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OFFICIAL GAZETTE UNITED STATES PATENT OFFICE

VOL. 136

SEPT. - OCT.

1908

MICRO PHOTO INC.
CLEVELAND, OHIO

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OFFICIAL GAZETTE

OF THE

UNITED STATES PATENT OFFICE.

VOLUME CXXXVI.

SEPTEMBER 1 TO OCTOBER 27, INCLUSIVE

1908.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.

1908.

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ERRATA.

898,401, page 405, in claim, line 6, for the word "blades" read *blade*.
899,723, page 929, first claim, line 3, for the word "and" read *or*.
900,170, page 1851, in heading, name of patentee, for "Edward Salzer" read *Eduard Salzer*.
900,782, page 1332, in heading, assignment, name of assignee, for the name "Neilsen" read *Nielsen*.
901,791, page 1700, fourth claim, line 7, for the word "walls" read *wall*, and same claim and line before the word "depth" for "the" read *in*.
902,488, page 1956, in heading, residence of patentee, for "Marion, Ind.," read *Indianapolis, Ind.*
70,889, (Trade-Mark,) page 1528, residence of registrant, strike out the word "Yorkshire."
Commissioner's Decisions, page 2000, first column, line 44, for the word "non-alcoholic" read *non-intoxicating*.

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(None.)

OFFICIAL GAZETTE

OF THE

UNITED STATES PATENT OFFICE.

SEPTEMBER—OCTOBER, 1908.

Patents Nos. 897,263 to 897,862.

THE OFFICIAL GAZETTE OF THE United States Patent Office.

[BY AUTHORITY OF CONGRESS.]

VOL. 136—No. 1. TUESDAY, SEPTEMBER 1, 1908. PRICE—$5 per year.

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Labels	10	No. 14,331 to No. 14,340, inclusive.
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Reissues	None.	
Total	697	

TO CITIZENS OF THE UNITED STATES.

State.	Patents and Designs.	Trade-Marks, Labels, and Prints.	State.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	.....	New Hampshire	1	1
Alaska, District of	.....	.....	New Jersey	17	3
Arizona Territory	.....	.....	New Mexico Ter't'y	1	.....
Arkansas	3	.....	New York	104	13
California	18	.....	North Carolina	1	.....
Colorado	14	.....	North Dakota	6	.....
Connecticut	17	.....	Ohio	49	7
Delaware	5	.....	Oklahoma	1	.....
District of Columbia	10	.....	Oregon	6	.....
Florida	4	.....	Panama	.....	.....
Georgia	5	1	Pennsylvania	56	10
Hawaii Territory	.....	.....	Philippine Islands	.....	.....
Idaho	2	.....	Rhode Island	10	.....
Illinois	43	5	South Carolina	.....	.....
Indiana	13	3	South Dakota	4	.....
Iowa	8	1	Tennessee	8	.....
Kansas	7	1	Texas	4	.....
Kentucky	5	.....	Utah	1	.....
Louisiana	2	.....	Vermont	1	.....
Maine	4	1	Virginia	4	.....
Maryland	1	1	Washington	5	.....
Massachusetts	48	10	West Virginia	3	.....
Michigan	29	1	Wisconsin	11	1
Minnesota	13	1	Wyoming	.....	.....
Mississippi	1	.....	U. S. Army	.....	.....
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Montana	.....	.....			
Nebraska	3	1	Total to citizens of the United States	566	64
Nevada	.....	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Algeria	.....	.....	Natal	.....	.....
Austria-Hungary	2	.....	Netherlands	.....	.....
Belgium	.....	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	.....	.....
British West Indies	.....	.....	New Zealand	1	.....
Canada	7	.....	Norway	1	.....
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	.....	.....
China	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	1	.....
Cuba	1	.....	Scotland	.....	.....
Denmark	1	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	.....	.....
England	9	.....	Sweden	1	.....
France	7	1	Switzerland	3	.....
Germany	26	1	Transvaal, South Africa	2	.....
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Ireland	.....	.....	Western Australia	.....	.....
Italy	1	.....			
Japan	1	.....	Total to citizens of foreign countries	65	2
Java	.....	.....			
Mexico	1	.....			

NOTICE.

The Official Gazette is printed and distributed by the Government Printing Office. All subscriptions and inquiries relating thereto should be forwarded to the "Superintendent of Documents, Government Printing Office," and not to the Patent Office.

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 25, 1908.

Douglas & Kingsland, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Geo. H. Baker, of 48-52 Edwards street, New Haven, Conn., for registration of a trade-mark and a trade-mark registered to Douglas & Kingsland, of Middletown, Conn., and the notice of said declaration sent by registered mail to the said Douglas & Kingsland having been returned undelivered, notice is hereby given to the said Douglas & Kingsland, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

Money by Mail.

Money sent by mail to the Patent Office will be at the risk of the sender. Letters containing money should be registered.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business August 25, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Aug. 11	May 11	796
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Aug. 6	July 27	136
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	July 31	June 20	214
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	July 30	June 8	264
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	July 30	June 3	214
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	July 22	May 18	267
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	July 20	Apr. 16	564
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	July 18	June 16	438
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	July 15	May 26	379
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	July 15	Apr. 2	563
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	July 13	June 2	396
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	July 13	May 22	368
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	July 10	May 15	521
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	July 9	June 4	393
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	July 8	June 12	664
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	July 6	June 17	572
125	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	July 6	Feb. 21	725
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	July 2	May 29	468
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	July 1	June 10	467
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	June 27	Apr. 16	590
167	V. Bookbinding; Harvesters; Jewelry; Music.	June 27	Apr. 3	489
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Masonry and Concrete Structures; Tents, Canopies, Umbrellas, and Canes.	June 24	May 20	557
147	XXIX. Cooperage; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	June 24	Apr. 11	661

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	June 24	Mar. 27	415
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	June 22	June 1	757
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	June 19	June 11	809
332	X. Carriages and Wagons	June 19	May 18	648
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	June 19	Apr. 3	714
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	June 18	May 8	486
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	June 13	June 8	834
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	June 9	Apr. 16	601
321	XXXIX. Baths and Closets; Water Distribution.	June 8	Apr. 1	800
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	June 6	Mar. 2	520
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	June 5	June 9	537
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	June 2	Apr. 21	655
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	May 28	May 4	767
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	May 26	Mar. 17	767
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	May 25	May 7	624
109	XVI. Telegraphy; Telephony	May 19	Mar. 8	519
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	May 2	Mar. 5	562
238	XIX. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Mar. 31	June 3	476

Total number of applications awaiting action..... 22,227

Room No.		Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks	Aug. 16	July 2	704
	Designs	Aug. 13	July 1	100
	Labels and Prints	Aug. 21	Aug. 17	34

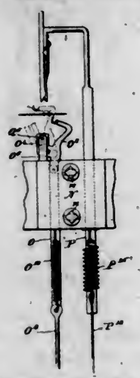
Examiners' Letters and Amendments.

Examiners are directed to recite in each letter in an application the date of the action by the applicant to which it is a reply, and applicants are requested to indicate in their actions on an application the date of the last Office letter.

PATENTS

GRANTED SEPTEMBER 1, 1908.

897,263. SELVAGE-FORMING MECHANISM FOR SHORT-WEFT LOOMS. FREDRICK E. ARBOUQUIER, Westbrook, Me., assignor, by mesne assignments, to Goodall Matting Company, a Corporation of Maine. Filed Oct. 2, 1903. Serial No. 175,417.



1. Selvage forming mechanism for a loom weaving in short weft lengths, comprising means for supporting and guiding a selvage cord and a series of warps, and means for turning the weft end around the selvage cord and back over the adjacent warp and down around said warp and up between said warp and selvage cord.

2. Selvage forming mechanism for a loom weaving in short weft lengths, comprising means for turning the weft end around the selvage cord and back over the adjacent warp, and means for carrying the turned weft end down around said warp and up between said warp and selvage cord.

3. Selvage forming mechanism for a loom weaving in short weft lengths, comprising means for supporting and guiding a selvage cord and a series of warps, and means mounted upon the lay for turning the weft end around the selvage cord and back over the adjacent warp and down around said warp and up between said warp and selvage cord.

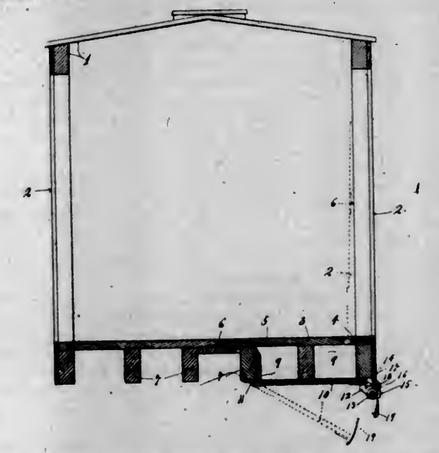
4. Selvage forming mechanism for a loom weaving in short weft lengths, comprising means mounted upon the lay for turning the weft end around the selvage cord and back over the adjacent warp, and means mounted upon the lay for carrying the turned weft end down around said warp and up between said warp and selvage cord.

5. Selvage forming mechanism for a loom weaving in short weft lengths, comprising an end turner provided with a hook and mounted upon the lay, means for moving the end turner to carry the hook from below the shed up around the selvage cord and back over the shed, whereby the hook turns the weft end around the selvage cord and back over the adjacent warp, and means for carrying the turned weft end down around said warp and up between said warp and selvage cord.

[Claims 6 to 28 not printed in the Gazette.]

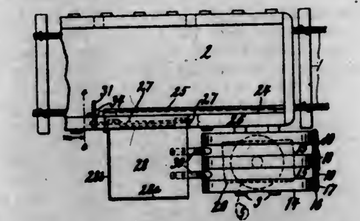
897,264. GRAIN-DOOR CONSTRUCTION. GUSTAV H. BEHRENDT and ALBERT LINDQUIST, Minneapolis, Minn. Filed Nov. 4, 1907. Serial No. 400,483.

1. The combination with a car body having a hopper in its floor structure, of a hinged door for closing the bottom of said hopper, a rock shaft supported from the floor structure in the vicinity of the free edge of said door and provided with a projecting cam or tappet arranged to engage and lock said door, a ratchet on said rock shaft, a pawl coöperating with said ratchet, and means for locking said pawl in engagement with said ratchet, substantially as described.



2. The combination with a car body having a hopper in its floor structure, said hopper having a hinged bottom door, a rock shaft supported from said floor structure in the vicinity of the free edge of said bottom door, a projecting cam or tappet on said rock shaft engageable with the free edge of said door to lock the same, a ratchet carried by said shaft, a bracket secured to the floor structure adjacent to said ratchet, a lock pawl pivoted to said bracket and engageable with said ratchet, a lock pin insertible through perforations in said bracket and lock dog to hold the latter engaged with said ratchet, and a seal applied to the end of said lock pin to hold the same in operative position, substantially as described.

897,265. MAIL-BAG CATCHER. PETER F. BERGMAN and HARRY W. GRIMES, St. Paul, Minn. Filed Mar. 23, 1908. Serial No. 422,754.



1. A mail catcher comprising a table-like stand adapted to be fixed near the track of the road for holding the mail bag and having in its top parallel grooves and at one end a hinged spring-pressed normally upright plate with

notches in its upper edge registering with the grooves in the table; a scoop adapted to be carried by and projecting horizontally from the side of the mail car, said scoop having inclined fingers adapted to move through the grooves in the table and thus insure the guiding of the mail bag into the scoop.

2. A mail catcher comprising a table-like stand adapted to be fixed near the track of the road for holding the mail bag and having in its top parallel grooves and at one end a hinged spring-pressed normally upright plate with notches in its upper edge registering with the grooves in the table; a scoop adapted to be carried by and projecting horizontally from the side of the mail car, said scoop having inclined fingers adapted to move through the grooves in the table and thus insure the guiding of the mail bag into the scoop, said grooved top portion of the stand being pivoted to the stand to swing in two opposite directions with its spring-pressed plate and means for latching the table to the stand in both of said directions.

3. A mail catcher comprising a table-like stand adapted to be fixed near the track of the road for holding the mail bag and having in its top parallel grooves and at one end a hinged spring-pressed normally upright plate with notches in its upper edge registering with the grooves in the table; a scoop adapted to be carried by and projecting horizontally from the side of the mail car, said scoop having inclined fingers adapted to move through the grooves in the table and thus insure the guiding of the mail bag into the scoop, a rock-shaft journaled horizontally in the lower part of the door opening of the mail car, and having said scoop affixed to it, a rocker arm or lever fixed at one end of the shaft, a latch lever pivoted adjacent thereto and having notches by which to engage the rocker arm and hold the scoop either horizontally out or folded upwardly into the door opening.

4. A mail catcher comprising a table-like stand adapted to be fixed near the track of the road for holding the mail bag and having in its top parallel grooves and at one end a hinged spring-pressed normally upright plate with notches in its upper edge registering with the grooves in the table; a scoop adapted to be carried by and projecting horizontally from the side of the mail car, said scoop having inclined fingers adapted to move through the grooves in the table and thus insure the guiding of the mail bag into the scoop, a rock-shaft journaled horizontally in the lower part of the door opening of the mail car, and having said scoop affixed to it, a rocker arm or lever fixed at one end of the shaft, a latch lever pivoted adjacent thereto and having notches by which to engage the rocker arm and hold the scoop either horizontally out or folded upwardly into the door opening, and a sliding door at the inner side of the door opening, said scoop having its rear side wall or guard beveled so as to admit the folding of the scoop to a more upright position against the outer side of the sliding door.

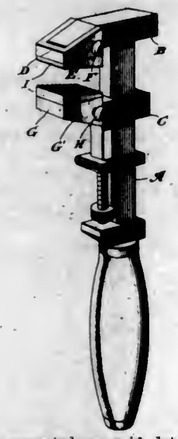
897,266. WRENCH. FRANK D. BODEY, Philadelphia, Pa. Filed Jan. 10, 1908. Serial No. 410,151.

1. The combination with a wrench, of detachable jaws pivotally mounted on the jaws of the wrench, and means for locking said detachable jaws in their adjusted positions.

2. The combination with a monkey wrench, of detachable jaws arranged over the jaws of the wrench, said jaws being pivotally connected to the jaws of the wrench, and thumb screws for locking said detachable jaws to the jaws of the wrench in their adjusted positions.

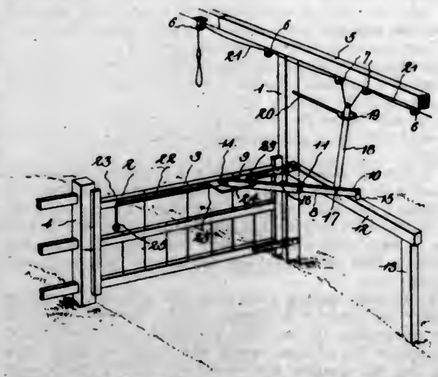
3. The combination with a monkey wrench, provided with a fixed jaw and a movable jaw having transverse bores extending therethrough, of detachable jaws arranged over said jaws, pivot pins extending through said detachable jaws and bores of the jaws, reversible jaw faces secured on the detachable jaws, and thumb screws working in threaded bores formed in the detachable jaws adapted to engage the jaws of the wrench, for the purpose described.

4. The combination with a monkey wrench, provided with the ordinary fixed and movable jaws, having transverse bores extending therethrough, of detachable jaws comprising grooved blocks arranged over said jaws, pivot pins extending through the walls of said block, and through the bores of the jaws, wedge shaped serrated jaw



faces, detachably mounted on said detachable jaws, and thumb screws working in threaded bores formed in the walls of the blocks, adapted to engage the sides of the jaws for locking said detachable jaws in their adjusted positions.

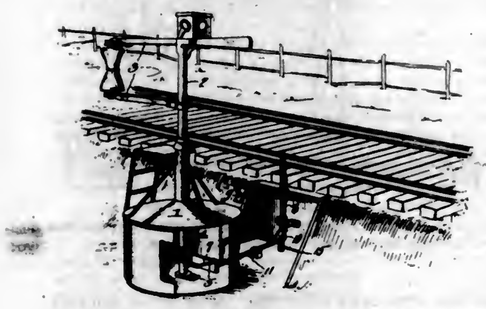
897,267. GATE-OPERATING DEVICE. ERASTUS L. BOOTH, Cincinnati, Ohio; John L. Booth, administrator of said Erastus L. Booth, deceased, assignor to John L. Booth, Cincinnati, Ohio. Filed Nov. 14, 1907. Serial No. 402,186.



The combination with a post, of a gate pivoted thereto, a pair of links one of which is pivotally connected with the top rail of the gate, a rigid stop rail arranged at right angles to the gate and to which the other link is pivotally connected, a rock-shaft carried by the top rail of the gate and provided with a crank adapted to engage the first named link, a bar pivotally connected with the second-named link, a rod rigid with the post and provided on its outer end with an eye through which the bar projects, rollers supported in horizontal position from a member supported by the post, and a rope engaging the rollers and secured to the bar.

897,268. MAIL-CRANE. JOHN BOUR, Sedalia, Mo. Filed Jan. 22, 1908. Serial No. 412,166.

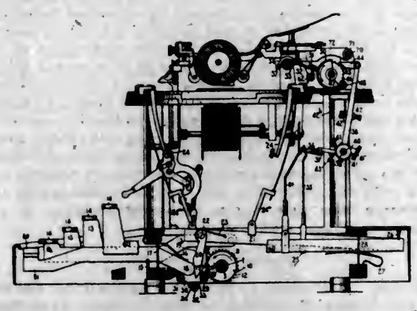
1. In combination with a rotatable post having an operating spring wound thereabout, an angle arm connected to said post, a fixed block engaged by the arm, a pivoted lever the inner end of which engages the angled portion of said arm, a second arm having a cam-foot in engagement with the outer end of the lever and means carried by rolling stock to a railroad for engaging the second mentioned arm and depressing the outer end of the lever.



2. In combination with a mail crane having a rotatable spring winding post, of locking means carried by said post, a pivoted lever having one end in engagement with said locking means, a spring under the other end of the lever, and means operated by passage of a train for depressing the outer end of said lever.

3. A device of the kind described comprising a combination with a spring operating post, an arm carried by said post, a block adapted to be engaged by the arm locking the post against rotation, a lever engaging the under side of the free end portion of the arm, a spring under the other end of the lever, a second pivoted arm arranged adjacent the track and having a cam-foot, and means carried by an engine for swinging said arm and depressing the outer end of the lever.

897,269. TYPE-WRITING MACHINE. BYRON A. BROOKS, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Jan. 11, 1904. Serial No. 188,656.



1. In a typewriting machine, the combination with a printing mechanism and a power driven member for operating the same, of a coupler pivoted to a portion of said printing mechanism and adapted to be moved by said power driven member, and a key lever having a cam portion for moving said coupler on its pivot to bring it into engagement with said driven member.

2. In a typewriting machine, the combination of a series of type bars, a series of keys for said type bars, means controlled by the keys for operating said type bars by power other than that applied to the keys, and mechanical means adjustable to regulate the force with which said power operating means operates the type bars.

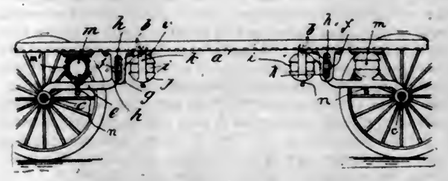
3. In a typewriting machine, the combination with a series of type bars, a series of operating levers, one for each bar, and a series of couplers, one for each lever, of a power driven shaft having fixed thereon a series of rings, one for each of said couplers, each ring having a lug for operating its coupler.

4. In a typewriting machine, the combination with a series of type bars, of operating means therefor comprising a series of couplers, one for each bar; and a power driven drum having lugs on its surface, one for each coupler; said lugs being arranged in different angular positions about said drum, whereby no two type bars can be operated at the same instant.

5. In a typewriting machine, the combination of a printing mechanism, a power driven member for operating said printing mechanism, a coupler for coupling said printing mechanism to said driven member, and adjustable means for disengaging said printing mechanism from said driven member at different points to regulate the force of the operation of said printing mechanism.

[Claims 6 to 18 not printed in the Gazette.]

897,270. RUNNING-GEAR FOR VEHICLES. WILLIAM H. CHAPIN, Springfield, Mass. Filed Dec. 11, 1905. Serial No. 291,286.



1. A vehicle running gear comprising a frame or platform, a wheel-frame consisting of an axle, two supporting arms therefor, means to pivot said arms between their extremities on an axis parallel with said axle, and pneumatic cushions disposed at opposite ends of the supporting arms, one on each side of the pivotal point thereof, to yieldingly restrict the movement of the ends of said arms in opposite directions.

2. A vehicle running gear comprising a frame or platform, an axle, a wheel-frame consisting of arms disposed longitudinally of the frame and embracing said axle near each end of the latter; means to support the wheel-frame on said platform on an axis parallel with the axle, said axis being arranged to yield in a direction at an angle to the platform, and pneumatic cushions disposed at opposite ends of the supporting arms between the latter and suitable abutments to permit independent vertical movements of said arms.

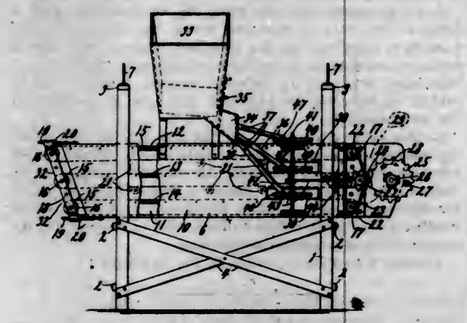
3. In a running gear for vehicles, a forked wheel frame, a horizontally disposed axis on which said frame may swing; an axle supported in spherical bearings in the forked end of said frame, said bearings and frame being arranged to permit vertical movement of one end of said axle and one of the fork-arms of said frame independently; together with a pneumatic cushion located between the arms of the forked frame and a suitable abutment.

4. In a running gear for vehicles, a forked wheel-frame, a horizontally disposed, vertically yielding axis on which said frame may swing; an axle supported in bearings in the forked end of said frame, said bearings and frame being arranged to permit vertical movement of one end of said axle and one of the fork-arms of said frame independently; together with a pneumatic cushion located between the arms of the forked frame and a suitable abutment.

5. A wheel-frame comprised in the running gear of a vehicle consisting of two arms disposed longitudinally of the vehicle, an axle extending between two ends of said arms, a support on which said arms may swing, which support is located between the two extremities of said arms, a pneumatic cushion located between said arms and suitable abutments on said platform, at either side of said axis.

[Claims 6 and 7 not printed in the Gazette.]

897,271. GRAIN-CLEANER FOR WILD PEAS AND COCKLE. JOHN S. CHRISTENSEN, Norway Lake, Minn. Filed Feb. 21, 1908. Serial No. 417,004.



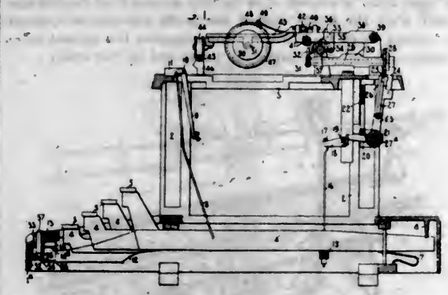
1. A grain cleaning machine comprising in combination a supporting frame, a tilting normally laterally inclined frame, hinged at one side therein and means for changing the inclination of said frame, one or more endless conveyer belts or aprons mounted on and driven by rollers in the tilting frame, means for rotating said rollers so as to move the conveyers, a rock-shaft journaled at one side of the tilting frame and operatively connected with the driving mechanism of the rollers, a pan fixed on the rock-shaft for each conveyer belt and projecting in over the upper run thereof, a hopper mounted on the tilting frame, spouts extending from said hopper one into each pan, and means for regulating the passage of grain through each spout.

2. A grain cleaning machine comprising in combination a supporting frame, a tilting normally laterally inclined frame hinged at one side therein, and means for changing the inclination of said frame one or more endless conveyer belts or aprons mounted on and driven by rollers in the tilting frame, means for rotating said rollers so as to move the conveyers, a rock-shaft journaled at one side of the tilting frame and operatively connected with the driving mechanism of the rollers, a pan fixed on the rock-shaft for each conveyer belt and projecting in over the upper run thereof, a hopper mounted on the tilting frame, spouts extending from said hopper one into each pan, and means for regulating the passage of grain through each spout, said spouts having each an elongated outlet by which to spread the grain upon the bottom of the pan.

3. A grain cleaning machine comprising in combination a supporting frame, a tilting normally laterally inclined frame hinged at one side therein and means for changing the inclination of said frame, one or more endless conveyer belts or aprons mounted on and driven by rollers in the tilting frame, means for rotating said rollers so as to move the conveyers, a rock-shaft journaled at one side of the tilting frame and operatively connected with the driving mechanism of the rollers, a pan fixed on the rock-shaft for each conveyer belt and projecting in over the upper run thereof, a hopper mounted on the tilting frame, spouts extending from said hopper one into each pan, and means for regulating the passage of grain through each spout, said spouts having each an elongated outlet by which to spread the grain upon the bottom of the pan, and said outlet being turned partly away from the destributing edge of the pan, for the purpose set forth.

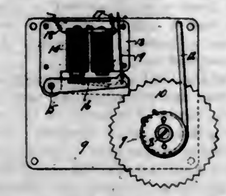
897,272. TYPE-WRITING MACHINE. ADOLPH F. DECKER, Evansville, Ind., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed June 6, 1907. Serial No. 377,600.

In a typewriting machine, the combination of a feed rack, a holding dog, space key levers at the sides of the machine, a space bar extending transversely of the machine and connected to said levers by depressed brackets, a latch pivoted to the front bar of the base frame and normally occupying a position subatantially parallel with said space bar but adapted to be swung to engage the depressed



bracket when the space bar is pushed down and thus lock the holding dog and feed rack in engagement.

897,273. TROLLEY-CATCHER. MICHAEL G. DELANEY, Detroit, Mich., assignor to William Degenhart, Buffalo, N. Y. Filed Aug. 30, 1907. Serial No. 390,738.



1. In a trolley catching device, the combination with an over-head conductor, of a trolley pole carrying a wheel in engagenemt with said conductor, a rope attached to the trolley pole, a spring actuated drum upon which a portion of the rope is wound, a detent for restraining the rotation of the drum, means for electrically actuating said detent to release said drum, said detent actuating means being in circuit with the trolley pole, and a cord attached to said detent for actuating it to release the armature independently of the operation of said electrically actuated means.

2. In a trolley catching device, the combination of an over-head conductor, a trolley pole in engagement therewith, a rope attached to the trolley pole, a spring actuated drum upon which a portion of the rope is wound, a ratchet wheel upon said drum a detent armature pivotally mounted at one end and at the other end engaging said ratchet wheel for restraining the rotation of said drum, an electro-magnet for actuating said armature, said magnet being in circuit with the trolley pole, and means for disengaging the armature from said ratchet wheel independently of the operation of said electro magnet.

897,274. BUTTERFLY-JEWEL. WILLIAM D. DENTON and ROBERT W. DENTON, Wellesley, Mass. Filed Sept. 18, 1907. Serial No. 393,478.



1. As a new article of manufacture, an imitation jewel comprising a frame having a glazed front, a section of a butterfly's wing beneath said front to form a background, a natural butterfly interposed between said wing section and said front, a yielding filler beneath said wing section, and a rigid backing to crowd said wing section against and about said interposed butterfly and force them into complete and intimate contact with said front throughout their exposed areas.

2. As a new article of manufacture, imitation jewel comprising a frame having a glazed front of concavo-convex form, a section of a butterfly's wing beneath said front to form a background, a natural butterfly interposed between said wing section and said front, a yielding filler beneath said wing section, and a rigid backing to crowd said wing section against and about said interposed butterfly and force them into complete and intimate contact with said front throughout their exposed areas.

3. That improvement in fine or decorative art, which consists in so mounting a section of an insect's wing beneath a glazed sight opening or panel as to expose a regular definite area, destroy the identity of the wing, and produce a jewel-like effect, superposing on said section a natural butterfly, and forcing the exposed wing area and superposed butterfly into complete and intimate contact throughout its entire surface with said glazed panel to produce an effect of solidity and depth.

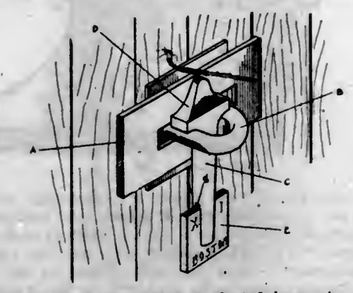
4. As a new article of manufacture, an imitation jewel comprising a mounting having a sight opening, a section of an insect's wing so arranged in said mounting as to expose through said sight opening an unbroken definite area of the wing and destroy the identity of the wing as such, and a natural butterfly superposed on said wing section so as to give a cameo like effect.

897,275. TWINE-CUTTER. JOSEPH DE YOUNG, South Holland, Ill. Filed Oct. 14, 1907. Serial No. 397,377.



A twine cutter comprising a flat elongated member bent to form a finger ring, said elongated member having a reduced portion and an angularly and outwardly extending blade formed by a continuation of the reduced portion, said blade having a sharpened point and beveled edges upon its upper and under sides, the beveled edge upon the under side of said blade being rounded adjacent the elongated portion.

897,276. SEAL-LOCK. JOHN M. EDSON, Detroit, Mich., assignor of one-half to William A. McNair, Detroit, Mich. Filed Aug. 14, 1905. Serial No. 274,125.



1. A seal lock comprising a slotted hasp pin, a catch within said pin projecting into the slot thereof and a fragile plate grooved to engage the slot in said pin and recessed for engagement with said catch, the sides of the groove in said plate forming a break joint preventing access to said catch.

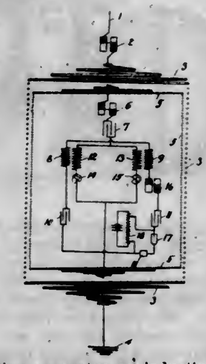
2. A seal lock comprising a slotted hasp pin, a catch within said pin projecting into said slot and a fragile pottery plate grooved to engage said slot and form an angle joint with the side thereof in which said catch is located, said plate being also recessed for engagement with said catch.

897,277. METHOD OF TREATING MILK OR CREAM AND BUTTER. ALPHEUS FAY, Louisville, Ky. Filed May 28, 1908. Serial No. 435,560.

1. The method of treating milk which consists in first removing cream from the milk while fresh; then removing butter from the cream while fresh; and then remixing the cream and milk residues, substantially as specified.

2. The method of treating milk which consists in first removing cream from the milk while fresh; and at a temperature below the souring point, then removing butter from the cream while fresh, and at a temperature below the souring point, and then remixing the cream and milk residues, substantially as specified.

897,278. WIRELESS TELEGRAPHY. REGINALD A. FESSENDEN, Washington, D. C. Filed Oct. 6, 1906. Serial No. 337,733.

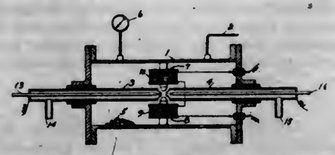


1. In signaling apparatus an inductive coupling, and a receiver placed in the secondary of the coupling, and within influence of the primary so that the primary acts to shield it from disturbing influences.

2. In signaling apparatus an inductive coupling, and a receiver connected in the secondary of said coupling, the receiver being placed within the primary and being protected thereby from disturbing influences.

3. In receiving apparatus for wireless telegraphy an inductive coupling comprising a primary, and a secondary and a receiver in circuit therewith,—all inclosed within the primary of the coupling.

897,279. MEANS FOR GENERATING HIGH-FREQUENCY ELECTRIC OSCILLATIONS. REGINALD A. FESSENDEN, Washington, D. C. Filed Dec. 17, 1906. Serial No. 348,194.



1. In apparatus for generating high frequency oscillations, a pair of spark gap terminals, one of which terminals is made of very thin sheet metal, and means to keep said terminal cool.

2. In apparatus for generating high frequency oscillations, a pair of terminals, an inclosing non-vacuous cham-

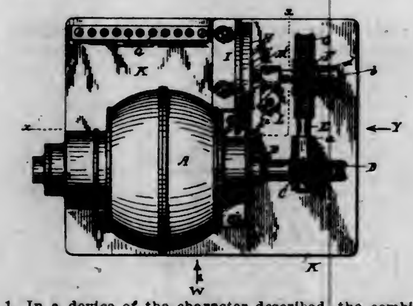
ber, and the terminals being made of very thin sheet metal, and having means to keep them cool.

3. A discharge gap comprising two hollow metallic terminals with very thin walls at their ends, means to keep said walls cool, and a chamber of gas surrounding the terminals and adapted in connection with the cooling, to keep the terminals from vaporizing.

4. In wireless telegraphy apparatus, a discharge gap composed of two metallic terminals one of them having extremely thin walls presented to the spark, and means to prevent vaporization of the metal of the terminals.

5. In apparatus for generating high frequency oscillations, a pair of terminals, an inclosing chamber containing gas under pressure, and the terminals being made of very thin sheet metal and having means to keep them cool.

897,280. AUTOMATIC STOKING-INDICATOR MECHANISM. ROBERT FORSYTH and WILLIAM W. HANSCOM, San Francisco, Cal. Filed Sept. 15, 1904. Serial No. 224,571.

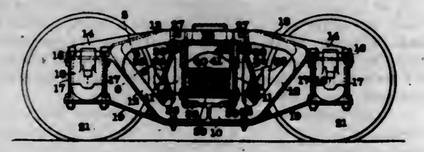


1. In a device of the character described, the combination of a supporting base, an insulating disk mounted thereon, a series of contact segments arranged equi-distant apart and concentrically mounted upon the surface of said disk, signaling devices connected with said contacts, a concentric ring contact on said disk surface arranged within said segment contacts and spaced therefrom, a rotary shaft having a bearing at one end in said insulating disk, and an auxiliary bearing at its opposite end, a bracket on said shaft intermediate said bearings, and connected brushes mounted on said bracket and extending into contact with the surface of the disk whereby they connect with said contacts and operate the signaling devices.

2. In a device of the character described, an indicator comprising a casing having a plurality of separated compartments, designating instrumentalities for each compartment, a sounding signal, and electrical means for automatically successively illuminating each compartment and simultaneously setting into operation said sounding signal, said means comprising a motor, an armature shaft rotated thereby, a cross shaft, a worm on the armature shaft, an intermeshing worm wheel on the cross shaft and a spaced worm also mounted thereon, an auxiliary shaft, a worm wheel thereon arranged to mesh with said last mentioned worm, an insulated plate carrying a series of spaced segment contacts concentrically arranged about and separated from a continuous contacting strip and having connection with the insulated partition plate, and brushes on the auxiliary shaft coöperating with said contacts.

897,281. CAR-TRUCK. ROBERT E. FRAME, St. Louis, Mo., assignor to Herbert W. Wolff, St. Louis, Mo. Filed Jan. 19, 1907. Serial No. 353,100.

1. In a car truck, the combination with the lower member and truck columns of a side frame, of a compression member provided with integral vertically removable interlocking means engaging with said truck columns to prevent relative movement of the part in the direction of the length of the compression member, and fastening means passing through said interlocking means and truck columns.



2. In a car truck, the combination with the lower member and truck columns of a side frame, of a compression member provided with interlocking means engaging the said truck columns, and horizontal fastening means passing through said interlocking means and said truck columns.

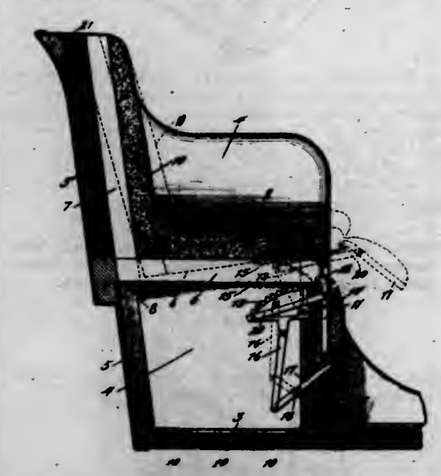
3. In a car truck, the combination with the lower member and truck columns of a side frame, of a compression member provided with vertically removable interlocking means engaging the said truck columns, and horizontal fastening means passing through said interlocking means and said truck columns.

4. In a car truck, the combination with the lower member and truck columns of a side frame, of a compression member provided with dove-tail end extensions, said truck columns having dove-tail recesses in their upper faces into and out of which said extensions are vertically movable.

5. In a car truck, the combination with the lower member and truck columns of a side frame, of a compression member of channel section provided with dove-tail end extensions, said truck columns having dove-tail recesses in their upper faces into and out of which said extensions are vertically movable.

[Claims 6 to 17 not printed in the Gazette.]

897,282. SEAT. ALFRED FRESCHL, Chicago, Ill. Filed Aug. 1, 1907. Serial No. 386,526.



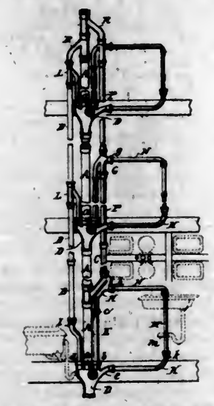
1. A supporting frame having a substantially vertical back, a seat-frame consisting of a horizontal seat-portion and a vertical back-portion in fixed relation to each other in all positions, a shifting support at or near the front of the seat-portion, a seat and back carried by the seat-frame, the seat-frame being supported by the supporting frame and shifting support in normal and inclined positions.

2. A supporting frame having a substantially vertical back, a seat-frame consisting of a horizontal seat-portion and a vertical back-portion in fixed relation to each other in all positions, a cam support at or near the front of the seat-portion, the seat-frame resting on the supporting frame and cam support in all positions.

3. In combination with a supporting frame, a seat-frame, a seat and back carried by the frame, a rack on the seat-frame, a pinion mounted on the body and meshing with the rack to tilt the seat, a lever to move the pinion, and means to hold the rack and pinion against accidental movement.

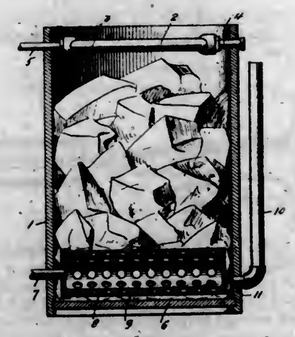
4. A supporting frame, a seat-frame having a seat and back, a rest pivoted to the front of the frame, a cam to tilt the frame, a lever connecting the cam and rest, and a lever for moving the cam.

897,283. PLUMBING SYSTEM. JOHN L. FRUIN, New York, N. Y. Filed Oct. 16, 1907. Serial No. 397,597.



A plumbing system which consists of a main waste pipe and two main vent pipes provided at each floor with a triple vent sanitary tee and suitable vent and waste fittings whereby at each of said sanitary tees an independent single or double system of fixtures may be discharged through a common waste pipe and vented through each of said main vent pipes without interfering with each other, and having all the vent pipes brought together to the common vent at the venting end of said system.

897,284. APPARATUS FOR MAKING BRINE. HENRY J. GERNER, Canton, Ohio, assignor to Mary Gerner, Canton, Ohio. Filed June 12, 1907. Serial No. 378,508.



1. In a brine apparatus, the combination of a tub for holding ice and salt, a circular sprinkler head trunnioned in the upper end of said tub and having an inlet pipe serving functionally as a trunnion, said head having openings formed in its lower side disposed radially with relation to the circumferential axis of said head, an outlet pipe located adjacent to the bottom of said tub, a perforated drum connected to said pipe, a screen inclosing said drum, and an overflow pipe movably mounted at the side of said tub and entering the same adjacent to the bottom thereof.

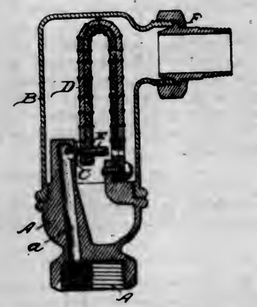
2. A brine apparatus consisting of a receptacle for containing ice and salt, a circular sprinkler head trunnioned in the upper end of said receptacle and having openings formed therein, an inlet pipe connecting with said head and serving functionally as a trunnion, an outlet pipe arranged in said receptacle, a perforated drum connected to said pipe within said receptacle, a screen surrounding said drum, and an overflow pipe arranged at the side of said receptacle.

3. A brine apparatus consisting of a receptacle, a circular sprinkler head trunnioned in the upper end of said receptacle, an inlet pipe connecting with said head and constituting one of the trunnions therefor, an outlet pipe arranged at the lower end of said receptacle, a perforated drum connecting with said pipe within said receptacle, and a screen covering the perforations of said drum.

4. In a brine apparatus, a receptacle, a sprinkler-head trunnioned in the walls of said receptacle near the upper end thereof, an inlet pipe connecting with said head and constituting one of the trunnions therefor, and an outlet pipe connected to said receptacle near the lower end thereof.

5. In a brine apparatus, a receptacle, a sprinkler-head trunnioned in the walls of said receptacle near the upper end thereof, an inlet pipe connecting with said head and constituting one of the trunnions therefor, a perforated drum located in the bottom of the receptacle, and an outlet pipe communicating with said drum.

897,285. AUTOMATIC VALVE. ARTHUR J. GREENAWAY, Detroit, Mich. Filed Apr. 3, 1908. Serial No. 424,871.

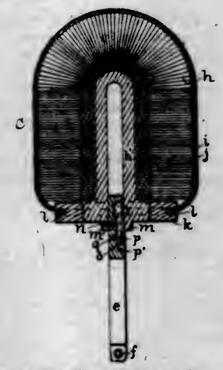


1. In a valve of the class described having a discharge port, a thermostatic inverted U-shaped bar composed of dissimilar metals riveted together, one of the legs of said bar being longer than the other with the shorter leg free to move under the expansion and contraction of the parts, a screw threaded bolt or rod set transversely through the shorter leg of said bar and adapted for adjustment, a valve disk, a ball and socket connection between the valve disk and rod, and means for securing the longer leg of the thermostatic bar fixedly to the valve casing.

2. In a valve of the class described including an inlet and a discharge port, a thermostatic U-shaped bar, one of the legs of said bar being longer than the other, the longer leg being fixed to the valve casing and the shorter leg being free to move under the expansion and contraction of the parts, a screw threaded bolt or rod set transversely through the shorter leg of said thermostatic bar and adapted for adjustment, and a valve disk connected to said shorter leg of the thermostatic bar for movement into and out of engagement with the port of the valve, the longer leg of the thermostatic bar having an opening to permit of the passage of said screw threaded bolt therethrough when the shorter leg is contracted toward the longer leg.

3. In a valve of the class described, having an inlet, and a discharge port, a thermostatic U-shaped bar composed of dissimilar metals riveted together, one of the legs of said bar being free to move under the expansion and contraction of the parts, a screw-threaded bolt or rod set transversely through the free leg of said bar and adapted for adjustment, a valve disk, and a ball and socket connection between the valve disk and rod.

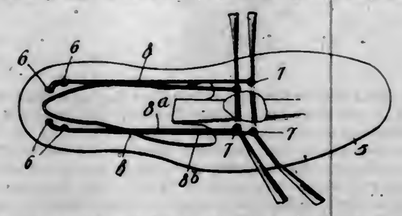
897,286. CLEANING AND POLISHING APPARATUS. EZRA HASKELL, New York, N. Y. Filed Nov. 13, 1902. Serial No. 131,168.



1. A device, of the class designated, comprising a brush provided with a core having a flange at its base extending beneath and supporting adjacent portions of the brush, such brush being cylindrical and round at the top, and a cover on said brush, said cover being attached to said flange.

2. The combination, in an apparatus of the class designated, with a cylindrical brush rounded at the top, and a core having a peripherally grooved flange at its base extending beneath and supporting the bristles of the brush, of two covers upon said brush, and cords one outside of the other in the flange groove to fasten said covers at the bottom to the flange.

897,287. OVERSHOE-FASTENER. JOHN T. HEARN, Victory, Ga. Filed Nov. 4, 1907. Serial No. 400,613.



1. An overshoe having a pair of openings spaced from each other longitudinally of the shoe at each side of the shoe adjacent to the heel, the forward opening of each pair being located slightly below the rearward opening of each pair, said shoe having also a pair of openings forwardly of the opening of the shoe and each side thereof, the corresponding openings of the two pairs being in registration with each other transversely of the shoe, the forward opening of each pair being located slightly below the rearward opening of the corresponding pair.

2. The combination with an overshoe having spaced openings in each side adjacent to its heel, said shoe having a pair of spaced openings therein at each side in its forward portion, of a string tied in each pair of the rearward openings, said strings having their end portions brought forwardly exteriorly and passed through the forward openings of the shoe to extend transversely of the shoe therewithin, said strings having their extremities brought upwardly exteriorly of and over the forward portion of the shoe and fastened together.

897,288. EXPRESSION ATTACHMENT. OTTO F. HINTZ, Detroit, Mich., assignor to The Farrand Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 14, 1907. Serial No. 392,908.

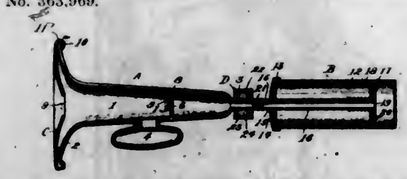


1. In a piano action, the combination with a main rest bar for limiting the movement of the hammers, of a frame having brackets for supporting said rest bar, an auxiliary rest bar parallel to said main rest bar and brackets for said auxiliary rest bar adjustably secured to said frame.

2. In a piano action, the combination with a main rest bar for limiting the movement of the hammers, of a frame having brackets for supporting said rest bar, and an auxiliary rest bar parallel to said main rest bar beneath the same, and separately operable to control the same hammers, said auxiliary rest bar being formed in sections spaced from each other to provide clearance for the brackets of said frame.

3. In a piano action, the combination with a main rest bar extending the entire width of the action, of a pair of complementary auxiliary rest bars arranged parallel to said main rest bar and beneath the same, rock shafts upon which said auxiliary rest bars are respectively mounted adjustable in position upon said frame and separate lever systems for actuating said rock shafts operable from the keyboard of the instrument.

897,289. BREAST-PUMPING MACHINE. TRUMAN W. HOWELL, Mabton, Wash. Filed Mar. 22, 1907. Serial No. 363,969.

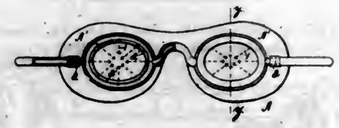


1. In a device of the class described, the combination of a hollow body having a mouth at one end, a depending vessel on the body and communicating therewith, a yielding guard on the mouth dished inwardly and having an opening and serving to prevent liquid from flowing out of the body, transverse overlapping walls in the body at the rear of the vessel to dam back liquid while permitting the free flow of air, and a pump attached to the body at a point behind the walls.

2. In a device of the class described, the combination of breast piece including a vessel and having a neck provided with an outstanding flange, a pump including a piston rod, a coupling piece rigidly mounted on the neck, and a threaded connection between the coupling piece and rod for rigidly and detachably connecting the pump and breast piece together.

3. In a breast pump, a breast member comprising a single piece structure and including a hollow body, a mouth at one end, a depending vessel, transversely extending walls within the body at the rear of the vessel, and a neck for connection with a pump.

897,290. PNEUMATIC EYE-PROTECTOR. ALBERT E. JACOBS, Lancaster, Pa. Filed Mar. 26, 1907. Serial No. 364,745.

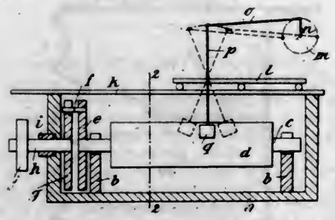


1. In a device of the class described, consisting of an eye protector, a frame formed of two adjacent tubular circular eye frames formed with openings in their periphery, a tubular nose-bridge connecting said eye frames, means for connecting said eye frames to flexible piping, and means for supporting said flexible tubes and securing the device to the head of the wearer, for the purpose set forth.

2. In a device of the class described, consisting of an eye protecting frame formed of tubular circular eye frames; openings formed in the periphery of said eye frame, a tubular nose-bridge the ends of which are secured to the adjacent sides of said eye frames, nipples secured to said eye frames, flexible tubes having their forward ends secured to said nipples and their rear ends secured to a Y-shaped connecting pipe, means for circulating air through said tubes and nipples, and means for liberating said air from the openings in the periphery of said eye frames.

3. In a device of the class described, an eye protecting frame, formed of two tubular eye frames, openings through the walls of their periphery, a tubular nose-bridge connecting said eye frames at adjacent points upon their periphery, nipples secured to said eye frames at their extreme opposite outer edges, flexible tubes having their forward ends secured to said nipples, a Y-shaped tubular connection connecting the rear ends of said flexible tubes with each other and to a source of air supply, a curved slide plate formed with clampings embracing said flexible tubes and slidably adjustable thereon.

897,291. METHOD OF RENDERING ELECTROLYTIC COPPER HOMOGENEOUS. MARCEL A. JULLIEN and EMILE L. DESSOLLE, Levallois-Perret, France. Original application filed Apr. 4, 1907, Serial No. 366,421. Divided and this application filed Dec. 7, 1907. Serial No. 405,611.



A method of rendering homogeneous electrolytic copper, consisting in the application against the metal electrolytically deposited on a rotary cylinder in the vat, of a polisher having a reciprocating movement, which moves longitudinally on the cylinder in such manner that the polisher describes on the copper deposit not simply a screwthread, but a sinusoidal curve surrounding the spires of the screwthread, and the sinusoidal curves interengaging in such manner that no point of the surface escapes the action of the polisher which is applied to the cylinder with a suitable pressure.

897,292. COAT-HANGER. FRANK M. KEEDERLE, Norwalk, Ohio. Filed Feb. 17, 1908. Serial No. 416,358.



1. In a coat hanger of the character described, the combination with a pair of sheet metal supporting members having overlapping inner ends provided with alined lateral curved slots adjacent their lower edges, and alined openings adjacent their upper edges, and comprising extensions bent to form shoulder pieces at their outer ends and flared upwardly at their inner ends to form neck pieces, of a hanging hook for said members formed of wire and having its extensions bent angularly through said alined openings and engaging the inner surface of said members, and clamping elements for engagement through said alined slots, substantially as described.

2. In a coat hanger of the character described, the combination of a pair of supporting members each formed of a single piece of sheet metal, having overlapping inner ends provided adjacent their lower edges with curved lateral alined slots and adjacent their upper edges with alined openings concentric with the curvature of said slots, comprising extensions bent to form shoulder pieces at their outer ends and flared upwardly to form neck pieces adjacent their inner ends, of a hanging hook for said members formed of wire and having its extensions bent angularly through said alined openings and provided with curved ends to engage the inner curved surfaces of said members adjacent the neck portions thereof, and clamping elements for engagement through said curved alined slots, substantially as described.

897,293. COMBINATION-TOOL. JOHN O. KORPI, Soudan, Minn. Filed May 11, 1908. Serial No. 432,197.

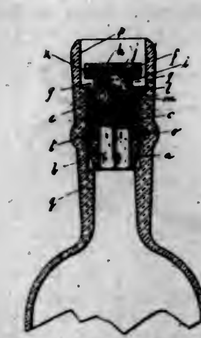


The device described comprising a handle with a stove lid lifting tongue at its front end, and back of said tongue a rearwardly curved hook-shaped projection for the purposes set forth, said projection terminating in a claw for pulling tacks and nails, said tongue serving in the latter case as a fulcrum or supporting point on the floor or other lumber from which a nail or tack is to be extracted.

897,294. STOPPER. EMIL W. KOTTUSCH, New York, N. Y. Filed Oct. 18, 1907. Serial No. 398,026.

1. A stopper for liquid receptacles, comprising an integral hollow body which is open at both ends, a valve

working in the lower portion, a ball contained in the upper portion of said body and adapted to act by its weight on said valve, the said body having perforations at its mouth portion, a piece secured in and closing said mouth, a projection at the bottom of said piece, said projection having a conical cavity to serve as a guide for said ball, and forming an annular passage between itself and the upper portion containing the ball, substantially as set forth.



2. A stopper for liquid receptacles, comprising an integral hollow body which is open at both ends, a valve working in the lower portion, a ball contained in the upper portion of said body and adapted to act by its weight on said valve, the said body having perforations at its mouth portion, a piece secured in and closing said mouth, a projection at the bottom of said piece, said projection having a conical cavity to serve as a guide for said ball, and forming an annular passage between itself and the upper portion containing the ball, and means for securing said stopper in the liquid receptacle, substantially as set forth.

3. In a bottle, a neck having an inner annular groove and a stopper permanently fitted therein, said stopper comprising a hollow body which is open at both ends, a valve working in the lower portion, a ball in the upper portion of said body, and adapted to act by its weight on said valve, the said body having perforations on the circumference at its mouth portion, a piece secured in and closing the said mouth, a projection at the bottom of said piece having a conical cavity to serve as a guide for the ball, and forming an annular passage between itself and the upper portion containing the ball, the lower portion of the said body being formed with an annular groove, a rubber ring tightly fitted in said groove, and engaging in the neck of the bottle, substantially as set forth.

897,295. GARMENT-SUPPORTER CLASP. DARRAGH DE LANCEY and JOHN J. BUCHANAN, Waterbury, Conn., assignors to Waterbury Buckle Co., Waterbury, Conn., a Corporation. Filed Feb. 6, 1908. Serial No. 414,565.
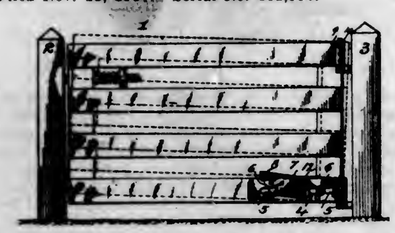


1. In a garment-supporter clasp, the combination with the inner jaw thereof, of an outer jaw mounted on the inner jaw, an operating lever pivotally mounted in the inner jaw in position to coact with the outer face of the outer jaw, and a spring located within the inner jaw and having its lower end secured thereto and its upper end attached to the upper end of the outer jaw.

2. In a garment-supporter clasp, the combination with the inner jaw thereof, of an outer jaw mounted on the inner jaw, an operating lever pivotally mounted in the inner jaw in position to engage with the outer face of the outer jaw, a leaf-like sheet-metal spring placed within the inner jaw and having its upper end connected with the upper end of the outer jaw, and a rubber disk located at the lower end of the inner jaw over the fixed lower end of the spring.

3. In a garment-supporter clasp, the combination with an inner jaw formed in its upper portion with a clearance opening, of an outer jaw mounted on the said inner jaw, an operating lever pivotally mounted in the inner jaw in position to coact with the outer face of the outer jaw, and a spring located within the inner jaw and having its lower end secured thereto and its upper end attached to the upper end of the outer jaw the movement of which is increased by the said clearance opening.

897,296. GATE-HINGE. IRWIN LESTER, Tuscola, Ill. Filed Nov. 13, 1907. Serial No. 401,990.

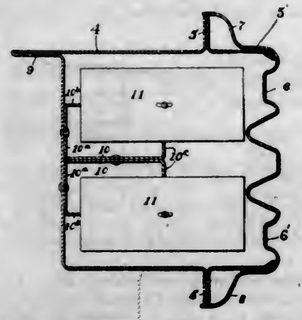


1. In a hinge of the character specified, the combination of a support, a hinge member having adjustable connection with the said support, a stop and coöperating shouldered latch of which one is attached to the support and the other to the hinge member to secure the latter in the required adjusted position.

2. In combination, a support, a hinge member adjustably mounted upon the said support and having a slot, a fastening projected from the support and passed through the slot of the hinge member, a stop and coöperating pivoted shouldered latch of which one is attached to the support and the other to the hinge member to secure the latter in the adjusted position.

3. In a swinging gate, the combination of an adjustable hinge member, the same consisting of a plate having longitudinal slots, fastenings passed through said slots for connecting the plate to the gate, and a latch pivoted to said plate and adapted to coöperate with a fastening thereof to hold the gate in an adjusted position.

897,297. FIREPROOF WINDOW CONSTRUCTION. EDMUND H. LUNKEN and CHARLES M. CONKLIN, Cincinnati, Ohio, assignors to The Lunken Steel Window Company, a Corporation of Ohio. Filed June 27, 1907. Serial No. 381,124.



1. In fire-proof window construction, a frame member having guide flanges on opposite sides thereof, portions projecting in advance of the guide flanges, and removable finishing plates embracing said projecting portions and having molded edges abutting against said flanges.

2. In fire-proof window construction, a frame member having an outwardly projecting flange serving as a guide, a finishing plate having an edge overlapping said flange, and a weather strip between said parts.

3. In fire-proof window construction, a frame member having a guide flange, a removable finishing plate having a molded edge resting against the edge of said guide flange, and a metallic weather strip between said frame member and finishing plate.

4. In fire-proof window construction, frame members having overlapping edges, and a metallic weather strip embracing the edge of one of said parts and bearing against the other part.

5. In fire-proof window construction, a hollow vertical frame member having a removable cover plate and forming weight channels, and vertically disposed plates or bars rigidly held within said side member and having portions forming guides for the weights.

[Claims 6 to 10 not printed in the Gazette.]

897,298. MANUFACTURE OF SCYTHES. ALFRED MEIS, Reading, Pa., assignor to Columbian Cutlery Company, Reading, Pa., a Corporation of Pennsylvania. Filed Mar. 3, 1908. Serial No. 418,938.



The improvement in manufacturing scythe blades or the like which consists in rolling a straight high-carbon steel bar of a cross-section comprising a thin web and a headed back-edge as required in the finished blade, and imparting desired longitudinal curvature and transverse set to the blank cut from said bar by swaging action upon a web portion thereof adjacent the headed back-edge without working of the back-edge or front-web portions of the rolled blank, substantially as set forth.

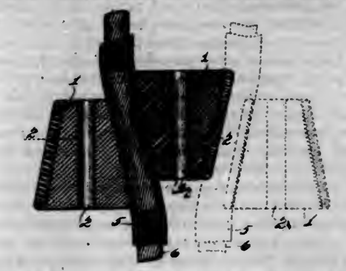
897,299. GARMENT-SUPPORTER CLASP. JAMES F. MOLLOY, West Haven, Conn. Filed Nov. 25, 1907. Serial No. 403,703.



1. In a garment supporter, the combination with the button member thereof, of a loop member adapted to set over the head of the button and having parallel sides which are separate a distance which is less than the diameter of the button and greater than the width of the post, and a contracted end, substantially as described.

2. A garment supporter, comprising a plate having web-attaching slots, a post extending parallel with and over the face of said plate, a flexible button on the outer face of said post, and a loop member adapted to set over said button and having parallel sides which are separate a distance which is less than the diameter of the button and greater than the width of the post and contracted at its lower end, substantially as described.

897,300. ELECTRIC-CABLE CLAMP. ERNEST W. MULLER, Brooklyn, N. Y., assignor to Hubert Krantz, Brooklyn, N. Y. Filed Feb. 8, 1908. Serial No. 414,885.



1. In combination with an electric cable comprised of a conducting core and outside insulating cover, a clamp composed of opposed wedge-like insulators having projections on their faces adapted to penetrate the cover of the cable and firmly secure themselves in the metal of the conducting core, whereby the strain on said cable at the clamp may be borne by the core directly.

2. In combination with an electric cable comprised of a conducting core and outside insulating cover, a clamp composed of opposed wedge-like insulators having projections on their faces adapted to penetrate the cover of the cable and firmly secure themselves in the metal of the conducting core, whereby the strain on said cable at the clamp may be borne by the core directly, said clamp comprising a stationary member and a movable member.

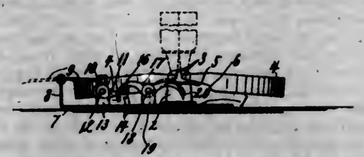
3. In combination with an electric cable comprised of a conducting core and outside insulating cover, a clamp composed of opposed wedge-like insulators having projections on their faces adapted to penetrate the cover of the cable and firmly secure themselves in the metal of the conducting core, whereby the strain on said cable at the clamp may be borne by the core directly, said projections on the faces of said insulators being of metal and means for securing them to the insulator proper.

4. In combination with an electric cable comprised of a conducting core and outside insulating cover, a clamp composed of opposed wedge-like insulators having projections on their faces adapted to penetrate the cover of the cable and firmly secure themselves in the metal of the conducting core, whereby the strain on said cable at the clamp may be borne by the core directly, a supporting frame for the insulators and mechanical means for initially causing said teeth to bite through the insulating cover and grip the core.

5. In combination with an electric cable comprised of a conducting core and outside insulating cover, a clamp composed of opposed wedge-like insulators having projections on their faces adapted to penetrate the cover of the cable and firmly secure themselves in the metal of the conducting core, whereby the strain on said cable at the clamp may be borne by the core directly, said clamp comprising a stationary member and a movable member, a means for securing the stationary insulator in place, and mechanical means for forcing the movable member into place.

[Claims 6 to 9 not printed in the Gazette.]

897,301. ANIMAL-TRAP. GEORGE MCEACHRON, Forsyth, Mich. Filed Mar. 12, 1908. Serial No. 420,532.

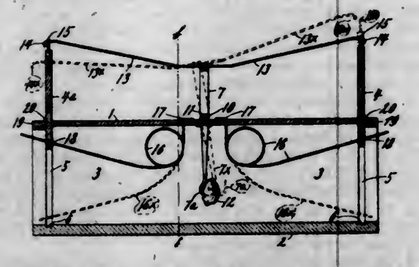


1. In an animal trap, the combination with a base bar having upstanding posts, a pair of arched jaws having their ends journaled in said posts and one or more springs

arranged to close the jaws of a lateral arm extending from the middle of the base bar and having at its outer end a post near the outer side of the adjacent jaw when the latter is open and posts 13 and 19 farther in on the arm, a lever 9 pivoted to the outer post and transversing the top of the open jaw, an angular lever pivoted in the post nearest the inner side of the jaw and having a vertical arm with a notch engaging the inner end of the lever 9 and a horizontal arm, a two-armed lever pivoted in the innermost post of the lateral arm and having one of its arms pivotally engaged with the horizontal arm of the angular lever and its other arm formed into a bait hook disposed in the middle of the trap.

2. In an animal trap of the kind described having two arched jaws, the combination with one of its jaws of a frame arm extending outward below and beyond the open jaw, of a lever pivoted to said arm outside the jaw and adapted to hold the jaw down by reaching inward over its upper edge, two levers pivotally mounted on the frame arm inside the open jaw and engaging one another, one of said two levers engaging the lever that holds down the jaw, and the other having an arm formed into a bait hook near the middle of the trap, substantially as shown and described.

897,302. ANIMAL-TRAP. CHARLES OLSON, Hector, Minn. Filed Jan. 24, 1908. Serial No. 412,496.



1. In an animal trap, in combination, an elongated box open at both ends and having a top with a central aperture and transverse slots near its end, vertically slidable doors in said slots to close the ends of the box, springs secured to the box and engaging the doors to close them, a bait hook pivotally suspended within the box near the middle of the cover and extending above the cover through said aperture therein, two arms extending from said upward extension and adapted to engage each of them one of the doors to hold them elevated, and to trip them when the bait hook is moved.

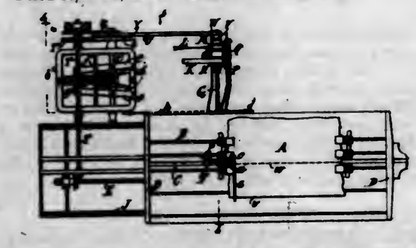
2. In an animal trap, in combination, an elongated box open at both ends and having a top with a central aperture and transverse slots near its end, vertically slidable doors in said slots to close the ends of the box, springs secured to the box and engaging the doors to close them, a bait hook pivotally suspended within the box near the middle of the cover and extending above the cover through said aperture therein, two arms extending from said upward extension and adapted to engage each of them one of the doors to hold them elevated, and to trip them when the bait is moved, said box having in its sides grooves guiding the doors.

3. In an animal trap, in combination, an elongated box open at both ends and having a top with a central aperture and transverse slots near its end, vertically slidable doors in said slots to close the ends of the box, springs secured to the box and engaging the doors to close them, a bait hook pivotally suspended within the box near the middle of the cover and extending above the cover through said aperture therein, two arms extending from said upward extension and adapted to engage each of them one of the doors to hold them elevated, and to trip them when the bait hook is moved, said box having in its sides grooves guiding the doors and grooves in its bottom for the lower ends of the doors for the purpose set forth.

4. In an animal trap, in combination, an elongated box open at both ends and having a top with a central aperture and transverse slots near its end, vertically slidable doors in said slots to close the ends of the box, springs secured to the box and engaging the doors to close them; a bait hook pivotally suspended within the box near the middle of the cover and extending above the cover through said aperture therein, two arms extending from said upward extension and adapted to engage each of them one of the doors to hold them elevated, and to trip them when the bait hook is moved, said doors having apertures and said springs being situated inside the box near the sides thereof, and having each an arm engaged in one of the apertures in the door near each side of the box.

5. In an animal trap, in combination, an elongated box open at both ends and having a top with a central aperture and transverse slots near its end, vertically slidable doors in said slots to close the ends of the box, springs secured to the box and engaging the doors to close them, a bait hook pivotally suspended within the box near the middle of the cover and extending above the cover through said aperture therein, two arms extending from said upward extension and adapted to engage each of them one of the doors to hold them elevated, and to trip them when the bait hook is moved, said doors having each in its upper end means for the arm to engage, and said arms being curved or arched downwardly at their ends to facilitate their disengagement when the bait-hook is touched by the animal.

897,303. COPING-MACHINE. JOHN R. PEIRCE, New York, N. Y., assignor to Royden Marble Machinery Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 17, 1906. Serial No. 306,557.



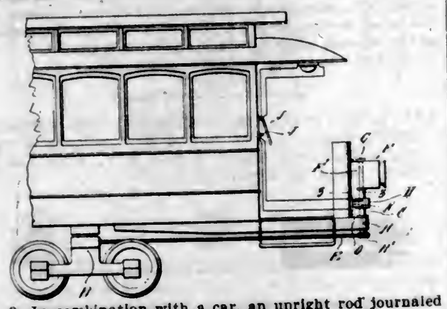
1. A machine for coping marble comprising in combination a bed B, a thin wheel F of carborundum journaled below and projecting above the bed and adapted to extend through a slab of marble on said bed, a shaft G carrying said wheel, pulleys M, N and O on said shaft, belts K and L adapted to drive in opposite directions, and belt shifters P and Q operable from the front of the machine, whereby the shaft G may be driven directly by a belt at high speed and with a frictional driving force and in either of two directions, and means for moving said bed in the direction of the plane of the wheel, whereby the wheel cuts through the slab substantially in the manner of a circular saw.

2. A machine for coping marble, comprising in combination a thin wheel F of carborundum, a bed B for carrying a slab of marble and feeding it to said wheel, a shaft G carrying said wheel, belt pulleys for driving said shaft in opposite directions directly from a belt at high speed and with a frictional driving force, a shaft E for moving said bed, mechanism for driving said shafts simultaneously, means for reversing the directions of said shafts, and means for varying the speed of movement of the bed.

897,304. CONTINUOUS TRACK-LIGHT AND AUTOMATIC SIGNAL. JOHN M. PITNEY, Jr., Lorain, Ohio. Filed May 11, 1908. Serial No. 432,184.

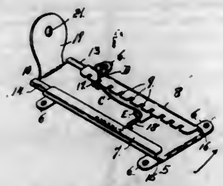
1. In combination with a car, an upright rotatable rod, a lamp mounted thereon, a fibrous cylinder fixed to said rod, a metallic band extending partially about said cylinder, contact points mounted upon the car and adapted to bear against the circumference of said cylinder, electrical circuit connections with said points, a bolster, connections between the same and said rod whereby, as the bolster turns, a rotary movement will be imparted to said rod and the circuit closed, causing a signal to be sounded simultaneously with the turning of the lamp, as set forth.

2. In combination with a car, an upright rotatable rod, a lamp mounted thereon, a fibrous cylinder fixed to said rod, a metallic band extending partially about said cylinder, contact points mounted upon the car and adapted to bear against the circumference of said cylinder, electrical circuit connections with said points, a bolster, a sprocket wheel fixed to said rod, a sprocket chain passing about said wheel and connected to the ends of said bolster, as set forth.



3. In combination with a car, an upright rod journaled in suitable bearings therein, a sprocket wheel fixed to said rod, a bolster, a sprocket chain fastened at its ends to the latter and passing about said sprocket wheel, a lamp having a socket portion fitted over an angular portion of said rod, a hinged lamp retaining member mounted upon the car and engaging said socket member, a cylinder of fibrous material upon said rod, a metallic band partially surrounding said cylinder, contact points mounted upon the car, and adapted to bear against said band and cylinder, and electric connections with said points, as set forth.

897,305. ADJUSTABLE SHADE-ROLLER BRACKET. ELSWORTH E. QUAINTANCE, Denver, Colo., assignor to The Permutation Lock and Novelty Manufacturing Company, Denver, Colo. Filed July 27, 1906. Serial No. 328,032.



1. An adjustable bracket for shade rollers, comprising two members, one being stationary and the other slidable thereon; the slidable member, being provided with two inwardly turned flanges; the stationary member also being provided with two inwardly turned flanges forming ways in which the opposite edges of the other member are adapted to slide, one of the flanges of the stationary member being provided with notches; while the corresponding flange of the slidable member is provided with a projection in which is located a slot, the slidable member being also provided with a spring locking device having one part thereof adapted to enter the slot in the projection and also the notched flange of the stationary member for the purpose set forth.

2. An adjustable shade roller bracket comprising two members, one being stationary and the other movable thereon; the stationary member having its opposite edges provided with ways adapted to receive the movable member, one edge of the stationary member being provided with a series of notches; the movable member being provided with inwardly turned flanges forming reinforced edges and provided with a spring pawl mounted on the body of the member and having one arm engaging one of the flanges, while the other arm engages a recess formed in the other flange, the said arm being also adapted to engage one of the notches of the stationary member when the two members are in the assembled relation.

3. An adjustable bracket for shade rollers, comprising a stationary member formed from an integral piece of sheet metal whose opposite sides are bent inwardly forming ways and whose opposite ends are bent underneath, forming reinforced extremities having apertured lugs protruding beyond the sides of the member, one of the side flanges being provided with a series of notches; the movable member being formed from an integral piece of sheet metal having its opposite sides bent inwardly, forming reinforced edges and having one extremity bent outwardly at right angles to its body portion and provided with an opening to receive the pin of one extremity of the shade roller, the slidable member being also provided with a spring pawl adapted to engage a recess formed in one of its flanges, the recessed part extending inwardly beyond the notched flange of the stationary member when the two members are assembled.

897,306. GLOVE. JOSEPH ROSENFELD, Detroit, Mich. Filed Dec. 20, 1907. Serial No. 407,282.



1. A glove finger having a reinforcing extension, a strand tied about the finger at the junction of the reinforcement therewith, and said reinforcement being turned onto the end of the finger so formed.

2. A glove finger having an integral reinforcing extension, a strand tied about the finger at the junction of the end of said finger and said reinforcement, said reinforcement being turned back onto the end of the finger so formed.

3. A glove finger having an integral reinforcement extending therefrom, of a thickness less than that of the finger proper, a strand tied about the finger at the junction of said reduced reinforcement therewith to form the end of the finger and give shape to said reinforcement which is turned onto the end of the finger to increase the thickness thereof and conceal said strand.

4. A glove having a finger provided with a reinforcing extension of the same diameter as the finger and formed integral therewith, a strand tied about the finger at the junction of said reinforcement therewith to close the end of the finger proper and give shape to said reinforcement which is turned onto the end of the finger to conceal said contracting strand.

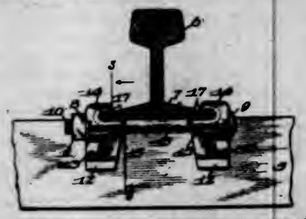
5. A glove having the fingers thereof provided with reinforcing extensions and having the hand portion thereof provided with an extending reinforcement adapted to be turned onto said hand portion, the fingers having strands wrapped about them to contract their tubular formation and close the ends of the fingers, said strand being wrapped about the fingers at the juncture of the reinforcing portions therewith which reinforcing portions are turned onto the fingers and are secured at their ends to the inner end of the reinforcement of the hand portion of the glove.

[Claims 6 to 10 not printed in the Gazette.]

897,307. RAIL-STAY. JOHN M. SCOTT, Racine, Wis., assignor to Otto R. Barnett, Chicago, Ill. Filed Sept. 25, 1907. Serial No. 394,525.

1. In a rail stay, the combination of opposed clamping members, with means for clamping the same against the

rail flange, and a U-shaped, hard-metal, gripping device associated with one of said members and adapted to extend around the edge of and bite into the rail flange.



2. In a rail stay, the combination of opposed clamping members, with means for clamping the same upon the rail flange, a jaw on one of said clamping members, and a hard-metal, gripping device in said jaw, said device formed so as to bite into the rail flange from above and below.

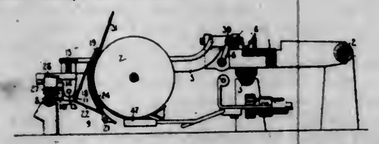
3. In a rail stay, the combination of opposed clamping members, with means for clamping the same upon the rail flange, a jaw on one of said clamping members, said jaw having a groove, and a hard-metal gripping device in the groove, said device bent upon itself so as to extend around the edge of the rail flange.

4. In a rail stay, the combination of opposed clamping members, with means for clamping the same upon the rail flange, a jaw on one of said clamping members, and a hard-metal gripping device in said jaw, said device formed with an edge and so as to bite into the rail flange from above and below.

5. In a rail stay, the combination of opposed clamping members, with means for clamping the same upon the rail flange, a jaw on one of said members, and a hard-metal gripping device in said jaw, said device consisting of a rod bent upon itself and angular in cross section so as to form an edge extending around and biting into the rail flange.

[Claim 6 not printed in the Gazette.]

897,308. TYPE-WRITING MACHINE. CHARLES H. SHEPARD, New York, N. Y., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Original application filed July 17, 1902, Serial No. 115,922. Divided and this application filed Sept. 6, 1905. Serial No. 277,207.



1. In a typewriting machine, the combination of a platen, a paper feed roller adapted to coöperate with said platen, an adjustable support for said roller and upon which support the roller is adapted to be moved into or out of contact with the platen, and a spring which is adapted to exert a pressure upon said roller to maintain it in contact with the platen and which constitutes a portion of the support and a portion of the means by which the support is held in place and enables it to be clamped in the adjusted position.

2. In a typewriting machine, the combination of a platen, a paper feed roller adapted to coöperate with said platen, an adjustable support for said roller and upon which support the roller is adapted to be moved into or out of contact with the platen, and a spring which is adapted to exert a pressure upon said roller to maintain it either in or out of contact with the platen and which constitutes a portion of the support and a portion of the means by which the support is held in place and enables it to be clamped in the adjusted position.

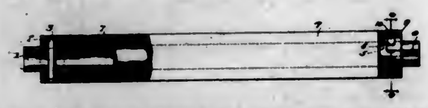
3. In a typewriting machine, the combination of a movable platen carriage, paper guiding mechanism carried by the carriage and which coöperates with the platen and which is maintained in such coöperation by the carriage when it is in the operative position, and means for effecting a movement of said guiding mechanism away from the operative position by a movement of the platen.

4. In a typewriting machine, the combination of a swinging platen carriage, paper guiding or feeding devices that coöperate with the platen and are carried by and travel with the carriage, and mechanism for automatically changing the position of the guiding and feeding devices with relation to the platen by a swinging movement of the carriage away from the operative position.

5. In a typewriting machine, the combination of a swinging platen carriage, spring pressed paper guiding or feeding devices that coöperate with the platen, and mechanism for automatically relieving the spring pressure of the paper devices on the platen by a swinging movement of the carriage away from the operative position.

[Claims 6 to 20 not printed in the Gazette.]

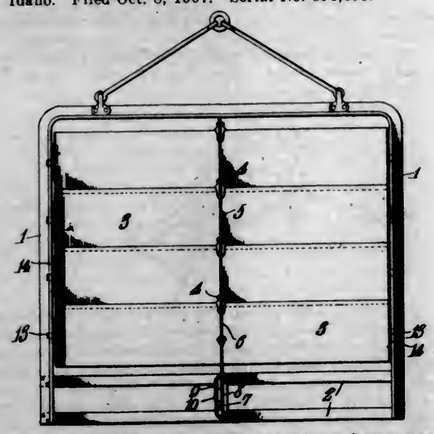
897,309. VULCANIZING-MANDREL FOR RUBBER HOSE. SAMUEL J. SILL, Buffalo, N. Y., assignor of one-half to Herbert H. Hewitt, Buffalo, N. Y. Filed Jan. 8, 1908. Serial No. 409,773.



1. A vulcanizing mandrel for rubber hose comprising a cylindrical body having a fixed collar at one end and having at its opposite end a collar removably encircling said mandrel and detachably interlocked therewith.

2. A vulcanizing mandrel for rubber hose comprising a body having a fixed collar at one end and having a detachable collar at its opposite end, said detachable collar being connected by a bayonet joint to the body of the mandrel.

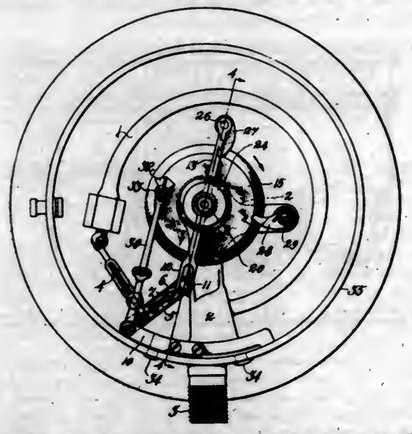
897,310. SOIL-PULVERIZER. JOHN M. SIVADIE, Orofino, Idaho. Filed Oct. 8, 1907. Serial No. 396,498.



1. An implement as described comprising a frame, members pivoted at their ends to the sides of said frames and having at the bases of their pivots inclined guides which are wedge-shaped in cross-section.

2. An implement as described comprising a frame, a member pivotally mounted therein and having a body portion formed up of sheet metal substantially U-shaped, a strip of channel iron connecting the ends of the U-shaped portions together, strips inserted in the ends of the pivoted member and having trunnions which engage the frame.

897,311. PRESSURE-RECORDER. GEORGE SPENCER, Medford, Mass., assignor to Crosby Steam Gage and Valve Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 13, 1908. Serial No. 420,795.

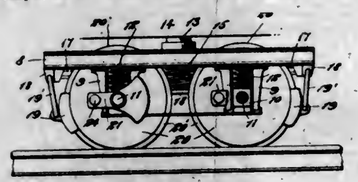


1. A pressure recording gage comprising in combination a Bourdon tube spring, a chart and a rotary chart support, with means comprising a friction driving pawl, actuated by said Bourdon tube spring whenever and while expanding under pressure, for rotating said chart support in one direction, means simultaneously actuated by said Bourdon tube spring for recording such pressure upon said chart and means comprising a friction retaining pawl for preventing the rotation of said chart support in the opposite direction; substantially as described.

2. A pressure recording gage comprising in combination a Bourdon tube spring, a chart and a rotary chart support, with means, actuated by said Bourdon tube spring whenever and while expanding under pressure, for rotating said chart support in one direction, means simultaneously actuated by said Bourdon tube spring for recording such pressure upon said chart and means for preventing rotation of said chart support in the opposite direction; substantially as described.

3. In a pressure recording gage the combination, with a Bourdon tube spring, pen, chart and rotary chart support, of means, actuated by said Bourdon tube spring whenever and while expanding under pressure, for simultaneously rotating said chart support and moving said pen over said chart; substantially as described.

897,312. ELECTRIC LOCOMOTIVE. ELMER A. SPERRY, Brooklyn, N. Y. Filed Feb. 7, 1908. Serial No. 414,674.



1. In a locomotive, a plurality of wheeled driving axles for developing the tractive effort, divided motive power consisting of a motor, for each axle, a truck-frame holding the motors, provided with means at considerable elevation from the roadway, for delivering the effort thus developed to the load and means for rotatively coupling the axles.

2. In a locomotive, a plurality of wheeled driving axles for developing the tractive effort, divided motive power consisting of a motor, for each axle, a truck-frame holding the motors and retarding means, provided with means at considerable elevation from the roadway for delivering the effort thus developed to the load, and means for rotatively coupling the axles.

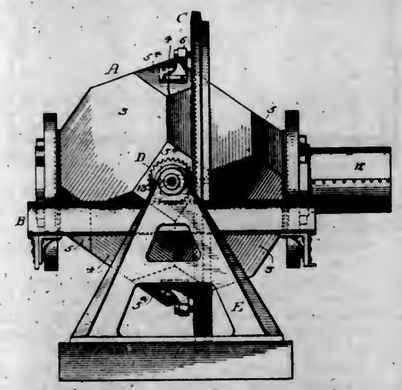
3. In a locomotive, a plurality of wheeled driving axles for developing the tractive effort, divided motive power consisting of a motor, for each axle, a truck-frame holding the motors, providing journals for the axles outside the wheels, and also provided with means at considerable elevation from the roadway, for delivering the effort thus developed to the load and means for rotatively coupling the axles located outside the truck-frame.

4. In a locomotive, a plurality of wheeled driving axles in close relation, for developing the tractive effort, divided motive power consisting of a motor, for each axle, practically filling the space between the wheels, a truck-frame holding the motors, provided with means at considerable elevation from the roadway, for delivering the effort thus developed to the load and means for rotatively coupling the axles.

5. In a two axled locomotive truck, the axles being in close relation for developing the tractive effort, divided motive power consisting of a motor, for each axle, a truck frame holding the motors provided with a swiveling bolster at a considerable elevation from the roadway for supporting the load and means for rotatively coupling the axles.

[Claims 6 to 23 not printed in the Gazette.]

897,313. MIXING-MACHINE. WILLIAM O. STARK, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Dec. 18, 1905. Serial No. 292,190.



1. In a mixing machine, a rotary mixing receptacle supported for operation about a diagonal axis and having interior plane surfaces inclined to the axis of rotation and having an opening for the passage of material concentric, or substantially so, with such axis of rotation, the interior angles formed by the conjunction of the plane surfaces being obtuse angles in effect produced by cutting away the corner portions of a cube or cubiform mixing box.

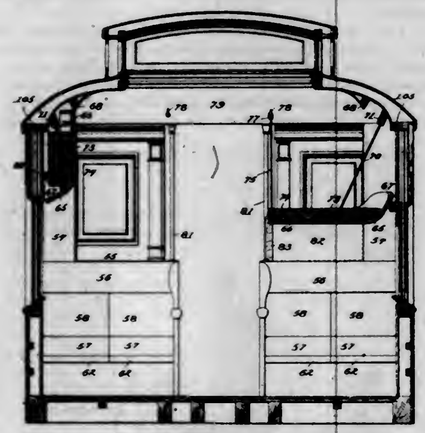
2. In a mixing machine, a rotary mixing receptacle supported for operation about a diagonal axis and having interior plane surfaces inclined to the axis of rotation and having openings for the passage of material concentric, or substantially so, with the axis of rotation, the interior angles formed by the conjunction of the plane surfaces being obtuse angles in effect produced by cutting away the corners and other rectangular portions of a cube or cubiform mixing box; and means for tilting said receptacle in directions to tilt its axis of rotation.

3. In a mixing machine, a rotary mixing receptacle having interior plane surfaces corresponding with plane side portions formed by cutting away the corner portions and intervening angular portions of a cube, the mixing receptacle being mounted to revolve about an axis corresponding with an axis extending between and through diago-

nally opposite corners of a cube, and having opposite openings for the passage of material concentric, or substantially so with said axis.

4. In a mixing machine, a rotary polyhedric mixing box having plane side portions inclined to the axis of rotation, and having an annular series of plane side portions 5^a; an annular rack around the mixing receptacle and secured upon the plane side portions 5^a; a driving pinion engaging the annular rack, and means for tilting the mixing receptacle; said mixing receptacle being provided with an opening for the passage of material concentric, or substantially so, with its axis of rotation.

897,314. CAR CONSTRUCTION. FRANK E. STEBBINS, Washington, D. C. Filed Dec. 9, 1893. Serial No. 571,578.



1. The combination in a car, of two seats facing each other, each seat having a cushion and movable back upholstering; grooved plates suitably supported; and journals carried by the seat cushion and located in the grooves of the plates.

2. The combination in a car, of two seats facing each other, each seat having two cushions and movable back upholstering made in two parts; grooved plates suitably supported; and journals carried by the seat cushions and located in the grooves of the plates.

3. The combination in a car, of two seats facing each other, each seat having a cushion and movable back upholstering; grooved plates; journals carried by the seat cushions and located in the grooves of the plates; and removable means located at the front edges of the cushions for raising the edges and causing the cushions to slant rearwardly.

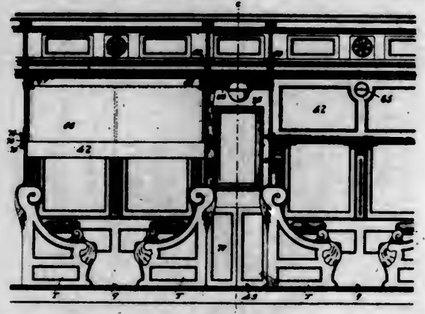
4. The combination in a car, of two seats facing each other, each seat having two cushions and movable back upholstering in two parts; grooved plates; journals carried by the cushions and located in the grooves of the plates; and movable means at the front under surfaces of the cushions for raising the outer edges of the same.

5. The combination in a car, of two seats facing each other, each seat having a cushion with a strip, as 62, secured to its under surface and said strip provided with a pin or pins, as 63; and a seat rail with a hole or holes for the pin or pins.

[Claims 6 to 71 not printed in the Gazette.]

897,315. CAR CONSTRUCTION. FRANK E. STEBBINS, Washington, D. C. Filed Dec. 24, 1897. Serial No. 663,352.

1. The combination with a car, of two seats facing each other and each provided with a single integral movable cushion, and back upholstering; one of said back upholsterings being divided and a part thereof removable and adapted to fit the space between the cushions; and means for supporting said removable part in position, whereby a part of the area between the backs may be transformed into a lounge by day.



2. The combination with a car, of two seats facing each other, seat cushions provided with journals traveling in slots, seat rails, the said cushions being adapted to be drawn out and supported on the rails, and in connection with the removable back upholsterings forming a lower berth; and removable back upholsterings adapted to fit the spaces between the rear edges of the cushions when drawn out and the back boards.

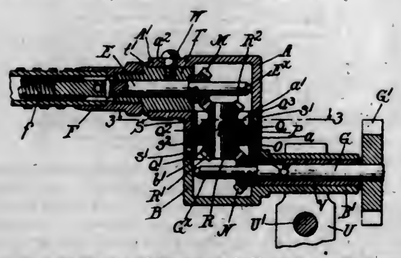
3. The combination in a sleeping car, of two seats facing each other and having removable cushions; means for raising the outer edges of the cushions; and means connecting the rear edges of the cushions with the seat frames which will allow the cushions to be drawn out and which will support the same and prevent the front edges from dropping when so drawn out.

4. The combination in a sleeping car, of two seats facing each other and having movable cushions; movable means for raising the outer edges of the cushions; back upholsterings one of which is made in two parts; and means for supporting part of the back upholstering between the two cushions, when the means for raising the outer edges have been removed, whereby a sofa is formed for day use.

5. The combination in a car, of two seats facing each other; movable cushions; movable back upholsterings, one of which is made in two parts; pieces hinged to the seat rails for raising the outer edges of the cushions; and means for supporting a part of a back upholstering between the edges of the cushions when said edges are lowered.

[Claims 6 to 118 not printed in the Gazette.]

897,316. SWIVEL-JOINTED SHAFT. JOHN K. STEWART, Chicago, Ill. Filed Nov. 1, 1907. Serial No. 400,166.



1. In a device for the purpose indicated, a case comprising two members having each an open end and assembled with their open ends seating one upon the other for rotation about an axis at right angles to their meeting plane, and a device for connecting said two members for such rotation consisting of two annular diaphragms formed separately from said members and inserted and secured in the proximate ends of said members respectively, and a coupling sleeve extending through said annular diaphragms, longitudinally stopped with respect thereto and loose for rotation in one of them.

2. In a device for the purpose indicated, a case comprising two members having each a closed end and an open end and assembled with their open ends seating one upon the other for rotation about an axis at right angles to their meeting plane; a device for connecting said two members for such rotation consisting of an annular diaphragm inserted and secured in the open end of each member and formed separately therefrom for such insertion and securement, and a coupling sleeve extending loose through one diaphragm, longitudinally stopped thereon at the inner side thereof and made fast in the other diaphragm.

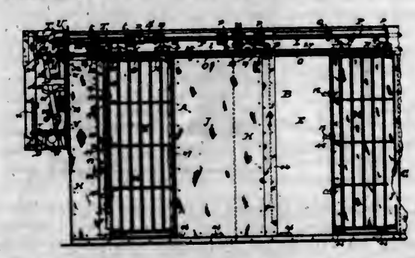
3. In a device for the purpose indicated, a gear casing comprising two members which have each a closed and an open end and which are assembled with their open ends facing; a device for connecting said two members with capacity for relative rotation about an axis at right angles to their meeting plane, consisting of two annular diaphragms formed separately from said members respectively, and inserted and made fast in the proximate ends of said respective members, and a sleeve which connects them rotatably about the axis thereof.

4. In a device for the purpose indicated, a gear case comprising two members assembled end to end with capacity for rotation about an axis at right angles to their meeting plane and having their opposite ends closed; a device for connecting said two members for such rotation consisting of diaphragms for closing their meeting ends; a sleeve which connects said diaphragms rotatably about the axis of the sleeve, said members being interiorly shouldered to stop the diaphragms respectively, the diaphragms being adapted to be forced tight into the sleeves to the shoulders and to retain the two members together by their frictional engagement with said members respectively.

5. In a device for the purpose indicated, a case comprising two members having each a closed end and an open end, and assembled with their open ends seating one upon the other for rotation about an axis at right angles to their meeting plane; a device for connecting said two members for such rotation consisting of two diaphragms adapted to be driven tight into the ends of said members respectively, and axially apertured and provided with a swivel connection about such axial apertures.

[Claims 6 and 7 not printed in the Gazette.]

897,317. CELL-DOOR OPERATING AND LOCKING MEANS. RICHARD C. STEWART and WALLACE A. STEWART, Covington, Ky., assignors to Stewart Jail-Works Company, Covington, Ky., a Corporation of Kentucky. Filed July 17, 1907. Serial No. 384,261.



1. In a cell door manipulating means, the combination of a series of alined, sliding cell-doors, locking means for each which act automatically when a door is closed, two bars supported above these doors parallel to their upper edges, one of which is adapted to be operatively connected to all the locking-means mentioned, the other in like manner to the doors, and means to shift each bar length-wise and whereby, when the first bar is shifted, the locking-means of all doors are acted upon to unlock them, after which when the second bar is shifted, the unlocked doors may be moved in either direction.

2. In combination with a series of alined, sliding cell-doors provided with locking means, a longitudinally movable bar supported above their upper edges, arms rigidly connected to this bar, and complementary projections at the upper edges of the doors adapted to be engaged by the former, and means to adjust this bar length-wise for the purpose of moving the doors from one of their extreme positions into the other one and back again.

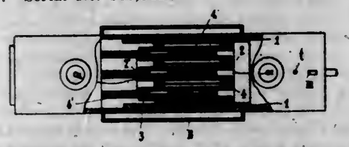
3. In combination with a series of alined, sliding cell-doors, a longitudinally movable bar supported above them, means to operatively connect the doors thereto, a worm at one end of this bar, a nut which receives the same and which is supported in a manner to be free to rotate in a longitudinally fixed position, devices to rotate this nut and means to prevent the worm from rotating with the nut.

4. In combination with a series of alined, sliding cell-doors, a longitudinally movable bar supported above them, having also a rotary movement, devices to operatively connect any or all doors to this bar, means to rotate this latter for purpose of such connection and means to slide it longitudinally to move the doors connected thereto.

5. In combination with a series of alined, sliding cell-doors, a longitudinally movable bar supported above them, having also a rotary movement, arms on said bar one for each door, there being also projections on the upper edges of said doors adapted to be engaged by these arms, which arms are mounted in different radial positions so that when one arm engages any particular door, no other door is so engaged, means to rotate this bar for purposes of such engagement, and means to move it with the connected doors longitudinally.

[Claims 6 to 18 not printed in the Gazette.]

897,318. OZONIZER. JAN STEYNIS, New York, N. Y., and HENRI CHAUMAT, Paris, France. Filed Mar. 6, 1907. Serial No. 360,841.



1. The improved ozonizer comprising a box with detachable ends, insulated electrodes, an ozonizer block composed of two series of metal plates alternately connected to one and the other of said electrodes, one series of said plates being stationary and the other movable to vary the length of the effluvia, and means for insulating said metal plates, substantially as and for the purpose specified.

2. The improved ozonizer comprising a box with detachable ends, insulated electrodes, an ozonizer block composed of two series of metal plates alternately connected to one and the other of said electrodes, one series of said plates being stationary and the other movable to vary the length of the effluvia, porcelain blocks arranged in steps out of the path of effluvia to guide the movable plates, and glass plates for insulating the plates of different polarity, substantially as and for the purpose specified.

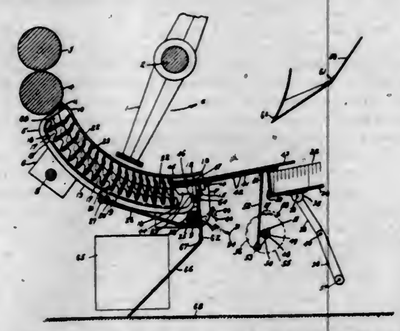
897,319. STUD OR RIVET. EDWIN B. STIMPSON, New York, N. Y., assignor to Edwin B. Stimpson Company, a Corporation of New York. Filed Dec. 11, 1906. Serial No. 347,265.



A stud for the purpose specified, having a malleable head swaged into the cavity of the hard, cup-like steel

cover, the said cover being contracted about its sides and extending over the crown of said head, and said cover having in it an aperture, as set forth.

897,320. COTTON-PICKER MACHINE. AMASA ST. ONGE, Providence, R. I., assignor to Clements A. Brown and said Amasa St. Onge, Providence, R. I., Copartners as The Brown-St. Onge Company. Filed June 25, 1907. Serial No. 380,767.



1. The improved grid for cotton picker machines herein described, consisting of the combination of two curved side plates; a laterally extending detachable flange on the upper edge of each side plate; a laterally extending flange on the lower edge of each side plate; a plurality of lugs in series upon each side plate, which at their upper contiguous corners are equi-spaced apart, each lug having its rear edge directed radially with respect to the curvature of that side plate to which it is fixed and its forward edge at an acute angle to its said rear edge; two curved plates mounted slidably on the lower flange of each side plate and provided with teeth, whose forward edge is directed radially with respect to the curvature of the curved plate to which it belongs and whose rear edge is at an acute angle to its said forward edge; a series of grid bars mounted at their bottom edges between teeth of said two notched plates, respectively, each of which bars has a straight body portion and an upper bent end, terminating in a short upper edge, the body portion of each bar being of a thickness nearly equal to the said space between each two contiguous lugs, so as to be capable of a sliding movement loosely between said lugs, but in contact with each, and the bottom edge of each bar being rounded and seated in the recess between two corresponding contiguous teeth of said notched plate, which recess is approximately equal in width to the thickness of the body portion of said bar; and means for giving a longitudinal movement and adjustment to said notched plates upon said side plates, respectively.

2. The improved grid for cotton picker machines herein described, consisting of the combination of two curved side plates, each having flanges upon its upper and lower edges; a plurality of fixed lugs in series upon each side plate, each lug having two fulcrum edges on its upper surface on opposite sides thereof, respectively, one fulcrum edge being nearer the upper edge of the side plate than the other is; a curved plate mounted slidably upon the lower flange of each side plate and having teeth, each of which teeth is beveled on one side thereof; a series of grid bars, each of uniform thickness, and approximately equal to the width of the recess between the contiguous teeth of the notched plate, and each bar having a bent upper end, terminating in a sharp edge, and a rounded bottom edge seated in two corresponding tooth recesses of the notched plates; and means for longitudinally moving and adjusting each notched plate, each of said bars being adapted to slide between said fixed lugs as guides and to fulcrum on the upper corners thereof, respectively, according to the direction of movement of said notched plates.

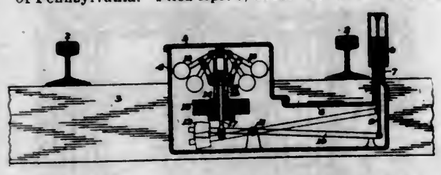
3. The improved grid for cotton picker machines herein described, consisting of the combination of two curved side plates; a series of fixed lugs on each side plate and having equal spaces between each upper corner thereof and the corner of the next contiguous lug; two plates mounted slidably on the side plates and each provided with a series of teeth with equal intervening spaces; and a plurality of grid bars, seated in said tooth-spaces, respectively, and having a thickness equal to the width of said tooth-spaces at the bottom thereof and to said lug spaces at the top thereof and arranged to have a constant bearing and contact upon both their forward and rear sides upon said corners of said adjacent lugs, respectively, and adapted to change their angular direction proportionately with the movement of the notched plates.

4. The improved grid for cotton picker machines herein described, consisting of the combination of two curved side plates; a series of fixed lugs on each side plate and having equal spaces between each upper corner thereof and the corner of the next contiguous lug; two plates mounted slidably on the side plates and each provided with a series of teeth with equal intervening spaces; a plurality of grid bars, seated in said tooth-spaces, respectively, and having a thickness equal to the width of said tooth-spaces at the bottom thereof and to said lug spaces at the top thereof and arranged to have a constant bearing and contact upon both their forward and rear sides upon said corners of said adjacent lugs, respectively, and adapted to change their angular direction proportionately with the movements of the notched plates; and an integral head upon the upper end of each grid bar, provided with a sharp whipping edge, all so arranged and combined that said whipping edges are always equally distant from each other, whatever may be the angular direction of said bars, caused by the movements of said notched plates.

5. The improved grid for cotton picker machines herein described, consisting of the combination of two curved side plates; a series of fixed lugs spaced equally apart on each side plate; a plate mounted slidably on each side plate and each provided with teeth spaced equally apart; a plurality of grid bars mounted on their bottom edges in said tooth-spaces of the second named plates, respectively, and each in contact with said lugs, respectively, on both their contiguous front and rear sides; and an integral head on the upper end of each bar, provided with an acute-angled whipping edge, all said whipping edges being disposed in one curve symmetrically and concentrically with the curved edges of both of said side plates, whatever may be the angular direction of said bars, caused by the movements of said notched plates.

[Claims 6 to 11 not printed in the Gazette.]

897,321. CENTRIFUGALLY-ACTUATED TRAIN-STOP. JACOB B. STRUBLE, Swissvale, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Apr. 7, 1908. Serial No. 425,791.



1. A track stop arranged to be moved into and out of operative position, a centrifuge for shifting the stop, and a motor for driving the centrifuge; substantially as described.

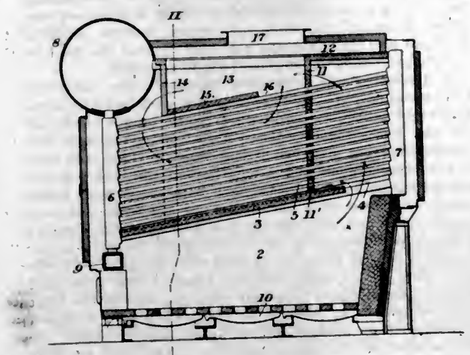
2. A vertically movable train stop, a centrifuge arranged to shift said stop from one position to another, a motor for driving the centrifuge, and means operating by gravity to shift the stop in the oppcsite direction to that in which it is actuated by the centrifuge; substantially as described.

3. A track stop movable relatively to one of the track rails, a centrifugal device for actuating said stop, a motor for driving the centrifugal device, and means whereby when the motor ceases to act the stop will be shifted in the reverse direction; substantially as described.

4. A vertically movable track stop, actuating mechanism therefor, and a casing inclosing said mechanism and having an upwardly extending portion through which the track stop is connected with the operating mechanism and which is telescopically engaged with the stop; substantially as described.

5. A track stop having an inclosing casing provided with a lateral extension underneath one of the track rails, and with an upward extension at the outer side of said rail, a centrifuge for shifting the track stop, and connections from the centrifuge to the track stop, said connections extending through the said lateral and upward extensions of the casing; substantially as described.

897,322. WATER-TUBE BOILER. LELAND L. SUMMERS, Barberton, Ohio, assignor to The Babcock & Wilcox Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 30, 1906. Serial No. 298,618.



1. In a water tube generator having a reverberatory arch or covering extending partially over its furnace, and having a transverse opening at the rear forming an upward path for the gases, transverse and longitudinally arranged baffings arranged to form forwardly extending longitudinal side passes for the gases, and also a central rearwardly extending pass communicating at the front with the side passes and with the stack at the rear, substantially as described.

2. In a water tube generator of the class described, a reverberatory arch or covering extending partially over the furnace, an upward passage for the gases between the end wall of the furnace and the reverberatory arch or covering, a transverse vertical baffle or baffings extending upwardly and entirely across the tubes in a vertical direction, but leaving clear spaces at each side, and subsequent longitudinal baffles or baffling arranged to cause the gases to follow a path parallel with the tubes of the generator, substantially as described.

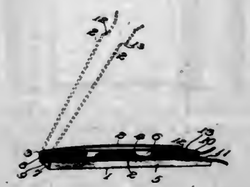
3. In a water tube boiler having a reverberatory arch or covering extending partially over the furnace, with an upward pass for the gases at the uncovered portion of the furnace, a transverse baffle, and subsequent longitudinal baffles arranged to form lateral forwardly extending gas passes and a central rearwardly extending gas pass, a space being provided between the lower edge of the transverse baffle and the said arch or covering for communication with the said central pass, substantially as described.

4. A water tube boiler having front and rear headers connected by longitudinal water tubes, a furnace below said tubes, a horizontal baffling or reverberatory arch extending over the furnace from one end for a portion of its length and located at or near the bottom of the series of tubes, a vertically extending cross baffle at the flue end of the horizontal baffle arranged to give an upward pass to the gases transversely of the tubes, said vertical baffle extending only a part of the width of the series of tubes, and longitudinal baffings arranged to give forward and back passes for the gases longitudinally of the tubes before passing to the stack, substantially as described.

5. A water tube boiler having front and rear headers connected to inclined water tubes, a horizontal baffle or roof extending from one end of the furnace short of the other end and leaving a flue at said other end, a vertical cross baffle extending upwardly from the flue end of the roof, said vertical baffle occupying the central portions of the tubes and terminating short of the sides of the series of tubes, and longitudinal baffles extending from its side edges forwardly and causing the gases to divide and flow longitudinally of the tubes in one direction and thence unite and flow backwardly longitudinally of the tubes to an outlet flue, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

897,323. HAIR-WAVER. JAMES H. TAYLOR and IZORA TAYLOR, Philadelphia, Pa. Filed Feb. 15, 1907. Serial No. 357,497.



1. A hair waver comprising a body member of channel shape in cross section, open substantially its full length on one side, and a retaining member on said open side and overlapping the longitudinal edges thereof.

2. In a hair waver a sheet metal body member of channel shape in cross section and comprising a bottom, two sides and an end, the said end and the adjoining surface of the bottom being formed with a rib.

3. In a hair waver a sheet metal body member of channel shape in cross section and comprising a bottom, two sides and an end, the said end overlapping the adjoining end edges of the said sides and the said end and adjoining surface of the bottom being formed with a rib.

4. A hair waver comprising a body member of channel shape in cross section and having an extended end forming a bearing, and retaining means hinged to said bearing, the said end and the adjoining bottom of the body member being formed with a rib for the purposes set forth.

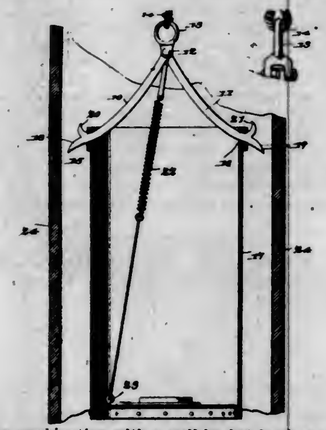
5. A hair waver comprising a body member of channel shape in cross section, open substantially its full length upon one side, a spring retaining member hinged at one end of said body member upon said open side and comprising two limbs spaced apart at one end of said body member a distance substantially equal to the width of the channel in said body member and extending normally obliquely to said body member, and means fixed at the free end of said body member to bring said limbs in substantial alinement with the planes of the sides of said body member.

[Claims 6 to 15 not printed in the Gazette.]

897,324. WELL-BUCKET. DAVID S. TERRY, Ofahoma, Miss. Filed Apr. 30, 1907, Serial No. 371,080. Renewed Jan. 30, 1908. Serial No. 413,469.

1. The combination with a well bucket having oppositely disposed apertures, of a bail jointed centrally and movable outwardly through said apertures and terminating in pointed spurs and provided with lateral projections for bearing against the exterior of the bucket and limiting the movement of the bail members in one direction.

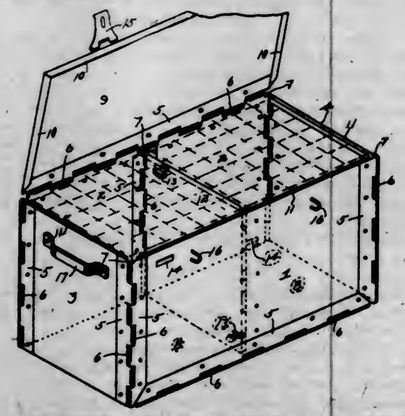
2. The combination of a well bucket having oppositely disposed apertures, a clip for supporting a draw cable, a bail formed of two parts and pivoted by one end in said clip and extending by the free ends inwardly through said apertures and terminating in pointed spurs and provided with lateral projections for bearing against the exterior of the bucket to limit the movement of the bail members in one direction.



3. The combination with a well bucket having oppositely disposed apertures, of a bail formed in two parts pivotally united at one end and movably extending through said apertures and terminating in pointed spurs and with lateral projections for bearing against the exterior of the bucket and limiting the movement of the bail members in one direction, and a spring coupled between said bucket and the pivoted connection of said bail members.

4. The combination of a well bucket having oppositely disposed apertures a clip for supporting a draw cable, a bail formed of two parts and pivoted by one end in said clip and extending by the free ends movably through said apertures and terminating in pointed spurs and provided with lateral projections for bearing against the exterior of the bucket to limit the movement of the bail members in one direction, and a spring coupled by one end to said clips and by the other end to said bucket.

897,325. COLLAPSIBLE SHIPPING-CRATE. WILLIAM E. THOROMAN, Dayton, Ohio. Filed Jan. 31, 1908. Serial No. 413,589.

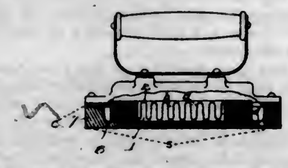


1. A collapsible sheet metal shipping crate, the same consisting of front and rear sides and bottom and top portions united by horizontal hinges extending the lengths of said front and rear and top and bottom portions, and end and central partition portions united to the front and rear portions of the crate by vertical hinges extending the entire depth of said end and central partition portions, the top and bottom portions having hasps, and the front and rear portions having staples which coöperate to maintain the top and bottom in position when the crate is in a serviceable form, or to maintain the top and bottom parallel with the rear and front portions when the crate is collapsed, and means on the central partition coöperating with means on the front and rear portions of the crate to prevent the crate from opening on the vertical hinges when in a collapsed condition.

2. In a collapsible sheet metal shipping crate, front and rear panels hinged to top and bottom portions, and end panels hinged at their opposite edges to the vertical edges of the front and rear panels, the front and rear panels having grooves in their opposite longitudinal edges and the end panels having similar grooves in their top and bottom edges, the top and bottom of the crate having marginal edges adapted to enter said grooves when the top and bottom of the crate are closed, hasps on the top and bottom of said crate, and staples on the front and rear sides thereof which coöperate with said hasps in maintaining the crate in a serviceable condition or in a collapsed condition, a central partition, and means thereon engaging the front and rear panels of the crate to hold the crate in a collapsed condition, substantially as specified.

3. A sheet metal collapsible shipping crate, the front and rear panels of which are hinged at their vertical edges to the end panels, top and bottom panels hinged to the upper and lower edges respectively, of the front and rear panels, the front and rear panels being provided each with one or more staples and a longitudinal slot, the top and bottom panels being provided each with one or more hasps which coöperate with the staples on the front and rear panels in maintaining the top and bottom of the crate in a serviceable position or in position when the crate is collapsed, a central partition in said crate hinged at its vertical edges to the front and rear panels of the crate, and means thereon which coöperate with the slots in the front and rear panels to prevent the crate when in a collapsed condition, from opening on the hinges which connect the end panels and the central partition to the front and rear panels of the crate.

897,326. ELECTRIC HEAT UNIT OR DEVICE. GEORGE H. WADE, Atlanta, Ga. Filed Mar. 9, 1908. Serial No. 419,988.



1. An electrical heating unit, comprising a ribbon of insulating and heat resisting material, a wire secured to the side of said ribbon and spacing the folds of said ribbon apart when wound, said wire being formed from material having a high temperature co-efficient.

2. In a device of the character described a heating unit formed with a plurality of layers and an electrical conductor positioned therebetween said layers causing the heat of said electrical conductor to be projected in parallelism with the plane of said layers.

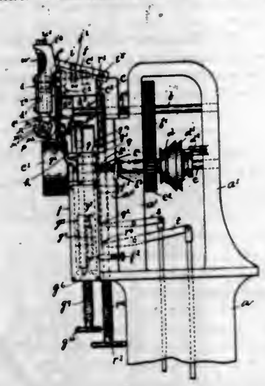
3. In a device of the character described, a heating unit formed with a plurality of layers of mica, and an electrical conductor positioned between said layers said electrical conductors spacing the said layers whereby the heat generated in said electrical conductor will be projected from between said layers.

4. An electrical heating unit comprising a strip of insulating material arranged in successive layers, and a resistance material spacing the insulating strips and arranged to provide openings extending transversely the greater part of the width of the strip.

5. An electrical heating unit comprising a strip of insulating material wound in successive convolutions, and a resistance material carried by and spacing the insulating strips and arranged to provide openings extending transversely the greater part of the width of the strips.

[Claims 6 and 7 not printed in the Gazette.]

897,327. SOLE-CHANNELING MACHINE. EDWIN A. WEBSTER, Groveland, Mass., assignor to Haverhill Channeling Machine Company, Haverhill, Mass., a Corporation of Maine. Filed Jan. 22, 1906. Serial No. 297,094.



1. In a sole channeling machine, a sole support, a knife-holder-support having guide ways disposed obliquely to said sole support, a knife-holder reciprocally mounted on said guideways, a channeling knife mounted on said holder with its blade extending parallel to said guideways to points adjacent said sole support and having a cutting edge at its end, and means for reciprocating said knife holder, substantially as described.

2. In a sole channeling machine, a sole support, a channeling knife, a support for holding said knife at an angle to the face of said sole support, means for moving said knife with relation to said support to cut the channel, and means for moving said knife support away from said sole support in the direction in which the knife extends to withdraw the latter from the channel, substantially as described.

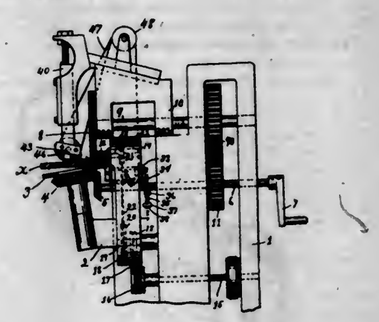
3. In a sole channeling machine, a sole support, a channeling knife having a cutting edge at its end, a knife holder, means for vibrating said holder to move said knife longitudinally in a path at an angle to said support, and means, independent of said vibrating means, for moving said holder away from said support to lift the knife above the upper side of a sole held on said support, substantially as described.

4. In a sole channeling machine, a sole support, a knife support, a channeling knife carried by said support having a cutting edge at its end, means for reciprocating said knife longitudinally to cut a channel in a sole held by said sole support, and means, independent of said reciprocating means, for moving said knife support to withdraw the knife from the channel, substantially as described.

5. In a sole channeling machine, a sole support, a knife-holder, a channeling knife carried thereby having a cutting edge at its end, means for vibrating said holder to move said knife longitudinally in a path at an angle to said support, and means, independent of said vibrating means, for moving said holder in the direction of said path and away from said support, to lift the knife above the upper side of a sole held on said support, substantially as described.

[Claims 6 to 33 not printed in the Gazette.]

897,328. SHOE-CHANNELING MACHINE. EDWIN A. WEBSTER, Groveland, Mass., assignor to Haverhill Channeling Machine Company, Portland, Me., a Corporation of Maine. Filed May 15, 1907. Serial No. 373,726.



1. A machine of the character described comprising a sole support, a knife mounted to rotate on an axis approximately parallel to said support, and extending longitudinally of said axis in position to form an upper receiving seat on the upper edge portion of a sole held on said support, said knife having its cutting edge disposed to extend obliquely rearward from its sole-edge-engaging portion, so that the leather at the edge of the sole is removed in advance of that more remotely situated from the edge, substantially as described.

2. A machine of the character described comprising a sole support and means for moving the sole thereover in a predetermined direction, a shaft rotatable about an axis approximately perpendicular to the direction in which the sole is fed and parallel to the face of said support, a cutter mounted on said shaft having a knife extending longitudinally thereof in position to engage the upper side of the sole, adjacent its edge, when held on said support, means for rotating said shaft so that the knife is advanced in the opposite direction to that in which the sole is fed while in engagement therewith, said knife having its cutting edge extending rearwardly, with relation to its direction of rotation, from its sole-edge-engaging portion, to remove the leather at the edge of the sole in advance of that situated more remotely from its edge, substantially as described.

3. A machine of the character described comprising a rotary shaft having a knife mounted thereon with its cutting edge extending longitudinally thereof, means for holding a sole with its upper side approximately parallel to the axis of the knife and for feeding it against the rotation of the knife, a presser-foot having a sole-engaging face extending longitudinally of the knife with its rear edge disposed closely adjacent the path of the edge of the knife, and means for yieldingly pressing said foot against the surface of the sole in advance of the knife, substantially as described.

4. A machine of the character described comprising a rotary shaft having a knife mounted thereon with its cutting edge extending longitudinally thereof, sole supporting and feeding means for holding a sole in position to be engaged at its upper side by the knife and for moving it against the rotation thereof, and a presser foot disposed to bear against the surface of the sole closely adjacent the point at which the knife moves out of engagement with the sole, said foot being circularly movable towards and from the sole and having means for yieldingly pressing it against the sole, substantially as described.

5. A machine of the character described comprising a rotary shaft having a knife mounted thereon with its cutting edge extending longitudinally thereof, sole supporting and feeding means for holding a sole in position to be engaged by the knife and moving it against the rotation thereof, a collar mounted at one side of said knife and having a chip guard extending longitudinally thereof in

front of its path, and means permitting circular movement of said guard to hold one edge thereof closely adjacent the surface of the sole, substantially as described.

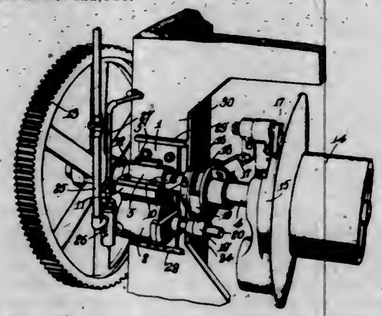
[Claims 6 to 12 not printed in the Gazette.]

897,329. HALTER. THEODORE W. WEBER, St. Louis, Mo. Filed Feb. 29, 1908. Serial No. 418,483.



The adjustable halter herein shown, consisting of a continuous strap formed with overlapped connecting ends constituting a single strap head-stall and nose-band and a triple strap reciprocating jaw-band carrying a loosely mounted lead ring, said head-stall and nose-band connected by a pair of pivotally movable check straps, substantially as set forth and for the purpose specified.

897,330. CLUTCH-THROWING MECHANISM. JAMES G. WESTBROOK, Ogdensburg, N. Y. Filed Jan. 20, 1908. Serial No. 411,846.



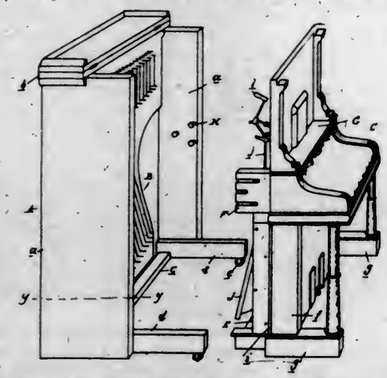
1. In mechanism of the class described, the combination with a power shaft, a clutch for transmitting movement therefrom, and a sleeve slidingly mounted to move longitudinally of said shaft for throwing said clutch, of a bearing for said shaft, a cylinder formed integral with said bearing and having its longitudinal axis parallel to the longitudinal axis of the shaft, a piston within said cylinder connected with said sleeve for actuating the same, and means for supplying pressure to the cylinder for operating the piston.

2. In mechanism of the class described, the combination with a support having spaced beads formed with undercut grooves, of a base plate beveled outwardly and adapted to have its beveled portions fit snugly within said undercut grooves, a shaft bearing carried by said plate, a power shaft mounted in said bearing, a cylinder carried by said plate in position for having its longitudinal axis parallel to the longitudinal axis of the shaft, a clutch for transmitting movement from the shaft, a piston in said cylinder adapted to actuate the clutch, and means for supplying pressure to the cylinder for actuating the piston.

3. In mechanism of the class described, the combination with a power shaft, of a bearing therefor, a base plate supporting said bearing and formed with an overhanging portion or shoulder, a cap for said bearing having a portion projecting beneath said shoulder at one side, means for securing the opposite side of the cap in position, a cylinder carried by said base plate and arranged with its longitudinal axis parallel to the longitudinal axis of the shaft, a clutch for transmitting movement from the shaft, a piston within said cylinder adapted to actuate said clutch, and means for supplying pressure to the cylinder for operating the piston.

4. In mechanism of the class described, the combination with a power shaft, of a journal bearing therefor, a plate formed integral with said bearing and provided with a groove extending longitudinally of the bearing, a cap for said bearing having a flange at one side extending into said groove, means at the opposite side of the cap for securing the same against movement, a cylinder connected with said bearing with its axis parallel to the axis of the bearing, a clutch for transmitting movement from the shaft, a piston in said cylinder for actuating the clutch, and means for supplying pressure to the cylinder for operating the piston.

897,331. MECHANICAL MUSICAL INSTRUMENT. AURA E. WHITEHEAD, Detroit, Mich., assignor to Farrand Organ Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 17, 1904. Serial No. 228,791.



1. In a piano, a case therefor divided in a vertical longitudinal plane into two separable sections a key-bed carried by the forward section and cheek plates on said forward section adjacent to said keybed and secured to the sides of the opposite section.

2. In a piano, a case therefor divided in a vertical longitudinal plane into two separable sections, projecting cheek plates on the forward section underlapping the sides of the opposite section, and means for clamping said cheek plates to the sides of the opposite section.

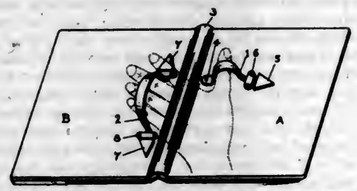
3. In a piano, a case therefor divided in a vertical longitudinal plane into two separable sections, base rails projecting forward from the rear section upon which the forward section is slidably supported and cheek plates projecting rearwardly from said forward section and means for clamping said cheek plates to the sides of the rear section.

4. In a piano, a case therefor divided in a vertical longitudinal plane into two separable sections, the harp mounted in the rear section, a key bed forming the integral part of the forward section, a cheek plate on said forward section projecting rearward therefrom adjacent to said key bed, and a clamping bolt for securing said cheek plate to the sides of the rear section to hold said key bed in rigid relation thereto.

5. In a piano, a case therefor divided in a vertical longitudinal plane into two separable sections, a keybed carried by the forward section a cheek plate having an open ended slot therein projecting from one section and adjacent to said keybed, lapping the side of the other section and a clamping bolt engaging the open-ended slot in said cheek plate, adapted to secure the same to said side.

[Claims 6 and 7 not printed in the Gazette.]

897,332. ORDER-HOLDER. WILLIAM R. WILSON, Saginaw, Mich. Filed Sept. 20, 1907. Serial No. 393,870.



1. The combination with a pair of flexibly-connected covers, of a member on the outer face of one cover adapted to receive the thumb of the operator and a member on the outer face of the opposite cover adapted to receive the fingers of the operator.

2. The combination with a pair of flexibly-connected covers, of a member extending transversely of one cover and adapted to receive the thumb of the operator and a second member extending longitudinally of the opposite cover and designed to receive the fingers of the operator.

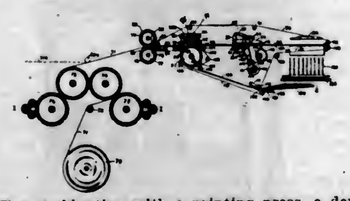
3. The combination with a pair of flexibly-connected covers, of a strap secured at one end to one of the covers near its inner longitudinal edge and extending transversely of the cover toward its outer longitudinal edge, a keeper under which the free end of the strap loosely passes, an enlargement on the free end of the strap, a second strap extending longitudinally of the opposite cover and located near the inner longitudinal edge thereof, keepers under which the free ends of the longitudinally-extending strap pass and enlargements on the ends of the last-named strap for preventing its disengagement from the keepers.

4. The combination with the covers of a book, of flexible straps secured to the outer faces of the covers and so located as to receive the fingers and thumb of an operator.

5. The combination with the covers of a book, of flexible straps secured to the outer faces of the covers and so located as to receive the fingers and thumb of an operator, at least one end of each strap being free, keepers under which the free ends of the straps loosely pass, and means for preventing the disengagement of the free ends of the straps and the keeper.

[Claims 6 and 7 not printed in the Gazette.]

897,333. ASSOCIATING AND COLLECTING MECHANISM. HENRY A. W. WOOD, New York, N. Y., assignor to Campbell Printing Press & Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Mar. 4, 1898, Serial No. 612,548. Renewed Jan. 24, 1908. Serial No. 412,492.



1. The combination with a printing press, a device for assembling printed products coming therefrom, a stationary stapling device, means for causing the same to act intermittently, means for carrying the assembled products as they are made through the stationary stapling device, and means for effecting a momentary stationary relation between the assembled product and the stapling device as the same acts.

2. The combination of a web-associating mechanism, a stationary wire stapling device, means for leading the associated webs on the run through the stationary stapling device, and means for effecting a momentary stationary relation between the wire stapling device and the webs while the stapling device acts.

3. The combination of a web-associating mechanism, a stationary stapling device, means for advancing the associated webs through the stationary stapling device, means for effecting a momentary stationary relation between associated webs and the stapling device while the latter acts, and means for cutting off the ends of the associated and stapled webs.

4. The combination of a web-associating device, a stationary stapling device, means for leading the associated webs on the run through the stationary stapling device, means for momentarily stopping the section of the associated webs in the stapling device and then advancing the same at an accelerated speed, and means for causing the stationary stapling device to act while the section of the associated webs stands still in the stapling device.

5. The combination of a web-associating mechanism, a stationary stapling device, a folder mechanism, means for continuously leading the associated webs from the web-associating mechanism to the folder, means for causing the section of associated webs passing through the stapling device momentarily to dwell and then to advance at an accelerated speed, and means for causing the stapling device to act during the dwell of the associated webs.

[Claims 6 to 18 not printed in the Gazette.]

897,334. METHOD OF MANUFACTURING ELASTIC MATERIAL. ARTHUR ADLER, Vienna, Austria-Hungary, assignor to Rudolf Neufeld, Vienna, Austria-Hungary. Filed Aug. 19, 1907. Serial No. 389,218.

1. The method of manufacturing elastic chrome-glue compositions as substitutes for india rubber and the like, consisting in adding lead-plaster to the known basic mass of glue glycerin and chrome salts.

2. The method of manufacturing elastic chrome-glue compositions as substitutes for india rubber and the like, consisting in adding lead-plaster in combination with vegetable matters to the known basic mass of glue glycerin and chrome salts.

3. The method of manufacturing elastic chrome-glue compositions as substitutes for india rubber and the like, consisting in adding lead-plaster (in combination with adraganth, gum resins, vegetable balsams, water glass, and vegetable fibers treated with acid) to the known basic mass of glue glycerin and chrome salts.

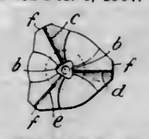
897,335. DRILL-CHUCK. THOMAS R. ALMOND, Yonkers, N. Y., assignor to T. R. Almond Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Dec. 29, 1904. Serial No. 238,724.



In a chuck, the combination of the body having a tapering front end, longitudinal recesses converging toward

said end, and an annular recess communicating with said longitudinal recesses, a ring surrounding the body in the rear of said annular recess, and rigidly secured to the body, a rotatable ferrule surrounding the body loosely in advance of said ring and in line therewith, said ferrule inclosing the annular recess of the body, a sectional nut located in said annular recess and arranged to rotate in unison with the ferrule, bearing balls interposed between the adjacent ends of the ring and ferrule, and converging jaws mounted to slide in the longitudinal recesses of the body and screw-threaded to fit the said nut.

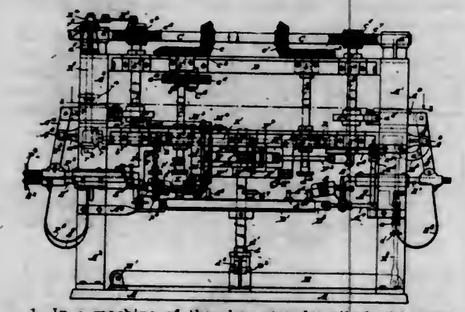
897,336. ROCK-DRILL. ROBERT H. ANDERSON, Germiston, Transvaal. Filed Feb. 6, 1907. Serial No. 355,982.



1. A detachable cutting head for rock drills, comprising a body portion having a flat base for engagement with a shank, cutting edges disposed upon the face of said body portion, and a stem centrally disposed on said base and forming therewith a rivet-like shaped structure and internally inclined faces in said head forming a hole centrally disposed therein, said inclined faces being provided with grooves, substantially as described.

2. A detachable cutting head for rock drills comprising a stem on the base of said head and internally inclined faces in said head, forming a hole centrally disposed therein said inclined faces being provided with grooves, substantially as set forth.

897,337. CAN CRIMPING AND SOLDERING MACHINE. FREDERICK W. BALLARD, Cleveland, Ohio, assignor to The Sherwin-Williams Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 24, 1905. Serial No. 270,898.



1. In a machine of the character described, the combination of end standards; cross-bars joining the same; a rotatable carrier-frame mounted on a vertical axis beneath said cross-bars and intermediately of said standards; spaced disks rotatably mounted around said carrier frame; and vertical shafts mounted in said cross-bars and bearing disks on their lower ends adapted to coöperate with the disks on said carrier frame to grip and rotate cans placed thereon.

2. In a machine of the character described, the combination of end standards; cross-bars joining the same; a carrier frame mounted on a vertical axis beneath said cross-bars and intermediately of said standards, spaced disks rotatably mounted around said carrier frame; vertical shafts mounted in said cross-bars and bearing disks on their lower ends adapted to coöperate with the disks on said carrier frame to grip and rotate cans placed thereon; and reciprocable members, bearing devices respectively designed to operate upon cans thus held and rotated, mounted in said standards.

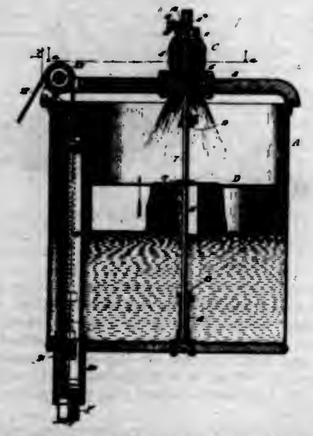
3. In a machine of the character described, the combination of end standards; cross-bars joining said standards; a horizontal drive shaft having its ends mounted in the tops of said standards; a step located intermediately of said standards; a vertical spindle having its lower end mounted in said step and its upper end in the lowermost of said cross-bars; a carrier frame borne by said spindle; uniformly spaced disks rotatably mounted around said carrier frame; and a plurality of vertical shafts mounted in said cross-bars and bearing disks on their lower ends adapted to coöperate with the disks on said carrier frame, to grip and rotate cans placed thereon, said frame-bearing spindle and vertical shafts being respectively operatively connected with said drive shaft.

4. In a machine of the character described, the combination of end standards; cross-bars joining said standards; a horizontal drive shaft having its ends mounted in the tops of said standards; a step located intermediately of said standards; a vertical spindle having its lower end mounted in said step and its upper end in the lowermost of said cross-bars; a carrier frame borne by said spindle; uniformly spaced disks rotatably mounted around said carrier frame; means adapted to periodically rotate, and means adapted to raise, said spindle and attached carrier frame; a plurality of vertical shafts mounted in said cross-bars and bearing disks on their lower ends adapted to coöperate with the disks on said carrier frame to grip and rotate cans placed thereon when said carrier frame is thus raised; and reciprocable members, bearing devices respectively designed to operate upon cans thus held and rotated, mounted in said standards; said frame-bearing spindle, vertical shafts, and reciprocable members being respectively operatively connected with said horizontal drive shaft.

5. In a machine of the character described, the combination of end standards; cross-bars joining the same; a rotatable carrier frame mounted on a vertical axis beneath said cross-bars and intermediately of said standards; spaced disks rotatably mounted around said carrier frame; vertical shafts mounted in said cross-bars and bearing disks on their lower ends adapted to coöperate with the disks on said carrier frame to grip and rotate cans placed thereon; three reciprocatory bars mounted in said end standards at different corners of the machine; and can-crimping mechanism and two soldering devices mounted on said bars, respectively, taken in order in the direction of rotation of said carrier frame, the two bars bearing the soldering devices being on the same side of the machine.

[Claims 6 to 22 not printed in the Gazette.]

897,338. AUTOMATIC WATER-SUPPLY TANK. CHARLES E. BATHRICK, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed June 19, 1905. Serial No. 265,922.



1. The combination of the tank provided with a liquid supply port; a supply valve arranged for opening and closing the supply port and secured upon the upper portion of a stem extending from the valve downwardly within the tank and having two spaced and relatively adjustable tappets; spring locking means for automatically locking the valve in its open and closed positions in alternation; a float for operating the valve and for releasing it from each of its said two locked positions, the float being to such end arranged to engage the upper tappet and lift the stem and valve during its rise within the tank, and to engage the lower tappet and draw down the stem and valve during its descent within the tank, said float being sufficiently buoyant to release the valve and stem from the spring locking means during its rise, and being of sufficient weight to release the valve and stem from the spring locking means during its descent; and a siphon for drawing off the liquid contents of the tank while the supply port is closed by the valve.

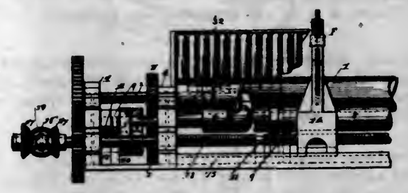
2. The combination of the tank provided with a liquid supply port; a valve arranged for opening and closing the supply port and having a stem whereon the valve is secured extending downwardly within the tank and provided with relatively spaced and adjustable tappets 9 and 10; spring locking means for automatically locking the valve stem in position to hold the valve closed and open in alternation; a float arranged for up and down movement along the stem and for unlocking and operating the said stem; and a device for drawing off liquid from the tank consisting of a siphon supported for vertical movement and having a lateral inlet port above the lower end of its longer leg, and means for raising the siphon to expose its said lateral port within the tank when the latter is suitably filled and the supply valve is locked, and for lowering the siphon to an extent to close its said port and permit a predetermined quantity of the liquid contents of the tank to be siphoned off from the tank before the supply valve is unlocked by the descending float.

3. The combination with the tank, of means for controlling the supply to the tank consisting of a valve chamber having opposite outlet ports and an intermediate inlet; a suitable passageway for receiving liquid from both of said ports and for discharging the same into the tank; and a pair of valves secured upon the upper end portion of an upright longitudinally movable stem, the valves being relatively spaced and arranged for simultaneously closing the said ports, and the stem being extended downwardly within the tank and provided with a pair of tappets; spring locking means for locking the pair of valves in open and closed positions; a float for engaging the tappets in alternation and unlocking and operating the stem, and a siphon for drawing off the liquid contents of the tank while the supply port is closed.

4. The combination with the tank of a float arranged within the tank and having a central opening, a valve stem extending through the opening in the float which latter has a sliding connection with the stem, said stem being provided with stops or tappets respectively above and below the float; a shell or casing C mounted upon the tank and connected with liquid supply means; a shell 1 arranged within the casing C and having open upper and lower ends and also having lateral communication with the supply pipe or passage; and valves 5 and 6 for closing the upper and lower open ends of the central shell 1, the valve stem above the valves being provided with two beveled grooves or notches 11 and 11^a, and the casing C being provided with a spring backed latch device for engaging in one or the other of the grooves or notches 11 and 11^a according to the position of the valve stem.

5. The combination with the tank open at the top, of a water means having a discharge outlet arranged over the tank opening; a valve rod having means for controlling the discharge of liquid into the tank; a float arranged for independent up and down movement along the valve rod, the latter being provided with stops respectively above and below the float, for the purpose set forth; a siphon device E arranged within the tank alongside the float and having a ported ledge 19 extended below the bottom level of the tank; a guide device for guiding the siphon in its up and down movement; and a cable for raising and lowering the siphon attached to the latter and passing over a sheave on the tank.

897,339. AUTOMATIC MACHINE FOR WINDING FIRE-HOSE PIPE AND ANALOGOUS TUBING. EUGENE D. C. BAYNE and LAWRENCE A. SUBERS, Cleveland, Ohio. Filed Jan. 21, 1907, Serial No. 353,352. Renewed Jan. 25, 1908. Serial No. 412,636.



1. In an automatic machine for winding fire hose pipe and analogous tubing with an insulated thread for the purpose described, in combination with a highly-polished, rotatable, metallic winding tube, pivotal supports therefor upon which said highly-polished, metallic winding tube is designed to rotate, a traveling carriage and director wheel thereon, designed to traverse the entire length of the highly-polished, metallic winding tube, an operating screw passing through said carriage, gearing connecting the movements of said highly-polished, metallic winding tube and screw whereby the speed of the carriage will be correlative to the speed of rotation of the highly-polished, metallic winding tube to wind a circumferential or spiral turn thereon at each rotation of the tube, substantially as described.

2. In an automatic machine for winding a circumferential or spiral layer of threads insulated with a rubber or other adhesive material in combination with a highly-polished, rotatable metallic winding tube, a carriage adapted to travel longitudinally thereof, guide and director wheels for the insulated thread thereon, a screw passing through said carriage and adapted to move the same longitudinally of the highly-polished, metallic winding tube, gearing connecting the screw and highly-polished, metallic winding tube whereby their movements are correlative to advance the carriage at each revolution of the highly-polished, metallic winding tube and highly-polished metallic pressure tubes adapted to engage said highly-polished, metallic winding tube and a removable outer bearing for said highly-polished, metallic winding tube, substantially as described.

3. In an automatic machine for the purpose described, a rotatable highly-polished, metallic winding tube closed at both ends, fixed bearings for one end of said highly-polished, metallic winding tube, a removable bearing for the other end of said highly-polished, metallic winding tube, a screw extending the length of the highly-polished, metallic winding tube, a traveling carriage thereon, director and guide wheels mounted in the said carriage, gearing connecting the said screw and highly-polished, metallic winding tube whereby their movements are correlative, fixed bearings for the screw, means for reversing the movements of the screw at each end of its stroke, highly-polished, metallic pressure tubes adapted to engage said highly-polished, metallic winding tube and exert a pressure upon the surface thereof and spring pressed pivotal bearings for said highly-polished, metallic pressure tubes, substantially as described.

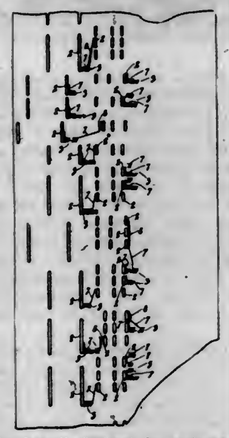
4. In a machine for the purpose described, a highly-polished, metallic winding tube closed at both ends, a steam pipe entering one end thereof, a pipe for compressed air traversing said tube, diverging passages and an annular groove connected with said radial passages at one end thereof, fixed bearings for one end of said highly-polished, metallic tube and a removable bearing for the other end thereof, substantially as described.

5. In a machine for the purpose described, a highly-polished, metallic winding tube closed at both ends, fixed

bearings for one end of the highly-polished metallic winding tube, a removable bearing for the other end thereof, a steam pipe with swivel steam joint connected with the free end of said highly-polished, metallic winding tube and pressure tubes adapted to engage said highly-polished, metallic tubes, steam pipes connected with the openings in said highly-polished, metallic tubes, spring pressed bearings for said highly-polished, metallic pressure tubes and a rotating means for said highly-polished, metallic tubes, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

897,340. COMBINATION VOCAL AND INSTRUMENTAL MUSIC SHEET. FRANK B. BEINKAMP, Cincinnati, Ohio, and LEBBEUS L. HARDING, Canon City, Colo. Filed Aug. 19, 1907. Serial No. 389,161.



1. The herein described sheet for automatic musical instruments, said sheet having note apertures of varying lengths, syllables comprising words of a song to indicate those note apertures corresponding thereto, and lineal characters adjacent to said syllables, said characters being composed of lines extending from each syllable to and along said note apertures as far as said syllable is to be held by the singer.

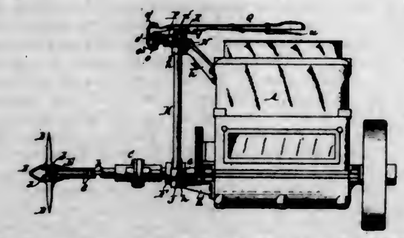
2. The combination, with a tracker-board and rollers of an automatic musical instrument, of a music sheet connected with said rollers and coöperating with said tracker-board, said sheet being provided with note apertures, syllables comprising words of a song arranged to indicate those note apertures corresponding thereto, and lineal characters arranged adjacent to said syllables and extending therefrom in the direction of movement of the sheet, said lineal characters being of varying extent to indicate the varying times at which the several vocal tones should be sustained.

3. The combination, with a tracker-board and rollers of an automatic musical instrument, of a music sheet connected with said rollers and coöperating with said tracker-board, said sheet being provided with note apertures, syllables comprising words of a song arranged to indicate those note apertures corresponding thereto, and lineal characters arranged adjacent to said syllables and extending therefrom in the direction of movement of the sheet, said lineal characters being of varying extent and arrangement to indicate the varying volume of tones and times at which the several vocal tones should be sustained.

897,341. PROPELLER-ADJUSTING DEVICE. WILLIAM E. BLAIR, Buffalo, N. Y., assignor to Buffalo Gasolene Motor Company, Buffalo, N. Y. Filed Mar. 16, 1907. Serial No. 362,680.

1. A propeller adjusting device comprising a main driving shaft, propeller blades adjustably supported on said main shaft, a shifting rod movable lengthwise of the main shaft and operatively connected with the propeller blades, a main adjusting shaft arranged at an angle to the main driving shaft and adjusting rod and operatively connected with said rod, a counter shaft arranged parallel with the main adjusting shaft, a large gear secured to the main adjusting shaft, a small gear secured to the counter shaft and meshing with the large gear, and a hand lever connected with the counter shaft, substantially as set forth.

2. A propeller adjusting device comprising an adjusting shaft adapted to be operatively connected with a propeller, a counter shaft, intermeshing gears secured to said adjusting and counter shafts, respectively, a hand lever connected with said counter shaft, and a supporting head which is adjustable circumferentially relatively to said adjusting shaft and which is provided with a bearing in which said counter shaft is journaled, substantially as set forth.



3. A propeller adjusting device comprising an adjusting shaft adapted to be operatively connected with a propeller, a counter shaft, intermeshing gears secured to said adjusting and counter shafts, respectively, a hand lever connected with said counter shaft, a bracket having a bearing in which said adjusting shaft is journaled, and a supporting head secured to said bracket so as to be capable of circumferential adjustment around said adjusting shaft and provided with a bearing in which said counter shaft is journaled, substantially as set forth.

4. A propeller adjusting device comprising an adjusting shaft adapted to be operatively connected with a propeller, a counter shaft, intermeshing gears secured to said adjusting and counter shafts, respectively, a hand lever connected with said counter shaft, a bracket having a bearing in which said adjusting shaft is journaled, a supporting head secured to said bracket so as to be capable of circumferential adjustment around said adjusting shaft, a bearing which is arranged on said head on one side of said adjusting shaft and in which said counter shaft is journaled, a locking segment arranged on said head on the opposite side of said adjusting shaft, and a locking pawl mounted on said hand lever and adapted to engage said locking segment, substantially as set forth.

5. A propeller adjusting device comprising an upright adjusting shaft, a counter shaft, a small gear segment arranged on the central part of the counter shaft, a large gear segment meshing with the small gear segment and adjustably secured to the upper end of said adjusting shaft, a bracket having a bearing in which the adjusting shaft is journaled, a supporting head adjustably secured to said bracket and having a bearing in which the lower end of the counter shaft is journaled, a screw nut applied to the lower end of the counter shaft and engaging with the lower end of its bearing, a hand lever connected with the counter shaft above its gear segment, and a screw nut applied to the upper end of the counter shaft and engaging with the upper end of the hub of the hand lever, substantially as set forth.

897,342. DUST-SEPARATING APPARATUS. CARL W. E. BOEGEL, Lima, Ohio. Filed Mar. 30, 1908. Serial No. 423,994.

1. In dust separating apparatus, a cylindrical casing, an inverted concavo-convex primary foraminous diaphragm in the casing, the casing having an inlet below the diaphragm and an outlet above the diaphragm, a spout communicating with the inlet and adapted to direct air and dust against the convex side of the diaphragm, and a series of secondary foraminous diaphragms, interposed between the primary diaphragm and the outlet, substantially as and for the purposes specified.



2. In dust separating apparatus, a casing of cylindrical formation having an inlet in its convex side near its lower end, a foraminous diaphragm in the casing of hemispherical formation, presenting its convex side downward toward the lower end of the cylindrical casing and adapted to be rotated therein to invert it, a curved spout communicating with the inlet and adapted to conduct air and dust upward against the convex side of the diaphragm whereby the air may pass through the diaphragm and whereby dust will be intercepted by the diaphragm and thrown downward in the casing around the curved spout, and an outlet from the casing above the diaphragm, substantially as and for the purposes specified.

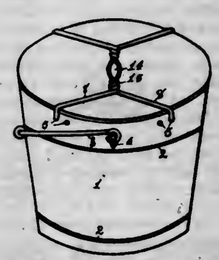
3. In dust separating apparatus, a cylindrical casing, an inverted concavo-convex primary foraminous diaphragm in the casing, the casing having an inlet below the diaphragm and an outlet above the diaphragm, a curved spout communicating with the inlet and adapted to direct air and dust against the convex side of the diaphragm, and a series of secondary foraminous diaphragms interposed between the primary diaphragm and the outlet, substantially as and for the purposes specified.

4. In dust separating apparatus, an upright cylindrical casing having an opening in its lower end for the removal of dust, and an opening for the admission of air and dust an invertible concavo-convex primary foraminous diaphragm in the casing, a curved spout communicating with the opening for the admission of air and dust and adapted to conduct the air and dust upward against the convex side of the primary diaphragm, a lid adapted to close the opening in the lower end of the casing against the admission of air, the casing having an opening in its upper end, a top lid adapted to close the opening in the upper end against the admission of air, a series of hoops on the lower surface of the top lid, and a series of secondary foraminous diaphragms mounted on the hoops, the top lid having an opening for the outlet of air, and the secondary diaphragms being interposed between the primary diaphragm and the opening for the outlet of air, substantially as and for the purposes specified.

5. In dust separating apparatus, a casing, a primary foraminous diaphragm in the casing, the casing having an inlet below and an outlet above the primary diaphragm, and a series of secondary diaphragms interposed between the primary diaphragm and the outlet, the primary diaphragm being invertible and adapted to engage with one of the secondary diaphragms when being inverted, substantially as and for the purposes specified.

[Claims 6 to 8 not printed in the Gazette.]

897,343. SHIPPING-CASE-COVER FASTENER. JOHN BRAUER, Menasha, Wis. Filed Mar. 11, 1908. Serial No. 420,323.

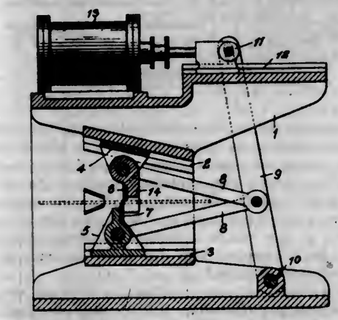


1. In a fastener for a pail or other shipping case cover, comprising two wires, each of which wires extends from the inner to the outer side of said shipping case near its upper edge and forms an outer loop in the slack of each wire, which two loops are bent upward over the cover and toward its center where they are twisted together, four bores through said shipping case wall near its upper edge for each of said two wires, arranged in pairs spaced apart, each end of the wire of each of said loops passing from the outer to the inner side of said case through one bore of each pair, thence being bent at a nearly right angle toward the other bore of the pair, thence at a nearly right angle and entering the other bore of said pair, the wire between said two bends upon each end of the wires being driven into the wall of the shipping case, flush with its inner surface.

2. As a member of a pail or other shipping case cover fastener, a wire bent into a nearly semicircular form, a hook formed upon each end of the wire, the free end of each hook being spaced apart from the main body of the wire and arranged in a position parallel with said main body, the main body being adapted to pass from the outer to the inner side of said case through one of a pair of bores therein, and the free end aforesaid being adapted to enter from the inside of the case, the second bore of the pair.

3. A wire shipping case cover fastener, a hook upon an end of the wire for preventing it from being pulled through the wall of the case, the wire of which hook incloses three sides of a rectangular space having two slightly rounded corners.

897,344. SHEAR MECHANISM. THOMAS J. BRAY, Pittsburg, Pa., and GIBBON C. SHACKLEFORD, Youngstown, Ohio. Filed Apr. 6, 1908. Serial No. 425,519.



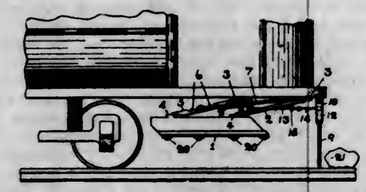
1. A shear mechanism having in combination guide ways having their guiding surfaces in converging planes, cutter carrying heads mounted on said ways and means for reciprocating said heads.

2. A shear mechanism having in combination cutter-carrying heads, means for reciprocating the heads, means for causing one of the heads to reciprocate in a plane intersecting the line of movement of the article to be sheared.

one of the heads having its cutter movably connected thereto, a lock for holding the cutter in operative position and means operative on the movement of the head for shifting the cutter.

3. A shear mechanism having in combination cutter-carrying heads, one of said heads having its cutter movably connected thereto, means for reciprocating the heads, means for causing one of the heads to reciprocate in a plane intersecting the line of movement of the article to be sheared, and means operative by the movement of the head having the movable cutter for locking the cutter during the forward movement of the head and for shifting the cutter from and back to operative position during the movement of the head after the shearing operation.

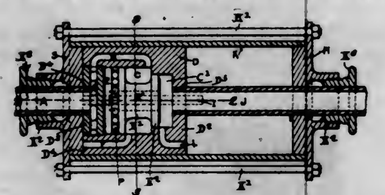
897,345. STREET-CAR FENDER. DAVID H. BRAZIL and ALEXANDER BRAZIL, Montgomery, Ala. Filed Sept. 16, 1907. Serial No. 393,165.



1. In a car fender, a pilot suspended from the front platform of the car, a trigger for suspending said pilot bodily from the platform of the car, and downward and rearwardly inclined links connecting said pilot with the platform of the car and adapting said pilot to be dragged by said platform of the car when released by said trigger.

2. In a car fender, the combination of a pilot normally bodily suspended above the surface of the street, a trigger for suspending said pilot, links slanting backward from the platform to said pilot and so connecting said pilot with the car as to drag the pilot when released and allow it to drop to the surface of the street, and a swinging fender for contact with any obstruction, being swung and operating said trigger to release said pilot and allow it to drop into position to engage the obstruction.

897,346. WATER-MOTOR. FRANK BREITENSTEIN, Denver, Colo. Filed Feb. 14, 1907. Serial No. 357,410.



1. In a water motor, the combination with the cylinder, of a piston reciprocally mounted therein, a hollow motive fluid inlet piston rod and a hollow exhaust piston rod connected to said piston and extending through the opposite ends of said cylinder, a differential valve mechanism mounted in said piston, and a coöperating set of motive fluid ports in said piston arranged to admit and to exhaust the fluid pressure from the alternate ends of said cylinder in alternate order.

2. In a water motor, the combination with the cylinder, of a piston reciprocally mounted therein, provided with hollow water inlet and exhaust pistons extending from its opposite sides through the opposite ends of said piston, a main valve chamber in said piston of two diameters, a main valve of two diameters fitting the two diameters of said chamber, an auxiliary valve and port in said piston adjacent to said main valve and chamber, said auxiliary valve being arranged to extend beyond the sides of said piston and strike the opposite ends of said cylinder and be moved a predetermined distance thereby, and a series of coöperating water-inlet and exhaust ports arranged between said ports and valves and operatively connected to said water inlet and exhaust piston rods.

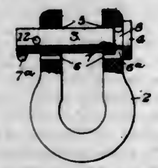
3. In a water motor, the combination with the cylinder, of the piston provided with oppositely extending hollow piston rods, one of which is adapted to admit water to said piston, and the other to exhaust water from said piston, a main valve chamber and valve in said piston, an auxiliary valve port and valve adjacent to said main valve and valve chamber, said auxiliary valve being arranged to strike the opposite ends of said cylinder at the ends of said piston's reciprocal strokes, a pair of ports leading from said main valve chamber to the opposite ends of said piston, a fluid inlet into said auxiliary port from said fluid inlet piston rod, an exhaust port from said auxiliary port to said exhaust piston rod, and coöperating fluid inlet and exhaust ports extending in said main valve and piston.

4. In a water motor, the combination of the cylinder, the piston head reciprocally mounted in said cylinder, the water inlet and exhaust piston rods connected at one end to said piston head, and the main valve chamber of two diameters in said piston head, with the main valve of two diameters reciprocally mounted in said main valve chamber, said piston head and main valve being provided with suitable coöperating water inlet and exhaust ports, a separate auxiliary valve chamber in said piston head, and an auxiliary valve slidably mounted within said auxiliary valve chamber, coöperating ports extending from said water inlet piston rod and from said main valve chamber and from said exhaust piston rod to said auxiliary valve chamber, said auxiliary valve being arranged to extend beyond said piston head far enough to strike the opposite ends of said cylinder at the ends of its opposite reciprocal strokes, and be moved to control the operative movement of said main valve.

5. In a water motor, the combination with the cylinder, of the piston and hollow water inlet and exhaust piston rods, a main valve having valved end portions of two different diameters fitting reciprocally in a chamber of two diameters in said piston, an auxiliary valve and valve chamber independent of said main valve, said auxiliary valve being provided with a port portion at its center and with a valve portion at its opposite ends, a coöperating set of water inlet and exhaust ports in said piston adapted to admit and to exhaust water from the opposite ends of said cylinder in alternate order, said auxiliary valve being arranged to engage the opposite ends of said cylinder and to operatively control said main valve.

[Claim 6 not printed in the Gazette.]

897,347. PIN AND CLEVIS DEVICE. ALBERT O. BUCKIUS, Chicago, Ill., assignor to The National Malleable Castings Company, Chicago, Ill., a Corporation of Ohio. Filed Dec. 6, 1907. Serial No. 405,308.



1. In a pin and clevis device, a pin arranged to slide endwise in the clevis, and having a bendable portion whose position is changed after the pin is inserted to prevent the withdrawal of the pin from the clevis; substantially as described.

2. The combination of a pin and a clevis, the pin being arranged to slide endwise in the clevis, and one of the members of the pin and clevis having a bendable portion whose position is changed after the pin is inserted to prevent the withdrawal of the pin from the clevis; substantially as described.

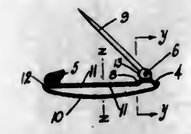
3. The combination of a pin and a clevis, the pin being arranged to slide endwise in the clevis, and one of the members of the pin and clevis having a bendable portion whose position is changed after the pin is inserted and the other member having a coöperating stop member adapted to engage the said bendable portion in its changed position to prevent the withdrawal of the pin from the clevis; substantially as described.

4. In a pin and clevis device, a clevis having eyes, and a pin arranged to slide in said eyes, the pin and clevis having integral coöperating stop portions whose relative position can be changed after the pin has been inserted to prevent the withdrawal of the pin; substantially as described.

5. In a pin and clevis device, a clevis having eyes, and a pin arranged to slide in said eyes, said pin having a longitudinal groove, and the clevis having a projection arranged to engage said groove, said pin having a bendable portion which can be moved to close one end portion of the groove after the pin has been inserted; substantially as described.

[Claim 6 not printed in the Gazette.]

897,348. CUFF-PIN. JOHN A. CHAPLIN, Warwick, R. I., assignor to Waite Thresher Company, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 4, 1908. Serial No. 419,133.



1. In an article of the class described, the combination, with a cup-shaped front portion, of a back portion secured therein, said back portion being provided at one end with a pin-catch and at the other end with a pair of hinge-members, a pin-tongue pivoted therein, and a bearing portion in said back portion beneath said hinge-members, the free end of said bearing portion engaging the inner end wall of the front portion.

2. In an article of the class described, the combination, with a cup-shaped front portion, of a back portion secured therein, said back portion being provided at one end with a pin-catch and at the other end with a pair of hinge-members, a pin-tongue pivoted therein, and a longitudinally extending rib having its rear end located adjacent said hinge-members.

3. In an article of the class described, the combination, with a cup-shaped front portion, of a back portion secured therein, said back portion being provided at one end with a pin-catch and at the other end with a pair of hinge-members, a pin-tongue pivoted therein, a bearing portion in said back portion beneath said hinge-members, and a longitudinal rib at the forward end of said bearing portion, the free end of said bearing portion engaging the inner end of the front portion.

4. In an article of the class described, the combination, with a cup-shaped front portion, of a back portion secured therein, said back portion being provided at one end with a pin-catch and at the other end with a pair of hinge-members, a pin-tongue pivoted therein, and an inclined longitudinally extending rib having its rear end extending between said hinge-members.

5. A back plate for cuff-pins and similar articles comprising a body portion, a pin-catch and a pair of hinge-members integral with said body portion, and a longitudinal rib upon the front of said body portion adjacent the forward ends of said hinge-members.

[Claim 6 not printed in the Gazette.]

897,349. FLEXIBLE SHAFT. GEORGE H. COATES, Worcester, Mass. Filed June 8, 1906. Serial No. 320,918.

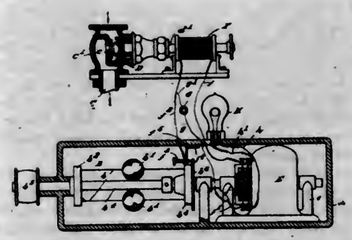
1. In a flexible shaft, a link composed of members forming a hollow cylindrical stem with a spherical socket at one end, a cylindrical shank inclosed in said hollow cylindrical stem and having a spherical tip on its projecting end opposite from said spherical socket, and transverse pins passing through said cylindrical stem and said cylindrical shank.



2. In a flexible shaft, a link composed of members forming a hollow cylindrical stem with a spherical socket at one end provided with diametrically opposite openings, a cylindrical shank inclosed in said hollow cylindrical stem and attached thereto, said shank having a spherical tip on its projecting end provided with pins on either side thereof, with said pins arranged to be inserted in the openings in the spherical socket of the next link, whereby rotary movement is imparted from one link to the next link.

3. In a flexible shaft, a link composed of separable members forming a hollow cylindrical stem, with a spherical socket at one end provided with diametrically opposite openings, a cylindrical shank inclosed in said hollow cylindrical stem and attached thereto, said shank having a spherical tip on its projecting end provided with a transverse pin, with the ends of said pin arranged to be inserted in the openings in the spherical socket of the next link, whereby rotary movement is imparted from one link to the next link.

897,350. ELECTRIC STOP-MOTION FOR MOTORS AND SIGNAL FOR THE SAME. ADAM COCHRANE, Lowell, Mass. Filed Mar. 21, 1908. Serial No. 422,415.



1. The combination of a centrifugal governor, a dynamo-electric machine, mounted on said governor and rotating therewith, a shut-off, a normally open electric circuit, in which said dynamo is included, means for operating said shut-off included in said circuit, and means operated by said governor for closing said circuit when said governor attains a predetermined speed.

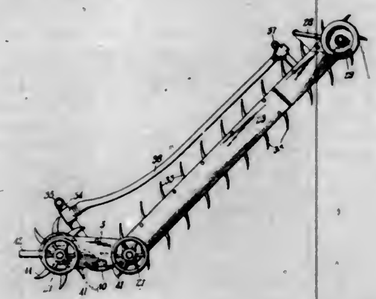
2. The combination of a centrifugal governor, a dynamo-electric machine, mounted on said governor and rotating therewith, a shut-off, a normally open electric circuit, in which said dynamo is included, said shut-off being provided with a stem of magnetizable material, a solenoid also inclosed in said circuit and surrounding said stem, and means operated by said governor for closing said circuit to operate said shut-off when said governor attains a predetermined speed.

3. The combination of a centrifugal governor, a dynamo-electric machine, mounted on said governor and rotating therewith, a shut-off, a normally open electric circuit, in which said dynamo is included, means for operating said shut-off included in said circuit, and means operated by said governor for closing said circuit when said governor attains a predetermined speed, a closed electric circuit in which said dynamo is also included, and a signal arranged in said closed circuit.

4. The combination of a centrifugal governor, a dynamo-electric machine, mounted on said governor and ro-

tating therewith, a shut-off, a normally open electric circuit, in which said dynamo is included, means for operating said shut-off included in said circuit, and means operated by said governor for closing said circuit when said governor attains a predetermined speed, a closed electric circuit in which said dynamo is also included, and an incandescent lamp arranged in said closed circuit.

897,351. CLAM-DIGGER. WILLIAM D. COLLIER, Marco, Fla. Filed Mar. 23, 1908. Serial No. 422,785.



1. In a clam digger of the character described, the combination of a digger-wheel having digger-fingers, and means to force fluid against said digger-wheel to loosen the material between said digger fingers, substantially as described.

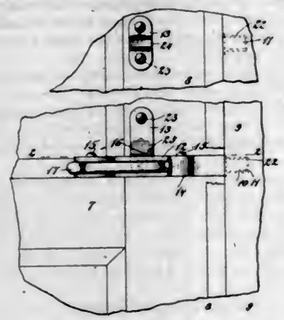
2. In a clam digger of the character described, a digger-wheel comprising a cylindrical drum having a plurality of circular slots in its peripheral face, and having openings extending therethrough from the base of said slots, digger fingers for engagement within said slots and having reduced threaded shanks projected through said openings and nuts for engagement upon said threaded shanks within said case, and against the internal surface thereof, substantially as described.

3. In a clam digger of the character described, the combination of a digger-frame comprising spaced side boxes, front and rear shafts journaled between and within said boxes, sprocket wheels mounted upon the ends of said shafts within said boxes, a digger wheel mounted upon the forward shaft between said boxes, a conveyer frame comprising spaced side boxes journaled at the lower ends upon said rear shaft and extending upwardly therefrom, said rear shaft being provided with sprocket wheels within said conveyer frame side boxes, a driving shaft journaled through said side boxes at the upper ends of the conveyer frame and provided with sprocket wheels journaled thereon within said boxes, sprocket chains connecting said upper and lower sprocket wheels, and an endless conveyer traveling about said driving shaft and said rear shaft of said digger-frame to receive the clams from said digger-wheel, substantially as described.

4. In a clam digger of the character described, the combination of a digger frame, a digger wheel mounted to rotate therein, a conveyer frame extending upwardly from said digger frame, vertical channel plates secured upon said digger wheel frame, and wheel shafts adjustably carried within said channel plates whereby the bite of said digger wheel may be regulated, substantially as described.

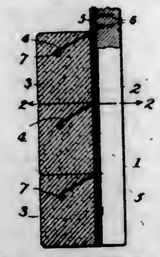
897,352. SASH-FASTENER. DANA W. COLLISON and GEORGE MATTHEWS, Columbus, Ohio. Filed Jan. 14, 1908. Serial No. 410,813.

The combination with the sashes and the casing of a window, of a sash-fastener carried by one of the sashes and comprising a turn-button having an eccentric slot, a sliding bolt, and a pin carried by the bolt and extending into the aforesaid slot; and keepers for the turn-button



and the sliding-bolt on the other sash and on the casing, respectively.

897,353. WALL FOR BUILDINGS. JOHN S. CULLEY, Louisville, Ky. Filed May 12, 1905. Serial No. 260,141.

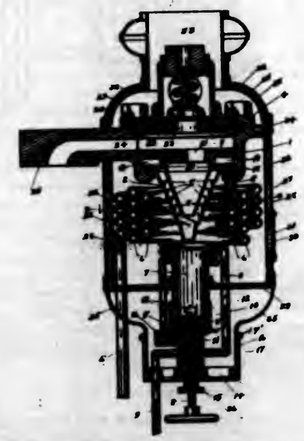


1. The herein described wall facing block, composed of a body of cement or other suitable material, and a hanger formed of a bent, flat, metal plate having one section embedded in the block and another section projecting from and extending parallel to the rear face of the block at an obtuse angle to the embedded section and adapted to be connected directly to a suitable support, said plate having oppositely extending lateral projections at the inner end of its embedded section, substantially as and for the purpose described.

2. The herein described wall facing block, composed of a body of cement or other suitable material, and a hanger comprising a bent, flat, metal plate having one section embedded in the block and projecting through the rear face thereof and another section projecting therefrom at an obtuse angle and extending parallel to said rear face of the block and adapted to be connected directly to a suitable support, the inner end of the embedded section of said plate being bent upon itself to provide a hook or sleeve, and a bar or pin extending through said hook or sleeve and projecting beyond the side edges of the plate, whereby the inner end of the hanger is wider than the body, substantially as and for the purpose described.

897,354. ELASTIC-FLUID GENERATOR. CHARLES W. DAKE, Grand Rapids, Mich., assignor to The Dake-American Steam Turbine Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Apr. 10, 1907. Serial No. 367,463.

1. The combination with a casing having a closed bottom and having a discharge flue at its upper end, of a supporting casting arranged in the upper end of said casing, said casting comprising a discharge chamber; an inwardly-projecting annular flange at the bottom of said discharge chamber; a cap for said discharge chamber; a safety-valve therefor carried by said cap; an inverted conical superheating chamber having an outwardly-projecting flange at its upper end arranged on said flange in said discharge chamber, said superheating chamber being adapted to be removed through the top of said discharge chamber; a threaded member for clamping said superheating chamber in position, said threaded member being provided with an opening for connecting said superheating chamber to said discharge chamber, and with an annular delivery passage; a plurality of ports connecting the said delivery passage to said superheating chamber; an inverted conical baffle open at its lower end, carried by said threaded member and projecting downwardly into said superheating chamber; heating coils arranged about said superheating chamber and connected to deliver to said annular delivery passage; a burner arranged below said superheating chamber, the burner tube of said burner being threaded through the bottom plate of said casing; and a casing for said burner.



2. The combination with a casing, of a supporting casting arranged in the upper end of said casing, said casting comprising a discharge chamber; an inwardly-projecting annular flange at the bottom of said discharge chamber; a cap for said discharge chamber; a safety valve therefor carried by said cap; an inverted conical superheating chamber having an outwardly-projecting flange at its upper end arranged on said flange in said discharge chamber, said superheating chamber being adapted to be removed through the top of said discharge chamber; a threaded member for clamping said superheating chamber in position, said threaded member being provided with an opening for connecting said superheating chamber to said discharge chamber, and with an annular delivery passage; a plurality of ports connecting the said delivery passage to said superheating chamber; an inverted conical baffle open at its lower end, carried by said threaded member and projecting downwardly into said superheating chamber; and heating coils arranged about said superheating chamber and connected to deliver to said annular delivery passage.

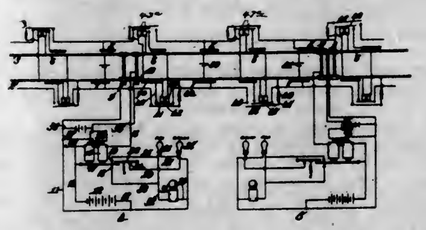
3. The combination with a casing having a closed bottom and having a discharge flue at its upper end, of a supporting casting arranged in the upper end of said casing, said casting comprising a discharge chamber; an inwardly-projecting annular flange at the bottom of said discharge chamber; a cap for said discharge chamber; a safety valve therefor carried by said cap; an inverted conical superheating chamber having an outwardly-projecting flange at its upper end arranged on said flange in said discharge chamber, said superheating chamber being adapted to be removed through the top of said discharge chamber; a threaded member for clamping said superheating chamber in position, said threaded member being provided with an opening for connecting said superheating chamber to said discharge chamber, and with an annular delivery passage; a plurality of ports connecting the said delivery passage to said superheating chamber; an inverted conical baffle open at its lower end carried by said threaded member and projecting downwardly into said superheating chamber; heating coils arranged about said superheating chamber and connected to deliver to said annular delivery passage; a burner arranged below said superheating chamber, the burner tube of said burner being threaded through the bottom plate of said casing; and a casing for said burner.

4. The combination with a casing, of a supporting casting arranged in the upper end of said casing, said casting comprising a discharge chamber; an inwardly-projecting annular flange at the bottom of said discharge chamber; a cap for said discharge chamber; a safety valve therefor carried by said cap; an inverted conical superheating chamber having an outwardly-projecting flange at its upper end arranged on said flange in said discharge chamber, said superheating chamber being adapted to be removed through the top of said discharge chamber; a threaded member for clamping said superheating chamber in position, said threaded member being provided with an opening for connecting said superheating chamber to said discharge chamber, and with an annular delivery passage; a plurality of ports connecting the said delivery passage to said superheating chamber; and heating coils arranged about said superheating chamber and connected to deliver to said annular delivery passage.

5. The combination with a casing having a closed bottom and having a discharge flue at its upper end, of a supporting casting arranged in the upper end of said casing, said casting comprising a discharge chamber; an inwardly-projecting annular flange at the bottom of said discharge chamber; an inverted conical superheating chamber having an outwardly-projecting flange at its upper end arranged on said flange in said discharge chamber, said superheating chamber being adapted to be removed through the top of said discharge chamber; a threaded member for clamping said superheating chamber in position, said threaded member being provided with an opening for connecting said superheating chamber to said discharge chamber, and with an annular delivery passage; a plurality of ports connecting the said delivery passage to said superheating chamber; an inverted conical baffle open at its lower end carried by said threaded member and projecting downwardly into said superheating chamber; heating coils arranged about said superheating chamber and connected to deliver to said annular delivery passage; a burner arranged below said superheating chamber, the burner tube of said burner being threaded through the bottom plate of said casing; and a casing for said burner.

[Claims 6 to 22 not printed in the Gazette.]

897,355. ELECTRIC BLOCK-SIGNALING SYSTEM. JOHN W. DAVIS, Los Angeles, Cal., assignor to Mills-Piddington Cab Signal Company, Los Angeles, Cal., a Corporation of California. Filed Sept. 20, 1907. Serial No. 393,840.



1. The combination of railway rails at least one of which is in insulated sections, contact rails coöperative with said railway rails, a source of electrical energy connected to each insulated section of said railway rails, magnets within and electrically connected with each insulated section of said railway rails, armatures for the magnets, a contact point for one of the armatures, electrically connected to one of said contact rails, the other armature being connected through a resistance with one of the railway rails, and a contact engageable by the sec-

ond armature and electrically connected with the first armature of the magnets in the preceding insulated section of railway rails.

2. The combination of railway rails at least one of which is in insulated sections, contact rails coöperative with said railway rails, means for supplying current to the railway rails, magnets within and electrically connected with each insulated section of said railway rails, armatures for the magnets, a contact point for one of the armatures, electrically connected with one of said contact rails, the other armature being connected through a resistance with one of the railway rails, a contact engageable by the second armature and electrically connected with the first armature of the magnets in the preceding insulated section of railway rails, and a vehicle to travel along said railway rails, having current collecting means to engage said contact rails and also having signals of different character electrically connected with said current collecting means.

3. The combination of railway rails at least one of which is in insulated sections, contact rails coöperative with said railway rails, means for supplying current to the railway rails, magnets electrically connected with each insulated section of said railway rails, armatures for the magnets, a contact point for one of the armatures, electrically connected with one of said contact rails, the other armature being connected through a resistance with one of the railway rails, a contact engageable by the second armature and electrically connected with the first armature of the magnets in the preceding insulated section of railway rails, and a vehicle to travel along said railway rails, having current collecting means to engage said contact rails and also having different colored lamps electrically connected with said current collecting means.

4. The combination of railway rails at least one of which is in insulated sections, contact rails coöperative with said railway rails, a source of electrical energy connected with said railway rails, magnets within each insulated section of railway rails and electrically connected with said railway rails, armatures for said magnets, a contact point for one of the armatures electrically connected to one of said contact rails, the other armature being connected through a resistance with one of said railway rails, and a contact engageable by the second armature and electrically connected with the first armature of the magnets in the preceding insulated section of railway rails.

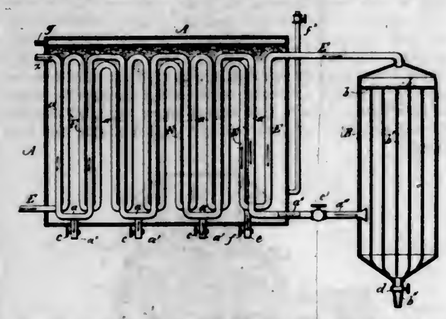
5. The combination of a magnet, a contact, a lamp connected with said contact, a second contact, a second lamp connected with said second contact, a third contact connected with the first lamp, an armature for said magnet, an automatically-operable device normally against said second contact and adapted to resist the movement of said armature toward its magnet, and means for energizing the magnet and supplying the lamps with current.

[Claims 6 to 11 not printed in the Gazette.]

897,356. METHOD OF DRYING AIR FOR BLAST-FURNACES. DAVID T. DAY, Washington, D. C. Filed Jan. 5, 1905. Serial No. 239,820.

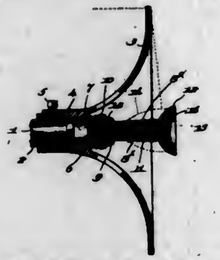
1. The method of drying air for blast-furnaces which consists in compressing air to a degree above the pressure of ordinary blowing engines, then cooling such compressed air in pipes or conduits to the ordinary temperature by means of a circulating fluid in contact with the pipes, drawing off water of condensation therefrom, then expanding such cooled air by a controlling device to the ordinary fifteen pound pressure of the blast admitted to blast-furnaces, thereby further cooling and drying it, and by means of such cooled and expanded air cooling the circulating fluid in contact with the pipes or conduits conveying the compressed air and drawing off the water of condensation from the expanded air.

2. The method of drying air for blast furnaces which consists in compressing air to a pressure above the pressure of fifteen pounds of the ordinary blowing engine, then cooling such highly compressed air to the ordinary temperature by exposing it in pipes to the circulation of a fluid, then expanding such compressed and cooled air, approximately, to the pressure of fifteen pounds of air admitted to blast-furnaces, thereby further cooling and drying it, drawing off water of condensation and passing such cool, dry air through pipes in the cooling fluid in contact with the pipes conveying the highly compressed air, for maintaining such fluid at the ordinary temperature.



3. The method of drying air for blast furnaces which consists in compressing air to a pressure between fifty and one hundred pounds pressure and storing it in pipes, then cooling such air to the ordinary temperature by circulation of water, maintained at approximately the ordinary temperature, in contact with said pipes conveying the compressed air, then expanding such cooled air by a controlling device to about fifteen pounds pressure required in blast admitted to blast furnaces, thereby further cooling it and causing its moisture to be deposited passing this cooled expanded air through pipes in said cooling water, and delivering it to a blast furnace.

897,357. FILLING-END HOLDER FOR WEFT-REPLENISHING LOOMS. JOHN C. EDWARDS, Brookline, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Jan. 28, 1908. Serial No. 413,120.



1. In a filling-end holder, a tubular, expansible member and a member adapted to coöperate with and normally expand the tubular member, the filling-ends being wound thereupon, one of said members being detachable and the other member being permanently mounted on the filling-feeder, removal of the detachable member permitting the expansible member to contract within the mass of waste filling wound thereupon.

2. In a filling-end holder, a tubular, longitudinally slitted member, a coöperating expanding member, to enlarge the effective diameter of the tubular member upon which the filling-ends are wound, one of said members being permanently attached to the filling-feeder, and means to prevent accidental separation of said members.

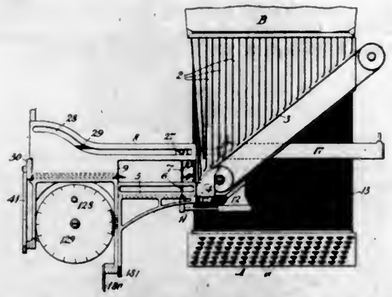
3. In a filling-end holder, a member having an expansible barrel, and a coöperating member having a tapering shank to enter and expand the barrel for the filling-ends to be wound thereupon, one of said members being adapted to be permanently attached to the filling-feeder, the barrel contracting upon separation from the shank to enable the filling waste on the barrel to be readily slipped off.

4. A rotatable filling-feeder having at its outer end a bell-like disk provided with an outwardly extended hub, a two-part filling-end holder comprising a resilient, expansible barrel attached to the hub and a detachable tapering shank having an enlarged head at its outer end, the shank when inserted in the barrel expanding the same in readiness to have the filling-end wound upon it.

5. A rotatable filling-feeder having at its outer end a filling-end holder comprising an expansible, permanently attached sheet-metal tube, and a detachable tapering expander adapted to enter and expand the tube to have the filling-ends wound upon it, the tube contracting when the expander is detached therefrom, to release the mass of filling waste wound upon the tube.

[Claims 6 to 13 not printed in the Gazette.]

897,358. TYPE CASTING AND COMPOSING MACHINE. RICHARD C. ELLIOTT, Clapham, London, England, assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed June 9, 1908. Serial No. 437,601.



1. In a type casting and composing machine such as described the combination of the following elements, to wit: a magazine equipped with a plurality of series of perforated selectors, the individuals of each series bearing the same number and arrangement of perforations and differing from every other series; mechanism for controlling the delivery of individual selectors from the several series; a trough or way into which the selectors are successively delivered and assembled in line; a receiving trough or way and means for transferring the line of selectors from said assembling to said receiving trough or way; a carrier in position to successively engage and remove the foremost of the assembled line of selectors; a clamping box provided with a series of ports adapted to register with the perforations in the selectors and arranged to receive the latter in succession as delivered by the carrier; and a type casting mechanism including an adjustable mold, a series of matrix carriers, and actuating devices controlled by the perforations in the selectors for bringing into action the matrix carrier corresponding therewith.

2. In a type casting and composing machine such as described, the combination of the following elements, to wit: a type casting mechanism including an adjustable mold; a series of matrix carriers each adapted to separately present its matrix to the mold and adjust or gage the latter; a selective actuating mechanism for the matrix carriers provided with two series of controlling devices whereof individual members of both series coöperate in the selection of each matrix carrier; a clamping box provided with a series of ports each in communication with one of the controlling devices of said matrix carrier actuating mechanism; a series of selectors each provided with a plurality of perforations variously disposed to represent different matrix carriers and adapted to register with corresponding ports in the clamping box; and means for assembling a line of selectors, transferring the assembled line to a receiving trough or way, and delivering successive selectors to the clamping box in the order in which they were assembled.

3. In a type casting and composing machine such as described wherein perforated selectors are employed to control the action of automatic type casting mechanism, the combination of the following elements, to wit; means for assembling a plurality of selectors representing a line of matter; a carrier operating to remove successive selectors from the assembled line; a clamping box between the relatively movable members whereof successive selectors are delivered by the carrier, said clamping box being provided with a series of ports registering with perforations in the selector, and a valve controlling the admission of pressure to said ports through the selector; and a type casting mechanism including a mold, a series of matrices, and means coupled with and controlled through the ports of the clamping box for selecting and bringing into action the matrix corresponding with the selector at the time engaged by the clamping box.

4. In a type casting and composing machine such as described wherein a series of separate selectors, each provided with perforations variously arranged to represent different characters controls the action of an automatic type casting mechanism, the combination of the following elements, to wit; a group or associated series of independent selectors representing a line of matter, each selector containing perforations variously arranged to represent characters and spaces; a type casting mechanism including a series of matrices and carriers therefor, an adjustable mold whose dimension is controlled by the matrices as presented thereto, and means for selectively presenting the matrices, one at a time, to the mold; a clamping device adapted to receive successive selectors between its onposing surfaces and provided with a pressure control valve and a series of ports registering with perforations in the selectors, said ports communicating with and controlling the matrix selecting devices; and feeding devices for withdrawing the selectors from the assembled group or series and presenting them one at a time between the opposing surfaces of the clamping device.

5. In a keyboard mechanism for a type casting and composing machine such as described for effecting the delivery of the selectors from their storing chambers or compartments in the magazine, the combination of the following elements, to wit; a reciprocatory member coupled with a key and a valve; a motor controlled by said valve; an actuating member coupled with said motor; a longitudinally reciprocatory and laterally movable member provided with an engaging shoulder normally located to one side of the path of motion of said actuating member, said reciprocatory and laterally movable member being coupled with said first named reciprocatory member and actuated by the latter to shift its engaging shoulder into the path of the actuating member; and a performing member coupled with said longitudinally reciprocatory and laterally movable member, to transmit the motion derived from said actuating member.

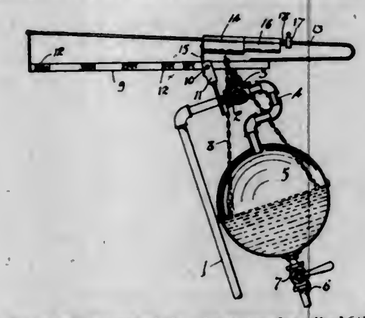
[Claims 6 to 31 not printed in the Gazette.]

897,359. LIQUID-DISPENSING APPARATUS. RALPH W. ELLIOTT, Antioch, Cal. Filed Jan. 23, 1908. Serial No. 412,246.

1. In an apparatus of the character described, the combination of a receptacle, means for supplying material thereto, a valve for controlling said supply means, a scale beam provided with a slideway, the receptacle being supported on said scale beam at one side of its fulcrum, a counter-balance weight, slidably supported on said slideway, and means whereby the movement of the scale beam controls said valve, substantially as described.

2. In an apparatus of the character described, the combination of a scale beam, a receptacle attached to said scale beam, a slide rod secured to said scale beam, and inclined thereto, a weight slidable upon said rod and having a pointer directed towards said scale beam, means for supplying material to said receptacle, a valve controlling said

means, and means whereby the movement of the scale beam controls said valve, substantially as described.



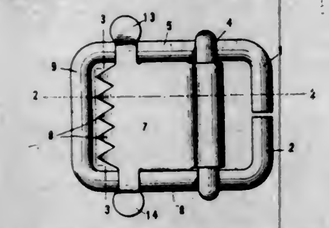
3. In an apparatus of the character described, the combination of a scale beam, a receptacle attached thereto, a pipe for drawing off liquid from the receptacle, a stopcock for the latter pipe, a pipe for supplying the liquid to the receptacle, a valve for controlling said latter pipe, a slide rod connected to said scale beam, a weight slidable on said rod, said scale beam contacting with the valve to control the liquid supply and close the same when the scale beam is tilted, substantially as described.

4. In an apparatus of the character described, the combination of a scale beam, a receptacle attached thereto, a pipe for drawing off liquid from the receptacle, a stopcock for the latter pipe, a pipe for supplying the liquid to the receptacle, a valve for controlling said latter pipe, a slide bar connected to said scale beam, a weight slidable on said rod, having a pointer directed towards said scale beam, said scale beam contacting with the valve to control the liquid supply and close the same when the scale beam is tilted, substantially as described.

5. In an apparatus of the character described, the combination of a scale beam, a receptacle attached thereto, a pipe for drawing off liquid from the receptacle, a stop-cock for the latter pipe, a pipe for supplying the liquid to the receptacle, a valve for controlling said latter pipe, a slide bar connected to said scale beam, a weight slidable on said rod, a spring-controlled buffer against which the weight can impinge at the end of its sliding movement, said scale beam contacting with the valve to control the liquid supply and close the same when the scale beam is tilted, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

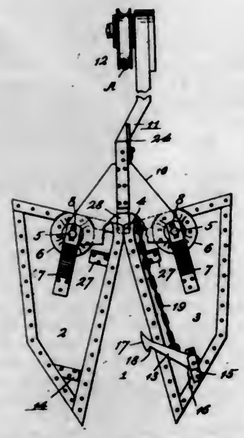
897,360. BUCKLE. NATHAN FEIN, New York, N. Y. Filed Mar. 4, 1908. Serial No. 419,152.



1. In a device of the class described, in combination, a frame having a cross bar, a tongue pivotally mounted on said cross bar and having a width substantially co-extensive with the width of said frame and adapted when in engagement with a strap to lie between the side members thereof, said tongue having teeth disposed adjacent an end member of said frame, a spring member formed upon said tongue adapted to engage with the inner surface of said frame, whereby the tongue will be maintained in engagement with the strap, and an ear extending laterally from said tongue and across a side member of said frame which operates to limit the downward swinging movement of said tongue, said ear also forming a means which may be grasped when it is desired to lift the tongue from engagement with the strap.

2. In a device of the class described, in combination, a frame provided with a bar which extends transversely thereacross and is connected with the side members thereof, a tongue comprising a strip of metal pivotally mounted upon said transversely extending member and adapted when in operative position, to lie between the side members of said frame, said tongue at its free end being provided with a plurality of upwardly inclined teeth which terminate adjacent an end member of said frame slightly above the same, a pair of oppositely disposed spring ears provided upon said tongue, which are adapted to engage the inner surfaces of the side members of said frame, and by such engagement to hold said tongue in operative position when the latter is in engagement with a strap, and a plurality of lateral ears which extend across the side members of the frame, said ears forming a means for limiting the downward swinging movement of said tongue with respect to said frame, and also providing a means by which the tongue may be swung upwardly from engagement with the strap.

897,361. AUTOMATIC BOTTOM-DUMPING AND SELF-CLOSING BUCKET. HIRAM G. FERRIS, Leavenworth, Kans. Filed Sept. 3, 1907. Serial No. 391,257.



1. A bucket of the character described consisting of twin sections, a pair of trunnions on each section, bearings in which the trunnions are rockingly mounted, and means on the ends of the sections for engaging the bearings when the bucket is closed.

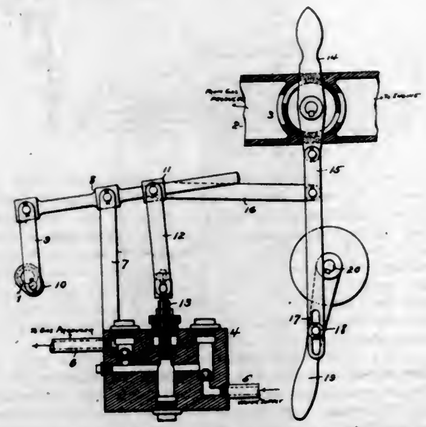
2. A bucket of the character described consisting of twin sections curved in opposite directions at the upper ends of their abutting edges, a pair of trunnions on each section located at the centers from which the curved ends are struck, bearings in which the trunnions are rockingly mounted, and hoods secured to the bearings for covering the curved ends of the abutting edges.

3. A bucket of the character described, comprising twin sections curved in opposite directions at the upper ends of their abutting edges, bearings in the form of two separate plates receiving correspondingly located pairs of trunnions, a suspended bail connected at its ends to said plates, and reinforcing means for said trunnions secured to said sections and disposed to overlie said plates.

4. A bucket of the character described comprising twin sections curved in opposite directions at the upper ends of their abutting edges, a pair of trunnions on each section, bearings in the form of plates receiving correspondingly located pairs of said trunnions, reinforcing straps, each

having one end secured to said sections, the other ends of said straps surrounding said several trunnions and means carried by said trunnions to hold the ends of said straps against displacement.

897,362. APPLIANCE USED IN COMBINATION WITH GAS-GENERATING PLANTS. ALBERT L. GALUSHA, Dorchester, Mass. Filed Dec. 4, 1907. Serial No. 405,089.



1. The combination with means for controlling the passage of gas from a gas producer, of means for feeding fluid to the producer in proportion to the varying amount of gas leaving the producer, and means coöperating with said controlling means and feeding means for varying both simultaneously.

2. The combination with a gas engine shaft and a valve for controlling the passage of gas from a gas producer to the engine, of a pump connected with and operated by the engine shaft for forcing fluid to the gas producer, and means for effecting adjustment of the stroke of the pump in accordance with the amount of gas flowing from the producer to the engine.

3. The combination with an engine shaft and a valve for controlling the passage of gas from a gas producer to the engine, of a pump for supplying fluid to the gas producer and devices connected with said valve for adjusting the stroke of the pump.

4. The combination with an engine shaft and a valve for controlling the passage of gas from a gas producer to the engine, of a pump operated by the engine for forcing fluid to the gas producer and devices connected with said valve for adjusting the stroke of the pump.

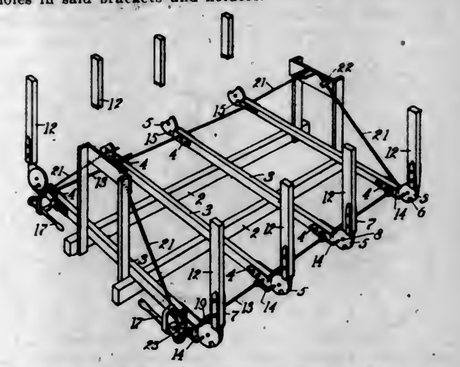
5. The combination with an engine shaft and a valve for controlling the passage of gas from a gas producer to the engine, of a pump for supplying fluid to the gas producer, connections between the engine shaft and the pump piston for operating the latter and means actuated simultaneously with the operation of said valve to adjust the stroke of said piston.

[Claims 6 to 11 not printed in the Gazette.]

897,363. HAY-RACK. CHARLES GILLSON, Mapleton, Minn. Filed Sept. 26, 1907. Serial No. 394,663.

1. In a rack of the class described, the combination of cross bars, stake holders having hinge support upon the ends of said cross bars, a slidable rod journaled along side said stake holders and carrying pins registering with holes in said stake holders, and means for reciprocating said rods.

2. In a hay rack the combination with a cross bar, of brackets secured upon the ends of said cross bar, stake holders rotatable upon the ends of said brackets, said brackets and stake holders being formed with registering holes, longitudinally slidable rods along side said rack and pins carried by said rods in position to pass through the holes in said brackets and holders.



3. In a hay rack the combination with outwardly extending brackets secured upon the sides of said rack, of stake holders having detachable rotatable support upon the ends of said brackets, longitudinally slidable rods along the sides of said rack, and means carried by said rods for interlocking with said holders and holding them in adjusted positions.

4. In a hay rack the combination with outwardly extending side brackets, of stake holders rotatably supported upon the ends of said brackets, means allowing disconnection of said holders and brackets when said holders are turned to a certain position, longitudinally adjustable rods along the sides of said rack and means carried by said rods for holding said holders in adjusted positions.

5. In a hay rack the combination of outwardly extending side brackets, stake holders having hinge support upon the ends of said brackets, means permitting disconnection of said brackets and holders when said holders are turned to a certain position, a longitudinally slidable rod provided with pins in position to extend through registering holes in said brackets and holders to hold the same in adjusted positions, and downwardly extending rods rotatably supported upon the ends of said rack in positions to actuate said slidable rods in the manner and for the purpose set forth.

897,364. WASTE AND VENT COCK. JOSEPH H. GLAUBER, Cleveland, Ohio. Filed Oct. 25, 1906. Serial No. 340,456.

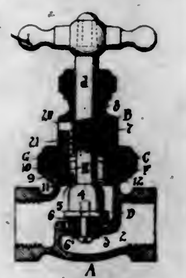
1. In a waste and vent cock, a valve casing and a valve adapted to seat therein, in combination with a bonnet rotatably mounted upon said casing and independent openings for waste and vent, respectively, said openings being relatively positioned on different horizontal and vertical planes whereby either opening may become a waste or vent dependent upon the position of the cock.

2. A valve casing having a main water passage and a main waste passage and independent vent and waste orifices open to said main waste-passage, and a main valve for said main water passage and an auxiliary valve adapted to close said main waste passage and thereby cut off communication with both said vent and waste orifices.

3. A valve casing having a main water passage and independent waste and vent openings communicating therewith and relatively positioned at different angles and on different cross sections, and a main valve for said main water passage having primary closing valve members upon opposite sides thereof adapted to close the said waste and vent openings before the main valve is opened and to close the said main water passage before the waste and vent are opened.

4. A valve casing and a main valve therein, and a rotatable bonnet mounted upon said casing having a waste out-

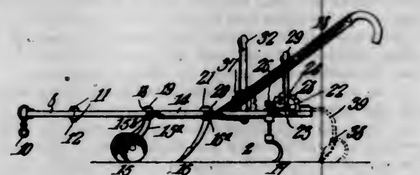
let and a vent opening relatively positioned at different angles and planes to provide for automatic drainage regardless of the position of the valve, in combination with a cup shaped packing holder held in place by said bonnet and having removable packing therein adapted to seal the outlet to both said waste and vent.



5. A valve casing having a main water passage and a main valve therefor, and a waste passage adapted to be closed by said main valve, a packing holder removably seated within said casing and packing removably seated within said holder, and a primary sealing ring within said holder and beneath said packing.

[Claims 6 to 15 not printed in the Gazette.]

897,365. CULTIVATOR. ROSALIA H. HEINZE, Kellogg, Minn. Filed Oct. 5, 1907. Serial No. 396,063.



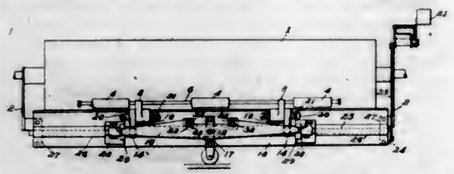
1. A cultivator comprising a main central beam, a beam on each side of said main beam extending forwardly beyond the end of said main beam and pivotally connected to the ends of a bracket, a secondary beam fulcrumed to said bracket between its ends and adjustably fastened to the forward end of the main beam, earth engaging implements on each side beam, and means for laterally moving said side beams.

2. A cultivator comprising a main central beam, a beam on each side of said main beam extending forwardly beyond the end of said main beam, a bracket pivotally attached at its ends to the forward ends of said side beams, a coupling fastened to the forward end of the main beam, a secondary beam fulcrumed to said connecting bracket and adjustably secured to said coupling, said secondary beam being movable in a horizontal plane, earth engaging implements on each side beam, and means for moving said side beams to and from the main beam.

3. A cultivator comprising a main beam, a secondary beam in front of said main beam pivoted to a bracket and having its rearward end adjustably attached to the forward end of said main beam, a beam pivoted to said bracket on each side of the main beam, each of said side beams carrying earth engaging implements, means for raising and lowering certain of said earth engaging implements, and means for moving said side beams close to or away from said main beam.

4. A cultivator comprising a main central beam, a secondary forward beam capable of being turned at an angle to said main beam and having means for attaching a horse thereto, a coupling on the forward end of said main beam to which is connected the rear end of said secondary beam, and a transverse slot for a fastening bolt to permit said secondary beam to move laterally, a bracket in which said secondary beam is fulcrumed and having lateral projections, a side beam pivoted in each lateral projection and adapted to move to and from said main beam, and means for moving said side beams.

897,366. TYPE-WRITING MACHINE. WILLIAM F. HELMOND, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 8, 1908. Serial No. 414,871.



1. In a typewriting machine, the combination with a revoluble platen and a platen frame, of a releasable pressure-roll mechanism including a plate or bar extending along the platen and fixed at its ends to the ends of the platen frame, a rock-shaft journaled upon said plate and extending along the platen, a key connected to said rock-shaft, cam collars upon said rock shaft, leaf springs secured upon said plate and engageable by said cam collars, and arms carrying pressure rolls and engageable by said springs and pivoted on said plate.

2. In a typewriting machine, the combination with a revoluble platen and a platen frame, of a releasable pressure-roll mechanism including a plate or bar extending along the platen and fixed at its ends to the ends of the platen frame, a rock-shaft journaled upon said plate and extending along the platen, a key connected to said rock shaft, cam collars upon said rock-shaft, leaf springs secured upon said plate and engageable by said cam collars, and arms carrying pressure-rolls and engageable by said springs and pivoted on said plate; said arms being arranged in pairs, and a pintle being fixed upon said plate to carry each of said pairs of arms.

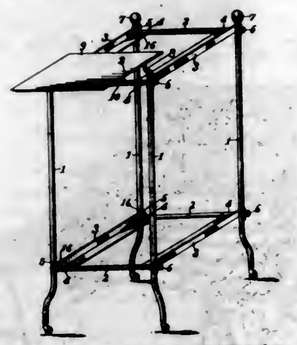
3. In a typewriting machine, the combination with a revoluble platen and a platen frame, of a releasable pressure-roll mechanism including a plate or bar extending along the platen and fixed at its ends to the ends of the platen frame, a rock-shaft journaled upon said plate and extending along the platen, a key connected to said rock-shaft, cam collars upon said rock-shaft, leaf springs secured upon said plate and engageable by said cam collars, and arms carrying pressure-rolls and engageable by said springs and pivoted on said plate; said plate having recesses in its edge to receive the arms, and said recesses being bridged by pintles upon which the arms are pivoted.

4. In a typewriting machine, the combination with a revoluble platen and a platen frame, of a releasable pressure-roll mechanism including a plate or bar extending along the platen and fixed at its ends to the ends of the platen frame, a rock-shaft journaled upon said plate and extending along the platen, a key connected to said rock-shaft, cam collars upon said rock-shaft, leaf springs secured upon said plate and engageable by said cam collars, and arms carrying pressure-rolls and engageable by said springs and pivoted on said plate; each of said springs being secured at its middle portion to a bracket attached to the plate, one bracket upon each side of the plate, and the rock-shaft extending between the springs.

5. In a typewriting machine, the combination with a revoluble platen and a platen frame, of a releasable pressure-roll mechanism including a plate or bar extending along the platen and fixed at its ends to the ends of the platen frame, a rock-shaft journaled upon said plate and extending along the platen, a key connected to said rock-shaft, cam collars upon said rock-shaft, leaf springs secured upon said plate and engageable by said cam collars, and arms carrying pressure-rolls and engageable by said springs and pivoted on said plate; each of said springs being secured at its middle portion to a bracket attached to the plate, one bracket upon each side of the plate, and the rock-shaft extending between the springs; and means being provided to regulate the tension of the springs, said regulating means comprising screws each having a head to engage one spring and a shank threaded through the opposite spring.

[Claims 6 to 12 not printed in the Gazette.]

897,367. ADDING-MACHINE STAND. AUGUSTIN HENDRICKS, Grand Rapids, Mich. Filed Aug. 12, 1907. Serial No. 388,166.



1. An adding machine stand comprising four legs, rods connecting the legs in pairs, angle bars each pivotally attached to the rods at the ends, and removable cap screws detachably securing each angle iron to the adjacent leg.

2. An adding machine stand comprising four legs, rods connecting said legs in pairs, angle bars each having one member formed tubular at each end to pivotally surround and connect the rods, and having the other member perforated for cap screws, and cap screws detachably inserted in said perforations and in the adjacent leg.

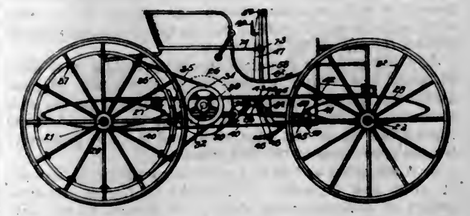
3. In an adding machine stand, four tubular legs, rods connecting the legs in pairs, angle bars each having one member turned in tubular form to receive the rods and pivotally engage the same, cap screws detachably inserted in the other member of each angle bar and in the adjacent leg, brackets inserted in the upper ends of one pair of legs, a table pivotally attached to the brackets at one side, and a brace pivoted on the rod which connects said legs and detachably engaging a recessed support beneath the other side of the table.

4. In an adding machine stand, four tubular legs, rods connecting the legs in pairs at the respective ends of the stand, angle bars each having one member turned in tubular form and surrounding the respective rods and also rotative thereon, cap screws removably inserted in openings in the other member of each bar and in the adjacent leg, a bracket inserted in the top of each of two legs, a brace pivoted on a rod connecting said legs and extending transversely beneath the outer side of the table, a table supported on said brackets and brace, a support under one side of the table and pivoted to the upper ends of the brackets, and a support under the other side of the table and having recesses to receive the brace.

5. In an adding machine stand, a tubular leg, a rod extending through the leg, an angle bar having a horizontal member surrounding the rod and rotative thereon, and also having a vertical member engaging the side of the leg, a cap screw inserted in the vertical member and the leg, and a plug in the leg and having an opening to receive the rod and a screw threaded opening to receive the cap screw.

897,368. AUTOMOBILE. HENRY K. HOLSMAN, Chicago, Ill. Original application filed Feb. 8, 1907, Serial No. 356,393. Divided and this application filed June 12, 1907. Serial No. 378,502.

1. In an automobile, the combination with running gears, of a steering wheel having its axle pivoted thereon, a steering arm secured to the axle, a vertical rock shaft, link connections between the rock shaft and the steering arm, a horizontal arm connected to the rock shaft to swing it to steer the vehicle but movable relative thereto, an elongated handle and sleeve journaled on the horizontal arm, engine-throttling mechanism, and connections between the engine-throttling mechanism and the sleeve, whereby the latter may be rotated in one position of the arm and moved longitudinally thereof in another position to control the speed of the vehicle.



2. In an automobile, the combination with running gears, of a steering wheel having its axle pivoted thereon, a steering arm secured to the axle, a vertical rock shaft, link connections between the rock shaft and the steering arm, a horizontal arm pivotally connected to the rock shaft so it can be swung to a vertical position, said arm being used to swing the rock shaft to steer the vehicle, an elongated handle and sleeve journaled on the horizontal arm, engine-throttling mechanism, and connections between the engine-throttling mechanism and the sleeve, whereby the latter may be rotated on the horizontal arm independently thereof in the horizontal position of the arm and moved longitudinally thereof in the vertical position of the arm to control the speed of the vehicle.

3. In an automobile, the combination with running gears, of a traction wheel journaled thereon, a steering wheel axle pivoted on the running gears, a steering wheel, connections between the axle and the steering wheel, a steering member, a handle carried thereby, an engine movable to driving and non-driving position, connections between the engine-shaft and the traction wheel, engine-throttling mechanism, and connections between the handle and the engine-throttling mechanism operative in any position of the engine.

4. In an automobile, the combination with running gears, of a traction wheel journaled thereon, an engine movable to driving and non-driving position, driving connections between the engine and the traction wheel, engine-throttling mechanism upon the engine, an engine-throttling mechanism-controlling member mounted upon a relatively stationary part of the vehicle, and connections between said engine-throttling mechanism and the controlling-mechanism therefor operative in any position of the engine.

5. In an automobile, the combination with running gears, of a traction wheel journaled thereon, an engine movable to driving and non-driving position, connections between the engine-shaft and the driving wheel, an engine-shifting member, engine-throttling mechanism carried by the engine, an engine-throttling-mechanism-controlling member mounted on a relatively stationary part of the vehicle, and connections between the engine-throttling-mechanism-controlling member and the engine-throttling mechanism, one element thereof being mounted upon the engine-shifting members so as to make the controlling mechanism operative in any position of the engine.

[Claims 6 and 7 not printed in the Gazette.]

897,369. SEA-GROIN. JESSE A. HOWLAND, Sea Bright, and WILLIAM H. DE NYSE, Long Branch, N. J. Filed Dec. 10, 1906. Serial No. 347,061.

1. A sea groin or like structure comprising a false work of piles and stringers, and interlocked reinforced concrete

planks, said planks being arranged vertically and secured to the said stringers with their lower ends extending into the bed of the water way.



2. A sea groin or like structure comprising a false work of piles and stringers, and interlocked reinforced concrete planks of self-sustaining length and secured to the said stringers, the upper ends of the planks projecting upward beyond the top of the false work.

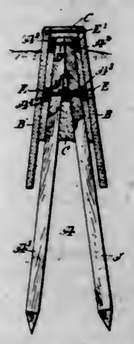
3. A sea groin or like structure comprising a false work of piles and stringers, interlocked reinforced concrete planks of self-sustaining length and secured to the said stringers, the upper ends of the planks projecting upward beyond the top of the false work, and metallic protectors for the upper ends of the said planks.

4. A sea groin or like structure comprising a false work of piles and stringers, interlocked reinforced concrete planks of self-sustaining length and secured to the said stringers, the upper ends of the planks terminating in a head resting on the upper stringer, and metallic caps for the corners of the said heads.

5. As a new article of manufacture a plank for sea groins and other hydraulic structures and consisting of a body of concrete in the form of a plank, and metal bars extending lengthwise in the said body for reinforcing the plank, one side of the body having a reinforced tongue and the other side being provided with a reinforced groove.

[Claim 6 not printed in the Gazette.]

897,370. BULKHEAD AND JETTY CONSTRUCTION. JESSE A. HOWLAND, Sea Bright, and WILLIAM H. DE NYSE, Long Branch, N. J. Filed Dec. 10, 1906. Serial No. 347,062.



1. A bulk-head, jetty or like structure comprising a support formed of a plurality of spaced and connected piles driven into the bed of the water way, a driven concrete sheet planking held on the said support, and a backing for the said sheet planking and embedding the upper portion of the said support.

2. A bulk-head, jetty or like structure comprising a support formed of spaced pairs of piles driven into the bed of the water way, the piles of each pair of piles diverging downwardly, and stringers connecting the pairs of piles, driven interlocked concrete planks attached to the said support, and a concrete backing for the said planks and embedding the upper portion of the said support.

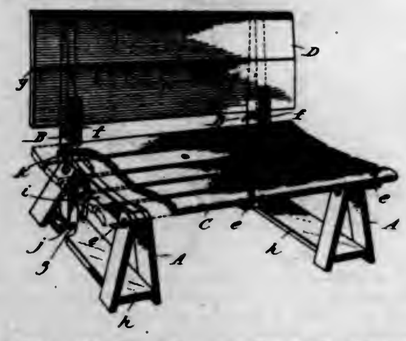
3. A bulk-head, jetty or like structure comprising a support, sheet plankings on opposite sides of the said support, and a backing of concrete for the said sheet plankings and embedding the upper portion of the said support.

4. A bulk-head, jetty or like structure comprising a support formed of a plurality of pairs of piles connected together, the piles of each pair of piles being secured together and having their lower ends diverging, concrete planking secured to the support, and a backing of concrete for the said planking and embedding the upper portion of the piles.

5. A bulk-head, jetty or like structure comprising a support, and sheet plankings on opposite sides of the said support and formed of interlocked concrete planks, driven down on the said support as guideways and firmly secured thereto.

[Claims 6 to 10 not printed in the Gazette.]

897,371. HALL, CONVENTION, AND CAMP-MEETING SETTEE. JOHN W. HUEBNER, Brillion, Wis. Filed Aug. 16, 1907. Serial No. 388,934.



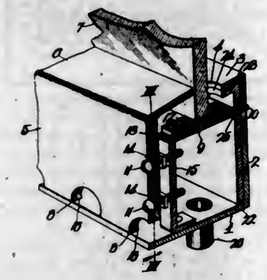
1. In a separable hall, convention and campmeeting settee, composed of a plurality of trestles, a plurality of lazy back standards, a lazy back and a seat arranged for being detachably connected when assembled together and formed into a settee, a trestle for supporting the seat and lazy back consisting of four legs in pairs and an upper and lower girth, the girths spacing the pairs of legs and the legs of each pair apart, the upper girth being arranged edgewise between the upper ends of the trestle legs, and its upper edge adapted in form lengthwise thereof to support a seat, a bolt through the upper ends of each pair of legs and an end of said girth, a loop at the rear end of said girth, its free ends being arranged between said girth end and the upper ends of a pair of legs and engaged with their fastening bolt, a lower girth secured flatwise between each pair of legs and the legs of each pair a short distance above their lower ends and spreading the legs of each pair apart, and a socket upon its upper side near its rear end adapted to receive a tenon of a lazy back standard.

2. In a separable settee comprising in its construction a plurality of trestles having each four legs, an upper and a lower girth, and a lazy back standard detachably connected with the trestle, a lazy back standard therefor adapted to be held in a position inclining backward, within a loop at the rear end of the upper girth and extending upward above the upper girth of the trestle, means upon the front edge of said standard for detachably connecting therewith a lazy back, it extending from a point above said upper girth to the upper end of the standard, and means for holding the lower end of said lazy back standard upon the rear end of said lower girth.

897,372. WINDOW-FRONT CONSTRUCTION. FRANCIS M. JACKSON, Kansas City, Mo. Filed Feb. 25, 1908. Serial No. 417,745.

1. In a window front construction, a pair of bars having apertures, a window light between said bars, and a slide plate fitting in the passage formed by and between the bars and adapted to cover or expose the apertures of one of them.

2. In a window front construction, a pair of bars having apertures, a window light between said bars a slide plate fitting in the passage formed by and between the bars and adapted to cover or expose the apertures of one of them, and a second slide plate also occupying said passage and adapted to cover or uncover the apertures of the companion bar.

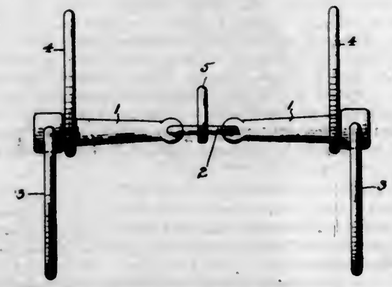


3. In a window front construction, a pair of bars having apertures, a window light between said bars, a slide plate fitting in the passage formed by and between the bars, and means for sliding said bar in one direction or the other so as to cover or uncover the apertures of said bar.

4. In a window front construction, a pair of bars having apertures, a window light between said bars, a slide plate fitting in the passage formed by and between the bars, and provided with an elongated hole, a cam fitting in said hole and eccentrically journaled in the contiguous bar, and means to turn said cam and thereby slide the slide plate so as to cover or uncover the apertures of said contiguous bar.

5. In a window front construction, a pair of angle bars having their adjacent edges provided with apertures, a pair of window lights fitting between the apertured edges of the bars and disposed at an angle to each other, means for clamping the bars against the window lights, a pair of slide plates fitting against the inner side of one of said angle bars and connected together and provided with apertures in their edges contiguous to the window lights, a pair of slide plates fitting against the inner side of the other angle bar and provided with apertures in their edges adjacent to the window lights, means for imparting sliding movement to said connected apertured slide plates, and independent means for imparting sliding movement to the other pair of slide plates.

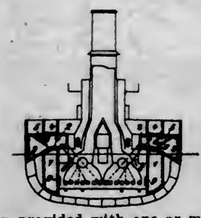
897,373. BRIDLE-BIT. MELVIN JINCKS, Cohocton, N. Y. Filed Jan. 29, 1908. Serial No. 413,186.



1. A bridle bit comprising two bars, a link connecting the adjacent ends of said bars, a link having a straight cross-bar and a curved bar connecting the ends of said cross-bar, said links being correspondingly notched where engaging each other to prevent movement of the links relative to one another, a ring secured to the free end of each of the bars aforesaid, and other rings loosely mounted on the bit between the end rings.

2. A bridle bit comprising the combination of two bars, a link connecting the adjacent ends of the bars having its middle portion externally notched, a link having a straight cross-bar and a curved bar connecting the ends of said cross-bar, said last mentioned link being notched internally adjacent to the cross-bar aforesaid and mounted on the first-mentioned link so that the notches therein engage one another and the links are perpendicular to one another, a ring secured to the free end of each of the bit bars, and other rings loosely mounted on the bit between the end rings.

897,374. COAL-BUNKER FOR MEN-OF-WAR. HEINRICH A. KAUERMANN, Duisburg, Germany, assignor to The Firm of Duisburger Maschinenbau Aktiengesellschaft vorm. Bechem & Keetman, Duisburg, Germany. Filed Nov. 15, 1906. Serial No. 343,555.



1. A war-ship provided with one or more boilers in the middle of the ship, hold bunkers, lower deck-bunkers, and oblique chutes leading thwartships from the lateral deck bunkers to the middle of the ship and directly into the firing rooms.

2. A war-ship provided with one or more boilers in the middle of the ship, hold bunkers, lower deck bunkers divided by bulkheads into inner and outer compartments, and oblique chutes leading thwartships from one of the compartments of the deck bunkers to the middle of the ship and directly into the firing rooms.

3. A war-ship provided with one or more boilers in the middle of the ship, hold bunkers, lower deck bunkers, oblique chutes leading thwartships from the lateral deck bunkers to the middle of the ship and directly into the firing rooms, and collecting tanks above the deck bunkers and communicating with the same.

4. A war-ship provided with hold bunkers, a lower deck bunker divided by an inclined partition into inner and outer compartments, said partition having a door therein, a chute leading from one of the compartments of the deck bunker directly to the stoke hole of the furnace, and a collecting tank arranged above the inclined partition of the deck bunker and provided in its bottom with a door opposite the door in the said inclined partition, so that the outer compartment of the deck bunker can be directly filled from the collecting tank.

5. A war ship provided with hold bunkers, lower deck bunkers, chutes leading from the deck bunkers directly to the stoke holes of the furnace, and collecting tanks above the deck bunkers and communicating with the same, said collecting tanks having a hinged section adapted to be swung inwardly to leave a side passage on the deck, the section when the tank is in use extending to the side of the ship.

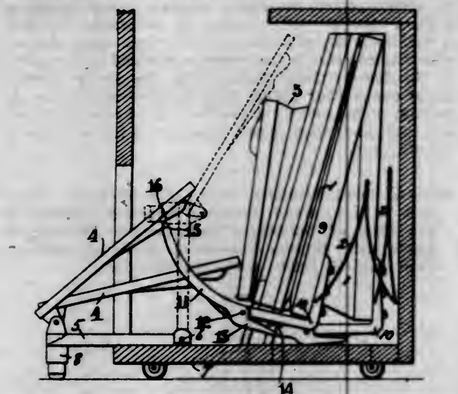
[Claims 6 to 10 not printed in the Gazette.]

897,375. PEDAL MECHANISM. GEORGE B. KELLY, Jamaica Plain, Mass. Filed Feb. 11, 1908. Serial No. 415,288.

1. The combination with a pedal and a bellows, of a push bar pivotally connected with the bellows and having an extension beyond its pivotal connection, a spring bearing on the extension, the forward end of the push bar being in contact with the pedal, substantially as set forth.

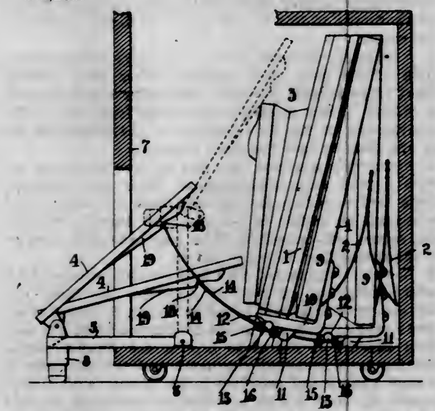
2. The combination with a pedal and a bellows, of an angle bar secured to the bottom part of the movable

board of the bellows, a push bar pivoted to the bottom member of the angle bar and having an extension beyond



its pivot, a spring interposed between said extension and the angle bar, the forward end of the push bar resting loosely in a notch of the pedal, substantially as set forth.

897,376. PEDAL MECHANISM. GEORGE B. KELLY, Jamaica Plain, Mass. Filed Feb. 11, 1908. Serial No. 415,289.



1. The combination with a pedal and a bellows, of a means for transmitting motion from the pedal to the bellows and from the bellows to the pedal, which means consists of a single and continuous element connected with one of these elements and loosely in contact with the other, substantially as set forth.

2. The combination with a pedal and a bellows, of a flexible means for transmitting motion from the pedal to the bellows, and from the bellows to the pedal, which means is mounted on one of these two elements and loosely in contact with the other, substantially as set forth.

3. The combination with a pedal and a bellows, of a spring metal bar extending from the bellows to the pedal, substantially as set forth.

4. The combination with a pedal and a bellows, of a spring metal bar connected with the movable board of the bellows and extending to the pedal, substantially as set forth.

5. The combination with a pedal and a bellows, of a spring metal bar connected with the movable board of the bellows at one end and having its opposite end rested loosely against the pedal, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

897,377. TRUNK-LOCK. ROBERT W. KING, Syracuse, N. Y., assignor to Susan A. King, Syracuse, N. Y. Filed May 27, 1908. Serial No. 435,215.



1. A lock mechanism, comprising a main lock, a key for operating said lock, a spring-hasp to carry said main lock, a pivotal support for said hasp, by means of which said hasp may be rotated or rocked laterally, a plurality of bolt locks, each comprising a male and a female member and a reciprocating bolt, a cross-arm connected to said pivotal support, and a series of links to connect said bolts with said cross-arm.

2. A lock mechanism, comprising a main lock, a key for operating said lock, a spring-hasp to carry said main lock, a pivotal support for said hasp, by means of which said hasp may be rotated or rocked laterally, a plurality of bolt locks, each comprising a male and a female member and a reciprocating bolt, a cross-arm connected to said pivotal support, a series of links to connect said bolts with said cross-arm, and stop-pins to limit the operation of said cross-arm and said hasp.

3. A lock mechanism, comprising a main lock, a key for operating said lock, a spring-hasp to carry said main lock, a pivotal support for said hasp, by means of which said hasp may be rotated or rocked laterally, a plurality of bolt locks, each comprising a male and a female member and a reciprocating bolt, a cross-arm connected to said pivotal support, a series of links to connect said bolts with said cross-arm, and a spring to normally hold each of said bolts in locking position, and also to restore said hasp to its normal upright position.

4. A locking mechanism, comprising a main lock operated by a key, a hasp to carry said main lock, a spring to operate said hasp when the main lock is released by the key, a pivotal support for said hasp adapted to permit said hasp to be rotated after the same has been operated by said spring, a pair of auxiliary locks, each comprising a slotted tongue and a reciprocating latch-bolt, a guide for each of said latch-bolts, a spring to operate each latch-bolt in one direction, a link connected to each latch-bolt, a cross-arm connected to said pivotal support and to said hasp and also with said links, adapted to effect the withdrawing of said latch-bolts when said hasp is rotated, and a spring to restore each latch-bolt to normal locking position, and also to restore the hasp to its normal upright position.

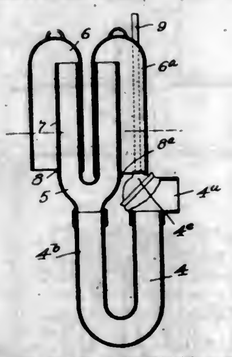
5. A locking mechanism, comprising a main lock, a key for operating said lock, a hasp to support said main lock, a spring to throw said hasp outwardly when the main lock is released, a pivoted support for said hasp, a cross-arm connected to said pivoted support and movable with said hasp, a plurality of auxiliary locks, each comprising a male and a female member, and a reciprocating latch-bolt, a spring to normally hold each of said latch-bolts in locking position, and a link to connect each latch-bolt with said cross-arm, by means of which said latch-bolts may be shifted into released position by the operation of said hasp on said pivoted support.

[Claims 6 to 8 not printed in the Gazette.]

897,378. AUTOMATIC FLUSH-TANK SIPHON. GORDON LAND, Grants Pass, Oreg. Filed Mar. 27, 1907. Serial No. 364,949.

1. In a flush tank siphon for flushing sewers and the like, the combination with a P trap having a vertical downtake limb, of a pair of vertical downtake pipes having their lower ends connected together to form a single conduit which is joined to the downtake limb of said trap, and a bell over each downtake pipe and having a side space forming an uptake channel, one of said bells having its lower edge located on a higher plane than the lower edge of the other.

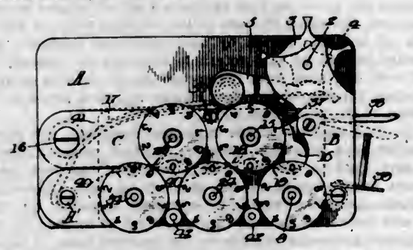
2. In a flush tank siphon for flushing sewers and the like, the combination with a P trap having a vertical downtake limb, of a pair of vertical downtake pipes having their lower ends connected together to form a single passage communicating with said downtake limb, a bell over each downtake pipe having a part circular portion embracing the pipe and a part circular portion forming an uptake passage, and stops on the pipes for holding said bells at different elevations.



3. In a flush tank siphon for flushing sewers and the like, a trap having vertical intake and uptake portions and a horizontal outlet, a diagonally connected removable cap at the junction of said uptake and horizontal outlet, a pair of vertical downtake pipes connected together at their lower ends to form a single conduit joined to the downtake limb of said trap, and a bell over each downtake pipe having a side space forming an uptake channel.

4. In a flush tank siphon for flushing sewers and the like, a trap having vertical intake and uptake portions and a horizontal outlet, a diagonally connected removable cap at the junction of said uptake and horizontal outlet, a vent pipe extending vertically upward from said cap, a pair of vertical downtake pipes connected together at their lower ends to form a single conduit joined to the downtake limb of said trap, and a bell over each downtake pipe having a side space forming an uptake channel.

897,379. CYCLOMETER. CHARLES L. LILLEBERG, Chicago, Ill., assignor to John B. Mallers, Jr., Chicago, Ill. Filed Feb. 3, 1908. Serial No. 414,111.



1. In a cyclometer a series of suitable digit-wheels having stationary bearings, and digit-wheels alternating therewith having bearings movable simultaneously towards and from said first mentioned digit wheels, one numeral of each digit-wheel constituting one of the numerals of the total number indicated by said cyclometer.

2. In a cyclometer a series of suitable digit-wheels, a stationary frame in which said wheels have bearings, a transversely movable frame normally pressing toward said stationary frame, and digit-wheels alternating with and normally engaging said first mentioned wheels and having bearings in said movable frame.

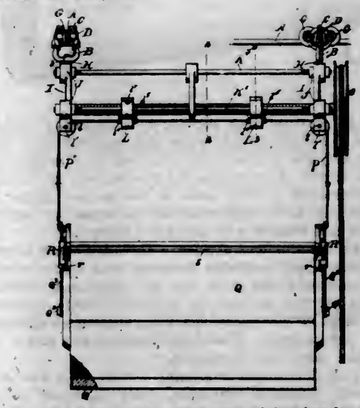
3. In a cyclometer a series of suitable digit wheels, a stationary frame in which said wheels have bearings, a movable frame pivoted at the end opposite the units digit wheel in said stationary frame and normally pressing towards said stationary frame, and digit wheels alternating with and normally engaging said first mentioned wheels and having bearings in said movable frame.

4. In a cyclometer a series of suitable digit wheels a stationary frame in which said wheels have bearings, a movable frame pivoted at one end and normally pressing towards said stationary frame, and digit wheels alternating with and normally engaging said first mentioned wheels and having bearings in said movable frame.

5. In a cyclometer a series of suitable digit wheels having stationary bearings, digit-wheels alternating therewith having bearings movable simultaneously towards and from said first mentioned digit-wheels, and means for preventing involuntary motion of said wheels when disengaged.

[Claims 6 to 22 not printed in the Gazette.]

897,380. CONVEYER. ARTHUR D. LONG and GEORGE DIETZ, Fairfield, Iowa, assignors, by direct and mesne assignments, to Louden Machinery Company, Fairfield, Iowa, a Corporation of Iowa. Filed June 19, 1905. Serial No. 266,003.



1. In combination, a frame comprising heads connected by rods, pulleys carried by the heads, means attached to the heads for supporting the frame, a screw rotatably mounted in the heads, yokes movable on the rods and engaged by the screw, pulleys carried by the yokes, a bucket, connections between the bucket and the yokes, said connections passing over the pulleys of the heads and yokes.

2. In combination, a frame comprising heads connected by rods, means attached to the heads for supporting the frame, a screw rotatably mounted in the heads, said screw having its end portions oppositely threaded, yokes mounted on the rods of the frame and engaged by the screw, a bucket, connections between the bucket and the yokes.

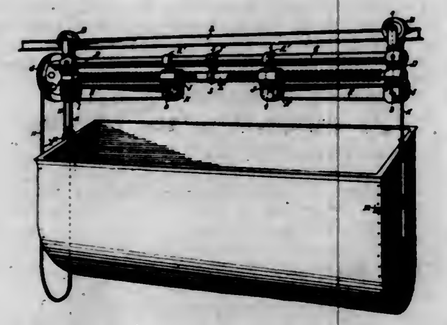
3. In combination, angular heads, rods connecting the heads near their apices, a screw rotatably mounted in the heads, yokes movable on the rods and engaged by the screw, pulleys carried by the yokes, pulleys carried by the heads, a bucket, and connections between the bucket and the yokes, said connections passing over the pulleys of the heads and yokes.

4. In a conveyer, a frame comprising heads and parallel rods, yokes slidable on the rods, pulleys mounted to rotate in the yokes approximately alining longitudinally of the frame, flexible connections run over the longitudinally alining pulleys, the said flexible connections leading from the frame at opposite ends, a receptacle suspended from the flexible connection and means for moving the yokes longitudinally of the frame.

5. In a conveyer, a frame consisting of heads, rods connecting the heads, yokes slidable on the rods, pulleys car-

ried by the yokes and heads, flexible connections run over the pulleys and extending over the pulleys on the heads, a receptacle attached to the ends of the flexible connections, means whereby the movement of the yokes operates the flexible connections over the pulleys on the heads and means for moving the yokes.

897,381. ELEVATOR AND CARRIER. WILLIAM LOUDEN, Fairfield, Iowa. Filed Sept. 18, 1905. Serial No. 278,917.



1. In an elevator and carrier, a horizontally disposed rotatable shaft carrying a screw and mounted in a frame which is adapted to run on an overhead track and to constitute a carrier, a receptacle for the carrier, an elevating tackle connected to both ends of the carrier frame and the receptacle, and means whereby the screw will operate the tackle and elevate and lower the receptacle.

2. In an elevator and carrier, a threaded shaft horizontally disposed and rotatably mounted in a frame adapted to run on an overhead track and to constitute a carrier, a receptacle for the carrier, an elevating tackle connected to both ends of the shaft and the receptacle and means whereby the threaded shaft will operate the tackle and elevate and lower the receptacle.

3. In a device of the character described, a carrier, a horizontally disposed rotatable shaft mounted in the frame of the carrier and carrying on one end a right hand screw and a left hand screw on the other end, a receptacle for the carrier, an elevating tackle connected to the receptacle at each end, and means whereby the screws will simultaneously operate the tackles and correspondingly elevate and lower the ends of the receptacle.

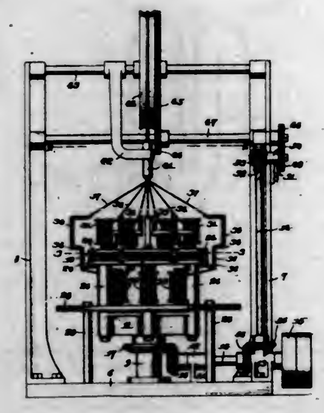
4. In a device of the character described, a carrier, a horizontally disposed shaft having a right hand thread cut on one end and a left hand thread cut on the other end, and said shaft being rotatably mounted in the carrier frame, a receptacle for the carrier, an elevating tackle connected to each end of the receptacle, and means whereby the threaded shaft will simultaneously operate the elevating tackles and correspondingly elevate and lower the ends of the receptacle.

5. In combination with a frame, means for supporting said frame, blocks slidably mounted between the ends of the frame, means for imparting motion to the blocks, a receptacle, a flexible connection between each block and the adjacent end of the receptacle whereby movement of the blocks will raise or lower the ends of the receptacle uniformly.

[Claims 6 to 19 not printed in the Gazette.]

897,382. BRAIDING-MACHINE. JACOB LUNDGREN, Philadelphia, Pa., assignor to Samson Cordage Works, Boston, Mass., a Corporation of Massachusetts. Filed May 13, 1907. Serial No. 373,234.

1. In a machine of the character described, the combination of a rotatable member, rotating means therefor, a series of two-part track-ways fixedly connected to said member, carriers on said track-ways, means for actuating said carriers, a set of bobbins on said carriers delivering threads to the braiding point, a second set of bobbins, and means for passing the threads delivered from the second set of bobbins entirely around bobbins of the first named set and between the parts of said track-ways.



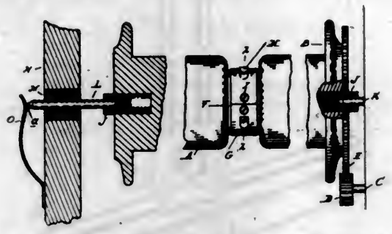
2. In a machine of the character described, the combination of a rotatable member, rotating means therefor, shafts fixed to said member, a series of two part track-ways fixed to said shafts, carriers on said track-ways, means including rotatable members mounted on said shafts for actuating said carriers, a set of bobbins on said carriers delivering threads to the braiding point, a second set of bobbins, means for passing the threads delivered from the second set of bobbins entirely around bobbins of the first named set and between the parts of said track-ways.

3. In a machine of the character described, the combination of a rotatable member, rotating means therefor, shafts fixed to said member, a series of two part track-ways fixed to said shafts, carriers on said track-ways, means including rotatable members mounted on said shafts for actuating said carriers, a set of bobbins on said carriers delivering threads to the braiding point, a second set of bobbins carried by said rotatable members, and means carried by said rotatable members for passing the threads delivered from the second set of bobbins entirely around bobbins of the first named set, and between the parts of the said track ways.

4. In a machine of the character described, the combination of a rotatable member, rotating means therefor, shafts fixed to said member, a series of two-part track-ways fixed to said shafts, carriers on said track-ways, means including rotatable members mounted on said shafts for actuating said carriers, a set of bobbins on said carriers delivering threads to the braiding point, a second set of bobbins, and thread-guiding arms carried by said rotatable members and extending to rotate through the spaces between the parts of said track-ways.

5. In a machine of the character described, the combination of a rotatable member, rotating means therefor, shafts fixed to said member, a series of two-part track-ways fixed to said shafts, carriers on said track-ways, means including rotatable members mounted on said shafts for actuating said carriers, a set of bobbins on said carriers delivering threads to the braiding point, a second set of bobbins carried by said rotatable members, and thread-guiding arms carried by said rotatable members and extending to rotate through the spaces between the parts of said track-ways.

897,383. MUSIC-WINDING ROLL FOR PERFORATED MUSIC-SHEETS. GEORGE E. MACK, Detroit, Mich., assignor to Farrand Organ Company, Detroit, Mich., a Corporation of Michigan. Filed July 17, 1905. Serial No. 270,033.



1. A winding roll for music sheets provided with a plurality of music engaging hooks spaced about the circumference thereof.

2. A winding roll for music sheets provided with a plurality of music engaging hooks arranged in circumferential series and spaced equidistant from each other.

3. The combination with a music winding roll, of a band centrally encircling the same, and a plurality of music-engaging hooks secured to said band.

4. The combination with a music winding roll, of a metallic band encircling said roll, and a plurality of music-engaging hooks struck out from said band.

5. A winding roll for music sheets provided with a plurality of music engaging hooks arranged at different points about the roll and so as to exactly counter-balance each other and preserve the balance of the roll.

897,384. SPINNING-RING. MICHAEL H. MALONEY, Chelsea, Mass. Filed Aug. 29, 1906. Serial No. 332,518.



1. A device of the character specified having a traveler ring, a rotatable carrier upon which said ring is loosely mounted, and means whereby in the operation of the device said carrier by its weight will act as a rotatable drag against the free rotation of said ring.

2. A device of the character specified having a traveler ring, a rotatable carrier, means for loosely mounting said ring upon said carrier to have a vibratory motion with respect thereto, and means connecting said traveler ring and carrier whereby in the operation of said device said ring and carrier will rotate together.

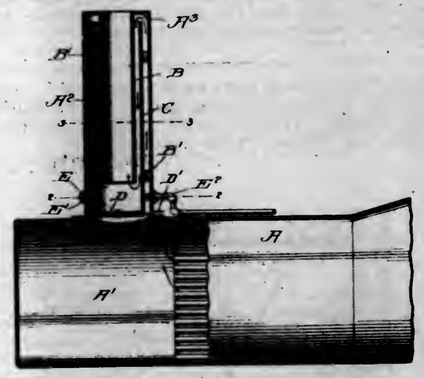
3. A device of the character specified having a traveler ring, a carrier for said ring, means for loosely mounting said ring upon the carrier, said ring being adapted to yield with a vibratory movement to said carrier upon the application of light pulls to said ring in the operation of the device, means connecting said ring with said carrier whereby said ring will rotate with said carrier, and means for mounting said carrier to be freely rotatable.

4. An article of the character specified having in combination a traveler ring, a carrier therefor, means for loosely mounting said ring upon said carrier whereby said ring will have a relative movement with respect to said carrier and said carrier rotate in unison therewith as said traveler ring is turned, and means for mounting said carrier to be freely rotatable.

5. A device of the character specified having in combination a traveler ring, a carrier therefor, means for loosely mounting said ring upon said carrier to have relative movement with respect thereto, means whereby said carrier will rotate in unison with said traveler ring as said traveler ring is turned in the operation of the device, and means for mounting said carrier to be freely rotatable.

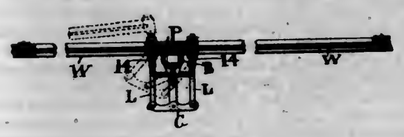
[Claims 6 to 8 not printed in the Gazette.]

897,385. SPARKLESS SMOKE-STACK FOR TRACTION-ENGINES. ANTON MATHISON, Rochford, S. D. Filed June 15, 1907. Serial No. 379,246.



The combination with a straight stack having at the top an inner annular flange, a depending sleeve carried by said flange, said sleeve opening upwardly and downwardly and terminating short of the lower end of the stack, brackets carried by and within the stack, a pipe carried by said brackets, the pipe terminating at its upper end short of the flange, and its lower end extending below the sleeve, a damper arranged in the lower end of the pipe, and means for admitting steam into the space between said pipe and the stack.

897,386. MEANS FOR OPERATING CAR-DECK WINDOWS. WILLIAM J. MCGRATH and MARTIN H. SCHEFFT, Cleveland, Ohio. Filed Jan. 6, 1908. Serial No. 409,397.



1. A device for controlling windows in the decks of cars comprising a supporting bracket having an arm provided with a series of teeth, an operating rod through said arm and a member mounted thereon adapted to interlock with said teeth.

2. A device to open and close windows in the decks of cars comprising a supporting bracket and an arm rigid therewith having a circle of serrations at its bottom, an operating rod rotatable in said arm and a spring pressed member slidably mounted on said rod and engaged with said serrations, and means operatively connecting said rod with a window.

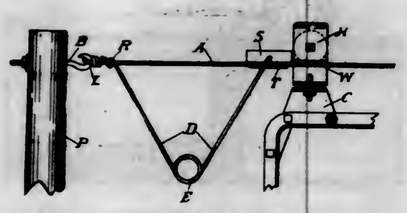
3. A car window controlling device comprising a supporting bracket and an arm detachably secured thereto having a tubular bearing with serrations at its bottom, and an operating rod through said bearing and a serrated tubular head slidably engaged on said rod and a spring to hold said head normally in contact with said tubular bearing.

4. A car window controlling device comprising a support having a tubular bearing provided with serrations, in combination with an operating rod projecting through said bearing, a member having serrations engaging the serrations on said bearing and rotatably and slidably locked on said rod, a spring supporting said member in working position and an arm rigid with said rod and window operating means connected therewith.

5. The supporting bracket and the arm removably affixed thereto having a tubular bearing with teeth at its bottom, in combination with an operating arm rotatably mounted

on said bracket through said bearing, a serrated spring pressed head on said rod adapted to engage said tubular bearing, an arm rigid with the upper end of said rod, a cross bar pivoted at its middle on said arm and links pivotally engaged with the ends of said cross bar, and adapted to connect with different windows.

897,387. STOP FOR ELEVATED CARRIERS. ALBERT H. NELLER, Fairfield, Iowa, assignor to Louden Machinery Company, Fairfield, Iowa, a Corporation of Iowa. Filed Mar. 30, 1908. Serial No. 424,082.



1. The combination of an elevated track, a carrier to run on the track, a stop to arrest the movement of the carrier mounted on the track and slidable thereon, and resilient means having one end applied directly to the track and the other connected to the stop to ease the arrest of the carrier and to cause a rebound of the same.

2. The combination of an elevated track, a carrier to run on the track, a stop to arrest the movement of the carrier mounted on the track and slidable thereon, and a spring having one end directly applied to the track and the other connected to the stop to ease the arrest of the carrier and to cause a rebound of the same.

3. The combination of an elevated track, a carrier to run on the track, a stop to arrest the movement of the carrier mounted on the track and slidable thereon, and a depending spring having one end directly applied to the track and the other connected to the stop to ease the arrest of the carrier and to cause a rebound of the same.

4. The combination of an elevated track, a carrier to run on the track, a stop to arrest the movement of the carrier mounted on the track and slidable thereon, and a depending spring having a coil near its lower central portion with one end directly applied to the track and the other connected to the stop to ease the arrest of the carrier and to cause a rebound of the same.

5. The combination of an elevated track, a carrier to run on the track, a stop to arrest the movement of the carrier mounted on the track and slidable thereon, and a depending V-shaped spring having one end connected to the stop and the other end having an open coil adapted to encircle the track and to rest against a fixed stop.

[Claims 6 to 9 not printed in the Gazette.]

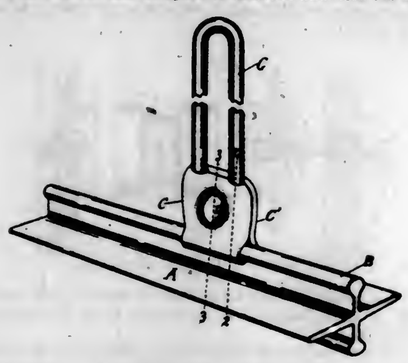
897,388. TRACK-HANGER. ALBERT H. NELLER, Fairfield, Iowa, assignor to Louden Machinery Company, Fairfield, Iowa, a Corporation of Iowa. Filed Apr. 22, 1908. Serial No. 428,607.

1. A track hanger comprising a pair of clamping members having their lower ends adapted to catch over and hold the head of a track-rail, and having means on their upper ends to embrace and hold the lower ends of a staple.

2. A track hanger comprising a pair of clamping members having their lower ends adapted to catch over and hold the head of a track-rail, and having recesses in their upper ends to embrace and hold the lower ends of a staple.

3. The combination of a pair of clamping members having recesses in the inner faces of their upper ends, and their lower ends adapted to embrace and hold the head of a track-rail, and a staple having headed ends inserted in the recesses of the clamping members.

4. The combination of a pair of clamping members having a recess in each of the upper corners of the inner faces, and their lower ends adapted to embrace and hold the head



of a track-rail, and a staple having headed ends inserted in the recesses in the corners of the clamping members.

897,389. BALANCE. JACOB NELSON, Chicago, Ill., assignor to Edward P. Martin Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 27, 1906. Serial No. 340,823.



1. In a measuring instrument, in combination, a base; a gear case secured to said base; a tubular standard secured to said gear case; a scale; an indicator on said standard; a feed screw in said standard for moving said indicator; a shaft rotatably mounted in said gear case, said shaft being connected with said feed screw; and means for rotating said shaft.

2. A link for Jolly balances adapted to be detachably secured at one end to a spring and at the other to a scale pan, said link having a loop therein and a contact member fixed to said link within said loop.

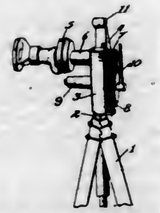
3. In a balance, in combination, a spring; a scale pan; a link for connecting said spring and said scale pan, said link having a loop therein; a contact point attached to said link; an indicator; and a contact member fixed to said indicator adapted to enter said loop and contact with said contact point.

4. In a balance, in combination, a base; a gear case secured to said base, said gear case having a tubular, compressible neck; a standard adapted to fit within said neck; a clamp ring surrounding said neck; and a screw for tightening said clamp ring.

5. In a measuring instrument, in combination, a standard; a feed screw; a member slidably mounted on said standard, said member having guides thereon; a half-nut slidably mounted between said guides; a lever pivotally mounted on said sleeve; a link connecting said half-nut and said lever; and a spring tending to move said lever in one direction.

[Claims 6 to 8 not printed in the Gazette.]

897,390. WINDMILL-FRAME. LA VERNE W. NOYES, Chicago, Ill. Filed Aug. 12, 1905. Serial No. 273,971.



1. In a wind mill, a turn table having a journal-box-receiving opening, a journal-box mounted at one end in said opening, said journal-box being provided with a shoulder, and means, coöperating with said shoulder, for locking the journal-box in various positions whereby the position of the portion of the journal-box most subject to wear may be periodically changed.

2. In a wind mill, the combination with a turn-table having an opening formed therein, of a journal box having an end adapted to fit within said opening, a shoulder upon said journal box, means carried upon the turn-table adapted to engage said shoulder and thereby to retain said box in position, and means for preventing the application of said retaining means except when said journal box is rotated to one of several predetermined positions.

3. In a wind mill, the combination with a turn table, having openings formed therein, of journal boxes provided with journal bearings, said journal boxes having ends thereof adapted to fit within said openings, projections upon said journal boxes, removable means carried upon the turn table adapted to engage one of said projections to prevent the turning of said journal boxes in said openings, and means for preventing the application of said last-named means except when said journal boxes are rotated to a predetermined position.

4. In a wind mill, the combination with a turn table, of an arm or bracket carried thereby, having sockets formed therein, removable supports provided with journal bearings and having the ends thereof adapted to fit within said sockets, shoulders formed upon said supports, pins carried by said arm, and washers carried by said pins having a recess formed therein, into which the points of the shoulders of the supports are adapted to fit.

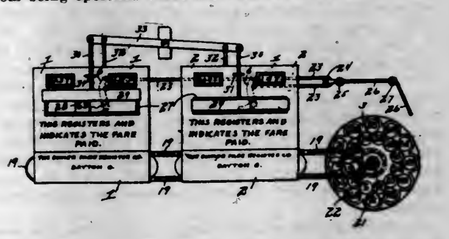
5. In a wind mill, the combination with a turn table, of removable supports having journal bearings for the wind mill, carried by said turn table, shoulders formed on said supports to receive a wrench to turn the same, means for engaging predetermined points of the shoulder, and means for preventing the engagement of the remaining points of the shoulder.

[Claims 6 and 7 not printed in the Gazette.]

897,391. OPERATING MECHANISM FOR FARE-REGISTERS. JOHN F. OHMER and FRANK G. COLBY, Dayton, Ohio, assignors to Ohmer Fare Register Company, Rochester, N. Y. Filed July 10, 1907. Serial No. 382,975.

1. The combination with two register mechanisms, of a single cord or cable connected with the mechanism of each register, a pulley intervening between either end of said cord or cable, and means for preventing the operation of the mechanism of one register, while the mechanism of the other register is in an operative condition.

2. The combination with two series of counters, each series being adapted to register fares of certain denominations, individual actuating devices for each counter, a main actuating member for the individual actuating devices of each series of counters, said main actuating members being adapted to upward movements in operating the individual actuating devices of any particular counter of either series, a single flexible connection extending to each of said main actuating members and by means of which one or the other of said main actuating members is operated by pulling upon said flexible connection, and means for preventing one of said main actuating members from being operated while the other is actuated.



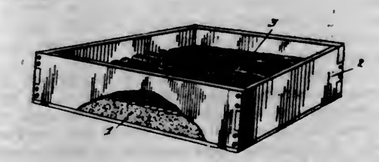
3. The combination with two register mechanisms, of flexible means consisting of a pull rope connected to the mechanisms of both registers, and whereby the mechanism of one or the other register may be operated, and means for preventing the operation of one mechanism while the other mechanism is being operated.

4. The combination with two register mechanisms including a main actuating member for each of such mechanisms, a cord or cable looped around a flexible connection, and the ends of which are connected with the main actuating members, a single cord or cable extending from said flexible connection and by means of which one or the other of the main actuating members may be operated by drawing upon said single rope or cable, and means for preventing the operation of one of said main actuating members while the other is being operated.

5. In a fare register, the combination with two machines each one of which is adapted to register certain specific fares, of a lifting bar for each machine adapted to actuate the mechanism of such machine to register and indicate the fares, an operating lever coöperating with each lifting bar, a flexible connection between the operating levers of the two machines, said flexible connections being looped around an anti-friction connection, a pull rope connected to said anti-friction connection and extending on the interior of the car, said pull rope being adapted to actuate the levers of each machine and means for preventing an elevation of one of said lifting bars while the other is being elevated by drawing upon said pull rope.

[Claim 6 not printed in the Gazette.]

897,392. NITROGENOUS FOOD PRODUCT. KEIICHIRO OKAZAKI, Tokyo, Japan, assignor of one-half to Hanuemon Yenjo, Tokyo, Japan. Filed Mar. 13, 1907. Serial No. 362,157.



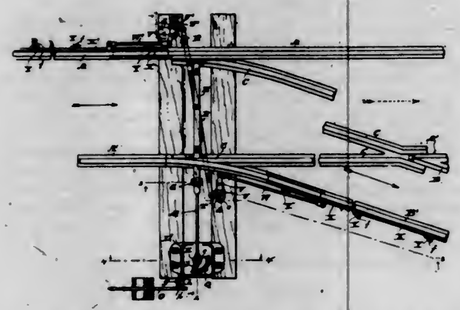
1. A process of producing a nitrogenous food composition which consists in steaming rice hulls until the starch contained therein is reduced to a gelatinous state, cooling to a temperature favorable to fungus growth bringing rice straw into proximity thereto, maintaining the hulls at

this temperature for several days, separating the "Okazaki" fungus from other fungi developed, cultivating the "Okazaki" fungus upon a medium of nitrogenous vegetable material mixed with porous material and moistened with water, for several days at a temperature favorable to fungus growth, then adding a readily diffusible liquid to the mass, separating the liquid content from said mass and evaporating said liquid to dryness at a temperature below 100° C.

2. A process of producing a nitrogenous food composition which consists in steaming rice hulls having porous material mixed therewith until the starch contained therein is reduced to a gelatinous state, cooling the hulls to a temperature of between about 20° and 35° C., planting fungi from rice straw thereon maintaining the hulls at this temperature for several days, separating the "Okazaki" fungus from the other fungi developed, cultivating this fungus upon a medium comprising refuse nitrogenous material as pressed cake mixed with porous material and moistened with water, for several days at a temperature between about 20° and 35° C., then adding a readily diffusible liquid to the mass, separating the liquid portion of the mass and desiccating said liquid at a temperature below 100° C. under diminished atmospheric pressure.

3. In the process of producing a nitrogenous food composition, the herein described steps comprising cultivating upon a medium of nitrogenous vegetable material mixed with insoluble porous material substantially pure "Okazaki" fungus, a whitish fungus normally developed in a wild state on rice hulls at a temperature of between about 20° to 35° C., maintaining said vegetable material and fungus at a temperature favorable to fungus growth for several days, adding a readily diffusible liquid to the mass, separating the liquid portion of the mass and desiccating it substantially as described.

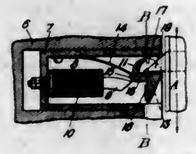
897,393. RAILWAY-SWITCH. MATHEW H. OWEN and WILLIAM OWEN, Chicago, Ill. Filed Jan. 2, 1906. Serial No. 294,089.



1. In a railway system, the combination of a spur-switch, a weighted operating lever in gear connection therewith, a strip disposed adjacent to the outside rail of the spur in bell-crank connection with the switch, and a second strip disposed adjacent to the rail of a main track opposite the first named strip, and also in bell-crank connection with said switch.

2. A railway switch, a signal stem, a toothed wrist-plate secured thereto, a rod in connection with the switch and wrist-plate, a thrust-bar connected to said wrist-plate diametrically opposite the switch rod connection thereof, said thrust-bar being arranged to impinge against the rail when the switch is closed, bell-cranks connected to the switch at either side thereof, reciprocative strips at either side of the railway track and adjacent to the rails thereof, rods connecting said strips and bell cranks, and a weighted lever in gear connection with the aforesaid wrist-plate.

897,394. ELECTROMAGNETIC LOCKING DEVICE. CHARLES O. PETERS, Winthrop, Mass. Filed Mar. 30, 1908. Serial No. 424,090.



1. A locking device comprising in its construction an electro-magnet, a pivoted locking member, an armature connected to said locking member and adapted to coöperate with said magnet to rock said locking member on its pivot, a door, and a latch mounted on said door and normally engaging said locking member, a part of said latch normally lying in a plane containing the pivotal axis of said member and extending parallel to the direction of movement of said door.

2. A locking device comprising in its construction an electro-magnet, a pivoted locking member, an armature mounted on said locking member and adapted to coöperate with said magnet to rock said locking member on its pivot, a door, and a latch mounted on said door and normally engaging said locking member, a part of said latch coinciding with the axis of said member.

3. A locking device comprising in its construction an electro-magnet, a pivoted locking member, an armature mounted on said locking member and adapted to coöperate with said magnet to rock said locking member on said pivot, a spring adapted to normally hold said locking member in its locked position, a door, and a latch mounted on said door and normally engaging said locking member, a part of said latch coinciding with the axis of said member.

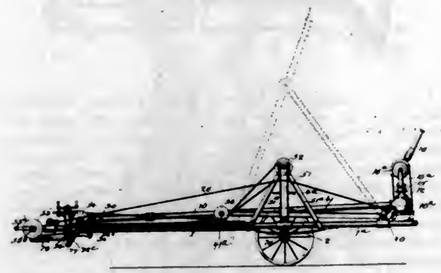
4. A locking device comprising in its construction an electro magnet, a pivoted locking member, an armature connected to said locking member and adapted to coöperate with said magnet to rock said locking member on its pivot, a spring adapted to normally hold said locking member in its locked position, a door, and a latch mounted on said door and normally engaging said locking member, a part of said latch normally lying in a plane containing the pivotal axis of said member and parallel to the direction of movement of said door.

5. A locking device comprising in its construction an electro-magnet, a pivoted locking member provided with a surface containing the axis of said member, an armature connected to said locking member and adapted to coöperate with said magnet to rock said locking member on its pivot, a spring adapted to normally hold said locking member in its locked position, a door, and a latch mounted on said door and normally engaging said surface at said axis.

897,395. HOSE-NOZZLE CART. EMANUEL J. PETRU and JOSEPH ZIDEK, Chicago, Ill. Filed Aug. 31, 1907. Serial No. 390,867.

1. A hose-nozzle carriage comprising a horizontally extending frame and a pair of wheels on which it is mounted for travel, in combination with a water-supply pipe lodged on the frame and extending longitudinally thereof; a nozzle connected to the pipe at the forward end; a carriage connected to the pipe at the rear end mounted for travel along the frame; a cable connected to the frame at the forward part; a drum about which the cable is wound at the rear part of the frame; a pulley on the frame forward of the travel of the carriage and a pulley on the carriage, the cable intermediate its forward connection to the frame and the drum being extended around both pulleys, and means for rotating the drum.

2. A hose-nozzle carriage comprising a longitudinally extended frame and a pair of wheels on which it is mounted for travel, in combination with a water-supply pipe extending lengthwise of the frame supplied with a nozzle at its forward end and hose connections at its rear end; a carriage mounted for travel on the frame, to which the rear end of the pipe is connected; a link connected to the forward end of the frame and to the pipe intermediate the nozzle and the carriage; a cable connected at one end to the frame and a drum at the rear end of the frame around which the other end of the cable is wound; a pulley on the carriage and a second pulley at a forward position on the frame, the cable being passed around said two pulleys in its course intermediate the drum and its attachment to the frame.



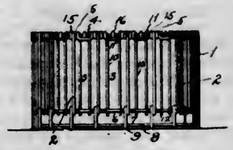
3. A hose-nozzle carriage comprising a horizontally extending frame and wheels on which it is mounted for travel, in combination with a water-supply pipe extending lengthwise of the frame having a discharge nozzle at the forward end and hose connections at the rear end; a carriage mounted on the frame for travel lengthwise thereof connected to the rear end of the pipe; a link pivoted at its forward end on the frame and at its rear end to the pipe intermediate the nozzle and the carriage; a cable connected at one end to a forward point on the frame, and a drum on the rear end of the frame around which the cable is wound, a pulley on the carriage and an elevated pulley forward thereof on the frame, the cable being passed around said two pulleys intermediate its connection with the frame and the drum, and a pulley mounted on the pipe in the vertical plane of the plies of the cable extending between said two previously mentioned pulleys, said plies being deflected under said pulley on the pipe.

4. A hose-nozzle carriage comprising a horizontally extended frame and a pair of wheels on which it is mounted for travel, in combination with a supply pipe extending lengthwise of the frame provided with a nozzle at its forward end and a hose connection at its rear end; a carriage mounted on the frame for travel therealong connected to the rear end of the carriage; a link connected to the forward part of the frame and to the pipe intermediate the nozzle and the carriage; means for propelling the carriage along the frame, and a device affording yielding resistance to the forward movement of the carriage positioned for encounter in the advance movement of the carriage and adapted to react to retract the carriage.

5. A hose-nozzle carriage comprising a horizontally extended frame and a pair of wheels on which it is mounted, in combination with a water-supply pipe extending lengthwise of the frame and having hose connections at its rear end; a fitting swiveled to the pipe at the forward end of the latter for rotation about a vertical axis; a nozzle swiveled to the fitting for rotation about a horizontal axis; a cable connected with the fitting for rotating it on the pipe; another cable connected with the nozzle for rotating it on the fitting; a sheave pulley on the fitting about which the first-mentioned cable extends for rotating the fitting, said sheave pulley having eyes extending through it and guide pulleys mounted on it below the eyes respectively, the nozzle-rotating cable plies extending through said guide eyes and around said guide pulleys respectively.

[Claims 6 to 8 not printed in the Gazette.]

897,396. TRAP. WILLIAM Z. PIERCE, Dexter, Tex. Filed Aug. 19, 1907. Serial No. 389,101.

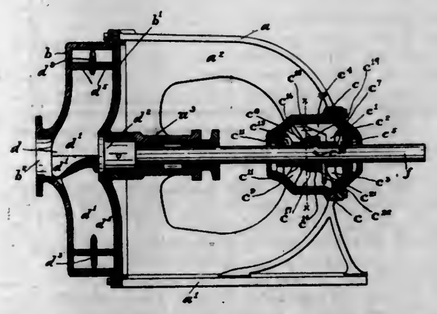


1. In a wire trap, a top ring, a stop ring, vertical wire supports coiled about the rings and supporting the same, a plurality of wire gates each formed of a single piece of wire looped about the top ring and bearing against the stop ring at its lower end.

2. In a trap, a top ring, a stop ring, vertical wire supports coiled about the said rings and supporting the same, and gates swingingly mounted on the top ring and having their lower ends bearing against the inside of the stop ring.

3. In a wire trap, a top ring, a stop ring, a plurality of wire gates swingingly mounted on the ring and having their lower ends bearing against the stop ring, and vertical wire supports for the rings coiled about the same on each side of each gate.

897,397. CENTRIFUGAL PUMP AND WATER-WHEEL. JOSEPH PIRKL, Dayton, Ohio, assignor to The Dayton Hydraulic Machinery Company, Dayton, Ohio, a Corporation of Ohio. Filed Oct. 11, 1907. Serial No. 396,890.



1. In a centrifugal pump, a cylinder, a rotary piston therein, said piston consisting of an outer ring and an inner core, the outer ring being formed in a plane substantially at right angles to the axis of the cylinder, inclined vanes or wings extending laterally from said ring, and curved screw-shaped blades of less number than said vanes forming said inner core and joined to said wing so as to connect with and form a continuation of certain of said vanes, as and for the purpose specified.

2. In a centrifugal pump, an outer casing having an axial inlet and a peripheral discharge opening, a rotary piston within said casing said piston consisting essentially of two parts, to wit: an outer peripheral ring in a plane at right angles to the axis of rotation of said piston, and a central hub formed of screw-shaped blades extending laterally and tapering to and terminating at the axial inlet, said ring being also provided with a series of laterally extending wings or vanes on opposite sides thereof, the number of said vanes being greater than said screw-shaped blades and placed at substantially equal distances between said blades, as and for the purpose specified.

3. In a centrifugal pump, an outer casing having an axial inlet and a peripheral discharge, a rotary piston therein, said piston consisting of inner curved radial blades tapering to and terminating at the axial inlet and outer medial ring to which said blades are connected, and

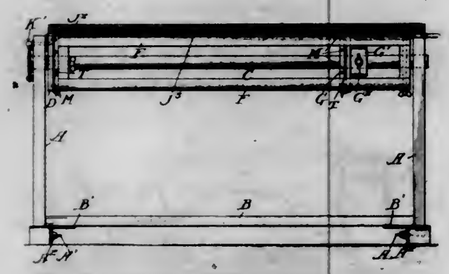
a series of inclined blades extending laterally from each side of said ring to which some of said vanes are connected to form a continuation of said blades, as and for the purpose specified.

4. In a centrifugal pump, a cylinder, a rotary piston therein, the inner zone of said piston consisting of a series of radial screw-shaped blades and the outer zone consisting of a medial ring connecting the outer ends of said blades which are extended in an inclined direction on each side of said ring to form vanes thereon, and a series of intermediate inclined vanes corresponding to the projecting portions of said blades also located at intervals on said ring, the inclination of said vanes corresponding to the projecting portions of said blades, as and for the purpose specified.

5. In a centrifugal pump, a cylinder and a cylinder head, an arch-shaped frame and base formed integral with said head, a rotating piston and an axial shaft secured thereto, bearings in said arch-shaped frame for said shaft, and a thrust collar intermediate said bearings, as and for the purpose specified.

[Claims 6 to 10 not printed in the Gazette.]

897,398. CURTAIN-STRETCHER. THEO H. PURPLE, Constantine, Mich. Filed June 3, 1907. Serial No. 376,954.



1. In a device of the class described, a reel mounted to rotate upon an axis, said reel being composed of end plates connected together by longitudinal bars, a series of pins secured to one of said bars and serving as a means for holding the end of a curtain, a series of adjustable pins secured to one of said end plates and serving as a means for holding one edge of the curtain, an intermediate plate axially adjustable to any desired position between the end plates, and other adjustable pins secured to the intermediate plate and serving to hold the opposite edge of the curtain.

2. In a device of the character described, a series of parallel bars mounted to rotate about an axis, a series of pins secured to one of said bars and serving to hold one end of a curtain mounted upon said bars, a separate bar arranged to be secured at any desired position with respect to the previously mentioned bars, and a series of other pins secured to said separate bar and serving to hold the other end of the curtain.

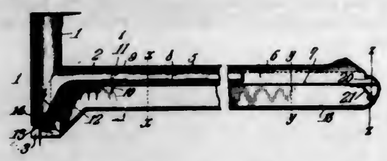
3. In a curtain stretcher, a series of parallel bars mounted to rotate about an axis, a series of pins secured to one of said bars and serving to hold one end of a curtain, said pins being so located that they will not be touched by a curtain passing over said bar to the next adjacent bar, and a separate adjustable bar provided with pins for holding the other end of the curtain.

4. In a curtain stretcher, a reel composed of bars upon which a curtain may be wound, one of said bars being provided with a groove, a series of curtain holding pins located in said groove as described, and a separate adjustable bar provided with other curtain holding pins.

5. In a curtain stretcher, a reel composed of bars upon which a curtain may be wound in successive layers, curtain holding pins being secured to one of said bars and so located as not to be touched by succeeding layers of the curtain wound upon the reel, and an adjustable device for securing the final end of the curtain.

[Claims 6 to 8 not printed in the Gazette.]

897,399. MAGAZINE TACK-HAMMER. NATHAN M. PURVIANCE, Spokane, Wash. Filed Oct. 9, 1907. Serial No. 396,683.



1. The combination with a head, a stem extending therefrom, and a tubular jacket inclosing the stem and forming a magazine, there being a passage extending from the magazine and between the stem and jacket, said jacket being slotted longitudinally along said passage and the magazine; of guide devices for directing objects from the slot and onto the head, and means movably mounted within the stem and projecting into the passage for preventing the objects within the slot from moving backward into the magazine.

2. The combination with a head, a stem extending therefrom, and a tubular sleeve or jacket upon the stem and forming a magazine at one end of the stem, there being a passage between the jacket and stem and a longitudinal slot opening into the passage and magazine, said jacket and stem constituting a handle; of guide devices for directing objects from the slot and onto the head, said devices having yieldable terminals constituting retaining means, and spring-actuated stop devices within the stem and projecting into the passage for preventing movement of the objects from the head to the magazine.

3. The combination with a head, a stem extending therefrom, and a tubular sleeve or jacket upon the stem and forming a magazine at one end of the stem, there being a passage between the jacket and stem and a longitudinal slot opening into the passage and magazine, said jacket and stem constituting a handle; of guide devices for directing objects from the slot and onto the head, said devices having yieldable terminals constituting retaining means, spring actuated stop devices within the stem and projecting into the passage for preventing movement of the objects from the head to the magazine, and a longitudinally channeled casing detachably secured upon the handle, said channel being disposed to receive the objects projecting through the slot.

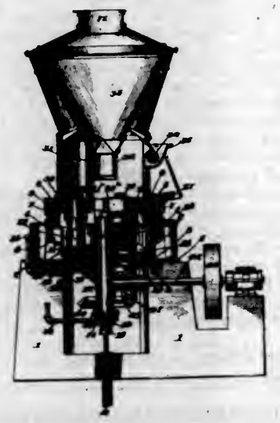
4. In a tool of the character described the combination with a hollow handle constituting a magazine and having a longitudinal slot; of a head, means for directing objects from the slot to the head, and a longitudinally channeled casing detachably secured upon the handle, said channel being disposed to receive objects within the slot.

5. In a tool of the character described the combination with a hollow handle constituting a magazine and having a longitudinal slot; of a head, means for directing objects from the slot to the head, a longitudinally channeled casing detachably secured upon the handle, said channel being disposed to receive objects within the slot, and a fastener for the casing, said fastener being disposed to engage, and constituting a closure for, the magazine.

[Claim 6 not printed in the Gazette.]

897,400. CENTRIFUGAL MILL. ALBERT RAYMOND, Chicago, Ill.; Mary M. Bartelme administratrix of said Raymond, deceased. Filed Sept. 22, 1902. Serial No. 124,370.

1. In a machine of the class described, the combination with a bowl having a closed bottom and provided with tangentially arranged air inlets through its vertical wall, of a bearing projecting upwardly from the bottom thereof, a main shaft mounted within said bearing, a support carried by said main shaft, a journal-box pivotally mounted near its lower end upon said support, said pivotal mounting being provided eccentrically of the axis of the journal-box and between the journal-box and shaft, a roller-shaft mounted within said journal-box and projecting from the upper end thereof, a crushing-roll carried by the projecting portion of said roll-shaft, and means for ratating said main shaft and the members associated therewith, substantially as described.



2. In a machine of the class described, the combination with a bowl having a closed bottom and provided with tangentially arranged air inlets through its vertical wall, of a bearing projecting upwardly from the bottom of said bowl, a main shaft mounted within said bearing, a support carried by said main shaft, a journal-box pivotally mounted near its lower end upon said support, a roll-shaft mounted within said journal-box, a crushing roll carried by said roll-shaft, a crushing-ring arranged opposite to said crushing-roll, means arranged to carry material upwardly within said bowl and to deliver the same to the crushing devices, said means comprising an upper and a lower plow supported by said main shaft, and an intermediate plow carried by the journal-box, substantially as described.

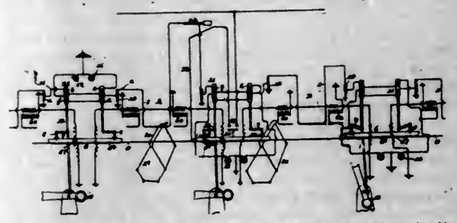
3. In a machine of the class described, the combination with the main shaft, of a support carried thereby and carrying a journal-box having an integral closure at its lower end, a roll-shaft mounted within said journal-box and projecting from the upper end thereof, a bearing in the form of a bushing mounted upon said roll-shaft and within said journal-box, said bushing projecting out of said journal-box, and a cap-piece mounted upon the upper end of said journal-box and providing a stuffing-box around said roll-shaft, substantially as described.

4. In a machine of the class described, the combination with a journal-box closed at its lower end, of a roll-shaft mounted within said journal-box and projecting from the upper end thereof, a bearing in the form of a bushing mounted upon said roll-shaft and within said journal-box, said bushing projecting out of said journal-box, a cap-piece mounted upon the upper end of said journal-box and providing a stuffing-box around said roll-shaft, a crushing-roll mounted upon the projecting end of said roll-shaft, and provided on its under side with an annular chamber surrounding said shaft, and a perforated disk arranged to close said chamber, substantially as described.

5. In a machine of the class described, the combination with a journal-box, of a roll-shaft journaled therein and projecting from the upper end thereof, a crushing-roll mounted upon the projecting end of said roll-shaft, said crushing-roll being provided with an oil-duct and said roll-shaft being provided with a longitudinal oil-duct arranged to communicate at a point inside of the crushing-roll with the oil-duct in said crushing-roll, and also arranged to communicate with the bearings of said roll-shaft within the journal-box, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

897,401. ELECTRIC SIGNALING SYSTEM. HARRY C. REAGAN, Butler, Pa., assignor of one-half to John H. Barrett, Mars, Pa. Filed May 27, 1907. Serial No. 375,765.



1. In an electric railway signal system, an electrically operated car, a trolley wire, a signal wire, and a safety stop bar operated through said signal wire for drawing the current collecting device on the car away from the trolley wire to disconnect said car from its electric operating current.

2. In an electric railway signal system, an electrically operated car, a trolley wire, a signal wire, a safety stop bar operated through said signal wire for drawing the current collecting device on the car away from the trolley wire to disconnect said car from its electric operating current, and means for moving said bar to and from said current collecting device.

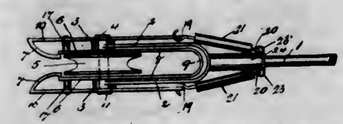
3. In an electric railway signal system, an electrically operated car, a trolley wire, a signal wire, a safety stop bar operated through said signal wire for drawing the current collecting device on the car away from the trolley wire to disconnect said car from its electric operating current, and a solenoid connected to said bar for moving the same to and from said current collecting device.

4. In an electric railway signal system, an electrically operated car, a trolley wire, a signal wire divided into sections or blocks, and a safety stop bar connected to each of said sections and operated through said signal wire for drawing the current collecting device on the car away from the trolley wire to disconnect said car from its electric operating current.

5. In an electric railway signal system, an electrically operated car, a trolley wire, a signal wire divided into sections or blocks, a safety stop bar connected to each of said sections and operated through said signal wire for drawing the current collecting device on the car away from the trolley wire to disconnect said car from its electric operating current, and a compensator in circuit with the end of each of said sections.

[Claims 6 to 39 not printed in the Gazette.]

897,402. TROLLEY-FINDER. JOSEPH P. REED, Muncie, Ind. Filed May 4, 1908. Serial No. 430,811.



1. In a trolley for electrically propelled cars, the combination with a trolley pole having an upper forked end, a trolley bearing bolt projecting through said forked end and a trolley journaled on said bolt and situated between the bifurcations of said fork, of a bifurcated trolley wire finder having its arms pivoted on said bolt, a bend connecting the lower ends of said arms, outer arms extending from the top ends of said finder arms and pivoted

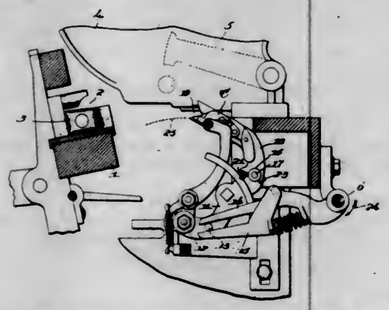
on the prolonged outer ends of said bolt, and yielding springs connected to the lower ends of said outer arms whereby the trolley finder is yieldingly maintained in normal position.

2. In a trolley for electrically propelled cars, the combination with a trolley pole having an upper forked end, a journal bolt projecting through said forked end and a trolley journaled on said bolt and situated between the bifurcations of said forked end of said trolley pole, of a bifurcated trolley finder composed of a single piece of metal forming two inner parallel arms or bifurcations and two outer parallel reinforcing arms, each of which arms has a hole at its central portion to pivotally receive said journal bolt, the inner arms of which are arranged to be situated on each side of said trolley and between the bifurcations of the fork of said trolley pole, and said outer arms extending exteriorly of the latter.

3. In a trolley for electrically propelled cars the combination with a trolley pole having an upper forked end, a journal bolt projecting through said forked end and a trolley journaled on said bolt and situated between the bifurcations of said forked end of said trolley pole, of a bifurcated trolley finder constructed of a single piece of metal forming inner upper arms and lower parallel arms, a bend connecting the lower ends of said parallel arms, outer arms extending downwardly from the upper free ends of said upper arms and situated parallel with the latter, said inner and outer arms pivotally mounted at or near their central portions on said journal bolt, and a pull-down rope connected to said connecting bend of said lower inner arms.

4. In a trolley for electrically propelled cars, the combination with a trolley pole having an upper forked end, a journal bolt projecting through said forked end and a trolley journaled on said journal bolt and situated between the bifurcations of said forked end of said trolley pole, of a bifurcated trolley finder constructed of a single piece of metal forming upper inner finder arms and lower parallel arms, the upper end portions of said upper inner arms being flared outwardly, downwardly extending arms connected at their top ends to the top ends of the flaring portions of said inner upper arms, said inner and outer arms being pivoted on said journal bolt, said outer arms having lower prolonged ends, a pull down rope secured to the bend of said lower inner arms and yielding means connected to the lower prolonged ends of said outer arms.

897,403. SHUTTLE-FEELER FOR FILLING-REPLENISHING LOOMS. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Nov. 16, 1907. Serial No. 402,397.



1. In an automatic filling-replenishing loom, a shuttle-feeler comprising two connected members movable in unison and also relatively to each other, and a spring to normally effect their movement in unison when the feeler is moved into operative position, engagement of the feeler by the shuttle when improperly boxed compressing the spring to effect relative movement of the two members of the feeler and obviating damage to or lifting of the shuttle.

2. In an automatic filling-replenishing loom, a shuttle-feeler movable automatically into feeling position when replenishment is called for, and yielding means to permit downward movement of the tip of the feeler when engaged by the shuttle.

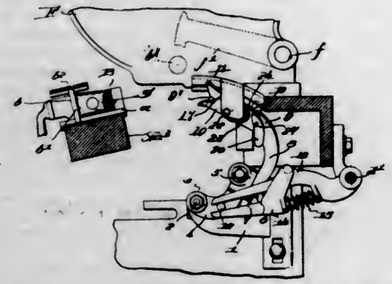
3. In an automatic filling-replenishing loom, a two-part shuttle-feeler movable automatically into feeling position when replenishment is called for, the upper member having a rearwardly extended tip, and a spring-controlled joint connecting said members and permitting depression of the tip when engaged by the shuttle.

4. In an automatic filling-replenishing loom, a two-part shuttle-feeler movable automatically into feeling position when replenishment is called for, the upper member having a rearwardly extended, notched tip, a thread-cutting device on said upper member adjacent the notched tip, a horizontal pivot connecting the members and a spring normally effecting movement of the members as a unit but permitting the upper member to swing downward on the connecting pivot when the tip engages the shuttle, to prevent lifting of the latter or injury thereto.

5. In an automatic filling-replenishing loom, a two-part shuttle-feeler movable automatically into feeling position when replenishment is called for, the upper member having a rearwardly extended tip, a fixed, horizontal fulcrum for and upon which the feeler normally swings as a unit, a horizontal pivot connecting the upper and lower parts of the feeler, and a spring adjacent the pivot and normally preventing relative movement of the parts of the feeler.

[Claim 6 not printed in the Gazette.]

897,404. THREAD-PARTING MECHANISM FOR LOOMS. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Nov. 16, 1907. Serial No. 402,398.



1. In an automatic filling-replenishing loom, a swinging carrier, a shuttle-feeler pivotally mounted thereon and laterally movable relatively thereto, means carried by the feeler to clamp and part the thread of the filling-supply to be abandoned, and means to control the lateral movement of the feeler and cause it to move toward the edge of the cloth as the carrier returns to normal position after replenishment, to prevent breakage of the clamped end of filling.

2. In an automatic filling-replenishing loom, a swinging carrier movable rearwardly prior to filling replenishment, a shuttle-feeler pivoted on the carrier to rock laterally and also to move bodily with the carrier, a controller to govern the lateral movement of the feeler and cause it to approach the edge of the cloth as the carrier returns to normal position, and means mounted on the feeler to clamp and part the thread of the filling-supply to be abandoned, the combined rearward movement of the carrier and the lateral rocking of the feeler operatively positioning said means to act upon the thread.

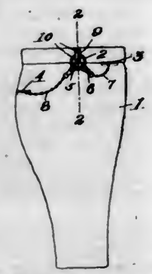
3. In an automatic filling-replenishing loom, a lay having a shuttle-box, a swinging carrier, means to move it toward the lay when replenishment is called for, a shuttle-feeler pivotally mounted on and movable with the carrier and also laterally relatively thereto, to cross the mouth of the shuttle-box when the shuttle is properly boxed, a fixed controller coöperating with the feeler, to govern its lateral movement when moved forward or back by the carrier, and means on the feeler to clamp and part the thread of the filling-supply to be abandoned when replenishment is effected, the controller causing the feeler to move laterally toward the edge of the cloth when the carrier returns to normal position, to prevent breakage of the clamped end of filling.

4. In a loom, automatic filling-replenishing mechanism, a lay, a shuttle-box thereon at the replenishing side having an opening in its back wall adjacent the mouth of the box, a shuttle-feeler, thread parting means thereon, and means acting automatically when replenishment is called for to move the feeler into position to cross the mouth of the shuttle-box and enter the opening in its back wall when the shuttle is properly boxed, to thereby cause the parting means to extend across the plane of the back wall and trap the thread to be parted.

5. In an automatic filling-replenishing loom, an upturned, swinging carrier, means to move it rearward when replenishment is called for, a shuttle-feeler pivotally mounted on the carrier, to move bodily therewith and also laterally relatively thereto, a fixed cam to govern the lateral movement of the feeler, a follower on the latter coöperating with the cam, means on the feeler to clamp and part the thread of the filling-supply to be abandoned, and a device mounted on the cam to set the clamping and parting means when the feeler is moved into operative position, the cam acting, upon return of the carrier to normal position, to move the feeler toward the edge of the cloth.

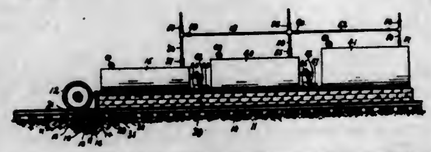
[Claim 6 not printed in the Gazette.]

897,405. WATCH AND KEY CHAIN GUARD. MATHEW RICHMOND, Parkfield, Cal. Filed Mar. 4, 1908. Serial No. 419,204.



The combination with a pair of trousers or the like, of an attaching ring arranged upon the exterior of the trousers adjacent to the waist band, a flexible strip arranged upon the waist band and across one side of the ring and having its ends folded or doubled under, and rivets passed through said folded or doubled ends of the strip and the waist band of the trousers, substantially as and for the purposes set forth.

897,406. RAILWAY TRACK-MOTOR. FRANKLIN J. RITTER, Chapman, Nebr. Filed Nov. 23, 1907. Serial No. 403,514.



1. The combination with a railway track including the rails and ties, of an air compressing device located between said ties, a plurality of communicating tanks of progressively increasing size, each tank having an outlet pipe, branch pipes connecting said outlet pipes, means whereby the air from said compressing device is transmitted to the smaller of said tanks, means whereby the compressed air may be conveyed progressively through all of the tanks, and means whereby said compressing device is actuated by the wheels of the cars passing over said rails.

2. The combination with the track rails and ties of a railway, of an air compressing device including a cylinder and a plunger rod, a pivoted track lever having connection with said plunger rod and arranged for operation by the engagement therewith of the wheels of the cars passing over the rails, and a hood carried by said plunger rod and extending over the cylinder and thereby serving as a guide to the plunger rod and as a shield to the cylinder.

3. In a device of the class described, an air compressing device, a plurality of tanks of progressively increasing size having communication with one another, each tank having an outlet, branch pipes connecting said outlets, and means governing the flow of air from one tank to another.

4. In a device of the character described, an air compressing device including a cylinder and plunger rod, a lever having connection with the plunger rod, a plurality of tanks of progressively increasing size, means whereby the air from said compressing device is transmitted to the smaller of said tanks, means for controlling the air from said tanks, and means controlling the flow of air from one tank to another.

897,407. CUFF-PIN. ANDREW ROBERTSON, Providence, R. I., assignor to Waite Thresher Company, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 4, 1908. Serial No. 419,114.

1. In an article of the class described, the combination, with a cup-shaped front portion, of a back plate secured therein, said back plate being provided with a pin-catch and a hinge-member, said hinge-member having a forwardly extending projection between said hinge-member and the body portion of said back plate.

2. In an article of the class described, the combination, with a cup-shaped front portion, of a back plate secured therein, said back plate being provided at one end with a pin-catch and at the other end with two hinge-members, both of said hinge-members being provided with forwardly extending beveled projections between said hinge-members and the body portion of said back plate.

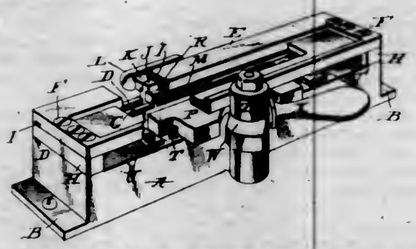
3. In an article of the class described, the combination, with a cup-shaped front portion having the sides thereof higher than the ends, of a back plate provided with two hinge-members, each having a forwardly extending projection, the sides of the cup-shaped front portion being wrapped around said forward projections.

4. In an article of the class described, the combination, with a cup-shaped front portion, of a back plate secured therein, said back plate being provided with a pin-catch, two hinge-members, a pin-tongue pivoted in said hinge-members, and a forward projection from each of said hinge-members, said forward projection being integral with the body portion.

5. In an article of the class described, the combination, with a cup-shaped front portion, of a back plate secured therein, said back plate being provided with a pin-catch and two hinge-members, said hinge-members each having an outwardly and forwardly extending projection which joins the body portion of the back plate with said hinge-member.

[Claims 6 and 7 not printed in the Gazette.]

897,408. ABRADING-MACHINE. ALFRED W. ROOVERS, Brooklyn, N. Y. Filed Aug. 19, 1905. Serial No. 274,878.



1. In a machine of the character specified, the combination of a fixed body portion provided with separated clamping faces against which the article to be abraded, adjacent to its edges, bears; a clamping member movable toward said faces; means for actuating and securing said member in position with the body to be abraded resting thereon and clamped between it and the clamping faces of the fixed body; and an abrasive tool carrier movable back and forth in line with the exposed face of the clamped article.

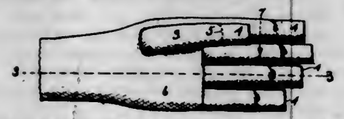
2. In a machine of the character specified, the combination of a main body portion having an opening therein, with clamping faces located upon opposite sides of the opening; a combined clamping and supporting member mounted within the opening; means for moving said member toward and from the clamping faces and securing it in its adjusted position, with the article to be abraded clamped between it and said faces; and a file-carrier also mounted in the opening and movable back and forth therein parallel with the work supporting face of the clamping member.

3. In a machine of the character specified, the combination of a main body portion provided with a clamping face; a clamping bed or member carried by the body and movable toward and from the clamping face; means for actuating said member and securing the same in its adjusted position; a slide mounted in the body and movable therein in parallelism with the work-supporting face of the bed; and a file carried by the slide.

4. In a machine of the character specified, the combination of a body portion provided with a channel; a slide mounted therein; a file adjustably carried by said slide; a clamping bed or member movable toward and from the file, said member being provided with a nose or projection; a lever pivotally supported upon the body portion; and a cam carried by the lever, said cam coacting with the projection to hold the clamping bed in its elevated position.

5. In a machine of the character specified, the combination of a fixed body portion; a clamping bed; a file-carrier movable back and forth over said bed; and a file secured to the carrier, said file being higher at its center and having the teeth extending in opposite directions from each side of the center, whereby the abraded surface will be burnished, substantially as described.

897,409. GLOVE. JOSEPH ROSENFELD, Detroit, Mich. Filed Dec. 23, 1907. Serial No. 407,648.



1. A glove having a finger of tubular form provided with a reinforcing extension contiguous with said finger and cylindrical in shape, the opposite walls of the finger being stitched together upon a transverse line to close the end of the finger at the juncture of the reinforcing portion therewith, forming of said reinforcing portion a tubular cap which is turned back onto the end of the finger over said line of stitching.

2. A glove having the fingers thereof provided with integral reinforcing extensions of less thickness than the body of the fingers and cylindrical in form, the walls of the fingers at the junction of the reinforcing extensions being stitched together on a curved line extending transversely of the fingers to form the finger ends, the tubular reinforcing extensions being turned back over the finger ends and over said lines of stitching and secured to the body of the fingers.

897,410. CARBON-HOLDER. OSCAR A. ROSS, Chicago, Ill. Filed July 30, 1906. Serial No. 328,352.



1. An electrode holder of the kind described, comprising a resilient socket member of insulating material adapted to receive and resiliently retain an electrode placed therein, in combination with a contact member contained within the socket, and arranged to operatively contact therein with said electrode inserted therein on the side thereof.

2. An electrode holder of the kind described comprising a resilient socket member of insulating material adapted to receive and resiliently retain an electrode placed therein, in combination with a resilient contact member positioned within the socket and arranged to operatively contact within the socket with an electrode maintained therein.

3. In an electrode holder for arc lamps, a socket member comprising a plurality of parts, and means for resiliently retaining said parts in operative position to receive and retain a coöperating electrode member placed therein, in combination with an electrical contact member positioned within the socket and arranged to operatively contact therein with a coöperating part forced therein on the side thereof.

4. In an electrode holder for arc lights and the like, a socket member comprising two parts of insulating material and a clamping spring arranged to resiliently retain said parts in operative position to receive and retain a coöperating member placed therein, in combination with an electrical contact member contained within the socket and arranged to operatively contact with a coöperating part forced therein.

5. In an electrode holder for arc lights and the like, a socket member comprising a plurality of parts and a U-shaped clamping member arranged to resiliently retain the parts in operative position to receive and retain a coöperating member placed therein, in combination with an electrical contact member contained within the socket and arranged to operatively contact with a coöperating part forced therein.

[Claims 6 to 10 not printed in the Gazette.]

897,411. PLUMB AND LEVEL. FRANK O. ROURKE, Shawnee, Ohio. Filed Oct. 17, 1907. Serial No. 397,798.

1. A plumb rule comprising a body frame, a pendulum pivoted at its upper end, a supplemental needle pivoted to said pendulum, and a stationary fulcrum plate inclosing said supplemental needle and giving a reversed movement of the same to that of the pendulum.

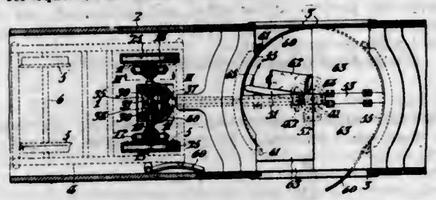
2. A plumb rule comprising a hollow body frame, a pendulum pivoted therein at its upper end, a supplemental needle pivoted to said pendulum, and an adjustable fulcrum plate inclosing the supplemental needle to vary the throw of the same and to impart a movement to the needle reverse to that of the pendulum.

3. A plumb rule comprising a body frame having a longitudinal chamber, a pendulum hung within the same at its upper end and formed at said upper end as a loop, a needle pivoted to said pendulum within the loop, and a stationary fulcrum plate embracing said needle.



4. A combined plumb rule and spirit level comprising a body frame with a middle longitudinal opening, spirit levels arranged in the longitudinal opening parallel to the sides of the body frame, a pendulum needle arranged within said opening, and removable side panels formed with middle openings opposite said spirit levels, the needle being arranged between the spirit levels and accessible through the middle opening.

897,412. APPARATUS FOR DISCHARGING PACKAGES FROM MOVING VEHICLES. JOHN ROWBOTHAM, Center Square, Pa. Filed Dec. 26, 1907. Serial No. 408,018.



1. In a device for discharging packages from a moving vehicle, the combination of the revoluble wheels of said vehicle, means adapted to engage the said wheels and to be driven thereby, movable means adapted to occasion the discharge of the said packages from the said vehicle, and means operatively connecting the said means driven by the said wheels and the said discharging means whereby movement of the latter is occasioned to discharge the said packages.

2. In a device of the character described, the combination of an adjustable revoluble member supported upon a vehicle, means for occasioning revolution of the said member when the vehicle is in motion, means for discharging packages from the said vehicle when it is in motion, the operation of the said discharging means being occasioned by the revolution of the said revoluble member.

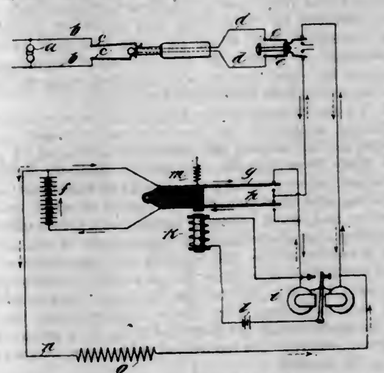
3. In a device of the character described, the combination of an adjustable revoluble member supported upon a vehicle, means for adjusting the said member, means for occasioning revolution of the said member when it has been moved by the said adjusting means into proper relation to the said means for occasioning revolution, movable means for discharging packages from the said vehicle while in motion, means for occasioning movement of the said discharging means interposed between the said revoluble member and the said discharging means.

4. In a device of the character described, the combination of a revoluble member connected to a moving vehicle, a shaft, a wheel rigidly secured to the said shaft and adapted to be driven by the said revoluble member, revoluble means located in the said moving vehicle for discharging mail or similar matter from the moving vehicle, and driving means operatively connected to the said shaft and to the said revoluble discharging means for occasioning revolution of the latter.

5. In a device of the character described, the combination of a revoluble member connected to a moving vehicle, an adjustable shaft, a wheel rigidly secured to the said shaft and adapted to be driven by the said revoluble member, revoluble means located in the said vehicle for discharging packages from the moving vehicle, and driving means operatively connected to the said shaft and to the said revoluble discharging means for occasioning revolution of the latter.

[Claims 6 to 11 not printed in the Gazette.]

897,413. SIGNALING-CIRCUIT. HARRY O. RUGH, Sandwich, Ill. Filed May 2, 1908. Serial No. 430,458.



1. A pole-changing device including a source of current, switch elements constituting terminals of said source of current, a normal contact for each of said switch elements, an alternate contact for each of said switch elements, a conductor connected with one normal and one alternate contact, a second conductor connected with the other normal and the other alternate contact, a polarized relay connected in circuit with said conductors, a magnet for effecting engagement between said switch elements and their alternate contacts, the switch arm of the polarized relay including said electro-magnet in circuit when said relay is included in circuit with the normal contacts of said switch elements, and serving to remove said electro-magnet from circuit when said relay is included in circuit with the alternate contacts of said switch elements, in combination with a switch or key for connecting the said conductors in circuit with a suitable translating device responsive to the currents of changed directions, said key also controlling the circuit relationship of said polarized relay; and a conductor including high resistance, included in circuit with said source of current, one of its switch terminals, the alternate contact of said terminal and the polarized relay, whereby the operation of said polarized relay to remove said electro-magnet from circuit is insured.

2. A pole-changing device including a source of current, switch elements constituting terminals of said source of current, a normal contact for each of said switch elements, an alternate contact for each of said switch elements, a conductor connected with one normal and one alternate contact, a second conductor connected with the other normal and the other alternate contact, a polarized relay connected in circuit with said conductors, a magnet for effecting engagement between said switch elements and their alternate contacts, the polarized relay including said electro-magnet in circuit when said relay is included in

circuit with the normal contacts of said switch elements, and serving to remove said electro-magnet from circuit when said relay is included in circuit with the alternate contacts of said switch elements, in combination with a switch or key for connecting the said conductors in circuit with a suitable translating device responsive to the currents of changed directions, said key also controlling the circuit relationship of said polarized relay, and means supplementing the said key for maintaining the polarized relay in circuit with the alternate contacts in the event of the failure of said key so to do, whereby the removal of said electro-magnet from circuit is insured.

3. A pole-changing device including a source of current, switching mechanism for reversing said current, an electro-magnet for moving the switching mechanism, a polarized relay receiving the current of different directions, operating, when receiving the current of one direction, for including said electro-magnet in circuit to effect its energization, and, when receiving current of another direction, to remove said electro-magnet from circuit, in combination with a switch or key for enabling the impression of currents of changed directions upon a suitable translating device, said key also controlling the circuit relationship of said polarized relay, and a conductor including high resistance, included in circuit with said source of current and said polarized relay when the first aforesaid switching mechanism is moved by its operating electro-magnet, whereby the operation of said polarized relay to remove said electro-magnet from circuit is insured.

4. A pole-changing device including a source of current, switching mechanism for reversing said current, an electro-magnet for moving the switching mechanism, a polarized relay receiving the current of different directions, operating, when receiving the current of one direction, for including said electro-magnet in circuit to effect its energization, and, when receiving current of another direction, to remove said electro-magnet from circuit, in combination with a switch or key for enabling the impression of currents of changed directions upon a suitable translating device, said key also controlling the circuit relationship of said polarized relay, and means supplementing the said key for maintaining the polarized relay in a given circuit condition, whereby the removal of said electro-magnet from circuit is insured.

5. A pole-changing device including a source of current, switch elements constituting terminals of said source of current, a normal contact for each of said switch elements, an alternate contact for each of said switch elements, a conductor connected with one normal and one alternate contact, a second conductor connected with the other normal and the other alternate contact, a polarized relay connected in circuit with said conductors, and a magnet for effecting engagement between said switch elements and their alternate contacts, the polarized relay including said electro-magnet in circuit when said relay is included in circuit with the normal contacts of said switch elements, and serving to remove said electro-magnet from circuit when said relay is included in circuit with the alternate contacts of said switch elements.

[Claim 6 not printed in the Gazette.]

897,414. METAL WINDOW-SASH. EDWARD A. SANDERS, Oakland, Cal. Filed Sept. 26, 1906. Serial No. 336,333.

1. A window sash comprising a sheet metal tubular rail or stile formed with a longitudinal groove to receive a pane of glass, the groove being formed by the inturned edge portions of the sheet metal, the opposite edge parts overlapping and arranged to lie opposite the edge of the pane, and at right angles to a face of the groove that constitutes a backing for the pane, substantially as set forth.

2. In a window sash construction, a rail formed of sheet metal having its opposite longitudinal edges inturned and disposed at right angles to each other whereby is formed a groove having two sides only, one side of the groove forming the seat for the edge of a pane of glass and the other side forming a backing therefor, substantially as set forth.

3. In a window sash construction, a rail formed of sheet metal having its opposite longitudinal edges inturned and disposed at right angles to each other whereby is formed a groove having two sides only, one side of the groove forming the seat for the edge of a pane of glass and the other side forming a backing therefor, the said seat portion of the groove being of double thickness of metal, substantially as set forth.

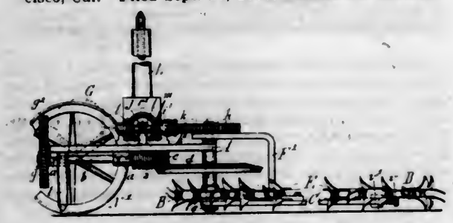


4. A window sash composed of tubular top and bottom rails and stiles of sheet-metal, and metal corner-blocks uniting the ends of the rails and stiles at the angles, said rails and stiles being each formed of a strip of metal, and having inturned portions extending longitudinally of the strip, the opposite edge portions thereof being disposed at right angles to the said inturned portions, whereby is formed a recess or groove and the corner blocks being formed with slots for the corners of a pane of glass.

5. In a metal sash for a window, a tubular bottom rail having a glass-receiving groove, stiles having similar grooves to admit the glass, and a top-rail having a slot extending through it and longitudinally of the rail in line with the grooves in the stiles and bottom rail, for inserting the glass from above, and means for closing said slot after the glass is set.

[Claim 6 not printed in the Gazette.]

897,415. MINING-MACHINE. GESA SANTA, San Francisco, Cal. Filed Sept. 17, 1907. Serial No. 393,365.



1. A post adapted to engage the mine-floor, a driving-sprocket wheel upon the said post, a cutting-chain upon the said driving-sprocket wheel and having an axis within the said post, means supporting the said cutting-chain in position for cutting, means for operating the said driving-sprocket wheel for driving the said cutting-chain for cutting, and means for swinging the said cutting-chain about the said post.

2. A post adapted to engage the mine-floor, a driving-sprocket wheel upon the said post, a boom pivoted upon the said post, a cutting-chain upon the said driving-sprocket wheel and carried by the said boom and having an axis within the said post, means for operating the said driving-sprocket wheel for driving the said cutting-chain for cutting, and means for swinging the said boom about the said post.

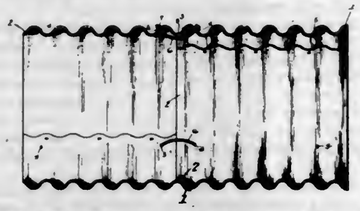
3. A bed, a post supporting the said bed, a driving-sprocket wheel upon the said post, a boom pivoted upon the said post, a cutting-chain upon the said driving-sprocket wheel and carried by the said boom and having an axis within the said post, means carried by the said bed for operating the said driving-sprocket wheel for driving the said cutting-chain for cutting, and means carried by the said bed for swinging the said boom and the said cutting-chain about the said post.

4. A bed, posts supporting the said bed, a driving-sprocket wheel upon one of the said posts, a boom pivoted upon the said post, an arm pivoted to an extension of the said post and supporting the said boom, a cutting-chain upon the said driving-sprocket wheel and carried by the said boom and having an axis lying within the said post, means carried by the said bed for operating the said driving-sprocket wheel for driving the said cutting-chain for cutting, means carried by the said bed for swinging the said boom and the said cutting-chain about the said post, and a jack connected with the said bed for bracing the same.

5. A cutting-chain, a post, a boom pivoted upon the said post and carrying the said cutting-chain, said post being adapted at its lower end to engage the mine-floor within the said cutting-chain, means for operating the said cutting-chain for cutting, and means for swinging the said boom about the said post.

[Claims 6 to 10 not printed in the Gazette.]

897,416. CULVERT AND CONNECTION. JULIUS H. SCHLAFLY, Canton, Ohio, assignor to The Canton Culvert Company, Canton, Ohio, a Corporation of Ohio. Filed Apr. 23, 1908. Serial No. 428,737.



1. The herein described culvert and connection comprising culvert sections corrugated at the ends, one end of each section terminating at the point of greatest diameter, producing a flared end and the other end terminating at the point of least diameter producing a contracted end, holes arranged in the sides of the first and last full convex corrugation at each end of the sections, the contracted end of one section introduced into the flared end of the other section, curved bolts extending through the said holes in the sides of the corrugations and the said bolts provided with nuts whereby the sections may be drawn together and a tight joint produced between the flaring and the contracted ends, substantially as specified.

2. In a culvert and connection, culvert sections each provided with a flaring and a contracted end, the external surface of said contracted end corresponding in contour with the internal surface of the flaring end, full convex corrugations adjacent to said ends, holes in the sides of said full convex corrugations farthest from the engaging ends of the said sections, the contracted end of one section introduced into and engaging the flared end of the adjacent section, curved bolts through the holes in said sections and nuts on the said bolts for the purpose of drawing the sections together, substantially as and for the purpose specified.

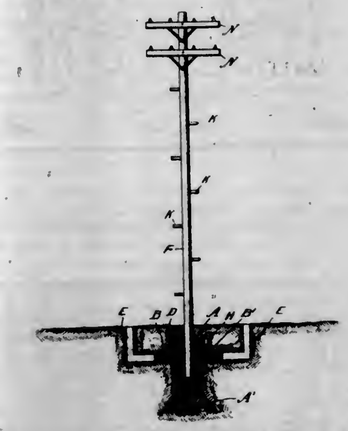
3. In a culvert and connection, culvert sections each provided with a flaring and a contracted end, the external surface of said contracted end corresponding in contour with the internal surface of the flaring end, full convex corrugations adjacent to said ends, holes in the sides of said full convex corrugations farthest from the engaging ends of the said sections, the contracted end of one section introduced into and engaging the flared end of the adjacent section, curved bolts through the holes in the said sections, the said bolts bearing against the contracted edge on the inside of the joint, and nuts on the said bolts for the purpose of drawing the sections together, and of pressing the said contracted end of the inner section against the flared end of the outer section, substantially as and for the purpose specified.

4. In a culvert and connection, the combination of circumferentially corrugated sections, each section terminating at one end at a point of greatest convex corrugation and at the other end at a point of greatest concave corrugation, the contracted end of one section located in the flared end of the adjacent section and means for drawing the two sections together, substantially and for the purpose specified.

5. In a culvert and connection, the combination of culvert sections each provided with a flared and a contracted end, a full convex circumferential corrugation located upon each end of each section adjacent to the flaring and to the contracted portions respectively, a contracted end of one section located within the flared end of the adjacent section, holes located in the sides of the said corrugations and means located through said holes and in engagement with the said corrugations adapted to draw the said sections together, substantially as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

897,417. ANCHORAGE FOR TELEGRAPH-POLES. JOHN D. SELF, Hamilton, Ga. Filed June 19, 1908. Serial No. 439,364.



An anchorage for telegraph, telephone poles, etc., comprising a socket member, the lower end of which is flaring and the shank portion hollow, a post telescoping within said socket member, a set screw mounted in a threaded aperture in the latter and engaging said post, a collar telescoping over the shank portion of said member and its upper movement limited by said set screw, said collar having radial angled arms, the ends of which are vertically disposed, as shown and described.

897,418. FILTER. ANDREW J. SHERIDAN, Kansas City, Kans., assignor to James O. Wilson, Kansas City, Mo. Filed Nov. 29, 1907. Serial No. 404,367.

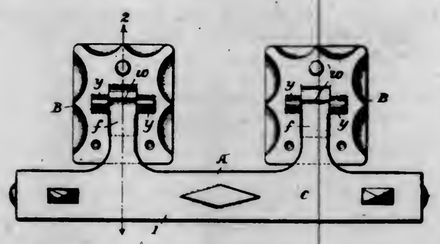
1. A filter comprising side portions of filtering material, having beveled edges, provided with longitudinal grooves, said side portions being cemented together at their edges in a manner to provide a filter body, having a central chamber, and a tube projecting through the body into said chamber.

2. A filter comprising side portion of filtering material, having beveled edges provided with longitudinal grooves, a cement body set between said edges and within said



grooves, and spreading said side portions apart to form a central chamber, and a tube extending through said cement body into said chamber.

897,419. MALLEABLE HANDLE. PATRICK D. SKAHEN, Syracuse, N. Y. Filed Mar. 25, 1908. Serial No. 423,236.



1. The combination in a handle for caskets, etc., of a hand-grasp and two independent attaching plates, the hand-grasp consisting of a continuous plate bent to form a straight hollow cross piece, and, adjacent to each end, a bracket at right angles to said cross piece and provided with side flanges and tubular trunnions adapted to sockets of the attaching plates.

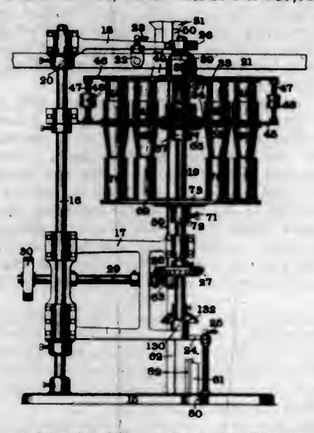
2. The combination in a handle of two independent socketed attaching plates, and a handle having a straight hollow cross bar and two flanged brackets each at right angles to the cross bar and provided with tubular side trunnions, said handle of one piece of malleable metal.

3. The within described hand-grasp consisting of a single sheet of metal with a tongue extending from one edge near each end, the other portion bent on itself to form a hollow cross bar intermediate and beyond the tongues and with the edges meeting at one side, and with a flap extending from one side and bent over to close the end, and each tongue bent to form side flanges, a curved end, and two cylindrical hollow side trunnions.

4. A hand-grasp having a straight hollow cross piece and two flanged brackets each with cylindrical side trunnions, combined with two attaching plates, each in one piece, with edge flanges and a central opening and inwardly turned lips and side sockets adjacent to the lips, the lips and sockets adapted to receive the aforesaid trunnions.

5. The combination in a handle of a hand-grasp, having a straight hollow cross piece and two flanged brackets each with cylindrical side trunnions, and two attaching plates, each in one piece with edge flanges, a central opening and inwardly turned lips and side sockets adjacent to the lips, the lips and sockets adapted to receive the aforesaid trunnions, and each plate extended outward above the opening to present a bearing edge *w*.

897,420. CAN-FILLING MACHINE. CHESLEY T. SMALL, St. Louis, Mo., assignor to Small, Townsend Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 25, 1905. Serial No. 289,045.



1. In a machine for filling cans or the like the combination with a rotary member provided with a plurality of measures, of a second rotary member for holding the cans or the like, a normally stationary cut-off plate between said rotary members, means whereby said first named rotary member and cut-off plate are movable laterally out of engagement with each other, and means for feeding material to said measures.

2. In a machine for filling cans or the like, the combination with a rotary member provided with a plurality of measures, of a second rotary member for holding cans or the like, a normally stationary cut-off plate between said rotary members, said cut-off plate being less than a circle, means whereby said first named rotary member and said cut off plate are movable laterally out of engagement with each other, and means for feeding material to said measures.

3. In a machine for filling cans or the like, the combination with a rotary member provided with a plurality of measures, of a second rotary member for holding the cans or the like, a normally stationary and substantially semicircular cut-off plate between said rotary members, means whereby said first named rotary member and cut-off plate are movable laterally out of engagement with each other, and means for feeding material to said measures.

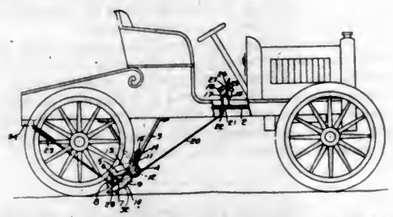
4. In a machine for filling cans or the like, the combination with a rotary member provided with a plurality of measures, of a second rotary member for holding the cans or the like, a normally stationary cut-off plate between said rotary members, a feed-plate arranged above said first named rotary member and attached to said cut-off plate, means whereby said first named rotary member and said plates are movable laterally out of engagement with each other, and means for feeding material to said measures.

5. In a machine for filling cans or the like, the combination with a rotary member provided with a plurality of adjustable measures, of a second rotary member for holding the cans or the like, a normally stationary cut-off plate between said rotary members, a feed-plate arranged above said first rotary member and adjustably attached to said cut-off plate, means whereby said first named rotary member and said plates are movable laterally out of engagement with each other, and means for feeding material to said measures.

[Claims 6 to 30 not printed in the Gazette.]

897,421. BRAKE FOR AUTOMOBILES. GORDON STABLES, Philadelphia, Pa. Filed Apr. 24, 1907. Serial No. 370,009.

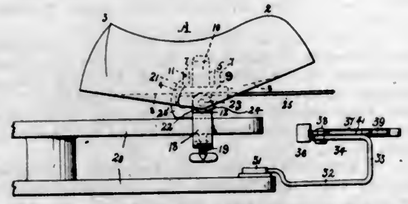
1. A brake of the type set forth, comprising a rock shaft having cranks at its ends, brake shoes pivoted to said cranks, a transverse member formed with openings, said brake shoes having stems projecting through said openings as guides, pins carried by the stems above the transverse member, coil springs embracing the stems and bearing against the pins and transverse member, spring actuated means for rocking said shaft, and means for holding said shaft normally against movement by said spring actuated means.



2. A brake of the type set forth, comprising a rock shaft having cranks at its ends, brake shoes pivoted to said cranks, a transverse member formed with openings, said brake shoes having stems projecting through said openings, as guides, spring actuated means for rocking said shaft to move said shoes beneath the wheels and means for holding said shaft normally against movement by said spring actuated means.

3. A brake of the type set forth, comprising a rock shaft having cranks at its ends, brake shoes pivoted to said cranks, a transverse member formed with openings, said brake shoes having stems projecting through said openings as guides, pins carried by the stems above the transverse member, coil springs embracing the stems and bearing against the pins and transverse member, retractile springs connecting the shoes and the transverse member, spring actuated means for rocking said shaft, and means for holding said shaft normally against movement by said spring actuated means.

897,422. SHOULDER-PRESSER FORM. JACOB M. STEIN, Washington, D. C. Filed Mar. 4, 1908. Serial No. 419,200.



1. A reversible shoulder presser form terminating at each end in a combined shoulder and collar pressing surface.

2. A reversible shoulder presser form embodying a block terminating at each end in a shoulder pressing surface, each end having a different formation, whereby shoulders of different contours may be formed.

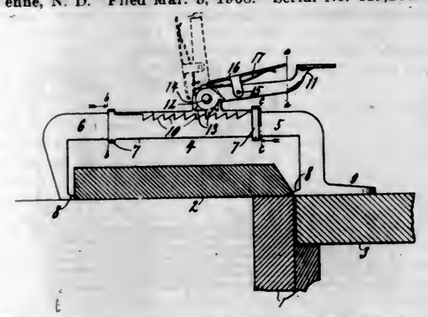
3. A shoulder presser form terminating at each end in a shoulder pressing surface, and a rocking support for the form.

4. A reversible shoulder presser form terminating at each end in a shoulder pressing surface, each end having a different formation, whereby shoulders of different contours may be formed, the form having recesses therein, and a supporting means for the form including a projection for interchangeable engagement in said recesses.

5. A shoulder presser form terminating at each end in a shoulder pressing surface, the top of the form intermediate the ends being concave, and a supporting means constructed and arranged whereby the opposite shoulder pressing surfaces may be raised and lowered alternately.

[Claims 6 to 12 not printed in the Gazette.]

897,423. DOOR-FASTENER. HANS C. STENBERG, Sheyenne, N. D. Filed Mar. 5, 1908. Serial No. 419,260.

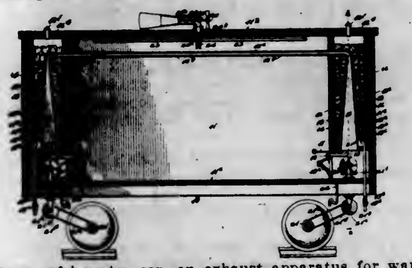


1. A door fastener comprising two overlapping members forming a clamp having flat, sharp hoops adapted to engage the opposite edges of a door casing, one of the members having a finger adapted to bear against the side of the door.

2. A door fastener comprising two overlapping members forming a clamp having flat, sharp hooks adapted to engage the opposite edges of a door casing, one of the members having a finger adapted to bear against the side of the door, said clamp being formed of two bars slidingly and guidingly moving on each other, one of the bars having a ratchet rack, the other having a serrated lug, a finger lever pivoted on said lug and having teeth engaging the rack.

3. A door fastener comprising two overlapping members forming a clamp having flat, sharp hooks adapted to engage the opposite edges of a door casing, one of the members having a finger adapted to bear against the side of the door, said clamp being formed of two bars slidingly and guidingly moving on each other, one of the bars having a ratchet rack, the other having a serrated lug, a finger lever pivoted on said lug and having teeth engaging the rack, and a spring pressed dog pivoted on the lever and normally engaging the serrations of the lug.

897,424. REFRIGERATOR-CAR. JAMES D. STEWART, Chicago, Ill. Filed Mar 29, 1906. Serial No. 308,723.

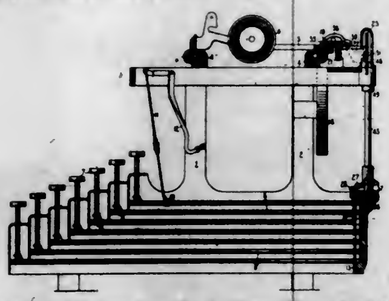


In a refrigerator car, an exhaust apparatus for warm air comprising a plurality of converging pipes, a vertical tube extending through the top of the car and to which the pipes are connected, a check valve in the tube, a hollow vane connected to the top of the tube and having therein a screw, and a fan at the front of the vane, and connected to the screw, and adapted to rotate the same and exhaust the air.

897,425. TYPE-WRITING MACHINE. GEORGE F. STILLMAN, Syracuse, N. Y., assignor to Alexander T. Brown, Syracuse, N. Y. Filed Mar. 9, 1905. Serial No. 249,244.

1. In a typewriting machine, the combination of a series of keys; an escapement mechanism; a universal bar actuated by said keys and operating said escapement mechanism; an adjustable stop for arresting said universal bar at different points in its return motion; means for moving

said stop out of the path of said universal bar; and a line lock device coacting directly with said universal bar in its extreme return position.



2. In a typewriting machine, the combination of a universal bar; a slotted endwise movable bar coacting with said universal bar to limit the return motion thereof; an eccentric engaging in said slot and moving said bar endwise; and keys coacting with said universal bar.

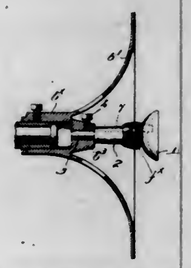
3. In a typewriting machine, the combination with keys and type mechanism operated thereby, of a universal bar; an adjustable stop coöperating directly with said universal bar; and a line lock mechanism connected to said stop to move the same out of the path of the universal bar and to lock said universal bar.

4. In a typewriting machine, the combination of a series of keys; a universal bar actuated from said keys; a carriage; carriage feed mechanism; a shaft; connections whereby said carriage, at a determined point, actuates said shaft; a stop for arresting said universal bar on its return motion; connections whereby said shaft moves said stop out of working position; and a line lock dog operated by said shaft and coacting with said universal bar.

5. In a typewriting machine, the combination of a series of keys; a universal bar actuated from said keys; a carriage; carriage feed mechanism; a shaft; connections whereby said carriage, at a determined point, actuates said shaft; an adjustable stop for arresting said universal bar on its return motion; connections whereby said shaft moves said stop out of working position; and a line-lock dog operated by said shaft and coacting with said universal bar.

[Claims 6 to 15 not printed in the Gazette.]

897,426. FILLING-END HOLDER FOR WEFT-REPLENISHING LOOMS. MELVIN L. STONE, Lewiston, Me., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Jan. 22, 1908. Serial No. 412,147.



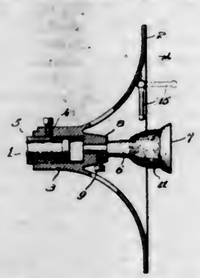
1. A filling-feeder for filling-replenishing looms provided with a hub at its outer end, a filling-end holder having a metallic shank sustained by the hub, and a non-metallic piece inserted in and extended longitudinally of the shank, along which the blade of a knife may be drawn to cut the accumulated filling-ends therefrom.

2. A filling-feeder for filling-replenishing looms, a filling-end holder having an enlarged circular head and a metallic shank sustained at the outer end of the feeder, the head having a radial slot, and a strip of non-metallic material inserted in the shank and extended longitudinally thereof in alinement with the slot in the head, for the purpose set forth.

3. A rotatable filling-feeder for filling-replenishing looms, a filling-end holder sustained at the outer end thereof and comprising a longitudinally grooved metallic shank and an enlarged circular head having a radial slot intersecting the groove, and a strip of wood inserted in the groove and at its outer end projecting through the slot.

4. A rotatable filling-feeder for filling-replenishing looms, a filling-end holder sustained at the outer end thereof and comprising a longitudinally grooved metallic shank and an enlarged circular head having a radial slot intersecting the groove, and a strip of non-metallic material inserted in the groove and extended the length of the shank, the outer face of said strip being flattened.

897,427. FILLING-END HOLDER FOR WEFT-REPLENISHING LOOMS. MELVIN L. STONE, Lewiston, Me., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Feb. 20, 1908. Serial No. 416,822.



1. In apparatus of the class described, a bell-shaped disk over which the filling-ends are led, a centrally located end-holding stud extended outwardly from the disk, and an auxiliary end-holder eccentrically mounted on the disk and adapted to be swung outward therefrom in parallelism with the end-holding stud, about which auxiliary end-holder the collected filling-ends are carried to form a temporary loop.

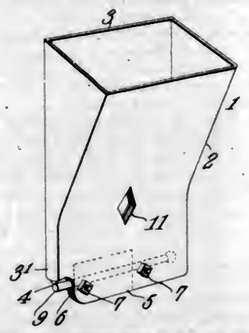
2. In apparatus of the class described, a bell-shaped disk over which the filling-ends are led, a centrally located end-holding stud extended outwardly from the disk, and normally inoperative means mounted on the disk to sustain, when operative, a temporary loop of filling-ends passed around the stud and said means and thence back to the stud.

3. In apparatus of the class described, a bell-shaped disk over which the filling-ends are led, a centrally located end-holding stud extended outwardly from the disk, an ear on the outer face of the disk eccentric to the stud, an arm fulcrumed on the ear and movable outward into parallelism with the stud or into inoperative position radial to the stud, and means to lock said arm in either position, the arm when operatively positioned forming a support for a temporary loop in the collected filling-ends when carried about the arm.

4. In apparatus of the class described, a bell-shaped disk over which the filling-ends are led, a centrally located end-holding stud extended outwardly from the disk, and normally inoperative means mounted on the disk and adapted when operative to coöperate with a temporarily grouped series of filling-ends and position the same in a temporary loop, whereby filling waste on the stud can be removed without breaking down said ends.

897,428. MATCH-SAFE. FRANK O. SWENSON, Manor, Tex. Filed Mar. 16, 1908. Serial No. 421,301.

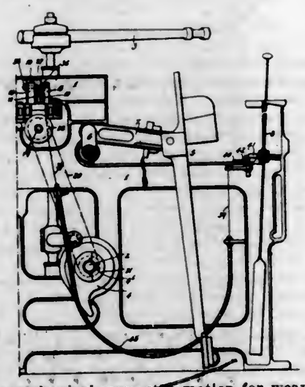
1. A match safe comprising a hopper having a contracted lower portion provided with a passage way therein, the front and rear walls of said contracted portion being separated at their ends, and combined adjusting and match supporting means extending transversely between the separated portions of the walls.



2. A match safe comprising a hopper having a contracted portion provided with a match receiving passage way therethrough, opposite walls of said contracted portion being separated at their lower ends, and means carried by said ends for adjusting them toward or from each other to regulate the transverse area of the passage way, said means constituting match safe supporting devices.

3. A match safe comprising a hopper having a lower contracted portion provided with a passage way for the reception of matches, the lower portions of opposite walls of said contracted portion being separated, one corner of said contracted portion being also cut away to expose a match within the passage way, and means for supporting a match in exposed position, said means constituting means for adjusting the separated walls toward or from each other.

897,429. MECHANICAL WARP STOP-MOTION FOR WEAVING-LOOMS, WARPING-MACHINES, AND THE LIKE. JOHN TAYLOR and EDWIN W. BUCKLEY, Newton Heath, Manchester, England. Filed Nov. 4, 1907. Serial No. 400,634.



1. In a mechanical warp stop motion for weaving looms and the like comprising drops and fixed and movable serrated drop bars supported at each side of the loom arranging and constructing the operative parts of the motion in such manner that said parts are contained within, and the serrated drop bars supported at one end by, a single casting or framing adapted to be readily clamped to, adjusted on and removed from the framing of the loom, substantially as described.

2. In a mechanical warp stop motion for weaving looms and the like, the combination of a casting or framing adapted to be readily clamped to, adjusted on and removed from the framing of the loom and containing the normally moving parts of the motion proper, a pivoted plate or lever operated by said motion on the fall of a drop, a shipper device and a flexible connection between said lever and the shipper device, substantially as described.

3. In combination in a mechanical warp stop motion for weaving looms and the like, drops, fixed and movable serrated drop bars, a shipper device, a connection between the motion and the shipper device, a constantly moving actuator, a moving part adapted during the normal operation of the motion to miss the constantly moving actuator but on the fall of a drop to be held in alinement with the constantly moving actuator and means carried by said moving part for operating the connection between the motion and the shipper device, substantially as described.

4. In combination in a mechanical warp stop motion for weaving looms and the like, drops, fixed and movable serrated drop bars, a constantly moving actuator, a rocking lever connected with the movable serrated bar or bars, means whereby the rocking lever is normally operated so as to miss contact with the constantly moving actuator, a part carried by the rocking lever and held in line with the actuator on the stopping of the movable bar or bars, a shipper device and a connection between the part carried by the rocking lever and the shipper device for operating the latter, substantially as described.

5. In combination in a mechanical warp stop motion for weaving looms and the like, drops, fixed and movable serrated drop bars, a continuously rotating horizontal shaft, a vertical rock shaft, a rocking lever connected with the movable serrated drop bar or bars, a connection between the rock shaft and the rocking lever for operating the latter, a cam on the horizontal shaft, a sliding rod carried by the rocking lever and arranged to be operated by the cam when held in alinement therewith, a shipper device and means for transmitting the movement of the sliding rod thereto, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

897,430. STOVE-POLISH. DAMASE H. TETRAULT, Rouses Point, N. Y. Filed Oct. 25, 1907. Serial No. 399,196.

1. A stove polish consisting of graphite, soap, lard and resin.

2. A stove polish consisting of approximately sixty-four parts by weight of graphite, six parts of soap and one part each of lard and resin.

3. The method of preparing stove polish which consists in boiling graphite and soap in water, melting lard and resin together and boiling this mixture with the first one until the whole becomes as thick as cream.

897,431. ALLOY FOR BEARING METALS. ENRIQUE A. TOUCEDA, Albany, N. Y. Filed Nov. 27, 1907. Serial No. 404,150.

1. A bearing composed of an alloy of lead and cadmium.

2. A bearing composed of an alloy composed of lead and cadmium, in which the lead predominates.

3. A bearing composed of an alloy one of whose ingredients is lead, toughened and hardened by the presence of cadmium.

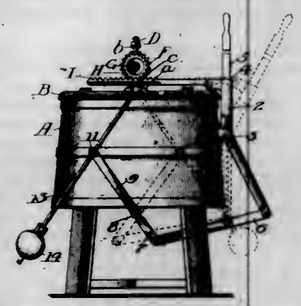
4. A bearing composed of an alloy of lead and other metals, said alloy being hardened and toughened by the presence of cadmium.

5. A bearing metal composed of an alloy whose base is lead, hardened and toughened by the presence of cadmium.

897,432. MECHANICAL MOVEMENT FOR WASHING-MACHINES. WILLIAM H. VOSS, Davenport, Iowa. Filed Apr. 1, 1908. Serial No. 424,676.

1. Mechanism for operating a washing machine comprising a suitable support, a rotary reciprocal shaft, de-

vices for operating the same, a lever connected to said devices and fulcrumed to the side of said support, a separate pendulum adapted to oscillate alongside of said support, and means for imparting the motion of said lever thereto.



2. Mechanism for operating a washing machine comprising a suitable support, a rotary reciprocal shaft, devices for operating the same, a lever connected to said devices and fulcrumed to the side of said support, a separate pendulum adapted to oscillate alongside of said support, and means extending under said support for imparting the motion of said lever thereto.

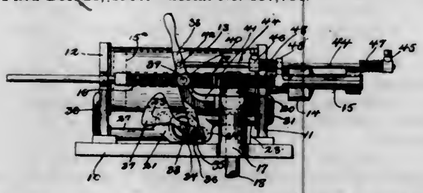
3. Mechanism for operating a washing machine comprising a suitable support, a rotary reciprocal shaft, devices for operating the same, a lever connected to said devices and fulcrumed to the side of said support, a separate pendulum suspended from a point near the top of said support and adapted to oscillate alongside thereof, and means for imparting the motion of said lever thereto.

4. Mechanism for operating a washing machine comprising a suitable support, a rotary reciprocal shaft, devices for operating the same, a lever connected to said devices and fulcrumed to the side of said support, a separate pendulum suspended from a point near the top of said support and adapted to oscillate alongside thereof, and means extending under said support for imparting the motion of said lever thereto.

5. Mechanism for operating a washing machine comprising a suitable support, a rotary reciprocal shaft, devices for operating the same, a lever connected to said devices and fulcrumed to the side of said support, a separate pendulum adapted to oscillate alongside of said support, and means that engage said pendulum below its point of suspension for imparting the motion of said lever thereto.

[Claims 6 to 18 not printed in the Gazette.]

897,433. WATER-MOTOR FOR WASHING-MACHINES. JAMES WAGNER and ANDREW STRNAD, Cleveland, Ohio. Filed Dec. 23, 1907. Serial No. 407,781.



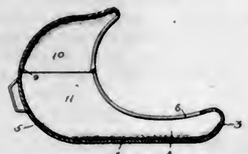
1. In combination, a cylinder, a piston in said cylinder, a rack bar operated by said piston, a rotary counterweighted valve controlling the motive fluid to said cylinder, a valve operating mechanism comprising a lever connected to the valve stem, a valve rod connected to said lever, and springs on said valve rod, and means whereby the movement of the piston and rack bar causes the springs to be compressed and shifts the counterweight to a position such that the springs may expand and shift the valve further with a quick movement.

2. In combination, in a motor, a cylinder, a piston in said cylinder, a rack bar connected to said piston and adapted to be operated thereby, a rotary counterweighted valve controlling the motive fluid to said cylinder, a valve operating mechanism comprising a lever connected to said valve, and a valve rod connected to said lever, springs on said valve rod and means whereby the movement of the piston and rack bar compresses a spring and shifts the valve and counterweight to a position such that the spring may expand and cause a further shifting of the valve and counterweight with a quick movement.

3. In combination, in a motor, a cylinder, a piston in said cylinder, a rack bar connected to said piston and adapted to be shifted thereby, a valve casing having supply and exhaust connections for motive fluid, a rotary valve in said casing, a crank and counterweight connected to the stem of said valve, a valve lever engaging the crank, a valve rod connected to the lever, springs on said valve rod, and means whereby the movement of the piston and rack bar compresses the springs and raises the counterweight to position such that the springs may shift the valve and counterweight with a quick movement.

4. In combination, in a motor, a cylinder, a piston in said cylinder, a rack bar connected to said piston and adapted to be reciprocated thereby, said rack bar having a lug or projection, a valve casing having supply and exhaust connections for a fluid, a rotary valve in said casing, a crank and counterweight connected to the stem of said valve, a lever connected to said crank, a valve rod having two springs and abutments therefor, said parts being so arranged that the lug or projection on the rack bar engages the springs when the piston approaches the ends of its movement, and raises the counterweight to positions such that the springs may expand and shift the same beyond its central position whereby the valve will be shifted quickly by the springs and counterweight.

897,434. BED-PAN. DORA A. WALTZ, Salt Lake City, Utah. Filed Aug. 9, 1905. Serial No. 273,374.

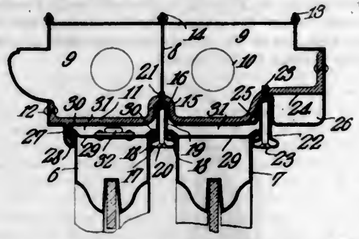


1. A device of the character described, comprising the body portion having inturned side walls, a front wall and a rear wall which rises to a greater height, than the front wall and a hood which is open only at the front and the bottom thereof removably engaging the body portion, the rear wall of the hood, and the rear wall of the body portion, registering with each other and forming a continuous surface and a sealed joint.

2. In a device of the character described, the combination with the body having its rear portion raised and the upper edge of said portion lying in a substantially horizontal plane of a removable hood the lower edge of which registers with the upper edge of the raised body portion and interlocking members at said edges and adapted to removably hold the hood into engagement with the body, the joint between the hood and the body, being a closed one, and the rear wall of the hood lying in the plane of and forming a continuation of the rear wall of the body.

897,435. WINDOW. BARTOW A. WARLICK, Atlanta, Ga. Filed Feb. 8, 1908. Serial No. 415,001.

1. A window including a frame having a sill provided with an inclined shoulder, stops secured to the frame, sashes slidably mounted between the stops and provided with guide flanges disposed obliquely to the vertical faces of the sashes for engagement with the stops, a flange depending from the lower sash and adapted to engage the inclined shoulder of the sill when said sash is in closed position, the meeting rail of the lower sash being inclined or beveled, and a flange extending laterally from the meeting rail of the upper sash and adapted to bear against the inclined face of the meeting rail of the lower sash when said sashes are in closed position.



2. A window including a frame, stops secured to the frame, sashes slidably mounted between the stops and provided with guide flanges disposed obliquely to the vertical faces of the sashes and adapted to bear against the stops, the meeting rail of one of the sashes being provided with an inclined face, a flange extending laterally from the meeting rail of the other sash and adapted to bear against the inclined face when the sashes are in closed position, and reinforcing plates carried by said meeting rails.

3. A window including a hollow sheet metal supporting frame, reinforcing plates disposed on opposite sides of the window frame, stops secured to the reinforcing plates and provided with laterally extending lips, sashes slidably mounted between the stops and bearing against said lips, and flanges carried by and disposed obliquely to the vertical faces of the sashes and engaging the stops in advance of the lips.

4. A window including a hollow sheet metal supporting frame, reinforcing plates disposed on opposite sides of the frame, a horizontal reinforcing plate extending across the top of the frame, stops extending laterally from the side reinforcing plates, sashes slidably mounted between the stops and provided with guide lips disposed obliquely to the vertical faces of the sashes and adapted to engage said stops, and ribs depending from the horizontal reinforcing plate and adapted to accommodate the upper sash between them when the latter is moved to closed position.

5. A window including a hollow frame, reinforcing plates secured to the opposite sides of the frame, partitions extending transversely across the frame and defining independent compartments, stops extending laterally from the reinforcing plates and provided with lateral lips, sashes slidably mounted between the stops and provided with lateral guide flanges adapted to engage the stops, a horizontal reinforcing plate extending across the top of the frame, brackets secured to the horizontal plate, pulleys journaled in said brackets, weights slidably mounted in the compartments, and a flexible medium secured to each weight and having its intermediate portion engaging the adjacent pulley with its terminal fastened to one of the sliding sashes.

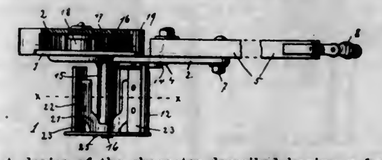
[Claims 6 to 8 not printed in the Gazette.]

897,436. LAWN-TRIMMER. HARRY WATKINS, Utica, N. Y., assignor of one-half to Johnson C. Dewhurst, Deerfield, N. Y. Filed Oct. 7, 1907. Serial No. 396,197.

1. A device of the character described having a frame, an integral sleeve projecting laterally therefrom, with a free end, a blade-supporting frame having a portion mounted in the sleeve with its arms extended alongside the sleeve and adapted to support blades thereon, the said member having a guard comprising a disk mounted at the outer ends of the blades and beyond the end of the fixed blade, substantially as set forth.

2. A device of the character described having a frame, a handle mounted thereon, a sleeve projecting laterally from the frame and supported only at one end on the frame, a shaft mounted in the sleeve and projecting therefrom, horizontally disposed revolving cutting members mounted on the projecting end of the shaft, a bracket, a fixed blade adjustably mounted on the bracket extended outwardly beyond the edge of the frame in coöperation with the revolving cutting members, and means for revolving said cutting members, substantially as set forth.

3. In a device of the character described, the combination with a frame having integral therewith a handle-lug, a knife-supporting bracket with knife adjustments thereon, a sleeve and a wheel-stud, of a handle adjustably mounted on the handle-lug, a wheel with interior gear teeth mounted on the stud, a fixed blade mounted on the bracket so as to be adjusted thereon to adjust the edge of said blade vertically, and a stud mounted in the sleeve having a pinion at one end to engage the wheel teeth and at the outer end of the sleeve having blade supporting arms extending backward toward the frame and blades supported thereon, substantially as set forth.

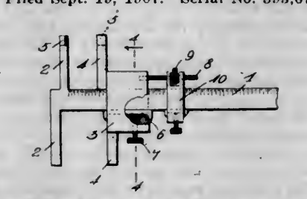


4. A device of the character described having a frame, an integral sleeve projecting laterally therefrom, with a free end, a blade-supporting frame mounted in the sleeve with its arms extended alongside the sleeve and adapted to support blades thereon, substantially as set forth.

5. A device of the character described having a single traction wheel whereby to ride and operate the device, a sleeve mounted at one end only on the said device and projecting laterally therefrom with the outer end free, and cutting members mounted to revolve around said sleeve and extending alongside thereof, whereby the tilting of the device on the wheel is operative to control the plane of work in the cutting operation, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

897,437. CALIPERS. WILLIAM H. WATSON, Lakeport, N. H. Filed Sept. 19, 1907. Serial No. 393,672.

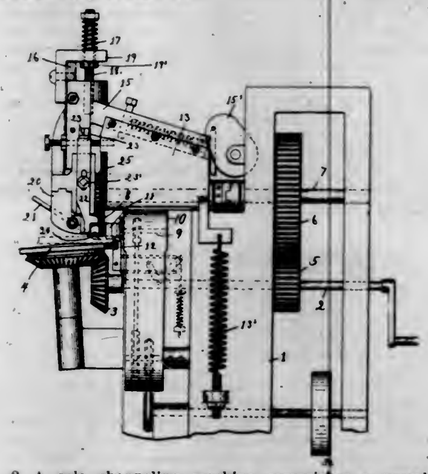


A device of the character specified, comprising a graduated body formed at its outer end and at one side with a laterally extending arm one side of which is flat its entire length and the opposite side of which is formed at the outer end of the arm with a rounded portion of approximately semi-circular form, and a slide mounted to slide on the body, said slide being cast with a laterally extending arm adapted for movement in a plane parallel with the body arm one side of the slide arm being flat and adapted to slide against the flat side of the body arm and the opposite side thereof formed with a rounded portion to correspond and register with the rounded portion of the body arm, with means for adjusting the slide.

897,438. CHANNELING-MACHINE. EDWIN A. WEBSTER, Groveland, Mass., assignor to Haverhill Channeling Machine Co., Haverhill, Mass., a Corporation of Maine. Filed Sept. 18, 1907. Serial No. 393,483.

1. A sole channeling machine comprising a movable work support, a knife obliquely disposed above said sup-

port to cut an inclined channel in a sole carried thereby, and means for holding the sole against said support and feeding it against said knife composed of a presser roll disposed to engage the sole directly in front of the knife edge and a pair of feed rolls respectively disposed closely adjacent the end of the knife and in the rear of its edge, substantially as described.



2. A sole channeling machine comprising a movable work support, a knife obliquely disposed above said support to cut an inclined channel in a sole carried thereby, means for holding the sole against said support and feeding it against said knife composed of a presser roll disposed to engage the sole directly in front of the knife edge and a pair of feed rolls respectively disposed closely adjacent the end of the knife and in the rear of its edge, means for driving said feed rolls at a predetermined surface speed and means for driving said support at a somewhat greater surface speed, substantially as described.

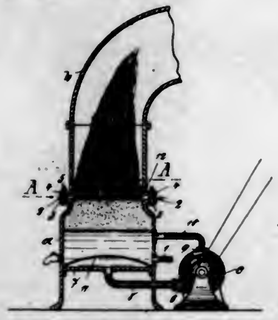
3. A sole channeling machine comprising a work support having an approximately horizontal face and movable to feed the sole, a channeling knife having a cutting edge at its end and extending obliquely towards said support, and means for pressing the sole against said support at points in front of, in the rear of and at the end of the edge portion of said knife, substantially as described.

4. A sole channeling machine comprising a sole support and means for feeding the sole thereon, a rotary knife mounted to move about an axis approximately parallel to said support and extending longitudinally of said axis in position to form an upper receiving seat on the upper edge portion of a sole held on said support, a channeling knife having a cutting edge at its end, oppositely disposed to said rotary knife, and extending obliquely towards said support and transversely of the feed, and a guard disposed to engage the edge of the sole opposite the end of said channeling knife, substantially as described.

5. A sole channeling machine comprising a sole support and means for feeding the sole thereon, a rotary knife mounted to move about an axis approximately parallel to said support and extending longitudinally of said axis in position to form an upper receiving seat on the upper edge portion of a sole held on said support, a channeling knife oppositely disposed to said rotary knife, and having its cutting edge extending obliquely with and across the feed to its end and a guard disposed to engage the edge of the sole opposite the end of said channeling knife, substantially as described.

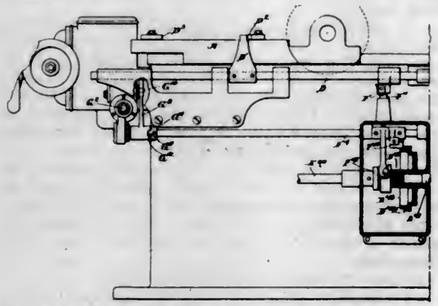
897,439. APPARATUS FOR MAKING LAMPBLACK. GOTTFRIED WEGELIN, Kalscheuren, near Cologne, Germany. Filed Jan. 2, 1908. Serial No. 408,906.

1. In an apparatus for producing lampblack from tar or other carbonaceous substances, the combination with a distillation-vessel adapted to receive liquid hydrocarbon, of a combustion-chamber above said distillation-vessel and communicating therewith, it being adapted to distil the liquid exclusively by the radiant heat of the flame and to produce the lampblack, inlets in said combustion-chamber for admitting air, and a pump connected by pipes with said distillation-vessel for constantly circulating the liquid through same, so as to prevent the formation of coke at the upper surface of the liquid.



2. In an apparatus for producing lampblack from tar or other carbonaceous substances, the combination with a distillation-vessel adapted to receive liquid hydrocarbon, of a combustion-chamber above said distillation-vessel and communicating therewith, it being adapted to distil the liquid exclusively by the radiant heat of the flame and to produce the lampblack, inlets in said combustion-chamber for admitting air, a pump connected by pipes with said distillation-vessel for constantly circulating the liquid through same, so as to prevent the formation of coke at the upper surface of the liquid, and a sieve in said distillation-vessel for separating any foreign matters from the liquid.

897,440. METAL-WORKING MACHINE. RICHARD T. WINGO, Providence, R. I., assignor to Brown and Sharpe Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Jan. 16, 1904. Serial No. 189,320.



1. The combination, with a carriage, of a feed-member for advancing the carriage, a return member for retracting the carriage, driving mechanism for said feed-member, an indexing mechanism, and means for throwing said driving mechanism out of operation during the indexing, substantially as described.

2. The combination, with a carriage, of a feed member for advancing the carriage, driving mechanism therefor, an indexing mechanism, and means controlled by the indexing mechanism for throwing said driving mechanism out of operation as the indexing begins and throwing said driving mechanism into operation when the indexing is completed, substantially as described.

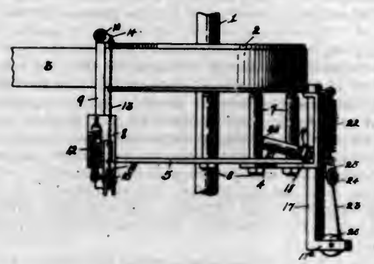
3. The combination, with a carriage, of a feed member for advancing the carriage, a return member for retracting the carriage, a reversing device controlled by the carriage, driving mechanism for the feed member, an indexing mechanism, and means for throwing said driving mechanism out of operation during the indexing, substantially as described.

4. The combination, with a carriage, of a feed member for advancing the carriage, a clutch for connecting the feed member with the carriage, driving mechanism for the feed member, a clutch in said driving mechanism, an indexing mechanism, and means for disengaging said latter clutch during the indexing, substantially as described.

5. The combination, with a carriage, of a feed member for advancing the carriage, a clutch for connecting the feed member with the carriage, driving mechanism for the feed member, a clutch in said driving mechanism, an indexing mechanism, and connections between said latter clutch and indexing mechanism for controlling the engagement of the clutch, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

897,441. BELT-SHIFTING MEANS. ERNEST WIRTH, Schopfheim, Germany, assignor to Louis Greiner, Toledo, Ohio. Filed Dec. 9, 1907. Serial No. 405,758.



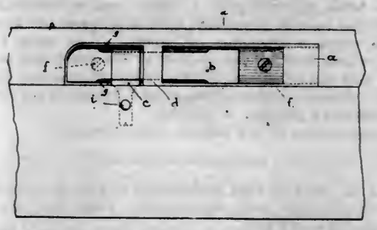
1. The combination with a pulley and the belt operating thereon, of a belt support at the side of the pulley, independent means movable laterally of the pulley for throwing the belt from the pulley to the support and vice versa, and means associated with each of said shifting means to yieldingly retain it in one position of its movement.

2. The combination with a pulley, of a belt support at the side thereof, and a set of belt-shifter members capable of relative longitudinal reciprocatory movements in planes transverse to the pulley, one member being movable to shift a belt from the pulley to the support and the other being movable to shift a belt from the support to the pulley.

3. The combination with a pulley, of a stationary belt-support at the side thereof comprising a member laterally spaced from the pulley and having a portion curved to conform to a segment of the pulley, said member having spaced belt supporting portions projecting toward the pulley, and laterally spaced longitudinally reciprocatory means relatively movable to shift a belt on and off the pulley.

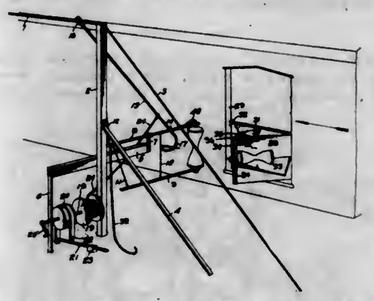
4. In association with a pulley, a belt support comprising a part laterally spaced from the pulley and having sleeved projections thereon extending toward the pulley-rim and terminating in proximity thereto, said projections being arranged in the form of a segment of the pulley rim to adapt them to support a belt when shifted thereon from the pulley, means carried by the support for shifting a belt thereto from the pulley, a shift-bar carried by the support for longitudinal movement laterally of the pulley, said bar having a lateral projection extending between the projections on said part in the path of shifting movement of the belt, means acting on the shift-bar to normally retain it with its projection in contiguous position to said part, and a pull-member associated with the shift-bar and adapted, when pulled, to effect a movement of the shift-bar from normal position to throw a belt from the support to the pulley.

897,442. BUTTER-BOX FASTENER. GEORGE E. WOODBURY, San Francisco, Cal. Filed Nov. 26, 1907. Serial No. 403,975.



A fastening-means for the cover for a box comprising a bolt-plate having a bolt-containing cavity in the front, a bolt slidable therein, a bar extending across the cavity at a point between the ends, said cavity being open at one end to admit the bolt, a recess in the back of the said plate extending perpendicularly across the cavity, and a retaining loop insertible in the plate from below at the recess and having a shank for securing it in place.

897,443. MAIL-BAG CATCHING AND DELIVERING APPARATUS. OSCAR O. AYRES, Olathe, Kans. Filed Mar. 27, 1908. Serial No. 423,685.



1. In a mail-bag catching and delivering apparatus, the combination, with a track, of a bag-removing member adapted to travel thereon; a flexible element connected at one end with said member; and a brake mechanism connected with the other end of said flexible element, for checking the movement of said member.

2. In a mail-bag catching and delivering apparatus, the combination, with a track, of a bag-removing member adapted to travel thereon; a rotary member; a flexible element secured at one end to said rotary member and adapted to be wound around the same, said flexible element being connected at its other end with said bag-removing member; and means for checking the unwinding of said flexible element from said rotary member, to terminate the movement of said bag-removing member.

3. In a mail-bag catching and delivering apparatus, the combination, with a track, of a bag-removing member adapted to travel thereon; a shaft; a drum and a friction disk secured to said shaft; a flexible element secured at one end to said drum and adapted to be wound around the same, said flexible element being connected at its other end with said bag-removing member; and a brake adapted for engagement with said disk, for checking the unwinding of said flexible element from said drum, to terminate the movement of said bag-removing member.

4. In a mail-bag catching and delivering apparatus, the combination, with an elevated track, of a bag-supporting crane including upper and lower arms, one of said arms being provided with a notch; and a traveling bag-removing member suspended from said track and adapted for initial engagement in said notch, whereby the retention of said member in operative position is effected.

5. In a mail-bag catching and delivering apparatus, the combination, with an elevated track, of a bag-supporting crane including upper and lower arms, one of said arms being provided with a notch; and a traveling bag-removing member suspended from said track and comprising a wheel, a depending rod secured at its upper end to said wheel, and a hook located at the lower end of said rod, said rod being adapted for initial engagement in said notch, whereby the retention of said bag-removing member in operative position is effected.

[Claims 6 to 17 not printed in the Gazette.]

897,444. MEANS FOR SECURING WHEELS ON AXLES. DAVID BALLIF, Biel, Switzerland. Filed Feb. 25, 1908. Serial No. 417,719.



Means for securing wheels on axles, comprising in combination, a bolt (*a*) an eye (*b*) provided on said bolt, said eye having notches, (*f*), a cut off ring (*c*), bent up ends (*d*) on said ring, which are adapted to fit in the eye and the notches, substantially as described and shown and for the purpose set forth.

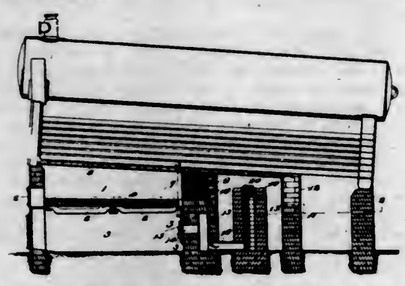
897,445. APRON. CHARLES W. BARTRUM, Newburgh, N. Y., assignor to Sweet, Orr & Company, Newburgh, N. Y., a Firm. Filed Apr. 17, 1905. Serial No. 256,072.



An apron, comprising essentially two pieces, each composed of the integral lower portion 1, having the two fork-points 2 and 3 by means of which the garment is shaped to the crotch and made to conform to the wearer's person, the rear slope 4 extending from the waist line to the fork-point 3 and supplied with rear ties, and the upper portion 5, these two pieces united substantially as shown and forming legs 9, and a bib 10, and open behind the full width from crotch upward, whereby the apron is accurately fitted about the person, fully protects the wearer in front, and being open in the rear allows perfect freedom of movement of the person.

897,446. BOILER-FURNACE. ORESTES U. BEAN, New York, N. Y., assignor to Bunsen Smokeless Furnace Company of America, a Corporation of South Dakota. Filed Aug. 29, 1907. Serial No. 390,631.

1. In a boiler furnace the combination with a fire box, of a bridge wall in the rear of said fire box, a combustion chamber in the rear of said bridge wall, a series of piers separated from each other mounted on top of the bridge wall and extending from the top of the bridge wall to the lower surface of the boiler, whereby a plurality of restricted openings are formed for the passage of the products of combustion, a second series of piers located adjacent to the bridge wall and extending from the bottom of the combustion chamber to a height less than the height of the top of the first mentioned piers and in line with the restricted openings between the first series of piers, said bridge wall being provided with an air chamber, and both of said series of piers being provided with air channels having suitable outlets and connected to the air chamber in the bridge wall.



2. In a boiler furnace the combination with a fire box, of a bridge wall in the rear of said fire box, a combustion chamber in the rear of said bridge wall, a series of piers separated from each other mounted on top of the bridge wall and extending from the top of the bridge wall to the lower surface of the boiler, whereby a plurality of restricted openings are formed for the passage of the products of combustion, a second series of piers located adjacent to the bridge wall and extending from the bottom of the combustion chamber to a height less than the height of the top of the first mentioned piers and in line with the restricted openings between the first series of piers, said bridge wall being provided with an air chamber, both of said series of piers being provided with air channels having suitable outlets and connected to the air chamber in the bridge wall and extending from the top of the bridge wall to the lower surface of the boiler, whereby a plurality of restricted openings are formed for the passage of the products of combustion, a second series of piers located adjacent to the bridge wall and extending from the bottom of the combustion chamber to a height less than the height of the top of the first mentioned piers and in line with the restricted openings between the first series of piers, said bridge wall being provided with an air chamber, by which air is supplied to the chamber, and a damper having its operating part extending outside the furnace to control the supply of air.

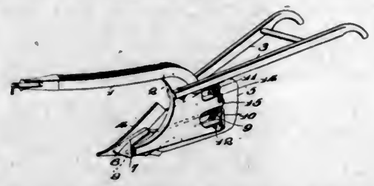
3. In a boiler furnace the combination with a fire box, of a bridge wall in the rear of said fire box, a combustion chamber in the rear of said bridge wall, a series of piers separated from each other mounted on top of the bridge wall and extending from the top of the bridge wall to the lower surface of the boiler, whereby a plurality of restricted openings are formed for the passage of the products of combustion, a second series of piers located adjacent to the bridge wall and extending from the bottom of the combustion chamber to a height less than the height of the top of the first mentioned piers and in line with the restricted openings between the first series of piers, said bridge wall being provided with an air chamber, and both of said series of piers being provided with air channels having suitable outlets, the outlets in the first mentioned piers being located on the sides thereof, and the outlets on the second mentioned piers being located in the top thereof and connected to the air chamber in the bridge wall.

4. In a boiler furnace the combination with the fire box, of a bridge wall to the rear of said fire box, a series of piers separated from each other mounted on top of the bridge wall and extending from the top of the bridge wall to the lower surface of the boiler whereby restricted openings are formed for the passage of the products of combustion, a series of piers to the rear of and adjacent to said bridge wall and in line with the restricted openings, a second bridge wall to the rear of said last mentioned piers, said bridge wall having a series of restricted openings therethrough in line with said last mentioned piers.

5. In a boiler furnace the combination with a fire box, of a bridge wall in the rear of said fire box, a combustion chamber in the rear of said bridge wall, a series of polygonal piers separated from each other mounted on top of the bridge wall and extending from the top of the bridge wall to the lower surface of the boiler, whereby a plurality of restricted openings are formed for the passage of the products of combustion, a second series of polygonal piers located adjacent to the bridge wall and extending from the bottom of the combustion chamber to a height less than the height of the top of the first mentioned piers and in line with the restricted openings between the first series of piers, said bridge wall being provided with air chamber, and both of said series of piers being provided with air channels having suitable outlets and connected to the air chamber in the bridge wall.

[Claims 6 and 7 not printed in the Gazette.]

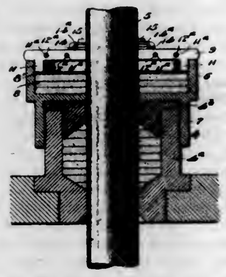
897,447. PLOW. OTTO BEASLEY, Columbia, Tenn. Filed Jan. 28, 1908. Serial No. 413,115.



1. A frog for plow shovels, the same consisting of separable parts, the one having a T-projection and the other a recess of corresponding shape to receive said T-projection, and one of said parts having projections to embrace opposite sides of the other part to prevent their separation when alined.

2. A frog for plow shovels, the same comprising separable parts, one of the parts having a T projection and extensions at opposite sides of said projection, and the other part having a recess to receive the T-projection, and notches at the sides of said recess to receive the extensions of the first mentioned part at opposite sides of the T-projection.

897,448. PISTON-ROD LUBRICATOR. EDWARD BLAKE, Kenora, Ontario, Canada. Filed Apr. 9, 1908. Serial No. 426,032.



1. In a piston rod lubricator, the combination with a lubricating cup and a piston swab contained therein, of a split cap removably attached to the mouth of said cup.

2. In a piston rod lubricator, the combination with a solid or integral lubricating cup and a piston swab contained therein, of a split cap removably attached to said cup having means for the securement together of its parts.

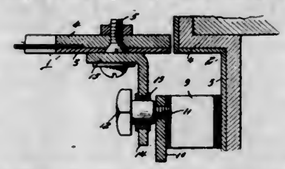
3. In a piston rod lubricator, the combination with a lubricating cup and a piston swab contained therein, of a split cap removably attached to the mouth of said cup having lugs and openings on its respective parts received one within the other.

4. In a piston rod lubricator, the combination with a lubricating cup having screw-threads at its mouth, and a piston swab contained therein, of a split cap, the sections of which are directly engaged with the screw-threads on the cup for holding the swab therein.

5. In a piston rod lubricator, the combination with a lubricating cup having screw-threads at its mouth, and a piston swab contained therein, of a split cap, the sections of which are directly engaged with the screw-threads on the cup for holding the swab therein, and dowels on the cap sections for holding said sections together.

[Claims 6 to 8 not printed in the Gazette.]

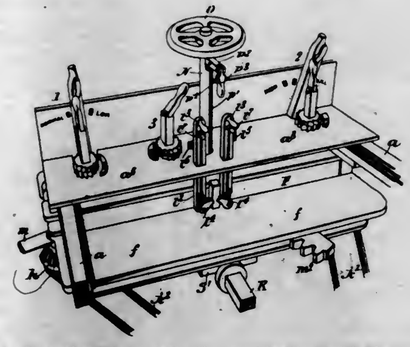
897,449. SASH-PIVOT. FREDERICK BOGENBERGER, Milwaukee, Wis. Filed Apr. 16, 1908. Serial No. 427,455.



1. A sash pivoting device comprising a sash plate member secured to the frame of the sash, a supporting member adjustably secured to the stile of the frame, a pivot bolt secured to one of said members and having pivotal connection with the other member, a limiting stud on the supporting member, and a pawl carried by the sash supporting member adapted to engage said stud to determine the movement of the sash.

2. A sash pivoting device comprising a sash plate secured to the frame of the sash, an arm adjustably secured to the stile of the frame, a pivot bolt secured to the arm and having pivotal connection with the plate, a limiting stud on the arm, and a pawl carried by the plate adapted to engage said stud to determine the movement of the sash.

897,450. SHORT-TURN GEAR. ROBERT H. BOWMAN, Canon City, Colo. Filed Feb. 24, 1908. Serial No. 417,380.



1. In a short turn gear, the combination with the main frame of the vehicle, a pair of driven gears mounted thereon, and the front truck wheels loosely mounted on their respective axles; of a separate gear connection that joins each of the wheels with their respective drive gears, each of the said connections including a shifting clutch device, for throwing the wheels out of gear with their respective drive gears, means on the front truck frame for oscillating the wheels together but in reverse directions and other means on the said front truck frame for independently actuating the clutch devices.

2. A short turn gearing for motor vehicles, a pair of front truck wheels each loosely but independently mounted, means for oscillating the wheels in unison but in reverse directions, a pair of driven gears mounted on the vehicle frame, separate gear connections for joining the said drive gears with their respective front truck wheels and a separate means for each of said connections for throwing the wheels in or out of operable connection with their respective drive gears.

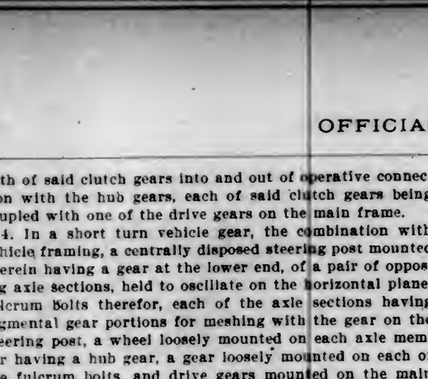
3. In a short turn gearing for motor vehicles, the main frame, a pair of independently acting drive gears mounted thereon, a pair of opposing axle sections fulcrumed on the front end of the frame to oscillate in the horizontal plane, means on the frame for oscillating the axles together but in reverse directions, a wheel loosely mounted on each axle having a hub gear, a clutch gear for each wheel hub gear, means on the front end of the frame for throwing either or

both of said clutch gears into and out of operative connection with the hub gears, each of said clutch gears being coupled with one of the drive gears on the main frame.

4. In a short turn vehicle gear, the combination with vehicle framing, a centrally disposed steering post mounted therein having a gear at the lower end, of a pair of opposing axle sections, held to oscillate on the horizontal plane, fulcrum bolts therefor, each of the axle sections having segmental gear portions for meshing with the gear on the steering post, a wheel loosely mounted on each axle member having a hub gear, a gear loosely mounted on each of the fulcrum bolts, and drive gears mounted on the main frame coupled with the loose gears on the fulcrum bolts, and clutch devices for operatively connecting and disconnecting the loose gears with the drive gears.

5. In a short turn gear, in combination with the main frame, a pair of oppositely disposed horizontally mounted drive gears, and means on the main frame for transmitting motion to the pair of horizontally mounted drive gears, of a pair of axle members fulcrumed centrally of their respective horizontally drive gears, a wheel loosely mounted on each wheel section, having a hub gear in constant mesh with the horizontal gear, said axles each having a segmental member at the inner end, and a steering post mounted on the main frame centrally of the frame, a gear on the lower end of said post that meshes with the segmental gears on the axles and a means for locking the post to its rotatable adjustments a drive mechanism coupled with each horizontal drive gear and means for operatively connecting and disconnecting said drive mechanism from said horizontal drive gears as set forth.

897,451. DERRICK OR HOISTING MEANS. ROBERT H. BOWMAN, Canon City, Colo. Filed June 8, 1908. Serial No. 437,358.



1. A derrick or hoisting mechanism of the character described which comprises in combination with a wagon bed; a turn table mounted near one end of the wagon bed, a pair of front uprights and other uprights mounted on the turn table, the front uprights being relatively so positioned on the wagon bed whereby they can be projected beyond the end of the said bed, the said uprights, having their inner faces formed with guides for receiving a pile driver, pulley guides mounted on the upper ends of the uprights for the pile driver lift cable and other guides below the turn table for the pulley end of the said lift cable.

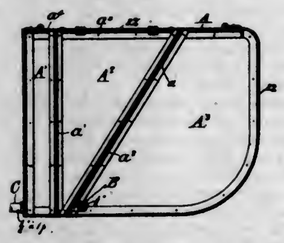
2. The combination with a wagon bed; of a turn table mounted on one end of the said bed, a pair of front uprights, mounted on the turn table and positioned at a point beyond the peripheral edge of the said turn table, said guides each having a vertical groove on the inner face for slidably receiving a pile driver, other uprights mounted on the turn table, guide pulleys mounted on the upper ends of the uprights, for the pile driver pull cable and supplemental pile driver guides adapted to be detachably secured on the lower ends of the front uprights when they are turned to project beyond the table end, as set forth.

3. A combined derrick and hoist for motor wagons and the like, comprising a turn table adapted for being mounted on the wagon bed and near one end thereof, base timbers mounted on the turn table and projected beyond the peripheral edge thereof, a pair of front and a pair of rear uprights mounted on the said base timbers, a longitudinal beam mounted on the upper edge of the upright and extended beyond the front face of the front uprights, a cable sheave mounted in the said extended portion, other guide pulleys or sheaves mounted on the said longitudinal beam, said front uprights having inside guide grooves for a pile driver, all being arranged substantially as shown and described.

4. The combination with a turn table, said turn table comprising an annular member having a horizontally projected peripheral flange, and adapted for being fixedly mounted on a wagon bed near one end thereof, a base member mounted to turn thereon, said base member including a pair of parallel horizontal bars whose ends project beyond the peripheral edge of the turn table, a pair of front and a pair of rear uprights mounted on the horizontal bars, the front ones on the projected front portion of the bars, cross beams that connect the upper ends of the uprights, a longitudinal beam mounted on the cross bars and having its ends projected beyond the bottom or base bars, supporting pulleys mounted in the outer ends of the said longitudinal beam and cable guide pulleys mounted on said beam midway the ends thereof, the front uprights having their inner opposing faces vertically grooved for receiving a pile driver.

5. The hereinbefore described improved derrick and hoist mechanism that consists of a ring shaped base member adapted to be secured upon a wagon bed near one end thereof and having a peripheral horizontal flange, a turn table having a pendent portion for fitting within the ring member, said turn table including a pair of parallel horizontal timbers, the ends of which extend beyond the ring shaped base member, clamp devices detachably secured to the timber extensions for engaging the horizontal flange on the ring member, a pair of uprights secured between one set of projected ends of the horizontal timbers, said uprights having their inner opposing faces vertically grooved, extension grooved guide members adapted for detachably connecting to the lower ends of the said grooved uprights, a pair of rear uprights mounted on the horizontal timbers, braces that connect the upper ends of the two sets of uprights, a longitudinal beam mounted on the braces and having its opposite ends projected beyond the front and rear uprights, a hoisting pulley mounted on each of the projected ends of the said longitudinal beam, cable sheaves mounted on the beam and a lever device mounted on the upright frame for turning it, as set forth.

897,452. APPARATUS FOR GENERATING A SOLUTION FOR PREVENTING INCRUSTATION IN STEAM-BOILERS. FÉLIX BAUN, St. Petersburg Russia. Filed Sept. 10, 1906. Serial No. 334,030.



1. In an apparatus for the generation of a cleaning solution for the interior of boilers, a generator comprising a plurality of compartments or chambers, removable partition screens separating said chambers, means for delivering to said generator fluid in the form of spray, and connections between said generator and a boiler wherein the solution is to be used, whereby the solution may be delivered to the boiler.

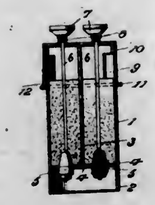
2. In an apparatus for generating a cleaning solution for the interior of boilers, a generator comprising a plurality of chambers, removable partition screens separating said chambers, said screens forming between them an angular chamber wherein the flax seed of other solution generating agent is placed, a perforate delivery pipe for admitting fluid to said generator in the form of spray, and suitable connections between one of the other of said chambers and a boiler wherein said solution is to be used, whereby the solution may be transferred from the generator to said boiler.

3. In an apparatus for generating a cleaning solution for boilers, a generator comprising a plurality of chambers, a vertical screen removably inserted within said generator dividing the same into two chambers, an inclined partition screen similarly inserted within said generator, and forming between it and the aforesaid screen an angular chamber, a perforate delivery pipe lying beneath the lower end of said inclined screen and adapted to admit fluid in the form of spray to said generator, and suitable connections between the rear chamber and a boiler wherein said solution is to be used, whereby the solution may be transferred from said generator to said boiler.

4. In an apparatus for generating a cleaning solution for the interior of boilers, a generator comprising a plurality of chambers, removably inserted partition screens separating said chambers from one another, a delivery pipe lying beneath one of said screens and having perforations on the surface adjacent said screen, whereby fluid may be admitted to the chamber through said perforations and simultaneously forced through the aforesaid screen, and suitable connections between said generator and a boiler wherein the solution is to be used, whereby said solution may be transferred from said generator to said boiler.

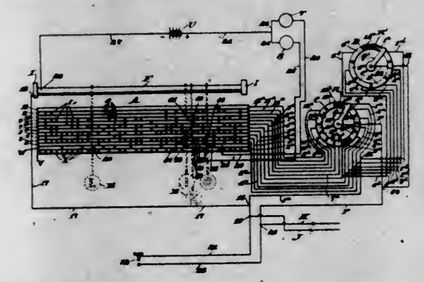
5. In an apparatus for generating a cleaning solution for boilers, a generator comprising a plurality of chambers, two removably inserted screens separating said chambers from one another, one of said screens being inclined relatively to the other and forming therebetween an angular chamber, a perforate delivery pipe lying beneath the lower end of said inclined screen and having perforations on the surface adjoining the said screen, whereby fluid for generating the solution may be admitted in the form of spray and simultaneously forced through said screen to thereby remove from the inner face of said screen any collected solution generating agent and to keep in continuous circulation the solution so formed within the generator, and suitable connections between said generator and a boiler wherein said solution is to be used, whereby said solution may be transferred from the generator to said boiler.

897,453. COMBINED SALT AND PEPPER SHAKER. CHARLES R. BYAM, Chicago, Ill. Filed July 8, 1907. Serial No. 382,767.



A condiment holder comprising a casing subdivided into a plurality of compartments and having an annular rib projecting outwardly therefrom, the said casing being threaded adjacent the rib and being formed with lateral openings communicating with the several compartments, and a collar fitting removably upon the exterior of the casing and normally closing the lateral openings, the said collar abutting against the annular rib and having one edge thereof in engagement with the before mentioned threaded portion of the casing adjacent the rib.

897,454. TELEGRAPHIC TRANSMITTER. GEORGE A. CARDWELL, New York, N. Y., assignor to Telegraph Transmitting Instrument Company, a Corporation of New York. Filed Aug. 19, 1905, Serial No. 276,884. Renewed Jan. 20, 1908. Serial No. 411,729.



1. In a telegraphic transmitter the combination of a keyboard and key levers, the line circuit, sets of electric contacts arranged in series, each of which sets is adapted to be connected to the line circuit by the operation of a key lever, and each set of contacts corresponding to a signal, a transmitting device having divisions corresponding with the said sets of contacts, and circuits and connections so devised and arranged that signals corresponding to the particular key levers operated are automatically transmitted over the line.

2. In a telegraphic transmitter the combination of a keyboard and key levers, the line circuit, series of individual electrical contacts, each of which is adapted to make contact with a key lever, the individual contacts in different series being arranged in sets, and each set corresponding to a signal, a transmitting device having divisions corresponding with the said series of contacts, and circuits and connections so devised and arranged that signals are automatically transmitted over the line corresponding to the particular key lever operated, and means controlled by said key levers for controlling the transmitting device.

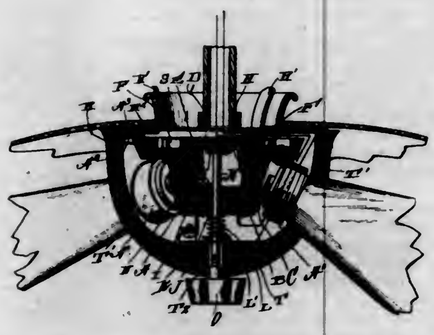
3. In a telegraphic transmitter the combination of a keyboard and key levers, the line circuit, series of contacts adapted to make contact with the key levers, a transmitting device, circuits and connections between the series of contacts and the transmitting device, means for actuating said device, and means controlled by the key levers for controlling said device.

4. In a telegraphic transmitter the combination of a keyboard and key levers, the line circuit, conducting strips arranged upon the keyboard, contacts connected to said strips in predetermined arrangement and adapted to make contact with the key levers in sets corresponding to different characters, a transmitting device, means for actuating the same, and circuits and connections so devised and arranged that signals are automatically transmitted over the line corresponding to the particular key levers operated.

5. In a telegraphic transmitter the combination of a keyboard and key levers, the line circuit, conducting strips arranged along the keyboard in proximity to the key levers, contacts connected to said strips and arranged in rows or sets opposite the respective key levers and extending transversely of the keyboard, said transverse sets of contacts representing signals corresponding to the particular characters designated by the key levers, a transmitting device, means for actuating the same, and circuits and connections devised and arranged to transmit the signals by operating the key levers.

[Claims 6 to 18 not printed in the Gazette.]

897,455. CLUSTER-FIXTURE FOR ELECTRIC LIGHTS. JOHN H. CALDWELL, Philadelphia, Pa. Filed Dec. 21, 1907. Serial No. 407,531.



1. A cluster electric fixture comprising a switch holding member with bulb sockets thereon, stationary contact points connected to said socket members, a metallic ring upon said member and having projections adjacent to said sockets, a rotatable disk with resilient contact points thereon, one or more of which is adapted to be thrown against said contact points connected with the sockets as the disk is turned, and a cover for said switch carrying member, as set forth.

2. A cluster electric fixture comprising a switch holding member with bulb sockets thereon, stationary contact points connected to said socket members, a metallic ring upon said member and having projections adjacent to said sockets, a rotatable disk, resilient metallic contact points thereon adapted to be thrown against one or another of the contact points, which are connected to said sockets, as the disk is rotated, the upper surface of said member being recessed and provided with metallic lining, projections upon the resilient contact points bearing against said lining, means for rotating said disk, and a cover for the switch carrying member, as set forth.

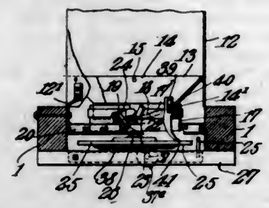
3. A cluster electric fixture comprising a switch holding member with bulb sockets thereon, stationary contact points connected to said sockets, a metallic ring upon said member and having projections adjacent to said sockets, a rotatable disk, resilient metallic contact points thereon adapted to be thrown against one or another of the contact points, which are connected to said sockets, as the disk is rotated, the upper surface of said member being recessed and provided with metallic lining, projections upon the resilient contact points bearing against said lining, a pin fixed to said disk and projecting through an aperture in said member and having a threaded end, a cover for said member provided with holes registering with said sockets, said pin projecting through the cover, and a button fitted to the threaded end of the pin, as set forth.

4. A cluster electric fixture comprising a switch holding member with bulb sockets thereon, stationary contact points connected to said socket members, a metallic ring upon said member and having projections adjacent to said sockets, a rotatable disk, resilient metallic contact points thereon adapted to be thrown against one or another of the contact points, which are connected to said sockets, as the disk is rotated, the upper surface of said member being recessed and provided with metallic lining, projections upon the resilient contact points bearing against said lining, a pin fixed to said disk and extending through an aperture in said member, a key passing through an aperture in said pin, a spring bearing between said key and the end of said member, a cover for the switch member and provided with apertures registering with the bulb sockets, and a key upon said pin, as set forth.

5. A cluster electric fixture comprising a switch holding member with bulb sockets thereon, stationary contact points connected to said socket members, a metallic ring upon said member and having projections adjacent to said sockets, a rotatable disk, resilient metallic contact points thereon adapted to be thrown against one or another of the contact points, which are connected to said sockets, as the disk is rotated, the upper surface of said member being recessed and provided with metallic lining, projections upon the resilient contact points bearing against said lining, a pin fixed to said disk and extending through an aperture in said member, a key passing through an aperture in said pin, a spring bearing between said key and the end of said member, a cover for the switch member and provided with apertures registering with the bulb sockets, a rotatable disk, resilient metallic contact points thereon adapted to be thrown against one or another of the contact points, which are connected to said sockets, as the disk is rotated, the upper surface of said member being recessed and provided with metallic lining, projections upon the resilient contact points bearing against said lining, a pin fixed to said disk and extending through an aperture in said member, a key passing through an aperture in said pin, a spring bearing between said key and the end of said member, a cover for the switch member and provided with apertures registering with the bulb sockets, said member having lugs upon the face thereof, a shade supporting plate having fingers with hooked ends adapted to engage said lugs, as set forth.

[Claim 6 not printed in the Gazette.]

897,456. COMBINED FERTILIZER-DISTRIBUTER AND CULTIVATOR. EUGENE M. COLE, Charlotte, N. C. Filed Mar. 10, 1908. Serial No. 420,220.



1. In a fertilizer distributer, a hopper, a revoluble discharge disk arranged below the bottom of the hopper and of a diameter greater than the discharge opening of the hopper, and a vertically adjustable valve ring carried by the hopper and movable to adjust the vertical height of the passage between the disk and the lower edge of the ring.

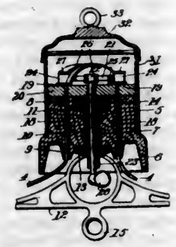
2. In a fertilizer distributer, a hopper having a funnel shaped bottom terminating in a flanged discharge neck, a valve ring mounted on the neck and provided with a plurality of inclined slots, pins projecting from the neck and adapted to said slots, the ring being circumferentially adjustable to alter the quantity of fertilizer distributed, and a rotatable discharge disk located below and of greater diameter than said valve ring.

3. In a fertilizer distributer, a hopper having a funnel shaped bottom terminating in a discharge neck, a plurality of pins extending from said neck, a circumferentially adjustable valve ring arranged around the neck and provided with a plurality of inclined slots for the reception of said pin, a revoluble discharge disk arranged below and of greater diameter than the ring, a discharge finger carried by the neck and loosely resting on the disk at a point near the periphery thereof, and an agitating finger carried by said disk.

4. In a fertilizer distributer, a hopper having a funnel shaped bottom terminating in a discharge neck, a plurality of pins extending from the neck, a circumferentially adjustable valve ring having slots for the reception of said pin, a revoluble discharge disk located below the ring, and a loosely mounted agitating finger supported by the disk and having a ball and socket connection therewith at a point distant from the center of said disk.

5. In a machine of the class described, a wheeled frame, a bevel gear carried by the wheel, a hopper having a funnel shaped bottom terminating in a discharge neck, a valve ring carried by the neck and adjustable to vary the quantity of fertilizer discharged, a discharge disk mounted below the neck and having a bevel gear on its lower face, a shaft, a pair of pinions mounted thereon and forming a driving connection between the two bevel gears, a pivotally mounted lever having a bearing for one end of the shaft, and an adjusting means connected to said lever for raising and lowering the same and thus connecting and disconnecting the train of gearing.

897,457. HANGER FOR ELECTRIC LAMPS. GEORGE CUTTER, South Bend, Ind. Filed June 6, 1906. Serial No. 320,448.



1. The combination with the insulator having a depression in its under face, of a cross arm having a projecting portion fitted in said depression, a switch, and a switch operating shaft extending through the insulator and insulated from the cross arm, said shaft terminating short of the lower edge of the cross-arm and lamp suspending means carried by the cross arm.

2. The combination with the insulator having a depression in its under face, of a cross arm provided with a projecting portion extending into said depression, the projecting portion of the arm having an opening, a switch, and a switch operating shaft extending through the insulator and terminating at one end in the opening of the projecting portion of the cross arm.

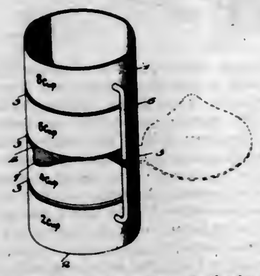
3. The combination of an insulator having a central bore and a plurality of conductor bores, a cross arm secured to one side of the insulator, a switch mounted at the opposite side of the insulator and a switch operating shaft extending through the central bore.

4. The combination with an insulator having a depression in its top and in its bottom and also having a bore communicating with said depressions, of a tubular member disposed in said bore, means in said top depression to sustain said tubular member, a cross-arm provided with a projecting portion extending into said bottom depression and secured to said tubular member, a switch mounted upon the insulator, and a switch operating shaft extending through the tubular member and insulated therefrom.

5. The combination with the insulator having a central bore, of a tubular member mounted in said bore, a cross arm secured to the lower end of the tubular member, a switch mounted above the insulator, and a switch operating shaft extending through the tubular member and insulated therefrom.

[Claims 6 to 12 not printed in the Gazette.]

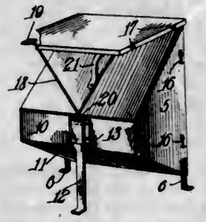
897,458. MEASURING DEVICE. ORRIN E. DICKESON, Oskaloosa, Iowa. Filed Jan. 28, 1908. Serial No. 413,117.



1. As a new article of manufacture, the herein described measuring receptacle comprising a body portion formed with a series of slots one above the other, a vertically disposed guide rod formed with angularly disposed ends connected to the outer side of the body portion, a closed bottom secured to the body portion, and a slide formed with an apertured ear by which it is mounted to swing and slide up and down on the said rod, the said slide being arranged to be entered in any one of the slots in the body portion.

2. As a new article of manufacture, the herein described measuring receptacle, comprising a body portion having a closed bottom and formed with a series of slots one above the other, a vertically disposed guide rod connected to the body portion, and a disk mounted upon said rod and arranged to slide longitudinally and turn thereon and arranged to enter any one of the slots whereby to form a closure for the receptacle above the closed bottom.

897,459. PORTABLE BAKER AND BROILER. WILBURN C. GRANT, Queen City, Tex. Filed Nov. 9, 1907. Serial No. 401,477.



1. A device of the class described comprising a casing having an open front, and a closure for the front of the casing and movable to horizontal position above the casing to form a table.

2. A device of the class described comprising a casing having an open front, a plate constituting a closure for the front of the casing and movable to horizontal position above the casing to form a table, and a bail depending from the plate and engaging the casing for supporting the rear end of said plate when supported above the casing.

3. A device of the class described comprising a casing having an open front and provided with a socket, a plate constituting a closure for the front of the casing and movable to horizontal position above the casing to form a table, and a bail pivotally secured to one end of the plate and adapted to engage the socket for supporting said plate in horizontal position.

4. A device of the class described comprising a casing having an open front and provided with forward depending supporting legs, a socket secured to the rear wall of the casing, a rear supporting leg seated in said socket, a plate forming a closure for the open end of the casing and movable to substantially horizontal position to form a table, and a bail secured to the plate and adapted to engage the walls of the socket when said plate is moved to horizontal position.

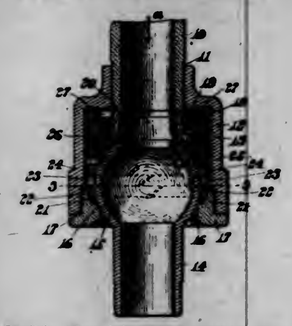
5. A device of the class described comprising a substantially trapezoidal casing having an open front and provided with inwardly extending brackets, a removable tray supported on said brackets and having a vertically extending flange, spaced depending supporting legs secured to the casing at the front end thereof, a socket secured to the rear end of the casing, a rear supporting leg engaging the socket and having its intermediate portion off set for engagement with the adjacent inclined wall of the casing, a cover forming a closure for the front of the casing and movable to substantially horizontal position to form a table, and a supporting bail pivotally secured to the cover and engaging the socket for supporting the cover in horizontal position.

[Claims 6 to 8 not printed in the Gazette.]

897,460. FLEXIBLE PIPE-JOINT. WARREN A. GREENLAW, Melrose Highlands, Mass., assignor to The Greenlaw Manufacturing Co., Boston, Mass., a Corporation of Maine. Filed Aug. 16, 1907. Serial No. 388,860.

1. In a flexible pipe joint, the combination of a pipe member provided with a cup-shaped end; a second pipe

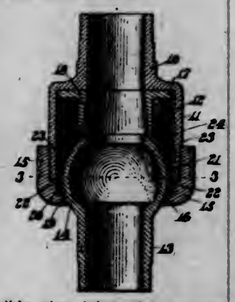
member having a ball-shaped end adapted to enter said cup-shaped end; a seat for said ball secured to said cup-shaped end; a packing adapted to impinge on the surface of said ball; an annular removable member interposed between said ball end and the bottom of said cup-shaped member and provided with a tubular stop for limiting the inward movement of said ball; and a spring interposed between said packing and annular member.



2. In a flexible pipe joint, the combination of a pipe member provided with a cup-shaped end; a second pipe member having a ball-shaped end adapted to enter said cup-shaped end; a seat for said ball secured to said cup-shaped end and provided with an inclined annular wall; a packing adapted to be operated by said inclined wall to cause it to impinge on the surface of said ball; an annular removable member interposed between said ball end and the bottom of said cup-shaped member and provided with a tubular stop for limiting the inward movement of said ball; and a spring interposed between said packing and annular member.

3. In a flexible pipe joint, the combination of a pipe member provided with a cup-shaped end; a second pipe member having a ball-shaped end adapted to enter said cup-shaped end; a seat for said ball secured to said cup-shaped end; a packing interposed between said ball and the walls of said cup-shaped end; a removable ball stop provided with an outwardly extending flange having a plurality of perforations therethrough; and a spring between said packing and said flange.

897,461. FLEXIBLE PIPE-JOINT. WARREN A. GREENLAW, Melrose Highlands, and HARRISON A. ROYCE, Boston, Mass., assignors to The Greenlaw Manufacturing Co., Boston, Mass., a Corporation of Maine. Filed Aug. 16, 1907. Serial No. 388,861.



1. In a flexible pipe joint, the combination of a pipe member provided with a cup-shaped end; a second pipe member having a ball-shaped end adapted to enter said cup-shaped end; a cap threaded to said cup-shaped end provided with an inwardly extending flange having a rearwardly extending lip the inner wall of which has a groove therein; and an annular packing ring held in position by said lip.

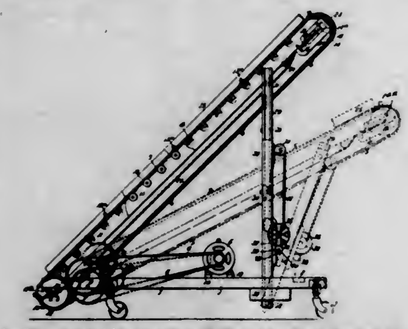
2. In a flexible pipe joint, the combination of a pipe member provided with a cup-shaped end; a second pipe member having a ball-shaped end adapted to enter said cup-shaped end; a seat for said ball secured to said cup-shaped end; a packing interposed between said ball and the walls of said cup-shaped end; a ring with beveled edges bearing upon said packing; and a spring for forcing the beveled edges of said ring into said packing.

3. In a flexible pipe joint, the combination of a pipe member provided with a cup-shaped end; a second pipe member having a ball-shaped end adapted to enter said cup-shaped end; a seat for said ball secured to said cup-shaped end; a packing interposed between said ball and the walls of said cup-shaped end; a ring with beveled edges bearing upon said packing; a spring for forcing the beveled edges of said ring into said packing; and an annular follower between said ring and spring.

4. In a flexible pipe joint, the combination of a pipe member provided with a cup-shaped end; a second pipe member having a ball-shaped end adapted to enter said cup-shaped end; a seat for said ball secured to said cup-shaped end; a packing interposed between said ball and the walls of said cup-shaped end; a ring with beveled edges bearing upon said packing; a spring for forcing the beveled edges of said ring into said packing; an annular follower between said ring and spring; and a removable annular ball stop interposed between said spring and the bottom wall of the chamber in said cup-shaped end.

5. In a flexible pipe joint, the combination of a pipe member provided with a cup-shaped end; a second pipe member having a ball-shaped end adapted to enter said cup-shaped end; a seat for said ball secured to said cup-shaped end; a packing interposed between said ball and the walls of said cup-shaped end; a ring with beveled edges bearing upon said packing; and yieldable means for forcing said ring outwardly to permit the beveled edges thereon to force said packing against the outward face of said ball.

897,462. PORTABLE STACKING-ELEVATOR. EDWARD HANAK, New Orleans, La. Filed Sept. 26, 1906. Serial No. 336,295.



1. In a portable elevator of the character described, the combination with a base frame, the said frame including opposite side bars, an endless carrier frame pivotally mounted on the front ends of the side bars, a pair of supports for the upper end of the carrier frame, each of the said supports consisting of telescopic members, one of which is pivotally connected to swing outwardly as the carrier frame is lowered, the upper ones of said supports being pivotally connected to the upper end of the carrier frame, brackets carrying pulleys connecting the upper ends of the lower telescopic members, lift cables connected to the lower ends of the upper telescopic members, a winding drum mounted on the lower telescopic members over which the ends of the lift cables wind, and means also mounted on the lower telescopic members for winding up the drum.

2. As an improvement in portable elevators, the combination with the main frame, said frame including lower horizontal side bars 1 and upper side bars 62, the said side bars 62 forming a supplemental supporting frame; of an endless carrier and a frame therefor, the said carrier frame comprising a lower and an upper section, the latter being hingedly connected to the lower section, the lower section being pivotally mounted at its lower end in the outer extremities of the side bars 1—1 and having its upper ends supportable on the outer end of the supplemental supporting frame, driving means on the main frame connected with the lower end of the endless carrier, mechanism for supporting and adjusting the upper or hinged end of the carrier, which comprises two sets of lower and upper telescopic members, the upper one for each set of members having a vertically slidable fulcrum connection with its co-acting lower member, the said upper members having pivotally connected to the upper end of the uppermost portion of the carrier frame, and means mounted on the lower telescopic members and the main frame for raising the upper telescopic members, and said means including lift cables connected to the fulcrum ends of the said upper telescopic members, as set forth.

897,463. DUMP-CAR. HERBERT T. HERR, Denver, Colo., assignor to The Herr Dump Car Company, Denver, Colo. Filed May 4, 1906. Serial No. 315,265.



1. In a dumping car, the combination with the car body, and a hinged dumping door, of means for locking the door in the closed position, said means including stationary hangers and movable members coöperating with the hangers, an operating rod supported and guided by the hangers and connected in operative relation with the movable locking members, and actuating means connected with the rod to release the movable locking members from or throw them into locking engagement with the door at will.

2. The combination with the car body provided with a dumping door, forming a part of its bottom, means for locking the door in the closed position including stationary hangers and movable locking members, the movable members being provided with means for imparting a limited degree of lifting movement when actuated to perform the locking function, to overcome any sagging tendency of the door, the latter being provided with members which are engaged by the locking means, an operating rod, a suitable connection between the rod and the movable locking members, the hangers being provided with supporting guides which the rod engages, and means for actuating the rod to perform the door-locking and door-releasing functions.

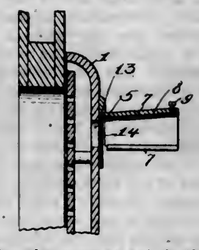
3. In a dumping car, the combination with the car body, of a bottom door extending lengthwise of the car and hinged at its opposite longitudinal edges, stationary hangers mounted on the car adjacent the hinged edges of the door, rods extending lengthwise of the car and supported and guided by the hangers, movable locking devices connected with the rods and coöperating with the hangers to lock the doors in the closed position, and means for operating the rods whereby the door may be released and locked at either of its hinged edges.

4. In a car, the combination of two doors arranged to close openings in the car bottom on opposite sides of its longitudinal center, the said doors being both hinged at their opposite longitudinal edges, hangers mounted on the car adjacent both hinged edges of both doors, movable locking devices coöperating with the hangers to lock the doors in the closed position, rods supported and guided by the hangers and connected in operative relation with the movable locking devices, and means for actuating the rods whereby the doors may be released or locked at either edge.

5. In a dumping car, a hinged door forming a part of the car bottom, a crank shaft for closing the door, an operating shaft, an inclined counter-shaft, a gearing connection between the counter-shaft and the two other shafts, a brake wheel on the counter-shaft, a rock shaft having a crank, a brake strap engaging the brake wheel and connected with the crank of the rock shaft, and means for operating the rock shaft for applying the brake.

[Claims 6 to 8 not printed in the Gazette.]

897,464. REFLECTOR. GEORGE H. HERRNECKER, Hornell, N. Y. Filed Nov. 25, 1907. Serial No. 403,730.



1. A reflector for the purpose set forth comprising a regulatable cut-off, a body portion provided with an interiorly arranged reflecting member, a regulatable cut-off exteriorly of and at one terminus of the body portion and means whereby said body portion and cut-off can be maintained in proximity to a source of light.

2. A reflector for the purpose set forth comprising a body portion having an interiorly arranged reflecting member and terminating at one end in a flange, a cut-off, and means for pivotally and adjustably connecting the cut-off to said flange, said cut-off when in closing position arranged at one end of the body portion.

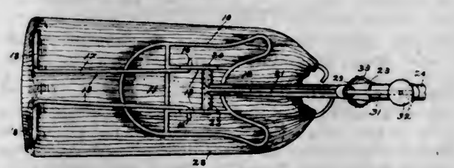
3. A reflector for the purpose set forth comprising a body portion, a reflecting member supported therein, means extending through the body portion to prevent shifting of said member, a cut-off, and means for pivotally and adjustably connecting the cut-off with the body portion at one terminus thereof.

4. A reflector for the purpose set forth comprising a body portion, a reflecting member secured therein, a cut-off, and means for pivotally and adjustably connecting the cut-off with the inner terminus of the body portion, said cut-off arranged exteriorly of the inner terminus of the body portion.

5. A reflector for the purpose set forth comprising a flanged body portion, a reflecting member secured therein, means extending through the flange whereby said body portion can be maintained in close proximity to a source of light, a cut-off provided with a handle, and a pivotal connection between said handle and said flange.

[Claims 6 to 11 not printed in the Gazette.]

897,465. COMBINED MOP AND WRINGER THEREFOR. EDWARD HILKER, Chicago, Ill. Filed May 2, 1906. Serial No. 314,738.



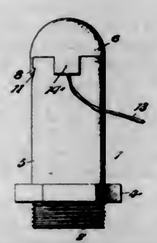
1. In a combined mop and wringer, the combination with the body or holder, of a mop-holding-arm detachably

and pivotally connected therewith and adapted to rest on the upper surface thereof and to be restricted in its downward movement thereby, a handle extension pivotally mounted on the body, a shaft journaled near the handle, a mop secured at one of its ends to the front portion of the mop-holding-arm and at its other end to said shaft, and means to rotate the shaft, substantially as described.

2. In a combined mop and wringer, the combination with the body or holder, of a handle extension pivotally connected thereto at its lower end and having in its upper end a socket, a handle fitted in said socket, a mop-holding-arm detachably and movably connected to the body and adapted to rest on the upper surface thereof and to be restricted in its downward movement thereby, a shaft journaled on the upper portion of the handle extension, a mop secured at one of its ends to the front portion of the mop-holding-arm and at its other end to said shaft, and means to rotate the shaft, substantially as described.

3. In a combined mop and wringer, the combination with the body or holder having an inwardly curved portion in its rear part and longitudinally extending and spaced apart and apertured portions projecting upwardly from the body, of a handle extension pivotally mounted on said longitudinal portions, a mop-holding-arm detachably and pivotally connected at its rear portion to the apertured portions of the holder, said arm adapted to rest on the upper surface of the holder and to be restricted in its downward movement thereby, a shaft journaled near the handle, a mop secured at one of its ends to the front portion of the mop-holding-arm and at its other end to said shaft, and means to rotate the shaft, substantially as described.

897,466. SPARK-PLUG GUARD. ROBERT S. KEARNEY, New York, N. Y. Filed Apr. 9, 1907. Serial No. 367,146.

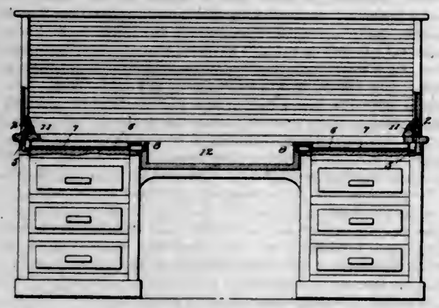


1. A guard for spark plugs comprising a cylindrical shell open at both ends and adapted to slip over the spark plug and inclose the same, one end of the shell being secured to the base of the spark plug while the opposite end is provided with a notch, a removable cap normally closing the notched end of the shell, and a hood carried by the cap and projecting over the said notch.

2. A guard for spark plugs comprising a cylindrical shell open at both ends and adapted to slip over the spark plug and inclose the same, one end of the shell being detachably secured to the base of the spark plug while the opposite end is provided with a notch, a cap hinged to the notched end of the cylindrical shell, a catch for holding the cap normally in a closed position, and a pendent hood carried by the cap and projecting over the notch.

897,467. DESK-LOCK. WILLIAM J. KENNEDY, Somerville, Mass., assignor to Derby Desk Company, Somerville, Mass., a Corporation of Maine. Filed Apr. 3, 1908. Serial No. 424,863.

1. In a roll-top desk, the combination of a roll top, a latch or bolt situated to engage the roll top at the side thereof and situated above the desk top and contiguous thereto at the front thereof, an opening and closing member of the desk situated below the desk top, and a latch or bolt operating means adapted to be moved by said opening and closing member and extending horizontally therefrom at the front of the desk and beneath the upper surface of the desk top to the latch or bolt.



2. In a roll-top desk, the combination of a roll top, tracks for the side edges of said top, a latch or bolt situated in one of the tracks to interlock with the track-engaging portion of the roll top, yieldingly held in interlocking engagement, an opening and closing member of the desk, and means interposed between said member and the latch or bolt that positively moves the bolt or latch to unlocking position when said opening and closing member of the desk is moved to an open position, said means permitting movement of said member to closed position independently of the position of the latch or bolt.

3. In a roll top desk, the combination of a roll top, tracks engaged by the edges thereof, a spring actuated latch or bolt situated in one of the tracks and normally tending to locking position, a drawer having a surface inclined with reference to the direction of movement of the drawer, and a bar adapted to engage said inclined surface and connected with the latch or bolt.

4. In a lock for roll top desks, the combination of a spring catch located in the track of the roll top, and having a lever with a downward extension through the desk top, a rod below the desk top to actuate said lever extension, and a cam in a drawer below the desk top to actuate said rod.

5. In a lock for roll top desks, the combination of a spring catch located in the track of the roll top with a lever extension therefrom, a keeper on the lower end of the roll top to coöperate with the said spring catch, a rod below the desk top to actuate the said lever extension, and a cam in a drawer below the desk top to actuate said rod.

[Claim 6 not printed in the Gazette.]

897,468. BRIDGE FOR EYEGLASSES. STEPHEN C. LAFLIN, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Corporation of Massachusetts. Filed May 6, 1907. Serial No. 371,962.



1. In combination with an eyeglass strap provided with an opening in its central member and with a transverse recess located in the outer surface of said member and leading to said opening, a bridge bar the end portion of which is seated in said recess and provided with a lug within said opening.

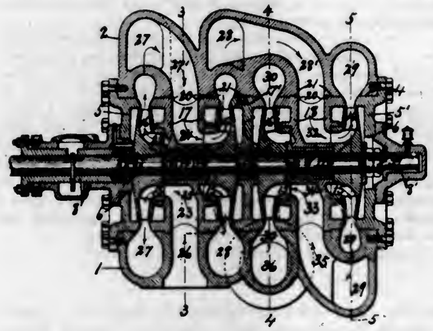
2. In combination with an eyeglass strap provided with an opening at one side of its central member and with a recess in its outer surface, leading to said opening, a bridge bar the end portion of which is located in said recess flush with the outer surface of the strap and provided with a fastening lug within said opening.

3. In combination with an eyeglass strap having a recess extending in the outer surface of its central member toward one of its end members and an opening with which said recess communicates, a bridge bar the end portion of which is located in said recess and provided with a lug located within said opening and riveted or swaged against the inner surface of the strap.

4. In combination with an eyeglass-strap provided with a recess extending in the outer surface of its central member toward one of its end members, a bridge bar, the end portion of which is seated in said recess.

5. In combination with an eyeglass-strap whose central member is provided in its outer surface with a transverse recess extending to the edge of said member, a bridge bar, the end portion of which is seated in said recess.

897,469. HIGH-LIFT CENTRIFUGAL PUMP. CARL LAGER, Baldwinsville, N. Y. Filed June 7, 1904. Serial No. 211,450.



In a multistage centrifugal pump, a casing having impeller chambers and annular delivery passages, and an inlet between the delivery passages, impellers in said chambers having their inlets facing each other, a diaphragm separating said chambers and having separate passages, one connecting the casing inlet to one of the impeller inlets, and the other connecting the delivery of the last mentioned impeller with the inlet of the other impeller.

897,470. SAFETY-CATCH FOR JEWELRY. EMILE LIEBERT, Los Angeles, Cal., assignor, by mesne assignments, to Crouch Manufacturing Jewelry Company, a Corporation of California. Filed June 20, 1907. Serial No. 379,991. (Model.)

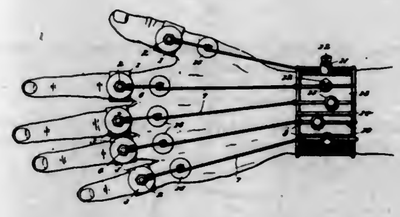


1. A brooch comprising a body; a securing pin secured to, at or near one end of said body; a bifurcated bearing secured near the other end of said body, the furcations extending transversely the body; a bonnet pivotally mounted in said bearings to swing longitudinally the body; and a skirt secured to the lower part of said bonnet, said skirt projecting toward the junction of the securing pin and body.

2. In a brooch or like device a safety catch comprising a bonnet pivotally secured in bearings secured to the body, said catch being mounted to swing longitudinally the securing pin and having a skirt projecting in front of the part which secures the bonnet in its bearings, said skirt being above the body.

3. In a brooch or like device, a safety catch comprising a bonnet pivotally secured in bearings secured to the body, said catch being mounted to swing longitudinally the body, and having a skirt projecting in front of the pivot which secures the bonnet to its bearings, said bearings extending upwardly to the height of the bonnet, and a portion extending in front of the pivot securing the bonnet, said bonnet having the rear portion closed and slightly heavier than the front portion.

897,471. FINGER-DEVELOPING APPLIANCE. FERNANDO LOYOLA, Queretaro, Mexico. Filed Mar. 28, 1908. Serial No. 423,972.



1. An appliance of the character described, comprising a series of rings adapted to be slipped over the fingers and thumb, weights detachably secured to said finger rings, connecting arms embodying articulate sections of which the forward one has a vertically swinging connection with the rear one, said forward sections being secured to the rings and of which the rear sections have a laterally swinging connection with the wrist band, and a wrist band to which said rear sections are secured.

2. An appliance of the character described, comprising a wrist band, a series of finger rings, said rings being provided with stems, apertured disks adapted to be slipped upon said stems, means for holding said disks in place, articulate arms connected at one end to said stems, and an adjustable connection between said arms and the wrist band.

3. An appliance of the character described, comprising a wrist band, a series of finger rings, said rings being provided with stems, apertured disks adapted to be slipped upon said stems, articulate arms connected to the respective stems, rods having a jointed connection with the rear ends of said arms, and posts secured to said wrist band and arranged for adjustable connection with said rods.

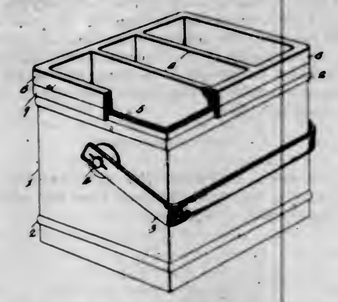
4. An appliance of the character described, comprising a wrist band, a series of finger rings, said rings being provided with stems, disks adapted to be slipped upon said stems, means for holding said disks in place, loops mounted upon said stems, articulate arms having a vertically movable connection with said loops, said arms being constructed in vertically movable sections, rods with which the rear ends of said arms have a laterally movable connection, and means for adjustably holding said rods to the wrist band.

5. A device of the character described, comprising a wrist band, a series of finger rings, articulate sectional arms connected at one end to the wrist band and at their other ends to the finger rings respectively, and pads secured to said arms at the jointed connection between the sections thereof.

897,472. JAR FOR STORAGE BATTERIES. JOSEPH MARX, Buffalo, N. Y. Filed July 19, 1907. Serial No. 384,580.

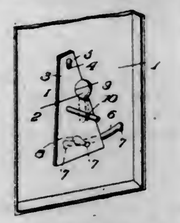
In a jar for storage batteries, the combination of an outer shell, an inner shell formed of hard rubber and fitting within the outer shell, the said inner shell being provided at its mouth with an enlarged annular rim also

formed of hard rubber and extending over and resting upon the edge of the outer shell, and a lip of soft rubber pend-



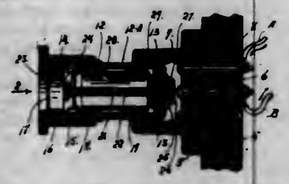
ent from the enlarged rim and overlapping the edge of the outer shell upon the exterior thereof.

897,473. KEYHOLE-GUARD AND KEY-LOCK. EDWARD L. MEDLER, Albuquerque, N. Mex. Filed May 2, 1906. Serial No. 314,888.



The combination with a door escutcheon provided with the usual key-hole opening, and a plate pivotally mounted on the inner side of said escutcheon to swing parallel with the face thereof, and formed with an edge recess in alinement with the bit receiving portion of the key-hole opening, means for holding said plate in the following positions, to wit, with the wall of its recess in position to engage a key inserted in the key-hole, or in such a position that the solid portion back of said recess will entirely close said key-hole, and an arm secured to and projecting perpendicularly from the plate in transverse alinement with the bit-receiving portion of the key-hole opening and back of the recess, as and for the purpose set forth.

897,474. INDICATING FUSE PLUG AND HOLDER. CLAUDE E. MENTZER, Denver, Colo., assignor of one-third to Leon A. Freeman and one-third to George L. Bettcher, Denver, Colo. Filed Feb. 19, 1906. Serial No. 301,813.



1. In a fuse cartridge and holder, the combination of a cartridge provided with a fuse, an indicating device released by the burning of the fuse, a holder inclosing the cartridge and provided with a transparent member located in front of the indicating device, and means for causing the said device to move to facilitate detection of the burned fuse.

2. A fuse cartridge provided with a fuse and a slender device passing through the fuse and connected with an indicating device, and a coil spring adapted to act on the indicating device to move the same when the fuse is burned or blown.

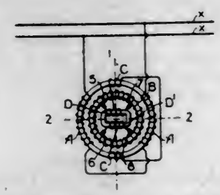
3. A fuse cartridge composed of conducting end members, an insulating member connecting the conducting members, a fuse inclosed by the cartridge member and connecting the two end members, a wire passing through the fuse and made fast at one of the end members of the cartridge, the outer extremity of the wire passing loosely through the other end member, an indicating device connected with the outer extremity of the wire beyond the end member of the cartridge, and a coil spring interposed between the end member of the cartridge and the indicating device for the purpose set forth.

4. A fuse cartridge provided with a fuse, a spring-actuated indicating device held against movement when the fuse is intact but released and actuated by the spring when the fuse is burned, a shell inclosing the cartridge, and a cap applied to the outer extremity of the shell and having a transparent diaphragm located at some distance from the indicating device to allow the latter to move sufficiently for visual indication.

5. The combination of a fuse cartridge provided with a fuse, a spring-actuated indicating device normally held against movement but released to be actuated by the spring when the fuse is burned, the indicating device being located at the outer extremity of the fuse cartridge, a casing inclosing the fuse cartridge, a cap applied to the outer extremity of the casing, a ring interposed between the cap and the outer extremity of the cartridge, and a transparent diaphragm located between the ring and the outer extremity of the cap, the construction being such that a chamber is left between the transparent diaphragm and the indicating device for the purpose set forth.

[Claims 6 to 12 not printed in the Gazette.]

897,475. ALTERNATING-CURRENT MOTOR. MAURICE MILCH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 12, 1903, Serial No. 176,606. Renewed Oct. 5, 1907. Serial No. 396,024.



1. In an alternating-current motor, a primary member provided with a winding distributed over a portion only of the said member, a secondary member provided with a winding connected to the segments of a commutator, short-circuiting brushes on said commutator arranged to maintain in local closed circuits those portions of the said secondary winding that are adjacent to the primary field winding, and means for producing an auxiliary field displaced from the field due to the primary winding.

2. In an alternating-current motor, a primary member provided with a winding distributed over a portion only of the said member, a secondary member provided with a winding connected to the segments of a commutator, short-circuiting brushes on said commutator arranged to maintain in local closed circuits those portions of the said secondary winding that are adjacent to the primary field winding, and means for producing an auxiliary field along a line substantially at right angles to the line of the primary field.

3. In an alternating-current motor, a primary member provided with a winding distributed over a portion only of the said member, a secondary member provided with a winding connected to the segments of a commutator, short-circuiting brushes on said commutator arranged to maintain in local closed circuits those portions of the said secondary winding that are adjacent to the main exciting winding, and an auxiliary field winding included in the local closed circuits.

4. In an alternating-current motor, a primary member provided with a winding distributed over a portion only of the said member, a secondary member provided with a winding connected to the segments of a commutator, short-circuiting brushes on said commutator arranged to maintain in local closed circuits those portions of the said secondary winding that are adjacent to the main exciting winding, and an auxiliary field winding included in said local closed circuits, the said winding being arranged to produce a magnetization along a line substantially at right angles to the line of magnetization of the primary winding.

5. In an alternating current motor, a primary member provided with a winding distributed over a portion only of the said member, a secondary member provided with a winding connected to the segments of a commutator, short-circuiting brushes on said commutator, a choke coil to the windings of which the said brushes are connected, and an auxiliary field winding connected to middle points in the choke coil winding.

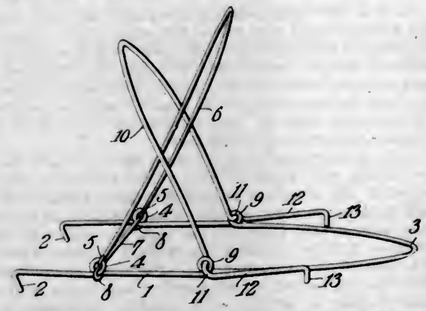
[Claims 6 to 17 not printed in the Gazette.]

897,476. CLASP FOR OVERSHOES. RALPH L. MILLIKEN, Stanford University, Cal. Filed Dec. 4, 1907. Serial No. 405,093.



The herein-described clasp consisting of a strip doubled upon itself to form spaced spring arms, the ends of the strip being returned inwardly with their extremities normally in engagement with each other and forming inwardly facing jaws, said jaws being normally spaced from each other except at such extremities and being crimped towards each other at corresponding points intermediate of their ends, as and for the purpose set forth.

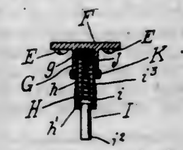
897,477. KETTLE-TILTER. ELYSA MOUSSEAU, Green Bay, Wis. Filed Apr. 20, 1908. Serial No. 428,205.



1. A kettle lifting and tilting device comprising a main bail shaped frame adapted to lie across and extend beyond the edge of a kettle top, the ends of the frame terminating in kettle engaging hooks, and intermediate portions of both legs of the frame being bent to form eyes, and a pair of bails pivotally connected to said eyes and arranged to cross each other to form a clamp for the handle of the kettle, the end portions of one of said bails being extended and terminating in kettle rim engaging hooks.

2. A kettle lifting and tilting device comprising a main bail shaped frame arranged to extend across the top of a kettle and provided with terminal hooks for engaging the kettle rim, intermediate portions of both legs of the frame being bent to form eyes, a cross brace connecting two of the eyes near the open end of the frame, and a pair of kettle handle engaging bails pivoted to said eyes and arranged to cross each other, one of said bails having its ends rearwardly extended and terminating in kettle rim engaging hooks.

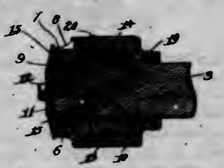
897,478. ANTIRATTLING DEVICE. ALBERT S. NEWTON, Providence, R. I. Filed Mar. 18, 1908. Serial No. 421,859.



1. In a device of the type set forth, the combination with a socket, of a bearing pin, a spring in the socket pressing against the bearing pin, a sleeve engaging the pin adjustably connected with the socket, and means upon the sleeve coöperating with the socket for locking the sleeve in adjusted position.

2. In a device of the type set forth, the combination with a socket provided with threads, of a bearing pin, a spring in the socket pressing against the bearing pin, a sleeve engaging the pin provided with threads adapted to engage the threads of the socket, and a lock nut also engaging the threads of the sleeve and abutting against the socket.

897,479. SOLE-EDGE TRIMMER. JOSEPH NICKERSON, Athol, Mass. Filed May 1, 1905. Serial No. 258,185.



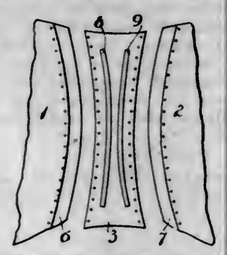
1. In an edge trimmer, the combination with a shaft of a cutter thereon having radially-extending teeth, a hub secured to the shaft back of the cutter and provided with an axial chamber, a cylindrical guard bushing received within said chamber, and means to detachably secure said bushing to the hub, said bushing being of less diameter than the toothed portion of the cutter and having guard fingers located between the teeth of the cutter and extending beyond the hub and substantially the full width of the cutter.

2. In an edge trimmer, the combination with a shaft of an axially-chambered hub fast thereon, a cutter mounted on the shaft situated closely adjacent to the hub, and a bushing having one end received within said chamber of the hub and having at the other end guard fingers extending between the teeth of the cutter and substantially to the front face thereof and means to rigidly but detachably secure the bushing to the hub, the diameter of the toothed portion of the bushing being slightly less than the diameter of the toothed portion of the cutter.

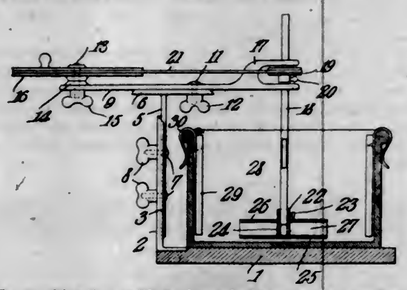
897,480. CORSET. CHAUNCEY L. OLMSTEAD, West Brookfield, Mass., assignor to Olmstead Qunbong Corset Company, West Brookfield, Mass., a Corporation of Massachusetts. Filed Dec. 21, 1907. Serial No. 407,501.

In a corset or similar article, two independent side members, a single intermediate back member dependently con-

nected to said side members and having free upper and lower ends, said back member being of less width at an intermediate point than at the ends, flexible reinforcements for said intermediate member extending lengthwise thereof but terminating short of the upper and lower ends, a projecting flap carried by each side member extending toward said intermediate member, and lacings overlying said flaps and adjustably connecting said side members with said intermediate member.

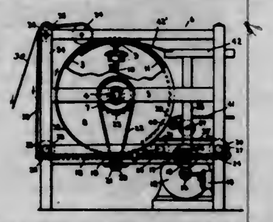


897,481. CHURN. WILLIAM C. PEASE, Marietta, Ohio, assignor of one-half to Lloyd V. Rood, Marietta, Ohio. Filed Nov. 12, 1907. Serial No. 401,885.



In combination with a churn body, a dasher mechanism comprising a hollow shaft journaled for rotation, a hollow hub adapted to receive the end of the shaft, an imperforated plate closing the lower end of the hub and projecting laterally beyond the same, a perforated plate attached to the upper part of the hub and lying parallel with the first said plate, said hub being provided with laterally disposed perforations which are located between said plates at points below the plane occupied by the upper plate, said plates being of such diameter with relation to the churn body that sufficient space intervenes between the sides of the body and the edges of the plate to permit the contents of the body to describe substantially vertical orbits during the process of churning.

897,482. BLUE-PRINTING MACHINE. JAMES C. PERHAM, Glenville township, Schenectady county, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 12, 1903. Serial No. 156,794.



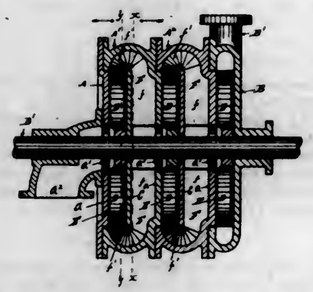
1. In a blue-printing machine, a rotatable cylinder of transparent or translucent material, a source of illumination mounted within said cylinder, means for driving said cylinder at any desired rate of speed, means for maintaining a strip of sensitized paper in contact with the outer surface of said cylinder, and mechanism for moving said paper-maintaining means through the machine at a speed corresponding to the peripheral speed of said cylinder.

2. In a blue-printing machine, a cylinder of transparent or translucent material, a source of illumination mounted within said cylinder, means for driving said cylinder at any desired rate of speed, an endless belt of flexible material for maintaining a strip of sensitized paper in contact with the outer surface of said cylinder, and mechanism for moving said belt through the machine at a speed corresponding to the peripheral speed of said cylinder.

3. In a blue-printing machine, a rotatable cylinder of transparent or translucent material, an endless belt adapted to maintain a strip of sensitized paper in contact with the surface of said cylinder, means for driving said cylinder, separate mechanism whereby said belt is moved at a speed corresponding to the peripheral speed of said cylinder, and means for adjusting the tension of said endless belt.

4. In a blue-printing machine, a cylinder of transparent or translucent material rotatably mounted on its longitudinal axis, means for driving said cylinder, means for maintaining a strip of sensitized paper and a tracing tightly against the outer surface of said cylinder during part of a revolution, and flexible fingers for automatically removing the tracing and the paper from the surface of said cylinder after the paper has been subjected to the rays of light.

897,483. CENTRIFUGAL PUMP. JOHN G. PFADT, Erie, Pa., assignor to William B. Flickinger, Frank W. Grant, and John G. Pfadt, trustees, Erie, Pa. Filed Feb. 23, 1905. Serial No. 246,936.

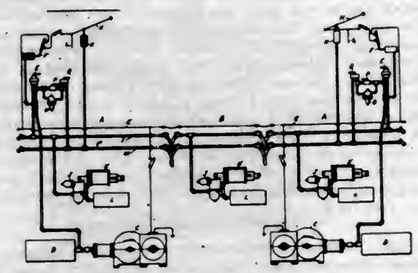


1. In a centrifugal pump, a pump shell having a chamber with a central inlet at one end and a central outlet at the other, a disk forming a radial wall in said chamber, an impeller between said radial wall and the inlet end of said chamber, and deflector plates in said chamber extending over the periphery of the impeller and the periphery of the radial wall, on lines diagonal to the axis of the impeller, substantially as set forth.

2. In a centrifugal pump, a pump shell having a chamber therein with a central inlet at one end and a central outlet at the other end, a disk forming a radial wall in said chamber, an impeller between said radial wall and the inlet end of said chamber, and deflector plates in said chamber, portions of which are inclined to lines radial to the axis of the impeller, and extending longitudinally over the peripheries of the impeller and radial wall on lines diagonal to the axis of the impeller, substantially as set forth.

3. In a multiple stage centrifugal pump, a pump shell having two or more chambers therein, a disk forming a radial wall in each of said chambers, an impeller between the radial wall and the inlet end of each chamber, and deflector plates in each chamber, extending over the peripheries of the impellers and radial walls therein, substantially as set forth.

897,484. PNEUMATIC CONTROL SYSTEM. PHILIPP PROBA, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Apr. 19, 1907. Serial No. 369,045.



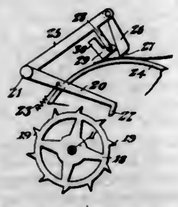
1. In a train of motor-driven cars, in combination with an air-brake system having main reservoirs on a plurality of cars, a reservoir-pipe for equalizing the pressures in the several reservoirs, contact devices in the motor circuits, and pneumatically-operated actuating means therefor connected to said reservoir-pipe.

2. In a train of motor-driven cars, in combination with an air-brake system having main reservoirs on a plurality of cars, a reservoir-pipe for equalizing the pressures in the several reservoirs, a manually-operated valve controlling the pressure in said reservoir-pipe, contact devices in the motor circuits, and actuating means therefor responsive to variations of pressure in the reservoir pipe.

3. In a train of motor-driven cars, in combination with an air-brake system having main reservoirs on a plurality of cars, a reservoir-pipe for equalizing the pressures in the several reservoirs, a manully-operated valve controlling the pressure in said reservoir-pipe, automatic valves adapted to disconnect the reservoirs from the reservoir-pipe upon a predetermined fall of pressure in said pipe, contact devices in the motor circuits, and actuating means therefor responsive to variations of pressure in said reservoir-pipe.

4. In a train of motor-driven cars, in combination with an air-brake system having main reservoirs on the several cars, a reservoir-pipe for equalizing the pressures in the several reservoirs, a manually-operated valve controlling the pressure in said reservoir-pipe, automatic valves adapted to disconnect the reservoirs from the reservoir-pipe upon a predetermined fall of pressure in said pipe, manually-controlled by-passes for said automatic valves, contact devices in the motor circuits, and actuating means therefor responsive to variations of pressure in said reservoir-pipe.

897,485. COUNTING AND CANCELING APPARATUS. ARCHIBALD PICKEN, Norfolk, Va. Filed Apr. 17, 1906. Serial No. 312,173.



1. In a machine of the character set forth, the combination with a register, of operating means therefor, a brake for preventing the actuation of the register by the operating means, and means controlled by an article to be registered for moving the brake to permit the operating means to actuate the register.

2. In a machine of the character set forth, the combination with a register, of operating means therefor, a brake for holding the register against movement, and means operated by an article to be registered for moving the brake to an inoperative position with respect to said register.

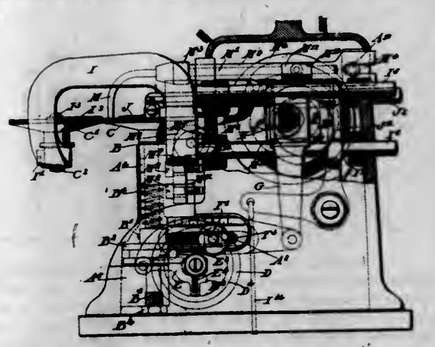
3. In a machine of the character set forth, the combination with a register, of operating means therefor, a brake wheel movable with the register, a brake movable into and out of coaction with the wheel, and means controlled by the article to be registered for moving the brake.

4. In a machine of the character set forth, the combination with a register, of operating means therefor, a toothed brake wheel movable with the register, a brake latch movable into and out of coaction with the teeth of the wheel, and means controlled by the article to be registered for moving the latch out of coaction with the teeth of the wheel.

5. In a machine of the character set forth, the combination with a register, of means for operating the register, a toothed brake wheel connected to the register, swinging brake arm having a tooth movable into and out of coaction with the teeth of the wheel, and means actuated by the article to be registered and connected to the arm for swinging the same.

[Claims 6 to 31 not printed in the Gazette.]

897,486. OVERSEAMING SEWING-MACHINE. RAYMOND L. PLUMLEY, Wilmington, Del., assignor to Frederick Osann Company, New York, N. Y., a Corporation of New York. Filed July 18, 1907. Serial No. 384,329.



1. In a sewing machine for overseaming having a reciprocating needle and a looper, a looper supporting member, means for reciprocating the said member in a direction substantially parallel to the movement of the needle, a stationary support, a link connection between said support and the looper supporting member for causing a rising and falling movement of the latter as it is reciprocated, and means for adjusting the link connection to vary said rising and falling movement.

2. In a sewing machine for overseaming having a main frame, a reciprocating needle and a looper, a looper supporting member, means for reciprocating said member in a direction substantially parallel to the movement of the needle, a support adjustably secured to the main frame and a link connection between the support and the looper supporting member for giving a rising and falling movement to the latter as it is reciprocated.

3. In a sewing machine for overseaming having a main frame, a reciprocating needle and a looper, a looper supporting member, means for reciprocating said member in a direction substantially parallel to the movement of the needle, a support secured to the main frame and adjustable with respect thereto in two directions, and a link connection between the support and the looper supporting member for giving a rising and falling movement to the latter as it is reciprocated.

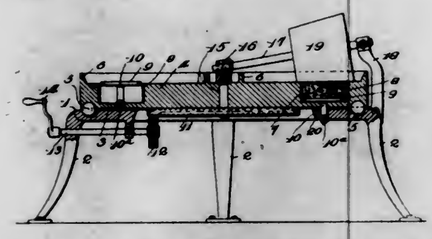
4. In a sewing machine for overseaming having a main frame, a reciprocating needle, a looper bar, and a looper

supporting member in which said looper bar is journaled, a pin and slot sliding connection between the rear end of the looper supporting member and the main frame, and a link connection between the main frame and the forward end of the looper supporting member, said link connection comprising a support secured to said main frame and adjustable with respect thereto in a direction parallel to the line of movement of the needle and also in a direction toward and away from the line of movement of the needle, and a link pivotally connected at one end to said support and at the other end to said supporting member, and means for giving said looper supporting member a reciprocatory movement relative to said main frame.

5. In a sewing machine for overseaming having a main frame, a reciprocating needle and a looper, a looper supporting member, means for reciprocating said member in a direction substantially parallel to the line of movement of the needle, a sliding connection between the rear end of the supporting member and said main frame, a support secured to the main frame, a link connection between the support and the forward end of the looper supporting member for giving a rising and falling movement to the latter as it is reciprocated, and means for adjusting said support relative to the main frame in a direction substantially parallel to the line of movement of the needle.

[Claims 6 to 17 not printed in the Gazette.]

897,487. MACHINE FOR MOLDING BUTTER. CHARLES H. PRESCOTT, East Liverpool, Ohio, assignor of one-half to James E. Davis, East Liverpool, Ohio. Filed Dec. 4, 1907. Serial No. 405,055.

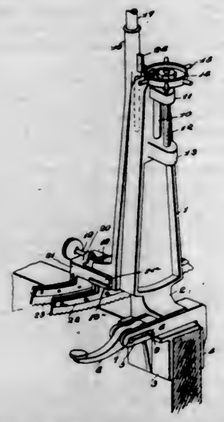


1. A machine of the character described, comprising a supporting framework embodying an annular bed with a centrally located opening extending therethrough, a mold carrier mounted to rotate on said bed, said carrier being provided with one or more cavities for the reception of butter, a shaft supported in the framework above the mold carrier, a roller mounted on said shaft and adapted to engage the outer surface of the mold carrier as it rotates underneath the roller, a circular rack secured to the bottom of the mold carrier within the central opening of the bed, and a driving shaft journaled underneath the bed and provided at its inner end with a pinion meshing with said rack.

2. A machine of the character described, comprising a framework embodying an annular bed having a centrally located opening extending therethrough, a mold carrier mounted to rotate on said bed and formed on its upper face with an inner and an outer rim, said mold carrier being provided with one or more mold cavities, pallets mounted in the mold cavities means for automatically raising the pallets, and permitting them to lower during the rotation of the mold carrier, a pin projecting upwardly through the center of the mold carrier and within the circle of the inner rim, a shaft bearing secured to the upper end of said pin, a bracket secured to and projecting upwardly from the framework, a shaft journaled in said bearing and said bracket, a roller mounted on said shaft and adapted to smooth the material in the mold cavities as the mold carrier rotates, a rack secured to said pin and lying against the lower face of the mold carrier within the opening of the bed, and a driving shaft journaled underneath the bed and provided at its inner end with a pinion meshing with the teeth of said rack.

3. A machine of the character described, comprising a supporting framework embodying an annular bed formed with a centrally located opening and an annular upwardly facing groove, a mold carrier provided with one or more mold cavities formed in its lower face with an annular groove, registering with the groove of the bed, friction balls interposed between the bed and mold carrier and adapted to travel in said grooves, whereby to mount the carrier for rotation on the bed, pallets mounted in the mold cavities, means for raising said pallets in the cavities and for permitting them to lower during the rotation of the carrier, a roller supported above the carrier and adapted to engage therewith for the purpose specified, a circular rack secured to the lower ends of the carrier within the opening of the bed, and a driving shaft journaled underneath the bed and having a driving connection with said rack.

897,488. SAWING APPARATUS. CHARLES H. PRESCOTT, East Liverpool, Ohio, assignor of one-half to James E. Davis, East Liverpool, Ohio. Filed Dec. 4, 1907. Serial No. 405,056.

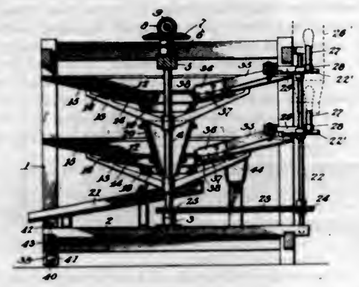


1. An apparatus of the character described, comprising a standard formed at its upper end with a longitudinally extending slot and in its rear side with a boss below the slot, a supporting arm mounted to move vertically in said slot, a saw-carrier mounted to oscillate on the front end thereof, a sawing device secured to said saw-carrier, a feed screw resting on said boss and working through the rear end of the arm, and a feed wheel secured to the upper end of said screw and provided with a series of radially extending tappets projecting from its periphery, the saw-carrier being provided above the standard with a rearwardly projecting dog arranged to strike said tappets, as and for the purpose set forth.

2. An apparatus of the character described, comprising a standard, provided at its lower end with a clamp, a saw-carrier embodying a shank mounted to oscillate on said standard, a relatively stationary saw clamp secured rigidly to the lower end of said shank, a relatively movable saw clamp mounted on the lower end of said shank and means for adjusting the last named clamp to and from the other clamp.

3. An apparatus of the character described, comprising a standard provided at its lower end with a clamping means, a saw carrier embodying a shank mounted to oscillate on said standard said shank being provided with an offset foot, said foot being formed at its side edges with grooved flanges, a relatively stationary saw clamp rigidly secured to said foot, an adjustable saw clamp provided with a fork embracing said foot, the members of the fork fitting in the grooved flanges of the foot, said last named clamp being also formed with a lug, and an adjusting screw working therethrough and extending into the said foot.

897,489. GRAIN AND SEED SEPARATOR. FAUSTIN PRINZ, Milwaukee, Wis. Filed June 24, 1907. Serial No. 380,604.



1. The grain and seed separator, comprising a concave pan the wall whereof inclines from its center upwardly, having its upper portion formed with a greater pitch than its lower portion and formed with a central discharge opening, the inclination of the wall being such that grain initially fed onto the upper portion thereof will be carried around in the rotation of the pan while portions thereof will move down the wall to the central discharge opening, means for initially feeding grain onto the upper portion of the wall, and means for rotating said pan, substantially as described.

2. The grain and seed separator, comprising a concave pan having a portion thereof between its inner and outer edges formed with a circumferentially extending opening, the portion of the wall of the pan above said opening having such inclination as to support grain deposited thereon and permit some of the grain to move from the upper onto the lower portion of the wall, means for deflecting through said opening a portion of the material fed onto the pan, and means for rotating said pan, substantially as described.

3. The grain and seed separator comprising the concave pan formed of inner and outer plates, the outer plate having a greater pitch than the inner plate and formed to support grain deposited thereon and permit a portion of it to move onto the inner plate, a circumferentially extending opening being formed between the two plates, means for deflecting through said opening a portion of the material fed onto the pan, and means for rotating the pan, substantially as described.

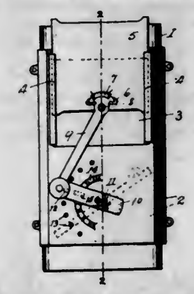
4. The grain and seed separator comprising a rotatable concave pan having a portion thereof between its inner and outer edges formed with a circumferentially extending opening for the discharge of material carried by the pan, the wall of the pan above said opening having such inclination as to support grain deposited thereon and permit a portion of it to move onto the wall below the opening, and a spout to receive material discharged through said opening, substantially as described.

5. The grain and seed separator comprising a concave rotatable pan having a central discharge opening, and a rotatable feed distributing plate for delivering material onto the inclined surface of said pan with an impetus directing it towards the center of the pan, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

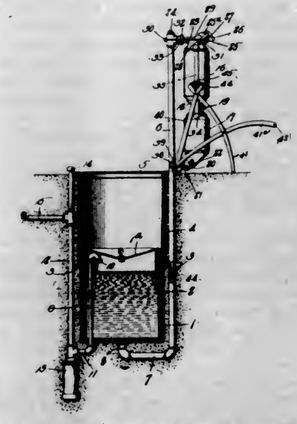
897,490. DAMPER-REGULATOR. HARRY REASER, Reading, Pa., assignor to Lewis Reaser, Reading, Pa. Filed Apr. 8, 1908. Serial No. 425,842.

A stove pipe having a rectangular face portion, an opening in said face portion, a guideway on either side of said opening, a gate sliding in said guideways, an arm pivotally attached to the outside of said gate and having a pivotal connection at its other end to a resilient damper-controlling rod, a revolving damper mounted on a shaft, said shaft being controlled in its movement by said damper-controlling rod, a segmental rack on the outside of said face portion, an auxiliary rack outside of said segmental



rack, and pawls on the under side of said damper-controlling rod for engaging said racks and locking the gate and damper in any position.

897,491. ACETYLENE-GAS APPARATUS. NILS A. RENSTROM, Omaha, Nebr., assignor of one-half to Edmund Thorp, Omaha, Nebr. Filed Apr. 30, 1906. Serial No. 314,505.



1. In an acetylene gas apparatus, the combination with a pit, of a gasometer within the pit, a piping connected to the bottom of the gasometer and extending above the top of the pit; and a portable generator provided with means for attaching it to the piping, said piping being adapted to hold the portable generator rigid with the gasometer.

2. An acetylene gas apparatus comprising a pit; a gasometer arranged within the pit; a generator mounted upon trunnions above the pit and adapted to be turned into and out of generating position; and a piping adapted to hold the generator in its generating position and rigid with the gasometer.

3. An acetylene gas apparatus comprising a pit; a gasometer within the pit; a rigid piping extending upwardly from the gasometer and above the top of the pit; a trunnioned generator movable to and from the rigid piping; and a coupling on said piping whereby the generator may be secured thereto.

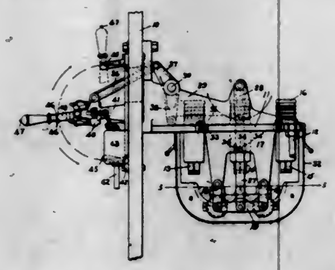
4. An acetylene gas apparatus comprising a pit; a gasometer arranged within the pit and provided with a rigid piping extending above the mouth of the pit; a portable reversible generator adapted to be connected with said rigid piping; and means for rigidly securing said generator to the piping.

5. The combination with the pit and the gasometer arranged within the pit; of a rigid piping connected to the gasometer and projecting above the pit; a support ar-

ranged above the pit; a generator journaled on the support to permit the filling and dumping of the generator; and means for coupling the generator to the rigid piping during the operation of the generator.

[Claims 6 to 11 not printed in the Gazette.]

897,492. ELECTRIC SWITCH. ORAN O. RIDER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 27, 1904. Serial No. 214,215.



1. A double throw electric switch biased to open when closed and having its open position between its two closed positions, an operating lever therefor, means for clutching said lever to the movable switch element so as to close the latter, and means for automatically freeing said element from said lever irrespective of the position of the lever.

2. A double throw electric switch biased to open when closed and having its open position between its two closed positions, an operating lever therefor, means for clutching said lever to the movable switch element so as to close the latter, and electrically actuated means responsive to predetermined electrical conditions in its circuit to free said element from said lever irrespective of the position of the lever.

3. An electric switch comprising a support, a movable switch element, an operating lever, a rocking member connected to said element, means for connecting said member to said lever, means for breaking said connection comprising contacting levers carried by said member and support respectively, and a coöperating trip coil also carried by said support and acting on one of said levers to transmit motion to the other.

4. The combination with a suitable support, of a movable switch element, an operating handle therefor, a movable member mounted adjacent to said handle and connected to said switch element, means for latching said member to said handle, a lever carried by said member for tripping said latch, a lever pivoted to said support and movable at all times into engagement with the aforesaid lever, and a tripping coil mounted on said support for actuating the latter lever.

5. In switch-operating mechanism, the combination of a pivoted operating lever, a member pivoted concentrically therewith, means for locking said member and lever together, a tripping lever carried by said member and having an end extending into the line of pivots of said lever and member, and means carried by a fixed member for engaging the end of said tripping lever to actuate it to trip said locking means.

[Claims 6 to 12 not printed in the Gazette.]

897,493. ARTIFICIAL MARBLE AND PROCESS OF MAKING THE SAME. AUGUST RIESCH, Munich, Germany. Filed Nov. 4, 1907. Serial No. 400,561.

1. A process of making artificial marble, consisting in mixing sawdust, a cement base, and mineral filling material together, then moistening this mixture with a solution of a haloid salt and mixing them so as to cause the mixture to cohere in granules, then coating the granules with a coloring material.

2. A process of making artificial marble, consisting in mixing sawdust, a cement base, and a mineral filling material together, then moistening this mixture with a solution of chlorid of magnesium and mixing them together so as to cause the mixture to cohere in granules, then sprinkling the granules with a dry mineral coloring matter.

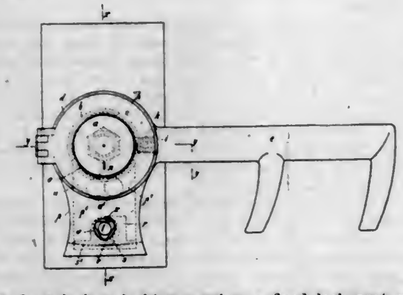
3. A process of making artificial marble, consisting in mixing sawdust, cement and mineral filling material together, then moistening this mixture with a solution of a haloid salt and mixing them together so as to cause the mixture to cohere in granules, then sprinkling the granules with magnesium oxid and a mineral filling material to give them a coating of color.

4. A process of making artificial marble, consisting in mixing powdered sawdust and a cement base together in a dry state, then adding to this mixture a solution of a haloid salt and stirring them together so as to cause the mixture to cohere in granules, and then coating the granules with a coloring matter.

5. A composition consisting of a body made of sawdust, cement and mineral filling material made to cohere in granules by mixing them with a solution of a haloid salt of magnesium, and a coating for the particles consisting of a coloring material made of magnesium oxid and a mineral filling material.

[Claim 6 not printed in the Gazette.]

897,494. SEAL-LOCK. SIEGFRIED SCHMIDL, Brünn, Austria-Hungary. Filed May 15, 1907. Serial No. 373,868.



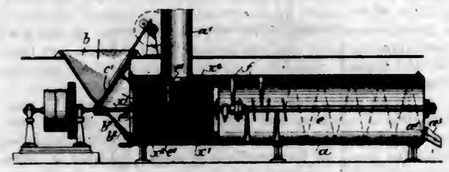
1. In a lock, a locking member, a fixed lock part with which said member movably engages and provided with a flange therearound and cut away at one portion, a cover for said lock part having a hook for rotatably engaging with the flange of said fixed lock part, and for entering and leaving the cut away portion of said flange and means for making a visible indication upon a disk when the cover is moved.

2. In a lock, a locking member, a fixed lock part to which the locking member is pivotally connected and provided with a flange therearound and cut away at one portion, a cover hinged to said locking member having a hook for rotatably engaging with the flange of said fixed lock part, and for entering and leaving the cut away portion of said flange, and means for making a visible indication upon a disk when the cover is moved.

3. In a lock, a locking member a fixed lock part with which the locking member has a pivotal engagement and provided with a flange therearound cut away at one portion, a cutting device on said fixed locking part, a cover hinged to said locking member for gripping a disk between the cover and the locking member and for forcing the same against the cutting device, and a hook upon the cover for rotatably engaging the aforesaid flange and for entering and leaving the cut away portion thereof.

897,495. APPARATUS FOR THE PRODUCTION OF HYDRATE OF LIME. WALTER SCHULTHESS, Paris, France. Filed Sept. 16, 1907. Serial No. 393,093.

1. In an apparatus of the character described, a stationary substantially horizontal slaking receptacle having a charging aperture in one end and a discharge aperture in the other end, a shaft extending longitudinally through the receptacle having a hollow perforated portion, a sieve adjacent the charging aperture and secured to the hollow perforated portion and rotating therewith, and transporting blades between the sieve and discharge aperture on the shaft.



2. An apparatus of the character described, comprising a fixed cylindrical slaking receptacle having a charging aperture at one end and a discharge aperture at the opposite end, a shaft extending longitudinally through the receptacle having a hollow perforated portion, a cylindrical sieve located opposite the charging aperture, a worm on the external periphery of the sieve, and transporting blades between the sieve and discharge aperture.

3. An apparatus of the character described, comprising a horizontally fixed cylindrical slaking receptacle having a charging aperture at one end and a discharge aperture at the opposite end, a hopper communicating with the charging aperture, a grid adjustably mounted in the hopper, a shaft extending longitudinally through the receptacle having a hollow perforated portion, a cylindrical sieve located opposite the charging aperture, and transporting blades on the shaft between the sieve and discharge aperture.

4. An apparatus of the character described, comprising a horizontally fixed cylindrical slaking receptacle having a charging aperture at one end and a discharge aperture at the opposite end, a hopper communicating with the charging aperture, a grid adjustably mounted in the hopper, a dust-conduit communicating with the receptacle, a shaft extending longitudinally through the receptacle having a hollow perforated portion, a cylindrical sieve located opposite the charging aperture, and transporting blades on the shaft between the sieve and discharge aperture.

5. An apparatus of the character described, comprising a cylindrical slaking receptacle having a charging aperture at one end and a discharge aperture at the opposite end, a shaft extending longitudinally through the receptacle having a hollow perforated portion, a cylindrical sieve located opposite the charging aperture, blades supporting the sieve, adapted to mix and transport the material in the latter and transporting blades on the shaft between the sieve and discharge aperture.

[Claims 6 to 8 not printed in the Gazette.]

897,496. NARROWED-KNITTED WEB, HOSIERY MADE THEREFROM, AND MODE OF MAKING SAME. ROBERT W. SCOTT, Leeds Point, N. J., assignor of one-half to Louis N. D. Williams, Ogontz, Pa. Filed June 5, 1906. Serial No. 320,268.

1. A shaped, tubular, seamless, machine-knit web having bordering wales in the shaped portion, and narrowing wales interknitted with said bordering wales and overlapping the same on the face of the web.

2. A machine-knit stocking having a seamless heel, and a seamless leg having a shaped calf portion with bordering wales and narrowing wales interknitted therewith.

3. A machine-knit stocking having seamless heel and toe pockets, and a seamless leg with shaped calf portion having bordering wales and narrowing wales interknitted therewith.

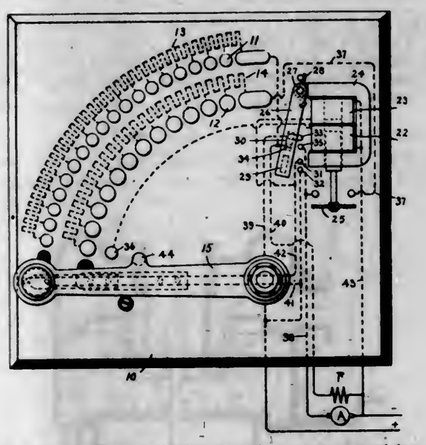
4. A machine-knit stocking having seamless heel and toe pockets, a seamless foot, and a seamless leg having shaped calf portion with bordering wales and narrowing wales interknitted therewith.



5. A machine-knit stocking having a seamless heel and a seamless foot having instep gussets with bordering wales and narrowing wales interknitted therewith.

[Claims 6 to 15 not printed in the Gazette.]

897,497. STARTING AND SPEED-REGULATING RHEOSTAT. FRANK J. SEABOLT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 25, 1908. Serial No. 412,539.



1. A controlling device for electric motors comprising a pair of resistances each provided with contacts, a controlling member simultaneously engaging said contacts, an electromagnetic device for closing the motor circuit through one of said resistances, and means controlled thereby for rendering said member ineffective to control one of said resistances when moved in one direction and the other of said resistances when moved in the opposite direction.

2. A motor-starting and speed-regulating rheostat comprising an armature resistance and a field resistance each provided with contacts, a controlling member simultaneously engaging said contacts, electrically-controlled means arranged to be energized upon the initial movement of said arm for closing the motor circuit through the armature resistance, and means controlled thereby for rendering said member ineffective to control of one of said resistances when moved in one direction and the other of said resistances when moved in the opposite direction.

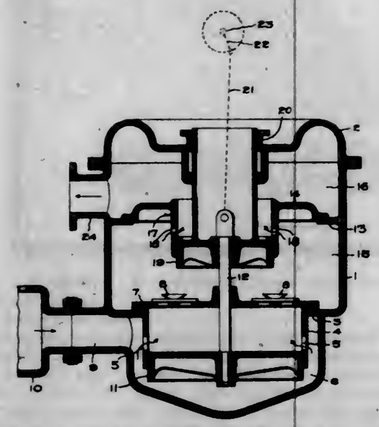
3. A motor-starting and speed-regulating rheostat comprising an armature resistance and a field resistance each provided with contacts, a controlling member simultaneously engaging said contacts, an electromagnetic device arranged to be energized upon the initial movement of said arm for closing the motor circuit through the armature resistance, means for short-circuiting the field resistance, and means controlled by said electromagnetic device for opening said short-circuit and simultaneously short-circuiting the armature resistance when the controlling arm reaches running position.

4. A controlling device for electric motors comprising a pair of resistances each provided with contacts, a controlling member simultaneously engaging said contacts, an electromagnetic device for closing the motor circuit through one of said resistances, a switch in connection with said member for controlling said electromagnetic device, and means controlled by said electromagnetic device for rendering said member ineffective to control one of said resistances when moved in one direction and the other of said resistances when moved in the other direction and simultaneously short-circuiting said switch.

5. A controlling device for electric motors comprising a pair of resistances each provided with contacts, a controlling member simultaneously engaging said contacts, an electromagnetic device for closing the motor circuit through one of said resistances upon the initial movement of said member, means for reducing the energy of said device from an actuating to a holding current, and means controlled by said device for rendering said member ineffective to control one of said resistances when moved in one direction and the other of said resistances when moved in the opposite direction.

[Claims 6 to 10 not printed in the Gazette.]

897,498. MULTISTAGE PUMP FOR PRODUCING A VACUUM OR COMPRESSING GASES. AUGUST SIEGEL, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Dec. 26, 1907. Serial No. 408,056.



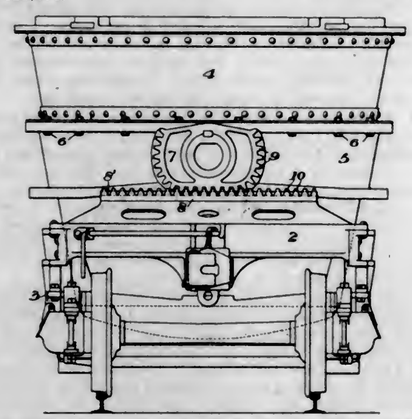
1. An apparatus of the character described, comprising a piston and cylinder, the latter containing an inlet port or slot controlled by the piston, an inlet for the cylinder, an outlet valve, a second piston and cylinder, the latter being provided with an inlet port controlled by the piston, a chamber which receives the fluid directly from the second cylinder, and is always in uninterrupted communication therewith, and an outlet.

2. An apparatus of the character described, comprising a piston and cylinder, the latter having a port controlled by the piston, a chamber communicating with the source of supply and the port, a valve-controlled outlet, a second piston and cylinder, the latter having an inlet port controlled by the piston, an intermediate chamber communicating with said valve-controlled outlet and the inlet port of the second cylinder, a discharge chamber in unrestricted communication with the second cylinder, and an outlet for the discharge chamber.

3. An apparatus of the character described, the combination of a casing, a ported cylinder supported therein and separated from the wall by a supply chamber, a partition which divides the casing into intermediate and discharge chambers, a ported cylinder supported by the partition, pistons which move in the cylinders and control the ports, a pressure-controlled valve between the space of the first mentioned cylinder and the intermediate chamber, an inlet for the supply chamber, and an outlet for the discharge chamber.

4. In an apparatus of the character described, the combination of a piston and cylinder, a port in the cylinder controlled by the piston, a supply chamber communicating with the port, an intermediate pressure chamber, a valve controlling the passage of fluid from the cylinder to the chamber and which is held on its seat by the pressure in the chamber so long as it is superior to that in the cylinder, a second piston and cylinder, a port for the latter controlled by the piston and communicating with the intermediate chamber, a discharge chamber in unrestricted communication with the second cylinder, and an outlet for the discharge chamber.

897,499. DUMPING-CAR. RICHARD H. STEVENS, Munhall, Pa., assignor of one-half to Per Torsten Berg, Stockholm, Sweden. Filed Feb. 13, 1908. Serial No. 415,674.

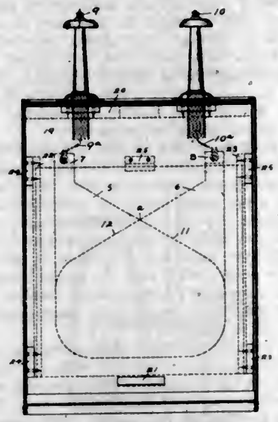


1. In a ladle car, a rolling and tipping ladle having supporting trunnions, gear wheels on said trunnions, a car frame having horizontally extending trunnion supports on which the trunnions roll in tipping the ladle, the contacting surface of the trunnion wheels and trunnion supports having meshed gear teeth, the teeth of the trunnion wheels in contact with the trunnion supports when the ladle is in its upright position being flattened to lower the horizontal axis of the trunnion; substantially as described.

2. In a ladle car, a rolling and tipping ladle having a supporting trunnion, gear wheels on said trunnions, a car frame having horizontally extending trunnion supports on which the trunnion wheels roll in tipping the ladle, the gear teeth on the trunnion wheels in mesh with the rack teeth on said trunnion supports being arranged to lower the axis of the trunnions when the ladle is in its central upright position; substantially as described.

3. A tilting car comprising a body portion having trunnions thereon, a car frame having trunnion-supports and coacting toothed surfaces on the trunnions and supports, the teeth in mesh when the car body is in its central position being arranged to lower the axis of the trunnions and maintain the car body in its vertically upright position; substantially as described.

897,500. CONDENSER. WILLIAM B. TAYLOR, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Jan. 5, 1907. Serial No. 350,905.



1. In a condenser, active plates of opposite polarity and terminal-projections or ears on said plates, each of said plates being cut away at points adjacent a terminal of opposite polarity.

2. In a condenser, a plurality of rectangular plates of opposite polarity and terminals on said plates, the terminals of opposite polarity being arranged on opposite sides of one of the axes of the plates, and each of the plates having a corner cut away diagonally adjacent a terminal of opposite polarity.

3. In a condenser, a plurality of rectangular plates of opposite polarity and terminals on said plates, the terminals of opposite polarity being arranged on opposite sides of one of the axes of the plates and each of said plates having its corners cut in a rounded fashion and the corner adjacent a terminal of opposite polarity cut away diagonally.

4. A condenser unit consisting of a pair of electrically-connected plates, an interposed plate of opposite polarity, a laminated body of dielectric material containing dead conducting layers arranged between said latter plate and each of the other plates, and terminals on said active plates, each of said active plates being cut away diagonally at points adjacent a terminal of opposite polarity.

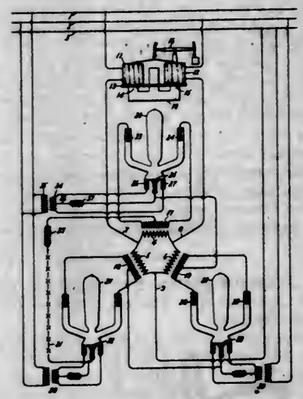
5. A condenser unit consisting of a pair of electrically-connected substantially rectangular plates, a similarly shaped interposed plate, laminated bodies of dielectric material separating said plates from each other, said bodies extending beyond the edges of said plates, and terminals consisting of ears on said plates extending beyond the said bodies, each of said plates having its corner cut away diagonally adjacent the ear on the plate of opposite polarity.

[Claim 6 not printed in the Gazette.]

897,501. SYSTEM OF ELECTRICAL DISTRIBUTION. MATTHEW O. TROY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 11, 1905, Serial No. 286,830. Renewed Feb. 24, 1908. Serial No. 417,393.

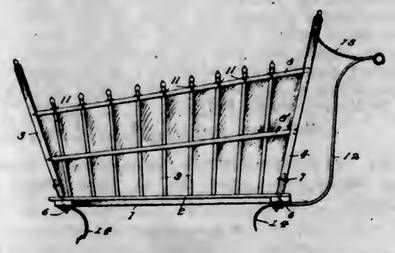
1. The combination of a source of multiphase, constant-potential, alternating current, constant potential transformer primary windings supplied with current from said source, a constant current regulator for the leads of said primary windings, secondary windings, a rectifier for each secondary winding, connections interlinking the rectifiers in series, and a consumption circuit traversed by the current flowing through said rectifiers.

2. The combination of a plurality of constant potential transformer primaries and secondaries, means for supplying a constant current to said primaries, rectifiers for said secondaries, each of said rectifiers having a plurality of positive electrodes and a single negative electrode, connections interlinking the rectified circuits in series, and a consumption circuit fed by the rectified current from said rectifiers.



3. The combination of a constant potential alternating current source, leads extending therefrom, a constant current regulator operatively related to said leads, transformer primaries supplied with current from said leads, secondaries operatively related to said primaries, each of said secondaries being provided with a neutral connection, a rectifier for each secondary having positive electrodes connected to the terminals of said secondary, and a negative electrode connected to the neutral wire of another secondary, and current consuming means connected between the neutral connection of one secondary and the negative electrode of one of the rectifiers.

897,502. TAKEAPART BABY-CARRIAGE. FRANK TURNER, Cleveland, Ohio. Filed Mar. 12, 1908. Serial No. 420,748.



1. A baby carriage including a base, supporting springs therefor, and a handle member, frame bars supported on the base, and single bolt connections uniting the frame bars and base, said bolts receiving the supporting springs and handle member.

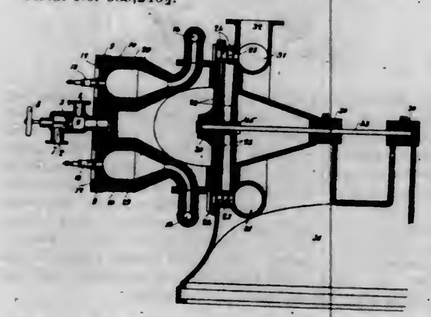
2. A baby carriage comprising a base, frame bars mounted on the base, bolts passing through the base and removably secured in the frame bars, supporting springs engaging said bolts beneath the base, a handle bar engaging said bolts beneath the base, and nuts coöperating with the bolts to secure the frame bars, supporting springs, and handle bar in position.

3. A baby carriage comprising a base, a frame structure supported thereon, said structure including loop form end bars, the terminals of each end bar being seated in the base, bolts passed through the base and seated within the terminals of the loop bars, and transverse bolts passed through the loop bars and base bolts.

4. A baby carriage comprising a base including an upper and a lower section, a carriage frame including loop form end bars, the terminals of each of said ends bars being inserted in openings formed in the upper section of the base and resting upon the upper surface of the lower section of the base, bolts passed through the lower section of the base and seating in the terminals of the end bars, and bolts passed transversely through said bars and through the base bolts.

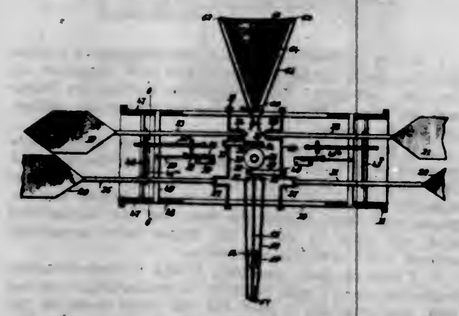
5. A baby carriage including a base, a frame supported thereon and including loop formed end bars having their terminals removably secured in the base, upright bars joining the end bars and base intermediate the terminal sections of said end bars, and side sections joining the alined terminal sections of the respective end bars, said side sections comprising longitudinal bars connected with the end bars, and uprights seated in openings in the base and passing through one of said longitudinal bars, and means for securing the uprights to the longitudinal bar.

897,503. GASEOUS-FLUID TURBINE. CARLO WEDEKIND, St. Jean-sur-Mer, France. Filed Oct. 16, 1906. Serial No. 339,240.



In a gaseous fluid turbine of the kind described, the combination of a charging apparatus, explosion chambers formed by a retort of refractory material communicating each directly with the charging apparatus, a water-jacket surrounding the explosion chambers, double concentric nozzles leading opposite the blades of the turbine, the inner one of which is connected with the water-jacket and the outside one with the explosion chambers, and secondary nozzles conveying steam from the water-jacket to the blades of the turbine, substantially as described and for the purpose set forth.

897,504. FLYING-MACHINE. ALEXANDER V. WILSON, Bar Harbor, Me. Filed Oct. 31, 1906. Serial No. 341,418.



1. An air-ship comprising a car or body portion, wings or blades extended outward from both sides of the body portion, means for causing lengthwise reciprocating motion of the blades, and means for causing oscillatory movements of the blades on both their inward and outward movements.

2. An air-ship comprising a body portion, wings or blades extended from opposite sides of the body portion, there being a pair of blades at each side, stems extended inward from the blades, crank shafts, with the cranks of which the stems have connection, the cranks of a shaft being so arranged as to impart alternate longitudinal movements to the blades of a pair, a motor for operating the crank shafts, and means for causing oscillatory movements of the wings or blades.

3. In an air-ship, a body portion, a crank shaft thereon, a wing or blade, a stem extended inward from the wing or blade and having connection with the crank of the crank shaft, a rod connected to the under side of the stem, said rod through a portion of its length being rectangular in cross section with its planes respectively horizontal and perpendicular, and another portion of said rod being triangular in cross section with its planes arranged at an angle to the planes of the first-named section, and a fulcrum plate having a rectangular perforation through which said rod is movable.

4. An air-ship comprising a body portion, a crank shaft thereon, a stem having connection with the crank of the crank shaft, a wing or blade on the outer end of the stem, a rod connected to the under side of the stem, the said rod having one portion of its length rectangular in cross section with the planes thereof horizontal and vertical, the other portion of the rod being also rectangular in cross section but having planes arranged at an acute angle with relation to the planes of the first-named section, a fulcrum plate having a rectangular opening through which said rod is movable, and means for adjusting said plate to change the fulcrum point.

5. An air-ship comprising a body portion, a pair of wings or blades extended outward from each side of the body portion, a crank shaft for each pair of blades, the cranks thereon being extended in opposite directions, stems extended inward from the wings or blades and connecting with the cranks, rods connected to the under sides of the stems, and adjusting fulcrums for said rods, said rods and fulcrums being so formed as to permit not only of the longitudinal movement of the stems but to impart a rocking or oscillatory movement thereto.

[Claim 6 not printed in the Gazette.]

897,505. STREET-CLEANER. RICHARD L. WORTHINGTON, Philadelphia, Pa. Filed Nov. 12, 1907. Serial No. 401,782.



1. In a street sweeper, the combination with a body mounted on wheels, of a shovel secured to said body, endless chains mounted over said shovel carrying rotary brushes and means for operating said chains and rotating said brushes simultaneously.

2. In a street sweeper, the combination with a body mounted on wheels, of a shovel secured to one end of the body, endless chains traveling over said shovel provided with a plurality of rotary brushes and means for rotating said brushes when traveling upwardly.

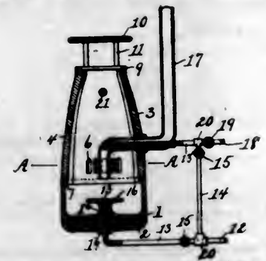
3. In a street sweeper, the combination with a body mounted on wheels, of a shovel secured to one end of said body, endless chains traveling over said shovel carrying rotary brushes provided with gears and a rack carried by the shovel adapted to be engaged by said gears for rotating said brushes for the purpose described.

4. A street sweeper comprising a wheeled body, a shovel carried by said body, and an endless chain of rotary brushes traveling over said shovel.

5. The combination with a body, of an axle provided with wheels, gears secured on said axle, a shovel secured to one end of said body, brackets secured to said body, a shaft mounted in said brackets carrying gears, chains passing over said gears and the gears of the axle, and an endless chain carrying brushes traveling over said shovel, and means for rotating said brushes.

[Claims 6 to 8 not printed in the Gazette.]

897,506. HEATING APPARATUS. JOHN N. YOUNG, Alameda, Cal. Filed Feb. 8, 1904. Serial No. 192,615.



1. In combination in an oil burner, of a main casing having open top, means for feeding a volume of oil to the upper portion of the inner wall of said casing under gentle pressure to permit the oil to cling to said wall in the form of a film and oil and air supplies entering the lower portion of the casing whereby an upwardly directed volume of burning fluid will engage the descending film of oil.

2. In an oil burner, the combination with a casing including a base member, of a tube supported by the base, a disk resting on said tube, an air pipe arranged above the disk and adapted to direct the volume of air downward against the same, and an oil pipe extending within the air pipe, and having its discharge end above the discharge end of said air pipe.

3. The combination in an oil burner of a base, an upper casing member, the walls of which gradually converge toward the top, the top of said casing being open, a spreader supported by the top of the casing, means for feeding oil into the upper portion of the casing under gentle pressure, so that the oil may be spread in the form of a film on the inner surface of the casing, a deflecting member secured above the base and means for directing a volume of burning fluid downward into contact with said deflecting member.

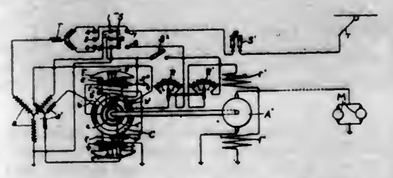
4. In an oil burner, the combination with a cup shaped base having a layer of refractory or fire-resisting material therein, a casing mounted on the base, a fuel spreading or deflecting member arranged within and above the bottom of the base, a supply pipe leading upward through the base to said spreading member and serving to admit light hydrocarbon to the burner and means for directing a volume of burning fluid downward against said spreading or deflecting member.

5. The combination in an oil burner, of a main casing including a cup shaped base and a sectional upper portion having flanges seated within the top of the base, the upper edges of said sections being also flanged, a ring encircling the flanges and combining the sections together, a spreader arranged above the open top of the casing, rods extending upward from the ring and supporting the spreader, and means for introducing opposing volumes of burning fluid to said casing.

897,507. SYNCHRONOUS MOTOR. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 5, 1905. Serial No. 259,065.

1. In combination with a source of alternating-current, a synchroneus motor having a field provided with phase-splitting means, means for connecting the field winding to said source and for short circuiting said armature winding to start the motor, and means for connecting said armature winding to said source and for supplying direct-current to the field winding when the motor is up to speed.

2. In an alternating-current synchronous motor, conductors in inductive relation to the field winding, conductors displaced from the field winding and connected to the first named conductors, means for connecting the field winding to the source of alternating-current and short-circuiting the armature winding to start the motor, and means for connecting the armature winding to said source and for supplying direct-current to the field winding when the motor is up to speed.



3. In combination with a source of single-phase current, a synchronous motor having a field provided with phase-splitting means and an armature winding arranged for connection as a polyphase winding, means for connecting the field winding to said source and for short-circuiting said armature as a polyphase winding through a starting resistance, and means for connecting said armature winding to said single-phase source and for supplying direct-current to the field winding.

4. In combination with a source of single-phase current, a synchronous motor having a field provided with phase-splitting means and a polyphase armature winding, means for connecting the field winding to said source and short-circuiting all the phases of the armature winding through a resistance at starting, and means for connecting two terminals of said armature windings to said source and supplying direct-current to the field winding when the motor is up to speed.

5. In combination with a source of single-phase current, a synchronous motor having an armature winding arranged for polyphase connection and a field provided with conductors in inductive relation to the field coils and other conductors displaced therefrom and in series therewith, means for connecting the field winding to said source and short-circuiting said armature winding as a polyphase winding through a resistance at starting, and means for connecting the armature winding to said source and supplying direct current to said field winding when the motor is up to speed.

[Claims 6 to 19 not printed in the Gazette.]

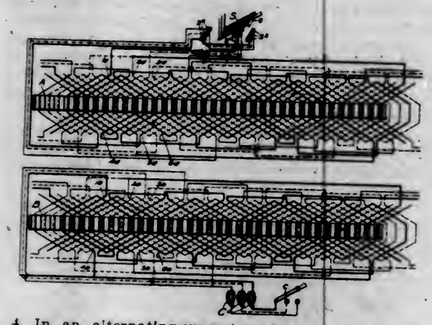
897,508. ALTERNATING-CURRENT MOTOR. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 16, 1905. Serial No. 282,884.

1. In an alternating-current motor, a laminated primary member, two primary windings of different pole numbers both carried on the same part of said member, two secondary windings of corresponding pole numbers, and connections whereby the current induced in one secondary winding may flow through the other.

2. In an alternating-current motor, a laminated primary member, two primary windings of different pole numbers both carried on the same part of said member, two secondary windings of corresponding pole numbers, contact devices to which both of said secondary windings are connected, and a short-circuiting switch coöperating with said contact devices.

3. In an alternating-current motor, a laminated primary member, two primary windings of different pole numbers carried on the same part of said member, two secondary windings of corresponding pole numbers, connections whereby the current induced in one secondary wind-

ing may flow through the other, and means for connecting one of said primary windings to a source of alternating-current and short-circuiting the other.

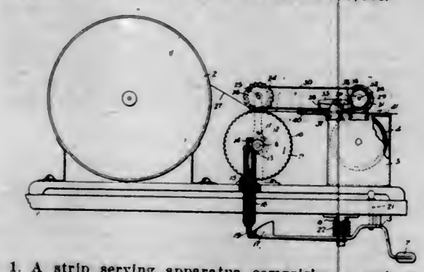


4. In an alternating-current motor, a laminated primary member, two primary windings of different pole numbers carried on the same part of said member, two secondary windings of corresponding pole numbers, contact devices to which both of said secondary windings are connected, means for connecting either primary winding to a source of alternating-current, means for short-circuiting one primary winding, and means for short-circuiting said contact devices.

5. In an alternating-current motor, a laminated primary member, two primary windings of different pole numbers carried on the same part of said member, two secondary windings of corresponding pole numbers, means for connecting one primary winding to a source of alternating-current and short-circuiting the other, connections between the two secondary windings whereby the current induced in one is supplied to the other, and means for short-circuiting each of the secondary windings.

[Claims 6 to 13 not printed in the Gazette.]

897,509. STRIP-SERVING DEVICE. FREDERICK S. ANABLE, Boston, Mass., assignor to National Binding Machine Company, Boston, Mass., a Corporation of Maine. Filed Oct. 19, 1907. Serial No. 398,244.



1. A strip serving apparatus comprising a strip support, a moistener mounted in operative relation thereto, and means adapted to be operated by bodily pressure of the operator, while leaving the hands free, to feed the strip from the support toward the moistener.

2. A strip serving apparatus comprising a strip support, a moistener mounted in operative relation thereto, and means adapted to be operated by a lower limb of the operator to feed the strip toward the moistener.

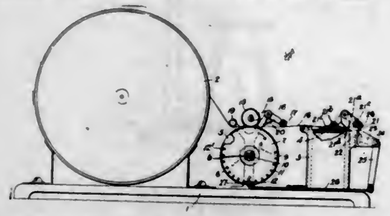
3. A strip serving apparatus comprising a strip support, a moistener mounted in operative relation thereto, and means adapted to be operated by bodily pressure of the operator, while leaving the hands free, to feed a predetermined length of strip from the support toward the moistener.

4. A strip serving apparatus comprising a strip support, a moistener mounted in operative relation thereto, means adapted to be operated by bodily pressure of the operator, while leaving the hands free, to feed a predetermined length of strip from the support toward the moistener, and means to vary such predetermined length.

5. A strip serving apparatus comprising a strip support, a moistener mounted in operative relation thereto, and means adapted to be operated by bodily pressure of the operator, while leaving the hands free, to sever the strip delivered from said support.

[Claims 6 to 17 not printed in the Gazette.]

897,510. STRIP-SERVING DEVICE. FREDERICK S. ANABLE, Boston, Mass., assignor to National Binding Machine Company, Boston, Mass., a Corporation of Maine. Filed Oct. 21, 1907. Serial No. 398,316.



1. A strip serving apparatus from which a strip may be drawn by draft thereon by the operator comprising a strip support, a moistener in operative relation thereto, and means operated by draft by the operator upon the strip to deliver a strip of predetermined length.

2. A strip serving apparatus from which a strip may be drawn by draft thereon by the operator comprising a strip support, a moistener in operative relation thereto, and means operated by draft by the operator upon the strip to deliver past the moistening point a strip of predetermined length.

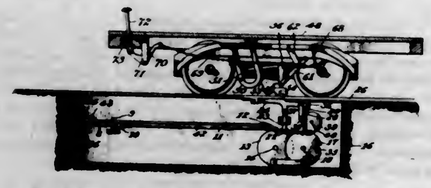
3. A strip serving apparatus from which a strip may be drawn by draft thereon by the operator comprising a strip support, a moistener in operative relation thereto, and means operated by draft by the operator upon the strip to sever a predetermined length of strip.

4. A strip serving apparatus from which a strip may be drawn by draft thereon by the operator comprising a strip support, a moistener in operative relation thereto and means operated by draft by the operator upon the strip to deliver past the moistening point and to sever a predetermined length of strip.

5. A strip serving apparatus from which a strip may be drawn by draft thereon by the operator comprising a strip support, a moistener in operative relation thereto, means operated by draft by the operator upon the strip to deliver a strip of predetermined length, and means to vary the predetermined length.

[Claims 6 to 27 not printed in the Gazette.]

897,511. AUTOMATIC TRAMWAY-SWITCH. EMIL L ANDERSON, Philadelphia, Pa. Filed Feb. 17, 1908. Serial No. 416,219.



1. In an automatic switch, a switch point, a rod connected thereto, a tripping lever having means for returning it to its normal position immediately after its actuation, diametrically opposed rotative members connected to move in the same direction, one of said members being connected to said switch point rod, and means for applying

the depressive movement of the tripping lever to one or other of said disks alternately to move the switch point alternately in opposite directions.

2. In an automatic switch, a switch point, a rod connected thereto, a tripping lever having means for returning it to its normal position immediately after its actuation, mechanism for throwing the switch point alternately from one position to the other by the depression of the tripping lever, mechanism for locking the switch point when thrown into either position, and means for unlocking the switch point prior to the movement of the switch throwing mechanism.

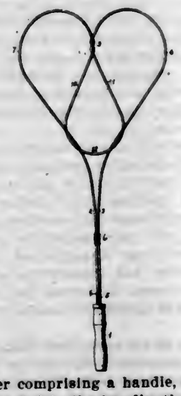
3. An automatic switch, a switch point, a rod connected thereto, a tripping lever having means for returning it to its normal position immediately after its actuation, diametrically opposed rotative members connected to move in the same direction, one of said members being connected to the switch rod, means for alternately operating one or the other of said rotative members by the depression of the tripping lever, and a switch point locking mechanism operating to unlock the switch by the first movement of the tripping lever and to lock the switch at the end of the movement of the tripping lever.

4. In an automatic switch, a switch point, a rod connected thereto, a tripping lever having a spring for returning it to its normal position immediately after its actuation, diametrically opposed rotative members connected to rotate in the same direction, one of said members being connected to the switch point rod, an operating bar attached to the tripping lever and adapted to engage with one or the other of said members to rotate the same, and springs attached to said members, said springs being alternately flexed by the movement of said members to throw the operating rod alternately into engagement with one or the other of said members.

5. In an automatic switch, a switch point, a rod connected thereto, a tripping lever having means for returning it to its normal position immediately after its actuation, diametrically opposed rotative members connected to each other, one of said members being connected to the switch point rod, means for alternately operating one or the other of said members from the tripping lever, a switch point lock, a rotative element connected to said switch point lock to operate the same, and means for rotating said element by the actuation of the tripping lever.

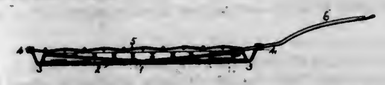
[Claims 6 to 25 not printed in the Gazette.]

897,512. CARPET-BEATER. ALFRED W. ANDREWS, Rockford, Ill., assignor to Andrews Wire & Iron Works, Rockford, Ill., a Corporation of Illinois. Filed Jan. 7, 1908. Serial No. 409,693.



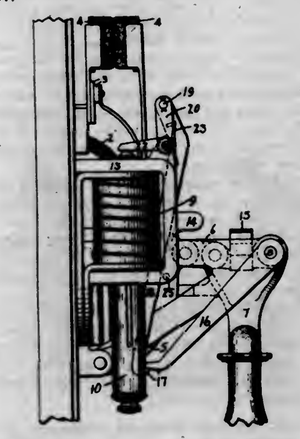
A carpet beater comprising a handle, a single wire having its ends connected to the handle, the center portion of the wire formed into two side loops and a center loop, the point of connection of the side loops and center loop formed by a twist, and the wire forming the side loops passing through the center loop.

897,513. TOASTER. CHARLES ANDREWS, Jr., Rockford, Ill., assignor to Andrews Wire & Iron Works, Rockford, Ill., a Corporation of Illinois. Filed Feb. 6, 1908. Serial No. 414,619.



A toaster comprising a perforated sheet metal main portion having its center depressed and formed with V shaped edges, the outer walls of the edges formed with rests, and a top seated in the rests in a fixed manner.

897,514. LATCH MECHANISM. PAUL BEHR, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Jan. 23, 1907. Serial No. 353,637.



1. In a tripping mechanism, the combination with a latch for engaging a locking member, of controlling means for causing the strain exerted on the latch by said member to force the latch either toward or away from latching position.

2. In a tripping mechanism, the combination with a latch engaging a locking member and lifted thereby when said member moves from locked position, of controlling means movable relative to said latch and coöperating therewith as said latch is shifted to force it toward latching position when said means is in one position and to force it away from latching position when said means is in another position.

3. In a tripping mechanism, the combination with a latch engaging a locking member and shifted thereby when the said member moves from locked position, of controlling means coöperating with said latch and movable relative thereto, and electromagnetic means for altering the relative position of the latch and the controlling means to cause the shifting of the latch by the locking member to force the latch toward or away from latching position.

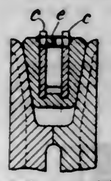
4. In a tripping mechanism, the combination with a latch engaging a locking member and shifted thereby when the said member moves from locked position, of pivoted controlling means for said latch movable relative thereto to change the relation of the latch to the pivot of the controlling means, whereby the shifting of the latch by the locking member forces the latch toward or away from locking position.

5. In a tripping mechanism, the combination with a latch engaging a locking member and shifted thereby when the said member moves from locking position, of pivoted controlling means for said latch movable relative thereto to change the relation of the latch to the pivot of the controlling means, whereby the shifting of the latch by

the locking member forces the latch toward or away from latching position, and electromagnetic means for changing the relation of said latch to the pivot of the controlling means.

[Claims 6 to 11 not printed in the Gazette.]

897,515. FRICTION DRIVE-CHAIN. WARREN J. BELCHER and WILLIAM M. BUTLER, Hartford, Conn., assignors to The Whitney Manufacturing Company, Hartford, Conn., a Corporation. Filed May 25, 1906. Serial No. 434,917.

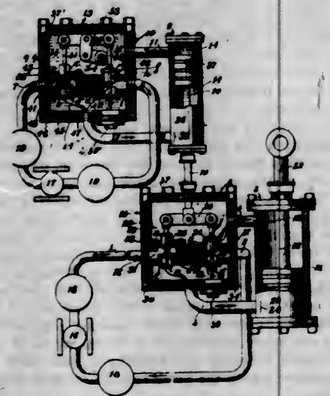


1. A friction-drive chain comprising pivotally connected elements, a flexible covering strip extending transversely around each alternate element, that part of said strip lying next the sides of the chain being wedge-shaped in cross section, and a fastening device to engage the abutting ends of each strip to tightly secure the covering strip to the inclosed chain element.

2. A friction-drive chain comprising pivotally connected blocks and side-plates, a covering strip extending transversely around each set of side-plates, that part of said strip lying next the sides of the chain being wedge-shaped in cross section, and a fastening device to engage the abutting ends of each strip, one edge of the side plates constituting a part of said fastening device.

3. A friction-drive chain comprising pivotally connected elements, a covering strip extending transversely around each alternate element, said strip tapering in cross sectional form from the inner towards the outer edge of the chain, and means to secure said strip in fixed position on the chain element it incloses.

897,516. POWER-APPLYING APPARATUS FOR OPERATING SWITCHES, SIGNALS, AND OTHER DEVICES. WALTER J. BULL, Los Angeles, Cal., assignor, by direct and mesne assignments, to Los Angeles Switch and Signal Company, Los Angeles, Cal., a Corporation. Filed Aug. 7, 1905. Serial No. 272,964.



1. A pneumatic engine, air-supplying means therefor, means for controlling the air for said engine, a liquid engine for controlling the air-controlling means, a pump adapted to supply liquid thereto, pipes connecting said pump with said engine, and means for reversing the flow of liquid through said pipes.

2. Two chambers, each having a port; ways between the chambers each having a port; reverse valves for opening and closing the passage between the way ports through one and the other chamber alternatively; a beam connected with said valves, and a rod connected with said beam for operating the same.

3. Two chambers, each having a port; ways between the chambers each having a port, said ways being respectively provided with external and internal valve seats each side of the way ports; reverse valves in said ways adapted to seat on said seats; and means for operating said valves.

4. A cylinder, a piston therein, ports being in said cylinder, one on each side of the piston; pipes, one for each port; a valve chest provided with air supply and exhaust ports and connected with said pipes; valves in the valve chest for controlling the air for said ports; another cylinder; a piston therein, ports being in said other cylinder, one on each side of the piston therein; pipes, one for each of the last-mentioned ports; a valve chest provided with supply and exhaust ports and connected with said last-mentioned pipes; means for supplying pressure to said last-mentioned pipes alternatively through said valves, and means for controlling said valves.

5. Two chambers, each provided with a port; two ways between said chambers, each provided with a port; pressure means operating through said ports and ways, and reversing valves for opening and closing the passage between the way ports through one and the other chamber alternatively.

[Claims 6 to 16 not printed in the Gazette.]

897,517. MOTOR VESSEL. DAVID C. BLAKE, Marshfield, Oreg. Filed Jan. 20, 1908. Serial No. 411,629.



1. In an apparatus of the class described, the combination of a plurality of canoe-like sections, each section comprising a closed body, terminating in upwardly-extending, curved end-portions, a transverse shaft journaled upon said bodies, a roller or propeller fixedly secured to said shaft, a casing covering a portion of said roller, and a beam supported upon the upwardly-curved end-portions and said casing.

2. An apparatus of the class described, comprising a plurality of parallel, canoe-like sections, each section provided with upwardly-curved end portions, inwardly-curved or bowed guards engaging the upwardly-curved end-portions of the sections, and extending downward, and propelling means carried by the canoe-like sections between the guards.

3. In an apparatus of the class described, the combination of a plurality of parallel canoe-like sections, provided with an upwardly-curved, hollow end portion, transverse supporting means positioned contiguous to the ends of and connecting said canoe-like sections, inwardly-bulged guards connected near their upper end to the upwardly-curved end portions and supported at their lower ends upon said supporting and connecting means, and means supported entirely upon said canoe-like sections and positioned between said guards for propelling the canoe-like sections.

4. An apparatus of the class described, comprising a series of parallel canoe-like sections provided with upwardly-extending portions at their ends, rollers journaled between each two sections and arranged in transverse alinement, casings supported by said sections and partly covering the rollers, guard means positioned at the ends of said canoe-like sections and engaging at their upper ends the upper ends of said sections and being adapted to prevent liquid from passing over the top of said casings, and means positioned between the rollers and the casings and being capable of imparting rotary movement to the shafts and rollers.

5. An apparatus of the class described, comprising a plurality of buoyant sections, a transverse shaft supported upon said sections, a roller or propeller fixedly secured to said shaft between said sections, a semi-cylindrical casing carried by said sections and covering the upper portion of said propeller, and a beam supported upon and engaging the upper portion of said casing.

[Claims 6 to 16 not printed in the Gazette.]

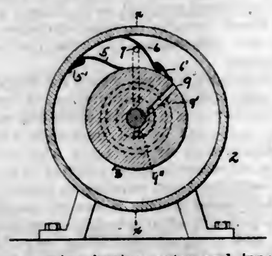
897,518. ARTIFICIAL-TOOTH MOUNT. SAMUEL S. BLOOM, Philadelphia, Pa. Filed Jan. 3, 1908. Serial No. 409,139.



1. A back plate for an artificial tooth mount having a portion thereof struck up to form a rib, and a pin secured to the upper face of said rib.

2. A back plate for an artificial tooth mount having a portion thereof struck up to form a rib, and a pin secured to the upper face of said rib, the face of said rib being depressed to receive a portion of said pin.

897,519. ROTARY ENGINE. LEVI BONNER, Ames, Colo. Filed Sept. 20, 1905, Serial No. 279,257. Renewed Jan. 25, 1908. Serial No. 412,634.



1. A rotary engine having outer and inner cylinders, one of which has a movement of rotation relative to the other, a resilient blade attached to one of said cylinders whose edge bears on the circumferential surface of the other cylinder, and fluid pressure inlets and outlets opening into the space between the said cylinders, said blade being rearwardly inclined and the faces thereof against which the pressure acts being inclined to the face of the cylinder against which it contacts, substantially as described.

2. A rotary engine having an interior and exterior cylinder one of which has a movement of rotation relatively to the other, a resilient, rearwardly inclined blade mounted on the interior face of the outer cylinder and normally bearing against the face of the inner cylinder, a resilient, rearwardly inclined blade mounted on the inner cylinder and normally bearing against the inner face of the outer cylinder the faces of both of said blades against which the pressure acts being inclined to the face of the cylinder against which it contacts, means whereby the said blades shall pass each other when they meet, and fluid pressure inlets and outlets opening into the space between said cylinders, substantially as described.

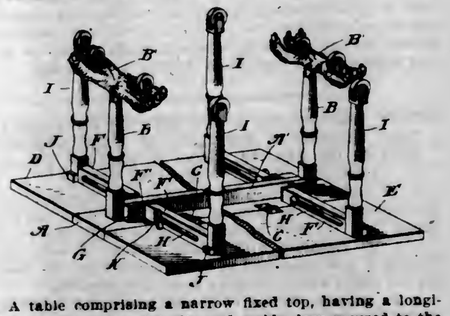
3. A rotary engine having inner and outer cylinders one of which has a movement of rotation relatively to the other, a blade resiliently mounted on the inner face of the outer cylinder, inclined reversely to the direction of rotation and normally bearing against the outer face of the inner cylinder, a corresponding blade mounted resiliently on the inner cylinder and inclined rearwardly to the direction of rotation of said cylinder and normally bearing against the inner face of the outer cylinder the faces of both of said blades against which the pressure acts being inclined to the face of the cylinder against which each blade contacts, and fluid pressure inlets and outlets opening into the space between said cylinders, substantially as described.

4. In a rotary engine the combination with an interior and exterior cylinder, having ports for the admission of fluid pressure between them, of a blade mounted upon one of the said cylinders and adapted to fill the space between the said cylinders, said blade being mounted upon said cylinder by means of a spring clip whereby it may be removed or replaced, substantially as described.

5. In a rotary engine the combination with an interior and exterior cylinder, having ports for the admission of fluid pressure between them, of a blade mounted upon one of the said cylinders and adapted to fill the space between the said cylinders, said blade being mounted upon said cylinder by engagement with a longitudinal clip extending the length of said cylinder, whereby the blade may be removed or replaced, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

897,520. TABLE. JACOB BRENNER, Philadelphia, Pa. Filed Feb. 4, 1908. Serial No. 414,179.



A table comprising a narrow fixed top, having a longitudinal strip secured to its under side, legs secured to the under side of said top, against the ends of said strip, blocks secured to the sides of said strip at each end, arms hinged to said blocks, provided with longitudinal grooves in their upper edges, the walls of said grooves being longitudinally slotted, slide-bars mounted in said grooves carrying bolts, working through said slots, wing nuts working on said bolts for locking said slide-bars, legs carried by said slide-bars, leaves hinged to the side edges of said fixed top, and stops secured on the under side of said leaves, adapted to be engaged by the legs of the slide-bars.

897,521. MAIL-BAG RECEIVING AND DELIVERING APPARATUS. RALPH G. CASS, Fitch Bay, Quebec, Canada. Filed Jan. 9, 1908. Serial No. 410,019.

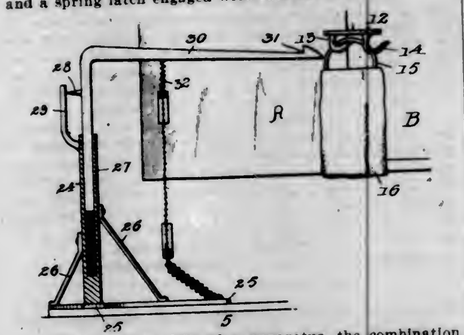
1. The combination with a car having a slidable bar, bag supporting means carried by said bar, means for holding the bag supporting means normally within the car and a spring latch engageable at times with said bar, of a receiving apparatus located adjacent the car and comprising an adjustable standard having a horizontally disposed arm, and a yieldable buffer suspended from said arm and arranged transversely thereof.

2. The combination with a car having a slidable bag supporting bar, means for holding said bar normally within the car, a spring latch engageable at times with the bar, of a bag receiving apparatus located adjacent the car and comprising a vertically adjustable standard having a horizontally disposed arm, a support for said standard, a buffer suspended from said arm, and springs carried by said support and engaged with said buffer.

3. In a mail bag receiving apparatus the combination with a vertically disposed standard, and an adjustable standard carried thereby, said adjustable standard hav-

ing a horizontally disposed bag receiving arm, of a yieldable buffer suspended from said horizontally disposed arm.

4. In a mail-bag delivering apparatus, the combination with a car, of a slidable bar carried thereby, bag supporting means carried by said bar at the outer end thereof, spring means for holding said bar normally within the car, and a spring latch engaged with said bar.



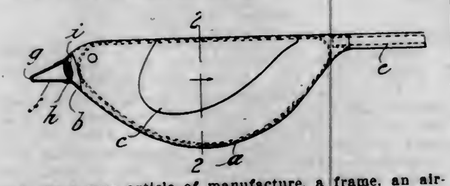
5. In a mail-bag delivering apparatus, the combination with a car, of a slidable bar carried thereby, bag supporting means carried at the outer end of the bar, means for holding the bag supporting means normally within the car, and a spring latch engageable at times with the bar.

897,522. PRODUCING A SOLVENT TO BE USED IN THE ARTIFICIAL RETTING OF BAST FIBROUS STALKS OR PLANTS. MARY H. COLAHAN, Chicago, Ill. Filed Sept. 21, 1907. Serial No. 393,978.

1. In artificial retting of unbroken bast fibrous stalks, the subjecting of the same to the action of a solvent produced from the acid sludge discharge liquid, known as "acid oil", combined with a small percent. of soda, thus forming a new compound in concentrated form, for treating the stalks substantially as shown and described.

2. In artificial retting of fibrous stalks, the subjecting of the same to the action of a solvent produced from the acid sludge discharge liquid known as "acid oil", and a small per cent. of soda, combined with means for the injection of steam under control, to regulate its action on the fiber in degumming and separating it from the woody part of the stalk, so that it is conditioned, when dry, for decortication to a perfect spinning fiber.

897,523. TOY. MAUD D. COOK, Springfield, Mass. Filed Oct. 7, 1907. Serial No. 396,127.

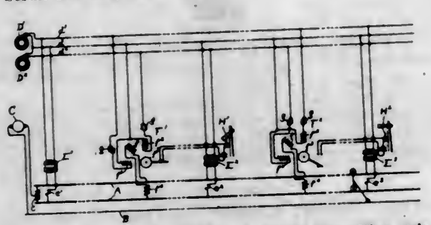


1. As a new article of manufacture, a frame, an air-tight flexible covering enveloping the same, means for inflating the covering, means communicating with the interior of the covering for emitting a sound when the covering is inflated, and a part forming movable wing elements *e* and secured at its middle portion to the exterior upper portion of the covering, whereby when the covering is inflated and deflated, the wing elements will rise and fall in unison with the movements of the covering, as described.

2. A toy, a frame element formed from a single piece of stiff material representing in outline a bird, an air-tight inflatable flexible covering therefor, movable wing elements to be actuated by the inflation thereof attached to the back portion of the covering, means for inflating the covering, and means for emitting a sound when the covering is inflated and the wings are moved.

3. A toy comprising a frame having in general the outline of a bird, an inflatable covering enveloping the same, means for inflating the covering, a bill element attached to the covering, means therein for emitting a sound when the cover is inflated, and movable wing portions attached to the upper edge of the covering and normally engaging the sides thereof, whereby when the covering is inflated and deflated the movable wing elements will rise and fall in unison therewith, and a sound will be emitted from the bill element, as described.

897,524. BLOCK-SIGNAL SYSTEM. FRED B. COREY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 2, 1906. Serial No. 341,762.



1. In a block-signal system, a signal-controlling relay having one winding connected to the track-rails and a plurality of windings supplied with current from a plurality of different circuits carrying currents of different frequencies and coöperating with the track-winding to control the signal.

2. In a block-signal system, means for supplying to the track-rails simultaneously a plurality of currents differing in character, and a signal-controlling relay having one winding connected to the track-rails and windings supplied independently of the track with currents corresponding in character to those supplied to the track and coöperating with the track winding to control the signal.

3. In a block-signal system, means for supplying to the track-rails a plurality of alternating-currents of different frequencies, and a signal controlling relay having one winding connected to the track-rails and windings cooperating therewith supplied independently of the track with currents corresponding in frequency to those supplied to the track.

4. In a block-signal system, a signal-controlling relay comprising a short-circuited conducting member, a winding connected to the track-rails and in inductive relation to said short-circuited member, and a plurality of windings connected to different circuits and coöperating with the track-winding to produce a torque on said member.

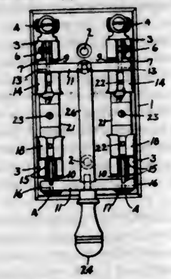
5. In a block-signal system, means for supplying to the track-rails a plurality of alternating-currents differing in character, and a signal-controlling relay comprising a short-circuited conducting member, a winding connected to the track-rails and in inductive relation to said member, and windings supplied independently of the track with currents corresponding in character to those supplied to the track and coöperating with the track winding to produce a torque on said member.

[Claim 6 not printed in the Gazette.]

897,525. ELECTRIC SWITCH. FRANK C. DE REAMER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 1, 1905. Serial No. 272,185.

1. In an electric switch, the combination of a pair of contact blade sections, fuse receptacles secured to the adjacent ends of and in alinement with said blade sections, and means for supporting said blade sections independent of said fuse receptacles.

2. In an electric switch, the combination of a pair of contact blade sections, cup-shaped fuse receptacles secured to the adjacent ends of and in alinement with said blade sections, and means for supporting said blade sections.



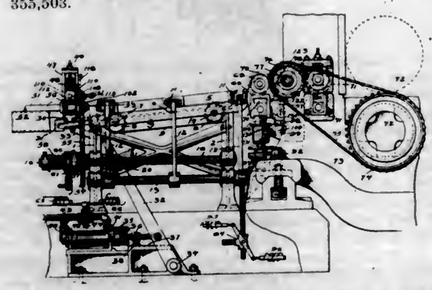
3. In an electric switch, the combination of a pair of contact blade sections, cup-shaped fuse receptacles comprising a plurality of spring fingers secured to the adjacent ends of and in alinement with said blade sections, and means for supporting said blade sections.

4. In an electric switch, the combination of two insulating bars, contact blade sections secured to said bars, fuse receptacles secured to the adjacent ends of and in alinement with said blade sections, and means for supporting said bars in fixed relative positions.

5. In an electric switch, the combination of two insulating bars, contact blade sections secured to said bars, fuse receptacles secured to adjacent ends of said blade sections, and a rod rigidly connected to one of said bars and detachably connected to the other bar.

[Claims 6 and 7 not printed in the Gazette.]

897,526. MATCHING MECHANISM. PERCY E. DONNER and MILTON W. HOGLE, Pittsburg, Pa.; said Hogle assignor to said Donner. Filed Feb. 2, 1907. Serial No. 355,503.



1. In a matcher, the combination of squaring up means for the sides of the plates forming the pack, and actuating mechanism for said squaring means arranged to be controlled by the plates.

2. In a matcher, the combination of squaring up means for the sides of the plates forming the pack, actuating mechanism for said squaring means, and controlling means for said actuating means, said controlling means being actuated by the plates and arranged to render the matching mechanism inactive while the plates are entering the matcher.

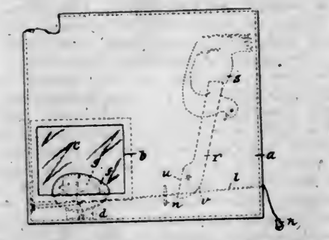
3. In a matcher, the combination of constantly actuated squaring up means for the sides of the plates forming the pack, and mechanism controlled by the plates and arranged to stop said squaring means while the plates are entering the matcher.

4. In a matcher, the combination of constantly actuated squaring up mechanism for the sides of the plates forming the pack, and means arranged to be controlled by the plates for stopping said squaring mechanism while the plates are entering the matcher.

5. In a matcher, the combination of a frame, mechanism for feeding the plates into said frame one on the other, mechanism for feeding the pack out of the frame, and pushing mechanism arranged to engage the rear ends of the plates, squaring the same, and pushing them into the feeding out mechanism.

[Claims 6 to 27 not printed in the Gazette.]

897,527. TOY. ALBERT ENSOR, Paterson, N. J. Filed Mar. 30, 1908. Serial No. 424,110.

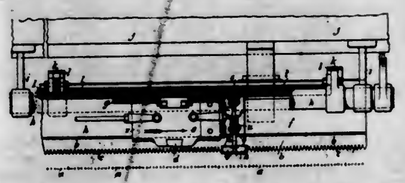


1. The combination of a box having a sight opening, a movable part *f* disposed within the box opposite the sight opening, and normally held in one position and forming one member of a changeable pictorial representation, an actuating device, a normally slack cord connecting said device and the part *f*, and a part *r* adapted to move to a position opposite to the opening and controlled by said device and forming another member of said changeable pictorial representation, substantially as described.

2. The combination of a box having a sight opening, a movable part *f* disposed within the box and normally held in one position and forming one member of a changeable pictorial representation, a normally retracted actuating device, a normally slack cord connecting said device and the part *f*, and a part *r* adapted to move to a position opposite to the opening and controlled by said device and forming another member of said changeable pictorial representation, substantially as described.

3. The combination of a box having a sight opening, a movable part *f* disposed within the box and normally held in one position and forming one member of a changeable pictorial representation, a normally retracted actuating device, a normally slack cord connecting said device and the part *f*, and a lever adapted to move to a position opposite to said opening, said lever being normally held retracted but having one end projecting into the path of movement of a part of the actuating device and forming another member of said changeable pictorial representation, substantially as described.

897,528. LOOM FOR THE MANUFACTURE OF TUFTED OR PILE FABRICS. THOMAS GREENWOOD, Wolverley, near Kidderminster, England. Filed Mar. 20, 1907. Serial No. 363,344.



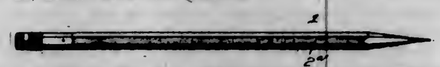
In a loom of the class described, the combination with the sliding knife box of the long serrated knife blade of the tuft yarn cutting mechanism, means for moving the knife blade, an oiling pad for oiling said long knife blade carried by the knife box and means for moving said pad parallel to the movement of the long knife blade but to a less extent.

897,529. NEW DISAZO DYE. OSCAR GÜNTHER and LEOPOLD HESSE, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Feb. 19, 1908. Serial No. 416,782.

1. The herein described new azo-dyestuffs obtainable from sulfurous acid ester of 1.8-aminonaphthol, amins and with derivatives of 2-amino-5-naphthol-7-sulfonic acid, which dyestuffs are, after being dried and pulverized, in the shape of their alkaline salts dark powders soluble in water, soluble in concentrated sulfuric acid with from a red to violet to blue color; yielding upon reduction with stannous chlorid and hydrochloric acid 1.8-aminonaphthol, a diamin and a derivative of 2.6-diamino 5-naphthol-7-sulfonic acid; and dyeing cotton from violet to blue shades, substantially as hereinbefore described.

2. The herein described new azo-dyestuff obtainable from sulfurous acid ester of 1.8-aminonaphthol, cresidin and with 2-amino-5-naphthol-1.7-disulfonic acid, which dyestuff is, after being dried and pulverized, in the shape of its sodium salt a dark powder which is soluble in water with a violet color and which is soluble in concentrated sulfuric acid with a blue color; yielding upon reduction with stannous chlorid and hydrochloric acid 1.8-aminonaphthol, 1-methyl-2.5-diamino-4-ethoxybenzene and 2.6-diamino-5-naphthol-1.7-disulfonic acid; and dyeing cotton reddish-blue shades, substantially as hereinbefore described.

897,530. PENCIL, PENHOLDER, AND LIKE ARTICLE. THOMAS F. HANDLY, Allegheny, Pa. Filed June 13, 1906. Serial No. 321,528.

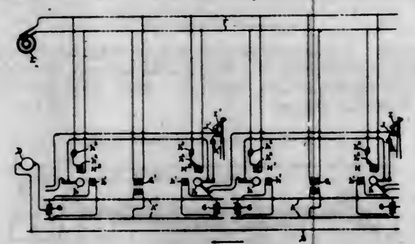


1. As a new article of manufacture a pencil or like instrument having a face secured thereto, said face completing the normal configuration of the instrument and being a deterrent.

2. As a new article of manufacture, a pencil or like instrument having a face secured thereto, said face completing the normal configuration of the instrument and being a deterrent, said face extending and being exposed throughout the length of the instrument.

3. A pencil, pen-holder or like article formed with an external longitudinal groove containing a deterrent substance or compound.

897,531. BLOCK-SIGNAL SYSTEM. LAURENCE A. HAWKINS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 19, 1908. Serial No. 416,696.



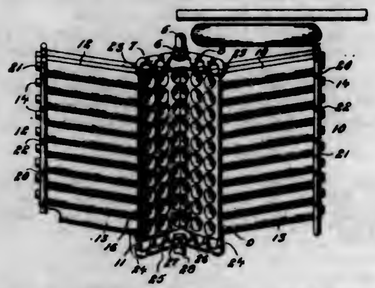
1. An alternating-current block signal system, comprising sources of alternating-current connected to the track rails near the centers of the blocks, relays connected to the rails at both ends of the blocks, and home signals for the blocks, each of said signals being controlled jointly by the relays at both ends of the block guarded by the signal and by the relay at the adjacent end of the block next in advance.

2. An alternating-current block signal system, comprising sources of alternating-current connected to the track rails near the centers of the blocks, relays connected to rails at both ends of each block, home signals, and controlling circuits for the signals, the controlling circuit of each of said signals including contacts of the relays at both ends of the block guarded by the signal and of the relay at the adjacent end of the block next in advance.

3. An alternating-current block signal system, comprising sources of alternating-current connected to the track rails near the centers of the blocks, track relays, relay connections to the track rails at both ends of each block, home signals, and operating means and control circuits therefor arranged to permit a signal to go to danger upon a failure of alternating-current in the relay connections at either end of the block guarded by the signal or in the relay connections at the adjacent end of the block next in advance.

4. An alternating-current block signal system, comprising sources of alternating-current connected to the track rails near the centers of the blocks, relays connected to the rails at both ends of each block, and signals for the blocks, the relay at the entering end of a block being arranged to control the home signals both for that block and for the block next in the rear.

897,532. COOLING DEVICE FOR EXPLOSIVE-ENGINES. REINHOLD HERMAN, Crafton, Pa. Filed Aug. 12, 1907. Serial No. 388,157.



1. A cooling device for the purpose set forth comprising groups of sets of combined water and air conduits, the water conduits of each set of each group being suitably spaced apart and the air conduits being open at each end and disposed within the water conduits, each of said air conduits opening at each end directly into the atmosphere whereby the air will be conducted by the sets of air conduits of each group in the same general direction and in currents independent of each other, the combined conduits of each group extending in an opposite direction with respect to the conduits of the other group.

2. A cooling device for the purpose set forth comprising groups of combined water and air conduits, the water conduits of each group being suitably spaced apart and the air conduits open at each end and disposed within the water conduits, the combined conduits of each group extending in an opposite direction with respect to the conduits of the other group, and a combined supporting and air pocket-forming member interposed between the group.

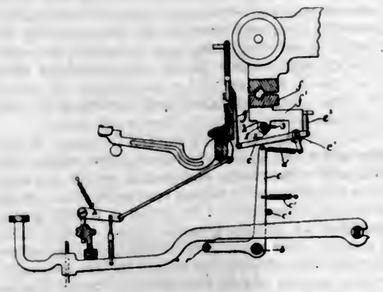
3. A cooling device for the purpose set forth comprising groups of sets of water conduits, the sets of each group extending at an inclination and in opposite directions with respect to the sets of the other group, the water conduits of each set alternately communicating with each other, and an air conduit extending through each of the water conduits and of a diameter with respect to the water conduit to form a contracted water passage, each of said air conduits opening at each end directly into the atmosphere whereby the air will be conducted by the sets of air conduits of each group in the same general direction and in currents independent of each other.

4. A cooling device for the purpose set forth comprising groups of sets of water conduits, the sets of each group extending at an inclination and in an opposite direction with respect to the sets of the other group, the water conduits of each set alternately communicating with each other, and an air conduit extending through each of the water conduits and of a diameter with respect to the water conduit to form a contracted water passage, each of said air conduits having a bell-shaped mouth, each of said air conduits opening at each end directly into the atmosphere whereby the air will be conducted by the sets of air conduits of each group in the same general direction and in currents independent of each other.

5. A cooling device for the purpose set forth comprising groups of sets of water conduits, the sets of each group extending at an inclination and in an opposite direction with respect to each other, the water conduits of each set at alternative ends communicating with each other, an air conduit extending through each of the water conduits and of a diameter with respect to the water conduits to form a contracted water passage, and a combined supporting and air pocket-forming means interposed between the groups of sets of water conduits and connected to the air conduits.

[Claims 6 to 14 not printed in the Gazette.]

897,533. TYPE-WRITING MACHINE. EDWARD B. HESS, New York, N. Y., assignor to Royal Typewriter Company, Hoboken, N. J., a Corporation of New Jersey. Filed July 24, 1907. Serial No. 385,275.

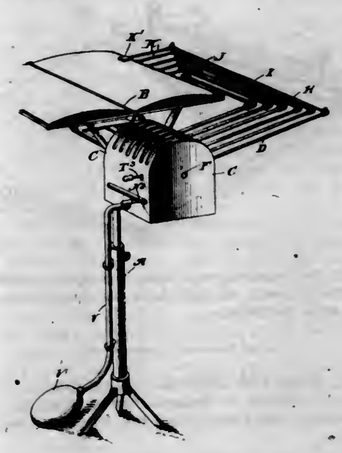


1. In a visible writing machine, a universal bar, means for depressing it on operation of a finger piece, a vertically disposed arm rocking with the universal bar, a spring link applied to its upper end, a bell crank lever to whose short downwardly extending arm the rear end of the spring link is connected and a ribbon vibrator connected with the longer forwardly extending arm of the bell crank lever in combination with adjustable variable stop devices to determine the extent of movement of the ribbon vibrator.

2. In a visible writing machine, a universal bar, means for depressing it on operation of a finger piece, a vertically disposed arm rocking with the universal bar, a spring link applied to its upper end, a bell crank lever to whose short downwardly extending arm the rear end of the spring link is connected and a ribbon vibrator connected with the longer forwardly extending arm of the bell crank lever in combination with an adjustable rotatable stop device adapted to arrest the movement of the bell crank lever and having stop surfaces of unequal radius.

3. In a visible writing machine, a carriage shift rail, a bell-crank lever pivoted therein, a ribbon-vibrator with which the forwardly extending arm of the bell-crank is connected, a horizontally disposed extensible spring link connected at one end to the short downwardly extending arm of the bell-crank, a part movable longitudinally of the machine to which the other end of the spring link is connected, means for moving said part when the finger pieces of the machine are depressed and adjustable variable stop devices acting to determine the extent of movement of the ribbon vibrator.

897,534. MUSIC-LEAF TURNER. AUGUST P. HILDEBRANDT, Philadelphia, Pa. Filed Dec. 30, 1907. Serial No. 408,465.



1. A music leaf turner comprising a plurality of spring actuated arms, means for locking said arms, a movable tripping arm adapted to engage said locking means, and means for imparting a step by step motion to said tripping arm.

2. A music leaf turner comprising a plurality of spring actuated loosely mounted disks carrying arms, locking levers for engaging said disks, a tripping arm for engaging said locking lever, and means for imparting a step by step motion to said tripping arm.

3. The combination with a casing provided with a plurality of slots, of a shaft secured longitudinally in said casing, a plurality of spring actuated disks loosely mounted on said shaft provided with cam lips, arms carried by said disks extending out through said slots, locking levers for engaging said cam lips, a tripping arm for engaging said levers in succession, and means for operating said tripping arm.

4. The combination with a casing, provided with a plurality of slots, of a longitudinal shaft mounted in said casing, a plurality of disks loosely mounted on said shaft carrying arms extending out through said slots, springs for operating said disks, levers for locking said disks, a slidably mounted tripping arm for engaging said levers, and means for throwing said tripping arm into engagement with said levers, together with means for sliding said tripping arm, for the purpose described.

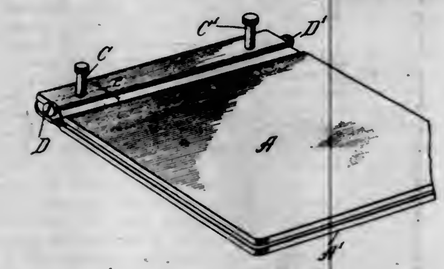
5. In a music leaf turner, the combination with a casing provided with a plurality of slots, and having a longitudinal shaft arranged therein, of a plurality of disks provided with cam lips loosely mounted on said shaft, arms carried by said disks extending out through said slots, rods adjustably mounted on said arms, fingers adjustably mounted on said rods carrying clasps, locking levers for engaging said cam lips, and means for disengaging said locking levers from said cam lips in succession.

[Claims 6 to 9 not printed in the Gazette.]

897,535. LOOSE-LEAF BINDER. LE ROY HILL, Chicago, Ill., assignor to Jones Improved Loose Leaf Specialty Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 20, 1907. Serial No. 402,960.

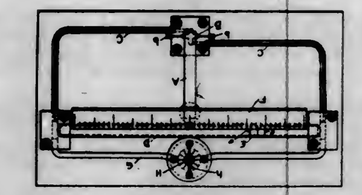
In a binder, the combination with a lower clamping-bar and binding-posts rising therefrom, of a tubular upper clamping-bar having perforations receiving said posts, the ends of the upper clamping-bar lying some distance within the planes of the longitudinal edges of the cover-sections,

end-plugs in said upper clamping-bar having threaded perforations, and clamping-screws extending through said per-



forations and engaging said posts and having heads lying substantially inside the planes of the longitudinal edges of said cover-sections.

897,536. MERCURY METER. FRANK HOLDEN, London, England, assignor to General Electric Company, a Corporation of New York. Filed Jan. 30, 1907. Serial No. 354,789.



1. In a mercury meter, a magnet, a mercury-containing chamber within the field of said magnet, current leads to the mercury in said chamber, a continuous closed duct having its ends opening into said chamber, an index in said tube adapted to be moved by a flow of mercury therein, and manually-controlled means for adjusting the position of said index in the tube.

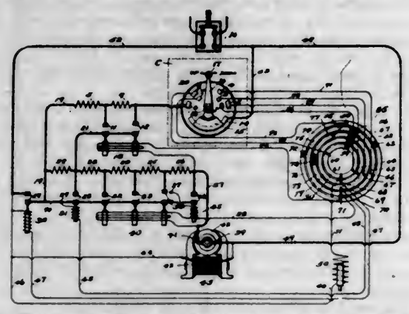
2. In a mercury meter, a magnet, a mercury-containing chamber within the field of said magnet, current leads to the mercury in said chamber, a continuous closed duct having its ends opening into said chamber, a portion of said duct forming an index tube, an index in said tube adapted to be moved by a flow of mercury therein, and manually-controlled means for producing a flow of mercury in said tube.

3. In a mercury meter, a magnet, a mercury-containing chamber within the field of said magnet, current leads to the mercury in said chamber, a continuous closed duct having its ends opening into said chamber, a portion of said duct forming an index tube, an index in said tube adapted to be moved by a flow of mercury therein, a duct shunting said index tube, and manually-controlled means in the shunt duct for producing a flow of mercury therein.

4. In a mercury meter, a magnet, a mercury containing chamber within the field of said magnet, current leads to the mercury in said chamber, a continuous closed duct having its ends opening into said chamber, a portion of said duct forming an index tube, an index in said tube adapted to be moved by a flow of mercury therein, a duct shunting said index tube, and a paddle-wheel mounted therein.

5. In a mercury meter, a magnet, a mercury-containing chamber within the field of said magnet, current leads to the mercury in said chamber, a continuous closed duct having its ends opening into said chamber, a portion of said duct being capillary and another portion enlarged, an index in the enlarged portion adapted to be moved by a flow of mercury therein, and manually-controlled means for adjusting the position of said index.

897,537. ELECTRIC CONTROLLING SYSTEM. JOHN D. IHLDER, New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed July 29, 1905. Serial No. 271,777.



1. The combination with an elevator car and its motor, of sectional starting resistance, an electro-dynamic brake circuit including said resistance, means for controlling said resistance in accelerating the motor, and means coacting with said controlling means for automatically cutting out a portion of said resistance when in the electro-dynamic brake circuit.

2. The combination with an elevator car and its motor, of sectional starting resistance, means for controlling said resistance in gradually starting the car on the up motion, automatic means controlling said resistance to reduce the speed of the motor while the car is approaching its upper limit of travel, and means for establishing an electro-dynamic brake circuit including said resistance for regulating the speed of the car in its downward travel.

3. The combination with a car and its motor, of starting resistance for the motor, electro-magnetic means for controlling said resistance, a stop-motion switch for automatically re-inserting said starting resistance when the car approaches the upper limit of its travel, a manual switch for establishing an electro-dynamic brake circuit including said starting resistance, and circuits and connections coacting with said stop-motion switch for automatically cutting out a portion of said resistance as the car approaches its lower limit of travel.

4. The combination with an elevator car, and its motor, of sectional starting resistance for said motor, electro-magnetic means for controlling said resistance, an additional sectional resistance, a load magnet for controlling said additional resistance, means for connecting both of said resistances in an electro-dynamic brake circuit, and means for automatically effecting the energization of said load magnet as the car approaches a predetermined point in its downward travel.

5. The combination with an elevator car and its motor, of sectional starting resistance for said motor, automatic means for controlling said resistance, additional sectional resistance, means for connecting both the said resistances in an electro-dynamic brake circuit, a load magnet for controlling said additional resistance, and means for connecting said load magnet across the motor-armature as the car approaches the lower limit of its travel.

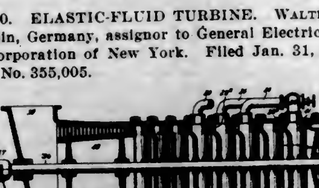
[Claims 6 to 22 not printed in the Gazette.]

897,538. SYSTEM OF MOTOR CONTROL. LEOPOLD JANISCH and WILHELM NAUMANN, Berlin, Germany, assignors to General Electric Company, a Corporation of New York. Filed Mar. 6, 1907. Serial No. 360,915.

1. In combination, a motor, a controller therefor, a resistance, and means operated by said controller for connecting said resistance in parallel with the armature of the motor when the controller is moved even slightly toward its "off" position.

2. In combination, a motor, a controller therefor, a resistance arranged in parallel to the armature of the motor, and means for opening the circuit through said resistance when the controller is moved even slightly toward the "on" position and for closing said circuit when the controller is moved even slightly toward the "off" position.

3. In combination, a motor, a controller therefor, a resistance arranged in parallel to the armature of the motor, and means yieldingly connected to the moving element of the controller for maintaining the circuit through the resistance open or closed according as the most recent movement of the controller has been toward the "on" or the "off" position.



4. In combination, a series motor, a controller therefor, a resistance, and means operated by said controller for connecting said resistance in parallel with the armature of the motor when the controller is moved even slightly toward its "off" position.

5. In combination, a series motor, a controller therefor, a resistance arranged in parallel to the armature of the motor, and means for opening the circuit through said resistance when the controller is moved even slightly toward the "on" position and for closing said circuit when the controller is moved even slightly toward the "off" position.

[Claim 6 not printed in the Gazette.]

897,539. METALLIC BEAM. FREDERICK C. KEIGHLEY, Uniontown, Pa. Filed Mar. 28, 1908. Serial No. 423,896.



1. In a metallic beam, a single piece of sheet metal folded upon itself several times so that the folds thereof may be compressed tightly together and adjacent one another, said sheet metal being so folded as to provide extended portions extending in opposite directions and designed to overlap or cover said folds and binding means so that the said folds and extended portions are held in a compact mass.

2. A metallic beam comprising a single piece of sheet metal folded upon itself several times so that the folds thereof may be compressed tightly together and adjacent one another said sheet metal being so folded as to provide extended portions designed to overlap or cover said folds, wire binders encircling said beam so that said folds and extended portions are held as a compact mass.

897,540. ELASTIC-FLUID TURBINE. WALTER KIESER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Jan. 31, 1907. Serial No. 355,005.

1. An elastic-fluid turbine comprising a plurality of stages and having an inlet and an exhaust in combination with a conduit for shunting one or more high pressure stages to prevent excessive pressure in a given stage or stages.

2. An elastic-fluid turbine comprising a plurality of stages and having an inlet and an exhaust, in combination with a conduit which receives motive fluid after it performs work in the initial stage and shunts it past one or more stages and discharges into a low pressure stage to prevent excessive pressure in the initial stage, and a means for governing the passage of fluid in the conduit.

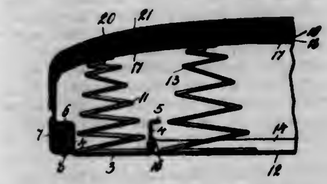
3. An elastic-fluid turbine comprising a plurality of stages and having an inlet and an exhaust, in combination with a plurality of conduits for shunting one or more high-pressure stages.

4. An elastic-fluid turbine comprising a plurality of stages and having an inlet and an exhaust, in combination with a conduit for shunting one or more of the early stages to prevent excessive pressure, and a valve for controlling the passage of motive fluid through the conduit.

5. An elastic-fluid turbine comprising a plurality of stages and having an inlet and an exhaust, in combination with a conduit for shunting one or more of the early stages to prevent excessive pressure, and a valve responsive to pressure changes for controlling the passage of motive fluid through the conduit.

[Claims 6 to 20 not printed in the Gazette.]

897,541. CUSHION. JOHN B. KILBURN and EDWARD G. BUDD, Philadelphia, Pa., assignors to Hale-Kilburn Metal Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 5, 1907. Serial No. 382,150.



1. A cushion having a rectangular frame consisting of metallic frame-members secured together at their ends, certain of said frame-members being sheet-metal strips pressed to a channel-section and arranged with the open side upward, slats extending across said frame and secured at their ends to opposite members thereof, spiral springs mounted within the channels of said frame-members and extending upwardly therefrom, spiral springs mounted on said slats, and a covering extending over said springs and yieldingly sustained thereby, substantially as set forth.

2. A cushion having a frame consisting of metallic frame-members secured together at their ends, certain of said frame-members being sheet-metal strips pressed to a channel-section and arranged with the open side upward, said members having extensions at the outer sides bent to form grooves, tacking strips secured in said grooves, spiral springs mounted within the channels of said frame-members and extending upwardly therefrom, and a covering yieldingly positioned by said springs and secured at its edges to said strips, substantially as set forth.

3. A cushion having a frame consisting of metallic frame-members secured together at their ends, certain of said frame-members being sheet-metal strips pressed to a channel-section and arranged with the open side upward, metallic slats having integral, upwardly-turned flanges at their lateral edges extending across said frame and secured at their ends to opposite frame-members, spiral springs mounted within said frame-members and slats and extending upwardly therefrom, and a covering yieldingly sustained by said springs, substantially as set forth.

4. A cushion having a frame consisting of frame-members secured together at their ends, certain of said members being sheet-metal strips pressed to a channel-section, metallic braces extending across each of said members and secured at their ends to opposite sides thereof, spiral

springs supported on said members, and a covering yieldingly sustained by said springs, substantially as set forth.

5. A cushion having a frame consisting of frame-members secured together at their ends, certain of said members being sheet-metal strips pressed to a channel-section and arranged with the open side upward, metallic braces extending across each of said sheet-metal members and secured at their ends to opposite sides thereof, spiral springs mounted within said channel-shaped members and extending upwardly therefrom, and a covering yieldingly sustained by said springs, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

897,542. BOTTLE-STOPPER. GEORG KIRKEGAARD, New York, N. Y., assignor to Imperial Stopper Company, a Corporation of Maine. Filed July 24, 1907. Serial No. 385,236.



In combination with a bottle having a neck with an annular circumferential bead, a bottle stopper comprising a circular disk having an annular depending flange, said flange being provided with an inwardly projecting rim at its lower edge adapted to extend beneath said bead, whereby the vertical section of the flange is sharply curved or bent, a packing of resilient material within said flange, and a plurality of symmetrically spaced-apart folds in the flange, forming a plurality of strengthening shoulders, said folds following the curved or bent contour corresponding to said vertical section of the flange.

897,543. PROCESS FOR THE MANUFACTURE OF CARD-PAPER OR THE LIKE FROM TWO SIMULTANEOUSLY-PRODUCED SINGLE PAPER WEBS. RUDOLF KRON, Golzern, near Grimma, Germany. Filed Nov. 27, 1907. Serial No. 404,042.

A process for the manufacture of card paper or the like, consisting in separately and preliminarily drying two simultaneously produced paper webs to a predetermined degree of humidity, for instance, to a degree of humidity of from 30 to 20 per cent. directing these paper webs from separate sources of supply into engagement with each other and applying to one of the webs an amount of paste greater than is capable of being absorbed by it, thereby producing in proximity to the point of engagement of the two webs a surplus supply of paste to be absorbed by the web to which the paste was not first applied.

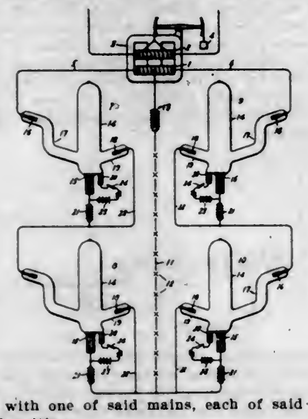
897,544. RECTIFIER SYSTEM. OSIAS O. KEUH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 9, 1905. Serial No. 286,505.

1. The combination of a source of alternating-current, main conductors extending therefrom, a return conductor also extending therefrom, and a plurality of vapor electric rectifying devices in each of said main conductors.

2. The combination of a source of alternating-current, main conductors extending therefrom, a return conductor also extending therefrom, and a plurality of vapor electric rectifiers in series in each of said main conductors.

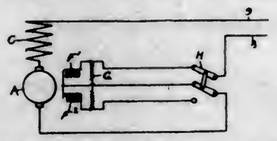
3. The combination of a source of alternating-current, mains extending therefrom, and a plurality of rectifiers in series in one at least of said mains, each of said rectifiers having a cathode and a plurality of anodes.

4. The combination of a source of alternating-current, mains extending therefrom, and a plurality of rectifiers



in series with one of said mains, each of said rectifiers being self-exciting.

897,545. SINGLE-PHASE COMMUTATOR-MOTOR. MARIUS C. A. LATOUR, Paris, France, assignor to General Electric Company, a Corporation of New York. Filed Mar. 11, 1907. Serial No. 361,883.



1. A single-phase motor of the commutator type having in combination with its main field coils connections adapted to produce a relative phase-displacement of the currents in the main field coils for adjacent poles whereby a commutating field is produced in the space between the adjacent sides of said coils.

2. A single-phase motor of the commutator type having its main field coils for adjacent poles separated by a lug or tooth, and connections for said coils adapted to produce a relative phase-displacement of the currents in the conductors of said coils on opposite sides of said tooth whereby a commutating field is produced in said tooth.

3. A single-phase motor of the commutator type having main field coils for adjacent poles connected in parallel, and an impedance in series with one of said coils adapted to produce a relative phase-displacement of the currents in said coils, whereby a commutating field is produced in the space between the adjacent sides of said coils.

4. A single-phase motor of the commutator type having main field coils for adjacent poles separated by a lug or tooth and connected in parallel circuits, and an impedance in series with one of said coils adapted to produce a relative phase-displacement of the currents in said coils, whereby a commutating field is produced in said tooth.

5. A single-phase motor of the commutator type having main field coils for adjacent poles connected in parallel circuits and means in circuit with said coils for producing a relative displacement of the currents in said coils, whereby a commutating field is produced in the space between the adjacent sides of said coils.

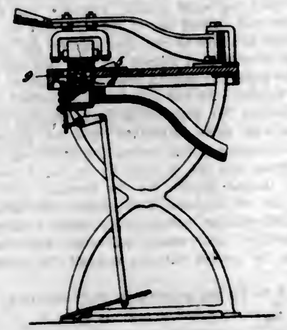
[Claims 6 to 12 not printed in the Gazette.]

897,546. PROCESS OF PREPARING CARBONIC-ACID BATHS. PAUL G. LEBRAM, Berlin, Germany. Filed Nov. 6, 1907. Serial No. 400,975.

1. The process of preparing carbonic acid baths, consisting in adding a formic acid ester of multivalent alcohol to an aqueous solution of a bicarbonate, substantially as described.

2. The process of preparing carbonic acid baths, consisting in adding the mannite ester of formic acid to an aqueous solution of a bicarbonate, substantially as described.

897,547. CIGAR-WRAPPER CUTTER AND ROLLING TABLE. BERNARD LIBERMAN, Philadelphia, Pa. Filed Oct. 30, 1906. Serial No. 341,263.



1. In a cigar wrapper cutter, the combination of a cutting die comprising a band of resilient sheet metal suitably held in the required contour, and a coöperating roller adapted to sweep the cutting edge of the die.

2. In a cigar wrapper cutter, the combination of a cutting die comprising a band of resilient sheet metal suitably held in the required contour, and a coöperating roller adapted to sweep the cutting edge of the die, the said die adapted to yield slightly, due to its resiliency, when first struck by the roller, as and for the purpose specified.

3. In a cigar wrapper cutter, the combination of a cutting die comprising a band of resilient sheet metal and means for forming and holding the same in the required contour, a coöperating roller and a swinging support therefor, the roller adapted to sweep the cutting edge of the die to cause the leaf to be cut thereby, and the die, due to the resiliency of the band forming the same, adapted to yield when first struck by the roller, as and for the purpose specified.

897,548. ARC-LIGHT ELECTRODE AND METHOD OF MAKING THE SAME. CHARLES F. LINDSAY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 10, 1903. Serial No. 184,668.



1. The method which consists in partially reducing a mixture containing iron oxid and titanium oxid, grinding and mixing the partially reduced product, forming electrodes therefrom, and thereafter subjecting said electrodes to a reducing action.

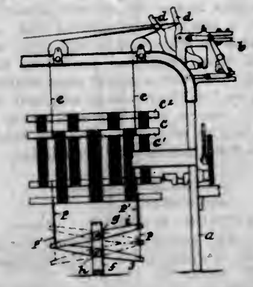
2. The method which consists in subjecting an electrode mixture to a chemical action to partially change it, forming electrodes out of the product, and thereafter continuing the chemical action to still further change the material.

3. The method of forming electrodes, which consists in mixing together different constituent materials, subjecting the mixture to a reducing action, forming electrodes of the resultant mixture, and then subjecting the electrodes to a reducing action.

4. The method of forming electrodes, which consists in producing a mixture of metallic oxids, subjecting the mixture to a reducing action, forming electrodes of the mixture, and subjecting the electrodes to a further reducing action.

5. The process of making arc light electrodes which consists in subjecting metal oxids to a reducing action, then forming electrode pencils of the reduced product and subjecting the pencils to a reducing process.

897,549. LOOM HARNESS MECHANISM. DAVID LINDSAY, Paterson, N. J. Filed Mar. 12, 1908. Serial No. 420,617.

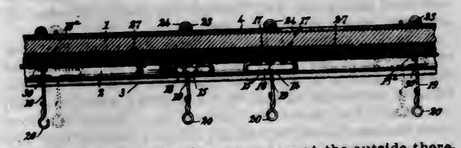


1. The combination, with two harness units, of means for reciprocating them in opposite directions, levers fulcrumed between their ends, and means for connecting one harness unit with one end portion of one lever and the opposite end portion of the other lever and for connecting the other harness unit with the other end portions of said levers, substantially as described.

2. The combination, with two harness units, of means for reciprocating them in opposite directions, superposed levers fulcrumed between their ends, and means for connecting one harness unit with one end portion of one lever and the opposite end portion of the other lever and for connecting the other harness unit with the other end portions of said levers, substantially as described.

3. The combination, with two harness units, of means for reciprocating them in opposite directions, superposed levers fulcrumed between their ends and each having its end portions laterally off-set relatively to each other, and means for connecting one harness unit with one end portion of one lever and the opposite end portion of the other lever and for connecting the other harness unit with the other end portions of said levers, substantially as described.

897,550. CURTAIN-POLE. WILLIAM B. LITTLE, New York, N. Y. Filed Oct. 17, 1907. Serial No. 397,789.



1. A curtain pole, having a run-way at the outside thereof and a longitudinal bore provided with an outwardly opening slot, and curtain hangers having portions arranged to travel in said bore and portions arranged to travel upon said run-way.

2. A curtain pole, having at the upper side a run-way and within the pole a longitudinal bore provided with an outwardly opening slot, and curtain hangers arranged to slide within said bore, said hangers extending through said slot and having arms arranged to travel upon said run-way.

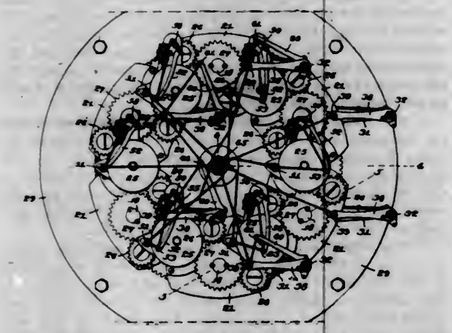
3. A curtain pole, having a run-way and a longitudinal bore provided with an outwardly opening slot, and curtain hangers having portions provided with rollers and arranged to move in said bore, and portions provided with rollers arranged to travel upon said run-way, each of said hangers having means for attaching a curtain thereto at a plurality of points.

4. A curtain pole, having at the upper side a run-way and within the pole a longitudinal bore provided with a downwardly opening slot, and curtain hangers having rollers within said bore and arranged to move longitudinally of the same, said hangers extending through said slot and having upwardly disposed arms provided with rollers and arranged to move longitudinally of said run-way, each of said hangers having means for attaching to a curtain at a plurality of points arranged one above the other.

5. A curtain pole, having at the upper side a groove constituting a run-way, and within the pole a longitudinal bore provided with a downwardly opening slot, and curtain hangers arranged to slide within said bore, said hangers being provided with extensions projecting through said slot and having upwardly arranged arms adapted to travel upon said run-way, said extensions and said arms having eyes adapted to receive curtain pins whereby the curtain is held at a plurality of points above and below the pole.

[Claims 6 to 8 not printed in the Gazette.]

897,551. BRAIDING-MACHINE. JACOB LUNDGREN, Philadelphia, Pa., assignor to Samson Cordage Works, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 4, 1903. Serial No. 179,807.



1. In a machine of the character described, the combination of a set of bobbin carriers, supporting means therefor having a space therebetween, a set of bobbins thereon delivering threads to the braiding point, a second set of bobbins, and means for passing the threads delivered from the second set of bobbins entirely around bobbins of the first named set and between the bobbins of said first named set, and through the spaces between the adjacent bobbin-supporting means.

2. In a machine of the character described, the combination of a set of bobbin-carriers, supporting means therefor having a space therebetween, a set of bobbins thereon delivering threads to the braiding point, a second set of bobbins, means for passing each thread delivered from the second set of bobbins entirely around two bobbins of the first named set, and between the bobbins of said first named set and through the spaces between the adjacent bobbin-supporting means.

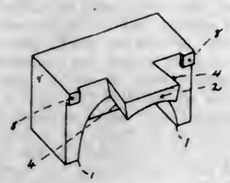
3. In a machine of the character described, the combination of a set of bobbin carriers, supporting means therefor having a space therebetween, a set of bobbins thereon delivering threads to the braiding point, a second set of bobbins, means for passing each thread delivered from the second set of bobbins entirely around two bobbins of the first named set and between the bobbins of the said first named set and through the spaces between the adjacent bobbin supporting means, the two bobbins that are inclosed by the path of one thread of the second set of bobbins being separately inclosed by the paths of two other threads of the second set of bobbins.

4. In a machine of the character described, the combination of a set of bobbin carriers, supporting means therefor having a space therebetween, a set of bobbins thereon delivering threads to the braiding point, a second set of bobbins, a series of thread guides for the threads delivered from the second set of bobbins, means for independently rotating said guides whereby the threads delivered from the second set of bobbins may be passed entirely around bobbins of the first named set and between the bobbins of said first named set and through the spaces between the adjacent bobbin-supporting means.

5. In a machine of the character described, the combination of means for supporting and rotating two sets of bobbins in the same direction and in annular paths around the braiding point, means for directing the threads delivered from one set of bobbins to the braiding point, a series of thread guides for the threads delivered from the other set of bobbins, and means for independently rotating said guides during the bodily rotation of the series, whereby the threads delivered from one set of bobbins may be passed entirely around the bobbins of the other set.

[Claims 6 to 19 not printed in the Gazette.]

897,552. CEMENTITIOUS BUILDING-BLOCK. EDWARD H. MCCLINTOCK, West Somerville, Mass., assignor of one-half to Edward B. Martin, John D. Crosby, and Chester S. Day and one-fourth to Arthur S. Martin, Boston, Mass. Filed June 11, 1906. Serial No. 321,274.



1. A cementitious building block comprising two interengaging components, forming, in their engaged position a block whose under portion has a cored away recess opening from, and largest near, the bottom surface of the block, and extending with a gradually decreasing horizontal area into the upper portion of the same, said components engaging by a tongue extending from the upper surface of one component, and adapted to fit within a corresponding recess in the surface of the other component.

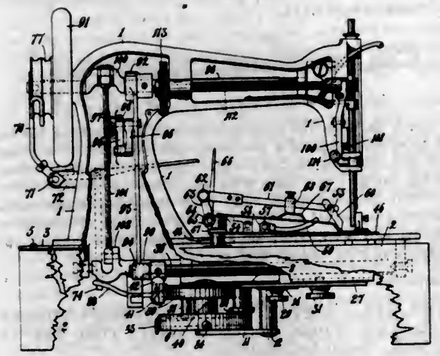
2. A cementitious building block comprising two interengaging components, forming, in their engaged position a block whose under portion has a cored away recess opening from, and largest near, the bottom surface of the block, and extending with a gradually decreasing horizontal area into the upper portion of the same, said components engaging by a tongue extending from the upper surface of one component, and adapted to fit within a corresponding recess in the upper surface of the other component, and being provided with means whereby the said components are separated along their adjacent faces so as to establish passages leading from the recess to the surface of the block.

3. A cementitious building block comprising two interengaging components, forming, in their engaged position a block whose under portion is partially cored away to form a recess opening from, and largest near, the bottom of, said block, the sides of said recess, converging towards the upper portion of said block, the height of said recess being less than that of the block so as to leave the upper surface thereof substantially entire; said components engaging by a tongue laterally extending from the upper surface of one component, and adapted to fit within a corresponding recess in the surface of the other component.

4. A cementitious building block comprising two interengaging components, forming, in their engaged position, a block whose under portion has a cored-away arch shaped recess contained in part in each component, said components engaging by a tongue integral with crown of one component and adapted to fit within a corresponding recess in the crown of the other component.

5. A cementitious building block comprising two interengaging components forming in their engaged position a block whose under portion is partially cored away to form an arch shaped recess contained in part in each component, said components engaging by a tongue integral with, and projecting from the crown of one component and adapted to fit within a corresponding recess in the crown of the other component, and having spacing devices whereby said components are separated along their adjacent faces so as to establish passages leading from the recess to the surface of the block.

897,553. SEWING MACHINERY. CARL J. PALSSON, Christiania, Norway, assignor to Carl Gunnar Anderson, Göttenborg, Sweden. Filed Jan. 25, 1907. Serial No. 353,984.

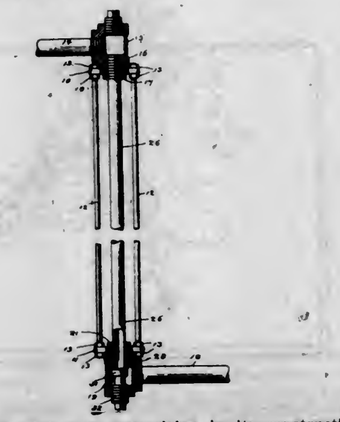


1. In a sewing machine, the combination of a frame carrying the stitching mechanism including a needle-bar, of means adapted to actuate said frame bodily so as to impart to it a motion to cause the needle bar to move along the outline of a button-hole, means adapted to impart to the needle-bar a lateral vibration, means for throwing the frame-operating means into or out of operation, and means for throwing the needle-bar-vibrating means into or out of operation, substantially as and for the purpose set forth.

2. In a sewing machine, the combination of a table, a stitching frame movable bodily in relation to the said table, a needle-bar carried by the said frame, a mechanism adapted to actuate the said frame so as to impart thereto a motion causing the needle bar to move along the outline of a button-hole, a mechanism adapted to impart to the needle-bar a lateral vibration adapted for side stitching, a stationary work-holding clamp detachably secured to the table, means for throwing the frame-operating mechanism into or out of operation, and means for throwing the needle-bar-vibrating mechanism into or out of operation, substantially as and for the purpose set forth.

3. In a sewing machine, the combination of a table, a stitching frame slidably mounted on the said table, a needle-bar carried by the said frame, a mechanism adapted to actuate the said frame bodily so as to impart thereto a motion causing the needle-bar to move along the outline of a button-hole, a mechanism adapted to impart to the needle-bar a lateral vibration adapted for side stitching, a stationary work-holding clamp detachably secured to the table, means for throwing the frame-operating mechanism into or out of operation, and means for throwing the needle-bar-vibrating mechanism into or out of operation, substantially as and for the purpose set forth.

897,554. AUTOMATIC TRAP. IRVING H. PECK and WILLIAM D. HAGGERTY, Derby, Conn. Filed Feb. 26, 1908. Serial No. 417,843.



1. An automatic trap comprising in its construction two heads having connections for inlet and outlet pipes respectively, said heads having flat opposing faces, cross-heads mounted against said flat faces, sleeves passing through said cross heads into the first mentioned inlet and outlet heads, said sleeves having heads engaging said cross heads to bind them against the inlet and outlet heads, rods connecting said cross heads, a tube secured to one of said sleeves and mounted to slide in the other sleeve, and a valve opposite the sliding end of said tube.

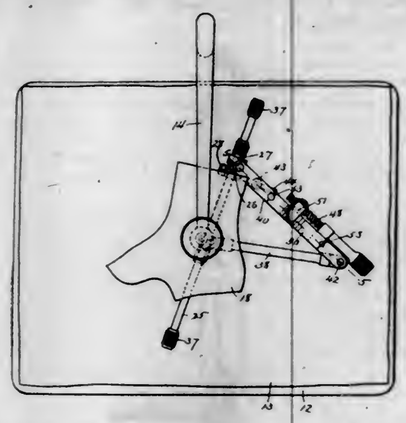
2. In an automatic trap, the combination with upper and lower cross-heads, rods connecting said cross-heads, upper and lower heads, inlet and outlet pipes engaging said heads respectively and sleeves having heads clamping the cross heads to said upper and lower heads, of a valve adjustably secured in the lower head and a tube rigidly secured in the upper sleeve and extending through the lower sleeve and provided at its lower end with a valve seat which engages the valve to prevent escape of steam when the tube is expanded and permits escape of water of condensation when the tube is contracted.

897,555. MACHINE FOR GRADING PATTERNS. ALBERT F. PRESTON, Boston, Mass. Filed Oct. 26, 1907. Serial No. 399,250.

1. A pattern grading machine, comprising a pattern, means for holding the pattern elevated above the stock to be marked, and separated from the latter by a working space, a traveler movable progressively around the pattern, and radially toward and from a point within the area of said pattern, a single operating tool mounted to move with the traveler and also mounted to move radially toward and from the traveler, one of the parts, termed respectively the traveler and operating tool, being located in said space, and automatic means governed by radial movements of the traveler for proportionally varying the radial distance between the traveler and the tool.

2. A pattern grading machine, comprising a pattern, means for holding the pattern elevated above the stock to be marked, and separated from the latter by a working space, a traveler movable progressively around the pattern, and radially toward and from a point within the area of said pattern, a single operating tool mounted to move with the traveler and also mounted to move radially toward and from the traveler, one of the parts, termed respectively the traveler and operating tool, being located in

said space, automatic means governed by radial movements of the traveler for proportionally varying the radial distance between the traveler and the tool, said means permitting the initial radial distance between the traveler and tool to be manually varied.



3. A pattern grading machine, comprising a pattern, means for holding the pattern above the stock to be marked, and separated from the latter by a working space, a traveler movable progressively around the pattern, and radially toward and from a point within the area of said pattern, a single operating tool mounted to move with the traveler, and also mounted to move radially toward and from the traveler, one of the parts, termed respectively the traveler and operating tool, being located in said space, carriers for said traveler and tool, means for supporting and guiding said carriers, said means including a movable member to which one of the carriers is affixed and on which the other carrier is movable, and automatic means governed by movements of the said member for varying the distance between said carriers.

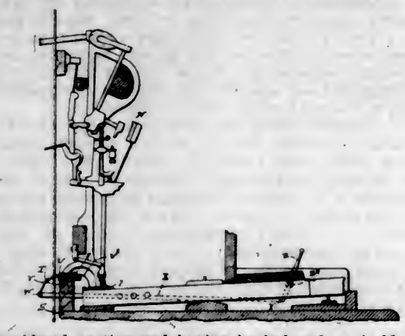
4. In a pattern grading machine, in combination, a pattern and means for holding it elevated above the pattern stock, and separated from the latter by a working space, and grading mechanism coöperating with the pattern, and including a single operating tool and a traveler, one of the parts, termed respectively the traveler and operating tool, being located in said space, said parts being interchangeable with each other to permit grading either upwardly or downwardly from the pattern.

5. In a pattern grading machine, in combination, a pattern and means for holding it elevated above the pattern stock, and separated from the latter by a working space, and grading mechanism, including a single operating tool, adapted to move in said space radially toward and from a point within the area of said pattern, and means coöperating with said tool to cause the latter to mark on the pattern sheet a proportional outline of greater area than the pattern and surrounding the same.

[Claims 6 to 22 not printed in the Gazette.]

897,556. TOUCH-REGULATOR FOR PIANOS. CLARENCE E. PRYOR, Binghamton, N. Y. Filed Apr. 25, 1907. Serial No. 370,311.

A touch regulator for pianos and the like instruments comprising in combination with a longitudinal support arranged adjacent the rear inner ends of the keys, a bar hinged along one edge to said support, a lever arm carried by the end of said bar, means connected to said lever arm to rock the bar upon its pivotal center, and springs carried by the bar, said springs overhanging and adapted to engage the inner ends of the keys the bar having a longitudinal groove in its under face and being shouldered inward from the upper outer edge thereof, the springs being passed through the material of the bar at the base of the



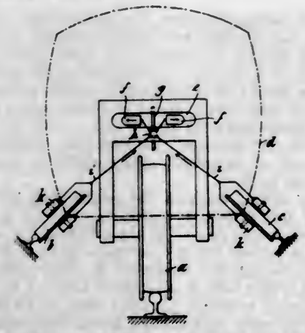
shouldered portion and having hooked ends embedded in the grooved portion in the under face of the bar.

897,557. HOLDBACK OR BREECHING STRAP. GEORGE F. RICE, Holliston, Mass. Filed Feb. 26, 1908. Serial No. 417,811.



In a harness, the coubination with a breeching having a breeching ring, of a breeching strap secured at one end to said ring and having a buckle secured to said breeching strap on its outer side with the tongue thereof directed toward the breeching ring, said breeching strap being doubled on itself to form a loop to engage the shaft or holder and the end of said strap being passed through the breeching ring and secured to the buckle.

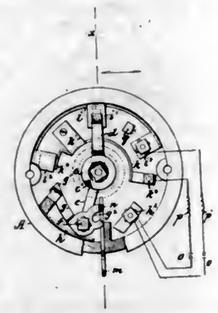
897,558. SUPPORT FOR MONOTRACK-VEHICLES. RICHARD SCHERL, Berlin, Germany. Filed May 21, 1908. Serial No. 434,071.



1. In a device for raising and lowering supporting wheels in a monotrack vehicle the combination of central wheels, supporting wheels laterally arranged on the vehicle, means for lifting the lateral wheels when the vehicle is running at normal speed and for automatically lowering the said wheels when the vehicle slows down or stops so that the vehicle normally runs on the central wheels only.

2. In a device for raising and lowering supporting wheels in a monotrack vehicle the combination of central wheels, supporting wheels laterally arranged on the vehicle, a centrifugal governor to lift the lateral wheels when the vehicle is running at normal speed and automatically to lower the said wheels when the vehicle slows down or stops so that the vehicle normally runs on the central wheels only.

897,559. SWITCH. LAWRENCE B. STEVENS, Rutherford, N. J. Filed June 1, 1906. Serial No. 319,682.



1. An electric switch, comprising a rotatable contact spring provided with a locking member, an electrical connection leading from said spring to a source of electrical supply, a cut-out in said connection, said cut-out being provided with a locking member, means for operating said cut-out to break said connection and lock said spring against rotation.

2. An electric switch, comprising a rotatable contact spring, an electrical connection leading from said spring and provided with means for connection with an electric circuit, a locking member secured to said contact spring, a locking cut-out in said electrical connection and a key for operating said cut-out to break said connection and lock said contact spring against rotation.

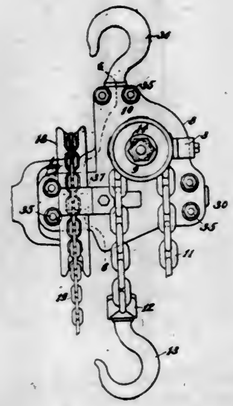
3. In an electric switch, the combination with a plurality of conductors leading from a plurality of sources of electrical supply, a contact spring designed for electrical connection with each of said conductors in succession, a common return conductor leading to said sources of electric supply, said return conductor being provided with a cut-out, having a locking member, and means for operating said cut-out to interrupt the circuit through said return conductor and lock said contact spring out of contact with said plurality of conductors.

4. In an electrical switch, the combination with a plurality of electrical supply conductors and a common return conductor, of a rotating contact spring for connecting each of said supply conductors with said return conductor, a locking member rigidly secured to said contact spring, and a pivoted cut-out in said return conductor, said cut-out having a locking member, and means for actuating said cut-out to interrupt the circuit through said return conductor and lock said contact spring against rotation.

897,560. CHAIN HOIST. JOSEPH J. STOSICK, South Milwaukee, Wis. Filed June 24, 1907. Serial No. 380,388.

1. In a chain hoist, a casing, a worm wheel connected to said casing, a load lifting means connected to said worm wheel, a worm for moving the worm wheel, a shaft upon which said worm is mounted, means for rotating said shaft to move said worm into mesh with the worm wheel without lateral movement of the shaft and to operate the load lifting means, and means for moving the worm out of mesh with the worm wheel by a movement of said worm wheel.

2. In a chain hoist, a casing, a worm wheel connected to said casing, a load lifting means connected to said worm wheel, a worm for moving the worm wheel, a shaft upon which said worm is mounted, means for rotating said shaft to move said worm into mesh with the worm wheel by a longitudinal movement of the worm on said shaft and to operate the load lifting means, and means for moving the worm out of mesh with the worm wheel by a movement of said worm wheel.



3. In a chain hoist, a casing, a worm wheel connected to said casing, a load lifting means connected to said worm wheel, a worm for moving the worm wheel, a shaft upon which said worm is mounted, keyed connections between said worm and shaft, means for rotating said shaft to move said worm into mesh with the worm wheel without lateral movement of the shaft and to operate the load lifting means, and means for moving the worm out of mesh with the worm wheel by a movement of said worm wheel.

4. In a chain hoist, a casing, a worm wheel connected to said casing, a load lifting means connected to said worm wheel, a worm for moving the worm wheel, a shaft upon which said worm is mounted, means for rotating said shaft to move said worm into mesh with the worm wheel without lateral movement of the shaft, means for moving the worm out of mesh with the worm wheel by a movement of said worm wheel, and other means for giving the worm a further movement.

5. In a chain hoist, a casing, a worm wheel connected to said casing, a load lifting means connected to said worm wheel, a worm for moving the worm wheel, a shaft upon which said worm is mounted, keyed connections between the worm and the shaft, means for rotating said shaft to move said worm into mesh with the worm wheel by a longitudinal movement of the worm on said shaft, means for moving the worm out of mesh with the worm wheel by a movement of said worm wheel, and spring actuated means for giving the worm a further longitudinal movement.

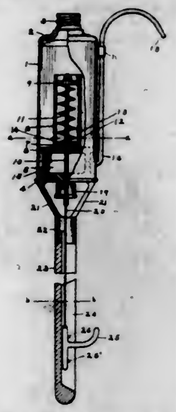
[Claims 6 to 12 not printed in the Gazette.]

897,561. OILER. JOHN E. THRON, Philadelphia, Pa. Filed Oct. 21, 1907. Serial No. 398,343.

1. An oiler comprising a reservoir having a discharge pipe, a pump cylinder disposed within the reservoir, a piston within the pump cylinder, a clapper valve arranged at the lower end and in the walls of the said cylinder, a frame connecting the cylinder and the reservoir at the lower end thereof, a piston-rod, a stuffing box connected with the frame, a handle of indeterminate length attached to the frame, an operating hook and connecting means between said hook and said piston rod, all substantially as shown and described.

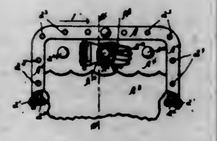
2. In combination with an oiler comprising a cylindrical casing, a discharge pipe connected therewith, a pump within the casing and operative means combined therewith, of a frame partly below and within said casing, said

frame having a chamber communicating with the said pump, and a handle of indefinite length, all substantially shown and described.



3. In an oiler of the class described, the combination with a casing and pump therein, of an integral hollow frame having communicating passages between the pump and discharge outlet, said frame forming the connecting means between the casing and its handle, all substantially as shown and described.

897,562. PURSE-CLASP-LOCKING DEVICE. LOUIS TUORTO, Lancaster, Pa. Filed Nov. 4, 1907. Serial No. 400,512.



1. In a purse or bag frame of the class described, composed of two hinged members, one member formed with a frame-plate, carrying a movable catch-plate, formed with a rearwardly projecting catch-lip, and forwardly projecting actuating studs, projecting through guide slots in the frame-plate and terminating in beveled heads, means for retaining said catch-plate in a locked position, and means for concealing the head of the main or central stud for the purpose set forth.

2. In a purse or bag frame of the class described, the combination, of two hinged frame members, a frame-plate secured and forming part of one of said members, a movable catch-plate secured upon the inner surface of said frame-plate, a keeper-plate rigidly secured to the inner surface of said frame-plate, and partly overlapping said catch-plate, a spring-bearing stud mounted upon the catch-plate, a spring-bearing stud mounted upon the inner surface of said frame-plate, a spring-retaining stud mounted upon the inner surface of said frame-plate, a coiled spring embracing said spring-retaining stud, and having its extending ends in contact with the spring-bearing studs, for the purpose set forth.

3. In a purse or bag frame of the class described, comprising two hinged frame members, a frame-plate forming part of one of said members, guide slots extending through said frame-plate, hinge-lugs projecting from the outer face of said frame-plate, coacting with hinge-lugs formed upon an embossed catch-cover and pivoted to the same by a hinge-pin, a coiled spring embracing said hinge-pin and having extending arms, one bearing against the outer surface of the frame-plate and the other against the inner surface of the catch-cover, a catch-plate secured to the inner edge of the embossed catch-cover and a catch-stud formed with a head engaging the guide slots, for the purpose set forth.

897,563. RING CUTTER. JOHN H. TURCOTTE, Springfield, Mass. Filed Mar. 9, 1908. Serial No. 419,852.



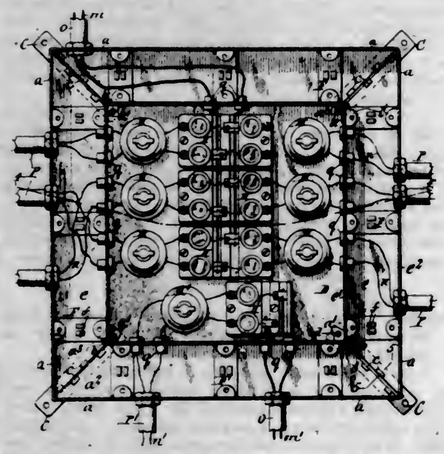
1. As a new article of manufacture, a ring adapted to fit a digital member and having an indentation in its periphery which indentation extends into one edge without cutting into the other edge of said ring, for the purpose set forth.

2. As a new article of manufacture, a ring adapted to fit a digital member and having a plurality of transverse slots in the edges of said ring, for the purpose set forth.

3. As a new article of manufacture, a ring adapted to fit a digital member and having a plurality of transverse undercut slots in the edges of said ring, for the purpose set forth.

4. As a new article of manufacture, a ring adapted to fit a digital member and having transverse slots of different sizes in the edges of said ring, for the purpose set forth.

897,564. PANEL-BOX. FRANK S. WAHL, Olean, N. Y. Filed Apr. 29, 1907. Serial No. 370,818.



1. A panel box having a gutter inclosing frame composed of L-shaped corner sections and straight side sections interposed between the corner sections, substantially as set forth.

2. A panel box having a gutter inclosing frame composed of corner sections and side sections interposed between the corner sections, said corners having L-shaped bodies and covers and said side sections having straight bodies and covers, substantially as set forth.

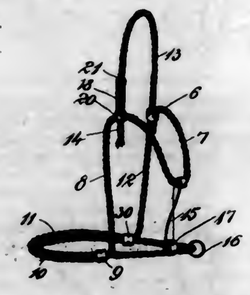
3. A panel box having an inclosing frame composed of a plurality of gutter sections which are arranged end to end, and means for detachably connecting adjacent sections, substantially as set forth.

4. A panel box having an inclosing frame composed of a plurality of gutter sections which are arranged end to end, and means for detachably connecting adjacent sections consisting of coupling pieces arranged across the joints between said sections and lugs arranged on one of said parts and engaging with openings in the other part, substantially as set forth.

5. A panel box having an inclosing frame composed of a plurality of sheet metal gutter sections which are arranged end to end, and means for detachably connecting adjacent sections consisting of U-shaped coupling pieces arranged with said sections across the joints between the same and having openings, and bendable lugs which are arranged on said sections and which are passed through said openings and clenched against the coupling pieces, substantially as set forth.

[Claims 6 to 17 not printed in the Gazette.]

897,565. ROPE HALTER. CHARLES WALKER, Chicago, Ill. Filed Oct. 17, 1907. Serial No. 397,886.



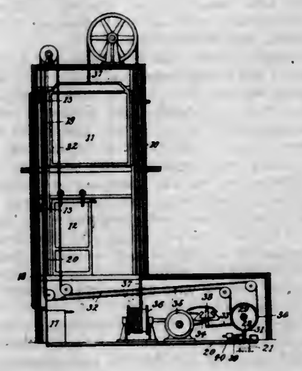
1. A halter comprising a rope bent to form loops to extend around the throat and nose of the animal, and a holder for the free end of the rope consisting of a bar having rings at opposite ends through which the rope is bent and a transverse tube through which the rope extends at one end of the throat loop.

2. In a rope halter, a fastening for the rope consisting of a bar having rings at opposite ends through which the rope extends, the ring at one end being in the same plane as the bar and that at the other end projecting from the side of the bar, the bar having an intermediate lug over which the rope is bent, and also having an integral transverse tube through which the rope passes, on the side of the bar opposite said projecting ring.

3. A halter comprising a single piece of rope bent to form in succession a single throat loop, a cheek piece extending down one side, a continuous nose loop, a cheek piece extending up the other side, a single crown loop, connections between the crown loop and the cheek pieces and throat loop, one of which connections is adjustable, and connecting rings between the cheek pieces and the nose loop.

897,566. SAFETY DEVICE FOR CONVEYANCES. FREDERICK W. A. WIESEBROCK, New York, N. Y. Filed June 17, 1907. Serial No. 379,316.

A device of the character described, comprising a compressed air tank, a casing communicating therewith, an inclosed tubular door-controlled plunger having a circumferential groove and an exhaust port, a pipe adapted to communicate at one end with said groove and port, a cylinder communicating with the other end of the pipe, an inclosed piston, a wheel controlled by the piston, and



means controlled by the wheel for operating a conveyance, substantially as specified.

897,567. TURBINE. ARTHUR C. WOOD, Waukegan, Ill. assignor of one-half to Justin K. Orvis, Waukegan, Ill. Filed Feb. 21, 1908. Serial No. 417,007.



1. In a turbine engine, the combination of a casing comprising a shell and heads therefor provided with shaft bearings, a shaft mounted to rotate in said bearings, a drum secured to rotate with said shaft inside of said casing, said drum comprising a central hub and vanes secured to the perimeter thereof, a plurality of driving fluid chests on the front casing head, provided with chambers connected to form different series, the chambers of different series being provided, respectively, with inclined ports, the ports of each series of chambers being inclined in the same direction and of different series in opposite directions.

2. In a turbine engine, the combination of a casing comprising a shell and heads therefor provided with shaft bearings, a shaft mounted to rotate in said bearings, a drum secured to rotate with said shaft, said drum comprising a central hub and vanes secured to the perimeter thereof, said vanes comprising a plurality of series, a plurality of driving fluid chests on the front casing head each provided with chambers which extend over the different series of vanes and which are connected to form different series, the different series of chambers being provided, respectively, with inclined ports for each series of vanes, the ports of each series being inclined in the same direction and of different series in opposite directions.

3. In a turbine engine, the combination of a casing comprising a shell and heads therefor provided with shaft bearings, a shaft mounted to rotate in said bearings, a drum secured to rotate with said shaft inside of said casing, said drum comprising a central hub and vanes secured to the perimeter thereof, a plurality of driving fluid chests on the front casing head, provided with chambers connected to form different series, the chambers of different series being provided, respectively, with inclined ports, the ports

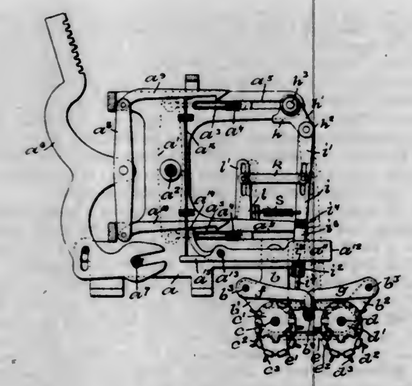
of each series being inclined in the same direction and of different series in opposite directions, a supply pipe connected to both of said series of chambers and means for controlling said supply pipe, whereby communication thereof with either of said series of chambers may be separately effected.

4. In a turbine engine, the combination of a casing comprising a shell and heads therefor provided with shaft bearings, a shaft mounted to rotate in said bearings, a drum secured to rotate with said shaft inside of said casing, said drum comprising a central hub and vanes secured to the perimeter thereof, a plurality of driving fluid chests on the front casing head, provided with chambers connected to form different series, the chambers of different series being provided, respectively, with inclined ports, the ports of each series of chambers being inclined in the same direction and of different series in opposite directions, a supply pipe connected to both of said series of chambers and a three-way cock for controlling said supply pipe whereby communication thereof with either of said series of chambers may be separately effected.

5. In a turbine engine, the combination of a casing comprising a shell and heads therefor provided with shaft bearings, a shaft mounted to rotate in said bearings, a drum secured to rotate with said shaft inside of said casing, said drum comprising a central hub and vanes secured to the perimeter thereof, a plurality of driving fluid chests on the front casing head, provided with chambers connected to form different series, the chambers of different series being provided, respectively, with inclined ports, the ports of the same series of chambers being inclined in the same direction and of different series in opposite directions, and the rear head of the engine casing being provided with exhaust ports located equidistant between the steam chests on the front casing head, whereby the engine will work on the same expansion in both directions of rotation.

[Claims 6 to 8 not printed in the Gazette.]

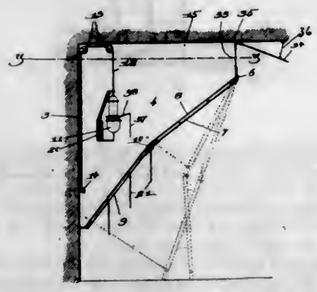
897,568. LOOM-DOBBY. EUGENE H. BALLOU, Pawtucket, R. I., assignor of one-half to Lorraine Manufacturing Company, Pawtucket, R. I., a Corporation of Rhode Island. Filed Dec. 27, 1905. Serial No. 293,443.



1. In a loom dobby comprising dobby frame indicator fingers and a swinging frame *i* having the arms *i' i'* supporting the lower cross bar i^2 in which are the vertical holes i^3 i^3, said frame also provided with an upper cross bar i^4 and vertical connecting bars i^5 i^5 between the upper and lower cross bars forming the openings i^6 i^6 for the indicator fingers of the dobby, pins i^7 i^7 in the holes i^3 i^3 and having the heads i^8 i^8 in the openings i^6 i^6, means for pivotally securing the swinging frame *i* to the dobby frame, means for swinging the frame at predetermined intervals, the pattern chain, the auxiliary pattern chain, and means for alternately connecting the pins i^7 i^7 with a pattern chain or an auxiliary pattern chain.

2. The combination with a loom dobby, of frames *b b* secured to the dobby frame, rods b^2 b^2 supported the frames *b b*, a bar b^4 supported in the frames, *b b*, a shaft *c* supported in bearings in the frames *b b*, a sprocket wheel *c'* secured to the shaft *c*, a pattern chain c^2 on the sprocket wheel *c'* and having the pegs c^3 c^3, a shaft *d* supported in bearings in the frames *b b*, a sprocket wheel *d'* secured to the shaft *d*, an auxiliary pattern chain d^2 on the sprocket wheel and having the pegs d^2 d^3, a sprocket wheel *e'* secured to the shaft *c*, a sprocket wheel e^2 secured to the shaft *d*, chain *e* connecting the sprocket wheels *e'* and e^2, a series of indicator levers *f f* pivotally secured to the rod b^3 over the pattern chain c^2, a series of indicator fingers, a series of auxiliary indicator levers *g g* pivotally secured to the rod b^3 over the pattern chain d^2, brackets *h h* secured to the frame of the dobby each having the arm *h'* with the end bearing h^2, a swinging frame *i* having the arms *i' i'* pivotally secured to the bearing h^2 in the bracket *h* and supporting the lower cross bar i^2 in which are the vertical holes i^3 i^3, said frame also provided with an upper cross bar i^4, and vertical connecting bars i^5 i^5 between the upper and lower cross bars forming the openings i^6 i^6 for the indicator fingers of the dobby, pins i^7 i^7 in the holes i^3 i^3 and having the heads i^8 i^8 in the openings i^6 i^6, a link *k* pivotally secured to the rear arm *i'* of the frame *i*, a bell crank lever *l* pivotally connected to the link *k*, a coiled spring *s* connected to the frame *i* and to the frame of the dobby, and means for operating the bell crank lever *l* at predetermined intervals.

897,569. MEANS FOR PRODUCING ARTIFICIAL LIGHT FOR PHOTOGRAPHERS' USE. FRANK E. BARENTZEN, Malden, Mass., assignor to William G. Burns, Boston, Mass. Filed Nov. 10, 1906. Serial No. 342,774.



1. In apparatus for producing artificial skylight effects, the combination with a room or space for the object to be photographed, of a closed compartment separated from said room by a partition of translucent light-diffusing material, an artificial light situated within said compartment, and a plurality of supplemental screens mounted on said partition and arranged so that the amount of light transmitted to the object to be photographed through different parts of the partition may be varied.

2. In a device of the class described, the combination with an artificial light, of a translucent light-diffusing screen adjustably mounted to vary the angular relation thereof to a horizontal plane.

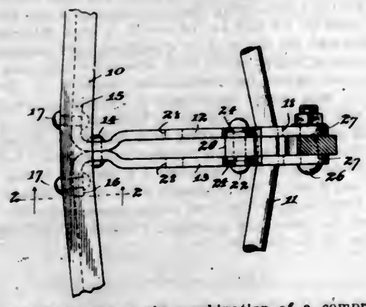
3. A device for producing artificial skylight effects comprising a chamber, one side of which is adjustable relative to the other sides and is composed of a translucent light-diffusing medium and an artificial light within the chamber.

4. A device of the class described comprising two wings extending laterally from the wall of a room and reaching to the ceiling, a translucent screen extending from one wing to the other and with said wings dividing the room into a space to receive the object to be photographed and a light-containing chamber, and an artificial light between the wings and within the light-containing chamber.

5. A device of the class described comprising two wings extending laterally from the wall of the room and reaching to the ceiling, a frame hinged to the wings and covered with translucent light-diffusing material and an artificial light back of the frame between the wings.

[Claims 6 to 10 not printed in the Gazette.]

897,570. BRAKE-BEAM STRUT AND FULCRUM. EDWARD H. BAUER, Hammond, Ind., assignor to Simplex Railway Appliance Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 11, 1907. Serial No. 401,686.



1. In a brake beam, the combination of a compression bar, a tension member, a strut between said compression bar and said tension member and composed of a pair of bars secured together and having their ends bent in opposite directions, said bent ends lying against and fastened to said compression bar, and a saddle or seat on which said tension member bears associated, with said bars, substantially as described.

2. In a brake beam, the combination of a compression bar, a tension member, a strut between said compression bar and said tension member and having portions spaced apart, said spaced-apart portions having apertures therethrough, and a seat or saddle on which said tension member bears having parts located in the apertures of said strut and bearing against the walls thereof, said tension member passing through said apertures, substantially as described.

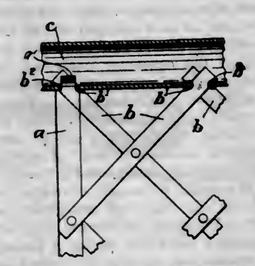
3. In a brake beam, the combination of a compression bar, a tension member, a strut between said compression bar and said tension member and having apertured portions spaced apart, and a seat or saddle on which said tension member bears located between and riveted to the spaced-apart portions of said strut and having projections located in the apertures of said strut and bearing against their walls, said tension member passing through said apertures, substantially as described.

4. In a brake beam, the combination of a compression bar, a tension member, a strut between said compression bar and said tension member and having apertured portions spaced apart, and a saddle or seat on which said tension member bears located between and riveted to said spaced-apart portions of said strut and having projections located in said apertures and bearing against their walls, said seat or saddle also having means for attachment of a brake beam hanger thereto, substantially as described.

897,571. RAILING. WILLIAM BAYLEY, Springfield, Ohio. Filed June 26, 1907. Serial No. 380,978.

1. In a rail structure, a hand rail having a series of openings, angularly arranged bars in said openings adapted to be moved in opposite direction so that their sides will impinge against said hand rail on opposite sides of the opening, substantially as specified.

2. In a rail structure, a hand rail having a series of slotted openings, angularly arranged bars in said openings adapted to be moved in opposite directions, and their sides impinging against the portions of said hand rail, as specified.

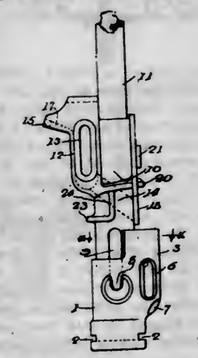


3. In a railing, a hand rail having slotted openings throughout its length, a series of bars having notches at their ends adapted to slip into said openings at substantially right angles thereto and secured in their positions by being turned in opposite directions until the said notches engage the upper and lower sides of said rail, substantially as specified.

4. In a rail structure, a longitudinal bar having perforations, a series of transverse bars extending in opposite directions at an angle to said longitudinal bar, said transverse bars having notches on opposite sides adapted when turned to an angular position to engage the outer and inner side of said longitudinal bar, substantially as specified.

5. In a railing, a hand rail having openings throughout its length, two bars for each opening pivoted together at a point near one of their ends, said pivoted ends being adapted to be slipped into said openings and the bars secured in their positions by being turned in opposite directions until the sides of said bars engage with said railing, substantially as specified.

897,572. TORPEDO-CANE. ROSCOE BEAN, Berea, Ohio. Filed Apr. 19, 1907. Serial No. 369,043.



1. A device of the character described comprising an explosion head, a plunger adapted to reciprocate therein, a magazine carried by said plunger provided with an outlet and having an opening of less width than the diameter of said outlet extending from the point near the bottom of said magazine, and means for feeding the contents of said magazine to said explosion head.

2. A device of the character described comprising an explosion head, a plunger adapted to reciprocate therein, a magazine carried by said plunger provided with an outlet on one side thereof and having a slot extending upward from a point near the bottom of said magazine on the side opposite said outlet, and means for feeding the contents of said magazine to said explosion head.

3. A device of the character described comprising an explosion head, a plunger adapted to reciprocate therein, a magazine carried by said plunger and provided with an

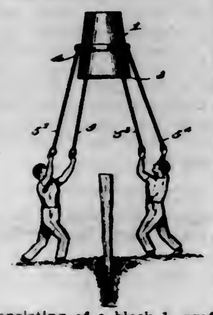
inlet opening and an outlet opening, a lip extending outwardly beneath said inlet opening, a slot formed in said magazine and extending from a point near the bottom thereof to said inlet opening, thence outwardly to a point near the outer end of said lip, and means for feeding the contents of said magazine to said explosion head.

4. A device of the character described comprising an explosion head, a magazine, a plunger reciprocably mounted in said explosion head having a passage extending transversely thereof and adapted to connect said magazine with said explosion head, and a cut-off carried by said plunger, extending across one end of said passage and adapted to be engaged by said head and moved out of alinement with said passage when said device is operated.

5. A device of the character described comprising an explosion head, a magazine, a plunger reciprocably mounted in said explosion head and having a passage extending transversely thereof and adapted to connect said magazine with said explosion head, and a plate carried by said plunger, extending across one end of said passage and adapted to be engaged by said head and moved out of alinement with said passage when said device is operated.

[Claims 6 to 11 not printed in the Gazette.]

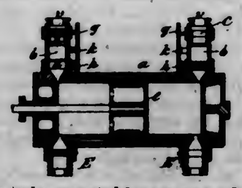
897,573. MALL FOR DRIVING POSTS INTO THE GROUND. TAYLOR R. BEARD, Malvern, Ark. Filed Oct. 22, 1907. Serial No. 398,586.



1. A mall, consisting of a block 1, preferably tapering, and larger at its bottom than at its top; headed bolts 2, passing horizontally through said mall; an iron plate 3, secured to the lower face of said block; a band 4, securely fastened around said block about midway between its upper and lower ends; bearings 4^1, 4^2, 4^3, and 4^4, secured to the outer face of said band, and handles 5^1, 5^2, 5^3, and 5^4, hinged in said bearings, respectively, said handles arranged in pairs opposite each other, substantially as shown and described and for the purposes set forth.

2. A mall, consisting of a block; an iron plate secured to the lower face of said block; a band, secured around said block about midway between its upper and lower ends; bearings, secured in pairs to the outer face of said band, and handles hinged in said bearings, substantially as shown and described and for the purposes set forth.

897,574. VALVE MECHANISM FOR FLUID-MOTORS. ALBERT BECHT, Paris, France. Filed Mar. 31, 1904. Serial No. 201,007.

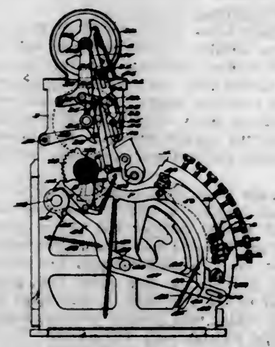


1. A motor to be operated by a gaseous fluid under pressure, having a measuring chamber through which the fluid must pass on its way to the motor, a cock between said chamber and the motor, a cock between said chamber and the source of supply of the fluid, means for differently operating these cocks, so as to avoid wire-drawing the fluid, and means for varying the capacity of the said chamber.

2. A motor to be operated by a gaseous fluid under pressure, having a measuring chamber through which the fluid must pass on its way to the motor, a cock between said chamber and the motor, a cock between said chamber and the source of supply of the fluid, means for differently operating these cocks, and means for varying the capacity of the said chamber, said means comprising a movable plunger, adapted to move into and out of said chamber, and means for equalizing the pressure on said plunger.

3. A motor to be operated by a gaseous fluid under pressure, having a measuring chamber through which the fluid must pass on its way to the motor, a cock between said chamber and the motor, a cock between said chamber and the source of supply of the fluid, means for operating these cocks, and means for varying the capacity of the said chamber, said means comprising a cylinder *n*, branching from said chamber, a plunger *p* in said cylinder, a stem on said plunger for operating it, a cylinder *o* alined with the cylinder *n*, a partition between said cylinder and said chamber having in it an aperture *t*, a piston *u* in the cylinder *o* and fixed on the prolonged stem of the plunger, and pipes which supply the fluid under pressure to the outer ends of the respective cylinders *n* and *o*, to equalize the pressure on the plunger.

897,575. CASH-REGISTER. FRANK H. BICKFORD, Dayton, Ohio, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (Incorporated in 1906.) Filed Apr. 7, 1899. Serial No. 712,049. Renewed Nov. 29, 1907. Serial No. 404,375.



1. The combination with a series of keys, a detent for said keys, an indicator, a movable spring actuated member for operating said indicator, devices moved by the keys for positioning the spring actuated member, means for latching said member and an operating mechanism common to said latching means and the key detent.

2. In a cash register, the combination with a series of keys, of an indicator, a rack bar for operating said indicator, a pivoted segment arranged to be operated by said keys, a printing device connected to said segment and means connecting the segment and rack bar whereby the segment moves the bar but the latter may move independently of said segment.

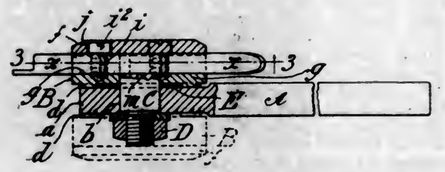
3. In a cash register, the combination with a series of operating keys, a pivoted segment, an indicator, a rack bar for operating said indicator formed with an elongated slot, a pivoted lever carrying a pin which projects into said slot and means for connecting said lever and segment.

4. In a cash register, the combination with a series of keys, of a pivoted segment arranged to be operated by the same, an indicator, a rack bar for operating said indicator formed with an elongated slot, and ratchet teeth, a pivoted lever carrying a pin which projects into said slot, a pawl arranged to engage the ratchet teeth and means connected to the movable parts of the machine for operating said pawl.

5. In a cash register, the combination with a series of keys, of a pivoted segment arranged to be struck and operated by said keys, a slidable rack bar having an elongated slot formed therein, a pivoted lever arranged to be operated by the segment and carrying a pin which projects into said slot, devices for holding the slidable rack in the position to which it is adjusted independently of said segment and an indicator arranged to be operated by said rack bar.

[Claims 6 to 16 not printed in the Gazette.]

897,576. TURRET TOOL-HOLDER. FRANK E. BOCORSELSKI, Springfield, Mass. Filed June 20, 1908. Serial No. 439,568.



1. In a turret tool holder, in combination, a holder-bar having a transverse aperture through its end portion, an annular member provided within its one face portion with a plurality of differently radially extending tool receiving grooves opening to the outer edge of such member, and having screw holes parallel with its axis adjacent said grooves, headed screws the threaded shanks of which engage in said holes while edge portions of their heads overlie the grooves for individual confinements of the tools in the grooves, a stud having at one end an enlarged head provided with a plurality of apertures at points outside of the stud in which the heads of said screws are respectively accommodated, and said stud having a threaded portion at its other end, and extended centrally through the said annular member and through the holder-bar aperture, and a binding nut screw-engaged on the threaded end portion of the stud and seating against the end portion of the holder bar.

2. In a reversible turret tool holder, in combination, a holder-bar having a transverse hole through its end portion and having its opposite face surrounding the ends of said hole radially serrated, an annular member provided within its one face portion with a plurality of differently radially extending tool receiving grooves all opening to the outer edge of such member, and having its side opposite its grooves serrated, a stud, having an enlarged head at one end and a threaded portion at its other end, extended centrally through the said annular member and through the holder-bar aperture, and a binding nut screw engaged on the threaded end portion of the stud.

897,577. BARREL-GRIP FOR REVOLVERS AND OTHER PISTOLS. GEORGE C. BOUANE, Worcester, Mass. Filed June 15, 1907. Serial No. 379,191.

1. A pistol provided with a barrel grip located beneath the barrel at the muzzle thereof and adapted to increase the weight of the barrel, said grip being also provided with forwardly and rearwardly extending arms arranged in substantially the same horizontal plane to form a flat rest or support for the barrel.

2. A pistol provided with a barrel grip located beneath the barrel at the muzzle thereof and adapted to increase the weight of the barrel, said grip being also provided with forwardly and rearwardly extending arms having terminal edges arranged in the same horizontal plane to provide a rest or support for the barrel.



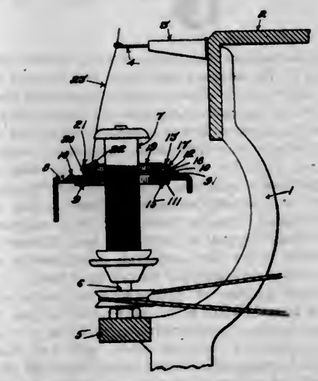
3. A pistol provided with a barrel grip located beneath the muzzle end thereof and adapted to increase the weight of the barrel, and provided with a finger receiving opening, said grip being also provided with projecting arms located in advance and in rear of the said opening and arranged to form a rest or support for the barrel, and concave faces at the bottom of the grip in front and in rear of the said opening.

4. A pistol provided with a barrel grip, having a finger-receiving opening and provided with forwardly and rearwardly projecting arms, said arms having terminal edges arranged in the same horizontal plane to provide a rest or support for the barrel.

5. A pistol provided with a barrel grip, consisting of a body portion having a finger receiving opening, and front and rear arms extending from the body portion and having terminal edges arranged in the same plane as the bottom of the body portion to form a rest or support for the barrel of the pistol.

[Claims 6 to 10 not printed in the Gazette.]

897,578. RING-SPINNING MACHINE. GEORGE H. BRABROOK, Taunton, Mass. Filed May 3, 1906. Serial No. 314,956.



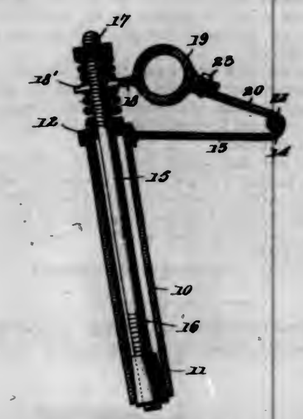
1. In a ring spinning machine, in combination with a ring-holder, a rotary ring having flanges which project from its upper and lower edges, a traveler movable on the upper flange of said ring, three or more grooved antifriction rollers journaled on studs which project vertically from the face of the ring-holder, said rollers forming bearings for the outer periphery of the ring, the grooves in the said rollers being of greater width than the thickness of the lower flange on the ring whereby clearance is afforded for the traveler between the upper flange of the ring and the upper flange of the rollers.

2. In a ring spinning machine, in combination with a traveler and traveler ring, a ring-holder having adjustably mounted therein three or more studs, anti-friction rollers journaled on said studs and forming bearings for the

traveler ring, the ring being provided with a group of tapped out holes for each of said studs, each group being disposed in a line eccentric to the center of the ring and corresponding with every other group, the corresponding holes in all the groups being in a line concentric with the center of the ring, whereby the studs may be adjusted to accommodate rings of varying sizes.

3. In a ring spinning machine in combination with a ring holder, a flanged rotary ring, a traveler movable on the flange of said ring, three or more grooved anti-friction rollers journaled on studs which project vertically from the face of the ring holder, said rollers forming bearings for the rotary ring, the traveler supporting flange of said rotary ring being always above the upper ends of the said rollers to afford a sufficient clearance at all times for the passage of the traveler and its supporting flange above the rollers.

897,579. BICYCLE HANDLE-BAR. JAMES E. BRANNAN, Idagrove, Iowa. Filed Dec. 20, 1907. Serial No. 407,390.

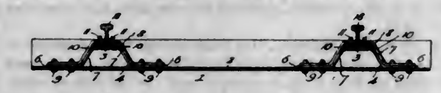


1. A bicycle handle bar comprising a hollow stem, a head carried by the stem at the upper end thereof, a plate carried by said head, a bolt located within said stem and having threaded portions adjacent its upper and lower ends, a cone engaged with the threaded lower end of said bolt, and arranged for frictional engagement within the stem, a plate hingedly connected with the first named plate, a handle-bar receiving sleeve carried by said last named plate, a forwardly extending plate carried by said sleeve and loosely engaged with said bolt outwardly of the head, springs carried by said bolt and disposed above and below said forwardly extending plate, and a nut engaged with the threaded upper end of said bolt.

2. A bicycle handle-bar comprising a hollow stem, a head carried by said stem at its upper end, a plate carried by said head, a cone located within the stem at its lower end, a bolt located within the stem, said bolt having a threaded lower end engaged with said cone, said bolt having a threaded upper end located outwardly of said head, a handle bar receiving sleeve hingedly connected with said plate and having a forked portion loosely engaged with said bolt, springs carried by said bolt and located above and below said forked portion, and nuts engaged with said bolt above and below said springs.

897,580. METALLIC RAILWAY-TIE. GEORGE T. BRIDWELL, Denver, Colo. Filed Mar. 28, 1908. Serial No. 423,857.

1. In a railroad tie as specified, the combination with a channel beam, having oppositely arranged rail-receiving recesses in its sides, of resilient rail-supporting saddles secured to said channel beam, in line with said recesses, comprising foot portions from which extend upright members which terminate in horizontal members on a higher plane than the bottoms of the said recesses; plates secured upon the foot portions of the saddles, which extend above the tops of the saddles, and terminate in inwardly projecting ends, and set screws in said inwardly-turned ends.



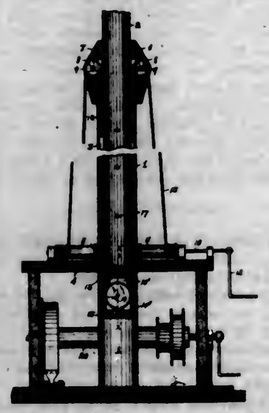
2. In a railway tie as specified, the combination with a channel beam having oppositely-arranged rail receiving recesses in its side members, of resilient saddles secured to the bottom of the beam, in line with the recesses, the tops of the saddles being above the bottoms of the recesses; rail clamps secured upon the lower ends of the saddles, and extending above and over the tops of the saddles, and set screws in the upper end of the clamps.

3. In a railway tie as specified, the combination with a channel beam having oppositely positioned rail receiving recesses in its upright members, of rail supporting saddles in line with said recesses, comprising foot portions which rest upon the bottom of the beam, and inclined upright members which terminate in a horizontal bridge, which is above the level of the bottoms of the rail receiving recesses; rail clamps having foot portions which rest upon the corresponding portions of the saddles; upright members which run parallel with the corresponding members of the saddles, and terminate in inwardly projecting ends; set screws in said ends, and bolts extending through the foot portions of the saddles and clamps and through the bottom of the channel beam.

4. In a railroad tie as specified, the combination with a channel beam having opposite rail receiving recesses in its side members, and a raised portion in its bottom, terminating in abrupt vertical ends, of saddles secured to the bottom of the channel beam in line with the opposite recesses, having horizontal rail supporting bridge members on a plane above the level of the bottoms of the recesses; clamps secured upon the saddles, having upright members which terminate above the bridge members in inwardly projecting ends, and set screws in said ends.

5. In a railroad tie as specified, the combination with a channel beam, of resilient rail supporting saddles secured to the bottom of said beam between its side members: rail clamps which extend above the tops of said saddle and terminate in inwardly turned ends, and set screws in the said ends.

897,581. HOISTING-MACHINE. WILLIAM M. BROWN, Gibsonburg, Ohio. Filed Apr. 20, 1908. Serial No. 428,078.



1. In a hoisting-machine, a mast comprising relatively adjustable telescoping sections, and means for adjusting said sections, said means comprising a windlass, two sheaves carried at the upper end of the lower section on opposite sides thereof, a sheave carried at the lower end of the upper section, and a cable having its ends attached to the windlass and its intermediate portion acting on the sheaves on said sections to effect a raising or lowering of the upper section when the windlass is turned.

2. In a hoisting-machine, a mast comprising relatively adjustable telescoping sections adapted to have free relative turning movements, the lower section having bolt holes therethrough, a sheave at each side of the lower section at the upper end thereof, a sheave carried at the lower end of the upper section, a windlass, and a cable attached to the windlass and acting on said several sheaves, to communicate a relative adjusting movement to the mast sections when the windlass is operated, and a member adapted to be inserted in said bolt holes to support the upper section in adjusted position and permit a free turning thereof relative to the lower section.

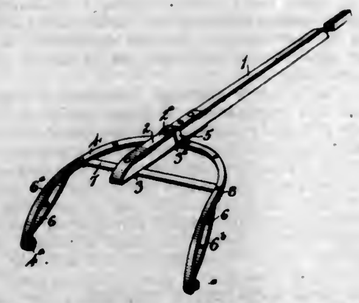
3. In a hoisting-machine, a mast comprising upper and lower relatively adjustable telescoping sections, said sections having an annular space between them, a block fixed to the upper end of the lower section, said block being bored to receive the upper section and center it within the lower section and having incuts in opposite sides thereof in communication with said annular space, sheaves mounted in said incuts, means at the lower end of the upper section for centering it within the lower section, a sheave carried at the lower end of the upper section, a windlass mounted without the sections, and means cooperating with said several sheaves and windlass for effecting a relative adjustment of the sections when the windlass is operated.

4. In a hoisting-machine, a mast comprising sections adapted to have relative longitudinal and rotary adjustment, a windlass cable coöperating with both sections for effecting relative longitudinal adjustment thereof, and means coöperating with the sections when in longitudinally adjustable position adapted to maintain them in such position and to permit a free relative turning thereof.

5. In a hoisting machine, the combination with a mast having adjustable telescoping sections, of a cable having a portion extending between the telescoping portions of the sections and looped under the lower portion of the inner section, and means for taking up or letting out the cable to effect a relative adjustment of the sections.

[Claims 6 and 7 not printed in the Gazette.]

897,582. BUGGY-TONGUE. THOMAS R. BROYLES, Marshfield, Mo. Filed Mar. 12, 1908. Serial No. 420,743.

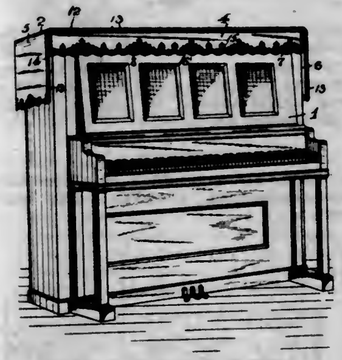


1. The combination with a vehicle tongue, a metal strip embracing the rear end of the tongue and having offset portions, a U-shape member bent upon itself to cross its own bow portion, said member having its bow portion passing through an offset portion of the strip upon the top of the tongue and having its cross member passing through an offset portion beneath the tongue, as and for the purpose set forth.

2. The combination with a tongue, a metal strip passing over and under the rear portion of the tongue and secured thereto, said strip having an offset portion above the tongue and one beneath the tongue, the second mentioned portion being to the rear of the first, and a U-shape member having its bow portion up-set to pass over the tongue and beneath the first mentioned offset, said U-shape member being bent back upon itself and carried transversely across the bow portion forming a brace passing beneath the tongue and through the second mentioned offset portion of the strip, and then bent back to its remaining free end, as and for the purpose set forth.

3. The combination with a vehicle tongue, of a U-shape member bent at its ends to form coils, said U-shape member having its bow portion passing over the top of the tongue, and being bent back from one coil to the other, said bent back portion extending beneath the end portions of the U-shape member and being bent to cross the bow portion and beneath the tongue, and a curved strip secured to the under face of said U-shape member and carried beneath the bow portion, passing under the tongue, as and for the purpose set forth.

897,583. TEXTILE-FABRIC COVER. FRANK B. BURNS, New York, N. Y. Filed Jan. 8, 1907. Serial No. 351,294.



1. A textile fabric cover comprising a main body or top-portion and a front overhang extending downwardly from the front marginal edge of the body or top-portion, said front overhang and said body or top-portion being formed with a doubled-over portion, and means connected with said doubled-over portion arranged to provide a substantially rigid rib.

2. A textile fabric cover comprising a main body or top-portion and a front overhang extending downwardly from the front marginal edge of the body or top-portion, said front overhang and said body or top-portion being formed with a doubled-over portion, and an overlock stitching stitched through and over the edge of the said doubled-over portion to provide a substantially rigid rib.

3. A textile fabric cover comprising a main body or top-portion, a front overhang extending downwardly from the front marginal edge of the body or top-portion, and an end overhang at each end of said main body or top-portion, said front overhang and said body or top-portion being formed with a doubled-over portion, and an overlock stitching stitched through and over the edge of the said doubled-over portion to provide a substantially rigid rib.

897,584. WRENCH. VICTOR CARLSON, Peoria, Ill. Filed Dec. 16, 1907. Serial No. 406,796.

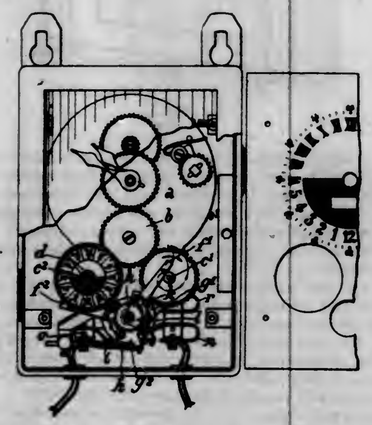
In a wrench, in combination, a handle having an axial bore, a cylindrical wrench head having an axially projecting stem passed through the bore, fastening means for the stem, a ring formed on said wrench head, a ratchet cylinder mounted for rotation in said ring and having teeth on opposite sides thereof, dogs slidably mounted in said wrench head to engage said ratchet teeth, said handle

having its inner end portion recessed, springs disposed in said recessed inner end portion and engaging said dogs, said handle having oppositely located openings in its annular edge, pins carried by said dogs and projecting later-



ally therefrom to work in said openings and a ring rotatably confined between said head and said handle and having an edge cammed, at opposite points to engage said pins and effect movement of said dogs, the said cammed edge being located adjacent the edge of the handle in which said openings are formed.

897,585. ELECTRIC TIME-SWITCH. JULES CAUDERAY, Lausanne, Switzerland. Filed Feb. 4, 1907. Serial No. 355,606.



1. A time switch mechanism comprising a motor, a shaft, means actuated by said motor for imparting intermittent partial revolutions to said shaft at predetermined and regulatable intervals, a star wheel on said shaft, terminals, and a pair of springs connected to one of said terminals, and adapted to bear against the periphery of the said wheel alternately the one against the point of a tooth and the other against the surface intervening between two teeth thereof, and to be actuated thereby to close an electric circuit through the other terminal and to control movement of the star wheel.

2. A time switch mechanism comprising a motor, a pair of arbors, a disk on each of said arbors driven simultaneously by said motor, a cam on each of the said disks, a shaft, sector members mounted independently on said shaft, an arm secured to each sector member, a pin in each arm and adapted to contact with the face of one of said cams, means for maintaining the said pins in contact with said cams, a ratchet wheel on said shaft, a pawl on each of said sector members adapted to engage the said ratchet, a star wheel on said shaft, a spring actuated by said star wheel to open and close an electric circuit, and a spring for limiting each movement of the said star wheel.

3. A time switch mechanism comprising a motor, a disk, an arbor on which the same is mounted, a cam on said disk, a shaft, means actuated by said cam for imparting intermittent partial rotations to said shaft, terminals, a spring connected at one end to one of the said terminals and adapted at its other end to contact with the other terminal and means on the said shaft for directly actuating the said spring to open and close an electric circuit.

4. A time switch mechanism comprising a motor, a disk, an arbor on which the same is mounted, a cam on said disk, a shaft, means actuated by said cam for imparting intermittent partial rotations to said shaft, terminals, a pair of springs each connected at one end to one of said terminals and each adapted at its other end to make electrical contact with the other terminal and means fixed on said shaft for directly and simultaneously actuating both said springs to open and close an electric circuit.

5. A time switch mechanism comprising a motor, a disk, an arbor on which the same is mounted, a cam on said disk, a shaft, terminals, a pair of springs each connected at one end to one of said terminals and each adapted at its other end to make electrical contact with the other terminal, a star-wheel fixed to said shaft and provided with an uneven number of points adapted to bear against each of the said springs to open and close an electric circuit and means actuated by the said cams for imparting intermittent partial rotations to the said shaft and star-wheel.

[Claim 6 not printed in the Gazette.]

897,586. UNDER-WATER EXHAUST. CHARLES B. CHATFIELD, Grand Rapids, Mich. Filed Mar. 28, 1908. Serial No. 423,845.

1. An under water exhaust having a rearwardly and outwardly opening discharge and an outwardly and rearwardly inclined deflector arranged transversely in front of and opposite said discharge and having an exposed transverse outer edge.

2. An under water discharge comprising a body plate provided with longitudinally arranged guards, an inclined deflector arranged transversely of said plate and between and connecting said guards intermediate the length thereof, and an exhaust pipe opening outwardly through said plate between said guards and behind said deflector.

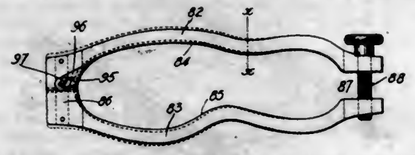
3. An under water exhaust having an outwardly opening discharge and a transversely arranged rearwardly and outwardly inclined deflector arranged in advance of and forming the exterior front wall of said discharge to deflect the water downwardly, substantially as described.

4. An under water exhaust comprising a body adapted to be secured longitudinally along the outer surface of a boat hull, and an exhaust pipe opening through the body intermediate its length and extending inwardly therefrom to pass through the hull into the boat, and a transversely arranged outwardly and rearwardly inclined deflector immediately in advance of the exhaust opening from said pipe to deflect the water downwardly therefrom, substantially as described.

5. An underwater exhaust having an outwardly and rearwardly opening discharge, and a transversely arranged inclined deflector forming the front wall of said discharge and having a water passage slit arranged transversely of said deflector and opening through the outer edge thereof.

[Claims 6 to 14 not printed in the Gazette.]

897,587. LASTING-MACHINE. GEORGE H. CLARK, Allston, Mass. Filed Oct. 22, 1906. Serial No. 339,985.

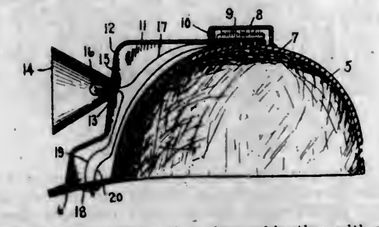


1. In a lasting machine, a clamping form comprising laterally yielding members inclosing a sole shaped recess, a spring connecting the members at one end and a threaded bolt connecting the members at the opposite end, substantially as described.

2. In a lasting machine, a clamping form comprising laterally yielding members inclosing a sole shaped recess and jointed together at its opposite ends, means for laterally drawing the members towards each other and clamping the same about the upper and last, a shield covering the joint at one of the ends of the member and means for forcing the shield in contact with the end of the upper and last.

3. In a lasting machine, a clamping form comprising laterally yielding members inclosing a sole shaped recess and having its upper surfaces shaped to the contour of the bottom of the last and provided with beveled clamping faces, substantially as described.

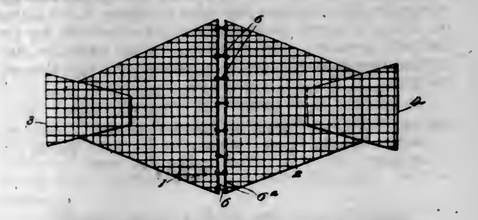
897,588. MINER'S CAP AND LAMP. LEWIS W. COGSWELL and JAMES D. ABEL, Taylorville, Ill. Filed Jan. 31, 1908. Serial No. 413,719.



A miner's cap having a vizor, in combination with a pad secured to the inner crown of the cap, a sheet metal casing having a bottom portion conforming to the shape of the cap and ending at the upper crown of the cap and then being doubled upon itself to form a base of double thickness, the upper portion of the casing being bent outward and downward, and secured to the vizor of the cap, the forward vertical portion of said casing having a threaded opening, a frusto-conical reflector within said opening, a lamp carried by said reflector, a fabric pocket having a flap secured to the outer crown of said cap inclosing said base, a battery upon said base and within said pocket, an electric switch secured to the under surface of said vizor, and electric conductors connecting said switch, lamp and batteries.

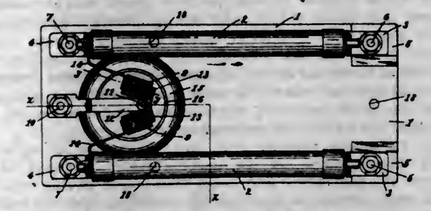
897,589. FISH-TRAP. WILLIAM L. CONNEVEY, Lewisville, Ark. Filed Jan. 5, 1907, Serial No. 350,942. Renewed June 13, 1908. Serial No. 438,412.

A fish trap comprising a plurality of sections, each of which is provided with a rigid wire rim, hooks pivotally secured to the respective rims and designed for detachable engagement with the opposite rim, whereby the sections are yieldingly held together so as to accommodate themselves to the bottom of the stream, said sections being provided with entrance funnels projecting partly within and partly outside of the outer ends of the sections with the smaller ends innermost, the said smaller ends of the funnel



being flattened and bent inwardly whereby to form contracted throats leading into the interior of the sections.

897,590. SUBSTATION-PROTECTOR. FRANK B. COOK, Chicago, Ill. Filed Nov. 8, 1907. Serial No. 401,348.



1. A protector unit of the character described comprising a substantially flat base made of nonconducting material, tubular fuses mounted along the sides of the base substantially parallel therewith, a cylindrically-shaped recess in the said base between the said fuses and near one end thereof, an annular wall projecting from the said base around the said recess to increase the depth of the latter without necessitating the thickening of the body of the base, a pair of lightning arresters located within the said recess substantially perpendicular to the said base, a pair of spring members mounted on top of the said base, formed to provide suitable terminals for the respective fuses and extending into the said recess through slots in the wall of the latter, and having their inner ends formed to provide suitable terminals for the respective lightning arresters, a ground terminal for the lightning arresters, mounted on top of the said base, extending into the said recess to the bottom thereof through a slot in the wall of the recess and having its inner end bifurcated and formed to provide suitable ground terminals for the respective lightning arresters, a bolt extending through the bottom of the base into the said recess for holding the ground-terminal member in place, a ledge around the inner side of the wall of the said recess, a formed sheet-metal cap fitting the interior of the wall of the said recess and resting against the said ledge which limits the insertion of the cap into the recess, the said cap forming a covering for the lightning arresters, the slots in the wall of the said recess through which the lightning-arrester terminals pass forming vents for the lightning-arrester inclosure, and suitable binding posts for connecting circuit conductors to the fuses and lightning arresters.

2. A protector unit of the character described comprising a substantially flat base, a pair of fuses mounted along the sides of the base, a recess in the base between the fuses and near one end thereof, a wall around the recess projecting from the base to increase the depth of the recess without necessitating the thickening of the body of the base, a pair of lightning arresters located within the recess, a pair of spring members mounted on top of the base, formed to provide suitable terminals for the respective fuses and extending into the said recess through slots in the wall of the latter, and having their inner ends formed to provide suitable terminals for the respective lightning arresters, a ground terminal for the lightning arresters

mounted on top of the base, extending into the said recess through a slot in the wall thereof and having its inner end bifurcated and formed to provide suitable ground terminals for the respective lightning arresters, a cap fitting the wall of the said recess and forming a covering for the lightning arresters, and suitable binding posts for connecting circuit conductors to the fuses and lightning arresters.

897,591. AUTOMOBILE RUNNING-GEAR. JOHN W. COOPER, Boston, Mass. Filed July 2, 1907. Serial No. 381,819.



1. In a vehicle running gear, the combination of upper and lower frames, an intermediate frame between said upper and lower frames and having pivotal connection with the former, a vertical spring arranged between the inner portion of said intermediate frame and the lower frame, a horizontal spring mounted upon the lower frame and connecting means between said horizontal spring and the outer portion of the intermediate frame for supporting the latter by a suspending action.

2. In vehicle running gear, the combination of upper and lower frames, an intermediate frame arranged between the said upper and lower frames and having outer and inner extensions, and having connection with the said upper frame to turn about a vertical and a longitudinal axis, a vertical spring arranged between the inner extension of the intermediate frame and the lower frame, a horizontal spring mounted upon the lower frame, and a connection between said horizontal spring and the outer extension of the intermediate frame for sustaining the latter by a suspending action.

3. In a vehicle running gear, the combination of upper and lower frames, horizontal tubes secured to the lower frame and having outer extensions, vertical springs interposed between the inner ends of said horizontal tubes and the upper frame, springs arranged within the said tubes, and connecting means between the springs within the tubes and the upper frame and having connection with the outer extensions of said tubes.

4. In a vehicle running gear, the combination of upper and lower frames, horizontal tubes secured to the lower frame and having outer extensions, vertical springs interposed between the inner ends of said horizontal tubes and the upper frame, springs arranged within the said tubes, and levers pivoted between their ends to the outer extensions of the tubes and having connection at their lower ends with the springs within said tubes and at their upper ends with the upper frame.

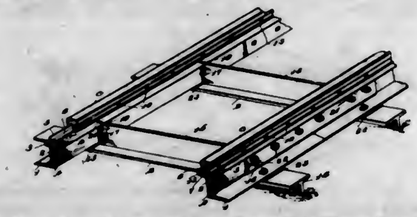
5. In a vehicle running gear, the combination of upper and lower frames, horizontal tubes secured to the lower frame and having outer extensions, vertical springs interposed between the inner ends of said horizontal tubes and the upper frame, springs arranged within the said tubes, levers pivoted to the outer extensions of the tubes and having their upper ends slotted and their lower ends connected with the springs within the said tubes, and connecting means between the upper frame and the slotted ends of the levers and having limited play in the slots thereof.

[Claims 6 to 13 not printed in the Gazette.]

897,592. STRINGER AND TIE. JOHN W. COOPER, Boston, Mass. Filed Aug. 24, 1907. Serial No. 389,989.

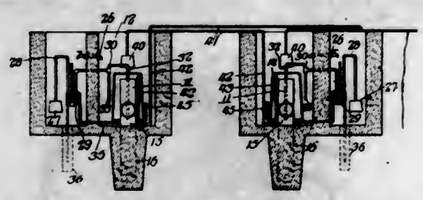
1. In combination, a stringer having a lateral flange provided with an opening, a tie having a projection to pass through the opening in the lateral flange of the sleeper and to interlock therewith, and positive connecting means between the tie and stringer.

2. In combination, a stringer having a lateral flange provided with an opening, a tie having a lower portion extending beneath the stringer and having a vertical flange abutting against the stringer and formed with a projection to pass through the opening in the lateral flange thereof, and positive connecting means between the stringer and tie.



3. In railroad construction, the combination of parallel stringers having basal flanges forming extended supports and provided at or near their upper edges with vertical and opposite lateral flanges, rails seated upon said vertical flanges and having pendent flanges lapped alongside said vertical flanges and secured thereto, and ties, each tie having a lower portion of T form and a vertical flange terminating a distance from the ends of said lower T portion, the ends of the vertical flanges of the ties abutting against the stringers and having projecting portions interlocking with the lateral flanges thereof, and having the end portions of the ties extended beneath the stringers and forming supports therefor, and positive connecting means between the stringers and ties.

897,593. APPARATUS FOR CONTROLLING THE FLOW OF LIQUIDS. JAMES W. COX, Berwyn, Ill., assignor to Sidney W. Miller, Chicago, Ill. Filed June 8, 1908. Serial No. 437,318.



1. Means for emptying the liquid contents of a tank comprising a siphon, means whereby the emptying operation of the siphon is automatically prolonged after the contents of the tank have been substantially discharged, and means operating at a predetermined period thereafter to discontinue the operation of the siphon, embracing a sealed vent pipe which enters the siphon and means for transmitting air under pressure to said vent pipe, for the purpose set forth.

2. Means for emptying the liquid contents of a tank comprising a trapped siphon apparatus, the trap of which is so proportioned relatively to the intake limb of the siphon apparatus that the siphon does not automatically vent itself, and means for terminating the emptying operation of the siphon embracing a sealed vent pipe which enters the siphon apparatus and means for transmitting air under pressure to said vent pipe, for the purpose set forth.

3. Means for emptying the liquid contents of a tank comprising a trapped siphon apparatus, the trap of which is so proportioned relatively to the intake limb of the siphon apparatus that the siphon does not automatically vent itself, a vent pipe entering the siphon and arranged to be sealed at or below the level of the receiving end of the intake limb of the siphon apparatus, and a pressure transmitting pipe arranged to transmit air under pressure to said vent pipe.

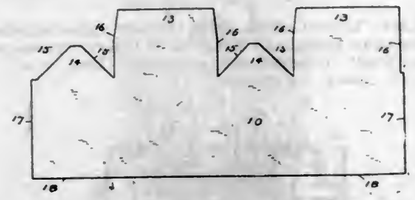
4. Means for emptying the liquid contents of a tank comprising a trapped siphon apparatus, the trap of which

is so proportioned relatively to the intake limb of the siphon that the siphon does not automatically vent itself, and a pressure transmitting pipe extending into the siphon and provided at or below the level of the receiving end of said intake limb and exterior thereto with a sealed vent pipe.

5. The combination with a siphon, of a pressure transmitting pipe extending into the siphon and a sealed vent pipe exterior to said intake limb and connected with said pressure transmitting pipe at or below the level of the receiving end of said intake limb.

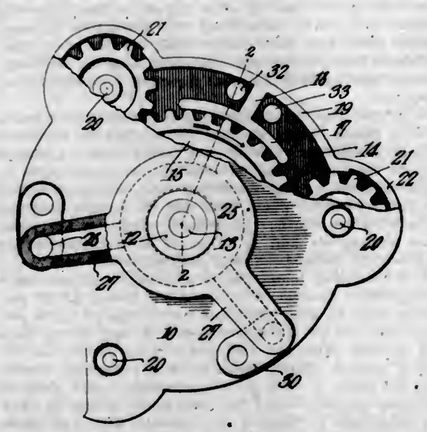
[Claims 6 to 9 not printed in the Gazette.]

897,594. SHIPPING-PACKAGE. WILLIAM N. CRAW, South Norwalk, Conn. Filed Apr. 16, 1908. Serial No. 427,294.



A flexible receptacle comprising a body and bottom, the body having a straight lower edge secured to the edge of the bottom, and having four upwardly extending flaps two of which are triangular in form while the other two are larger and have practically parallel edges, the side edges of said flaps being secured together, and means for closing the ends of the larger flaps.

897,595. MOTOR. FRANK J. CROUCH and CHARLES P. CHURCH, Seattle, Wash. Filed Jan. 17, 1908. Serial No. 411,331.

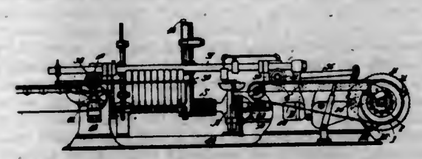


1. In a rotary motor, a casing, a rotary piston arranged therein and provided with equi-distantly spaced teeth or blades, a revoluble abutment having teeth or blades corresponding to those of the piston and interfitting therewith to prevent the passage of the operating fluid between the two, a curved partition covering a portion of the teeth or blades of the piston, and with which the piston makes close contact, and a second partition dividing the space between the curved partition and the casing into inlet and escape chambers.

2. In a rotary motor, a casing, a rotary piston arranged therein and provided with equi-distantly spaced teeth or blades, a series of spaced rotary abutments arranged in the casing and provided with teeth or blades corresponding to those of the piston and intermeshing therewith to prevent the passage of fluid between them, the casing being provided with semi-circular projections to house the outer portions of the abutments and the inner faces of the walls of said projections being arranged to engage with the outer ends of the teeth or blades, a series of arcuate partitions arranged between and spaced from the abutments, the inner faces of said partitions being in engagement with the ends of the teeth or blades of the piston, and partitions extending from the curved partitions to the wall of the casing and dividing the space into inlet and exhaust chambers.

3. In a rotary motor, a casing, partitions arranged therein and dividing said casing into a series of inlet and exhaust chambers, each provided with a port, a rotary piston mounted in the casing and provided with peripheral teeth or blades, a series of rotary abutments having teeth or blades intermeshing with those of the piston, a revolubly adjustable pressure chest mounted at one side of the casing, and a series of distributing-arms extending from the chest and arranged to register with the ports.

897,596. BRICK AND TILE CUTTING MACHINE. WILLIAM R. CUNNINGHAM, Bucyrus, Ohio, assignor to The American Clay Machinery Company, Bucyrus, Ohio, a Corporation. Filed Aug. 27, 1908. Serial No. 390,271.



1. In a brick and tile cutting machine, the combination with a support frame work, a measuring drum mounted thereon, a measuring belt upon which the bar of clay is received, a longitudinally reciprocal member, and a cutting-reel carriage carried in unison therewith, of means for moving said member horizontally in register with the travel of the bar of clay, said means comprising a gear-wheel on the axis of the drum, a cam fixed to the side of said gear-wheel and comprising a plurality of connected arms having opposite faces forming a continuous cam surface with low points terminating contiguous to the axis of the drum and with high points extending towards the periphery of the drum, and a rocker-member having a plurality of arms, one of said arms having its outer end arranged above the axis of the drum, and substantially close to the axis of the said drum and engaged by a low point of the cam surface when the cutting-reel carriage is about to start on its horizontal travel in unison with the travel of the column of clay, said cam-surface being so shaped as to maintain a continuous contact with the rocker-arm during the travel of the carriage.

2. In a brick and tile cutting machine, the combination with a supporting frame-work, a measuring-drum mounted thereon, a horizontally traveling belt upon which the bar of clay is received, a longitudinally reciprocal member, and a cutting-reel carriage carried in unison therewith, of means for moving said member and carriage horizontally in register with the travel of the bar of clay, said means comprising a gear-wheel on the axis of the drum, a cam fixed to the side of said gear-wheel and comprising a plurality of connected arms having opposite faces forming a continuous cam surface with low points terminating contiguous to the axis of the drum and with high points extending toward the periphery of said drum, and a rocker-member having a plurality of arms, one of said arms connecting with said longitudinally reciprocating member and another arm having an outer portion disposed below the axis of the drum so that on the return reciprocal movement of the said member, said second arm may be engaged

by a low portion of the cam near the axis of the drum and thereby overcome the inertia of starting the carriage on its return movement, said cam-surface being so fashioned as to maintain a continuous contact with said second rocker-arm during its passage thereby.

3. In a brick and tile cutting machine, the combination with a supporting frame-work, a measuring-drum mounted thereon, a horizontally traveling belt upon which the bar of clay is received, a longitudinally reciprocating member, and a cutting-reel carriage carried in unison therewith, of means for moving said member and carriage horizontally in register with the travel of the bar of clay, said means comprising a gear-wheel on the axis of the drum, corresponding cams on opposite sides of the gear wheel and reversely-arranged relative to each other, each of said cams comprising a plurality of connected arms having opposite faces forming a continuous cam surface with low points located contiguous to the axis of the drum and with high points extending towards the periphery of the drum, and a three-arm rocker-member adjacent to the gear-wheel having one arm connected to said reciprocating member and having the outer ends of the other arms in constant contact with said cam-surface and arranged respectively above and below the axis of the drum so that in starting to move the carriage in either direction one of said arms will engage the low part of its cam near the axis of the drum and the inertia due to starting the carriage will be overcome.

4. In a brick and tile cutting machine, the combination with a supporting frame-work, a measuring-drum mounted thereon, a horizontally traveling belt upon which the bar of clay is received, a longitudinally reciprocating member, and a cutting-reel carriage carried in unison therewith, of means for moving said member and carriage horizontally in register with the travel of the bar of clay, said means comprising a gear-wheel on the axis of the drum, corresponding cams on opposite sides of the gear-wheel and reversely-arranged relative to each other, each of said cams comprising a plurality of connected arms having opposite faces forming a continuous cam-surface with low points located contiguous to the axis of the drum and with high points extending towards the periphery of said drum, and a rocker-member having a plurality of arms the outer ends of which are maintained in constant contact with said cam-surface, said member being connected with said reciprocating member, and one of said cams being axially-adjustable relative to the other cam.

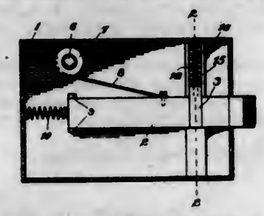
5. In a brick and tile cutting machine, the combination with a supporting frame-work, a measuring-drum mounted thereon, a horizontally traveling belt upon which the bar of clay is received, a longitudinally reciprocating member, and a cutting-reel carriage carried in unison therewith, of means for moving said member and carriage horizontally in register with the travel of the bar of clay, said means comprising a gear-wheel on the axis of the drum, corresponding cams on opposite sides of the gear-wheel and reversely arranged relative to each other, each of said cams comprising a plurality of connected arms having opposite faces forming a continuous cam surface with low points located contiguous to the axis of the drum and with high points extending towards the periphery of said drum, one of said cams having slots arranged concentric with the axis of the drum whereby it may be turned about said axis and adjusted to take up wear or lost motion, and a rocker-member having a plurality of arms, one of said arms being connected with said reciprocating member and the outer ends of other arms being constantly engaged by said cam-surface.

[Claims 6 to 10 not printed in the Gazette.]

897,597. LOCK. JOHN A. CURRY, Key West, Fla. Filed Oct. 3, 1907. Serial No. 395,780.

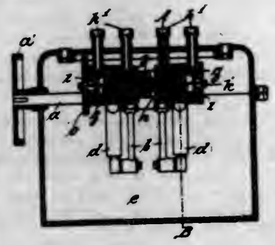
1. A lock comprising a sliding bolt, a sliding tumbler in engagement with said bolt, said sliding tumbler being bifurcated to straddle said bolt and said bolt being provided with a slot on each side thereof to receive said tumbler, substantially as described.

2. A lock comprising a sliding bolt, a sliding tumbler in engagement with said bolt, said sliding tumbler being bifurcated to straddle said bolt and constructed to be



forced out of engagement with said bolt by means of a sliding key, substantially as described.

897,598. LUBRICATOR. PAUL DAIMLER, Untertürkheim, Germany, assignor to The Firm of Daimler Motorengesellschaft, Untertürkheim, Germany. Filed Sept. 4, 1907. Serial No. 391,316.



1. A lubricator comprising a plurality of pumps, a common rotating distributing valve and ported casing for said pumps, said valve having spring connected valve parts, substantially as described.

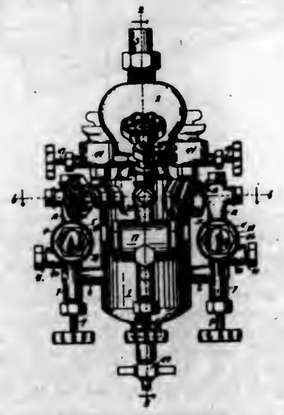
2. A lubricator comprising a plurality of pumps, a common rotating distributing valve and ported casing for said pumps, said valve comprising two oppositely arranged conical parts with their narrow ends towards each other, a slidable coupling between said parts, a spring resiliently binding said parts in an axial direction, substantially as described.

3. A lubricator comprising in combination with a pump, a valve casing having an inlet and a plurality of outlets therein, a rotating valve in said casing having L-shaped grooves therein the circumferentially arranged parts of which coincide continually during the working strokes of the pump with the pump inlet and the axially arranged parts of which during the delivery stroke of the pump come successively and at intervals into communication with outlets circumferentially disposed about said valve.

4. A lubricator comprising, a plurality of pumps and a driving shaft therefor, a valve casing having an oil suction passage for each pump and two groups of outlet passages disposed on the opposite side of said casing from said suction passages, a rotating valve having two L-shaped grooves therein opposite each pump the circumferential parts of said grooves rotating in the plane of the pump passage, while the axial parts extend in opposite directions to connect successively with the outlet passages, gearing from the pump driving shaft to the valve, said gearing being arranged to rotate the valve once for each two revolutions of the pump driving shaft.

5. A lubricator having in combination a plurality of pumps and a driving shaft therefor, a valve casing having oil suction and pump passages arranged in one plane in said casing, two groups of outlet passages in said casing; said groups being arranged in planes on opposite sides of the plane containing the pump passage, a rotating distributing valve in said casing common to all the pumps and comprising spring connected conical parts, each part being opposite a pump and provided with two L-shaped grooves the circumferential parts of which grooves rotate in the plane of the pump passage, while the axial parts extend at diametrically opposite points of the valve, one to each of the groups of outlet passages, a driving gear from the pump shaft to the valve, said driving gear being arranged to rotate the valve once for each two revolutions of the pump driving shaft.

897,599. LUBRICATOR. ROBERT DAVIDSON, Detroit, Mich., assignor to Michigan Lubricator Co., Detroit, Mich., a Corporation of Michigan. Filed July 23, 1906. Serial No. 327,310.



1. In a locomotive lubricator, the combination with the reservoir, of a sight-feed feature exterior to the reservoir, said sight-feed feature consisting of a barrel-like member lying in a horizontal plane, hollow arms cast integral with the reservoir connecting the barrel-like member with the upper and lower portions thereof respectively, an oil discharge arm, there being an oil passage within the top of the lubricator connecting the upper arm of the sight-feed feature with the oil discharge arm, a condenser, and an equalizing tube leading from the condenser and connecting within the reservoir said oil passage way with the steam space of the condenser.

2. In a locomotive lubricator, the combination with the reservoir having an oil passage in the upper portion thereof, a sight-feed feature communicating with said oil passage, an oil discharge arm leading from the discharge end of said oil passage, and a steam equalizing tube within the reservoir communicating with the discharge end of said oil passage in direct alinement with said oil discharge arm.

3. In a locomotive lubricator, the combination with the reservoir, of a plurality of sight-feed features exterior to the reservoir and located in the same horizontal plane, said sight-feed features consisting of barrel-like members, hollow arms cast integral with the reservoir connecting the barrel-like members with the upper and lower portions thereof respectively, oil discharge arms, there being oil passage ways within the top of the lubricator independently connecting the upper arms of the sight-feed features with the oil discharge arms, a condenser common to all of the sight-feed features, and equalizing tubes leading from the condenser and independently connecting within the reservoir said oil passage ways with the steam space of the condenser.

4. In a locomotive lubricator, the combination with the reservoir having oil passages in the upper portion thereof, of sight-feed features communicating with said oil passages, oil discharge arms leading from the discharge ends of said oil passages and steam equalizing tubes within the reservoir communicating with the discharge ends of said oil passages in direct alinement with said oil discharge arms.

897,600. INDEX. EUGENE DAVIS, St. Louis, Mo. Filed Nov. 30, 1906. Serial No. 345,686.



1. In a book index, the combination with a plurality of book sheets, of a plurality of index sheets each projecting beyond the book sheets the whole length thereof, and tabs attached to the margins of said index sheets, substantially as set forth.

2. In a book index, a plurality of index sheets and a plurality of tabs, each of different color and having a wing bent back toward the body of the tab, substantially as set forth.

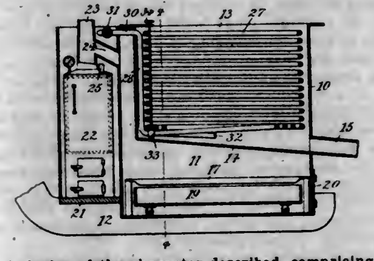
3. A book index tab having a wing bent back toward the body thereof and adapted to be bent back further toward said body, and a gummed binding member riveted to said tab, substantially as set forth.

4. A book index tab having a wing bent back toward the body thereof and adapted to be bent back further toward said body, and a rivet member having rivets whereby said tab may be riveted to an index sheet, substantially as set forth.

5. In a book index, an index sheet having a marked edge, and a tab having a wing bent back toward the body thereof and adapted to be bent back further toward said sheet, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

897,601. SNOW-MELTING APPARATUS. SOLOMON DENEMARK, New York, N. Y. Filed May 18, 1908. Serial No. 433,436.



1. A device of the character described, comprising a receptacle, an inclosed pipe extending along the sides and bottom thereof to form an inner snow receiving basket, a boiler connected to said basket, and a fire chamber surrounding the receptacle, substantially as specified.

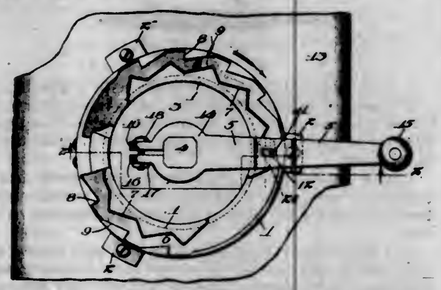
2. A device of the character described, comprising a snow receptacle, a surrounding fire chamber, a grate within said chamber, a steam boiler, a coil of steam pipe within the receptacle that communicates with the boiler, a stack on the boiler, and a by-pass that connects the fire chamber with said stack, substantially as specified.

3. A device of the character described, comprising a snow receptacle, a steam boiler, a communicating steam coil which forms a snow receiving basket within the receptacle and is provided with an upwardly extending leg, a horizontal loop, a downwardly extending leg, and a valve within the loop, substantially as specified.

897,602. CONTROLLER-REGULATOR. FREDERICK M. DU BOIS, Syracuse, N. Y., assignor, by mesne assignments, to American Automotoneer Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 2, 1906. Serial No. 294,282.

1. In a controller regulator, the combination with a handle, of a dog suitably mounted to be rotated by said handle, and arranged to oscillate independently of the handle only in a single plane with respect to the handle,

a series of stops for engaging said dog, and means for moving said dog into engagement with said stops, said dog being disengaged from said stops by gravity.



2. In a controller regulator, the combination with a handle, of a dog suitably mounted to be rotated by said handle, and arranged to oscillate independently of the handle only in a single plane with respect to the handle, a series of stops for engaging said dog, and means for moving said dog into engagement with said stops, said dog being disengaged from said stops by gravity.

3. In a controller regulator, the combination with a handle, of a dog pivotally mounted and arranged to be rotated by said handle and to oscillate independently of the handle only in a single plane with respect to the handle; a series of stops for engaging said dog, means for moving the free end of said dog into engagement with said stops to one side of its center of gravity, whereby said dog will be disengaged from said stops by gravity.

4. In a controller regulator, the combination with a handle, a dog suitably mounted to be rotated by said handle and arranged to oscillate independently of the handle only in a single plane with respect to the handle, a series of stops for engaging said dog, and means for moving said dog into engagement with said stops, said dog being arranged to automatically disengage from said stops.

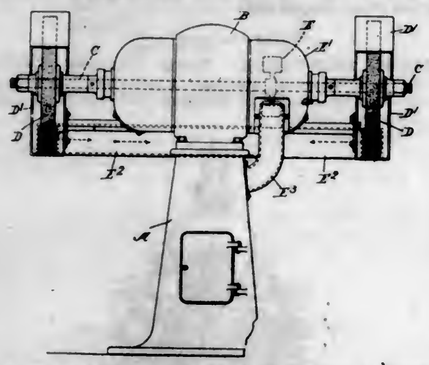
5. In a controller regulator, the combination with a handle, of a dog suitably mounted to be rotated by said handle and arranged to operate in a vertical plane, a series of stops for engaging said dog, serrations for throwing said dog into engagement with said stops when said handle is moved in one direction, said stops and serrations being so constructed and arranged that said dog will readily move between same and permit a continuous movement of the handle in a reverse direction.

[Claims 6 to 17 not printed in the Gazette.]

897,603. BUFFING AND GRINDING APPARATUS. FREDERICK B. DUNCAN, Madison, Wis., assignor to Northern Electrical Manufacturing Company, Madison, Wis., a Corporation of Wisconsin. Filed July 9, 1900. Serial No. 22,919.

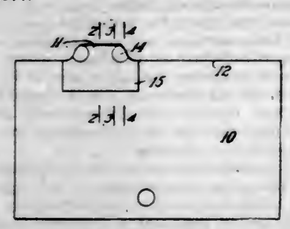
1. In a buffing or grinding device the combination of a supporting hollow base with a hood or cap or cover mounted thereon, suitable bearings mounted thereon provided with grinding wheels, one at each end of a shaft which is mounted in said bearings, an electric motor mounted upon said base and within said hood, its rotating part attached to said shaft, a fan attached to said shaft and driven thereby, air ducts leading from the grinding wheels to the fan, a connection from the fan space to the base so that the material drawn from the grinding wheels may be discharged into the base, a door for removing such material from the base, and a suitable partition in the hood to separate the moving parts of the motor from the fan, all substantially as described and for the purposes specified.

2. In combination, an electric motor having a bonnet removably secured against one end of the motor frame, said bonnet having a space or chamber formed in it, a partition separating the space and the bonnet from the interior of the motor, a bearing for the armature shaft of the motor carried by said bonnet, a fan carried by the armature shaft of the motor between the bearing and partition, a tool carried by the outer end of the armature shaft, a hood for said tool, a pipe or conductor leading from said hood to the space within said bonnet, and a discharge conductor or pipe leading away from said bonnet.



3. In a buffing and grinding device, a motor, a grinding device mounted upon the motor-shaft, a hood about said grinding device, a bonnet arranged between the grinding device and the motor, a fan-chamber arranged within said bonnet and communicating with the interior thereof on the side adjacent the motor, a revolving fan mounted on the motor-shaft and arranged within said chamber, and means connecting the hood to the bonnet at a point adjacent the side of the fan-chamber nearest the motor.

897,604. INDEX AND FILING SYSTEM. JAMES F. DUNLEAVY, Newton, Mass. Filed July 9, 1908. Serial No. 442,677.



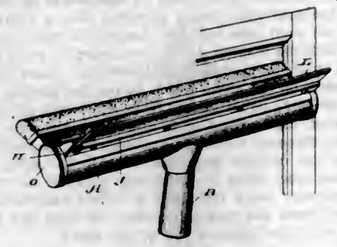
1. A sheet having a body portion; an edge binding of celluloid or the like attached thereto on both sides thereof and, at the exposed edges of the binding, a piece of celluloid or the like set in and forming a continuation of the said body and being embraced therewith between the portions of the binder which are on opposite sides of the sheet.

2. A sheet, having a body portion; a binding of celluloid or the like folded over the edge thereof and attached to opposite sides of the sheet and, at the exposed end edges of the binding, a piece of celluloid or the like set in the sheet and forming a continuation of the body and being embraced therewith between the portions of the binder which are on opposite sides of the card.

3. A card, comprising a body portion having a projecting tab; a binding of celluloid or the like folded over the outside edge of the tab and attached to its sides; there being pieces of celluloid or the like set in at the ends of the tab continuously with the card body and embraced with the card between the portions of the binder on opposite sides of the card.

4. A card, comprising a body portion having a projecting tab; a binding of celluloid or the like folded over the outside edge of the tab and attached to its sides; there being pieces of celluloid or the like dovetailed into the card at the ends of the tab continuously with the card body and embraced with the card between the portions of the binder on opposite sides of the card.

897,605. WINDOW-CLEANER. GEORGE C. DWIGHT, Red Bank, N. J. Filed Oct. 18, 1907. Serial No. 398,097.



1. In a window cleaner the combination of a liquid receptacle, A, provided with a cap O at each end and an orifice extending longitudinally thereof, a cleaner, F, provided with a core tapered in cross section, and having flared ends, extending beyond the ends of said receptacle and a handle attached to said receptacle, substantially as described.

2. In a window cleaner the combination of a tank provided with a cap O, one at each end and an orifice extending longitudinally thereof, an open bottom trough D located in said orifice and secured to said receptacle, a cleaner, F, provided with a core, E, tapered in cross section fitting said trough D, and provided with flared ends, N, extending slightly beyond the ends of said receptacle, and a handle attached to said receptacle, substantially as described.

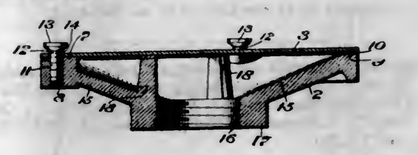
3. In a window cleaner the combination of a tank, A, provided with an orifice, C, an open bottom trough like receptacle, D, secured to said tank and having its side walls extending into the same, a tapered cleaner F provided with a tapered core, E, fitting said trough D covered with a liquid absorbing material, and provided with flared ends, N, adapted to enter the corners of a window sash, and a handle attached to said receptacle, substantially as described.

4. In a window cleaner the combination of a liquid receptacle, A, provided with a cap O at each end and an orifice, C, extending longitudinally thereof, a trough like open bottom receptacle, D, secured to said receptacle A and having its side walls extending into the same, a tapered cleaner, F, provided with a tapered core, E, and extended flared ends, N, fitting in said trough, D, and a handle, B, attached to said receptacle, said cleaner, F, being inclined at an oblique angle to the longitudinal plane passing through said receptacle and said handle, substantially as described.

5. In a window cleaner the combination of a cylindrical receptacle, A, provided with a cap, O, at each end having rounded edges extending slightly beyond the ends of said receptacle proper, a trough like open bottom receptacle, D, having flared projecting ends secured to said receptacle, A, a cleaner, F, provided with a core, E, fitted to said receptacle, D, and having the flared projecting ends, N, extending slightly beyond said caps, and a handle, B, attached to said receptacle, A, the said cleaner, F, being inclined at an oblique angle to the longitudinal plane passing through the said receptacle, A, and said handle, B, whereby the said cleaner, F, may be turned when in use, so as to bring different surfaces into contact with the glass, and whereby the flared ends, N, may be utilized to clean the corners of the window sash, while the rounded edges of the caps, O, will prevent the said receptacle, A, from marring the wood work of the sash, substantially as described.

[Claim 6 not printed in the Gazette.]

897,606. FILTER-VALVE. JACOB R. ELFRETH and CALES P. ELFRETH, Philadelphia, Pa. Filed Mar. 5, 1908. Serial No. 419,381.



1. In a sand filter valve, a body, a movable solid plate thereon, means for providing a port between the body and plate at all times and a stop for said plate to limit the movement thereof.

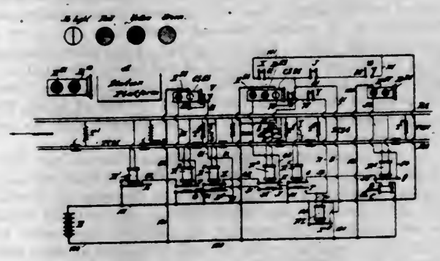
2. In a sand filter valve, a body, the inner walls of which are inclined or dish-shaped, a top plate movably connected with said body and forming a port therebetween at all times, and means for limiting the movement of said plate.

3. In a sand filter valve, a body having an inclined inner face, bosses formed on said body, pins or extensions on said body and a plate movably attached to said body supported by said bosses and said pins.

4. In a sand filter valve, a body, a solid top plate forming a valve port between said body and said plate at all times, the latter being movable as a valve and a stop for limiting the upward movement of said plate.

5. In a sand filter valve, a body having an inclined inner wall, bosses on said body, pins or projections on said body, a solid top plate, normally supported by said bosses and means for connecting said plate with said body and for permitting a certain upward movement thereof.

897,607. AUTOMATIC CALLING-ON SIGNAL. WILLIAM H. ELLIOTT, New York, N. Y. Filed Dec. 24, 1907. Serial No. 407,921.



1. In a railway automatic signal system, in combination, a section of track, and a calling on signal adjacent the rear end of the section, said signal being adapted to be capable of operation when said section is occupied.

2. In a railway automatic signal system, in combination, a section of track, an overlap section for said section, and a calling on signal adjacent the rear end of said section, said signal being adapted to be capable of operation when said overlap section is occupied.

3. In a railway automatic signal system, in combination, a section of track, a home signal, a calling on signal adjacent the rear end of said section, said home signal being adapted to display a stop indication when said section is occupied, and said calling on signal being adapted to be capable of operation when said home signal indicates stop.

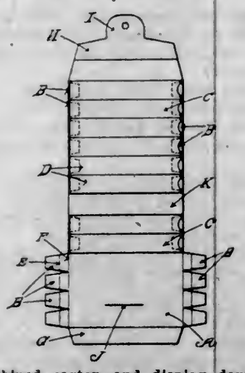
4. In a railway automatic signal system, in combination, a track section, a calling on signal adjacent the rear end of said track section, and a releasing section, said signal being adapted to operate upon said releasing section becoming occupied when said track section is occupied.

5. In a railway automatic signal system, in combination, a track section, a calling on signal adjacent the rear of the track section, an overlap section for said track sec-

tion, and a releasing section, said signal being adapted to operate upon said releasing section becoming occupied when said overlap section is occupied.

[Claims 6 to 42 not printed in the Gazette.]

897,608. CARTON OR DISPLAY DEVICE. FREDERICK C. ELY, Northampton, Mass., assignor to The Florence Manufacturing Company, Northampton, Mass., a Corporation of Massachusetts. Filed Aug. 22, 1905. Serial No. 275,291.



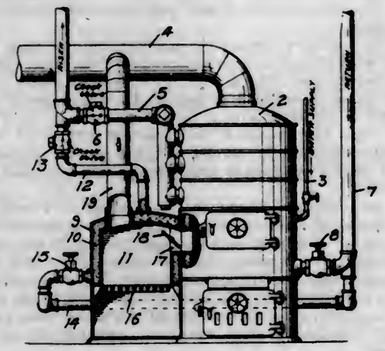
1. The combined carton and display device for individual boxes comprising a sheet of cardboard upon the main portion of which the boxes are to be disposed in groups, the space between the said groups being substantially equal to the combined thickness of as many of said boxes as there are groups, the said sheet being provided with a plurality of tongues on each side equal in number to the number of boxes which the display device is adapted to hold, and of greater length than the thickness of said individual boxes so as to overlap the end of the box and enter a pocket in the box, a flap at one end of the sheet adapted to be folded over the thickness of the boxes when the several groups are folded together and means whereby when the sheet is folded and the several groups of boxes are folded together, the said flap may be engaged with the opposite end of the sheet.

2. The combined carton and display device for individual boxes comprising a sheet of cardboard upon the main portion of which the boxes are to be disposed in groups, the space between said groups being substantially equal to the combined thickness of as many of said boxes as there are groups, a crease in said cardboard at each side of said space between the groups, the said sheet being provided with a plurality of tongues on each side equal in number to the number of boxes which the display device is adapted to hold, said tongues being transversely creased in alinement with the body portion of the cardboard so that when the tongues are folded there will be no side projections, a flap on one end of the body of the card adapted to be folded up against the sides of the boxes when the display device is folded and contains boxes, and a flap at the opposite end of the sheet having a transverse crease along the line of the box next that end whereby said sheet may be folded over the side of the group of boxes and means whereby said flap may be engaged with the overlapping flap at the other end of the sheet.

3. A combined carton and display device for individual boxes comprising a sheet of cardboard upon the main portion of which the boxes are to be disposed in groups, the space between said groups being substantially equal to the combined thickness of as many of said boxes as there are groups, the said sheet being provided with a plurality of tongues on each side equal in number to the number of boxes which the display device is adapted to hold, in combination with a plurality of individual boxes disposed transversely of the sheet which forms the display device, said boxes being equal in length to the width of the body of the sheet, each box being in alinement with two of said oppositely disposed tongues and secured to the body of the sheet by the tongues being tucked into the ends of the boxes.

4. A combined carton and display device for individual boxes comprising a sheet of cardboard upon the main portion of which the boxes are to be disposed in groups, the space between said groups being substantially equal to the combined thickness of as many of said boxes as there are groups, the said sheet being provided with a plurality of tongues on each side equal in number to the number of boxes which the display device is adapted to hold, in combination with a plurality of individual boxes disposed transversely of the sheet which forms the display device, said boxes being equal in length to the width of the body of the sheet, each box being in alinement with two of said oppositely disposed tongues and secured to the body of the sheet by the tongues being tucked into the ends of the boxes, said sheet being provided with a flap at one end and means whereby when the sheet is folded and the several groups of boxes are folded together, the said flap may be engaged with the opposite end of the sheet.

897,609. HEATING SYSTEM. EGBERT N. FAIRCHILD, Minneapolis, Minn., assignor of one-half to M. A. Lehman, Minneapolis, Minn. Filed June 4, 1908. Serial No. 436,631.



1. The combination, with a hot water heating system comprising a main boiler or heater having a smoke flue and a water circulating chamber, a riser and return pipe connected with said chamber, of a comparatively small supplementary boiler also having a smoke flue and a circulating chamber, and pipe connections with said riser and return pipe, and said supplementary boiler being adapted to temporarily augment the heating surface of said main boiler, for the purpose specified.

2. In a hot water heating system, the combination, with the main boiler having a riser and return pipe connections and a discharge flue for the products of combustion and a circulating chamber, of a supplementary boiler having a fire box and a circulating chamber surrounding the same and a flue leading from said fire box into the fire box of said main boiler, circulating pipes leading from the circulating chamber of said supplementary boiler to said riser and return pipes, a discharge pipe for the products of combustion leading from said fire box, and a valve arranged in the flue between the fire box of said main and supplementary boilers whereby the products of combustion in said supplementary boiler may be directed to the fire box of said main boiler or into said discharge pipe, substantially as described.

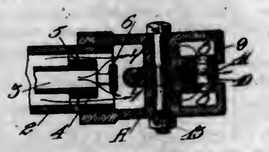
897,610. FLEXIBLE POWER-TRANSMITTING MECHANISM. ROSMAN I. FANCHER, Baldwinsville, N. Y. Filed Mar. 23, 1906. Serial No. 307,629.

1. In a flexible power transmitting mechanism, a rotary head having radial slots and a socket extending inwardly from one end beyond the slots, wedge-shape jaws movable radially in said slots, a flexible shaft having the helices at one end secured together and inserted into said socket beyond the jaws, a non-rotatable casing of closely coiled wire inclosing the intermediate portion of the shaft, a leather jacket surrounding the casing, a non-rotatable sleeve loosely inclosing the aforesaid head and adjacent end of the jacket, and movable means for rigidly clamping the sleeve to said jacket.



2. In a flexible power transmitting mechanism, a revoluble spindle having a socket in one end, a coil-wire shaft having its helices at one end brazed together and inserted in said socket, jaws in the spindle engaging the shaft some distance from the brazed helices, means for operating said jaws, a non-rotatable coil-wire casing for said shaft, a leather jacket for the casing, and non-rotatable holding means clamped to one end of the jacket.

897,611. OIL-BURNER. JAMES C. FITZSIMMONS, Oakland, Cal. Filed Apr. 3, 1908. Serial No. 424,883.



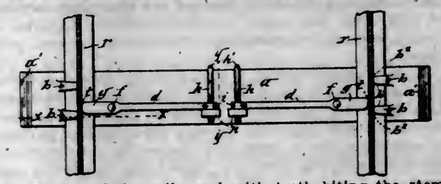
1. An oil burner comprising a forked head having passages in which oil and an atomizing agent are mixed, means for supplying the oil and atomizing agent to said passages, and a short tubular section slotted between its ends and clamped in said forked head and having its ends open to said passages in the head, with means for clamping said section in the head.

2. In an oil burner, a split burner head having a chamber in which oil and an atomizing agent are commingled, means for supplying oil and said agent to said chamber, an independent short tubular section removably held within the split portion of the head, said section having a discharge slot communicating with said chamber, and a clamping bolt extending transversely through the split portion of the burner head for removably securing the section in position.

897,612. RAILWAY CROSS-TIE. JOSEPHINE M. GAY, Oneida, N. Y., executrix of Elisha G. Gay, deceased. Filed July 6, 1907. Serial No. 382,515.

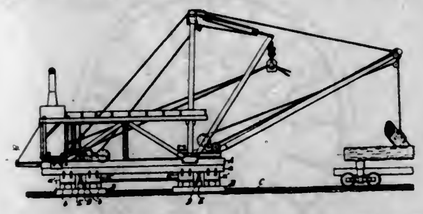
1. The combination, with the cross-tie and rails mounted thereon, of rail-gripping levers pivoted to the tie and provided with eyes on their free ends, an anchor having a screw-threaded end passing through said eyes, and a nut on said anchor formed with an elongated bearing engaging the tie.

2. A railway crosstie consisting of a steel bar formed T-shaped in cross-section and having rail-gripping jaws of the rails, levers pivoted to the top of the tie in proximity to the rails and formed with jaws engaging the informed integral with the tie and engaging the outer flanges



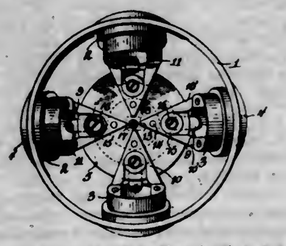
ner flanges of the rails, and with teeth biting the stems of the rails, and anchors connected to the ends of the long arms of the levers, and formed with hooks engaging the side of the tie.

897,613. LOG HAULING AND LOADING MACHINE. EBENEZER W. GERRISH, Jacksonville, Fla. Filed Feb. 24, 1905. Serial No. 247,205.



In a log hauling machine, in combination, the engine-supporting-platform, legs therefor adapted to straddle the railway track, hydraulic jacks cooperating with said legs and a pump mounted upon said platform whereby said jacks are operated, and a suspender whereby the lower member of each of said jacks is suspended when not in operation.

897,614. CLUSTER-LAMP SOCKET. CHARLES D. GERVIN, New York, N. Y., assignor to The Dale Company, a Corporation of New York. Filed Feb. 14, 1908. Serial No. 415,857.



1. In a cluster socket, a casing having a plurality of shells, metallic clips connected to said shells and extending in proximity to a common point but out of contact with one another, means connecting said clips together in insulated relation from one another, a single rigid metallic part, and a screw for impelling said part into electrical contact with the proximate ends of all of said clips simultaneously.

2. In a cluster socket, a casing, a plurality of shells, clips projecting from said shells toward a common point and insulated from one another, a binding post acting to connect all of said clips together and establish a circuit connection therewith, and means affording center contacts.

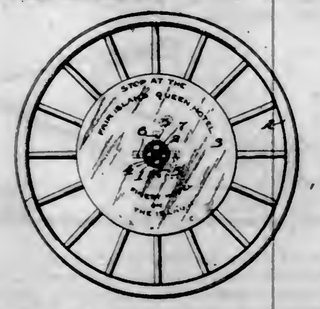
3. In a cluster socket, a casing, a plurality of shells, clips projecting from said shells toward a common point and insulated from one another, a binding post acting to connect all of said clips together and establish a circuit connection therewith, and a single metallic plate having prongs constituting center contacts for all of said shells.

4. In a cluster socket, a casing having threaded shells, bifurcated clips projecting inward therefrom toward a common point and electrically insulated from one another, center contacts projecting between the bifurcated portions of said clips, and means for simultaneously engaging a circuit wire and establishing a connection between said clips.

5. In a cluster socket, a casing having threaded shells, bifurcated clips projecting inward therefrom toward a common point and electrically insulated from one another, center contacts projecting between the bifurcated portions of said clips, and a screw and washer for simultaneously engaging a circuit wire and electrically connecting said clips.

[Claims 6 to 13 not printed in the Gazette.]

897,615. ADVERTISING DEVICE FOR VEHICLES. MARTIN F. GESERICH, St. Louis, Mo. Filed Dec. 9, 1907. Serial No. 405,722.



1. In an advertising device of the character described, the combination with an axle nut of a vehicle, of an advertising sheet or plate, a carrier for said sheet or plate comprising frame members to which the sheet or plate is attached, a band connecting said frame members, and means whereby said carrier may be attached to said axle nut, substantially as set forth.

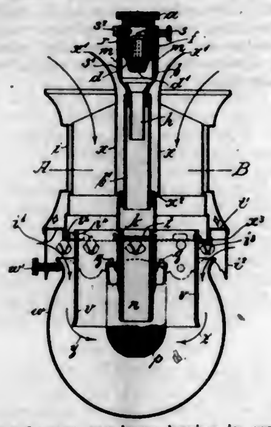
2. In an advertising device of the character described, the combination with an axle nut of a vehicle, of an advertising sheet or plate, a carrier for said sheet or plate comprising a pair of crossed U-shape frame members having wings at their inner ends to which said sheet or plate is attached, a band connecting said frame members, and means whereby said frame members are attached to said axle nut.

897,616. INVERTED INCANDESCENT GAS-LAMP. MAX GRAETZ, Berlin, Germany. Filed Feb. 28, 1906. Serial No. 303,518.

1. An inverted incandescent lamp having in combination, segmental chimneys, a burner tube disposed in an air space between and supporting said segmental chimneys, a burner tip, a mantle supported by said burner tip, a transparent extension common to said segmental chimneys and surrounding the mantle, a globe closed at its lower end and supported from said segmental chimneys, an outer casing supported from said chimneys and leaving an air circulation space between itself and the chimneys.

2. An inverted incandescent gas lamp having in combination, a lamp casing, a plurality of chimneys of segmental cross section supporting said casing with a partially complete annular space between, a burner tube supporting said chimneys and arranged between but outside the same, a gas nozzle and air inlet piece arranged above said chimneys and attached to the burner tube, a burner tip and mantle attached to said burner tube, a transparent extension common to said chimneys and surrounding said mantle.

3. An inverted incandescent gas lamp having in combination, a burner tube exposed to the atmosphere, a burner tip and mantle for said tube, segmental chimneys supported from said burner tube, a gas nozzle and air inlet above said segmental chimneys, deflecting hoods on said segmental chimneys for deflecting the burned gases away from said air inlet.

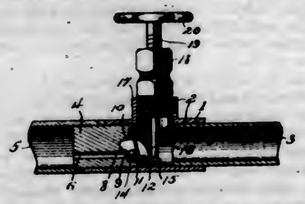


4. An incandescent gas lamp having in combination, a burner tube, a burner tip and mantle for said tube, segmental chimneys supported from said burner tube, a gas nozzle and air inlet connected to the upper part of the burner tube and above said chimneys, deflecting hoods on said chimneys for deflecting the burned gases away from said air inlet, a casing supported by said chimneys and surrounding the same so as to form an air circulating space in which said burner tube is disposed.

5. An inverted incandescent gas lamp having in combination, a burner tube, a burner tip and mantle for said tube, a plurality of chimneys of segmental cross section supported by said burner tube, a gas nozzle and air inlet piece on the burner tube and arranged above the opening of said chimneys, deflecting hoods on said chimneys opposite said air inlets, a transparent extension to said chimneys surrounding the mantle, a casing supported by said segmental chimneys and forming an air circulating space in which said burner is placed.

[Claims 6 and 7 not printed in the Gazette.]

897,617. AUTOMATIC VALVE. MARTIN L. GROVE, Tylersburg, Pa., assignor of one-third to W. A. Wray, Tylersburg, Pa., and one-third to N. F. Hoover, Marienville, Pa. Filed Apr. 10, 1907. Serial No. 367,408.



1. In a valve of the type described, a body, a plug threaded in said body and having a longitudinally disposed bore formed therein, one end of said plug being recessed to provide a seat, a plate pivotally mounted in the recessed end of said plug, a lever fulcrumed in the recessed end of said plug, a ball mounted in the recessed end of said plug, a perforated plate or screen mounted over the recessed end of said plug, and bearing against said ball, and a valve stem adjustably mounted in said body and adapted to engage said fulcrumed lever, substantially as described.

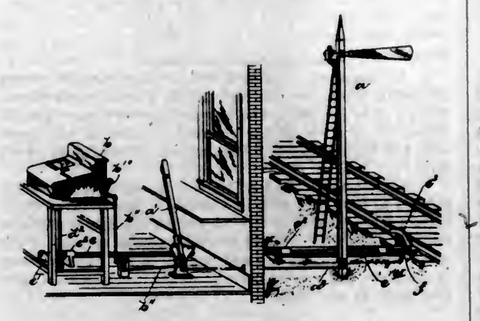
2. In a valve of the type described a body, a plug threaded therein and having a bore and provided at one end with a recess, a plate pivotally mounted in the recessed end of said plug, a lever fulcrumed in the recess in said plug, a spherical valve in the recessed end of the plug and adapted to close the end of said bore, and means carried by said body and engaging said lever for elevating said spherical valve.

3. In a valve of the type described a body, a plug threaded therein, said plug having a bore formed therein, a lever fulcrumed at one end of said plug, a spherical valve mounted in a recess in the end of said plug and adapted to close said bore, a perforated plate or screen mounted upon the end of said plug, and means adapted to engage said lever for normally holding said spherical valve in an elevated position.

4. A valve of the type described comprising a body, a plug threaded therein, said plug having a bore formed therein, a lever fulcrumed upon the inner end of said plug, a spherical valve in said plug and adapted to close said bore, and a valve stem carried by said body and adapted to engage said lever for holding said spherical valve in an elevated position.

5. A valve of the type described comprising a body, a plug threaded therein, said plug having a bore threaded therein, a lever fulcrumed upon the end of said plug, a valve in the plug and adapted to close the end of said bore, and means carried by said valve body and adapted to engage the end of said lever for holding said spherical body or ball in an elevated position.

897,618. RECORDING DEVICE FOR BLOCK-SIGNAL SYSTEMS. TIMOTHY HALEY, Xenia, Ohio, assignor of one-half to Alfred G. Barnes, Macedonia Depot, Ohio. Filed Jan. 29, 1907. Serial No. 354,786.



1. In a device as described, a signal apparatus, an individual recording device, train operated actuating mechanism for said recording device, setting mechanism for said recording device acting synchronously with said signal apparatus, substantially as specified.

2. In a device as described, a signal apparatus, a train operated recording mechanism, a connection between said signal apparatus and said recording mechanism operated independent of the train for automatically adjusting said recording mechanism to correspond with the signal displayed, substantially as specified.

3. In a local station equipment, a signal apparatus, a train operated recording mechanism, means for automatically varying said recording mechanism to correspond with the signal displayed, substantially as specified.

4. In a device as described, a signal apparatus, a recording device, a connection between said signal and recording device whereby the setting of said recording device will be automatically varied in unison with the variation of the signal and means for completing the registration of the condition of the signal, substantially as specified.

5. In a signal station equipment, the combination with a signal apparatus, a recording mechanism, including a record sheet, means operated by a passing train for placing a permanent record on said sheet, and means for automatically varying the registering mechanism with the variation of the signal.

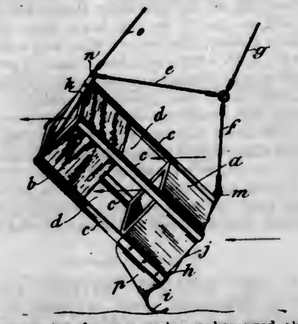
[Claims 6 to 26 not printed in the Gazette.]

897,619. PROCESS OF CONDENSING GALLOCYANINS WITH AMINS. CHARLES DE LA HARPE, Basel, Switzerland, assignor to Dye Works, formerly L. Durand, Huguenin & Co., Basel, Switzerland. Filed July 6, 1907. Serial No. 382,539.

1. The process of making amino-compounds, which consists in condensing a gallocyanin with an amin in the presence of an aromatic nitrohydrocarbon.

2. The process of making amino-compounds, which consists in condensing a gallocyanin with an amin in the presence of dinitrobenzene.

897,620. APPARATUS FOR RECOVERING SUBMERGED OBJECTS. FRIEDRICH H. C. HEYN, Hamburg, Germany. Filed Apr. 20, 1908. Serial No. 428,033.



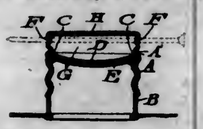
1. An apparatus for recovering submerged objects, comprising a box-shaped body open at both ends, one of which is hooked, and having lateral apertures, and means for attaching a drag-line to the body, in such manner that the latter assumes an inclined position with the hooked end downward, the current acting against the inner and outer body-walls presented to it, serving to cause the apparatus to sink, substantially as described.

2. An apparatus for recovering submerged objects, comprising a box-shaped body presenting an open-ended hooked metal frame at one extremity, and an open-ended wooden frame at the opposite extremity, with gaps between the two frames, and means of attaching a drag-line to the body, in such manner that the latter assumes an inclined position with the hooked end downward, the current acting against the inner and outer body-walls presented to it, serving to cause the apparatus to sink, substantially as described.

3. An apparatus for recovering submerged objects, comprising a box-shaped body presenting a terminal hooked metal frame having a grated extremity, and an open-ended wooden frame at the opposite end, with gaps between the two frames, and means for attaching a drag-line to the body, in such manner that the latter assumes an inclined position with the hooked end downward, the current acting against the inner and outer body-walls presented to it, serving to cause the apparatus to sink, substantially as described.

4. An apparatus for recovering submerged objects, comprising a box-shaped body open at both ends, one of which is hooked, and having lateral apertures, and means for attaching a drag-line to the body, in such manner, that the latter assumes an inclined position with the hooked end downward, the current acting against the inner and outer body-walls presented to it, serving to cause the apparatus to sink, and an auxiliary line attached to the hookless end of the apparatus, whereby the latter can be drawn into erect position when desired, substantially as described.

897,621. SCREW-CAP. RICHARD M. HOLLINGSHEAD, Camden, N. J. Filed Aug. 2, 1907. Serial No. 386,747.



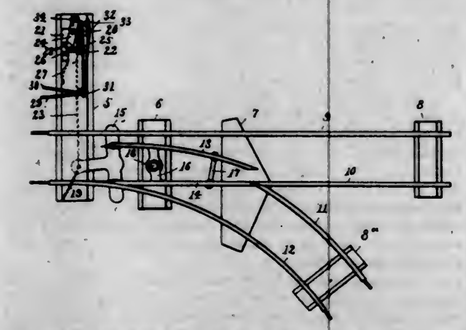
1. A screw cap of the character stated having a groove in the side of the interior thereof, a downwardly convex disk adapted to be peripherally seated in said groove, and a downwardly convex gasket adapted to be sustained on the underside of said disk and having the peripheral portion seated in said groove.

2. A screw cap of the character stated having within the same a disk and a gasket thereunder, said disk being convex on its under face and being adapted to be peripherally seated on a shoulder within the cap, and said gasket being adapted to be sustained on the convex face of said disk, said cap having a closed top, and said side having openings therethrough.

3. A screw cap of the character stated having a body provided with a groove in the inner face of the side thereof, and a downwardly convex disk, and a downwardly convex gasket, both within said body imposed one upon the other, said groove forming a common seating for the peripheral portions of said gasket and disk.

4. A screw cap consisting of a body composed of a top and a side, the latter having a groove in its inner face, and a gasket and disk in said body, said gasket and disk being imposed one on the other and being downwardly convex, and both having their peripheral portions seated in said groove, said body having a chamber therein, and an opening in the side, said chamber and opening being above said disk.

897,622. TOY-RAILWAY SWITCH. CHARLES A. HOTCHKISS, Bridgeport, Conn., assignor to The Ives Manufacturing Corporation, Bridgeport, Conn., a Corporation of Connecticut. Filed June 8, 1907. Serial No. 377,888.



1. In a portable toy railway switch, the combination with a pair of intersecting track sections, sleepers upon which the rails of track are supported, one of said sleepers having an opening in its side, of a short rail section pivoted intermediate of the intersecting portions of said track sections, plates for securing the rails together, one of said plates being provided with an arm that extends into the said opening in side of sleeper, a lever connected with the said arm for moving the short rails to line with the respective track sections, and means for retaining said parts in line with either of its track sections.

2. In a portable toy railway switch, the combination with a pair of connected track sections supported upon sleepers, of a short rail section pivoted intermediate of the track sections, plates for securing the rails together one of said plates having an arm extending into the sleeper, a lever pivoted to sleeper and means within the sleeper for connecting the lever with the said arm.

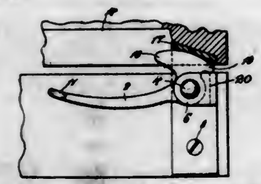
3. In a toy railway switch, the combination with a pair of intersecting and connected track sections, of a short rail section pivoted intermediate the intersecting portions of track section, a spring for normally holding the short rail section so that one of its rails will line with one track section, a lever for shifting the said short rail section so that its other rail will line with the other section, and means for holding it in that position.

4. In a toy railway switch, the combination with a pair of connected track sections, of a short rail section pivoted intermediate the intersecting portions of track sections, a spring for normally holding the rail section to line with one side of track section, and means for retaining said parts in such position against the action of the holding means.

5. In a toy railway switch, the combination with a pair of connected track sections, of a short rail section pivoted intermediate the intersecting portions of track sections, means for normally holding the rail section to line with one track section, a lever for throwing said rail section to the opposite side, a pawl to engage the lever, and connections for engaging and releasing the pawl.

[Claims 6 to 11 not printed in the Gazette.]

897,623. WINDOW-FASTENER. ABIEL G. HOWLAND, Christchurch, New Zealand. Filed Nov. 12, 1906. Serial No. 342,989.



1. An improved window fastener comprising a bracket secured to the lower sash and having a jaw integral therewith, a lever pivoted in the jaw and having a cam integral therewith, a plate having recesses secured to the upper sash and sloping bases to the recesses substantially as set forth.

2. An improved window fastener comprising a bracket secured to the lower sash and having a jaw integral therewith, a lever pivoted in the jaw and having a cam and heel integral therewith, a plate having recesses secured to the upper sash, a sloping top and bottom to the bottom recess of the plate and sloping bottoms to the other recesses, substantially as set forth.

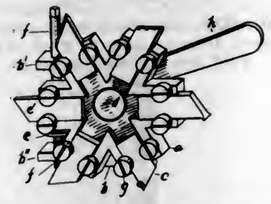
897,624. FERTILIZER. JAMES F. JARBOE, Chenaultt, Ky. Filed Aug. 22, 1907. Serial No. 389,733.

The process herein described consisting in first disposing a layer of chlorid of sodium in a suitable receptacle, sprinkling upon the layer of chlorid of sodium a dilute solution of paris green, soap and kerosene, then disposing over the material thus treated a layer of pulverized manure and earth, then sprinkle over the layer of manure and earth a quantity of sulfate of ammonia, then dispose over the material thus treated a layer of muriate potash, then dispose over the mass a quantity of phosphoric acid, then sprinkle over the mass a quantity of chlorid of sodium, then sprinkle over the mass a dilute solution of paris green, soap and kerosene, then dispose over the mass an air tight covering and permit the mass to remain a sufficient time to permit the complete amalgamation of the ingredients, the time varying from twenty to one hundred days according to the temperature of the weather, then disintegrating the mass and exposing to the atmosphere until dried, then pulverizing the mass.

897,625. LATHE TOOL-HOLDER. CHARLES E. KEEL, Indianapolis, Ind. Filed Oct. 17, 1907. Serial No. 397,777.

1. A lathe tool-holder including a frame with a hole through it, a turret head adapted to carry a plurality of cutters and having a spindle projecting through said hole beyond said frame and threaded, a rib on said frame, and a hand lever secured on said spindle with a cam-shaped surface on one side thereof bearing against said rib, whereby when said hand-lever is turned in one position, the turret head will be clamped against said frame, and when turned in another position, the turret head can be turned.

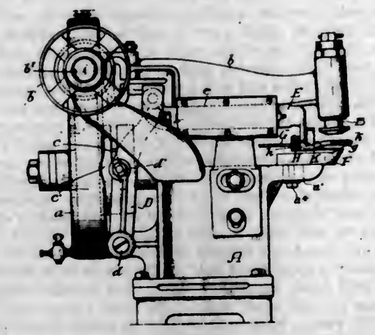
2. A lathe tool-holder including a frame with a hole through it, a turret head adapted to carry a plurality of cutters and having a spindle projecting through said hole beyond said frame, and a rib on said frame, a hand-lever on said spindle with a cam-shaped surface on one side thereof bearing against said rib, and means on said spindle for holding the hand-lever in position, whereby when said hand-lever is turned in one position, the turret head will be clamped against said frame, and when turned in another position, the turret head can be turned.



3. A lathe tool-holder including a frame with a hole through it, a turret head adapted to carry a plurality of cutters and having a spindle projecting through said hole beyond said frame, means on said spindle adapted to cooperate therewith to clamp the head to the frame, and spring-pushed buttons mounted in said frame and acting against said turret head to disengage it from said frame when released by said hand-lever.

4. A tool-holder including a frame with a pair of projections one above the other at the end thereof, a cutter head mounted in said frame against the side thereof, said cutter head having radial arms for holding the cutters, a vertically adjustable screw-rod mounted in the extension from said frame beside one of the arms of said cutter, and a disk secured to said screw rod in position to engage one of the surfaces of said frame to adjust its position and hold the cutter in said arm in the proper position for operation.

897,626. WELT-BEATING MACHINE. WILLIAM B. KEIGHLEY, Vineland, N. J., assignor to Charles Keighley & Sons, a Firm. Filed Oct. Oct. 30, 1907. Serial No. 399,805.



1. A welt beating machine consisting of a hammer, an anvil, and means interposed between said hammer and anvil for stretching a welt while it is being beaten.

2. The combination in a welt beating machine of a hammer, an anvil, gripping mechanism actuated by said hammer, and means for moving said gripping mechanism from the line of action of the hammer in order to apply tension to the object engaged by said mechanism.

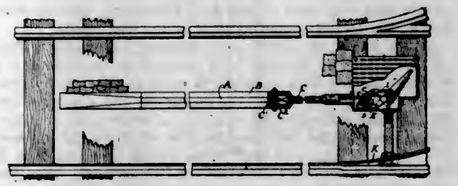
3. The combination of means for gripping a strip of welting, an abutment for preventing movement of the main portion of the shoe to which the welting is attached, means for moving said gripping means away from the shoe, and means for beating the welt while it is under tension.

4. A welt beating machine having means for placing a welt under tension, and means for delivering a blow or blows upon the welt while it is under tension.

5. The combination in a welt beating machine of a hammer, an anvil, means for operating the hammer, two structures having substantially parallel faces for gripping a welt, and means for reciprocating said structures between the hammer and anvil so that they will receive a succession of blows from said hammer.

[Claims 6 to 16 not printed in the Gazette.]

897,627. TRAMWAY-SWITCH. FRANK J. KENDRICK, Schenectady, N. Y. Filed Oct. 25, 1907. Serial No. 399,156.



1. In a tramway switch, a switch tongue, an operating lever connected therewith, a movable member adapted to be moved in one direction by a device on the car and return automatically to normal position, and means interposed between said movable member and switch operating lever whereby one movement of said movable member operates the switch tongue in one direction and the succeeding movement of said member operates said tongue in the opposite direction.

2. In combination, a switch tongue, a bell crank lever having one arm operatively connected therewith, a rocking arm or lever mounted to oscillate on the same axis as said bell crank lever, a spring connecting the arm or lever with the other arm of the bell crank lever, and means for oscillating the said rocking arm or lever.

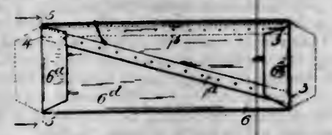
3. In combination, a switch tongue, a bell crank lever having one arm operatively connected therewith, a rocking arm or lever having the same axis of rotation as said bell crank lever, a tension spring between the said rocking arm and the other arm of the bell crank lever, a movable member adapted to be operated from a moving car, and connections between said movable member and said rocking arm for causing the one to be moved by the other.

4. In combination, a switch tongue, a bell crank lever having one arm operatively connected therewith, a rocking arm or lever having the same rotation as said bell crank lever, a tension spring between the said rocking arm and the other arm of the bell crank lever, a walking beam connected to said rocking arm, a pull device for operating said walking beam and means whereby a pull upon said device will swing said walking beam in one direction and a second pull will swing it in the opposite direction.

5. In combination, an oscillating member, a switch tongue, connections interposed between said oscillating member and tongue whereby the latter is operated from the former, a cam device reversibly connected with said oscillating member, a movable member adapted to be operated from a moving car, pull connections interposed between said cam device and movable member, and means for automatically reversing the position of said cam device after each pulling operation.

[Claim 6 not printed in the Gazette.]

897,628. PACKET FOR BRAID AND OTHER NARROW FABRICS. CHARLES S. KING, Pawtucket, R. I. Filed Apr. 9, 1908. Serial No. 425,993.

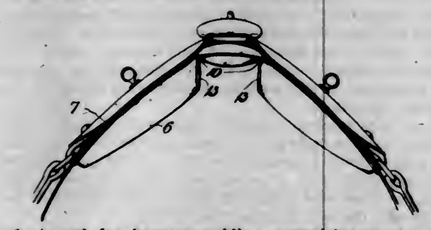


1. An improved article of commerce comprising a bolt of fabric, and a wrapper provided with flaps at opposite ends, said wrapper being passed between the bolt and an outer run of the fabric which passes around the adjacent edges of the wrapper, the wrapper being folded around the bolt to expose said run of the fabric on the exterior of the wrapper, said flaps being folded over the ends of the bolt and secured to the outer face of the wrapper.

2. An improved article of commerce comprising a bolt of fabric having its outer end secured to the bolt and a wrapper provided with flaps at opposite ends, said wrapper being passed between the bolt and a run of fabric on the side opposite the fastened end of the fabric, said wrapper being folded around the bolt and said flaps being folded over the ends of the bolt protecting the adjacent fabric and inclosing the fastened end of the fabric.

3. An improved article of commerce comprising a bolt of fabric having its outer end secured to the bolt and a wrapper having flaps at opposite ends, said wrapper being passed between a run of the fabric on the side opposite its fastened end exposing said run of fabric, the wrapper folded around the bolt on the side opposite the exposed run of the fabric, said flaps being folded over the ends of the bolt and over the adjacent run of the fabric that lies over the wrapper.

897,629. HARNESS-PAD. EMIL J. KOCH, Chicago, Ill. Filed Sept. 7, 1907. Serial No. 391,793.



1. A pad for harness saddles, comprising upper and lower cover pieces extending over both sides of the saddle, said pieces being stitched together by two spaced rows of stitching extending across the same on opposite sides of the middle, the lower piece being fulled and tucked in to form a squared end under said stitching, and stuffing between said pieces.

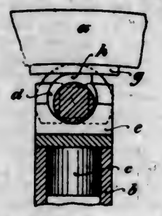
2. A pad for harness saddles, comprising upper and lower cover pieces stitched together and extending over both sides of the pad, the lower piece having substantially square corners tucked in and forming a box-like end, at the top of each side pad, and stuffing between said pieces.

3. A pad for harness saddles, comprising upper and lower corner pieces stitched together and extending over both sides of the pad and stitched across on opposite sides of the middle, the lower piece having corners with "satchel" folds tucked in at the upper end of each pad, forming a substantially flat end, and stuffing between the cover pieces.

897,630. DETACHABLE RIM. RUDOLF KRONENBERG, Ohligs, Germany. Filed Dec. 21, 1907. Serial No. 407,462.

1. A rim for vehicle wheels, bearings engaging the spokes of the wheels and provided with openings, and a transverse locking member engaging said openings and provided with an eccentric part engaging the rim.

2. A rim for vehicle wheels, bearings engaging the spokes of the wheels, transverse locking members having



eccentric parts for engaging the rim, means for preventing lateral movement of the rim on the bearings, and means for connecting said bearings.

897,631. MAGAZINE CAP-EXPLODER. GEORGE KRUEGER, Cincinnati, Ohio, assignor to W. B. White, Cleveland, Ohio. Filed Sept. 2, 1903. Serial No. 171,606.



1. In a device of the character described, a cane having a head provided with an explosion chamber, an anvil within said chamber, a hammer within said chamber, means for moving said hammer toward said anvil, a magazine, a spring pressed plunger for feeding the ammunition from said magazine to said chamber, and a part carried by said hammer and extending through one of the walls of said chamber for controlling the movement of said plunger.

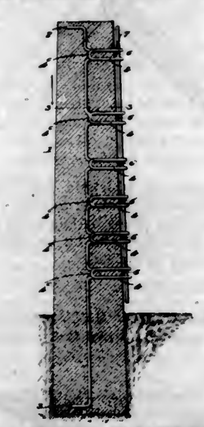
2. In a device of the character described, a cane having a head provided with an explosion chamber, an anvil within said chamber, a hammer within said chamber, means for moving said hammer toward said anvil, a magazine, a plunger adapted to feed the ammunition from said magazine to said chamber, a spring-actuated lever for operating said plunger, and a part carried by said hammer, extending through one of the walls of said chamber and engaging said lever, whereby said lever is moved against the tension of its spring and said plunger withdrawn from said magazine when said hammer is moved toward said anvil.

3. In a device of the character described, a cane having a head provided with an explosion chamber, an anvil within said chamber, a hammer within said chamber, means for moving said hammer toward said anvil, a magazine, a plunger adapted to feed the ammunition from said magazine to said chamber, lugs mounted on said head, a shaft mounted in said lugs, a lever comprising a loop of wire having its closed end secured to said plunger and its free ends fixedly wound about said shaft, one of said ends engaging said head, a part carried by said hammer adapted to engage the said lever to move the same against the tension of its spring when said hammer is moved toward said anvil and adapted to be engaged by the other end of the wire forming said lever to return said hammer to its normal position.

4. In a device of the character described, a cane having a head provided with a chamber, a magazine, a plunger adapted to feed the ammunition from said magazine to said chamber, a spring-pressed lever for actuating said plunger, an anvil within said chamber, and a hammer within said chamber adapted to coöperate with said anvil and comprising a portion extending parallel with said anvil, an arm arranged at substantially right angles to said portion, adapted to engage said lever to withdraw the plunger from said magazine when said hammer is moved toward said anvil.

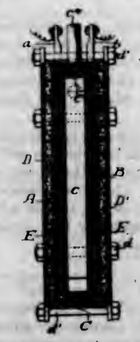
5. In a device of the character described, a cane having a head provided with an explosion chamber, an anvil within said chamber, a hammer within said chamber, means for moving said hammer toward said anvil, a magazine, means for feeding the ammunition from said magazine to said chamber, and a part carried by said hammer and extending through one of the walls of said chamber for controlling the movement of said feeding means.

897,632. CONCRETE FENCE-POST. CHARLES KUBACH, Abilene, Kans. Filed Aug. 17, 1907. Serial No. 389,027.



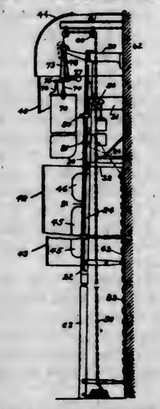
A concrete fence post provided with a combined reinforcing and fence-wire-holding device comprising a single wire composed mainly of straight portions disposed lengthwise in said post, and intermediate portions forming integral loops having laterally-extending legs lying in the same vertical plane, the closed end of each loop being bent back and embedded in the post adjacent to the straight portions of the device but at one side thereof, leaving eyes projecting from the surface of the post.

897,633. ELECTROLYTIC CELL. GILBERT C. LANDIS, York, Pa. Filed July 2, 1907. Serial No. 381,915.



The combination of a plurality of graphite plates having terminals for connection with a source of current, a frame of insulating material extending around the edges of the plates and interposed between the graphite plates so as to form a circuitous course for liquid flowing from the inlet to the outlet, metallic plates outside of the graphite plates and provided with lugs, an asbestos plate interposed between each of the graphite plates and each of its adjacent metallic plates, and bolts extending between the lugs of said metallic plates for clamping together the various parts.

897,634. FIRE-ESCAPE. GEORGE LEBRI, Salem, Mass. Filed Nov. 16, 1907. Serial No. 402,449.



1. In a fire escape, a series of ladder sections of which the top section is fixed to the building and the others are slidably attached to it or to each other, a basket, a shaft, a handle therefor, a barrel thereon, a hook in the barrel, pulleys, a support therefor, and a chain looped around the hook and connected at one end to the bottom rung of the lower ladder section and at its other end passed over said pulleys and attached to the basket as described.

2. In a fire escape, a series of ladder sections of which the top section is fixed to the building and the others are slidably attached to it or to each other, metal telescoping shields with side openings attached to the ladder sections, a basket located inside said shields, and means whereby the ladder sections and the basket may be raised together and may be lowered independently.

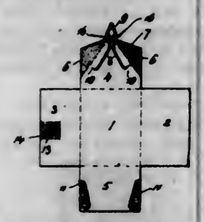
3. In a fire escape, a series of ladder sections of which the top section is fixed to the building and the others are slidably attached to it or to each other, a basket, means for raising the ladder sections and basket together, means for holding the basket up, and means for holding the ladder up, means for releasing the ladder, and different means for releasing the basket.

4. In a fire escape, a series of ladder sections of which the top section is fixed to the building and the others are slidably attached to it or to each other, a basket, a shaft, a handle therefor, a barrel thereon, a hook in the barrel, pulleys, a support therefor, and a chain looped around the hook and connected at one end to the bottom rung of the lower ladder section and at its other end passed over said pulleys and attached to the basket as described, combined with a ratchet carried by said shaft, a pawl which engages said ratchet, and a trip chain which is attached to said pawl and passes within reach of persons in the different stories of the building.

5. In a fire escape, a series of ladder sections of which the top section is fixed to the building and the others are slidably attached to it or to each other, a supporting bar, a basket, a basket hook pivoted to the basket and adapted to engage said bar, a shaft, a handle therefor, a barrel thereon, a hook in the barrel, pulleys, a support therefor, and a chain looped around the hook and connected at one end to the bottom rung of the lower section and at its other end passed over said pulleys and pivoted to the basket hook as described.

[Claims 6 to 10 not printed in the Gazette.]

897,635. ENVELOP. THOMAS LEWIS and HENRY C. DANDO, Derry, Pa. Filed Feb. 26, 1908. Serial No. 417,930.



1. An envelop comprising a body portion, side flaps adapted to fold upon said body portion, end flaps adapted to fold upon said side flaps, an eyelet adhesively secured between said side flaps, a fastener flap carried by one of said side flaps and adapted to lie upon said eyelet, metallic pronged reinforcements carried by one of said end flaps, a resilient metallic triangular head carried by the other of said end flaps and held in engagement therewith by adhesively secured corner flaps, said head being adapted to pass through said flaps and said eyelet, substantially as described.

2. An envelop comprising a body portion, side flaps adapted to fold thereon, end flaps adapted to fold on said side flaps, an eyelet arranged between said side flaps, metallic reinforcements carried by one of said end flaps, a resilient triangular shaped head carried by the other of said end flaps and adapted to pass through said side flaps and said eyelet.

897,636. PROCESS FOR MAKING FELDSPAR FLUX. FRED M. LOCKE, Victor, N. Y. Filed Feb. 6, 1906. Serial No. 299,780.

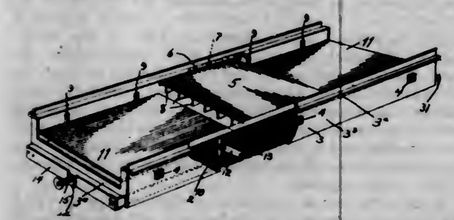
1. The method of preparing feldspar flux to be used in the manufacture of high potential porcelain insulators, said method consisting in melting, fusing and cooling the feldspar and then grinding it to a fine powder.

2. The herein described method of producing a feldspar flux to be used in the manufacture of high potential insulators, consisting in first firing the feldspar to the melting point, and then cooling and reducing it to a finely comminuted condition.

3. A product of the herein described process, said product consisting of finely powdered previously melted feldspar.

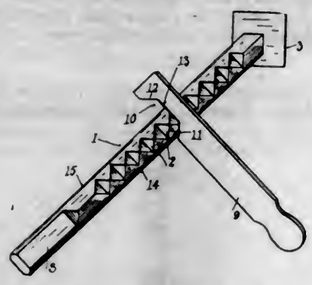
4. A flux for high potential porcelain insulators consisting of finely comminuted previously melted feldspar.

897,637. VEGETABLE SLICING OR CUTTING MACHINE. HARLAND E. MADDEN, Hebron, Ohio. Filed Oct. 25, 1907. Serial No. 399,086.



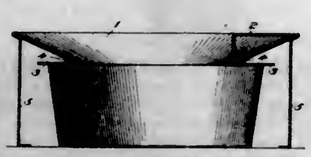
In a vegetable slicing machine, the combination with a supporting framework and a hopper mounted thereon, of a slicing frame slidably mounted in said framework, a fixed cutter plate extending between the sides of the slicing frame, floor plates on opposite sides of said cutting plate, slidably mounted longitudinal bars links pivoted to said bars and to said floor plates, a transverse bar connecting the ends of said longitudinally disposed bars, an adjusting screw engaging a threaded opening in said transverse bar and engaging one end of the slicing frame, and means for imparting a reciprocatory motion to said slicing frame, said floor plates lying between the sides of the slicing frame and said longitudinal bars lying upon the outer sides of the slicing frame, there being slots formed in the sides of the slicing frame through which the pivots that connect the links to the floor plates, pass.

897,638. TOY. THOMAS A. MARTIN, Covington, Ky., assignor of one-half to Fred J. Warner, Memphis, Tenn.; Mary Martin administratrix of said Thomas A. Martin, deceased. Filed June 6, 1907. Serial No. 377,619.



A device for operating whirligig toys by rubbing the stem thereof consisting of a blade having a notch in the edge thereof, wider than the whirligig stem and providing by its bottom a rubbing-face and by its ends two contact-faces, substantially as described.

897,639. SPLASH-PAN FOR BATHING-TUBS. LUTHER MATTHEWS, Paris, Tenn. Filed Oct. 1, 1907. Serial No. 395,409.



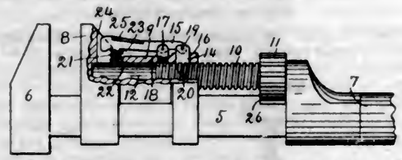
1. As a new article of manufacture a tub bathing device formed of an open flaring splash guard and a seating sealing splash fender plate fixed to its under side and extending outward from the inner edge of the guard opening and forming thereby a seat for the guard upon the edge of the tub to prevent the splashing of the water over the edge of the tub and form a smooth edge at the guard opening.

2. In a bathing-device, a splashing-guard formed with a central opening and flaring sides, a seat mounted thereon, and a fender plate fixed to the under side of the splash-guard and extending therefrom horizontally, and braces connecting the outer edge of the fender with the overhanging splash-guard.

3. In a bathing-device, a splash-guard formed with a central opening and flaring sides, a seat mounted thereon, and a fender-plate fixed to the under side of the splash-guard and extending therefrom beneath it, braces connecting the outer edge of the fender with the overhanging splash-guard, and supporting legs connected to the outer edge of the splash-guard.

897,640. WRENCH. JOHN MINETT, Springfield, Mass. Filed Dec. 18, 1907. Serial No. 407,023.

1. The combination, in a wrench, with a shank provided with a fixed jaw, a movable jaw and sleeve mounted on said shank and slotted and recessed respectively, such slot and recess opening into each other, and a serrated member, of a movable dog mounted in said sleeve and adapted to engage and release said serrated member, a lever pivotally-mounted between its ends on the sleeve and having one end pivotally-connected with said dog and the other end extending into the slot in said movable jaw, and a spring in the sleeve recess arranged to force normally the dog into locking engagement with the serrated member through the medium of said lever.



2. The combination, in a wrench, with a shank provided with a fixed jaw, a sleeve provided with a slotted jaw slidingly-mounted on said shank, said sleeve having a recess therein adjacent to its jaw, and a suitably mounted non-reciprocating screw extending into the sleeve, of a longitudinally reciprocating dog in said sleeve, said dog being serrated at its inner end to engage with said screw, an actuating lever for said dog pivoted at one end to the latter and pivotally-mounted between its ends on the sleeve, the free terminal of such lever being in the slot in said movable jaw, and a spring arranged in the sleeve recess to bear against the free terminal of said lever to force such terminal outward.

3. The combination, in a wrench, with a shank provided with a fixed jaw, a slotted sleeve provided with a jaw slidingly mounted on said shank, and a suitably mounted non-reciprocating screw extending into the sleeve, of a longitudinally reciprocating dog in the slot in the sleeve, such dog being serrated at its inner end to engage with said screw, a post on said sleeve, an actuating lever for said dog pivoted at one end to the latter and pivotally-mounted on said post, and a spring arranged to bear against the free terminal of said lever to force such terminal outward.

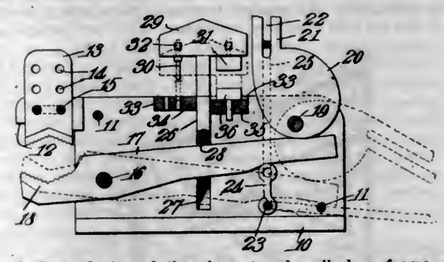
4. The combination, in a wrench, with a shank provided with a fixed jaw, a slotted sleeve provided with a jaw slidably mounted on said shank, and a suitably mounted non-reciprocating screw extending into the sleeve, of a longitudinally reciprocating dog in the slot in said sleeve, such dog being serrated at its inner end to engage with the screw, a post on the sleeve, an operating lever pivoted at one end to said dog and pivotally-mounted on said post, said lever being provided near its free terminal with a retaining lug for a spring, and a spring between the sleeve and said free terminal of the lever, the outer end of said spring being held in place by said lug.

5. The combination, in a wrench, with a shank provided with a fixed jaw, a slotted sleeve provided with a jaw slidingly-mounted on said shank, and a suitably mounted non-reciprocating screw extending into said sleeve, of a longitudinally reciprocating dog in the slot in the sleeve, such dog being serrated at its inner end to engage with the screw, a post on the sleeve, an operating lever pivoted at one end to said dog and pivotally-mounted on said post, said lever being provided between the free terminal thereof and the post on the outer edge with a thumb or finger piece, and a spring between the sleeve and said free terminal of the lever to force such terminal outward.

[Claim 6 not printed in the Gazette.]

897,641. METAL-WORKING TOOL. CHARLIE L. MOSES, Hilltop, W. Va. Filed Apr. 21, 1908. Serial No. 428,321.

1. In a device of the character described, a frame, a tool actuating lever pivotally mounted thereon, an operating lever provided with a slot and a cam head resting against one face of said first mentioned lever, a rock shaft, a rock arm mounted thereon to press against the opposite face of the first mentioned lever, and a bail passing through said slot and fixedly mounted on said rock shaft.



2. In a device of the character described, a frame, a tool actuating lever pivotally mounted thereon, a vise member formed on said lever, a second vise member adjustably mounted on said frame, in opposition to the vise member on the lever, an operating lever provided with a slot and a cam head resting against one face of said tool actuating lever, a rock shaft, a rock arm mounted thereon to press against the opposite face of the first mentioned lever, and a bail passing through this slot, and fixedly mounted on said rock shaft.

3. In a device of the character described, a frame, a lever pivotally mounted thereon, a tool supporting head actuated by said lever, a vise member formed on said lever, a second vise member adjustably mounted on said frame in opposition to the vise member on the lever, an operating lever provided with a slot and a cam head resting against one face of said first mentioned lever, a rock shaft, a rock arm mounted thereon to press against the opposite face of the first mentioned lever, and a bail passing through this slot, and fixedly mounted on said rock shaft.

4. In a device of the character described, a frame, a lever pivotally mounted thereon, a tool supporting head actuated by said lever, tools detachably mounted on said head, die blocks mounted on said frame, a vise member formed on said lever, a second vise member adjustably mounted on said frame in opposition to vise member on the lever, an operating lever provided with a slot and a cam head resting against one face of said first mentioned lever, a rock shaft, a rock arm mounted thereon to press against the opposite face of the first mentioned lever, and a bail passing through said slot and fixedly mounted on said rock shaft.

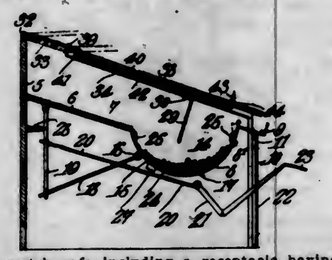
5. In a device of the character described, a frame, a lever pivotally mounted thereon, a tool supporting head actuated by said lever, a punch and a shear blade detachably mounted on said head, die blocks mounted on said frame, a shear blade held in one of said die blocks to conct with the shear blade on the head, a vise member formed on said lever, a second vise member pivotally mounted on said frame in opposition to the vise member on the lever, an operating lever provided with a slot and a cam head resting against the face of said first mentioned lever, a rock shaft, a rock arm mounted thereon to press against the opposite face of the first mentioned lever, and a bail passing through said slot and fixedly mounted on said rock shaft.

897,642. SINGLE-DELIVERY MATCH-BOX. EDWARD T. MURRAY, Colorado Springs, Colo. Filed Feb. 11, 1907. Serial No. 356,822.

1. A match safe including a receptacle having a match receiving magazine, a plurality of pivotally united covers one of which is provided with a pocket and forms a closure for the match receptacle when the other is in open position, and clips hingedly mounted in said pocket and adapted to receive an advertisement.

2. A match safe including a receptacle having a match receiving magazine, a plate extending transversely across the magazine and having its upper edge spaced downwardly from the top of the receptacle, a main cover pivotally mounted on the receptacle and adapted to engage the plate, clips pivotally connected with the main cover for

supporting an advertising card, an auxiliary cover pivotally mounted on the main cover, and a catch carried by the main cover and adapted to engage the auxiliary cover for locking said covers in engagement with each other.



3. A match safe including a receptacle having an inclined partition defining a match receiving magazine, a slotted segmental plate disposed within the receptacle and having one end thereof secured to the partition and its opposite end bifurcated and extended laterally beyond the adjacent wall of the receptacle to form a match support provided with vertically disposed stop lugs, a feed plate slidably mounted on the segmental plate and provided with a depending lug extending through said slot, and means operatively connected with the lug for operating the plate thereby to successively deliver a single match to the support.

4. A match safe including a receptacle having an inclined partition forming a match receiving magazine, a segmental plate secured to one end of the partition and having its opposite end bifurcated and extended laterally beyond the front wall of the receptacle to form spaced arms terminating in upwardly extending lugs constituting a match support, there being a slot formed in the segmental plate, a feed plate slidably mounted on the segmental plate and having a portion thereof extending through said slot and means operatively connected with the feed plate for successively delivering a single match on the match support.

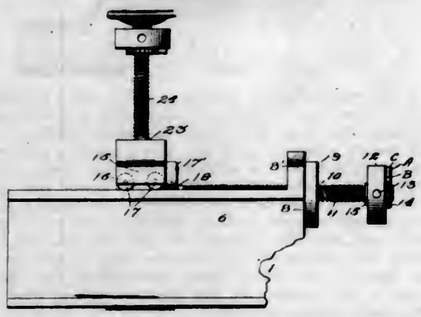
5. A match safe including a receptacle having a match receiving magazine, a slotted segmental plate disposed within the receptacle and provided with laterally extending arms constituting a match support, a feed plate slidably mounted on the segmental plate and provided with a depending weighted lug extending through the slot of the segmental plate, a depending lever pivotally mounted within the receptacle, a rod forming a pivotal connection between the lever and lug, a bell crank lever operating lever, and a rod forming a connection between the depending lever and the adjacent end of the bell crank lever.

897,643. CHIMNEY-CAP. JACOB O. MYHRE, Hatton, N. D. Filed Feb. 18, 1907. Serial No. 357,785.



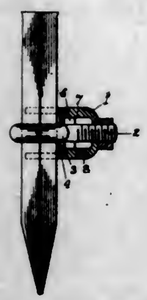
The combination with a stack 1 having a contracted upper end 2, with openings 2^a, of brackets 4 secured to the upper end of said stack, a cylindrical shield 3 secured to said brackets 4 extending around the contracted end 2 of said stack, but spaced apart therefrom, and a double ended conical deflector 5 supported by said brackets 4 with its lower portion projecting through said opening 2^a and with its upper end extending above said shield 3, said shield 3 being materially larger in diameter than said stack 1 and conical deflector 5, substantially as described.

897,644. JACK. WILLIAM F. MCCULLOCK, Washington, D. C. Filed Oct. 11, 1907. Serial No. 397,017.



In a jack, the combination with a screw stem having a shoulder adjacent to one end, of a head having a passage therethrough in which the portion of the screw beyond the shoulder is engaged, said screw extending outwardly beyond the head, said outwardly extending portion being provided with ratchet teeth, an arcuate dog pivoted upon the outer face of the head for movement to bring its ends into interchangeable engagement with the ratchet teeth, said dog having notches adjacent to its ends, and springs arranged for removable engagement in the notches, said springs when in the notches being arranged to hold the dog with the adjacent end in engagement with the ratchet teeth.

897,645. CLIP. ANDRUS B. MCLEAN, Mansfield, Ohio. Filed Aug. 26, 1907. Serial No. 390,092.



1. The combination of a channel bar and a clip having an elongated slot formed therein, rearwardly projecting ears adapted to fit within the walls of said channel bar formed on said clip, said clip being also provided with forwardly projecting members having notches formed therein for clamping purposes.

2. The combination of a channel bar and a clamping device comprising a body portion having rearwardly projecting ears adapted to fit within the walls of said channel bar and forwardly extending members with notches formed therein for clamping purposes.

3. The combination of a channel bar and a clip having an elongated aperture formed in the central portion, rearwardly projecting ears formed on each end of said clip and adapted to fit within the walls of said channel bar, forwardly projecting notched members extending from the side of the clip for clamping purposes.

4. The combination of a channel bar and a clip having an aperture provided therein, rearwardly projecting ears formed on said clip and adapted to fit within the walls of the channel bar, forwardly extending side members having notches formed therein for clamping purposes, means to securely retain a tooth in contact with said notches.

5. The combination of a channel bar and a clamping device comprising a body portion with rearwardly extending ears fitting within the walls of the channel bar and forwardly extending side portions provided with notches therein receiving a harrow tooth, a bolt having an eye formed thereon receiving a harrow tooth, said bolt passing through apertures in the clamping device and channel bar, a nut securely retaining the tooth in position substantially as described and set forth.

[Claims 6 and 7 not printed in the Gazette.]

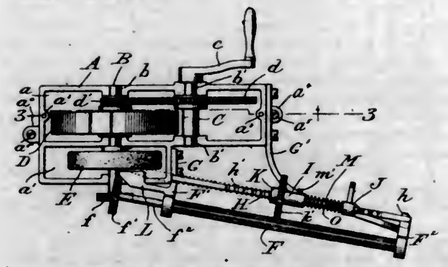
897,646. CORSET-WAIST. LOUISE NELSON, Oakland, Cal. Filed Mar. 5, 1906. Serial No. 304,423.



1. In a corset waist, a body piece with substantially straight fronts having outwardly curved upper edges, flexible segmental pieces with straight inner edges, said straight edges being stitched to said curved edges of the fronts, and a plurality of supporting straps attached to the outer and inner ends of the segments.

2. In a corset waist, a body piece with substantially straight fronts having outwardly curved upper edges, flexible segmental pieces with straight inner edges, said straight edges being stitched to said curved edges and forming substantially horizontal shelves of shallow depth, and straps converging from the outer ends of the segments, and from the back of the body piece, and meeting upon the shoulders.

897,647. MACHINE FOR SHARPENING PENCILS. CARL NICKUM, Logansport, Ind. Filed Sept. 18, 1907. Serial No. 393,571.



1. In a device of the class described, a pencil-pointing mechanism, a chuck adapted to receive the end portion of a pencil, means for rotating said chuck, a tension device operating to yieldingly move the chuck toward the pencil-pointing mechanism, and means whereby the chuck and the tension device therefor may be adjusted simultaneously to variable positions relative to the pencil pointing mechanism, thereby enabling the chuck to be used for supporting pencils of different lengths and at the same time feed said pencil under yielding pressure to said pointing mechanism.

2. In a device of the class described, pencil-pointing mechanism, a chuck adapted to receive the butt end portion of a pencil and to apply pressure thereto in an endwise direction, means for rotating said chuck, and tension mechanism normally coöperating with said chuck, said tension mechanism being adjustable simultaneously with the chuck and to variable positions relative to the pencil-pointing mechanism, whereby the chuck is shiftable to suit pencils of different lengths and is capable of feeding such pencils under yielding pressure to said pointing mechanism.

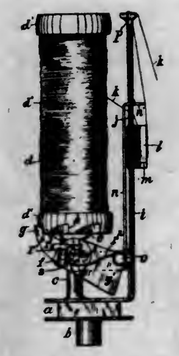
3. In a device of the class described, pencil-pointing mechanism, a solid chuck-shaft, a chuck thereon, means for rotating the chuck-shaft, and a tension device coöperating with said chuck and shiftable bodily therewith to variable positions relative to said pointing mechanism, whereby the chuck is adapted to accommodate pencils which vary in length and to feed said pencils under yielding pressure to said pointing mechanism.

4. In a device of the class described, pencil-pointing mechanism, a chuck-carriage, a solid chuck-shaft mounted in the carriage, a chuck rotatable with the shaft and adapted to receive a butt-end of a pencil for exerting endwise pressure thereon, means for rotating the chuck-shaft, and a tension device in coöperative relation to the chuck-carriage, said tension device being adjustable with the chuck-carriage at variable distances from said pointing mechanism.

5. In a device of the class described, pencil-pointing mechanism, a rotatable pencil chuck, and a tension device coöperating with said chuck for moving a pencil normally under pressure toward said pointing mechanism, said chuck and the tension device therefor being shiftable simultaneously and at will relative to said pointing mechanism, whereby pencils varying in length may be used in the machine and held under a given pressure in coöperative relation to said pointing mechanism.

[Claims 6 to 15 not printed in the Gazette.]

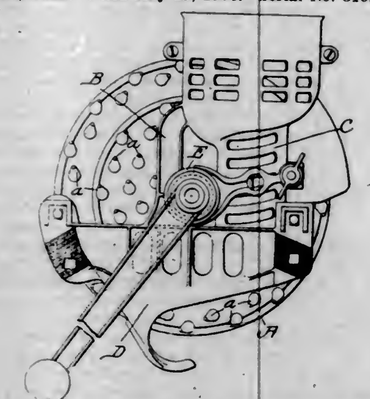
897,648. SAFETY-REGULATOR FOR BRAIDING-MACHINE BOBBINS. THOMAS F. O'BRIEN, Perth Amboy, N. J. Filed May 23, 1907. Serial No. 375,205.



1. In a braiding machine, the combination, with the carrier and the bobbin having ratchet-teeth h, the stud f upon the carrier below the bobbin, the gravity-latch fitted to the stud and having the pawl g to engage the ratchet-teeth, and the counterweight g' to actuate such pawl, of the wire spring secured upon the stud f and extended in a coil r' around the same and said coil terminated in the free end r^2 applied to the said pawl for increasing its effect upon the latch, the detachability of the free end enabling the wire to be removed and bent at pleasure to vary its tension.

2. In a braiding machine, the combination, with the carrier and the bobbin having ratchet-teeth *h*, the stud *f* upon the carrier below the bobbin provided with linch-pin hole across the end, the gravity latch fitted to the stud and having the pawl *g* to engage the ratchet-teeth and the counterweight *g'* to actuate such pawl, of the wire spring having its end *r* inserted in the hole with the linch-pin and extended from the hole toward the counterweight end of the latch, thence bent in a coil *r'* around the stud and having its free end *r²* applied detachably to a stud or rivet *o* upon the counterweight, the detachability of the free end enabling the wire to be removed and bent at pleasure to vary its tension.

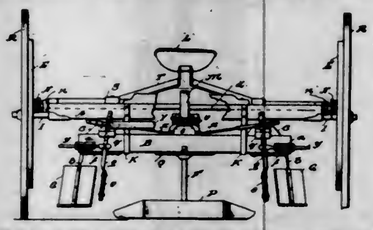
897,649. CORN-SHELLER. ASAHEL H. PATCH, Clarksville, Tenn. Filed May 29, 1906. Serial No. 319,373.



1. A corn-sheller comprising a rotary shelling disk, and means including a spring for yieldingly holding an ear of corn against the working face of the disk, the entire working face of the disk being provided with pointed teeth slanting from the face of the disk in the direction of rotation, whereby the teeth are caused to engage the ear at a slant and the spring-pressure required for holding the ear in place is reduced.

2. A rotary disk for corn-shellers having its working face provided with pointed teeth slanting from the face of the disk in the direction of rotation, the slant of the teeth increasing outwardly from the hub or central portion of the disk.

897,650. INSECT-EXTERMINATOR. GRANT T. PATTEN, Piqua, Ohio. Filed Nov. 30, 1907. Serial No. 404,513.

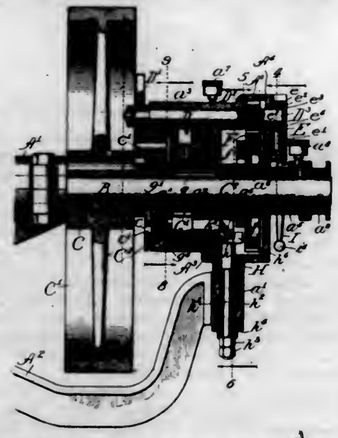


1. In a machine of the character set forth, the combination of a framework adapted to be advanced over the field, a second framework movable with reference to the main framework and adapted to be controlled by the operator or driver to cause it to follow crooked rows of vines or plants, and means for dislodging and collecting insects carried by the said second framework and movable therewith.

2. In combination, a main framework, actuating means mounted thereon, a second framework adjustable with reference to the main framework and provided with means for dislodging insects from the vines or plants, and means mounted upon said second framework for transmitting power from the aforementioned actuating means to the insect dislodging means.

3. In a machine of the character described, the combination of a main framework, ground wheels supporting said framework, a second framework connected with and carried by the main framework, means under control of the driver to admit of moving said second framework to cause it to follow irregularities in the rows of vines or plants, a receptacle connected with said second framework and arranged to catch dislodged insects, insect dislodging means mounted upon said second framework and movable therewith, and actuating means for operating the insect dislodging means from the aforementioned ground wheels.

897,651. MECHANICAL MOVEMENT. JOHN T. H. PAUL, Chicago, Ill., assignor to E. Goldman & Co. Inc., a Corporation of Illinois. Filed Jan. 2, 1906. Serial No. 294,104.



1. In mechanism of the character set forth, the combination of a rotary member, a member in axial alinement therewith and adapted to be connected to rotate therewith, a rotary cam in axial alinement with said first and second-named members, a clutch-member carried by the second-named member and controlled by said cam, a clutch-member carried by the first-named member and adapted to be engaged by the first-named clutch-member, and actuating means for said cam actuated from said first-named member, for the purpose set forth.

2. In mechanism of the character set forth, the combination of a rotary member, a member in axial alinement therewith and adapted to be connected to rotate therewith, a clutch-member carried by said second-named member, a spring tending to project said clutch-member, a rotary cam in axial alinement with said first and second-named members and controlling said clutch member, and intermittent actuating means for said cam actuated by said first-named member, for the purpose set forth.

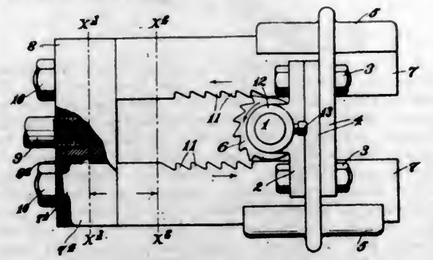
3. In mechanism of the character described, the combination of a shaft, a rotary member journaled thereon, a member secured on the shaft and adapted to be connected to rotate with said rotary member, a spring-projected clutch-member carried by the second-named member journaled on said shaft, a rotary cam in coaxial alinement with said shaft, and means for moving said cam, said means being actuated by said rotary member, for the purpose set forth.

4. In mechanism of the character set forth, the combination of a shaft, a rotary member journaled thereon, a member firmly secured on the shaft and adapted for connection with said rotary member, a clutch-member carried by said firmly secured member, a rotary cam coaxial with said shaft, a second shaft geared to said cam and equipped with a wheel located adjacent to said rotary member, and means connected with the rotary member for actuating said wheel for the purpose set forth.

5. In mechanism of the character described, the combination of a shaft, a sleeve journaled thereon and equipped with a firmly secured pulley and a disk adjacent to said pulley, a clutch-member carried by said disk, a disk secured to the shaft adjacent to said first-named disk, a cam journaled concentric with said shaft adjacent to said second-named disk, a clutch-member carried by the second-named disk and controlled by said cam, a shaft parallel with said first-named shaft and geared to said cam, a wheel connected with said second-named shaft, and a stud moving with said pulley and first-named disk and serving to actuate said wheel, for the purpose set forth.

[Claims 6 to 12 not printed in the Gazette.]

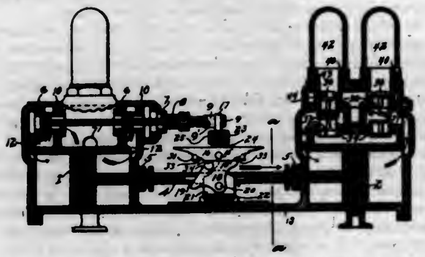
897,652. MOTION-CONVERTING DEVICE. JOHN E. PAULSON, Foreston, Minn. Filed Apr. 10, 1908. Serial No. 426,239.



In a device of the kind described, the combination with a shaft and a segmental pinion carried thereby, of a bearing in which one end of said shaft is journaled, a pair of rack guiding brackets having overlapping prongs adjustably secured to said bearing, a pitman rod provided with a head, and a pair of rack bars secured at one end to said head and guided for reciprocatory motion by said brackets, the said rack bars having teeth on their opposing edges for coöperation with the teeth of said segmental pinion, substantially as described.

897,653. [WITHDRAWN.]

897,654. VALVE-GEAR. AUGUSTINE J. POCOCK, Dayton, Ohio. Filed May 18, 1908. Serial No. 433,405.



1. In a pump, the combination with a piston rod having a driving piston, and an inlet valve, of valve gear for reversing said valve comprising a tilting lever coöperatively connected with the stem or rod of said valve, a trip piece movable with and pivoted on the piston rod and adapted to impart movement to the tilting lever, and an accumulator pressing the tilting lever and reversing its position at the end of each movement of the trip-piece.

2. In a pump, the combination with a piston rod with a driving piston thereon, and a valve rod with a valve thereon, of a trip-piece pivoted on the piston rod, an accumulator, said trip-piece and accumulator being movable with the piston rod, and a tilting lever interposed between the accumulator and the trip-piece and controlled thereby in the movements of the piston rod to reverse the valve.

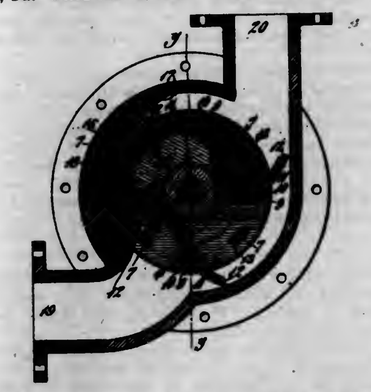
3. In a pump or engine, the combination with a piston and piston rod, and a valve and valve rod, of a tilting lever engaging the valve rod to impart reciprocating movement to the valve, an oscillating trip-piece movable with the piston rod and in contact with the tilting lever, said trip piece being adapted to move the tilting lever to a horizonal position, and means engaging the tilting lever and adapted to reverse its position and to thus impart reciprocating movement to the valve.

4. In an engine or pump, the combination with a piston and piston rod, and a valve and valve rod, of a valve gear for reversing said valve and comprising a tilting lever with an extended arm adapted to impart movement to the valve when the tilting lever assumes either of its tilting positions, an oscillating trip-piece movable with the piston rod and having two working surfaces which alternately engage the tilting lever, and means for preserving a suitable contact between the tilting lever and the trip-piece.

5. In an engine or pump, the combination with a piston and piston rod, and a valve and valve rod, of a valve gear comprising a tilting lever with an extended arm engaging the valve rod, said tilting lever having abutments and recesses on one side thereof, an oscillating trip-piece having working surfaces disposed at suitable angles to each other with intervening recesses and shoulders adapted to cooperate with the abutments and recesses on the tilting lever and whereby the tilting lever is movable from a horizontal to inclined positions at the end of each travel of the trip-piece, and an accumulator engaging the tilting lever and controlling the inclined positions thereof until the trip-piece lifts said lever to its horizontal position.

[Claims 6 to 10 not printed in the Gazette.]

897,655. ROTARY PUMP. LOUIS L. PRATT, Philadelphia, Pa. Filed Dec. 9, 1907. Serial No. 405,647.



1. In a rotary pump, a casing, a rotatable drum therein, a shaft-receiving hub centrally in said drum rotatably-connected therewith, a bucket mounted within said drum, and a transversely-extending connection for the heads of said drum, said hub and connection forming stops for the opposite ends of said bucket in the rotation of the latter with the drum which carries the same.

2. In a rotary pump, a casing, an inlet and an outlet therefor, a drum in said casing, a bucket pivoted intermediate of its ends to said drum, means within the periphery of said drum for causing said bucket to swing in one direction and means within the periphery of said drum whereby said bucket swings by gravity in the opposite di-

rection said drum being provided with a plurality of stops respectively for the opposite ends of said buckets.

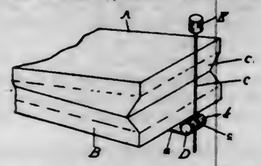
3. In a rotary pump, a casing, an inlet and an outlet therefor, a drum in said casing, a shaft-receiving hub on said drum and rotatable therewith, buckets pivoted to said drum, means within the periphery of said drum outside said hub for engaging said buckets and causing them to swing in one direction, and means within the periphery of said drum whereby said buckets swing by gravity in the opposite direction, said hub forming a common stop for said buckets for engagement with one end of the latter, and means on the drum serving as stops for the other end of said buckets.

4. In a rotary pump, a casing, an inlet and an outlet therefor, a drum in said casing, buckets pivoted to said drum, means whereby said buckets swing by gravity in one direction, a common stop for said buckets, means for causing said buckets to swing in the opposite direction, and a stop for the buckets in the path of travel of said buckets.

5. In a rotary pump, a casing, an inlet and an outlet therefor, a drum in said casing, buckets pivoted to said drum, stops adapted for the opposite ends of said buckets, and means to overturn said buckets.

[Claims 6 to 8 not printed in the Gazette.]

897,656. SELF-PLAYING MUSICAL INSTRUMENT. WILLIAM J. PUBLOW, Detroit, Mich., assignor to The Farrand Company, Detroit, Mich., a Corporation of Michigan. Filed June 3, 1908. Serial No. 436,383.



1. The combination of a fibrous block or bar, a lifter rod secured thereto, a clamp embracing the block or bar, and a movable member to which the clamp is secured.

2. The combination of a fibrous block or bar, a lifter rod secured thereto, a closable clamp embracing the block or bar, and a movable member to which the clamp is secured.

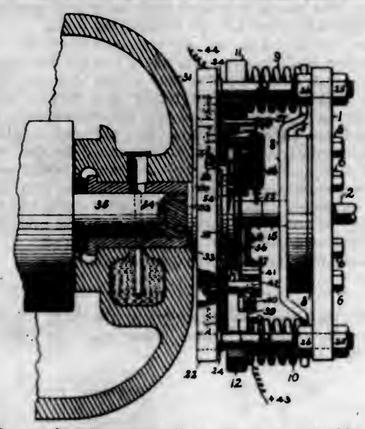
3. The combination of a fibrous block or bar, a lifter rod adjustably connected thereto, a bifurcated clamp embracing the block or bar on opposite sides of the lifter rod, and a movable member to which the clamp is secured.

4. The combination of a fibrous block, a lifter rod having a screw threaded engagement therewith near the middle, a bifurcated closable metal clamp bent around the bar on opposite sides of the rod, and a movable member to which the clamp is secured.

897,657. ELECTRIC AND PNEUMATIC GOVERNOR. WILLIAM K. RANKIN, Philadelphia, Pa., assignor to John E. Reyburn, Philadelphia, Pa. Filed Dec. 11, 1907. Serial No. 406,003.

1. The combination with a motor-compressor of an electric-pneumatic governor having an internally coned sleeve attached to and rotatable by the motor, a diaphragm operative by pneumatic pressure; a rotatable disk and a cone therefor adapted to engage the coned sleeve by the pressure on the diaphragm; brushes electrically connected and attached to the disk; and brushes having electrical conductors and adapted to contact with the disk brushes when the disk is rotated, and form an electrical circuit.

2. In an electric-pneumatic governor, a rotatable sleeve adapted to engage and be rotated by the armature shaft of a motor compressor; a coned seat within the sleeve; a disk and brushes thereon, and having a cone adapted to frictionally engage the coned seat aforesaid; a diaphragm operatively connected to the disk and its cone, having connection to an air reservoir, and whereby the air pressure operates the diaphragm to force the cone into frictional contact with the coned seat of the rotatable sleeve.



3. In an electric-pneumatic governor, a rotatable sleeve having an internal coned seat, and means to rotate the sleeve; a rotatable disk having a cone, and brushes attached thereto, with electrical connection between the brushes; stationary brushes with adjustable means for contact with the disk brushes, and electrical conductors thereto and therefrom; a diaphragm operatively connected to the rotatable disk; resilient means to force the diaphragm to resist a desired degree of pneumatic pressure; means to introduce said pressure against the diaphragm and frictionally engage the cone and the coned seat to thereby rotate the cone and break the circuit; and means upon the disengagement of the cone to the coned seat, by a decrease of pneumatic pressure, to oppositely rotate the disk and its brushes and make the circuit.

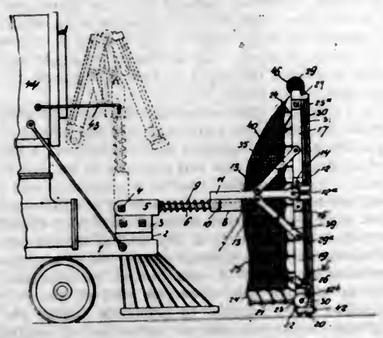
4. In an electric-pneumatic governor, a rotatable and internally coned sleeve, and means for its rotation; a coned disk adapted to engage the sleeve for rotation, and means to limit the degree of rotation; a diaphragm subjected to pneumatic pressure; a plunger with resilient means to force it against the diaphragm, and connections to the coned disk for its engagement with the sleeve when the diaphragm is subjected to maximum pressure; electrically connected brushes on the disk; fixed brushes with adjustments, conductors thereto and therefrom, and adapted to form a circuit with the disk brushes; a minimum pressure lever having adjustments, engaging the coned disk when the circuit is broken, and until a desired minimum pneumatic pressure is obtained; and resilient means to rotate the disk and again form the circuit when the disk is free from the minimum pressure lever.

5. In an electric-pneumatic governor, a diaphragm subjected to pneumatic pressure; a plunger and adjustable resilient means to force it against the diaphragm for a maximum pressure; a coned disk, connected to the plunger, rotatable on said connection, and circuit brushes thereon; fixed brushes with positive and negative conductors; resilient means to rotate the disk and form a circuit; a rotatable sleeve having a coned seat adapted to engage the cone of the disk and break the circuit; and an adjustable minimum pressure lever adapted to engage and retain the coned disk and its brushes out of circuit until a minimum prearranged pressure against the diaphragm is reached.

[Claim 6 not printed in the Gazette.]

897,658. FENDER FOR LOCOMOTIVES AND STREET-CARS. JOHN REBAR, Smithdale, Pa. Filed June 22, 1908. Serial No. 439,725.

1. The combination with a locomotive, of bearings carried thereby, rods pivotally supported by said bearings, spring pressed sleeves slidably mounted upon said rods, forwardly extending brackets carried by said sleeves, said frames pivotally carried by the forward ends of said brackets, transverse bars connecting said side frames, a platform pivotally supported by one of said transverse bars, a net resiliently connected to said platform, to said side frames and to the other of said transverse bars, curtain guides supported by said side frames and terminating in brackets at the upper edge of said fender, a shaft journaled in said brackets, a curtain attached to said shaft and having the lower edge thereof provided with a curtain rod, spring drums carried by the lower edges of said side frames, cables connecting with said drums and with the ends of said curtain rod, spring-held latches mounted adjacent to said spring drums for engaging said curtain rod and holding the curtain in a lowered position, a hook-shaped member attached to said net and loosely mounted upon the transverse bar at the upper edge of said fender for engaging said curtain rod and holding said curtain in a raised position, toggle links connecting said side frames with said brackets, a resilient strip carried by the transverse bar at the lower edge of said fender, and means carried by said locomotive for maintaining said fender in a folded position, substantially as described.



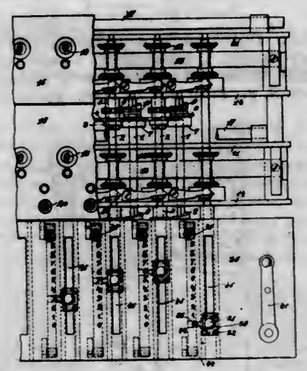
2. The combination with a locomotive, of a fender pivotally mounted thereon, said fender comprising pivotally supported rods, spring-pressed sleeves slidably mounted upon said rods, brackets carried by said sleeves, frames pivotally connected to the outer ends of said brackets, transverse bars connecting said frames, a curtain journaled between the upper ends of said curtain guides, a curtain rod carried by the free edge of said curtain, spring drums supported at the lower edges of said fender, cables connecting said drums and the ends of said curtain rod, spring-held latches arranged adjacent to said drums for engaging said curtain rod and holding said curtain in a lowered position, a hook-shaped member loosely mounted at the upper edge of said fender for holding said curtain in a raised position, a platform supported by one of said transverse bars at the lower edge of said fender, a net resiliently connected to said platform, said frames and the other of said transverse bars, toggle links connecting with said brackets for maintaining said frames in a vertical position, and means carried by said locomotive for maintaining said fender in a folded position.

3. A fender comprising pivotally supported rods, spring-pressed sleeves mounted upon said rods, brackets carried by said sleeves, frames pivotally connected to the forward ends of said brackets, a curtain arranged at the upper ends of said frames, spring drums arranged at the lower edges of said frames and connecting with said curtain for closing the same, a hook-shaped member loosely mounted at the upper edge of said frames for normally holding said curtain in an open or raised position, a net resiliently connected to said frames, toggle links for maintaining said frames in a vertical position, and means carried by a locomotive for supporting said fender in a folded position.

4. A fender comprising pivotally supported rods, spring-pressed sleeves mounted upon said rods, brackets carried by said sleeves, frames pivotally connected to the forward ends of said brackets, a curtain arranged at the upper ends of said frames, spring drums arranged at the lower edges of said frames, cables connecting said drums with said curtain for closing the same, a hook-shaped member loosely mounted at the upper edge of said frames for normally holding said curtain in an open or raised position, a net resiliently connected to said frames, and toggle links for maintaining said frames in a vertical position.

5. A fender comprising pivoted rods, spring-pressed sleeves mounted upon said rods, brackets carried by said sleeves, foldable frames carried by said brackets, a net resiliently connected to said frames, a curtain arranged at the upper edges of said frames and adapted to be automatically lowered to the lower edge of said frames, means for maintaining said curtain in a lowered position, and means arranged at the upper edge of said frames for maintaining said curtain in a raised position.

897,659. CALCULATING-MACHINE. ROBERT REIN, Schlachtensee, near Berlin, Germany, assignor, by mesne assignments, to Ludwig Spitz & Co., G. m. b. H., Berlin, Germany, a Corporation. Filed Oct. 23, 1906. Serial No. 340,208.



1. In a machine of the character described, the combination with a pair of index plates, one of said index plates provided with a row of windows for indicating products and the other of said plates provided with two rows of windows for indicating both products and quotients, of means for coupling said index plates, said means including a lever pivoted to one of said plates, and a catch carried by said lever and adapted to engage the other of said plates.

2. In a machine of the character described, the combination with a pair of index plates, one of said index plates provided with a row of windows for indicating products and the other of said plates provided with two rows of windows for indicating both products and quotients, of means for coupling said index plates, said means including a lever pivoted to one of said plates, a catch carried by said lever and adapted to engage the other of said plates, and a plurality of shafts each having a prismatic portion, a feed-wheel adjustably mounted on the prismatic portion of each of said shafts, sleeves rotatably mounted on said shaft, and a feed-wheel and ratchet-disk rigidly mounted on each of said sleeves.

3. In a machine of the character described, the combination with a pair of index plates, one of said index plates provided with a row of windows for indicating products and the other of said plates provided with two rows of windows for indicating both products and quotients, of means for coupling said index plates, said means including a lever pivoted to one of said plates, a catch carried by said lever and adapted to engage the other of said plates, and a plurality of shafts each having a prismatic portion, a feed wheel adjustably mounted on the prismatic portion of each of said shafts, a disk loosely carried by

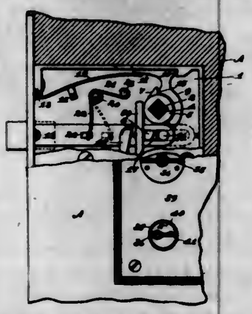
each of said shafts, and means for operatively connecting each of said disks with the corresponding shaft, said means comprising a pawl and ratchet.

4. In a machine of the character described, the combination with a pair of index plates, one of said index plates provided with a row of windows for indicating products and the other of said plates provided with two rows of windows for indicating both products and quotients, of means for coupling said index plates, said means including a lever pivoted to one of said plates, a catch carried by said lever and adapted to engage the other of said plates, and reversing mechanism comprising a shaft, gears slidably mounted on said shaft, two parallel bars, one arranged adjacent each of said gears, a lever, and links connecting said lever and bars.

5. In a machine of the character described, the combination with a setting plate provided with a slot and a series of triangular shaped notches adjacent said slot, of a setting slide movable in said slot, an elastic plate carried by said slide, a pair of rollers carried by said elastic plate and adapted to enter said notches, and rollers carried by said setting slide and adapted to run on said setting plate on the side opposite said notches.

[Claim 6 not printed in the Gazette.]

897,660. DOOR LOCK AND LATCH MECHANISM. BATTESE REVOIR, Syracuse, N. Y., assignor of one-third to Ray B. Smith and one-third to E. Gilbert Lathrop, Syracuse, N. Y. Filed May 28, 1906. Serial No. 319,079.



1. In a door-lock and latch-mechanism, the combination with a locking bolt and its actuating means, of a latch-bolt, a spring for protracting the latch-bolt, a rotatable knob-spindle, means actuated by the knob-spindle for retracting the latch-bolt, a spring for moving the knob-spindle and retracting means to their normal positions, a bar carried on the locking-bolt and serving as a catch for locking the latch-bolt in protracted position, a pivotally supported keeper operative for engaging the said bar, and means disposed on the inner face of the door for actuating said keeper as set forth.

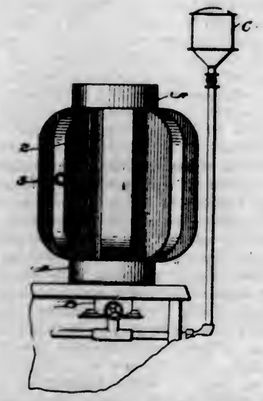
2. In door-lock and latch-mechanism, the combination of a latch-bolt, means for retracting the said bolt, and a spring for forcing the same to protracted position, a locking-bolt, means for actuating said locking-bolt, a vertical bar carried on the latter bolt and serving as a catch adapted to engage the latch-bolt when both bolts are in protracted position, a pivotally supported keeper consisting of an arm normally disposed parallel with the said bar and adapted to be swung to horizontal position to engage the bar when the latter is in engagement with the latch-bolt, and means operative from only the inner face of the door for actuating said keeper as set forth.

3. In a door-lock and latch-mechanism, the combination of a case, a latch-bolt, a spring holding said latch-bolt normally in protracted position, and a knob-spindle for retracting the same, a locking-bolt, a tumbler pivoted at one end of the case, a spring pressing the free end of said tumbler normally into engagement with the inner end portion of the locking-bolt, key-operated means engaging the free end of the tumbler to move the same out of engagement with the locking-bolt to permit the said key-operated means to actuate the locking-bolt, a vertical bar carried rigidly on the locking-bolt and adapted to engage the latch-bolt when both bolts are in protracted position, and thereby lock the latch-bolt with the locking-bolt, a second rotatable spindle extending through one side of the case and provided with a thumb-piece for turning the same, and a keeper provided with a hub supported revolubly and independently of the latter spindle and operated thereby, said keeper being adapted to engage the aforesaid bar when the bolts are in protracted positions as and for the purpose set forth.

4. In a door-lock, the combination of a case, a locking-bolt provided on its upper edge with a lug and in its lower edge with a notch, a tumbler consisting of a plate disposed parallel with the locking-bolt and pivoted at one end to the case and provided at its free end with a lug normally resting on the top of the locking-bolt and in the path of the lug of the locking-bolt, a spring pressing upon the free end of said tumbler, a stationary cylinder supported below the locking-bolt and tumbler and provided with a transverse slot, a sectional barrel journaled in said cylinder and provided in its opposite ends with key-slots, and a tongue projecting radially from the barrel and movable in the transverse slot, said tongue being adapted to bear against the lower edge of the tumbler to lift its lug out of the path of the lug on the locking-bolt and also adapted to engage the notch in said locking-bolt to actuate the bolt as set forth.

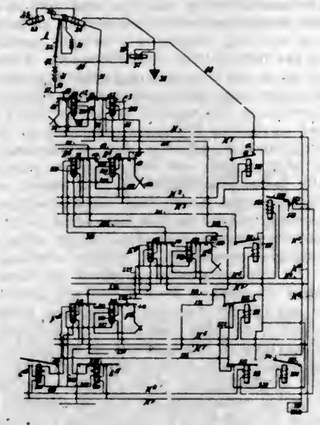
5. In a door-lock, the combination of a case, a locking-bolt, a tumbler pivoted at one end to the case and having its free end portion normally engaging said locking-bolt, a cylinder held stationary in the case and provided in its central portion with a transverse slot, a barrel supported in said cylinder and composed of three independently rotatable sections, the end barrel-sections each being provided with a longitudinal key-slot, and the ends of the central section provided with recesses for the reception of the end of a key, and a tongue secured rigidly to said central barrel-section and projecting through the transverse slot of the cylinder, said tongue being adapted to primarily engage the free end of the tumbler to lift the latter out of engagement with the locking-bolt, and secondarily engage the locking-bolt to move the same to protracted and retracted positions as set forth and shown.

897,661. AUXILIARY HEATER. WILLIAM C. RICHMAN, Vermillion, S. D. Filed June 18, 1908. Serial No. 439,127.



As an article of manufacture, an auxiliary heater, adapted to be applied to a stove or other heater, said auxiliary heater comprising a cylinder or tube, open at its ends, and a series of separate chambers arranged around said tube, said chambers being spaced apart and extending longitudinally of the tube and communicating therewith at both ends, and a damper mounted in said tube between the opposite ends of said chambers, substantially as described.

897,662. TELEGRAPHIC SELECTIVE SYSTEM. ALFRED M. ROBERTS, Buffalo, N. Y. Filed Dec. 6, 1906. Serial No. 346,641.



1. In a telegraph, the combination of successive series of selecting magnets, the first series comprising a selecting magnet which responds to a transmitted plus impulse and a selecting magnet which responds to a transmitted minus impulse, and each following series comprising a pair of magnets for each selecting magnet of the preceding series, one magnet of the pair responding to a transmitted plus impulse and the other to a transmitted minus impulse, substantially as set forth.

2. In a telegraph, the combination of successive series of selecting magnets, the first series comprising a selecting magnet which responds to a transmitted plus impulse and a selecting magnet which responds to a transmitted minus impulse, and each following series comprising a pair of magnets for each selecting magnet of the preceding series, one magnet of the pair responding to a transmitted plus impulse and the other to a transmitted minus impulse, and automatic switches whereby circuits are closed through different magnets of successive series according to the direction of the transmitted impulses, substantially as set forth.

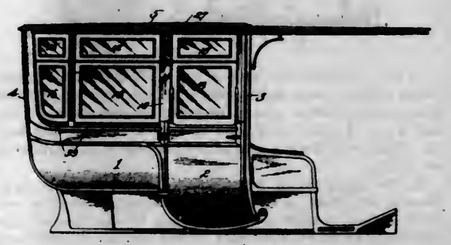
3. In a telegraph, the combination of a relay which is moved out of the zero position in one or the other direction according to the direction of the transmitted impulse, successive series of selecting magnets, the first series comprising a magnet which responds to a transmitted plus impulse and a magnet which responds to a transmitted minus impulse, and each following series comprising a pair of plus and minus magnets for each selecting magnet of the preceding series, and automatic switches whereby circuits are closed through different magnets of successive series according to the direction of the transmitted impulse, substantially as set forth.

4. The combination of a relay which is moved out of its zero position in one or the other direction according to the direction of the transmitted impulse, a plus and a minus selecting magnet which respond respectively to plus and minus impulses acting on the relay, and secondary magnets which are controlled by said selecting magnets and are energized after said selecting magnets have been energized, substantially as set forth.

5. The combination of a relay which is moved out of its zero position in one or the other direction according to the direction of the transmitted impulse, plus and minus selecting magnets which respond respectively to plus and minus impulses acting on the relay, secondary magnets which are controlled by said selecting magnets, a circuit in which said seconuary magnets are arranged, and an automatic circuit breaker which breaks said circuit when an impulse actuates said relay and closes said circuit after such impulse has ceased, substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

897,663. CONVERTIBLE AUTOMOBILE-BODY. EDWARD T. ROBINSON, St. Louis, Mo., assignor to St. Louis Car Company, St. Louis, Mo., a Corporation. Filed Sept. 27, 1907. Serial No. 394,823.



1. A convertible automobile body consisting of a body proper, stationary corner posts extending upwardly therefrom, a top supported by said corner posts, side posts, hinged to said top and susceptible of being moved in juxtaposition to the top of the vehicle body, means for retaining said hinged posts in either their elevated or lowered position, and window sashes for coöperating with said stationary corner posts and said hinged posts, substantially as set forth.

2. A convertible automobile body consisting of a body proper, stationary corner posts extending upwardly therefrom, a top supported by said corner posts, hinged side posts, hinged window sashes, said hinged posts and said hinged window sashes being susceptible of being moved in juxtaposition to said top, and means for retaining said hinged posts and said hinged sashes in either their elevated or lowered position, substantially as set forth.

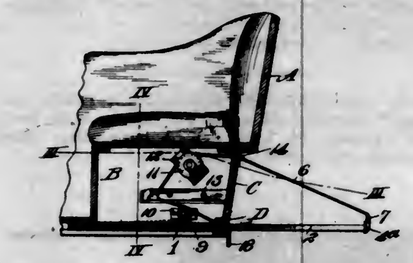
3. A convertible automatic body consisting of a body proper, stationary corner posts, a top, side posts hinged to said top, slidable window sashes, means for retaining said hinged side posts in either their raised or lowered position, and means for retaining said window sashes in either their raised or lowered position; said body proper being provided with pockets for the reception of said slidable window sashes substantially as set forth.

4. A convertible automobile body consisting of a body proper, stationary corner posts, a top, hinged side posts hinged window sashes; said hinged posts and hinged window sashes being susceptible of being raised in juxtaposition to said top, means for retaining said hinged elements in their raised or lowered positions, and a covering or false ceiling for the purpose specified, substantially as set forth.

5. A convertible automobile body having window sash pockets formed in its sides and end walls, stationary corner posts extending upwardly from said body, a top supported by said corner posts; said posts being hinged to said top, a dowel carried by each of said hinged posts for coöperation with plates supported by said body proper, means for locking said posts in their lowered position, hinged and slidable sashes located between said hinged posts and between said hinged and stationary corner posts; said hinged sashes being supported in the top proper of the vehicle and the slidable sashes being each located in vertical alinement with said pockets of the body proper, and means for locking said hinged sashes in either their raised or lowered positions, substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

897,664. DISAPPEARING LUGGAGE-CARRIER FOR AUTOMOBILES. EDWARD T. ROBINSON, St. Louis, Mo., assignor to St. Louis Car Company, St. Louis, Mo., a Corporation. Filed Feb. 11, 1908. Serial No. 415,357.



1. The combination with a vehicle body, of a luggage frame slidably mounted in said body, so as to be shiftable thereunder, flexible means attached to the forward and rear ends of said frame, and means carried by said body on which said flexible means is operable, substantially as set forth.

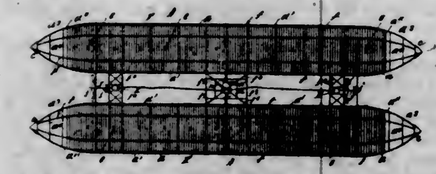
2. The combination with a vehicle body, of guide strips beneath said body, a luggage frame slidably fitted to said guide strips, flexible means attached to the forward and rear ends of said frame, and rollers carried by said body on which said flexible means is operable, substantially as set forth.

897,665. AUTOMATIC WRENCH. DE LEONARD RUGG, Catskill, N. Y. Filed Jan. 2, 1907. Serial No. 350,346.



The combination in a wrench, of a hollow handle having an integral curved jaw toothed on its convex surface and having two cheek pieces, an angular jaw having a reduced and notched portion fitting between the cheek pieces, a pivot pin on which the jaw is mounted, a lever mounted within the hollow handle and pivoted thereto, the end of one arm of said lever being shaped to engage the notch in the angular jaw, the other arm of the lever projecting rearwardly and through a slot in the handle, and a spring attached to the last mentioned arm of the lever and acting to force the movable jaw towards the fixed jaw.

897,666. METHOD OF CONTROLLING AIR-SHIPS. MARIO SCHIAVONE, Ferrandina, Italy. Original application filed July 30, 1906, Serial No. 328,376. Divided and this application filed June 20, 1907. Serial No. 379,822.



1. In aeronautics, the method herein set forth of controlling and changing the axial inclination of an elongated float consisting in increasing or diminishing the weight of one portion of the float with relation to another portion thereof by introducing compressed air into or releasing it from an end compartment in the float separated by a hermetically sealed flexible transverse diaphragm from the compartment of the float containing a buoyant material composed of a gas lighter than the atmosphere, whereby the compressed air is not only utilized as ballast but also for the purpose of navigation, substantially as set forth.

2. In aeronautics, the method herein set forth of controlling and changing the axial inclination of an elongated float, consisting in increasing or diminishing the weight of portions of the float with relation to other portions thereof by introducing compressed air into or releasing it from end compartments in the float separated by hermetically sealed flexible transverse diaphragms from the compartment of the float containing a buoyant medium composed of a gas lighter than the atmosphere, whereby the compressed air is not only used as ballast but also for the purpose of navigation, substantially as set forth.

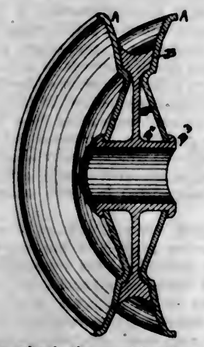
3. In aerostatics, the method herein set forth of controlling and navigating air ships, consisting in independently introducing compressed air into or releasing it from either one or both float end compartments separated by hermetically sealed diaphragms from a central compartment containing a gas lighter than the atmosphere.

4. In aeronautics, the method herein set forth of controlling and changing the inclination of air ships, consisting in introducing compressed air into or releasing it from the float end compartments separated by hermetically sealed flexible diaphragms from a buoyant material composed of a gas lighter than the atmosphere, whereby the compressed air is not only used as ballast but also for the purpose of navigation, substantially as set forth.

5. In aerostatics, the method herein set forth of controlling and navigating air ships consisting in independently introducing compressed air into or releasing it from either one or both float end compartments separated by hermetically sealed flexible diaphragms from a central compartment containing a gas lighter than the atmosphere, whereby the density of the buoyant medium is varied and the weight of either one or both ends increased or diminished for the purpose described.

[Claim 6 not printed in the Gazette.]

897,667. TROLLEY-WHEEL. EDWARD P. SHARP, Buffalo, N. Y. Filed Dec. 26, 1905. Serial No. 293,151.



1. In a trolley wheel, the combination of a contact ring having an integrally connecting hub, two side plates which support said ring and which are in turn supported by said hub and expanded heads on the ends of said hubs for the purpose specified, substantially as described.

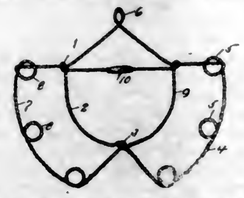
2. In a trolley wheel the combination of a contact ring having an integrally connected hub, side plates having a central opening adapted to receive said hub, and expanded heads on the ends of said hub, for the purpose of forming electrical contact surfaces, substantially as described.

3. In a trolley wheel, the combination of a contact ring having an integrally connecting hub, side plates arranged to support opposite sides of said ring, and expanded heads on the ends of said hub, for the purpose of connecting said side plates together against said ring, and forming electrical contact surfaces at the sides of said wheel, substantially as described.

4. In a trolley wheel the combination of side plates having central openings and a contact ring having an integrally connecting hub fitting into said openings, said hub extending axially outside of said flanges and expanded heads which form electrical contact surfaces at the sides of said wheel, substantially as described.

5. In a trolley wheel the combination of side plates having central openings, a contact ring having an integrally connecting hub fitting into said openings and contact surfaces at the sides of said wheel formed by expanded heads on the ends of said hub, substantially as described.

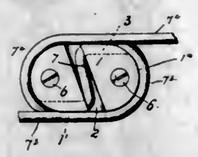
897,668. PLATE-HOLDER. LOUISE M. SHOEMAKER, Pittsburg, Pa. Filed Apr. 10, 1908. Serial No. 426,407.



1. A plate holder comprising an integral frame constructed of a piece of wire, said piece of wire being bent to form inner frames, outer frames, plate supporting eyelets carried thereby, and a loop above said inner and outer frames, substantially as described.

2. A plate holder comprising a concave frame constructed of a single piece of wire, said piece of wire being bent to provide inner frames, outer frames, and eyelets for engaging the edges of a plate, substantially as described.

897,669. INSULATOR. FRANK J. SIEGWART, Pittsburg, Pa. Filed Jan. 3, 1908. Serial No. 409,112.



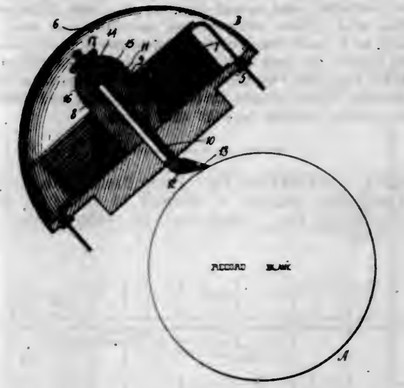
1. An insulator comprising a body portion substantially oblong in plan having opposite flat faces and opposite rounded faces, said body having a groove in the outer face thereof extending diagonally across the narrower width of the face, and said flat faces of the body each having a groove spaced away from the grooved outer face of the body, the grooves in the flat faces extending in opposite directions and each intersecting at their inner ends with the groove in the outer face of the body.

2. An insulator comprising a body having an oblong end face provided with a groove extending diagonally across the narrower width of said face, said body provided on opposite sides thereof with grooves spaced away from the end face and extending in opposite directions, the said grooves at their inner ends intersecting the diagonal groove in the end face of said body.

897,670. ELECTRICAL IMPULSE-RECORDER. AUGUSTUS K. SLOAN, Jr., Brooklyn, N. Y. Filed Apr. 22, 1908. Serial No. 428,673.

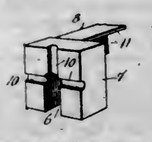
1. An electro-magnetic recording instrument comprising a record blank; a solenoid; a stylus movable endwise through the core of the solenoid; and an armature carried by the stylus for moving the latter in the direction of the record blank under the influence of the solenoid.

2. An electro-magnetic recording instrument, comprising a record blank; a solenoid having its core provided with an axial bore angular in cross-section; a stylus movable endwise through said bore; and an armature carried by the stylus, for moving the latter in the direction of the record blank under the influence of the solenoid, said stylus being formed angular in cross-section, whereby it is held against rotation during its endwise movement.



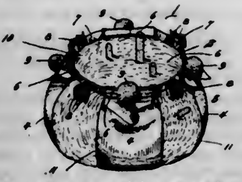
3. An electro-magnetic recording instrument, comprising a record blank; a solenoid; a stylus movable endwise through the core of the solenoid; an armature carried by the stylus, for moving the latter in the direction of the record blank under the influence of the solenoid, said armature being adjustable upon the stylus to vary the depth of the indentations made upon said record blank; and means for locking the armature in its adjusted position.

897,671. METAL BEDSTEAD. LON B. SNYDER and SHIRLEY T. HERON, Chattanooga, Tenn. Filed July 13, 1907. Serial No. 383,607.



The combination of a side bar, a block shaped head thereon provided with a slot extending entirely through the same, a corner post, a block fixed thereon and provided with a horizontally extending stud adapted to extend through the slot, means on the stud for rigidly securing the head and block together, tongues on the block radially disposed around the stud adapted to extend into correspondingly shaped grooves on the head.

897,672. SANITARY HAIR-PIN HOLDER. BESSIE E. STEPHENS, Chicago, Ill., assignor to The Sanitary Hair Goods Co., Chicago, Ill., a Corporation of Illinois. Filed Jan. 13, 1908. Serial No. 410,679.

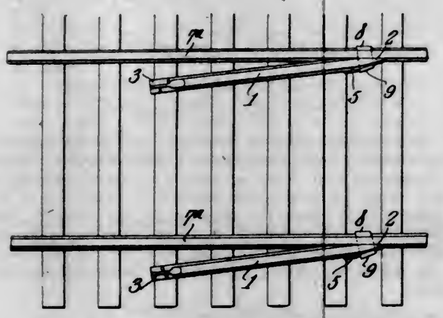


1. A hair pin holder comprising an outer covering having a filling of wool, said covering being provided with an enlarged central opening to expose the wool therethrough and with side openings radiating from said central opening.

2. In combination, a filling of wool, and a casing comprising a plurality of ribbons centrally crossed and sewed together, loops on the free ends of said ribbons, and a binding ribbon passed through all of said loops.

3. In combination, a sanitary filling of wool, and an outer casing consisting of a plurality of ribbons crossed intermediately and sewed together at their intersecting edges, said ribbons being turned upwardly and over said filling to a point removed from the outer central point of said filling, the free ends of said ribbon being folded upwardly and back and secured to themselves to form loops, a binding ribbon passed through said loops, and bows on said binding ribbons between said loops.

897,673. CAR-REPLACER. BERRY STRICKLAND, Compass Lake, Fla., assignor of one-half to James C. Jones, Greenhead, Fla. Filed Apr. 20, 1908. Serial No. 428,198.



1. A car replacer embodying a member adapted to be secured to a rail, a lifting shoe on one end of said member provided with a downward projection adapted to engage the flange of a rail and elevate the upper face of said member above the plane of said rail.

2. A car replacer embodying a member provided with a bevel surface on one end thereof, a lifting shoe on the other end of said member provided with opposed upturned flanges, and a projection extending downwardly and at right angles to the lower face of said lifting shoe.

3. A car replacer embodying a member adapted to be secured to a rail, a lifting shoe on one end of said member provided with a downward projection adapted to engage the flange of the rail and elevate the upper face of said member above the plane of said rail, and means to secure said member to the rail.

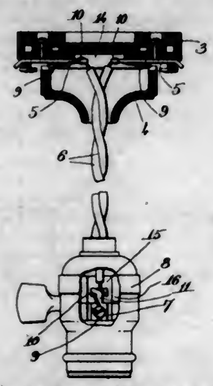
4. A car replacer embodying a member adapted to be secured to a rail, a lifting shoe on one end of said member provided with a downward projection adapted to engage the flange of the rail and elevate the upper face of said member above the plane of said rail, and a fastening member provided with hooks on the opposed ends thereof having oblique walls adapted to engage the base flanges of said rail and shoe member.

897,674. TERMINAL FOR ELECTRIC FITTINGS. FREDERICK A. SWAN, Cliftondale, Mass. Filed Apr. 26, 1907. Serial No. 370,352.

1. In an electrical fitting, the combination with a terminal of conducting material, of means to detachably connect a conducting wire thereto, said terminal having integral therewith means to relieve said connecting means from any strain to which the wire may be subjected.

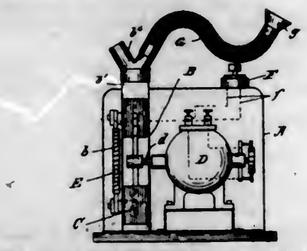
2. In an electrical fitting, the combination with a terminal, of a conducting wire, and means to detachably connect said wire to the terminal, said terminal having as an integral part thereof a portion about which the conducting wire may be wrapped thereby to provide sufficient frictional engagement between the wire and said portion to withstand the strain to which the wire may be subjected.

3. The combination with a fixed electrical fitting having a terminal, of a conducting wire connected thereto and suspended therefrom, a second fitting also having a terminal and means to connect the conducting wire to said



terminal, whereby said second fitting is suspended from the fixed fitting, each terminal of each fitting having as an integral part thereof means to relieve the connection between it and said wire from any strain.

897,675. HAIR-DRIER. MATHIAS THOME, Chicago, Ill. Filed Dec. 21, 1907. Serial No. 407,588.



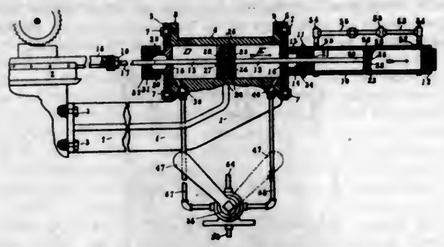
1. The combination with an outer casing of a fan casing therein having an air inlet in one side, a fan in said casing, means for operating the same and a heating coil engaged to the side of the fan casing and surrounding said inlet.

2. In a device of the class described the combination with an outer casing of a fan casing therein having an air inlet aperture in one side, an outlet pipe leading from the fan casing through the top of the outer casing, a fan in said fan casing, a motor adapted to drive the same, and a heating coil surrounding said inlet and axially of which the air passes in entering the fan casing.

3. In a hair drier the combination with an outer casing, of a fan casing therein having an air inlet opening in one side, a fan in the fan casing, a motor adapted to drive the same, a continuous heating coil having a central opening therethrough and axially of which the air passes in entering the fan casing, an outlet pipe leading from the fan casing through the top of the outer casing, a forked connection thereon and a hose engaged to said connection.

4. In a device of the class described the combination with an outer casing of a fan casing therein, having an air inlet in one side thereof, a fan in said casing, a motor adapted to operate said fan, a heating coil rigidly engaged to the fan casing and surrounding the air inlet and provided with a central opening therein through which the air enters the fan casing, and a three way switch controlling said heater and motor.

897,676. FLUID-FEEDING-PRESSURE MECHANISM. GEORGE THOMPSON, Mansfield, Ohio, assignor of one-half to Frank Schreidt, Mansfield, Ohio. Filed July 24, 1907. Serial No. 385,373.



1. In a fluid pressure feeding mechanism comprising a power cylinder having a piston fitted to reciprocate therein through the medium of an elastic fluid, a governing cylinder arranged in tandem with said power cylinder having the bore thereof filled with fluid, a piston fitted to reciprocate therein, a piston rod connecting the pistons in the power cylinder and governing cylinders having one end projecting through the head of the power cylinder, a carriage or the like for feeding purposes connected to said piston rod, substantially as, and for the purpose described.

2. In a fluid pressure feeding mechanism comprising a power cylinder, a piston fitted to reciprocate therein, means to permit the inflow of air on both sides of said piston and to exhaust it therefrom, cupped washers fitted to each side of said piston and adapted to prevent the flow of fluid past said piston, a governing cylinder connected in tandem with said power cylinder, a piston fitted thereto, said governing cylinder being filled with oil, a by-pass to permit communication with the front or rear end of the governing cylinder, a piston rod secured to the pistons in the power and governing cylinders leaving one end projecting from the power cylinder, a feeding table connected to one end of said piston rod, said power cylinder having ports formed in each end thereof, a supply pipe, a three-way valve connected to said pipe, means to connect said three-way valve to each end of said power cylinder whereby fluid under pressure can enter either end of the cylinder and be exhausted therefrom.

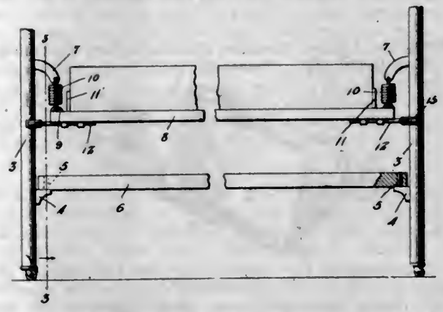
3. In a fluid pressure feeding mechanism, the combination of power and governing cylinders arranged in tandem with each other and connected together, pistons fitted to reciprocate in said cylinders, a piston rod connecting both of said pistons with one end projecting from the power cylinder, and a feeding table or the like connected to the piston rod, said governing cylinder containing a fluid, a by-pass connecting each end of said governing cylinder, means on the by-pass to retard or permit the free passage of the fluid from either end of the governing cylinder for governing purposes.

4. In a fluid pressure feeding mechanism comprising a main power cylinder and an auxiliary governing cylinder, said governing cylinder being filled with oil, pistons fitted to reciprocate in said cylinders, a piston rod to connect said pistons to provide for simultaneous reciprocation, a carriage connected to one end of the piston rod, ports provided in the power cylinder, a supply pipe, a three-way valve attached to said pipe, means to connect said three-way valve to both ends of the power cylinder whereby the fluid under pressure can flow into either end of the power cylinder or be exhausted therefrom, substantially as and for the purpose described.

5. In a feeding mechanism for milling machines or the like comprising a power cylinder, a piston fitted to reciprocate therein, a governing cylinder of smaller diameter arranged in tandem with and connected to said power cylinder, a piston fitted to reciprocate in said governing cylinder having an aperture formed therein, a piston rod to connect both pistons, a carriage connected to one end of the piston rod, a valve to close said aperture on one side when the piston in the governing cylinder is moving in one direction whereby a quicker return movement can be obtained of the carriage, a by-pass connecting each end of the governing cylinder to permit the passage of fluid from either end of the cylinder, means on said by-pass to retard the flow of said fluid therethrough to regulate the speed of the carriage, as and for the purpose described.

[Claims 6 to 9 not printed in the Gazette.]

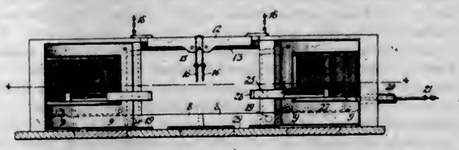
897,677. BEDSTEAD. HARRY W. THOMPSON, Philadelphia, Pa. Filed Apr. 24, 1908. Serial No. 429,011.



1. A bedstead having a mattress support, means for connecting said support with said bedstead to permit said support to swing laterally and to move vertically and means constructed to lock said mattress against lateral movement and to permit it to move vertically.

2. In a bedstead, the combination of a head and a foot board having apertured brackets projecting from the inner faces thereof, means for rigidly connecting said head and foot boards, a mattress supporting member provided with perforated upwardly projecting lugs or ears, coiled springs detachably connected with said lugs and with said brackets and sliding catches mounted on said mattress supporting member and provided with bifurcated ends for engaging the posts of said head and foot boards.

897,678. GRAIN-CAR DOOR. JACOB THOMPSON, Garretson, S. D., assignor of one-half to George F. Rose, Colorado Springs, Colo. Filed May 9, 1907. Serial No. 372,756.



1. A car having two laterally sliding doors movable from and toward each other, a detachable channel member adapted to inclose the upper edges of the doors, and means for locking the doors to said channel when they are in their closed position.

2. A car having two slidable doors in alinement with each other and having their adjacent edges in engagement with each other when the doors are in their closed position, a detachable channel member adapted to fit over the upper edges of the doors when they are in the last-mentioned position, and means carried by said channel member for preventing the separation of said doors, when they are in their closed position.

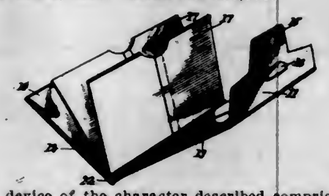
3. A car having two doors, the vertical adjacent edges of which are in engagement with each other when the doors are in their closed position, a channel member adapted to be placed over the upper horizontal edges of said doors when in their closed position, and means for securing the channel to said doors, to normally prevent their being opened.

4. A car having two inner sliding doors, casings for receiving said doors when the latter are in their open position, and tracks upon which said doors slide, said tracks being hinged and adapted to be swung up into said casing to protect the edges of the doors when the latter are opened.

5. A car, comprising two inner sliding doors, casings inclosing said doors, hinged track sections adapted to be swung on their hinges into said casings when the doors are opened, and means for holding said track sections within said casings.

[Claims 6 to 9 not printed in the Gazette.]

897,679. ALBUM. WILLIAM THOMPSON, New York, N. Y. Filed Oct. 8, 1907. Serial No. 396,370.



1. A device of the character described comprising a receptacle, closed at the side edges and open at the opposite ends, folded transversely upon itself to provide two envelops, and a cover for the envelops having a flap at one end adapted to be passed into the adjacent envelop, and a flap at the opposite end thereof provided with a tongue insertible within a slit formed in the body of the cover.

2. In a device of the character described, a flat receptacle composed of two layers of sheet material closed at opposite edges and with the opening therebetween passing continuously therethrough, and folded transversely upon itself at a point intermediate its length to provide two envelops, the folding line separating the envelops being of substantially the same relative strength as the remainder of the material of which the envelops are composed.

3. In a device of the character described, a flat receptacle closed at the side edges and open at both ends, folded transversely upon itself to produce two envelops which are inseparably connected together on the line on which the fold is made.

4. In a device of the character described, a flat receptacle open at both ends and closed at opposite side edges folded transversely upon itself to provide two envelops, and a cover between which the envelops are detachably secured.

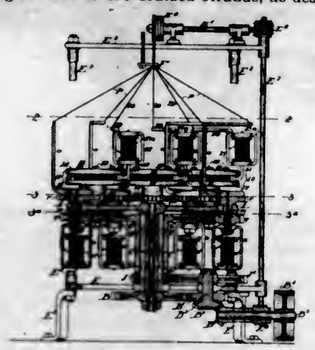
5. In a device of the character described, a cover made from a single blank of flexible sheet material folded at opposite ends to provide flaps, and on an intermediate line to form backs, a plurality of double envelops inserted between said backs, with one of said flaps passing into the adjacent envelop, and an elastic band passing around the folding lines of the envelops and backs, detachably connecting them together.

897,680. CORD-MAKING MACHINE. JAMES P. TOLMAN and HERBERT G. PRATT, Newton, Mass., assignors to Samson Cordage Works, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 9, 1907. Serial No. 401,442.

1. In a braiding machine of the kind described, two sets of strand supplies, one comprising fliers and the other comprising carriers and track heads carrying said carriers, each track head having but one gap in its periphery for the passage of said fliers about said carriers, as described.

2. In a braiding machine of the kind described, two sets of strand supplies, one comprising rotary fliers and the other comprising carriers, in combination with track heads, each track head carrying a carrier capable of rotation about its periphery and having but one gap in its periphery whereby a flier in its rotation may cross the path of said periphery and pass around the carrier carried by said track head, as described.

3. In a braiding machine of the kind described, means for making an interlocking twist comprising two sets of strand supplies, one comprising fliers and the other comprising carriers and track heads carrying said carriers, each track head having but one gap in its periphery for the passage of said fliers about said carriers, and means for giving a twist to the braided strands, as described.

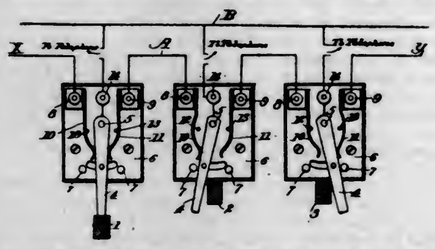


4. In a braiding machine of the kind described, means for making an interlocking twist comprising two sets of strand supplies, one comprising rotary fliers and the other comprising carriers, in combination with track heads, each track head carrying a carrier capable of rotation about its periphery and having but one gap in its periphery whereby a flier in its rotation may cross the path of said periphery and pass around the carrier carried by said track head, and means for giving a twist to the braided strands, as set forth.

5. In a braiding machine of the kind described, two sets of strand supplies one comprising rotary fliers and the other comprising carriers, supporting plates for said carriers having gaps for said fliers, means for rotating said supporting plates, and means for causing the rotation of said carriers about said plates, as set forth.

[Claims 6 to 14 not printed in the Gazette.]

897,681. TELEPHONE-SWITCH. CLARENCE TRUITT, Moscow, Idaho. Filed June 8, 1907. Serial No. 377,902.



1. The combination, with a telephone in a party line circuit of a switch-bar pivoted directly above its receiver-hook and normally arranged in a vertical position with its free end engaging said hook, means to turn said switch bar to permit said hook to rise, and means to break the main line circuit when said switch is turned.

2. The combination, with a telephone in a party line circuit, of a switch bar pivoted directly above its receiver-hook and normally arranged in a vertical position with its free end engaging said hook, a handle on said switch bar arranged at an angle thereto and projecting through a slot in the support for said switch bar whereby the latter may be turned to permit said hook to rise, and means to break the main line circuit when said switch is turned.

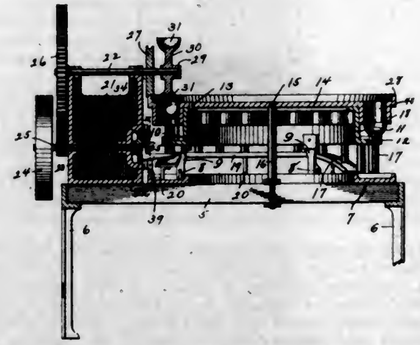
3. The combination, with a telephone in a party-line circuit, of a switch bar adapted to normally engage and hold down its receiver-hook, means for turning said switch bar to permit said hook to rise, springs normally contacting with the sides of said switch bar and comprising parts of the main line circuit, and pins adapted to hold either of said springs out of contact with said switch bar when the latter is turned in the opposite direction.

4. The combination, with a telephone in a party-line circuit, of a switch-bar pivoted directly above its receiver-hook and normally arranged in a vertical position with its free end engaging said receiver hook, means for turning said switch bar to permit said hook to rise, springs normally contacting with the sides of said switch bar and comprising parts of the main line circuit and pins adapted to hold either of said springs out of contact with said switch when the latter is turned in the opposite direction.

5. The combination, with a telephone in a party line circuit, of a switch bar adapted to normally engage and hold down its receiver-hook, means for turning said switch bar to permit said hook to rise, electrical connections from the main line circuit normally contacting with the sides of said switch bar and means to hold either of said connections out of contact with said switch bar when the latter is turned in the opposite direction.

[Claims 6 and 7 not printed in the Gazette.]

897,682. MACHINE FOR MAKING POPCORN BALLS. WEBB W. TURNBULL, Columbus, Ohio. Filed Oct. 16, 1907. Serial No. 397,699.



1. In a device of the character described, the combination with a horizontally rotating member having a plurality of mold pockets formed therein, of cup-like plungers movably mounted within said pockets, a series of vertically rotating cup-like molds adapted to coact with the cup-like plungers, and means for bodily elevating said cup-like plungers when they reach a position beneath the vertically rotating molds.

2. In a device of the character described, the combination with a horizontally rotating member having a plurality of mold pockets formed therein, of cup-like plungers movably mounted within said pockets, a series of vertically rotating cup-like molds adapted to coact with the cup-like plungers, means for bodily elevating said cup-like plungers when they reach a position beneath the vertically rotating molds, and means for holding said cup-like plungers in an elevated position during a portion of the rotation of the horizontally rotating member.

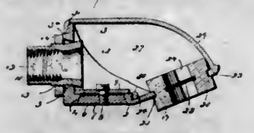
3. In a device of the character described, the combination with a horizontally rotating member having a plurality of mold pockets formed therein, of cup-like plungers movably mounted within said pockets, a series of vertically rotating cup-like molds adapted to coact with the cup-like plungers, means for bodily elevating said cup-like plungers when they reach a position beneath the vertically rotating molds, and a fixed cam member over which the lower ends of said plungers are adapted to ride, said cam serving to hold the cup-like plungers in an elevated position during a portion of the rotation of the horizontally rotating member.

4. In a device of the character described, the combination with a horizontally rotating member having a plurality of mold pockets formed therein, of cup-like plungers movably mounted within said pockets, a series of vertically rotating cup-like molds adapted to coact with the cup-like plungers, means for bodily elevating said cup-like plungers when they reach a position beneath the vertically rotating molds, and a vertically rotating bearing member bearing upon the horizontally rotating member to resist the upward thrust of the cup-like member.

5. In a device of the character described, the combination with a rotative table having a plurality of pockets open both at the top and the bottom formed therein, of cup-like plungers mounted to move bodily with said table, a plurality of cup-like molds mounted to rotate at right angles to the table and to coact with the cup-like plungers to compress the body of plastic material between them, and means for elevating said cup-like plungers when they come into alinement with the bodily rotating molds.

[Claims 6 and 7 not printed in the Gazette.]

897,683. CONDUIT-CAP FOR ELECTRIC INSTALLATION. WHEELER H. VIBBER, New London, Conn., assignor to The Gillette-Vibber Co., New London, Conn., a Corporation. Filed Feb. 6, 1908. Serial No. 414,582.



1. In a convertible cap forming an end-terminal for electric conduits, the combination with a body having a vertical and a horizontal wall merging into each other at a right angle, and each formed with an opening, the said openings being located close together; of a plug adapted to be introduced into one opening or the other according as it is desired to use the device for capping a horizontal or vertical conduit.

2. In a convertible cap for electric conduits, the combination with a body having a vertical and a horizontal wall, each formed with a tapered opening, of a tapered plug adapted to fit into either one of the said openings and formed with a central threaded hole, and a bridge and a screw for drawing the plug into place in one of the said openings and holding it therein, the plug being located in either one opening or the other according as the cap is to be used for capping a vertical or horizontal conduit.

3. In a cap for electric conduits, the combination with a body formed with an opening, of a thimble-like coupling having its inner end flared to form a self-adjusting flange coacting with the inner edge of the wall of the said opening, and the said thimble having its outer end threaded and formed between its ends with an externally threaded shoulder; and a nut applicable to the said shoulder for drawing the thimble into place in the opening.

4. In a convertible cap for electric conduits, the combination with a body having a horizontal and a vertical wall each formed with an opening, of a plug for closing one opening like the other, and a thimble or coupling for introduction into the opening not occupied by the plug.

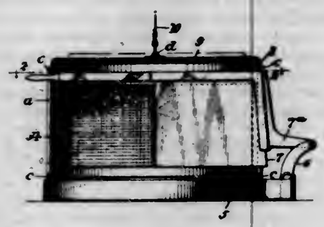
5. In a cap forming an end-terminal for electric conduits, the combination with a body provided at its ends with arms separated by a space, of a cover fitting over the said body to form a chamber, and an insulator located in the said space and having its ends grooved for engagement with the said arms and its sides grooved for engagement with the edge of the portion of the body lying between the said arms.

[Claims 6 to 10 not printed in the Gazette.]

897,684. CHEESE-COVER. FRANK A. VOGT, Anderson, Ind. Filed Mar. 24, 1908. Serial No. 423,038.

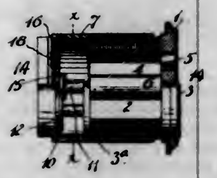
As a new article of manufacture a cover for a cheese supported on a cheese cutter, comprising a metallic body

having a cylindrical wall and a circular top and provided in its walls with oppositely arranged slots, said slots ex-



tending from near the top out through the lower edge and having their edges reinforced.

897,685. ADJUSTABLE CYLINDER-LOCK. HENRY G. VOIGHT, New Britain, Conn., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Feb. 15, 1908. Serial No. 416,039.



1. In a cylinder lock, a frame, a rearwardly projecting threaded shell support, a hollow shell section having a rotatable threaded connection with said threaded support and adapted to be adjusted to and fro thereon by rotation, a plug carried by the frame, a rotatable roll-back supported by the shell section and adjustably connected with the plug, and means to lock the threaded connection of the shell section against rotation relatively to the frame section and means to permit the shell section to be rotated for adjustment on the frame section without disturbing the alinement of the plug and roll-back.

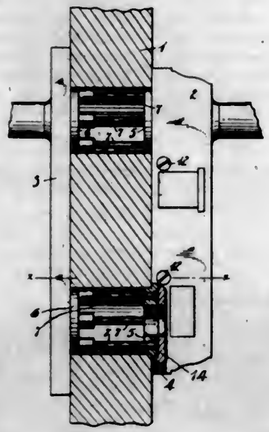
2. In a cylinder lock, a frame, a rearwardly projecting threaded shell support, a hollow shell section having a rotatable threaded connection with said threaded support and adapted to be adjusted to and fro thereon by rotation, said shell section having a non-rotatable back, a plug carried by the frame, a roll-back mounted on said shell back and adjustably connected with the plug, and means to lock the threaded connection of the shell section against rotation relatively to the frame section.

3. In a cylinder lock, a frame, a rearwardly projecting threaded shell support, a hollow shell section having a rotatable threaded connection with said threaded support and adapted to be adjusted to and fro thereon by rotation, said shell section having a non-rotatable back, a plug carried by the frame, a roll-back mounted on said shell back and adjustably connected with the plug, and means to lock the threaded connection of the shell section against rotation relatively to the frame section, said locking means being carried by said shell back and detachably engaging said rotatable shell connection.

4. In a cylinder lock, a frame including a rearwardly extending threaded shell support, a hollow shell having a portion correspondingly threaded and rotatably mounted thereon, a plug in said frame, a rotatable roll-back and a non-rotatable support therefor, adjustable means of connection between said roll-back and plug and between said roll-back, support and frame.

5. In a cylinder lock, a frame including a rearwardly extending threaded shell support, a hollow shell having a portion correspondingly threaded and rotatably mounted thereon, a plug in said frame, a rotatable roll-back and a non-rotatable support therefor, adjustable means of connection between said roll-back and plug and between said roll-back, support and frame, said roll-back and support being connected with said hollow shell connection for movement to and fro therewith.

897,686. LOCK CONSTRUCTION. HENRY G. VOIGHT, New Britain, Conn., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 18, 1908. Serial No. 421,929.



1. In a device of the character described, two members arranged to stand on opposite sides of a door and including two plates arranged to make a surface engagement with said door, a clamping device coöperating with both of said plates, each of said plates having a passage, means whereby said passages will be arranged in alinement, a lock case adapted to one of said plates, and means for detachably connecting said lock case with said plate, said means making direct engagement with both of said parts.

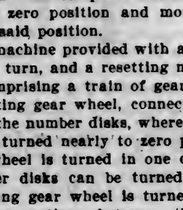
2. In a device of the character described, an escutcheon plate adapted to the outside of a door, a seat plate adapted to the inside of the door, means for securing said plates together to clamp them securely to said door, a lock case adapted to be secured to said seat plate, and attaching devices coöperating with said plate and said lock case to detachably secure the same to each other.

3. In a device of the character described, an escutcheon plate adapted to the outside of a door, a seat plate adapted to the inside of the door, means operable from the inside of the door and coöperating with both of said plates to clamp them against opposite sides of said door, a lock case adapted to said seat plate, lugs on said parts arranged to aline or register, and an interlocking device arranged to pass through said lugs to detachably connect said parts.

897,687. CIGAR-LIGHTER. CHARLES A. WAGNER, Brooklyn, N. Y. Filed Mar. 4, 1908. Serial No. 419,113.

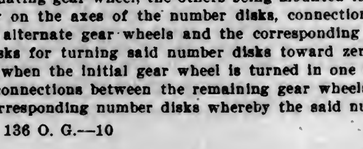
1. In a cigar lighter of the character herein specified, the combination with a piece of tinder, of an inclosing case therefor, and a slide adapted to act upon the extremity of the tinder or fabric and pinch the same, substantially as shown and described.

2. In a cigar lighter of the character herein specified, a case having an opening or perforation in its top, and an ignitible tinder located within the case, in combination with a slide adapted to close the opening or perforation in



the top of the case, and an extinguishing device adapted to pinch the end of the fabric, carried by said slide.

897,688. RESETTING DEVICE FOR ADDING-MACHINES. JAMES J. WALSH, Elizabeth, N. J. Filed Nov. 29, 1907. Serial No. 404,236.



1. In an adding machine, a series of number disks, and a resetting mechanism comprising a train of gear wheels, and connections between the gear wheels and the number disks, whereby the turning of one of the end gear wheels of the train in opposite directions will reset the said number disks to zero position.

2. In an adding machine, a series of number disks mounted to turn, and means for resetting the number disks comprising a train of gear wheels of which one is the actuating gear wheel, connections between the gear wheels and the number disks whereby two complete turns of the actuating gear wheel in opposite directions will set the number disks to zero, and means for limiting the turning movement in both directions.

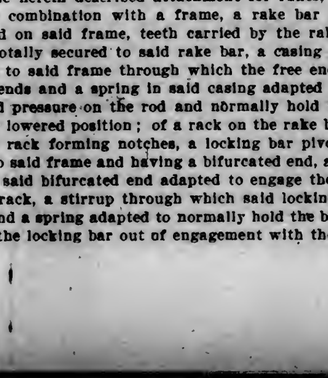
3. An adding machine comprising a series of number disks, mounted to turn, and a resetting device for resetting the number disks to zero position, the said resetting device having an initial or actuating gear wheel, a train of gear wheels actuated thereby, and connections between the said train of gear wheels and the number disks, whereby the turning of the initial gear wheel in one direction will move sundry of the number disks toward zero position, and the turning of the actuating gear wheel in the opposite direction will complete the movement of said number disks to zero position and move the remaining number disks to said position.

4. An adding machine provided with a series of number disks mounted to turn, and a resetting mechanism for the number disks comprising a train of gear wheels of which one is the actuating gear wheel, connections between the gear wheels and the number disks, whereby alternate number disks can be turned nearly to zero position when the actuating gear wheel is turned in one direction, and the remaining number disks can be turned to zero position when the actuating gear wheel is turned in the opposite direction, and connections between the number disks whereby the movement of the said remaining number disks to zero position completes the turning movement to zero position of the said alternate number disks.

5. In an adding machine a series of manually controlled number disks mounted to turn, a resetting mechanism comprising a train of gear wheels of which one is the initial or actuating gear wheel, the others being mounted to turn loosely on the axes of the number disks, connections between alternate gear wheels and the corresponding number disks for turning said number disks toward zero position when the initial gear wheel is turned in one direction, connections between the remaining gear wheels and the corresponding number disks whereby the said number disks are turned to zero position when the said initial gear wheel is turned in the opposite direction, and mechanism for turning a number disk from a preceding one, whereby on the completion of the turning movement in the last mentioned direction all the number disks will be restored to zero position, and means for limiting the turning movement of the actuating gear wheel in both directions.

[Claims 6 to 8 not printed in the Gazette.]

897,689. RAKE. CLARENCE WALTHER, Oakdale, Cal. Filed Dec. 24, 1907. Serial No. 407,937.



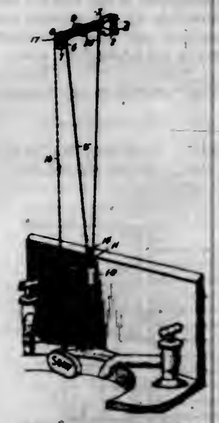
1. The herein described attachment for rakes, comprising the combination with a frame, a rake bar pivotally mounted on the frame, teeth carried by said bar and means to raise said teeth; of a rack secured to said rake bar, teeth on the edge of said rack to form notches and means on said frame adapted to be moved into said notches and hold the rake teeth in their elevated position.

2. The herein described attachment for rakes, comprising the combination with a frame, a rake bar pivotally mounted on said frame, teeth secured to said bar and means to swing said bar and elevate the teeth; of a rack carried by the rake bar, a plurality of teeth on the edge of said rack to form notches, a locking bar pivotally mounted on said frame, a pin carried by said locking bar adapted to be moved into engagement with the notches on the rack and means to normally hold the locking bar out of engagement with said notches.

3. The herein described attachment for rakes, comprising the combination with a pivotally mounted rake bar and teeth secured thereto; of a rack fixed to the rake bar, a plurality of teeth on said rack to form notches, the outer ends of said teeth being curved, a locking bar, a supporting standard for said locking bar, said locking bar having a bifurcated end, a pin carried by said bifurcated end adapted to engage the notches in the rack, a stirrup between the standard and bifurcated end of the locking bar and a spring carried by the stirrup adapted to direct upward pressure on the locking bar and normally hold the pin out of engagement with the notches.

4. The herein described attachment for rakes, comprising the combination with a frame, a rake bar pivotally mounted on said frame, teeth carried by the rake bar, a rod pivotally secured to said rake bar, a casing pivotally secured to said frame through which the free end of said rod extends and a spring in said casing adapted to direct outward pressure on the rod and normally hold the teeth in their lowered position; of a rack on the rake bar, teeth on said rack forming notches, a locking bar pivotally secured to said frame and having a bifurcated end, a pin carried by said bifurcated end adapted to engage the notches on the rack, a stirrup through which said locking bar extends and a spring adapted to normally hold the bifurcated end of the locking bar out of engagement with the rack.

897,690. SOAP-HOLDER. ABEL T. WATERS, Regina, Saskatchewan, Canada. Filed Jan. 28, 1908. Serial No. 413,083.



1. In a soap holder, a bracket provided at its free end with a bearing roller and at its opposite end with an attaching means, a cable extending from said means and over said roller, means for attaching soap to the free end of said cable, and a weight disposed upon the cable intermediate of the roller and attaching means.

2. In a soap holder, a bracket provided at its free end with a bearing roller and at its opposite end with an attaching means, a cable extending from said means and over said roller, means for attaching soap to the free end of said cable, a weight disposed upon the cable intermediate of the roller and attaching means, a wall plate, and a pivotal connection between said bracket and said plate.

3. In a soap holder, a bracket provided at its free end with a bearing roller and at its opposite end with an attaching means, a cable extending from said means and over said roller, means for attaching soap to the free end of said cable, a weight disposed upon the cable intermediate of the roller and attaching means, a supporting device carried by said bracket, and means carried by said weight to be engaged with said device.

4. In a soap holder, a bracket provided at its free end with a bearing roller and at its opposite end with an attaching means, a cable extending from said means and over said roller, means for attaching soap to the free end of said cable, a weight disposed upon the cable intermediate of the roller and attaching means, a supporting device carried by one side of said bracket, and means carried by said weight to rest upon the upper face of said supporting device.

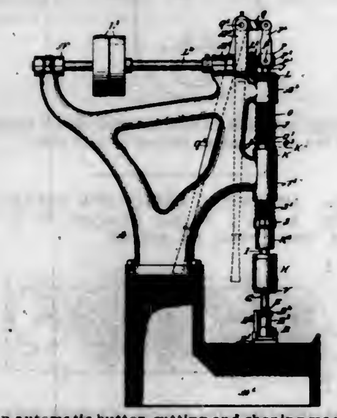
5. In a soap holder, a bracket provided with a laterally disposed attaching lug, a bearing roller pivotally mounted upon the free end of the bracket at one side thereof, a guard plate extending over said roller, a cable extending from said lug over said roller, a weight disposed upon the cable between said lug and roller, and means for connecting a soap cake to the free end of said cable.

[Claims 6 to 12 not printed in the Gazette.]

897,691. AUTOMATIC BUTTON CUTTING AND SHAPING MACHINE. WINFIELD S. WATSON, Memphis, Tenn. Filed July 5, 1907. Serial No. 382,260.

1. An automatic button-cutting and shaping machine comprising a slidable spring-pressed barrel, a shell holder carried by the said barrel, a spindle for carrying the cutting and shaping tools, manually controlled means for raising and lowering the said spindle independent of the said barrel, and means on the said spindle for raising the said barrel against the tension of its spring.

2. An automatic button-cutting and shaping machine provided with a spindle mounted to turn and to slide in the direction of its axis, a chuck held on the said spindle, a tool holder held in the said chuck, a tubular cutting tool held in the said tool holder, a facing tool within the said tubular cutting tool, the cutting tool having movement independent of the facing tool, and means for holding the said facing tool against movement while raising the said spindle, chuck, tool holder and cutting tool.



3. An automatic button-cutting and shaping machine provided with a tubular cutting tool mounted to turn and to slide in the direction of its length, means for raising and lowering said tool, a facing tool slidably mounted in the said tubular cutting tool and adapted to turn with the same, and means for holding the said facing tool against sliding movement while sliding the said cutting tool.

4. An automatic button-cutting and shaping machine provided with a chuck, a tool holder held in the said chuck, a tubular cutting tool held in the said tool holder, means for raising and lowering the chuck, a facing tool slidably mounted in the said tubular cutting tool and adapted to turn with the same, and means for holding the said facing tool against sliding movement while sliding the said tool holder and tubular cutting tool to cause the facing tool to act as a punch for pushing a button out of the said tubular cutting tool.

5. An automatic button-cutting and shaping machine provided with a chuck, a tool holder held in the said chuck, a tubular cutting tool held in the said tool holder, a facing tool slidably mounted in the said tubular cutting tool and adapted to turn with the same, a shank on which the said chuck is secured, a spindle mounted to turn and to slide in the direction of its axis and carrying the said shank, and means on the said chuck and spindle and coacting with a stationary part for holding the said facing tool against sliding movement on raising the said tubular cutting tool.

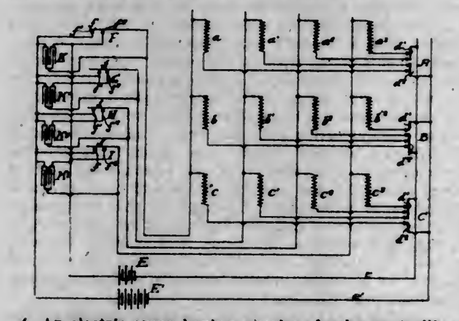
[Claims 6 to 24 not printed in the Gazette.]

897,692. ELECTRIC ORGAN-ACTION. WILLIAM R. WHITEHORNE, Brooklyn, N. Y., assignor to Whitehorne Organ Action Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 16, 1907. Serial No. 374,041.

1. An electric organ having a series of keys each provided with a switch, stop mechanism including a plurality of switches, a valve controlling magnet winding for each pipe, each winding having in series with it a key controlled switch and a switch belonging to the stop mechanism, with a source of current for energizing the windings, substantially as described.

2. An electric organ having a series of keys each provided with a key switch, a series of magnets each controlling the valve of a single pipe, and each having one of the key switches in series with it, with stop mechanism including a number of multiple contact switches also in circuit with the magnets.

3. An electric organ having a series of magnets each controlling the admission of air to a single pipe, a series of keys, a switch controlled by each key and in circuit with one of said magnets, and stop mechanism including a switch having a plurality of contacts each connected to one of said magnets substantially as described.

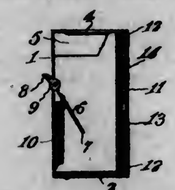


4. An electric organ having a series of valve controlling magnets for the valves of a series of pipes, a series of key switches respectively connected to said magnets, and a stop switch device also connected with the magnets, said stop switch device including a plurality of separate switches of which one is connected to one group of magnet windings and another is connected to another group of said windings, with sources of current of different voltages respectively connected to the various switches of said stop switch, substantially as described.

5. An organ having a magnet winding for controlling the sounding of each of its pipes, stop switch mechanism including a switch having a plurality of sets of contacts, the contacts of one set being connected with certain of the magnets and the contacts of another set being independently connected to others of said magnets, and key switches respectively in circuit with said magnets, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

897,693. MATCH-BOX. WALTER WILLIAMS, Detroit, Mich. Filed Feb. 5, 1908. Serial No. 414,423.



1. A match box comprising a receptacle having a sliding door, the top of the receptacle being provided with an opening alining with the inner walls of one corner thereof, a partition within the receptacle spaced away from the opening, and an ejector pivotally secured upon the interior of the receptacle below the partition, the ejector comprising a body portion within the receptacle provided with prongs and a handle portion projecting outside of the receptacle, and a spring secured to the ejector and adapted to force the body of the ejector downwardly.

2. A match box of the class described having a metal strip secured upon one of its faces and projecting beyond the width of the face, the ends of the strip adapted to be bent over a sharpening element, and a closure for the element comprising a slide having inturned edges adapted to engage the projecting edges of the strip.

897,694. SPRING SUSPENSION. WILLIAM O. WORTH, Evansville, Ind. Filed Nov. 21, 1906. Serial No. 344,427.

1. A spring suspension of the class described embracing a long semi-elliptical body spring and a shorter elliptical spring having one section rigidly bolted to the same and the upper section of the elliptical spring connected directly with the axle.

2. A spring suspension of the class described embracing a long body spring connected at its ends with the frame, a spring comprising oppositely disposed sections, each having leaves decreasing in length inwardly, one of said sections shaped for approximately its entire length, complementally with the long body spring and rigidly secured thereto and means connecting the other section with the axle.



3. A spring suspension of the class described embracing a long body spring extending below the axle, a spring connecting the same centrally with the axle and pads engaged between the body spring and the ends of said last named spring.

4. A spring suspension of the class described embracing a long body spring extending below the axle and a spring connecting the same centrally with the axle, a butting block between the body spring and axle and a butting block between the body spring and each end of the other spring.

5. A spring suspension embracing a long body spring consisting of a plurality of leaves, a spring consisting of oppositely disposed sections, positioned above said body spring, said sections having inwardly facing leaves, means connecting one section to the lower body spring and means connecting the other section with the axle.

[Claims 6 to 15 not printed in the Gazette.]

897,695. PROCESS OF MAKING FERTILIZERS. JOHN R. YOUNG, Norfolk, Va. Filed Apr. 20, 1908. Serial No. 428,097.

1. The process of producing ammoniated superphosphate, which consists in decomposing bone phosphate of lime with strong sulfuric acid of about 66° Baumé, in the immediate presence of undried press-cake of the herein described animal refuse containing water.

2. The process of producing ammoniated superphosphate, which consists in treating bone phosphate of lime with strong sulfuric acid in the presence of the solid part of animal refuse, herein described, containing water, and decomposing the solid matters and taking up the water and drying the product in the reaction.

3. The process of producing an ammoniated superphosphate which consists in mixing the press-cake of the herein described animal refuse, without previous drying, with bone phosphate of lime, and subjecting such mixture to the action of strong sulfuric acid, thereby decomposing the bone phosphate and solid animal matters and assimilating the moisture of the animal matter in the reaction and converting the ingredients substantially as described.

4. The process of producing ammoniated superphosphate, which consists in mixing the following ingredients in the order named and substantially in the proportions named, to wit:—with about from six hundred to eight hundred pounds of undried "press-cake" of the herein described refuse animal matter, containing about forty to fifty per cent. moisture, thoroughly incorporate about seven hundred pounds of finely pulverized bone phosphate of lime, and to said mixture add about seven hundred pounds of strong sulfuric acid (preferably 66° Baumé), agitating the mass until chemical action partially subsides, then allow the composition to set.

5. The process of producing ammoniated superphosphate, which consists in mixing undried "press-cake" of

refuse animal matters, as herein described, containing about forty to fifty per cent. moisture, with finely ground or pulverized bone phosphate of lime, and then adding to said mixture sufficient strong sulfuric acid to decompose the entire mass, producing in the re-action soluble phosphates of lime, sulfate of lime, and sulfate of ammonia and sulfurous acid gas.

[Claims 6 and 7 not printed in the Gazette.]

897,696. AIR-BRAKE VALVE. DAVID S. AFFLECK, Chicago, Ill. Filed Dec. 5, 1907. Serial No. 405,208.



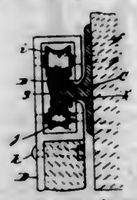
1. In a valve of the character described, the combination of a cylinder provided with ports, a piston mounted in said cylinder, means for holding said piston in a position to shut off communication between said ports, there being provided a passage and another port leading into said cylinder at one end of the piston, the last named port being designed for connection with the source of supply of compressed air, a solenoid, a support therefor, said solenoid being provided with a core, and a piston movable with said core, the last named piston projecting out of the solenoid and provided at its projecting end with a handle whereby the last named piston may be manually operated, such piston being designed to control communication between the last named port and passage, the solenoid being arranged upon energization to hold the core and piston in one position, and means for automatically moving the piston to another position upon the deënergization of the solenoid, the piston in one position intercepting the last named port and passage, and in the other position establishing communication between the same.

2. In a valve of the character described, the combination of a cylinder provided with ports, a piston mounted in said cylinder, means for holding said piston in a position to shut off communication between said ports, there being provided a passage and another port leading into said cylinder at one end of the piston, the last named port being designed for connection with the source of supply of compressed air, a solenoid, a support therefor, said solenoid being provided with a core and a piston movable with said core, the last named piston being designed to control communication between the last named port and passage, and the solenoid being arranged upon energization to hold the core and piston with the latter intercepting the last named port and passage, and means for automatically moving the piston in a direction to establish communication between said last named port and passage upon the deënergization of the solenoid.

3. An air brake valve of the character described, comprising a solenoid provided with opposite ports out of alinement with each other, said ports being designed for registry with a train pipe and exhaust pipe, respectively, a main piston mounted in said cylinder and spring pressed to a position to intercept said ports, said piston being provided with an annular recess always in registry with one of said ports, a supplemental cylinder secured to the first named cylinder and formed with a laterally opening port designed for communication with a main reservoir for compressed air, said supplemental cylinder being also formed with a laterally and downwardly extending passage communicating with an end of the first named cylinder and with the interior of the supplemental cylinder below the port therein, a supplemental piston mounted in the supplemental cylinder and formed with an annular recess communicating with said port, a solenoid mounted on said supplemental cylinder, said piston being provided with a stem forming the core of said solenoid, the solenoid being arranged, upon energization to hold the supplemental piston in a position to intercept the port and passage in the supplemental cylinder, and means for automatically moving said supplemental piston to a position where its recess will establish communication between the port and passage of the supplemental cylinder, upon the deënergization of the solenoid.

4. An air brake valve of the character described, comprising a main cylinder provided with ports out of alinement with each other, a main piston mounted in said cylinder and spring pressed in a direction to intercept said ports, said piston being provided with an annular recess in communication with one of said ports and being also formed in one end with another recess, a supplemental cylinder secured to the main cylinder and formed with a laterally and downwardly extending passage opening into the main cylinder in registry with the last named recess of the piston, said supplemental cylinder being also formed with a laterally opening port for the purpose specified, a solenoid secured to said supplemental cylinder, a piston mounted in said supplemental cylinder, said piston being formed with a stem constituting the core of the solenoid, the latter being arranged under one condition to hold the piston in a position to cut off communication between the port and passage in the supplemental cylinder, and means for automatically moving said piston in a direction to establish communication between said port and passage, in another condition of the solenoid.

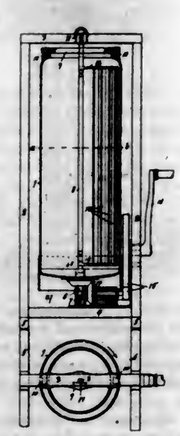
897,697. SUPPORT FOR SLIDING-DOOR TRACKS. JOHN ANDERSON, Hamilton, Ontario, Canada, assignor to Allith Manufacturing Company, Hamilton, Canada. Filed Sept. 11, 1907. Serial No. 392,373.



1. The combination of a track consisting of a hollow member provided with a longitudinal slot in its rear and extending from one end thereof to the other, with a plurality of supporting brackets therefor, each bracket consisting of a base, a shank extending outwardly therefrom, and a head on the outer extremity of the shank and of less thickness than the width of the slot of the track for insertion therein and removal therefrom, the head being of such length as to interlock in the track when the bracket is turned to throw the head transversely to the slot, and the shanks of the brackets being of such length as to space the track a sufficient distance from the wall to which the track is secured for permitting a bracket to be applied to the track while the latter is in position.

2. A track supporting bracket comprising a base, a shank secured to and projecting outwardly therefrom, and a head on the shank and rounded at its top and bottom, said shank having recesses in its top and bottom surfaces at a point immediately adjacent the head.

897,698. CHURN. SVEN P. A. ANDERSSON, Stockholm, Sweden. Filed Jan. 22, 1907. Serial No. 353,422.



1. In a churn, the combination of a bowl rotating about its vertical middle axis and having a high and narrow shape, a stationary dasher located in the bowl for working the cream, a frame, and means for pivoting the bowl to the frame in such a manner that the bowl may be emptied by rotating it round its horizontal transverse axis without being removed from the frame, substantially as described and for the purpose set forth.

2. In a churn, the combination of a bowl rotating about its vertical middle axis and having a high and narrow shape, a grid-like stationary dasher therein, a frame, a cross piece located above the bowl and provided with depending hooks for pivotally fastening the bowl to the frame, and means for raising the fastening device and the bowl in the frame into position to permit the bowl to be freely tilted, substantially as described and for the purpose set forth.

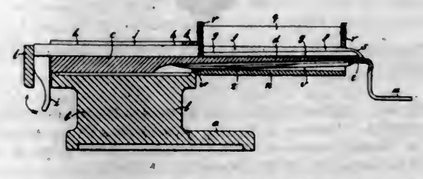
3. In a churn, the combination of a rotatable bowl having a high and narrow shape, a grid-like stationary dasher therein for working the cream, a frame, a hook-shaped device for fastening the bowl to the frame so as to be tilted when the bowl is to be emptied, and a screw for raising the said hook and thereby the bowl, in the frame to permit the bowl to be tilted, substantially as described and for the purpose set forth.

4. In a churn, the combination of a rotatable bowl having a high and narrow shape, a stationary dasher therein for working the cream, wings in the interior of the bowl, produced by depressions made in the wall of the bowl, a frame, and means for tiltably fastening the bowl to the frame, substantially as described and for the purpose set forth.

5. In a churn the combination of a bowl rotating about its vertical axis, the height of which bowl is one and a half the diameter of the bowl at least, a stationary dasher located therein and consisting of a plurality of wings disposed obliquely to the radius of the bowl, hooks depending on each side of the bowl from a cross piece, ears or the like provided on the bowl, in which the said hooks may be hooked, and a screw co-axial with the axis of the bowl and located in an upper cross piece of the frame, which screw, when caused to rotate with the bowl by the hooks hooked to the said ears, will raise the bowl in the frame by means of the hooks, so that it is brought out of engagement with a bottom bearing and can be tilted in the frame, substantially as described and shown in the accompanying drawings.

[Claim 6 not printed in the Gazette.]

897,699. TOOL OR APPARATUS FOR USE IN THE MANUFACTURE OF HAND-MADE CIGARETTES. LAZARIDAS APTEKMAN, Westcliff-on-Sea, England. Filed Feb. 29, 1908. Serial No. 418,494.



1. In tools or apparatus for use in the manufacture of hand made cigarettes, the combination of a standard furnished with a slotted upper part adapted to support a compound bar, said compound bar having a cylindrical portion and a rectangular extension for fitment in the slotted part of the standard, thumb screws for fixing the cylindrical bar in position, a cylindrical longitudinal groove in the upper part of the bar and extension, a concave filler located in the recess and arranged for movement about its axis through a semi-circle and longitudinally between limiting stops, a hopper formed integral with a longitudinally slotted movable sleeve fitting on the cylindrical bar, a circumferential slot in the sleeve and a pin in the cylindrical bar for limiting the movement of the sleeve, a longitudinal shallow recess in the sleeve which when moved into register with the groove in the cylindrical bar provides a clearance for the longitudinal manipulation of the filler, an adjustable knife blade carried by the aforesaid hopper, and a projecting lip and spring catch for holding a paper tube in line with the cylindrical longitudinal groove, all substantially as set forth.

2. In tools or apparatus for use in the manufacture of hand made cigarettes, the combination of a compound bar with a supporting standard, said compound bar comprising a cylindrical portion and a rectangular extension in the upper part of which is a longitudinal cylindrical groove, a projecting lip at the outer end of the cylindrical portion in register with the groove, a longitudinal groove at the underside of the cylindrical bar in which is located a steel strip furnished at its lower end with a handle, and a pin laterally of the groove whereby the pressure of the strip upon the underside of the projecting lip may be regulated, substantially as described.

3. In tools or apparatus for use in the manufacture of hand made cigarettes, the combination of a compound bar with a movable sleeve formed integral with the feed hopper, said feed hopper being furnished with an adjustable knife blade which is adapted to coact with one of the edges of a longitudinal cylindrical groove in a cylindrical portion of the compound bar, substantially as shown, for the purpose specified.

4. In tools or apparatus for use in the manufacture of hand made cigarettes, the combined hopper and movable sleeve in the latter of which is a shallow longitudinal recess which when brought into register with a cylindrical groove in a compound bar provides a clearance for the manipulation of the concave filler, substantially as shown, for the purpose specified.

897,700. INSULATING-COUPLING. HOMER ASHBAUGH, Indianapolis, Ind. Filed Mar. 7, 1908. Serial No. 419,667.

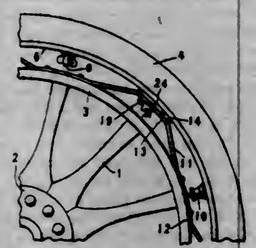
An insulating coupling comprising members permanently connected together and electrically isolated, one of which is arranged eccentrically relative to the other and is also

arranged to be adjusted with respect to the longitudinal center of such other without disturbing the permanent



connection of the members or the electrical isolation of the same.

897,701. DETACHABLE RIM FOR VEHICLE-WHEEL TIRES. EDWIN A. BAKER, New York, N. Y., assignor to Rapid Removable Rim Company, New York, N. Y. Filed Jan. 25, 1907. Serial No. 354,014.



1. A wheel construction, including a tire rim, a platform, one of said members having a recess, and two clamping members in said recess, one of said members being circumferentially adjustable; and the other member being radially adjustable.

2. A wheel construction, including a tire rim, a platform, one of said members having a recess, two clamping members in said recess, one of said members being circumferentially adjustable, and the other member being radially adjustable, and means for adjusting said members.

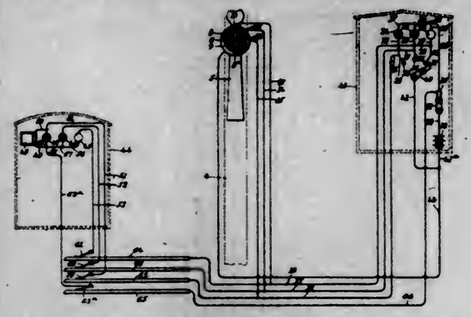
3. A wheel construction, including a tire rim, a projection carried thereby, a platform having a slot adapted to receive said projection and radially and circumferentially adjustable means for coöperating with said projection in said slot.

4. In a wheel construction, a wheel rim, a plurality of raised platforms carried thereby and spaced apart from each other, a plate mounted on the periphery of each platform and having a laterally open recess, a tire rim and tire having a valve stem and lugs located between said platforms, a plurality of blocks carried by the tire rim and registering with said recesses, tapered members radially movable for forcing the rim blocks circumferentially in the recesses and means for moving said tapered members.

5. In a wheel construction, a wheel rim having a plurality of raised platforms and a recess in each platform, a tire rim with tire and inwardly extending lugs and valve stem accommodated in the spaces between said platforms, blocks carried by the tire rim and fitting said platform recesses, and radially adjustable means carried by said platforms for forcing said blocks circumferentially and holding them in place, one of said parts being provided with an inclined surface.

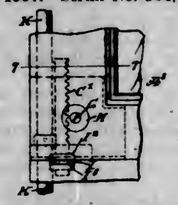
897,702. ELECTRIC SIGNAL SYSTEM. ANTHONY A. BARBERA, Philadelphia, Pa. Filed Feb. 28, 1908. Serial No. 418,229.

1. The combination of a semaphore arm, contact mechanism controllable by movements thereof, a plurality of separate wires connected with said contact mechanism, a plurality of alarm members mounted within a tower-house and connected with said wires so as to be energized by movements of said semaphore arm, a plurality of alarms carried by a locomotive, and electric mechanism controllable by movements of said locomotive for connecting said alarm members carried by said locomotive with said wire leading to said contact mechanism and for disconnecting the same therefrom.



2. The combination of a semaphore arm, contact mechanism actuated by movements of the same, wires connected with said contact mechanism, alarm mechanism mounted upon a movable locomotive, wires disposed adjacent to the track and adapted to be automatically connected with said alarm mechanism upon said locomotive, other alarm mechanism located in the tower-house, wires connected with said last-mentioned alarm mechanism, said wires adjacent to said track and said wires leading to said tower-house, being connected each in multiple with one of said wires connected with said contact mechanism, and a source of electricity for energizing all of said wires.

897,703. WINDOW. SIDNEY U. BARR, New York, N. Y. Filed Mar. 27, 1907. Serial No. 364,782.



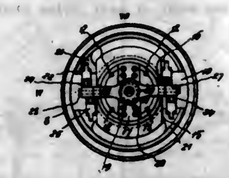
1. A window comprising a window frame, a sash, slidable pivots on which the sash is hung in the window frame, each pivot being provided with rack teeth, a manually controlled gear wheel in mesh with the said rack teeth and journaled in the sash, and means for locking the said gear wheel against movement.

2. A window comprising a window frame, a sash, slidable pivots on which the sash is hung in the window frame, a gear wheel, a bolt on which the gear wheel is mounted, and a clamping plate engaged by the said bolt and engaging the said gear wheel to clamp the latter in place.

3. A window provided with a sash having pivots for the sash to swing on, reinforcing corner pieces each fitting into adjacent ends of a stile and cross bar of the sash frame, the corner piece forming a bearing for a pivot, and manually controlled means arranged in the corner piece for imparting a sliding motion to the pivot.

4. A window provided with a sash having pivots for the sash to swing on, reinforcing corner pieces each fitting into adjacent ends of a stile and cross bar of the sash frame, the corner piece forming a bearing for a pivot, a gear wheel mounted to turn in a recess in the said corner piece and in mesh with rack teeth on the said pivot, and means for locking the said gear wheel against turning in the said recess.

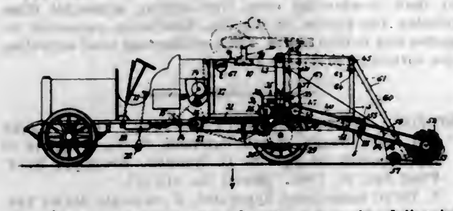
897,704. CLUTCH-PULLEY. WILLIAM BAUMGARDNER, Zelienople, Pa. Filed May 13, 1908. Serial No. 432,665.



1. A clutch embodying a revoluble shaft, a sleeve mounted thereon, a pulley wheel revolubly mounted upon said sleeve and having an interior annular enlargement providing a gripping surface, a cap mounted upon said sleeve, a collar fixed to said cap, and having a peripheral groove formed therein, said collar having oppositely disposed cut away sides provided with vertical guide grooves, a cross head secured to said sleeve and to said cap, a guide pin carried by said cross head, oppositely disposed segment shaped shoes movably mounted in the groove of said collar and adapted to frictionally engage said enlargement, adjustable toggle links pivotally connected to the confronting faces of said shoes, a yoke movably mounted upon said guide pin and adapted to engage in the vertical grooves of said collar, said yoke having bifurcated ends adapted to be connected to said links, and a spring carried by said guide pin between said cross head and said yoke.

2. A clutch embodying a revoluble shaft, a sleeve mounted thereon, a pulley wheel revolubly mounted upon said sleeve, a cap mounted upon said sleeve, a collar secured to said cap, said collar having a peripheral groove formed therein, oppositely disposed segment shaped shoes movably mounted in said groove and adapted to frictionally engage said pulley wheel, a cross head secured to said sleeve and to said cap, a guide pin carried by said cross head, a yoke movably mounted upon said pin and having bifurcated ends engaging said collar, adjustable toggle links connecting the bifurcated ends of said yoke with the confronting face of said shoes, and means arranged between said yoke and said cross head for normally holding said shoes out of engagement with said pulley wheel.

897,705. STREET-SWEEPER. WILBERN S. BEEMAN, Kansas City, Mo. Filed Apr. 12, 1907. Serial No. 367,766.



1. In a vehicle, a body, a brush, means for delivering the sweepings from the brush into the body, means for swinging the brush over the body, and means for shifting the body from the vehicle to a dumping position.

2. In a street sweeper, a vehicle having outer and inner links pivoted together, said links being swingingly mounted at the opposite sides of the vehicle, a revoluble brush journaled between the outer links, means for driving the brush including a chain drive arranged along the side of one of the outer and inner links, means for swinging the links and brush to an elevated position whereby the outer links assume a position at substantially right angles to the inner links, and means carried at the pivotal connection of the outer and inner links adjacent to said drive automatically operating to hold the chain of said drive in engagement with the driving and driven parts when the links are disposed in said position.

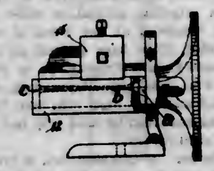
3. In a street sweeper, a motor vehicle, a revoluble brush, means for driving the brush from the motor of said vehicle, means for swinging the brush to an inoperative position above the vehicle, and means automatically operating to throw the brush out of gear with said motor when swung to said position.

4. In a street sweeper, a vehicle, outer and inner links pivotally connected together and swingingly mounted at the opposite sides of the vehicle, a brush journaled between the outer links, means for holding the links in substantial alinement and extended at the rear of the vehicle when the brush is in operative position, and means for elevating the brush over the vehicle with the outer links disposed at substantially right-angles to the inner links.

5. In a street sweeper, a vehicle having a box body, inner and outer links pivotally connected together swingingly mounted at the opposite sides of the box body, a brush journaled between the outer links, brackets attached to the opposite sides of the body, and means for swinging the brush over the body to bring the outer links to rest on said brackets and at substantially right-angles to the inner links.

[Claims 6 to 8 not printed in the Gazette.]

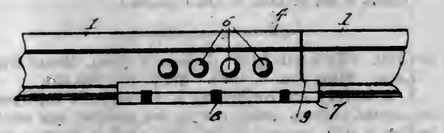
897,706. NIPPER-TUBE. WILLIAM A. BERRY, Xenia, Ohio. Filed Mar. 5, 1908. Serial No. 419,409.



1. The combination with a support, of a two part nipper tube mounted therein, one of said parts being stationary and the other being vertically movable with respect thereto and readily removable therefrom, said tube parts being longitudinally grooved to form a bore having flaring ends, and a weighted arm pivoted to said support and coöperating with said movable member to hold it in proper working position.

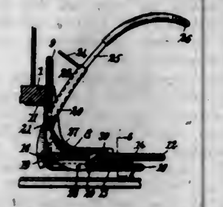
2. The combination with a support having an ear, of a tube member located in said support and stationary relative thereto, a movable tube member guided in said support and coöperating with the upper face of the aforesaid tube member, said members being grooved to form a tapered bore, and a weighted arm pivoted to said ear and coöperating with said movable tube member to hold the same in proper working position and whereby upon withdrawal of the arm the said upper movable member may be readily removed, substantially as set forth.

897,707. RAIL-SPLICE. GEORGE W. BLANCHARD, St. Louis, Mo. Filed Mar. 29, 1907. Serial No. 365,371.



The herein described rail splice comprising rails, the ends of which are provided with rabbets formed on vertical lines extending through the tread portion, the web and the flange of the rails, a chair for inclosing the base flanges of the rails, said chair having inwardly extending flanges bearing at their inner edges against the sides of the webs of the rails, said chair being formed in a single piece and having spike notches in the outer edges thereof, and bolts passing through slots in the web portions of the rabbeted ends of the rails, substantially as described.

897,708. CAR-FENDER. MOSES BOGUSHEFSKY, New York, N. Y. Filed Apr. 18, 1908. Serial No. 427,779.



1. In a car fender, in combination, a cradle adapted to catch a body, a movable trip bar projecting forwardly and adapted to be struck by a body on the track, a yoke normally held in an elevated position, and means actuated by said trip bar for moving said yoke downwardly and rearwardly toward said cradle.

2. In a car fender, in combination, a cradle adapted to catch a body, a trip bar projecting before said cradle, means for guiding said trip bar to slide in a front and rear direction, levers mounted at the sides of said cradle and projecting upwardly and forwardly, a yoke connecting said levers and normally disposed in an elevated position, and a connection between said levers and said trip bar for depressing said yoke when said trip bar is struck.

3. In a car fender, in combination, a cradle adapted to catch a body, a trip bar guided to slide on said cradle, levers pivotally mounted at the sides of said cradle and constituting guides, slide bars guided on said levers and projecting upwardly and forwardly, a yoke connecting said slide bars and normally disposed in an elevated position, means actuated by said trip bar for rocking said levers, and means actuated by said trip bar for sliding said slide bars upon said levers.

4. In a car fender, in combination, a cradle adapted to catch a body, a trip bar projecting forwardly therefrom and guided on said cradle, levers pivotally mounted on the sides of said cradle and projecting upwardly and forwardly therefrom, means for connecting said trip bar with said levers for rotating the same, slide bars guided on said levers, rocker plates pivotally connected with said slide bars and pivotally mounted on said cradle, means connecting said trip bar with said rocker plates for sliding said slide bars, and a yoke connecting the upper ends of said slide bars and moving downwardly and rearwardly when said trip bar is struck.

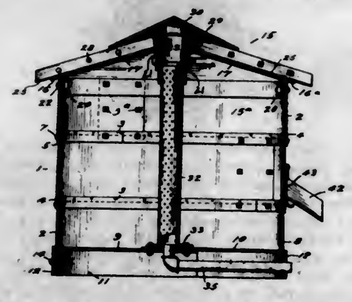
5. In a car fender, in combination, a cradle, a trip bar mounted to slide rearwardly on said cradle and projecting before the same, levers pivotally mounted on the sides of said cradle and projecting upwardly and forwardly therefrom, a pin-and-slot connection between said trip bar and said levers for actuating said levers, slide bars slidably mounted on said levers and projecting upwardly and forwardly, a yoke connecting said slide bars, rocker plates connected with said slide bars to move the same on said levers, said rocker plates being mounted on said cradle, and a pin-and-slot connection between said rocker plates and said trip bar for actuating said yoke.

[Claim 6 not printed in the Gazette.]

897,709. STORAGE-BIN. GEORGE W. BOLL, Mount Hope, Kans. Filed Jan. 6, 1908. Serial No. 409,554.

1. A storage bin comprising a plurality of superposed horizontal sections which overlap one another, one section having a strip secured to its lower edge, a spacing strip arranged between said first mentioned strip and said section whereby a groove is formed to receive the upper edge of the next section below, and means to detachably secure said edge in said groove.

2. A storage bin comprising a plurality of horizontal sections each made up of a plurality of vertical plates, each of the plates of one section having a strip secured near one edge, spacing strips interposed between said first mentioned strips and plates forming grooves to receive the adjacent edge of the next section, said first mentioned strips terminating inwardly of the ends of the plates to which they are secured, whereby the ends of said plates may be overlapped for the purpose of securing them to one another while the ends of said strips abut against one another.



3. A storage bin comprising a plurality of horizontal sections each made up of a plurality of vertical plates, each of the plates of one section having a strip secured near one edge, spacing strips interposed between said first mentioned strips and plates forming grooves to receive the adjacent edge of the next section, said first mentioned strips terminating inwardly of the ends of the plates to which they are secured, whereby the ends of said plates may be overlapped for the purpose of securing them to one another while the ends of said strips abut against one another, said spacing strips extending throughout the lengths of the other strips.

4. A storage bin comprising a plurality of horizontal sections each made up of a plurality of vertical plates, each of the plates of one section having a strip secured near one edge, spacing strips interposed between said first mentioned strips and plates forming grooves to receive the adjacent edge of the next section, said first mentioned strips terminating inwardly of the ends of the plates to which they are secured, whereby the ends of said plates may be overlapped for the purpose of securing them to one another while the ends of said strips abut against one another and bolts passed through said overlapping ends of said plates, the ends of the strips and the edge of the section which engages the groove formed by said strips whereby said plates and sections are detachably connected.

5. In a storage bin, a base section consisting of a plurality of overlapping plates detachably connected together at their overlapping ends, over-lapping segmental disks forming the bottom of the bin, detachably connected together and to said plates, and a reinforcing band encircling the bottom of said base section.

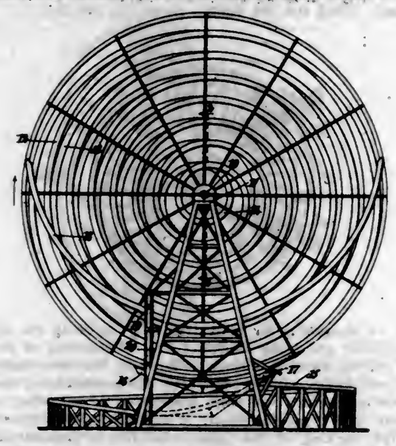
897,710. AMUSEMENT APPARATUS. PETER BRAEN and JOHN BRAEN, North Paterson, N. J., assignors of three-fourths to Charles D. Bunnell, Brooklyn, N. Y. Filed Jan. 24, 1908. Serial No. 412,411.

1. In an amusement apparatus, a revoluble device having means to cause a car to traverse the same and be discharged therefrom as the device revolves, and means to automatically return said car to said device, whereby it repeatedly traverses the same.

2. In an amusement apparatus, a revoluble device having an entrance track and a discharge track adapted to be traversed by a car, and means for automatically transferring the car from one of said tracks to the other at both ends thereof, as the said device revolves.

3. In an amusement apparatus, a revoluble device having an entrance track and a discharge track, a fixed inclined track leading from the discharge track to a point near the entrance track, and a transfer table for connecting the fixed track with the entrance track.

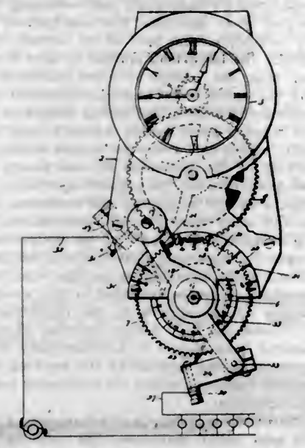
4. In an amusement apparatus, a revoluble device having an entrance track and a discharge track, a fixed inclined track leading from the discharge track to a point near the entrance track and a tilting transfer table for connecting the fixed track with the entrance track.



5. In an amusement apparatus, a revoluble device having an entrance track and a discharge track adapted to be traversed by a car, and means operated by said device for automatically transferring the car from one of said tracks to the other at both ends thereof, as the said device revolves.

[Claims 6 to 8 not printed in the Gazette.]

897,711. TIME-SWITCH FOR ELECTRIC CIRCUITS. HAYDEN W. BROWN, Waterbury, Conn. Filed Apr. 27, 1908. Serial No. 429,532.



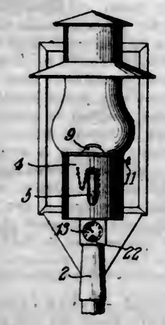
1. In a time switch for electric circuits, the combination with a time mechanism, of a gear wheel turned thereby, a shaft on which the wheel turns and which is turned by the wheel, a switch block mounted on the shaft and turned by said wheel, contact surfaces on said switch block, contact fingers in engagement therewith, and means for adjusting one of said fingers, substantially as described.

2. A time switch for electric circuits comprising a time mechanism, a gear wheel turned thereby, a shaft on which the said gear is mounted, a switch block on said shaft and adapted to be turned by said gear, said switch block formed with a contact surface, contact fingers arranged adjacent to said switch block, a switch arm carrying one of said contact fingers, and an hour dial fixed to said shaft, substantially as described.

3. A time switch for electric circuits comprising a time mechanism, a gear wheel turned thereby, a shaft on which the said gear is mounted, a switch block on said shaft and adapted to be turned by said gear, said switch block formed with a contact surface, contact fingers arranged adjacent to said switch block, a switch arm carrying one of said contact fingers, an hour dial fixed to said shaft, and an indicating dial with which the switch arm may be interlocked, substantially as described.

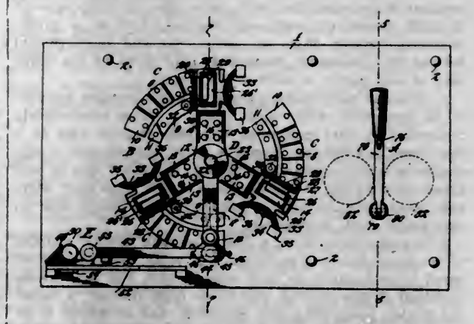
4. A time switch for electric circuits comprising a time mechanism, a gear wheel turned thereby, a shaft on which the gear wheel is mounted, a switch block mounted on said shaft and adapted to be turned by said gear and having a switch plate secured to the edge thereof, contact fingers adjacent to said switch block, a switch arm having an inwardly projecting arm by which one of the contact fingers is carried, an hour dial fixed on said shaft, and an indicating dial over which the switch arm is turned, substantially as described.

897,712. AUTOMATIC LAMP-EXTINGUISHER. EDWARD BRUSSEAU, Jefferson, S. D. Filed July 23, 1907. Serial No. 385,100.



An extinguisher for lamps comprising a lamp, a time piece having an alarm mechanism secured below the oil pot of the lamp, a toothed wheel on the winding post of said alarm mechanism, a tube passing through said oil pot from top to bottom, a tubular extinguisher slidable on the wick tube of the lamp, and an operating rod attached to said extinguisher extending downwardly through the tube in the oil pot and provided at its lower end with a rack engaging said toothed wheel, and a guide strip to hold said rack and toothed wheel in engagement.

897,713. MOTOR-STARTER. ANTHONY J. BURNS, Oswego, N. Y. Filed Aug. 9, 1907. Serial No. 387,939.



1. The combination of a motor starting switch including a movable contact member and means tending to hold

the same at open circuit position, a locking device for holding the element in running position, an automatically actuated cut-out switch, an electro magnet normally in open circuit for opening the cut-out switch and means responsive to a drop in voltage for controlling the operation of the locking device and closing the circuit of the said electro magnet.

2. The combination of a motor starter including a biased contact-carrying arm, with an automatically actuated cut-out switch, a locking device for holding the arm in running position, a normal open circuit closer connected in circuit with the cut-out switch, and means responsive to changes in voltage for releasing the locking device to permit the arm to move to open circuit position and for closing the said circuit closer.

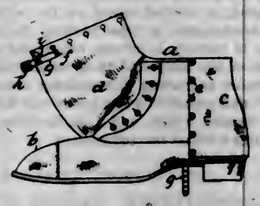
3. The combination of a no-voltage release motor starter, with an automatically-actuated cut-out switch, a normally open circuit closer for controlling the opening of the cut-out switch, and means responsive to no-voltage conditions for first closing the said closer and subsequently opening the motor starter.

4. The combination of a no-voltage release motor starter, with a cut-out switch disposed between the starter and source of current, a locking device for holding the movable element of the starter in running position, a normally open circuit closer connected in circuit with the cut-out switch, and an electro-magnetically controlled means sensitive to an abnormal drop in voltage for permitting the said circuit closer to close and the movable element of the starter to move to open circuit position.

5. The combination of a motor starter including a movable contact member adapted to automatically return to open circuit position, a locking device for holding the element in closed circuit position, a weight arranged to release the locking device, an electro-magnetically operated cut-out switch, and means sensitive to no-voltage conditions for permitting the weight to act and for closing the circuit including the electro-magnet of the cut-out switch.

[Claims 6 to 20 not printed in the Gazette.]

897,714. GAITER. HYMAN COHEN, Brooklyn, N. Y. Filed Mar. 19, 1907, Serial No. 363,169. Renewed June 19, 1908. Serial No. 439,454.

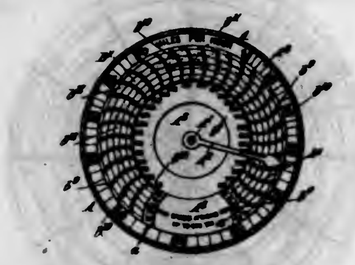


1. A gaiter, comprising a front and rear member adapted to be connected with each other, a strap secured to said gaiter, at each side thereof, and at a predetermined distance from the lower edge and supplemental devices for detachably connecting said strap to the lower edge of said gaiter, at each side thereof.

2. A gaiter comprising a front and rear member adapted to be connected with each other, a strap permanently connected to said gaiter at one side thereof and at a predetermined distance from the lower edge thereof, a supplemental strap similarly secured to the other side of said gaiter, devices for connecting said straps with each other and means for detachably connecting the lower edge of said gaiter with said straps.

3. A gaiter comprising a front and rear member adapted to be connected with each other, a strap permanently secured to said gaiter at each side thereof, and at a predetermined distance from the lower edge thereof, a securing device comprising two members, one of which is secured to said strap and the other of which is secured to said gaiter at each side thereof.

897,715. APPARATUS FOR INDICATING OR RECORDING SPEED. LEONARD E. COWEY, Brondesbury, England. Filed Oct. 26, 1905. Serial No. 284,524.



1. In apparatus for indicating and recording the speed of vehicles and other machines, the combination of a record-bearing member, means actuated by the speed indicating mechanism of the apparatus for producing a speed-indicating record on said record-bearing member, and means whereby said record is automatically obliterated by the working of the apparatus after a predetermined interval has elapsed, for the purpose specified.

2. In apparatus for indicating and recording the speed of vehicles and other machines, the combination of a record-bearing member having part of its surface unexposed to view, means for imparting motion to said record-bearing member, a device actuated by the speed indicating mechanism of the apparatus for producing a speed indicating record on said record-bearing member, and means whereby said record is automatically obliterated from the record-bearing member by the working of the apparatus as said member reaches its unexposed position for the purpose specified.

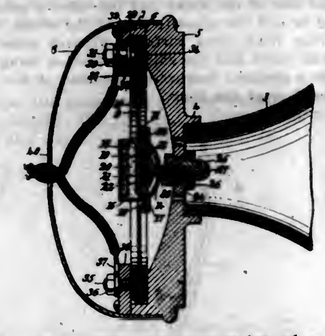
3. In apparatus for indicating and recording the speed of vehicles and other machines, the combination of a record-bearing member having part of its surface unexposed to view, means for imparting motion to said record-bearing member from the vehicle or other machine, a device actuated by the speed indicating mechanism of the apparatus for producing a speed indicating record on said record-bearing member, and means whereby said record is automatically obliterated from the record-bearing member by the working of the apparatus as said member reaches its unexposed position for the purpose specified.

4. In apparatus for indicating and recording the speed of vehicles and other machines, the combination of a record-bearing member having part of its surface unexposed to view, means for imparting motion to said record bearing member from a shaft receiving its motion from the vehicle or other machine, a device actuated by the speed indicating mechanism of the apparatus, for producing a speed indicating record on said record bearing member, and means whereby said record is automatically obliterated from the record-bearing member by the working of the apparatus as said member reaches its unexposed position for the purpose specified.

5. In apparatus for indicating and recording the speed of vehicles and other machines, the combination of a rotary record-bearing member having part of its surface unexposed to view, means for revolving said rotary member from a shaft receiving its motion from the vehicle or other machine whose speed is to be recorded, a device actuated by the indicating mechanism of the apparatus for producing a speed indicating record on said record bearing member, means whereby in the event of the speed varying beyond the limits to be recorded by said device, the latter will become temporarily inoperative without disorganizing the speed-indicating portion of the apparatus, and means whereby the said record produced by the said device is automatically obliterated from the rotary record-bearing member by the working of the apparatus as said member reaches its unexposed position for the purpose specified.

[Claims 6 to 17 not printed in the Gazette.]

897,716. TRANSMITTER. JESSE T. CURTIS, Bement, Ill. Filed Mar. 25, 1907. Serial No. 364,300.



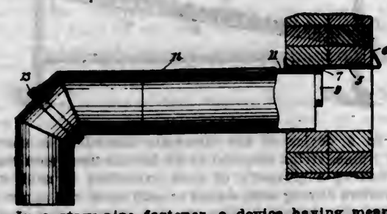
1. In a transmitter, the combination of a vibratory diaphragm provided with a sunken portion, a cup mounted within said sunken portion and adhering thereto by its pressure thereupon, a second diaphragm engaging said sunken portion and also engaging said cup, means for adjusting the tension of said second-mentioned diaphragm, and mechanism mounted within said cup and controllable by pressure for varying an electric current.

2. In a transmitter, the combination of a vibratory diaphragm provided with a sunken portion in which is mounted a cup, a second diaphragm engaging said sunken portion and also engaging said cup, an electrode secured to the central portion of said second diaphragm and having a threaded stem passing through an opening in the said sunken portion of said vibratory diaphragm.

3. In a transmitter, the combination of a frame, a vibratory diaphragm provided with a sunken portion in which is mounted a cup, a second diaphragm engaging said sunken portion and also engaging said cup, and an electrode secured to the central portion of said second diaphragm and having a threaded stem passing through an opening in the said sunken portion of said vibratory diaphragm and secured to said frame.

4. In a transmitter, the combination of a frame provided with a groove, a diaphragm mounted within a ring, said ring being disposed within said groove, a lug mounted upon said frame and overlapping a portion of said ring, a sleeve of insulating material mounted within said lug, a stem of conducting material extending through said sleeve and said lug, a tap secured rigidly upon said stem to prevent relative movement thereof, and a revoluble nut threaded upon said stem for the purpose of causing the same to act as a binding post.

897,717. STOVEPIPE AND FLUE-STOPPER FASTENER. LEWIS F. CULVER, Harvey Ill. Filed Jan. 22, 1908. Serial No. 412,100.



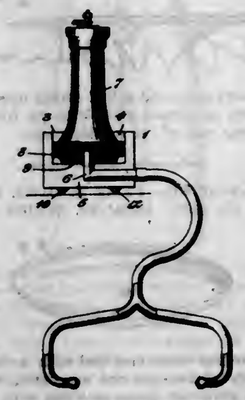
1. In a stove-pipe fastener, a device having means for securing it within a flue opening, a post carried by said device, means connected with said device for holding the stove-pipe against said post, and means carried by the post for securing a covering over said opening.

2. In a stove-pipe fastener, a device adapted to be secured within a flue opening, a post permanently secured to the device, and arms pivotally supported directly on said post for retaining a covering over said opening.

3. In a stove-pipe fastener, a device adapted to be secured within a flue opening, a post permanently secured to said device, and arms pivotally supported on said post, one of which is adapted to engage the wall of said opening opposite said device, and the other having means for securing a cover over said opening.

4. In a stove pipe fastener, a bar having means at its opposite ends for securing it within a flue opening, a post secured to and projecting from the bar, a member pivoted to the post adapted to engage the wall of the opening opposite thereto, and means connected with the post for securing a cover over said opening.

897,718. TELEPHONE INSTRUMENT. WILFORD R. DANIELS, New York, N. Y. Filed Apr. 10, 1908. Serial No. 426,412.



1. In a telephone instrument the combination of a sound receptacle, a solid body conforming to the flaring shape of the exterior of the ear-piece of the telephone receiver for collecting the sound produced in the said receiver.

2. In a telephone instrument the combination of a sounding block, a cone-shaped body adapted to support the telephone receiver whereby the sound produced in the receiver may be transferred to the said block.

3. In a telephone instrument the combination of a sounding block, a tube for containing the listening end of a telephone receiver, a solid body adapted to fill the space between the said receiver and the said block to transmit the sound produced in the receiver to the said block.

4. In a telephone instrument the combination of a wooden sounding block adapted to contain a portion of a telephone receiver, a cone located in the said block adapted to support the said telephone receiver and fill the space between the said block and the ear piece of the said receiver, a tube embedded in the said block and located in the center of the said conical surface.

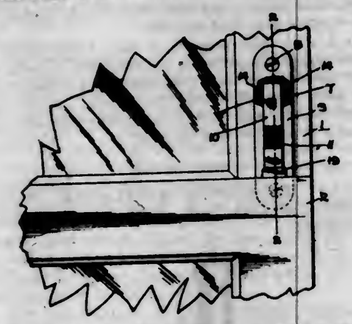
5. In a telephone instrument the combination of a receptacle to contain a portion of a telephone receiver, a disk adapted to support the said receiver and communicate the sound that may be produced in the material of the receiver to the said receptacle.

[Claim 6 not printed in the Gazette.]

897,719. SASH-FASTENER. RAYMOND DAUBAIGNAN, St. Louis, Mo., assignor of one-half to Reginald H. Lear, Kirkwood, Mo. Filed Aug. 8, 1906. Serial No. 329,654.

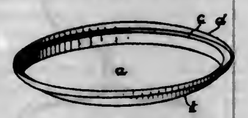
A sash fastener, comprising a plate adapted to be secured to the top sash of a window, there being a vertically disposed slot formed in said plate and there being semi-circular recesses formed in said plate at the upper end of the slot, a locking plate arranged in the slot, and which locking plate is shorter than the slot, a lip and recess at the lower end of the locking plate ears integral with the sides of the locking plate and bearing in the

semi-circular recesses, a lip and recess on the first mentioned plate at the lower end of the slot therein for engaging the lip and recess at the lower end of the locking plate when the same is moved downwardly through the slot to



its limit of movement, and a leaf spring fixed to the lower end of the first mentioned plate with its free end bearing against the rear side of the locking plate.

897,720. CAN-COVER. FRANK S. DAVIS, Detroit, Mich. Filed July 11, 1907. Serial No. 383,164.



1. A friction top cover provided with a rim and having its entire body within the rim depressed, the rim being formed by an upturned flange provided with an outwardly projecting peripheral flange forming an extension of the upturned flange and means held in position by said peripheral flange and projecting inwardly therefrom over the top of the cover, said means adapted to removably retain merchandise or other articles within the depression of the cover.

2. A friction top cover provided with a rim and having its entire body within the rim depressed, the rim being formed by an upturned flange provided with an outwardly projecting peripheral flange, the same being an extension of the upturned flange folded upon itself with the marginal portion thereof forming the top fold, and means for retaining merchandise and other matter within the depression in the cover, said means being held in position by engagement between the folds of the peripheral flange.

3. A friction top cover provided with a rim and having its entire body within the rim depressed, the rim being formed by an upturned flange provided with an outwardly projecting peripheral flange, the same being an extension of the upturned flange folded upon itself, the marginal portion of the extension being folded on top, and a supplementary cover marginally engaging between the folds of said peripheral flange and inclosing the space within the depression in the cover.

4. In a friction top can, the combination with the recessed friction cover having a cavity or chamber for the reception of loose articles therein on its upper side, and a marginal externally projecting pry off rim, of a removable paper supplemental disk fitting within the rim of the cover to retain articles loosely in the cavity of the cover, said pry off rim of the cover having a reinforcing flange folded upwardly and inwardly over the supplemental disk to secure the same in place, substantially as specified.

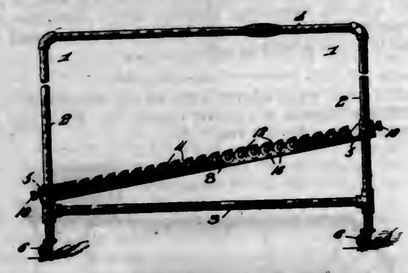
897,721. STOVE IMPLEMENT. MYER DAVIS, Trenton, N. J. Filed Feb. 21, 1908. Serial No. 417,070.

1. A stove implement comprising a handle bar or shank having a segmentally-curved T-shaped portion at one end enlarged in line with the shank, one of the arms of said portion being formed to provide a lifting hook projecting beyond one side of the shank and the other a poker blade projecting beyond the opposite side of the shank, the said arms having their outer surfaces disposed substantially in the same plane and the enlarged portion being formed to provide a straight transverse shoulder at the base of the convex face of the hook.



2. A stove implement comprising a handle bar or shank provided at one end with a segmentally-curved T-shaped portion, one of the arms of said T-shaped portion being formed to provide a lifting hook projecting beyond one side of the shank, and the other arm of said T-shaped portion being formed to provide a poker blade projecting beyond the opposite side of the shank and disposed in longitudinal alinement with said hook, the said arms having their outer surfaces disposed substantially in the same plane, and the hook having its outer convex surface terminating in advance of the line of the shank and the outer face of the center of said T-shaped portion being curved outwardly on an arc terminating beyond the said convex face of the hook to provide a straight transverse shoulder at their points of intersection, said shoulder being located in the direction of the hook beyond the plane of the shank.

897,722. EXERCISER. ALFRED DAY, Philadelphia, Pa. Filed May 4, 1908. Serial No. 430,668.

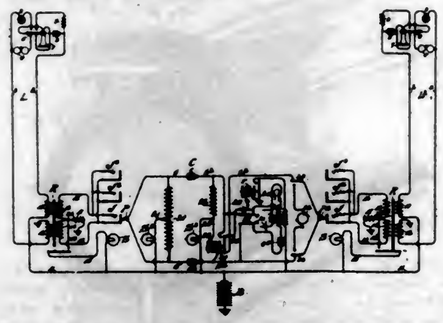


1. In a device of the character described, a movable rigid frame, strips situated at an incline upon said frame, and having a plurality of slots extending in said strips and rollers having ends seated in said slots, the upper wall of each slot extending over the end of the roller therein, whereby the same are prevented from accidental displacement.

2. In a device of the character described, a frame, strips situated at an angle upon said frame and having a plurality of slots inclined to the plane of the strips, means for locking said strips in position, and rollers having a portion thereof seated in said slots, whereby said rollers may be rotated but are prevented from lateral movement.

3. In a roller for an exercising device, a body portion, a shoulder thereon, rubber abutting said shoulder, a sleeve adapted to hold said rubber in position, and pins projecting from the ends of said roller.

897,723. TELEPHONE SYSTEM. WILLIAM W. DEAN, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 22, 1904. Serial No. 190,174.



1. In a telephone system, the combination with a telephone line, of a relay therefor, a line signal the circuit for which is controlled by said relay, a source of current adapted to be included in said circuit with said signal, a two-conductor cord circuit for establishing connections with the line for conversation, a supervisory signal associated therewith and adapted to be included in a second circuit out of the path of voice currents when the cord circuit is connected with the line, said second circuit including a portion of the cord circuit and a portion of the line circuit and said source, said portions together with the supervisory signal being in parallel with said line signal whereby when the connection is established and the said relay is operated one signal receives insufficient current to operate the same but when said relay is deënergized the supervisory signal is operated, substantially as described.

2. In a telephone system, the combination with a telephone line, a line signal for the line, a differential relay controlling said signal a cord circuit to establish connections with the line, a supervisory signal associated with the cord circuit, and means for placing the supervisory signal and the line signal in parallel branches of a local circuit when the connection is established, substantially as described.

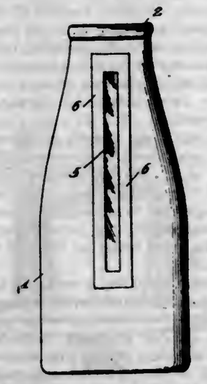
3. In a telephone system, the combination with a telephone line, of a cord circuit to establish connections therewith for conversation, a signal for the line, a supervisory signal associated with the cord circuit, means for including said signals in parallel branches in the same local circuit whereby said signals are retired and a differential relay in the line controlling one of said parallel branches and the other parallel branch being completed through contacts of the plug and line jack, substantially as described.

4. In a telephone system, the combination with a telephone line, of a two-conductor cord circuit to establish connections therewith for conversation, a line signal, a supervisory signal normally in an open circuit out of the path of voice currents during conversation, means for including said signals in parallel branches of the same circuit whereby said signals are retired, one of said branches including a portion of the talking circuit whereby no extra wires are required for the same throughout the multiple switchboard and the other branch being controlled by the subscriber, substantially as described.

5. In a telephone system, the combination with a telephone line, of a two-conductor cord circuit to establish connections with the lines for conversation, a line signal for the line, a supervisory signal normally in an open circuit of the cord circuit, said signals being adapted to be connected in parallel whereby they become inoperative, and means whereby a subscriber is enabled to normally control the line signal and during connections to control the supervisory signal, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

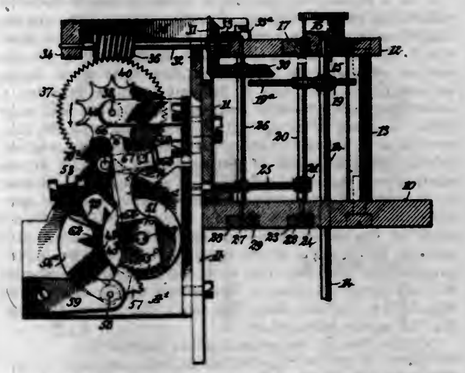
897,724. BOTTLE. GEORGE P. DENNIS, Muncie, Ind. Filed Mar. 5, 1908. Serial No. 419,336.



1. In a liquid receptacle comprising an opaque body, a non-opaque and non-frangible strip set in said body, and reinforcing members secured over the edge of said strips.

2. A liquid receptacle comprising a vertically slotted opaque paper body, a strip of transparent non-frangible material secured vertically to said body to cover the slot and reinforcing members cemented over the edges of said strips.

897,725. REGISTERING DEVICE. FRANK DE PARIS, Montreal, Quebec, Canada. Filed Jan. 30, 1908. Serial No. 413,353.



1. In a registering machine, a fixed shaft, a series of registering cylinders having corresponding numerals thereon and loosely mounted on the said shaft, a spur wheel secured to one face of the initial registering cylinder, a shifting mechanism for the spur wheel, adapted to move the same one tooth at each operation, a motor shaft, an escape wheel for operating the shifting mechanism in one direction, a driving connection between the motor shaft and the escape wheel, and a transmission mechanism between the several registering cylinders, which transmission mechanism between two registering cylinders causes the preceding cylinder at one complete revolution to turn the succeeding cylinder the distance of one digit.

2. In a registering machine, a series of loosely mounted registering cylinders provided with corresponding digits, transmission gearing between opposing cylinders, a spur wheel having a number of teeth corresponding to the number of digits upon a cylinder and secured to the outer face of the initial or unit cylinder, a spring-controlled dog mounted for engagement with the spur wheel and adapted to turn the same one tooth at each movement in one direction, an escape wheel, toothed correspondingly to the spur wheel, a motor shaft, and driving connections between the motor shaft and the escape wheel.

3. In a registering machine, a series of loosely mounted registering cylinders provided with corresponding digits, transmission gearing between opposing cylinders, a spur wheel having a number of teeth corresponding to the number of digits upon a cylinder and secured to the outer face of the initial or unit cylinder, a spring-controlled dog mounted for engagement with the spur wheel and adapted to turn the same one tooth at each movement in one direction, an escape wheel, toothed correspondingly to the spur wheel, a motor shaft, driving connections between the motor shaft and the escape wheel, and a check pawl for the spur wheel, operated synchronously with the said dog, releasing the wheel during the preparatory movement of the dog and locking the wheel at the end of the shifting movement of the dog.

4. In a registering machine, a series of loosely mounted registering cylinders provided with corresponding digits, transmission gearing between opposing cylinders, a spur wheel having a number of teeth corresponding to the number of digits upon a cylinder and secured to the outer face of the initial or unit cylinder, a spring-controlled dog mounted for engagement with the spur wheel and adapted to turn the same one tooth at each movement in one direction, an escape wheel, toothed correspondingly to the spur wheel, a motor shaft, driving connections between the motor shaft and the escape wheel, a check pawl for the spur wheel, operated synchronously with the said dog, releasing the wheel during the preparatory movement of the dog and locking the wheel at the end of the shifting movement of the dog, a spring-controlled detent in engagement with the spur wheel at a point removed from the point of engagement of the check pawl, and means for adjusting the motor shaft to increase or decrease the speed of the escape wheel driving connections.

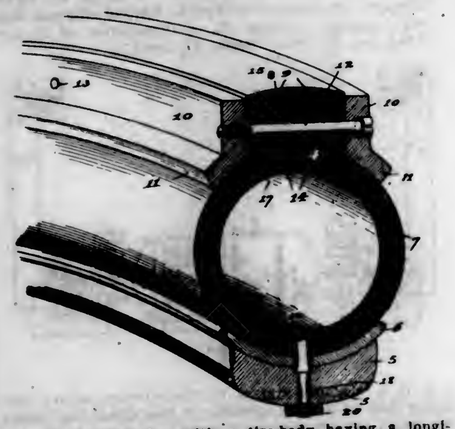
5. In a registering machine, a series of loosely-mounted registering cylinders provided with corresponding digits, transmission gearing between opposing cylinders, a spur wheel having a number of teeth corresponding to the number of digits on a cylinder, the spur wheel being secured to the outer face of the unit or initial cylinder, a controlling arm pivotally mounted opposite the said spur wheel, a spring drum operatively connected with the controlling arm, a dog carried by the controlling arm and engaging with the teeth of the said spur wheel, a driven shaft above the said cylinders, an escape wheel secured to the said shaft, correspondingly toothed to the spur wheel, an extension from the said controlling arm, operated upon by the escape wheel to move the controlling arm against the tension of its spring and carry the dog to preparatory position, the said controlling arm moving forward when released by the escape wheel, causing the dog to turn the spur wheel one tooth, and means for driving the escape wheel shaft.

[Claims 6 to 13 not printed in the Gazette.]

897,726. VEHICLE-TIRE. JOHN L. G. DYKES, Milford, Ill. Filed July 30, 1906, Serial No. 328,397. Renewed May 6, 1908. Serial No. 431,162.

1. The combination with a tire-body having a longitudinally split outer periphery and radially projecting flanges on either side of said split portion, of metal clamping rings applied to the outer sides of said flanges, the outer edges of said rings constituting in part the tread surface of the tire, and clamping bolts passed through said rings and flanges.

2. The combination with a tire-body having a longitudinally split outer periphery and radially projecting flanges on either side of said split portion, of metal clamping rings applied to the outer sides of said flanges and provided with base-portions engaging the tire-body at the bases of said flanges, the outer edges of said clamping rings forming the marginal parts of the tread surface of the tire, and clamping bolts passed through said rings and flanges.



3. The combination with a tire-body having a longitudinally split outer periphery and radially projecting flanges on either side of said split portion, of a channel-shaped annular cap covering said flanges, metal clamping rings applied to the outer sides of said cap the outer edges whereof form parts of the tread surface of the tire, and clamping-bolts passed through said rings, cap and flanges.

4. The combination with a tire-body having a longitudinally split outer periphery and radially projecting flanges on either side of said split portion, of a channel-shaped annular cap covering said flanges, metal clamping rings the outer edges whereof form parts of the tread surface of the tire applied to the outer sides of said cap and provided with base portions engaging the tire-body at the bases of said flanges, and clamping bolts passed through said rings, cap and flanges.

897,727. HAT-PIN. GUSTAF H. EKSTROM, Portland, Oreg. Filed Mar. 20, 1905. Serial No. 251,120.



1. The combination, of a hat-pin adapted to be inserted through the body of the hat, comprising a short shank made with a hook at its inner end, a clamp slidably mounted on said pin-shank and comprising a sleeve, arms on said sleeves extending inward toward the hook of the pin, and a bifurcated clamp-head on the inner ends of said arms arranged to be slipped off and on the pin shank, to release and fix the clamp in place.

2. The combination, of a hat-pin adapted to be inserted through the body of the hat and comprising a short shank made with a hook at its inner end, a clamp slidably mounted on said pin-shank, said clamp being made of a single piece of wire and consisting of a coiled sleeve portion, integral arms extending inward therefrom towards the hook of the pin, and loops integrally formed on the inner ends of said arms at each side of the pin-shank and arranged to be slipped off and on the latter, to release and fix the clamp in place.

3. As a new article of manufacture, a hat pin comprising a short shank, a hook integrally formed at the inner end thereof, a clamp slidably mounted on said pin shank, said clamp being made of a single piece of wire and consisting of a coiled sleeve portion, integral arms extending inward therefrom towards the hook of the pin, and loops integrally formed on the inner ends of said arms at each side of the pin shank and arranged to be slipped off and on the latter, to release and fix the clamp in place.

897,728. HOLDER FOR VIEWING TRANSPARENCIES. BENJAMIN J. FALK, New York, N. Y. Filed Apr. 9, 1908. Serial No. 426,060.

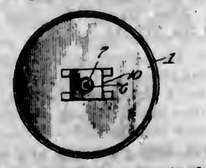


1. A device for viewing transparencies or the like, comprising a base presenting an upper reflecting surface, a frame for supporting the transparency in an inverted position at an angle to said base, and extending upwardly from the junction with said reflecting surface, and triangular wings between the frame and base at the sides and foldable to a position intermediate said frame and base, when the latter are brought to positions closely adjacent each other.

2. A device for viewing transparencies or the like, comprising a base presenting an upper reflecting surface, a frame for supporting the transparency at an angle to said base and extending upwardly from one end of said reflecting surface, triangular wings between the frame and base at the sides and foldable to a position intermediate said frame and base, when the latter are brought to positions closely adjacent each other, and oppositely-disposed cover sections hinged to the opposite sides of said frame, and serving to shield the rear of the device from light when in their folded position.

3. A device for viewing transparencies or the like, comprising a box forming a base and serving for the storage of a plurality of transparencies or the like, a closure at one end of said box, an upwardly-facing mirror forming the top of said box, upwardly-extending flanges adjacent the edges of said mirror, a frame hinged to said box adjacent one end of the mirror, and having an opening therethrough and flanges adjacent said opening for supporting a transparency, triangular wings hinged to the under surface of said frame adjacent the side edges thereof and adapted to support the frame at an angle to said box, and adapted to swing to positions beneath said frame when the latter is moved to a position within the flanges of the box and adjacent the mirror, and cover sections hinged to said frame adjacent the opposite edges thereof and foldable to a position to cover said frame, or to positions in substantial alinement with the frame to shield the rear of the device from light.

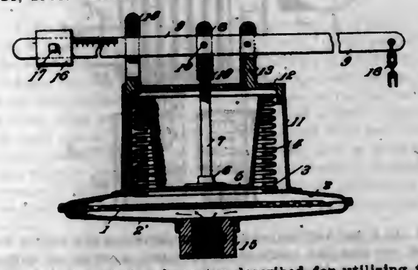
897,729. OIL-CAN. LLOYD M. FOREMAN, Huntington, W. Va. Filed Aug. 23, 1907. Serial No. 389,879.



1. An oiler having a valve at one end to control the flow of oil therefrom, an absorbent oil applying pad at such valved end of the oiler, and a band to engage and extend around the edge of such oiler and having means to engage and support such pad to detachably secure such pad at such end of the oiler such band providing an opening exposing the major portion of the outer surface of such pad.

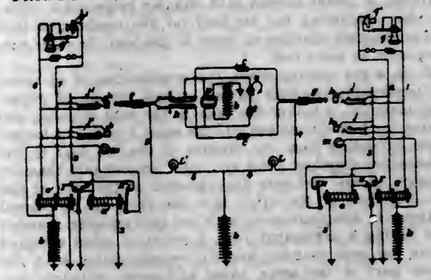
2. An oiler having a valved discharge opening at one end, an oil applying pad at such end of the oiler, and a band on such end of the oiler and having means to support such pad and hold the same in place, such band being fluted for the purpose set forth.

897,730. DEVICE FOR UTILIZING THE MOTION OF FLEXIBLE DIAPHRAGMS. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Mar. 24, 1905. Serial No. 251,914.



In a device of the character described for utilising the motion of a flexible diaphragm, the combination of a corrugated collapsible and expansible metallic vessel having a rigid movable end closure, a rigid plate having a central opening therein and fast to the opposite end of said vessel, a flexible diaphragm of larger diameter than that of said vessel fast to said plate for retaining in said vessel a power-transmitting liquid, means applying fluid pressure to said diaphragm and in open communication with a source of fluid pressure whose fluctuations are to operate the vessel, and power-transmitting means associated with said vessel.

897,731. SIGNALING DEVICE FOR TELEPHONE-EXCHANGES. THOMAS W. GARDNER, Nashville, Tenn. Filed Feb. 15, 1905. Serial No. 245,728.

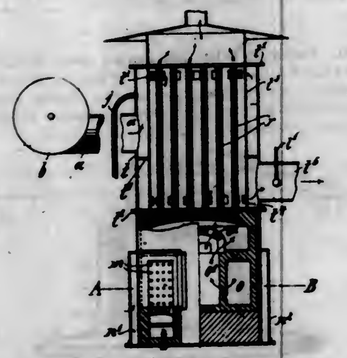


1. A telephone system including a source of electrical energy, a central exchange, an operator's set, two balanced windings having a common core, a condenser in series with the operator's head receiver, and connections between said apparatus such that the condenser is maintained in a charged condition by the battery and said windings, substantially as set forth.

2. A telephone system including a source of electrical energy, a central exchange, an operator's set, two balanced windings having a common core, a condenser in series with the operator's head receiver, and connections between said apparatus such that the condenser is maintained in a charged condition by the battery and said windings, and

means for connecting a terminal of the operator's plug to one of said windings, the connections of the system being such that a terminal of a jack in use has a polarity different from that of said plug terminal, substantially as set forth.

897,732. GAS HEATING-STOVE. HEINRICH GERDES, Berlin, Germany. Filed Jan. 21, 1903. Serial No. 242,154.



1. In a gas heating stove, the combination of a hollow fire door, an annular combustion chamber, a series of burner pipes to establish communication between the hollow fire door and the said combustion chamber, a gas feed to the door, and bridges in the combustion chamber of material adapted to be brought to a glow heat when the gas burners are ignited a cylinder mounted above the said combustion chamber and having air inlet and outlet, a series of tubes within said cylinder having their lower ends in open communication with the said combustion chamber and their upper ends leading to a chimney, substantially as described.

2. In a gas heating stove, the combination of a series of gas burner tubes and means for feeding gas to the same, an annular combustion chamber and a central circular compartment to the same into which the gases of combustion flow, means for conducting the gases of combustion from the said central compartment to a series of pipes, bridges in the combustion chamber of refractory material, a jacket around said annular combustion chamber for conducting the air feed for the combustion into the combustion chamber in order to pre-heat the same substantially as described.

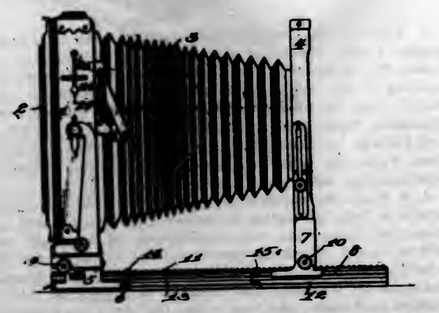
3. In a gas heating stove, the combination of an annular combustion chamber having bridges therein of refractory material, a hollow fire door to the said chamber and means for introducing gas into the same, a series of burner tubes extending from the interior of the fire door to the combustion chamber, a hot air jacket around said chamber opening at one end into the chamber at the side of the fire door and at the other into the open air, a central chamber in communication with the said annular chamber and having a perforated roof, a series of tubes mounted above the said chamber and in communication with the upper part of the same, inner and outer cylinders surrounding the said tubes and means for passing a current of air into the said cylinders and over said tubes from the top to the bottom thereof and then into the room to be heated substantially as described.

4. In a gas heating stove the combination of a combustion chamber and means for feeding gas and air thereto, bridges therein of refractory material adapted to be brought to a glow heat when the gas is burned, means for preheating the air fed to the said chamber, a series of tubes located above said chamber and means for conducting the hot gases from the said chamber through the said tubes, cylinders surrounding the said tubes, adapted to conduct the air to be heated along the said tubes, and means for controlling the gas feed according to the pressure of the air to be heated in the said cylinders substantially as described.

5. In a gas heating stove, the combination of a combustion chamber, means for feeding gas to the same and for feeding pre-heated air also to the same, a series of tubes mounted above the said chamber and in communication therewith and through which the hot gases pass off, a cylinder surrounding the said tubes to conduct the air along the same and discharge it into the room to be heated, means for controlling the gas feed to the stove by the pressure of the air in the stove, consisting of a bell mounted in suitable liquid, a pipe to establish communication between said bell and the stove, a valve mounted in the gas feed main and adapted to throttle the same and means for connecting the said valve with the said bell substantially as described.

[Claim 6 not printed in the Gazette.]

897,733. CAMERA. JOSEPH GODDARD, Rochester, N. Y., assignor to Seneca Camera Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 19, 1908. Serial No. 422,039.



1. A camera comprising a front and back, and a bed section shiftable rectilinearly in a direction laterally of the camera for relatively offsetting said front and back.

2. A camera embodying a lens support and a back, and a bed section slidable laterally relatively to the camera and adapted to receive and permit a longitudinal movement thereon of one of said parts.

3. A camera embodying a front, a back, and a bed provided with means to receive one of said parts, the bed being shiftable laterally of the camera to carry such part into a position at either side of the camera.

4. A camera having a bed comprising relatively laterally shiftable sections, said bed sections having means to receive and support the camera front and back respectively in relatively offset positions.

5. A camera embodying a bed comprising sections relatively shiftable laterally, and ways on the respective bed sections to receive the camera front and back, the ways being interrupted to permit relative lateral shifting movements of the bed sections.

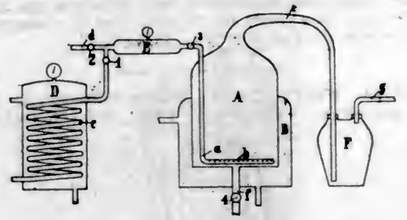
[Claims 6 to 11 not printed in the Gazette.]

897,734. BUCKLE. FREDERICK W. GOERDES, Newark, N. J., assignor, by direct and mesne assignments, of one-half to Charles H. Wright, Newark, N. J., and one-half to Friend A. Russ, Greenwich, Conn. Filed June 4, 1907. Serial No. 377,214.



The combination with a webbing, of a buckle comprising a supporting plate having at its lower portion means for attaching thereto the free end of the webbing, and provided with an upper transverse slot forming a loop, the lower wall of the slot being substantially straight to form a bearing for engagement of the secured end of the webbing, the upper part of said loop being bent forward at an angle beyond the plane of the plate at a point between the upper and lower end walls of the slot, the webbing being extended from its secured end through the slot and on opposite sides of the plate with its running portion in contact with the front of the plate and extending upwardly and rearwardly through the slot, and a locking lever journaled upon the bent part of the loop and having a tongue to engage the running portion of the web, said tongue being bent at an angle and adapted through its angular disposition and the arrangement of the bent portion of the loop to bear upon the running portion of the webbing and bind the same against the underlying secured portion above said lower wall of the slot and on a line between the unbent lower portions of the side walls of the slot.

897,735. PROCESS OF FREEING WASTE WATERS CONTAINING CYANIDS AND SULFOCYANIDS FROM POISON. PAUL GOLDBERG, Flörsheim-on-the-Main, Germany, assignor to The Firm of Chemische Fabrik Flörsheim Dr. H. Noerdlinger, Flörsheim-on the Main, Germany. Filed Jan. 23, 1906. Serial No. 297,509.



1. The process of purifying waste waters from ammonia-manufactories, coking plants, gas and tar manufactories and the like containing cyanids, sulfocyanids, formic acids, phenols and hydrocarbons in a very high degree of dilution, consisting in acidifying the waste waters, and in blowing a current of air through the same, whereby the poisonous compounds are driven off.

2. The process of purifying waste waters from ammonia-manufactories, coking plants, gas and tar manufactories and the like containing cyanids, sulfocyanids, formic acids, phenols and hydrocarbons in a very high degree of dilution, consisting in acidifying the waste waters, in heating the same, and in blowing a current of air through the same, whereby the deleterious compounds are driven off.

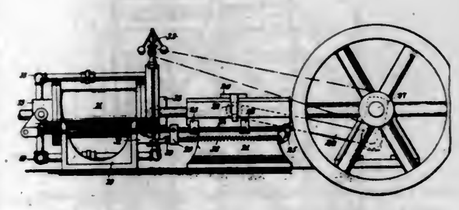
3. The process of purifying waste waters from ammonia-manufactories, coking plants, gas and tar manufactories and the like, containing cyanids, sulfocyanids, formic acids, phenols and hydrocarbons in a very high degree of dilution, consisting in acidifying the waste waters and in blowing a current of hot air through the same, whereby the poisonous compounds are driven off.

4. The process of purifying waste waters from ammonia-manufactories, coking plants, gas and tar manufactories and the like containing cyanids, sulfocyanids, formic acids, phenols and hydrocarbons in a very high degree of dilution, consisting in acidifying the waste waters, and in blowing a current of hot gases through the same, whereby the poisonous compounds are driven off.

5. The process of purifying waste waters from ammonia-manufactories, coking plants, gas and tar manufactories and the like, containing cyanids, sulfocyanids, formic acids, phenols and hydrocarbons in a very high degree of dilution, consisting in acidifying the waste waters, in adding oxidizing means to the acidified waters, and in blowing a current of air through the same, whereby the poisonous compounds are driven off.

[Claim 6 not printed in the Gazette.]

897,736. VALVE MECHANISM FOR ENGINES. ADAM GOOD, Manhattan, Kans. Filed Dec. 21, 1907. Serial No. 407,479.



1. In a device of the character described, a cylinder having a working piston and provided with valve casings at the opposite ends thereof, valves revolubly mounted in said casings for controlling the admission and exhaust to and from the cylinder at the opposite sides of the piston and having arms secured thereto, a valve-rod slidably mounted at each side of the cylinder and connected with one of said arms, collars carried by the valve-rods, and a cross-head operatively connected to the piston having depending means at both sides movable in the path of the collars and adapted to alternately contact therewith for actuating the valves.

2. In a device of the character described, a cylinder having a working piston and provided with a controlling valve, a valve-rod connected to the valve, means for actuating the valve-rod from the piston, a governor having a stem, a movable stop having a variable seating surface for said stem, and means connected to said stop adapted to shift the valve-rod when the support is released by the stem.

3. In a device of the character described, a cylinder having a working piston, a valve controlling the admission and exhaust to and from the cylinder, a valve-rod for operating the valve, means for actuating the valve-rod from the piston, a governor, a stepped stop for the governor, a lever connected with said stop, a projection carried by the valve-rod, and a tension spring connected with the lever normally forcing it against said projection.

4. In a device of the character described, a cylinder having a working piston, a valve controlling the admission and exhaust to and from the cylinder, a valve-rod for operating the valve, means for acutating the valve-rod from the piston, a stepped stop, means connected with the stepped stop normally tending to force the valve-rod in a direction to cut off the admission to the cylinder, and a governor for locking the stop.

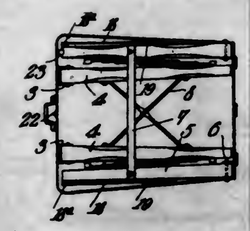
5. In a device of the character described, a cylinder having a working piston, valves for controlling the admission to and exhaust from the cylinder at the opposite sides of the piston, valve-rods for operating the valves, a cross-head operatively connected to the piston having means for actuating the valve-rods, a lever having means tending to alternately act on said rods and cut off the admission to the cylinder, a governor having a stem, and a device connected with the lever on which the stem of the governor seats operating in connection therewith to lock the lever in positions depending on the speed of the engine.

[Claim 6 not printed in the Gazette.]

897,737. COLLAPSIBLE CHAIR. HARRY GOODRICH, Council Bluffs, Iowa. Filed Jan. 15, 1908. Serial No. 410,987.

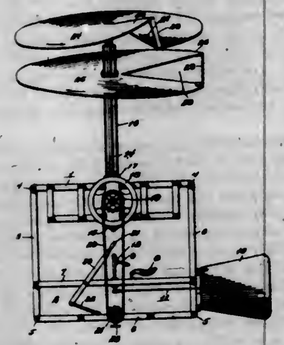
A folding chair comprising a seat frame, foldable legs connected thereto and disposed, when folded, to be seated within said frame, a back frame hingedly connected to and foldable onto the seat frame, said seat frame being slotted between the sides thereof, and a brace pivotally connected to the inner face of one side of the back frame and slidable within the slot and between the sides of the seat

frame, said brace being disposed when the back frame is folded onto the seat frame, to be completely housed within



said frames, there being a stop upon the brace for preventing its withdrawal from the slot in the seat frame.

897,738. FLYING-MACHINE. WINNE GORDON, Sharon Springs, N. Y., assignor of one-half to Worthie E. Colyer, Argusville, N. Y. Filed Apr. 28, 1906. Serial No. 314,176.



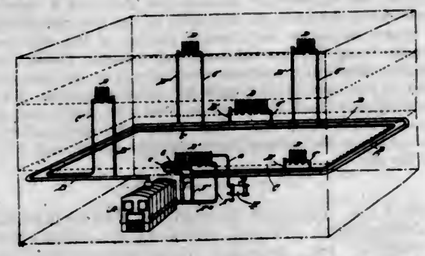
1. A flying machine comprising a main frame, oppositely rotating propellers carried thereby, a supplemental frame suspended from the main frame, said supplemental frame comprising hangers pivotally connected with the main frame, a bottom bar pivotally connected with the hangers, and a link joining the hangers above the bottom bar, drive gearing supported by the main and supplemental frames for driving the propellers, and adjusting means connected with the bottom bar and link of the supplemental frame for shifting the portions of said frame to change the center of gravity of the machine.

2. A flying machine embodying a main frame, propellers carried thereby, a supplemental frame suspended from the main frame, said supplemental frame comprising hangers pivotally connected with the main frame, a bottom bar pivotally connected with the hangers, and a link joining the hangers above the bottom bar, drive gearing supported by the main supplemental frames for operating the propellers, and adjusting means associated with two of the aforesaid portions of the supplemental frame for shifting said frame to change the center of gravity of the machine.

897,739. AUTOMATIC STEAM-HEATING SYSTEM. FERDINAND GROTE, Evansville, Ind. Filed Dec. 2, 1907. Serial No. 404,651.

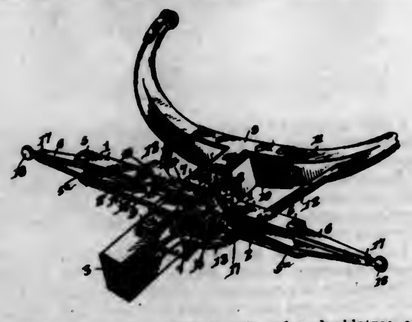
1. In an automatic steam heating system comprising a series of radiators and in combination therewith, a thermostatic trap and a jet pump in connection with the last radiator of the series for receiving and expelling the returning air therefrom through said thermostatic trap, substantially as described.

2. In an automatic steam heating system, the combination with a steam generator and a plurality of radiators, a steam supply pipe leading from the upper portion of the generator and returning to the generator near the base thereof, a main air pipe, valveless branch air pipes leading from the several radiators to a common or main air pipe, a thermostatic steam trap, a jet pump in the steam supply connection with the last radiator in the system, said pump having its suction opening connected with the main air pipe, and an air pipe leading from the last radiator to said steam trap, substantially as described.



3. In an automatic steam heating system, the combination with a heat distributing circuit including a series of radiators, an air exhaust pipe, a jet pump, in communication with said air exhaust pipe and the last radiator of the series, of a thermostatic trap to receive the fluids after they have passed the jet pump, and be closed thereby, substantially as described.

897,740. WHIFFLETREE. ALBERT O. HEIMSNESS, Fillmore, N. D. Filed Nov. 27, 1907. Serial No. 404,066.



1. The combination with a pole, of a doubletree composed of spaced members receiving and pivotally connected to the pole, one of the members being provided at the said pole with a bend forming opposite pole-engaging portions arranged to limit the swing of the doubletree during the operation thereof to dispense with stay straps or chains, and swingletrees carried by the doubletree.

2. The combination with a pole, of a doubletree composed of spaced members receiving and pivotally connected to the pole, the lower member being provided with a depending rectangular bend having sides arranged to engage the sides of the pole when the doubletree is in use to limit the swing of the doubletree and dispense with stay straps or chains, and swingletrees carried by the doubletree.

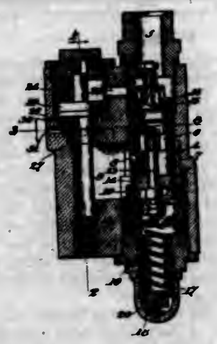
3. The combination with a pole, of a doubletree composed of spaced members receiving and pivotally connected to the pole, one of the members being provided at the said pole with a bend forming opposite pole-engaging portions arranged to limit the swing of the doubletree, a sectional sleeve mounted on the pole and arranged to be engaged by the doubletree, and swingletrees carried by the doubletree.

4. The combination with a pole, of a doubletree composed of spaced upper and lower bars or members receiving and pivotally connected to the pole, the upper bar or member being provided with arched portions, and the lower bar or member having a central depending bend forming opposite side portions arranged to engage the sides of the pole during the operation of the doubletree to limit the swing of the same and dispense with stay straps or chains, and swingletrees pivoted between the ends of the bars or members of the doubletree and extending inwardly to the said arched portions.

5. The combination with a pole having a curved cross bar, of a doubletree composed of spaced upper and lower bars or members receiving and pivotally connected to the pole, the lower bar or member being provided with a central depending rectangular bend forming opposite vertical side portions arranged to engage the sides of the pole to limit the swing of the doubletree, when the latter is in use, to dispense with stay straps or chains, side braces extending from the pole to the cross bar and having downwardly curved front portions extending beneath the doubletree and spaced from the central depending bend thereof, and swingletrees pivoted between the upper and lower bars or members of the doubletree.

[Claim 6 not printed in the Gazette.]

897,741. FEED AND QUICK-RELEASE VALVE. JAMES A. HICKS, Atlanta, Ga., assignor to Hicks Improved Engine Brake Company, Atlanta, Ga., a Corporation of Georgia. Filed Feb. 15, 1907. Serial No. 357,568.



1. In a device of the class described and in combination, a pressure-controlled feed valve, and an independent brake exhaust valve operable automatically upon a predetermined variation in pressures on the inlet and outlet sides of said feed valve.

2. In a device of the class described and in combination, a pressure-controlled feed valve, and an independent brake exhaust valve opening automatically under outlet pressure upon a predetermined variation in pressures on the inlet and outlet sides of said feed valve.

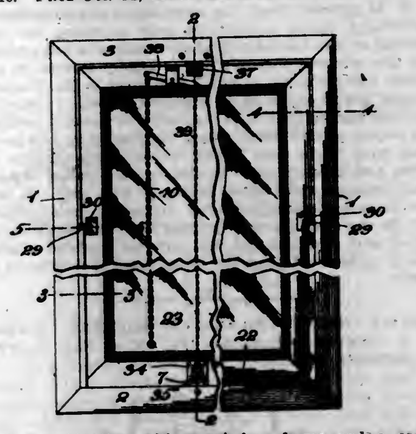
3. In a device of the class described and in combination, a pressure-controlled feed valve, and an independent brake exhaust valve subject to outlet pressure on one side and inlet pressure on the other side, and automatically operable upon a predetermined variation in pressures on the inlet and outlet sides of said feed valve.

4. In a device of the class described and in combination, a pressure-controlled feed valve, an exhaust passage on the outlet side of said feed valve, and an independent valve controlling said exhaust passage and automatically operable upon a predetermined variation in pressures on the inlet and outlet sides of said feed valve.

5. In a device of the class described and in combination, a pressure-controlled feed valve, exhaust ports in the outlet chamber of said feed valve, and an independent valve controlling said exhaust ports and automatically operable upon a predetermined variation in pressures on the inlet and outlet sides of said feed valve.

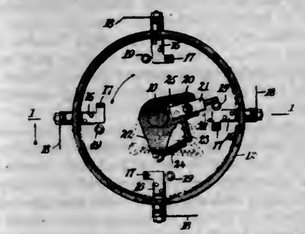
[Claims 6 to 23 not printed in the Gazette.]

897,742. FIREPROOF-WINDOW FASTENER. CHAS. H. HOFMANN and HERMAN L. W. HOFMANN, St. Louis, Mo. Filed Oct. 31, 1907. Serial No. 400,143.



The combination with a window frame and a sash arranged to swing therein, of a locking bolt held to slide vertically in the head of the frame and to engage the top rail of the sash when said sash is closed, a gravity hook pivotally arranged on the lower rail of the sash, a finger fixed to the sill of the frame, with which the gravity hook engages when the sash is closed, a lever fulcrumed to the top of the rail of the sash adjacent the vertically moving locking bolt, one end of which lever is adapted to bear against the lower end of said locking bolt, and a connection from said lever to the gravity hook.

897,743. TIMER. CLARENCE N. ISAACS, Newark, N. J. Filed Dec. 13, 1907. Serial No. 406,276.



1. In a circuit closer, a terminal, a pivoted arm adapted to intermittently engage therewith to close an electric circuit, and an obstruction adjacent said terminal and adapted to engage with said arm prior to the engagement of the latter with said terminal.

2. In a circuit closer, a rotatable shaft, an arm secured thereto and including lost motion connections, a spring for holding said arm in one of its limiting positions, a terminal adapted to be engaged by said arm to close an electric circuit, and an obstruction in the path of said arm adjacent said terminal.

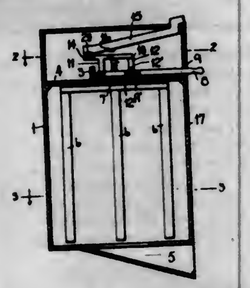
3. In a circuit closer, a terminal, a rotatable shaft, an arm carried by said shaft and including two sections pivoted together, a spring for holding said sections in a predetermined position in respect to each other, and an obstruction adjacent said terminal and in the path of said arm, whereby the end of said arm is retarded and the time of engagement between said arm and said terminal rendered substantially uniform independently of the speed of rotation of the shaft.

4. In a circuit closer, a rotatable shaft, an arm carried thereby, a terminal including two brushes spaced apart and adapted to engage with the end of said arm as the latter passes therebetween, means for retarding said arm

prior to its engagement with the brushes, and a coil spring for moving said arm between said brushes independently of the speed of rotation of the shaft.

5. In a circuit closer, the combination of a substantially stationary casing, a rotatable shaft extending into said casing, an arm carried by said shaft, said arm being formed of two sections, one of which is rigidly secured to said shaft and the other of which is pivoted to the first-mentioned section and movable in respect thereto, a spring for holding said sections in one of their two limiting positions in respect to each other, a terminal carried by said casing and lying in the path of said second-mentioned arm section, and an obstruction carried by said casing adjacent said terminal and adapted to engage with said arm prior to the engagement of the latter with said terminal, whereby the end of said arm is retarded and the time of engagement with said arm and said terminal rendered substantially uniform independently of the speed of rotation of the shaft.

897,744. NEWSPAPER-SELLING MACHINE. ANTHONY G. JACKSON, Philadelphia, Pa. Filed Nov. 28, 1906. Serial No. 345,528.



1. In a coin operated vending machine, the combination of a casing having an article holding compartment provided with a delivery chute, a movable ejector disposed therein, a laterally swinging operating handle connected to move said ejector, a lever fulcrumed on said handle and having a depending arm at one end provided with means to engage and lock said handle and a coin receiving socket arranged at its other end.

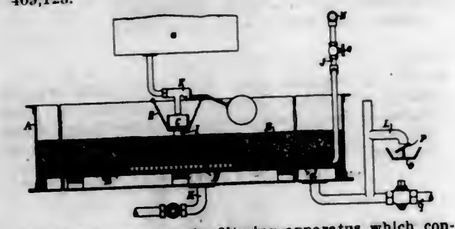
2. In a coin operated vending machine, the combination of a casing having an article holding compartment provided with a delivery chute, a movable ejector disposed therein, an operating handle connected with said ejector, a lever fulcrumed on said handle and having a depending arm provided with means to engage said handle and lock it, the free end of said lever having laterally spaced coin-receiving sockets and a coin chute with its delivery end arranged to extend over one of said sockets.

3. In a coin operated vending machine, the combination of a casing having an article holding compartment provided with a delivery chute, a movable ejector disposed therein, a laterally swinging operating handle connected with said ejector, an F-shaped lever having its short arm fulcrumed to said handle and its long arm provided with a pin to extend through said handle and engage a fixed member of the casing to lock said handle against lateral movement and a coin chute having its delivery end arranged over the free end of said lever.

4. In a coin operated vending machine, the combination of a casing having a partition extending transversely across one end thereof, a revoluble ejector mounted in said casing below said partition with the shaft thereof projecting through said partition, a laterally movable handle member connected with said shaft above said partition, a lever fulcrumed to the inner end of said handle and having a coin receiving socket at one end and a depending pin at its other end, said pin extending through said handle and adapted to engage a socket in said partition, and a coin chute arranged above said lever.

5. In a coin operated vending machine, the combination of a casing having an article holding compartment provided with a delivery chute, a movable ejector disposed therein, a laterally swinging operating handle connected with said ejector and having its free end extended through a slot in said casing and provided with an aperture intermediate of its ends, an approximately F-shaped lever having its short intermediate arm fulcrumed to said handle, and with its long arm provided with a pin operable vertically in the aperture in said handle and adapted to project therethrough and engage a socket in the casing, the free end of said lever being bifurcated and provided with coin receiving sockets, the said socketed arms being so spaced that one of them will be always under the coin chute in either of the two positions of the handle.

897,745. FILTERING APPARATUS. BERTRAM M. JÄGER, Birkenhead, England. Filed Jan. 3, 1908. Serial No. 409,123.



1. The improvements in filtering apparatus which consists in the combination of a filtering chamber having a false bottom, means for withdrawing filtered material through all parts of said false bottom, means for supplying material to be filtered to the upper part of the filter, a layer of granular material on the false bottom, means for passing a gaseous material under pressure such as steam up through the granular material at any given small portion of its surface from near the bottom of said granular material and thus thoroughly washing the granular material over a small portion of the area at a time, means for stopping the normal flow of the current through the filtering apparatus, and means for allowing the washings to overflow at the top.

2. In apparatus for filtering liquids, the combination of a filtering tank, a perforated false bottom thereto, a bed of granular material on said false bottom, means for passing steam up through the granular material in each small portion of the bed consecutively, and thus of thoroughly stirring and washing the granular material, means for reversing the current while this is going on and means whereby the liquid at its upper surface is allowed to overflow over a large area of lip and escape to the drain while the washing is going on.

3. In filters, the combination of a chamber having a perforated bottom, granular filtering material thereon, means immediately above that bottom for injecting air or steam over the various parts of the said bottom separately, and at the same time means for passing washing water up through the granular material, whereby while the material is being washed, it is also being thoroughly agitated by the air or steam.

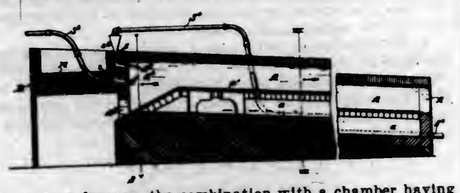
4. In filters, the combination with a filtering tank of a pervious false bottom of metal, a layer of filtering medium thereon, and just above said foraminous surface, means for supplying a gaseous material such as steam or air through each portion of the piping consecutively, means for introducing wash water below the false bottom, means for shutting off admission of liquor above the granular material whereby during the reversal of current each separate portion of the granular material is thoroughly stirred and washed.

5. In filters, the combination with a filtering tank, of a corrugated pervious bottom therefor, and steam pipes in the concavities of the corrugations, whereby the area of said bottom is increased and strengthened, and finer gauze

or perforations can be used than heretofore with equal flow of liquid, and whereby the formation of ridges of unwashed sand is avoided.

[Claims 6 and 7 not printed in the Gazette.]

897,746. BILLET-HEATING FURNACE. CARL J. F. JOHNSON, Cleveland, Ohio, assignor of one-half to Charles Berg, Cleveland, Ohio. Filed Sept. 14, 1905. Serial No. 278,374.



1. In a furnace, the combination with a chamber having two downwardly inclined openings into its interior; of connections with one of said openings for discharging therethrough into said chamber in a downwardly inclined direction, a blast consisting of a combustible mixture of gases; and connections with the other of said openings for conveying in a downwardly inclined direction a heated blast of non-combustible gases into said chamber, whereby the incandescent gases are effectively confined to the lower part of the chamber.

2. In a furnace, the combination with a chamber having two downwardly inclined openings, one above the other, into its interior; of connections with the lower of said openings for discharging therethrough into said chamber in a downwardly inclined direction, a blast consisting of a combustible mixture of gases; and connections with the upper of said openings for discharging into said furnace in a downwardly inclined direction a blast of heated non-combustible gases for confining the incandescent gases toward the lower portion of the chamber.

3. In a furnace, the combination with a chamber having two downwardly inclined openings, one above the other, into its interior; of air and gas connections with the lower of said openings whereby a blast consisting of a combustible mixture of gases may be discharged therethrough into said chamber in a downwardly inclined direction; and an air connection for the upper of said openings whereby a blast of heated air may be discharged into said furnace in a downwardly inclined direction above said first blast, substantially as described and for the purpose set forth.

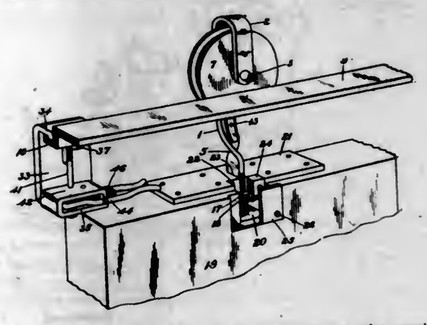
4. In a furnace, the combination with a chamber, of means for heating said chamber comprising a gas-burner having a burner-head formed with two downwardly inclined openings, one of said openings being adapted to discharge the products of combustion there taking place into said chamber in a downwardly inclined direction and in the form of a blast, and the other of said openings being adapted to discharge a blast of heated air above the blast from said gas-burner and in a downwardly inclined direction for effectively conveying and maintaining the first named blast in the lower portion of the chamber.

5. In a billet-heating furnace, the combination with a chamber, of a gas-burner adapted to heat said chamber and comprising a burner-head formed with communicating vertical and horizontal slots, such horizontal slots opening into said chamber throughout the width thereof, a gas supply connected with said horizontal slot, and an air supply connected with said vertical slot; and apertures connected with and approximately at right angle thereto said vertical slot and opening into said chamber above said horizontal slot.

[Claims 6 to 9 not printed in the Gazette.]

897,747. SUPPORT FOR EDGEWISE-MOVABLE DOORS. JAMES JOYCE, Toronto, Ontario, Canada. Filed Mar. 21, 1908. Serial No. 422,504.

1. In a support for edgewise movable doors, the combination with a track, a wheel running thereon, and a hanger supported from said wheel and adjustably secured to the door, of a stop clamped to said rail and having a spring clip engaging said hanger and a buffer secured between the jaws of said clip.



2. In a support for edgewise movable doors, the combination with a track, a wheel running thereon, and a hanger supported from said wheel and adjustably secured to the door, of a bracket having a hooked upper end engaging said track, a slidable clamp secured to said bracket and engaging the underside of said track, means for adjusting said clamp, spring arms secured to said bracket and adapted to engage said hanger, and a buffer of resilient material secured to said bracket.

3. In a support for edgewise movable doors, the combination with a track, a wheel running thereon, and a hanger supported from said wheel and adjustably secured to the door, of a bracket having a hooked upper end adapted to engage the said track and a vertical slot in the vertical portion thereof and a laterally turned bottom portion, a clamp having a notched end sliding in said slot and an upturned outer end and a threaded orifice, a screw rotatably held in said bracket and extending through the threaded orifice in said clamp, a pair of spring arms secured to the lower lateral portion of said bracket and having their outwardly extending ends flaring outwardly, and a buffer of resilient material fixedly secured to said bracket between said spring arms.

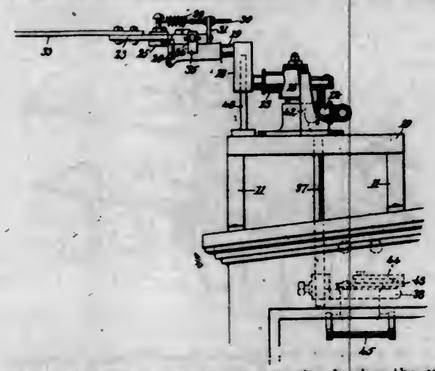
4. In a device of the class described, in combination, a door having a hanger stem recess made thereinto from the top and side edge, a hanger and a plate recess surrounding said hanger stem recess, a plate rigidly secured to the top edge face of said door and having a central rectangular slot therethrough over said recess, and lugs extending downwardly therefrom into said recess, a track rigidly secured above said door, a hanger traveling on said track and having a rectangular stem extending through said central rectangular slot in said plate and threaded on the end edge faces, a nut correspondingly threaded and turned on said stem beneath said lugs and a plate filling in said front plate recess and closing in the side opening to said hanger stem recess.

5. In a device of the class described, in combination, a door, a trolley hanger adjustably secured in said door, a track rigidly secured above said door having a channel groove and a lateral flange extending from the top to the longer leg of the channel groove, said flange being firmly secured to the support, and said trolley hanger having one flange of its wheel extending into said channel groove, and a dog pivotally secured to the stem of said trolley hanger, and at its upper end arranged in close proximity to the under side of said track and adapted to be swung from said position to remove said trolley hanger from the track.

897,748. SAFETY DEVICE FOR AIR-BRAKES. JOSEPH JUDGE, Pittston, Pa. Filed May 14, 1908. Serial No. 432,794.

1. In an air brake system, an air pipe having the end thereof forming a valve seat, a valve hinged adjacent said

seat, and a movable arm adapted to be operated by engagement with an obstruction, and serving to normally hold said valve in its closed position.



2. In an air brake system, an air pipe having the end thereof forming a valve seat, a valve hinged adjacent said seat, a movable arm adapted to be operated by engagement with an obstruction, and serving to normally hold said valve in its closed position, and means carried by said arm for positively disengaging said valve from its seat upon the movement of the arm.

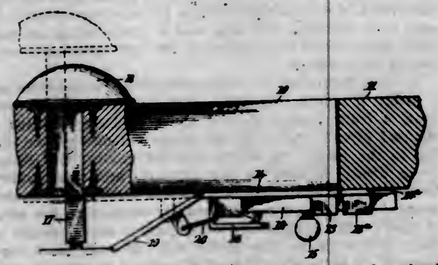
3. In an air brake system, an air pipe having the end thereof forming a valve seat, a valve hinged adjacent said valve seat, an arm pivoted to said pipe and adapted to be moved on its pivot by engagement with an obstruction, and means carried by said arm for normally holding said valve in its closed position.

4. In an air brake system, an air pipe having the end thereof forming a valve seat, a valve hinged adjacent said valve seat, an arm pivoted to said pipe and adapted to be moved on its pivot by engagement with an obstruction, means carried by said arm for normally holding said valve in its closed position, and means for positively opening said valve upon the movement of said arm.

5. In an air brake system, an air pipe, a flap valve closing the end thereof and having an upwardly-extending projection, an arm pivoted to the upper side of said pipe adjacent the end thereof, and means carried by said arm for engagement with said projection to hold said valve in its closed position.

[Claims 6 to 12 not printed in the Gazette.]

897,749. LATCH. EMIL KRAFFT, New York, N. Y. Filed Mar. 2, 1908. Serial No. 418,714.



1. The combination of a sliding latch bolt, a door knob having a spindle longitudinally and laterally movable, members pivoted together, one of which is pivotally supported and the other connected to the spindle, and a link connecting the pivoted member to the latch bolt.

2. The combination of a sliding latch bolt having a hook at its inner end, a door knob having a spindle longitudinally and laterally movable, members pivoted together, one of which is pivotally supported and the other connected to the spindle, and a device pivotally supported at an intermediate point of the pivoted member and engaging over the hook of the latch bolt.

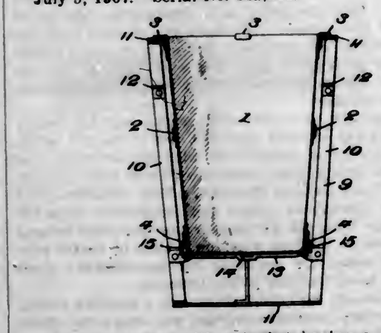
3. In combination with a door, a knob having a spindle movable longitudinally and transversely through the door, and a latch bolt for locking the door, operatively connected with the spindle and adapted to draw the knob inwardly when the bolt is projected.

4. In combination with a door, a latch bolt therefor at one side of the door, a door knob at the opposite side of the door, and means for moving the knob to and from the door by the operation of the bolt.

5. In combination with a door, a latch-bolt for locking the door at one side thereof, a knob at the opposite side of the door, members pivoted together, one of which is pivotally supported on the door adjacent to the bolt, and the other fixed relatively to the knob, and means connecting the pivotally-supported member with the bolt.

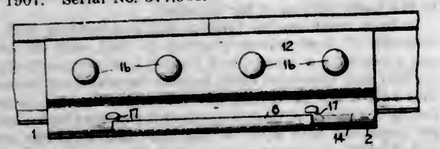
[Claims 6 to 15 not printed in the Gazette.]

897,750. COMBINED BASKET AND SUPPORT THEREFOR. CHARLES KUENSTING, Woodburn, Oreg. Filed July 5, 1907. Serial No. 382,301.



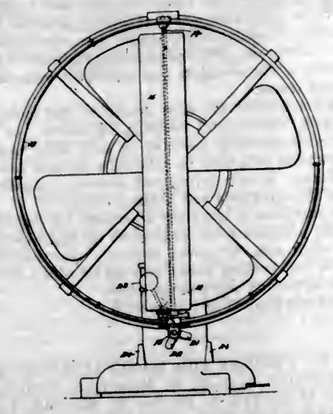
The combination with a basket having a plurality of metallic bands surrounding the same, angular extensions integral with the band at the upper end of said body and rings secured to the lower band; of a support for said basket, comprising a plurality of standards, circular plates secured to each end of said standards, the upper plate being adapted to receive and form a bearing for the integral extensions on the upper band, cross arms connecting the standards adjacent their lower ends and hooks pivotally secured to said cross arms adjacent their juncture with the standards, said hooks being adapted to engage the rings in the lower band and hold the bracket against casual removal from the support.

897,751. RAIL-JOINT CHAIR AND FASTENING. MODESTE LACHANCE, St. Johnsbury, Vt. Filed June 6, 1907. Serial No. 377,563.



A structure for the meeting ends of two rail sections comprising a fish plate for said ends having a flange to overlie the flanges on one side of the rails, a vertical portion serving to contact with the webs and under surfaces of the treads of the rails, said fish plate also having a base plate to contact with the under face of the base of the rail and having its opposite edges projecting beyond the edges of said base, one of said projecting edges having a dovetail recess formed therein provided with an overhanging tapering curved lip, a second fish plate applied to the webs and under faces of the treads on other sides of the rails, and having a flange to overlie the flanged portions on said other sides of the rails, said flange of the second fish plate being mounted in said recess of the first mentioned plate and having its terminal curved so as to contact with the curvature of said recess, spike receiving openings provided in the flanges of the fish plates coincident with the edges of the rail base and spikes in said openings, openings in the fish plates and webs of the rails and bolts secured in said openings, substantially as specified.

897,752. OSCILLATING DESK-FAN. EVRAH C. LIPPS, Warren, Ohio, assignor to The Peerless Electric Company, Warren, Ohio, a Corporation of Ohio. Filed Dec. 28, 1906. Serial No. 349,926.



1. The combination with a fan, and a movable-support therefor, of a vane carried by said support in the path of the current of air from the fan, and means for automatically changing the position of said vane for alternately presenting the opposite edges of the same side thereof to the current of air, thereby deflecting a portion of the current and causing the fan and its support to alternately move in opposite directions.

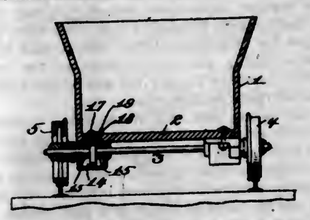
2. The combination with a fan, and a movable-support therefor, of a vane curved transversely throughout its length and pivoted to said support along the line of its longitudinal center, said vane being located in the path of the current of air, and means for automatically turning said vane on its axis for alternately presenting the opposite edges of the same side thereof to the current of air.

3. The combination with a fan, a movable-support therefor, and a guard for the fan carried by said support, of a vane, a rod pivoted in said frame and to which said vane is secured, a rock shaft engaging said rod, arms carried by said rock shaft, stops or posts with which said arms are designed to engage for rocking said shaft, and a weight on the latter for holding the vane in its different positions.

897,753. OILING ATTACHMENT. LAVALETTE L. LOGAN, New Haven, Pa.; Juna Logan and William P. Townsend administrators of said Lavalette L. Logan, deceased. Filed Jan. 23, 1907. Serial No. 353,678.

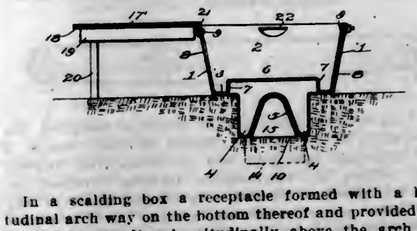
1. An oiling attachment comprising a receptacle having an annular space to contain a lubricant, a revoluble axle mounted in said receptacle, and a spring yoke detachably positioned within said annular space and frictionally engaging and rotatable with said axle whereby the lubricant is distributed to the latter, the axle being slidable in the direction of its length in the receptacle to compensate for the necessary movement in turning curves, and also slidable through the yoke without displacing the latter from operative position.

2. An oiling attachment comprising an oil supply means, a rotatable axle, a disk with an opening therethrough, and a resilient yoke inserted in the disk and engaging the axle to cause the disk to rotate with the latter.



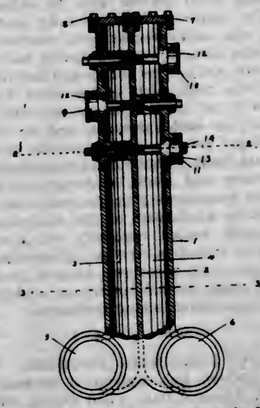
3. An oiling attachment comprising an oil supply means, a rotatable axle, a disk with an opening therethrough, and a resilient yoke inserted in the disk and frictionally engaging the axle to cause the disk to rotate with the latter, the disk and yoke being separable from the axle.

897,754. SCALDING APPARATUS. MATTHEW LYNCH, Malta Bend, Mo. Filed July 30, 1907. Serial No. 386,308.



In a scalding box a receptacle formed with a longitudinal arch way on the bottom thereof and provided with shoulders extending longitudinally above the arch way, ribs depending from the upper edges of the receptacle and disposed against the shoulders, and hoods adapted to be inserted in either end of the arch way having flanges formed thereon.

897,755. COMBINATION FRESH AND SALT WATER HYDRANT. FRANK MALLOYE, San Francisco, Cal. Filed Feb. 18, 1908. Serial No. 416,577.



1. A combination salt and fresh water hydrant, comprising a shell or casing, a vertical partition dividing the interior of said casing into two conduits, a nozzle for each conduit, a valve for closing one of said nozzles, having a stem, and a tubular connection formed integral with said partition and casing, through which said stem passes, substantially as described.

2. A combination salt and fresh water hydrant, comprising a shell or casing, a vertical partition dividing the interior of said casing into two conduits, a nozzle for each conduit, a valve for closing one of said nozzles, having a stem, a tubular connection formed integral with said partition and casing, through which said stem passes, a valve proper for closing the latter nozzle, said valve having a recess, and a nut on the stem of the valve and screwed into the valve to hold the end of the stem in said recess, substantially as described.

3. A combination salt and fresh water hydrant, comprising a shell or casing, a vertical partition dividing the interior of said casing into two conduits, a nozzle for each conduit, a valve for closing one of said nozzles, having a stem, a tubular connection formed integral with said partition and casing, through which said stem passes, a valve proper for closing the latter nozzle, said valve having a recess, a nut on the stem of the valve and screwed into the valve to hold the end of the stem in said recess, and a cover of vulcanized fiber between said valve and its seat, substantially as described.

897,756. FLEXIBLY-INTERMITTENT CHAIN-DRIVE. ISRAEL W. MARSHALL, Yorklyn, Del., assignor of one-half to Thomas E. Marshall, Yorklyn, Del. Filed Oct. 8, 1907. Serial No. 396,401.



1. In a driving mechanism of the class described, the combination of driving and driven sprocket wheels, a chain engaging therewith and communicating uniform rotary motion, an intermediate sprocket arranged between said sprockets adapted to be engaged by the driving chain under normal conditions, whereby upon encountering unusual resistance and for a period depending upon the duration of such resistance, said chain is caused to move out of rotative connection with said intermediate sprocket.

2. In an irregularly intermittent chain belt driving mechanism, the combination with a driving shaft, a driven shaft, and common chain sprocket wheels secured on each shaft, of a chain mounted on said sprocket wheels, a power conveying sprocket wheel positioned intermediately in the path of chain travel, the latter named sprocket having teeth formed with an obtuse angle on the side of the chain approach, whereby said chain may rise and pass over said sprocket upon abnormal resistance to rotation being encountered and during such interval as it exists, all substantially as shown and described.

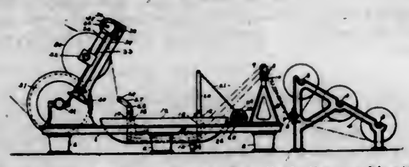
3. In a driving mechanism of the class described, the combination with driving and driven sprockets, of a slack chain mounted on said sprockets, and an intermediate sprocket arranged between said sprockets, adapted to be engaged by said chain under normal conditions, and to be disengaged when said chain is drawn tight upon the driven sprocket encountering undue resistance.

4. In a driving mechanism of the class described, the combination with spaced sprockets, of a slack chain mounted on said sprockets, and an intermediate sprocket arranged between said sprockets, adapted to be engaged by said chain under normal conditions, and to be disengaged upon encountering undue resistance.

897,757. SHEET-COMBINING MACHINE. ISRAEL W. MARSHALL, Yorklyn, Del., assignor of one-half to Thomas E. Marshall, Yorklyn, Del. Filed Oct. 8, 1907. Serial No. 396,403.

1. In a sheet combining machine the combination with a pair of heating cylinders arranged one above the other, of means for directing partially gelatinized sheets of paper between said cylinders, and means for driving the lower cylinder whereby the sheets of paper will be combined as they pass between the cylinders.

2. In a sheet combining machine the combination with a pair of revoluble heating cylinders arranged one above the other, of means for directing partially gelatinized sheets of paper between said cylinders, means for raising the upper cylinder and means for driving the lower cylinder, whereby the upper cylinder will be driven by frictional contact with the interposed sheets.



3. In a machine of the class described, the combination with a frame and tank, levers pivotally mounted on said tank, carrying a roll holding frame, scrapers arranged in advance of said tank, revoluble heating cylinders arranged at the front of the machine, and means for swinging said roll holding frame.

4. In a machine of the class described, the combination with a tank, drying and pressing cylinders, of a roll holding frame pivotally mounted in said tank, means for directing sheets of paper to said rolls in said tank, and from said rolls to said drying and pressing cylinders, and means for swinging said roll holding frame.

5. In a machine of the class described, the combination with a tank provided with bearings on its upper side edges, adjacent each end, of levers pivotally mounted in said bearings, a roll holding frame carried by said levers, and means for operating one pair of levers.

[Claim 6 not printed in the Gazette.]

897,758. PROCESS FOR MANUFACTURING INDURATED FIBER. ISRAEL W. MARSHALL, Yorklyn, Del., assignor of one half to Thomas E. Marshall, Yorklyn, Del. Filed Oct. 8, 1907. Serial No. 396,404.

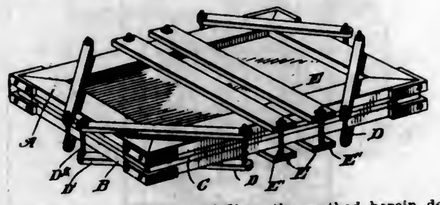
1. The process of making indurated fiber, consisting of subjecting a plurality of vegetable paper sheets to the action of a chemical whereby they are partially gelatinized, uniting the sheets under the combined influence of heat and pressure, cooling, aerating and subsequently washing until all traces of the chemical are removed and finally passing through drying rolls and calender rolls, all substantially as shown and described.

2. The process of making indurated fiber, consisting of subjecting a plurality of vegetable fiber sheets to a bath containing a solution having the property of causing a chemical change to take place in said vegetable fiber whereby a union of the sheets may be effected, substantially uniting said sheets by heat under moderate pressure, cooling and air curing, followed by repeated washing and soaking until no trace of the chemical used can be detected and the final passage of the united fiber sheet through drying rolls and calender rolls, all substantially as shown and described.

3. The process of continuously making indurated fiber, consisting of combining a plurality of sheets made of vegetable matter and having a relatively soft, porous texture, by saturating them each independently with zinc chlorid, removing the excess, immediately pressing the sheets in intimate contact between heated cylinders, the upper of which is maintained at twice the temperature of the lower, circulating the sheet in the air until cool, passing through a series of water baths, until all traces of the zinc chlorid have disappeared, and finishing the fiber sheet in drying rolls and calender rolls, all substantially as specified.

4. The process of making indurated fiber or the like, consisting in treating a plurality of separate paper sheets to the action of a solution having the property of causing a chemical change in the said sheets whereby they may become integrally incorporated into a single sheet, immediately subjecting the sheet to moderate pressure between heated cylinders, exposing the sheet in the air until cool and practically dry, washing and soaking the sheet in a water bath, an indefinite period of time, dependent upon its thickness, until the chemical solution has been removed except that which has become synthetically incorporated in the sheet, and finishing the said sheet as usual.

897,759. METHOD OF SOAKING SHEET FIBER. ISRAEL W. MARSHALL, Yorklyn, Del. Filed Jan. 13, 1908. Serial No. 410,539.



1. In the manufacture of fiber, the method herein described of extracting the chemicals from sheets of fiber, consisting of exposing only one side of the sheet to water, whereby blistering or separating of the layers of the sheet is prevented.

2. In the manufacture of fiber, the method herein described of extracting the chemicals from fibrous sheets consisting of clamping two sheets together and immersing them in water.

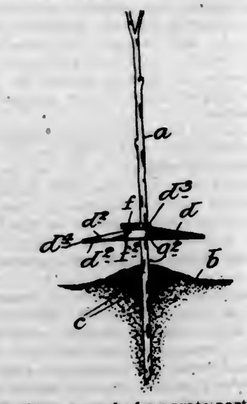
3. In the manufacture of fiber, the method herein described of extracting the chemicals from fibrous sheets consisting of placing two sheets together, clamping them between skeleton frames, and immersing the sheets and frames in water.

4. In the manufacture of fiber, the method herein described of extracting the chemicals from fibrous sheets consisting in rendering one side of a sheet impervious to water, clamping a second sheet to the impervious side of the first sheet, and immersing the sheet in water.

5. In the manufacture of fiber, the method herein described of extracting the chemicals from fibrous sheets consisting in water-proofing one side of a sheet, placing a second sheet against the water-proof side of the first sheet, clamping the sheets together between skeleton frames, and immersing the sheets and frames in water.

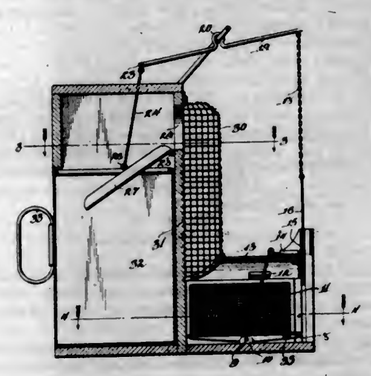
[Claims 6 and 7 not printed in the Gazette.]

897,760. PLANT-SHIELD. JOHN MARTIN, Irvington, N. Y. Filed Apr. 27, 1908. Serial No. 429,358.



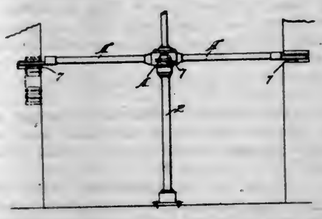
A plant shield composed of separate parts pivotally connected and adapted to rotate one upon another and to be opened at one side and the edges of which are adapted to overlap when closed, said shield when the separate parts are closed together being provided with a central opening, and means for locking the parts together and securing the shield to a pole.

897,761. ANIMAL-TRAP. ANGELO MENZ, Newport News, Va. Filed Dec. 6, 1907. Serial No. 405,416.



A trap comprising a main trap portion provided with an opening near its upper end, a vestibule connected thereto, a platform pivoted in the vestibule, a bail carried by the platform, a trigger connected to the bail, a sliding door held open by the trigger, a lever, a chain connected to said lever and to said door, a bail at the top of the main trap portion and provided with a T-shaped head, said lever being supported upon said bail links supported upon said head and passing through slots in the top of the main trap portion, and a hinged door to which said links are connected.

897,762. PASSENGER-RECORDER. CONRAD METZLER, Fresno, Cal. Filed Sept. 13, 1907. Serial No. 392,774.



1. A passenger and like recording apparatus, said apparatus including a metal character-bearing ticket, or check, a turnable gate, a locking device therefor, a ticket or check-receiving chute, mechanism actuated by the passage of said check to unlock the gate, and a recording mechanism imprinted by the passage of the ticket.

2. In a passenger recording apparatus, a metal printing ticket, a turnable gate fixed in the passage-way, and locking means therefor, a traveling tape located at one side of the gate opening, a spring-pressed latching rod extending from the recorder-box to lock the gate, a fulcrumed lever, one arm of which engages the latching rod, a chute into which the other arm of the lever projects, said chute being adapted to receive the ticket or check, and directing said check so that its printing surface is brought into contact with the tape to leave a permanent mark thereon.

3. In an apparatus of the character described, a vertical post having sockets in its sides, arms projecting radially in the plane of said sockets, slidable bars carried thereby, and springs by which said bars are pressed so as to enter the sockets when they register, a ticket-receiving chute

near the outer ends of the arms, a bell-crank lever having one end engaging the slidable bar, a pin carried by the other arm of the lever against which the ticket acts when introduced to the chute to withdraw the bar and allow the device to be turned, and means for removing the ticket and releasing the bar.

4. In an apparatus of the character described, arms turnable in a horizontal plane about a supporting post and having spring-pressed slidable bars carried thereby, corresponding sockets in the post, ticket-receiving chutes at the outer ends of the arms, a bell-crank lever engaging the slidable bars, means by which said lever is actuated by the introduction of the ticket to disengage the latch and allow the arms to be turned, printing characters carried upon the ticket the receiving surface for which said characters pass during the forward movement of the ticket at the end of a quarter revolution of the apparatus, a stop pin upon said receiver by which the ticket is disengaged to fall into said receiver.

897,763. TREATMENT OF COFFEE. JOHANN F. MEYER, Jr., LUDWIG ROSELIUS, and KARL WIMMER, Bremen, Germany. Filed May 4, 1906. Serial No. 315,181. (Specimens.)

1. In a process for obtaining green unbroken coffee beans freed of caffein, subjecting the unbroken green coffee beans to extraction *in vacuo*, removing the extract, depriving the extract of caffein, re-dissolving the residue and restoring it to the green beans while *in vacuo*, interrupting the vacuum for a short period and then restoring the vacuum, and then drying the impregnated green beans *in vacuo*.

2. In a process for obtaining green unbroken coffee beans freed of caffein, subjecting the green beans to extraction *in vacuo*, drawing off the liquid extract, removing the caffein from said extract, and then adding to the beans while *in vacuo* the said extract freed of caffein whereby the green beans are impregnated with said extract.

3. In a process for obtaining green unbroken coffee beans freed of caffein, subjecting the green beans to extraction *in vacuo*, drawing off the liquid extract, removing the caffein from said extract, then adding to the beans while *in vacuo* the said extract freed of caffein whereby the green beans are impregnated with said extract, and then drying the impregnated beans *in vacuo* at a moderate temperature.

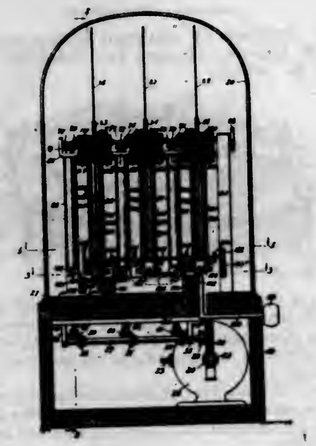
897,764. TEA PRODUCT AND PROCESS OF MAKING SAME. JOHANN F. MEYER, Jr., and KARL WIMMER, Bremen, Germany. Filed Oct. 1, 1906. Serial No. 336,973.

1. In a process for the preparation of tea free from theine, subjecting the tea to a volatile solvent whereby the aromatic bodies are extracted from the tea, then removing the solvent containing the aromatic bodies, then decomposing the salts of theine contained in the tea, then subjecting the tea to a volatile solvent whereby the theine is extracted, then withdrawing the solvent containing the theine, then impregnating the tea with the solvent containing the aromatic constituents, and then distilling off the last mentioned solvent.

2. In a process for preparing tea free from theine, subject the tea to a petroleum spirit whereby the aromatic constituents are extracted, then removing said petroleum spirit, then subjecting the tea to steam and ammonia to decompose the salts of theine, then extracting the theine by subjecting the tea to chloroform, then withdrawing the chloroform containing the theine, then drying the tea, then adding the petroleum spirit containing the aromatic constituents and thoroughly impregnating the tea with said constituents, and then finally distilling off the petroleum spirit.

3. As a new article of manufacture, tea leaves originally containing theine, freed therefrom and having their remaining aromatic constituents substantially unimpaired.

897,765. MULTIPLE TELEGRAPHONE SYSTEM. GEORGE MOBIN, Habana, Cuba. Filed Nov. 29, 1907. Serial No. 404,386.



1. The combination of a plurality of revoluble members, each adapted to hold magnetic impressions analogous to sound waves, means for actuating said revoluble members, magnetic members associated with said revoluble members for the purpose of recording magnetic impressions thereupon, and means for throwing one of said magnetic members into action and another out of action, for the purpose of making a record continuous

2. The combination of a revoluble member provided with oppositely disposed portions, each adapted to receive magnetic impressions analogous to sound waves, a magnet disposed adjacent to said revoluble member and movable bodily in relation to the general position thereof, for the purpose of receiving magnetic impressions therefrom, said magnetic member being disposed adjacent to one of said oppositely disposed portions, a second magnetic member disposed adjacent to the other of said oppositely disposed portions, and means for shifting a circuit from one of said magnetic members to the other.

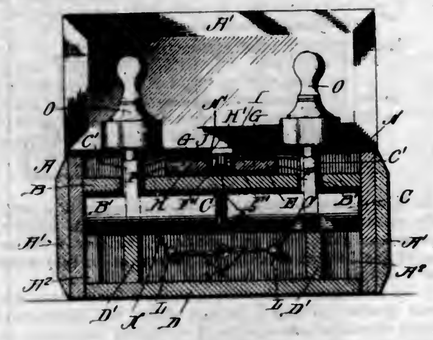
3. The combination of a plurality of record members provided with magnetic surfaces, magnetic members disposed adjacent to said magnetic surfaces, circuits for controlling said magnetic members, and means for opening one of said circuits and closing another for the purpose of shifting the magnetic action from one of said record members to another.

4. The combination of a plurality of telegraphone disks, magnets associated with said disks for the purpose of affecting magnetic impressions to be carried thereupon, contacts connected with said magnetic members for the purpose of opening and closing circuits therethrough, a carriage for supporting said magnetic members, and means controllable by movements of said carriage for opening and closing said contacts in a predetermined order of succession.

5. The combination of a plurality of record members, magnetic members movable relatively thereto, a feed screw for advancing said magnetic members relatively to said record members, mechanism engaging said feed screw for the purpose of controlling the general position of said magnetic members relatively to said record members, a movable carriage for supporting said magnetic members, and means controllable by movements of said carriage for disengaging said feed screw.

[Claims 6 and 7 not printed in the Gazette.]

897,766. ELECTRIC CIGAR-LIGHTER. ERNEST P. MULLER, Brooklyn, N. Y. Filed Feb. 4, 1907. Serial No. 355,756.

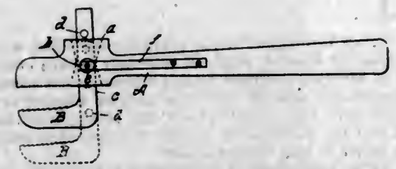


1. In an electric cigar lighter, the combination with a pair of electrically connected spaced distributing plates, of a series of spring contact points arranged in pairs, each pair of spring contacts being secured at one end to the plates first mentioned, respectively, the free end portions of said spring contacts curving inwardly and above the adjacent edges of said plates, and a dip movable between said contacts, and being upheld during said movement by the free end portions of said contacts.

2. In an electric cigar lighter, the combination with a strip of insulating material provided with a central rib forming a guide, plates arranged on said strip provided with angled ends bearing against said ribs, wooden blocks arranged on said plates, electrically connected distributing plates arranged on said blocks provided with angled ends extending down over the adjacent ends of said blocks against said plates, a series of spring contacts arranged in pairs secured to the rear ends of the angled ends of said distributing plates, and a dip adapted to be drawn over and through said contacts.

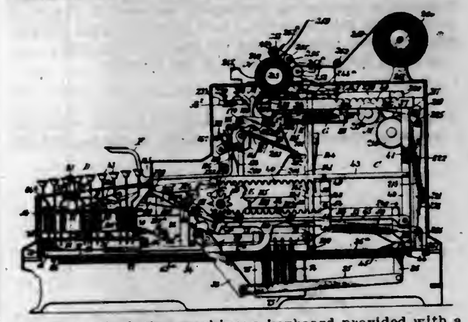
3. In an electric cigar lighter, the combination with a pair of spaced insulated angled end plates the angled end forming a guide, of distributing plates arranged on said plates, a series of oppositely arranged plate spring contacts arranged in pairs and connected to said distributing plates, and a dip adapted to travel on said insulating material and engage said contacts.

897,767. WRENCH. HARRY R. MUNCE and ROBERT J. MUNCE, Washington, Pa. Filed Nov. 14, 1906. Serial No. 343,318.



The combination in a wrench consisting of a handle or upper jaw portion and a lower jaw portion terminating in a shank which is provided with a series of holes for registering with the holes in the sides of the upper jaw portion, of a spring rigidly secured to the side of the handle or upper jaw portion at one end and to the pivot at its opposite end, said pivot being adapted to enter said holes in the upper jaw portion and shank of the lower jaw portion for holding said lower jaw portion in position, together with serrations formed in said upper and lower jaw portions headed in opposite directions to each other, all substantially as and for the purposes shown and described.

897,768. CALCULATING-MACHINE. CARL L. NELSON, Seattle, Wash. Filed Nov. 16, 1906. Serial No. 343,713.



1. In a calculating machine, a keyboard provided with a series of spring-controlled keys arranged in series, each series of keys being arranged in groups, tension-controlled type bars limited in movement in one direction by the depressed keys of the keyboard, a calculating mechanism operated by the movement of the type bars, a carriage, means for controlling the movements of the type bars by the movement of the carriage, and a printing mechanism operated partially by the movement of the type bars and partially by the movement of the carriage.

2. In a calculating machine, a key-board, tension-controlled depressible keys carried by the said board, a stop leaf below each key and locking means for the keys, a releasing device for the locking means, type bars mounted to slide relatively to the said stop leaves, being limited in their movement in one direction first by the stop leaves and second by the key or keys that are depressed, a calculating mechanism operated by the type bars, a carriage controlling the movement of the type bars in one direction, and means for operating the releasing device for the keys by the movement of the said carriage.

3. In a calculating machine, a casing, a key-board mounted therein, tension-controlled depressible keys mounted in said board and arranged in rows, a locking device for the keys of each row, a releasing device common to the locking devices for all the rows of keys, a spring-controlled stop leaf pivotally mounted beneath all the keys of each row, type bars slidably mounted in the casing, having spring-controlled movement in direction of the stop leaves and the lower ends of the keys, the number of type bars corresponding to the number of rows, a carriage for operating the type bars against the tension of their controlling springs, a trip connection between the carriage and the releasing device, a calculating mechanism operated by the said type bars, and a printing mechanism operated through the movement of the said carriage.

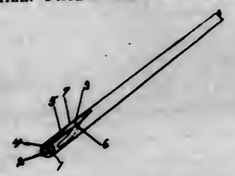
4. In a calculating machine, a casing, a key-board mounted therein, tension-controlled compressible keys mounted in said key-board and arranged in rows, a locking device for the keys of each row, a releasing device common to the locking devices for all the rows of keys, a spring-controlled stop leaf pivotally mounted beneath all the keys of each row, type bars slidably mounted in the casing, having spring-controlled movement in direction of the stop leaves and the lower ends of the keys, the number of type bars corresponding to the number of rows, a carriage for operating the type bars against the tension of their controlling springs, a trip connection between the carriage and the releasing device, a calculating mechanism operated by the said type bars, a printing mechanism operated through the movement of the said carriage, and means for carrying the calculating mechanism from an adding position to a total-designating position.

5. In a calculating machine, a series of type-carrying arms arranged in parallelism, tension-controlled type loosely mounted in said arms, a carriage movable relatively to the faces of the type in the said type-carrying arms, a multi-colored ribbon supported by the carriage, means for shifting the carriage to bring a desired color

of ribbon over the type to produce an impression, supports for the type-carrying arms, means for operating the said supports, a calculating mechanism operated by the movement of the said supports, and a paper-carrying mechanism adjustably mounted over the type-carrying arms.

[Claims 6 to 32 not printed in the Gazette.]

897,769. SEWING-NEEDLE. MARINUS J. C. NYBORG, Minneapolis, Minn. Filed Dec. 30, 1907. Serial No. 408,650.



A needle comprising a main body portion, formed with two longitudinal channels merging into a larger channel which passes slantingly towards the point end of the needle and emerges from the side of the needle, and provided with a tapered, bent hook or spring formed integral with said main body and having two inwardly tapering open ended parallel slots formed in the walls of the needle, substantially as described.

897,770. NUT-LOCK. HENRY OLDENDORFH, St. Louis, Mo. Filed Oct. 6, 1906. Serial No. 337,750.

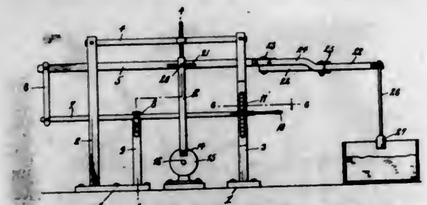


The combination of a member externally threaded at one end and provided with a bore, a nut screwed on the said threaded end, a headed bolt extending through the bore, a collar assembled on the bolt and held in contact with the end of the member by the head of the bolt and provided with slots extending from one side to the other and having peripheral recesses opening into the slots and presenting cam walls disposed opposite to the end surface of the member and coöperating with the latter to form pockets tapering in a direction away from the slots, and an annular locking piece proportioned to be freely assembled over the collar and having lugs adapted to enter the slots and normally disposed in the said pockets and bearing at one side directly on the end face of the member and at the opposite side directly on the said cam walls, said locking piece being in contact with the nut at all points.

897,771. TAMPING-MACHINE. PAUL OLSON, Stoughton, Wis. Filed Jan. 18, 1908. Serial No. 411,508.

1. In a tamping mechanism, a guide, a horizontally disposed member arranged in said guide for horizontal sliding movement and vertical oscillatory movement, a shiftable fulcrum for said member, means for oscillating said member and a tamper carried by said member.

2. In a tamping mechanism, a guide, a horizontally disposed member arranged in said guide for longitudinal sliding movement and a vertical oscillatory movement, a shiftable fulcrum for said member, means for oscillating said member, a segmental guide carried by said member, a bar arranged for horizontal swinging movement in said segmental guide and a tamper depending from said bar.



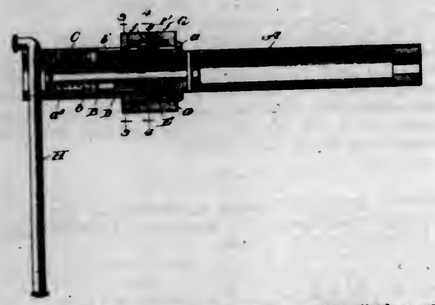
3. In a tamping mechanism, the combination of a vertically movable member, means for oscillating said member, a segmental guide upon said oscillatory member, a bar arranged for horizontal swinging movement in said guide and a tamper depending from said bar.

4. In a tamping mechanism, a guide, a horizontally disposed member arranged in said guide for longitudinal sliding movement and a vertical oscillatory movement, an adjustable lever, a fulcrum for said member carried by said lever, means for oscillating said member, and a tamper carried by said member.

5. In a tamping mechanism, a guide, a horizontally disposed member arranged in said guide for longitudinal sliding movement and a vertical oscillatory movement, a lever pivoted intermediate its ends, a locking device for one end of the lever, a link upon the other end of the lever and provided with a fulcrum for said member, means for oscillating said member and a tamper carried by said member.

[Claims 6 to 14 not printed in the Gazette.]

897,772. RATCHET-TOOL. EBEN R. PACKER, Chicago, Heights, Ill., assignor to Quincy, Manchester, Sargent Company, Chicago, Ill., a Corporation of New Jersey. Filed June 17, 1907. Serial No. 379,323.



1. In an instrument of the character described, a pair of connected members rotatable relatively to each other, a pair of reversely-arranged ratchet wheels on one member, a single-ended pawl on the other member adapted to coöperate with the ratchet wheels, the arrangement being such that the pawl may be brought into operation relative with either of said ratchet wheels.

2. In an instrument of the character described, a pair of connected members rotatable relatively to each other, a pair of reversely-arranged ratchet wheels on one member, a single-ended pawl on the other member adapted to coöperate with the ratchet wheels, the arrangement being such that the pawl may be brought into operative relation with either or both of said ratchet wheels.

3. In an instrument of the class described, a stem, a handle revolubly mounted on said stem, a pair of reversely arranged ratchet wheels on the stem, and a single-ended pawl secured to said handle in such a manner that it may be moved into engagement with either of said ratchet wheels.

4. In an instrument of the class described, a stem, a handle revolubly mounted on said stem, a pair of reversely arranged ratchet wheels on the stem, and a pawl secured to said handle in such a manner that it may be moved into engagement with either of said ratchet wheels or with both of said ratchet wheels simultaneously.

5. In an instrument of the class described, a stem, a handle revolubly supported on said stem, a pair of reversely arranged ratchet wheels on said stem, a single-ended pawl, and guides on the handle for securing the pawl to the handle so as to be free to be moved into engagement with either of said ratchet wheels.

[Claims 6 to 8 not printed in the Gazette.]

897,773. FENCE-POST. ARNOLD PAGEL, Racine, Wis. Filed Feb. 29, 1908. Serial No. 418,542.



1. A concrete fence post having embedded therein a series of castings, said castings being provided with grooves, flanges to anchor the same within the post, said castings each being provided with a curved slot and a lug at the end of the slot to accommodate the head of a bolt for securing a wooden board to the post, and arms projecting from the castings, said arms provided with registering apertures for a nail or other fastening device to hold the line wires in place.

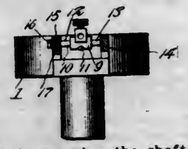
2. A plastic fence post provided with a bracket embedded therein, said bracket having spaced arms projecting from the post and being provided in its body portion adjacent the inner ends of said arms with a groove to receive the head of a bolt and a shoulder to hold the bolt head seated within said groove.

3. A fence post having brackets embedded therein, each of said brackets being provided with a pair of spaced arms projecting beyond the post and having retaining means located adjacent the inner ends of said arms, a board bearing against the arms, bolts extending through the board and having their heads engaged with said retaining means on the brackets, and nuts upon the outer ends of the bolts and clamping the board against said arms.

4. A bracket for fastening a wire or a board to a fence post, said bracket comprising a body portion adapted to be embedded within a cement post and provided with a pair of outwardly extending arms formed with eyes at their outer ends, the said body of the bracket being formed adjacent the inner ends of said arms with a bolt retaining groove and shoulder.

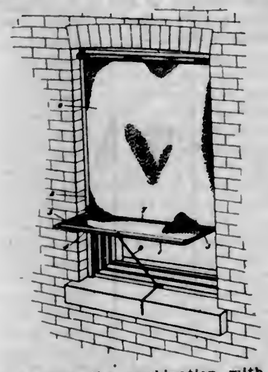
897,774. SOUND-BOX FOR TALKING-MACHINES. WILLIAM J. PATTERSON, Colorado Springs, Colo. Filed Nov. 23, 1907. Serial No. 403,359.

A sound-box provided at one side with a lateral bracket having spaced bearing ears extending at right angles therefrom parallel with said side and terminating adjacent the front of the box, one of said ears having directly formed therein a conical bearing recess and the other having formed therein a screw-threaded opening, an adjustable bearing bushing inserted in said opening and having a niched outer end and formed with a conical bearing recess in its inner end, a stylus-carrying bar provided on its rear side with a boss projecting between the ears and having a transverse opening, a shaft extending through said opening and beyond the sides of the boss and having conical ends journaled in the respective bearing recesses, and a



fastening detachably securing the shaft to the boss, the said bar being adapted for tilting movement in the space between the ears when the bushing is turned outward to a prescribed extent to permit of the insertion and withdrawal of said conical ends of the shaft within and from said bearing recesses, whereby the bar and parts as a whole may be bodily applied and removed, said shaft also being insertible and withdrawable longitudinally through the bearing opening when the bushing is removed.

897,775. AWNING. ANNIE L. PENFOUND, Toronto, Ontario, Canada. Filed Jan. 13, 1908. Serial No. 410,655.



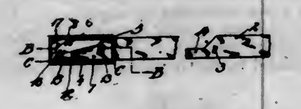
1. In an awning, the combination with the window frame and a flexible shade, of a bracket extending outwardly from said window frame intermediate of its height and rigidly secured thereto, a rod extending across the opening between the sides of said window frame and firmly secured at the inner ends of said bracket and adapted to engage the outer surface of said shade, and means for securing the lower end of said shade in proximity to the outer cross length of said bracket.

2. In a device of the class described, in combination, a window frame, a roller shade secured to said window frame, a rod rigidly secured and extending across said window frame intermediate of its height and adapted to hold said shade towards the lower end thereof in proximity to said frame, and a U-shaped bracket rigidly secured to the window frame and associated with said rod in holding the lower end of said shade under said rod and in a horizontal position in relation to the vertical position of the shade above said rod.

897,776. MECHANICAL SEAL. FRANK P. PFLEGHAR, New Haven, Conn. Filed Mar. 13, 1908. Serial No. 420,834.

1. A mechanical seal comprising a suitable casing, a laterally rocking spring hook within the casing, a shackle

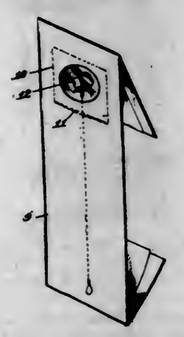
having one end permanently secured to the casing and the opposite end perforated to receive the spring hook, the said spring hook being provided with a lip adapted to be engaged by the entering end of the shackle for rocking the hook into position to spring into the perforation in the shackle.



2. A mechanical seal comprising a suitable casing, a swinging spring hook pivoted within the casing, a shackle having one end permanently secured to the casing and the other end perforated and free to enter the casing, the said spring hook being under the control of the entering end of the shackle for swinging it into locking position and means for retaining the said swinging spring hook against unintentional movement during the handling of the seal.

3. A mechanical seal comprising a suitable casing, an edgewise swinging spring hook pivotally secured within the casing and provided with an operating lip and a shackle having one end permanently secured to the casing and the opposite end perforated to receive the spring hook and adapted to engage the said lip to rock the spring hook into locking position.

897,777. DISPLAY-CLOSURE. ERNEST A. PFLUEGER, Akron, Ohio, assignor to The E. A. Pflueger Company, Akron, Ohio, a Corporation of Ohio. Filed June 24, 1907. Serial No. 380,552.



A display closure, embodying a front having a display aperture therein, and a pocket formed of two walls united together and open at one end, and overlying and closing said aperture, said pocket being formed of transparent material on that face or wall closing said display aperture, and having its transparent face or wall united to said closure front.

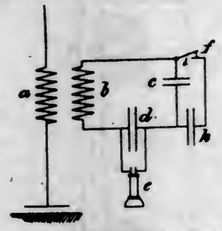
897,778. ENVELOP. GEORGE W. POST, Fond du Lac, Wis. Filed Feb. 24, 1908. Serial No. 417,443.



1. An envelop having a filling opening, a flap adapted to close said opening, one end of said envelop having a notch therein leaving an opening which extends only partially across said end and which is not closed by said flap whereby said envelop is adapted to be used for mailing purposes before the notched end is cut and as a filing jacket after said end is cut, said notched end being reinforced by an extra thickness of material secured at its edge and conforming to the straight and notched portions thereof.

2. An envelop having a filling opening, a flap adapted to close said opening, one end of said envelop having a notch therein leaving an opening which extends only partially across said end and which is not closed by said flap whereby said envelop is adapted to be used for mailing purposes before the notched end is cut and as a filing jacket after said end is cut, said notched end being reinforced by an extra thickness of material secured at its edge and conforming to the straight and notched portions thereof, but leaving the extreme folded edges of the straight portions at each side of the notch uncovered for the purpose specified.

897,779. RECEIVER FOR WIRELESS SIGNALING. VALDEMAR POULSEN, Copenhagen, Denmark. Filed Mar. 6, 1907. Serial No. 360,959.



1. The method of wireless signaling which consists in impelling the energy from a resonant oscillation circuit having inductance and capacity through a detector having inductance by periodically unbalancing or destroying the condition of resonance in said circuit.

2. A receiving apparatus for a wireless telegraph system comprising a circuit in which oscillations are set up, an oscillation circuit in resonance therewith, a detector having a comparatively large reactance, and means for unbalancing or destroying the condition of resonance in said oscillation circuit, whereby the energy accumulated by resonance is caused to discharge itself suddenly through the detector.

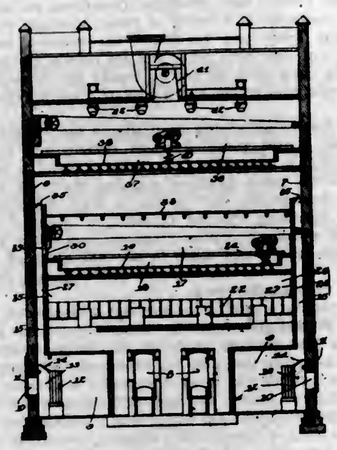
897,780. GAS-LIGHTER. LOUIS B. PRAHAR, New York, N. Y. Filed Nov. 19, 1907. Serial No. 402,874.



1. As an improved article of manufacture, a gas lighter consisting of a body tube having one portion provided with an air vent, and another portion below the said vent provided with a filling of absorbent material adapted to be saturated with alcohol, a catalytic igniter contained entirely within the body tube opposite the said vent, and an air bulb carried by the body tube at a point below its absorbent filling, and connections between said air bulb and the interior of the body tube whereby a light is automatically created only upon pressing the said air bulb, and the flame produced is directed to said vent.

2. As an improved article of manufacture, a gas lighter consisting of a body tube having one portion provided with an air vent, and another portion below the said vent provided with a filling of absorbent material adapted to be saturated with alcohol, a catalytic igniter contained entirely within the body tube opposite the said vent, and an air bulb carried by the body tube at a point below its absorbent filling, and connections between said air bulb and the interior of the body tube whereby a light is automatically created only upon pressing the said air bulb, and the flame produced is directed to said vent, and a controlling means for the fuel supply located between the absorbent filling and the catalytic igniter.

897,781. MALT-KILN. WILLIAM H. PRINZ, Oak Park, Ill., assignor of one-third to Charles A. Plamondon and one-third to George Plamondon, Chicago, Ill. Filed Mar. 25, 1907. Serial No. 364,485.



1. A malt-kiln, comprising a furnace, a plurality of perforated floors above said furnace, means for conducting heated air from said furnace through the malt on said floors means for conducting external air through the malt on said floors, and auxiliary means for heating the external air.

2. A malt-kiln, comprising a furnace, a finishing floor, a withering floor above said finishing floor, means for conducting heated air from the furnace through the malt on said finishing floor, means for conducting heated air from the furnace through the malt on the withering floor without its passing through the malt on the finishing floor, and means for supplying external air to the malt on the finishing floor.

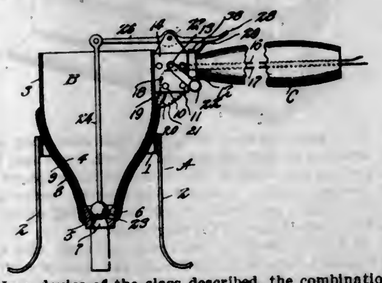
3. A malt-kiln, comprising a furnace, a finishing floor, a withering floor above said finishing floor, means for conducting heated air from the furnace through the malt on said finishing floor, means for conducting heated air from the furnace through the malt on the withering floor without its passing through the malt on the finishing floor, and means for conducting external air to the malt on the withering floor.

4. A malt-kiln, comprising a furnace, a finishing floor, a withering floor above said finishing floor, means for conducting air from the furnace to said floors means for conducting external air through the malt on the finishing floor, and auxiliary means for heating the external air.

5. A malt-kiln, comprising a furnace, a finishing floor, a withering floor above said finishing floor, means for conducting air from the furnace to said floors means for conducting external air through the malt on the withering floor, and auxiliary means for heating the external air.

[Claims 6 to 12 not printed in the Gazette.]

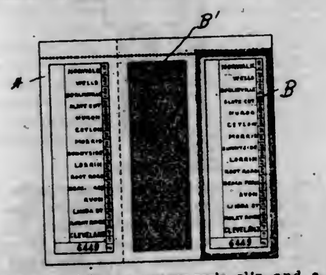
897,782. HEATER FOR APPLYING AND MELTING WAXES, PARAFFINS, SOLDERS, AND SIMILAR SUBSTANCES. FRANK A. REILLEY, Port Chester, N. Y. Filed July 17, 1907. Serial No. 384,263.



1. In a device of the class described, the combination of a crucible open at its top and provided with a discharge mouth at its bottom, a seat at the mouth, a valve arranged to engage the seat, a stem rigidly connected with the valve and supporting the same, a handle connected with the crucible adjacent the top thereof, a lever connected with the upper end of the valve stem, means for fulcruming the lever on the inner end of the handle and above the latter, a finger piece on the outer end of the lever and projecting over the handle, and a spring secured to the handle and bearing on the lever to hold the valve seated, with a switch mounted on the handle at the side thereof, and a heating coil on the crucible and controlled by the switch.

2. In a device of the class described, the combination of a crucible tapering downwardly to form a contracted mouth, a valve seat at the mouth, a valve arranged to engage the seat, a stem connected with the valve, a hollow handle attached to the crucible, a bracket on the inner end of the handle, a lever pivoted intermediate its ends on the bracket, a hinge connection between one end of the lever and the upper end of the stem, the opposite end of the lever projecting over the handle, a sectionalized heating coil secured around the outside of the crucible, and a switch device mounted on the handle and comprising contact points connected to different parts of the heating coil, a lever movable into and out of contact with the points, a lead wire connected with the switch lever, and a wire connected with one end of the coil.

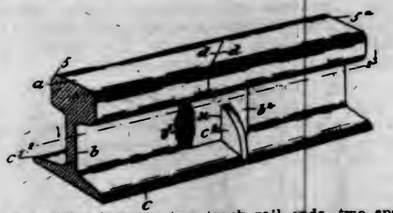
897,783. TICKET. ALEXANDER J. REYNOLDS, Cleveland, Ohio. Filed Dec. 10, 1904, Serial No. 236,314. Renewed June 19, 1908. Serial No. 439,453.



A ticket comprising a passenger's slip and a voucher slip, the passenger's slip and voucher slip being identical in form and superposed one on the other, and a sheet of

transfer material interposed between said slips and affixed around its edges to the edges of the voucher slip normally concealing the face of the voucher slip and also normally remaining intact with said slip.

897,784. TRACK-RAIL JOINT. JOHN C. RIGGS, Berkeley, Cal. Filed Aug. 27, 1907. Serial No. 390,267.



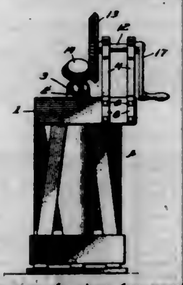
1. In a joint between two track rail ends, two spaced leaf members formed on the end of each track rail in advance of the web thereon, one of each of these spaced members having sliding inserted engagement between the spaced members on the other rail, and seating upon corresponding base-flanges of the track rails.

2. In a joint between two track rail ends, two spaced leaf members formed on each track rail, one of said members on each rail end being offset and thus disposed at one side and in advance of the body of the rail-web, the straight member of each rail having inserted engagemen between the spaced members on the mating rail end and passing over the base-flanges thereof whereon said straight members seat.

3. In a track rail joint, two spaced and parallel leaf members formed on an end of a rail web, one of said members being offset at its junction with the end of said rail web, and a flange turned upward from an end of one base flange on said track rail, and having contact at its upright edge upon the offset leaf member for its lateral support.

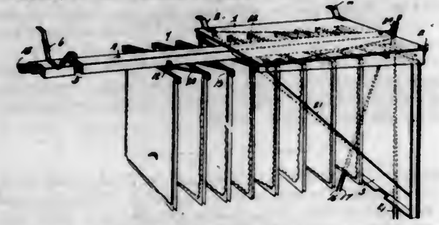
4. In a joint connection between the ends of two track rails, a straight leaf member, and an offset parallel leaf member, both formed on a respective end of the web on each track rail, the ball on each rail having an end face disposed diagonally to the longitudinal plane of a respective track rail web, the straight leaf member on each rail web sliding into the space between the leaf members on the other track rail, and when the diagonal end faces of the balls of the track rails impinge forming a laterally reinforced continuous rail joint connection.

897,785. ATTACHMENT FOR SMUT-MACHINES. EMIL RINDERMAN, Page, N. D. Filed July 9, 1907. Serial No. 382,819.



In a feed driving mechanism for smut mills, the combination of a frame, an inclined conveyer pipe, a screw shaft mounted for rotation in said conveyer pipe and projecting at its upper end above and beyond the upper rear wall of the frame, a beveled pinion detachably mounted upon the projecting end of the shaft, a pair of resilient angular strap brackets spaced apart and secured at their lower ends to the upper end of the rear wall of the frame and bent to extend at an oblique upward and rearward inclination therefrom, boxes secured to the front faces of the upper ends of the brackets, a shaft extending transversely between and beyond the brackets and journaled in said boxes to support the shaft between its ends, a crank handle upon the outer end of the shaft and a beveled gear upon the inner end of the shaft meshing with said pinion, substantially as specified.

897,786. DISPLAY-CABINET. OLIVER T. ROMSOS, Sarles, N. D., assignor of one-half to John A. Meyer, Sarles, N. D. Filed Jan. 21, 1908. Serial No. 411,989.



1. A display apparatus comprising a casing, a track arranged therein and extending therefrom, an extensible frame consisting of a series of racks arranged for travel upon the track and connected for relative movement toward and from each other and for pivotal motion at an angle to their path of travel, means for extending and contracting said frame, and a door or cover for closing the casing.

2. A display apparatus comprising a suspensible casing, a hollow slotted track arranged therein and extending therefrom, an extensible frame consisting of a series of racks having pivot members engaging the track and projecting through the slot therein, a cover for closing the casing, operating devices therefor, a member slidably mounted within the hollow track and connected with the extensible frame, and cords or the like attached to said member for moving the same in and out, said cords extending through the track.

3. A display apparatus comprising a suspensible casing, a track therein and extending therefrom, a series of racks pivotally and slidably engaging the track, a system of levers connecting the racks for expansion and contraction, means for sliding the racks in opposite directions, a door for closing the casing, and controlling means therefor.

4. A display apparatus comprising a suspensible casing, a track arranged therein and extending therefrom, a series of racks pivotally and slidably engaging the track, a system of levers connecting the racks, said levers having a lazytong action to expand and contract the racks and permit a pivotal movement thereof, a member movable within the track, and operating means coacting with said member for adjusting the racks.

5. A display apparatus comprising a suspensible casing, a track disposed within the casing and extending outwardly therefrom, racks slidably and pivotally engaging the track, a system of levers connecting the racks for expansion and contraction, means arranged within and extending through the track for moving the racks in opposite directions, a door for closing the casing, and means for operating the door and securing the same in closed position.

[Claims 6 to 9 not printed in the Gazette.]

897,787. SHORE-ANCHOR. JOHN J. RYAN, Memphis, Tenn. Filed Jan. 10, 1908. Serial No. 410,090.

1. The combination with a post having a threaded lower portion and a collar thereon, of a base plate having a radial slot therein, a peripheral depending flange thereon, said base plate being mounted upon the post below the collar, an arm extended from the base plate, an anchor blade depending from the outer end of the arm, and means for closing the slot in the base plate.

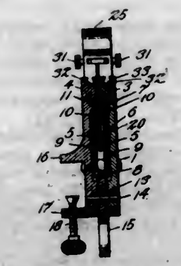
2. The combination with a post having a threaded lower portion and a collar thereon above the thread, of a radially slotted base plate, a peripheral depending flange on said base plate, an anchor blade, an arm on said blade, and clamping means for securing said arm radially projected from the base plate, said means also closing the slot therein.



3. The combination with an anchor post having a thread on its lower portion, a collar thereon above the thread, and a clevis link on the post above the collar, of a base plate having a depending flange on its periphery, said base plate being radially slotted, an arm, a depending anchor blade on the outer end of said arm, and clamping plates for securing the arm on the base plate over the radial slot, said clamping plates also closing the slot.

4. In a device of the character described, the coöperative anchoring device, comprising a forked arm, a keeper plate securable on members of the fork, and an anchor plate secured on the opposite end of the arm and depending at an angle thereto.

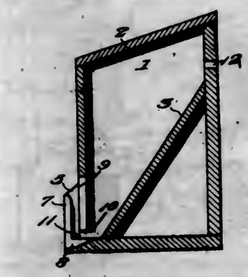
897,788. SAW-CLAMP. WILLIAM F. SCHMIDT, Hastings-upon-Hudson, N. Y. Filed Nov. 24, 1906. Serial No. 344,932.



1. A saw clamp comprising side bars arranged in spaced parallel relation, blocks depending from said bars formed with a slot to register with the space between the bars, each of said blocks being formed with an interior chamber, the upper wall of said chamber being of inverted V-shape, clamping blocks arranged within the chambers and of less width and length than said chambers, the upper surface of said blocks corresponding in shape to the upper wall of the chamber, and means for elevating said clamping blocks within the chamber.

2. A saw clamp comprising side bars arranged in spaced parallel relation, a block depending from said bars and formed with a slot to register with the space between the bars, said block being formed with an interior chamber having an upper wall of inverted V-shape, clamping blocks arranged within and of less width and length than said chamber, the upper surface of said blocks corresponding in shape to the upper wall of the chamber, and disks eccentrically mounted in the depending blocks and underlying and contacting with the clamping blocks.

897,789. MATCH-SAFE. EDWARD A. SCHNEIDER, Custer, Okla. Filed Sept. 12, 1906. Serial No. 334,328.



A match safe comprising a receptacle with a bottom extending beyond the front wall thereof, and having thereon a vertical front wall and vertical side walls so as to form a match delivery compartment therein, the front wall of the receptacle having an opening therein, and said front wall of the match delivery compartment having a similar opening arranged in alinement therewith, a transverse opening arranged between the lower edge of the front wall of the receptacle and the upper surface of said extension, an inclined feeding partition having one end secured to the rear wall of the receptacle and its other end secured to the bottom of the same, a curved recess cut midway in said extension and arranged between, and extending below the opening of the front vertical wall of the match delivery compartment, and a transverse ventilating opening arranged in the rear wall of the receptacle and above the upper secured end of the feeding partition substantially as specified.

897,790. JAR-LID CLAMP. FLAVIUS R. SCHRIVER, Wilkinsburg, Pa. Filed Oct. 22, 1907. Serial No. 398,649.



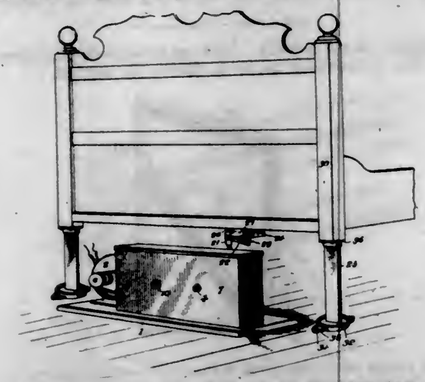
1. A sheet metal jar lid clamp comprising terminal inturned hooks, and a connecting body which is concavo-convex in cross section, said body being depressed centrally to provide a central bearing shoulder and arched arms or thumb pieces between said bearing shoulder and the hooks.

2. A sheet metal jar lid clamp comprising terminal inturned hooks, and a connecting body having marginal flanges, said body and flanges being depressed centrally to provide a central bearing shoulder and arched arms or thumb pieces between said bearing shoulder and the hooks.

897,791. VIBRATING BED. JOHN A. SEEBER, Portland, Oreg. Filed Dec. 10, 1907. Serial No. 405,844.

1. The combination with the bed, of spring legs for supporting the same, and means for vibrating the bed, said means comprising a motor, an arm mounted for swinging movement in a circle and driven by the motor, a friction roller on the end of the arm, a plate provided with an inclined edge with which the roller coöperates,

and with spaced parallel ribs on its upper face, a box secured to the bed and movable between the ribs, and a set screw connecting the box with the plate.



2. The combination with the bed, of spring legs for supporting the same, and means for vibrating the bed, said means comprising a motor, an arm mounted for swinging movement in a circle and driven by the motor, a plate provided with an inclined edge with which the arm coöperates, a box secured to the bed, and means for adjustably connecting the plate with the box.

3. The combination with the bed, of spring legs for supporting the same, and means for vibrating the bed, said means comprising a motor, an arm mounted for swinging movement in a circle and driven by the motor, a plate adjustably secured to the bed and provided with an inclined edge with which the roller coöperates.

4. The combination with the bed, of spring legs for supporting the same, and means for vibrating the bed, said means comprising a motor, an arm mounted for swinging movement in a circle and driven by the motor, and a cam surface on the bed, with which the arm coöperates.

5. In combination, a spring supported bed, and means for vibrating the bed, said means comprising an arm mounted for rotating movement, and a cam surface on the bed with which the arm coöperates, and means for operating the arm.

897,792. GAS-GENERATOR. GEORGE F. SILVEY, Alexandria, Ind., assignor of one-fourth to Samuel D. Montgomery and three-eighths to Samuel W. Montgomery, Alexandria, Ind. Filed Sept. 19, 1907. Serial No. 393,626.

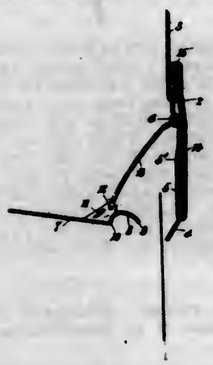


1. Means for generating gas from crude oil including a main frame with a series of holes therethrough, and removable tubes insertible in said holes for forming a conduit and retort, said tubes being formed of longitudinal sections, whereby the tubes may be readily removed and cleaned.

2. Means for generating gas from oil including a casting with a series of holes therethrough with the partitions between them cut away to cause communication between said holes, tubes removably insertible in said holes provided with side openings at their ends and diagonally opposite each other and that register with the openings between the holes in said casting, and side pieces removably secured to said casting for closing the ends of the tubes, whereby the series of tubes will form a sinuous conduit and retort.

3. Means for generating gas from oil including a casting with a plurality of series of holes therethrough with the partitions between the holes of each series cut away to give communication between said holes, and one series being placed above another series with communication between the end openings of said plurality of series, tubes removably insertible in said holes provided with side openings at their ends diagonally opposite each other and registering with the openings between the holes in said casting, and the tubes at the ends of the plurality of series being cut away at their ends to enable one series to communicate with another series, and side pieces removably secured to said casting for closing the ends of the tubes, whereby the series of tubes will form a sinuous conduit and retort.

897,793. GARMENT-CLASP. JOHN M. SINER, Brooklyn, N. Y. Filed Sept. 28, 1907. Serial No. 394,978.



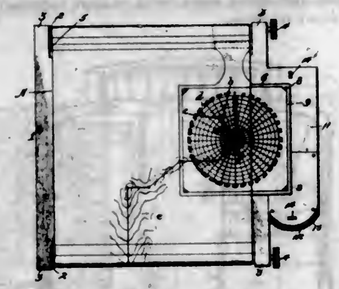
1. A garment clasp comprising a member having a jaw, a gripping lever formed of sheet metal with a hooked extremity, and having integral ears deflected therefrom at a point adjacent to such hooked extremity, whereby the latter is stiffened, and a flexible connection between said member and said lever.

2. A garment clasp comprising a sheet metal member having a turned-over portion at its upper end forming an eye and having an opening forming a jaw at its lower end, a gripping lever hooked at its lower end and having reinforcing ears adjacent said hooked portion and abutting thereagainst, and a swinging link joining said eye to said reinforcing ears.

897,794. SKETCHING OUTFIT. GLENN S. SMITH, Washington, D. C. Filed Nov. 9, 1907. Serial No. 401,428.

1. In a sketching outfit, the combination with a board, of a movable protractor, a compass, sights mounted on the board in fixed relation to the line from which angles indicating direction of the line of sight relative to magnetic north are read in using the instrument, and means for preventing the protractor from turning relative to the line between the sights, substantially as set forth.

2. In a sketching outfit, the combination of a board, a compass mounted upon the board, sights also mounted on the board and having fixed positions relative to the line from which the angles indicating direction of the line of sight relative to magnetic north are read, and means for supporting a protractor on the board and maintaining the base line thereof in definite angular relations to the line between the sights, substantially as set forth.



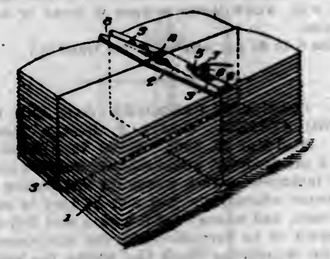
3. In a sketching outfit, the combination of a board, supports for a strip of paper or linen upon which the map is to be drawn adapted to pass over the face of the board, a compass, means for taking a sight on a distant object, and a holder for a protractor arranged between the said strip and the face of the board, whereby the markings on the protractor may be read through the strip, substantially as set forth.

4. In a sketching outfit, the combination of a board, supports for a strip of paper or linen at the opposite edges of the board, the strip being arranged to pass over the face of the board, a compass, means for taking a sight on a distant object, a holder for a protractor arranged to lie between the strip and the face of the board, and means for guiding the protractor holder in its movements and maintaining it in fixed angular relations to the line of the sighting means, substantially as set forth.

5. In a sketching outfit, the combination of a board, a compass supported thereby, means for taking a sight on a distant object having its axial line crossing the pivot of the compass needle, a movable protractor, means for guiding the protractor on right lines and maintaining it in fixed angular relations with the axis of the sighting means, and supports for a strip of material upon which the sketch is to be done, the strip being movable across the face of the protractor, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

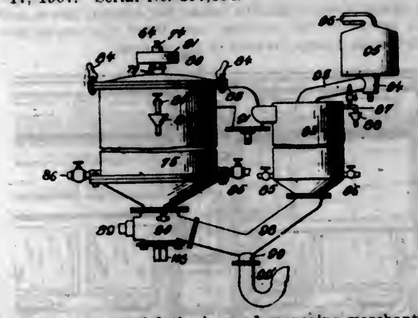
897,795. TYING APPLIANCE. JOB SMITH, Hope, N. D., assignor of one-third to Hugh M. Carpenter, Hope, N. D. Filed Nov. 30, 1907. Serial No. 404,505.



1. A device of the character described comprising a plate, a cord having one end secured thereto, a hook secured to the plate, a flat spring secured at one end to the body, a threaded bolt projecting from the plate and passing through the spring, and a nut engaging the threaded bolt for adjusting the tension of the spring.

2. A device of the character described comprising an elongated plate, a cord having one end secured thereto, a hook secured centrally of the plate, a flat spring secured at one end adjacent an end of the body, the free portion of the spring extending inwardly, and means passing through the spring engaging the body for adjusting the tension of the spring.

897,796. PROCESS OF PREPARING MERCHANTABLE IRON AND TIN COMPOUNDS FROM TIN-PLATE SCRAP. ELMER A. SPERRY, Brooklyn, N. Y. Filed Oct. 17, 1907. Serial No. 397,834.



1. The process of detinning and preparing merchantable iron from tin plate scrap which consists in billeting the scrap, packing the billets into retainers around a central space, placing the retainers within a chamber provided with a central induction and a peripheral eduction opening and developing a fluid current of the detinning reagent from the central space outwardly through the scrap rotating the retainer, and separately recovering the resulting black scrap and the tin bearing products.

2. The process of detinning and preparing merchantable iron from tin plate scrap which consists in billeting the scrap, packing the billets into retainers around a central space, placing the retainer within a chamber provided with a central induction and a peripheral eduction opening, propelling a gaseous current of the detinning reagent through the chamber by centrifugal action due to rotating the retainer, and separately recovering the resulting black scrap and the tin bearing products.

3. The process of detinning and preparing merchantable iron from tin plate scrap which consists in billeting the scrap, packing the billets into retainers, heating the group of billets thus packed under the combined condition of flow of the gaseous detinning reagent through the scrap and centrifugal action, and separately recovering the resulting black scrap and the tin bearing products.

4. The process of preparing merchantable iron from tin plate scrap which consists in suitably preparing the scrap, placing same in a reaction vessel, subjecting such scrap to a detinning reagent, and varying pressure on such scrap while holding the vessel at sub-atmospheric pressure during de-tinning.

5. The process of detinning and preparing merchantable iron from tin plate scrap which consists in compressing the scrap into laminated billets, packing such billets to form a cylinder with the laminations in a plane normal to the axis, suitably preparing the scrap so packed forcing the detinning reagent through the scrap in line with the laminations and separately recovering the resulting black scrap and the tin bearing products.

[Claims 6 to 40 not printed in the Gazette.]

897,797. ALCOVE SLEEPING-CAR. FRANK E. STEBBINS, Washington, D. C. Original application filed Dec. 24, 1897, Serial No. 663,352. Divided and this application filed Dec. 11, 1905. Serial No. 291,322.

1. The combination in a sleeping car and with the floor and walls, of fixed rigid seat backs or partitions located adjacent the walls and substantially at right angles thereto dividing the floor area into a central passage way, sections, and alcoves adjacent the walls; movable partitions adjustable in connection with the fixed seat backs or partitions and entirely shutting off the ends of the sections from the alcoves by night; and means for forming lower and upper berths located entirely within the sections.

2. The combination in a sleeping car and with the floor and walls, of fixed rigid seat backs or partitions located adjacent the walls and substantially at right angles thereto

dividing the floor area into a central passage way, sections, and alcoves adjacent the walls; movable partitions adjustable in connection with the fixed seat backs or partitions and entirely shutting off the ends of the sections from the alcoves by night; means for forming lower and upper berths in the sections; and toilet appliances, embracing wash basins, located in the alcoves.



3. The combination in a sleeping car and with the floor and walls, of fixed rigid seat backs or partitions located adjacent the walls and substantially at right angles thereto dividing the floor area into a central passage way, sections, and alcoves adjacent the walls; movable partitions adjustable in connection with the fixed seat backs or partitions and entirely shutting off the ends of the sections from the alcoves by night; means for forming upper and lower berths in the sections; and movable means for inclosing parts of the alcove spaces to form receptacles therein for bedding by day.

4. The combination in a sleeping car and with the floor and walls, of fixed rigid seat backs or partitions located adjacent the walls and substantially at right angles thereto dividing the floor area into a central passage way, sections, and alcoves adjacent the walls; movable partitions adjustable in connection with the fixed seat backs or partitions and entirely shutting off the ends of the sections from the alcoves by night; means for forming upper and lower berths in the sections; and movable end and top cover boards or partitions for inclosing parts of the alcove spaces to form receptacles and spaces above the top covers for hand baggage.

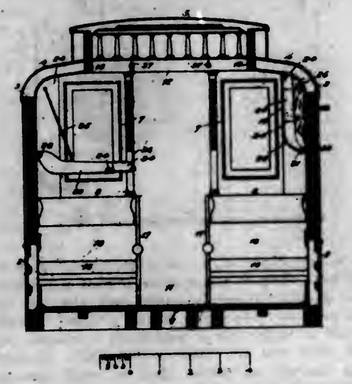
5. The combination in a sleeping car and with the floor and walls, of fixed rigid seat backs or partitions located adjacent the walls and substantially at right angles thereto dividing the floor area into a central passage way, sections, and alcoves adjacent the walls; movable partitions adjustable in connection with the fixed seat backs or partitions and entirely shutting off the ends of the sections from the alcoves by night; means for forming lower berths in the sections; hinged and folding upper berths in the sections; and toilet appliances in the alcoves.

[Claims 6 to 70 not printed in the Gazette.]

897,798. SLEEPING-CAR. FRANK E. STEBBINS, Washington, D. C. Filed Jan. 8, 1908. Serial No. 409,747.

1. The combination in a sleeping car and with the floor and walls, of seat backs and partitions, some of which partitions are fixed, located adjacent the walls and substantially at right angles thereto dividing the floor area into a central passage way, sections, and alcove spaces adjacent the walls, said alcove spaces being entirely shut off from the ends of the sections at night by partitions or head boards but open to the fronts of the sections, and means for forming lower and upper berths in the sections.

2. The combination in a sleeping car and with the floor and wall, of three fixed seat backs dividing the floor area adjacent the wall into a section and an alcove space, partitions in connection with the seat backs two of which are fixed, said alcove space being entirely shut off from the section at night by a partition and seat back so access to the section is by way of the central passage, and means for forming a lower berth and an upper berth in the section; said section and alcove space being in open communication at their front portions.



3. The combination in a sleeping car and with the floor and walls, of fixed vertical partitions located adjacent the walls and substantially at right angles thereto dividing the floor area into a central passage way, sections, and alcove spaces adjacent the walls, said alcove spaces being entirely shut off from the ends of the sections by the partitions but open to their front portions; and means for forming lower and upper berths in the sections.

4. The combination in a sleeping car and with the floor and walls, of fixed vertical partitions located adjacent the walls and substantially at right angles thereto dividing the floor area into a central passage way, sections, and alcove spaces adjacent the walls, said alcove spaces being entirely shut off from the ends of the sections by the partitions but open to their front portions; means for forming lower and upper berths in the sections; and toilet appliances, embracing wash basins, located in the alcoves.

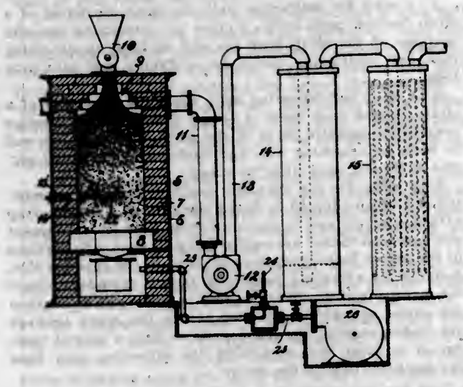
5. The combination in a sleeping car and with the floor and walls, of fixed vertical partitions located adjacent the walls and substantially at right angles thereto dividing the floor area into a central passage way, sections, and alcoves adjacent the walls, said alcoves being entirely shut off from the ends of the sections by the partitions; means for forming lower and upper berths in the sections; and movable means for closing the alcoves from the central passage way, which latter is open in front of an alcove and section.

[Claims 6 to 43 not printed in the Gazette.]

897,799. COMBINED PRODUCER-GAS AND CARBURETING SYSTEM. WILBUR F. STEELE, New York, N. Y. Filed May 25, 1906. Serial No. 318,726.

1. In a gas producer, a fuel chamber adapted to contain a bed of incandescent fuel, means for introducing air into said chamber whereby the fuel may be kept in an incandescent state, and means located within said fuel chamber and adapted to be surrounded by the incandescent fuel therein for introducing liquid fuel within the body of incandescent fuel, whereby within a single producer or chamber said liquid fuel is vaporized, gasified, and mixed with the gases produced from said incandescent fuel and air, thereby resulting in a fixed gas of high combustible power.

2. In a gas producer, a fuel chamber adapted to contain a bed of incandescent fuel, means for introducing air into said chamber whereby the fuel may be kept in an incandescent state, means for introducing steam into said chamber, and means located within said fuel chamber and adapted to be surrounded by the incandescent fuel therein for introducing liquid fuel within the body of incandescent fuel, whereby within a single producer or chamber said liquid fuel is vaporized, gasified, and mixed with the gases produced from said incandescent fuel and air, thereby resulting in a fixed gas of high combustible power.



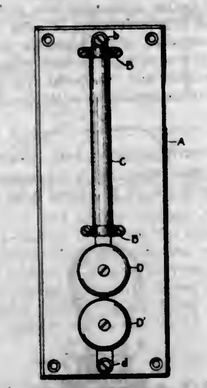
3. In a gas producer, a fuel chamber adapted to contain a bed of incandescent fuel, means for introducing air into said chamber whereby the fuel may be kept in an incandescent state, means for introducing steam into said chamber, and means located within and substantially centrally of said fuel chamber for feeding oil directly to the incandescent fuel therein.

4. In a gas producer, a grate for supporting a bed of incandescent fuel and means, located in close proximity to said grate and adapted to be inclosed within the bed of incandescent fuel, for introducing liquid fuel within said bed of incandescent fuel.

5. In an apparatus of the class described, a gas producer having a liquid fuel supply means extending into the area to be occupied by a bed of incandescent fuel, and a distributer adapted to substantially inclose the delivery portion of the said supply means.

[Claims 6 to 8 not printed in the Gazette.]

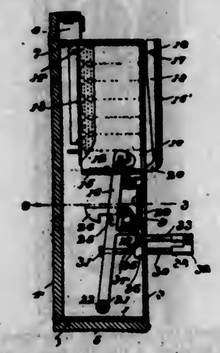
897,800. LIGHTNING-ARRESTER. CHARLES P. STEINMETZ, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 28, 1900. Serial No. 41,351.



1. In a lightning arrester, the combination of spark gap terminals, and a resistance in circuit therewith formed essentially of an oxid the resistance of which decreases when heated.

2. In a lightning arrester, the combination of spark gap terminals, and a resistance in circuit therewith formed of magnetite.

897,801. VENDING-MACHINE. SAMUEL M. STROOCK, Philadelphia, Pa., assignor to Automatic Inventions Company, a Corporation of Pennsylvania. Original application filed Mar. 5, 1907, Serial No. 360,675. Divided and this application filed Oct. 25, 1907. Serial No. 399,163.



1. In a machine of the character described, the combination of a magazine having a slotted bottom adapted to support articles contained therein, an ejector to push the lowest article into the magazine exit, and means to retain the article in the exit after the ejecting operation of the ejector.

2. In a machine of the character described, the combination of a magazine having a slotted bottom, an ejector, a retarding device having a movement approximately equal to the width of the magazine whereby it may bear on the end of an ejected article until it is removed by hand, and said ejector being adapted to normally bear on the bottom of the lowest article in the magazine above the one being ejected to support the superincumbent column of articles, and also to bear on the rear end of the article ejected to hold it against the retarder.

3. In a machine of the character described, the combination of a magazine, an ejector, and a pivoted retarding device having projections adapted to embrace the article being ejected at its sides.

4. In a machine of the character described, the combination of a slotted magazine, an ejector, and a retarding device pivoted near the top of the magazine and extending to a point adjacent the exit from the magazine slot, said ejector having a movement approximately equal to the width of the magazine and the length of articles for which the magazine is adapted and bearing on the end of the article ejected in opposition to the retarding device to retain the article in said exit.

5. In a machine of the character described, the combination of a casing, a slotted magazine, an article-ejector lever movable in the slot, and a stop for the forward movement of the ejector operative while the article is held in the magazine exit after the ejecting operation of the ejector, and means to hold the article in said exit until removed at will.

[Claims 6 and 7 not printed in the Gazette.]

897,802. LOCK CONSTRUCTION. HENRY G. VOIGHT and CHARLES J. CALEY, New Britain, Conn., assignors to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 18, 1908. Serial No. 421,928.

1. In a device of the character described, an outside member, an inside member, a threaded annular boss carried by and projecting to the rear of one of said members, a coupling device carried by the other member arranged to operatively engage the end of said boss, said boss having a passage, and a lock mechanism detachably mounted therein.

2. In a device of the character described, an inside member, a separate outside member, a tubular boss projecting

from one of said members through the other member, and a separate clamping means arranged externally of the last mentioned member coöperating with said boss.



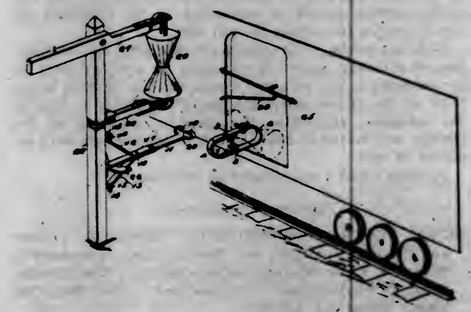
3. In a device of the character described, an inside member, an outside member, a tubular boss projecting from one of said members through the other member, a clamping means arranged externally of the other member coöperating with said boss, a guard for said clamping means, and means to hold said guard in place.

4. In a device of the character described, an inside member, an outside member, a tubular boss projecting from one of said members through the other member, a clamping means arranged externally of the other member cooperating with said boss, a guard for said clamping means, means to hold said guard in place, and a device carried by the first mentioned member to lock the last mentioned means against disengagement.

5. In a device of the character described, two members to be connected, a threaded tubular boss being carried by one of said members and projecting toward the other member, and a clamping device carried by the latter and arranged to engage said tubular boss to clamp said members on opposite sides of the door, and means carried by the last mentioned member to cover and protect said clamping device.

[Claims 6 to 11 not printed in the Gazette.]

897,803. MAIL CATCHER AND DELIVERER. JOHN C. WATTS, Van Wert, Ohio. Filed Jan. 8, 1908. Serial No. 409,818.



1. In combination, an arm arranged to swing horizontally, a brace secured to said arm and having pivotal connection with the support to which the arm is attached, and a plate attached to the support to which said brace is pivotally connected and adapted to engage frictionally with the inner end of the swinging arm.

2. In combination, a horizontally swinging arm, braces projected from opposite sides of the arm and pivoted to the support to which said arm is attached, said arm having an end portion extending between the braces, and a plate attached to the support to which said braces are connected and adapted to engage frictionally with the inner end of the swinging arm.

3. A sling for delivering mail, the same consisting of a strap doubled upon itself, a cross bar connecting opposite portions of the strap near one end to form an attaching loop, and reinforcing means for stiffening said attaching loop.

4. A sling for delivering mail, the same consisting of a strap doubled upon itself, a second strap having a portion connecting opposite parts of the mail strap near one end to form an attaching loop and having the remaining portion stiffening said attaching loop.

5. A sling for the purposes specified, the same consisting of a strap adapted to double upon itself, a second strap attached at one end to the main strap near an end thereof and extended thence across the space between side portions of the folded main strap and attached to the opposite side, forming an attaching loop, and thence extended around the inner side of the attaching loop to stiffen and strengthen the same, and again extended across the space between the folded parts of the main strap to form a second member of a cross bar, separating the attaching loop from the main portion of the strap.

897,804. WAXING DEVICE FOR LAUNDRY-IRONS. CHARLES B. WEATHERHEAD and ANNA L. WEATHERHEAD, Denver, Colo. Filed Mar. 19, 1907. Serial No. 363,243.



1. A waxing device composed of superposed layers of waxed material formed into a solid cake, the edges of the said layers forming the waxing surface, and a binder consisting of a strip of material passed around the edge of the device and threaded through an opening formed therein, the said binder having an exposed loop for the purpose set forth.

2. A waxing device composed of a series of superposed layers of waxed fabric forming a solid body, its waxing surface being composed of the edges of the superposed fabric layers, the device being provided with a flexible binder passed therearound and threaded through an opening formed therein to maintain the solidity of the layers.

897,805. INCANDESCENT-LAMP SOCKET. WILLIAM F. WEGNER, New York, N. Y., assignor to Stephen T. Williams, New York, N. Y. Filed Aug. 20, 1907. Serial No. 389,396.



1. A lamp socket provided with a screw threaded portion of greater diameter than the diameter of the screw threaded end of the lamp bulb to be inserted therein and

capable of receiving the screw threaded end of the lamp bulb by a direct thrust and a yielding contact piece arranged along the side wall of the socket for holding the bulb in position in the socket.

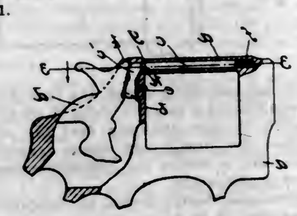
2. The combination with a lamp socket and a lamp bulb provided with a screw threaded end, the socket being provided with a screw threaded opening of greater diameter than the diameter of the screw threaded end of the lamp bulb and capable of receiving the screw threaded end of the lamp bulb by a direct thrust, of a spring contact piece arranged between the side wall of the socket and the bulb, to engage the screw threaded end of the bulb within the socket.

3. The combination with a lamp socket, and a lamp bulb, the socket having a portion of its wall constructed to yield to permit the entering of the lamp bulb by direct thrust and provided with a screw threaded interior for retaining the bulb in position.

4. An electric lamp socket provided with a tubular extension and an annular shoulder around the tubular extension, the said tubular extension being provided with a ratchet shaped screw thread, a yielding contact piece having its face formed to correspond to the screw thread on the interior of the tubular extension, the said contact piece extending along the inner wall of the extension, the relation of the said contact piece to the opposite wall of the tubular extension being such that a lamp bulb may be inserted between the contact piece and the wall of the tubular extension only by crowding back the contact piece.

5. An electric lamp socket comprising a body portion provided with a tubular extension and an annular shoulder, the tubular extension being provided with an interior screw thread, a spring contact piece extending along and spaced from the inner wall of the tubular extension and extending thence through the tubular extension onto the said annular shoulder, a second contact piece extending from the interior tubular extension through the wall thereof onto the annular shoulder, fastening devices extending through the body of the socket into engagement with the contact pieces, binding posts engaged with the contact pieces opposite the annular shoulder and a protecting ring surrounding the tubular extension and concealing the binding posts.

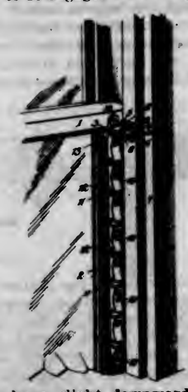
897,806. SAFETY FIRING-PIN. JOSEPH H. WESSON, Springfield, Mass., assignor to Smith & Wesson, Springfield, Mass., a Firm. Filed Dec. 20, 1907. Serial No. 407,391.



A revolver frame having a cylinder-opening therein and having a recoil-plate at one end of said opening, there being on the frame a seat for the hammer when it is down; a hammer, an L-shaped firing-pin one arm of which is located in the frame over said opening and the opposite end of which is located in a space between the hammer and the recoil-plate, and a spring to press the firing-pin towards the hammer, the firing-pin being movable towards and from the hammer when the latter is seated on the frame.

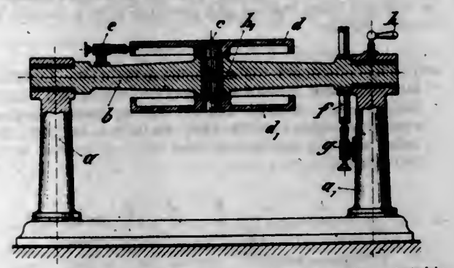
897,807. SASH-LOCK. EPHRAIM WIMER, Crabbottom, Va. Filed Mar. 14, 1908. Serial No. 421,038.

A sash lock comprising a keeper bar provided at intervals with horizontal recesses having grooves in their upper walls, a plate provided at its inner edges with vertically alined spaced eyes, a pintle arranged in the eyes, and a horizontally swinging locking arm provided at one end with an eye arranged between the said eyes and hinged to the plate by the said pintle, said locking arm being arranged to swing into and out of the recesses of the keeper bar and adapted to be engaged with the grooves at the tops



of the recesses by a slight downward movement of the sash, whereby the locking arm and the keeper bar are interlocked to hold the former against outward movement.

897,808. DEVICE FOR THE SUPPORT OF WORK. FRITZ WOLFENSBERGER, Mülheim-on-the-Rhine, Germany. Filed Mar. 28, 1907. Serial No. 365,020.



1. A work holding device comprising a main rotatable member, a plurality of rotatable flat-faced tables mounted thereon adapted to support the work to present the various faces thereof to the operating tools, the axes of rotation of the main member and of the tables being located at substantially right angles to each other, and means for retaining the main member and each table at any desired position in their respective rotatory paths.

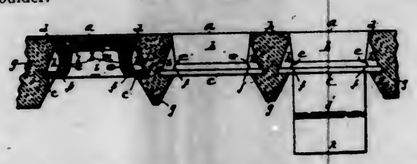
2. A work holding device comprising a rotatable spindle, means for setting and retaining said spindle at any point in its rotation, a plurality of flat rotatable tables mounted on said spindle adapted to support the work to present the various faces thereof to the operating tools, the axes of rotation of the spindle and of the tables being located at substantially right angles to each other, and means for setting and retaining the tables at any point in the rotation thereof.

3. A work holding device comprising a horizontal shaft rotatably mounted in a support, a plurality of flat-surfaced tables rotatably mounted on said shaft, the axes of rotation of said shaft and said tables being substantially at right angles to each other, and separate means for locking said tables to the shaft and the shaft to its support.

897,809. GLASS TILE. STANISLAUS ZACHARIAS, Detroit, Mich. Filed Apr. 24, 1908. Serial No. 428,924.

1. A glass tile comprising a top portion having depending side walls forming within the tile a chamber, said chamber formed with a bead or shoulder about the inside and toward the top thereof, the tile being additionally chambered within said bead or shoulder.

2. A glass tile comprising a top portion having depending side walls terminating in an outwardly projecting flange and inwardly contracted on their exterior surfaces from the top toward the bottom thereof, said walls forming within the tile a chamber outwardly expanded toward the base of the chamber, said chamber formed with a bead or shoulder about the inside and toward the top thereof, the tile being additionally chambered within said bead or shoulder.



3. A glass tile comprising a top portion having depending side walls terminating in an outwardly projecting flange and inwardly contracted on their exterior surfaces from the top toward the bottom thereof, said walls forming within the tile a chamber outwardly expanded toward the base of the chamber, and a prismatic arm projecting downwardly from the top of said chamber.

4. A glass tile comprising a top portion having depending side walls terminating in an outwardly projecting flange and inwardly contracted on their exterior surfaces from the top toward the bottom thereof, said walls forming within the tile a chamber outwardly expanded toward the base of the chamber, a prismatic arm projecting downwardly from the top of said chamber, said arm contracted on opposite sides thereof and provided with a beveled reflecting surface.

897,810. PROCESS FOR MANUFACTURING INSTRUMENTS FOR SEPARATING THE CUTICLE FROM THE NAILS. ROBERT AMORY, Boston, Mass. Original application filed Jan. 18, 1908, Serial No. 411,399. Divided and this application filed Mar. 12, 1908. Serial No. 420,685.



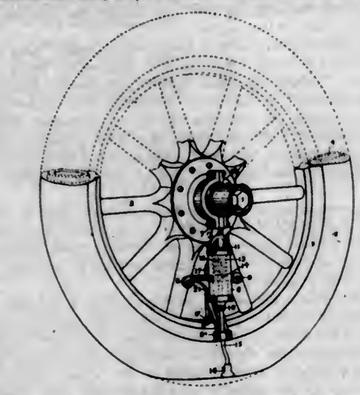
1. The process of manufacturing an instrument for separating the cuticle from the nails which consists in igniting the end of a piece of wood and allowing the same to become partly incinerated, then moistening the carbonized portion of said wood and removing a portion of the same, whereby an instrument with a sterilized conical end having a rounded point is obtained.

2. The process of manufacturing an instrument for separating the cuticle from the nails which consists in igniting the end of a piece of wood and allowing the same to become partially incinerated, then moistening the carbonized portion of said wood and removing by friction all the free carbon that can be removed in such manner, whereby an instrument is obtained having a clean and sterilized point.

897,811. AUTOMATIC PNEUMATIC-TIRE INFLATER. ROBERT C. BARRIE, Philadelphia, Pa. Filed June 18, 1907. Serial No. 379,673.

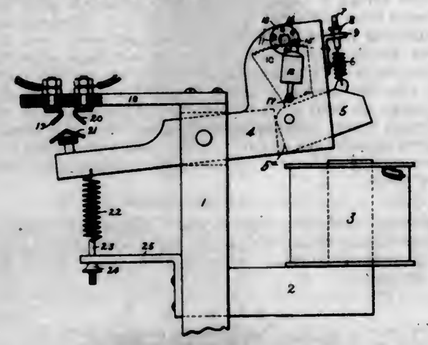
1. In an automatic compensative air-injector for automobiles, the combination of hub clamps with coöperative bolt fastenings for stable application, a projected lug serviceable to guide and guard the piston rod, a foot-piece adjustable to various tire diameters, a piston and inclosing cylinder provided with end and side valves with a flexible tube connection to the air-chamber of the wheel tire, substantially as set forth.

2. In an automatic pneumatic tire inflater, the combination of hub clamps with coöperative bolt fastenings for stable application, the basic projected lugs serviceable to guide and guard the piston rods, duplicate foot-pieces, each adjustable to various tire diameters and the tubular constructed air-pumps jointly contributory to a single



intervening air-reservoir having a single flexible tube connection to the air-chamber of the wheel tire substantially as set forth.

897,812. INVERSE TIME-LIMIT RELAY. PETER BENDMANN, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Jan. 18, 1907. Serial No. 352,952.



1. In a circuit-controlling device, the combination with means for establishing a magnetic field, of an armature, a member moved by said armature near the end of its travel to open the circuit, and means connecting said member and said armature for controlling the rate of movement of the armature.

2. In a circuit-controlling device, the combination with an electromagnet, of an armature, a member moved by said armature near the end of its travel to open the circuit, an adjustable restraining means for said member, and means connecting said member and said armature for controlling the rate of movement of the armature.

3. In a circuit-controlling device, the combination with an electromagnet, of an armature, a member moved by said armature near the end of its travel to open the circuit, adjustable restraining means for said armature, and means connecting said member and said armature for controlling the rate of movement of the armature.
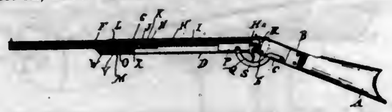
4. In a circuit-controlling device, the combination with an electromagnet, of an armature actuated thereby upon excessive abnormal current to break the circuit, a second armature actuated by said electromagnet on moderate abnormal current and moving the first armature to open the circuit near the end of its travel, and means to control the rate of movement of the second armature.

5. In a circuit-controlling device, the combination with, an electromagnet, of an armature moved thereby to open

the circuit on excessive overload, a second armature moved thereby on moderate overload, means for connecting said second armature near the end of its travel to the first armature to move it and open the circuit, and a retarding device to control the rate of movement of said second armature.

[Claims 6 to 10 not printed in the Gazette.]

897,813. AIR-GUN. BURTON B. BENNETT, Detroit, Mich., assignor, by mesne assignments, to Daisy Manufacturing Co., Plymouth, Mich., a Corporation of Michigan. Filed Apr. 12, 1907. Serial No. 367,838.



1. In an air gun, the combination with a stock, of a casing connected thereto provided with an air compression chamber, a spring-actuated plunger working within said chamber, and means associated with said plunger for first compressing the plunger spring and subsequently shifting the plunger during the operation of cocking.

2. In an air gun, the combination with an air compression chamber, of a spring-actuated plunger working therein, a reciprocating member, means associated with said member and plunger compelling during the operation of cocking, first the compression of the plunger spring upon movement of the member in one direction, and subsequently the shifting of the plunger upon its travel in the opposite direction, and means for reciprocating the member.

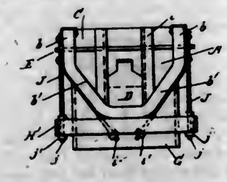
3. In an air gun, the combination with an air compression chamber, of a plunger working therein, an actuating spring for the plunger, a reciprocating member, means associated with said member, and the plunger acting to compress and retain the plunger spring upon movement of the member in one direction, and to shift the plunger and spring upon its travel in the opposite direction, and means for reciprocating the member.

4. In an air gun, the combination with a stock, of a casing pivoted thereto and provided with an air-compression chamber, a spring-actuated plunger working within said chamber, a reciprocating member in operative relation to the plunger adapted upon reciprocation to successively compress the plunger spring and shift the plunger, and an operative connection between said reciprocating member and the stock.

5. In an air gun, the combination with an air compression chamber, of a spring-actuated plunger working therein, the plunger stem or rod, a reciprocating member in operative relation to the plunger spring, a trigger carried by said member adapted to engage the rod, and means for reciprocating said member.

[Claims 6 to 9 not printed in the Gazette.]

897,814. GRAIN-TANK. CARL BLOM, Lake Park, Minn., assignor of one-third to John A. Bergren and one-third to John H. Moan, Lake Park, Minn. Filed Apr. 27, 1907. Serial No. 370,674.



In a grain tank, the combination, with a trough-shaped body formed of a series of bars, and provided with end-pieces; of a series of crosspieces arranged under the said body, brace-straps arranged in pairs and secured to the upper part of the said body and provided with converging screwthreaded portions and nuts at their lower ends under the said body and engaging with all the said crosspieces, and reinforcing brace-rods also arranged in pairs and secured to the upper part of the said body and to the laterally projecting end portions of certain of the said crosspieces.

897,815. MAKING PHOTOGRAPHIC PRINTS. CHAS. L. A. BRASSEUR, New York, N. Y. Filed July 20, 1906. Serial No. 326,975.



1. The method, substantially as hereinbefore set forth, of obtaining from a subdivided photograph (negative or diapositive) another photograph (positive or negative), containing a plurality of partial images, in which the color values or luminosities of the different partial images are differently rendered, consisting in printing the selected partial images unequally.

2. The method, substantially as hereinbefore set forth, of obtaining from a subdivided photograph another photograph, containing a plurality of partial images, in which the color-values or luminosities of different partial images are rendered in ratios different from that of the original, consisting in printing the selected partial images unequally and each over the whole of its portion of the photograph.

3. The method, substantially as hereinbefore set forth, of obtaining a "fourth plate" for use in polychrome printing consisting in printing, from a subdivided photograph, another photograph in which the color values or luminosities of the selected partial images are rendered in a ratio differing from that of the original, and in making the plate from the second photograph mentioned.

897,816. AUTOMATIC GAS CUT-OFF. VICTOR E. CAMPBELL, Portland, Oreg., assignor to Campbell's Automatic Safety Gas Burner Company, Portland, Oreg. Filed Oct. 15, 1906. Serial No. 339,027.



1. The combination with a tube having a burner at one end, and an auxiliary burner disposed below and adjacent the first mentioned burner and disposed to receive gas from the tube; of a plug valve for shutting off the supply of gas to the burners, a brake wheel, means operated by the movement of the valve for rotating the brake wheel, a spring pressed brake member disposed to automatically bear against and hold the brake wheel against movement, an arm pivoted adjacent and disposed to bear downward

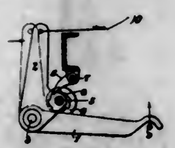
upon the brake member, and a thermostat disposed adjacent the auxiliary burner and adapted to be heated by a flame therefrom to release the arm and the brake member, said brake member being normally held by the arm and thermostat out of contact with the brake wheel.

2. The combination with a burner; of a valve for cutting off the flow of gas to the burner, a brake wheel, a spring pressed lever disposed to automatically contact with the brake wheel to hold it against rotation, a pivoted arm bearing upon the lever, a thermostat disposed when cool to bear upon the arm to hold the lever out of contact with the brake wheel, said thermostat being disposed to be heated by a flame from the burner, and mechanism disposed to be actuated upon the cooling of the thermostat and the release of the brake wheel for operating the valve to cut off the gas supply to the main burner.

3. The combination with a main illuminating burner and a gas cock; of a closing spring for said cock which is placed under stress on opening movement of the cock, brake means for preventing operative movement of the spring and the closing of the cock while the gas is burning, a pilot burner, and a thermostat element supported solely at its base and terminating short of the main burner, said element and all parts connected thereto being disposed entirely outside of the field of light of the main burner, said thermostat element being adapted to be heated by a flame from the pilot burner and designed when cooled by the extinguishing of said flame to shift said brake means into position to permit closing of the cock.

4. The combination with a main illuminating burner and a pilot burner therebelow; of a single gas cock for simultaneously turning on or shutting off gas for the two burners, a closing spring for said cock which is placed under stress on opening movement of the cock, brake means for preventing operative movement of the spring and the closing of the cock while the gas is burning, and a thermostat element to be heated by a flame from the pilot burner and designed when cooled by the extinguishing of said flame to shift said brake means into position to permit closing of the cock, said thermostat and all parts connected thereto being disposed outside of the field of light of the main burner.

897,817. APPARATUS FOR ADJUSTING RAILWAY-VEHICLE AND LIKE BRAKES. VICTOR CHAVÉRIAT, Paris, France, assignor of one-half to John Patrick O'Donnell, Westminster, England. Filed May 28, 1908. Serial No. 435,588.

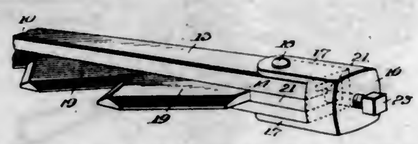


1. The combination, with a fulcrum shaft, and two levers pivoted side by side on the said shaft; of a revoluble adjusting cam supported by one of the said levers and bearing against the side of the other lever, the angle formed by the said levers being varied by turning the said cam.

2. The combination, with a fulcrum shaft, and two levers pivoted side by side on the said shaft; of a revoluble adjusting cam supported by one of the said levers and bearing against the side of the other lever, an operating wheel for revolving the said cam, a driving device for revolving the said operating-wheel step by step, and means for supporting the said driving device independent of the said levers so that it normally remains stationary while the said levers are being oscillated on their fulcrum shaft.

3. The combination, with a fulcrum shaft, and two levers pivoted side by side on the said shaft; of a revoluble adjusting cam supported by one of the said levers and bearing against one side of the other lever, a ratchet-toothed wheel secured to the said cam, a pawl for engaging with the said wheel, and a stationary support for the said pawl, the said cam being revolved step by step to adjust the relative positions of the said levers.

897,818. CUTTER-BAR FOR HARVESTERS. WILLIAM S. CLARK, Harrisville, W. Va., assignor of one-half to William R. Meservie, Harrisville, W. Va. Filed Jan. 2, 1908. Serial No. 408,998.



1. In a cutter bar for harvesters, the combination with a cutter bar having two longitudinal channels and a vertical channel connecting the same, of cutter blades having a vertical flange at one edge and a horizontal ledge projecting from the same, said vertical flange and ledge adapted to slide in the aforesaid vertical and longitudinal channels, and means for clamping said blades in said channels.

2. In a cutter bar for harvesters, the combination with a cutter bar having two longitudinal channels and a vertical channel connecting the same, of cutter blades having a vertical flange at one edge and a horizontal ledge projecting from the same, said vertical flange and ledge adapted to slide in the aforesaid vertical and longitudinal channels, and a clamping block at the outer end of the cutter bar for holding the blades in place.

3. In a cutter bar for harvesters, the combination with a cutter bar having a longitudinal angular channel, of cutter blades having overhanging ledges and adapted to slide in said channel, a cap pivotally secured to the outer end of the cutter bar and adapted to close the channel at one end, and locking means mounted in said cap adapted to clamp the blades in the cutter bar.

4. In a cutter bar for harvesters, the combination with a cutter bar having a closed inner end and angular longitudinal channel, of cutter blades having overhanging ledges and adapted to slide in said channel, a bifurcated clamping block adapted to fit in said channel at the outer end of the cutter bar, a cap pivotally secured to the outer end of the cutter bar and adapted to close the channel at said end, and means mounted in said cap adapted to engage the clamping block and lock the cutter blades in the cutter bar.

5. In a cutter bar for harvesters, the combination with a cutter bar having a longitudinal angular channel, of cutter blades having overhanging ledges and adapted to slide in said channel, a cap pivotally secured to the outer end of the cutter bar and adapted to close the channel at said end, and a set screw mounted in said cap and adapted to clamp the blades in the cutter bar.

[Claim 6 not printed in the Gazette.]

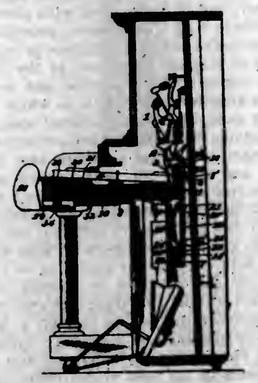
897,819. RAILROAD CROSS-TIE. WILLIAM CLEMENT, Traverse City, Mich. Filed Sept. 11, 1907. Serial No. 392,343.



1. A railroad tie made of a sheet of plate steel bent into a hollow body having equally but oppositely inclined sides and parallel top and bottom, the top being narrower than the bottom and having upwardly bent integral tongues and a threaded hole near each tongue, in line with a similar hole in the bottom of the tie.

2. A railroad tie made of plate steel with parallel top and bottom and inclined sides, said top having integral tongues and holes adjacent said tongues in line with holes in the bottom and a cap plate having downwardly inclined side flanges adapted to fit over said tie and be fastened thereto by bolts passing through holes therein and the alined holes in the top and bottom of the tie.

897,820. MECHANICAL PLAYING APPARATUS. WILLIAM F. COOPER, Norwalk, Ohio, assignor to The A. B. Chase Company, Norwalk, Ohio, a Corporation of Ohio. Filed Sept. 4, 1906. Serial No. 333,217.



1. In an automatic playing piano, the combination with the piano action including abstracts, of abstract actuating devices corresponding in number to the abstracts, and means for independently actuating said devices, said means having a disengageable make and break engagement with the actuating devices, the normal position of the abstract actuating-devices relatively to the action remaining unaffected by the disengagement therefrom of said means.

2. In an automatic playing piano, the combination with a piano, movable player-mechanism, including power pneumatics arranged within the case of the piano, and a piano-action including abstracts, of a player key-frame secured within the piano case and embodying pivoted player-keys, one for each abstract and adapted to engage said abstracts to actuate the same, said player key-frame also embodying vertically-movable finger-wires, one for each player key and connected thereto, and a make-and-break engagement between each of said finger-wires and the power pneumatics of said pneumatic-action.

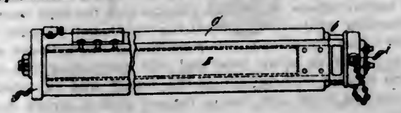
3. In an automatic playing piano, the combination with the piano action including abstracts, of abstract actuating devices corresponding in number to the abstracts, and means extending into the plane of the path of movement of the devices for independently actuating them, said means having a disengageable make and break engagement with the actuating devices as a unitary structure, the normal position of the abstract actuating-devices relatively to the action remaining unaffected by the disengagement therefrom of said means.

4. In an automatic playing piano, the combination with a piano-action including abstracts, of a movable interior playing mechanism including power pneumatics, a permanently-mounted key-frame including pivotally-mounted player-keys, one for each abstract and engaging said abeach finger-wire, and a pneumatic finger carried by each player key-frame, one for each player-key and connected at their upper ends to said player-keys, a block carried by each finger-wire, and a pneumatic finger carried by each power pneumatic of said player-mechanism, the said blocks and the said pneumatic fingers constituting a note-sounding, make and break engagement between each power pneumatic and its corresponding abstract.

5. In an automatic piano player, the combination with a pneumatic playing mechanism including power pneumatics, and the piano-action including abstracts, of player-keys, one for each abstract positioned back of and engaging under the abstracts, and operating connections between the power pneumatics of said playing-mechanism and the player-keys and operating on said player-keys to actuate the abstracts.

[Claims 6 to 8 not printed in the Gazette.]

897,821. RECOIL APPARATUS FOR GUNS. ARTHUR T. DAWSON and GEORGE T. BUCKHAM, Westminster, London, England, assignors to Vickers Sons & Maxim Limited, London, England. Original application filed Sept. 27, 1906, Serial No. 336,423. Divided and this application filed Nov. 14, 1907. Serial No. 402,148.



1. In recoil apparatus for guns the combination with a recoil buffer cylinder of a piston rod carrying a piston comprising a part fixed to the piston rod, another part adapted to slide longitudinally thereon, and a third part capable of angular displacement said third part being situated between the fixed and sliding parts, the three parts comprising the piston being provided with ports, substantially as set forth.

2. In recoil apparatus for guns the combination with a recoil buffer cylinder of a piston rod carrying a piston comprising a part fixed to the piston rod, another part adapted to slide, longitudinally thereon, and a third part capable of angular displacement, said third part being situated between the fixed and sliding parts, the three parts comprising the piston being provided with ports in their peripheries, substantially as set forth.

3. In recoil apparatus for guns, the combination with a recoil buffer cylinder of a piston rod, and a piston carried by the rod and comprising a part fixed to the rod, another part adapted to move longitudinally theron, means for returning the said part to its initial position, and a third part situated between the fixed and sliding parts and capable of angular displacement upon the piston rod, the three parts comprising the piston being provided with ports, substantially as set forth.

4. In recoil apparatus for guns the combination with a recoil buffer cylinder of a piston rod, and a piston carried by the rod and comprising a part fixed to the rod, another part adapted to move longitudinally thereon, means for returning the said part to its initial position and a third part situated between the fixed and sliding parts and capable of angular displacement upon the piston rod, the three parts comprising the piston being provided with ports in their peripheries, substantially as set forth.

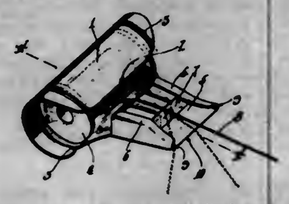
5. In recoil apparatus for guns the combination with a recoil buffer cylinder of a piston rod, a piston carried by the rod said piston comprising a part fixed to the rod, another part adapted to slide longitudinally thereon, a sleeve on said sliding part, a helical spring arranged in said sleeve, and a third part capable of angular displacement said third part being situated between the fixed and sliding parts the three parts comprising the piston being provided with ports, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

897,822. THREAD HOLDER AND WAXER. MARION F. DOUGHERTY, Los Angeles, Cal., assignor of forty one-hundredths to W. H. Whitesell, Los Angeles, Cal. Filed Sept. 16, 1907. Serial No. 393,241.

1. In a device of the character described comprising a substantially cylindrical casing adapted to receive a spool

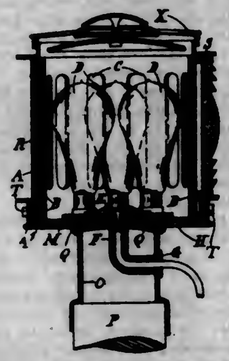
of thread, an extension projecting from the casing, and bees-wax in said extension through which the thread is adapted to be drawn and waxed.



2. A device of the character described comprising a substantially cylindrical casing formed of springy material and having an unconfined edge, said casing having near each end a projection which projects inwardly beyond the inner face of the cylinder, the said casing being adapted to receive spools of various lengths and the said inwardly extending projections permitting the spool to slide endwise along the smooth inner surface of the cylinder while the thread is being unwound but preventing the spool from sliding endwise out of the casing, and an extension projecting from said casing formed with a thread cutting edge.

3. A device of the character described comprising an expansible cylindrical casing adapted to receive and hold a spool of thread and formed with an extension having inwardly directed flanges adapted to receive a cake of bees-wax, the said flanges being depressed at their forward portions to form thread guiding troughs, and the said extension having one or more cutting edges.

897,823. MARINE SIGNALING-LAMP AND THE LIKE. HENRY ENDALL, Southampton, England. Filed Aug. 5, 1907, Serial No. 387,188. Renewed July 27, 1908. Serial No. 445,525.



1. A signaling lamp comprising in combination a rotatable cylinder and a stationary cylinder one fitting freely into the other, and both provided with slots which coincide or alternate with one another according to the respective positions of the said cylinders in relation to each other, lamps mounted within the inner cylinder upon an immovable member at the bottom thereof, a revoluble lens attachment surrounding the stationary cylinder and means for imparting to said rotatable cylinder a limited rotary movement in two directions.

2. A signaling lamp comprising in combination a rotatable cylinder and a stationary cylinder, one fitting freely into the other, and both provided with slots which coincide or alternate with one another according to the respective positions of the said cylinders in relation to each other, a disk or plate at the bottom of the inner cylinder, and a stem for carrying the same and keeping it stationary, such stem forming an axle on which the rotatable cylinder may turn, and lamps mounted upon said disk or plate, a revoluble lens attachment surrounding the stationary cylinder and means for imparting to said rotatable cylinder a limited rotary movement in two directions.

3. A signaling lamp comprising in combination a rotatable cylinder and a stationary cylinder, one fitting freely into the other, and both provided with slots which coincide or alternate with one another according to the respective positions of the said cylinders in relation to each other, lamps mounted within the inner cylinder upon an immovable member at the bottom thereof, a revoluble lens attachment surrounding the stationary cylinder, means for actuating said revoluble lens attachment, and means for imparting to said rotatable cylinder a limited rotary movement in two directions.

4. A signaling lamp comprising in combination a rotatable cylinder and a stationary cylinder, one fitting freely into the other, and both provided with slots which coincide or alternate with one another according to the respective positions of the said cylinders in relation to each other, a disk or plate at the bottom of the inner cylinder, a stem for carrying the same and keeping it stationary, such stem forming an axle on which the rotatable cylinder may turn, and lamps mounted upon said disk or plate, a revoluble lens attachment surrounding the stationary cylinder, means for actuating said revoluble lens attachment, and means for imparting to said rotatable cylinder a limited rotary movement in two directions.

5. A signaling lamp comprising in combination a rotatable cylinder and a stationary cylinder, one fitting freely into the other, and both provided with slots which coincide or alternate with one another according to the respective positions of the said cylinders in relation to each other, lamps mounted within the inner cylinder upon an immovable member at the bottom thereof, a revoluble lens attachment surrounding the stationary cylinder, a lever for actuating the rotatable cylinder, one arm of said lever entering a recess in the base of the latter and the other arm being adapted to be depressed and a spring for returning said lever to its original position after each depression.

[Claim 6 not printed in the Gazette.]

897,824. POLE-SHOE. WILLIAM R. EVERETT and EDWIN J. NEWTON, Chicago, Ill. Filed Aug. 17, 1904. Serial No. 221,021.



1. Pole shoes for magnetic engines or motors, said shoes being formed with extended arms, said arms being offset on opposite sides and overlapping the arms of the next shoe, said shoes having circumferential grooves formed therein, corresponding pole shoes having shoulders thereon, said shoulders fitting to and coinciding with the said circumferential grooves, for the purpose set forth substantially as described.

2. Pole shoes for magnetic engines or motors, said shoes being formed with extended arms, said arms being offset on opposite sides and overlapping the arms of the next shoe, said shoes having circumferential grooves formed therein, corresponding pole shoes having shoulders thereon, said shoulders fitting to and coinciding with the said circumferential grooves, strips of non-magnetic material mounted in said grooves, for the purpose set forth substantially as described.

897,825. DOOR-CHECK. MICHAEL J. FLYNN, New York, N. Y., assignor of one-half to Edward W. McCarty, Brooklyn, N. Y. Filed June 24, 1905, Serial No. 266,737. Renewed Feb. 3, 1908. Serial No. 414,059.

1. In a door check, a tubular casing adapted to be inset into the door jamb, a checking cylinder contained therein, a closing spring for impelling said checking cylinder inward, a resilient connection rod secured to the checking cylinder and having a ball at its free end, and an anchorage adapted to be secured to the door and having a socket to loosely receive said ball.



2. In a door check, a casing adapted to be inset into the door jamb, a checking cylinder contained therein, a closing spring for impelling said checking cylinder inward, a resilient rod secured to the cylinder and having a ball thereon, an anchorage adapted to be secured to the door and adapted to loosely receive said ball, a piston rod projecting from said checking cylinder and arranged to impinge against the inner wall of said casing as the checking cylinder moves inward, and means whereby said piston rod accelerates the checking action for only a portion of its movement into the checking cylinder.

3. In a door check, a casing adapted to be inset into the door jamb, a checking cylinder contained therein, a closing spring for impelling said checking cylinder inward, a piston rod projecting from the inner end of said checking cylinder, and having a reduced portion within the cylinder, a piston surrounding said reduced portion, and adapted to have a limited longitudinal movement upon said piston rod, said checking cylinder having a bore closely fitting said piston at one end and an enlarged bore at the other, a spring for impelling said piston rod outward from the checking cylinder, a connection rod secured to said cylinder, and an anchorage adapted to receive said connection rod.

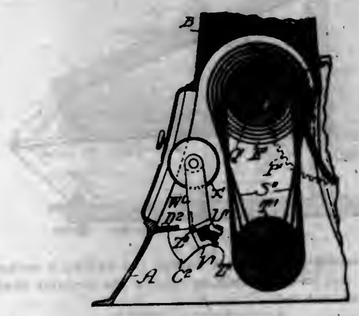
4. In a door check, a casing adapted to be inset into the door jamb, a checking cylinder contained therein, a closing spring for impelling said checking cylinder inward, a piston rod projecting from said cylinder and arranged to exert a resistance for a portion of its inward movement therein, a steel wire connection rod secured to said cylinder, and means upon the door for removably receiving said connection rod.

5. In a door check, a casing adapted to be inset into the door jamb, a checking cylinder contained therein, a closing spring for impelling said checking cylinder inward, a piston rod projecting from said cylinder and arranged to exert a resistance for a portion of its movement into the cylinder, a steel wire connection rod secured to said cylinder, a ball on said connection rod, and an anchorage upon the door arranged to removably receive said ball.

[Claim 6 not printed in the Gazette.]

897,826. DRIVING MECHANISM. HENRY J. GILBERT, Saginaw, Mich., assignor to William B. Mershon and Company, Saginaw, Mich., a Corporation of Michigan. Original application filed Sept. 8, 1896, Serial No. 605,049. Divided and this application filed Jan. 13, 1906. Serial No. 295,944.

1. The combination of a driving and a driven shaft, a cone pulley fast upon one of said shafts, a pulley upon the other shaft, a series of belts passing around said pulleys, a tightener pulley, and means for moving said tightener pulley longitudinally of said shafts and throwing it against one or another of the belts, to cause the driving shaft to drive the driven shaft at greater or less speed, as desired.



2. The combination of a driving and a driven shaft, a cone pulley fast upon the driving shaft, another cone pulley fast upon the driven shaft in reverse position to that upon the driving shaft, a series of belts passing around said pulleys, a tightener pulley, and means for moving said tightener pulley longitudinally of the shafts and throwing it against one or another of the belts, for the purpose described.

3. The combination of a driving and a driven shaft, a cone pulley fast upon one of said shafts, a pulley upon the other shaft, a series of belts passing around both of said pulleys, a rock shaft parallel to the above mentioned shafts, an arm movable longitudinally upon but turning with said rock shaft a tightener pulley carried by said arm, and means for moving said arm along the rock shaft, to bring the tightener pulley opposite one or another of the belts, and for rocking the shaft to throw the pulley against such belt, for the purpose described.

4. The combination of a driving and a driven shaft, a cone pulley fast upon the driving shaft, another cone pulley fast upon the driven shaft in reverse position to that upon the driving shaft, a series of belts around said pulleys, a rock shaft parallel with said driving and driven shafts, an arm movable longitudinally upon but turning with said rock shaft a tightener pulley carried by said arm, and means for moving the arm along the rock shaft, to bring it opposite one or another of the belts, and for rocking the shaft to throw it against such belt, for the purpose described.

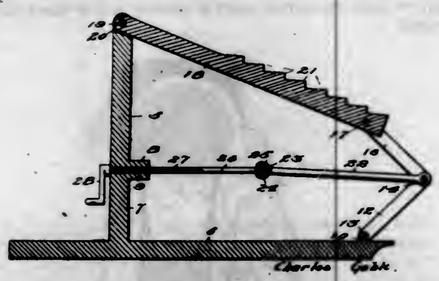
5. The combination of a driving and a driven shaft, a cone pulley fast upon one of said shafts, a pulley upon the other shaft, a series of belts passing around said pulleys, a rock shaft parallel to the first mentioned shafts, an arm movable longitudinally upon but turning with said rock shaft a tightener pulley carried by said arm, a pair of wheels located at the opposite ends of said shaft, a chain passing around said wheels and having its ends connected to the arm carrying the tightener pulley, and means for turning one of said wheels and rocking the shaft, to move the tightener pulley opposite one or another of the belts and to throw it against such belt, for the purpose described.

[Claims 6 to 14 not printed in the Gazette.]

897,827. LIFTING-JACK. CHARLES GOBLE, Beaverdam, Ohio. Filed Jan. 13, 1908. Serial No. 410,629.

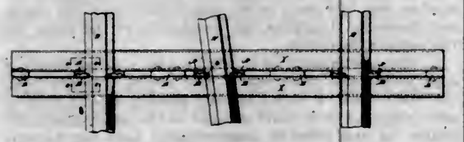
A lifting jack comprising a supporting base, a standard carried by the base, links pivoted to the base forwardly of the standard, links pivoted to the first named links, a lifting head pivotally connected to the standard at its inner end and having its outer end pivotally connected to the upper ends of the last named links, the standard having a threaded passage, a rod carried by the standard and having a threaded portion disposed in the passage, said rod having a portion extending outwardly of the standard and

provided at its ends with a circular head, and a rod pivotally connected at its forward end to the links at their



points of connection, said last named rod having a socket at its inner end and arranged to receive the circular head of the first named rod.

897,828. RAIL-FASTENER. OLIVER A. HALL, Omaha, Nebr. Filed Nov. 14, 1907. Serial No. 402,173.



1. A rail fastening, consisting of a rail supporting member having a slot running transversely to the rail with the adjacent vertical faces of said slot wrought into clutch formations and a rail clamp with corresponding clutch formations fitting between and interlocking with both of said opposite clutch formations of the rail supporting member.

2. A rail fastening, consisting of a rail supporting member having a slot running transversely to the rail with the adjacent vertical faces of said slot wrought into clutch formations, and a compound rail clamp made in two parts, each having on its exterior side clutch formations corresponding to the clutch formations of the adjacent side of the supporting member, said compound rail clamp being provided with interlocking means and fitting between and interlocking with both of said opposite clutch formations of the rail supporting member.

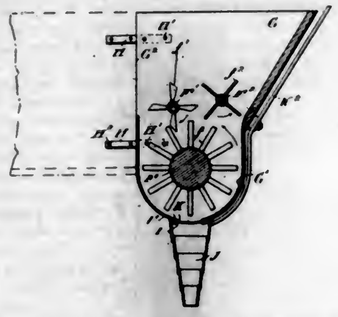
3. A rail fastening, consisting of a rail supporting member having a slot running transversely to the rail with the adjacent vertical faces of said slot wrought into clutch formations, and a two-part rail clamp, one part being formed with clutch formations of a horizontal character meshing with the corresponding clutch formations of the adjacent rail supporting member and the other part of the rail clamp being formed with vertical clutch formations meshing with the clutch formations of its adjacent rail supporting members, and means for connecting the two parts of the rail clamped together.

4. A rail fastening, consisting of a rail supporting member having a slot running transversely to the rail with the adjacent vertical faces of said slot wrought into clutch formations having both a vertical and a horizontal locking direction, and a rail clamp having on its opposite sides clutch formations fitting between and interlocking with the clutch formations of both the rail supporting members.

5. A rail fastening, consisting of a rail supporting member having a slot running transversely to the rail with the adjacent vertical faces of said slot wrought into clutch formations, said rail supporting member being also divided into two parts with one overlapping the other with a rabbeted joint, and a rail clamp with clutch formations fitting between and interlocking with both of said opposite clutch formations of the rail supporting member.

[Claims 6 to 24 not printed in the Gazette.]

897,829. FERTILIZER-DISTRIBUTER. HENRY N. HARPER, Monroe, La. Filed June 3, 1908. Serial No. 436,375.



1. The improvement in fertilizer distributers herein described, comprising the fertiliser box having a rounded bottom provided near its ends with discharge openings and having its front plate terminating at approximately the bottom of the wagon box, whereby the upper portion of the box is open at its front side, bars projecting forwardly from the fertilizer box and adapted to be secured to the side boards of a wagon box, a main shaft journaled in the fertilizer box and provided with blades which are beveled or inclined in reverse directions from its center toward the ends of the shaft, whereby to feed the material in such directions, a cutter shaft geared with the main shaft and having projecting knives adapted to cut up straw, shucks, cobs and the like and a driven stripper shaft journaled in the fertilizer box and having therein projecting pins adapted to pick straw, shucks and the like from the blades of the main shaft and to throw the same on the knives of the cutter shaft, and a regulating slide movable relatively to the fertilizer box and having openings which may be set into and out of registry with the discharge openings thereof, and a lever for operating the said slide, substantially as set forth.

2. The combination in a fertilizer distributer substantially as described, of the box, a main shaft operating therein and having conveyer blades inclining in reverse directions from the center of the shaft towards its ends and adapted to feed the material toward the opposite ends of the fertilizer box, a cutter shaft journaled in the box above the main shaft and having projecting knives adapted to cut straw and the like and to prepare the same for distribution, and a stripper shaft having pins adapted to pick straw, shucks and the like from the blades of the main shaft and to throw same to the knives of the cutter shaft, substantially as set forth.

3. The combination in a fertilizer distributer with the box and a bladed main shaft therein of a cutter shaft above the main shaft and slightly to one side of the center thereof and having knives adapted to cut up barn yard fertilizer material in the passage thereof to the main shaft, and a stripper shaft above the main shaft and to the opposite side of the center thereof from the cutter shaft and having pins adapted to pick straw, shucks and the like from the blades of the main shaft and to deliver the same to the knives of the cutter shaft, substantially as set forth.

897,830. DEVICE FOR RESHAPING AND RE-FORMING BOOTS AND SHOES. EDWARD C. HAWKINS, Allegheny, Pa., assignor of one-half to David Roney, Allegheny, Pa. Filed Mar. 28, 1907. Serial No. 365,146.

1. A device for reshaping shoes having means for externally engaging the sole of the shoe at the toe of the shoe and means for engaging the edge of the upper surface of said sole in the rear of the toe-engaging means.

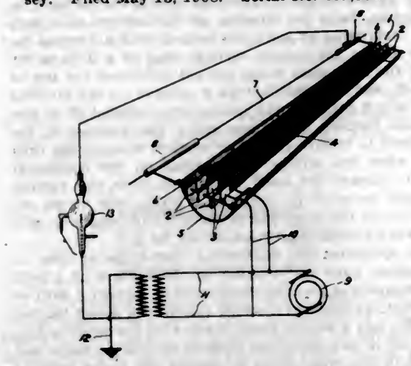
2. A device for reshaping shoes having a resiliently extensible and contractile shank or body, means for externally engaging the sole of the shoe at the toe of the shoe and means for engaging said sole in the rear of the toe-engaging means.



3. A device for reshaping shoes, consisting of a resiliently extensible and contractile body or shank having a lug for externally engaging the sole of the shoe at the toe of the shoe, and a lug for engaging the sole of the shoe in the rear of the toe-engaging means.

4. A device for reshaping shoes, consisting of a strip of spring metal bent intermediately of its ends to distribute the resiliency of said strip on the sole of the shoe to which said device is applied, the ends of the strip being bent upwardly and provided with lugs or clips for engaging the sole of the shoe at the toe and at a point in the rear of the toe.

897,831. MEANS FOR PREVENTING OFFSET IN CONNECTION WITH PRINTING. JOHN HERGESHEIMER, Philadelphia, Pa., assignor to The Curtis Publishing Company, Philadelphia, Pa., a Corporation of New Jersey. Filed May 13, 1908. Serial No. 432,574.



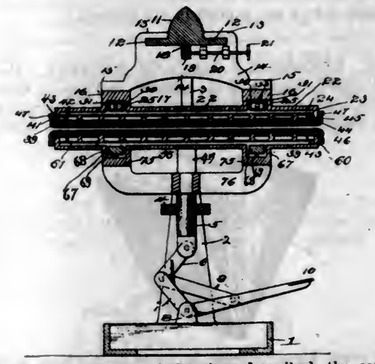
1. Means for preventing offset in printed sheets which comprise an electric heater and a single insulated conductor or discharger arranged in proximity with each other and with the moving sheets, and a source of unidirectional high tension current or charge connected with said conductor or discharger and with ground, substantially as described.

2. Means for preventing offset which comprise an electric heater and a discharger operatively arranged in respect to each other, and means for supplying current to the heater and high tension unidirectional current or charge to the discharger, whereby a silent discharge or electrical leakage is effected in proximity with the heater, substantially as described.

3. Means for preventing offset which comprise a heater and a discharger operatively arranged in respect to each other, and means for supplying high tension unindirectional current or charge to the discharger, whereby a silent discharge or electrical leakage is effected in proximity with the heater, substantially as described.

4. Means for preventing offset in printing which comprise a heater and a single insulated conductor or discharger arranged in proximity with each other and with the moving sheets, and means for charging the discharger with unidirectional charges or impulses, substantially as described.

897,832. CLOTHES PRESSING AND CLEANING APPARATUS. ADON J. HOFFMAN, Seattle, Wash., assignor of one-sixth to Richard M. Arms, Seattle, Wash. Filed Nov. 24, 1905. Serial No. 288,934.



1. In an apparatus of the class described, the combination of a steam chamber, a casing arranged therein and adapted to be surrounded by steam, said casing extending from near one end of said steam chamber to near the opposite end and formed with comparatively small inlet and outlet openings, and a comparatively large central body portion, means for directing heat through said casing for superheating the steam in said chamber, said outlet permitting heat to escape without coming in contact with the garment being operated upon, means for supplying steam to said chamber, and a clothes pressing head arranged contiguous to said steam chamber and adapted to permit steam to escape from the steam chamber when pressure is brought to bear thereon.

2. In an apparatus of the class described, the combination of a steam chamber, a casing therein extending from near one side of said chamber to near the opposite side thereof, means for permitting said casing to communicate with the atmosphere at both ends through the walls of said steam chamber, means for supplying gaseous fuels and directing the same longitudinally of said casing for heating the same, the heated casing being adapted to superheat the steam in said chamber, means for supplying steam under pressure to said chamber, and a clothes pressing pad arranged contiguous to and adapted to be supplied with steam under pressure from said steam chamber at the time mechanical pressure is applied to said pad.

3. In an apparatus of the class described, the combination of a steam chamber, a pair of steam domes communicating therewith, means for supplying steam to said domes, a heating casing arranged within each of said domes nearly filling the same for superheating steam in said chamber, means for supplying a flame to the interior of said casings for heating the same and clothes pressing means co-acting with said steam chamber.

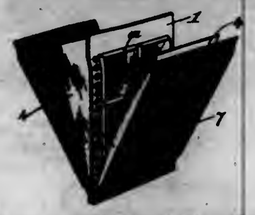
4. In an apparatus of the class described, the combination of a steam chamber, a casing arranged therein extending from near one side of said chamber to near the other side thereof, means for permitting said casing to communicate with the atmosphere at both ends, means for supplying heat to said casing, means for supplying steam under pressure to said chamber, and means for directing the steam against said casing, whereby the steam is adapted to be spread and superheated by said casing, clothes pressing means co-acting with said steam chamber, and means for permitting the superheated steam to escape into said clothes pressing means.

5. In an apparatus of the class described, the combination with a steam chamber, and means for supplying steam thereto, of a perforated plate arranged across the face of said chamber, a second plate arranged contiguous to the first mentioned plate, tapering lugs carried by said second mentioned plate and projecting into the perforations of said first mentioned plate, and springs normally retain-

ing said second mentioned plate in position for having said lugs close the perforations of said first mentioned plate, whereby steam is normally prevented from escaping from said steam chamber and is permitted to escape when said lugs are subjected to pressure.

[Claims 6 to 8 not printed in the Gazette.]

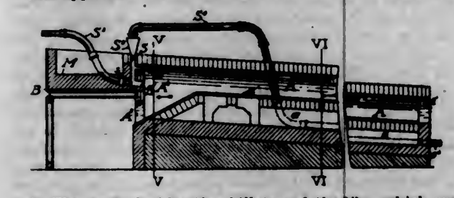
897,833. REVERSIBLE GALVANIC BATTERY. HARRY C. HUBBELL, Orange, N. J., assignor to Portable Electric Safety Light Company, Newark, N. J., a Corporation of New Jersey. Filed June 2, 1906. Serial No. 319,901.



1. A plate for reversible batteries, comprising a dry-pressed tablet of powdered nickel hydrate and powdered oxid of silver.

2. In a reversible galvanic battery, a plate comprising one or more dry-pressed tablets of powdered nickel hydrate and powdered oxid of silver, a plate comprising one or more dry-pressed tablets of cadmium oxid and nickel hydrate, and a suitable electrolyte.

897,834. METHOD OF HEATING BILLETS. CARL J. F. JOHNSON, Cleveland, Ohio, assignor of one-half to Charles Berg, Cleveland, Ohio. Original application filed Sept. 14, 1905, Serial No. 278,374. Divided and this application filed Jan. 31, 1906. Serial No. 298,766.

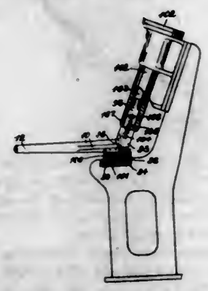


1. The method of heating billets and the like, which consists in advancing the same through a furnace-chamber; in discharging into said chamber in a downwardly inclined direction a blast of igneous vapors, and conveying a blast of heated non-combustible gases under pressure to said chamber so that it will extend above said first named blast in order to blanket and direct same to the lower portion of the furnace-chamber.

2. The method of heating billets and the like, which consists in advancing the same through a furnace-chamber in one direction and in discharging into said chamber in the opposite and downwardly inclined direction a blast of commingled igneous vapors, and above such blast and in a downwardly inclined direction a second blast of heated non-combustible gases under pressure so that the latter will extend above the first named blast in order to blanket and direct same to the lower portion of the furnace-chamber.

3. The method of heating billets and the like, which consists in advancing the same through the lower portion of a furnace-chamber in one direction and discharging into said chamber in the opposite and downwardly inclined direction a blast made up of ignited mixture of combustible gases, and conveying under pressure a blast of heated air so that it will extend above said first named blast and in a downwardly inclined direction whereby the direction of said first blast is conveyed and maintained along the lower portion of said chamber, substantially as described and for the purposes set forth.

897,835. APPARATUS FOR SHARPENING DRILLS OR DRILL-BITS. WALTER E. KIMBER, Johannesburg, Transvaal. Original application filed July 10, 1906, Serial No. 325,489. Divided and this application filed Jan. 29, 1907. Serial No. 354,629.



1. In apparatus for sharpening rock-drills or bits, a tool for bringing up the corners comprising a striker having a concave striking face provided with a fluted cutting edge, said face having a groove to receive the upper vertical wing of a drill or bit when the striker is operating on the horizontal wings of said drill or bit to impart the bevel to roughly form the cutting edge, and means for operating said striker, in combination with an anvil formed to hold the drill or bit to present said horizontal wings of the drill or bit to the fluted cutting edge of the tool aforesaid.

2. In apparatus for sharpening rock-drills or bits, in combination, tools for bringing up the corners of a drill or bit, comprising an anvil die formed with a vertical recess to receive the bottom vertical wing of a drill or bit so that the horizontal wings thereof are above the top of the block, and a striker having a concave on the striking face provided with a fluted cutting edge, beveled off in two directions forming an oblique angle, and grooved in the front bevel to receive the upper vertical wing of the drill or bit when the striker is operating on the horizontal wings to impart the bevel roughly to form the cutting edge, and mounted to reciprocate above and at an oblique angle to the anvil and in line with the end of a drill or bit when placed in position, as set forth.

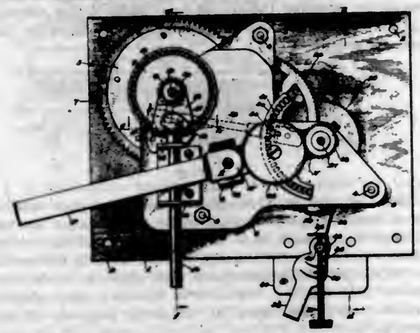
3. In apparatus for sharpening rock-drills or bits, in combination, tools for bringing up the corners of a drill or bit, comprising an anvil die formed to support a drill or bit so that the horizontal wings thereof are above the top of the die, and a striker made concave on the striking face beveled off in two directions forming an oblique angle and grooved in the front bevel to receive the upper vertical wing of the drill or bit when the striker is operating on the horizontal wings to impart the bevel roughly to form the cutting edge, and mounted to reciprocate above the anvil and in line with the end of a drill or bit when supported by said anvil die, as set forth.

897,836. PHONOGRAPH. EDWARD F. LEEDS and GEORGE RUMPF, New York, N. Y.; said Rumpf assignor to said Leeds. Filed Jan. 18, 1908. Serial No. 411,425.

1. In a phonograph, the combination of a record-tablet, a revoluble shaft carrying the record-tablet, a pivoted carriage carrying the revoluble shaft, and a laterally-movable feed-piece to communicate lateral motion to the pivoted carriage and cause the revoluble shaft and record-tablet to be moved in arcs of circles, substantially as described.

2. In a phonograph, the combination of a stylus, a record-tablet, a revoluble shaft carrying the record-tablet, a pivoted carriage carrying the revoluble shaft, and a laterally-movable feed-piece to communicate lateral motion to the pivoted carriage and cause the revoluble shaft and record-tablet to be moved in arcs of circles, substantially as described.

3. In a phonograph, the combination of a stylus, a tablet having a sound-record formed thereon, a revoluble shaft carrying said tablet, a pivoted carriage carrying the revoluble shaft, and a laterally-movable feed-piece to communicate lateral motion to the pivoted carriage and cause the revoluble shaft and record-tablet to be moved in arcs of circles, substantially as described.

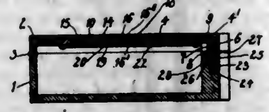


4. In a phonograph, the combination of a record-tablet, a revoluble shaft carrying the record-tablet, a pivoted carriage carrying the revoluble shaft and provided with rotatable wheels to revolve the shaft, and a laterally-movable feed-piece to communicate lateral motion to the pivoted carriage and cause the revoluble shaft and record-tablet to be moved in arcs of circles, substantially as described.

5. In a phonograph, the combination of a revoluble shaft, a pivoted carriage bearing the shaft, a plate and a sliding-rest attached to the carriage and touching the surface of the plate, substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

897,837. BOX-FASTENER. FRANK LENKEY and JOSEPH SZALAY, New York, N. Y. Filed May 12, 1908. Serial No. 432,425.



1. In a lock, the combination with a keeper, of a latch bolt adapted to engage the same, an oscillating lever connected to said latch bolt, a push button, an intermediate member between said lever and said push button, and a resilient means keeping said bar and said intermediate member in operative engagement with said push button and said latch bolt in engagement with said keeper.

2. In a lock, the combination with a keeper, of a latch bolt engaging the same, an oscillating lever connected to said latch bolt, a push buttton having an inclined lower surface, an intermediate member between said push button and said bar and having an inclined surface bearing against the similar surface of said push button, and a spring keeping said bar and said intermediate member in operative engagement with said push button and said latch bolt in engagement with said keeper.

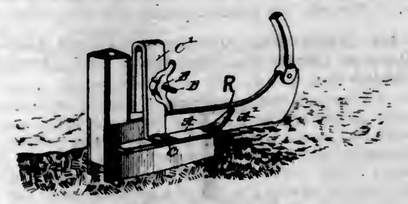
897,838. LID-LIFTING ATTACHMENT. THOMAS D. LOGUE, Sinnamahoning, Pa., assignor of one-half to Nathan Silin, Sinnamahoning, Pa. Filed Dec. 10, 1907. Serial No. 405,837.



1. An attachment for handles, comprising the combination with a handle; of a lifter, a head at one end of said lifter, having channels in the edge thereof adapted to receive portions of the handle, a tongue at the opposite end of the lifter and projections on the handle adapted to extend below the lifter and limit the inward and outward movement thereof.

2. An attachment for handles, comprising the combination with a handle, having its edges bent downwardly and inwardly; of a lifter, a head at one end of said lifter having channels therein to receive the inwardly extended edges of the handle, a tongue at the opposite end of the lifter and projections at the end of the handle extending below the lifter to limit the outward and inward movement of the lifter.

897,839. GAGE FOR SEED-PLANTERS AND CLAMPING MEANS THEREFOR. DENIS J. MAHONEY, Witoka, Minn. Filed Dec. 31, 1907. Serial No. 408,808.



1. As a new article of manufacture a gage for seed planter furrow openers comprising a resilient yoke carrying at its lower ends a pair of horizontally disposed shoes, adapted to engage frictionally the opposite sides of the furrow opener.

2. As a new article of manufacture a gage for furrow openers of seeders comprising a yoke consisting of two resilient members normally springing toward each other, a pair of horizontally disposed shoes at the lower ends of said resilient members, and auxiliary means for causing said resilient members to approach each other.

3. As a new article of manufacture a gage for furrow openers of seeders comprising an arched yoke member consisting of two resilient oppositely arranged spring arms connected at their upper ends, horizontally disposed shoes at the lower ends of said arms, a bolt passing through said arms, and a nut engaging said bolt, whereby the said resilient arms may be forced toward each other to rigidly clamp the same to the furrow opener of a seeder.

897,840. PREPARATION OF COFFEE. JOHANN F. MEYER, Jr., LUDWIG ROSELIUS, and KARL H. WIMMER, Bremen, Germany, assignors to The Kaffee-Handels-Aktiengesellschaft, Bremen, Germany. Filed May 4, 1906. Serial No. 315,180.

1. The process for removing caffein from green coffee beans, which consists in first treating the green coffee beans with dry steam in order to loosen the cellular structure, then treating them with gaseous chemicals adapted to liberate the caffein from its salts, then extracting the caffein with a volatile solvent and finally subjecting the extracted beans to a current of dry steam, substantially as described.

2. The process for removing caffein from green coffee beans, which consists in first treating the green coffee beans with dry steam in order to loosen the molecular structure, then treating them with gaseous chemicals adapted to liberate the caffein free from its salts, then extracting the caffein with a volatile solvent and finally subjecting the extracted beans to currents of dry steam at different pressures, substantially as described.

3. The process for removing caffein from green coffee beans, which consists in first treating the green coffee beans with dry steam in order to loosen the molecular structure, then treating them with gaseous chemicals adapted to liberate the caffein from its salts, then extracting the caffein with a volatile solvent and finally

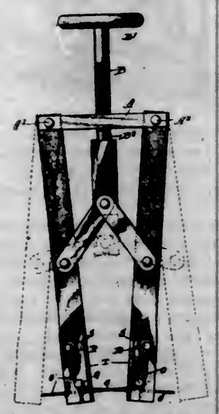
subjecting the extracted beans to a current of dry steam, while keeping the beans in motion, substantially as described.

4. The process for removing caffein from green coffee beans, which consists in first treating the green coffee beans with dry steam and then with gases or vapors having an acid or alkaline reaction, subsequently extracting them with a volatile solvent and finally treating them with a current of dry steam, while keeping the coffee beans in violent motion, substantially as described.

5. The herein described improvement in the process for the removal of caffein from green coffee beans, which consists in first treating the green coffee beans with dry steam in order to loosen the cellular structure, then treating them with gaseous chemicals adapted to liberate the caffein from its salts and then extracting the caffein with a volatile solvent.

[Claims 6 and 7 not printed in the Gazette.]

897,841. TIRE-TOOL. GUSTAVE MOHME and AARON V. HADLOCK, Chicago, Ill. Filed Feb. 8, 1907. Serial No. 356,457.



1. In a device of the kind described, a bar, a pair of arms pivotally connected to said bar at opposite ends thereof, each arm being provided with a transverse recess at its end, and the face of each arm adjacent its end being in a plane at an angle to the face of the rest of the arm, a wire guide and a wire clamp near the end of each arm, and means for causing movement of the ends of said arms towards and from each other.

2. In a device of the character described, the combination with a bar, of a pair of arms pivoted to said bar, a link pivoted to each of said arms, a member to which the inner ends of each of said links are pivoted, a manually operable screw threaded into said bar and engaging said member, and wire engaging clamps carried by each of said arms, said arms having slots formed in their lower ends, said slots lying at such an angle that when wires are passed therethrough and secured to the clamps of the opposite arms, said wires will cross each other.

897,842. PROCESS OF MAKING BIMETALLIC INGOTS, PLATES, SHEETS, TUBES, WIRES, AND LIKE PRODUCTS. JOHN F. MONNOT, New York, N. Y., assignor to Duplex Metals Company, New York, N. Y., a Corporation of New York. Filed May 23, 1905. Serial No. 261,740.

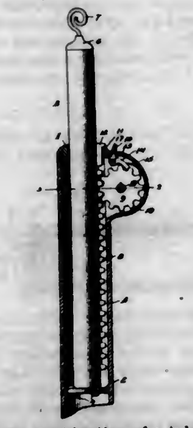
1. The process of producing bodies of unlike metals welded together which consists in electrically depositing on a core of ferrous metal a coating of a softer, ductile high-melting copper-like metal workable at steel working temperatures, heating core and coating together, and while at a suitable temperature compressing them together by a transverse pressure upon all abutting surfaces.

2. The process of producing bodies of unlike metals welded together which consists in depositing electrically a coating of a softer, non-ferrous, high melting, copper-like metal upon a core of a ferrous metal, heating the coated core to a suitable temperature and while at such temperature pressing the coated core between dies adapted to produce pressure upon all abutting surfaces of the joined metals.



3. The process of producing bodies of copper welded to steel which consists in electrically depositing a coating of copper upon steel, said coating corresponding to the thickness desired in the finished article, heating the coated core to a suitable temperature and while at such temperature pressing the coated core between dies adapted to produce pressure upon all abutting surfaces of the joined metals.

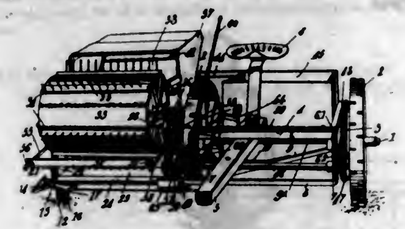
897,843. EXTENSIBLE POST OR PROP. RICHARD H. MCCOMBE, Waverly, Md., assignor of one-fourth to Albert Kuert, Philadelphia, Pa., and one-half to Anna E. McCombe, Waverly, Md. Filed Dec. 10, 1907. Serial No. 405,973.



1. In a prop, the combination of a tubular outer section, a cap removably secured in the upper end thereof, an inner section passing through the cap and guided by the latter, a peripheral flange on the lower end of the inner section and provided with radial slots, rollers mounted in the slots and engaging the internal surface of the outer section for coöperating with the said collar for guiding the movement of the inner section, a longitudinally-extending rack on the inner section, a pinion on the outer section to engage the said peripheral flange for limiting the upward movement of the inner section, and means for actuating the pinion.

2. In a prop, the combination of a tubular section, a cap therefor having a slot, an inner section guided by the cap, a rack on the inner section and passing through the slot and serving to prevent relative turning of the sections, a laterally-projecting lug at the upper end of the rack for engaging the cap to limit the inward movement of the inner section, a housing on the tubular section, a pinion in the housing, a crank for turning the pinion, a spring-pressed pawl for engaging the pinion to prevent the inner section from moving inwardly under its own weight, and a finger piece extending out of the housing and connected with the pawl for releasing the latter to permit the inner section to drop under its own weight.

897,844. PEA-HARVESTER. SHELBY NETTLESHIP, Fayetteville, Ark. Filed Feb. 28, 1907. Serial No. 359,763.

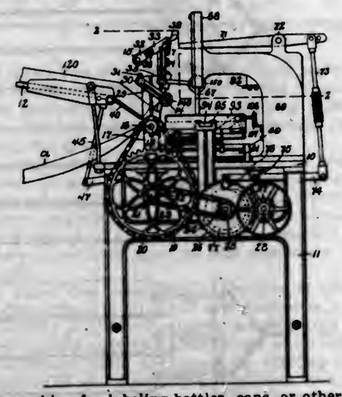


1. A harvester comprising a wheel supported frame, a driver's seat carried thereby, a bin disposed in rear of the seat and having a laterally extending feed portion provided with an inclined bottom, a housing carried by the frame and in front of the feed portion and at one side of the seat, an endless conveyer disposed entirely within the housing and extending from front to rear thereof, said conveyer being inclined upwardly and rearwardly and disposed to discharge pods into the feed portion of the bin, and a picking drum revolubly mounted in front of and disposed to throw pods against the conveyer, the axis of the conveyer and drum being parallel.

2. A harvester comprising a wheel supported frame, a driver's seat thereon, a housing carried by the frame at one side of and extending rearwardly beyond the seat, an endless conveyer entirely within and extending upwardly and rearwardly from the front of the housing, a bin disposed upon the frame at one side of the housing in rear of the seat, said bin having a laterally extending feed portion disposed beneath the conveyer and provided with an inclined bottom, a picking drum revolubly mounted in front of the conveyer and having parallel rows of teeth radiating therefrom, said teeth being disposed along lines parallel with the axes of the conveyer, and mechanism for actuating the drum and conveyer.

3. A harvester comprising a wheel supported frame, a driver's seat carried thereby, a bin disposed in rear of the seat and having a laterally extending feed portion provided with an inclined bottom, a housing upon the frame and in front of the feed portion and at one side of the seat, a picking drum revolubly mounted in front of and disposed to throw pods into the housing, and a conveyer within the housing for carrying the pods upwardly to the feed portion of the bin.

897,845. LABELING-MACHINE. MAYHEW E. NOYES, Hyde Park, Mass., assignor, by direct and mesne assignments, to William F. Pinkham, Wolfboro, N. H. Filed Aug. 20, 1904. Serial No. 221,561.



1. A machine for labeling bottles, cans, or other objects, comprising label-affixing means, a chute for said objects, a movable extension for conducting said objects from said chute to said means, and for permitting the discharge of said objects, and means for actuating said extension.

2. A machine for labeling bottles, cans, or other objects, comprising label-affixing means, a chute for said objects, detents for said objects, means for actuating said detents to release said objects one at a time, a movable extension of said chute adapted to conduct the objects so released to said label-affixing means, and means for actuating said extension for the purpose specified.

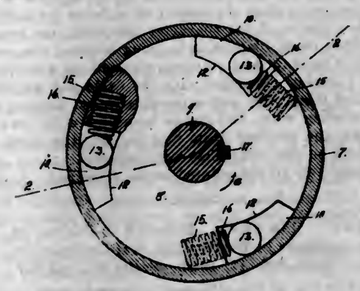
3. A machine for labeling cylindrical objects, such as bottles, cans, etc., comprising means adapted to support and rotate an object, means for conducting to said supporting and rotating means an object impelled by its own gravity, means for holding an object in juxtaposition to said supporting and rotating means, said holding means being adapted to recede to admit an object to said supporting and rotating means, and to recede to release said object from the same point at which it is admitted, and means permitting gravitation of an object released from said supporting and rotating means for conducting said object to a resting place.

4. A machine for labeling cylindrical objects such as bottles, cans, etc., comprising means adapted to support an object, means for fixing the axis of said object in juxtarelation to said supporting means, means for conducting said object to said supporting means, means for causing said supporting means to rotate said object while maintained in juxtarelation to said supporting means, means for applying paste across one end of a label, and means for inserting said end of the label between said object and said supporting means.

5. A machine for labeling bottles, cans or other cylindrical objects, comprising a rotating object-supporting roll, mounted on a fixed axis, means for rotating said roll, a non-yielding but adjustably mounted idle roll at a suitable distance from said supporting roll, a yielding idle roll movable toward and from said first two rolls, means for introducing an object between said rolls, and means for introducing one edge of an adhesive label between said supporting roll and said object.

[Claims 6 to 15 not printed in the Gazette.]

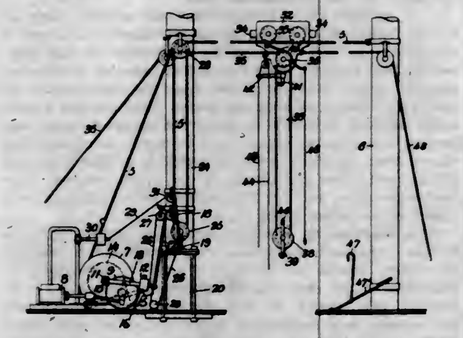
897,846. ROLLER-CLUTCH. WILBUR J. OLDS, Denver, Colo.; Florette E. Olds, administratrix of said Wilbur J. Olds, deceased, assignor of one-half to Murvin B. Cutshaw, Denver, Colo. Filed May 31, 1907. Serial No. 376,493.



In roller clutch mechanism, the combination with a driven disk and a driving member surrounding the disk, a collar keyed upon the driven shaft and engaging one surface of the driven disk, said disk and driving member being keyed to the driven and driving shafts respectively, the disk being provided with recesses closed on the outside by the driving member, the said recesses diminishing in width as they extend forwardly, rollers located in said recesses and having their axes parallel with the axis of the disk and extending through the said disk so as to engage the driving member at one extremity and the collar mounted upon the driven shaft at the other extremity, chambers formed in the said disk intermediate its surfaces and communicating with the wider extremities of the

said recesses, and coil springs located in said chambers and acting on the rollers approximately midway of their length, substantially as described.

897,847. LOADER AND HAULER. BERNARD OVERLACK, Sr., Plainfield, and ARTHUR OVERLACK, Newark, N. J. Filed Oct. 16, 1907. Serial No. 397,687.



1. In a coal loader, the combination with a single cable adapted to carry a traveling trolley and having one end attached to a vessel, of automatic means on the vessel for releasing or taking up the cable.

2. In a coal loader, the combination with a cable adapted to carry a traveling load of means for securing one end of the cable, and means carried at the other end of the cable for automatically releasing and paying out the cable when the strain on it exceeds a certain limit.

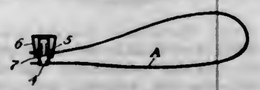
3. In a device of the character described, the combination with a cable connecting two moving or substantially stationary objects, of means carried by one of the objects controlled by a predetermined strain on the cable for releasing the cable, and automatic means for taking up the slack when the strain ceases.

4. In a device of the character described, the combination with a cable adapted to carry a pre-determined load between two moving or substantially stationary points, a winding drum carrying one end of the cable, means for releasing the cable from the drum when the pre-determined load has been exceeded and means permitting the rewinding of the cable when the load is at or below its normal.

5. In a device of the character described, the combination with a cable adapted to be hung between two rapidly moving or substantially stationary vessels, of a trolley and pulley, a spring connected with the cable and adapted to withstand the trolley and a pre-determined weight, a motor, a winding drum, and means connected with the spring to release the winding drum and pay out the cable when the weight on the trolley has been exceeded.

[Claims 6 to 10 not printed in the Gazette.]

897,848. CAR-SEAL. RUDOLPH C. PLEINS, St. Paul, Minn., assignor to Western Car Seal Company, St. Paul, Minn. Filed Nov. 17, 1906. Serial No. 343,887.



In a seal of the class described, the combination with a locking strap, of a single piece cap carried by one end of said strap, an inwardly extending flange carried by the inner end of said cap and constituting a central opening therefor, a stud carried by the other end of said strap, said stud being adapted to pass through and fit closely in said opening, and outwardly directed spring tongues 5 carried by said stud and extending toward the inner end thereof in position to stand inside said cap and to bear against said flange when said cap and stud are brought together.

897,849. GREASE-CUP. CHARLES H. PRESCOTT, East Liverpool, Ohio. Filed Dec. 17, 1907. Serial No. 406,886.



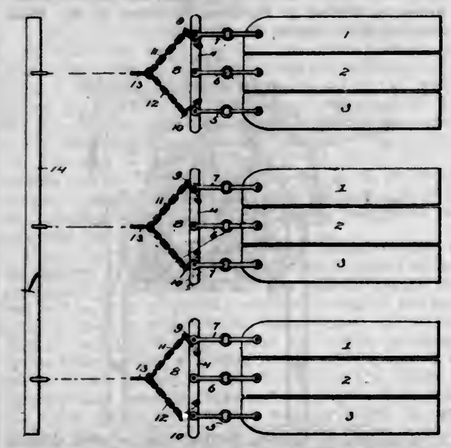
1. In a grease cup, the combination of a shaft provided with feeding means, a ratchet wheel secured to said shaft, a transverse shaft journaled to rock about its longitudinal axis on said cup, an arm secured to said shaft and extending perpendicularly to the longitudinal axis thereof, a stem projecting upwardly from the transverse shaft, a weight secured to said stem, and a pawl carried by said arm and adapted to engage said ratchet.

2. In a grease cup, the combination of a shaft provided with feeding means, a ratchet wheel secured to said shaft, an oscillatory weight mounted on the cup, and oppositely extending arms movable with said weight and adapted to be rocked thereby, each of said arms carrying a pawl designed for engagement with said ratchet.

3. A grease cup of the character described, comprising a shank provided with a base and formed with a bore, a body portion connected to said base, a shaft mounted to turn in said body portion, a worm carried by the lower end of said shaft and working in said bore, knives secured to said shaft above the worm, a ratchet connected to said shaft and mounted on the top of the body portion, an oscillatory weight mounted on the top of the body portion, and a rocker arm movable with said weight and provided with a pawl arranged for engagement with said ratchet.

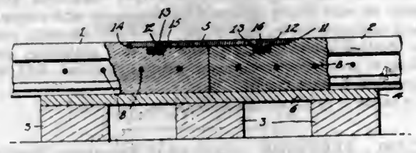
4. In a grease cup of the character described, the combination of a shaft mounted to turn in the cup, a worm secured to the lower end of said shaft, radially disposed blades secured to said shaft above the worm and formed with beveled lower faces, and means for automatically imparting an intermittent rotary movement to said shaft.

897,850. DEVICE FOR KILLING BOLL-WEEVILS. WILLIAM L. ROSSON, Milford, Tex. Filed Dec. 16, 1907. Serial No. 406,707.



In an exterminator, a plurality of drag bars, each of said drag bars having a runner formed with a curved end for passing over obstacles over which the exterminator is designed to pass, a cross bar, and means for pivotally securing each of said drag bars independently to said cross bar.

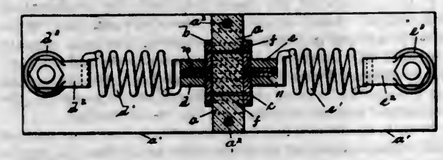
897,851. RAIL-JOINT. HARRY R. ROTH, South Allentown, Pa. Filed Mar. 21, 1908. Serial No. 422,454.



1. In a rail joint, the combination of meeting ends of two track rails formed in their heads with communicating recesses, the latter having in their bottoms cavities, said cavities having their side walls formed with alined openings, a joint plate adapted to fit into both of the recesses and formed upon its bottom with lugs to enter said cavities and provided with openings to aline with the openings or apertures at the sides of said cavities, transverse fastenings passed through said alined openings or apertures, and means for uniting the web portions of the track rails.

2. In a rail joint, the combination of meeting ends of two track rails formed in their heads with communicating recesses, the latter having in their bottoms cavities, said cavities having their side walls formed with alined openings, a joint plate adapted to fit into both of the recesses and formed upon its bottom with lugs to enter said cavities and provided with openings to aline with the openings or apertures at the ends of said cavities, transverse fastenings passed through said alined openings or apertures, a chair having a base plate to rest upon the cross ties and receive the base flanges of the rails, the chair being formed upon its side edges with integral fish-plates to engage the opposite sides of said rails and transverse fastenings passed through the fish-plates and the rails substantially as described.

897,852. SAFETY-FUSE. JOSEPH SACHS, Hartford, Conn., assignor to The Sachs Company, Hartford, Conn., a Corporation of Connecticut. Filed May 18, 1907. Serial No. 374,415.



1. A safety fuse comprising a plurality of separately insulated and sheathed conductors connected in multiple to common electrodes, and means for effecting a tension to separate the said conductors immediately upon the same becoming disrupted.

2. A safety fuse comprising a plurality of conductors, electrodes common to all of said conductors, a sheathing partition between the said electrodes and in which the said conductors are independently insulated and means for effecting a tension to separate the said conductors and the electrodes immediately upon the said conductors becoming disrupted.

3. A safety fuse comprising a plurality of conductors, electrodes common to all of the said conductors, a stationary sheathing partition of suitable and insulating material between the said electrodes and through which each of the said conductors passes and means for effecting a tension to separate the said electrodes immediately upon the conductors becoming disrupted to entirely withdraw the parted portions of the said conductors from the said sheathing partition.

4. A safety fuse comprising a casing, end caps therefor and a sheath member within said casing, electrodes on the opposite sides of said sheath, fusible conductors connected to the said electrodes extending between the same and passing through the said sheathing, means for connecting the said electrodes with the said end caps, means for maintaining the said sheathing in position within the said casing and means for moving the said electrodes away from one another immediately upon the rupture of the said conductors.

5. A safety fuse comprising a casing, end caps therefor and a sheath member within said casing, electrodes on the opposite sides of said sheathing, fusible conductors connected to the said electrodes extending between the same and passing through the said sheathing, means for connecting the said electrodes with the said end caps, and means for creating a tension on the said fusible conductors.

[Claims 6 to 8 not printed in the Gazette.]

897,853. TRUCK. HENRY J. VOM SCHEIDT, Buffalo, N. Y. Filed Nov. 16, 1907. Serial No. 402,441.



1. In a truck for printers' forms and the like, the combination of a wheeled base having a horizontal supporting top, engaging means on said top forming a seat for said form and holding the same against lateral movement, a standard secured on said base at one side of said engaging means, and a securing device on said standard for engaging the upper portion of said form, substantially as set forth.

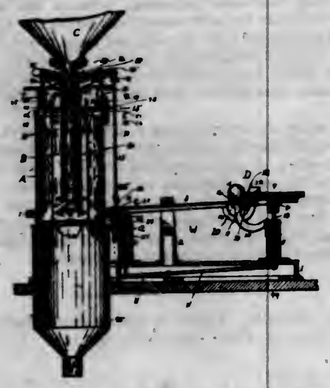
2. In a truck, the combination of a wheeled base, a groove extending lengthwise thereof on its upper side, a standard secured on said base at one side of said groove, and an adjustable clamp arranged on said standard for engaging an object supported on said base, substantially as set forth.

3. In a truck, the combination of a wheeled base, a groove extending lengthwise thereof on its upper side, a standard secured on said base adjacent to one side of said groove, and an adjustable clamp arranged on said standard above said base, substantially as set forth.

897,854. PROCESS FOR THE PRODUCTION OF A DIGESTIBLE FLOUR FROM BRAN. THEODOR SCHLÜTER, Jr., Foerderstedt, near Magdeburg, Germany. Filed May 7, 1907. Serial No. 372,386.

The herein described process for the production of a digestible flour from bran, consisting in mixing the bran with boiling water as to form a thin pulp, in heating quickly the pulp up to 100° C., in drying the pulp at a low temperature of about 70° C. till it becomes solid and in grinding the solid mass to a flour.

897,855. AUTOMATIC WEIGHING-MACHINE. CHARLES D. SCOTT, Topeka, Kans. Filed June 3, 1907. Serial No. 377,115.



1. In an automatic weighing machine, the combination with a weighing apparatus having a suitable container with an exit opening and a shutter therefor, a feed chute leading to said container and a shutter therefor, a lever for closing the exit shutter and opening the feed shutter, latches for holding the exit shutter closed and the feed shutter open, spring-actuated means for closing said feed shutters, a trip controlled by the weighing apparatus to release the feed shutters and permit them to be closed by said spring-actuated means, a trip controlled by said weighing apparatus to permit the opening of the exit shutter, and means for adjusting the control of said shutters by said weighing apparatus according to the weight within said container.

2. In an automatic weighing machine, the combination with a weighing apparatus having a suitable container with an exit opening and a shutter therefor tending naturally to an open position, of a feed chute for the container having a shutter tending naturally to a closed position, a lever to close the exit shutter and open the feed shutter, and connecting mechanism between the weighing apparatus and said shutters and automatically controlled by said weighing apparatus for tripping said shutters to permit the feed shutter to close and the exit shutter to open; together with means for adjusting the said automatic control over said shutters according to the weight in said container.

3. In an automatic weighing machine, the combination with a weighing apparatus having a container with an exit opening at the bottom and a shutter therefor tending naturally to an open position, of a feed chute for the container having a shutter tending naturally to a closed position, a lever to close the exit shutter and open the feed shutter, latches for holding the exit shutter closed and the feed shutter open and connecting mechanism between the weighing apparatus and said shutters and automatically controlled by the weighing apparatus for tripping the shutters to permit the feed shutter to close and the exit shutter to open.

4. In an automatic weighing machine, the combination with a weighing apparatus having a container with an exit opening at the bottom and a shutter therefor, of a feed chute for the container and a shutter therefor, means for closing the exit shutter and opening the feed shutter, a spring-pressed mechanism for releasing the exit shutter and closing the feed shutter, a latch for holding the feed shutter open and the exit shutter closed and automatically controlled by said weighing apparatus, and means for adjusting the control over said latch by said weighing apparatus according to the weight in the container.

5. In an automatic weighing machine, the combination with a weighing apparatus having a container with an exit opening at the bottom thereof and a shutter therefor, of a feed chute leading to said container and a shutter therefor, a means for closing the exit shutter, a manually-operated means for opening the feed shutter, a means for normally restraining the exit shutter from opening, an automatic means for releasing the exit shutter and closing the feed shutter, a trip rod connecting the weighing apparatus with the automatic means and controlled by the weighing apparatus, a frame for the weighing apparatus, a balance-beam therefor, and a weight supported alternately on said frame and said balance-beam and automatically shiftable from the one to the other whereby when the desired weight is attained in the container, said shiftable weight will automatically shift from said balance-beam to said frame.

[Claims 6 to 23 not printed in the Gazette.]

897,856. ELEVATOR. CHARLES D. SEEBERGER, Yonkers, N. Y. Filed Jan. 30, 1903, Serial No. 141,102. Renewed Feb. 16, 1905. Serial No. 245,874.



1. In an apparatus of the character described, the combination of an endless platform comprising a series of sections, a pair of driving chains secured to the ends of said platform-sections, a main motor for driving said platform, and a series of auxiliary motors disposed throughout the length of the platform, said motors imparting motion to said platform through the driving chains.

2. The combination in a moving platform or stairway, of sections, connections therebetween, guides therefor, a main driving device at one end of the mechanism, and an auxiliary driving device engaging with said connections between the two ends of the platform or stairway and at or near a point where the sections change direction of movement; substantially as described.

3. In a device of the class described, the combination with the steps, connections therebetween, of the tracks therefor, a main driving device at one end of the mechanism, and an auxiliary driving device engaging with the said connections between the two ends of the mechanism and at or near a point where the steps change direction of movement, substantially as described.

4. In a device of the class described, the combination with steps, chain connection therebetween, of tracks therefor having inclined and horizontal portions, a main driving device at one end of the mechanism, and an auxiliary driving device engaging with both the ascending and descending lines of chain between the two ends of the mechanism and at or near the top of the incline.

5. In a device of the class described, the combination with steps connected at their ends by chains, of tracks therefor having inclined and horizontal portions, a main driving device at one end of the mechanism, and an auxiliary driving device engaging with the said chains between the two ends of the mechanism and at or near the top of the inclined portion of the tracks.

[Claims 6 to 21 not printed in the Gazette.]

897,857. BIT-BRACE WRENCH. BERT R. SPAULDING, Buffalo, N. Y., assignor of one-half to Stephen E. Spaulding, Springville, N. Y. Filed Oct. 3, 1907. Serial No. 395,729.

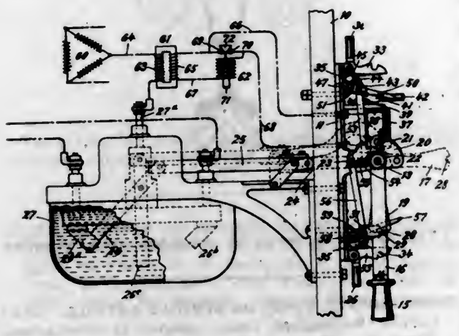
1. In a wrench, the combination of a cross head, a pair of spaced standards projecting forwardly from said cross head, a pair of sliding jaws arranged between said standards and having their rear portions constructed to surround said cross head, whereby both the front and rear faces of the cross head form guides for the jaws, and a rotary right and left screw arranged on the front side of said cross head, held against endwise movement in said standards and engaging correspondingly threaded openings in the jaws, substantially as set forth.

2. In a wrench, the combination of a cross head, a pair of spaced standards projecting forwardly from said cross head, a pair of sliding jaws arranged between said standards and having their rear portions constructed to surround said cross head, and a rotary right and left screw



arranged on the front side of said cross head, held against endwise movement in said standards and engaging said jaws, the jaws being disconnected on the front side of said screw, leaving the space between them unobstructed from their front ends to the screw, substantially as set forth.

897,858. AUTOMATIC CIRCUIT-BREAKER. HENRY P. BALL, New York, N. Y., assignor to General Incandescent Arc Light Company, of New York, a Corporation. Filed Jan. 31, 1903. Serial No. 141,319.



1. A double-throw electric switch biased to open when closed and having its open position between two closed positions, an operating lever therefor, and means for automatically feeding the movable switch element from either of its closed positions.

2. A double-throw electric switch biased to open when closed and having its open position between its two closed positions, an operating lever therefor, and an electrically-actuated means responsive to predetermined electrical conditions in its circuit to free the movable switch element from either of its closed positions.

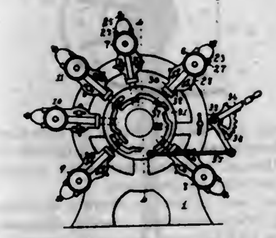
3. A double-throw switch having fixed contacts, a movable contact coöperating therewith and having a neutral position between said fixed contacts, an operating lever, a detachable connection between said lever and the movable contact, and an electro-responsive device for breaking said connection.

4. An electric switch comprising a movable switch element having a plurality of closed positions, an operating lever therefor, an independently mounted rocking member adjacent to said lever and connected to the movable switch element, means for connecting said member to said lever, and means for automatically breaking said connection when the switch is in any of its closed positions.

5. An electric switch comprising a movable switch element having a plurality of closed positions, an operating lever therefor, an independently mounted rocking member adjacent to said lever and connected to the movable switch element, an electrically controlled connection between said member and said lever, and means for breaking said connection when the switch is in any of its closed positions.

[Claims 6 to 25 not printed in the Gazette.]

897,859. MANGLE. PAUL L. BROCKARDT, Hamilton, Ohio, assignor, by mesne assignments, to The Ohio Laundry Machinery Co., Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 12, 1906. Serial No. 342,946.



1. In a mangle, the combination of a disk provided with a circumferential cam slot, having its end portions extended in opposite directions concentric with and at different distances from the center of the disk, a bar movably engaging with the slot, and means for rotatively adjusting the disk for moving and maintaining the bar in different radial positions of adjustment.

2. The combination of a cylindrical drier, a series of pressure rolls, an apron partially encircling the drier thereunder, a series of housings, bearing boxes slidably mounted therein for said rolls, springs arranged in said housings for yieldingly maintaining said boxes in a predetermined position, and cam mechanism for consecutively moving and maintaining said housings with the rolls equal distances from the drier.

3. The combination of a cylindrical drier, pressure rolls therefor, an apron movable between them and the drier, radially movable arms provided with bearing boxes wherein the rolls are journaled, and hand actuated cam mechanism for successively moving and maintaining a plural number of arms with the rolls equal distances from the axis of the drier.

4. The combination of a rotative drier, pressure rolls therefor, an apron movable between them and the drier, radially movable bars wherein the rolls are journaled, similar disks mounted at opposite ends of and concentric with the axis of the drier, said disks being each provided with a series of circumferential cam slots, anti-friction rollers secured on the bars and movably engaging with the slots, and hand actuated mechanism for rotatively adjusting the disks, whereby the bars and rolls may be moved in predetermined non-simultaneous order and maintained in different positions of adjustment.

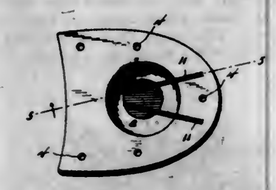
5. In a mangle, a rotatively adjustable disk provided with a series of cam slots which are extended at their respective ends in arcs concentric with and at different distances from the axis of the disk, radially movable bars engaging with the slots and means for rotatively adjusting the disk, whereby the bars may be moved in predetermined order and maintained in predetermined positions in relation to the axis of the disk.

897,860. RUBBER TREAD. WENDELL E. HERBAT, Hartford, Conn. Filed Nov. 8, 1901. Serial No. 81,602.

1. A rubber tread having an open center metal stiffening plate embedded therein and provided with recesses in its rear side, and upright strips of anti-slipping fabric in the rear portion of the heel, embedded therein, disposed longitudinally thereof and radially with reference to each other, on opposite sides of the longitudinal center of the heel, and angularly with reference to the stiffening plate, said strips extending from points within to points without the stiffening plate in planes which intersect the recessed portions

thereof, and also extending to and exposed at the lower surface of the rubber heel, substantially as described.

2. A rubber heel having strips of fabric embedded therein, disposed in an upright position and lengthwise thereof, and having their lower edges exposed at the bottom of the heel, substantially as described.

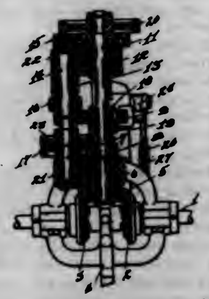


3. A rubber heel having strips of anti-slipping fabric embedded therein and disposed in an upright position and lengthwise thereof, and angularly with reference to each other, substantially as described.

4. A rubber heel having rearwardly diverging strips of anti-slipping fabric embedded therein, disposed in an upright position and longitudinally with respect to the heel, substantially as described.

5. A rubber tread having a recess in its lower side and provided with strips of anti-slipping fabric embedded in the heel, disposed in an upright position and lengthwise thereof, said strips having their lower edges exposed at the bottom of the heel and at the rear side and bottom of the recess, substantially as described.

897,861. VARIABLE-SPEED DRIVING MECHANISM. HENRY M. NORRIS, Cincinnati, Ohio. Filed Apr. 13, 1908. Serial No. 426,807.



1. In a variable speed device, a first and second shaft, a driving gear loose on one end of the first shaft, a compound gear adapted to turn with and slide on the intermediate portion of the first shaft, and having a clutch member formed thereon, and a third gear loose on the other end of the first shaft and having a coöperating clutch member for said first named clutch member, a double gear fixed to the second shaft meshing with the driving gear on the first shaft and adapted to be intermeshed with one of the members of the compound gear of the first shaft, a middle gear fixed to the second shaft and adapted to be intermeshed with the other member of the compound gear on the first shaft, a third gear fixed on the end of the second shaft and intermeshed with the end gear on the first shaft, and means for shifting the said compound intermediate with its clutch, substantially as described.

2. In a variable speed device, a first shaft, end gears loose thereon, and a compound intermediate gear splined thereon, clutch members for connecting one of the loose gears to the intermediate, a second shaft having four gears fixed thereon, two of which are adapted to be engaged by the respective members of the compound intermediate gear of the first shaft, substantially as described.

897,862. COMPOSITION OF MATTER FOR THE REMOVAL OF PAINT, VARNISH, AND THE LIKE. GEORGE H. HULL, Cranston, R. I., assignor, by direct and mesne assignments, to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed Jan. 29, 1907. Serial No. 354,754.

1. A composition for the purpose described obtained by mixing cyanid of potassium, oxalic acid and commercial calcium carbonate, whereby calcium oxalate and calcium cyanid are produced.

2. A composition for the purpose described obtained by mixing cyanid of potassium, oxalic acid, and commercial calcium carbonate, whereby calcium oxalate and calcium cyanid are produced, and the subsequent addition of alcohol.

DESIGNS.

39,468. BONBON-SPOON. WILLIAM W. BEVAN, Melrose, Mass. Filed June 6, 1908. Serial No. 437,210. Term of patent 3½ years.



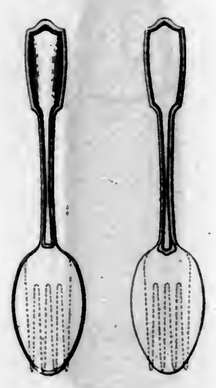
The ornamental design for a bon-bon spoon, as shown.

39,469. SPOON, FORK, OR SIMILAR ARTICLE. JOHN CLULEE, Wallingford, Conn., assignor to International Silver Co., Meriden, Conn., a Corporation of New Jersey. Filed June 22, 1908. Serial No. 439,866. Term of patent 7 years.



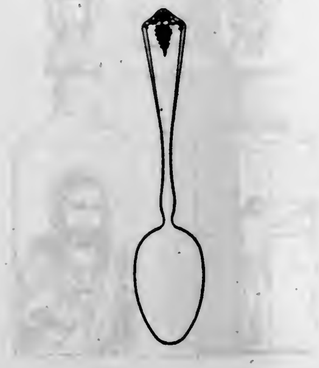
The ornamental design for a spoon, fork or similar article, as shown.

39,470. HANDLE OF SPOONS, FORKS, OR SIMILAR ARTICLES. WILLIAM C. CODMAN, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed July 3, 1908. Serial No. 441,924. Term of patent 14 years.



The ornamental design for the handle of a spoon, fork or similar article, as shown.

39,471. HANDLE OF SPOONS, FORKS, OR SIMILAR ARTICLES. GEORGE P. ITTIG, Bridgeport, Conn., assignor to The E. H. H. Smith Silver Co., Bridgeport, Conn., a Corporation of New York. Filed June 20, 1908. Serial No. 439,626. Term of patent 14 years.



The ornamental design for the handle of a spoon, fork or similar article.

39,472. HANDLE OF SPOONS OR SIMILAR ARTICLES. JOSEPH E. STRAKER, Jr., Attleboro, Mass. Filed June 13, 1908. Serial No. 438,407. Term of patent 7 years.



The ornamental design for the handle of a spoon or similar article as shown.

39,473. BACK FOR BRUSHES, MIRRORS, OR SIMILAR ARTICLES. HENRY J. HERBERT, Detroit, Mich. Filed May 1, 1908. Serial No. 430,407. Term of patent 7 years.



The ornamental design for a back for brushes, mirrors or similar articles, as shown.

39,474. BACK FOR BRUSHES, MIRRORS, OR SIMILAR ARTICLES. HENRY J. HERBERT, Detroit, Mich. Filed May 1, 1908. Serial No. 430,411. Term of patent 7 years.



The ornamental design for a back for brushes, mirrors, or similar articles as shown.

39,475. BACK FOR MIRRORS, BRUSHES, OR SIMILAR ARTICLES. HENRY J. HERBERT, Detroit Mich. Filed May 1, 1908. Serial No. 430,412. Term of patent 7 years.



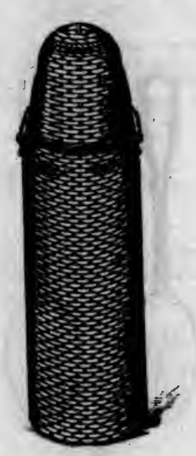
The ornamental design for a back for mirrors, brushes, or similar articles as shown.

39,476. BOTTLE. DANIEL W. BAGBY, St. Louis, Mo., assignor to Obear Nester Glass Company, St. Louis, Mo., a Corporation of Missouri. Filed June 18, 1908. Serial No. 439,255. Term of patent 14 years.



The ornamental design for a bottle, as shown.

39,477. BOTTLE. PAUL O. E. FRIEDRICH, New York, N. Y., assignor to Calaris Manufacturing Company, a Corporation of Delaware. Filed July 1, 1908. Serial No. 441,512. Term of patent 7 years.



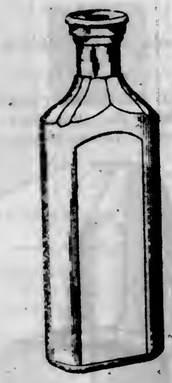
The ornamental design for a bottle as shown.

39,478. BOTTLE. JOHN J. GREENE, Providence, R. I. Filed July 3, 1908. Serial No. 441,928. Term of patent 7 years.



The ornamental design for a bottle as shown.

39,479. BOTTLE. PERLEE W. SCHOFIELD, Marion, Ind., assignor to Standard Glass Company, a Corporation of Indiana. Filed June 17, 1908. Serial No. 439,068. Term of patent 7 years.



The ornamental design for a bottle, as shown.

39,480. BOTTLE. GARRY P. VAN WYE, New York, N. Y. Filed June 8, 1908. Serial No. 437,456. Term of patent 14 years.



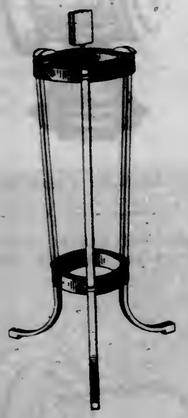
The ornamental design for a bottle, as shown.

39,481. BOTTLE-CASING. GEORGE P. ALTENBERG, Cincinnati, Ohio. Filed June 15, 1908. Serial No. 438,688. Term of patent 14 years.



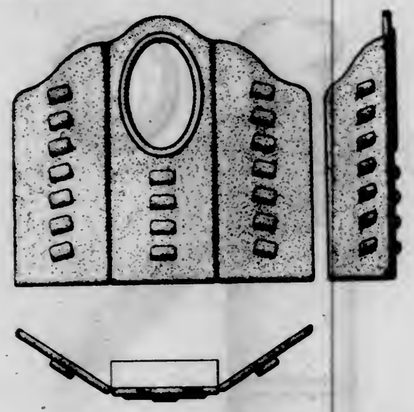
The ornamental design for a bottle casing, as shown.

39,482. ASH-RECEIVER AND STAND. CHARLES NELSON, Brooklyn, N. Y., assignor to S. Sternau & Company, New York, N. Y., a Copartnership. Filed June 6, 1908. Serial No. 437,209. Term of patent 7 years.



The ornamental design for an ash receiver and stand, as shown.

39,483. DISPLAY-STAND. HENRY W. FISHEL, New York, N. Y., assignor to Henry W. Fishel and Theodore H. Fishel, New York, N. Y., Copartners, trading as Fishel, Nessler & Company. Filed May 29, 1908. Serial No. 435,842. Term of patent 3½ years.



The ornamental design for a display stand as shown.

39,484. LAMP. PAUL KRASTIN, Detroit, Mich., assignor of one-half to John C. Widman, Detriot, Mich. Filed June 3, 1908. Serial No. 436,488. Term of patent 3½ years.



The ornamental design for a lamp, as shown.

39,485. AUTOMOBILE-HORN. LOUIS RUBES, Brooklyn, N. Y. Filed June 5, 1908. Serial No. 437,033. Term of patent 3½ years.



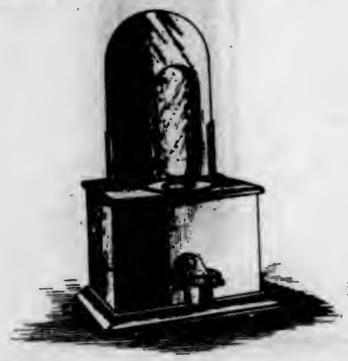
The ornamental design for an automobile horn, as shown.

39,486. MOTOR-CYCLE HORN. LOUIS RUBES, Brooklyn, N. Y. Filed June 5, 1908. Serial No. 437,034. Term of patent 3½ years.



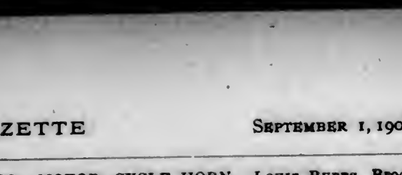
The ornamental design for a motorcycle horn, as shown.

39,487. VENDING-MACHINE CASING. ALEXANDER STEWART, Philadelphia, Pa. Filed Nov. 5, 1907. Serial No. 400,890. Terms of patent 3½ years.



The ornamental design for vending machine casing, as shown and described.

39,488. VEHICLE-BODY. RUSSELL HUFF, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of West Virginia. Filed May 29, 1908. Serial No. 435,841. Term of patent 7 years.



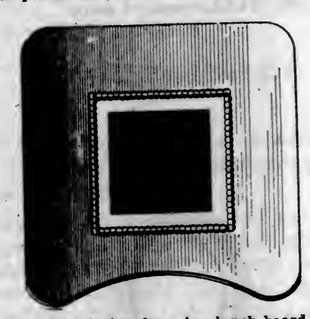
The ornamental design for a vehicle body, as shown.

39,489. WATER-HEATER. WILLIAM J. FINN, Scranton, Pa., assignor of one-half to Fredrick Bahls, Scranton, Pa. Filed June 3, 1908. Serial No. 436,490. Term of patent 14 years.



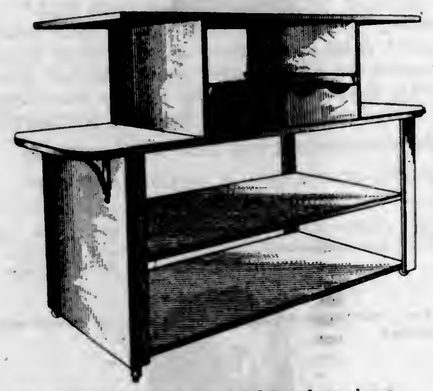
The ornamental design for a water heater, as shown.

39,490. LAP LUNCH-BOARD. LEONARD VAN PUTTEN, Holland, Mich. Filed June 2, 1908. Serial No. 436,304. Term of patent 14 years.



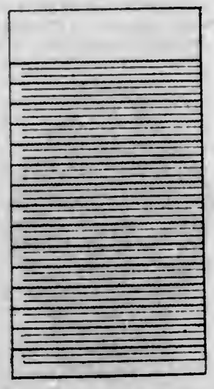
The ornamental design for a lap lunch board, as shown.

39,491. SIDEBOARD. OTTO HEBESTREIT, Colorado Springs, Colo. Filed June 6, 1908. Serial No. 437,203. Term of patent 14 years.



The ornamental design for a sideboard, as shown.

39,492. SHORTHAND NOTE-SHEET. WILLIAM J. GUY, New York, N. Y. Filed May 14, 1908. Serial No. 432,048. Term of patent 14 years.



The ornamental design for a shorthand note sheet, as shown.

39,493. FONT OF TYPE. SIDNEY C. GAUNT, Chicago, Ill., assignor to Barnhart Brothers & Spindler, Chicago, Ill., a Corporation of Illinois. Filed Apr. 25, 1908. Serial No. 429,286. Term of patent 7 years.

abcdef ghijklmno
pqrstuvwxyzABCD
EFGHIJ KLMNOP
QRSTUVWXYZ&.,-
:;!?$123456789
0—

The ornamental design for a font of type, as shown.

39,494. LACE CURTAIN. WILLIAM HARDY, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Philadelphia, Pa., Copartners, trading as John Bromley & Sons. Filed July 20, 1908. Serial No. 444,552. Term of patent 3½ years.



The ornamental design for a lace curtain substantially as shown.

39,495. LACE CURTAIN. WILLIAM HARDY, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Philadelphia, Pa., Copartners, trading as John Bromley & Sons. Filed July 11, 1908. Serial No. 443,174. Term of patent 3½ years.



The ornamental design for a lace curtain substantially as shown.

39,496. OPEN-WORK CURTAIN. WILLIAM M. MOSER, Philadelphia, Pa. Filed June 18, 1908. Serial No. 439,259. Term of patent 3½ years.



The ornamental design for an open-work curtain as shown.

39,497. CARPET. FRANK A. HAAS, New York, N. Y., assignor to Matthew J. Whittall, Worcester, Mass. Filed May 29, 1908. Serial No. 435,843. Term of patent 3½ years.



The ornamental design for a carpet as shown.

39,498. RUCHING. ALEXANDER BOEHM, New York, N. Y., assignor to Boehm & Levine, New York, N. Y., a Corporation of New York. Filed Apr. 28, 1908. Serial No. 429,787. Term of patent 7 years.



The ornamental design for a ruching, as shown and described.

TRADE-MARKS

PUBLISHED SEPTEMBER 1, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 17,889. (CLASS 10. FERTILIZERS.) BIRMINGHAM FERTILIZER COMPANY, Birmingham, Ala. Filed Mar. 15, 1906.



Particular description of goods.—Fertilizers.

Ser. No. 28,052. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WILLIAM LIDDELL & CO., LTD., New York, N. Y., and London, England. Filed June 11, 1907.



Particular description of goods.—Piece Goods, Dress Piece Goods, Napkins, Table-Cloths, Damasks, Sheetings, Pillow-Cases, and Towels, All Made of Linen.

Ser. No. 33,195. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ACORN CANNING CO., Houston, Tex. Filed Feb. 21, 1908.



Particular description of goods.—Hungarian-Style Goulash.

Ser. No. 33,641. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WESTERN GROCER COMPANY, Marshalltown, Iowa. Filed Mar. 26, 1908.



Particular description of goods.—Baking-Powder, Cream of Tartar, Bicarbonate of Soda, Carbonate of Soda, Laundry Starch, Lye, Bluing, Ammonia, Salt.

Ser. No. 34,221. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) BRAUN & BLOEM, GES. MIT BESCHRÄNKTER HAFTUNG, Dusseldorf, Germany. Filed Apr. 20, 1908.



Particular description of goods.—Cartridges.

Ser. No. 35,114. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HENRY DISSTON & SONS, INCORPORATED, Philadelphia, Pa. Filed June 3, 1908.

ELECTRIC

Particular description of goods.—Hand-Operated Screw-Drivers.

Ser. No. 35,159. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) RATHENOWER OPTISCHE INDUSTRIE ANSTALT VORM. EMIL BUSCH, A. G., Rathenow, Germany. Filed June 5, 1908. Used ten years.

Busch

Particular description of goods.—Telescopes, Microscopes, Photographic Apparatus, Projective and Objective Lenses, Opera-Glasses, Field and Marine Glasses, Spectacle-Lenses, Spectacle and Pince-Nez Frames, Lorgnettes and Reading-Glasses, Spectacles, Pince-Nez, Barometers, Optometers, Spherometers, Magnifying-Glasses, Exposure-Meters, Focus-Reducers for Cameras, and Optical Condensers.

Ser. No. 35,253. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE PETER SCHOENHOFEN BREWING COMPANY, Chicago, Ill. Filed June 10, 1908.



Particular description of goods.—A Malt Beverage.

Ser. No. 35,254. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE PETER SCHOENHOFEN BREWING COMPANY, Chicago, Ill. Filed June 10, 1908.
The upper panel being red.



Particular description of goods.—A Malt Beverage.

Ser. No. 35,457. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

ARGENT



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,459. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

ATMLETIC.

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,460. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,462. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,463. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

BINGO

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,478. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

Douglass



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,480. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,482. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

EXCLUSIVE

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,486. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,489. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,490. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

"Foot Print"



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,491. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,495. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

GENIUS

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,496. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

Good Luck

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,497. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,500. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

JOT

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,501. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,502. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

JUMATA

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,504. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,505. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,508. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

LITTLE NELL



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,512. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,514. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,516. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



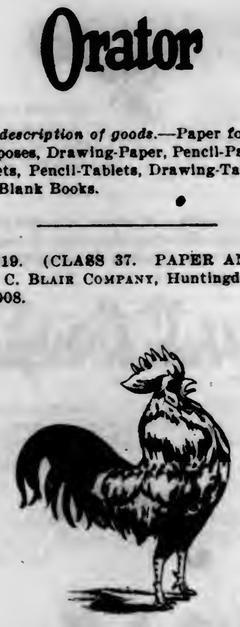
Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,517. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,518. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,519. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,521. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,525. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



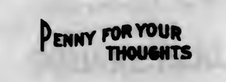
Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,526. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,527. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



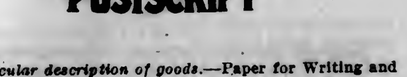
Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,528. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,532. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,533. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,535. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,538. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,541. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

Red Ribbon

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books

Ser. No. 35,544. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,545. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



The "Regular"

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,546. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,549. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,551. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,552. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

SIT LUX

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,555. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

SQUARE DEAL

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,556. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,559. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

Touch Down.

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,560. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,561. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,567. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

VANGUARD.

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,568. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,569. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,570. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,571. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

"VIOLA."

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,572. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,578. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,579. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,580. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,582. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,589. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

Karat

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,590. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

LA GRANDE

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,591. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,592. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,593. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

Redstart

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,597. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.

WATCH

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,605. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CREIGHTON & BETTS, New York, N. Y. Filed June 18, 1908.

C A N D B

Particular description of goods.—Cotton Goods in the Piece.

Ser. No. 35,685. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HAMILTON MANUFACTURING COMPANY, Lowell, Mass. Filed June 23, 1908.



Particular description of goods.—Cotton Piece Goods.

Ser. No. 35,720. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) THE MARLIN FIREARMS CO., New Haven, Conn. Filed June 24, 1908.



Particular description of goods.—Shotguns and Rifles.

Ser. No. 35,750. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHINA & JAPAN TRADING COMPANY, LIMITED, New York, N. Y. Filed June 25, 1908.

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FOONG YUH

Particular description of goods.—Unbleached Sheetings, Shirtings, Drills, and Flannels Woven of Cotton Yarn.

Ser. No. 35,766. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHINA & JAPAN TRADING COMPANY, LIMITED, New York, N. Y. Filed June 25, 1908.



Particular description of goods.—Unbleached Sheetings, Shirtings, Drills, and Flannels Woven of Cotton Yarn.

Ser. No. 36,004. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RED LETTER LINIMENT COMPANY, Vidalia, Ga. Filed July 8, 1908.

RED LETTER

The mark being printed in red.

Particular description of goods.—A Liniment.

Ser. No. 36,158. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) KATHLEEN B. LAPHAM, New York, N. Y. Filed July 16, 1908.



Particular description of goods.—Metal-Polishes.

TRADE-MARKS

REGISTERED SEPTEMRER 1, 1908.

70,422. PORTLAND CEMENT. ALPHA PORTLAND CEMENT COMPANY, Easton, Pa.
Filed May 21, 1908. Serial No. 34,855. PUBLISHED JUNE 30, 1908.

70,423. SOAPS. M. BENJAMIN BINKLEY, Dayton, Ohio.
Filed May 14, 1908. Serial No. 34,736. PUBLISHED JUNE 30, 1908.

70,424. LINEN HOSE. CHARLES NIEDNER'S SONS CO., Malden, Mass.
Filed May 18, 1908. Serial No. 34,815. PUBLISHED JUNE 30, 1908.

70,425. BELTING, HOSE, AND PACKING OF RUBBER, LEATHER, OR COMPOSITION. THE CORBETT-TAYLOR CO., Trenton, N. J.
Filed March 17, 1908. Serial No. 33,436. PUBLISHED JUNE 30, 1908.

70,426. CERTAIN PAPER ARTICLES. DENNISON MANUFACTURING COMPANY, Boston, Mass.
Filed April 14, 1908. Serial No. 34,096. PUBLISHED JUNE 30, 1908.

70,427. CERTAIN SURGICAL APPARATUS. DRÄGERWERK, HEINR. U. BERNH. DRÄGER, Lübeck, Germany.
Filed February 18, 1908. Serial No. 32,838. PUBLISHED JUNE 30, 1908.

70,428. SHAVING-BRUSHES. GILLETTE SAFETY RAZOR CO., Boston, Mass.
Filed May 27, 1908. Serial No. 34,986. PUBLISHED JUNE 30, 1908.

70,429. WRAPPING-PAPER. GRAHAM PAPER COMPANY, St. Louis, Mo.
Filed April 22, 1908. Serial No. 34,274. PUBLISHED JUNE 30, 1908.

70,430. STRAIGHT BOURBON WHISKY. A. J. HENSELER, Peoria, Ill.
Filed April 22, 1908. Serial No. 34,270. PUBLISHED JUNE 30, 1908.

70,431. DETERGENT COMPOUND ESPECIALLY PREPARED FOR CLEANING CARS. IMPERIAL CAR CLEANER CO., Newark, N. J.
Filed February 29, 1908. Serial No. 33,086. PUBLISHED JUNE 30, 1908.

70,432. PORTLAND CEMENT. J. & A. PAVIN DE LAFARGE, Viviers, France.
Filed July 21, 1906. Serial No. 21,069. PUBLISHED JUNE 30, 1908.

70,433. SPELLING-BLANKS. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed March 13, 1908. Serial No. 33,363. PUBLISHED JUNE 30, 1908.

70,434. SECTIONAL BOOKCASES AND FILING-CABINETS. MONTGOMERY LUMBER COMPANY, New York, N. Y.
Filed April 25, 1908. Serial No. 34,387. PUBLISHED JUNE 30, 1908.

70,435. VEHICLE WHEELS AND GEARS. MUNCIE WHEEL & JOBBING COMPANY, Muncie, Ind.
Filed March 16, 1908. Serial No. 33,407. PUBLISHED JUNE 30, 1908.

70,436. PEN-CLIPS, PENCIL-CLIPS, AND PAPER-CLIPS. WILLIAM F. OAKLEY, New York, N. Y.
Filed February 29, 1908. Serial No. 33,103. PUBLISHED JUNE 23, 1908.

70,437. BREAD. GEORGE E. RENTZ, Williamsport, Pa.
Filed April 4, 1908. Serial No. 33,852. PUBLISHED JUNE 30, 1908.

70,438. ABRASIVE COMPOSITION FOR CLEANING AND POLISHING. GEORGE WM. SAMPLE, York, Pa.
Filed September 12, 1907. Serial No. 29,878. PUBLISHED DECEMBER 10, 1907.

70,439. COMPOUND OF SORGHUM-MOLASSES AND CORN-SYRUP. SCHNULL & CO., Indianapolis, Ind.
Filed March 26, 1908. Serial No. 33,676. PUBLISHED JUNE 30, 1908.

70,440. CERTAIN LANTERNS. SIMMONS HARDWARE COMPANY, St. Louis, Mo.
Filed April 22, 1908. Serial No. 34,280. PUBLISHED JUNE 30, 1908.

70,441. MAPLE-SYRUP. ST. PAUL SYRUP REFINING COMPANY, St. Paul, Minn.
Filed October 12, 1907. Serial No. 30,578. PUBLISHED MAY 26, 1908.

70,442. POWDERED PREPARATION FOR MAKING MAYONNAISE DRESSING. GEORGE W. SWAIN, Brooklyn, N. Y.
Filed April 21, 1908. Serial No. 34,253. PUBLISHED JUNE 30, 1908.

70,443. PRINTED BOOKS OF INSTRUCTION ISSUED SERIALLY. THE SYSTEM COMPANY, Chicago, Ill.
Filed December 11, 1907. Serial No. 31,660. PUBLISHED JUNE 30, 1908.

70,444. CERTAIN BOTTLES AND JARS. GEORGE P. ALTENBERG, Cincinnati, Ohio.
Filed April 21, 1908. Serial No. 34,252. PUBLISHED JUNE 30, 1908.

70,445. CHAINS. DIAMOND CHAIN AND MANUFACTURING COMPANY, Indianapolis, Ind.
Filed June 24, 1905. Serial No. 8,975. PUBLISHED OCTOBER 2, 1906.

70,446. HERB TEA, A REMEDY FOR DISEASES ARISING FROM THE STOMACH OR BOWELS. MOLLIE FEIERSTEIN, New York, N. Y.
Filed May 9, 1908. Serial No. 34,659. PUBLISHED JUNE 30, 1908.

70,447. CASTOR-OIL IN CAPSULES. GRAPE CAPSULE COMPANY, Allentown, Pa.
Filed May 8, 1907. Serial No. 27,217. PUBLISHED MARCH 17, 1908.

70,448. JEWELERS' SAWS. HAMMEL, RIGLANDER & CO., New York, N. Y.
Filed May 19, 1908. Serial No. 34,829. PUBLISHED JUNE 30, 1908.

70,449. SAWS. HENRY DISSTON & SONS, INCORPORATED, Philadelphia, Pa.
Filed May 20, 1908. Serial No. 34,848. PUBLISHED JUNE 30, 1908.

70,450. VALVES. THE LUNKENHEIMER COMPANY, Cincinnati, Ohio.
Filed April 23, 1908. Serial No. 34,287. PUBLISHED JUNE 30, 1908.

70,451. ALTERATIVE FOR INTERNAL USE. JOHN A. SEITZ, New York, N. Y.
Filed May 2, 1908. Serial No. 34,544. PUBLISHED JUNE 30 1908.

70,452. ANTISEPTIC PREPARATION FOR THE SKIN. SHARP & DOHME, Baltimore, Md.
Filed April 20, 1908. Serial No. 34,232. PUBLISHED JUNE 30, 1908.

70,453. PERFUMES. STERLING SUPPLY CO., Chicago, Ill.
Filed April 25, 1908. Serial No. 34,379. PUBLISHED JUNE 30, 1908.

70,454. AXES. WARREN AXE AND TOOL COMPANY, Warren, Pa.
Filed May 22, 1908. Serial No. 34,891. PUBLISHED JUNE 30, 1908.

70,455. TOOTH-PASTE. WESCOT A. WOOD, New York, N. Y.
Filed May 1, 1908. Serial No. 34,522. PUBLISHED JUNE 30, 1908.

70,456. CERTAIN PRECIOUS-METAL AND PLATED WARE. ACKER, MERRALL & CONDIT COMPANY, New York, N. Y.
Filed March 23, 1908. Serial No. 33,552. PUBLISHED JUNE 30, 1908.

70,457. LADIES' ORNAMENTED COMBS. AUSTIN-WALKER COMPANY, Boston, Mass.
Filed May 14, 1908. Serial No. 34,740. PUBLISHED JUNE 30, 1908.

70,458. SUSPENDERS, GARMENT-SUPPORTERS, GARTERS, AND ARM-ELASTICS. AMERICAN NARROW FABRIC COMPANY, Worcester, Mass.
Filed May 14, 1908. Serial No. 34,745. PUBLISHED JUNE 30, 1908.

70,459. CERTAIN MUSICAL INSTRUMENTS, PARTS, AND SUPPLIES. JAMES BELLAK'S SONS, Philadelphia, Pa.
Filed January 28, 1908. Serial No. 32,475. PUBLISHED JUNE 30, 1908.

70,460. MEN'S DRESS AND NEGLIGÉE SHIRTS. CLARENCE M. FLORA, Independence, Kans.
Filed February 21, 1908. Serial No. 32,984. PUBLISHED JUNE 30, 1908.

70,461. SHOE-LACINGS. FORDE & NOTT, Boston, Mass.
Filed April 17, 1908. Serial No. 34,199. PUBLISHED JUNE 30, 1908.

70,462. SHOE-LACINGS. FORDE & NOTT, Boston, Mass.
Filed April 17, 1908. Serial No. 34,200. PUBLISHED JUNE 30, 1908.

70,463. CERTAIN KNIT GOODS. JOHN F. BROOKS Co., Needham and Needham Heights, Mass.
Filed February 21, 1908. Serial No. 32,982. PUBLISHED JUNE 30, 1908.

70,464. CERTAIN KNIT GOODS. JOHN F. BROOKS Co., Needham and Needham Heights, Mass.
Filed February 29, 1908. Serial No. 33,099. PUBLISHED JUNE 30, 1908.

70,465. COTTON THREAD AND WORSTED AND WOOLEN YARN. JOHN V. FARWELL COMPANY, Chicago, Ill.
Filed May 23, 1907. Serial No. 27,615. PUBLISHED JUNE 30, 1908.

70,466. SHOE-LACES AND CORSET-LACES. THE NARROW FABRIC Co., Wyomissing, Pa.
Filed April 29, 1908. Serial No. 34,470. PUBLISHED JUNE 30, 1908.

70,467. MEN'S OVERCOATS. M. & W. NAUMBURG & Co., New York, N. Y.
Filed April 9, 1908. Serial No. 33,960. PUBLISHED JUNE 30, 1908.

70,468. LEATHER BOOTS, SHOES, AND SLIPPERS. PAUL BROTHERS, Philadelphia, Pa.
Filed April 11, 1908. Serial No. 34,037. PUBLISHED JUNE 30, 1908.

70,469. LEATHER BOOTS AND SHOES. H. B. REED & COMPANY, Manchester, N. H.
Filed April 1, 1908. Serial No. 33,785. PUBLISHED JUNE 30, 1908.

70,470. LEATHER BOOTS AND SHOES. REGAL SHOE COMPANY, Boston, Mass.
Filed May 8, 1908. Serial No. 34,648. PUBLISHED JUNE 30, 1908.

70,471. RUBBER BOOTS AND SHOES. ROBERTS, JOHNSON, & RAND SHOE COMPANY, St. Louis, Mo.
Filed April 20, 1908. Serial No. 34,234. PUBLISHED JUNE 30, 1908.

70,472. HORNS FOR TALKING-MACHINES. SHEIP & VANDEGRIFT, INC., Philadelphia, Pa.
Filed May 4, 1908. Serial No. 34,576. PUBLISHED JUNE 30, 1908.

70,473. SASH AND HAIR-BOW SETS AND HAIR-BOW SETS. SMITH & KAUFMANN, New York, N. Y.
Filed May 12, 1908. Serial No. 34,704. PUBLISHED JUNE 30, 1908.

70,474. SASH AND HAIR-BOW SETS AND HAIR-BOW SETS. SMITH & KAUFMANN, New York, N. Y.
Filed May 12, 1908. Serial No. 34,705. PUBLISHED JUNE 30, 1908.

LABELS

REGISTERED SEPTEMBER 1, 1908.

14,331.—*Title:* "ROYAL STEWART." (For Cigars.) AMERICAN LITHOGRAPHIC COMPANY, New York, N. Y. Filed July 30, 1908.

14,332.—*Title:* "STONE PLOVER." (For Cigars.) HAUSFELD & HUENNEKENS CIGAR Co., Milwaukee, Wis. Filed July 9, 1908.

14,333.—*Title:* "TABACOS FINOS." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed July 11, 1908.

14,334.—*Title:* "RAVEN ROCK STRAIGHT BOURBON WHISKEY." (For Straight Bourbon Whisky.) JOSEPH WANDSTRAT, Cincinnati, Ohio. Filed July 6, 1908.

14,335.—*Title:* "WALL STREET BOURBON WHISKEY." (For Straight Bourbon Whisky.) JOSEPH WANDSTRAT, Cincinnati, Ohio. Filed July 6, 1908.

14,336.—*Title:* "RICHMOND FANCY PATENT FLOUR." (For Wheat-Flour.) CITY MILLS COMPANY, Columbus, Ga. Filed June 8, 1908.

14,337.—*Title:* "GOITRENE." (For a Medicinal Preparation.) THE GOITRENE COMPANY, Chicago, Ill. Filed December 9, 1907.

14,338.—*Title:* "SCHOOL ARTGUM." (For a Cleaning Composition.) ADOLPH SOMMER, Cambridge, Mass. Filed June 29, 1908.

14,339.—*Title:* "COLUMBIA." (For Liquid Fish Glue.) COLUMBIA GLUE COMPANY, Chicago, Ill. Filed June 15, 1908.

14,340.—*Title:* "KEEPUDRY." (For Rain-Coats.) LINCOLN GRANT TITUS, Columbus, Ohio. Filed July 13, 1908.

PRINTS

REGISTERED SEPTEMBER 1, 1908

2,328.—*Title:* "FRENCH AUTO OILS." (For Lubricating-Oil.) MARSHALL OIL COMPANY, Marshalltown, Iowa. Filed July 6, 1908.

2,329.—*Title:* "NO. 72. ASTROLOGICAL FATE CARDS." (For Playing-Cards.) THE UNITED STATES PLAYING CARD COMPANY, Norwood, Ohio. Filed July 28, 1908.

2,330.—*Title:* "THE BENNETT COMPANY'S LINE OF PIANOS." (For Pianos.) W. M. ROBINSON, Omaha, Nebr Filed July 24, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

CASE BROTHERS *v.* E. W. MURPHEY & COMPANY.

TRADE-MARK INTERFERENCE.

Decided September 4, 1907.

1. TRADE-MARKS—PRIORITY.

The evidence reviewed and *Held* to establish that M. & Co. were the first to adopt and use the word "Eureka" as trade-mark for press-boards.

2. SAME—GRADE-MARK.

Where it was impossible from the nature of the goods to put the trade-mark thereon, the fact that the mark was not placed on the cases in which the goods were shipped and that M. & Co. sent out a circular describing four grades of press-boards, of which "Eureka" was one, *Held* insufficient to establish that this mark was used merely to indicate grade or quality.

3. SAME—USE OF THE MARK ON SAMPLES A TRADE-MARK USE.

M. & Co. placed the mark "Eureka" on samples of press-boards which were distributed to the trade and which were identical with the boards furnished to customers in all respects except as to size. *Held* that this was such an association of the mark with the goods as to confer upon M. & Co. the exclusive right to the use thereof.

ON APPEAL.

PRESS-BOARDS.

Mr. Brainard H. Warner, Jr., for Case Brothers.

Mr. Philip C. Peck and *Messrs. G. H. & W. T. Howard* for E. W. Murphey & Company.

MOORE, *Commissioner:*

This is an appeal by each of the parties from a decision of the Examiner of Interferences holding that neither party is entitled to register the mark "Eureka" for press-boards.

Both parties to this interference proceeding are applicants. Upon the evidence adduced the Examiner of Interferences found that the mark in controversy had not been used in such a way as to secure to either party a trade-mark right, but that it had been used merely as a grade-mark.

The questions which I deem it necessary to consider on this appeal are, first, which of the parties was the first to adopt and use the mark; second, whether the evidence indicates that the mark was used as a grade-mark; third, was the mark affixed to the commercial article in such a way as to identify the same and associate the mark therewith in the mind of the user as an indication of the origin thereof?

1. The mark in controversy is applied to what is known as a "press-board," which is a strong paper-board used in knitting-mills for pressing or ironing knit goods, the process of ironing being carried out by placing alternate layers of press-board and knit articles in a hot or cold press and applying pressure thereto.

Case Brothers are manufacturers of such a board, and Murphey & Company are engaged in selling the same to knitting-mills, together with other mill supplies.

Prior to August, 1902, Murphey & Company were furnishing to their customers three different grades of press-board, which they denominated "New Process," "No. 1," and "No. 2," the "New Process" board being the best of the three grades. Complaint was made to Murphey & Company by one of their customers that their press-boards did not give satisfaction in hot pressing. This complaint was made known to Case Brothers, and they were asked if they could get out a board that could be guaranteed, to which Case Brothers replied that they would furnish a board that they would guarantee to last as well as any other make of American boards which could be found, but that they would not guarantee it for any specified time.

Accordingly, on August 9, 1902, Murphey & Company entered into a contract with the customer making the complaint guaranteeing for one year the board which should be furnished them, in which contract the board was referred to as "AA" board. It appears that this designation was used without consultation with Murphey & Company by one J. C. Hardy, a salesman for Murphey & Company, who personally came in contact with most of their customers and who transacted most of the business with Case Brothers which required personal attention. Murphey & Company, having decided to carry the new high-grade press-boards as a part of their regular line, felt that a new name should be adopted therefor. R. C. Payne, a member of the firm of Murphey & Company, testified that the mark now in controversy was suggested by one J. G. Carpenter, who was at that time their bookkeeper, and who died before the testimony in this case was taken. This testimony is corroborated by Leary, another employee. J. C. Hardy, whose interests are now with Case Brothers, does not admit the occurrence of all the events which Payne states took place in his presence, but Hardy does testify that a conversation with respect to the selection of a mark took place, and in answer to question 11 (C. R., p. 96) he states:

When we had discussed this question for some little time we decided that these names should be shown to Mr. Stanley of Case

Brothers and for me to visit them and suggest that the name "Eureka" would be the one we would prefer among the number, and as I stated in my previous testimony, Mr. Stanley spoke about the word "Eureka" as being applied to packing and soap and did not know that any press-boards bore that name and that he thought under those circumstances we would adopt the name "Eureka."

Mr. Robert N. Stanley, who is the manager for Case Brothers, in reply to the question how they came to adopt the name "Eureka" states as follows:

To the best of my recollection, Mr. Hardy came to our office in the late summer or early in September and talked with me regarding the name of the board. The name was suggested and was thought to be a good name for the board, and on an order from E. W. Murphey & Company later in the month, in making their first order for this board, exclusive of the sample lot referred to before, they used the word "Eureka." (C. R., p. 24.)

None of the witnesses for Case Brothers distinctly claim to have suggested the mark, nor do they deny that it was first suggested by Murphey & Company, in view of which and of the testimony above referred to I am of the opinion that the record clearly shows that the name originated with Murphey & Company. This conclusion is confirmed by the fact that there is record evidence showing that the mark was used by Murphey & Company in a letter to one of their customers, dated August 28, 1902, and that it was also used in a letter from this customer to Murphey & Company, dated August 30, 1902, while Stanley admits that at this early date no name had yet been chosen. (C. R., p. 26.) My conclusion is that Murphey & Company were the first to adopt the mark.

As to the use of the mark the record is very clear that Case Brothers never sold their press-boards to any one except Murphey & Company under the name "Eureka," that they never used the mark on the cases in which they packed the board for shipment to Murphey & Company or to others upon Murphey & Company's order, nor did they send out any samples of the board to the trade under this name. It is therefore clear that outside of the use of the mark by Murphey & Company they made no use of the mark which would give them a property right therein. Nor can Case Brothers claim the benefit of any use of the mark by Murphey & Company, since it is clear from the record that the latter adopted the mark for their own use, that many of their customers did not know who made the boards, and looked to them solely as the party responsible for the quality thereof. It is well settled that one may acquire an exclusive right to a mark which he has adopted and used to designate goods of his selection, although not of his manufacture. (*Menendez* v. *Holt*, 128 U. S., 514.) It is found, therefore, that Murphey & Company were the first to adopt and use the mark.

2. Does the evidence show that the mark was used by Murphey & Company as a grade-mark? The record indicates that about eighty per cent. of the goods sold by Murphey & Company were sent directly to their customers from Case Brothers—the manufacturers—in accordance with orders from the former, and that the cases in which these goods were shipped were not marked except with the address of the consignee. The record further shows that when press-boards were shipped directly to Murphey & Company the cases containing them were not marked with the trade-name, but by an order-number only, and that upon receipt of such cases an employee of Murphey & Company would compare the numbers on the bills, in which the character of the goods was stated, with the number on the cases and label them "Eureka" or "New Process," as the case might be. This marking was not stenciled, but was put on with a pencil. This employee admitted on the stand that he so labeled the boxes in order to determine readily the contents thereof. The record also shows that in the fall of 1902 Murphey & Company sent out to the trade a circular describing their four grades of press-boards, "Eureka," "New Process," "No. 1," and "No. 2." Upon these facts the Examiner of Interferences held that the evidence indicated that the mark was used as a grade-mark and not as a trade-mark. With this view I do not agree. The word "Eureka" is not in itself indicative or suggestive of grade. It has not been held in any reported case, so far as I know, that a party cannot acquire property rights in different marks for the same class of goods, and it is well known that a large number of the trade-marks now in use are used in this way. For example, a manufacturer who puts out different grades of cigars ordinarily adopts different names for the different grades, and while these names might be indicative of grade to the manufacturer himself, they would not be so to the consumer, who generally does not know the manufacturer, but who associates only the particular name with the particular goods to which it is affixed. To the consumer, then, such a name is indicative of origin only. Nor does the fact that Murphey & Company failed to mark the cases in which they sent out the goods conclusively show that they regarded the mark or intended to use it solely as a grade-mark.

While the failure of Murphey & Company to use the mark in the way it is ordinarily used tends to indicate that they were not using it as a means to distinguish the origin of their goods, a contrary intention is indicated by the whole record of the case, which shows that the "Eureka" press-board was personally brought to the attention of mill-owners by a salesman in the employ of Murphey & Company; that trade was solicited by means of samples of this board with the mark plainly printed thereon; that orders were received and filled therefor, and correspondence had with respect thereto. So far, therefore, as the failure to mark the packages raises any presumption against Murphey & Company's intention to acquire a property right in the mark, as distinguished from a use of it as indicative of grade, it is overcome by other evidence in the case. This circumstance, however, has another important bearing on the case, and that is, having so failed to place the mark on the packages in which they sold the goods have they otherwise so associated the mark with the goods as to indicate to the users the origin or ownership thereof? This question will now be considered.

3. The usual definition of a trade-mark includes the limitation that it must be "affixed" to the goods. The limits of the conditions which will satisfy this requirement are not very clearly defined in the adjudicated cases which I have been able to find. A mark is very commonly applied or affixed to the goods themselves, as by printing, engraving, or embossing. In many cases it is impossible or inconvenient to affix the mark to the commercial article itself, as in the case of liquids, powder, etc., and in these cases it has been held

sufficient ordinarily to affix the mark to the packages in which the goods are sold. It has also been held in a decision by Mr. Commissioner Duell in the case of *Hay & Todd Mfg. Co.* v. *Querns Bros.* (86 O. G., 1323) that it is unnecessary to attach physically the label containing the mark to the packages of goods, but that it is sufficient to place the label bearing the mark in the package containing the goods. On the other hand, it has been held that a mere advertisement of the goods associated with a mark is not such a use of the mark as will create a trade-mark right, (*St. Louis Piano Mfg. Co.* v. *Merkel*, 1 Mo. App., 305; *Hazelton Boiler Co.* v. *Tripod Boiler Co.*, 142 Ill., 494; *Hartshorn* v. *Philbrick*, 101 O. G., 2077,) nor the use of a mark in ordering goods or selling them to customers. (*Thompson* v. *Montgomery*, 6 R. P. C., 404.) In the case at bar the mark was not printed or impressed upon the goods sent out for use, for this would have rendered them unfit for the object intended, nor was the mark placed on the packages or on a label placed in the packages; but the mark was plainly printed on samples of the press-board identical in all respects with that furnished to customers except as to size. These samples could not be put into presses and used in the way press-boards are ordinarily used; but they could be otherwise tested as to color, thickness, quality, etc., so that persons who received them could determine the advisability of ordering press-boards of the quality exhibited, and when so ordered and the orders were filled could determine whether the goods furnished were of the quality of the sample. Thus purchasers were able to definitely associate the particular mark with a particular class and quality of goods, and this is believed to be the vital requisite to the establishment of a property right in a mark. In Powell's case (66 L. J. Ch., 303) Bowen, L. J., said:

The function of a trade-mark is to give an indication to the purchaser or possible purchaser as to the manufacture or quality of the goods, to give an indication to his eye of the trade source from which the goods come, or the trade hands through which they pass on their way to the market.

By placing in the hands of the public samples of goods with the trade-mark printed thereon it is believed that Murphey & Company have so associated the mark with the goods as to tell the public from what source they come and that they have for this reason exclusive right to the use thereof. Moreover, the record shows that these press-boards were ordered by the name "Eureka," that they were so billed to customers, and that correspondence was had in which the word "Eureka" was recognized as associated with a particular style or quality of board. Undoubtedly the customers of Murphey & Company by means of these samples, correspondence, personal solicitation, etc., had come to associate the word "Eureka" with a particular quality of goods, and the mark has thus come to be a valuable asset in their business.

While I entertain some doubt as to whether the use in this case has been sufficient under the law, it is believed that this doubt should be resolved in favor of the applicant, especially in view of the fact that the record appears to show that the "Eureka" press-boards have in fact acquired a reputation in the market and in view of the fact that, in any event, the registration of the mark gives only additional rights of procedure and does not confer a right of property therein.

The decision of the Examiner of Interferences is reversed, and priority of adoption and use is awarded to Murphey & Company.

GRAVES *v.* GUNDER.

Decided August 20, 1908.

1. TRADE-MARKS—CANCELATION—USE OF MARK ON GOODS OF DIFFERENT DESCRIPTIVE PROPERTIES.

The use by the applicant for cancelation of a mark on a dyspepsia remedy furnishes no ground for canceling the registration of substantially the same mark for tooth-powder, since these articles are manifestly of different descriptive properties.

2. SAME—SAME—REGISTRATION UNDER THE "TEN-YEARS" CLAUSE—APPLICANT'S USE SUBSEQUENT TO THE PASSAGE OF THE TRADE-MARK ACT.

Where a mark was registered under the "ten-years" clause of the Trade-Mark Act, the use of that mark by the applicant for cancelation after the passage of that act is no ground for canceling the registration.

3. SAME—SAME—MARK USED NOT SAME AS MARK REGISTERED—UNESSENTIAL FEATURES.

The mark registered was "Graves Tooth Powder." *Held* that no ground for canceling said mark would be established by showing that the mark actually used was "Dr. E. L. Graves Tooth Powder." (*Standard Underground Cable Co.*, 123 O. G., 656; 27 App. D. C., 320.)

4. SAME—SAME—PRIOR REGISTRATION BY SAME PARTY.

The fact that a party registered the words "Dr. E. L. Graves Tooth Powder" and "Dr. E. L. Graves Unequalled Tooth Powder" does not constitute a ground for canceling his registration of the words "Graves Tooth Powder." (*Anheuser-Busch Brewing Association* v. *D. G. Yuengling et al.*, 129 O. G., 3501.)

APPEAL from Examiners-in-Chief.

TRADE-MARK FOR TOOTH-POWDER.

Mr. J. A. Rosen and *Mr. W. S. Duvall* for Graves.
Messrs. Mason, Fenwick & Laurence for Gunder.

BILLINGS, *Acting Commissioner:*

This is an appeal by Graves from a decision of the Examiner of Interferences dismissing his application for the cancelation of the registration of a trade-mark for tooth-powder.

The mark in question consists of the words "Graves Tooth Powder" and was registered by the party Gunder on February 12, 1907, registration being obtained under the "ten-years" clause of the Trade-Mark Act.

In his application for cancelation Graves alleges that at the time Gunder applied for registration and a long time prior thereto he had been engaged in the manufacture and sale of tooth-powder under the name of "W. E. Graves Tooth Powder." He further alleges that neither Gunder nor his predecessor in business at any time during the ten years preceding the passage of the Trade-Mark Act used the name "Graves" alone in connection with tooth-powder, but always used the same in connection with the initials "E. L." or "Dr. E. L.," the mark appearing as "Dr. E. L. Graves Tooth Powder."

Gunder took no testimony. Graves took the testimony of himself and one other witness, Milton Brown, and introduced in evidence certified copies of certain portions of the testimony of Gunder and Dr. E. L. Graves given in a suit brought by Gunder against W. E. Graves in the United States Circuit Court for the District of Kansas involving the right to use the mark here in controversy.

W. E. Graves testifies that his business is manufacturing toilet goods and medicines. He states that for sixteen years he has sold a "dyspepsia cure" in packages marked "Graves Dyspepsia Cure." He also states that he has since April, 1906, been selling tooth-powder in cans marked "W. E. Graves Tooth Powder." Since tooth-powder and "dyspepsia cures" are manifestly goods of different descriptive properties and since W. E. Graves did not commence to sell tooth-powder till after the passage of the Trade-Mark Act, it follows that there is nothing in this testimony to show that Gunder was not the sole user of the words "Graves Tooth Powder" in connection with tooth-powder during the ten years next preceding the passage of that act.

It is argued that the testimony of Graves and the exhibits introduced in evidence show that Gunder has admitted that neither he nor his predecessor in business, E. L. Graves, ever used the words "Graves Tooth Powder" alone, but that all tooth-powder sold by them was marked "Dr. E. L. Graves Tooth Powder." Objection was made to the introduction of this testimony, which objection was, except as to certain parts of Brown's testimony, overruled by the Examiner of Interferences. The question of the admissibility of this testimony has been raised on this appeal; but it is not deemed necessary to consider it, for the reason that even if it be established that Gunder and his predecessor used only the words "Dr. E. L. Graves Tooth Powder" that would not, under the ruling of the court of appeals in the case of the *Standard Underground Cable Company*, (123 O. G., 656; 27 App. D. C., 320,) constitute a ground for canceling the mark "Graves Tooth Powder." In that case the court said:

> When an applicant presents his alleged mark for registry under the act approved February 20, 1905, who is to determine of what the mark consists? If, as in the present case, the mark is impressed upon a label, and, in addition to the matter claimed as the trade-mark by an applicant, certain accessories are shown, is the power vested in the Commissioner of Patents to say to applicant you must describe or show your mark not only as consisting of what you say it is, but also you must include such portion of the accessories, or parts of the label as I think are a material portion of the mark, although you may think otherwise. The power is an autocratic one and its possession by the Commissioner of Patents cannot be presumed but must, we think, be set forth in the statute with reasonable clearness. * * * Nowhere in the act do we find any power vested in the Commissioner of Patents to decide for the applicant the scope of his claimed trade-mark. * * * We repeat that we do not think that Congress intended to confer upon the Commissioner of Patents authority to say to an applicant how much or how little of the embellishments appearing in connection with what may be called the essential feature of a trade-mark, form an actual part of the trade-mark. Rather do we think that this right of selection and designation rests with the applicant. No general rule can possibly be applied, and where this is the case it is unwise to attempt to exercise a power not expressly vested in an executive officer. The proper forum for the decision of such questions is the courts where each case can be passed upon as it arises.

On the cartons and cans which were submitted by W. E. Graves as showing the mark used by the registrant appear the words "Dr. E. L. Graves Unequalled Tooth Powder." It cannot be held, however, that the initials "Dr. E. L." and the word "Unequalled" form an essential part of the mark which should have been included in the mark registered. As the registrant was, under the decision above cited, entitled to register his mark as shown in the drawings, it follows that the fact that he used this with other words does not constitute a ground for cancelation of the mark.

Attention is also called to registration Nos. 59,250 and 59,251, issued to Gunder. The marks shown in these registrations are "Dr. E. L. Graves Tooth Powder" and "Dr. E. L. Graves Unequalled Tooth Powder." As pointed out in the decision in the case of *Anheuser-Busch Brewing Association* v. *D. G. Yuengling et al.*, (129 O. G., 3501,) these registrations did not constitute a bar to the registration of the present mark, and therefore they offer no ground for the cancelation of the registration.

The decision of the Examiner of Interferences is affirmed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

CASE BROTHERS *v.* E. W. MURPHEY & CO.

Decided April 14, 1908.

TRADE-MARK—PRIORITY.

Assuming, as held by the Commissioner of Patents, that the word "Eureka" is a valid trade-mark for press-boards and that its use on samples of such boards was a trade-mark use, the evidence is sufficient to justify the holding that M. & Co. were entitled to register this mark.

Mr. B. H. Warner, Jr., and *Mr. Levi Cooke* for the appellant.

Mr. George H. Howard and *Mr. Philip C. Peck* for the appellee.

SHEPARD, *J.*:

This is an interference proceeding between rival applicants for the registration of Eureka as a trade-mark for press-boards. These boards are sheets of heavy paper cardboard used by knitting-mills in pressing and finishing their goods. A book is made by placing the goods upon a board; another board is placed thereon, which is covered by goods again. This process goes on until a book of proper size is made up to go between the plates of the hot press, where pressure and heat are applied. Where there is a high degree of heat, an extra high grade of board is necessary.

Case Brothers were manufacturers of press-boards in New Jersey. Murphey & Co. were engaged at Hudson, N. Y., as dealers in mill supplies, including press-boards, and ordered their boards from Case Brothers. In many instances, the orders when received were followed by shipments directly to the customer. The bills were sent to Murphey & Co. who paid them. The sales by Case Brothers were to them and not to their customers. Murphey & Co. claim to have requested the manufacture of a very high class board, to which they gave the name Eureka. The name could not be affixed to the boards because the ink would come out in pressing and injure the pressed articles.

Murphey & Co. filed their application for registration April 18, 1906, and Case Brothers applied May 22, 1906. The Examiner of Interferences denied registration to each party on the ground that Eureka had been adopted and used as a mark of grade or quality.

On appeal by both parties to the Commissioner, the latter held that Murphey & Co. were the first to use the mark, and that it was not a grade-mark merely, but a valid trade-mark.

As the mark could not be affixed to the goods themselves, there was some doubt as to a trade-mark use, but by reason of sample cards sent with packages by Murphey & Co., showing the name, the Commissioner was of the opinion that the acts of Murphey & Co. amounted to a trade-mark use.

Whether the mark can be registered as a valid trade-mark, because of its character and use, is a question that is not before us on this appeal. Assuming, as found by the Commissioner, that it may be registered by the one entitled to its use, the sole question is as to the rights of the respective claimants.

The evidence in support of the claims of the parties has been fully and fairly reviewed by the Commissioner, and, agreeing with his conclusion, we see no occasion for its discussion.

If the mark was used in such a way as to constitute it a trade-mark, we think that the Commissioner was clearly right in holding that Murphey & Co. had the superior right to register it.

The decision will therefore be affirmed; and this decision will be certified to the Commisioner of Patents. It is so ordered. Affirmed.

Court of Appeals of the District of Columbia

DURKEE, JR., *v.* WINQUIST AND TURNSTROM.

Decided April 14, 1908.

INTERFERENCE—TESTIMONY OF INVENTOR UNCORROBORATED.

It is well settled that the uncorroborated testimony of the junior party in interference is insufficient to overcome the presumption attaching to the prior filing date of the senior party.

Mr. L. S. Bacon and *Mr. J. H. Milans* for the appellant.

VAN ORSDEL, *J.*:

This is an appeal from a decision of the Commissioner of Patents in an interference proceeding awarding priority of invention to Winquist and Turnstrom for a toe-calk for horseshoes. Durkee, Jr., filed his application for patent on January 30, 1905. Victor Winquist and Alfred Turnstrom filed their application October 14, 1904. A patent was granted to Durkee, Jr., on August 8, 1905. The issue in interference is as follows:

1. A horseshoe-calk composed of a V-shaped outer plate of iron with an angular opening extending lengthwise of its body below the line of its free ends, and a steel plate fitting within the opening, the steel plate being provided with a pointed lug integral therewith and extending outwardly from the edges of the outer plate.
2. A horseshoe-calk consisting of a steel-plate portion having a pointed lug extending from its edge and integral therewith, having a plate of iron folded upon the lengthwise edge opposite the lug, said iron portion enveloping one edge and entire side surfaces of the steel-plate portion.

The evidence of Durkee, Jr., to establish his claim consisted of his own deposition, unsupported by any other evidence. It is well settled that the uncorroborated testimony of a junior party in an interference is insufficient to overcome the presumption attaching to the prior filing date of the senior party. Winquist and Turnstrom, relying on their senior application, offered no evidence, the burden being on Durkee, Jr. They were justified in resting on their prior application, until he had discharged the burden of proof resting upon him to establish a conception of the invention in question, and reduction of the same to practice, at a date prior to the filing date of the senior applicants. This he failed to do by his own uncorroborated evidence.

It was held by the Commissioner of Patents that—

> the terms of the claims, when given their ordinary meaning, clearly read upon the structure of both parties.

With this decision, we fully agree. Winquist and Turnstrom, being the senior applicants, are entitled to the priority.

The decision of the Commissioner of Patents is affirmed, and the clerk is directed to certify these proceedings as by law required. Affirmed.

Court of Appeals of the District of Columbia.

IN RE FABER.

Decided June 2, 1908.

PATENTABILITY—COMBINATION—ANTICIPATION.

The mere combination of articles disclosed in two former patents will not constitute invention unless it results in producing a new and useful article not applied by those familiar with the state of the art. A patent should not be issued when the alleged invention is a mere modification of the principle involved in former inventions or discoveries.

Mr. H. S. Knight and *Mr. James A. Carr* for Faber.

Mr. F. A. Tennant for the Commissioner of Patents.

VAN ORSDEL, *J.*:

This is an appeal from the Commissioner of Patents refusing to grant a patent to the appellant, Herman W. Faber, for a surgical dressing. The claims upon which the application for patent is based are nine in number, but the following sufficiently disclose the invention:

1. A surgical dressing comprising a binding medium cellularly and interstitially impregnated and superficially coated with an ointment having an oleaginous base.
4. A surgical dressing comprising a binding material cellularly and interstitially impregnated and superficially coated with an ointment having a non-adhesive, non-absorbent base and containing a refrigerating anesthetic and non-irritating antiseptic.

The claims were rejected because of the state of the art as shown in two former patents. A patent issued June 28, 1881, to one Rosenwasser, discloses an antiseptic dressing closely resembling appellant's, except that it had no oleaginous base. This base, however, is disclosed fully in a patent issued to one Doppelmayer on October 7, 1890. The Examiners-in-Chief referred to appellant's alleged invention, and to these patents, as follows:

> In our opinion the article produced is obviously lacking in invention in view of matters of common knowledge. To use a bandage or dressing impregnated with an ointment is so well known and in such common use that judicial notice may be taken of it. It is well known that such dressing prevents drying of the wound and prevents the bandage from adhering to the parts. The patent to Rosenwasser discloses an antiseptic dressing and except for the absence of the oleaginous base substantially anticipates the dressing here claimed. We agree with the Examiner that there was no invention in adding the oleaginous base. The patent to Doppelmayer discloses a liniment having an oleaginous base and while the patentee states in his specification that he prefers to use it without bandaging the wound we are of the opinion that one who prefers to, and does in fact, use it on a bandage does not thereby become an inventor. This patent shows that an oleaginous base may be combined with the ordinary antiseptics used in treating a wound and to use the compound produced in one of the ordinary ways in which ointments and antiseptics are used is in our opinion an obvious expedient.

It was held by all of the tribunals of the Patent Office that there is nothing new in the custom of applying ointment to a cloth which is to be used as a bandage, as described in the claims of appellant. The mere combination of the articles disclosed in the two former patents will not constitute an invention, unless it result in producing a new and useful article not applied by those familiar with the state of the art. A patent should not be issued where the alleged invention is a mere modification of the principle involved in former inventions or discoveries. It is well settled that a valid patent cannot be issued for an improvement which is simply a new application of knowledge already familiar to those skilled in the art. (*Ryan* v. *Hard*, 145 U. S., 241; *Grant* v. *Walter*, 148 U. S., 547;

Market Street Cable Railway Co. v. *Rowley*, 155 U. S., 621.)

The record, we think, discloses that appellant's alleged invention contains nothing new to those skilled in the art. The application of the principles involved in the issue is obvious to those familiar with the use of such bandages in connection with the performance of surgical operations. Where this is apparent, no patent should issue. As stated in *Hollister* v. *Benedict & Burnham Mfg. Co.*, (113 U. S., 59:)

It is but the display of the expected skill of the calling, and involves only the exercise of the ordinary faculties of reasoning upon the materials supplied by a special knowledge, and the facility of manipulation which results from its habitual and intelligent practice; and is in no sense the creative work of that inventive faculty which it is the purpose of the Constitution and the patent laws to encourage and reward.

We fully agree with the conclusions of the Commissioner and his decision is affirmed. The clerk will certify these proceedings as required by law. Affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 27, 1908.

George H. Taylor, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Frederick O. Hanson, of Springfield, Mass., and Holyoke, Mass., for registration of a trade-mark and a trade-mark registered to George H. Taylor, of 207 Monroe street, Chicago, Ill., and the notice of said declaration sent by the Patent Office by registered mail to the said George H. Taylor having been returned undelivered, notice is hereby given to the said George H. Taylor, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 6, 1908.

Mayer Brothers & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of B. Fischer & Company, of 271-275 Greenwich street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Mayer Brothers & Company, of New York, N. Y., and the notice of said declaration sent by registered mail to the said Mayer Brothers & Company having been returned undelivered, notice is hereby given to the said Mayer Brothers & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 6, 1908.

Iler and Burgweger, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Yonkers Brewery, of Yonkers, N. Y., for registration of a trade-mark and a trade-mark registered to Iler and Burgweger, of Kansas City, Mo., and the notice of said declaration sent by registered mail to the said Iler and Burgweger having been returned undelivered, notice is hereby given to the said Iler and Burgweger, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 4, 1908.

Francis H. Reinhard, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Baird Bros. & Company, of 1435-1437 Tenth street northwest, Cleveland, Ohio, for registration of a trade-mark, a trade-mark registered to Searle & Son, of Rockford, Ill., and a trade-mark registered to Francis H. Reinhard, of 143 Maiden Lane, New York, N. Y., and the notice of said declaration sent by registered mail to the said Francis H. Reinhard having been returned undelivered, notice is hereby given to the said Francis H. Reinhard, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 29, 1908.

Searle & Son, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Baird Bros. & Company, of 1435-1437 Tenth street northwest, Cleveland, Ohio, for registration of a trade-mark, a trade-mark registered to Searle & Son, of Rockford, Ill., and a trade-mark registered to Francis H. Reinhard, of 143 Maiden Lane, New York, N. Y., and the notice of said declaration sent by registered mail to the said Searle & Son having been returned undelivered, notice is hereby given to the said Searle & Son, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents, in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

E. B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 24, 1908.

William H. Ward, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Yonkers Brewery, of Yonkers, N. Y., for registration of a trade-mark and a trade-mark registered to William H. Ward, of San Francisco, Cal., and the notice of said declaration sent by registered mail to the said William H. Ward having been returned undelivered, notice is hereby given to the said William H. Ward, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents, in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
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Total	689	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	2	.....	New Hampshire	3	.....
Alaska, District of	3	.....	New Jersey	23	6
Arizona Territory	.....	.....	New Mexico Ter't'y	.....	.....
Arkansas	3	.....	New York	79	23
California	29	5	North Carolina	2	..
Colorado	8	.....	North Dakota	4	.....
Connecticut	12	1	Ohio	32	7
Delaware	1	1	Oklahoma	1	.....
District of Columbia	4	.....	Oregon	4	.....
Florida	3	.....	Pennsylvania	63	6
Georgia	5	.....	Philippine Islands	.....	.....
Hawaii Territory	.....	.....	Porto Rico	4	.....
Idaho	1	.....	Rhode Island	4	.....
Illinois	51	3	South Carolina	.....	.....
Indiana	14	1	South Dakota	.....	.....
Iowa	8	2	Tennessee	4	.....
Kansas	5	1	Texas	10	1
Kentucky	5	1	Utah	.....	.....
Louisiana	3	2	Vermont	2	.....
Maine	2	.....	Virginia	1	1
Maryland	8	.....	Washington	9	.....
Massachusetts	44	11	West Virginia	5	.....
Michigan	21	1	Wisconsin	8	3
Minnesota	13	2	Wyoming	.....	.....
Mississippi	2	.....	U. S. Army	1	.....
Missouri	18	1	U. S. Navy	.....	.....
Montana	3	.....			
Nebraska	3	2	Total to citizens of the United States	526	81
Nevada	.....	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Algeria	.....	.....	Natal	.....	.....
Austria-Hungary	1	.....	Netherlands	1	.....
Belgium	1	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	.....	.....
British West Indies	16	.....	New Zealand	1	1
Canada	.....	1	Norway	1	1
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
China	.....	.....	Russia	.....	.....
Costa Rica	.....	.....	Scotland	1	.....
Cuba	.....	.....	South Australia	.....	.....
Denmark	.....	.....	Spain	.....	.....
Ecuador	.....	.....	Sweden	.....	.....
England	15	1	Switzerland	4	1
France	10	1	Turkey	.....	.....
Germany	19	.....	Transvaal, South Africa	.....	.....
India	.....	.....	Victoria	.....	.....
Ireland	.....	.....	Western Australia	1	.....
Italy	.....	.....			
Japan	.....	.....	Total to citizens of foreign countries	71	6
Java	.....	.....			
Mexico	.....	.....			

NOTICE.

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Changes in Classification.

(ORDER No. 1,777.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 8, 1908.

The following changes in the classification of patents are hereby directed, to take effect this day:

In Division XXXII, class 220, Metallic Shipping and Storing Vessels, abolish the following subclasses:

Tanks—
126. Transporting—
127. Compartment,
128. Vehicle.

In Division XXXIV, class 105, Railway Rolling-Stock, establish the following subclass:

Cars—
Freight—
264. Tank.

This subclass is formed of the patents taken from the above abolished subclasses.

C. C. BILLINGS,
Acting Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business September 1, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Aug. 18	May 11	800
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Aug. 17	Aug. 3	132
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Aug. 12	June 30	217
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Aug. 5	June 10	286
172	XXXI. Alcohol, Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Gums; Water Purification.	Aug. 1	June 18	214
135	VIII. Reds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Aug. 1	Apr. 22	575
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	July 23	June 2	266
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	July 22	June 12	673
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	July 18	June 25	421
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	July 17	Apr. 2	558
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	July 16	May 21	342
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	July 15	June 10	516
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	July 15	May 26	418
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	July 13	June 4	454
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	July 13	June 3	420
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	July 13	June 2	466
125	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	July 13	Feb. 29	725
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	July 11	June 17	592
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	July 6	Apr. 18	683
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	July 6	Apr. 3	694
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	July 2	Apr. 20	622
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	July 2	Apr. 14	435

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Masonry and Concrete Structures; Tents, Canopies, Umbrellas, and Canes.	June 27	May 29	550
167	V. Bookbinding; Harvesters; Jewelry; Music.	June 27	Apr. 7	511
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	June 24	June 11	751
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	June 24	May 15	506
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	June 22	June 1	771
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	June 20	June 8	832
332	X. Carriages and Wagons	June 19	May 25	650
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	June 16	May 15	525
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	June 15	May 1	610
321	XXXIX. Baths and Closets; Water Distribution.	June 15	Apr. 2	800
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	June 10	May 1	600
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	June 6	Mar. 2	534
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	June 5	June 9	584
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	June 5	May 4	797
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	May 29	Mar. 21	743
220	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	May 28	May 11	622
109	XVI. Telegraphy; Telephony	May 21	Mar. 8	550
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	May 4	Mar. 5	550
238	XIX. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Apr. 13	May 23	409

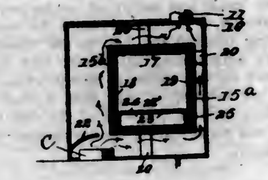
Total number of applications awaiting action 22,584

Room No.		Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks	Aug. 21	July 16	676
	Designs	Aug. 26	July 7	103
	Labels and Prints	Aug. 31	Aug. 26	10

PATENTS

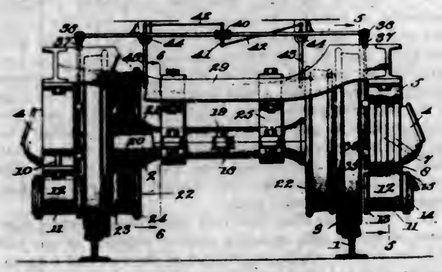
GRANTED SEPTEMBER 8, 1908.

897,863. STOVE OR HEATER ATTACHMENT. GEORGE T. ADCOCK, Burns, Tenn. Filed Jan. 7, 1908. Serial No. 409,649.



The combination with a stove or heater, of a detachable oven comprising a casing having a heat inlet passage in communication with the discharge passage of the stove or heater, said casing having pot openings in the top wall thereof, closures for said openings, depending members carried by said casing for engagement with the rear wall of said stove or heater, a casing disposed within the first named casing and having spaced walls, heat absorbing material located between the walls of the last named casing, blocks carried by the last named casing for holding the walls of the last named casing in spaced relation to the walls of the first named casing, and fastening devices engaged with the walls of the first named casing and with said blocks respectively.

897,864. SAFETY APPLIANCE FOR RAILWAYS. JAMES T. ANDREW, Montgomery, Ala. Filed Apr. 28, 1908. Serial No. 429,785.



1. In a car truck, the combination of a wheel axle, and a sleeve encircling said axle and provided with journals at each end and safety wheels mounted on said journals, substantially as described.

2. In a car truck, the combination of the ordinary wheels and an axle, and a split sleeve encircling said axle and provided with safety wheels at its ends, substantially as described.

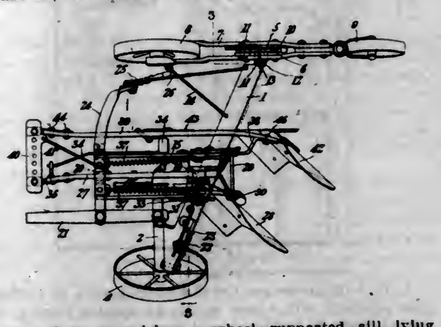
3. In a car truck, the combination of the ordinary wheels and an axle, and a split sleeve encircling said axle having journals and provided with safety wheels at its ends on said journals, substantially as described.

4. In a car truck, the combination with the ordinary wheels and an axle, of a sleeve provided with journals surrounding said axle between said wheels, safety wheels mounted on said journals and a safety beam support resting on said sleeve, whereby said sleeve will assist in holding the two parts of the axle together should it break, and whereby said safety beam will serve to brace the truck, substantially as described.

5. In a car truck, the combination with the ordinary wheels and an axle, of a split sleeve surrounding said axle between said wheels, provided with safety wheels at its ends; and a plurality of safety beam supports loosely encircling said sleeve and serving to brace the truck, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

897,865. PLOW. PETER D. ARRAS, Rawson, Ohio. Filed June 28, 1907. Serial No. 381,316.



1. A plow comprising a wheel supported sill lying obliquely across the line of draft, and a beam lying transversely of the sill and being in the line of draft, and means for adjusting the angle between the sill and beam, whereby the angle between the supporting wheel and the line of draft is adjusted.

2. A plow comprising a wheel supported sill lying obliquely across the line of draft, a beam lying across the sill and being in the line of draft, a frame mounted upon the sill and receiving the beam, a lever mechanism supported by the frame and connected with the sill for adjusting the angle between the beam and the sill.

3. A plow comprising a sill lying obliquely across the line of draft, a beam lying across the sill and being in the line of draft, a wheel supporting one end of the sill, and being fixed with relation thereto, a truck adjustably supporting the opposite end of the sill and wheels carried by the truck and being located upon opposite sides of the sill, said truck retaining the last said wheels against independent vertical movement.

4. A plow comprising a sill, a furrow wheel supporting one end thereof, a truck located at the opposite end and having vertical movement with relation to the sill, wheels attached to the truck and located upon opposite sides of the sill, a lever mechanism mounted upon the truck and means resiliently connecting the sill with the lever mechanism.

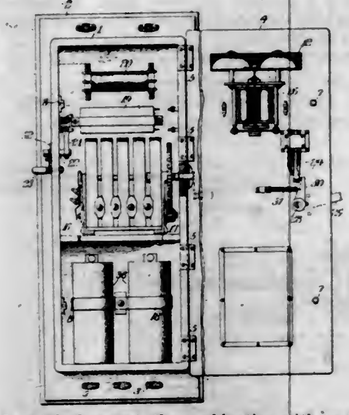
5. A plow comprising a frame, a sill supporting the same, and adapted to swing horizontally with relation thereto and a beam guided vertically by the frame and lying across the sill.

[Claim 6 not printed in the Gazette.]

897,866. SIGNALING APPARATUS. GEORGE F. ATWOOD, East Orange, N. J., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 26, 1906. Serial No. 303,017.

1. In a telephone set, the combination with an inclosing case provided with a door having an opening therein, of a

gasket interposed between said door and the case, a screen or grating secured across said opening, a telephone bell mounted on the door with its gongs in proximity to said opening, a telephone switch and switch hook also mounted upon said door, a shaft extending through the door and connecting the switch with the switch hook, a generator mounted within said case and having a shaft extending through the wall to the exterior thereof, a stuffing box surrounding said shaft, a circuit changing switch mounted on the interior of said case, a shaft extending from the switch through the wall of the case to the exterior thereof, and an actuating handle secured to the outer end of said shaft.



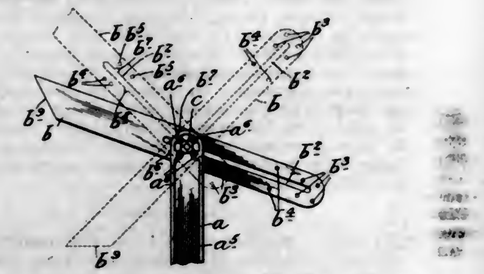
2. In a telephone set, the combination with an inclosing case provided with a door having an opening therein, of a gasket interposed between said door and the case, a screen or grating of fine mesh secured across said opening, a heavier screen or grating also secured across said opening outside of said first mentioned screen, a telephone bell mounted on the door with its gongs in proximity to said opening, a telephone switch and switch hook also mounted upon said door, a shaft extending through the door and connecting the switch with the switch hook, a generator mounted within said case and having a shaft extending through the wall to the exterior thereof, a stuffing box surrounding said shaft, a circuit changing switch mounted on the interior of said case, a shaft extending from the switch through the wall of the case to the exterior thereof, and an actuating handle secured to the outer end of said shaft.

3. In a telephone set having a closed apparatus box provided with a closely fitting door having an opening therein, said opening being protected by a screen or grating of fine mesh, a telephone bell mounted within the box with its gongs in proximity to said opening, a telephone switch also mounted on the inside of the door and a switch hook mounted on the outside thereof on a shaft which extends through the door and is oscillated by the switch hook to operate the switch, a generator within the case having a shaft extending through the wall to the exterior thereof, an operating handle secured to said shaft, a circuit changing switch mounted on the interior of the case, a shaft extending from said switch through the wall of the case to the exterior thereof, and an actuating handle secured to the outer end of said shaft.

4. In a telephone set having a closed apparatus box provided with a closely fitting door having an opening therein, said opening being protected by an inner screen of fine mesh and an outer screen or grating of heavy mesh, a telephone bell mounted on the door with its gongs in proximity to said opening, a telephone switch also mounted on the inside of the door and a switch hook mounted on the outside thereof on a shaft which extends through the door and is oscillated by the switch hook to operate the switch, a generator within the case having a shaft extending through the wall to the exterior thereof, an operating handle secured to said shaft, a circuit changing switch mounted on the interior of said case, a shaft extending from the switch through the wall of the case to the exterior thereof, and an actuating handle secured to the outer end of said shaft.

5. In a telephone set having a closed apparatus case provided with a closely fitting closure, said case having an opening protected by a screen of fine mesh and a screen of heavier and stouter mesh outside said first mentioned screen, a telephone bell mounted within the case with its gongs in proximity to said opening, a telephone switch within the case and a switch hook mounted on the outside thereof, a shaft whereon said switch-hook is mounted extending to the inside and oscillated by the switch hook to operate the switch, a generator within the case having a shaft extending through the wall to the exterior thereof, a stuffing box surrounding said shaft and an operating handle secured to the same, a circuit changing switch mounted on the interior of said case, a shaft extending from the switch through the wall of the case to the exterior thereof, and an actuating handle secured to the outer end of said shaft.

897,867. CARPENTER'S COMBINATION-TOOL. ANTON BARTELS, Yonkers, N. Y. Filed Mar. 11, 1908. Serial No. 420,294.



1. A tool of the class described comprising a handle composed of spring side members secured together at one end and one part of which is provided at its free end with inwardly directed pins which are secured therein, an arm provided in one end portion with a slot which extends longitudinally thereof, a bolt passed through the free ends of the separate parts of the handle and through said slot and provided at one end with a nut, said arm being also provided around the opposite ends of the slot therein with holes adapted to receive said pins, and in the opposite side walls of said slot at one end thereof with recesses also adapted to receive said pins.

2. A tool of the class described comprising a handle composed of spring side members secured together at one end and one part of which is provided at its free end with inwardly directed pins which are secured therein, an arm provided in one portion with a slot which extends longitudinally thereof, a bolt passed through the free ends of the separate parts of the handle and through said slot and provided at one end with a nut, said arm being also provided around the opposite ends of the slot therein with holes adapted to receive said pins, and in the opposite side walls of said slot at one end thereof with recesses also adapted to receive said pins, and between the end portions of said slot and in the opposite sides thereof with other holes or apertures adapted to receive said pins.

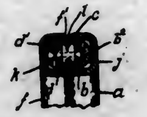
897,868. ELECTRIC IGNITION DEVICE OR SPARKING PLUG FOR INTERNAL-COMBUSTION MOTORS. CHARLES O. BASTIAN and GEORGE CALVERT, London, England. Filed June 27, 1906. Serial No. 323,660.

1. In a "sparking plug" for internal combustion engines, the combination of an insulator formed from a tube of glass closed at one end, and provided with the annular enlargement a^x, packing material on each side of said enlargement, a metal shell surrounding said insulator and having the gland c, and a wire sealed through the closed end of said tube and connected to said shell, substantially as described.



2. In a "sparking plug" for internal combustion engines, the combination of an insulator formed from a tube of glass closed at one end, and provided with the annular enlargement a^x, packing material on each side of said enlargement, a metal shell surrounding said insulator and having the gland c, a wire sealed through the closed end of said insulator and connected to said shell, and a split collar f secured to the upper end of said insulator and provided with the clamping screw g, substantially as described.

897,869. BAND FOR BRACELETS. THOMAS S. BENNETT, Attleboro, Mass. Filed Oct. 8, 1907. Serial No. 396,364.



1. A lazy-tongs band composed of pairs of arms pivoted to each other at or near their centers, pivot pins connecting the ends of the adjacent arms, and means upon the pivot pins for maintaining the adjacent ends of the arms out of contact with each other.

2. A lazy-tongs band composed of pairs of arms pivoted to each other at or near their centers, pivot pins connecting the ends of the adjacent arms, and shoulders upon the pivot pins intermediate the arms.

3. A lazy-tongs band composed of pairs of arms pivoted to each other at or near their centers, each arm being provided with openings adjacent their ends, pivot pins entering the openings of the adjacent arms, and shoulders upon the pivot pins intermediate the arms.

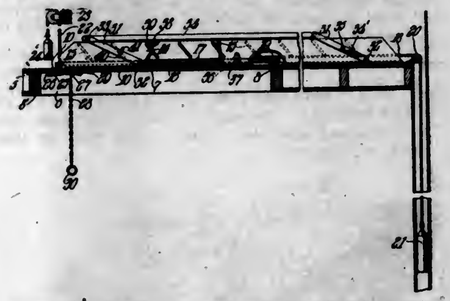
4. A lazy-tongs band composed of pairs of arms pivoted to each other at or near their centers, each arm comprising a plate provided with openings adjacent its ends and a shell engaging the plate, pivot pins whose ends are received in the openings, and shoulders upon the pivot pins intermediate the plates.

5. A lazy-tongs band composed of pairs of arms pivoted to each other at or near their centers, each arm comprising a plate provided with openings adjacent its ends and an outer shell engaging the plate, pivot pins passing through the openings, shoulders upon the pivot pins intermediate the plates, and rivet heads upon the ends of the pivot pins resting against the outer surfaces of the plates.

897,870. MOVABLE STAIRWAY. FRANK E. BESSLER, Akron, Ohio. Filed Sept. 27, 1907. Serial No. 394,901.

1. The combination with a support having an opening, of a closure for said opening, a stairway slidably mounted on the closure and movable through the opening in the support to operative position, a foldable guard rail pivotally mounted on the stairway, and means carried by the closure and extending in the path of movement of the stairway and adapted to engage the guard rail for automatically moving the latter to operative position when the stairway is lowered and moving the guard rail to folded position when the stairway is elevated.

2. The combination with a support having an opening, of a closure for said opening, a stair-way slidably mounted on the closure, counter-balances secured to the closure and stair-way, respectively, a guard rail pivotally mounted on the stair-way, and means carried by the closure and adapted to engage the guard rail for moving the latter to operative position when the stair-way is lowered.



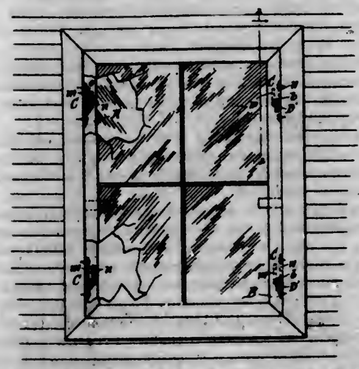
3. The combination with a support having an opening, of a closure for said opening, a stair-way slidably mounted on the closure and movable through said opening to operative position, a folding guard rail pivotally mounted on the stair-way, means carried by the closure and adapted to engage the guard rail for moving the latter to operative position when the stair-way is lowered, and means for locking the guard rail in operative position.

4. The combination with a support having an opening, of a closure, a stairway slidably mounted on the closure and including spaced side members disposed in contact with the adjacent longitudinal edges of the platform and connected by transverse strips constituting steps, there being longitudinal grooves formed in the inner faces of the side members, guide strips secured to the upper surface of the platform and extending within the longitudinal grooves, counter balances connected with the closure and stairway, respectively, and means for automatically locking the closure in closed position.

5. The combination with a support having an opening, of a closure for said opening, a stair-way slidably mounted on the closure, a guard rail pivotally mounted on the stair-way and provided with a slot, and an actuating member secured to the closure and adapted to engage the walls of the slot for moving the guard rail to operative position when the stair-way is lowered.

[Claims 6 to 8 not printed in the Gazette.]

897,871. FASTENING DEVICE FOR OUTSIDE WINDOWS. SIMON S. BROWN, Waterville, Me. Filed June 1, 1908. Serial No. 436,020.

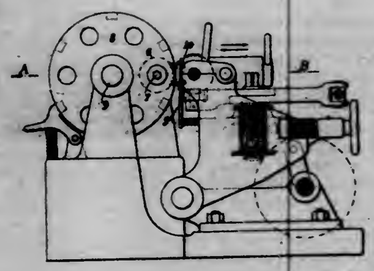


1. The combination of a pair of bifurcated brackets fixed to a window casing with an outside or additional

window and bolts passed through the latter, to enter the spaces between the bifurcations of said brackets, the said bolts being provided with nuts, which bear against said brackets and with parts bearing against the exterior of said outside window substantially as set forth.

2. A removable outside window provided with a pair of holes b in combination with a pair of bolts extending through said window and fixed slotted devices receiving said bolts, the nuts of the latter bearing against said devices behind the slots substantially as set forth.

897,872. PROCESS FOR THE MANUFACTURE OF GEAR-WHEELS. FRÉDÉRIC A. BRUN, Trablaine, near Le Chambon-Feugerolles, France. Filed Nov. 30, 1906. Serial No. 345,781.



1. In the process of manufacturing toothed wheels by circular lamination and impression of heated blanks, the operation consisting in rolling a die roll on the circumference of the blank and at the same time laminating the lateral faces of the teeth and the rim of the wheel, the blank being supported at points between the central boss of the blank and the circumference and in such a way that the rolling of the die wheel takes place without reaction on the central boss of the blank.

2. In the process of manufacturing gear wheels by circular lamination and impression of heated blanks, the operation consisting in rolling on the circumference of the blank a plurality of successively acting die-rolls of different configurations and at the same time laminating the lateral faces of the teeth and rim of the wheel, the blank being supported at points between the central boss of the blank and the circumference, and in such a way that the rolling of the successive die wheels takes place without reaction on the central boss of the blank.

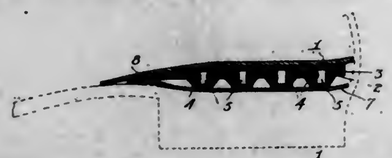
897,873. SULFUR DYE AND PROCESS OF MAKING SAME. EMILE T. BUNDSMAN, Point Loma, Cal., assignor to Point Loma Chemical Company, Point Loma, Cal., a Corporation of South Dakota. Filed Oct. 7, 1905. Serial No. 281,761.

1. The process of making coloring matters consisting in heating a sugar with sulfuring substances until a non-hygroscopic, readily pulverizable dyestuff is formed, substantially as described.

2. The process of making coloring matters consisting in heating grape sugar with sulfuring substances, until a non-hygroscopic, readily pulverizable dyestuff is formed, substantially as described.

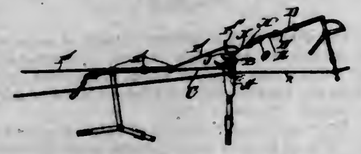
3. As a new article of manufacture, the dark brown coloring matter which can be obtained from grape sugar by heating the same with sulfur and sodium sulfid, which is non-hygroscopic, readily pulverizable, soluble in cold water, cold sodium carbonate solution, alcohol, and caustic soda solution, and which dyes cotton in an alkaline salt bath with or without the addition of sodium sulfid fast dark brown shades, and which, when heated with hydrochloric acid forms a dark brown coloring matter which is insoluble in cold water, cold sodium carbonate solution, alcohol, and concentrated sulfuric acid, is easily soluble in caustic alkaline solution, and readily soluble in cold sodium sulfid solution, and dyes cotton from an alkaline salt bath with the assistance of sodium sulfid fast dark brown shades.

897,874. HEEL-CUSHION. MATTHEW BYRNE, San Francisco, Cal. Filed Aug. 23, 1906. Serial No. 331,764.



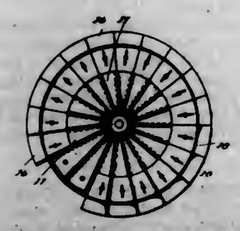
A heel cushion for shoes comprising a relatively thick body having a plurality of frusto-conical projections depending from its lower face, hermetically closed vertically disposed air-chambers arranged in each of the several projections of the body, a forwardly projecting tongue carried by said body, upwardly extending wells formed in the lower face of said body between said air cells, a retaining strap cemented in the shoe beneath said body, a pliable tread lift applied over said body, and a transverse row of stitching passing through the lift, the tongue and the retaining strap, said tread lift projecting beyond the tongue and lying well over the instep of the shoe.

897,875. APPARATUS FOR CHECKING AND UNCHECKING HORSES. HARVEY A. CLEMENS, Lederachsville, Pa. Filed June 12, 1908. Serial No. 438,183.



A device for checking and unchecking horses comprising, in combination with an overdraw check and check hook of a harness, a strap having a widened portion which is slitted, a strip cut from said strap and integral therewith, and having connections with the overdraw check, said strap being bent and passing through said slit, and a check ring secured to said strap, as set forth.

897,876. CURRENT-MOTOR. HARVEY C. CODER, Kansas City, Mo. Filed May 24, 1907. Serial No. 375,489.

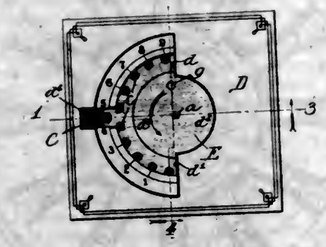


1. A motor wheel comprising a rim having slots therein, and blades formed in sections, the inner sections being rigid with the wheel while the outer sections pass loosely through the slots in the rim and are adjustably connected to the inner sections.

2. In a current motor, the combination of a float, a motor wheel mounted upon the float, and a guard for the motor wheel, the said guard being mounted to swing bodily about a vertical axis.

3. In a current motor, the combination of a float, a motor wheel mounted upon the float, and a guard for the motor wheel, the said guard being formed with a series of rollers and being mounted to swing bodily about a vertical axis.

897,877. ADDING-MACHINE. ALONZO E. COLE, Chicago, Ill. Filed Nov. 26, 1907. Serial No. 403,020.



1. In an adding machine, the combination of a stop cover having a circular opening with radially equal cover spaces on a semi-circular margin thereof, a disk beneath said stop cover concentric with said opening having radially equal disk spaces on the margin corresponding to said radial cover spaces, an index opening in said semi-circular margin adapted to reveal one at a time the disk spaces as the disk revolves and series of perforations in said disk, arranged in arcs on circumferences of different diameters between the disk center and the disk margins, one for each space on radii dividing adjacent spaces.

2. The combination of a disk having its outer margin divided by radial lines into equal disk spaces, a series of perforations arranged on said disk in arcs on circumferences of different diameters falling between said spaces and the center of said disk, a perforation on each of said dividing lines, a stop cover, a semi-circular opening concentric with said disk, having stop edges coincident with a disk diameter bisecting said arcs, the semi-circular margin about said opening being divided by radial lines coincident with the radial lines which divide the disk spaces into radially equal cover spaces, one of which is cut away to reveal one at a time the disk spaces as said disk rotates, substantially as and for the purposes described.

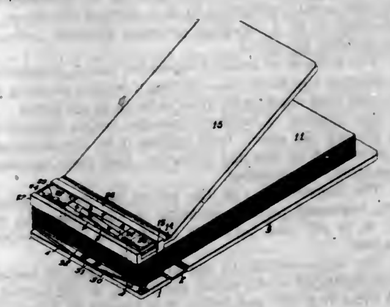
3. In an adding machine, a base, stop covers having coincident circular openings, disks concentric with said openings beneath each cover and orifices adapted to receive a key arranged one in each disk and in the base on coincident circumferences within the circumference of said circular openings, whereby said disks may be returned to initial position when turned therefrom by bringing said orifices into registration.

4. In an adding machine, concentric disks, stop covers above each disk provided with coincident circular openings concentric with said disks and orifices, adapted to receive a key, arranged in each disk on coincident circumferences within the circumference of said circular openings, whereby said disks may be aimed to initial position by bringing said orifices into registration on insertion of a key in the orifice in the top disk and turning the same until the key drops into the orifices of the disks below.

5. In an adding machine, a rotatable disk having equal disk spaces on its outer margin divided by radii of the disk, each space bearing different numerals in duplicates, like numerals being oppositely disposed, series of apertures arranged in semi-circles concentric with the disk and between its center and the said spaces, there being in each series a number of apertures equal to the number of different numerals, and a stop cover above the disk having a semi-circular opening concentric with the disk, the semi-circular edge of this opening having as many equal cover spaces as there are different disk numerals, each space equal to and adapted to cover a disk space, one of said cover spaces being cut away to reveal one at a time the disk spaces below as said disk rotates, each cover space being indicated by different numerals corresponding to each of the different disk numerals, the straight edge of said opening constituting a stop for a disk operating key.

[Claims 6 to 14 not printed in the Gazette.]

897,878. LOOSE-LEAF BINDER. CHARLES B. COOK, Hartford, Conn. Filed Apr. 19, 1906. Serial No. 312,583.



1. A loose-leaf binder comprising a base and a pair of substantially rigid impaling posts thereon, each post consisting of sections hinged together end to end, and the sections being shouldered to prevent movement beyond an upright position; the shoulders being upon the outer side of each post so that the posts can bend only towards each other, the pivots upon one post being slightly skewed relatively to those upon the other, so as to permit the upper portions of the posts to lie side by side when bent over.

2. A loose-leaf binder comprising a base, a pair of substantially rigid impaling posts thereon, each post consisting of a series of sections hinged end to end, a cover through which the posts rise, and a pair of keepers movable upon said cover for locking the upper portions of the posts down thereon.

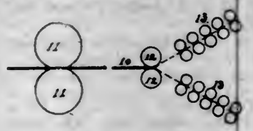
3. A loose-leaf binder comprising a base, a pair of posts thereon, each post consisting of sections hinged together end to end, and the sections being shouldered to prevent movement beyond an upright position; the shoulders being upon the outer side of each post so that the posts can bend only towards each other, the pivots upon one post being slightly skewed relatively to those upon the other, so as to permit the upper portions of the posts to lie side by side when bent over, a cover having a depression and having perforations in said depression to receive said posts, the latter when bent over being received in said depression, and keepers in said depression to slide over the depressed portions of the posts to lock them down.

4. A loose-leaf binder comprising a base, a pair of substantially rigid impaling binder posts erected thereon, and each consisting of sections hinged end to end, a cover having a depression and having perforations in said depression through which said posts rise, the posts being movable upon their hinges so as to lie down in said depression, and releasable means for holding down the unused sections of the posts; said releasable means being received in said depression so that no parts thereof project above the top surface of the cover, whereby scratching or marring of the desk is avoided.

5. A loose-leaf binder comprising a base, substantially rigid impaling posts erected thereon, a detachable cover through which the posts rise, each post comprising sections jointed together to fold down upon said cover, means coöperating with the posts for locking the cover upon the posts, and a yielding device for pressing the sheets together.

[Claims 6 to 9 not printed in the Gazette.]

897,879. PROCESS OF MANUFACTURING EXPANDED METAL. LEWIS E. CURTIS, Chicago, Ill., assignor to Breckenridge Jones, trustee, St. Louis, Mo. Filed Sept. 4, 1906. Serial No. 333,092.



1. The improvement in the process of manufacturing expanded metal, consisting in first slitting the sheet, then subjecting it to a swaging pressure between rolls, and then opening the sheet.

2. The process of making expanded metal, consisting in first slitting the sheet then rolling it with a swaging pressure, and then opening it, substantially as set forth.

3. The process of making expanded metal, consisting in first slitting the sheet, then rolling it in the direction of the slits with a swaging pressure, and then opening it, substantially as specified.

4. The improvement in the art or process of manufacturing expanded metal consisting in subjecting the sheet after it is slit and before it is opened, to a hardening operation.

5. The improvement in the art or process of manufacturing expanded sheet metal consisting in subjecting the sheet after it is slit and before it is opened to a hardening and lengthening operation.

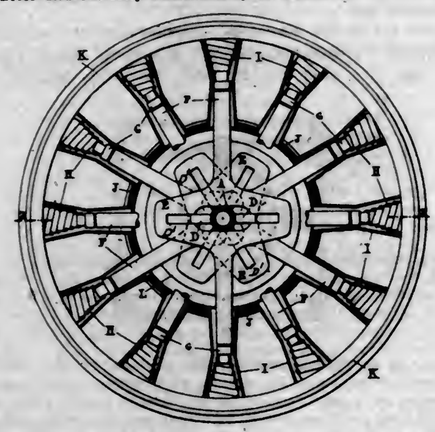
897,880. WHEEL-TIRE. JOSIAH S. CUSHING, Norwood, Mass. Filed Feb. 8, 1906. Serial No. 300,036.

1. In a resilient wheel, a felly having vertical guiding-means extending continuously therearound, a flexible tire attached to said felly having radially and inwardly extending guiding-means thereon, said tire-guiding-means extending inwardly beyond and being at all times in sliding engagement with said felly-guiding-means, whereby the tire is radially guided and laterally supported, and a continuous circular band within the tire, surrounding the felly, at a distance therefrom, which transmits the weight of the load to the tread portion only of the tire, substantially as described.

2. In a resilient wheel, a felly having vertical guiding-means extending continuously therearound, a flexible tire attached to said felly having radially and inwardly extending guiding-means thereon, said tire-guiding-means extending inwardly beyond and being at all times in sliding engagement with the said felly-guiding-means, whereby the tire is radially guided and laterally supported, and a continuous circular band within the tire, surrounding the felly, at a distance therefrom, which transmits the weight of the load to the tread portion only of the tire, said circular band being of lesser diameter than the felly-guiding-means and disposed adjacent thereto, whereby it is radially guided and laterally supported, substantially as described.

897,881. ELASTIC WHEEL. ANDRÉ DAUVERGNE, Lyon, France. Filed Nov. 29, 1907. Serial No. 404,337.

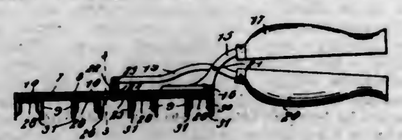
1. An elastic wheel comprising in combination a rigid felly, a hub independent thereof, and capable of movement relatively thereto in the plane of rotation, a series of diametric spokes having central portions in sliding engagement with said hub, cushioning means interposed between the outer ends of each spoke and the inner surface of the felly, a central drum and rigid connections between the latter and the felly substantially as described.



2. An elastic wheel comprising a rigid felly, a hub independent thereof, and capable of movement relatively thereto in the plane of rotation of the wheel, a series of radial bars rigidly mounted on said hub, a series of diametric spokes having enlarged central portions, provided with apertures adapted to have sliding engagement with said bars, a spring interposed between the outer ends of each spoke and the inner surface of the felly, a central drum and rigid connections inclosing portions of the spokes, between said drum and the felly substantially as described.

3. An elastic wheel comprising a rigid felly, a hub independent thereof and capable of movement relatively thereto in the plane of rotation of the wheel, a series of radial bars rigidly mounted on said hub, a series of diametric tubular spokes having enlarged flattened central portions provided with apertures adapted to have sliding engagement with said bars, a series of helical springs interposed between the outer ends of the spokes and the inner surface of the felly, a central drum, a series of radially disposed tubes rigidly connecting said drum to the felly and inclosing the outer ends of the spokes and the springs aforesaid, and plates secured to the felly and adapted to be guided by said central drum substantially as described.

897,882. CURRYCOMB. THOMAS E. DESMOND, Spokane, Wash. Filed Apr. 11, 1907. Serial No. 367,610.

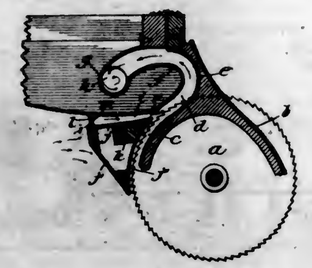


1. A currycomb comprising, in combination, an upper frame including a series of spaced, longitudinal cross-pieces; a series of depending comb-plates secured to said cross-pieces and arranged transversely with respect thereto, each comb plate having a series of openings formed therethrough, the corresponding openings of the several comb-plates alining with each other; a lower frame including a series of spaced, longitudinal cross-pieces disposed directly beneath the corresponding cross-pieces of the upper frame and extending through the openings in said comb-plates; a series of depending resilient cleaner-plates secured transversely to the cross-pieces of said lower frame, each cleaner-plate having its lower edge bent laterally outward to form a spring tongue disposed in yielding contact against the adjacent face of the corresponding comb-plate; and a pair of pivotally connected handles secured to said frames for moving the latter relatively to each other, to cause said scraping tongues to move over the face of said comb-plates.

2. A currycomb comprising in combination, an upper frame including a series of spaced longitudinal cross-pieces; a series of depending U-shaped comb-plates secured to said cross-pieces and arranged transversely with respect thereto, the legs of each comb-plate having a series of openings formed therethrough the corresponding openings of the several comb-plates alining with each other; a lower frame including a series of spaced longitudinal cross-pieces disposed directly beneath the corresponding cross-pieces of the upper frame and extending through the openings in the comb-plate; a series of depending U-shaped resilient cleaner-plates secured transversely to the cross-pieces of the lower frame, each cleaner-plate fitting within the corresponding comb-plate and having the lower edges of its legs bent laterally outward against the inner face of the adjacent comb-plate leg to form a spring scraping tongue; and a pair of pivotally connected handles secured to said frames for moving the latter relatively to each other, to cause said scraping tongues to move over the face of said comb-plates.

3. A curry comb comprising, in combination, an upper frame including a series of flat longitudinal cross-pieces arranged in spaced relation to each other one of said cross-pieces having an opening formed therethrough; a series of depending U-shaped comb-plates secured to said cross-pieces and arranged transversely with respect thereto, the legs of each comb-plate having a series of rectangular openings formed therethrough, the corresponding openings of the several comb-plates alining with each other; a lower frame including a series of flat longitudinal cross-pieces disposed directly beneath the corresponding cross-pieces of the upper frame and extending through the openings in the comb-plates; a vertical post secured to one of the cross-pieces of the lower frame and extending through the opening in said upper cross-piece; a series of depending U-shaped resilient cleaner-plates secured transversely to the cross-pieces of the lower frame, each cleaner-plate fitting within the corresponding comb-plate; a handle secured to one of the cross-pieces of the upper frame; a handle pivoted to the first-mentioned handle and to said post for moving said frames relatively to each other; and a coil-spring carried by said post and bearing at opposite ends against the pivoted handle and the upper cross-piece through which the post passes, to normally maintain the frames apart from each other.

897,883. CLEANING MECHANISM FOR SAW-GINS. JAMES G. DICKSON, Little Rock, Ark. Filed Feb. 12, 1908. Serial No. 415,595.



1. A lint cleaning mechanism for saw gins, comprising a dust chamber, a flue communicating with said chamber and into which a relatively small portion of the peripheral edges of the saws extend, and means for producing a draft of air in said flue counter to the movement of the saws to remove dirt, moisture and the like from the lint.

2. A lint cleaning mechanism for saw gins, comprising a relatively narrow flue into which the peripheries of the saws travel after passing the ribs, and means for producing a draft of air in said flue counter to movement of the saws to remove dirt, moisture and the like from the lint.

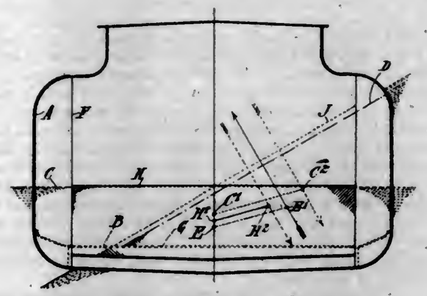
3. A lint cleaning mechanism for saw gins, comprising a flue running transversely of the battery of saws and having a slotted wall through which the saws extend, and means for producing a draft of air in said flue counter to the movement of the saws to remove dirt, moisture and the like from the lint.

4. A lint cleaning mechanism for saw gins, comprising a flue running transversely of the battery of saws and having a slotted front wall through which the saws extend, and an air blast channel at the rear of said flue and opening into the flue to direct a blast of air counter to the movement of the saws in the flue and substantially tangential to said saws.

5. A lint cleaning mechanism for saw gins, comprising a flue running transversely of the battery of saws and having a slotted front wall through which the saws extend, and an air blast channel having a constricted exit at the rear of said flue and opening into the flue to direct a blast of air counter to the movement of the saws in the flue and substantially tangential to said saws.

[Claims 6 and 7 not printed in the Gazette.]

897,884. CARGO VESSEL. WILLIAM DOXFORD, Sunderland, England. Filed Apr. 3, 1907. Serial No. 366,156.



In a vessel for easily shifting bulk cargoes, the combination of the hull comprising side walls and an outer bottom shell, inner upright walls fitted some distance from the hull and a hold bottom fitted close to the bottom shell, whereby when the vessel is transversely inclined the transverse movement of a partial cargo will be restricted and the movement of its center of gravity will be less than the movement of the center of buoyancy and the stability of the vessel retained.

897,885. MANUFACTURE OF CASEIN. HENRY V. DUNHAM, Bainbridge, N. Y., assignor to Casein Company of America, New York, N. Y., a Corporation of New Jersey. Filed Feb. 19, 1906. Serial No. 301,905.

1. A process of producing a casein compound suitable for coating, which consists in treating milk with hydrofluoric acid in sufficient quantity to precipitate the casein therefrom, and then separating the casein and whey.

2. A process of producing a casein compound suitable for coating, which consists in curdling milk with commercial hydrofluoric acid diluted to such an extent that it has no appreciable corrosive action upon glass, and then separating the precipitated casein from the whey.

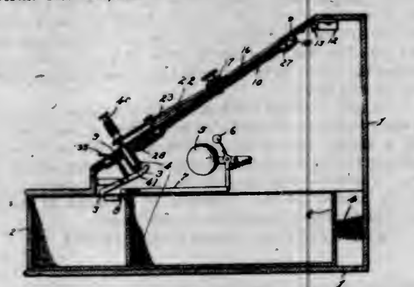
3. A process of producing a casein compound suitable for coating, which consists in heating milk and mixing commercial hydrofluoric acid therewith, in the proportion of one pint to one quart of acid to one thousand quarts of milk, and then separating the casein from the whey.

4. A composition of matter consisting of casein and hydrofluoric acid.

5. A solution for sizing purposes consisting of approximately 94% of caseinate of hydrofluoric acid, and six per cent. of borax, mixed with water, substantially as described.

[Claim 6 not printed in the Gazette.]

897,886. CASH-REGISTER. ALBERT N. ERICSSON, Detroit, Mich., assignor of one-half to Harry J. Furse and Karl R. Davies, Detroit, Mich. Filed Mar. 12, 1908. Serial No. 420,550.



1. A cash register comprising a casing, a spring projected till movable therein, a detent locking the till when closed, a dial plate detachably secured in the casing having a large circular aperture, an annulus of regularly disposed numerals concentric with the aperture, a plate backing the dial plate provided with a view hole, a ratchet disk journaled between the plates concentric with the dial aperture and provided with ratchet teeth and with a ring of apertures corresponding in number to the numerals of the dial annulus, a stop on the dial plate at the zero numeral, a ring of numerals on the back of the ratchet disk underrunning the back plate view hole, a lever journaled at one end on the disk pivot having a view hole adapted to register with a dial numeral, a latch thereon adapted to interlock with any one of the disk apertures, and to engage the zero stop of the dial plate, and means on the lever adapted to trip the drawer detent when the lever latch is engaged by said stop.

2. A cash register comprising a casing, a spring projected till movable therein, a detent locking the till when closed, a dial plate detachably secured in the casing having a large circular aperture, an annulus of regularly disposed numerals concentric with the aperture, a plate backing the dial plate provided with a view hole, a ratchet disk journaled between the plates concentric with the dial aperture and provided with ratchet teeth and with a ring of apertures corresponding in number to the numerals of the dial annulus, a stop on the dial plate at the zero numeral, a ring of numerals on the back of the ratchet disk underrunning the back plate view hole, a lever journaled at one end on the disk pivot having a view hole adapted to register with a dial numeral, a latch thereon adapted to interlock with any one of the disk apertures, and to engage the zero stop of the dial plate, and means on the lever latch is engaged by said stop, and a cam block on the back plate adapted to release the lever latch as it engages the zero stop.

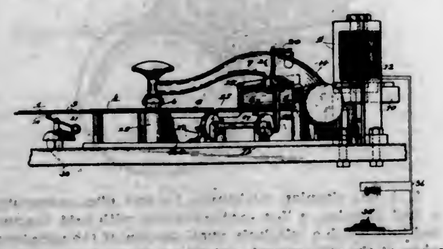
3. A cash register comprising a casing, a spring projected till movable therein, a detent locking the till when closed, a dial plate detachably secured in the casing having a large circular aperture, an annulus of regularly disposed numerals concentric with the aperture, a plate backing the dial plate provided with a view hole, a ratchet disk journaled between the plate concentric with the dial aperture and provided with ratchet teeth and with a ring of apertures corresponding in number to the numerals of the dial annulus, a stop on the dial plate at the zero numeral, a ring of numerals on the back of the ratchet disk underrunning the back plate view hole, a lever journaled at one end on the disk pivot having a view hole adapted to register with a dial numeral, a latch thereon adapted to interlock with any one of the disk apertures, and to engage the zero stop of the dial plate, a stud on the underside of the lever adapted to enter an aperture of the disk, a spring-projected latch in the stud adapted to hook under the disk when the stud is thrust home, a cam block between the plates adapted to press the latch into the stud when the latter is approaching the zero stop, and means on the lever adapted to trip the drawer when the lever is engaged by the zero stop.

4. A cash register comprising a casing, a spring projected till movable therein, a detent locking the till when closed, a dial plate detachably secured in the casing having a large circular aperture, an annulus of regularly disposed numerals concentric with the aperture, a plate backing the dial plate provided with a view hole, a ratchet disk journaled between the plates concentric with the dial aperture and provided with ratchet teeth and with a ring of apertures corresponding in number to the numerals of the dial annulus, a stop on the dial plate at the zero numeral, a ring of numerals on the back of the ratchet disk underrunning the back plate view hole, a lever journaled at one end on the disk pivot having a view hole adapted to register with a dial numeral, a latch thereon adapted to interlock with any one of the disk apertures and to engage the zero stop of the dial plate, and a spring plunger longitudinally reciprocable in the lever adapted to depress the drawer detent when the lever is at the zero stop.

5. A cash register comprising a casing, a spring projected till movable therein, a detent locking the till when closed, a dial plate detachably secured in the casing having a large circular aperture, an annulus of regularly disposed numerals concentric with the aperture, a plate backing the dial plate provided with a view hole, a ratchet disk journaled between the plate concentric with the dial aperture and provided with ratchet teeth and with a ring of apertures corresponding in number to the numerals of the dial annulus, a stop on the dial plate at the zero numeral, a ring of numerals on the back of the ratchet disk underrunning the back plate view hole, a lever journaled at one end on the disk pivot having a view hole adapted to register with a dial numeral, a latch thereon adapted to interlock with any one of the disk apertures, and to engage the zero stop of the dial plate, a stud on the underside of the lever adapted to enter an aperture of the disk, a spring projected latch in the stud adapted to hook under the disk when the stud is thrust home, a cam block between the plates adapted to press the latch into the stud when the latter is approaching the zero stop, and a spring plunger longitudinally reciprocable in the lever adapted to depress the drawer detent when the lever is at the zero stop.

[Claims 6 to 14 not printed in the Gazette.]

897,887. ADDRESSING-MACHINE. ERNEST H. FREY, Cleveland, Ohio. Filed Mar. 5, 1906. Serial No. 304,166.



1. The combination with a bed plate, of an elevated horizontal rotatable disk having type bar attaching devices and type-bars upon its flat upper surface, a central pivoted support for the disk upon said bed plate, an inking device arranged to engage the several type-bars in succession, an envelop support or table mounted upon the said bed plate, outside of the disk, and extending over the flat surface of the disk, said table having an opening arranged to register in succession with the several type-bars as the disk rotates, a depressible lever pivotally supported upon said bed plate exterior to said disk, and a striking plate thereon, means for rotating said disk to bring each type-bar in succession underneath said opening, and an anvil raised upon said bed plate and located underneath said disk and envelop table.

2. In combination, a detachable and rotatable disk, a circular series of detachable type-bars thereon, a central pivoted support therefor, an envelop support, adjacent to said disk, and having an opening registering with each type-bar in turn as said disk rotates, a striking arm or lever opposite said opening, an anvil block to support the disk and receive the stroke, mechanism for rotating the disk to bring the several type-bars in succession underneath the striking lever, said movement being coincident with the raising of said lever, an electro-magnet, an armature upon said lever adapted to engage said magnet, whereby said lever is depressed, a return spring therefor and pedal operated means for closing the circuit to said magnet, substantially as described.

3. In an addressing machine, the combination with a detachable disk, having a series of detachable type thereon, and provided with a circular set of engaging means therein, of a bed plate and central pivotal support thereon upon which said disk is rotatably mounted, a table for envelops mounted upon said bed plate and extending over one side of the disk, said table having an opening registering with each type-bar in succession as the disk is rotated, a striker arm pivoted on said bed plate and adapted to press said envelops into contact with said type-bars, means for operating said striker arm, and means for rotating said disk coincidently with the raising of the arm in such a manner as to bring the type-bars in succession under the striker arm, consisting of a toothed wheel adapted to engage the circular set of engaging means, a ratchet wheel adapted to move in unison with said toothed wheel, and a spring pressed latch upon the arm adapted to engage said ratchet wheel, substantially as described.

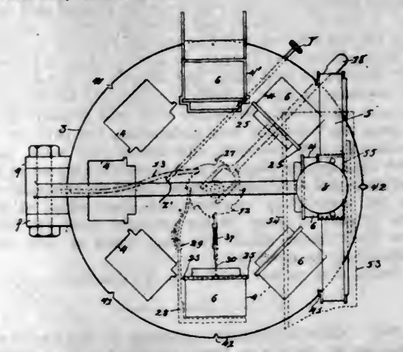
4. The combination with a disk having a rotating means therein, and a central pivotal point of support, of a series of radially disposed keepers, arranged in pairs thereon, and a series of circularly arranged keepers thereon, and a series of type-bars or plates, upon the disk, each type-bar being included between one pair of keepers and abutting against one of the series of circularly disposed keepers at its inner end, but free for insertion and removal at its outer end, substantially as described.

5. In combination in an envelop addressing device, having a horizontal bed plate, a horizontal disk elevated thereover, and centrally pivoted thereon, the said disk having type-bar retaining devices and type-bars therein, an inking roller in the path of the said type-bars, a support therefor pivoted for removal of the inking roller upon the said bed plate, an envelop support or table above the disk, mounted upon the bed plate outside the disk upon an elevated support and provided with an opening, a pivoted striking lever mounted upon said bed plate outside of the disk, and a return spring therefor, and means for rotating the said disk coincident with the elevation of said pivoted lever, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

897,888. ADDRESSING-MACHINE. ERNEST H. FREY, Cleveland, Ohio. Filed June 10, 1907. Serial No. 378,127.

1. In an addressing machine or other printing device employing printing cards, the combination with a horizontal table, of a rotatable disk thereon provided with spaced openings adapted to receive a printing card and convey the same upon the table, a vertical card receptacle arranged over the path of said openings, in which said printing cards are adapted to lie horizontally and to fall one at a time into said openings, an inking ribbon arranged over the path of said openings, a pressure lever and platen arranged to register with said ribbon and opening over which it extends, instrumentalities operated by said pressure lever for rotating said disk to present said openings in succession to said receptacle and pressure lever, an open case underneath said table adapted to receive each used printing card in turn, and automatically operating instrumentalities for withdrawing said cards into said case in the order in which they are delivered thereto, the said table having an opening registering with each opening in said disk in turn and with said open case, substantially as described.



2. In an addressing machine, the combination of, a table, a circular disk thereon provided with spaced openings adapted to receive printing cards, a vertical storage receptacle located over the path of said openings in which said cards are adapted to lie horizontally, and to fall one at a time by gravity into said openings, an inking ribbon located over the path of said openings, a receiving case for the used cards located underneath the path of said openings, the said table having an opening registering therewith, a pressure lever arranged to register with said inking ribbon and opening over which it passes, automatic means operatively connected with said lever for rotating said disk to bring said openings successively underneath said receptacle and pressure lever and over said receiving case, automatically operated means for feeding said inking ribbon, and automatic means for withdrawing the used cards into said case in the order in which they fall, through the said openings in said disk and table, substantially as described.

3. In an addressing machine, the combination of a horizontal table, a circular rotatable disk mounted thereon, and provided with spaced openings adapted to receive printing cards, a vertical storage receptacle for said cards located over the path of said openings, said table having an opening registering in turn therewith, into which opening said cards are adapted to fall by gravity an inking device over the path of the openings, a pressure lever over the path of said openings, a receiving case underneath the opening in said table automatic means operatively connected with the movement of said pressure lever to bring said openings successively underneath said storage receptacle and pressure lever and over said opening in the table and receiving case, and an automatically operated device adapted to withdraw said cards in the order received within said case, substantially as described.

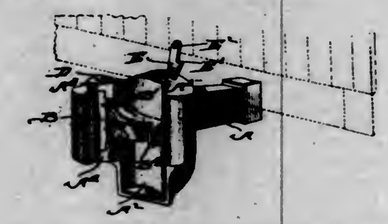
4. In an addressing machine, in combination, a table, a card conveyer rotatable therein, said conveyer provided with openings adapted to receive printing cards, a vertical storage receptacle for said cards, located over the path of said openings, into which said cards are adapted to fall one at a time by gravity, an inking device over the path of said openings, a pivoted pressure lever over the path of said openings, a ratchet upon said conveyer and a pawl upon said pressure lever, whereby the conveyer is rotated by the action of said lever to bring each opening in turn underneath said storage receptacle, the said table having an opening registering in turn with

the openings in said conveyer, a receiving case underneath said opening in said table, and a device adapted to withdraw each used card into said case in turn as it falls through said opening in said table, said withdrawing device being automatically operated by said ratchet, substantially as described.

5. In an addressing machine, in combination, a stationary table and a rotatable card conveyer thereon adapted to receive and carry printing cards having extended edges, said conveyer provided with spaced openings having linear extensions at one edge thereof adapted to register with extended edges of said cards, a vertical card storage receptacle mounted on said table over the path of said openings, in which receptacle said printing cards lie horizontally and are adapted to fall by gravity into said openings, an inking device over the path of said openings, a pressure lever pivoted on said table, and adapted to register with said openings in turn, automatic means for rotating said conveyer, operatively connected with said pressure lever, an open top receiving case underneath the path of the openings in said conveyer, and having side walls, upon which the extended edges of said cards are adapted to fall by gravity and are designed to rest, and an automatic device for temporarily retaining the inner edges of said cards in said openings in the conveyer until the outer edges have fallen within the said walls of said case, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

897,889. CAR-COUPLING. ALBERT P. GOLDMAN and HOWARD H. STEPHENS, North Chillicothe, Ill., assignors of one-third to John W. Tobin, North Chillicothe, Ill. Filed Apr. 3, 1906. Serial No. 309,628.

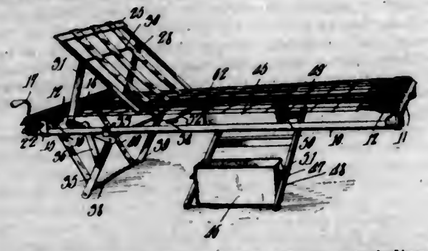


1. A coupler comprising a recessed head, a knuckle having a finger projecting into said head, a shoulder on said finger engaging the inner upper edge of the recess when the knuckle is in open position, an angled, vertically movable locking member adapted to lock the knuckle against outward movement when the locking member is in its lowest normal position and means for lifting the locking member and forcing the knuckle into open position, the locking member resting on the shoulder above mentioned when in its highest position.

2. A car coupler comprising a coupler head having a recess formed in its front face and a vertical slot communicating in its lower end with said recess, a pivoted knuckle having a finger adapted to work in the said recess, the said finger having a shoulder formed thereon, an angled locking member resting loosely within the recess and adapted to receive and lock the knuckle finger in a closed position, and a lever connected at its lower end with the locking member, said lever resting in the vertical slot and movable in said slot for the purpose of lifting the locking member clear of the knuckle finger.

897,890. INVALID-BED. JOHN HALL, North Monroe, N. H. Filed Sept. 9, 1907. Serial No. 391,971.

1. In an invalid bed, a spring structure including a spring frame, the spring having an opening, a thimble in alinement with the opening and hung from the spring, a pair of links hung from the spring adjacent to the opposite ends of the thimble, a commode pan having shoulders arranged to be engaged by said links, and means for simultaneously moving the links to release position to permit removal of the pan.



2. In an invalid bed, a spring structure including a spring supporting frame, the spring having an opening, a thimble in alinement with the opening and hung from the spring, a pair of links hung from the spring adjacent the ends of the thimble, a commode pan having a pair of shoulders for engagement with the links, the upper portions of such shoulders being tapered to permit automatic engagement with said links, a pair of levers pivoted to the thimble and arranged to spread the links, one of said levers extending out to a position adjacent the edge of the spring structure, and means for connecting the said levers.

3. In an invalid bed, a spring structure including a spring carrying frame, the spring having an opening, a thimble in alinement with the opening and supported from the spring, a pair of links hung from the spring adjacent the opposite ends of the thimble, a commode pan having shoulders in engagement with the links, a pair of handles extending from the pan, and a pan lifting frame, one end of said frame having an elongated connection with the spring.

4. In a bed of the class described a spring structure including a spring carrying frame, the spring having an opening, a lifting frame pivotally connected to the spring and having one end normally resting upon the surface on which the bed is mounted, a commode vessel, handles extending therefrom and slidably mounted upon and supported by the pivoted frame, said frame constituting means for positioning the commode vessel below the opening.

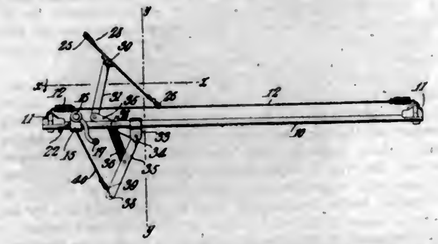
5. In a bed of the class described a spring structure including a spring carrying frame, the spring having an opening, a thimble depending from the spring and surrounding the opening, supporting devices depending from the spring adjacent opposite ends of the thimble, a lifting frame pivotally connected to the spring structure and having one end normally resting upon the surface on which the bed is mounted, a commode vessel, handles extending therefrom and slidably mounted upon and supported by the frame, said handles being shiftable by the frame into engagement with the supporting devices.

[Claim 6 not printed in the Gazette.]

897,891. INVALID-BED. JOHN HALL, North Monroe, N. H. Original application filed Sept. 19, 1907, Serial No. 391,971. Divided and this application filed Dec. 6, 1907. Serial No. 405,392.

1. In an invalid bed, a spring structure including a spring carrying frame, an adjustable back rest connected to the spring, a shaft journaled in bearings carried by the spring frame, hangers carried by said frame, a cross bar or shaft mounted in the hangers, bell crank levers fulcrumed on said cross bar or shaft, links extending from the upper arms of the bell crank levers through the mesh of the spring and connected to the back rest, and flexible members extending from the other arms of the bell crank levers to the shaft.

2. In an invalid bed, a spring structure including a spring carrying frame, a back rest connected to the spring, a winding shaft, bearings carried by the spring frame and supporting said winding shaft, an operating crank at one end of the winding shaft, a ratchet wheel on said shaft, a pawl engaging the ratchet wheel, a pawl release bar pivotally mounted on the shaft, a second shaft mounted in hangers depending from the spring frame, a pair of bell crank levers on said second shaft, links connecting the upper arms of the bell crank levers to the back rest, said links extending through the mesh of the spring, and flexible members extending from the lower arms of said bell crank levers to the winding shaft.



3. In an invalid bed a spring structure including a spring supporting frame, a back rest comprising flexible members, means thereon detachably engaging the spring, non-flexible members constituting a support for the flexible members, means upon said non-flexible members for detachably engaging the spring, the flexible and non-flexible members being supported at their lower ends solely by the spring, a winding shaft, and means actuated thereby for adjusting and supporting the back rest.

4. In an invalid bed, a spring structure including a spring carrying frame, hangers carried by the frame, bell crank levers pivotally supported by the hangers, upstanding links upon the bell crank levers, a back rest pivotally mounted upon said links and including flexible and non-flexible members, means upon each of said members for detachably engaging the wire structure, and means mounted upon the frame for actuating the bell crank levers.

897,892. FOUNTAIN-PEN. ROBERT A. HAMILTON, New York, N. Y. Filed Dec. 27, 1906. Serial No. 349,623.



1. A fountain pen comprising a holder having a pen point and feed mounted at the front end to reciprocate therein, a reservoir detachably carried by said barrel, said pen and feed having a fastening extending within the detachable reservoir and separable from the holder only when the reservoir is detached.

2. An ink joint between two relatively movable parts of a fountain pen comprising a tubular extension carried by one part and surrounding the other to form a cylindrical air space, said parts having abutting bearing shoulders.

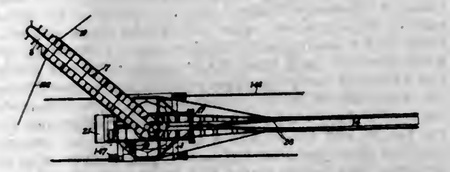
3. An ink joint between two relatively movable parts of a fountain pen comprising a tubular extension on one part and surrounding the other part to form a cylindrical air space, abutting bearing shoulders, and means for securing the parts together, substantially as described.

4. An ink joint between two relatively movable parts of a fountain pen comprising a tubular extension on the barrel and a feed fitting within and separated from the tubular extension, abutting bearing shoulders, and means for separably securing the barrel and the feed together.

5. A fountain pen comprising a barrel and a sleeve rotatably mounted thereon, a tubular extension on one part extending beyond the end of the other part and surrounding it to form an air space, said parts having bearing surfaces contiguous to one end of said air space.

[Claims 6 to 10 not printed in the Gazette.]

897,893. LOADING AND STORING MACHINE. WILLIAM E. HAMILTON, Columbus, Ohio. Filed Aug. 29, 1907. Serial No. 390,829.



1. A loading machine comprising a platform mounted upon a truck, a turntable thereon, gathering mechanism pivotally mounted above said turntable, delivery mechanism supported on said turntable, means constantly in register with said delivery conveyer for discharging material from said gathering mechanism on to said delivery mechanism, and means for imparting lateral movement to said gathering mechanism.

2. A loading machine comprising a platform mounted upon a truck, a turntable thereon, radial gathering mechanism pivotally mounted above said turntable, delivery mechanism mounted upon said turntable independently of said gathering mechanism, means for vertically adjusting said delivery mechanism, means constantly in register with said delivery conveyer for discharging material thereon from said gathering mechanism, and means for actuating said truck towards and away from the material to be moved.

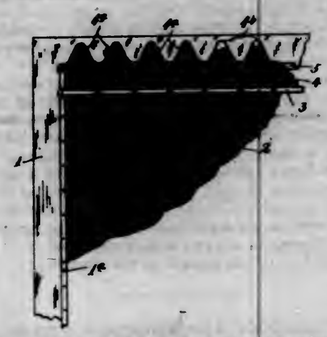
3. A loading machine comprising a platform mounted upon a truck, a turntable thereon, a tubular column supported within the above said turntable, a head shaft rotatably mounted in said column, a gathering conveyer mounted loosely upon said column, and a delivery conveyer mounted upon said turn table and adapted to swing thereon about the axis of said head shaft.

4. A loading machine comprising a platform mounted upon a truck, a turn table thereon, radial gathering mechanism supported on said turntable and constructed to be automatically adapted to varying elevations of the surface operated upon, means for discharging material from said gathering mechanism on to said delivery mechanism, said means being constructed to be constantly in register with the point of discharge from said gathering mechanism and the conveyer on said delivery mechanism.

5. In a loading machine, a column, a gathering conveyer pivotally mounted thereon, a plate loosely mounted on said column to receive the material borne by said conveyer and having a discharge opening therein, a delivery conveyer, and a hopper construction comprising a member depending from said plate and a second member mounted upon the delivery conveyer and registering with said depending member.

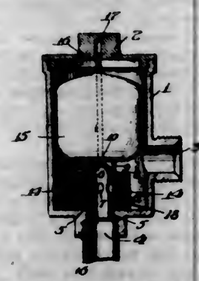
[Claims 6 to 53 not printed in the Gazette.]

897,894. OUT-TRAPPING FLY-ESCAPE SCREEN. HENRY A. HANSON, Grano, N. D. Filed Dec. 23, 1907. Serial No. 407,821.



In an out-trapping fly escape screen for windows and doors, the combination with a rectangular marginal frame, a main body screen secured to said frame but terminating at its upper edge below the transverse upper bar of said frame, a supplemental screen section secured at its upper edge to the transverse upper bar of said frame and provided with a multiplicity of conical pockets extending upward from the lower edge of the upper bar of said frame and having fly escape passages at their upper extremities, the lower edge of the said supplemental screen section being carried downward to a point materially below the upper bar of said frame, and a pair of separately formed clamping bars engaging and securing the upper edge of the main body screen to the said lower edge of said supplemental screen section, the said clamping bars being secured at their ends to the sides of said frame and serving to stiffen the upper portion of the screen body, substantially as described.

897,895. AUTOMATIC WATER-RELIEF VALVE. AMOS HARRISON, Chicago, Ill., assignor to Warren Webster and Company, Camden, N. J., a Corporation of New Jersey. Filed Nov. 2, 1904. Serial No. 231,043.



1. A device of the kind described, comprising a shell provided with an inlet and an outlet opening, means for connecting said shell into a heating system, a chamber arranged within said shell inclosing said outlet opening, provided with one or more ports formed through its wall, and having a recess formed in said wall extending around said chamber at said ports, in combination with a tubular valve inclosing a part of said chamber, by its position controlling said ports by covering said recess, and a float attached to said valve adapted to control its position.

2. A device of the kind described, comprising a shell provided with an inlet and an outlet opening, means for connecting said shell into a heating system, a chamber arranged within said shell inclosing said outlet opening, and provided with ports formed through the side wall, and with an air vent through the end wall of said chamber, in combination with a tubular valve, provided with one or more openings near its upper end, inclosing a part of said chamber, by its position controlling said ports, and a float attached to said valve adapted to control its position.

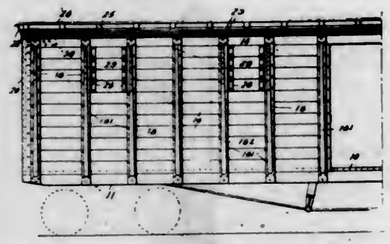
3. A device of the kind described, comprising a shell provided with an inlet and an outlet opening, means for connecting said shell into a heating system, a chamber arranged within said shell inclosing said outlet opening, provided with ports formed through the side wall, and with an air vent through the end wall of said chamber, and having a recess formed in said side wall extending around said chamber at the ports, in combination with a tubular valve provided with one or more openings near its upper end, inclosing a part of said chamber, by its position controlling said ports by covering said recess, and a float attached to said valve adapted to control its position.

4. A device of the kind described, comprising the combination of a shell provided with an inlet and an outlet opening, means for connecting said shell into a heating system, a chamber arranged within said shell inclosing said outlet opening, and provided with ports formed through the wall of said chamber, and with a recess formed in said wall extending around said chamber at the ports, a tubular valve inclosing a part of said chamber, by its position controlling said ports by covering said recess, a float attached to said valve adapted to control its position, and a tubular screen arranged within the shell and partly inclosing said valve and chamber.

5. A device of the kind described, comprising the combination of a shell provided with an inlet and an outlet opening, means for connecting said shell into a heating system, a chamber arranged within said shell inclosing said outlet opening, and provided with ports formed through the side wall and with an air vent through the end wall, a tubular valve provided with one or more openings in its wall near its upper end, inclosing a part of said chamber, by its position controlling said ports, a float attached to said valve adapted to control its position, and a tubular screen arranged within said shell and partly inclosing said valve and chamber.

[Claim 6 not printed in the Gazette.]

897,896. CONSTRUCTION OF RAILWAY-CARS. HILLMAN H. HARVEY and ROY J. COOK, Chicago, Ill. Filed Mar. 16, 1907. Serial No. 362,600.



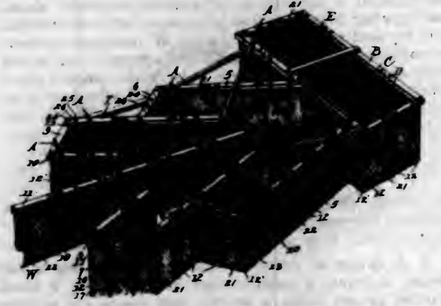
A car side without interior framing, formed of planking placed edge on edge, and finished to present an interior plane surface, provided with exterior angle and intermediate posts, to all of which the planking is removably bolted, substantially as specified.

897,897. FISH-TRAP. JAMES R. HECKMAN, Ketchikan, Alaska. Filed Feb. 27, 1908. Serial No. 418,063.

1. In a fish trap structure, the combination with a rigid buoyant frame including a plurality of floatable members all occupying a substantially common plane, of depending web supporting members secured to the frame.

2. In a structure of the class described, the combination with a buoyant frame consisting of a plurality of floatable members occupying a substantially common plane, of separate nonbuoyant depending web supporting members carried by the frame.

3. In a fish trap structure, the combination with a buoyant supporting member, of a depending member carried by the supporting member, a continuous rope movably engaged with the lower portion of the depending member, a second rope movably engaged with the depending member above the first named rope, and a net web secured to the ropes.

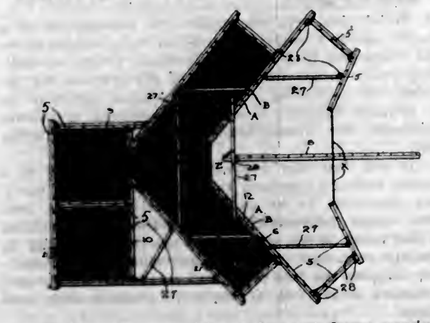


4. In a fish trap structure, the combination with a supporting member of a depending member carried by the supporting member said depending member having vertically spaced eyes, flexible members movably engaged in the eyes and a net web secured to the flexible members.

5. In a fish trap, the combination with a buoyant supporting frame, of a depending web supporting member carried by the frame, a web secured to the frame and movable vertically over the web supporting member, a rope slidably connected with the lower end of the web supporting member, said rope being secured to the lower portion of the web, an eye member carried by the web supporting member and extending laterally therefrom between the ends of said web supporting member, a second rope slidably engaged through the eye member, said second rope being secured to the web above the lower portion thereof, said eye member including means for guiding the lower edge of the web thereover when the web is moved downwardly.

[Claims 6 to 14 not printed in the Gazette.]

897,898. FISH-TRAP. JAMES R. HECKMAN, Ketchikan, Alaska. Filed Mar. 20, 1908. Serial No. 422,313.



1. A fish trap comprising a buoyant frame consisting of a plurality of floatable members movably connected with each other and occupying a substantially common plane, web supporting members carried by the frame members, the web supporting members of each frame member being located adjacent to the one side thereof, and a net web carried by the web supporting members.

2. A fish trap comprising a plurality of floatable frame-members, depending web-supports carried by the frame members adjacent to one side thereof, net-webbing adapted for movement over the web-supports into and out of operative position, and means for moving the net-webbing.

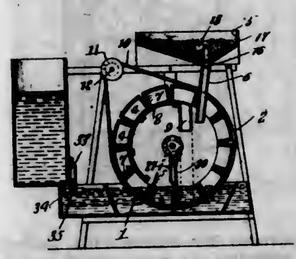
3. In a fish trap structure, the combination with a buoyant frame member of depending web rods carried by the frame member adjacent to one side thereof, haul downs movably engaged with the web rods, and net webbing carried by the haul downs.

4. In a fish trap structure, the combination with a frame member of a web rod engaged therein adjacent to one side thereof, and a haul down movably engaged with the web rod.

5. In a fish trap structure, the combination with a frame member comprising two parallel beams rigidly secured together, of depending web rods carried by one of said beams.

[Claims 6 to 11 not printed in the Gazette.]

897,899. GRAIN-TREATING APPARATUS. ROBERT S. HOUSTON, Emerson, Manitoba, Canada. Filed Oct. 9, 1907. Serial No. 396,570.



1. A grain treating apparatus comprising, a tank adapted to contain treating fluid, a drum mounted to rotate above said tank and through said fluid, means for delivering the grain to said drum, means for delivering the treated grain from said drum, a skimming device, a scraper coöperating therewith, and means carried by the drum to operate said skimming device and scraper.

2. A grain treating apparatus comprising, a tank adapted to contain treating fluid, a drum mounted to rotate above said tank and through said fluid, means for delivering grain to said drum, means for delivering the treated grain from said drum, a skimming device, a scraper coöperating therewith, and cams carried by the drum to operate said skimming device and scraper.

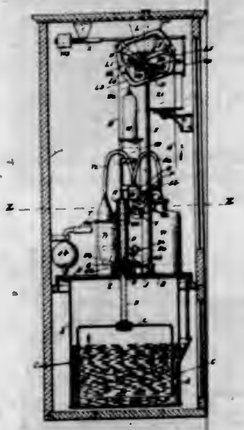
3. A grain treating apparatus comprising, a tank adapted to contain treating fluid, a drum mounted to rotate above said tank and through said fluid, means for delivering grain to said drum, means for delivering the treated grain from said drum, a skimming device, and a cam carried by said drum.

897,900. APPARATUS FOR THE ANALYSIS OF GAS MIXTURES. WILLIAM S. HUBBARD, Leicester, England. Filed Aug. 22, 1907. Serial No. 389,705. (Model.)

1. In apparatus for automatically analyzing mixed gases and indicating the proportion of one of them, an operated spindle having exact vertical stroke, an operated valve having quick movement at each end of the spindle stroke, a gas pump, a valve and valve box with ports for distributing the gases, a measuring vessel, a re-measuring vessel with means attached thereto for indicating on a moving chart the proportion of gas absorbed, substantially as described.

2. In apparatus for automatically analyzing mixed gases and indicating the proportion of one of them, an operated spindle having exact vertical stroke, an operated valve having quick movement at each end of the spindle stroke, means for introducing and expelling the gases to be analyzed through the distributing valve box to and from the fixed gas pump bell, liquid sealed in tank having exact vertical stroke, means for expelling and supplying at atmospheric pressure a portion of the gases to the first

measurer for analysis and the remainder to the atmosphere, a valve and valve box with ports for distributing the gases, a measuring vessel, an absorption vessel, a re-measuring vessel with means attached thereto for indicating on a moving chart the proportion of gas absorbed, substantially as described.

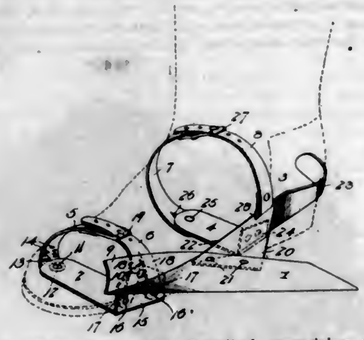


3. In apparatus for automatically analyzing mixed gases and indicating the proportion of one of them, an operated spindle having exact vertical stroke, an operated valve having quick movement at each end of the spindle stroke, a gas pump, a valve box with ports, a valve having quick movement sliding thereon, means for conveying gases, to be analyzed to and from pump bell, to air, to and from first measurer, to absorber and second measurer, means for expelling gases remaining after absorption from the second measurer to atmosphere, an absorption vessel, a re-measuring vessel, with means attached thereto for indicating on a moving chart the proportion of gas absorbed, substantially as described.

4. In apparatus for automatically analyzing mixed gases and indicating the proportion of one of them, an operated spindle having exact vertical stroke, an operated valve having quick movement at each end of the spindle stroke, a gas pump, a valve and valve box with ports for distributing the gases, means for introducing and expelling a portion of the pumped gas into the first measurer having contracted ends attached to spindle and having exact vertical stroke in liquid in fixed tank, means for conveying the expelled gases from the first measurer through the distributing valve on to the absorbing vessel nearly filled with absorbing liquid, means for conveying the remaining gases after absorption to a re-measuring vessel with means attached thereto for indicating on a moving chart the proportion of gas absorbed, substantially as described.

5. In apparatus for automatically analyzing mixed gases and indicating the proportion of one of them, an operated spindle having exact vertical stroke, an operated valve having quick movement at each end of the spindle stroke, a gas pump, a valve and valve box with ports for distributing the gases, a measuring vessel, an absorption vessel, means for conveying the remaining gases after absorption to the underside of a liquid sealed re-measuring bell suspended in tank attached to spindle having exact stroke, bell suspended to a balanced lever with pen and means for recording on a moving chart the extent of its descending movement when the re-measuring vessel does not receive the same quantity of gas as was expelled by the first measurer, means for connecting to the air the pipe from the absorbing vessel to the re-measuring vessel through valve box and valve, after the record has been made on the moving chart, substantially as described.

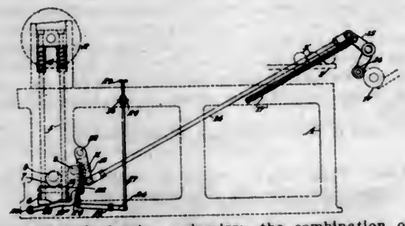
897,901. CORN-CUTTER. WARREN S. HUFFAKER, Kipton, Ohio. Filed Mar. 19, 1908. Serial No. 422,027.



1. A device of the class described comprising a heel brace, a shank, a knife carried by the shank, a shield carried by the knife, a stirrup, and means for securing the device to the boot of the user.

2. A device of the class described comprising a heel brace, a shank, and knife secured to the shank, a shield carried by the knife, an arch plate, a stirrup pivoted to the shield and straps to secure the device to the boot of a user.

897,902. INK-ROLLER TRIP FOR PRINTING-PRESSES. CLARENCE L. JOHNSTON, San Francisco, Cal., assignor to Frank Brown Redington, Chicago, Ill. Filed Jan. 15, 1906. Serial No. 296,116.



1. In ink feed trip mechanism, the combination of a cylinder having a regularly recurrent reciprocating movement transverse to its axis, a fountain roller, an oscillating roller, means independent of the cylinder for operating the oscillating roller, and means operative by the cylinder during its regularly recurrent transverse movements, for automatically tripping the oscillating roller.

2. In ink feed trip mechanism, the combination of a cylinder having a regularly recurrent reciprocating movement transverse to its axis, a fountain roller, a feed roller, means independent of the cylinder for operating the feed roller, means operative by the cylinder during its regularly recurrent transverse movements for automatically tripping the feed roller, and means for placing said last-named means out of operative position with said cylinder.

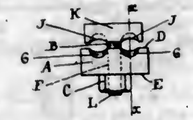
3. In a printing press, the combination with the impression-forming mechanism, the ink-fountain, the oscillating roller, and means to operate the latter, of means including a pivoted stop-member operative by the impression-forming mechanism for tripping the oscillating roller to discontinue the delivery of ink from the fountain, and means for placing said stop member in inoperative position with said impression-forming mechanism to permit the delivery of ink independent of said impression-forming mechanism.

4. In a printing press, the combination of a cylinder mounted to have a limited regularly recurrent reciprocating movement transverse to its axis, a fountain, an oscillating roller, means for operating said roller, a stop member arranged to interrupt the operations of said means-for-operating-the-oscillating-roller, and means for operating said stop-member synchronously with the regularly recurrent transverse movements of said cylinder.

5. In a printing press, the combination of a cylinder mounted to have a limited regularly recurrent reciprocating movement transverse to its axis, a fountain, an oscillating roller, means for operating said roller, a stop member arranged to interrupt the operations of said means for operating the oscillating roller, means for operating said stop-member synchronously with the regularly recurrent transverse movements of said cylinder, and means for placing said stop member in inoperative position with the cylinder.

[Claims 6 to 11 not printed in the Gazette.]

897,903. CLAMP. JOSEPH KENNEDY, New York, N. Y., assignor to Ogden Iron & Steel Manufacturing Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 28, 1907. Serial No. 359,808.



1. A guy clamp comprising in combination three parts only, first, a body member, or jaw, having flat parallel faces and a single central longitudinal hole, secondly, a securing member or bolt having a flat head, a shank and a screw-threaded end, the shank of the bolt being passed through the central hole in the jaw, and a nut on the screw threaded shank of the bolt, two of said three parts being provided on their meeting faces with cooperating curved transverse grooves adapted to lie at each side of the shank of the bolt, whereby guy ropes may be clamped directly between said two grooved parts.

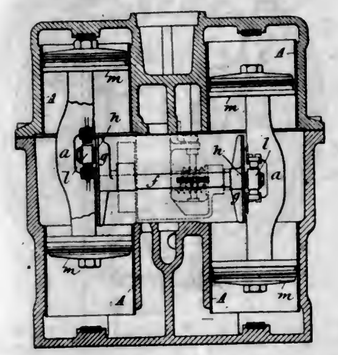
2. A guy clamp comprising in combination three parts only, first, a body member or jaw having flat parallel faces, and a single central longitudinal hole entirely surrounded by the material of the jaw, one of the faces of said jaw being provided with curved transverse grooves at each side of the central hole, secondly, a securing member or bolt having a flat head, a shank and a screw-threaded end, the shank of the bolt being passed through the central hole in the jaw, and the head of the bolt lying opposite the grooved face of the jaw, the under side of the bolt head being adapted to lie in proximity to the jaw without touching the same, and said under side of the bolt head being provided with curved transverse grooves adapted to register with the grooves in the jaw, whereby guy ropes may be clamped directly between and against the bolt head and jaw, and thirdly, a nut on the screw-threaded shank of the bolt for tightening and holding the parts.

897,904. LIQUID-METER. WALTER G. KENT, London, England. Filed July 23, 1907. Serial No. 385,201.

1. In a piston meter, the combination of a pair of cylinders, pistons in the cylinders, a crank shaft, means for connecting the cranks of said shaft to the pistons including a yielding element which allows the pistons to remain at rest at the ends of their strokes while the inlet valves are closing and the outlet valves are opening whereby the breaking of the mechanism is avoided, substantially as set forth.

2. In a piston meter, the combination of a pair of cylinders, pistons in the cylinders, a pair of slotted frames fixed respectively to the pistons, yieldably mounted bearing pieces at the sides of the slots, and a crank shaft carrying crank pins working between the bearing pieces, the organization being such that the breaking of the crank, crank pins and piston frames owing to the checking of the piston which is in mid career at the moment the other piston is started from rest is avoided.

3. In a piston meter, the combination of two pairs of cylinders, two pairs of pistons in the cylinders, a crank shaft, means for connecting the cranks of said shafts to the two pistons of each pair including a yielding element which allows the pistons to remain at rest at the ends of their strokes while the inlet valves are closing and the outlet valves are opening and which prevents the breaking of the crank, crank pins and piston frames from the checking of the piston which is in mid career at the moment the other piston is started from rest.

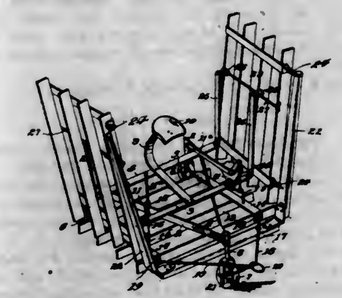


4. In a piston meter, the combination of two pairs of cylinders, two pairs of pistons in the cylinders, two slotted frames connecting respectively the two pistons of each pair, yieldably mounted bearing pieces at the sides of the slots and a crank shaft carrying crank pins working between the bearing pieces, the organization being such as to allow the pistons to remain at rest at the ends of their strokes while the inlet valves are closing and the outlet valves are opening and to prevent breakage of the parts resulting from the checking of the piston which is in mid career at the moment the other piston is started from rest.

5. In a "piston" meter, the combination of a pair of cylinders, pistons in the cylinders, a pair of slotted frames fixed respectively to the pistons, slotted tubes fixed to the sides of the slots, bearing pieces protruding from the slots in the tubes, elastic cushions in the tubes against which the bearing pieces rest, and a crank shaft carrying crank pins working between the bearing pieces.

[Claim 6 not printed in the Gazette.]

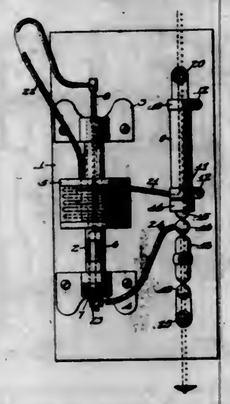
897,905. HARROW. ELISHA S. KINKADE, Geneva, Nebr. Filed Dec. 14, 1907. Serial No. 406,521.



A harrow comprising a wheeled frame embodying longitudinal bars and cross bars secured thereto and bracing the same, the ends of the cross bars being extended upwardly to form standards and being formed at their upper extremities with upwardly facing hooks, a middle harrow portion suspended from the frame, and vertically swinging

side harrow portions having longitudinal rods arranged for engagement with the hooked extremities of the standard to support the side harrow portions in raised position.

897,906. LIGHTNING-ARRESTER. FRANK P. H. KNIGHT, Keokuk, Iowa, assignor to Electric Service Supplies Company, Camden, N. J., a Corporation of New Jersey. Filed June 28, 1907. Serial No. 381,279.



1. In a lightning-arrester, the combination with an automatic circuit-breaker adapted to open the circuit and again close the same and operated by the normal current, of a permanent discharge-path associated with said circuit-breaker.

2. In a lightning-arrester, the combination with a discharge-path, of an automatic circuit-breaker adapted to open the circuit and again close the same and operated by the normal current and in shunt to a portion of said discharge path, whereby said discharge-path remains unaffected during the operation of the circuit-breaker.

3. In a lightning-arrester, the combination with an automatic circuit-breaker adapted to open the circuit and again close the same and having separable contacts to disrupt the normal arc, of a permanenet discharge-path associated with said circuit-breaker.

4. The combination with a discharge-path, of an automatic circuit-breaker in shunt to a portion of said discharge-path and having separable contacts to disrupt the normal arc, whereby said discharge-path remains unaffected during the operation of the circuit-breaker.

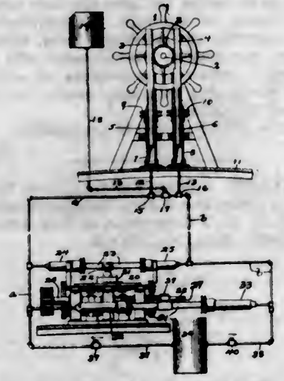
5. In a lightening arrester, the combination with discharge-electrodes having air-gaps therebetween, of a shunt-path for drawing the arc of the normal current away from one or more of said air-gaps, and means for automatically interrupting the flow of normal current in said shunt-path.

[Claims 6 to 21 not printed in the Gazette.]

897,907. TELEMOTOR. LINCOLN A. LANG, Cleveland, Ohio. Filed Oct. 10, 1907. Serial No. 396,870.

1. In a system of the character described, the combination, with an actuating device and a device driven or actuated thereby, of a liquid-holding pipe system, controlling means for said actuating device arranged to be acted upon by the liquid in said system, means for imparting to the liquid in the system an impulse which will operate the controlling means to start the actuating device, and means for imparting to the liquid in the system an impulse which will operate the controlling means to stop the actuating device, substantially as specified.

2. In a system of the character described, the combination, with an actuating device and a device driven or actuated thereby, of a liquid-holding pipe system, controlling means for said actuating device arranged to be acted upon by the liquid in said system, means for imparting to the liquid in said system an impulse which will operate the controlling means to start said actuating device, and means, operative by the movement of the driven or actuated device, for imparting to the liquid in the system an impulse which will operate the controlling means to stop the actuating device, substantially as specified.



3. In a system of the character described, the combination, with an actuating device and a device driven or actuated thereby, of a liquid-containing pipe system, controlling means for said actuating device arranged to be acted upon by the liquid in said system, means for imparting to the liquid in the system an impulse which will operate the controlling means to start said actuating device, and means, operative by the movement of the driven or actuated device, for imparting to the liquid in the system an impulse which will operate the controlling means to stop the actuating device, substantially as specified.

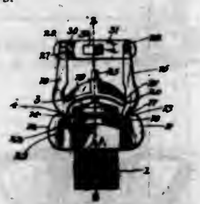
4. In a system of the character set forth, the combination, with an actuating device and a device driven or actuated thereby, of a liquid-containing pipe system, controlling means for said actuating device arranged to be acted upon by the liquid in the system, means for imparting to the liquid in said system an impulse which will operate the controlling means to start the actuating device, and means, operative by the movement of the driven device, for imparting to the liquid an impulse which will operate the controlling means to stop the actuating device without affecting the means which imparts the first-mentioned impulse to the actuating device, substantially as specified.

5. In an apparatus of the character described, the combination, with an actuating device and a device driven thereby, of a liquid-holding pipe system comprising two normally non-communicating branches, controlling means communicating with both of said branches and adapted to operate said actuating device, means for simultaneously applying pressure to one branch of the system and relieving pressure in the opposite branch, thereby moving said controlling means, and means, communicating with both branches of said system and operated by said driven device, for simultaneously reversing the pressures in the branches of the system, substantially as specified.

[Claims 6 to 24 not printed in the Gazette.]

897,908. SPRINKLER-HEAD FOR AUTOMATIC FIRE-EXTINGUISHERS. VALENTINE LAPHAM, Chicago, Ill. Filed Sept. 2, 1899. Serial No. 729,358.

1. A sprinkler head comprising a nozzle having a water outlet, a closure for such outlet, engaging hooks on the nozzle located on opposite sides of the outlet, a substantially vertical lever having a bridge secured thereto and extending laterally thereof, bearing against the closure and engaging one of said hooks at its lower end, a second substantially vertical lever engaging the other of said hooks at its lower end and bearing against the free end of said bridge and a collapsible link connecting the upper ends of said levers.



2. A sprinkler head comprising a nozzle having a water outlet, a closure for such outlet, and means for normally holding such closure seated consisting of a pair of substantially vertical levers detachably engaging the nozzle at their lower ends, one of the levers having a bridge secured thereto and extending laterally across and above such closure and engaging the other lever with its free end, a collapsible link connecting the upper ends of the levers and a set screw extending through the bridge and bearing against the top of the closure, such screw exerting tension on the link and tending to force the bridge-provided lever outwards and the bridge from engagement with the other lever.

3. A sprinkler head comprising a nozzle having a water outlet substantially at the top plane thereof, hooks on the nozzle on either side of the outlet, a closure for such outlet, two substantially vertical levers having hook-shaped lower ends engaging under the nozzle hooks, a bridge connected to one of the levers, extending laterally across and above the closure and engaging under a shoulder on the other lever intermediate of its length, a set screw in such bridge and bearing against the closure, such screw tending to force the bridge to an oblique position and to release it from engagement with said shoulder when the head is shot off, and a collapsible link connecting the upper ends of the levers and tending to resist tensile strain.

4. A sprinkler head comprising a nozzle having a water outlet substantially at the top plane thereof, hooks on the nozzle on either side of the outlet, a closure for such outlet, two substantially vertical levers having hook-shaped lower ends engaging under the nozzle hooks, a bridge connected to one of the levers, extending laterally across and above the closure and engaging the other lever intermediate of its length, a set screw in such bridge and bearing against the closure, hooks on the upper ends of the levers and extending in opposite directions, and a collapsible link having holes near its ends engaging by the hooks on the upper ends of the levers.

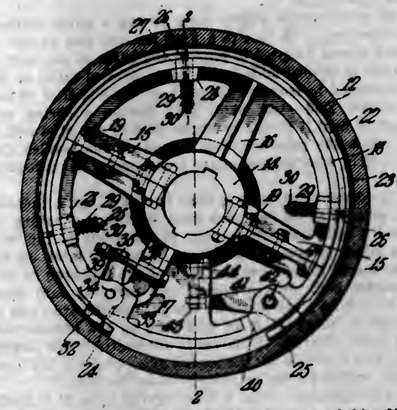
5. A sprinkler head comprising a nozzle having a water outlet, hooks 13 and 14 on the nozzle, a valve cap 3 for the outlet, a lever 18 having a hook 22 engaging hook 14, a bridge 19 connected to lever 18 and having a free end 20, a lever 15 having a hook 16 engaging hook 13 and having a shoulder 21 bearing against said end 20, a set screw 24 in the bridge and bearing against the cap, and a collapsible link connecting the upper ends of the levers.

[Claims 6 to 12 not printed in the Gazette.]

897,909. FRICTION-CLUTCH. DANIEL F. LEPLEY, Connellsville, Pa. Filed July 17, 1907. Serial No. 384,196.

1. In an internal friction clutch, a revoluble disk or wheel having slots in its rim, one wall of one of the slots being concaved, a friction band encircling the rim, a lever pivotally mounted in one of the slots and having a curved seating face resting against the concaved wall of the slot, means for adjusting said lever to compensate for wear of the parts, a second lever extending through a second slot in the rim and engaging the opposite end of the band, and means for operating the second lever to apply or release the clutch.

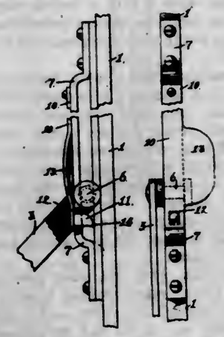
2. In an internal friction clutch, a revoluble disk or wheel the rim of which is provided with elongated passages, a friction band partly encircling the rim, an adjustable support for one end of the band, an operating lever connected to the opposite end of the band, and a series of studs secured to the band and projecting through the passages in the rim to prevent lateral displacement of said band.



3. In an internal friction clutch, a revoluble disk or wheel having a slotted rim and provided with elongated passages, a friction band partly encircling the same, an adjustable support extending through one of the slots and carrying one end of the band, a clutch operating lever extending through another slot and engaging the opposite end of the band, a series of studs projecting inward from the band and extending through the said passages in the rim, and springs encircling said studs and tending to contract the band and release the clutch.

4. In an internal friction clutch, a revoluble wheel or disk having a slotted rim, one of said slots having a concaved wall, a lever extending through said slot and having a convex face resting against the concaved wall, a friction band partly encircling the rim and having at one end an opening for the reception of one end of said lever, adjustable screws connected to the opposite end of the lever, a second lever extending through another slot in the rim and engaging the opposite end of the band, and means for operating said second lever.

897,910. ELEVATOR-DOOR-OPENING DEVICE. FREDERICK N. LONG, Oakland, Cal., assignor of one-half to Frederick J. White, Oakland, Cal. Filed Dec. 9, 1907. Serial No. 405,731.



1. In combination with a door having a guide thereon, a link pivoted at its foot to a fixed bearing and having on its head a stud adapted to play in the guide of the door as the latter is opened and closed, and a latch on the door disposed in the path of the stud to lock and to release said stud.

2. In combination with a door having a guide thereon, a link pivoted at its foot to a fixed bearing and having on its head a stud adapted to play in the guide of the door as the latter is opened and closed, and a spring latch on the door arranged to traverse the path of the link-stud, to lock and release it.

3. In combination with a door having a guide thereon, a link pivoted at its foot to a fixed bearing and having on its head a stud adapted to play in the guide of the door as the latter is opened and closed, and a beveled latch on the door arranged to traverse the path of the link-stud to lock and release said stud, said latch having a spring arm adapted to hold it normally in the path of the stud and to yield before the pressure of said stud on the beveled side of the latch, whereby the latter is automatic in its locking action.

4. In combination with a door having a guide thereon, a link pivoted at its foot to a fixed bearing and having on its head a stud adapted to play in the guide of the door as the latter is opened and closed, a beveled latch on the door arranged to traverse the path of the link-stud to lock and release said stud, a spring arm carrying said latch adapted to hold it normally in the path of the stud and to yield before the pressure of said stud on the beveled side of the latch, whereby the latter is automatic in its locking action, and a handle on the spring arm, whereby the operator can withdraw the latch to release the stud.

5. In combination with a door having upon it a guide, a link pivoted at its foot to a fixed bearing and having on its head a stud adapted to play in the guide of the door as said door is opened and closed, a spring arm secured to the door, a latch carried by said arm and adapted to traverse the path of the link-stud to lock and release said stud, a handle on the spring arm to enable the operator to withdraw the latch and slide the door open, and means for limiting the withdrawal of the latch, to relieve the spring arm of the door opening pressure.

[Claims 6 to 10 not printed in the Gazette.]

897,911. GARMENT-SUPPORTER CLASP. HENRY E. LORENTZ, Baltimore, Md. Filed Oct. 19, 1907. Serial No. 398,216.



1. In a garment supporter, a web, a plate secured to the web and provided with a slot, a button wider than said slot secured to the plate by devices permitting it to rotate on its axis and to swing from the plate, for the purpose set forth.

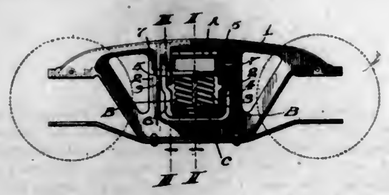
2. The combination with a main metal plate provided with a central slot or aperture, of a metal button plate both wider and shorter than said slot and connected to the plate near the end of the slot by a joint permitting it to rotate on its axis and swing from the plate.

3. The combination with a main plate provided with a slot or aperture, of a web secured to the upper end of the plate to support the same, a button plate secured to the plate at the upper end of the slot and arranged to turn edgewise and pass through the slot and to turn flatwise to extend across the same.

4. The combination with the plate provided with the central slot of a button plate adapted to span the slot and to pass edgewise through the same, and a member hinged to the plate at the end of the slot and in swivel-like engagement with said button plate.

5. The combination with a supporting tape or web, of a main plate secured to the end of the tape and provided with a slot or aperture, a button plate having a portion wider than the slot and a shank narrower than the slot, a hinging member, having a ring portion passed through the plate at the end of the slot and a headed portion in swiveling engagement with the end of said shank, substantially as set forth.

897,912. SWING-MOTION CAR-TRUCK. WILLIAM D. LOWRY, St. Louis, Mo. Filed Mar. 9, 1908. Serial No. 419,910.

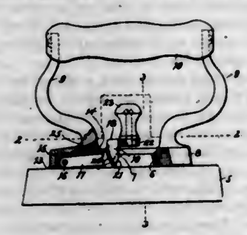


1. In a swing motion car truck, a side frame provided with a bolster receiving pocket and having a plurality of hanger supporting members at each side of said pocket cast integral with the frame, a swing motion hanger having its arms located between the supporting members at each side of said pocket, and means removably mounted in said hanger supporting members whereby said hanger is pivotally supported, substantially as set forth.

2. In a swing motion car truck, the combination of a side frame provided with columns at the sides, of a bolster receiving pocket, and legs integral with the frame and depending into said pocket and parallel with said columns, a hanger having its arms interposed between said columns and legs, and means mounted in said columns and legs for pivotally supporting said hanger, substantially as set forth.

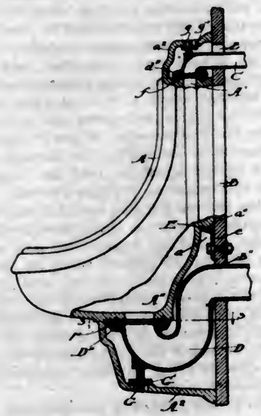
3. In a swing motion car truck, the combination of a side frame provided with columns at the sides, of a bolster receiving pocket provided with flanges and legs integral with the frame and depending into said pocket and parallel with said flanges, a hanger having its arms interposed between said flanges and legs, and means mounted in said flanges and legs for pivotally supporting said hanger, substantially as set forth.

897,913. SAD-IRON. ALEXANDER LUETHI, Lakemills, Wis. Filed Sept. 17, 1906. Serial No. 334,876.



A sad iron, comprising a body portion provided on its top surface with vertically projecting and forwardly converging lugs provided with angular inner faces and beveled forward ends, a removable handle for said body portion comprising a slotted base provided with angular sides constructed to fit the angular inner faces of the lugs and to be brought into engagement therewith, a latch positioned within the slot and pivotally connected to said base near its forward end, and provided at its free end with a transverse portion with depending beveled fingers to engage the beveled forward ends of the lugs beneath a horizontal line drawn transversely through the latch pivot to draw the angular sides of the base portion into wedging engagement with the angular inner faces of the lugs and hold the same in locked engagement therewith, a handle for operating said latch, and a handle portion connected to said base.

897,914. PLUMBING-FIXTURE. PATRICK J. MADDEN, Chicago, Ill. Filed May 24, 1906. Serial No. 318,512.



1. In a plumbing fixture, the combination of a bowl having vertical inlet and outlet openings, inlet and outlet pipes having vertical ends registering with the inlet and outlet openings, respectively, gaskets interposed between the bowl and pipes and surrounding the inlet and outlet openings and means for compressing the gaskets between the bowl and pipes, substantially as described.

2. In a plumbing fixture, the combination of a bowl having vertical inlet and outlet openings, inlet and outlet pipes having their ends presented downwardly and upwardly respectively and registering with said openings, gaskets interposed between the bowl and pipes and surrounding the openings, and pressure devices arranged to exert their pressure vertically, the one upward and the other downward, for compressing the gaskets between the bowl and pipes, substantially as described.

3. In a plumbing fixture, the combination of a bowl having vertical inlet and outlet openings, inlet and outlet pipes registering with said openings, gaskets interposed between the bowl and the pipes and pressure devices including screws for compressing the gaskets between the bowl and pipes, substantially as described.

4. In a plumbing fixture, the combination of a bowl having vertical inlet and outlet openings, horizontal inlet and outlet pipes having their ends bent and presented downwardly and upwardly respectively, and registering with said openings, and means for forming liquid tight joints between the bowl and pipes, substantially as described.

5. In a plumbing fixture, the combination of a bowl having vertical inlet and outlet openings, inlet and outlet pipes having their ends presented downwardly and upwardly, respectively, and registering with said openings, gaskets interposed between the bowl and pipes, and means for forcing the pipes toward each other and thereby compressing the gaskets and clamping the bowl, substantially as described.

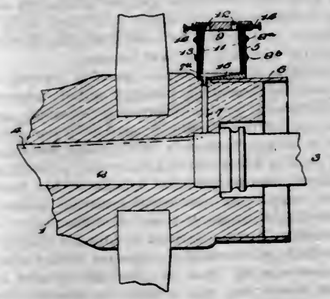
[Claims 6 to 48 not printed in the Gazette.]

897,915. AXLE-LUBRICATOR. EDWARD MEYER and EMIL C. SCHIFFERS, San Antonio, Tex. Filed Feb. 7, 1908. Serial No. 414,820.

1. An axle lubricator comprising a band adapted to be applied to the hub of a wheel, an oil cup carried by the band and projecting beyond an edge of the same, and a feed tube leading from the projecting portion of the cup.

2. An axle lubricator comprising a split band adapted to be applied to the hub of a wheel, an oil cup carried by the split band and projecting beyond an edge of the same, and a feed tube leading from the projecting portion of the cup.

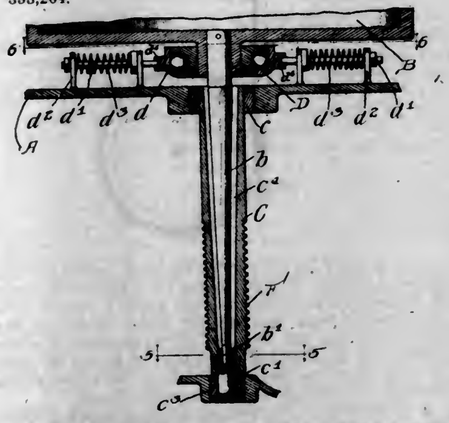
3. In a lubricator, the combination of a reservoir formed with an annular groove, a cover provided with a flange adapted to be received within the reservoir, a spring carried by the flange, a lug projecting from the spring and extending through the flange for coöperation with the groove to hold the cover in position, and a feed tube leading from the reservoir.



4. In a lubricator, the combination of a reservoir formed with a pair of annular grooves, a cover provided with a flange adapted to be received within the reservoir, a spring carried by the flange, lugs projecting from the spring and extending through the flange for coöperation with the grooves to hold the cover in an adjusted position, and a feed tube leading from the reservoir.

5. In a lubricator, the combination of a reservoir having a pair of annular grooves formed in the interior walls thereof, a cover therefor, the said cover being formed with an annular flange adapted to be received within the reservoir, a spring strip applied to the flange and provided with a pair of locking lugs adapted to coöperate with the annular grooves to lock the cover in position with the flange either entirely or partially received within the reservoir, and means for feeding lubricant from the reservoir.

897,916. HIGH-SPEED ROTARY DEVICE. HUBERT A. MYERS, Goshen, Ind. Filed Jan. 21, 1907. Serial No. 353,204.



1. A machine for the purpose specified, having a rotary driven centrifugal member, a spindle supported for free and unopposed lateral movement, within limits, and self-centering rotation upon its lower end, and means for supporting the spindle against endwise movement.

2. A machine for the purpose specified, having a rotary driven centrifugal member, provided at its bottom with a downwardly extending spindle which is free from lateral thrust, within limits, and supported for self-centering rotation, means for communicating power to the lower end of said spindle and supporting the same against endwise movement.

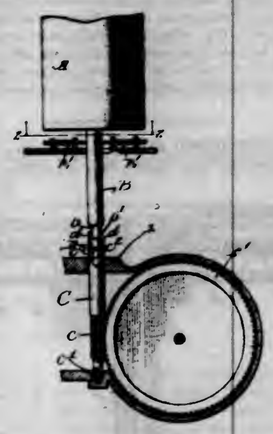
3. A machine for the purpose specified, having a rotary driven centrifugal member, a rotary and downwardly extending spindle supported for free and self-centering rotation, an outer spindle in which the said first mentioned spindle is inclosed, with sufficient space between the two spindles to permit the inner spindle to find its center of rotation, bearings for the upper and lower ends of said outer spindle, and means for communicating power to the outer spindle to rotate the said member.

4. A machine for the purpose specified, having a rotary driven centrifugal member, a rotary spindle supported for lateral movement and self-centering rotation, means at the upper end of the spindle for steadying and supporting the same in an approximately vertical and central position while at rest, or while starting to rotate, permitting unopposed lateral movement of the spindle within limits, and means for supporting and communicating power to the lower end of said spindle to rotate said member.

5. A machine for the purpose specified, having a rotary driven centrifugal member, an upright rotary spindle extending downwardly from the bottom of said member, means for supporting said spindle for lateral movement, within limits, and self-centering rotation, a worm gearing for communicating power to said supporting means to rotate said spindle, means for operating said worm gearing to rotate the said spindle, and means for holding the spindle against endwise vertical displacement.

[Claims 6 to 15 not printed in the Gazette.]

897,917. HIGH-SPEED ROTARY DEVICE. HUBERT A. MYERS, Goshen, Ind. Filed Mar. 16, 1907. Serial No. 362,652.



1. A machine for the purpose specified, having a rotary driven centrifugal member, means for transmitting power to the member to rotate the same about a vertical axis, said member being mounted for lateral movement and balanced against side thrust by the transmission of power thereto, and an automatic clutch adapted to free the member and allow the latter to continue the self-balancing rotation after the transmission of power ceases.

2. A machine for the purpose specified, having a rotary driven centrifugal member, means for communicating power to the member to rotate the same about a vertical axis, said member being mounted for lateral movement and balanced against side thrust by the transmission of power thereto, and automatic means adapted to be operated by the cessation of the transmission of power to free the member and allow the latter to continue the self-balancing rotation.

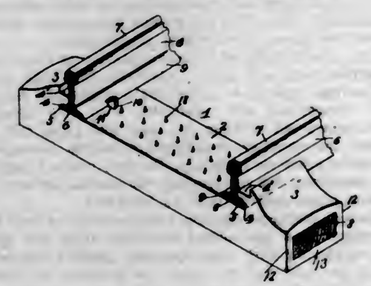
3. A machine for the purpose specified, having a rotary driven centrifugal member, a worm gearing for rotating the same about a vertical axis, said member being mounted for lateral movement and balanced against side thrust by the transmission of power thereto, and an automatic clutch for freeing the member and allowing the latter to continue the self-balancing rotation after the worm gearing has discontinued the transmission of power, said gearing comprising a worm held against endwise movement.

4. A machine for the purpose specified, having a rotary driven centrifugal member, a transmission gearing for rotating said member about a vertical axis, said member being mounted for lateral movement and balanced against side thrust by the transmission of power thereto, and an automatic connection for freeing the member and allowing the same to run ahead or lead the transmission of power with a self-balancing rotation thereof.

5. A machine for the purpose specified, having a rotary driven centrifugal member, a rotary and downwardly extending spindle, means for supporting said spindle, said spindle being left free to balance itself on the lower end thereof, a power transmission device, and an automatic clutch between the power transmission and the lower end of said spindle, said clutch adapted to disconnect the spindle and permit the latter to rotate freely after the said device has discontinued the transmission of power, said spindle and member being balanced relative to any and all lateral thrust thereon.

[Claims 6 to 10 not printed in the Gazette.]

897,918. RAILWAY CROSS-TIE. CASEY T. MOORE, Colt, Ark. Filed July 9, 1907. Serial No. 382,908.



1. A hollow railway cross-tie, consisting of a resilient, metal body, whose upper and lower walls are parallel with each other, and whose side walls curve outwardly; clamping blocks, integral with the upper wall of the body of said tie, each having a lower recess 4, adapted to fit over the outer flange of the base of a railway rail, its inner end fitting against the web of said rail; an upper recess 4^1, adapted to give room for and support fish-bar plates, said tie provided with perforations through its upper wall, inwardly from the inner ends of said clamping blocks, and wooden blocks fitting in the hollow at each end of said body, leaving a space between the lower face of the upper wall of said body and the upper side of said block, said tie adapted to carry railway rails and hold the same, by having them fitted in said clamping blocks and secured by railway spikes passing through said perforations into said blocks, substantially as shown and described and for the purposes set forth.

2. A hollow railway cross-tie, consisting of a resilient metal body, whose upper and lower walls are parallel with each other, and whose side walls curve outwardly; clamping blocks, integral with the upper wall of the body of said tie, having recesses adapted to fit over the outer flange of the base of a railway rail, their inner ends fitting against the web of said rail, said tie provided with perforations through its upper wall inwardly from the inner ends of said clamping blocks, and wooden blocks fitting in the hollow at each end of said body, leaving a space between the lower face of the upper wall of said body and the upper side of said blocks, said perforations adapted to permit railway spikes to pass through the same into the wooden blocks, and thereby hold railway rails in the recesses and against the ends of said clamping blocks, substantially as shown and described and for the purposes set forth.

897,919. MEANS FOR EXTERMINATING INSECTS AND OTHER VERMIN. GUSTAVE A. H. MULLER, St. John, New Brunswick, Canada. Filed May 8, 1907. Serial No. 372,580.



1. In a means for exterminating insects and other vermin, the combination with a suitable backing, of a substance having light radiating and light absorbing properties and spread over the surface of said backing and a transparent adhesive substance spread over said luminous substance continuously in a sticky condition and through which the light radiates from the said luminous substance, substantially as described.

2. In a means for exterminating insects and other vermin, the combination with a backing of paper material, of a dry luminous substance radiating light without combustion and forming a coating on the surface of said paper material and a transparent sticky substance spread over said luminous substance and continuously in a sticky condition and forming with said paper material and luminous substance a composite sheet of three layers, substantially as described.

897,920. CUSHION FOR BOOTS AND SHOES. FRANK P. MCINTYRE, Philadelphia, Pa. Filed Aug. 11, 1906. Serial No. 330,162.



1. A sponge rubber cushion for boots or shoes having integrally combined therewith thin surface layers composed of rubber impervious to air.

2. A sponge rubber cushion for boots or shoes having a recess or depression in its upper face, and having integrally combined therewith thin surface layers of rubber impervious to air, the upper layer following the contour of said depression or recess.

3. A sponge rubber cushion for boots or shoes consisting of a mass of sponge rubber completely inclosed within a thin surface layer or coating of rubber impervious to air which is integrally combined with said sponge rubber mass.

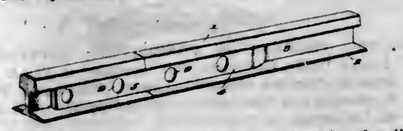
4. A sponge rubber cushion for boots or shoes consisting of a mass of sponge rubber with beveled edge and indented top, said cushion having a thin surface layer or coating of rubber impervious to air which completely incloses the sponge rubber mass and is integrally combined therewith.

5. A slip insole for boots or shoes consisting of a cover of leather, and a sponge rubber sole and heel cushion, each having thin surface layers of rubber impervious to air to one of which the cover is secured.

[Claim 6 not printed in the Gazette.]

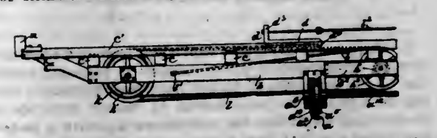
897,921. RAIL-JOINT. CHARLES L. MCVOY, Pensacola, Fla. Filed Oct. 4, 1907. Serial No. 395,949.

1. A rail joint composed of two abutting rail ends each consisting of a base flange, an intervening web and a tread, each of which parts are continuous and extend to the extreme rail end; said rail ends also provided on opposite sides thereof with integral side tongues, extending longitudinally beyond the rail ends proper; each of which tongues are adapted to fit snugly between the treads and base flanges of said rail ends and to be supported by said base flanges throughout their whole length; and suitable fastenings passing through said webs and tongues; whereby each rail end is supported by the base flange of the other throughout the extent of its projecting tongue, substantially as described.



2. In a rail joint the combination of a pair of rails, each comprising a base flange, a tread and an intervening web all terminating in the same vertical plane at the respective ends of said rails, and each of said rails being provided at their ends, on opposite sides, with apertured tongues 5 extending longitudinally beyond the end of the rail and disposed parallel to but out of alinement with the web portion and forming with said web the shoulder 6, and bolts coöperating with apertures in said tongues and with apertures formed in said webs to securely bolt said tongues to the webs of their opposed rail with the tongues lying snugly against the webs and base flanges on opposite sides for their whole lengths, whereby each rail end is supported by the base flange of the other, substantially as described.

897,922. DRAW-BENCH. LA VERNE W. NOYES and DANIEL R. SCHOLES, Chicago, Ill.; said Scholes assignor to The Aermotor Company, Chicago, Ill., a Corporation of Illinois. Filed May 16, 1901. Serial No. 60,527.



1. In a draw-bench, the combination of a traveling frame, comprising a pair of longitudinal stringers, a track mounted upon said frame, a buggy adapted to travel back and forth upon said track, cable-wheels mounted at each end of said frame, a pair of cable-carriages mounted between the stringers of said frame and adapted to travel back and forth therebetween, a cylinder carried by said frame for supplying power for operating said buggy, a piston rod extending from each end of said cylinder, each rod being operatively connected with its respective cable-carriage, and a pair of cables operatively connecting said buggy with said cable-carriages for moving said buggy in opposite directions, each cable passing over one of the cable-wheels and its associated cable-carriage.

2. In a draw-bench, the combination with a suitable track, of a buggy having portions extending respectively above and below said track, and a pair of cables for moving said buggy in opposite directions, the cable for moving the same in one direction being connected with the portion of the buggy extending above the track, and the cable for moving the buggy in the other direction being connected with the buggy extending below the track.

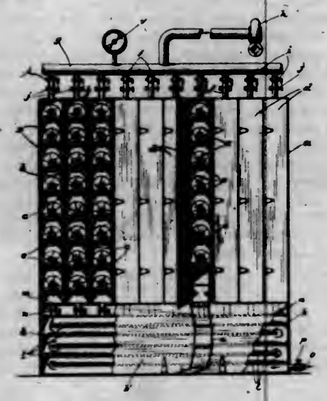
3. The combination with a draw bench, of a truck supporting the same and having a pair of wheels mounted rigidly upon the opposite ends of an axle, a gear wheel carried upon each of said wheels, and racks alongside the tracks with which said gear wheels are adapted to engage to maintain the truck in alinement.

4. The combination with a draw bench, of a truck for supporting the same, of a track and coöperating racks and gear wheels associated with said track and truck for maintaining the truck in alinement, and a power device independent of said track and gears for moving said truck transversely.

5. In a draw-bench, the combination with a traveling frame comprising a pair of longitudinal stringers, of a track consisting of a pair of longitudinal members mounted above the stringers and spaced apart so as to form a guide-slot between them, a buggy traveling upon said track and guided by said slot, and means for operating the buggy.

[Claims 6 to 18 not printed in the Gazette.]

897,923. PROCESS OF PRESERVING EXPLOSIVES. JULIEN ORTIZ, Greenville, Del., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed July 31, 1907. Serial No. 386,343.



1. The process of storing explosives to retard their spontaneous decomposition which consists in inclosing a quantity of the explosive in an air tight compartment, rarefying the air in the compartment in contact with the explosive and displacing the withdrawn air with a body of anhydrous air, and then rarefying the body of anhydrous air.

2. The process of storing explosives to retard their spontaneous decomposition which consists in inclosing a quantity of the explosive in an air tight compartment, drying a body of air, withdrawing air in contact with the explosive and displacing the air so withdrawn by air so dried, shutting off access of dried air to the explosive, and rarefying the body of air in the compartment in contact with the explosive.

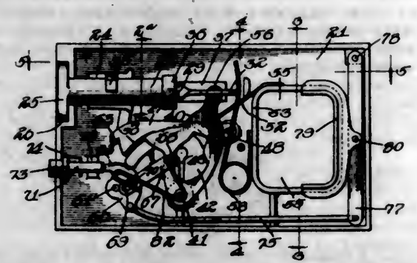
3. The process of storing explosives to retard their spontaneous decomposition which consists in independently storing fractional parts of the entire quantity, rarefying the air in contact with each fractional part, drying a body of air not in contact with the explosive, and independently introducing the air so dried into contact with the several fractional parts.

4. The process of storing explosives to retard their spontaneous decomposition which consists in independently storing fractional parts of the entire quantity, drying a body of air not in contact with the explosive, and independently withdrawing air in contact with each fractional part and independently introducing air so dried into contact with the several fractional parts, and then rarefying the anhydrous air in contact with each fractional part.

897,924. LOCK. THEODORE C. PROUTY, Aurora, Ill., assignor to Wilcox Manufacturing Company, Aurora, Ill., a Corporation of Illinois. Filed Oct. 17, 1906. Serial No. 339,385.

1. In a lock, the combination with a casing, of a bolt, means for projecting the bolt, and a sliding spiral device for causing an axial rotation of the bolt.

2. In a lock, the combination with a casing, of a bolt, means for projecting the bolt, and a sliding spiral device connected with said projecting means and with said bolt for causing an axial rotation of the bolt.



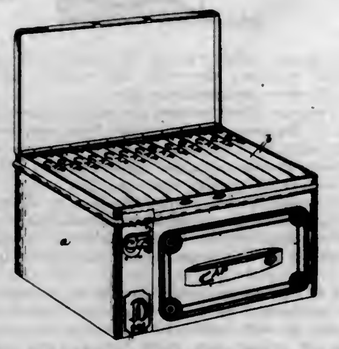
3. In a lock, the combination with a casing, of a bolt having a socket in its rear or inner end, a spiral device entering said socket in the bolt, and means for projecting said bolt and moving said spiral device forward in said socket.

4. In a lock, the combination with a casing, of a bolt having a socket in its rear or inner end, a spiral device entering said socket in the bolt, means for projecting said bolt and moving said spiral device forward in said socket, and means for locking said spiral device to said bolt.

5. In a lock, the combination with a casing, of a bolt, a spiral device connected with said bolt, means for longitudinally moving said bolt and spiral device, and means for holding said bolt against rotation until it has been projected.

[Claims 6 to 27 not printed in the Gazette.]

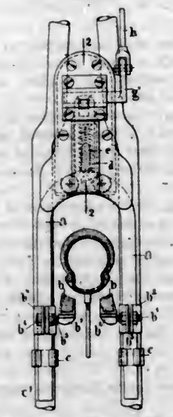
897,925. PACKING CIGARS. ORVILLE L. PARMENTER, Racine, Wis., assignor, by direct and mesne assignments, to Racine Paper Goods Company, Racine, Wis., a Corporation of Wisconsin. Filed Oct. 13, 1898. Serial No. 693,416.



1. The cigar package consisting essentially of a previously formed elongated flexible tube-like paper pocket having a longitudinal approximately flat stiffening wall and flexible longitudinal creased cushioning edge walls, said pocket completely inclosing the contained cigar and sealed and passed around both ends of said cigar, said pocket being compressed at its ends by collapsing said edge walls, forming the end corner portions projecting laterally beyond the opposite sides of the cigar ends and constituting protecting cushions and hand holds by which the pocket can be grasped and torn open to permit removal of the inclosed cigar without injury to the wrapper thereof, substantially as and for the purposes described.

2. The separate individual original cigar package composed of a previously formed elongated tube-like paper pocket having a loose lining and longer than and completely and loosely inclosing the contained cigar and permanently closed at both ends and covering both ends of the cigar and having edge portions projecting laterally beyond the opposite sides of the cigar to form longitudinally disposed side projecting cushions and corner hand holds by which the package can be grasped and torn open to permit removal of the cigar without injury to its wrapper during the tearing operation, substantially as described and shown and for the purposes substantially as set forth.

897,926. BRAKE-LOCK FOR BICYCLES. BERNARD PÉDUCASSE, Lyon, France. Filed Dec. 10, 1906. Serial No. 347,014.



In a cycle wheel rim brake lock the combination of a brake-member adapted to bear on the rim, an upwardly operative brake-actuating mechanism comprising ratchet teeth on one of its members, a pawl, a spring adapted to move said pawl into engagement with said ratchet teeth and a transversely slidable pin comprising a cam adapted to be actuated by a removable key for causing the cam to disengage said pawl from said ratchet teeth and to be slid directly by hand for removing the cam-surface laterally from the pawl for permitting the engagement thereof.

897,927. RULE-TIP. THOMAS PRENTICE, New Britain, Conn. Filed June 6, 1907. Serial No. 377,548.



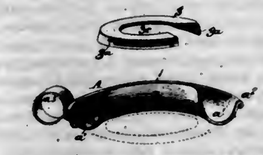
1. A rule tip comprising a rule end rabbeted at each side and having recesses in the sides joining the rabbet, a sheet metal tip capping said rabbeted end and carrying portions entered into said recesses and having their edges expanded into engagement with the walls of the said recesses.

2. The combination with a rule having a tenon at its end and a circular recess in the face of the rule extending from said tenon, a tip capping said tenon and carrying circular members connected to it by necks entered into said recesses and having edges undercutting the walls of said recesses.

897,928. HEAT-RETAINER AND DRIP-PAN. EDWARD C. REITER, Rockville, Conn. Filed Oct. 3, 1907. Serial No. 395,734.

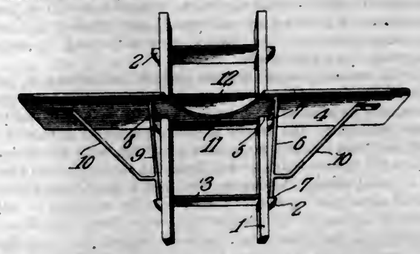
1. A device of the character described, comprising a hollow dish shaped rim, whose inner wall extends vertically to form a heat concentrating chamber and an apertured cover plate adapted to be removably supported upon the said inner wall.

2. In a device of the character described, the combination with a hollow dish shaped annular rim, whose inner wall is vertically extended to form a heat concentrating



chamber and an apertured cover plate having a pendent flange, said cover plate being adapted to removably fit upon the said inner wall, substantially as shown and described.

897,929. DETACHABLE SHELF FOR STORE-LADDERS. GEORGE H. RIDOUT, Luling, Tex. Filed May 23, 1908. Serial No. 434,590.



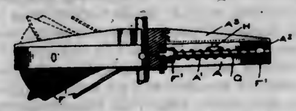
1. In combination with a ladder an attachment comprising a shelf having at its rear edge notches for the reception of the uprights of the ladder, brackets attached to the under sides of the shelf and sockets mounted upon the uprights of the ladder for engagement with said brackets.

2. In combination with a ladder having upon the sides of its uprights sockets, an attachment comprising a shelf having at its rear edge notches for the reception of the uprights of the ladder, brackets mounted upon the under sides of the end portions of the shelf for engagement with the sockets upon the ladder.

3. In combination with a ladder having sockets mounted upon its uprights, an attachment comprising a shelf having end portions defined by a recess cut at the forward edge thereof, and brackets mounted upon the under sides of the shelf for engagement with the sockets.

4. In combination with a ladder having sockets upon its uprights, an attachment comprising a shelf having upon its under sides brackets for engagement with the sockets and being provided at its forward edge with a recess with defined end portions, a leaf hinged to the said shelf and adapted to swing over said recess.

897,930. WAVE, TIDE, AND CURRENT MOTOR. CHARLES G. ROEHR, Chicago, Ill. Filed Aug. 30, 1907. Serial No. 390,707.



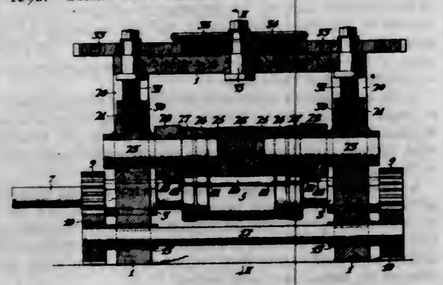
1. In a wave, tide or current motor, a motor device comprising a submerged motor wheel; submerged bearings on which it is mounted with its axis disposed longitudinally with respect to the tide, wave or current movement, such motor wheel comprising a plurality of vanes pivoted for oscillation both ways from the plane of rotation of the wheel; elastically yielding means resisting their deflection in either direction from said plane, and power-communicating devices from the shaft of said wheel extending above the current.

2. A wave, tide and current motor comprising a plurality of submerged motor wheels; submerged bearings on which such wheels are mounted with their axes all disposed longitudinally with respect to their tide, wave or current movement; a structure above water connected with said bearings and a common power shaft mounted on such upper structure; means for communicating movement from the motor wheel shafts to said common power shaft, each of said motor wheels comprising a plurality of vanes pivoted for oscillation both ways from the plane of rotation of the wheel, and springs which yieldingly resist the deflection of said wheels either way from said plane.

3. A wave, tide and current motor device comprising a submerged motor wheel having its shaft journaled longitudinally with respect to the direction of water movement; means for transmitting power from such shaft upward to a point above the water surface, such motor wheel comprising vanes pivotally mounted for oscillation from a position trending obliquely in one direction to a position trending obliquely in the opposite direction from the plane of rotation of the wheel, and elastically yielding means resisting the deflection of said vanes in either direction from said plane.

4. A wave, tide or current motor comprising a submerged motor wheel; submerged bearings for the same on which such wheel is mounted with its axis longitudinal with respect to the water movement; means restraining said bearings against movement of travel with the water; means for transmitting power from the shaft of such wheel to a point above the water level, such wheel comprising radial arms and spokes; vanes pivotally mounted on said arms or spokes for oscillation both ways from the plane of rotation of the wheel, and springs carried by the spokes and reacting on the vanes for yieldingly resisting the deflection of the latter in either direction from said plane of rotation.

897,931. METAL-ROLLING PROCESS AND MILL. MARCUS RUTHENBURG, Lockport, N. Y. Filed Aug. 14, 1905. Serial No. 274,021.



1. In a rolling mill, the combination with a roll having loose rings, of a roll having positively driven zones opposed to said loose rings.

2. In a rolling mill, the combination with a roll having loose rings; of two rolls comprising positively driven zones respectively opposed to said loose rings; said rolls comprising positively driven zones forming a bed to retain the article to be rolled.

3. In a rolling mill, the combination with a roll having zones of different diameters; of a roll having loose rings opposed to said zones, and, loose rings respectively overlapping the end zones.

4. In a rolling mill, the combination with two rolls comprising zones of different diameters forming a bed to retain the article to be rolled; of a roll having loose rings opposed to said zones, and, loose rings respectively overlapping the end zones.

5. The process which consists in confining a heated billet at its ends, except for a limited area around its axis, against longitudinal expansion, and subjecting it throughout its length to the action of a transversely operating rolling and reducing means and reducing it while the outer portions of the ends are thus confined and while the said limited area about the axis is unconfined.

[Claim 6 not printed in the Gazette.]

897,932. TIRE-PLUG. ROBERT SAMPSON, Montreal, Quebec, Canada. Filed Jan. 29, 1907. Serial No. 354,600.



1. In a tire plug, the combination of a head, having a socket therein, with a shank provided with an offset end slidably engaging within said socket, and a clamp coöperating with said shank.

2. In a tire plug, the combination of a head, having a socket therein, with a shank provided with an offset end, formed by bending the shank to one side, rotatably engaging within said socket, and a clamp coöperating with said shank.

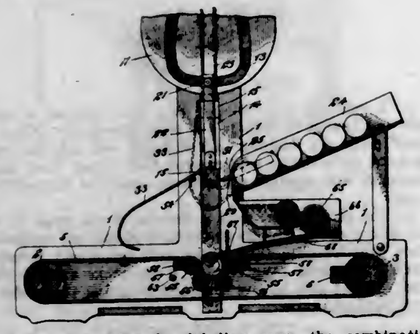
3. In a tire plug, the combination of a head, having a socket therein, with a shank provided with an off-set end slidably and rotatably engaging within said socket, and a clamp coöperating with said shank.

4. In a tire plug, the combination of a head having a socket therein, a screw threaded shank provided with an offset end, formed by bending the shank to one side, engaging within said socket, a coöperative cap threaded upon said shank, and a flexible, non-elastic, member embodying a textile body with a layer of cement upon the under side thereof carried upon said shank between said head and said cap.

5. In a tire plug, the combination of a head embodying an elongated, dished, metallic member having a central opening therethrough, and embedded in a mushroom cap of rubber, having reduced, lateral edges, a threaded shank provided with an offset T end rotatably and slidably engaging through and beneath said metallic head, a clamping cap threaded upon said shank, and a textile member with a cement covered under side interposed between said cap and head.

[Claims 6 to 8 not printed in the Gazette.]

897,933. LABELING-MACHINE. EDWARD P. SAYRE, Montclair, N. J. Filed Aug. 23, 1907. Serial No. 389,779.



1. In a machine for labeling cans, the combination with means for supplying cans and means for supplying paste and labels; of positively driven yielding means adapted to form a pocket to receive the can and press the label supply to the surface to be labeled and means adapted to positively force said cans towards said yielding means, causing said cans to form said pocket.

2. In a machine of the character described, the combination with means for supplying cans and means for supplying paste and labels; of a flexible endless belt normally held straight in stretched condition, rollers disposed underneath said belt and adapted to receive the can with the belt between and press the label supplied to the surface to be labeled, and means adapted to force said cans between said rollers with said belt between.

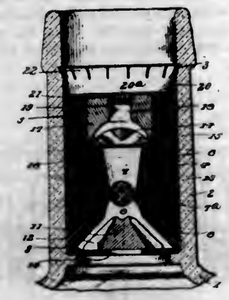
3. In a machine of the character described, the combination with means for supplying cans and means for supplying paste and labels; of a flexible endless belt normally held straight in stretched condition, yielding rollers disposed underneath said belt and adapted to receive the can with the belt between and press the label supplied to the surface to be labeled, and means adapted to force said cans between said rollers with said belt between.

4. In a machine of the character described, the combination with means for supplying cans and means for supplying paste and labels; of a flexible endless belt normally held straight in stretched condition, yielding rollers semi-circularly disposed underneath said belt adapted to receive the can and press the label supplied to the surface to be labeled and means adapted to force said cans between said rollers with said belt between.

5. In a machine of the character described, the combination with means for supplying cans, and means for supplying paste and labels; of a flexible endless belt yieldingly disposed normally held straight in stretched condition, yielding rollers semicircularly disposed underneath said belt adapted to receive the can and press the label supplied to the surface to be labeled and means adapted to force said can between said rollers with said belt between.

[Claims 6 to 16 not printed in the Gazette.]

897,934. NON-REFILLABLE BOTTLE. PAUL F. SCHMIDT, Jersey City Heights, N. J. Filed Nov. 27, 1907. Serial No. 404,079.



1. A non-refillable bottle, embodying a valve casing formed with an opening extending therethrough, valve mechanism controlling said opening, a baffle secured in the opening and formed with obliquely and inwardly extending apertures communicating with the opening below the baffle, and a nozzle secured in the opening above the baffle, as and for the purpose set forth.

2. A non-refillable bottle, embodying a valve casing formed with an opening extending therethrough, and with upper and lower valve-chambers formed in said opening, valves mounted in the respective valve-chambers, a baffle secured in the opening above the upper valve chamber and formed with obliquely and inwardly extending openings communicating with said valve chamber, and a nozzle secured in the opening above the baffle as and for the purpose set forth.

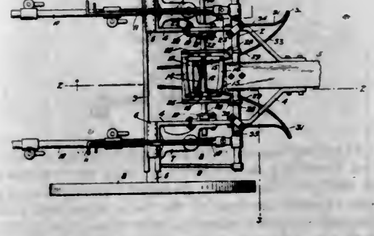
3. A non-refillable bottle embodying a valve casing formed with an opening extending therethrough and with upper and lower valve chambers formed in said opening, valves mounted in the respective valve chambers, a dome-shaped baffle secured in the opening above the upper valve chamber and formed with openings extending inwardly and obliquely therethrough and communicating with the said valve chamber, and a nozzle having an opening extending therethrough, said opening being flared toward its lower end, said baffle being received in said flared end of the opening and being spaced therefrom as and for the purpose set forth.

4. A non-refillable bottle having a neck and embodying a valve casing in said neck and formed with an opening extending therethrough, valve mechanism controlling said opening, a nozzle secured in the opening above the valve mechanism and formed with an opening extending therethrough and in said opening with an annular groove, and a disk mounted upon the upper end of the casing and secured in the neck, said disk being formed with an aperture in registry with the opening in the nozzle and with a nipple extending downwardly into the opening in the nozzle and in the groove thereof, as and for the purpose set forth.

5. A non-refillable bottle having a neck formed with an annular groove and embodying a valve casing having an opening extending therethrough, valve mechanism controlling said opening, a nozzle secured in the opening above the valve mechanism and formed with an opening extending therethrough, said opening being formed with an annular groove, and a cup-like disk mounted upon the upper end of the casing and formed with an opening in registry with the opening in the nozzle and with a slitted nipple extending downwardly into the said opening of the nozzle and designed to be spread out into the groove thereof, the rim of said disk being slitted and being designed to be spread out into the groove in the neck of the bottle as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

897,935. COTTON-TOPPER. OSCAR SCHWARZ, Granger, Tex. Filed Dec. 14, 1907. Serial No. 406,496.



1. The combination of a frame having an arched portion, supporting wheels therefor, clamps upon said frame, vertically disposed hanger bars slidably arranged in said clamps, a shaft journaled in said hanger bars, a rotary cutter upon said shaft, means for operating said shaft from one of said supporting wheels, a relatively stationary knife and means for adjusting said stationary knife to cause it to co-act with the rotary cutter.

2. The combination of a frame having an arched portion, supporting wheels for the frame, vertically adjustable bearings, a transverse shaft in said bearings, means for driving said shaft from one of said wheels, a rotary cutter upon said shaft and arranged in the arched portion of the frame, a stationary knife to co-act with said cutter, hanger bars loosely mounted on the shaft and connected to the ends of said knife and adjustable connections between said hanger bars and the frame.

3. The combination of a frame having an arched portion, supporting wheels for the frame, vertically adjustable bearings upon the frame, a transverse shaft in said bearings, gearing between said shaft and one of the supporting wheels, a rotary cutter upon said shaft in the arched portion of the frame, a stationary knife to co-act with the cutter, hanger bars loosely mounted on the shaft and connected to the ends of said knife, adjustable connections between said hanger bars and the frame and deflectors

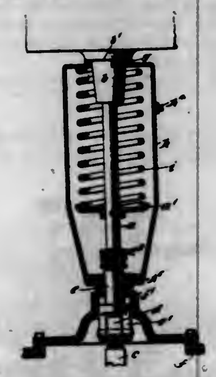
adjustably connected to the frame and adapted to guide the plants into the path of the rotary cutter and its co-acting knife.

4. The combination of a frame having an arched portion, supporting wheels for the frame, vertically adjustable bearings, a transverse shaft in said bearings, means for driving said shaft from one of said wheels, a rotary cutter upon said shaft and arranged in the arched portion of the frame, a stationary knife to co-act with said cutter, hanger bars for the knife each having curved portions pivoted to the shaft and connected to the knife and upright slotted portions, and clips engaged with the frame and arranged in the slotted portions of said hanger bars.

5. The combination of a frame having an arched portion, supporting wheels for the frame, vertically adjustable bearings, a transverse shaft in said bearings, means for driving said shaft from one of said wheels, a rotary cutter upon said shaft and arranged in the arched portion of the frame, a stationary knife to co-act with said cutter, and a supporting means for the knife pivoted to swing from the shaft and adjustably connected to the frame.

[Claims 6 to 8 not printed in the Gazette.]

897,936. VALVE-STEM CASE. EDWARD B. SINKLER, New York, N. Y. Filed Oct. 1, 1907. Serial No. 395,350.



1. The combination with an engine having a valve stem and an actuating device therefor, of a case extending between relatively stationary parts of the engine and inclosing the exposed portions of the valve stem and actuating device, and a spring engaging the valve stem to seat the valve and also engaging the case to hold it in place.

2. The combination with an engine having a valve stem and an actuating device therefor, of a case extending between relatively stationary parts of the engine and inclosing the exposed portions of the valve stem and actuating device, said case being formed into two longitudinal sections and having means for removably holding them together, whereby the case may be applied to and removed from position.

3. The combination in an internal combustion engine of a valve stem a guide for the stem a case inclosing the exposed portion of the stem and extending from the guide, and a spring engaging the valve stem to actuate it and also engaging the case to hold it in position.

897,937. DEVICE FOR TRUING BOWLING-PINS. THOMAS SMALL, Camden, N. J., assignor of one-half to Charles P. Richter, Camden, N. J. Filed Mar. 27, 1906. Serial No. 308,208.

1. In a machine for truing bowling pins, a revoluble means for engaging the upper portion of the pin, a centering means for engaging its base portion and means for holding a grinding material against said base portion.

2. In a machine for truing bowling pins, a revoluble means for engaging the upper portion of the pin, a yielding centering means for engaging its base portion and means for holding a grinding material against said base portion.



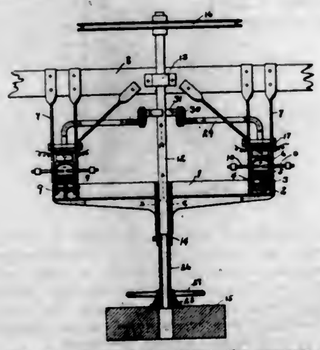
3. In a machine for truing bowling pins, a revoluble means for engaging the upper portion of the pin, a yielding centering means for engaging its base portion and yielding means for holding a grinding material against said base portion.

4. A machine for truing bowling pins, consisting of revoluble means for engaging the upper portion of the pin, a casing having a chamber for a spiral spring, a centering pin engaging said spring and having a projecting stem passing through the end of said chamber, and means external to the casing for drawing said stem against the resistance of said spring.

5. A machine for truing bowling pins, consisting of revoluble means for engaging the upper portion of the pin, a casing having an outer chamber for one spiral spring and an inner chamber for another spiral spring, a centering pin engaging the one spring and a grinding plate engaging the other spring, and means for drawing the said grinding plate and centering pin against the resistance of said springs.

[Claims 6 to 16 not printed in the Gazette.]

897,938. PROCESS FOR THE MANUFACTURE OF CEMENT. WILLOUGHBY E. SNYDER, Nazareth, Pa. Original application filed July 20, 1904, Serial No. 217,317. Divided and this application filed Mar. 11, 1907. Serial No. 361,639.



1. In the manufacture of cement, the process of calcination which consists in subjecting material suitable therefor to a series of electrically generated heats and in the employment therewith of an air current through the successive heats from the final to the initial heat.

2. In the manufacture of cement, the process of calcination which consists in exhibiting a charge upon a movable hearth to the action of successive electrically generated heats, and in generating against the charge a current of air proceeding from the final to the initial heat and moving in opposition to the direction of movement of the hearth.

3. In the manufacture of cement, the process of calcination which consists in subjecting material suitable therefor upon a movable hearth to a series of reverberatory heats generated respectively from a series of electric arcs and in the employment therewith of a current of air proceeding from the final to the initial heat and moving in opposition to the direction of movement of the hearth.

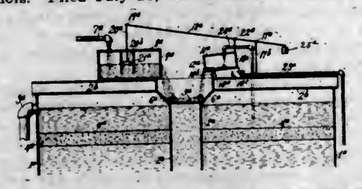
4. In the manufacture of cement, the process of calcination which consists in intermittently feeding the material to be calcined in separate charges upon a movable hearth and subjecting said charges to the reverberatory heat of a series of electric arcs located within a current of air moving in opposition to the direction of movement of the hearth.

897,939. METHOD OF MAKING A COMPOSITION OF MATTER FOR MASONRY-WORK. LUDWIG A. TYC and LOUIS N. BENJAMIN, Montreal, Quebec, Canada, assignors to Ideal Concrete, Limited, Montreal, Canada, a Corporation of Canada. Filed Apr. 22, 1907. Serial No. 369,680.

1. In the herein described method of making a composition of matter for masonry work, the mixture of a liquid cement by dissolving in water at a low temperature, approximately 32° to 40° Fahr., a magnesium chlorid of anhydrous form, obtained from a tachhydrite composition made up of $2MgCl_2$, $CaCl_2$, and $12H_2O$, and adding to this dissolved matter one and one half parts of calcined lime and quickly stirring said mixture and adding thereto a mixture separately prepared, composed of one part barium chlorid, $BaCl_2$, three parts silicate of potash in powder form and two parts of sulfuric chlorid at 5 hydrometer, this latter mixture being poured in during the said stirring, in quantities determined by the density required, then taking a quantity of inert matters and an oxid and mixing said inert matters, oxid and liquid cement thoroughly together in suitable quantities and finally letting the mixture so made set in a temperature at an approximate minimum of 60° Fahr.

2. In the herein described method of making a composition of matter for masonry work, the mixture of a liquid cement by dissolving in water at a low temperature, approximately 32° to 40° Fahr., a magnesium chlorid of anhydrous form, obtained from a tachhydrite composition made up of $2MgCl_2$, $CaCl_2$, and $12H_2O$, and adding to this dissolved matter three parts magnesite or dolomite not calcined and quickly stirring said mixture and adding thereto a mixture separately prepared, composed of one part barium chlorid, $BaCl_2$, three parts silicate of potash in powder form and two parts of sulfuric chlorid at 5 hydrometer, this latter mixture being poured in during the said stirring, in quantities determined by the density required, then taking a quantity of inert matters and an oxid and mixing said inert matters, oxid and liquid cement thoroughly together in suitable quantities and finally letting the mixture so made set in a temperature at an approximate minimum of 60° Fahr.

897,940. WATER-PURIFYING APPARATUS. CHARLES P. VAN GUNDY, Catonsville, Md., assignor to Kennicott Water-Softener Company, Chicago, Ill., a Corporation of Illinois. Filed July 16, 1907. Serial No. 384,011.



1. A water purifying apparatus comprising a reservoir having an outlet, means for feeding water to said reservoir, a tilting chemical feed box having an outlet, means connected to the chemical feed box and controlled by the volume of water in said reservoir for variably tilting said chemical feed box and automatically varying the outflow of chemical from said feed box.

2. A water purifying apparatus comprising a reservoir having an outlet, means for varying the outflow from said reservoir, means for feeding water to said reservoir, a tilting chemical feed box having an outlet, means connected to the chemical feed box and controlled by the volume of water in said reservoir for variably tilting said chemical feed box and automatically varying the outflow of chemical from said feed box.

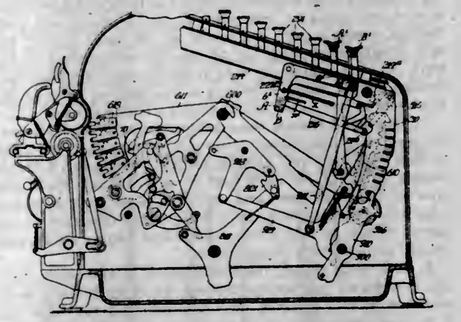
3. A water purifying apparatus comprising a reservoir having an outlet, means for feeding water to said reservoir, a tilting chemical feed box having an outlet, means for adjusting the size of said feed box outlet, means connected to the chemical feed box and controlled by the volume of water in said reservoir for variably tilting said chemical feed box and automatically varying the outflow of chemical from said feed box.

4. A water purifying apparatus comprising a reservoir having an outlet, means for varying the outflow from said reservoir, means for feeding water to said reservoir, a tilting chemical feed box having an outlet, means for adjusting the size of said feed box outlet, means connected to the chemical feed box and controlled by the volume of water in said reservoir for variably tilting said chemical feed box and automatically varying the outflow of chemical from said feed box.

5. A water purifying apparatus comprising a reservoir, a discharge therefrom, variable according to the volume of water therein, a water supply thereto, a chemical supply, a tilting chemical box having a vertical slot therein, and connections to move said box to vary automatically the outflow of chemical from said box according to the supply of water in said reservoir.

[Claims 6 to 22 not printed in the Gazette.]

897,941. ADDING-MACHINE. JESSE G. VINCENT, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 15, 1906. Serial No. 296,190.



1. In a machine of the character described, the combination with an accumulator, setting up devices and type-carriers coöperatively related for the successive accumulation of items and the listing thereof and for the setting up of totals through turning of the accumulator to zero; of means for causing one section of the accumulator to effect the setting up of a total independently of another section of said accumulator.

2. In a machine of the character described, the combination with an accumulator, setting up devices and type-carriers coöperatively related for the successive accumulation of items and the listing thereof and for the setting up of totals through turning of the accumulator to zero; of means for causing different sections of the accumulator to effect the setting up of totals independently of each other.

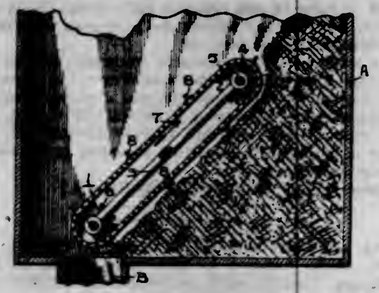
3. In a machine of the character described, the combination with an accumulator, setting up devices and type-carriers coöperatively related for the successive accumulation of items and the listing thereof and for the setting up of totals through turning of the accumulator to zero; of key-controlled means for causing different sections of the accumulator to effect the setting up of totals independently of each other.

4. In an adding machine, the combination of accumulating and printing mechanism divided in sections arranged to print and accumulate separate sets of individual items, means for independently printing the totals or accumulations of the different sections, and a series of total keys, one for each section, for controlling said means.

5. In an adding machine the combination with accumulating and printing mechanism divided in sections arranged to print and accumulate separate sets of individual items and to print separate totals, the accumulating mechanism including pinions and sets of racks corresponding with said sections, of means for permitting the operation of the racks, one set at a time, in the totaling operation.

[Claims 6 to 26 not printed in the Gazette.]

897,942. SAND-FEEDING DEVICE FOR MOLDING-MACHINES. WALTER H. WANGELIN, Belleville, Ill. Filed July 20, 1907. Serial No. 384,720.



1. In a sand feeder, the combination of a receiver, having a spout at the bottom thereof, a driving shaft mounted in said receiver, over, and adjacent to, the spout, and sand feeding means loosely supported at its inner end by the said driving shaft and free at its outer end except by the body of sand placed in said receiver and carrying sand feeding means adapted to scrape the body of sand in the direction of the spout, substantially as set forth.

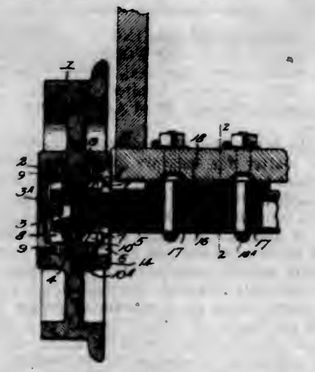
2. In a sand feeder, the combination of a receiver, having a spout at the bottom thereof, a driving shaft mounted in said receiver, over, and adjacent to, the spout, a frame loosely fitted at its inner end to said driving shaft and free at its outer end, and carrying sand feeding means adapted to scrape the body of sand in the direction of the spout, driven by said driving shaft and supported by said frame, substantially as set forth.

3. In a sand feeder, the combination of a receiver, having a spout at the bottom thereof, an inner driving shaft mounted in said receiver, over, and adjacent to, the spout, a frame loosely fitted at its inner end to said driving shaft and free at its outer end, an outer shaft mounted in the outer end of said frame, and endless chains provided with conveying bars fixed to said shafts and adapted to scrape the body of sand in the direction of the spout, substantially as set forth.

4. In a sand feeder, the combination of a receiver, having a spout at the bottom thereof, an inner driving shaft mounted in said receiver, over, and adjacent to, the spout, a frame loosely fitted at its inner end to said driving shaft, and free at its outer end, a driven shaft mounted in the outer end of said frame, driving sprocket wheels fixed to said driving shaft, driven sprocket wheels on the outer shaft, endless chains mounted upon said sprocket wheels, and conveying bars fixed to said chains and adapted to scrape the body of the sand in the direction of the spout, substantially as set forth.

897,943. CENTRIFUGAL-OILING BEARING FOR WHEELS. FREDERIC A. WARREN, Canon City, Colo. Filed Jan. 2, 1907. Serial No. 350,452.

1. In a centrifugal oiling bearing for car wheels, a car axle, a bearing disk integrally connected to said car axle, provided with a deep annular recess in its side next to said axle, a car wheel having an axial recess in which said bearing disk fits, a cap provided with a hub having annular grooves and having an axial bore tapering divergingly from said cap to the end of said hub, said hub being arranged to fit loosely over the axle of said bearing disk, means for securing said cap to said car wheel, and a projection on said disk surrounding and overhanging the adjacent annular grooves of said cap's hub.



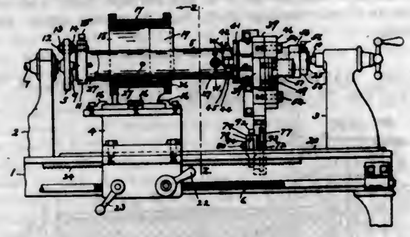
2. In a centrifugal oiling bearing for car wheels, the combination with a car wheel, provided with a recess at its axial center adapted to receive an axle bearing, of a car axle, a bearing disk connected to said car axle and fitting in said car-wheel's axial recess, said bearing disk being provided with a recess at its axial center extending into it a predetermined distance from its side opposite to its axle, a lug at the axial center of the bottom wall of the recess of said wheel, extending into the recess of said bearing disk and provided with an oil inlet aperture extending through it from the outside of said wheel, an oil holding recess in the axle side of said bearing disk, and a cap secured to said car wheel to close the entrance to said recess, provided with an inwardly projecting hub at its center, extending into the recess of said bearing disk, there being a rim portion on said disk, provided with radial apertures, said rim portion being arranged to surround the hub of said cap.

3. In a centrifugal oiling bearing for car wheels, the combination with the car wheel axle, having an enlarged disk bearing at its end, said disk being provided with recesses in its sides, and with an oil receiving recess at its axial center, of a car wheel provided with an axial recess extending partially through it, arranged to fit rotatably on said disk bearing, an inwardly projecting lug on the bottom wall of the recess of said wheel adapted to extend into said oil inlet recess of said disk bearing, said lug having an oil inlet aperture extending through it arranged to discharge oil into the oil inlet recess of said disk bearing, and a cap adapted to be secured to said wheel and arranged to fit around said axle and close the entrance to said recess and confine said disk bearing rotatably in said car wheel's recess.

4. In a centrifugal oiling car wheel, the combination with the car wheel, having an axial recess extending partially through it from its axle receiving side, and an introverted lug at the axial center of the bottom of said recess, containing an open oil inlet aperture, extending from the outside of the wheel through said lug, of the axle and disk bearing fitting rotatably in said car wheel's recess, said disk bearing being provided with an axial recess extending into its end adapted to fit loosely over said car wheel's introverted oil inlet lug, and the cap secured to said car wheel and arranged to confine said disk in said wheel's axial recess.

5. In a centrifugal oiling car wheel, the combination of an axle or shaft and a car wheel, provided with an axial aperture, with a disk bearing on said axle or shaft provided with a tapering hub portion fitting said wheel's axle aperture, oil recesses in the opposite side of said disk bearing the inner wall of which is provided with a circular annular projecting lip, a cap fitting over said axle and removably secured to the side of said car wheel, having a hub portion provided with a tapering bore fitting rotatably on said disk bearing's tapering hub and extending into its oil recess, and a projecting annular lip on the inner end of said cap's hub below the circular lip on the wall of said disk bearing's oil recess.

897,944. BORING-MACHINE. FRANK J. WATERS, Providence, R. I., assignor to Waters Engine Company, Saco, Me., a Corporation of Maine. Filed Aug. 17, 1907. Serial No. 389,058.



1. In a boring machine, the combination of a rotatable boring shaft having two diametrical slots and a central longitudinal recess or slot extending between and opening into said diametrical slots; an oscillatory arm centrally pivoted to the boring shaft in said longitudinal slot; a pattern bar slidably mounted in one of said diametrical slots and pivotally connected to the oscillating arm at one end thereof; a cutter bar slidably mounted in the other of said diametrical slots and pivotally connected to the oscillatory arm at the opposite end thereof; a cutting tool mounted in the cutter bar; and means for giving a reciprocating movement to the pattern bar.

2. In a boring machine, the combination of a rotatable boring shaft, having two diametrical slots; a pattern bar slidably mounted in one of said slots; a cutter bar, slidably mounted in the other of said slots; a cutting tool on said cutter bar; means for giving a reciprocating movement to the pattern bar; and a lever centrally pivoted on said boring shaft and operated by the pattern bar to give a reciprocating movement to the cutter bar.

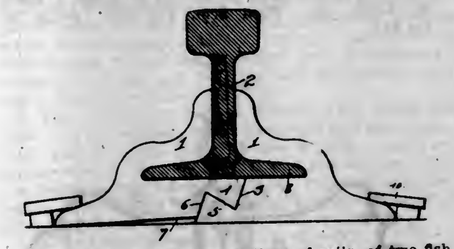
3. In a boring machine, the combination of a lathe having a head stock and a tail stock; a rotatable boring shaft axially mounted in said head stock and tail stock; a pattern bar carried by said shaft and capable of a reciprocating movement thereon transversely of the shaft; a cutter bar carried by the shaft and capable of a reciprocating movement thereon transversely of the shaft, which cutter bar is provided with a cutting edge; means for communicating said motion from the pattern bar to the cutter bar equally and to the same extent; and a pattern having a bore made in different arcs transversely thereof, but continuous of each other *seriatim*, with the surface of which bore the pattern bar is consecutively in contact, said shaft having its axial line parallel with and eccentric to the axial line of said bore.

4. In a boring machine, the combination of a boring shaft made in two longitudinal half-sections, each semicircular in cross section and each abutting the other on the plane sides thereof, respectively, said sections being made each with two slots and an intermediate communicating recess and said slots and recess of one section registering with those of the other section; screws connecting said two sections and having their heads contained in sockets, respectively, so as to be below the peripheral surface of said shaft; a pattern bar mounted slidably in one of said registering slots; a cutter bar mounted slidably in the other of said registering slots; and an oscillating arm or lever in said intermediate registering recess pivotally mounted therein and pivotally connected to the pattern bar and cutter bar at its respective ends.

5. In a boring machine, the combination of a shaft having a diametrical slot; a lever pivotally mounted on the shaft; a cutter bar mounted slidably in said slot and pivotally mounted on the end of the lever; and a cutting tool on the cutter bar.

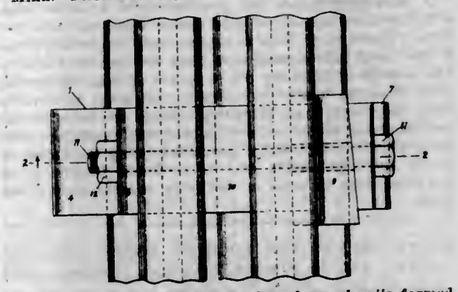
[Claims 6 to 20 not printed in the Gazette.]

897,945. FISH-PLATE. GEORGE WENDLING, Dayton, Ohio. Filed July 1, 1907. Serial No. 381,725.



The combination with two sections of rails, of two fish plates having recesses to receive the base flanges of the rails, and the portions of said fish plates above the base flanges of said rails being adapted to clamp the sides of the rails above said base flanges, the base portions of said fish plates below the rail flanges having interlocking portions with tapering matching surfaces adapted to engage each other substantially throughout their tapering surfaces when weight is placed upon the rails to clamp the interlocking portions of said fish plates and the sides of the rails, the base portion of one of said fish plates being adapted to engage the surfaces of the ties throughout the width of said base portion, and the base portion of the other of said fish plates being of less depth adjacent to the interlocking portions of said fish plates so that said base portion of less depth will be supported by the interlocking portions of the fish plates free from engagement with the ties adjacent to the interlocking portions, substantially as specified.

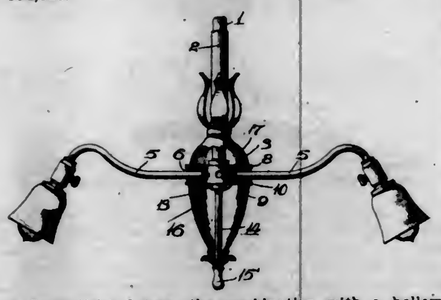
897,946. GUARD-RAIL. CHARLES WIENCH, Shevlin, Minn. Filed Mar. 10, 1908. Serial No. 420,206.



The combination with the track and guard rails formed with transverse alining openings, of the clamp yoke 1 having a base portion to engage the base flanges of said rails, the upright arm 7 arranged at one of its ends and formed with an opening to aline with the openings in said rails and having its inner face 8 inclined transversely, and the loop or arm 4 formed at the other end of the base of said yoke, said loop or arm 4 having its inner face shaped to engage the base flange, web and head of one of the rails, said loop or arm being further formed with an opening to aline with the openings in said rails, the spacing block 10 arranged between said rails and having a transvenrse opening to aline with the openings in the latter, the wedge block 9 having its outer face inclined to engage the inclined face 8 of the arm 7 and its opposite face shaped to engage the outer face of the base flange, web and head

of the adjacent rail, said block 9 being formed with a transverse opening to aline with those in the rails, the bolt 11 passed through said alining openings in the arms 7, the wedge blocks 9, the rails, the spacing block 10 and the plate 5, and the nut 12 upon the projecting threaded end of said bolt, substantially as shown and described.

897,947. LIGHT-FIXTURE. ARTHUR B. WILSON, St. Louis, Mo., assignor of one-half to George T. Breen, St. Louis, Mo. Filed Sept. 27, 1907. Serial No. 394,818.

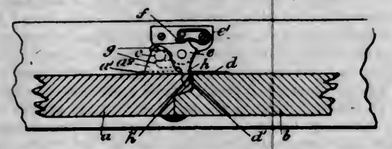


1. In a light fixture, the combination with a hollow stem, of a hollow body secured to said stem and provided with a plurality of holes adapted to receive hollow lamp supporting arms, a flanged brace ring surrounding said body and provided with arm receiving holes complementary to those of said body, and a face band surrounding said flanged brace ring and provided with a less number of holes than the body, to receive a less number of lamp supporting arms than said body is susceptible of receiving.

2. In a light fixture, the combination, with a hollow stem; of a hollow body secured to said stem and provided with a plurality of holes adapted to receive hollow lamp supporting arms, a sectional brace ring having flanges and surrounding said body and provided with arm receiving holes complementary to those of said body, and a face band surrounding said brace ring between the flanges thereof and containing a less number of holes than the number of holes in said body or brace ring.

3. In a light fixture, the combination of a hollow stem, a hollow body secured to said hollow stem, and provided with a plurality of holes to receive lamp supporting arms, a face band surrounding said body and provided with a less number of holes for the reception of lamp supporting arms than the number of holes in said body, and hollow lamp supporting arms extending through the holes in said face band and seated in holes in said body; said face band being provided with index marks indicating the points at which additional holes may be produced therein to be complementary to holes in said body, substantially as set forth.

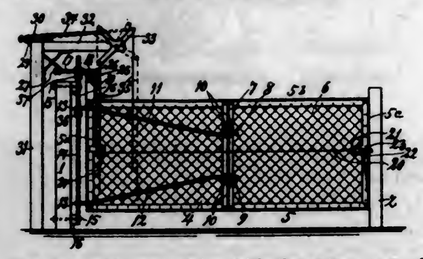
897,948. MEANS FOR LOCKING DOORS AND THE LIKE. ARTHUR WINDSOR, Edinburgh, Scotland. Filed Feb. 29, 1908. Serial No. 418,558.



1. The combination of a door frame, a pair of doors hinged to opposite sides of the frame, a pivoted catch, a plate to be retained by it one slotted and the other having a projection fast with it, two base plates one carrying the pivoted catch and the other the plate, one base plate adapted to be fixed to the frame and the other to the door which has to be closed first in such a way that when this door is being closed the projection passes into the slot and turns the catch into the locked position and a spring tending to hold over the pivoted catch into one or other of its extreme positions and a plate secured to the other door which when this latter door is closed comes against part of the pivoted catch and prevents it from turning until this door has again been opened.

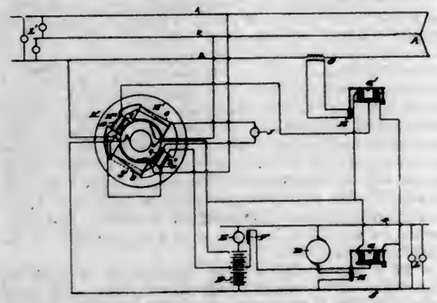
2. The combination of a door frame, a pair of doors hinged to opposite sides of the frame, a base plate fixed to the frame, a slotted catch pivoted to it, a base plate fixed to the back of the door that has to be closed first, a projection carried by it adapted to engage the slotted catch, a spring tending to hold over the pivoted catch into one or other of its extreme positions and a plate secured to the other door which when this latter door is closed comes against part of the pivoted catch and prevents it from turning until this door has again been opened.

897,949. GATE. ANDREW A. WITZ, Garrison, N. D. Filed Feb. 21, 1908. Serial No. 417,005.



In a gate, the combination with the gate proper of a vertical frame bar secured at the middle of the gate, two rods having threaded ends inserted horizontally through the bar near the middle thereof and provided with nuts at both sides of the bar, the outer ends of said rods being spread apart, passed through the frame bar forming the hinged end of the gate and being beyond the end of the gate formed with eyes to serve as hinges for the gate.

897,950. SYSTEM OF ELECTRICAL DISTRIBUTION. JOSEPH L. WOODBRIDGE, Philadelphia, Pa. Filed Jan. 20, 1908. Serial No. 411,570.



1. In combination an alternating current circuit, a direct current circuit, transforming apparatus including a rotary converter connected between them, and means responsive to changes of electrical condition on the alternating current circuit and adapted to vary the distribution of field flux around the periphery of the converter armature.

2. In combination an alternating current circuit, a direct current circuit, an armature with its commutator and brushes adapted to develop both alternating current and direct current electro-motive-forces operatively connected between the two circuits, a field structure providing for the magnetic flux which influences each section of the armature between adjacent brushes, two paths constituting a main and an auxiliary pole, means for constantly exciting the main poles, and means responsive to changes of electrical condition of the alternating current circuit for variably exciting the auxiliary poles.

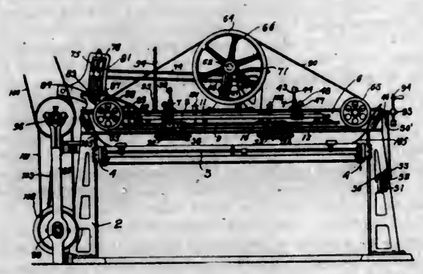
3. In combination an alternating current circuit, a direct current circuit, an armature with its commutator and brushes adapted to develop both alternating current and direct current electro-motive-forces operatively connected between the two circuits, a field structure providing for the magnetic flux which influences each section of the armature between adjacent brushes, two paths constituting a main and an auxiliary pole, means for constantly exciting the main poles, means for producing constant excitation of each auxiliary pole of the opposite polarity to that of the corresponding main pole, and means responsive to the electrical condition of the alternating current circuit and adapted to apply a varying excitation to the auxiliary poles.

4. In combination an alternating current circuit, a direct current circuit, an armature provided with commutator, brushes and alternating current terminals operatively connected between the two circuits, a field structure providing for the magnetic flux which influences each section of the armature between adjacent brushes, two parallel paths constituting a main and an auxiliary pole, whereof the auxiliary pole is the trailing pole, means for constantly exciting the main poles, and means responsive to changes of electrical condition of the alternating current circuit for varying the excitation of the auxiliary poles.

5. In combination an alternating current circuit, a direct current circuit, an armature provided with commutator, brushes and alternating current terminals operatively connected between the two circuits, a field structure providing for the magnetic flux which influences each section of the armature between adjacent brushes, two parallel paths constituting a main and an auxiliary pole whereof the auxiliary pole is the trailing pole, means for constantly exciting the main poles, means adapted to apply to each auxiliary pole an excitation of the opposite polarity to that of the corresponding main pole, and means responsive to the electrical condition of the alternating current circuit and adapted to vary the excitation of the auxiliary poles.

[Claims 6 to 8 not printed in the Gazette.]

897,951. RUBBING AND POLISHING MACHINE. CHARLES S. YARNELL, Minneapolis, Minn., assignor to Moore Carving Machine Co., Minneapolis, Minn., a Corporation of Minnesota. Filed May 1, 1905. Serial No. 258,203.



1. The combination, with a suitable work supporting table, of a flexible guide-bar, a reciprocating rubbing head arranged upon said guide-bar, means for reciprocating said head, and means for raising and lowering said guide-bar.

2. The combination, with a suitable work-supporting table, of a vertically movable pressure-bar, a guide-bar arranged below and parallel with said pressure-bar, a reciprocating rubbing head arranged upon said guide-bar, means for raising and lowering said pressure-bar, and means for reciprocating said head.

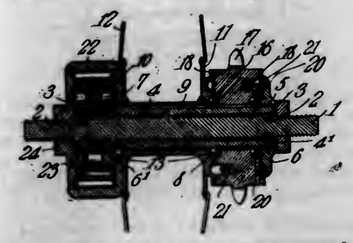
3. The combination, with a suitable work supporting table, of a vertically movable pressure-bar, a flexible guide-bar arranged below and parallel with said pressure-bar, a reciprocating rubbing head arranged upon said guide-bar, means for raising and lowering said pressure-bar, and means for reciprocating said head.

4. The combination, with a suitable work supporting table, of a vertically movable pressure-bar, a guide-bar arranged below and parallel with said pressure-bar, yielding means connecting said guide-bar with said pressure-bar, a reciprocating rubbing head arranged upon said guide-bar, means for raising and lowering said pressure-bar, and means for reciprocating said head.

5. The combination, with a suitable work supporting table, of a pressure-bar, levers supporting said bar, a rotatable shaft to which said levers are secured, a guide-bar arranged below and parallel with said pressure-bar, yielding means connecting said guide-bar with said pressure-bar, a reciprocating rubbing head arranged upon said guide-bar, and means for reciprocating said head.

[Claims 6 and 7 not printed in the Gazette.]

897,952. COASTER-BRAKE. MARK AINSWORTH, Sedalia, Mo. Filed Oct. 12, 1907. Serial No. 397,164.



1. In a coaster brake, an axle, a sleeve mounted loosely thereon, a brake mechanism at one end of said sleeve, a flange at the other end of the sleeve, said flange having a circular series of taper notches formed in one face, a hub mounted on the sleeve and having spaced flanges for the attachment of the spokes, one of said flanges coacting with the brake mechanism and the other of said flanges having a circular series of taper notches formed in one face, said face being in opposed relation and spaced from the notched face of the flange on the sleeve, a driving pinion having transverse inclined passages therethrough and mounted loosely upon the sleeve between the notched flanges with the through passages in the pinion matching the notches in the flanges, and balls in said passages movable into operative relation to either of said circular series of notches.

2. In a coaster brake, a hub having at one end a clutch mechanism, and at the other end a brake mechanism composed of an annular series of interconnected brake shoes, springs acting on said brake shoes in unison to move them out of operative position, and a link and lever connection between the clutch mechanism and said brake shoes for forcing the latter against the action of the springs into operative position.

3. In a coaster brake, a driving mechanism, a brake mechanism comprising an annular series of interconnected brake shoes, springs acting on said shoes in unison to move them out of operative position, and a link and lever connection between the driving mechanism and said brake shoes for forcing them against the action of the springs into operative position.

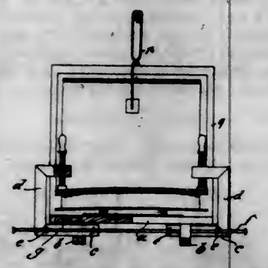
4. In a coaster brake, a driving mechanism, a brake mechanism comprising an annular series of segmental brake shoes pivotally connected together and at one end of the series to a fixed member, springs tending to collapse the brake shoes to move them out of operative position, a bell-crank lever, a link connection between the same and

the driving mechanism, and a pivoted finger carried by the bell-crank lever and engaging that end member of the series of brake shoes remote from the point of connection of the series with the fixed member.

897,953. METALLIC PRODUCT. GEORGE F. ALLEN, Granite City, Ill., assignor to Edward R. Hoyt, St. Louis, Mo. Filed May 1, 1908. Serial No. 430,265.

A metal product consisting of from one and four tenths percent. to five percent. of zinc and the balance of lead, substantially as set forth.

897,954. PROCESS FOR MAKING PHOTOGRAPHIC COPIES OF PRINTED MATTER AND THE LIKE. CARL VON ARNHARD, Munich, Germany. Filed Mar. 28, 1908. Serial No. 423,856.



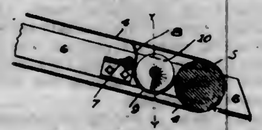
1. The improved method of making photographic reproductions of printed matter and the like, which consists in laying the printed sheet face to the front upon a backing sheet, applying a light-sensitive sheet with its face in intimate contact with the printed surface, overlaying with a transparent cover plate, and exposing to light from the front.

2. The improved method of making photographic reproductions of printed matter and the like, which consists in laying the printed sheet upon a backing sheet of nonactinic properties, applying a light-sensitive sheet in intimate contact with the printed sheet, and exposing to light from the front.

3. The improved method of making photographic reproductions of printed matter and the like, which consists in laying the printed sheet face to the front upon a backing sheet of nonactinic color, applying a light-sensitive sheet with its face in intimate contact with the printed surface, overlaying with a transparent cover plate, and exposing to light from the front.

4. The improved method of making photographic reproductions of printed matter and the like, which consists in laying the printed sheet face to the front upon a backing sheet, applying a light-sensitive sheet with its face in intimate contact with the printed surface, overlaying with a transparent cover plate, applying pressure about the edges of the cover plate and centrally below the backing sheet, and exposing to light from the front.

897,955. ATTACHMENT FOR GRADERS. HENRY N. BARRETT, Hope, N. D., and ELMER D. WALLACE, Minneapolis, Minn. Filed Dec. 1, 1905. Serial No. 289,837.



1. In a grading machine, the combination with a carrier belt and a scraper arranged between the upper and lower sections of the belt and engaging the surface of the same to remove the accumulated dirt, of frame members on each side of said carrier belt, a trough near said scraper, said frame members forming ends to the trough, and a carrier operating transversely to the direction of movement of said belt and whereto the dirt is delivered by said scraper, substantially as described.

2. In a grading machine, the combination with a carrier belt and a scraper device arranged between the upper and lower sections thereof, of a trough provided near said scraper, and a transversely operating conveyer provided in said trough, substantially as described.

3. In a grading machine, the combination with a carrier belt and a flexible scraper arranged between the upper and lower sections of the belt, of a trough semi-circular in cross section provided near said scraper and adapted to receive the dirt therefrom, said trough being arranged transversely with respect to said belt, and a screw conveyer operating in said trough.

4. In a grading machine, the combination with a carrier belt, of means operating between the upper and lower section of said belt and transversely with respect to the direction of the movement thereof, to deliver the dirt dislodged from said belt beyond the edge of the same, and means acting upon the inner surface of the carrier belt adjacent to said delivering means to detach dirt from the belt and direct it onto said delivering means, said delivering means being entirely within the carrier belt, substantially as described.

5. In a grading machine, the combination with a carrier belt and a roller and a scraper arranged between the upper and lower sections of the belt and engaging the surface of the same to remove the accumulation of dirt, of a trough arranged transversely near said scraper and having an edge adapted to engage the surface of said roller, for the purpose specified.

897,956. APPARATUS FOR TREATMENT OF RAMIE AND OTHER TEXTILE SUBSTANCES. JACQUES BENDEL, Paris, France. Filed Dec. 12, 1906. Serial No. 347,560.



1. A support for sustaining ramie or similar textile substance in strips, comprising two relatively short frames hinged together, a longer frame hinged to the outer end of each of said short frames, and a reticulated surface extending throughout the confines or extent of each frame.

2. A support for ramie or other textile substance in strips, comprising two oblong, relatively narrow frames, said frames being hinged together; a frame pivotally secured to the outer edge of each of said oblong frames, said frames being relatively long; and wire mesh secured in each of said frames and extending from wall to wall thereof.

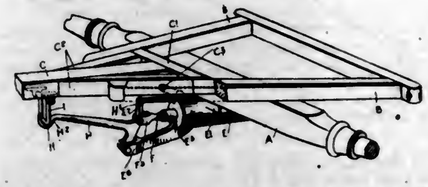
3. In an apparatus for treating ramie, the combination of a circular tank; a vertical shaft centrally disposed therein; a pair of circular supporting irons; arms extending outwardly from the shaft beneath said irons and over the upper edge of the tank; rollers carried by said arms and resting upon the upper edge of the tank; a series of cross-bars removably supported upon the circular irons; and a series of reticulated frames, adapted to support ramie or other fiber, mounted upon said cross-bars.

4. In an apparatus for treating ramie or other fiber in strips, the combination of a sprinkling rose, horseshoe in form and provided with openings upon the inner face thereof; a second sprinkling rose standing between the arms of the first rose and spaced therefrom, the perforations in said second rose opening toward the arms of the first rose; a reticulated supporting frame for the fiber being treated; and means for supporting said frame out of contact with the roses, as it is passed between the same.

5. In an apparatus for treating ramie or other fiber, the combination of a rose, horseshoe in shape and provided with perforations upon the inner face thereof; and a second rose arranged between the arms of the first rose and out of contact therewith, said rose being provided with perforations opening toward the face of the horseshoe rose.

[Claims 6 and 7 not printed in the Gazette.]

897,957. TONGUE-SUPPORT FOR VEHICLES. NORMAN F. BENNETT, Sunderland, Ontario, Canada. Filed Apr. 8, 1908. Serial No. 425,932.

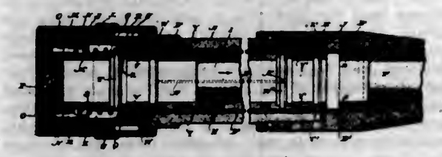


1. In a tongue support, for vehicles, the combination with the running gear and tongues suitably pivoted, of a shell secured to the running gear, a rod capable of longitudinal movement in the shell and provided with a washer at one end, a spiral spring secured between one end of the shell and the washer, a bell crank lever pivotally connected to the end of the rod and suitably fulcrumed and a link suitably fulcrumed in the bottom of the tongue and having the lower end fitting into a hook at the forward end of the bell crank lever as and for the purpose specified.

2. A device of the class described comprising a shell, a rod extending through the forward end thereof and provided with an end washer, a spiral spring extending between the front end of the shell and the washer, an arm attached to part of the shell, a bell crank lever pivotally connected to the rod and the arm and detachable means for conuecting the lever to the tongue as and for the purpose specified.

3. A device of the class described comprising a shell, a rod extending through the forward end thereof and provided with an end washer, a spiral spring extending between the front end of the shell and the washer, an arm attached to part of the shell, a bell crank lever pivotally connected to the rod and the arm, detachable means for connecting the lever to the tongue, and a stop arm designed to engage with the tail formed on the bell crank lever as and for the purpose specified.

897,958. PNEUMATIC HAMMER. JOSEPH BOYER, St. Louis, Mo., assignor to Chicago Pneumatic Tool Company, a Corporation of New Jersey. Filed Sept. 26, 1899. Serial No. 731,720.



1. A pneumatic hammer comprising a cylinder, a piston therein, and a valve composed of two coöperating parts located at opposite ends of the cylinder and operated by the motive fluid at working pressure as admitted to the tool.

2. A pneumatic hammer comprising a cylinder, a piston therein, and a valve located in the piston chamber and composed of two coöperating parts arranged at the opposite ends of the piston chamber, and operated by the motive fluid at working pressure as admitted to the tool.

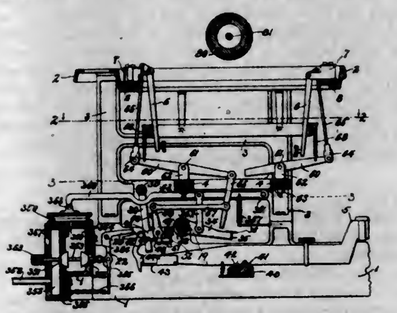
3. A pneumatic hammer comprising a cylinder, a piston therein, and a valve composed of two coöperating portions or rings located in opposite ends of the piston chamber and operated by the motive fluid at working pressure as admitted to the tool.

4. A pneumatic hammer comprising a cylinder, a piston therein, and a coöperating valve composed of two annular portions or rings located in the opposite ends of the piston chamber and connected by rods passing longitudinally through the cylinder wall, said valve being operated by the motive fluid at working pressure as admitted to the tool.

5. A pneumatic hammer comprising a cylinder, a piston therein, and a valve composed of two coöperating annular portions or rings located in opposite ends of the piston chamber, said piston passing through said valve rings at the opposite ends of its stroke and said valve rings being shifted at the end of the strokes of the piston in a direction opposite to the movement of the piston by the motive fluid at working pressure as admitted to the tool.

[Claims 6 to 28 not printed in the Gazette.]

897,959. TYPE-WRITING MACHINE. THADDEUS CAHILL, New York, N. Y., assignor to Ellis Spear, John T. Schaaff, E. Hilton Jackson, and Joseph J. Darlington, trustees. Filed Feb. 28, 1901. Serial No. 49,265.



1. In combination in a typewriting machine, (*a*) a plurality of type-bars, striking to a common printing-center; (*b*) a pneumatic motor device common to a plurality of said type-bars for actuating said type-bars, each as required; (*c*) keys at the key-board; (*d*) means operated by said keys, whereby the different type-bars to which the motor aforesaid is common are connected with said motor device, each type-bar as required; and (*e*) valve mechanism, controlled by said keys, whereby said pneumatic motor device is brought into action, when a key is depressed, to actuate the type-bar corresponding to the key depressed.

2. In combination in a typewriting machine, (*a*) a plurality of type-bars, striking to a common printing-center; (*b*) a pneumatic motor device common to a plurality of said type-bars for actuating said type-bars, each as required; (*c*) keys at the key-board; (*d*) valve mechanism for controlling said pneumatic motor device; and (*e*) a valve-controlling frame, common to a plurality of keys, each of said keys acting, when depressed, through said valve-controlling frame, upon the valve mechanism aforesaid, to bring the pneumatic motor device aforesaid into action to operate the type bar corresponding to the key depressed.

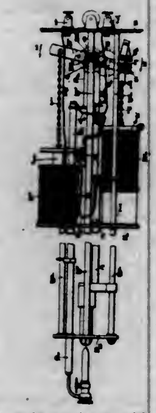
3. In combination in a type-writing machine, (*a*) a type-bar; (*b*) a pneumatic power device for actuating said type-bar; (*c*) a valve, for controlling said pneumatic power device; (*d*) a key at the key-board, acting when depressed to bring the pneumatic power device aforesaid into action to operate the type-bar; and (*e*) means acting to permit said valve to return to its normal position in advance of the release of the key, thereby to permit said pneumatic power device and the type-bar operated thereby to return to their normal positions in advance of the release of the key, so that another key may be depressed to print while the key first depressed is still held down.

4. In combination in a type-writing machine, (*a*) a type-bar; (*d*) a pneumatic power device for actuating said type-bar; (*c*) a valve, for controlling said pneumatic power device; (*d*) a key at the key-board; (*e*) a releasable connection intermediate said key and the valve aforesaid, wherethrough said key, when depressed, operates said valve to bring the pneumatic power device aforesaid into action; and (*f*) means acting when said key is depressed, on said releasable connection to permit said valve to return to its normal position in advance of the release of said key; said valve acting by such return movement to permit the pneumatic power device aforesaid to return to its normal position; said pneumatic power device serving by such return movement to permit the type-bar to return to its normal position; whereby another key may be depressed to print while the key first depressed is still held down.

5. In combination in a type-writing machine, (*a*) a type-bar; (*b*) a pneumatic power device for actuating said type-bar; (*c*) a valve, for controlling said pneumatic power device; (*d*) a key at the key-board; (*e*) a releasable connection intermediate said key and the valve aforesaid, wherethrough said key, when depressed, operates said valve to bring the pneumatic power device aforesaid into action; said power device serving as it impels the type-bar, to act upon the releasable connection aforesaid, to permit the valve operated by the key depressed, to return to its normal position in advance of the release of said key; said valve acting by such return movement to permit the pneumatic power device aforesaid to return to its normal position; said pneumatic power device serving by such return movement to permit the type-bar to return to its normal position; whereby another key may be depressed to print while the key first depressed is still held down.

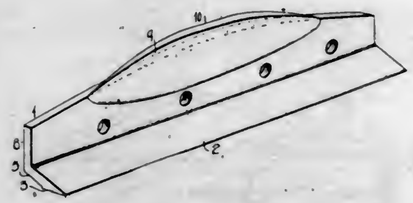
[Claims 6 to 47 not printed in the Gazette.]

897,960. ELECTRIC-ARC LAMP. PIERRE M. CAPITAINE, Les Lilas, France. Filed Nov. 11, 1907. Serial No. 401,696.



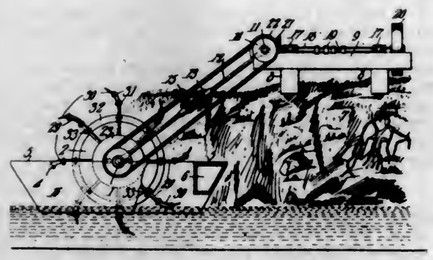
In an electric arc lamp in combination with the two carbon-holders suspended to threads wound upon drums mounted upon the same axle, with a beam to the ends of which the chains for the cores of the electro-magnets are attached, one of which is in derivation and the other in series, a braking device comprising in combination a pinion and a flying-pinion, a heavy body suspended in proximity of the flying pinion, so that its wings are adapted to strike against said body, an axle for the pinion and the flying pinion mounted at one end of the beam, a speed reducing gearing connecting said braking device with the axle of the drums for the carbon-holders, a spur wheel between the pinion of the braking device and the speed reducing gearing, and a dash-pot connected with the core of the negative electro-magnet, having a hollow piston a cylinder for said piston, a piston rod which freely passes through the top plate of said hollow piston, a disk at the end of the piston for lifting the piston when the rod is in a certain position, substantially as described and shown and for the purpose set forth.

897,961. FISH-PLATE. WILLIAM H. CARLIN, Owensboro, Ky. Filed May 23, 1907. Serial No. 375,326.



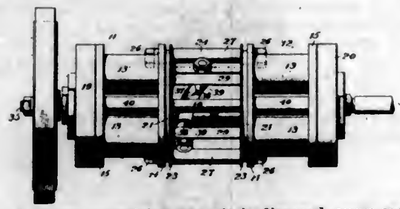
In combination with the meeting ends of two rails, a fish plate comprising a side piece having an upper convex edge, the side piece being formed on its outer face with a central longitudinal bearing flange, the convex edge of the side piece extending approximately in the arc of a circle and the upper edge of the bearing flange extending also approximately in the arc of a circle of less diameter and from points approximately co-incident with the upper edge of the side piece above the same, the central portion of the upper edge of the side piece being adapted to be arranged under the tread portions of the rails and the upper edge of the bearing flange having a central longitudinal bearing portion adapted to lie flush with the upper surfaces of the rail treads.

897,962. HYDRAULIC MOTOR. WILLIAM R. CLARKSON, Tenino, Wash. Filed May 20, 1907. Serial No. 374,645.



The combination with a fixed structure disposed to be secured upon the bank of a stream and to overhang the stream; of a float, longitudinally adjustable anchor bars connecting the float with the side portions of the fixed structure, said float and bars being extended in the direction of movement of the stream, a drive shaft journaled upon the float, oppositely disposed concavo-convex disks upon the shaft and arranged in pairs, said disks having registering grooves in their adjoining faces, spokes within the grooves, means extending through the disks and engaging the shaft for holding the disks in frictional engagement with the spokes, each of said spokes having a curved terminal portion, transversely curved blades parallel with the shaft and secured upon the curved portions of the spokes, said portions extending transversely of the blades and constituting reinforcements therefor, a brace ring connected to each set of spokes, a driven shaft journaled upon the overhanging frame, and means for transmitting motion from the drive shaft to the driven shaft, said means being disposed to be tightened by the adjustment of the anchor bars.
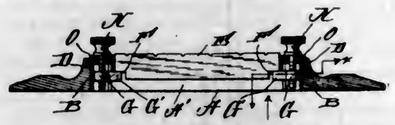
897,963. PUMP. DAVID E. CLAYTON and GEORGE C. CLAYTON, Newark, N. J. Filed Nov. 27, 1907. Serial No. 404,013.



1. A pump comprising oppositely-disposed pump-casing members, each member comprising flat portions and a plurality of pump-casings disposed therebetween, the casings of one member being alined with those of the other, a drive-shaft journaled in said members and having thereon a cam surface, a piston-rod operable in each pair of alined casings, means on said rods and operable on said cam surface whereby said rods are reciprocated, an outer casing connected with each casing member and forming therewith a compression-chamber with which said pump-casings of the member communicate, and a by-pass connecting the compression-chambers.

2. A pump comprising oppositely-disposed members each having a pump-casing therein disposed opposite to that in the other, means whereby said members are maintained in separated fixed relation, an outer casing on each member in communication with its pump-casing and forming a compression-chamber, means of communication between the compression-chambers, a drive-shaft journaled in said members and having between the members a cam surface, a piston-rod operable in the oppositely positioned pump-casings, and means on said piston-rod operable on said cam surface whereby said rod is reciprocated.

897,964. BRIDGE FOR GUITARS. JOHN DE JULIO, New York, N. Y., assignor to Mary A. J. De Julio. Filed Feb. 19, 1908. Serial No. 416,762.



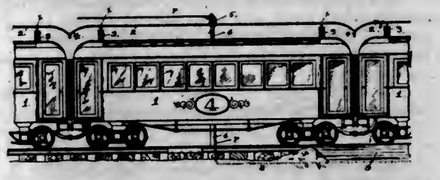
1. In combination with a guitar, a bridge having an elongated slot therein, a bridge plate mounted in said slot, nuts mounted in recesses at the ends of said slot, a projection upon each nut adapted to engage the bridge plate, and a screw passing through the nut, as set forth.

2. In combination with a guitar, a bridge having an elongated slot terminating in recesses, a bridge plate mounted in said slot and having notches in the ends thereof, a nut mounted in each recess and having a lateral projection engaging the marginal edge of each notch, a screw fitted to each nut, as set forth.

3. In combination with a guitar, a bridge having an elongated slot terminating in recesses, a bridge plate mounted in said slot and having notches in the ends thereof, a metallic lining for each recess, a nut mounted within each recess and provided with a laterally projecting lug adapted to engage the marginal edge of the notch in the end of a bridge plate, a screw having a shouldered portion bearing against the marginal edge of the bridge and adapted to engage the threads of said nut, as set forth.

897,965. SYSTEM FOR TRANSMITTING ELECTRIC CURRENTS TO CARS. JOHN J. EAGAN, San Francisco, Cal. Filed Oct. 18, 1905. Serial No. 283,265.

1. In a system for transmitting electric currents to cars, a plurality of poles supporting current transmitting horizontal arms, main feed wires insulated at the apex of said poles, branch feed wires leading to said arms, mutually engaging rods curving downwardly at their ends to contact with said arms, spiral springs out of contact with said rods mounted on said cars, vertical wires sustained by said springs interiorly to engage said rods, substantially as described.

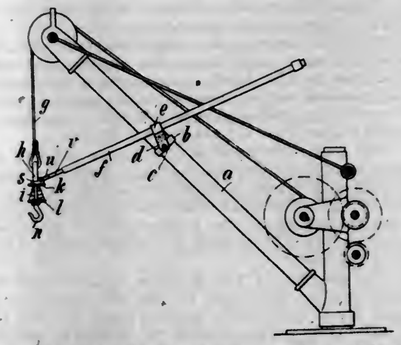


2. In a system for transmitting electric currents to cars, a plurality of poles supporting current transmitting horizontal arms, main feed wires insulated at the apex of said poles, branch feed wires leading to said arms, mutually engaging rods curving downwardly at their ends to contact with said arms and becoming gradually thinner to such ends, spiral springs out of contact with said rods mounted on said cars, and vertical wires sustained by said springs interiorly to engage said rods, substantially as described.

3. In a system for transmitting electric currents to cars, a plurality of poles supporting current transmitting horizontal arms, main feed wires insulated at the apex of said poles, branch feed wires leading to said arms, mutually engaging rods curving downwardly at their ends to contact with said arms and becoming gradually thinner to such ends, such ends consisting of vertical branches, springs out of contact with said rods mounted on said cars, and, vertical wires sustained by said springs interiorly to engage said rods, substantially as described.

4. In a system for transmitting electric currents to cars, a plurality of poles supporting current transmitting horizontal arms, main feed wires insulated at the apex of said poles, branch feed wires leading to said arms, mutually engaging rods curving downwardly at their ends to contact with said arms, and having holes in the base thereof, springs out of contact with said rods mounted on said cars, vertical wires sustained by said springs interiorly to engage said rods, and means for conducting the current under ground across intersecting streets, substantially as described.

897,966. GUIDING MEANS FOR LOAD-SUPPORTING ROPES IN CRANES. AUGUST W. ELSING, Lüneburg, Hanover, Germany. Filed Oct. 16, 1907. Serial No. 397,686.



1. In a rope guide, the combination with a rope-support, a rope adapted to travel thereon, a supporting member carried by the rope, of rigid members connecting the rope-support and supporting member extensible in the direction of and parallel to their longitudinal axes and capable of relative rotation about said axes.

2. The combination with a rope-support, a rope thereon, a supporting member carried by the rope and a carrying member rotatably mounted in the supporting member, of telescoping members connecting the rope support and supporting member.

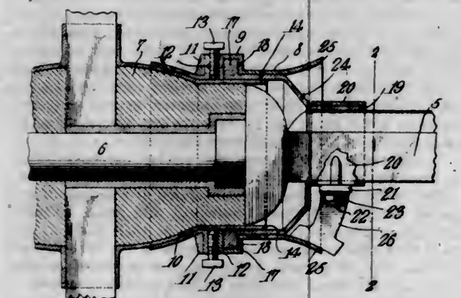
3. In a rope guide, the combination with a rope support, a rope adapted to travel thereon, and a supporting member carried by the rope, of a rigid member flexibly connected with the rope-support and a rigid member hinged to the supporting member slidably connected with the aforesaid rigid member.

4. In a rope guide, the combination with a jib, a rope adapted to travel thereon, and a supporting member carried by the rope, of a pin mounted on the jib, an arm pivoted on the pin, a socket pivoted in the arm, a tube carried by the socket, and a rod slidably mounted in the tube hinged to the supporting member.

5. In a rope guide, the combination with a rope support, a rope adapted to travel thereon, a supporting member carried by the rope, and means to prevent the rotation of the supporting member, of a carrying member rotatably mounted in the latter.

[Claim 6 not printed in the Gazette.]

897,967. SPINDLE-PROTECTOR. EBERT E. EAVIN, Austin, Ind. Filed Feb. 1, 1907. Serial No. 355,280.



1. The combination with a vehicle axle and hub, of a cap secured to the axle and forming a closure for one end of the hub, and a sleeve surrounding the cap and bearing against the hub, said cap and sleeve being provided with interlocking parts.

2. The combination with a vehicle axle and hub, of a sectional cap secured to the axle and forming a closure for one end of the hub, and a sleeve surrounding the cap and detachably secured to the hub, said sleeve and cap being provided with interlocking parts.

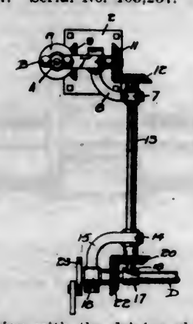
3. The combination with a vehicle axle and hub, of a sleeve detachably secured to the hub and provided with a circumferential bead defining an annular guide way, and a cap provided with an annular flange adapted to enter the guide way, said cap being secured to the axle and forming a closure for the inner end of the hub.

4. The combination with a vehicle axle and hub, of a tubular member surrounding the hub and provided with a circumferential groove, a cap bearing against the axle and provided with an annular flange seated in said groove, a scraper bearing against the interior walls of the tubular member and a clip for locking the cap and scraper in position on the axle.

5. The combination with a vehicle axle and hub, of a tubular member surrounding the hub and having one end thereof flared, said tubular member being provided with an intermediate circumferential rib defining a groove, a cap having an annular flange adapted to enter the groove, a scraper bearing against the interior walls of the tubular member at the flared end thereof, and a common fastening means for securing the cap and scraper in position on the axle.

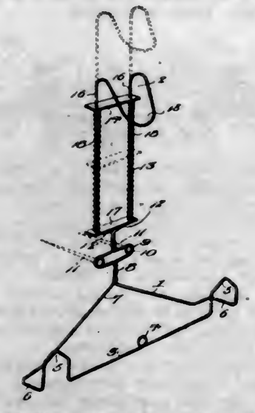
[Claims 6 to 10 not printed in the Gazette.]

897,968. GEARING. LEVI FAIR, Liberty, Ky. Filed Nov. 21, 1907. Serial No. 403,237.



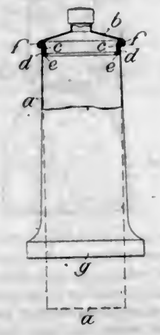
The combination with the driving shaft of an engine, of a gear upon said driving shaft, a bearing supporting one end of said shaft, and having an arm projecting therefrom terminating in a collar bearing, a bearing post having an intermediate bearing and a bracket laterally extending and provided with a collar bearing, a shaft held within said two mentioned collar bearings, a bevel gear upon each end of said shaft one of said gears meshing with the gear upon said driving shaft, a stub shaft within said intermediate bearing, a bevel gear upon each end of said shaft one of said bevel gears meshing with one of the bevel gears upon said last mentioned shaft, said bearing post having a bracket arching upwardly from said intermediate bearing and terminating in a collar bearing and a second bracket extending from said bearing post and terminating in a collar bearing registering with said last mentioned collar bearing and a governor shaft within said last two mentioned bearings in gear connection with said stub shaft as disclosed.

897,969. PICTURE-HANGER. OTHO J. FARIS, Cashmere, W. Va. Filed July 20, 1907. Serial No. 384,779.



A picture hanger comprising a lower member and an upper member, each of such members made of wire, such lower member having a base portion provided with means to engage the lower and outer sides of a picture, upwardly converging arms to lie behind the picture, portions extending upwardly from said converging arms, twisted together and providing oppositely extending arms formed with coils forming openings for the reception of nails or the like, upwardly extending parallel arms rising from said twisted portions and a bar connecting the upper ends of said parallel arms; the said upper member being also formed of wire, bent to form a U-shaped hook, and having vertical arms depending from the upper ends of the sides of such hook and a bar connecting the lower ends of such arms together, such bar having openings for the reception of the vertical parallel arms of the lower member, the said bar at the upper ends of the said parallel arms of the lower member having openings for the reception of the parallel arms of the upper member, and springs connecting said bars together and normally drawing the lower and upper members toward each other.

897,970. COLLAPSIBLE TUBE AND THE LIKE. MORITZ FAUST, Berlin, Germany. Filed Apr. 13, 1907. Serial No. 367,944.



1. The combination, with a ring having an outwardly extending rim, a flexible tubular body embracing the ring with its upper extremity and extending over its rim and down inside the same, and a second ring arranged tightly within the first ring and to clamp the tubular body therebetween, of a rigid head embracing the open end of the thus stiffened tubular body and having an inwardly extending rim to engage the rim of the first ring.

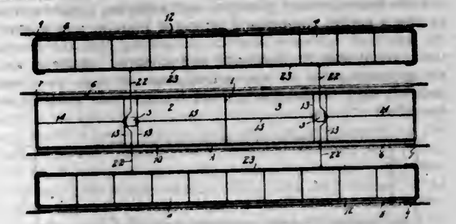
2. The combination, with a ring having an outwardly extending rolled rim, a flexible tubular body embracing the ring with its upper extremity and extending over its rim and down inside the same, and a second ring having an outwardly rolled rim and arranged tightly within the first ring and to clamp the tubular body therebetween, of a rigid head embracing the open end of the thus stiffened tubular body and having an inwardly extending rim to engage the rim of the first ring.

3. The combination, with an S-shaped ring with outwardly and inwardly rolled rims, a flexible tubular body embracing the ring with its upper extremity and extending over its outwardly rolled rim and down inside the same, and a second ring arranged tightly within the first ring to clamp the tubular body therebetween, of a rigid head embracing the open end of the thus stiffened tubular body and having an inwardly extending lower rim to engage with the outwardly rolled rim of the said ring and body.

4. The combination, with an S-shaped ring with outwardly and inwardly rolled rims, a flexible tubular body embracing the ring with its upper extremity and extending over its outwardly rolled rim and down inside the same into the trough formed by the inwardly rolled rim, and a second ring having an outwardly rolled rim and arranged tightly within the first ring with its rim overlying the outwardly rolled rim of the first ring to clamp the tubular body therebetween, of a rigid head embracing the open end of the thus stiffened tubular body and having an inwardly extending lower rim to engage with the outwardly rolled rim of the said ring and body.

897,971. PLANT FOR STORING AND COMPRESSING COTTON. JOHN R. FORDYCE, Little Rock, Ark. Filed Nov. 21, 1906. Serial No. 344,441.

1. A plant for handling bales of cotton, consisting of a shed a cotton compress located in said shed, warehouses arranged in rows on opposite sides of said shed, and a trolley system comprising tracks and trolleys traveling thereon for carrying the bales of cotton from the compress shed to the warehouses and from the warehouses to the point at which the cotton is shipped; substantially as described.



2. A plant for handling bales of cotton, consisting of sheds, cotton presses located inside of said sheds, platforms extending longitudinally of said sheds, for receiving the inbound cotton, warehouses arranged in rows adjacent said sheds, platforms running along the outsides of said warehouses, and a trolley system consisting of tracks extending over said receiving platforms and inside of said sheds and also to the platforms outside of the warehouses, and trolleys traveling on said tracks for carrying the bales of cotton to points inside of the compress sheds and to the warehouses; substantially as described.

3. A plant for handling bales of cotton, consisting of sheds cotton presses located inside of said sheds, warehouses in which the cotton is stored arranged in rows on opposite sides of said sheds, and a trolley system comprising tracks which extend along the outside of the sheds and warehouses and also into the interior of said sheds and having trolleys traveling thereon for conveying bales of cotton; substantially as described.

4. A plant for handling bales of cotton, consisting of receiving platforms, a cotton press located at approximately the center of the plant, trolley tracks arranged above said platforms and having trolleys traveling thereon which are provided with means for elevating and carrying bales of cotton, rows of warehouses in which cotton is to be stored and being located some distance from the receiving platforms, and trolley tracks extending from the receiving platforms past the front doors of the warehouses; substantially as described.

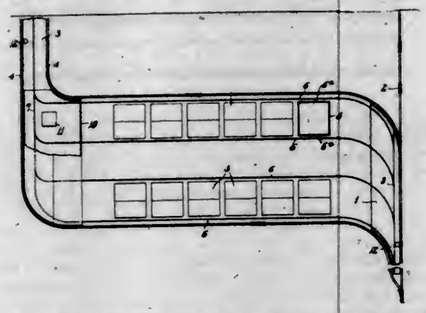
5. A plant for handling bales of cotton, consisting of compress sheds provided with receiving platforms extending along the sides thereof, a trolley system consisting of tracks arranged above said platforms and tracks arranged inside of said sheds and leading to the outside tracks, rows of warehouses provided with outside platforms and located on opposite sides of said compress sheds, trolley tracks extending above said warehouse platforms, a railroad siding located between said warehouses and compress sheds, an overhead trolley system consisting of tracks which extend from the compress sheds to the warehouses, and trolleys traveling on the tracks of both systems for carrying bales of cotton; substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

897,972. PLANT FOR HANDLING BALED COTTON. JOHN R. FORDYCE, Atlanta, Ga. Filed Feb. 23, 1907. Serial No. 358,906.

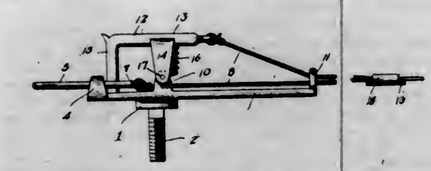
1. A plant for handling baled cotton comprising a receiving platform having surface railway tracks extending alongside thereof, a shipping platform located some distance from the receiving platform, spur tracks branching from the railway track at the receiving platform and extending alongside of the shipping platform, rows of warehouses arranged between the receiving and shipping platforms, and inclined overhead conveyer tracks extending from the receiving platform past said warehouses to the shipping platform, a storage house located adjacent said shipping platform and having the conveyer tracks extending therethrough and a cotton compressor arranged inside of said storage house; substantially as described.

2. A plant for handling baled cotton comprising a plurality of rows of warehouses built on an incline, a receiving platform at the high end of said incline, a shipping platform at the low end of said incline, a temporary storage house located adjacent said shipping platform and having a cotton compressor arranged therein, and a gravity operated conveyer system comprising elevated tracks that extend over the receiving and shipping platforms and on opposite sides of the warehouses of each row and through said temporary storage house; substantially as described.



3. A plant for handling baled cotton comprising receiving and shipping stations, surface railway tracks arranged adjacent thereto, means for moving the cars on said tracks, a plurality of rows of warehouses arranged between said stations, a temporary storage house located adjacent the shipping station, means inside of said storage house for compressing bales of cotton, and gravity-operated means traveling from the receiving station past said warehouses and through the storage house to the shipping station for carrying bales of cotton; substantially as described.

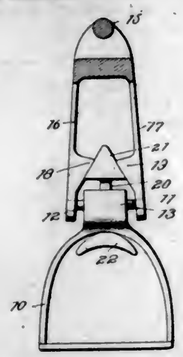
897,973. RELEASING DEVICE FOR CHECKREINS. SAMUEL P. FOSTER, Chattanooga, Tenn., assignor of one-half to Charles A. Bedell, East Chattanooga, Tenn. Filed Feb. 13, 1908. Serial No. 415,738.



In combination with a harness saddle, a releasing device for check reins comprising a supporting plate having a depending threaded stem to screw into the saddle and a pair of longitudinally spaced upstanding guide extensions, a check rein engaging link, a latch device having a pair of laterally spaced depending supporting legs and a depending link engaging portion, pivotally mounted upon the front guide extension, an upright spring arranged between the body of the latch device and the front guide extension, pins projecting from the body of the latch device and the front guide extension into opposite ends of said spring, an operating cord, one end extending through the rear guide extension and attached to the pivot end of the latch device body and the opposite end thereof through the other guide extension and connected with the check rein engaging link, and guide means detachably connected with the harness for receiving opposite portions of the operating cord.

897,974. SAFETY-STIRRUP. WILLIAM L. FUCHS, Sardis, Ohio. Filed Apr. 6, 1908. Serial No. 425,538.

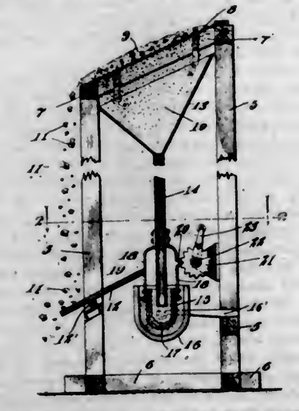
1. A safety stirrup comprising a foot loop, a suspending member having disconnected resilient sides, means for detachably engaging said sides to said foot loop, a foot engaging member movably disposed within said foot loop, and means whereby the operation of said foot engaging member causes the lateral separation of the spaced sides of the suspending member.



2. A safety stirrup comprising a foot loop having lateral trunnions, a suspending member having resilient sides disconnected at one end and apertured to engage said trunnions, a foot engaging member within said foot loop, and a member movably engaging said foot loop and adapted to distend said resilient sides to cause the separation of the suspending member from the foot loop.

3. A saftey stirrup comprising a foot loop having a vertical guide aperture at its upper end and with oppositely disposed trunnions, a suspending member having resilient sides apertured to receive said trunnions, inwardly extending lugs carried by said sides, and a rod slidable in said guideway and with laterally enlarged upper end to engage said lugs and with foot engaging portion at the lower end within the foot loop.

897,975. AMALGAMATOR. BENJAMIN F. GEIGER, Los Angeles, Cal. Filed Oct. 7, 1907. Serial No. 396,152.



1. An amalgamator comprising a frame having an ore screen mounted thereon, a chute leading from beneath said screen, an amalgamating cup around the end of said chute, an agitator within said sup, and a resiliently supported plate connected with said agitator, said plate adapted to receive upon it the coarse refuse from said screen.

2. An amalgamator comprising a frame having an inclined screen mounted thereon, an amalgamating cup mounted in said frame below said screen, a chute adapted to lead the fine screenings from said screen to said cup, and an agitator projecting into said cup, said agitator adapted to be vibrated by the falling of the coarse refuse from said screen thereon.

3. An amalgamator comprising a frame having a screen mounted thereon, an amalgamating cup mounted beneath said screen, and an agitator projecting into said cup, said agitator provided with a member adapted to receive thereon the fall of the coarse refuse from the screen.

4. An amalgamator comprising a frame having an inclined screen mounted thereon, an amalgamating cup mounted beneath said screen, an agitator projecting into said cup, and a movably supported member connected to said agitator, said member being directly beneath the lower edge of said screen.

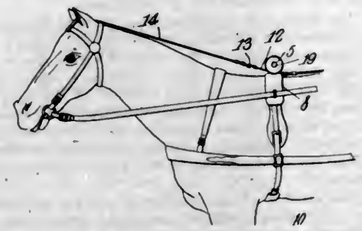
897,976. SUPPORTER FOR TROUSERS AND DRAWERS. WILLIAM H. GERMANN, Washington, D. C. Filed Feb. 7, 1908. Serial No. 414,760.



1. A clasp comprising a member consisting of spaced branches, one of said branches being slotted and the other branch being formed with a spring-tongue, a plate pivoted to the slotted branch and extending at one end through one of its slots and between the branches into engagement with the spring tongue, and a spur on the other end of the plate adapted to project through the other slot of the first-mentioned branch toward the other branch.

2. A clasp comprising a member consisting of spaced branches, one of said branches being slotted and the other branch being formed with a spring-tongue, a plate pivoted to the slotted branch and extending at one end through one of its slots and between the branches, said end of the plate being curved and in engagement with the spring-tongue, and a spur on the other end of the plate adapted to project through the other slot of the first-mentioned branch toward the other branch.

897,977. CHECKREIN. BENSON J. GRANT, Galena, Kans. Filed Oct. 22, 1907. Serial No. 398,628.



1. A device of the class described including a casing provided with a ratchet, a shaft journaled in the casing and provided with a corresponding ratchet adapted to engage the ratchet on the casing, a spring actuated drum mounted for rotation on the shaft and spaced from one wall of the casing by said ratchets, a strap secured to the drum and provided with means for engagement with a check rein, and a spring interposed between the drum and the other wall of the casing for yieldably supporting the ratchets in engagement with each other.

2. A device of the class described including a casing having a ratchet secured thereto, a shaft journaled in the casing and provided with a corresponding ratchet, a spring actuated drum mounted for rotation on the shaft and bearing against the ratchet on the latter, a strap having one end thereof secured to the drum and its opposite end passing through the casing and provided with means for engagement with the check rein, a spring arranged on the opposite side of the casing from the ratchets and interposed between the drum and the adjacent wall of the casing for yieldably supporting the ratchets in engagement with each other, and a finger piece secured to one end of the shaft.

3. A device of the class described including a casing having a ratchet secured thereto, a transverse shaft journaled in the casing and provided with a corresponding ratchet, a spring actuated drum mounted for rotation on the shaft, a strap having one end thereof secured to the drum and its opposite end extended through the casing and provided with means for attachment to a check rein, a spring interposed between the drum and the adjacent wall of the casing for yieldably supporting the ratchets in engagement with each other, a stop extending laterally from the casing, and a corresponding stop secured to the drum and adapted to engage the stop on the casing for limiting the rotary movement of the drum.

4. A device of the class described including a casing formed of a plurality of sections one of which is provided with spaced bayonet slots, pins extending laterally from the opposite section and adapted to engage said slots, a spring actuated drum mounted for rotation in the casing, a strap having one end thereof secured to the drum and its opposite end passing through the adjacent casing section and provided with means for attachment to a check rein, and a spring interposed between the drum and adjacent casing section for locking the pins in engagement with the walls of the slots.

5. A device of the class described including a casing formed of mating sections one of which is provided with oppositely disposed bayonet slots, a shaft journaled in the casing, a ratchet rigidly secured to the shaft, a corresponding ratchet secured to the adjacent casing section, a spring actuated drum mounted for rotation on the shaft, a strap having one end thereof secured to the drum and its opposite end extending through the adjacent casing section and provided with means for engagement with a check rein, pins extending laterally from the mating section, a spring interposed between the drum and the adjacent casing section for holding the pins in engagement with the walls of the slots, coacting stops carried by the casing and drum, respectively, for limiting the rotary movement of the drum, and a finger piece secured to one end of the shaft for rotating the shaft to regulate the tension of the spring.

897,978. CABLE-SUSPENSION TRANSPORTATION SYSTEM. CHARLES G. HICKS, Chicago, Ill., assignor of one-half to John W. Kilmore, Chicago, Ill. Filed Mar. 12, 1907. Serial No. 361,988.



1. A cable suspension transportation system comprising cables, supports therefor, track sections connecting adjacent cable spans at said supports said track sections comprising movably supported members and means for engaging said movably supported members of said track sections with said cable spans comprising supporting guides mounted in the ends of said movably supported members of said track sections and inner supporting guides, the cables passing over said outer and under said inner supporting guides.

2. A cable suspension transportation system comprising cables, supports therefor, track sections connecting adjacent cable spans at the supports said track sections comprising movably supported members and means for engaging said movably supported members of said track sections with said cable spans comprising supporting guide

wheels mounted at the ends of said movably supported members of said track sections and inner guide wheels, the cables passing over said outer and under said inner guide wheels.

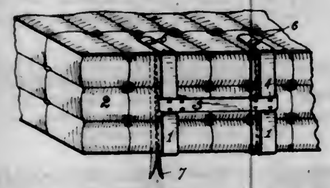
3. A cable suspension transportation system comprising cables, supports for said cables, track sections connecting adjacent cable spans at said supports, said track sections comprising connected bars spaced apart to form a track of desired width, and comprising also movably supported members, and means for engaging said movably supported members of said track sections with the cables at opposite sides of said supports, comprising supporting guides secured between the outer ends of said spaced members forming said track sections and inner supporting guides, the cables passing over said outer guides and under said inner guides.

4. A cable suspension transportation system comprising cables, supports for said cables, track sections connecting adjacent cable spans at said supports, said track sections comprising connected bars spaced apart to form a track of desired width, and comprising also movably supported members, and means for engaging said movably supported members of said track sections with the cables at opposite sides of said supports, comprising guide wheels mounted between the ends of the spaced members of said track sections and inner guide wheels also mounted between the members of said track sections, the cables passing over said outer and under said inner guide wheels.

5. A cable suspension transportation system comprising supports, cables supported thereby, each span of which forms a separate section and track sections connecting adjacent cable spans at said supports, said track sections comprising movably supported members and means for engaging said movably supported members of said track sections with said cable spans comprising supporting guides mounted in the ends of said movably supported members of said track sections and inner supporting guides, the cable spans passing over said outer and under said inner supporting guides.

[Claims 6 to 19 not printed in the Gazette.]

897,979. HANDLE FOR MATTRESSES. CARLISLE B. HOLDING, Toledo, Ohio. Filed Nov. 26, 1906. Serial No. 345,148.



1. The combination with a mattress of a handle detachably secured thereto and comprising two strap members, a member connecting said strap members intermediate their ends, and means for securing the strap ends to the mattress-body.

2. The combination with a mattress of a handle therefor comprising two flexible strap members having apertured ends bent to engage the opposing surfaces of the mattress, a member connecting said straps to form a hand-hold, and pins passed through the mattress and opposite apertured ends of the straps and clenched to prevent an accidental removal thereof.

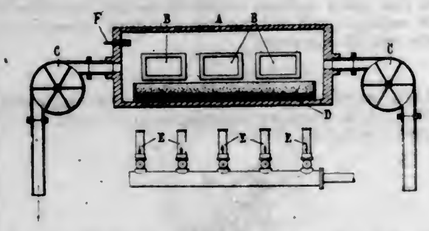
3. A lifter for a mattress consisting of two members having their ends adapted to be removably attached to a mattress and joined intermediate their ends by a hand-hold.

4. The combination with a mattress of a lifter consisting of two members having apertured ends and joined intermediate their ends by a hand-hold and double-pointed pins for passing through the mattress and opposite ends of the members, said pins having their points spread to prevent an accidental removal thereof.

5. The combination with a mattress and a lifter therefor having its ends embracing opposite sides of the mattress, of a pin passed through the mattress and coacting with the lifter ends to retain them to the mattress.

[Claim 6 not printed in the Gazette.]

897,980. MANUFACTURE OF PEROXID OF POTASSIUM. GEORGE F. JAUBERT, Paris, France. Filed May 16, 1907. Serial No. 373,995.



1. The method of manufacturing peroxid of potassium, which consists in subjecting a potassium alloy to the action of heat in the presence of oxygen and so proportioning the temperature employed to the amount of oxygen supplied as to cause the potassium to absorb the oxygen slowly without ignition and without combination of the potassium peroxid with the other metal contained in the alloy; substantially as described.

2. The method of manufacturing peroxid of potassium, which consists in placing a potassium alloy in an inclosing chamber and heating the chamber externally while passing through it a slow current of air, and so limiting the temperature and air supply as to cause the potassium to absorb a considerable part of the oxygen of the air without ignition and without combination of the potassium peroxid with the other metal contained in the alloy; substantially as described.

3. The method of manufacturing peroxid of potassium, which consists in placing a potassium alloy in an inclosing chamber and heating the chamber externally to a temperature not to exceed 350° centigrade, while passing through said chamber a slow current of air, thereby effecting the slow absorption of a considerable part of the oxygen of the air without ignition and without combination of the potassium peroxid with the other metal contained in the alloy; substantially as described.

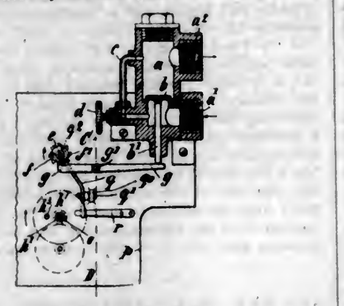
4. The method of manufacturing peroxid of potassium, which consists in placing a potassium alloy in an inclosing chamber and heating the chamber externally to a temperature not to exceed 350° centigrade, while passing through said chamber a slow current of dry and decarbonated air, thereby effecting the slow absorption of a considerable part of the oxygen of the air without ignition and without combination of the potassium peroxid with the other metal contained in the alloy; substantially as described.

5. The method of manufacturing peroxid of potassium, which consists in placing a potassium alloy in an inclosing chamber, heating the chamber externally to a temperature of about 150° to 200° centigrade, while passing through said chamber a slow current of air, and increasing the temperature, but not to exceed 350° centigrade, as the absorption of the air decreases; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

897,981. DEVICE FOR PRODUCING INTERMITTING LIGHT. JULIUS C. F. JÜRGENS, Hamburg, Germany, assignor to Rudolph Gustav Witt, Hamburg, Germany. Filed Sept. 10, 1907. Serial No. 392,177.

1. In a device for producing intermitting light, a gas conduit and a valve therein, in combination with a clock mechanism, valve actuating means operable by the clock mechanism, and means to periodically control said actuating means operated by the hour gear of said mechanism.



2. In a device for producing intermitting light, a gas conduit and a valve therein, in combination with a clock mechanism, means operated by the latter to continuously reciprocate the valve, a controlling valve, and means operated by the clock mechanism to periodically actuate the controlling valve.

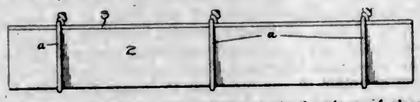
3. In a device for producing intermitting light, a gas conduit, a valve therein, and cams to open and close the valve, in combination with a clock mechanism to operate the cams, and cams adjustable on the hour gear arbor to control the valve operating means.

4. In a device for producing intermitting light, a gas conduit, a valve therein and cams to open and close the valve, in combination with a clock mechanism to operate the valve, cams adjustable on the arbor of the hour gear, a controlling valve in the gas conduit, and means operated by the adjustable cams to periodically actuate the controlling valve.

5. In a device for producing intermitting light, a gas conduit and a valve therein, in combination with a clock mechanism, means actuated by the latter to open and close the valve, adjustable cams, an hour-gear slidably mounted on its shaft controlled by said cams, a controlling valve mounted in the conduit and means operated by the sliding of the hour gear to actuate the controlling valve.

[Claims 6 to 8 not printed in the Gazette.]

897,982. COMPOSITE BEAM. FREDERICK C. KEIGHLEY, Uniontown, Pa. Filed Apr. 4, 1908. Serial No. 425,106.



1. A composite beam comprising a single piece of sheet metal bent upon itself at 3^a, and provided with a plurality of rectangular folds forming a plurality of rectangular spaces, a plurality of rectangular wooden fillers held in said spaces, the said sheet metal having its extremities so disposed as to close said spaces, and a binder for holding the parts of said beam, in a compact form.

2. A composite beam comprising a single piece of sheet metal folded to form upper and lower rectangular spaces and an intermediate rectangular space which is disposed to one side of the first named spaces, a plurality of rectangular wooden fillers held in said spaces, the said sheet metal having its extremities so disposed as to close said spaces, and a wire binder twisted about said beam, so as to hold the parts in a compact form.

897,983. RECEPTACLE-CLOSURE. GEORGE J. KIRBY, Willimantic, Conn. Filed Mar. 22, 1905. Serial No. 251,518.

1. In a receptacle, the combination with a body portion, and a lid therefor, of a spring having its end portions parallel and its intermediate portion bent longitudinally, the said intermediate portion lying within the longitudinal plane of the spring occupied by the end portions, one of said end portions being pivotally connected to said body portion and the other of said end portions being pivotally connected to the lid.



2. In a receptacle, the combination with a body portion, of a lid pivotally connected therewith, an S-shaped spring elastic longitudinally of the body of the S, said spring being substantially flat and the ends thereof pivotally engaging the body portion and lid respectively, and the said spring being positioned for lying snugly against the contiguous parts of the lid when at the extreme of the movement of the lid.

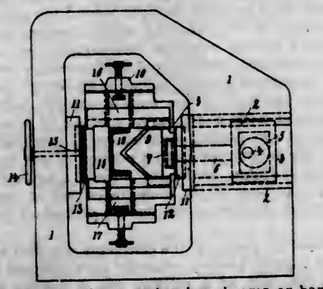
3. In a receptacle, the combination with a body portion and a lid pivotally connected therewith, of a longitudinally acting spring pivotally engaging said body portion at a relatively short distance below the line of pivotal connection of the body portion with the lid, said spring also pivotally engaging said lid at a point a relatively great distance across the width of the lid and above the pivotal connection between the lid and body portion, substantially the entire spring lying in contact with the under surface of the lid.

4. A spring lid case comprising a main body, a lid, a hinge connecting said lid to said body, a fastening device connected to said body below the pintle of the hinge, another fastening device connected to the lid, and a spring one end of which is held by the said fastening device on the body, the other end held by the said fastening device on the lid, the said ends of the spring being integral with an intermediate member bent from the ends of the spring and disposed in a plane therewith and held substantially parallel with hinge, substantially as described.

5. A spring lid case comprising a main body, a lid, a hinge connecting said lid to the body, and a spring having a plicated intermediate member and two outer members both of which are parallel with the intermediate member, a fastening device on said lid for holding one end of the spring and a fastening device on the body located below the pintle of the hinge for holding the opposite end of the spring, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

897,984. DEVICE FOR CUTTING FIGURED IRON. JOHANNES KRÜGER, Berlin, Germany. Filed Jan. 2, 1908. Serial No. 408,992.



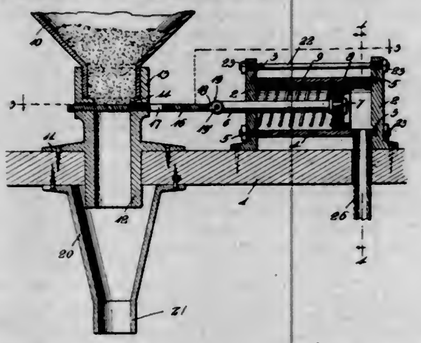
1. In a machine for severing iron beams or bars, a stationary frame, a work-holding frame mounted to rotate on a horizontal axis in said frame and carrying stationary knives, the planes of which when the said rotatable frame

is adjusted to the desired bevel are inclined to the usual plane, a knife and means for reciprocating it toward and from the stationary knives, and means whereby said knife is rendered rotatable on the same horizontal axis as the rotatable work-holding frame.

2. In a machine of the class described, a stationary frame, a member rotatable upon a horizontal axis and carrying means for holding the work together with stationary knives, and another member comprising a knife and means for reciprocating it to and from the stationary knives, said knife being rotatably connected to its reciprocating means, the axis of rotation being coincident with that of the work-holding frame.

3. In a machine of the class described, a stationary frame, a work-holding member carrying stationary knives, the planes of which when the said rotatable frame is adjusted to the desired bevel are inclined to the usual plane, a knife member and means for reciprocating it, and means whereby one of said members is rendered rotatable on a horizontal axis, for the purpose set forth.

897,985. SANDING DEVICE. HARRY F. MENTZEL, Tarentum, and JAMES H. MOSER, Parnassus, Pa. Filed Feb. 17, 1908. Serial No. 416,411.



1. A sanding device of the character specified, embracing a hopper supporting member formed with a discharge port or opening and with a depending tubular extension designed to extend through the floor of a street railway car, a casing inclosing the projecting portion of the tubular extension and extending below the same, a slide valve formed with a discharge port or opening to register with that of the hopper supporting member, a cylinder fixedly mounted on the car floor, a piston arranged in the cylinder, a pitman between the piston and slide valve, a resilient element for normally exerting pressure upon the piston to maintain the discharge port or opening of the slide valve out of registration with the discharge opening of the hopper supporting member and means for leading a pressure fluid into the cylinder behind the piston.

2. A device of the character specified comprising a hopper support having a tubular cylindrical body formed at its upper end with an enlarged approximately rectangular hopper supporting portion having a discharge port to register with the bore of the hopper support body, a slide valve formed with a discharge opening to register with the bore of the hopper support body, mounted to slide through the hopper supporting portion of the hopper support, and yieldable means for normally maintaining the discharge opening of the slide valve out of registration with that of the hopper supporting portion of the hopper support.

3. A sanding device of the character specified embracing a hopper support having a tubular body adapted to extend through the floor of a railway car, a hopper supported thereby, a slide valve mounted to slide through the hopper support above the car floor and immediately beneath the hopper, said valve having a discharge port to register with the bore of the hopper body, a cylinder mounted upon the floor of the car near the hopper, a piston in the cylinder, a pressure spring arranged between one end of the cylinder and piston, and a conducting pipe for leading a pressure fluid into the cylinder in front of the piston.

4. In a sanding device for railway cars, a pair of cylinder supporting frames mounted upon the floor of the car, a cylinder mounted between said frames, a piston in the cylinder, a tubular hopper support mounted upon and extending through the floor of the car, a slide valve having a discharge opening to register with the bore of the hopper support, a connection between the slide valve and piston, a coil spring arranged in the cylinder between the piston and one of the cylinder supporting frames to normally hold the discharge opening of the slide valve out of register with the hopper support, and means for leading a pressure fluid into the cylinder to actuate the piston.

897,986. BOX-FASTENER. JOHN C. MERRILL, San Martin, Cal. Filed July 26, 1907. Serial No. 385,745.



1. The combination with a body and upstanding loops upon the body; of a closure disposed to engage the loops, a slidable locking member upon the closure and having laterally offset integral alining portions insertible into the loops simultaneously, and non-alining means engaging said member and one of the alining portions for guiding said portions into the loops and preventing rotation of the member upon the closure.

2. The combination with a body and loops upstanding therefrom; of a closure engaging the loops, a bolt slidably mounted upon the closure and having alining end portions shiftable in one direction into engagement with the loops, said bolt having an upstanding intermediate portion, and resilient means engaging said portion to lock the bolt within the loops.

3. The combination with a body having a loop secured to one wall thereof and upstanding therefrom, and loops upon another wall of the body and extending upward therefrom, said last mentioned loops embracing and projecting into opposite faces of said wall; of an apertured closure having an integral tongue insertible into the first mentioned loop, said apertures being disposed to receive the remaining loops, a slidable member upon the closure and shiftable in one direction to engage the loops in the apertures, and means for automatically locking said member within the loops.

897,987. MEASURING DEVICE. EUGENE J. MEZGER, Yolo, Cal. Filed Jan. 31, 1908. Serial No. 413,578.

1. In a combination device for the purpose specified, an elongated solid rod having graduations, slidable members carried by the rod two of which comprise sleeves having arms provided with bifurcations, marking wheels having knife edges mounted in said bifurcations, while one of the other members comprises a sleeve having a plate projecting laterally and parallel with the said arms, and thumb screws for holding the members in adjusted position, and removable means carried by each end of said rod to prevent accidental displacement of the members.

2. In a combination device for the purpose specified, an elongated solid rod having graduations and provided with a groove, slidable members carried by the rod two of which comprise sleeves having arms provided with bifurcations, marking wheels having knife edges mounted in said bifurcations, while one of the other members comprises a sleeve having a plate projecting laterally and parallel with the said arms, another of said members comprises a sleeve having about its lower periphery a polygonal shaped plate and thumb screws mounted in each sleeve of the members for holding the members in adjusted position, a revolving ring carried at the lower end of said rod, a washer and screw for holding the ring to the rod, said ring, washer and screw acting as means to prevent accidental displacement of the members from one end of the rod, a ring carried by the upper end of the rod provided with a hollow offset having a tongue to be received by said groove, said hollow offset having a spring pressed pin, said groove having a recess to receive said spring pressed pin, so as to prevent displacement of the members from the upper end of the rod.



3. In a combination device for the purpose specified, an elongated solid rod having graduations and provided with a longitudinal groove, slidable members carried by the rod two of which comprise sleeves having arms provided with bifurcations, marking wheels having knife edges mounted in said bifurcations, while one of the other members comprises a sleeve having a plate projecting laterally and parallel with the said arms, another of said members comprises a sleeve having about its lower periphery a polygonal shaped plate, and thumb screws mounted in each sleeve of the members and adapted to engage the groove for holding the members in adjusted position and to prevent rotary movement of the members, a revolving ball bearing marking ring carried at the lower end of said rod and a washer and screw for holding said ring to the rod, said ring, washer and screw acting as means for preventing displacement of the members from the lower end of said rod.

4. In a combination device for the purpose specified, an elongated solid rod having graduations, and provided with a longitudinal groove, slidable members carried by the rod, two of which comprise sleeves having arms provided with bifurcations, marking wheels having knife edges mounted in said bifurcations, while one of the other members comprises a sleeve having a plate projecting laterally and parallel with said arms and thumb screws mounted in each sleeve of the members and adapted to engage the groove for holding the members in adjusted position and to prevent rotary movement of the members, and removable means carried by each end of said rod to prevent displacement of the members.

5. In a combination device for the purpose specified, an elongated solid rod having graduations and provided with a longitudinal groove, slidable members carried by the rod, two of which have marking wheels provided with knife edges, and thumb screws mounted in each sleeve of the members and adapted to engage the groove for holding the members in adjusted position and to prevent rotary movement of the members, the lower end of said rod having removable means to prevent displacement of the members from said end, the upper end of said rod having a ring provided with a hollow offset having a tongue to be received by said groove, said groove having a recess, said offset having a spring pressed pin to engage said recess to prevent displacement of the members from the upper end of said rod.

[Claims 6 to 13 not printed in the Gazette.]

897,988. MEANS FOR EXTERMINATING INSECTS AND OTHER VERMIN. GUSTAVE A. H. MULLER, Montreal, Quebec, Canada. Filed Feb. 10, 1908. Serial No. 415,206.

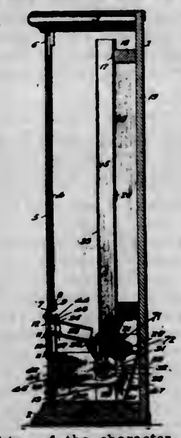


1. In an insect and vermin exterminator, the combination with a transparent body, of a cool luminous substance applied as a coating on said body, and a destructive agent carried by said transparent body, substantially as described.

2. In an insect and vermin exterminator, in combination, a glass dish forming a bowl-like receptacle having a prominently exposed portion extending above the bowl portion, a cool luminous substance coating said dish, and a destructive agent carried by said bowl portion, substantially as described.

3. In a device of the class described, a glass body suitably formed, a cool luminous substance painted on one side of said glass body and a destructive agent arranged on the other side said glass body, through which the light from said luminous substance radiates, substantially as described.

897,989. VENDING-MACHINE. JOHN V. MCCARTHY, Waverley, and ALEXANDER MACLEOD, Watertown, Mass. Filed Feb. 8, 1907. Serial No. 356,464.



1. In a machine of the character described, a rotary shaft, a casing, a slotted coin carrier on said shaft, a removable container disposed over said carrier, and a curved slotted shield, disposed over said carrier, said shield being entirely independent of the container and interposed between the lower end thereof and the carrier and extended beneath the same and affixed to the casing, a coin chute, and a coin receiver interposed between said chute and coin carrier and provided with a deflector.

2. In a machine of the character described, a rotary shaft, a casing, a slotted coin carrier on said shaft, a plurality of independent removable containers disposed over said carrier, a curved slotted shield disposed over said carrier, said shield being entirely independent of the container and interposed between the lower end thereof and

the carrier and extended beneath the same and affixed to the casing, and guiding means for the articles to be delivered, said guiding means extending rearwardly over said shield and rearward beyond the same opposite the adjacent walls of the containers.

3. In a machine of the character described, a casing, a rotary shaft therein, a disk on said shaft having lateral pins, a pivotally mounted lever and a pawl loosely pivoted thereon and adapted to engage said pins in succession as the lever is actuated, a plurality of slotted coin carriers independently mounted on said shaft, and a curved shield attached to the casing, and having a plurality of slots coincident with said carriers for the reception of portions only of coins, said shield being independent of the article-containers.

4. In a machine of the character described, a rotary shaft, a casing, a slotted coin carrier on said shaft, a disk on said shaft having lateral pins, a pivotally mounted lever, and a pawl loosely pivoted thereon and adapted to engage said pins in succession as the lever is actuated, a removable container disposed over said carrier, a coin receiver fixedly secured in front of said container, a depending deflector plate within said receiver, a coin chute having its discharge end over said receiver, said chute being inclined from a perpendicular and having substantially V-shaped bottom walls, and a curved slotted shield, disposed over said carrier, said shield being entirely independent of the container and interposed between the lower end thereof and the carrier and affixed to the casing.

5. In a machine of the character described, a rotary shaft, a casing, a slotted coin carrier on said shaft, a disk on said shaft having lateral pins, a pivotally mounted lever, and a pawl loosely pivoted thereon and adapted to engage said pins in succession as the lever is actuated, said pawl having an extension beyond its pin-engaging portion, removable container disposed over said carrier, a coin receiver fixedly secured in front of said container and having front inclined wall, a depending deflector plate within said receiver with its lower end curved toward the front inclined wall of said receiver, and a curved slotted shield disposed over said carrier, said shield being entirely independent of the container and interposed between the lower end thereof and the carrier and affixed to the casing.

[Claims 6 to 8 not printed in the Gazette.]

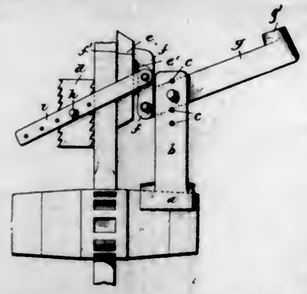
897,990. FLEXIBLE FIRE-RESISTING SHUTTER AND SLAT THEREFOR. EDWARD H. MCCLOUD, Columbus, Ohio. Filed Jan. 27, 1908. Serial No. 412,777.



1. A slat for the construction of flexible shutters or curtains including a strip of sheet metal bent at its lower edge to form a wide shoulder and a substantially cylindrical roll constituting a hinge member, and at its upper edge to form a corresponding shoulder and a substantially elliptical roll constituting a hinge member of a vertical diameter to fit within the cylindrical hinge member and of a horizontal diameter considerably smaller than the corresponding internal diameter of the cylindrical hinge member.

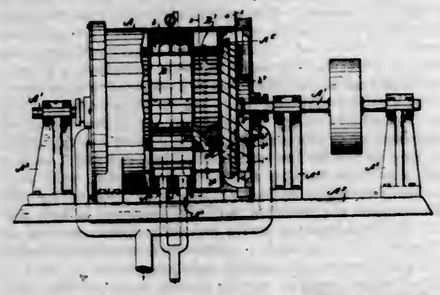
2. A flexible shutter or curtain made up chiefly of slats including a strip of sheet metal bent at its lower edge to form a wide shoulder and a substantially cylindrical roll constituting a hinge member, and its lower edge to form a corresponding shoulder and a substantially elliptical roll also constituting a hinge member of a vertical diameter to fit within the cylindrical hinge member and of a horizontal diameter considerably smaller than the corresponding internal diameter of the cylindrical hinge member.

897,991. SPOKE-PULLER. WILLIAM C. MCCOY, Great Bend, Kans., assignor of one-half to L. P. Kern, Great Bend, Kans. Filed June 26, 1906. Serial No. 323,446.



In a spoke puller a standard, a power lever fulcrumed intermediate its ends thereto, a pair of gripping blocks, a pair of links *f* interposed between one of the blocks and the standard, said links being pivoted at the lower ends to one end of said power lever, a pair of links pivotally connected at their opposite ends to each of said blocks respectively, a pin pivotally connecting the two pairs of links to each other and to the adjacent block, and projecting portions on the links *f* extending beyond the said pivot pin and co-acting with the last named block.

897,992. TURBINE. NEWTON MCKEE, Milwaukee, Wis. Filed Mar. 5, 1908. Serial No. 419,297.



1. A turbine comprising twin bucketed wheels separated upon a shaft by a distance piece hub, blades for said hub forming main portion steam chambers and means arranged whereby the steam is passed centrifugally from said steam chambers to the buckets of said wheels.

2. A turbine comprising twin bucketed wheels separated upon a shaft by a distance piece hub carrying blades, a lap ring encircling said blades, lugs and recesses arranged on the inner face of said ring and steam ports adapted to pass steam centrifugally from the steam chambers formed between said blades to the buckets of said wheels.

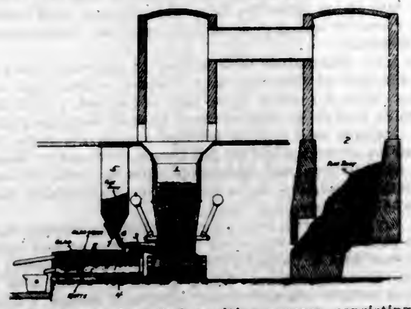
3. A turbine comprising a bucketed wheel, a distance piece hub secured to said wheel upon a shaft, blades for said hub, the distance between which forming main portion steam chambers and means provided for the escape of steam centrifugally from said steam chambers to the buckets of said wheel.

4. A turbine comprising twin bucketed wheels, a distance piece hub separating said wheels upon a shaft, blades for said hub forming main portion steam chambers, steam ports in the steam sides of said wheels adapted to conduct steam centrifugally therein and steam ports on the outside of said wheels adapted to conduct steam centripetally therein.

5. A turbine comprising twin bucketed wheels, a distance piece hub separating said wheels upon a shaft, blades for said hub forming main portion steam chambers, steam ports in the steam sides of said wheels, a casing for said turbine, deflector cups arranged in said casing, steam ports on the outside of said wheels adapted to conduct steam centripetally therein, and deflectors arranged on the inside of the end of said casing.

[Claims 6 to 9 not printed in the Gazette.]

897,993. SMELTING. ALEXANDER R. MCKENZIE, Great Falls, Mont. Filed Dec. 5, 1907. Serial No. 405,221.



1. The herein described smelting process, consisting in discharging slag and matte from a furnace to a settler, and discharging fine ore into the stream of slag and matte as the same flows from the furnace to the settler.

2. The herein described process, consisting in mixing fine ore with molten slag and matte issuing from a smelting apparatus.

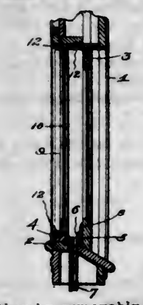
3. The herein described process, consisting in discharging molten slag and matte downwardly into a settler and discharging fine ore into said downwardly flowing stream of molten slag and matte, whereby said fine ore will be carried by said stream into the body of molten slag and matte in the settler.

4. The herein described process, consisting in discharging flue dust with molten slag and matte into a receptacle and smelting the fine dust in said receptacle.

5. The herein described process, consisting in smelting a body of ore in a furnace, discharging the molten slag and matte from said furnace to a receptacle, discharging flue dust or fine ore with the slag and matte into said receptacle and utilizing the heat of said molten slag and matte and the self-fluxing quality of the flue dust to smelt the latter in said receptacle.

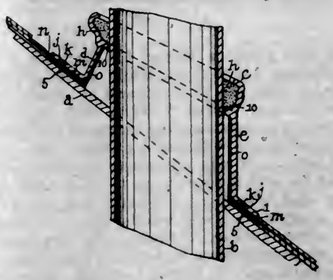
897,994. DUST AND CINDER SHIELD AND GUARD FOR CAR-WINDOWS. JAMES S. MCKENZIE, Atlanta, Ga. Filed Apr. 5, 1906, Serial No. 310,193. Renewed Feb. 5, 1908. Serial No. 414,448.

A cinder guard and shield for car windows comprising in combination with a window sash a trough strip secured to the window sill, said strip having formed therein a longitudinally disposed trough or channel, a vertical engaging surface formed on the outer edge of the strip to engage the inner side of the lower rail of the sash when the latter is in a closed position, means to discharge cinders from said trough, a cap strip secured to the inner side of the lower rail of said sash to engage said trough strip when the sash is in a closed position, and means for deflecting cinders into said trough comprising a removable shield adapted to be arranged on either side of the window to deflect the cinders into the trough and prevent their entrance into the car when the sash is raised, laterally-projecting notched or recessed fastening plates secured to the side of and projecting from the outer edge of said shield, headed screws arranged on the adjacent side of the window frame to receive the notched outer ends of said



fastening plates, thereby removably holding the shield in engagement with the window casing, and a slidably mounted bolt arranged on the lower inner corner of the shield and adapted to be engaged with the recess in the sill to hold said shield in place, substantially as described.

897,995. ROOF-JOINT. GEORGE B. NORGRAVE, Peabody, Mass. Filed Oct. 10, 1907. Serial No. 396,780.



1. In a roof joint, a rigid body portion having an upright substantially circular short end portion, and a longer end portion downwardly and outwardly inclined with relation to said short end portion and forming therewith elongated top and bottom openings to permit the rigid body portion to be turned into different angular positions with relation to a pipe extended through said device and of a diameter substantially equal to the width of the elongated top opening and an elongated hub attached to the said body portion at its top and having its long axis extended in the same direction as the long axis of the elongated top opening of the body portion and adapted to receive a tamped packing, substantially as described.

2. In a roof joint, a rigid body portion having an elongated opening at its top to permit it to be turned into different angular positions with relation to a pipe extended through said body portion and of a diameter substantially equal to the width of the said opening and a hub attached to the said body portion at its top and having one end wall extended in substantially the same plane as one end wall of the body portion, and having its opposite end wall extended at an angle to the opposite end wall of the body portion, said hub being adapted to receive a tamped packing, substantially as described.

3. In a roof joint, a body portion having an elongated top opening, and a hub integral with said body portion and having an elongated opening whose long axis extends in the same direction as the long axis of the top opening in the body portion and adapted to receive a tamped packing, substantially as described.

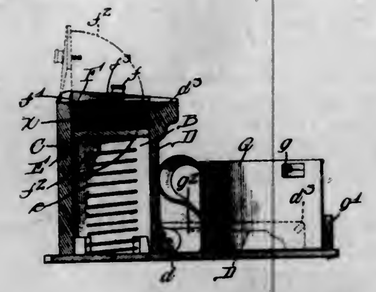
4. In a roof joint, a body portion of one piece having an elongated top opening and with a larger bottom opening and a hub of larger area than said opening integral with

said body portion and adapted to receive a tamped packing, substantially as described.

5. In a roof joint, a body portion having at its upper end an inwardly extended bead or flange forming the walls of an elongated opening, and a hub portion extended above said flange and having one end wall inclined upwardly and outwardly to the adjacent wall of said body portion to form an elongated hub of larger area than said opening, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

897,996. HOLDER FOR LABELS OR THE LIKE. WILLIAM O'LEARY, Chicago, Ill. Filed Jan. 31, 1907. Serial No. 354,990.



1. In a label holder, a support for the stack of labels, a cover affording access to the labels, a straight lip over which the top label can be withdrawn by simply laying a finger thereon and pulling forward, said lip having a smooth center for sustaining the weight of the finger, and means preventing the withdrawal of more than one label at a time and one or more adjustable screws for properly positioning the said lip relative to the uppermost label.

2. In a label holder, an automatic feed for the stack of labels, a notched top wall holding down the labels and affording access thereto, a straight lip over which the top label can be withdrawn by laying a finger thereon and pulling forward, said lip having a smooth center for sustaining the weight of the finger, and means preventing the withdrawal of more than one label at a time and the notch of said top wall being disposed in position to aline the finger with said smooth portion of the lip, as set forth.

3. In a label holder, the combination of the spring pressed support E, the movable cover F, the movable front wall D, said front wall provided with a middle portion d^2 and rubber portions d^3 at each side thereof, said middle and rubber portions beveled to provide a lip over which the top label can be withdrawn by laying a finger thereon and pulling forward.

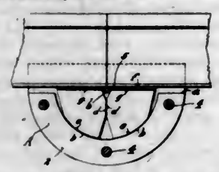
4. In a label holder, means for holding the stack of labels, and a lip over which the top label can be withdrawn by laying a finger thereon and pulling forward, said lip having a central portion to take the pressure of the finger on the moving label, and rubber side portions at either side thereof.

5. A label holder comprising devices for holding and feeding the stack of labels, a lip controlling the withdrawal of the labels one at a time from the top of the stack, said lip sustaining the weight of the finger and suitable means disposed below said lip and in the line of withdrawal and a removable front wall supporting said lip and disposed between the labels and said means, for the purpose set forth.

[Claims 6 to 14 not printed in the Gazette.]

897,997. RAIL-BOND. ROBERT J. OSTICK, Covington, Ky. Filed May 9, 1907. Serial No. 372,814.

1. The combination with a pair of adjoining railway rails, of a pair of plates supported upon the base of said rails, filling blocks supported by said plates, a bond lying between the under surface of said rail base and filling blocks, and means for clamping said plates laterally below the rails, substantially as described.



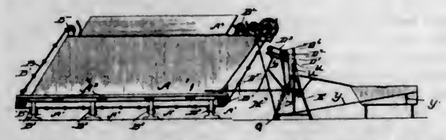
2. The combination with a pair of adjoining railway rails, of a pair of plates provided with an inclined flange extension adapted to seat upon the inclined surface of the base of the rail, a bond contacting with the lower surface of the base of said rails, means carried by said plates for clamping said bond in position, means for laterally clamping said plates below the rails, whereby said bond clamping means is moved to a clamping position, substantially as described.

3. The combination with a pair of adjoining railway rails, a pair of clamping plates adapted to seat upon the upper inclined surface of the base of the rail, a bond for bonding said rails, means carried by said clamping plates for clamping said bond in position against the rails, the clamping action against the bond being produced by means for laterally clamping said plates below the rails, causing a vertical action due to the coacting inclined surfaces, substantially as described.

4. In combination with a pair of adjoining railway rails of a pair of plates supported upon the base of said rails, provided with a flanged projection, said flange having a curved bearing surface, filling blocks provided with a curved surface adapted to seat upon said flanges, a bond lying between the base of the rails and filling blocks, means for laterally clamping said plates, whereby a vertical clamping action is effected between filling blocks and rails, substantially as described.

5. A clamp for clamping adjoining railway rails, comprising a pair of plates supported upon the inclined surface of the base of the rails, means carried by said plates adapted to contact with the base of the rails, clamping means for clamping said plates laterally below the rails whereby a wedge-like action is produced between the base of the rails and clamping plates, substantially as described.

897,998. BOTTLE-WASHING MACHINE. ALEXANDER S. OTTO, St. Louis, Mo. Filed Jan. 24, 1905. Serial No. 242,474.

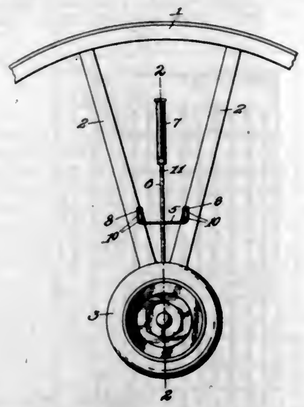


1. A device of the kind described comprising a bottle washing device, an endless conveyer adapted to convey the bottles from the said device, a pivoted receptacle adapted to receive the bottles in an inverted position, said receptacle being upwardly and downwardly open, a tubular, rotatable pipe carrying a brush adapted to engage the mouth of the bottle while in the receptacle, means for rotating the pipe, means for supplying a liquid to the pipe, and means for dumping the pivoted receptacle.

2. A bottle washing machine comprising a receptacle adapted to receive and support a plurality of bottles in an inverted position, said receptacle being upwardly and downwardly open, a reciprocating tray arranged below the receptacle, a plurality of vertically movable pipes supporting said tray, sleeves carried by the tray and opening upwardly and downwardly through the tray, said sleeves alining with the pipes, brushes carried by the pipes and projecting into the sleeves, said sleeves being adapted

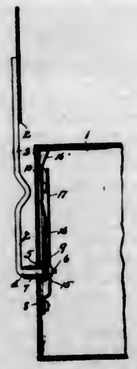
to receive the necks of bottles held by the receptacle, means for forcing a stream of water through the pipes, means for reciprocating the tray and pipes, means for rotating the pipes, and means for manually dumping the receptacle.

897,999. OILING DEVICE FOR WHEELS. GEORGE W. PATTEN, Wimbledon, N. D. Filed May 8, 1908. Serial No. 431,671.



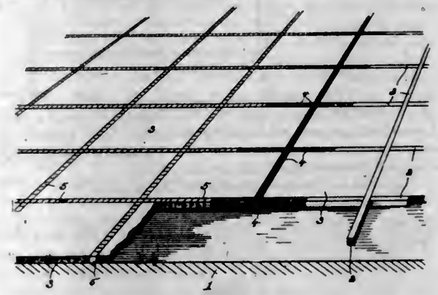
The combination with a wheel having a rim, a hub formed with a transverse opening arranged adjacent its inner end and in communication with its bore and spokes between the rim and hub, of a bracket plate arranged between two spokes and having angular ends secured to the latter, a tubular body arranged in said bracket plate and having its lower end arranged in the transverse opening in the hub and its upper end externally screw threaded, a lubricant container engaged with the threaded upper end of the body and adapted to force lubricant through the latter when it is screwed inwardly.

898,000. SIGNAL-LOCK FOR MAIL-BOXES. SAMUEL PATTERSON and JOHN W. WISEMAN, Gonzales county, Tex., assignors of one-third to Oliver T. Payne, Lavaca county, Tex. Filed June 5, 1907. Serial No. 377,426.



In combination with a mail box having a hole therein, a segmental plate secured on the inside of the box having a hole therein to register with the hole in the box and projections on the curved edge of the plate forming stops, said projections being arranged in pairs adjacent to the ends of the curved edge of the plate, the inner one of each pair of projections having a slanting upper edge on which the arm rides when reaching its extreme positions, a rectangular L-shaped signal staff having its end extending through the holes in the box and plate, an arm secured to the inner end of the staff and engaging the projections on the plate, and a curved retaining strip secured over the arm and the curved edge of the plate, substantially as shown and described.

898,001. METHOD OF LAYING MOSAIC, GRANOLITHIC, AND SIMILAR FLOORS. PETER PELLARIN, Detroit, Mich. Filed July 2, 1906. Serial No. 324,401.



1. A floor covering comprising in combination with a bed of cementitious material, a layer of granolithic material on said bed formed in relatively large sections with narrow dividing spaces between the sections and a plurality of granite cubes of the same width as said spaces cemented at their opposite sides to said adjacent sections and having their adjacent faces abutting and cemented to one another.

2. A floor covering comprising in combination with a bed of cementitious material, a layer of granolithic material on said bed formed in relatively large rectangular sections, with narrow dividing spaces between the sections, said spaces defining rectangles dividing the upper layer into rectangular sections, and a plurality of granite cubes of the same width as said spaces cemented at their bottoms and opposite sides to said bed and the sides of the adjacent sections respectively, and having their adjacent faces abutting and cemented to one another.

3. The method of constructing surface coverings of granolithic, mosaic or similar material which consists in first covering the surface with a layer of cementitious material then dividing the surface so covered into sections by laying thereon suitable wooden strips, then filling in the sections or spaces between the strips even with their upper edges with the surface covering material and permitting the same to dry and harden, and then removing the strips and filling in the spaces left by said strips with granite cubes of the same width as said spaces cemented at their bottoms and opposite sides to said bed and the sides of adjacent squares respectively, and having their adjacent faces abutting and cemented to one another.

898,002. CANNING APPARATUS. WILLIAM F. PILLMORE and DAVID ANDEREGG, Westernville, N. Y. Filed July 5, 1907. Serial No. 382,277.

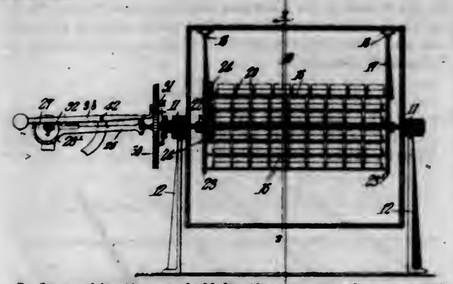
1. In apparatus of the class described, a normally free can support, and a pair of constantly movable shaking members between which said support is intermittently clamped.

2. In apparatus of the class described, a normally free can support, a constantly operated shaking means, and mechanism for intermittently connecting said support to said shaking means.

3. In combination, a can support, a shaking means therefor, and mechanism for alternately connecting and disconnecting the shaking means and support.

4. In combination, a can supporting shelf, a shaking means therefor, and means for connecting and discon-

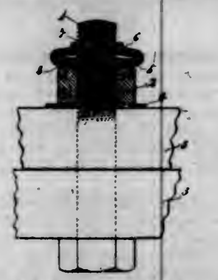
necting the shelf and shaking means at predetermined intervals.



5. In combination, a shelf for the support of cans, a pair of constantly operated shaking members, and means for moving said shaking members into clamping engagement with and disengagement from said shelf.

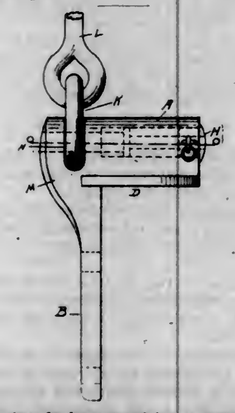
[Claims 6 to 12 not printed in the Gazette.]

898,003. NUT-LOCK. EDWARD POSSON, Chicago, Ill. Filed July 5, 1906. Serial No. 324,913.



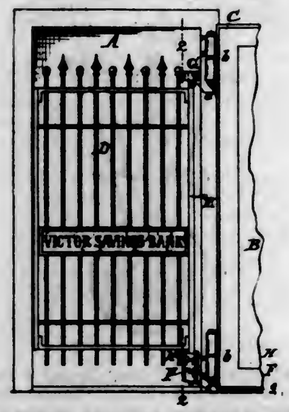
A nut lock in the form of a plate or body having a central perforation of a size sufficient to freely pass the threaded end of a bolt or rod, and having opposing spring prongs extending inward at an angle to each other, and extending upward at their inner ends, the said inner ends of said prongs being thicker than the body of the plate and threaded for engagement with the threaded end of a bolt or rod, substantially as described.

898,004. LIFE-BOAT DETACHING DEVICE. JOSEPH PREVOT, Green Bay, Wis. Filed Sept. 6, 1907. Serial No. 391,705.



A boat releasing device comprising a metal hanger, bolt plates, a barrel portion, a vertically disposed slot, a link in said slot, a spring actuated plunger provided with a cylindrical portion engaging said link and said plunger also provided with a square portion, a bushing with a square hole threaded into the rear portion of said barrel, and a holding pin for holding the parts into position as set forth.

898,005. GRAVITATING HINGE FOR DAY-GATES. FREDERICK W. RODLER, Cincinnati, Ohio, assignor to Victor Safe & Lock Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Aug. 29, 1907. Serial No. 390,602.



In a gravitating hinge, the combination of an upper knuckle, a lower knuckle inclined on its upper side, a lifter block inclined on its under side and seated on the inclined surface of the lower knuckle, both being provided with axially alined perforations, the lifter block having also a transverse notch in its upper side, and a rail, seated with its lower end in this notch and integrally extended through the lifter-block and into the knuckle below where it forms a pintle, there being a similar pintle formed on the upper end of this rail.

898,006. RAIL-JOINT. PORT W. ROW, Hillsboro, Ill. Filed Feb. 11, 1908. Serial No. 415,390.



1. In a device of the character described, a pair of rails having screw-threaded apertures in their ends, and a connecting piece having screw threaded extensions thereon and adapted to be screwed into said apertures, as set forth.

2. In a device of the character described, a pair of rails having screw-threaded apertures in their ends, and a connecting piece having extensions thereon provided with right and left hand screw-threads, and adapted to be screwed into said apertures, as set forth.

3. In a device of the character described the combination with a pair of rails provided at their adjacent ends with side extensions formed on the webs thereof, and provided in their ends with apertures, of a connecting device adapted to be interposed between the ends of said rails and having the same form of said rails at their connecting ends, and provided with extensions adapted to enter the apertures therein, as set forth.

4. In a device of the character described the combination with a pair of rails having side extensions formed in their webs at their meeting ends, apertures in their ends, and a connecting device adapted to be interposed between the ends of said rails, of a chair on which the rails and their intermediate connecting device are seated, comprising a plate extending under the joint of the rails, said chair having on one side thereof an inwardly extending clamp adapted to take over the flanges of the connecting rails and provided at both of its edges with spike holes whereby the said chair may be spiked to the ties, as set forth.

898,007. EGG-CRATE. DAVID M. ROWE, Oglesby, Ill. Filed Mar. 21, 1907. Serial No. 363,625.

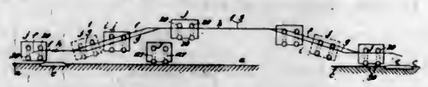


1. An egg crate comprising a box or casing, a series of trays arranged therein, spring holding devices arranged on said trays, said devices comprising an apertured base portion, a series of integrally formed upwardly projecting spring metal holding arms, circular pads arranged in the base of said devices, and screws adapted to be inserted through said pads and the base portion of the egg holding devices to secure the latter to the trays, substantially as described.

2. In an egg crate, a series of trays, a series of egg holding devices, said devices comprising a central apertured attaching plate, fastening means adapted to be inserted through the aperture in said plate, a series of radially projecting upwardly curved egg holding arms formed integral with said plate, outwardly curved supporting fingers on the upper ends of said arms to support the next tray above, and pads arranged on said plate and secured by said fastening means, substantially as described.

3. An egg crate comprising a box or casing, a series of trays arranged therein, spring egg holding devices arranged on said trays, said devices comprising an apertured base portion, a series of integrally formed upwardly projecting spring metal egg holding arms bent to fit an egg, said arms being bent outwardly at their upper ends to form supports for the next tray above, circular pads arranged on the base of said devices, and screws adapted to be inserted through said pads and the base portion of said egg holding devices to secure the same to the trays, substantially as described.

898,008. VEHICLE AND JUNCTION AND CROSSING THEREFOR. ROBERT C. SAYER, Redland, Bristol, England. Filed Aug. 1, 1907. Serial No. 386,646.



1. In an apparatus for enabling the main line traffic of both roads and railways to pass junctions without stopping, or interference, the combination of junctions provided with inclined bars disposed on the ground, rails suspended above the ground beyond the traffic and of wider gage than the cars designed to travel thereon, stops and crossings carried by said suspended rails and laid to suitable inclines and having overlapping ends.

2. In an apparatus for enabling the main line traffic of both roads and railways to pass junctions without stopping, or interference, the combination of junctions provided with inclined bars disposed on the ground, rails suspended above the ground beyond the traffic and of wider gage than the cars designed to travel thereon, stops and crossings carried by said suspended rails and laid to suitable inclines and having overlapping ends, intermediate junctions with the upper rails having similar parts, branch rails arranged below the upper rails, cars to cross said junctions having lower wheels to run on the lower rails, flanged upper wheels to run on the upper rails, with means for causing them to bogie or swivel and rotate synchronously with said lower wheels, said upper wheels having mechanism adapted to thrust them in or out to engage said stops on the upper rails and be guided thereby to cause said upper wheels to aline with, alight upon, and run on the upper rails, or to rise and descend on the lower rails and wheels of the car in a level position, or parallel to the rails, to above or below the main line cars, and cross over or under them.

3. In an apparatus for enabling the main line traffic of both roads and railways to pass junctions without stopping, or interference, the combination of junctions provided with inclined bars disposed on the ground, rails suspended above the ground beyond the traffic and of wider gage than the cars designed to travel thereon, stops and crossings carried by said suspended rails and laid to suitable inclines and having overlapping ends, intermediate junctions with the upper rails having similar parts, branch rails arranged below the upper rails, cars to cross said junctions having lower wheels to run on the lower rails, flanged upper wheels to run on the upper rails, with means for causing them to bogie or swivel and rotate synchronously with said lower wheels, said upper wheels having mechanism adapted to thrust them in or out to engage said stops on the upper rails and be guided thereby to cause said upper wheels to aline with, alight upon, and run on the upper rails, or to rise and descend on the lower rails and wheels of the car in a level position, or parallel to the rails, to above or below the main line cars, and cross over or under them, means for driving the upper and lower wheels together, motors arranged at the bogie center to leave a central avenue for passengers to walk throughout the car.

5. The combination with a railway junction consisting of main line rails, and branch rails separated therefrom, rails arrayed above, below and between, the main line and branch rails, stops, crossings and incline ended bars arranged parallel and central to the rails, of a car fitted with means operable when crossing the junction to cause the upper wheels of said car to be projected to run upon the upper rails, or withdrawn, for its lower wheels to run on the lower rails level with one another, or parallel to the rails.

[Claim 6 not printed in the Gazette.]

898,009. ELEVATOR. CHARLES D. SEEBERGER, Yonkers, N. Y. Filed Nov. 6, 1905, Serial No. 285,958. Renewed Dec. 9, 1907. Serial No. 405,782.

1. A reversible conveyer having a shunt at each end, such shunts leading to opposite sides of the conveyer.

2. A conveyer consisting of an inclined run and a horizontal landing portion at each end, and a shunt for each landing portion, such shunts leading to opposite sides of the conveyer.



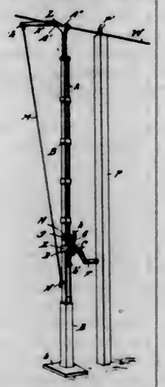
3. A conveyer consisting of an inclined run and a horizontal landing portion at each end, and a balustrade at each side of the incline and crossing one of the landings to provide a shunt therefor, such shunts leading to opposite side of the conveyer.

4. In a device of the class described, a conveyer extending between different floors or levels, and a drive therefor, such as a motor, located at the side of the conveyer and supported under and by the floor framing.

5. In a device of the class described, a conveyer extending between different floors or levels, a driving motor located under the floor at one level and supported by the floor framing of such level, and a trap door closed opening in the floor over the motor permitting of access to the motor.

[Claims 6 to 53 not printed in the Gazette.]

898,010. WIRE-LIFTER. JOHN C. SEELAND, Enumclaw, Wash. Filed Nov. 7, 1907. Serial No. 401,150.

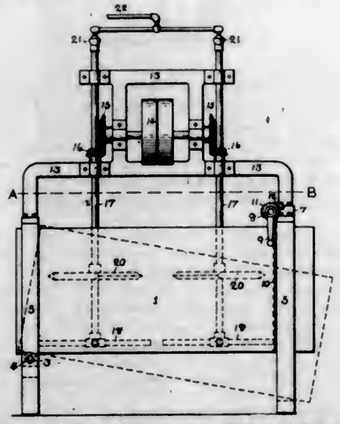


1. A wire lifter comprising a frame, a bar movably supported in said frame, said bar being provided at its upper end with diverging branches, both of said branches being bifurcated, a lever tiltably connected to one of said branches and having the shorter arm thereof projecting into the other bifurcated branch, the longer arm of said lever normally lying in a substantially horizontal position, said lever having the shorter arm thereof which is positioned between the extremities of the bar branches curved and with its upper face convex, a rod or its equivalent connected to the outer end of the longer arm of said lever, and means carried by said frame whereby the bar may be raised or lowered as desired and with respect to the frame.

2. A wire lifter of the class described, comprising a frame, a bar provided with rack teeth and having at its upper end bifurcated branches, a lever fulcrumed to one of said branches and adapted to have one of its arms enter the space between the parts of the other branch, means for actuating said lever to swing said arm up or down, a pinion carried by the frame and in mesh with said rack teeth of the bar, means for rotating said pinion, and disengageable means for securing the pinion against rotation in one direction.

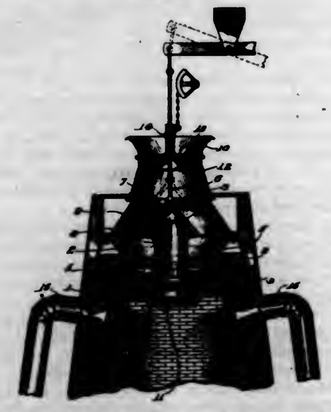
3. A wire lifter of the class described, comprising a bar having a forked upper end, a lever fulcrumed to one of the branches of such end, said lever having the arm thereof which is positioned between the extremities of the bar branches curved and with its top edge convex, a rod or an equivalent connected with the other arm of said lever, a casing for said bar, a pinion carried by the casing and engaging with rack-teeth provided in said bar, means for rotating said pinion to effect the raising or lowering of the bar, and a pawl adapted to engage with said pinion.

898,011. BUTTER GRANULATOR AND PURIFIER. FERDINAND SEIM, Louisville, Ky. Filed Jan. 2, 1908. Serial No. 408,983.



In a machine for making and purifying butter, a frame, a tank pivoted therein at one end, and adjustably securable therein at the other end, said tank being provided with a gate at its adjustably secured end, vertical hollow shafts extending into said tank, hollow perforated agitators regularly arranged at the lower ends of said shafts, and connected agitators, a source of air supply to said hollow agitators through said shafts, other agitators on said shafts above said perforated agitators vertically nonalined with the same, and a steam-coil arranged in said tank.

898,012. CHARGING APPARATUS FOR BLAST-FURNACES. MARTIN J. SHANNON, Steelton, Pa. Filed Mar. 11, 1908. Serial No. 420,317.



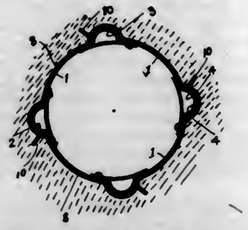
1. The combination with a blast furnace, of a hopper having openings at its top and bottom, and a sealing plug within said hopper, adapted when lowered to close off the bottom opening and when raised to close off the top opening in said hopper.

2. The combination with a blast furnace, of a hopper having at its top an opening surrounded by an inwardly projecting flange and at its bottom an opening, and a sealing plug having a conical top within said hopper, said plug being adapted when in a lowered position to close off the bottom of said hopper and when in a raised position to close off its top.

3. The combination with a blast furnace, of a hopper having an opening in its top and an opening in its bottom, a sealing plug within said hopper adapted when lowered to close off the bottom opening and when raised to close off the top opening, a second hopper placed above said first hopper, a bell for closing the discharge end of said hopper, walls for carrying said second hopper, and means, operated independently of one another, for operating said sealing plug and bell.

4. The combination with a blast furnace, of a hopper having an opening in its top and bottom, a sealing plug within said hopper adapted when lowered to close off the bottom opening and when raised to close off the top opening, an operating rod centrally attached to the upper end of said sealing plug, a second hopper placed above said first hopper, walls upon which said second hopper is carried, a bell, the stem of which is hollow and through which the operating rod of said plug passes, for closing the lower end of said second hopper, and means for operating said bell.

898,013. PILING AND METHOD OF CONSTRUCTING THE SAME. FRANK W. SKINNER, New York, N. Y. Filed Aug. 21, 1905. Serial No. 275,183.



1. The combination with a sectional annular pile, of an annular core therefor composed of a plurality of independently removable sections adapted to be removably engaged with one another and with pile sections before driving, substantially as described.

2. The combination with a sheet metal pile of a core therefor consisting of a plurality of independently movable sections adapted to engage each other, and having interlocking joints on their longer sides adapted to prevent relative transverse displacement, substantially as described.

3. The combination of a hollow pile and an earth raising flange thereon, substantially as described.

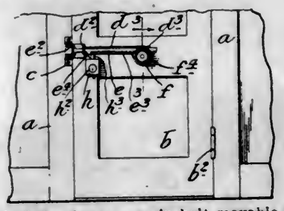
4. The combination of a hollow pile and means carried by said pile for removing the earth, adapted to be easily driven into the earth with the pile and to engage and remove the earth core while the pile remains in the earth, substantially as described.

5. The combination in a pile, of a shell, a driving core removably connected therewith and adapted to drive the shell, and earth-removing devices carried by said driving core and adapted to lift the earth within said core as the latter is raised, substantially as described.

[Claims 6 to 26 not printed in the Gazette.]

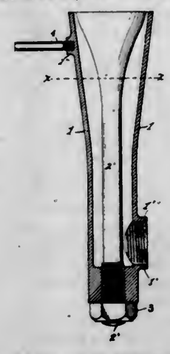
898,014. DOOR-LOCK. GUSTAVE E. SPILTOIR, New York, N. Y. Filed Apr. 9, 1908. Serial No. 426,036.

1. In a lock for doors, a main bolt movable transversely of the door, a spindle passing through the door and engaging said bolt and adapted to move it in both directions, said spindle being adapted to be operated from either side of the door, and a key operated lock secured to the door adjacent to said main bolt and provided with a lock bolt movable toward and from said main bolt and adapted to engage the same, said key operated lock being adapted to be operated from either side of the door.



2. In a lock for doors, a main bolt movable transversely of the door and provided with gear teeth, a spindle passing through the door and adapted to be operated from either side thereof and provided with a gear meshing with said teeth, and a key operated bolt mounted vertically of the door and adapted to engage the main bolt, said key operated bolt being adapted to be operated from either side of the door.

898,015. AIR-LIFT PUMP. WILLIAM F. SPANGLER, Greenfield, Ind. Filed Dec. 6, 1907. Serial No. 405,328.

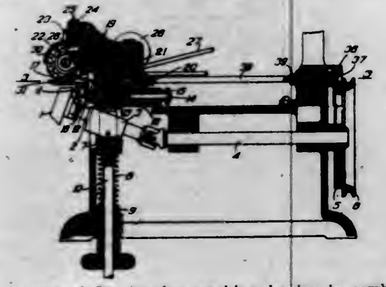


1. In a pump of the class described, the combination with a well casing adapted to project within the water, a hollow jacket located below the water line and having a cylindrical lower portion the lower end of which is interiorly screw threaded and a flaring conical upper portion, the upper end of which is open, a head located within said jacket the upper end of which head is conical and slightly smaller in diameter than the open end of the jacket, the cone of the head having a greater flare than the cone of the jacket and extending downwardly, means connected with said head whereby the same may be secured adjustably in the said threaded end of the jacket whereby the annular space between the head and the open end of the jacket may be varied in area, and means for supporting said jacket centrally within the well casing and supplying compressed air thereto.

2. In combination, a cylindrical casing adapted to extend into the water in a well, a hollow jacket located beneath the water line and within the casing, said jacket comprising a cylindrical lower portion and a conical flaring upper portion having an open mouth at its upper end, said jacket being provided with a lateral inlet in its cylindrical portion, a member within said jacket comprising a stem secured adjustably in the lower end of the said jacket and having at its upper end an upwardly and outwardly flaring head, the upper end of which is slightly less in diameter than the open mouth of the jacket aforesaid and the flare of which is greater than that of the conical portion of the jacket, means connected with the jacket at its lateral opening aforesaid to admit compressed

air thereto and serving to prevent lateral movement of the jacket in one direction, and a brace secured to the conical portion of the jacket to prevent lateral movement thereof in the opposite direction, substantially as set forth.

898,016. CHANNEL-FLAP-TURNING MACHINE. CHARLES P. STANBON, Lynn, Mass. Filed Oct. 3, 1904. Serial No. 226,899.



1. A channel flap turning machine, having in combination, a flap turning tool, a work support, and a feed wheel acting upon the channeled surface of the sole outside of the channel flap, a shaft carrying said feed wheel, and means for adjusting said shaft and feed wheel in the plane of the sole transversely to the direction of feed, substantially as described.

2. A channel flap turning machine, having in combination, a flap turning tool, a work support, a feed wheel acting upon the channeled surface of the sole outside of the channel flap, and means for adjusting the feed wheel in the plane of the sole transversely to the direction of feed, substantially as described.

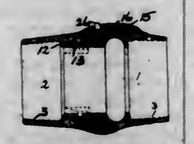
3. A channel flap turning machine, having in combination, a flap turning tool, a feed wheel acting upon the channeled surface of the sole outside of the channel flap, a rotary work support cooperating with the feed wheel to feed the work, means for actuating the feed wheel and work support, and means for relatively adjusting the feed wheel and work support transversely to the direction of feed, substantially as described.

4. A channel flap turning machine, having in combination, a feed wheel arranged to engage the channel surface, a flap turning wheel mounted to rotate on an axis substantially parallel with the surface of the sole, the acting face of the said wheel moving in a direction transverse of the channel flap, and means for adjusting said wheel in a direction substantially perpendicular to the surface of the sole, substantially as described.

5. In a channel flap turning machine, a flap turning wheel adjustably mounted to rotate on an axis substantially parallel with the surface of the sole, and provided with projections upon its periphery shaped to impel the work in the direction of the feed, and a feed wheel acting upon the channeled surface of the sole outside the channel flap, substantially as described.

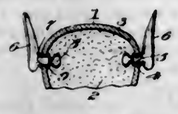
[Claims 6 to 13 not printed in the Gazette.]

898,017. HOSE-COUPLING. WILLIAM B. STEEN, Millcreek township, Erie county, Pa. Filed Jan. 25, 1907. Serial No. 354,017.



In a hose coupling mechanism the combination with the male and female fittings having interlocking cams adapted to be interlocked by the relative axial and rotative movements of the members; of a locking device comprising ratchet teeth on one of the members and a pawl arranged to move in an axial direction on the other of said members for holding the fittings in interlocked position; a spanner wrench having means for engaging one of said fittings and having devices thereon for actuating the pawl by direct engagement of the operative end of the pawl and movement in an axial direction while in engagement with the fitting.

898,018. TOY IN FORM OF AN ANIMAL. FRANZ STEIFF, Giengen, Germany. Filed Feb. 7, 1908. Serial No. 414,786.



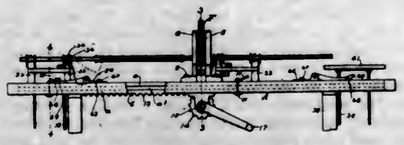
1. A toy animal comprising in combination, two portions each composed of yielding material, one of said portions having an opening and the other of said portions having a projection, said projection having a portion substantially equal in size with respect to said opening and a terminal or end slightly larger than said opening and serving to retain said portions in articulated relation and permit disconnection thereof.

2. A toy-animal comprising in combination two portions, one of said portions having an opening and the other of said portions having a projection, said projection having a portion substantially equal in size with respect to said opening and an end formed of yielding material slightly larger than said opening, and retaining means associated with said projection and the first mentioned portion for retaining the parts in assembled relation.

3. A toy-animal comprising in combination two portions, one of said portions having an opening and the other of said portions having a projection, said projection having a base portion substantially equal in size with respect to said opening and an end formed of yielding material and slightly larger than said opening, and retaining means consisting of a washer provided with portions engaging said projection for maintaining parts in the assembled relation when said projection is inserted through said opening.

4. A toy animal comprising in combination, two portions, one of said portions having an opening and the other of said portions having a projection, said projection having a portion substantially equal in size with respect to said opening and a yielding terminal or end slightly larger than said opening and serving to retain said portions in articulated relation and permit disconnection thereof.

898,019. MACHINE FOR MAKING MOPS AND BRUSHES. LOUIS STOCKER, Knoxville, Tenn., assignor to Myer Bridges Company, Louisville, Ky., a Corporation. Filed July 5, 1906. Serial No. 324,860.



1. In a machine for making mops and brushes, the combination with a handle support, of an abutment gage disposed adjacent one end thereof normally out of alinement with a handle in said support and movable into alinement therewith.

2. In a machine for making mops and brushes, the combination with a handle support, of an abutment gage disposed adjacent one end thereof and normally out of alinement with a handle in said support, and mechanism for moving said gage into alinement therewith.

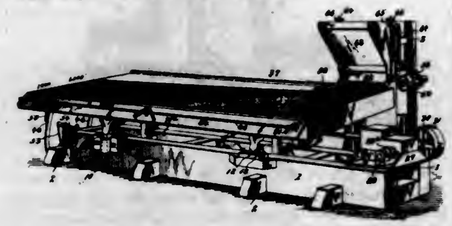
3. In a machine for making mops and brushes, the combination with a handle support, of a pivoted abutment gage normally out of alinement with a handle in said support and movable into alinement therewith.

4. In a machine for making mops and brushes, the combination with a handle support, of a pivoted abutment gage normally out of alinement with a handle in said support, mechanism for moving said gage into alinement therewith, and means acting on said mechanism for automatically moving said gage out of such alinement.

5. In a machine for making mops and brushes, the combination with a handle support, of a pivoted abutment gage normally out of alinement with a handle in said support, mechanism for moving said gage into alinement therewith, and a spring acting upon said mechanism for moving said gage out of such alinement.

[Claims 6 to 37 not printed in the Gazette.]

898,020. SEPARATING-TABLE. HENRY M. SUTTON, WALTER L. STEELE, and EDWIN G. STEELE, Dallas, Tex. Filed Sept. 22, 1906. Serial No. 335,836.



1. A concentrating table having a floor free from obstructions and impervious to the passage of material therethrough while pervious to air under pressure, in combination with means for passing air through said floor, means for causing the heavier and lighter materials to travel in divergent paths, and separated air controlling strips secured in contact with the under surface of said floor and disposed to form intermediate continuous air passages extending substantially transversely to the path of travel of the relatively lighter components of the material thereon.

2. A concentrating table having a floor free from obstructions and impervious to the passage of material therethrough while pervious to air under pressure, in combination with means for passing air through said floor, and separated air controlling strips each having a tapered outline secured in contact with the under surface of said floor and disposed transversely to the path of travel of a relatively lighter component of the material thereon.

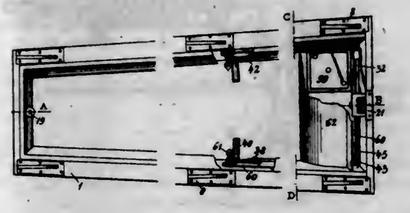
3. A concentrating table having a floor free from obstructions and impervious to the passage of material therethrough while pervious to air under pressure, in combination with means for passing air through said floor, and controlling means extending transversely to the path of travel of a relatively lighter component of the material thereon and gradually varying the width throughout the length thereof.

4. A concentrating table having a floor free from obstructions and impervious to the passage of material therethrough while pervious to air under pressure, in combination with means for passing air through said floor, and separated air controlling strips secured in contact with the under surface of said floor and disposed transversely to the path of travel of a relatively lighter component of the material thereon, said table being provided with an uncontrolled area beyond the longitudinal termini of the strips.

5. A concentrating table having a floor free from obstructions and impervious to the passage of material therethrough while pervious to air under pressure, means for causing the heavier and the lighter materials to travel in divergent paths thereon, in combination with means for passing air through said floor, and means disposed transversely to the path of travel of the relatively lighter component of the material thereon for controlling the effectiveness of said air pressure through said floor in different lines longitudinally of the travel of the heavier components.

[Claims 6 to 17 not printed in the Gazette.]

898,021. SAFETY-COFFIN. JOHAN J. TOOLEN, The Hague, Netherlands. Filed Jan. 29, 1907. Serial No. 354,614.



1. A safety coffin comprising, in combination, a coffin-body, a lid slidably fitting said body and one of said parts having an arm fitting a groove in the other part for securing the lid to the coffin-body, a spring exerting a constant pull upon the lid when slid to closed position, a bolt for retaining the lid in said position, and means within the coffin-body for moving the bolt to release the lid and permit the spring aforesaid to draw the lid to open position.

2. A safety coffin comprising, in combination, a coffin-body, a lid slidably fitting said body, a spring exerting a constant pull upon the lid when slid to closed position, a movable bolt carried by the coffin-body and engaging a recess in the lid when in said position, means within the coffin-body for moving the bolt from the recess to release the lid and permit the spring aforesaid to draw the lid to open position, and levers, within the coffin-body and connected by wires, for releasing the bolt-moving means aforesaid.

3. A safety coffin comprising, in combination, a coffin-body, a lid slidably connected with said coffin-body by means which prevent the lid being raised away from the coffin-body, means exerting a constant pull upon the lid when slid to closed position, a bolt within the coffin-body for retaining the lid in said position, and means, within the coffin-body, for moving the bolt and releasing the lid.

4. A safety coffin comprising, in combination, a body, a lid which can be slid on to the body, a bolt for retaining the lid in position when slid on, a spring tending to force the bolt upwards, means for forcing the bolt downwards, a lever, wires connected to the lever, means for pulling the wires, and means for automatically drawing off the lid.

5. A safety coffin comprising, in combination, a body, a sliding lid therefor having a recess at one end, a bolt on the body and adapted to enter the recess, a spring acting on the bolt to force it upwards, a projection on the bolt, a spring capable of acting thereon, a lever, wires connected to the lever, second levers with handles connected to the wires and means for automatically drawing off the lid.

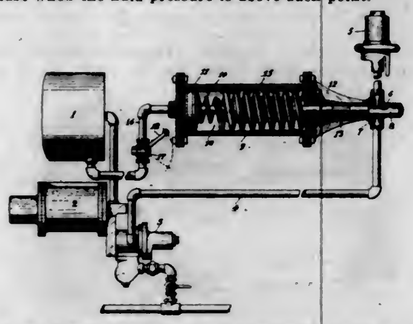
[Claims 6 to 12 not printed in the Gazette.]

898,022. FLUID-PRESSURE BRAKE. CLARENCE A. TRIPP, Los Angeles, Cal. Filed Apr. 29, 1908. Serial No. 429,806.

1. In a fluid brake system means for automatically closing the exhaust from the triple valve by fluid pressure when such pressure is below a predetermined point, and for opening the exhaust when the pressure rises above such point.

2. In a fluid brake system, fluid pressure operated means for closing the exhaust from the triple valve when the fluid pressure is below a predetermined point and for opening the exhaust when the pressure rises above such point.

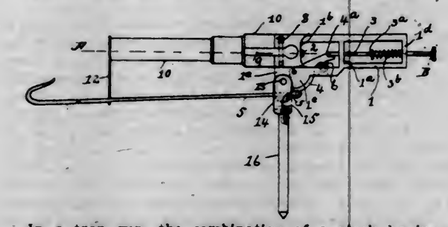
3. In a fluid pressure brake system, the combination with the auxiliary reservoir, brake cylinder, and triple valve, of fluid pressure operated means for cutting off the exhaust from the triple valve when the fluid pressure is below a predetermined point; and for opening the exhaust when the fluid pressure is above such point.



4. In a fluid brake system the combination of an auxiliary reservoir, brake cylinder, triple valve and pressure retaining valve, with a valve on the connection between the pressure retaining valve and the triple valve; fluid pressure operated means connected to said valve for closing the valve on the connection between the pressure regulating valve and triple valve when the fluid pressure is below a predetermined point and for opening said valve when the pressure rises above such predetermined point.

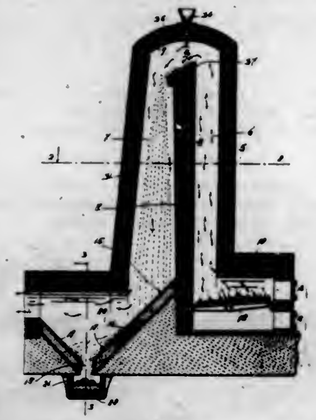
5. In a fluid brake system an auxiliary reservoir, a brake cylinder; a triple valve; a pressure retaining valve; connections between said parts; a valve on the connection between the pressure retaining valve and the triple valve; a piston chamber having the casing thereof connected to said valve casing; a piston in said chamber having a stem extending into the casing of the valve and forming the stopper of said valve, said stopper being reduced in size near the end thereof; two springs in said piston chamber on said stem, one of said springs being lighter and longer than the other; a connection from said piston chamber to the auxiliary reservoir; a three-way valve on said connection.

898,023. TRAP-GUN. WILLIAM J. WHEELER, Duluth, Minn. Filed Nov. 4, 1907. Serial No. 400,503.



In a trap gun, the combination of a stock having a breech block formed thereon said breech block being reduced in diameter at its forward end and having an aperture formed therein and extending longitudinally thereof, said stock having a depending forked lug at its forward end, a spring operated reciprocating firing bolt mounted in said stock, a firing pin mounted in said aperture in said breech block in alinement with said hammer, a bell crank trigger pivoted intermediate of its ends to said stock forward of said firing bolt and extending rearwardly, a hook pivotally connected to the lower arm of said lever and extending forwardly through said forked lug, said trigger being adapted at its upper end in set position to extend into the path of said firing bolt, a barrel removably mounted on said breech block, said barrel having recesses formed in its sides, spring controlled dogs, pivotally secured to said breech block and extending forwardly and externally overlapping the rearward end of said barrel, said dogs having projections formed thereon adapted in operation to engage said recesses formed in the sides of said barrel, substantially as described.

898,024. ROASTING-FURNACE. ARTHUR R. WILFLEY, Denver, Colo. Filed Oct. 13, 1906. Serial No. 338,726.



1. A roasting furnace of the character described, comprising a source of heat, an upwardly extending flue connected with the heat source, means for feeding the ore to be treated whereby it shall enter the ore flue in the upper part of the latter, a cooling medium located at the bottom of the last named flue with which the falling ore comes in contact, said medium being of such a nature as to cause the falling ore to slide therefrom automatically, and means located at the bottom of the furnace for excluding the atmospheric air substantially as described.

2. An ore roasting furnace comprising a source of heat, a hot air flue leading upwardly from the heat source, an ore roasting flue communicating at the top with the upper extremity of the hot air flue, the ore flue being provided at its discharge extremity with a water jacketed bottom downwardly inclined whereby the ore is cooled and automatically caused to slide from the furnace, to a device that is free from atmospheric air for the purpose set forth.

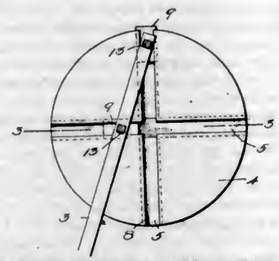
3. A roasting furnace provided with an upwardly extending roasting flue, a source of heat communicating with said flue at the top which is also provided with an inlet for the ore to be treated, the flue having an inclined water jacketed bottom whereby the ore is caused to slide away from the roasting compartment, the structure being provided with an ore outlet at the lower extremity of the said inclined bottom beyond the limits of the flue, and vibrating means located underneath said outlet for receiving the ore and causing it to travel gradually out of the furnace.

4. A furnace of the class described, provided with an upright roasting flue having a feed opening at the top, a source of heat communicating with said flue at the top whereby the hot air is caused to travel downwardly through the said flue, the said flue being provided with a downwardly inclined water jacketed bottom, a discharge opening at the lower extremity of said bottom, a trough having a water jacketed bottom located underneath the outlet opening, and means for imparting a longitudinal vibratory movement to the said trough whereby the roasted ore is caused to travel out of the furnace.

5. A furnace of the class described provided with an upright roasting flue or compartment provided with a feed opening at the top, the said flue increasing in cross sectional area from the top downwardly, the bottom of the flue being provided with a cooling medium arranged to cause the ore to pass automatically beyond the path of the falling ore particles, substantially as described:

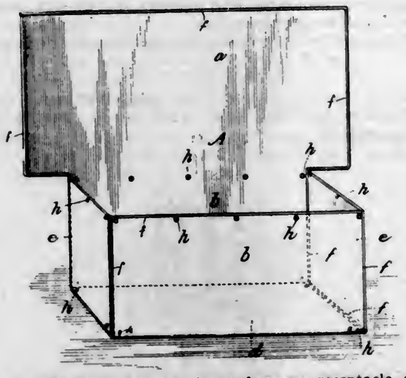
[Claims 6 and 7 not printed in the Gazette.]

898,025. TRANSMISSION MECHANISM. ARTHUR F. WILSON, EDWARD L. SOUTHWICK, and IRA M. SOUTHWICK, Medo, Minn. Filed May 11, 1907. Serial No. 373,040.



In a device of the class described, a rotary drive shaft, a trammel carried thereby and provided with detachable guide-ways having inturned bearing flanges, one of the guide-ways being transversely channeled intermediate of its ends to establish communication with the other guide-way, head blocks slidably disposed in the guide-ways and retained therein by said flanges, said blocks being provided with bearing openings, pivoting members extended through said openings and having spindles projecting beyond the face of the wheel, a pitman having openings to receive said spindles, retaining members applied to the outer ends of the spindles for securing the pivoting members to the pitman, and a reciprocatory member connected for operation by the latter.

898,026. TRUNK-LINING. MILDRED C. WILSON, New Haven, Conn. Filed Mar. 4, 1908. Serial No. 419,132.



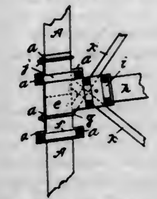
1. A waterproof lining for a baggage receptacle consisting of strong, flexible waterproof material shaped to fit the inside of such receptacle and having permanently closed, moisture-proof lower and vertical joints at its end corners, said lining being provided with a top portion entirely covering the top of the receptacle and overlapping the vertical parts of said lining so as to be adapted to tuck in at its front and ends to form practically moisture-proof joints around the top of the receptacle, and means for detachably securing said lining to such receptacle.

2. A waterproof lining for a baggage receptacle consisting of waterproof material shaped to fit the inside of such receptacle and having joints at the corners which are bound with tape to render them waterproof, said lining being provided with an overlapping top and with means for detachably securing said lining to such receptacle.

3. A waterproof lining for a baggage receptacle consisting of flexible waterproof material shaped to fit the inside of such receptacle and the tops, sides and bottom of which are of one seamless piece, and the said lining having permanently closed, moisture-proof lower and vertical joints at its end corners, combined with means for detachably securing the said lining to such receptacle, the said top of said lining being of sufficient size to largely overlap at the ends and front sides so as to tuck in at these points to afford practically moisture-proof overlapping joints around the top of the receptacle.

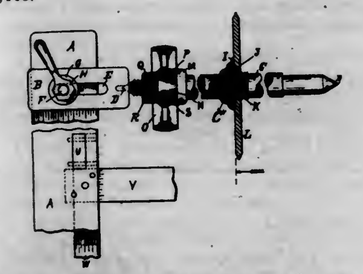
4. A waterproof lining for a baggage receptacle consisting of flexible waterproof material adapted to fit the inside of such receptacles and the top, sides and bottom of which are in one seamless piece, and the said lining having joints at its corners bound with tape to render them waterproof, combined with means for detachably securing the said lining to such receptacle, and the said top of said lining being of sufficient size to largely overlap at the ends and front side to afford practically moisture-proof overlapping joints.

898,027. DERRICK. PATRICK YORKE, Washington, Pa. Filed Jan. 23, 1908. Serial No. 412,327.



A derrick for oil, gas and Artesian wells, constructed of several sections which together with the girths and braces are rigidly secured and held in position by means of angle and T-irons and yokes which embrace said parts forming clamping devices therefor, all substantially as shown and described.

898,028. GLASS-CUTTING GRINDER. JOHN T. YOUNG, Elmira, N. Y., assignor of one-half to Benjamin N. Payne, Elmira, N. Y. Filed June 24, 1907. Serial No. 380,448.

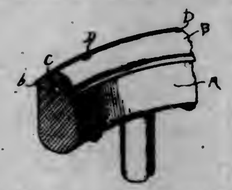


1. The combination of a shaft provided with a flange or collar and a screw-thread near said collar, of a driving-pulley having a part of its hub recessed and out of contact with the shaft and another part threaded and screwed on to the shaft, the inner face of the hub around the recess being held against the face of said flange or collar, for the purpose specified.

2. The combination of a shaft provided with two flanges formed with oppositely arranged screw-threads adjacent said flanges and leading to the faced sides thereof and one of which flanges is formed with annular ribs, a grinding-disk screwed up against the face of said ribbed flange and a driving-pulley having a part of its hub recessed and

out of contact with the shaft and another part screwed on to the shaft, the inner face of the hub around the recessed portion being held against the faced side of the adjacent flange, for the purpose specified.

898,029. METALLIC TIRE. WOLSEY R. HARBOUR, Terre Haute, Ind. Filed Apr. 16, 1907. Serial No. 368,472.



1. In a vehicle wheel, a suitable tire, said tire having recesses in its inner surface interrupted by a series of transverse ribs, the said ribs having recesses.

2. In a vehicle wheel, a felly, a tire secured thereto, said tire being approximately semi-elliptical in cross section and having an annular groove adapted when applied to the felly to form a channel, said channel being interrupted by a series of transverse ribs, said ribs having recesses, said tire extending beyond either side of the felly, the portions of the tire beyond the felly being beveled.

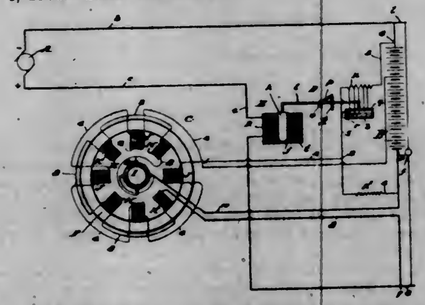
3. In a vehicle wheel, a felly, a tire secured thereto, said tire being approximately semi-elliptical in cross section and having an annular groove adapted when applied to the felly to form a channel, said channel being interrupted by a series of transverse ribs, said tire extending beyond either side of the felly, the portions of the tire beyond the felly being beveled toward the felly.

4. A tire having a flat surface adapted to contact with a felly, a convexed tread surface merging with concavities near the edges of the tire, the said tire being of greater width than the felly, the portions beyond the felly having their under surfaces beveled from the felly and merging with the outer or tread surface of the tire at acute angles.

5. A new article of manufacture consisting of a vehicle tire, the edges of the tire being adapted to extend beyond the sides of a felly when the tire is attached thereto, the outer surface of the tire having a convex center and concaved on the sides of the center toward the edges, the surface of the said felly toward each edge extending away from the inner surface of the tire, each edge of the tire being beveled from its inner surface to a point of intersection with the outer surface of the tire.

[Claim 6 not printed in the Gazette.]

898,030. SYSTEM OF REGULATION. JOSEPH BIJUR, New York, N. Y., assignor to The General Storage Battery Company, a Corporation of New York. Filed Apr. 4, 1906. Serial No. 309,767.



1. In a system of electric regulation the combination of the source of supply and work circuit, of a storage battery for compensating for variations on the work circuit, a booster connected to control the charge and discharge of the battery having an auxiliary field winding for compensating for armature reaction, and a main field winding for varying the direction and amount of voltage of the booster, and regulating means varying in accordance with changes on the work circuit for controlling the strength of said main field.

2. In a system of electric regulation the combination of the source of supply and work circuit, of a storage battery for compensating for variations on the work circuit, and a booster connected to control the charge and discharge of the battery, said booster having a main field whose strength and direction of magnetization varies in accordance with changes on the work circuit, and an auxiliary field whose strength and direction of magnetization vary in accordance with the amount and direction of current in the booster armature.

3. In a system of electric regulation the combination of the source of supply and work circuit, of a storage battery for compensating for variations on the work circuit, a booster connected to control the charge and discharge of the battery, having an auxiliary field responsive to the direction and amount of current in the booster armature for compensating for armature reaction, and a main field variable in direction and amount in accordance with changes on the work circuit for varying the direction and amount of voltage of the booster and regulating means for varying said main field in accordance with changes on the work circuit.

4. In a system of electric regulation, the combination of the source of supply and work circuit, of a booster having an auxiliary field for compensating for armature reaction and a main field responsive to changes on the work circuit, and regulating means varying in accordance with changes on the work circuit for controlling the strength of said main field.

5. In a system of electric regulation the combination of the source of supply and work circuit, of a booster provided with a main field whose strength and direction of magnetization vary in accordance with changes on the work circuit, and also having an auxiliary field whose strength and direction of magnetization vary in accordance with the current in the booster armature for compensating for armature reaction, and regulating means varying in accordance with changes on the work circuit for controlling said main field.

[Claims 6 to 15 not printed in the Gazette.]

898,031. DOUBLE-ACTING SPRING-HINGE. EMIL BOMMER, New York, N. Y. Filed Oct. 26, 1904. Serial No. 230,089.



1. A double-acting spring-hinge comprising in its construction two spring-barrels, a web connecting said barrels, flanges jointed to the respective barrels, and two ball-bearings interposed between the barrels and the joints carrying the load diagonally to each other, one at the lower end of one spring-barrel and the other at the upper end of the other spring-barrel.

2. A double-acting spring-hinge comprising in its construction two spring-barrels, a web connecting said barrels, flanges jointed to the respective barrels, and two ball-bearings interposed between the fixed tension-collars and the respective lower and upper ends of the spring-barrels and the adjacent pintle-sockets and located diagonally to each other, one at the lower end of one spring-barrel and the other at the upper end of the other spring-barrel.

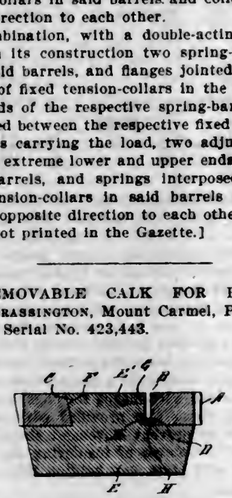
3. A double-acting spring-hinge comprising in its construction two spring-barrels, a web connecting said barrels, flanges jointed to the respective barrels, two ball-bearings interposed between the barrels and the joints carrying the load diagonally opposite to each other, one being interposed between the upper end of one spring-barrel and the joint carrying the load and the other between the lower end of the other spring-barrel and the joint carrying the load, and two adjustable tension-collars, also placed diagonally opposite to each other and located respectively one at the extreme lower end of the first spring-barrel and the other at the extreme upper end of the second spring-barrel.

4. The combination with a double-acting spring-hinge, comprising in its construction two spring-barrels, a web connecting said barrels, and flanges jointed to the respective barrels, of fixed tension-collars located diagonally opposite to each other, one at the lower end of one spring-barrel and the other at the upper end of the other spring-barrel and adjustable tension-collars located diagonally opposite to each other, one at the upper end of the first spring-barrel and the other at the lower end of the other spring-barrel, and springs interposed between the respective tension-collars in said barrels and coiled respectively in opposite direction to each other.

5. The combination, with a double-acting spring-hinge comprising in its construction two spring-barrels, a web connecting said barrels, and flanges jointed to the respective barrels, of fixed tension-collars in the extreme upper and lower ends of the respective spring-barrels, ball-bearings interposed between the respective fixed tension-collars and the joints carrying the load, two adjustable tension-collars at the extreme lower and upper ends of two respective spring-barrels, and springs interposed between the respective tension-collars in said barrels and coiled respectively in opposite direction to each other.

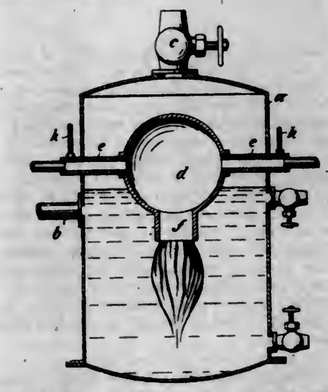
[Claim 6 not printed in the Gazette.]

898,032. REMOVABLE CALK FOR HORSESHOES. ISAAC S. BRASSINGTON, Mount Carmel, Pa. Filed Mar. 26, 1908. Serial No. 423,443.



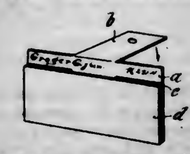
A removable calk for horse-shoes comprising, in combination with a shoe having an elongated slot formed in the toe thereof, one end wall of said slot being inclined, the other end at right angles to the face of the shoe and provided with a tapering keyway at the lower marginal edge of the opening, a toe calk having a shank portion conforming to the shape of the slot at the toe of the shoe in which it is seated, one end of the shank of said calk being undercut and forming with the inclined end wall of the slot a dove-tail connection, the opposite end of the shank of the calk having a tapering keyway opposite the keyway in the end of the slot, a tapering key having its opposite longitudinal edges inclined to conform to said inclined keyways and adapted to hold one end of the shank of the calk in dove-tail connection with the end of the slot, a space intervening between the opposite end of the slot and the adjacent end of the shank of the calk, as set forth.

898,033. PROCESS OF MAKING NITRIC ACID. OSCAR H. U. BRÜNLER, Leipzig-Gohlis, Germany. Filed Mar. 13, 1906. Serial No. 305,817.



Process of converting the nitrogen of the air into nitric acid, by burning in a burner immersed, mouth downwards, in water a mixture of combustible gas, oxygen and nitrogen, which mixture contains more oxygen than the atmospheric air, as and for the purpose specified.

898,034. CARD-CHAIN FOR SYSTEMATIC FILING OF MEMORANDA. HERMANN BRUNS, Munich, Germany. Filed Jan. 8, 1907. Serial No. 351,388.



1. A card chain unit consisting of a card having a tongue and an opening parallel to and at a distance from the tongue-bearing edge and of a length at least equal to the width of the tongue.

2. A card chain unit consisting of a card having a tongue projecting from its upper edge and an opening parallel to and at a distance from the tongue-bearing edge in line vertically with the tongue and of a length at least equal to the width of the tongue.

3. A card chain unit consisting of a card having a plurality of tongues and openings parallel to and at a distance from the tongue-bearing edge and of a length at least equal to the width of the tongues.

4. A card chain unit consisting of a card having a plurality of tongues projecting from its upper edge and openings parallel to and at a distance from the tongue-bearing edge in line vertically with the respective tongues and of a length at least equal to the width of the tongues.

5. A card chain unit consisting of a card having a perforated tongue projecting from its upper edge and an opening parallel to and at a distance from the tongue-bearing edge in line vertically with the tongue and of a length at least equal to the width of the tongue.

[Claims 6 to 13 not printed in the Gazette.]

898,035. AUDIPHONE. CYRUS L. BUCKWALTER, Loudonville, Ohio. Filed Feb. 13, 1908. Serial No. 415,740.

1. In an audiphone, a mouth piece, a diaphragm therefor, of a plurality of telescoping sections connecting the

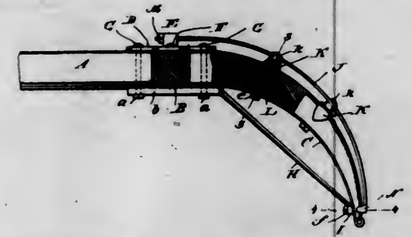
same, and an intensifier connected to the diaphragm and mouth piece which comprises a retractile member for the sections.



2. An audiphone comprising a plurality of telescoping sections, a diaphragm secured to one of said sections, a mouth piece secured to another of said sections, an intensifier connected with the diaphragm and the mouth piece which comprises a spiral retractile spring adapted to normally hold the sections collapsed or telescoped, a handle on one of the sections, and means operated by the handle for holding the sections in extended position.

3. In an audiphone, a roller, a plurality of telescoping sections, a mouth piece carried by one of said sections, a diaphragm carried by another of said sections, means to normally hold said sections in collapsed position, said means acting as an intensifier, a resilient spring catch carried by one of the sections and adapted to engage its adjoining sections to hold it in extended position, a spring operating handle carried by the spring clip and adapted to operate the catch.

898,036. VEHICLE-SHAFT. LOUIS BURG, Dallas City, Ill. Filed Jan. 27, 1908. Serial No. 412,869.



1. The combination with the heel portion of a vehicle shaft, of an inclined brace bar disposed under the shaft and connected at its ends therewith, a plate connected with and arranged on the shaft and also connected with the forward portion of the brace bar and having an apertured projection, a stay-bar arranged above and curved correspondingly to the shaft and connected at its rear end with the shaft and the brace-bar and having its forward portion threaded and extended through the said apertured projection on the plate, a nut mounted on the threaded portion of the stay-bar in front of the said projection, and saddles straddling and connected with the shaft and engaging the stay-bar to hold the latter against lateral movement.

2. The combination with the heel portion of a vehicle shaft, and a cross-bar connected to said shaft, of an inclined brace bar disposed under the shaft and connected at its ends therewith, a T-plate connected with and arranged on the shaft and cross-bar and also connected with the forward portion of the brace bar and having an apertured projection, a stay-bar arranged above and curved correspondingly to the shaft and connected at its rear end with the shaft and the brace bar and having its forward portion extending through the apertured projection on the T-plate, a nut mounted on the threaded portion of the stay-bar in front of the said projection, and saddles straddling and connected with the shaft and engaging the stay-bar to hold the latter against lateral movement.

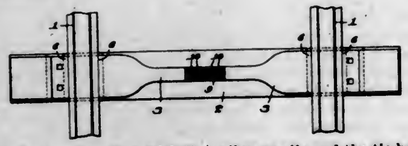
3. The combination with the heel portion of a vehicle shaft, of an inclined brace bar disposed under the shaft and having a T-head at its rear end on which is a teat to engage the shaft iron, a plate arranged on the shaft and having an apertured projection; said plate being bolted to the shaft and the forward portion of the brace bar, a stay-bar arranged above and curved correspondingly to the shaft and having a clip or shackle at its rear end straddling the shaft and connected with said T-head and also having a teat on said clip or shackle engaging the shaft and further having its forward portion threaded and extended through the said apertured projection on the plate, a nut mounted on the threaded portion of the stay-bar in front of the said projection, and saddles straddling and connected with the shaft and engaging the stay-bar to hold the latter against lateral movement.

4. The combination with the heel portion of a vehicle shaft, of an inclined brace bar disposed under the shaft and having a T-head at its rear end, a plate arranged on the shaft and having an apertured projection; said plate being connected with the shaft and the forward portion of the brace bar, a stay-bar arranged above and curved correspondingly to the shaft and having a clip or shackle at its rear end straddling the shaft and connected with said T-head, and also having its forward portion threaded and extended through the said apertured projection on the plate, a nut mounted on the threaded portion of the stay-bar in front of the said projection, and saddles straddling and connected with the shaft and engaging the stay-bar to hold the latter against lateral movement.

5. The combination of the curved heel portion of a vehicle shaft, a curved stay-bar arranged above and separated by an intervening space from the said heel portion and connected at its rear end with the said heel portion, an adjustable connection between the forward end of the stay-bar and the heel portion of the shaft, and means interposed between the heel portion of the shaft and the stay-bar and arranged to hold the latter.

[Claims 6 to 8 not printed in the Gazette.]

898,037. INSULATED GAGE-PLATE. EDWARD J. CLARK, Baltimore, Md. Filed Sept. 19, 1906. Serial No. 335,195.



1. The combination with the railway rails and the tie having depressions therein of a two part plate resting upon the tie and provided with means for engaging said depressions, said plate being also provided with means for engaging the rails to prevent movement thereof away from each other, a plate of insulating material extending over the two parts of the first named plate and arranged within a depression in the tie, and bolts securing the second named plate to the two parts of the first named plate.

2. The combination with the railway rails and the tie, having depressions therein, of a two part plate resting upon the tie and provided with means for engaging said depressions said plate being also provided with means for engaging the rails to prevent movement thereof away from each other, and a member of insulating material secured to the parts of said plate, and holding them in fixed relation to each other.

3. The combination with the railway rails and the tie having depressions therein, of a two part plate resting upon the tie and provided with means for engaging said depressions, said plate being also provided with means for engaging the rails to prevent movement thereof away from each other; a plate of insulating material extending over the two parts of the first named plate, and bolts securing the second named plate to the two parts of the first named plate.

898,038. RECOIL-OPERATED FIREARM. BRUNO CLARUS, Lüttich, Belgium. Filed Dec. 26, 1906. Serial No. 349,503.

1. In a recoil loading firearm, a fixed barrel, a receiver sliding on said barrel, a spring extending substantially the length of the barrel, and a casing or barrel for said spring fixed to the firearm within said receiver.



2. In a recoil loading firearm, a fixed barrel, a hollow receiver mounted to slide upon said firearm, a spring casing or barrel fixed to said firearm within said sliding receiver, and a spring operating against said casing and adapted to move said receiver forwardly.

3. In a recoil loading firearm, a fixed barrel, a hollow receiver mounted to slide upon said firearm, a spring casing or barrel fixed to said firearm within said sliding receiver, and a spring operating against said casing and adapted to move said receiver forwardly, and said casing being adapted to form a guide for said receiver.

4. In a recoil loading firearm, a fixed barrel, a sliding receiver, a casing or barrel within said receiver, a spring for operating against said casing and means for limiting compression of said spring, and a recoil spring adapted to operate independently of said actuating spring.

5. In a recoil loading firearm, a fixed barrel, a sliding receiver, a casing or barrel within said receiver, a spring for operating against said casing and means for limiting compression of said spring, and a recoil spring adapted to operate independently of said actuating spring, said recoil spring being mounted in said casing.

[Claims 6 and 7 not printed in the Gazette.]

898,039. GALLOCYANIN DYE AND PROCESS OF MAKING SAME. CHARLES DE LA HARPE, RUDOLF BURCKHARDT, and ERNST ZEHNTNER, Basel, Switzerland, assignors to The Firm of Dye Works formerly L. Durand, Huguenin & Co., Basel, Switzerland. Filed Apr. 21, 1908. Serial No. 428,410.

1. The described process for the manufacture of sulfonated gallocyanins consisting in condensing the nitroso derivatives of the aromatic amins usually employed for the manufacture of gallocyanins with pyrogallolsulfonic acid, in a suitable medium.

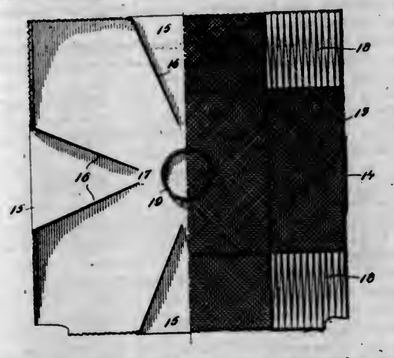
2. As new products the herein described sulfonated gallocyanins derived from pyrogallolsulfonic acid, which give with concentrated sulfuric acid blue solutions becoming magenta red when diluted with water, are insoluble in water in the form of free acids, dissolve in aqueous solutions of sodium acetate to a blue solution and in an aqueous solution of an alkali to violet solutions and dye wool violet to blue tints.

898,040. GALLOCYANIN AND PROCESS OF MAKING SAME. CHARLES DE LA HARPE and RUDOLF BURCKHARDT, Basel, Switzerland, assignors to The Firm of Dye Works, formerly L. Durand Huguenin & Co., Basel, Switzerland. Filed Apr. 21, 1908. Serial No. 428,411.

1. The herein described process for the manufacture of new gallocyanins consisting in condensing the nitrosomonoalkylarylamins with gallic acid and its derivatives.

2. As new products the herein described gallocyanins derived from the nitrosomonoalkylarylamins, which dye pure violet tints, constitute powders with bronze luster dissolving sparingly in water to violet solution and dissolving in sulfuric acid to blue solution turning to red by dilution with water.

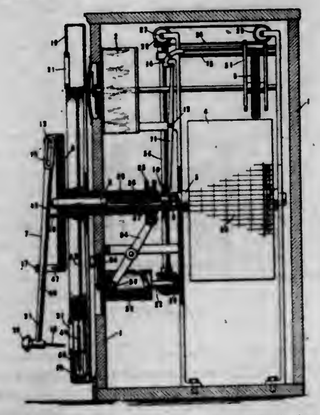
898,041. ANIMAL-TRAP. DECATUR D. DENNIS, San Antonio, Tex. Filed Jan. 20, 1908. Serial No. 411,718.



1. An animal trap consisting of a rectangular receptacle provided with a horizontal partition dividing the same into upper and lower compartments and having a plurality of openings, said lower compartment having, at each side, a series of fixed, but resilient, converging, sheet metal prongs disposed edgewise in vertical series and adapted to form oval openings, means for holding bait at or near the center of said lower compartment, and a plurality of upwardly-opening, hinged trap doors closing said openings in said horizontal partition, and through which openings entrapped animals in the lower compartment may pass up into and then be confined in the said upper compartment of the trap.

2. An animal trap comprising a substantially square receptacle provided with a horizontal partition dividing the same into upper and lower compartments, said receptacle having an inlet opening at each side thereof leading into said lower compartment, a plurality of inwardly inclined prongs arranged in vertical series at either side of each of said openings, means for holding bait at substantially the center of said lower compartment, and an upwardly opening trap door in each corner of said partition.

898,042. REGISTRATION-CONTROLLER FOR TIME-RECORDERS. HANNIBAL C. FORD, Syracuse, N. Y., assignor to Dey Time Register Co., a Corporation of New York. Filed Apr. 19, 1906, Serial No. 312,543. Renewed June 30, 1908. Serial No. 441,245.



1. In a mechanism of the class described, in combination, record forming means, movable means to actuate the same, means movable within the path of movement of said actuating means to prevent repetition of a completed rec-

ord, and means independent of said preventing means to restore the actuating means to operative condition without affecting the movement or changing the position of said preventing means.

2. In a mechanism of the class described, in combination, time record forming means, means to move a record receiving member into operative relation to the record forming means, means to render said moving means inoperative to repeat a completed record, means to cause relative lateral movement between said record forming means and the record receiving member, and means to restore said moving means to operative condition to form a different record from that completed, said means for rendering the movement means inoperative being independent of and unaffected by the action of said restoring means.

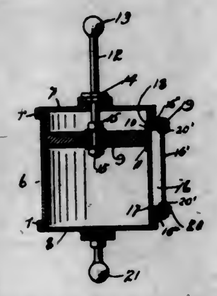
3. In mechanism of the class described, in combination, record-forming means, means for placing the same into operative relation to a record-receiving member, means adapted upon the actuation of said placing means to render the same inoperative, and means adapted to cause a relative lateral movement of said record forming means and the record-receiving member in two directions and upon movement in one of said directions to restore said placing means to operative condition and upon movement in the opposite direction to maintain said placing means in operative condition.

4. In mechanism of the class described, in combination, record-forming means, means adapted to place the same into operative relation to a record-receiving member, means adapted upon the actuation of said placing means to render the same inoperative, and means adapted to cause a relative lateral movement of said record forming means and the record-receiving member in two directions and upon movement in one of said directions to restore said placing means to operative condition and upon movement in the other direction to maintain said placing means in operative condition, said placing means being independent of and unaffected by the action of said last-mentioned means.

5. In mechanism of the class described, in combination, time record-forming means, means adapted to place a record-receiving member in operative relation thereto, manually-controlled means adapted to cause a relative movement of said first means and a record-receiving member in a predetermined direction, and means associated with said placing means adapted automatically to insure the chronological order of records formed in said direction.

[Claims 6 to 28 not printed in the Gazette.]

898,043. SHOCK-ABSORBER FOR VEHICLES. CHAS. K. FOSTER, Centerville, R. I. Filed June 12, 1907. Serial No. 378,557.

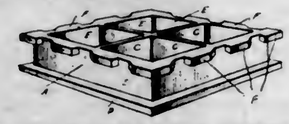


A shock absorber composed of a cylinder and a piston therein, said cylinder having ends provided with inwardly-extending flanges interiorly threaded and secured to the cylinder, a plate transversely curved and disposed between said flanges, said plate having right angular ends which are curved and secured to said cylinder, enlarged portions at each end of said plate, each of which is apertured, and a screw in each of said apertures, the wall of said cylinder adjacent said plate being formed with openings alining with said openings of the plate and adapted to receive said screws therein.

898,044. COMPOSITION OF MATTER. ATHELSTAN E. GOOCH, Campello, Mass., assignor to The Arabol Manufacturing Company, New York, N. Y., a Corporation of New York. Filed June 12, 1907. Serial No. 378,657.

The herein described composition of matter, or filler, for reinforcing the leather soles of welted shoes, consisting of a mixture of ground cork 2 to 3 lbs., and apparatine 1 gallon, said mixture drying within a few hours when exposed to the air to form with said cork a hornlike, elastic addition to the leather soles.

898,045. GLASS BRICK, TILE, AND BUILDING-BLOCK. PAUL E. GONON, New York, N. Y. Filed Nov. 21, 1904. Serial No. 233,752.

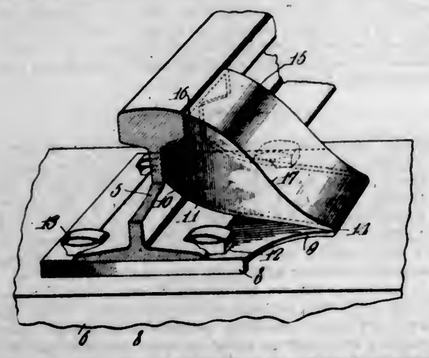


1. A block of the type set forth consisting of a body having ends, sides, and a face plate, said sides being formed with a series of outwardly projecting keys of quadrilateral form being of greatest area at their bases, the rearmost sides of the keys at the rear edge of the body sides and ends lying flush with the latter, some of said keys being located at the corners of the body and being of L-shape to extend on the sides and adjacent ends of the body.

2. A block of the type set forth consisting of a body having ends and sides, and a plurality of keys of rectangular form on said ends and sides, said keys at the corners of the body being of integral L-shape and extending on the sides and adjacent ends of the body, said keys being arranged in rows.

3. A block of the type set forth consisting of a body having ends and sides, and a plurality of rows of keys on said ends and sides, each key being of substantial rectangular form, one of said rows being arranged intermediate the top and bottom edges of said sides and ends and the other row being arranged so as to have one of their sides disposed flush with the rear edges of said sides and ends, and strengthening members on the inner faces of the sides and ends disposed transverse thereof.

898,046. BRACE AND PLATE. GUSTAVE H. GUNVALSON, Minneapolis, Minn. Filed Mar. 23, 1908. Serial No. 422,857.



1. A rail brace comprising a plate adapted to extend beneath and support the base of a rail, and having an intermediate portion thereof reduced in width and one end bent upwardly to form an over-hanging arm adapted to yieldably engage the head of the rail.

2. A rail brace comprising a plate adapted to extend beneath and support the base of a rail and provided with oppositely disposed depending reinforcing flanges, one end of the plate being reduced in width and bent upwardly to form an over-hanging arm having a seating recess formed therein for the reception of the head of the rail.

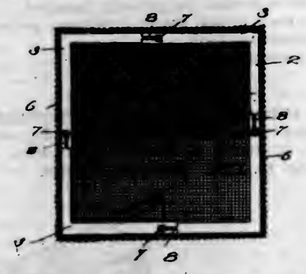
3. A rail brace comprising a plate adapted to extend beneath and support the base of a rail and provided with oppositely disposed longitudinal flanges, an intermediate portion of the plate being reduced in width to form a neck and one end of said plate bent to produce an over-hanging arm for engagement with the head of the rail, the opposite longitudinal edges of the arm being bent downwardly to form spaced reinforcing flanges.

4. A rail brace comprising a plate adapted to extend beneath and support the base of a rail and provided with oppositely disposed longitudinal reinforcing flanges, an intermediate portion of the plate being reduced in width to form a neck terminating in an over-hanging arm, the opposite longitudinal edges of which are provided with depending flanges, there being seating recesses formed in said flanges for the reception of the head of the rail.

5. A rail brace comprising a plate provided with spike receiving openings and having an intermediate portion thereof reduced in width and bent upwardly over the perforated portion of the plate to form an over-hanging arm, the opposite longitudinal edges of the arm being bent downwardly to form spaced reinforcing flanges the terminals of which are provided with seating recesses for the reception of the head of the rail.

[Claim 6 not printed in the Gazette.]

898,047. ADJUSTABLE FRAME. THOMAS J. HARFORD, Jersey City, N. J., assignor of one-half to J. J. Bamberger & Co., a Corporation of New York. Filed Aug. 26, 1907. Serial No. 390,219.

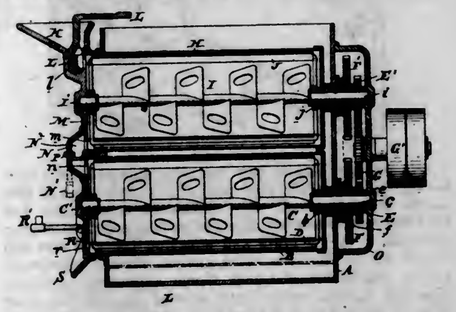


1. In an adjustable frame, four corresponding angular sections, each section consisting of a base having a flange which is curved over said base and provided upon its edge with a series of teeth, of telescopic connections between the said sections, and means for locking the said telescopic connections together, substantially as specified.

2. In an adjustable frame, corresponding telescopic sections, each section being provided with a locking means, the said sections consisting of a flat base having a flange which is curved over the base and provided with a series of teeth adjacent to the free edge of the base and a channel or groove formed by the said flange and base, substantially as shown and for the purpose specified.

898,048. ICE-CREAM FREEZER. JOSEPH H. HART, Philadelphia, Pa. Filed Oct. 28, 1907. Serial No. 399,426.

1. In an ice-cream freezer, the combination of a tank to contain the refrigerant, with two vessels arranged horizontally one above the other in the tank and adapted to be cooled by the refrigerant therein, means in each of the vessels for beating the contents thereof, a valved passage for supplying cream mixture to the upper vessel, a transference valve device for controlling the passage of the contents of the upper vessel into the lower vessel, and a valved discharge passage for permitting the contents of the lower vessel to be discharged outside of the tank.



2. In an ice-cream freezer, the combination of a tank to contain the refrigerant, with two vessels arranged horizontally one above the other in the tank and adapted to be cooled by the refrigerant therein, means in each of the vessels for beating the contents thereof, a valved passage for supplying cream mixture to the upper vessel, a transference valve device for controlling the passage of the contents of the upper vessel into the lower vessel, a valved discharge passage for permitting the contents of the lower vessel to be discharged outside of the tank, and means whereby the discharge valve for the lower vessel may when in the open position lock the transference valve device in its closed position.

3. In an ice-cream freezer, a vessel in which the cream is beaten and cooled, combined with a hopper for supplying the cream to the vessel, and a valve between the hopper and the vessel for controlling the flow of cream into the vessel provided with an extended plate adapted to be turned over and close the hopper when the valve is closed and vice versa.

4. In an ice-cream freezer, the combination of two vessels in which the cream is beaten and frozen arranged one above the other, combined with a cap plate fitting over the ends of the vessels and having an outlet port from the upper vessel and an inlet port to the lower vessel and a transference valve consisting of a circular plate rotatably supported on the cap plate over the said ports to close them and having a transverse channel which may be brought into alinement with the two ports to form a passageway for the discharge of the contents of the upper vessel downward into the lower vessel.

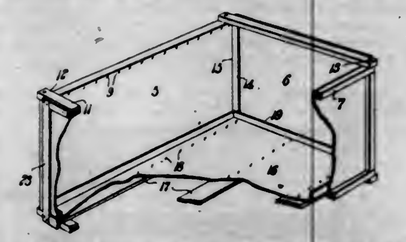
5. In an ice-cream freezer, the combination of a tank for the refrigerant, two vessels arranged one above the other horizontally in said tank, a beater and a scraper for each of the vessels journaled concentrically and respectively having parts extending through the vessels, and gearing for rotating the said beaters and scrapers held in operative position outside of the tank and adapted to receive and detachably connect with the extended parts of the beaters and scrapers for driving them whereby the beaters and scrapers may be withdrawn from the vessels and gearing for cleaning and the gearing be retained in normal position so as to again receive the extended parts of the beaters and scrapers.

[Claim 6 not printed in the Gazette.]

898,049. FOLDING SHIPPING-CASE. MALCOLM HUTCHINSON, Muskegon, Mich. Filed Mar. 29, 1907. Serial No. 365,353.

1. A folding shipping case including side and end panels having their adjacent ends pivotally united, some of said panels being provided with end flaps adapted to overlap adjacent panels to form a seal at the juncture of said

panels, and a bottom section engaging the inner faces of the end flaps for locking the panels in assembled position.



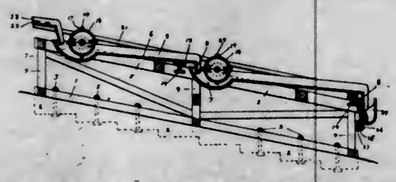
2. A folding shipping case including side and end panels having their adjacent ends pivotally united, some of said panels being provided with extensions constituting end flaps adapted to overlap adjacent panels, a bottom section combined with the crate and engaging the side and end panels for locking the same against pivotal movement, and a continuous marginal flange extending vertically from the bottom section and bearing against the inner faces of the end flaps for locking said flaps in engagement with the adjacent panels, the marginal flange being severed at each corner of the bottom section.

3. A folding shipping case including side and end panels having their adjacent ends pivotally united, some of said panels being provided with vertical creases forming foldable end flaps adapted to overlap the interior walls of adjacent panels, and a bottom section interposed between the side and end panels and bearing against the inner faces of the end flaps for locking the panels against pivotal movement.

4. A folding shipping case including end panels, side panels pivotally connected with the end panels and provided with vertical creases defining terminal flaps adapted to engage the interior walls of the end panels at the corners of the case, a bottom section combined with the case and adapted to engage the side and end panels for locking the same against pivotal movement, and a marginal flange flexibly connected with the bottom section and adapted to bear against the inner faces of the side panels and the inner faces of the end flaps for locking the panels against pivotal movement.

5. A folding shipping case including side and end panels having their adjacent ends pivotally united and foldable together when the case is collapsed, some of said panels being provided with terminal flaps adapted to overlap the interior walls of adjacent panels at the corner of the case, and a bottom section provided with a vertically disposed marginal flange adapted to bear against the inner faces of the side panels and the inner faces of the end flaps for locking the end flaps in engagement with the adjacent panels, said flange being provided with vertical slits at the corners of the bottom section.

898,050. LIXIVIATOR. WILLIAM L. IMLAY, Conestoga, Pa., assignor to William L. Imlay Rapid Cyanide Process Company, a Corporation of South Dakota. Filed Dec. 5, 1907. Serial No. 405,244.



1. In a lixiviator, a series of troughs adjustably mounted, each upon a lower level than the preceding one, and each provided with a receiving basin and a delivering lip, means for supporting said troughs in an adjustable manner, means for delivering the contents of said basin upon said trough, means for warming the contents of said basin, and for imparting a vibrating motion to said troughs, for the purpose set forth.

2. In a lixiviator, bearing plates rigidly supported upon a frame work, troughs formed with upwardly extending sides, bearing boxes integral with said sides, a bearing stud extending downward from said bearing boxes, orifices extending vertically through said bearing plates for the reception of said boxes and studs, a supporting bar having its ends secured to said bearing plates, an adjusting pin screw-threaded through said supporting bar near its center, guide studs formed upon said supporting bar, a basin formed in the upper end of said trough and a lip extension formed upon the lower end of said trough, for the purpose set forth.

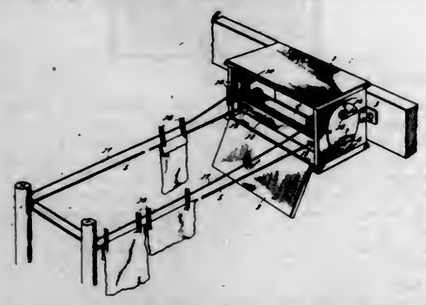
3. In a lixiviator, a series of troughs, adjustably mounted upon inclined bearing plates, bearing boxes integral with said troughs, a hollow drum mounted in said bearings, and revolving within said trough basin, hollow shafts concentric and integral with said drum rotatably mounted in said bearings, webs cast upon the outer surface of said drum, strips detachably connected upon the face of said webs, and means for rotating said drum, for the purpose set forth.

4. In a lixiviator, a series of troughs mounted upon an incline, each overlapping the other and formed at the upper end with basins, having circular bottoms, and at the lower end with extending lips, hollow shafts rotatably mounted in bearing blocks formed upon the sides of said troughs, sprocket wheels secured upon the extending ends of said shafts, an endless belt connecting and operating said sprockets, idlers mounted upon the supporting frame and retaining said chain belt in a taut position, for the purpose set forth.

5. In a lixiviator, a series of troughs each overlapping and delivering into the basin of the next in succession, a launder table formed with a series of pins in its upper surface and a downwardly extending lip delivering into the basin of the first trough of said series, a lip formed upon the lower end of the last trough of said series, having inwardly converging sides, a launder open at both ends and formed with a central lug pivotally mounted to the end transverse brace of said frame, under said projecting lip, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

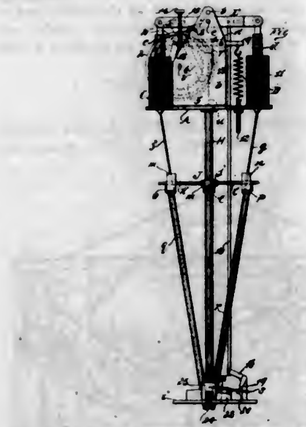
898,051. APPARATUS FOR DRYING CLOTHES. JULIE M. LEMON, Mono Mills, Ontario, Canada, assignor of one-half to Gavin J. Lemon, Mono Mills, Canada. Filed Aug. 16, 1907. Serial No. 389,228.



1. An apparatus of the character described, comprising a case, a spring retracted roller journaled in said case, a clothes line mounted to wind on said roller, and adapted to be drawn out of said case and fastened in an extended position, another spring roller journaled in said case, a clothes pin line mounted to wind on said last named roller and designed to be drawn out along and close to the clothes line and held in extended position, and clothes pins carried by the clothes pin line and adapted to secure clothes on the clothes line.

2. In an apparatus of the character described, the combination of two spring retracted rollers, separate lines mounted to wind on the respective rollers, and a series of clothes pins strung on one of said lines and adapted to hold articles on the other line.

898,052. ELECTRIC-ARC LAMP. ROBERT E. LEVE, New York, N. Y. Filed Jan. 22, 1908. Serial No. 412,107.



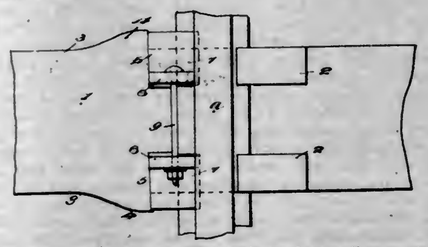
1. In an arc lamp, a suspended gravity feed electrode carriage sustaining a pair of dependent converging electrodes; feeding mechanism for said carriage comprising a winding drum for a suspension cord, a brake sheave and an escapement wheel all mounted concentrically upon and secured to a single rotatable shaft; a brake band fixed at one end and normally held under fixed tension about said brake sheave; means for adjusting said fixed tension; a shunt and a series coil; provisions for differentiating the joint effect of said coils; means intermediate said provisions and said brake band for decreasing said brake tension throughout only a part of the range of the differential effect of said coils; an escapement coöperating with said escapement wheel; and means intermediate said provisions and said electrodes for changing the relative lateral separation of the electrode ends throughout the range of said differential effect of said coils.

2. In an arc lamp, a suspended gravity feed electrode carriage sustaining a pair of dependent converging electrodes; feeding mechanism for said carriage comprising a winding drum for a suspension cord, a brake sheave and an escapement wheel all mounted concentrically upon and secured to a single rotatable shaft; a brake band fixed at one end and normally held under fixed tension about said brake sheave; means for adjusting said fixed tension; a shunt and a series coil; provisions for differentiating the joint effect of said coils; adjustable means intermediate said provisions and said brake band for decreasing said brake tension throughout only a part of the range of the differential effect of said coils; an escapement coöperating with said escapement wheel; and means intermediate said provisions and said electrodes for changing the relative lateral separation of the electrode ends throughout the range of said differential effect of said coils.

898,053. RAIL-FASTENER. KNUTE O. LOFTHUS, Brodhead, Wis. Filed Jan. 31, 1908. Serial No. 413,583.

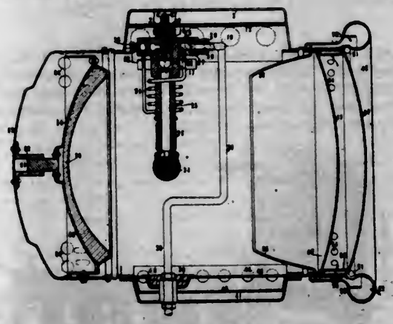
1. The combination with a tie and a rail mounted thereon, of means for engaging one edge of the rail, clamps embracing the side edges of the tie and adapted to bear against the rail, those surfaces of the clamps that bear against the rail and the upper surface of the tie being rounded, and means for drawing the clamps together, whereby to rock the same.

2. The combination with a tie and a rail mounted thereon, of means for engaging one edge of the rail, and clamps embracing the side edges of the tie and adapted to bear against the other edge of the rail, said clamps being formed with diverging ears, those surfaces of said clamps that bear against the rail being rounded, and means for drawing said ears together, whereby to rock the clamps.



3. The combination with a tie and a rail mounted thereon, of means for engaging one edge of the rail, hooked clamps embracing the side edges of the tie and adapted to bear against the other edge of the rail, said clamps being formed with upwardly diverging ears, those surfaces of said clamps that bear against the rail and the upper face of the tie being rounded, and a tie-bolt passing through the ears and arranged to draw the latter toward each other, as and for the purpose set forth.

898,054. PROJECTING-LANTERN. CHARLES M. LUNGREN, Bayonne, N. J., assignor to The Railway Utilities Company, a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,678.



1. A projecting lantern comprising in combination, a lantern body having a forward lens and an opening intermediate the ends of its upper portion, a ventilating hood overlying said opening, a vapor burner positioned in said opening by laterally extending lugs secured to said body, one or more of said lugs having air channels, an inspirator for commingling with vapor the air from said channels, a depending burner tube, a relatively small globular mantle mounted on the lower end of said tube, and a superheating coil arranged above said mantle in the path of the rising products of combustion.

2. A projecting lantern comprising in combination, a lantern casing having a forward transparent partition and a means for projecting light therethrough, a vapor burner located at the upper portion of said lantern casing intermediate the ends thereof, a burner tube projecting downwardly therefrom into said casing and terminating above the focus of the projecting means, a relatively small substantially globular mantle firmly mounted on the end of said depending burner tube in the focus of said projecting means, and a superheating coil arranged adjacent said burner within the path of the hot gases rising from said under-lying mantle.

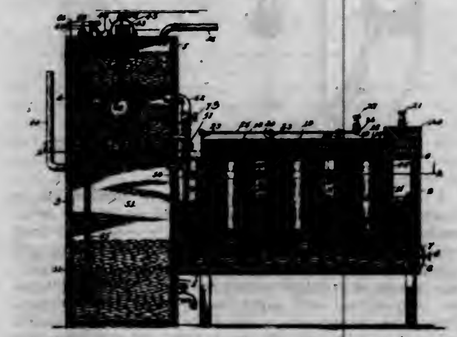
3. A projecting lantern comprising in combination, a lantern casing having a forward transparent partition and having an opening intermediate the ends of its upper portion, a vapor burner positioned in said opening by side lugs secured to said casing, a ventilator on said casing housing the upper portion of said vapor burner, a burner tube depending from said vapor burner, a relatively small mantle firmly mounted on the end of said tube, and a superheater arranged around the upper portion of said tube within the path of the rising products of combustion.

4. A projecting lantern comprising in combination, a lantern body having in its forward end a transparent partition, a vapor burner located in the upper part of said lantern body and having a depending burner tube, a vapor conduit terminating in an escape vent opening into the bore of said burner tube, one or more air conduits leading toward said vent, a valve for controlling the flow of vapor through said vent, means located in the upper part of said vapor burner for adjusting said valve, a hood carried by said lantern body above said vapor burner adapted to be displaced to gain access to said adjusting means, and an incandescing structure carried by the end of said depending burner tube.

5. A projecting lantern comprising in combination, a lantern body having a lens in its forward end and having an opening in its upper part, a vapor burner located in said opening and having a depending burner tube, a mantle mounted on the end of said burner tube, a superheating coil encircling said burner tube above said mantle, in the path of the rising hot gases therefrom, a conduit connected with the delivery end of said superheating coil and having an escape vent opening into the bore of said burner tube, one or more air conduits leading from a point without the path of the rising products of combustion, and a ventilator hood mounted on said lantern body over said vapor burner and adapted to be displaced to gain access to said burner.

[Claims 6 to 8 not printed in the Gazette.]

898,055. ELECTRIC BATTERY. WILLIAM MACMILLAN, New York, N. Y., assignor of one-half to Egbert Winkler and one-half to John J. Walsh, New York, N. Y. Filed Aug. 18, 1902, Serial No. 120,014. Renewed Feb. 2, 1905. Serial No. 243,812.



1. In a primary battery the combination of a receptacle, a pair of positive and negative elements located within the said receptacle, a lining located on the exterior of one of said elements and linings located on the interior and the exterior of the other of said elements, an insulating cylinder surrounding the said elements.

2. In a primary battery the combination of a receptacle, a plurality of concentric elements located within the said receptacle, cloth linings covering the exterior of each of the said elements, an insulating cylinder surrounding the said elements.

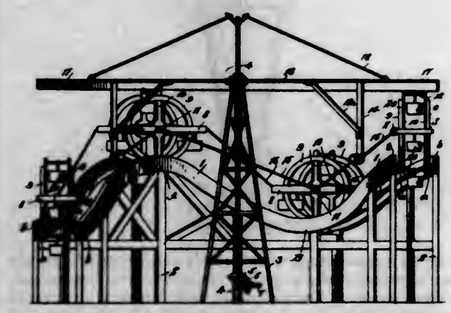
3. In a primary battery the combination of a receptacle, a negative element having a conductive head and an exterior lining of cloth, a positive element surrounding the said negative element and having inte[illegible] exterior linings of cloth, an insulating cylinder surrounding the said elements.

4. In a primary battery the combination of a plurality of pairs of concentric elements, the inner of the said elements having conductive heads, the outer of the said elements having conductive posts, conductive strips for connecting the said heads and the said posts together, an insulating cylinder surrounding each pair of elements.

5. In a primary battery the combination of a receptacle, a pair of concentric cylindrical elements located within the said receptacle, a porous plug located in the lower end of the inner of the said elements, an insulating cylinder surrounding the said elements and having an opening at the lower end thereof.

[Claims 6 to 15 not printed in the Gazette.]

898,056. AMUSEMENT APPARATUS. ALBERT MALSIN, New York, N. Y. Filed Sept. 28, 1907. Serial No. 395,047.



1. In an amusement apparatus, the combination with means for supporting it, of a circular track having alternate curved elevations and depressions to form an undulating surface, said track having lateral guides and an open bottom, a series of revolving wheels rolling on said track, and pendent cars carried by the wheels, together with means for imparting an independent rotary motion to said cars in addition to the bodily revolution of the cars with the wheels.

2. In an amusement apparatus, the combination with a curved track, of a revolving Ferris wheel movable thereon and provided with a series of depending cars, together with means for rolling the wheel on the track, together with means for imparting an independent rotary motion to said cars in addition to the bodily revolution of the cars with the wheel.

3. In an amusement apparatus, the combination with a circular undulating track, having an open bottom and lateral guides of a series of revolving wheels rolling on said track and carrying pendent cars, and means for causing the wheels to roll on the track, and means for independently rotating the pendent cars.

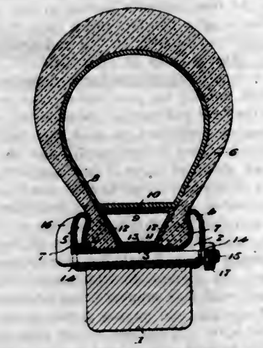
4. In an amusement apparatus, the combination with a circular undulating track, of a series of wheels rolling on said track, each wheel carrying a series of pendent cars and means for imparting an independent rotary motion to said cars.

5. In an amusement apparatus, the combination with a circular undulating track, of an upright drive-shaft having radially projecting arms, wheels rolling on the track, connections between the said radial arms and the axes of the wheels for actuating said wheels, together with pendent cars carried by the wheels and means for imparting an independent rotary motion to said cars in addition to the bodily revolution of the cars with the wheels.

[Claims 6 to 12 not printed in the Gazette.]

898,057. WHEEL. JOHN W. MEIXELL, Lewisburg, Pa. Filed Feb. 17, 1906. Serial No. 301,596.

1. In a wheel, a rim tubular in cross-section and having one edge turned up to form a clamping-member and provided below the same at intervals with transverse registering bolt-holes, in combination with a removable ring located at the opposite side of the rim at which said turned up edge is located and forming the opposite clamping-member, and a series of bolts located in the bolt holes and terminating at one end beyond the rim in angular heads engaging the ring, said bolts being of a diameter agreeing with the space within the hollow rim whereby they reinforce the outer wall of said rim, and nuts for the ends of the bolts.



2. In a wheel, a tubular rim, clamping means carried by the rim, bolts for the clamping-means passed laterally through corresponding openings formed in the opposite edges or walls of the rim and of a diameter agreeing with the distance between the walls of the rim, and nuts for the clamping-bolts.

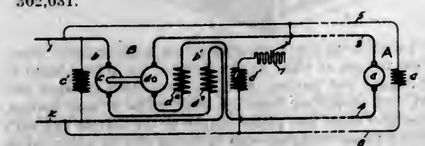
3. The combination with a wheel embodying tire clamping-means, and a tire engaged by said means, of an internal tubular ring located between the bases of the tire and substantially wedge-shaped in cross-section, the inner wall of said ring being provided with an inclined slit thereby forming a lap-joint, whereby the side walls of the ring are capable of compression.

4. The combination with a wheel provided with a rim having at one side a fixed external clamping-wall; an opposite removable clamping-ring slightly larger than and mounted on the rim and free to slide laterally thereover, and transverse bolts for engaging the ring, of a tire having its edges engaged by the wall and ring, and an internal ring of greater diameter than the rim and combining with the latter to form an annular space and located between the tire edges, said internal ring being hollow and having its inner wall provided with a continuous annular slit the edges of which overlap.

5. The combination with a wheel embodying a rim, tire clamping means and a tire engaged by said means, of an internal tubular ring located between the base portions of the tire and comprising an upper wall, downwardly converging side walls and an intermediate lower wall, the latter being divided longitudinally, substantially as shown and described.

[Claims 6 to 10 not printed in the Gazette.]

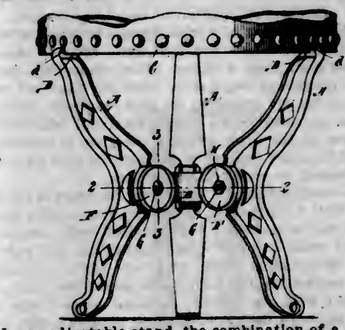
898,058. MEANS FOR REGULATING DYNAMO-ELECTRIC MACHINES. WILBUR L. MERRILL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 20, 1906. Serial No. 302,031.



1. In a system of control, an electric motor, a motor generator set supplying current to said motor, means for varying the voltage of the generator of the motor generator set to vary the speed of said motor, and means for modifying the voltage of said generator so as to maintain a predetermined speed of said motor constant, independent of its load.

2. In a system of control a source of current supply, a shunt motor with its field excited from said supply, a motor set driven from said current supply supplying current to the armature of said motor, the generator of said motor generator set having a field winding with a variable resistance arranged to vary its voltage through wide limits, a second winding in series with its armature circuit and a third winding in series with its driving motor armature for maintaining a substantially constant voltage on the generator when running at high or low voltage so as to maintain a speed on the motor independent of its load, all the windings producing a flux in the same direction.

898,059. ADJUSTABLE STAND. GEORGE O. MILLER, North Tonawanda, N. Y. Filed Feb. 1, 1908. Serial No. 413,901.



1. In an adjustable stand, the combination of a plurality of legs approaching each other closest at a point between their ends and having retaining members of annular formation at such point, and clamping-members between which said annular retaining-members are clamped.

2. In an adjustable stand, the combination of a plurality of legs approaching each other closest at a point between their ends and having annular retaining-portions at such point, and clamping-members between two of which each of said annular retaining portions is clamped.

3. In an adjustable stand, the combination of a plurality of supporting-legs provided at points between their ends with retaining annuli, clamping-plates having annular grooves to receive the edges of said annuli, and bolts passing through said plates and said annuli for securing said supporting-legs together.

4. In an adjustable stand, the combination of a plurality of supporting-legs having retaining-annuli in the same horizontal plane, clamping-plates provided with annular grooves in which the edges of said retaining-annuli fit, and bolts passing through said clamping-plates and said annuli to secure the supporting-legs together.

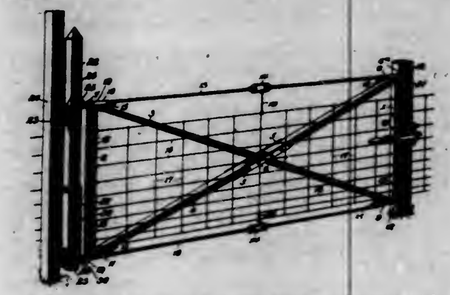
5. In an adjustable stand, the combination of a plurality of supporting-legs approaching each other closest at a point between their ends and each having a retaining-annulus at such point, clamping plates bent into substantially V-shape and having opposite ends provided with annular grooves in which the edges of the retaining-annuli on said legs enter, and bolts passing through said clamping-plates and said annuli to securely clamp the latter between said plates.

[Claims 6 and 7 not printed in the Gazette.]

898,060. GATE. CHARLES N. MOGNET, Trent, Pa. Filed Aug. 16, 1906. Serial No. 330,903.

1. The combination of a hinged support provided with a vertical ratchet, and a gate provided with vertical and

horizontal rods connected by corner plates, one of which engages the ratchet.



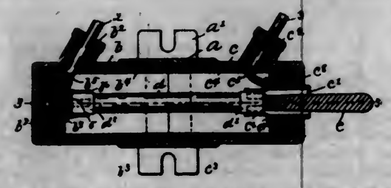
2. The combination of a hinged support provided with a vertical ratchet, a gate, and common means for engaging the ratchet to raise and lower the gate and for also moving the gate toward and from the ratchet to set the gate either in a horizontal position or at an inclination.

3. The combination of a hinged support provided with a vertical ratchet, a gate provided with vertical and horizontal marginal rods, a corner plate connecting the said rods and projecting rearwardly from the gate and engaging the ratchet for adjusting the gate vertically, said plate being also provided with a longitudinal slot adjustably receiving one of the rods, whereby the gate is adjusted toward and from the ratchet to arrange the said gate either in a horizontal or an inclined position.

4. The combination of a hinged bar provided at the lower portion with a ratchet, a loop having a guiding portion spaced from the ratchet, a gate provided with vertical and horizontal rods, a corner plate connecting the rods and provided with spaced slots, one of the slots receiving the loop and permitting the plate to be moved into and out of engagement with the ratchet, and one of the rods being extended through the other slot and provided with means for adjustably securing the plate to the gate to tilt the latter.

5. The combination of a hinged support provided with a vertical ratchet, a gate, a bottom corner plate engaging the ratchet to adjust the gate vertically, and adjustably secured to the gate to move the bottom of the same toward and from the hinged bar, whereby the gate may be set either in a horizontal or an inclined position, a bottom marginal rod connected with the corner plate, and means for adjusting the rod to vary the length of the same to permit the adjustment of the corner plate.

898,061. FUSE-BOX. HARRY P. MOORE, Newburyport, Mass., assignor to Chase-Shawmut Company, Boston, Mass., a Corporation of Maine. Filed Apr. 8, 1907. Serial No. 366,908.



1. A fuse-box consisting of a case having an opening at one end for the withdrawal of the fuse and having openings for the circuit wires, fuse-supports contained in said case to which the circuit wires are attached, said fuse-supports being disposed in alinement with said end opening, one of said fuse-supports having an opening through it for the fuse and the other fuse-support consisting of a socket having spring acting fingers which engage the fuse and a locking device for locking the fuse in position in said supports, substantially as described.

2. A fuse-box consisting of a cylindrical case having end walls and having openings for the circuit wires and having an opening through one of the end walls for the withdrawal of the fuse, fuse-supports contained in said case and attached to the end walls thereof to which the circuit wires are attached, said fuse-supports being disposed in alinement with said end opening, one of said fuse-supports having an opening through it for the fuse, and the other fuse-support consisting of a socket having spring-acting fingers which engage the fuse, a fuse contained in said case which engages the fuse-supports having at one end means for the attachment of a handle, and a detachable handle extending through the opening in the end wall which engages the fuse, substantially as described.

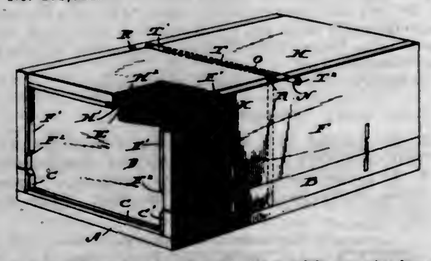
3. A fuse-box consisting of a supporting-plate, and case mounted thereon having an opening at one end for the withdrawal of the fuse and having openings for the circuit wires, fuse-supports contained in said case and attached thereto and circuit wires extending through the openings in said case and attached to said fuse-supports, whereby the connections of the circuit wires with the fuse-supports are entirely concealed, substantially as described.

4. A fuse-box consisting of a case having an opening at one end for the withdrawal of the fuse and having openings for the circuit wires, a tubular fuse-support in said case at the open end thereof, to which one of the circuit wires is attached, said fuse support being arranged concentric to the end opening, and having spring-acting portions for engaging the outer end portion of the fuse and a socketed fuse-support in said case at the opposite end thereof, to which the other circuit wire is attached, said fuse support being arranged in alinement with the aforesaid tubular fuse support, and having spring-acting portions engaging the inner end portion of the fuse, substantially as described.

5. A fuse-box consisting of a case having an opening at one end for the withdrawal of the fuse and having openings for the circuit wires, a tubular fuse-support in said case at the open end thereof, to which one of the circuit wires is attached, said fuse support being arranged concentric to the end opening, and having spring-acting portions for engaging the outer end of the fuse and having a base, and a socketed fuse-support in said case at the opposite end thereof to which the other circuit wire is attached, said fuse support being arranged in alinement with the aforesaid tubular fuse-support and having spring-acting portions engaging the inner end portion of the fuse and also having a base, separate supports to which said fuse-supports are respectively attached, and means for rigidly connecting them with the case, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

898,062. KNOCKDOWN BOX OR CRATE. LEWIS MCMULLEN, Altoona, Pa. Filed Dec. 30, 1907. Serial No. 408,611.



A knock-down box having a bottom with opposite longitudinal flanges at right angles thereto, the sides hinged to said flanges and having their free longitudinal edges rabbeted, ribs projecting from the inner faces of said bottom, flanges and sides, end pieces hinged to the bottom and each having its free swinging edge rabbeted and its outer throw limited by said ribs, a cover having its longitudinal edges rabbeted and adapted to receive the rabbeted portions of said side, the under surface of said top having transverse grooves engaged by the rabbeted edges of the ends of the box, a locking rod passing through registering apertures in the sides and top and having a threaded portion, a cylindrical nut with threaded opening adapted to receive the threaded end of said rod, as set forth.

898,063. HAIR CRIMPER AND CURLER. PAUL E. OSWALD, Los Angeles, Cal. Filed Aug. 22, 1907. Serial No. 389,605.



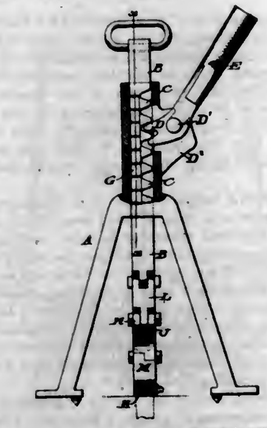
1. An instrument for crimping and curling the hair, comprising an upper member of suitable shape to partially surround the lower member and having teeth projecting downwardly from the edges thereof; a lower member pivotally secured to the upper member; and handles secured to said members.

2. An instrument for crimping and curling the hair comprising an upper member of suitable shape to partially surround the lower member, said upper member having teeth projecting downwardly from the edges thereof; a lower member pivotally secured to the upper member; an electric heating coil in said lower member, and handles secured to said members.

3. In an instrument for crimping and curling the hair an upper and a hollow lower member pivotally secured together; teeth projecting from the edges of the upper member; an electric heating coil composed of a spirally wound enamel covered resistance wire in the lower of said members; and handles secured to said members.

4. In an instrument for crimping the hair, two members pivotally secured together, one of said members having the body thereof composed of a plurality of hollow tubes in alinement, the body of the other member being of a configuration to partially surround the first member; and having teeth adapted to project beyond and at the sides of the other member electric heating coils in the tubular portions of said first member; and handles secured to said members.

898,064. SPIKE-EXTRACTOR. GEORGE W. RITTERSBACH, Jr., Philadelphia, Pa., assignor of one-fourth to Amos H. Kain, Philadelphia, Pa. Filed Mar. 30, 1906. Serial No. 308,990.

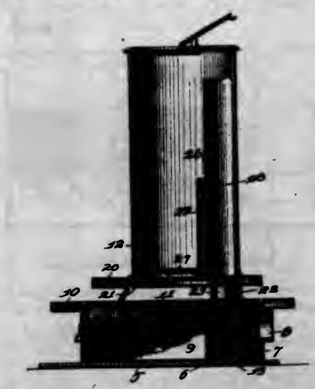


1. In a spike extractor, a standard having a vertically extended guide portion, a rack bar movable therein, means for actuating said rack bar, inwardly projecting jaws pivotally connected together and their upper portions forming the lower members of a toggle, the latter having upper members, which are pivotally connected with the lower end of the rack bar, and springs connected with the toggles and extending substantially in line with said bar and in opposite directions beyond the pivot of the jaws and bearing against the outer faces of the latter.

2. In a spike extractor of the character stated, an elevating bar, a guide in which it is vertically movable, means for moving said bar vertically step by step, means for automatically holding said bar in its elevated position, a toggle pivotally connected with said bar, a jaw extending from the lower members of said toggles, and a spring extending in the direction of the length of the bar and connected at one end with said toggle and bearing freely at the other end on said jaw, and being on the exterior faces of said toggle and jaw.

3. In a spike extractor, a standard, a draft bar guided therein, means for actuating said draft bar vertically, a toggle pivotally connected with said bar, jaws carried by the lower members of said toggles and springs each having an end bearing against the outer face of one jaw and its other end secured to the lower toggle member of the other jaw at a point above the pivot of said jaws.

898,065. BARREL-HEATER. HIRAM C. ROGERS, St. Louis, Mo. Filed May 14, 1907. Serial No. 373,690.



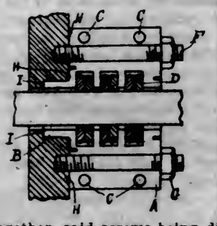
1. A barrel heater, comprising a base divided into two compartments, a detachable flue connection mounted upon one of said compartments, a drum, a flue located in said drum and arranged to communicate with the detachable flue connection, substantially as specified.

2. A barrel heater, comprising a base, a partition wall located in the base dividing the same into two compartments, one of said compartments attached to a pipe which communicates with the flue of a building, a detachable flue connection mounted upon said compartment, a smaller base detachably mounted upon the larger base, its rear end supported by the detachable flue connection, a drum detachably mounted upon the smaller base, a flue located in the drum and communicating with the detachable flue connection, substantially as specified.

898,066. METALLIC PACKING. GEORGE D. ROLLINS, Philadelphia, Pa. Filed Nov. 9, 1907. Serial No. 401,390.

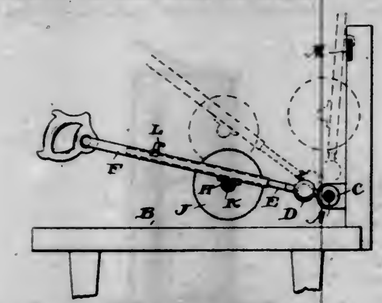
In combination with a steam chest, a metallic packing embodying a casing formed in two halves and provided with a central bore and with a lengthwise hole on each side of said bore at the line of division between said halves, a packing strip on each side of said bore between the latter and said holes, a reduced extension on said casing, an annular packing ring at the free end of said extension, a pair of spaced annular packing rings disposed on opposite sides of said holes on the inner end of said casing, all of said annular packing rings abutting the

steam chest, bolts threaded on each of their ends located in said holes and having one end threaded into said steam chest, nuts on the outer ends of said bolts bearing against said casing, and a plurality of screws for securing the



casing halves together, said screws being disposed in said casing beyond said bolts, said nuts being of a size to engage each of the casing halves to thereby bear equally on each.

898,067. HAND-CONTROLLED POWER-OPERATIVE MEAT-SAW. WILLIAM A. RUSSELL, Kent, Ohio. Filed Oct. 23, 1907. Serial No. 398,744.



1. The combination of a support, means capable of sliding substantially horizontally on said support, a frame so connected to said means as to be capable of universal and angular movement and composed of two parts slidable with relation to each other at an angle to the direction of the first mentioned movement, one of said parts bearing one member of the angularly adjustable connection, a shaft having a flexible portion mounted on the other part, and a saw driven thereby.

2. In a hand-controlled, power-operated saw, the combination of a table, a support thereon, means capable of moving on said support laterally with respect to the table, a yoke attached to said means and capable of universal angular movement with respect thereto, a frame mounted to slide telescopically on said yoke, a saw rotatably mounted on said frame and a flexible power-connection for driving said saw.

3. In a hand-controlled, power-operated saw, the combination of a support, means capable of sliding substantially horizontally on said support a yoke so attached to said means as to be capable of universal angular adjustment with respect thereto, a frame mounted to slide telescopically on said yoke, a saw-driving shaft rotatably mounted on said frame, a flexible power connection for said shaft, means for guiding said frame and means for suspending it on said support when not in use.

898,068. PROCESS OF SMELTING IRON. MARCUS RUTHENBURG, Philadelphia, Pa. Filed Feb. 13, 1903. Serial No. 143,230.

1. The herein described process which consists in mixing unburned pig iron and non-manganic iron oxid ore, in definite proportions; charging the same in a vertical stack furnace; preventing agitation of said mass while subjecting it to fusing temperature in said furnace, and, thereby producing two products; first, iron containing less sulfur and phosphorus than said pig iron; and, second, cinder containing sulfur and phosphorus derived from said pig iron.

2. The hereinbefore described process which consists in mixing ordinary pig iron and non-manganic iron oxid ore in approximately equal parts by weight; charging the same in a vertical stack furnace; preventing agitation of said mass while subjecting it to fusing temperature in said furnace, and, thereby producing two products; first, iron representing the amount in said pig plus the greater part of that in said ore, and containing less sulfur and phosphorus than the original pig iron; and, second, ferruginous cinder containing the greater portion of the sulfur and phosphorus before embodied in the original pig iron and ore, substantially as and for the purpose set forth.

3. The hereinbefore described process which consists in mixing ordinary pig iron and non-manganic iron oxid ore in definite proportions; charging the same in a vertical stack furnace upon a separate and distinct mass of fuel; preventing agitation of said mass while subjecting it to fusing temperature in said furnace, and, thereby producing two products; first, iron representing the amount in said pig plus the greater part of that in said ore, and containing less sulfur and phosphorus than the original pig iron; and, second, ferruginous cinder containing the greater portion of the sulfur and phosphorus before embodied in the original pig iron and ore, substantially as and for the purpose set forth.

4. The hereinbefore described process which consists in mixing unburned pig iron and iron ore, in definite proportions; charging the same in a cupola furnace; continuously preventing agitation of said mass while subjecting it to fusing temperature, and, thereby producing two products; first, iron representing the amount in said pig plus the greater part of that in said ore, and containing less sulfur and phosphorus than the original pig iron; and, second, ferruginous cinder containing the greater portion of the sulfur and phosphorus before embodied in the original pig iron and ore, substantially as and for the purpose set forth.

898,069. HOOK AND EYE. JOSEPH F. SCHOEPPI, Baltimore, Md. Filed Sept. 19, 1906. Serial No. 335,245.

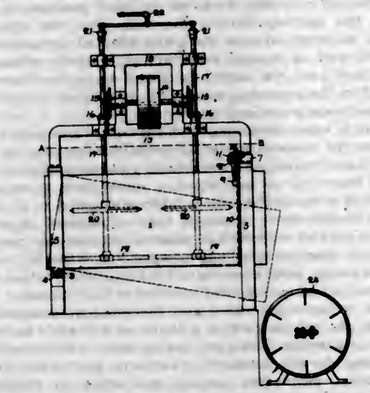


1. A connecting device in the nature of a fastening hook for trousers comprising a base, a hook returned from one end of the base and having an opening between its sides, a tongue provided with an opening near its free end, an eyelet connecting the other end of the tongue pivotally with the base in line with the opening in the hook, and lateral eyes projecting from the opposite sides of the base about in line with the eyelet in the base and undercut at their base for forming the eyelet substantially as set forth.

2. A connecting device for use as a fastening hook on trousers comprising a base, a hook bent from one end of the base and returned thereover and provided between its sides with an opening, and a tongue pivoted to the base approximately midway between the sides of the hook and provided in its free end with a stitching opening, and a stitching opening in the base in line with the opening through the hook whereby stitches may be passed over and over through the opening in the base and the opening in the free end of the tongue after the fashion of sewing on a button substantially as set forth.

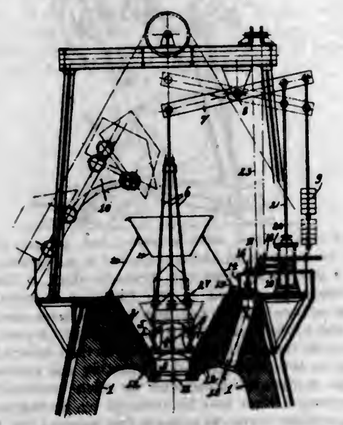
3. A connecting device for use as a fastening hook on trousers and consisting of a base, a hook bent from one end of the base and returned thereover and provided with an opening midway between its sides, a tongue provided at one end with an opening, an eyelet connecting the other end of said tongue pivotally with the base in line with the opening through the hook and approximately midway between the sides of the hook, and lateral eyes at the opposite sides of the base, the tongue being adapted for adjustment to underlie the base or project from the base beyond the hook, and the eyelet and the opening in the free end of the hook permitting the stitching of the device in place, substantially as set forth.

898,070. PROCESS OF GRANULATING AND PURIFYING BUTTER. FERDINAND SEIM, Louisville, Ky. Filed Feb. 12, 1908. Serial No. 415,611.



The process of purifying and granulating butter, consisting of putting the butter into a liquid, bringing the liquid and butter to a temperature of from 55 to 70 degrees, to render it viscous and ropy, violently agitating the liquid and butter in this condition to thoroughly disintegrate it and expose the surface of all the butter globules to the circumambient liquid, then forcing a strong current of pure cold air through the mixture to thoroughly oxidize and remove impurities, at the same time suddenly chilling the mixture to from 35 to 45 degrees while being violently agitated to bring the butter into the granular form.

898,071. CHARGING APPARATUS FOR BLAST-FURNACES. MARTIN J. SHANNON, Steelton, Pa. Filed June 29, 1907. Serial No. 381,392.



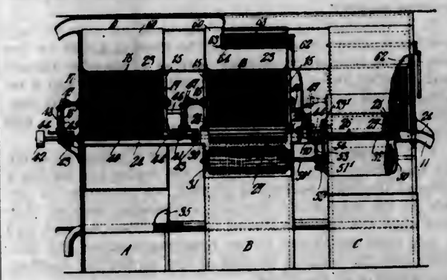
1. The combination with a blast furnace top of a hopper, a sealing plug within, making a tight joint at, and closing the opening in the bottom of said hopper and furnished at its lower end with projecting arms or teeth, and means whereby said sealing plug may be lifted from its seat.

2. The combination with a blast furnace top, of a hopper, a sealing plug within and closing the opening in the bottom of said hopper, means for unseating and seating said plug, and inclined deflecting plates placed in the throat of said hopper beneath said plug seat.

3. The combination with a blast furnace top of a hopper, a plug vertically movable within and closing the opening in the bottom of said hopper, and means operated by the action of an excess gas pressure in said furnace for lifting said plug from its seat.

4. The combination with a blast furnace top, of a hopper, a plug vertically movable within and closing the opening in the bottom of said hopper, a pivotally mounted beam from one end of which said plug is suspended, a steam or air cylinder, a piston and a piston rod carried by said cylinder the latter of which is attached to the end of the beam opposite to that carrying the plug, a valve for controlling the admission of the actuating fluid to said cylinder, a second cylinder, a piston and a piston rod carried by said second cylinder, said piston rod being connected to the operating lever of said valve, and a flue connecting the interior of said furnace and the bottom of said second cylinder.

898,072. COTTON-CLEANER AND GIN-FEEDER. JAMES M. SHEPPARD, Crowell, Tex. Filed June 15, 1907. Serial No. 379,204.



1. In a cotton cleaner, and gin feeder, a plurality of cleaners, a feed flue common to all of such cleaners, means for stopping each of said cleaners independently of the others, there being means to permit an accumulation of cotton at each cleaner when the latter is stopped, and a suction means for conveying the cotton through the feed flue while the cleaners are operating, and when one or more of them are idle.

2. In apparatus of the class described, a plurality of cotton cleaners, means for stopping each of said cleaners independently of the others, a feed flue common to all of such cleaners, means for permitting an accumulation of cotton at each cleaner while stopped, and a suction means common to all of such cleaners and serving to continue the feed when one or more of the cleaners are idle.

3. In apparatus of the class described, a plurality of cleaners each including a revoluble screen, a feed flue common to all of the cleaners, means for stopping each of said cleaners independently of the others, means for permitting an accumulation of cotton above each cylinder when the latter is stopped, and a continuously operable suction means common to all of the cleaners.

4. In apparatus of the class described, a plurality of cleaners, each including a revoluble screen, a feed flue common to all of the cleaners, a suction means common to all of the cleaners, and independently operable means for stopping one or more of the cleaners without stopping the feed.

5. In apparatus of the class described, a plurality of cotton cleaners, a feed pipe or flue common to all of the cleaners, individual chutes leading from the flue to the cleaner, valves arranged in said chute for cutting off the passage of cotton to the cleaners, said valves serving to permit an accumulation of cotton when the cleaners

are idle, and independently operable means for stopping one or more of the cleaners without stopping the feed.

[Claims 6 to 9 not printed in the Gazette.]

898,073. APPARATUS FOR SPEECH TRANSMISSION. HERBERT E. SHREEVE, Wyoming, N. J., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed Oct. 15, 1907. Serial No. 397,579.



1. In a telephone apparatus, a transmitting element comprising a casing, a vibratory electrode, and means for supporting the electrode upon the casing, both electrode and supporting means being capable of free lateral expansion.

2. In a telephone apparatus, a transmitting element comprising a casing, a supporting member carried by the casing said member having a central opening into which a reduced portion or tongue of the member extends, and an electrode bearing upon one side of said supporting member about the opening through the middle thereof and connected to the inner end of the reduced portion of the supporting member.

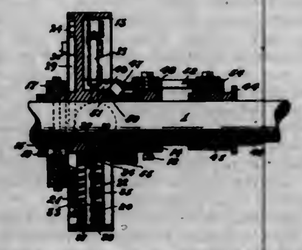
3. A transmitting element comprising an annular supporting member, an electrode in the form of a disk on one side of the supporting member bearing at its edge against said member about the central opening therein, and a retaining disk bearing upon the opposite side of the supporting member about the central opening therein and connected to said electrode.

4. A transmitting element comprising a casing, an annular supporting member carried by the casing and having a reduced inwardly extending portion, an electrode on one side of the supporting member, a retaining member situated upon the opposite side of the supporting member, and a pole piece connected to the retaining member, the electrode and the reduced portion of the supporting member, substantially as described.

5. A septum comprising a ring provided with an inwardly extending tongue, and a plate covering the opening in the ring and being attached to the tongue.

[Claims 6 to 8 not printed in the Gazette.]

898,074. GOVERNOR AND REVERSING-GEAR FOR ENGINES. WILLIAM N. SPRINGER, Peoria, Ill., assignor to Avery Manufacturing Company, Peoria, Ill., a Corporation of Illinois. Filed May 2, 1900. Serial No. 15,258.



1. In a speed governor and reversing mechanism, the combination of a shaft, an eccentric carrier mounted and adapted to be turned thereon, an eccentric on said carrier and movable thereon, centrifugal devices connected with the eccentric to move the same for governing, and toothed gearing arranged to turn said carrier angularly relative to the shaft for reversing, substantially as set forth.

2. In a speed governor and reversing mechanism, the combination of a shaft, an eccentric carrier mounted and adapted to be turned thereon, an eccentric on said carrier and movable thereon, centrifugal devices arranged to move the eccentric for governing, a shifting device mounted on the shaft and rigidly secured thereto on a pivot transverse to the shaft, turnable in planes parallel with the shaft and connected with said carrier, and means for actuating said shifting device to turn the carrier for reversing, substantially as set forth.

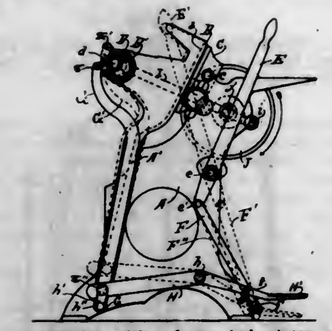
3. In a speed governing and reversing mechanism, the combination with the engine shaft, the eccentric, the centrifugal devices adapted to shift the eccentric, and a carrier for the eccentric loosely mounted on the shaft, of the gear 47 pivotally mounted in fixed position on the shaft, the shifting devices for said gear, the gear 49 loosely mounted on said shaft and adapted to mesh with gear 47 and to engage said carrier, whereby when the shaft is rotated the carrier is caused to rotate therewith and when the reversing mechanism is rotated the carrier is turned relative to said shaft.

4. In a valve governing and reversing mechanism for engines, the combination of an eccentric carrying part or wheel, an eccentric, and centrifugal governing devices connected therewith on said wheel, a rotary gear or segment connected with said wheel, a fulcrum adapted to be fixed on the engine shaft, a second gear or segment engaging the first gear or segment and mounted on said fulcrum and manually operated mechanism connected with the latter gear, whereby said wheel with its supported devices may be turned on an engine shaft relative to said fulcrum.

5. In a valve governing and reversing mechanism for engines, the combination of a shaft, an eccentric carrying means or wheel on said shaft, an eccentric and centrifugal governing devices connected therewith and mounted on said wheel, means for moving said wheel on the shaft angularly relative to the latter, and adjustable stops for arresting such turning of said wheel, to determine the position of the eccentric and the engine valve for the desired speed of the engine in either direction.

[Claim 6 not printed in the Gazette.]

898,075. PRINTING-PRESS. JOHN H. STONEMETZ, Grand Haven, Mich., assignor to The Challenge Machinery Company, Grand Haven, Mich., a Corporation of Illinois. Filed Mar. 12, 1908. Serial No. 420,732.



1. In combination with a frame, bed, platen, actuating wheel, eccentric shaft and eccentric of a job printing press, an arm projecting from the eccentric shaft, a horizontal lever centrally pivoted to the frame, a connecting rod pivoted at one end to one end of said lever and at the other end to the arm on the eccentric shaft, a pedal at the free end of the horizontal lever, a vertical lever centrally pivoted to the frame, a link connecting the vertical lever and the horizontal lever and by such connection that the horizontal lever may be actuated by, or independently of the vertical lever, to actuate the eccentric to increase or diminish the distance between the bed and the platen.

2. In combination with the frame, bed, platen, actuating wheel, crank, connecting rod and eccentric shaft of a job printing press, an eccentric mounted on the shaft and in bearings on the bed, a horizontal lever centrally pivoted to the frame, a connecting rod pivoted at one end to one end of the horizontal lever and at the other end to the arm on the eccentric shaft, a pedal at the free end of the lever, a vertical lever pivoted to the frame, a link pivoted at one end to the end of said lever and slidingly connected at the other end to the horizontal lever so that the horizontal lever may be actuated independent of the vertical lever or may be actuated and locked in place by the vertical lever, all arranged to actuate the eccentrics to increase or diminish the distance between the bed and the platen.

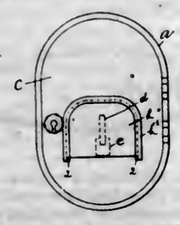
3. In combination with a bed and platen printing press, the mechanism for changing the distance between the bed and the platen consisting of a driving wheel and cranks on the press, a bed having an eccentric therein, a horizontal lever centrally pivoted to the frame, a connecting rod connecting one end of the lever with the eccentric, a vertical lever pivoted to the press frame and a link connecting it with the horizontal lever in position and by such connection that the horizontal lever may be actuated by, or independent of the vertical lever to actuate said lever and the eccentric shaft to hold and lock the bed away from the platen.

4. In combination with a bed and platen job printing press, a horizontal lever centrally pivoted to the press frame, an eccentric connected with the bed and having an actuating arm thereon, a connecting rod connecting the end of the lever with the arm on the eccentric, a standard extending down from the bed and pivoted to the press frame, a spring and rod connected at one end to the connecting rod and at the other end to the bed standard in position to force the connecting rod downward a vertical lever centrally pivoted to the frame, a link connecting the vertical lever with the horizontal lever by such connection that the horizontal lever may be actuated and locked in place thereby, or may be worked independent thereof.

5. In combination with the frame, bed, platen, eccentric shaft and arm of a bed and platen printing press, a horizontal lever centrally pivoted to the frame, a connecting rod pivotally secured to the eccentric arm back of the eccentric and extending downward below the end of the horizontal lever, a link connecting one end of the horizontal lever to the lower end of the connecting rod, a spring arranged to force the connecting rod downward, and a vertical lever pivoted to the frame and arranged to lock the horizontal lever in place when the connecting rod is raised for shifting the eccentric shaft to hold the bed away from contact with the platen.

[Claims 6 and 7 not printed in the Gazette.]

898,076. SIGNAL-BOX. NATHAN H. SUREN, Needham, Mass., assignor to The Gamewell Fire-Alarm Telegraph Company, New York, N. Y., a Corporation of New York. Filed Jan. 5, 1907. Serial No. 351,008.



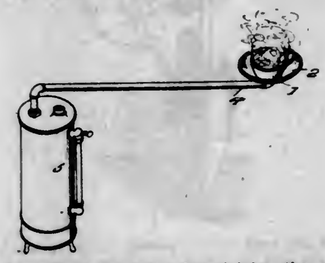
1. In a signal box, an actuating-lever pivotally connected to the actuating-mechanism of the signal-transmitting mechanism, whereby it may be moved into and out of operating position, and a frangible plate inclosing said actuating-lever when in its abnormal position, substantially as described.

2. In a signal-box an actuating-lever pivotally connected to the actuating-mechanism of the signal-transmitting mechanism, whereby it may be moved into and out of operating position, and a frangible plate inclosing said actuating-lever which engages and holds it in its abnormal position, substantially as described.

3. In a signal-box, an actuating-lever pivotally connected to the actuating-mechanism of the signal-transmitting mechanism, whereby it may be moved into and out of operating position, a frangible plate inclosing said actuating-lever which engages and holds it in its abnormal position, and means for returning said actuating-lever to its normal position when said plate is broken, substantially as described.

4. In a signal box, sliding actuating-mechanism for the signal transmitting mechanism having a pivotally connected actuating lever, whereby said lever may be moved into and out of operating position, and a frangible plate inclosing said actuating-lever when in its abnormal position, substantially as described.

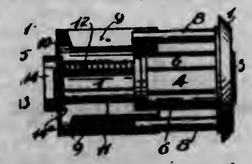
898,077. SIGN. SCHUYLER C. UNRUH, St. Joseph, Mich. Filed Mar. 18, 1908. Serial No. 421,878.



1. A sign for advertising hot drinks, the same consisting of a cup and saucer, a pipe passed through openings in the bottoms of said cup and saucer and having connection at its lower end with a source of steam supply, a distributer fitted to the upper end of said pipe and arranged within the lower portion of the cup, and a lock nut threaded upon the lower end of said pipe and cooperating with the said distributer to secure the cup and saucer.

2. The herein described sign for advertising hot drinks, the same consisting of a cup and saucer having openings in their bottoms, a pipe passed through said openings, a distributer fitted to the upper end of the pipe and consisting of a hollow head and a stem, the upper portion of the space of the hollow head being rounded and having minute openings leading therefrom through the top and sides of the distributer, a lock nut fitted to the lower end of said pipe and coöperating with the distributer to clamp the cup and saucer, and packing mounted upon the pipe between the distributer and cup and between the lock nut and saucer.

898,078. CYLINDER-LOCK. HENRY G. VOIGHT, New Britain, Conn., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Feb. 15, 1908. Serial No. 416,038.

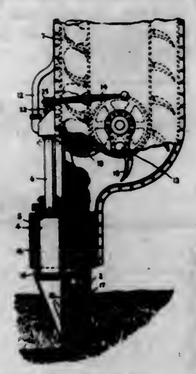


1. In a cylinder lock, the combination of a frame, a keyplug carried thereby, longitudinally arranged guides carried by said frame, a hollow shell mounted within said guides and arranged to slide thereon, a roll-back carried by said hollow shell and connected with said plug, and means for effecting a longitudinal adjustment of said shell relatively to said frame without disconnecting the plug and roll-back.

2. In a cylinder lock, the combination of a frame, a keyplug carried thereby, longitudinally arranged guides car-

ried by said frame, a hollow shell mounted within said guides and arranged to slide thereon, a roll-back carried by said hollow shell and connected with said plug, and means for effecting a longitudinal adjustment of said shell relatively to said frame without disconnecting the plug and roll-back, said means being independent of said plug and roll-back.

898,079. CLAY-EXCAVATOR. ROBERT N. WILLIAMS, Jr., Baltimore, Md. Filed Dec. 30, 1907. Serial No. 408,495.



1. In a clay excavator, a tubular cutter having a cutting edge at one end, a uniform bore throughout, and a discharge opening at the end opposite said cutting edge.

2. In a clay excavator, a tubular cutter of rectangular cross-section having a cutting edge at one end, a uniform bore throughout, projections within said cutter for holding clay therein, and a discharge opening for said clay at the end of said cutter opposite said cutting edge.

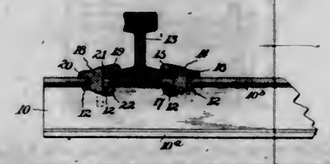
3. In a clay excavator, the combination of a tubular cutter, and fluid driven means connected therewith for forcing said cutter into a clay bank and for withdrawing it therefrom.

4. In a clay excavator, the combination of a tubular cutter, a driving cylinder rigidly connected therewith, a stationary piston for said cylinder, and means for supplying an expansive fluid to said cylinder to project said tubular cutter into a clay bank.

5. In a clay excavator, the combination of a tubular cutter having a cutting edge at one end and a discharge opening at the other end, means for driving said cutter into a clay deposit and for withdrawing it therefrom, and a conveyer adjacent to said cutter and operative to receive material discharged therethrough.

[Claims 6 to 16 not printed in the Gazette.]

898,080. METAL RAILROAD-TIE. WALTER J. WILSON, Homestead, Pa. Filed June 18, 1907. Serial No. 379,591.



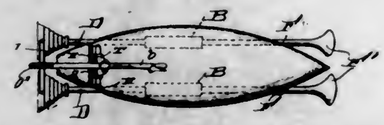
1. In a railroad tie and rail securing device therefor, the combination, of a metal tie having an upper horizontal portion with an opening therethrough alongside the rail, and flanges struck from said upper portion and projecting downwardly at opposite sides of the opening, said flanges extending parallel with the rail; together with a securing block comprising a body portion adapted to closely fit the opening in the tie and bear against the opposite flanges, a jaw on the block adapted to impinge on the rail, an opposite member on said block adapted to bear on the tie, and a reduced portion or tongue forming the lower portion of the block and adapted to be bent into engagement with one of the flanges of the tie, substantially as shown and described.

2. In a railroad tie and rail securing device therefor, the combination with a metal tie having an upper horizontal portion with openings therethrough, said openings being substantially alike in shape, of a pair of rail securing blocks each adapted to engage either one of the openings and having a jaw which engages an edge of the base-flange of the rail, and an offset on the rail-engaging jaw of one of the blocks whereby the position of the rail on the tie may be changed by reversing the blocks with respect to the sides of the rail; together with means for fastening the blocks to the tie, substantially as shown and described.

3. In a railroad tie and rail securing device therefor, the combination with a metal tie having an upper horizontal portion with openings therethrough at opposite sides of the rail and a depending flange at either side of each opening, said openings being alike in shape, of a pair of rail securing blocks each adapted to engage in either one of the openings in the tie and having a rail-engaging jaw and a depending reduced portion or tongue adapted to be bent into engagement with one of the depending flanges at the sides of the opening, and an offset on the rail-engaging jaw of one of the blocks, whereby the position of the rail on the tie may be changed laterally by reversing the blocks with respect to the sides of the rail, as herein shown and described.

4. In a railroad tie and rail securing device therefor, the combination with a metal tie having an upper horizontal portion with openings therethrough at opposite sides of the rail and flanges depending at opposite sides of each opening, said flanges extending parallel with the rail, of a pair of rail engaging blocks, one of which comprises a body portion adapted to fit either opening between the flanges, a gripping jaw adapted to engage the base-flange of the rail, a member opposite the jaw adapted to bear on the tie, and a reduced lower portion projecting below the upper portion of the tie and adapted to be bent into engagement with one of the depending flanges thereon, and the other rail engaging block constructed similar to the first mentioned block and having in addition a shoulder on the rail gripping jaw which will position an edge of the rail a slight distance from the body of the block, whereby the position of the rail on the tie may be shifted laterally by reversing the blocks with respect to the sides of the rail, as herein shown and described.

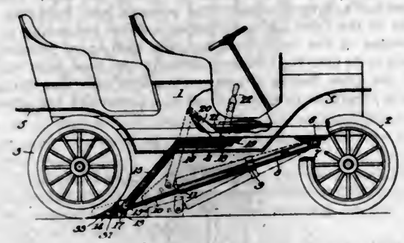
898,081. PROPELLING DEVICE FOR AERIAL SHIPS. DAVIS L. WOLF, Archer City, Tex. Filed Mar. 25, 1908. Serial No. 423,198.



1. A propelling apparatus for aerial ships, etc., comprising fans, pipes projecting therefrom, the forward ends of said pipes having conical telescoping sections, a cross-piece connecting the outer of each of said conical shaped sections, a pin upon said cross-piece, and a pivotal lever having sliding pivotal connection with said pin, as set forth.

2. A propelling apparatus for aerial ships, etc., comprising fans, pipes projecting therefrom, the forward ends of said pipes having conical telescoping sections, a cross-piece connecting the outer of each of said conical shaped sections, a pin upon said cross-piece, a pivotal lever having sliding pivotal connection with said pin, a rib upon the frame of the apparatus, rack teeth upon said rib, a sliding block upon the latter, a pinion wheel carried by the latter and in engagement with said ratchet teeth, and a projection upon said block upon which said lever is pivotally mounted, as set forth.

898,082. BRAKE FOR VEHICLES. WILLIAM WOLFE, Patton, Pa. Filed Aug. 22, 1907. Serial No. 389,644.



1. A vehicle-brake, comprising a drop-frame pivotally connected to the vehicle body in advance of the wheels to be braked and provided with arms extending toward the wheels to be braked, brake-shoe carriers telescopically combined with the arms of said drop-frame, brake-shoes secured to said carriers in advance of the wheels to be braked, mechanism operatively connected to the said brake-shoe carriers, and means for operating said mechanism arranged to exert its influence from a point in advance of the wheels to be braked, whereby a manipulation of said means operates to telescope said brake-shoe carriers, withdraw the brake-shoes forwardly from engagement with the wheels and lift the drop-frame, substantially as described.

2. A vehicle-brake, comprising a drop-frame pivotally connected to the vehicle body in advance of the wheels to be braked and provided with arms extending toward the wheels to be braked, brake-shoe carriers telescopically combined with the arms of said drop-frame, brake-shoes secured to said carriers in advance of the wheels to be braked, lever mechanism operatively connected to the said brake-shoe carriers, and means for operating said mechanism arranged to exert its influence from a point in advance of the wheels to be braked, whereby a manipulation of said means operates to telescope said brake-shoe carriers, withdraw the brake-shoes forwardly from engagement with the wheels and lift the drop-frame, substantially as described.

3. A vehicle-brake, comprising a drop-frame pivotally connected to the vehicle body in advance of the wheels to be braked and provided with arms extending toward the wheels to be braked, brake-shoe carriers telescopically combined with the arms of said drop-frame, brake-shoes secured to said carriers in advance of the wheels to be braked, provided with traveling and stationary friction surfaces for engaging the wheels to be braked, mechanism operatively connected to the said brake-shoe carriers, and means for operating said mechanism arranged to exert its influence from a point in advance of the wheels to be braked, whereby a manipulation of said means operates to telescope said brake-shoe carriers, withdraw the brake-shoes forwardly from engagement with the wheels and lift the drop-frame, substantially as described.

4. A vehicle-brake, comprising a drop-frame pivotally connected to the vehicle body in advance of the wheels to be braked and provided with arms extending toward the wheels to be braked, brake-shoe carriers telescopically combined with the arms of said drop-frame, brake-shoes secured to said carriers in advance of the wheels to be braked, mechanism operatively connected to the said brake-shoe carriers, means for operating said mechanism arranged to exert its influence from a point in advance of the wheels to be braked, whereby a manipulation of said means operates to telescope said brake-shoe carriers, withdraw the brake-shoes forwardly from engagement with the wheels and lift the drop-frame, a lock comprising a pivoted keeper for engaging said means to hold the brake in inactive position, and a foot lever for withdrawing said keeper and permitting automatic application of the brake.

5. A vehicle-brake, comprising a drop-frame pivotally connected to the vehicle body in advance of the wheels to be braked, brake-shoes telescopically connected with said drop-frame and located in advance of the wheels to be braked, and means for releasing the brake mechanism for automatic application and means for withdrawing the same from the engagement with the wheels.

[Claims 6 and 7 not printed in the Gazette.]

898,083. ELECTRIC-LIGHT FIXTURE. WILLIAM AMSTALDEN, Amador City, Cal., assignor of one-half to Aaron Weil, Amador City, Cal. Filed Dec. 31, 1907. Serial No. 408,712.



1. An extension fixture for electric lights comprising a spring-controlled drum for a flexible member, a pawl and ratchet detent for the same, and an alarm actuated by the movement of the pawl under the control of the ratchet.

2. In an extension fixture for electric lights a suitable casing, a drum within the casing for receiving a flexible member, a spring within the drum, a ratchet-wheel fast on said drum, a pawl fast on the casing and in operative relation to said ratchet wheel, a bell on the casing, and a clapper or hammer for the bell actuated by the pawl under the impulse of the ratchet.

3. In an extension fixture for electric lights, a spring-controlled rotative drum for a flexible member, a ratchet-wheel on said drum, said ratchet-wheel having a peripheral recess, and a spring-controlled pawl in operative relation to the ratchet-wheel and adapted to enter the peripheral recess therein.

4. An extension fixture for electric lights comprising a spring-controlled drum, a ratchet-wheel with a peripheral recess carried by said drum, a spring-controlled pawl having a tooth arranged for engagement with the ratchet-wheel, and a spring controlling said pawl and tending to move the same into a position substantially radial to the ratchet-wheel when the pawl is coincident with the peripheral recess in said ratchet-wheel.

5. An extension fixture for electric lights comprising a spring-controlled drum for receiving a flexible member, a ratchet-wheel thereon provided with a peripheral recess, a pawl provided with a tooth adapted to engage the teeth of the ratchet-wheel and with diametrically opposite fingers on opposite sides of said tooth, a lever having parts arranged to engage the fingers on the pawl, a spring maintaining said lever in engagement with the pawl, a bell, and a bell clapper or hammer carried by said lever.

[Claim 6 not printed in the Gazette.]

898,084. SPRING. HENRY G. BACKERMANN, Yoakum, Tex. Filed Dec. 5, 1907. Serial No. 405,234.



1. A device of the class described comprising a leaf spring having surface engaging portions at each end and a portion at the center extended upwardly, an auxiliary spring secured to the first named spring, a foot engaging plate secured upon the upper face of the first named spring, clamping straps carried by the plate, a cushioning block disposed between the first named spring and the foot engaging plate, and padded feet carried by the spring and arranged at the ends thereof.

2. A device of the class described comprising a leaf spring bent to form surface engaging portions, a concussion pad carried by said spring and located between its ends, an auxiliary spring carried by said first named spring, a foot engaging plate carried by said leaf spring, and a yieldable block disposed between said leaf spring and said foot engaging plate.

3. A device of the class described comprising a leaf spring, bent to form surface engaging portions, a concussion pad carried by the spring and located between its ends, an auxiliary spring carried by the first named spring, foot engaging means carried by the leaf spring, and cushion means disposed between the leaf spring and the foot engaging means.

898,085. THIMBLE. ROBERT J. R. BLAKE, Vancouver, British Columbia, Canada. Filed Jan. 17, 1908. Serial No. 411,338.



1. In a thimble, a segmentally split resilient body within which is secured a segmentally split resilient lining, the splits of the lining coming between those of the body.

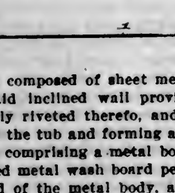
2. In a thimble, a body portion split by longitudinal cuts into segments, within which is a lining similarly split the splits of the lining coming between those of the outer body, and a sleeve slidable outside of the body portion.

3. In a thimble, a thin resilient body portion split by a single longitudinal cut, a lining of similar thin resilient material similarly split, and means for securing the lining within the body portion in a manner to admit of free outward expansion against the resilience of the material.

898,086. MULTIPLE ELECTRIC FUSE CUT-OUT. WILHELM BOEHM, Berlin-Charlottenburg, Germany. Filed June 8, 1907. Serial No. 378,035.

1. The herein described multiple electric cut-out consisting of a plug-like body of non-conducting material having a passage extending through one end thereof, a fuse within the passage comprising a plurality of independent sections, a contact having a member on the outside of the body and having within said passage two relatively adjustable members between which the fuse passes, and a second contact engaging the fuse and closing one end of the passage, each section of the fuse having a non-combustible core and being of such length as to extend from one contact to the other.

2. The herein described multiple electric cut-out consisting of a plug-like body of non-conducting material having a passage extending through one end thereof, a fuse within the passage comprising a plurality of independent sections, a contact having a member on the outside of the body and having within said passage two relatively adjustable members between which the fuse passes, and a second contact having an inner tubular member arranged within the passage and receiving one end of the fuse, and a clamping member extending to the outside of the body and engaging said inner member to hold it in electrical connection with the fuse, each section of the fuse having a non-combustible core and being of such length as to extend from one contact to the other.



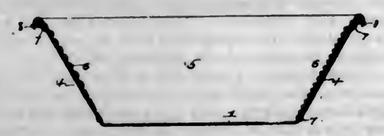
3. The herein described multiple electric cut-out consisting of a plug-like body of non-conducting material having a passage extending through one end thereof, a fuse extending through the passage and comprising a plurality of independent fusible sections and a non-combustible core, a spool supporting the body of the fuse at the inner end of the passage, and two contacts arranged to detachably engage the same section of the fuse within the passage and each having a member extending to the outer surface of the body.

4. A multiple electric cut out consisting of a suitable body having two separated contacts, a fuse comprising a non-combustible core, a plurality of fusible sections each of such length as to extend from one of said contacts to the other, and metal bands connecting the terminals of the fusible sections with said core, and means for detachably holding said bands in electrical connection with the contacts.

5. A multiple electric cut out consisting of a suitable body provided with two separated contacts, a fuse consisting of a non-combustible core, a plurality of metal rings or bands secured to said core at intervals corresponding to the distance between said contacts and a fusible wire connecting said bands, and means for holding the bands at the ends of any section of said wire in electrical connection with said contacts.

[Claims 6 and 7 not printed in the Gazette.]

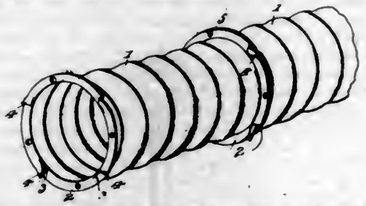
898,087. WASHTUB. WILLIAM L. BOGLE, Bentoak, Miss., assignor of one-half to W. C. McClure and one-half to James Thomas Harrison, Columbus, Miss. Filed Sept. 28, 1906. Serial No. 336,568.



1. A wash tub composed of sheet metal and having an inclined wall, said inclined wall provided with a wash board permanently riveted thereto, and having a portion extending beyond the tub and forming a handle.

2. A wash tub comprising a metal body having inclined ends, a corrugated metal wash board permanently fixed to each inclined end of the metal body, and the upper ends of said wash boards having portions bent forming handles for the tub.

898,088. CULVERT. DAVID C. BOYD, Galion, Ohio. Filed Mar. 4, 1908. Serial No. 419,125.



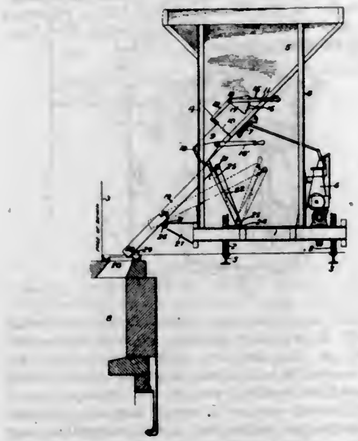
1. A culvert section provided with an outstanding end flange, and tongues offset from said flange, as and for the purpose set forth.

2. A culvert section provided with an end flange, said flange being formed with a plurality of slits, and the metal at one side of said slits being offset whereby to form a plurality of locking tongues.

3. The combination of two abutting culvert sections formed at their adjoining ends with flanges and with interlocking tongues offset from said flanges, the tongues of one flange facing in the opposite direction from those of the adjoining flange, the tongues of the respective flanges being interlocked, substantially as set forth.

4. The combination of two abutting culvert sections formed at their adjoining ends with flanges and with interlocking tongues offset from said flanges, the tongues of one flange facing in the opposite direction from those of the adjoining flange, and the tongues of the respective flanges being interlocked, substantially as set forth, and bolts securing said flanges together.

898,089. FURNACE-CHARGING MACHINE. REZEAU B. BROWN, Milwaukee, Wis. Filed Aug. 7, 1903. Serial No. 168,608.

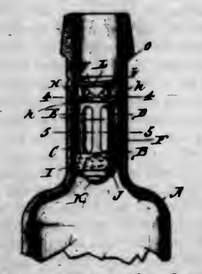


1. In a furnace charging machine, the combination of a carriage to travel in front of the furnace, a fuel supplying hopper or receptacle carried thereon, a receiving chamber connected with said hopper and movable therewith, means to discharge a measured quantity of fuel from said hopper to said chamber and for retaining the measured quantity of fuel in said chamber, and a chute to receive the fuel from said chamber and discharge it into the furnace.

2. In a furnace charging machine, the combination of a traveling carriage, a fuel supplying hopper mounted on the said carriage and provided with a measuring chamber mounted on said carriage into which the fuel can pass direct from the said hopper, a gate or valve to admit a desired quantity of fuel from the hopper to the measuring chamber, a gate or valve at the discharge mouth of said measuring chamber to retain the desired quantity of fuel in said measuring chamber, and a delivery chute carried by said carriage to receive the fuel issuing from the measuring chamber.

3. In a furnace charging machine, the combination with a fuel hopper, of a slidable and tiltable chute adapted to receive the fuel from said hopper, a stationary support on which said chute pivotally and slidably rests, stops carried by the said chute on opposite sides of said support which are adapted to engage the support when the chute is in its proper retracted or extended positions, and means for sliding and tilting said chute on said support.

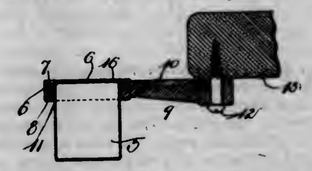
898,090. NON-REFILLABLE BOTTLE. JAY W. BUTLER, Hermitage, N. Y. Filed Aug. 15, 1907. Serial No. 388,702.



1. The combination with a bottle, of a valve stopper in the neck thereof having liquid passages between it and the wall of the bottle-neck, an inwardly-closing valve in said stopper and a disk having a plurality of legs stamped therefrom to form a central opening and to support the disk on said stopper.

2. The combination with a bottle having a neck provided with an internal bead, of a valve-stopper in said neck and having liquid passages between it and the wall of said neck, an inwardly-closing valve in said stopper and a guard supported on said bottle-stopper and located directly beneath the internal bead in said neck, said guard comprising a disk having a plurality of legs stamped centrally therefrom and bent downward to bear against said valve-stopper.

898,091. ASH-RECEPTACLE. MARTIN J. CARNEY, Brookline, Mass. Filed Sept. 6, 1907. Serial No. 391,564.

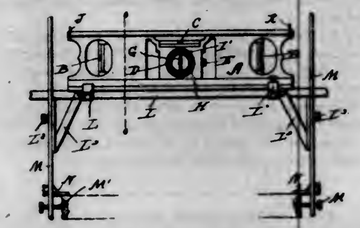


An ash receptacle comprising a holder adapted to be pivoted to and beneath a suitable support, said holder consisting of an arm terminating at its outer end in a rim with an opening extending vertically therethrough, a receiver adapted to contain ashes supported on said rim by means of a plurality of pins extending from said receiver and resting in a plurality of corresponding depressions formed in said rim, said receiver extending downwardly through said opening, and a cover hinged to said receiver and adapted, when raised, to engage said support when said arm is swung thereunder.

898,092. LEVEL AND COMPASS. ADELOR CARRIER, Alabaster, Mich. Filed July 25, 1907. Serial No. 385,495.

1. In a device of the kind described, the combination with a stock provided with spirit vials, of a compass adjustably mounted in said stock, adjustable legs carried by

said stock and set screws working in the lower ends of said legs, for attaching said legs to a shaft.

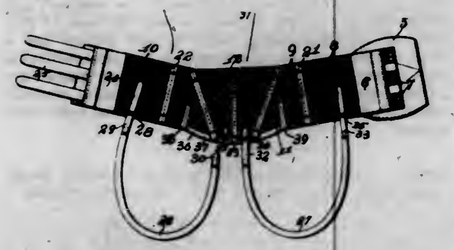


2. In a device of the kind described, the combination with a stock having vertical vials adjacent each end, and a central horizontal vial, of a bar secured to one edge of said stock provided with brackets, legs adjustably mounted on said brackets, and means carried by said legs for securing said legs on a shaft, for the purpose described.

3. A device of the kind described comprising a stock, a pivotally mounted compass carried thereby, a needle adapted to be brought into alinement with the compass needle, legs supporting the stock, screws carried by said legs to engage ends of a shaft, and blocks carried by and adjustable on the legs to engage the sides of the shaft.

4. In a device of the kind described, the combination with a stock carrying a pivotally mounted compass, a bar, blocks carried by the bar, means for securing said blocks to the stock, brackets carried by the bar, supporting legs carried by said brackets, and means carried by said legs for engaging opposite end portions of a shaft.

898,093. ABDOMINAL SUPPORTER. MAE CARRINGTON-STRANG, Chicago, Ill. Filed June 18, 1907. Serial No. 379,651.



As a new article of manufacture, an abdominal supporter comprising two strips of elastic material having their meeting edges concaved and convexed, respectively, a triangular section inserted at the top of the supporter at the meeting of the said strips, the strip having the convex edge being provided with a downward lip or extension, inelastic strips disposed upon the front and back surfaces of the supporter to adjust it to the abdomen of the wearer, suitable detachable fastening devices at the rear of the supporter, and flat tubular elastic bands removably secured to the supporter and adapted to pass around the legs of the wearer, substantially as described.

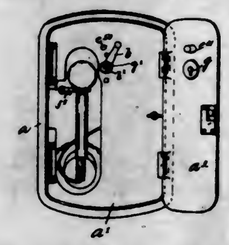
898,094. BOAT LASHING DEVICE. FRED T. CLAYTON, Sandwich, Mass., assignor of one-half to Robert A. Hammond, Sandwich, Mass. Filed Mar. 22, 1907. Serial No. 363,926.

1. A device for lashing a boat to the deck of a vessel comprising in its construction a link, the opposite ends of which are adapted to be pivotally connected, respectively, to a fixture fast to said boat and a fixture fast to the deck of said vessel, said link consisting of a rod, a latch pivoted to one end of said rod, said latch having a cam-shaped inner edge adapted to bear against said first named fixture for the purpose specified, and means to lock said latch to said rod.



2. A device for lashing a boat to the deck of a vessel, the opposite ends of which are adapted to be connected, respectively, to a fixture fast to said boat and a fixture fast to the deck of said vessel, said device comprising a rod, a latch pivoted to one end of said rod, said latch having a cam-shaped inner edge adapted to bear against said first-named fixture for the purpose specified, and means to lock said latch to said rod.

898,095. SIGNAL-BOX. FREDERICK W. COLE, Newton, Mass., assignor to The Gamewell Fire-Alarm Telegraph Company, New York, N. Y., a Corporation of New York. Filed July 10, 1906. Serial No. 325,443.



1. In a signal box, a multiple signal transmitter, means for setting it to transmit different signals, means for operating it, an intermediary locking-device for the transmitter, controlled by said signal-setting means, which, when in unlocking position permits the transmitter to operate and transmit one of its signals and when in locking position stops the transmitter at an intermediate part of its operation, when a different signal has been transmitted, substantially as described.

2. In a signal box, a multiple signal transmitter, means for setting it to transmit different signals, means for operating it, an intermediary locking-device for locking the transmitter at an intermediate part of its operation, when one of its signals has been transmitted, and means for moving said locking-device into its unlocking position to enable the transmitter to operate and transmit a different signal, substantially as described.

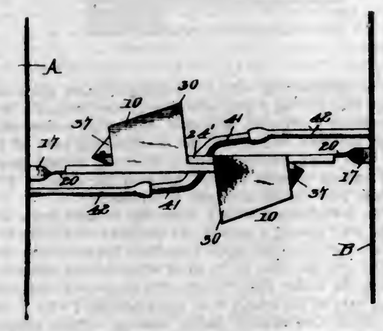
3. In a signal box, a multiple signal transmitter, means for setting it to transmit different signals, means for operating it, an intermediary locking-device for the transmitter, controlled by the signal-setting means and movable into its locking position to stop the transmitter at an intermediate part of its operation, when one of its signals has been transmitted, and adapted to be subsequently moved by the signal setting means into its unlocking position to release the transmitter and permit it to resume and complete its operation, substantially as described.

4. In a signal box, a multiple signal transmitter, means for setting it to transmit different signals, means for operating it, an intermediary locking-device for the transmitter, controlled by the signal-setting means and movable into its locking position to stop the transmitter at an intermediate part of its operation, when one of its signals has been transmitted, and adapted to be subsequently moved into its unlocking position by the closing of the box-door, to release the transmitter and permit it to resume and complete its operation, substantially as described.

5. In a signal box having a telephone and a supporting-hook for the telephone, a multiple signal transmitter, means for setting it to transmit different signals, an intermediary locking device for arresting the transmitter at an intermediate part of its operation, when one of its signals has been transmitted, and means, connected with the telephone hook, for moving said locking-device into its unlocking position, when the telephone is removed from the hook, to permit the transmitter to operate and transmit a different signal, substantially as described.

[Claims 6 to 35 not printed in the Gazette.]

898,096. AIR-BRAKE COUPLING. JOEL H. COLE, Arkansas City, and JOEL R. COLE, Winfield, Kans. Filed Dec. 18, 1907. Serial No. 407,051.



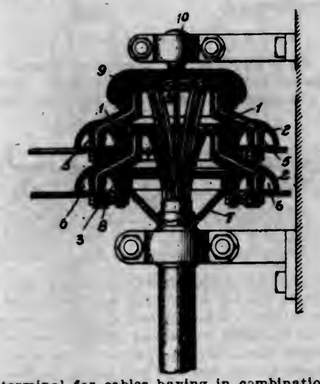
1. A coupler of the class described comprising coengaging members, each member having oppositely disposed sockets, means carried by each member for engagement in the sockets, air line connections carried by each member and communicating with each other, pivoted springs for yieldingly supporting said members, and adjusting screws engaged with said springs.

2. A coupler of the class described comprising coengaging coupling members, springs carried by said members, attaching plates, and adjusting screws carried by said plates and engaged with said springs.

3. The combination with a car, of a plate carried thereby, a spring pivotally mounted upon the under side of said plate, and air brake coupling section carried by said spring, and screws carried by said plate and engaged with the spring for movement of the coupling section in a horizontal plane.

4. The combination with a car, of a plate carried thereby, a spring pivotally connected with the under side of the plate, a coupling member carried by said spring, a socket member carried by said coupling member, air line connections carried by said member, a socket-engaging member carried by said coupling member and located outwardly of the socket member, and means carried by said plate for adjusting said spring in a horizontal plane.

898,097. TERMINAL FOR ELECTRIC CABLES. CHARLES W. DAVIS, Edgeworth, Pa., assignor to Standard Underground Cable Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Dec. 23, 1907. Serial No. 407,798.



1. A terminal for cables having in combination a body section or unit consisting of a conducting core having a body of self-supporting insulating material molded thereon, the outlet end of the core extending outwardly through the insulating material in a direction radial or approximately radial to the center of distribution and a cap supported by the unit and protecting the inner end of the conducting core.

2. A terminal for cables having in combination a series of sections or units similarly constructed and adapted to seat one upon the other, each unit consisting of a conducting core and a body of insulating material molded thereon, the insulating body of one unit extending outwardly beyond the point of emergence of the core of the underlying body.

3. A terminal for cables having in combination a block of insulating material having a seat at one end and a correspondingly shaped portion at its opposite end and a conducting core molded in the insulating block and extending through the insulating block from a point within the seat to a point outside of said seat.

4. A terminal for cables having in combination an annular block of insulating material having a seat at one end and a correspondingly shaped portion at its opposite end, and conducting cores molded in the insulating block and extending through said body from points within the periphery of the seat to points outside of the seat.

5. A terminal for cables having in combination an annular block of insulating material provided at one end with an externally threaded projection and having at its opposite end an internally threaded portion of substantially the same diameter as the externally threaded portion and a series of conducting cores extending through the insulating body from points within the externally threaded portion to points outside of the internally threaded portion.

[Claims 6 and 7 not printed in the Gazette.]

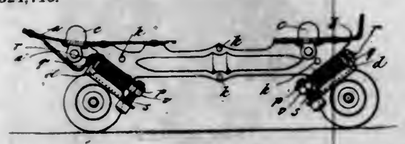
898,098. CONDENSATION DYE FROM GALLOCYANINS AND PROCESS OF MAKING SAME. CHARLES DE LA HARPE, KARL OSWALD, and ERNST ZEHNTNER, Basel, Switzerland, assignors to The Firm of Dye Works formerly L. Durand, Huguenin & Co., Basel, Switzerland. Filed Apr. 21, 1908. Serial No. 428,409.

1. The herein described process for the manufacture of new dyestuffs by treating the products made by condensing a gallocyanin dyestuff with an aromatic amin, with an acid and a reducing agent.

2. As new dyestuffs, the described derivatives of the condensation products of gallocyanin-dyestuffs with aromatic amins, which are very easily soluble in water,

giving colorless solutions becoming rapidly blue in air, dissolve in concentrated sulfuric acid with a green coloration, which does not change on the addition of an oxidant but fades only after some time, and give in printing with metallic mordants brilliant pure blue tints of great uniformity.

898,099. SKATE-FRAME. WALTER P. DODGE, Springfield, Mass., assignor to Barney & Berry, Springfield, Mass., a Corporation. Filed July 5, 1906. Serial No. 324,713.

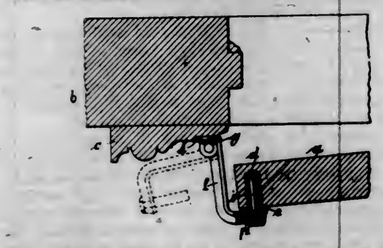


1. A frame for roller skates consisting of two flat metal parts, means for uniting the same, each part having at its ends integral outwardly bent projections to serve as supports for the skate-trucks and between the ends additional integral outwardly bent projections to serve as supporting means for the sole and heel-plates, as described.

2. A frame for roller skates having two sheet metal plates secured together, each plate having projections at its ends on opposite edges and bent at angles to the body portion of the plate, the projections on one edge at the ends of each of the united plates constituting supports for the sole and heel-plates, and the projections on the opposite edges at opposite ends constituting supports for the trucks, said supports being arranged at equal angles to the upper edge of the frame, whereby either end of the frame may constitute the front of the skate.

3. A skate frame comprising two plates secured together and having laterally extending integral projections constituting supporting elements, said integral projections being located in planes at angles to the upper surface of the frame.

898,100. SAFETY DEVICE FOR DOORS. JOSEPH GRÜNINGER, New York, N. Y. Filed Dec. 17, 1907. Serial No. 406,916.

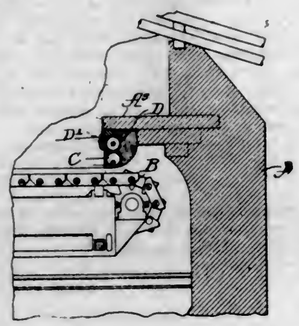


1. A safety device for doors comprising essentially a hinge with base plate secured to the door jamb, an L shaped arm movably mounted on said hinge and having an opening in its short portion, and a metal rod secured in said opening, in combination with a door having an opening and metal plate with coinciding opening adapted to lodge said rod when an attempt is made to open the door.

2. A safety device for doors comprising essentially a hinge with base plate secured to the door jamb and having formed thereon two indentations, an L shaped arm with opening in its short portion movably mounted on said hinge and having two small projections adapted to lodge in the indentations of the hinge, and a metal rod secured in the opening of the L shaped arm, in combination with a door having an opening and metal plate with coinciding opening adapted to lodge the metal rod when an attempt is made to open the door.

3. A safety device for doors comprising essentially a hinge with base plate secured to the door jamb, an L shaped arm with opening in its short portion movably mounted on said hinge, a catch consisting of two indentations in the hinge and two small projections on said L shaped arm, a metal rod having a short reduced portion and a long reduced portion, both being adapted to be inserted in the opening of the short arm portion, in combination with a door having an opening with metal plate and coinciding opening adapted to lodge the metal rod, an electric contact within the opening in the door, and an electric connection on the base plate of the hinge.

898,101. TRAVELING-GRATE FURNACE. JOSEPH HARRINGTON, Chicago, Ill., assignor to Green Engineering Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 23, 1906. Serial No. 302,609.



1. The combination with a traveling furnace grate and a bridge wall having a part which projects forwardly over said grate, of a pivotally mounted, adjustable bridge piece between the wall and grate, the overhanging part of the bridge wall being provided with a convexly curved, downwardly facing bearing surface adapted for contact with the bridge piece in all positions of the latter.

2. The combination with a traveling furnace grate and a bridge wall having a part which projects forwardly over the grate, of a bridge piece extending transversely over the grate and provided at its ends with bearing trunnions by which the bridge piece is pivotally supported, the overhanging part of the bridge wall being provided with a convexly curved, downwardly facing bearing surface adapted for contact with the intermediate portion of the bridge piece in all positions of the latter.

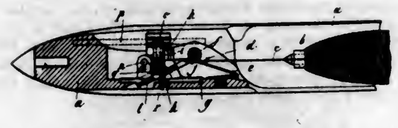
3. The combination with a traveling furnace grate and a bridge wall having a part which projects over said grate, including a water-cooled member, of a movably mounted bridge-piece in contact with the said water-cooled bridge wall member, and adapted to be shifted towards and from the grate while maintaining its contact with said bridge wall member.

4. The combination with a traveling furnace grate and a bridge wall having a part which projects over said grate, including a water-cooled member, of a bridge piece in contact with said water-cooled bridge wall member, said bridge piece being pivotally mounted to swing bodily towards and from the grate while maintaining its contact with said water-cooled member.

5. The combination with the side walls of a furnace, a traveling grate and a bridge wall having a forwardly projecting overhanging part, of a water-cooled member constituting a portion of said overhanging part of the bridge wall, and a pivotally mounted adjustable bridge piece in contact with said water-cooled member, said water-cooled member having a convexly curved, downwardly facing bearing surface adapted for contact with the bridge piece in all positions of adjustment of the latter.

[Claims 6 to 21 not printed in the Gazette.]

898,102. TENSION DEVICE FOR LOOM-SHUTTLES. JULES E. HAUVETTE, Clermont-Ferrand, France. Filed Feb. 26, 1907. Serial No. 359,494.



1. In a weaving shuttle for automatically regulating the delivery and tension of the weft thread, the combination of a tension counterweight arranged to oscillate in a plane transverse to the longitudinal axis of the shuttle, said counterweight being provided with an eyelet for the passage of the thread, a friction roller for the thread carried by the shuttle body, and a spring-actuated sliding stop for pressing the thread against the friction roller, said stop being under the control of the counterweight to relieve the thread from pressure against the friction roller.

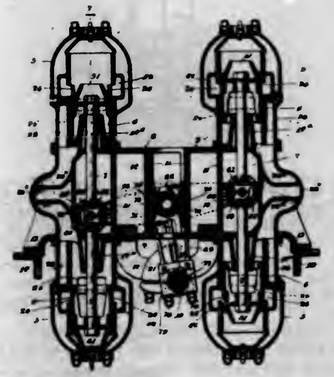
2. In a weaving shuttle for automatically regulating the delivery and tension of the weft thread, the combination of a tension counterweight arranged to oscillate in a plane transverse to the longitudinal axis of the shuttle, said counterweight being provided with an eyelet for the passage of the thread, a finger carried by said counterweight, a friction roller for the thread carried by the shuttle body, a sliding stop carried by the shuttle body, a spring tending to press the stop against the friction roller, and a tappet on the stop, said tappet being located in position to be engaged by the finger of the counterweight to operate the stop against the action of the spring.

3. In a weaving shuttle for automatically regulating the delivery and tension of the weft thread, the combination of a friction roller carried by the shuttle body, under which the thread passes after leaving the bobbin, a small plate for lightly pressing the thread against the roller, a stationary guide with two lugs for the passage of the thread, a counterweight arranged to oscillate in a plane transverse to the longitudinal axis of the shuttle, said counterweight being provided with an eyelet for the passage of the thread, a sliding stop carried by the shuttle body, a spring acting upon the stop tending to make it press the thread against the roller when the counterweight is in its lower position, a tappet on the stop, a finger on the counterweight co-acting with the tappet when the counterweight is raised to disengage the stop from the roller, and a side wall of the shuttle provided with a hole for the exit of the thread, said hole being provided with a roller on each side thereof.

898,103. EXPLOSION-ENGINE. THADDEUS W. HEERMANS, Evanston, Ill. Filed Feb. 26, 1907. Serial No. 359,472.

1. In an explosive engine, the combination with four single acting power cylinders arranged in lateral pairs, the cylinders of each pair opposing each other and spaced a distance apart greater than the stroke of the pistons, pistons therein and piston rods connected with said pistons, of a crank-shaft having a single crank-pin and a rocker for transmitting power successively from all of said cylinders to said single crank-pin to rotate said shaft.

2. In an explosive engine, the combination with four single acting power cylinders, their pistons and piston rods, each cylinder formed at its outer end to provide an explosive chamber and at its inner end to form a charging pump chamber in connection with which the piston operates, said cylinders being arranged in two lateral pairs with the cylinders of each pair opposing each other, the piston rods extending through the ends or heads of said charge pump chambers, of a crank-shaft having a single crank-pin, a rocker comprising an arm having rotative bearing with the crank-pin and a cross-arm the ends of which extend between the cylinders of each pair and are connected with the piston rods, the cylinders of each pair being located a distance apart greater than the stroke of the pistons.



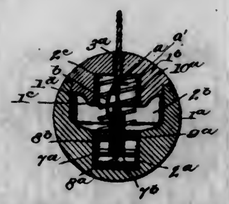
3. In an explosive engine, the combination with four single acting power cylinders, their pistons and piston rods, each cylinder formed at its outer end to provide an explosive chamber and at its inner end to form a charging pump chamber in connection with which the piston operates, said cylinders being arranged in two lateral pairs with the cylinders of each pair opposing each other, the piston rods extending through the ends or heads of said charge pump chambers, of a crank-shaft having a single crank-pin, a rocker pivotally mounted on said cross-head comprising an arm having rotative bearing with the crank-pin, and a cross-arm the ends of which extend between the cylinders of each pair and are connected with the piston rods, the cylinders of each pair being located a distance apart greater than the stroke of the pistons.

4. In an explosive engine, the combination with four single acting power cylinders, their pistons and piston rods, each cylinder formed at its outer end to provide an explosive chamber and at its inner end to form a charging pump chamber in connection with which the piston operates, said cylinders being arranged in two lateral pairs with the cylinders of each pair opposing each other, and a transverse frame extending between said pairs of cylinders on which the cylinders are rigidly supported, the cylinders of each pair being separated a distance apart greater than the strokes of said pistons, of a crank-shaft provided with a single crank-pin, a cross-head which has sliding engagement in guides in said frame, and a rocker pivotally mounted on said cross-head, said rocker having rotative bearing with said crank-pin and having parts which extend between and are connected with the piston rods.

5. In an explosive engine, the combination with four single acting power cylinders, their pistons and piston rods, each cylinder formed at its outer end to provide an explosive chamber and at its inner end to form a charging pump chamber in connection with which the pistons operate, said cylinders being arranged in two lateral pairs with the cylinders of each pair opposing each other, a frame extending transversely between the two pairs of cylinders upon which the cylinders are rigidly supported, and the cylinders of each pair being separated a distance apart greater than the strokes of said pistons, the inner ends or heads of said charging pump chambers being composed of fixed parts of the frame and the piston rods extending through said ends or heads of the pump chamber, of a crank-shaft having a single crank-pin, a sliding cross-head having sliding bearing in the frame, and a rocker pivotally mounted on said cross-head and having rotative bearing with the crank-pin and having parts which are connected with said piston rods.

[Claims 6 and 7 not printed in the Gazette.]

898,104. CIRCUIT-CLOSER FOR CALL-BELLS. ROBERT HENDERSON, U. S. Navy. Filed June 4, 1906. Serial No. 320,188.



1. In a circuit closer, the combination of a weighted knob or handle adapted to be grasped by the hand of the operator, and provided with one of the contacts of the circuit; circuit wires adapted to suspend and to slide in said knob or handle and provided with the other contact of said circuit; and a spring adapted to close said circuit when the said knob or handle is lifted, substantially as described.

2. In a circuit closer, the combination of a weighted handle adapted to be conveniently grasped by the hand of the operator and provided with one of the contacts of the circuit; circuit wires adapted to suspend and to slide in said handle and normally support the same, and provided with the other contact of the circuit; and a spring surrounding said circuit wires adapted to be compressed by the weight of said handle sufficiently to open the circuit when the apparatus is not in use, substantially as described.

3. In a circuit closer, the combination of a weighted knob or handle, adapted to be conveniently grasped by the hand of the operator, provided with one of the contacts of said circuit, and having a chamber therein, and a passage through a portion of the same; circuit wires provided with the other contact of said circuit operating in said chamber, and adapted to suspend said knob or handle and to slide through said passage; a spring in said chamber adapted to be normally sufficiently compressed by the weight of said handle to keep the circuit normally open; and means for closing the said chamber, substantially as described.

4. In a circuit closer, the combination of a hollow weighted handle, adapted to be conveniently grasped by the hand, and carrying one contact of the circuit; circuit closing means therein, comprising the other contact member of said circuit; a spring interposed between the said contact member and the top of said handle, and normally held compressed by the weight thereof; and circuit wires connected to said contact and normally suspending the said weighted handle, whereby the weight of said handle normally holds the circuit open, and whereby upon lifting of said weight the spring automatically closes said circuit, substantially as described.

5. In a circuit closer the combination of a weighted handle, carrying a contact; circuit wires normally suspending said handle; means located within said handle, and operating to close the circuit upon the lifting of said handle, and to similarly close another circuit upon the movement of said handle in an opposite direction, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

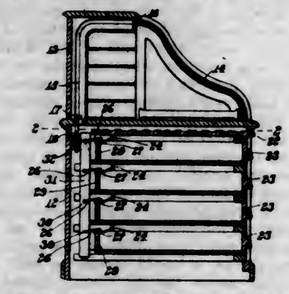
898,105. TOY BALLOON. WILLIAM P. HERBST, Washington, D. C. Filed Oct. 2, 1907. Serial No. 395,635.



1. The combination of an inflatable bag, a valveless tubular stem secured to the inflatable bag, and a mouth piece consisting of a paraffin paper tube removably fitted in the bore of the stem and foldable to form a self locking closure and also to prevent the mouth piece from being again used for inflating the bag.

2. The combination of an inflatable bag having a neck, a sleeve fitted within the neck and having a valveless bore or opening, fastening means arranged on the outside of the neck for securing the same to the sleeve, and a mouth piece consisting of a paraffin paper tube removably fitted in the bore or opening of the sleeve and foldable to form a self locking closure and also to prevent the mouth piece from being used again for inflating the bag.

898,106. DESK. JOHN W. HIGGINS, Somerville, Mass. Filed Jan. 9, 1908. Serial No. 410,058.



1. In a drawer-locking mechanism for desks, the combination of a vertically movable staff; a pivoted member operable by a movable part of the desk to move said staff; a drawer; and another member pivoted to the frame of the desk provided with a drawer-locking shoulder and adapted to be moved about its pivot by the upward movement of said staff to disengage said shoulder and unlock said drawer.

2. In a drawer-locking mechanism for desks, the combination of a vertically movable staff; a pivoted member operable by a movable part of the desk to move said staff; a drawer; a U-shaped locking device provided near either end with a shoulder adapted to engage the back of said drawer and pivoted to the desk frame on either side of said drawer; and means connected to said staff for imparting a movement to said locking device whenever said staff is vertically moved.

3. In a drawer-locking mechanism for desks, the combination of a vertically movable staff; a pivoted member operable by a movable part of the desk to move said staff; a drawer; a U-shaped locking device provided near either end with a shoulder adapted to engage the back of said drawer and pivoted to the desk frame on either side of said drawer and in front of the back of said drawer when in closed position; and means connected to said staff for imparting a movement to said locking device whenever said staff is vertically moved.

4. In a drawer-locking mechanism for desks, the combination with a drawer; of a member pivoted to the desk frame and provided with a drawer-engaging shoulder; a weight adapted normally to retain said shoulder in locking position; and means operable by a movable part of the desk for moving said weight to disengage said shoulder.

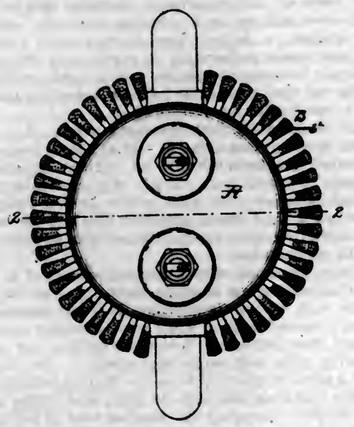
5. In a drawer-locking mechanism for desks, the combination with a drawer; of a member pivoted to the desk frame in front of the back of the drawer and provided with a drawer-engaging shoulder; a weight adapted normally to retain said shoulder in locking position; and means operable by a movable part of the desk for moving said weight to disengage said shoulder.

[Claims 6 to 11 not printed in the Gaeztte.]

898,107. HEAT-DISSIPATING DEVICE FOR GAS-ENGINES. GEORGE S. HILL, Bradford, Mass., assignor to Hill Motor Car Company, Haverhill, Mass., a Corporation of Maine. Filed July 27, 1905. Serial No. 271,449.

1. A heat-dissipating device for gas-engines, comprising a fan-shaped pin having integral protuberances.

2. A heat-dissipating device for gas-engines, comprising a pin threaded at one end and flattened and flaring toward the other end and provided with protuberances substantially as and for the purpose set forth.



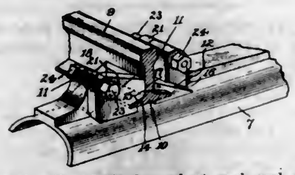
3. A heat-dissipating device for gas engines comprising a fan-shaped pin.

4. A heat-dissipating device for gas-engines, comprising a pin cylindrical at one end, tapering in one axial plane, and flaring in an axial plane at right angles thereto, to a wide, thin edge at the other end.

5. A heat-dissipating device for gas-engines, comprising a pin cylindrical at one end, and compressed at the other end to a width greater, and a thickness less, than the diameter of the cylindrical end.

[Claim 6 not printed in the Gazette.]

898,108. METAL RAILROAD-TIE. CHARLES HORRELL, Madison, Ill. Filed Sept. 19, 1907. Serial No. 393,041.

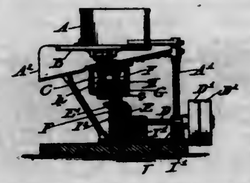


1. A metal railroad tie formed at each end with a rail seat, a lug upon each side of said rail seat, and provided with wedge engaging faces directed toward said rail seat, wedges adapted to be driven underneath said lugs and each formed with a groove for engaging the side of the rail base and means for engaging the tie and wedge for securing such wedge in position.

2. A metal tie formed at each end with a rail seat, a lug upon each side of said rail seat and provided with a wedge engaging face directed toward said rail sent, said faces upon opposite sides of the rail being inclined at opposite angles to the rail seat, wedges adapted to be driven underneath said lugs from opposite sides of the tie, said lugs being provided with bolt holes disposed transversely of the tie and said wedges each carrying a wing and provided with a bolt hole registering with the bolt hole in the lug and a bolt for traversing each of said bolt holes for securing the wedge in position.

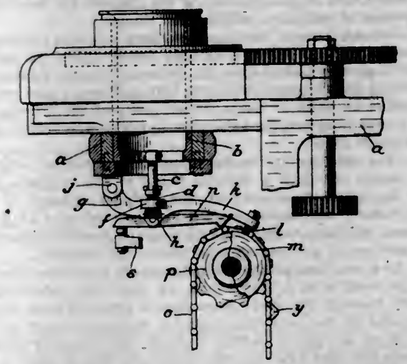
898,109. MACHINE FOR CUTTING CABBAGE. CHARLES W. HOTTMAN, Philadelphia, Pa., assignor of one-half to Christopher Offenhauser, Philadelphia, Pa. Filed July 20, 1905. Serial No. 270,461.

A vegetable cutter comprising a hopper, a cutter plate arranged below the hopper, a rotatable shaft supporting said cutter plate, a bracket loosely mounted upon a fixed shaft and provided with bearings to receive the rotatable shaft, a gear wheel secured to the fixed shaft, a pinion in



engagement therewith secured to the rotatable shaft, a bevel pinion fastened to said bracket and a bevel gear engaging the same mounted upon a shaft suitably driven, substantially as specified.

898,110. CIRCULAR-KNITTING MACHINE. HARRY A. HOUSEMAN, Philadelphia, Pa., assignor to Standard Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 22, 1907. Serial No. 375,022.



1. In a circular knitting machiue, the combination with a vertically movable needle cylinder, of a supporting lever for said cylinder, a second lever normally floating with respect to the first lever, a pattern device for operatively connecting said levers and means to operate upon said normally floating lever when in the last mentioned condition to lift said last mentioned lever.

2. In a circular knitting machine, the combination with a vertically movable needle cylinder, of a supporting lever for said cylinder, a second lever normally floating with respect to the first lever, a pattern device for operatively connecting said levers and means, operative during the knitting of one course, to operate upon said normally floating lever when in the last mentioned condition to lift said last mentioned lever.

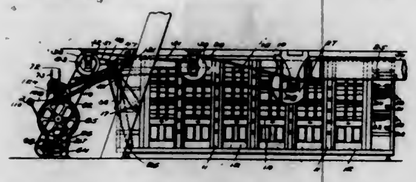
3. In a circular knitting machine, the combination with a vertically movable needle cylinder, of a lifting device and means to render said device active at a predetermined point and a cam, operative during knitting of one course, adapted, when the lifting device is rendered active, to lift said device.

4. In a circular knitting machine, the combination with a vertically movable needle cylinder, of a lifting lever normally loosely connected with said needle cylinder, a pattern device adapted to make a fixed connection between said lifting lever and needle cylinder, and means to lift said lever when said lever is so connected.

5. In a circular knitting machine, the combination with a vertically movable needle cylinder, of a lifting lever normally inoperative, a pattern device adapted to make an operative connection between said lifting lever and needle cylinder, and means to lift said lever when said lever is operatively connected with the needle cylinder.

[Claim 6 not printed in the Gazette.]

898,111. SOAP CHILLER AND DRIER. ANTHONY HUBER and ERNEST A. HOUCHIN, Brooklyn, N. Y. Filed May 24, 1906. Serial No. 318,598.



1. In a machine of the class described, a chilling cylinder, a feed hopper associated with the cylinder, a crushing roller located in juxtaposition to the cylinder, a stripper arranged in contact with the roller, an apron arranged to receive material from the stripper and move at a speed greater than the speed of the roller, and a drier arranged to receive material from the end of the conveyer apron.

2. In a machine of the class described, a hollow chilling cylinder, means within the cylinder for discharging liquid therefrom, and means external of the cylinder for varying the height of the liquid within the cylinder.

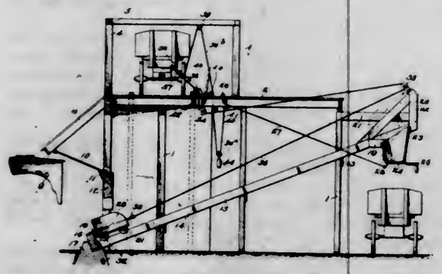
3. In a machine of the class described, a hollow chilling cylinder, means to admit a chilling liquid within the cylinder, a pipe extending into the cylinder in axial relation thereto, a branch pipe connected with said axial pipe and extending adjacent to the inner periphery of the cylinder, and means to rotate the axial pipe to adjust the height of the branch pipe.

4. In a machine of the class described, a hollow cylinder, means to admit a chilling liquid to the cylinder, a pipe extending from without the cylinder through the axis thereof, and means carried by the axial pipe at its external end for rotating the said pipe and for determining the position of the branch pipe within the cylinder.

5. In a machine of the class described, a hollow cylinder provided with a hollow hub, an inlet pipe extending axially through the said hollow hub, a coupling upon the outer end of the said inlet pipe for connection with the feed pipe, a pipe extending through the coupling and through the inlet pipe into the cylinder, a branch pipe extending from the inner extremity of the axial pipe and into juxtaposition with the inner periphery of the cylinder, and with its external end extending through the coupling, a dial carried upon the coupling, and means carried by the external end of the pipe for operation in conjunction with the dial to determine the position of the branch pipe within the cylinder.

[Claims 6 to 21 not printed in the Gazette.]

898,112. APPARATUS FOR HANDLING BEETS. DETLEF L. JOEHNCK, Rocky Ford, Colo. Filed Jan. 27, 1908. Serial No. 412,913.



1. The combination of stationary means for screening a weighed load of beets, a receptacle for the screenings, a hopper, means for shifting said receptacle from the screening means to said hopper by the vehicle initially conveying the load of beets as said vehicle is moved away, and cooperating means automatically dumping said receptacle, and allowing its return to its normal position, substantially as described.

2. The combination with means for screening a weighed load of beets, of an automatically dumping skip car normally located adjacent said screening means for receiving the screenings, a hopper distant from said screening means, and means coöperating to convey said skip car to said hopper comprising sheaves and a cable connecting said skip car with the vehicle initially conveying the load of beets, substantially as described.

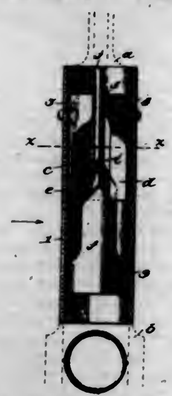
3. The combination with screening means, of a track terminating at one end adjacent said screening means and at its other end provided with an inclined extension of wider gage than said main track, a skip car operating on said track and provided with wheels having flanges of different width, and means operating said skip car by the vehicle initially conveying the weighed load of beets, substantially as described.

4. The combination with screening means, of a track terminating at one end adjacent thereto, and at its other ends the rails thereof terminating in short angular extensions, a second track of wider gage diverging upwardly from said short extensions, a skip car having rear wheels coöperating with said wide gage track to ride thereon while the forward wheels ride on the short extensions, and means for operating said skip car along said tracks by the vehicle initially conveying the weighed load of beets, substantially as described.

5. The combination with screening means, of a track terminating at one end below said screening means and inclining upwardly towards its other end, the rails thereof terminating in short angular extensions, a second track of wider gage diverging upwardly from said short extensions, a skip car having rear wheels of wider gage than said forward wheels, the said forward wheels coöperating with said short rails, and the rear wheels coöperating with said wider gage track to tilt said skip car towards the end of its movement up said incline, and means for operating said skip car by the vehicle initially conveying the weighed load of beets, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

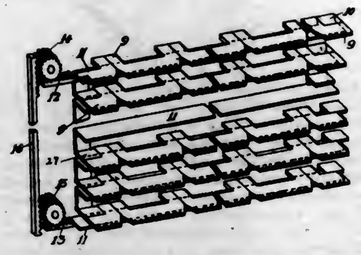
898,113. CAP-FEEDING MECHANISM FOR BOTTLE-CAPPING MACHINES. ALBERT JONES, Baltimore, Md. Filed Jan. 14, 1907. Serial No. 352,130.



1. In a bottle-cap assorting apparatus, a shell which at its upper end is provided with two blocks with an entrance channel between them, the said blocks having downward extensions of triangular cross-section; and at its lower end provided with similar blocks separated to form a discharge channel which is practically at a right angle with the entrance channel, the lower blocks being inverted and so placed that the ends of their extensions will pass beyond the ends of the extensions of the upper blocks, and thereby produce between the channels two crossed passages both of which lead to the discharge channel, combined with devices to deflect caps leaving the entrance channel, to one or other of the said passages, according to the position which the caps occupy on entering the apparatus, which conducts them in capping position, to the discharge channel, substantially as specified.

2. In a bottle-cap assorting apparatus, a shell having at its upper end two blocks with an entrance channel between them, the said blocks having downward extensions of V-shaped cross section; and having at its lower end two blocks with a discharge channel between them which is practically at a right angle with the entrance channel, the said blocks having upward extensions of V-shaped cross section, the upper and lower extensions forming two intersecting passages which are at about a right angle one with the other, and the upward extension of one of the lower blocks having a wedge-shaped end, combined with a device situated within the entrance channel to deflect caps to one or the other of the intersecting passages according to their position on entering the apparatus, and thereby conduct them in capping position to the delivery channel, substantially as specified.

898,114. VOTING-MACHINE INTERLOCK. FRANK KEIPER, Rochester, N. Y. Filed July 12, 1905. Serial No. 269,379.



1. In a voting machine, interlocking mechanism for multi-candidate voting comprising a plurality of groups of interlocking slides or wedge-blocks, connections between said groups to transmit the movement from one group to the next adjacent group, the two end blocks of said multi-candidate group being provided with rack teeth, and a limiting device consisting of pinions engaging therewith, and a rack bar engaging with said pinions movable independent of the frame of the machine and coupling said pinions and the end blocks together for simultaneous movement in either of two directions, whereby the spreading of the slides or wedge blocks may occur in both directions or in the direction of least resistance.

2. In a voting machine interlock, the combination of a plurality of series of interlocking blocks arranged in parallel series, with spacing devices for separating said blocks, the two end blocks at opposite ends of said interlock being provided with rack teeth, pinions engaging said rack teeth, a single rack bar engaging both of said pinions, by means of which said pinions and rack bar, the two end blocks at opposite ends of said interlock are connected for movement in unison, inclosing all of the blocks of the group between them.

3. In a voting machine interlock, the combination of a plurality of series of interlocking blocks, with spacing devices for separating said blocks, the two end blocks of opposite ends of said interlock being provided with racks, and being connected by means of pinions and a rack bar for movement in unison.

4. A combination in an interlocking mechanism of a plurality of series of interlocking blocks lying in parallel planes, all of said blocks being left free to move through a limited movement, with connections comprising three racks and two pinions extending between the end blocks of said plurality of series whereby the lost motion between said blocks is limited to a fixed amount.

5. In a voting machine interlock, the combination of keys and interlocking blocks, spacing devices carried by the keys and maintaining engagement with the blocks, said blocks being arranged in parallel series with connection between the series, the two outside end blocks of the parallel series being left free to move, with connections between them compelling coördination between them and fixing the interlocking space between them to a constant quantity, said connections comprising a series of racks and pinions.

[Claims 6 to 8 not printed in the Gazette.]

898,115. TURN-TABLE. PAUL KLEMP, Düsseldorf, Germany. Filed Apr. 16, 1908. Serial No. 427,299.



1. In a turn table for a track crossing, a base plate having a central recess, and inclined tongues extending between the track-rails, combined with a turn-plate rotatably seated in the recess, substantially as specified.

2. In a turn table for a track crossing, a base plate having a central recess, and inclined tongues extending between the track-rails, combined with a turn-plate rotatably seated in the recess, and with a ball race intermediate the base plate and turn-plate, substantially as specified.

3. In a turn table for a track crossing, a base plate having a central recess, and inclined tongues extending between the track-rails, combined with a turn-plate rotatably seated in the recess, and with a bolt secured to the turn-plate and rotatable in the base plate, substantially as specified.

4. In a turn table for a track crossing, a base plate having a central recess, and inclined tongues extending between the track-rails, combined with a turn-plate rotatably seated in the recess and provided with a central circular raised section, substantially as specified.

898,116. PROCESS OF REFINING METALS. KARL O. KRETSCHMER, Elizabeth, N. J., assignor of two-thirds to Charles J. Canda and Ferdinand E. Canda, New York, N. Y. Filed Oct. 18, 1907. Serial No. 398,005.

1. The process of refining metals, which consists in subjecting the metal while in a molten condition to the action of previously dehydrated compounds of boron.

2. The process of refining metals, which consists in adding a previously dehydrated compound of boron to the molten metal after said metal has left the furnace.

3. The process of refining metals, which consists in adding an anhydrous compound of boron to the molten metal while charging said metal into the ladle.

4. The process of refining metals, which consists in subjecting the metal while in a molten condition to the action of previously dehydrated compounds of boric acid.

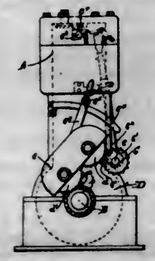
5. The process of refining metals, which consists in adding a dehydrated borate to the molten metal while charging said metal into the ladle.

[Claim 6 not printed in the Gazette.]

898,117. INTERNAL-COMBUSTION ENGINE. HERBERT J. LEIGHTON, Syracuse, N. Y. Filed Mar. 8, 1902. Serial No. 97,253.

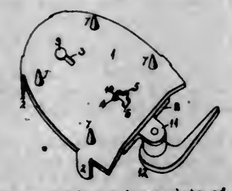
In combination in an internal-combustion engine having a crank-casing and a crank-shaft projecting outside of said casing, an igniting mechanism including a movable electrode, a reciprocating rod, a shaft arranged outside of the crank-casing parallel to the crank-shaft, a cam on the shaft outside of the crank-casing and connected to the reciprocating rod, and means for rotating the cam from the crank-shaft and also for varying the high point of said cam relatively to a given point on the crank-shaft, said means comprising a driven gear fixed on the cam-shaft, a driving gear fixed on the projecting end of the crank-

shaft, a pair of intermeshing gears meshing, respectively, with the driven and driving gears, a housing inclosing the pair of gears and having spindles for supporting the pair of gears, arms movable about the crank-shaft and the cam-



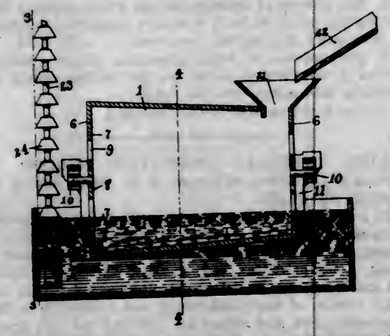
shaft, and journaled, respectively, on the spindles of the pair of gears, one of said arms having an extension terminating in a handle, and means for holding said arm in its adjusted position.

898,118. HEEL-PLATE. JOSEPH LIDEN, Rockford, Ill. Filed Jan. 20, 1908. Serial No. 411,794.



A heel plate comprising a base plate of a shape to approximately cover the heel, and formed with side and end upwardly extending lips and depending prongs, a clamping plate overlying the base plate and having a portion extending beyond the inner end of the base plate, a cam lever pivotally connected to the projection of the clamping plate and adapted to contact with the inner end of a heel, the base plate provided with a slot and a stud carried by the clamping plate located in the slot, the base plate formed with a slot having depressions located in opposite faces and a stud supported by the clamping plate adapted to enter any one of the depressions.

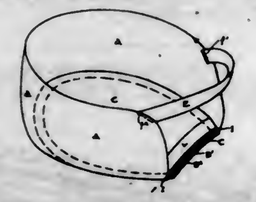
898,119. ORE SEPARATING OR CONCENTRATING MACHINE. WALTER R. LINS, Philadelphia, Pa. Filed May 13, 1907. Serial No. 373,211.



1. In a machine of the character described, a tank, a rocking drum mounted in said tank and having an opening discharging into said tank, said drum being conical and formed as an integral structure, the bottom of said drum having corrugations therein extending the length of the drum, and throughout a portion of its circumference, means for feeding the ore to said drum, and means for rocking the drum.

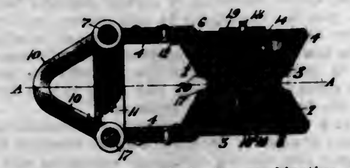
2. In a machine of the character described, a tank, a rocking drum mounted in said tank and having an opening discharging into said tank, said drum being conical and formed as an integral structure, the bottom of said drum having corrugations therein extending the length of the drum, and throughout a portion of its circumference, brackets carried by said tank for supporting the drum therein, a reciprocatory bar carried by one of said brackets, connections between said bar and said drum, whereby the latter is rocked by said bar, means for reciprocating said bar, and means for feeding the ore to said drum.

898,120. COMBINATION HEIGHT-INCREASER, HEEL-CUSHION, AND STOCKING-PROTECTOR. LEMUEL W. LITCH, Lynn, Mass. Filed Oct. 27, 1905. Serial No. 284,622.



As a new article of manufacture, a combined stocking-protector, height-increaser and heel-cushion, comprising a stocking-protector strip of suitable soft material molded to the contour of a human foot, and disposed in an upright position, the lower edge of said protector-strip being bent inward at an angle to form a flange, a substantially horizontal outer-sole portion disposed on the bottom of said flange, a substantially horizontal inner-sole portion disposed on the top of said flange, means for securing the sole-members to the flange, and a cushion-member disposed on said inner-sole portion.

898,121. LOGGER'S WIRE-ROPE SHEAVE-BLOCK. HENRY J. LITTLER, Vancouver, British Columbia, Canada. Filed Dec. 19, 1907. Serial No. 407,251.



1. In a logging sheave block, the combination with a sheave rotatable on a pin secured in the side plates of the block and forming the distance-piece between them, side plates having eyes secured to them for the reception of the yoke pins, and a yoke composed of a loop member and two compression links the latter extending directly between the eyes on the side plates and yoke pins through the eyes of the side plates and the yoke.

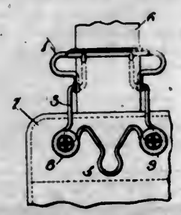
2. In a sheave block, the combination with a sheave rotatable on a hollow pin, side plates into apertures in which the hollow pin is fitted, strap plates secured to such side plates and having eyes for the reception of the yoke, bolts through the strap plates and hollow pin securing the sides together and to the pin, a yoke composed of a loop member and compression links each having eyes corresponding to those of the strap plates, and connecting pins through the strap plate eyes, loop member eyes and compression links.

3. In a sheave block, a hollow pin on which the sheave rotates said pin having a plunger fitting within the hollow

thereof and a screw tapped into the plunger and having a key projecting through the side plate, means for preventing rotation of the plunger, means for preventing end movement of the screw, and an oil hole delivering from the hollow of the pin to the external bearing surface thereof.

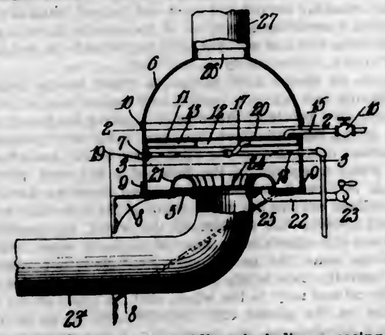
4. In a sheave block, the combination with a sheave, of a hollow pin said pin having an internal grease chamber and a plunger endwise movable therein means external to the sheave block for drawing said plunger within said grease chamber on which the sheave rotates, side plates into which the ends of the pin fit said side plates having eyes secured to them for the reception of the yoke, loop bolts through the side plates and hollow pin securing the plates together on the pin, a yoke composed of a V shaped loop member having eyes corresponding to those secured to the side plates and compression links extending directly between such side plate eyes, and pins through the eyes on the side plates the compression links and the link member.

898,122. BUCKLE. ABRAHAM L. LONDON, Pittsburg, Pa. Filed Nov. 7, 1907. Serial No. 401,052.



An article of the character described, comprising a strap engaging portion and a flap engaging portion constructed of wire and provided with a central button loop and two other loops arranged one on either side of the central loop.

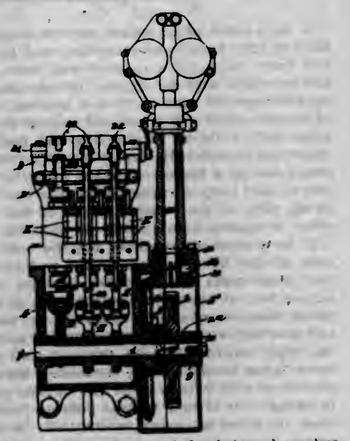
898,123. WATER-HEATER. DONALD M. MACLEOD, Los Angeles, Cal. Filed Aug. 27, 1907. Serial No. 390,325.



1. A water heater for buildings including a casing communicating with the external air only and comprising upper and lower sections and an intermediate section, said lower section being formed with an opening and having an annular flange for engagement with the exterior walls of the intermediate section, a hollow disk secured to the intermediate section and providing an interior water chamber, a partition extending transversely across said chamber, an inlet pipe communicating with the water chamber on one side of the partition, a heating coil arranged beneath the disk and having one end thereof communicating with the water chamber on the opposite side of the partition and its other end extended through the casing, a gas burner disposed within and surrounding the opening in the lower section of said casing, an air supply pipe disposed at said opening, a plate arranged within said opening at the bottom of the casing for deflecting the air laterally in engagement with the burner, and an air vent forming a source of communication between the upper section of the casing and the atmosphere.

2. A water heater for buildings including a casing communicating with the external air only and having a flat base and provided with a vertically disposed flange, said base being formed with a centrally disposed opening, a hollow disk disposed within the casing and having an opening formed therein and disposed in alinement with the opening in the base, said disk providing an interior water receiving chamber and having a partition extending transversely across the same, an inlet pipe communicating with the water chamber on one side of the partition, a heating coil disposed beneath the disk and having one end thereof communicating with the water chamber on the opposite side of the partition and its opposite end extended laterally through the casing, a sheet of asbestos secured to the upper surface of the disk and provided with an opening disposed in alinement with the opening in the disk, a burner disposed within the casing and arranged concentric with the opening in the latter, an air supply pipe secured to the base at said opening, a vent pipe engaging the flange of the casing, and brackets secured to the base for attaching the casing to a support.

898,124. FUEL-PUMP FOR INTERNAL-COMBUSTION ENGINES. JAMES D. MACPHERSON, New York, N. Y., assignor to American Diesel Engine Company, New York, N. Y., a Corporation of New York. Original application filed Apr. 7, 1905, Serial No. 254,267. Divided and this application filed Aug. 25, 1906. Serial No. 331,970.



1. In apparatus for injecting fuel for internal combustion engines, the combination with a part driven by the engine and a pump shaft, of clutching means between said parts comprising clutch members adapted to interlock or seize only in a definite angular relation which relation is predetermined with reference to the cycle of the engine, and independent means for forwardly rotating said shaft with respect to said engine-driven part.

2. In a fuel pump for internal combustion engines, a pump shaft, an engine-driven driving gear idly mounted thereon, a single tooth ratchet clutch mechanism between said parts and means for forwardly rotating said shaft with respect to said driving gear.

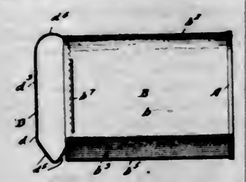
3. In a fuel pump for internal combustion engines, an engine governor, a pump shaft driving said governor and having a gear fast thereon and a driving gear loosely mounted thereon, in combination with clutch-members carried by said gears arranged to permit the forward rotation of the shaft with respect to said driving gear and independent means for rotating said shaft.

4. In a fuel pump for internal combustion engines, a casing having a partition dividing the same into compartments and a pump shaft common to said compartments, pump operating means on said shaft within one compartment and a driving gear loosely mounted on said shaft in the other compartment, in combination with clutching mechanism between said gear and shaft adapted to permit forward rotation of the latter with respect to said driving gear, means for independently driving said shaft, and an engine governor supported on the casing of the latter compartment.

5. In a fuel pump for internal combustion engines, a pump shaft, a driving gear for said shaft loosely mounted thereon, a second gear fast on said shaft and adapted to be automatically clutched to said driving gear under forward rotation of the latter, in combination with a governor shaft and a pinion thereon in mesh with the aforesaid second gear.

[Claims 6 to 11 not printed in the Gazette.]

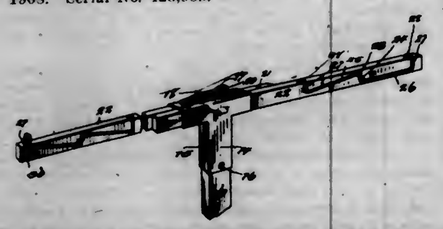
898,125. SHEET-METAL POCKET-BOX. ISAAC J. MARCUSE, Richmond, Va., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 19, 1906. Serial No. 339,593.



1. In a sheet metal pocket box, the combination with a body of thin form in cross section, and having wide back and front walls and a rounded wall at one upright edge, and provided with an angular trough-shaped wall at its opposite upright edge to form a pouring mouth therefor, of a cover round at one end and angular at the other, provided with a flange surrounding and conforming to the upper end of said body, the back wall portion of said cover flange having a hinge connection with the back wall portion of said body to cause the angular end of the cover to swing clear of the pouring mouth of the body when the cover is opened, substantially as specified.

2. In a sheet metal pocket box the combination with a body of thin form in cross section and having wide back and front walls and provided with an angular trough shaped wall at one of its upright edges to form a pouring mouth therefor, of a cover of an angular shape at one end and provided with a flange surrounding and conforming to the upper end of said body, the back wall portion of said cover flange having a hinge connection with the back wall portion of said body to cause the angular end of the cover to swing clear of said angular pouring mouth of the body when the cover is opened, substantially as specified.

898,126. HOLDER FOR PILLOW-SHAMS. VERNON MARKS, Campbellford, Ontario, Canada. Filed Mar. 28, 1908. Serial No. 423,955.



1. A pillow sham holder comprising a vertical support having means for attachment to a bedstead, independently longitudinally adjustable and frictionally held horizontal sham-supporting arms, sham-holding devices on the rear faces of said arms and having points engaging the upper faces of said arms, and a spring pin on the vertical support.

2. In a pillow sham holder, a vertical support, a hollow member at the upper end thereof, a spring pin on said hollow member, and horizontal arms having their overlapped ends frictionally held in said hollow member.

3. In a pillow sham holder, a vertical support, a hollow member at the upper end thereof, a spring pin on said hollow member, horizontal arms having their overlapped ends frictionally held in said hollow member, and spring pins mounted on the rear faces of said arms with their points engageable in cavities in the horizontal faces of the arms.

4. In a pillow sham holder, a vertically adjustable support, a hollow member secured to the upper end of one member of said support, independently adjustable horizontal arms having overlapped ends received in said hollow member, spring pins on said arms, and a spring pin on said hollow member.

5. In a pillow sham holder, a vertically adjustable support, a hollow member secured to the upper end of one member of said support, independently adjustable horizontal arms having overlapped ends received in said hollow member, spring pins on said arms, a spring pin on said hollow member, and a buffer on the rear face of the lower member of said support.

898,127. TURBINE. MATTHEW R. MOORE, Indianapolis, Ind. Filed July 22, 1904. Serial No. 217,678.



1. In an elastic fluid turbine, the combination with an annular set of movable vanes, of passages conducting the elastic fluid through the movable vane spaces two or more times in succession, the main portion of each such passage being smoothly curved and each end thereof being divided, forming a sectional nozzle, all of the nozzles at each point of delivery being of substantially the same form and angle of delivery, substantially as set forth.

2. In an elastic fluid turbine, a wheel having radially projecting and laterally curved buckets confined by an encircling tire, rotatably mounted in a casing having on each side facing the buckets of the wheel, a series of pockets or chambers and between the open sides of the pockets and the wheel a septum in the form of a flat ring, through which is formed a series of inclined tapering openings, the orifices next to the wheel being of the same size as the spaces between the buckets of the wheel, the partitions between the orifices being tapered to sharp edges, and the openings near the pocket side converged, not radially, but laterally, to a width of approximately six-tenths that of the orifices next to the wheel, and the edges of the partitions on the pocket side rounded over so as to form smooth debouchures, the inclination of the openings to be approximately 20 degrees to the faces of the septum; the sizes of the pockets and the number of openings through the septum opposite them being progressively enlarged to allow of the increase in volume of the stream of fluid as it loses pressure and motion.

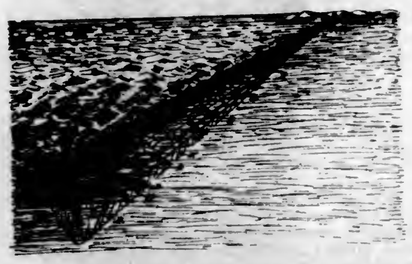
3. A steam turbine wheel having a series of separately formed, crescent-shaped buckets, in combination with a casing having passages arranged to apply the steam at two opposite points, throwing each stream of steam several times in succession against the end faces, to flow axially across through the spaces between the buckets, substantially as herein specified.

4. A steam turbine wheel having a series of separately formed, crescent-shaped buckets, in combination with a casing having passages arranged to apply the steam at two opposite points, throwing each stream of steam several times in succession against the end faces, having the successively enlarged chambers and the several reductions of pressure equal on the opposite sides of the axis, all substantially as herein specified.

5. A steam turbine wheel having a series of separately formed, crescent-shaped buckets, in combination with a casing having passages arranged to introduce and exhaust two streams at opposite points, and to apply each stream of steam several times in succession against the end faces, to flow axially across through the spaces between the buckets, and with nearly tangential guide plates A^8, all arranged to serve substantially as herein specified.

[Claims 6 to 18 not printed in the Gazette.]

898,128. STEADY-FLOATING STRUCTURE. WILLIAM E. MURRAY, Los Angeles, Cal. Filed Dec. 17, 1906. Serial No. 348,373.



1. The steady floating structure, consisting of a horizontal loaded flange carrying a superstructure by which buoyancy is maintained, a downwardly vertical projecting flange provided with a loading tube, a loading tube, gussets, tension frames, said flange being stiffened by the gussets and the tension frames, all for the purpose of producing increased steadiness of flotation in steady floating structures, substantially as set forth.

2. The steady floating structure, consisting of a horizontal loaded flange, two cross vertical downwardly projecting flanges connected to a loaded or loading tube of the structure, said loading tube, means for access to said loading tube, substantially as set forth.

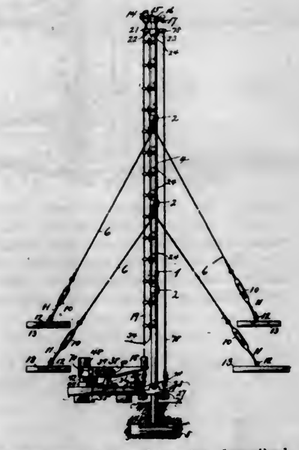
3. The steady floating structure consisting of a horizontal flange, a loaded or loading tube, two vertical downwardly projecting flanges connected to the loaded or loading tube of the structure, and situated crosswise in relation to each other, substantially as set forth.

4. The steady floating structure consisting of a horizontal loaded flange, a loaded or loading tube, two vertical downwardly projecting flanges, means for admitting the passage of hawsers therethrough for anchoring the structures, and the vertical tubes for having access to the loading tubes at the bottom of the said downwardly projecting flanges, substantially as hereinbefore set forth.

898,129. STRIKING-MACHINE. ROYCE A. NOKES and WILLIAM W. GORDON, Washington, D. C. Filed July 20, 1907. Serial No. 384,771.

1. In a machine of the character described, the combination with a standard, of a wire arranged adjacent said standard, means connecting the wire and standard, a block mounted and adapted to travel upon said wire, and a pivotally mounted lever having a slot at one end through which passes the said wire, and upon which slotted end the said block normally rests, said lever being adapted to bear directly upon said block to drive the same upwardly upon said wire when the opposite end of said lever is struck.

2. In a machine of the character described, the combination with a standard formed in sections adapted to be detachably secured together, and a rod carried by each of the sections, said rods constituting ladder rungs, of a wire arranged adjacent said standard, means connecting the wire and standard, and a block mounted and adapted to travel upon said wire.



3. In a machine of the character described, the combination with a standard formed in sections, the ends whereof are exteriorly threaded, interiorly threaded collars into which screw the adjacent ends of the sections, and a rung carried by each of the sections, of a wire arranged adjacent said standard, means connecting the wire and standard, a block mounted and adapted to travel upon the wire, and a pivotally-mounted lever upon one end of which the said block normally rests.

4. In a machine of the character described, the combination with a standard, rods carried by the standard at intervals and constituting ladder rungs an arm supported upon the standard adjacent to its upper end, and provided with a hook, a wire arranged adjacent to the standard and connected at its upper end to the hook, a tension device connected with the standard adjacent to the lower end to the latter and to which tension device the lower end of the wire is connected, and a block adapted to travel upon said wire, of a pivotally-mounted lever upon one end of which the said block normally rests and by which lever said block is driven upwardly when the opposite end of the lever is struck by a hammer or maul.

5. In a machine of the character described, the combination with a standard, a sleeve carried by the standard, arms carried by said sleeve and each provided with a hook, wires arranged adjacent the standard and having their upper ends connected to said arms, tension devices to which the lower ends of the wires are connected, and a block mounted and adapted to travel upon one of said wires, of a pivotally-mounted lever upon one end of which said block normally rests.

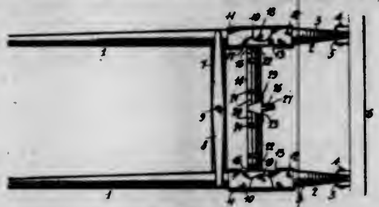
[Claims 6 to 19 not printed in the Gazette.]

898,130. THILL-DETACHER. JAMES D. O'BRIEN, Phœnixville, Pa. Filed Aug. 17, 1907. Serial No. 389,044.

1. Thills comprising rear sections and front sections detachably connected thereto and coupling sleeves in which the joints between said front and rear sections are disposed, in combination with pivoted locking links engaging such front sections, the latter and such locking links having coacting cam surfaces for the purpose set forth, and longitudinally movable bolts between such pivoted locking links and locking and unlocking means for such bolts.

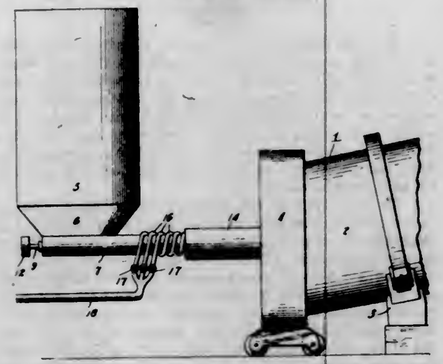
2. Thills comprising rear sections and front sections detachably coupled thereto, in combination with pivotally mounted locking links carried by the rear sections to en-

gage such front sections, and bolts to operate such links, and a movable wedge-acting element between the inner ends of such bolts, for the purpose set forth.



3. Thills comprising rear sections and front sections detachably coupled thereto, in combination with pivotally mounted locking links carried by the rear sections to engage such front sections, bolts to operate such links and a movable wedge-acting element between the inner ends of such bolts, and means to operate such wedge-acting element.

898,131. COAL-BURNER FOR CEMENT-KILNS. JAMES H. O'DONNELL and HUGH MCCLAFFERTY, Litzenberg, Pa. Filed Oct. 1, 1907. Serial No. 395,438.



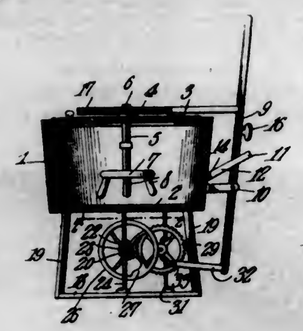
1. In a burner of the character described, a mixing tube, a feed tube projecting into the mixing tube and formed with an annular series of longitudinal slots, said feed tube being of less size than the mixing tube to provide a space between them, means within said space for directing a blast of air diagonally over the slots in the feed tube and spirally within the mixing tube and means for feeding fuel through the feed tube to said slots, substantially as set forth.

2. In a burner of the character described, a mixing tube, a feed tube projecting into the mixing tube and formed with an annular series of longitudinal slots, said feed tube being of less size than the mixing tube to provide a space between them, a conveyer within the feed tube for feeding fuel through the same to said slots, and a plurality of angularly arranged air blast pipes in the space between said tubes for directing blasts of air diagonally across the slots in the feed tube and spirally within the mixing tube, substantially as set forth.

3. A burner of the character described comprising a mixing tube, feed tube projecting into one end of the same and formed with an annular series of slots, a conveyer within the feed tube and air blast pipes coiled about the feed tube and having their discharge ends terminating adjacent to the slots in the feed tube and adapted to create a spiral blast through the mixing tube.

4. A burner of the character described comprising a mixing tube having a flared discharge end, a fuel hopper, a feed tube arranged in the bottom of the hopper and having one end projecting into the mixing tube and formed with slots or openings, a spiral conveyer arranged within the feed tube, agitator pins upon the shaft of said conveyer, and a valve controlled air blast pipe coiled about the feed tube and having its discharge end or nozzle terminating adjacent to the slotted portion of said feed tube, substantially as set forth.

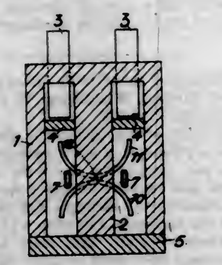
898,132. OPERATING MECHANISM FOR WASHING-MACHINES. ROSWELL C. OTIS and WILLIAM W. GUNDRUM, Casey, Iowa. Filed July 3, 1907. Serial No. 382,048.



1. In a washing machine, a support, a rotary element, an operating lever pivoted at an intermediate point and operatively connected to said element, a driving gear journaled beneath the machine and having a crank pin, a pitman connecting the latter and the lower end of the lever, a balance wheel shaft also journaled beneath the support, a pair of balance wheels thereon weighted at one side of their axes, a pinion on said shaft coöperating with the driving gear, and the supplemental handle on the operating lever between its pivot and the connection of the lever with the rotary element.

2. In a washing machine, a support, a rotary element, an operating lever pivoted at an intermediate point and operatively connected to said element, a driving gear journaled beneath the support and having a crank pin, a pitman connecting the latter and the lower end of the lever, a balance wheel shaft also journaled beneath the support, a pair of balance wheels thereon weighted at one side of their axes, and a pinion on the said shaft coöperating with the driving gear.

898,133. APPARATUS FOR PRODUCING VOLTAIC HIGH-CURRENT ARCS. HARRY PAULING, Gelsenkirchen, Germany, assignor to The Firm of Salpetersäure-Industrie-Gesellschaft, G. M. B. H., Gelsenkirchen, Germany. Filed July 29, 1907. Serial No. 386,073.

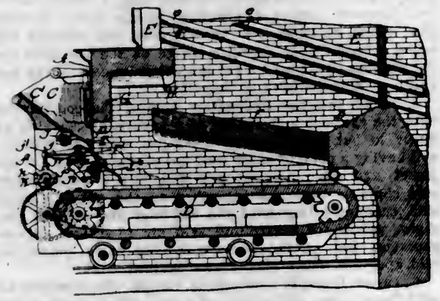


1. In an apparatus for producing voltaic high-current arcs, in combination, a magnet one pole of which forms a receptacle open at one end, such receptacle inclosing the other pole of the said magnet with a clear space between them, and a pair of curved electrodes arranged within this space so that the second said pole is embraced by both of them, such electrodes diverging towards the open end of the first said pole, substantially as set forth.

2. In an apparatus for producing voltaic high-current arcs, in combination, a magnet one pole of which forms a receptacle open at one end, such receptacle inclosing the other pole of the said magnet with a clear space between them, and a pair of curved electrodes arranged within this space so that the second said pole is embraced by both of them, such electrodes diverging towards the open end of the first said pole, and means for blowing a current of gas through the space between the electrodes and in the direction of divergence thereof, substantially as specified.

3. In an apparatus for producing voltaic high-current arcs, in combination, a magnet one pole of which forms a receptacle open at one end, such receptacle inclosing the other pole of the said magnet with a clear space between them, and a pair of curved electrodes arranged within this space so that the second said pole is embraced by both of them, such electrodes diverging towards the open end of the first said pole, and a pair of nose pipes extending through the closed end of the first said pole and lying on opposite sides of the second said pole, substantially as described.

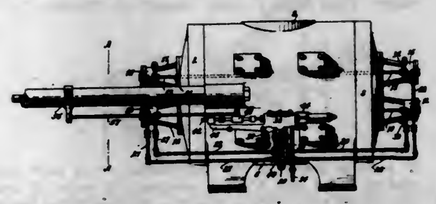
898,134. PROCESS OF BURNING COAL. HERMAN A. POPPENHUSEN, Evanston, and JOSEPH HARRINGTON, Chicago, Ill. Filed July 17, 1907. Serial No. 384,286.



1. The process of burning coal which consists in advancing the coal continuously into and through a furnace when spread in a layer, first applying coking heat to the top surface of the layer without aeration thereof, to effect the coking of the coal, and immediately after the completion of the coking operation admitting air to the bottom of the layer to effect combustion, agitating the part of the layer undergoing the coking operation to break up the layer and prevent caking or solidification of the coal; the agitation of the layer during the coking operation and its subsequent advance movement during combustion being effected without stirring or mixing the coal constituting the layer.

2. The process of burning coal which consists in advancing the coal continuously into and through a furnace when spread in a layer, first coking the coal without aeration and after the completion of the coking operation admitting air to the bottom of the layer to effect combustion, the coking being effected by directing the heated products of combustion arising from the portion of the layer undergoing combustion into contact with the top surface of the portion of the layer undergoing the coking operation, and agitating the part of the layer undergoing the coking operation to break up the layer and prevent caking or solidification of the coal, the agitation of the layer during the coking operation and its subsequent advance movement during combustion being effected without stirring or mixing the coal constituting the layer.

898,135. VALVE-OPERATING DEVICE FOR COMPRESSORS. WILLIAM PRELLWITZ, Easton, Pa., assignor to The Ingersoll-Sergeant Drill Company, New York, N. Y., a Corporation of West Virginia. Filed Mar. 8, 1905. Serial No. 249,136.



1. In a compressor, an inlet valve, a single fluid pressure motor therefor, a discharge valve, a single fluid pressure motor therefor, means for controlling the admission of fluid pressure to the motors for positively opening and closing the inlet valve and positively closing the discharge valve, said discharge valve being positively opened by direct pressure from the compress r piston chamber and auxiliary means for controlling the admission of pressure to the said discharge valve motor for assisting in the opening of the discharge valve at a predetermined point in the movement of the compressor piston.

2. In a compressor, an inlet valve, a single fluid pressure motor therefor, a discharge valve, a single fluid pressure motor therefor, a separate source of fluid pressure supply, a valve common to the motors for controlling the admission and exhaust of fluid pressure for positively opening and closing the inlet valve and positively closing the discharge valve, said discharge valve being positively opened by direct pressure from the compressor piston chamber, and auxiliary means for admitting fluid pressure from the said compressor piston chamber to the discharge valve motor for assisting in the opening of the said valve.

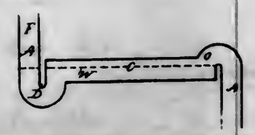
3. In a double acting compressor, inlet and discharge valves at each end of the compressor cylinder, a single fluid pressure motor for each valve having its piston connected to the valve stem, a fluid supply controlling valve chest, pipes connecting the valve chest with the motor cylinders to the front and rear of the inlet valve pistons and to the front of the discharge valve pistons, a valve in the chest for controlling the admission and exhaust of the fluid pressure through the said pipes to positively open and close the inlet valves and positively close the discharge valves, said discharge valves being positively opened by direct pressure from within the compressor piston chamber and pipes leading from the compressor piston chamber to the backs of the discharge valve pistons for assisting in the opening of the discharge valves at predetermined intervals.

4. In a double acting compressor, inlet and discharge valves at each end of the compressor cylinder, fluid pressure motors for the inlet and discharge valves, a six-way fitting, pipes leading therefrom to the motor cylinders in front and back of the inlet valve pistons and in front of the discharge valve pistons, a fluid supply controlling valve chest connected to the six-way fitting and having an inlet and outlet and a valve for controlling the admission and exhaust of the fluid pressure for positively opening and closing the inlet valves and positively closing the discharge valves at predetermined intervals.

5. In a double acting compressor, inlet and discharge valves at each end of the compressor cylinder, fluid pressure motors for the inlet and discharge valves, a six-way fitting, pipes leading therefrom to the motor cylinders in front and back of the inlet valve pistons and in front of the discharge valve pistons, a fluid supply controlling valve chest connected to the six-way fitting and having an inlet and outlet and a valve for controlling the admission and exhaust of the fluid pressure for positively opening and closing the inlet valves and positively closing the discharge valves at predetermined intervals and pipes

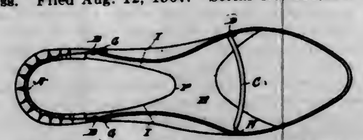
leading from the compressor cylinder to the backs of the discharge valve pistons for assisting in the opening of the discharge valves at predetermined intervals.

898,136. SEWER-GAS TRAP. JOHN P. PUTNAM, Boston, Mass. Filed Sept. 2, 1905. Serial No. 276,899.



In a water seal trap the combination of an inlet arm A, and an outlet arm A', each substantially equal in area to that of the fixture waste pipe F, a shallow unobstructed reservoir chamber C between the two having a depth substantially equal to the diameter of the waste pipe F, but having a length and breadth much greater than this diameter, a shallow bend D connecting the bottom of the inlet arm with the bottom of the chamber C, and an outlet opening O of area substantially equal that of the waste pipe F opening out of the side of the chamber C at some distance above its bottom.

898,137. SHOE-FORM. WILLARD C. RICHARDSON, Lynn, Mass. Filed Aug. 12, 1907. Serial No. 388,131.



In a shoe-form, a reinforcing section at the cone-portion, and a transverse brace at the ball-portion, one end thereof secured to one side of said section and the other end bent and bearing against, but unsecured to, the opposite side of said section, whereby the brace may be adjusted to narrow or widen the form at said ball-portion.

898,138. POLE-SOCKET. DANIEL A. ROBERTS, Elmira, N. Y. Filed Aug. 1, 1907. Serial No. 386,663.



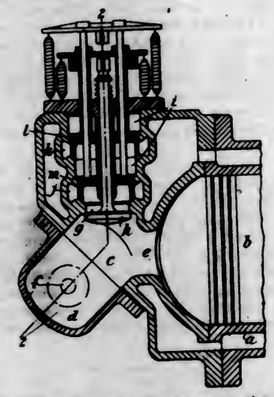
1. A pole socket comprising a body portion of semicylindrical form having a longitudinally projecting spur and an inturned ear integrally formed thereon along one edge adjacent each end.

2. A pole socket comprising a body portion of semicylindrical form terminating in parallel vertical end portions, said end portions being provided along one edge with flat longitudinally projecting spurs, and means on the socket for engaging the pole when inserted therein to prevent the withdrawal of the spurs.

3. A pole socket comprising a semicylindrical body portion adapted to receive the end of a pole, one or more inturned ears formed thereon along one edge to be engaged by the end of the pole, and longitudinal spurs projecting from said edge adjacent each end thereof.

898,139. INTERNAL-COMBUSTION ENGINE. DAVID ROBERTS, Grantham, England. Filed Nov. 9, 1907. Serial No. 401,487.

1. In an internal combustion engine, the combination with the cylinder and piston, of a vaporizing chamber exterior to but directly communicating with the cylinder, and having a portion of its wall not provided with a water jacket, and other portions provided with a water jacket, said chamber having an aperture on the water jacketed side, communicating with the air inlet and exhaust passages and valves controlling said passages, whereby said aperture serves as the air inlet and the exhaust outlet, substantially as described.



2. In an internal combustion engine, the combination with the cylinder and piston, of a vaporizing chamber exterior to but directly communicating with the cylinder, and having a portion of its wall not provided with a water jacket, and other portions provided with a water jacket, said chamber having an aperture on the water jacketed side, communicating with the air inlet and exhaust passages, whereby said aperture serves as the air inlet and the exhaust outlet, and a sealing valve for controlling said aperture, substantially as described.

3. In an internal combustion engine, the combination with the cylinder and piston, of a vaporizing chamber exterior to but directly communicating with the cylinder, and having a portion of its wall not provided with a water jacket, and other portions provided with a water jacket, said chamber having an aperture on the water jacketed side, communicating with the air inlet and exhaust passages, valves for controlling said air inlet and exhaust passages, and an independent sealing valve controlling said aperture, substantially as described.

4. In an internal combustion engine, the combination with the cylinder and piston, of a vaporizing chamber communicating with the cylinder, and provided with a fuel inlet, and an aperture separate from the fuel inlet, air inlet and exhaust passages connected with said aperture, separate controlling valves for said air inlet and exhaust passages and an independent sealing valve for said aperture, substantially as described.

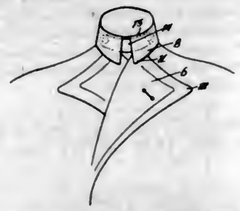
5. In an internal combustion engine, the combination with the cylinder and piston, of a vaporizing chamber communicating with the cylinder, and provided with a fuel inlet, and an aperture separate from the fuel inlet, air inlet and exhaust passages connected with said aperture, separate controlling valves for said air inlet and exhaust passages and an independent sealing valve for said aperture, all of said valves being concentrically arranged, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

898,140. COAT-COLLAR. LEON J. RODGERS, Chicago, Ill., assignor to Rose, Rodgers & Rose, Chicago, Ill., a Corporation of Illinois. Filed June 18, 1908. Serial No. 439,219.

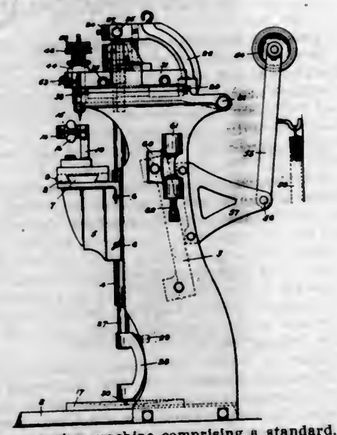
1. A coat provided with a collar and lapels and having intermediate the collar and lapels in each side a notch, said notch having three straight edges, the upper and lower edges being substantially parallel, and the inner straight edge located at an angle to said upper and lower edges.

2. A coat having a military collar and lapels, and having intermediate the collar and lapels on each side a notch, said notch having three straight edges, the upper and lower edges being substantially parallel, the inner straight edges cut at an angle with respect to the edge of the collar and lapel and occupying substantially a vertical position when



the collar is worn military style, the collar being folded down along a line extending from the upper termini of the inner vertical edges, and a tab having its ends underlying the turn-down collar and overlying the inner vertical edges.

898,141. ENGRAVING-MACHINE. WILLARD W. SAWYER, New York, N. Y., assignor to The Bates Machine Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 17, 1906. Serial No. 303,969.



1. An engraving machine comprising a standard, a bed plate hinged thereto, a bracket secured to the bed plate, a universal joint carried by the bracket, a tracer arm hung in the universal joint, a carrier plate, through which the tracer arm passes and to which it is connected, a pattern for one end of the tracer arm, said carrier plate being adapted to tilt with the bed plate and move in any direction in a plane parallel with said bed plate, and rotating spindles carried by said carrier plate.

2. An engraving machine comprising a standard, a bed plate hinged thereto, a bracket secured to the bed plate, a universal joint carried by the bracket, a tracer arm hung in the universal joint, a carrier plate, through which the tracer arm passes and to which it is connected, a pattern for one end of the tracer arm, said carrier plate being adapted to tilt with the bed plate and move in any direction in a plane parallel with said bed plate, and rotating spindles carried by said carrier plate, the connection between tracer arm and carrier plate comprising a socket on the carrier plate, a ball and a sliding sleeve therefor on the arm.

898,142. LOVING-CUP. ALFRED SCHICKERLING, New York, N. Y. Filed Apr. 4, 1908. Serial No. 425,136.

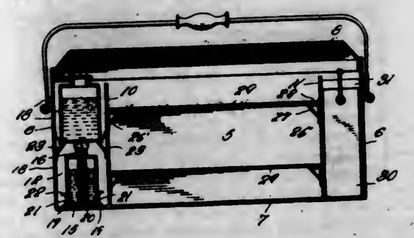
1. A loving cup comprising two drinking cups, one of said cups forming a base upon which the article rests when not in use, the second of said cups being pivoted with relation to the former, whereby both of said cups may be used simultaneously, substantially as described.

2. A loving-cup comprising two drinking cups, one of



which is provided at its lower contracted end with arms, the other of said cups being pivoted between said arms and capable of swinging at an angle to the first mentioned cup, substantially as described.

898,143. LUNCH-BOX. OSCAR SCHMITT, Davenport, Wash. Filed June 8, 1906. Serial No. 320,902.



A device of the class described comprising an oblong body, a top for the body, a vertical partition located within the body adjacent each end thereof and extending from side to side of the same, the said partitions forming in conjunction with the ends of the body end compartments and between themselves an intermediate compartment, brackets upon the partitions and the sides of the body, shelves removably supported within the intermediate compartment and upon said brackets, a partition subdividing one of said compartments, food containers removably disposed within said subcompartments, a liquid container supported within the other end compartment and above the bottom thereof, and a heater disposed beneath said liquid container.

898,144. PROCESS OF NITRATING SOLVENT NAPHTHA. GUSTAV SCHULTZ, Munich, Germany. Filed Oct. 3, 1907. Serial No. 395,775.

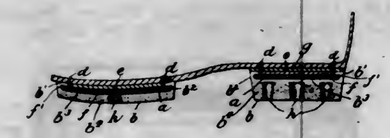
1. The process of producing a mixture of aromatic nitrocompounds from purified solvent naphtha, consisting in preliminarily nitrating the naphtha by mixing it with the described mixture of nitric and sulfuric acids; and then simultaneously cooling and agitating the same; then separating the mixed acids from the partially nitrated naphtha; completing the nitration of the latter with a fresh acid mixture containing a greater relative proportion of sulfuric acid than the first mixture, and cooling as before, and finally removing the mixed acids from the nitrated naphtha and washing the latter with water substantially as described.

2. The process of producing a mixture of aromatic nitrocompounds from purified solvent naphtha as hereinbefore specified having a boiling point of 120 degrees to 180 degrees C., consisting in preliminarily nitrating the naphtha by agitating it with the described mixture of nitric and sulfuric acids, slowly heating the mixture, simultaneously cooling and agitating the same, separating the mixed acids from the partially nitrated naphtha, completing the nitration of the latter with a fresh acid mixture as described containing a greater relative proportion of sulfuric acid

than the first, while heating and cooling as before, removing the mixed acids from the nitrated naphtha and washing the latter with water substantially as described.

3. The process of producing a mixture of aromatic nitro-compounds from purified solvent naphtha as hereinbefore specified having a boiling point of 120 degrees to 180 degrees C., consisting in preliminarily nitrating the naphtha by agitating it with the described mixture of nitric and sulfuric acids while cooling the mixture, then heating and afterward cooling the mixture, separating the residual mixed acids from the partially nitrated naphtha, completing the nitration of the latter with a fresh mixture of nitric and sulfuric acids containing a greater relative proportion of sulfuric acid than the first while heating and cooling as before, separating the resulting mixture of solid and liquid nitro-compounds from the residual acids and washing the nitro-compounds with water.

898,145. BOOT AND SHOE. JOHN F. SCHULTZ, Brooklyn, N. Y. Filed Apr. 26, 1907. Serial No. 370,495.



1. In round, rotating attachments for undersides of shoes, the combination with a shoe of a round, flanged, resilient tread member; a nail-holed, flat-metal ring; clenching nails and an intervening, round, leather lift; the said metal ring fastened with the clenching nails over said smaller leather lift, to the more-or-less built-up heel or sole of a shoe; the said tread member having at its outmost upper edge a flange integral with it; said flange having its inside edge notched for the purpose described, and being above its neck inwardly overhanging, adapted to embrace the free edge of said metal ring wherewith to rotatably connect it with a shoe.

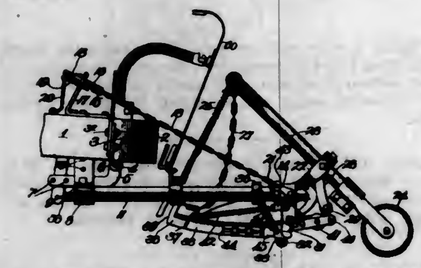
2. In round, rotating attachments for undersides of shoes, the combination of a round, flanged, resilient tread member; a woven fabric disk; a nail-holed flat metal ring; clenching nails and an intervening, round, leather lift; said metal ring fastened with clenching nails over the said smaller leather lift, to the more-or-less built-up heel or sole of a shoe; the said tread member having at its outmost upper edge a flange integral with it, and having embedded on its upper or inner end and neck of its flange the said woven fabric disk; said flange being above its neck inwardly overhanging, adapted to embrace the free edge of said metal ring, wherewith to rotatably connect it with a shoe.

3. In round, rotating attachments for undersides of shoes, the combination with a shoe of a round, flanged, resilient tread member; a woven fabric disk; a nail-holed, flat, metal ring; clenching nails and a leather lift for spacing the metal ring from the shoe; said metal ring fastened with clenching nails over said smaller leather lift to the heel or sole of a shoe; the said tread member having at its upper edge a notched flange integral with it and in its upper or inner end and neck of its flange the said woven fabric disk embedded; said flange being above its neck inwardly overhanging, adapted to embrace the free edge of said metal ring wherewith to rotatably connect it with a shoe.

4. In round rotating attachments for undersides of shoes, the combination with a shoe of a round, flanged, resilient tread member having its lower part of non-slipping material and its upper part of more elastic substance; a woven fabric disk; a nail-holed, flat metal ring; clenching nails and a round lift of leather for intervening; said metal ring fastened with clenching nails over said smaller, intervening lift, to the heel or sole of a shoe; the tread member having the said woven fabric disk embedded on its upper or inner end and neck of its notched flange; the latter being above its neck inwardly overhanging, thus adapted to embrace the free edge of the metal ring, wherewith to rotatably connect tread-member with a shoe.

5. In round, rotating attachments for undersides of shoes, a round projection on the underside of the shoe; a tread member having an upwardly projecting annular portion adapted to engage the projection on the shoe; a fabric disk lining the upper face of the tread-member and the neck of the annular portion, thereby forming an anti-spreading and protecting member.

898,146. STREET-CAR FENDER. ERNST H. SCHULZE, Kansas City, Mo. Filed Aug. 24, 1907. Serial No. 390,054.



1. A street car fender comprising a supporting frame, a fender pivotally supported at its rear end, means holding its front end elevated normally, and a second fender rockingly mounted on the supporting frame and adapted when its front end is swung downward to effect the release of the front end of the first-named fender by tripping the said holding means from engagement with said first-named fender.

2. A street car fender comprising a supporting frame, a fender pivotally supported at its rear end, means holding its front end elevated normally, a second fender rockingly mounted on the supporting frame and adapted when its front end is swung downward to effect the release of the front end of the first-named fender by tripping the said holding means from engagement with the first-named fender, and means to prevent accidental upward movement of the front end of the first-named fender after its release from said holding means.

3. A street car fender, comprising a supporting frame, a fender pivotally supported at its rear end, means holding its front end normally elevated, a second fender rockingly mounted on the supporting frame and adapted when its front end is swung downward to effect the release of the front end of the first-named fender by tripping the said holding means from engagement with the first-named fender, and a spring-actuated brace to prevent accidental upward movement of the front end of the first-named fender after its release from said holding means.

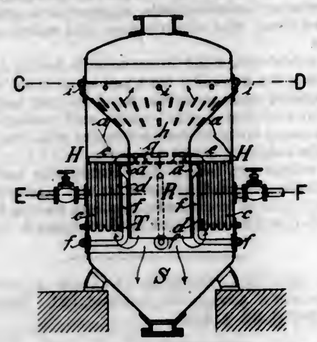
4. A street car fender, comprising a supporting frame, a fender pivoted at its rear end to the supporting frame, means holding the front end of said fender normally elevated, and movable means connected to said holding means and adapted to be operated manually to disengage said holding means from the front end of the fender.

5. A street car fender, comprising a supporting frame, a fender pivoted at its rear end to the supporting frame, means holding the front end of said fender normally elevated, movable means connected to said holding means and adapted to be operated manually to disengage said holding means from the fender, and means to automatically prevent accidental upward swinging movement of said fender after it is released.

[Claims 6 to 20 not printed in the Gazette.]

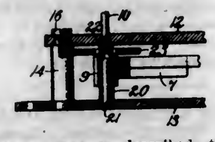
898,147. EVAPORATOR. ERICH VON SEEMEN, Rheinfelden, Switzerland. Filed Aug. 21, 1906. Serial No. 331,443.

In an evaporator for the condensation of fluid substance and crystallisation comprising the combination with an evaporator-shell of a cylinder forming a central chamber ending on top in a funnel provided with slots in its upper portion, a heater-drum containing vertical pipes and surrounding concentrically the said cylinder, an annular space being left between the said cylinder and heater-drum and the top plate of the latter extending from the shell of the evaporator to the circumference of the said cylinder,



thus covering the said annular space and making it an intermediate compartment closed on top and open at the bottom, feed pipes conducted into the said intermediate compartment and adapted to supply it with fresh fluid, and similar pipes opening into the rim of the funnel, also adapted to admit fresh fluid, the aforesaid cylinder *a* having slots close above the top-end of the heater, all substantially as described.

898,148. PRESSURE-GAGE. GEORGE SPENCER, Medford, Mass., assignor to Crosby Steam Gage and Valve Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1907. Serial No. 406,549.



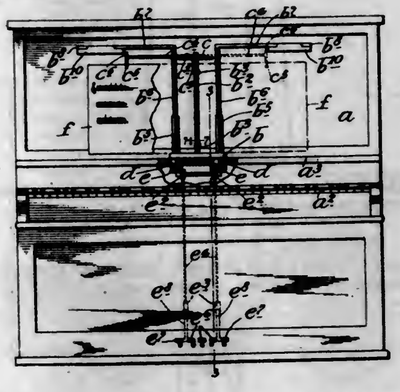
1. In a pressure gage as described, the combination, with the gage mechanism, of a frame suitably supported and index mechanism mounted thereon comprising a sector and a pinion coöperating with said sector, the pinion having a bored shaft rotatably mounted upon a stud fixed in said frame and forming with said stud a long bearing, together with intermediate mechanism and registering means; substantially as described.

2. An index mechanism comprising a frame and mounted thereon a sector and a pinion coöperating with said sector, the pinion having a bored shaft rotatably mounted upon a stud fixed in said frame and forming with said stud a long bearing and said pinion shaft being adapted to carry an index hand; substantially as described.

898,149. SHEET-MUSIC TURNER. JOHN T. STAPLETON, Jersey City, N. J. Filed Jan. 18, 1908. Serial No. 411,470.

1. In a sheet music turning apparatus, a central stationary vertical rod provided at its upper end with arms adapted to swing in a horizontal plane, said rod and said arms being provided with devices for holding sheets of music, rotatable vertical rods mounted laterally and rearwardly of the central rod and provided at their upper ends with arms adapted to engage the arms connected with the central rod, springs for holding said rotatable rods in a predetermined position, and pedal operated devices for turning said rods against the operation of said springs.

2. In a sheet music turning apparatus, a central vertical rod provided at its top with arms adapted to turn in a horizontal plane, said arms being provided at their outer ends with upwardly directed projections, means for connecting sheets of music with said rod and said arms, rotatable vertical rods mounted laterally and rearwardly of the first named rod and provided at their upper ends with arms which are above the first named arms, the arms of the rotatable rods being provided at their outer ends with stationary downwardly directed back flanges and with hinged front flanges, springs for holding said rotatable rods in a predetermined position, and pedal operated devices for turning said rods against the operation of said springs.



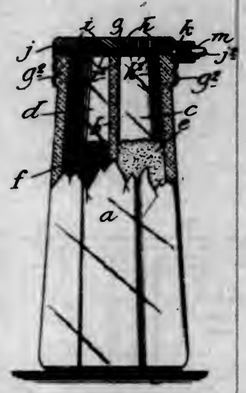
3. The combination with a support of a sheet music turning apparatus, comprising a central vertical rod, arms connected with the top of said rod and adapted to swing in a horizontal plane, means for connecting sheets of music with said rod, and said arms, rotatable vertical rods mounted laterally of and rearwardly of the first named rod and provided at their upper ends with arms adapted to swing in a horizontal plane and adapted to engage the first named arms, springs for holding said rotatable rods in a predetermined position, and means for turning said rods against the operation of said springs.

4. In an apparatus for turning sheet music, a central vertical rod provided at its top with arms adapted to swing in a vertical plane, said arms being provided at their outer ends with upwardly directed projections, and means for connecting sheet music with said rod and said arms, rotatable vertical rods mounted laterally of and rearwardly of the first named rod and provided at the top thereof with arms having heads adapted to engage the upwardly directed projections on the first named arms, springs for holding said rotatable rods in a predetermined position, and pedal operated devices for turning said rods against the operation of said springs.

898,150. SALT AND PEPPER HOLDER. JOHN T. STAPLETON, Jersey City, N. J. Filed Jan. 22, 1908. Serial No. 412,081.

A combination salt and pepper holder provided with a central vertical partition forming two separate vertical compartments and a cap adapted to close said compartments and the opposite side parts of which are provided with perforations arranged in parallel transverse rows, said cap being provided with a sliding plate which is mounted thereunder and the opposite side parts of which are provided with perforations arranged in transverse rows and which correspond with those in the cap, tensional devices for holding said plate so that the perforations therein will not register with those in the cap, and means whereby the movement of said plate one step, will cause the perforations in one part thereof to register with the

corresponding perforations in the cap, and the movement of said plate another step will cause the perforations in



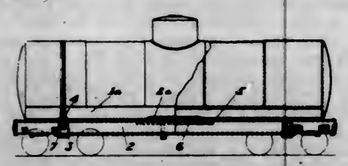
the other part of said plate to register with the corresponding perforations in said cap.

898,151. CURTAIN-FIXTURE. HENRY M. STEVENSON, Harnet, Vt. Filed Oct. 25, 1907. Serial No. 399,135.



The combination with a supporting roller and means for turning said roller including a pull cord wound thereon; of a spring curtain shade roller; suspending tapes for the shade roller wound upon the supporting roller and provided with terminal eyes; and a hanger embodying a hook insertible through the eye of one of the tapes, and a horizontal arm inserted through an eye in the shade roller shaft and terminating in an upturned integral hook.

898,152. TANK-CAR. JOHN F. STREIB, Avalon, Pa., assignor to Pressed Steel Car Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Feb. 21, 1908. Serial No. 416,991.



1. In a tank car, a pair of center sills having horizontal flanges deflected upwardly for a portion of their lengths to form opposing concave saddle members.

2. In a tank car, a pair of center sills having horizontal flanges deflected upwardly for a portion of their lengths to form opposing concave saddle members and supplemental braces for said center sills adjacent to said saddle or cradle members.

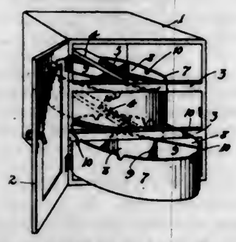
3. In a tank car, a pair of center sills having horizontal flanges deflected upwardly for a portion of their lengths to form opposing concave saddle members and angle plates extending along said sills beneath said saddle or cradle members.

4. In a tank car, a pair of center sills having horizontal flanges deflected upwardly for a portion of their lengths to form opposing concave saddle members and angle plates riveted to said center sills beneath said saddle or cradle members and a tie plate for said center sills extending between said saddle or cradle members.

5. In a tank car, longitudinal center sills having horizontal flanges deflected upwardly at the longitudinal center of said sills to form saddle members for the tank.

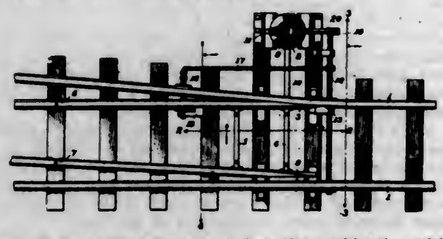
[Claims 6 to 10 not printed in the Gazette.]

898,153. ROTARY DRAWER. GUSTAVE A. STRÖMGREN and GEORGE A. STROMGREN, Oakland, Cal. Filed Mar. 9, 1908. Serial No. 419,833.



In combination, walls forming a chamber open at one side, a rotary receptacle in said chamber having walls dividing it into compartments open at the top, said receptacle being movable in said chamber to the open side thereof and rotatable when in position so moved to said open side, substantially as described.

898,154. SAFETY RAILROAD-SWITCH DEVICE. JOHN TANGNEY and BYRON C. BARNES, Colton, Cal. Filed Nov. 25, 1907. Serial No. 403,751.



1. In locks for railroad switches, the combination with a rock shaft, of a dog mounted thereon having a wedge-shaped lower surface adapted to engage and move a switch point, and means for operating the rock shaft.

2. In locks for railroad switches, the combination with a rock shaft, of a dog mounted thereon having a wedge-shaped lower surface, the point of the wedge being nearer one side of the dog than the other, and means for operating the rock shaft.

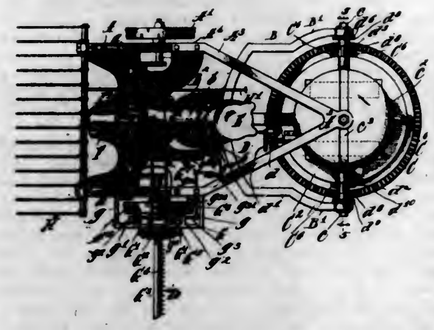
3. In a device of the class described, the combination with the main rails, of switch points, means for shifting said points, a rock shaft adjacent the end of a switch point, a dog carried by said shaft having a wedge-shaped under surface, the position of the dog being such that when in its lowered position it will engage the end of the switch point on one side or the other thereby locking the switch either in its open or closed position, and means for operating the rock shaft.

4. In a device of the class described, the combination with the main rails, of switch points, means for shifting said points, a locking dog having a wedge-shaped under surface, a pivotal support for said dog in advance of the end of a switch point, means for preventing lateral movement of said dog, and means for turning said dog on its pivot whereby its wedge-shaped under surface will engage the switch point and force it into its open or closed position.

5. In a device of the class described, the combination with the main rails, of switch points, means for shifting said points, a locking dog having a wedge-shaped under surface pivotally mounted in advance of a switch point and projecting at an incline thereover, a second dog pivotally mounted adjacent the rail and having an incline opposite to that of the locking dog, and connections between said dogs whereby they turn together on their pivots into their elevated or lowered positions.

[Claims 6 and 7 not printed in the Gazette.]

898,155. MOWING AND RAKING MACHINE. THOMAS J. THORP, Corvallis, Oreg., assignor to T. J. Thorp Manufacturing Company, Corvallis, Oreg. Filed Apr. 17, 1905. Serial No. 255,937.



1. In a self-propelled mower, the combination of flexibly joined front and rear frame sections, a wheel-frame supporting the front frame section and free to turn with relation thereto, steering-means mounted on said wheel-frame and connected with said front frame section, a traction wheel supporting said wheel-frame, a motor supported on said wheel-frame and geared to said traction wheel, wheels supporting the rear frame-section, and a sickle geared to one of said last-named wheels, for the purpose set forth.

2. In a self-propelled machine, the combination of flexibly joined front and rear frame sections, a wheel-frame mounted to turn on said front frame-section, a traction-wheel supporting said wheel-frame, a motor mounted on said wheel-frame and geared to said traction-wheel, wheels supporting the rear frame section, a motor mounted on the rear frame-section and geared to one of the wheels thereof, and a sickle geared to one of the rear wheels, for the purpose set forth.

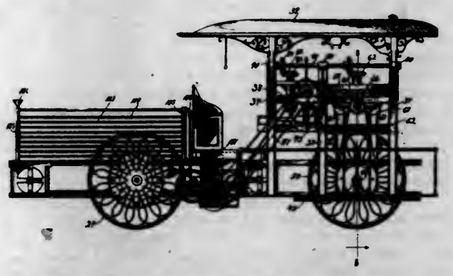
3. In a self-propelled mower, the combination of flexibly joined front and rear frame sections, a wheel-frame supporting the front frame-section and capable of turning with relation thereto, steering-means mounted on said wheel-frame and connected with the front frame-section, a traction wheel supporting said wheel-frame, a motor mounted on said wheel-frame and geared to said traction wheel, wheels supporting the rear frame section, a finger-bar adjustably connected with one side of the rear frame-section, and a sickle carried by said finger-bar and geared to one of the rear wheels for the purpose set forth.

4. In a self-propelled machine of the character set forth, the combination of a front frame-section and a rear frame-section having swivel connection therewith to permit relative turning about a longitudinal axis, a wheel-frame supporting the front frame section and capable of turning about a vertical axis, a traction-wheel supporting said wheel-frame, steering-means connected with said wheel-frame, a pair of rear wheels, and a sickle supported from the rear frame-section and geared to one of the rear wheels, for the purpose set forth.

5. In a self-propelled machine, the combination of flexibly joined front and rear frame-sections, wheels supporting the same, steering-means connected with the front frame section, a motor mounted on the frame and geared to a wheel of the machine, a laterally supported sickle geared to a wheel of the machine, and a transversely-disposed rake extending across the rear end of the frame, for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

898,156. MOTOR-VEICLE. THOMAS J. THORP, Corvallis, Oreg., assignor to T. J. Thorp Manufacturing Company, Corvallis, Oreg. Filed July 12, 1907. Serial No. 383,499.



1. In a self-propelled vehicle employing an engine, the combination of a supporting frame for the engine and wheels of the vehicle, and pipes for water and fuel supply mounted on said frame in position to form sides of the machine.

2. In a self-propelled vehicle employing an engine, the combination of a frame supporting the engine and wheels of the vehicle, a water-radiator extending longitudinally of the frame along one side of the vehicle and composed of a vertical series of intercommunicating pipes leading to the engine, and a fuel-supply coil extending longitudinally of the vehicle along the opposite side thereof and composed of a vertical series of intercommunicating pipes leading to the engine.

3. In a self-propelled vehicle employing an engine, the combination of a frame supporting the engine and wheels of the vehicle, a water-radiator extending longitudinally of the frame along one side of the vehicle and composed of tubular uprights and a vertical series of pipes each communicating with the interior of the uprights and leading to the engine-jacket, and a fuel-supply coil extending longitudinally of the vehicle along the opposite side thereof and composed of tubular uprights and a vertical series of pipes each communicating with the interior of the uprights and leading to the engine.

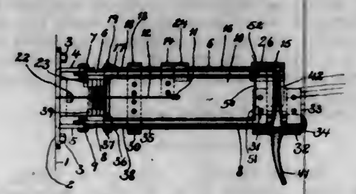
4. A main frame of the character set forth, provided at its sides with bearings and reversible cross-members equipped with bearings connected with said first-named bearings, and means for securing the cross members in adjusted positions on the frame, said cross-members being adapted to afford a support for parts of the vehicle between its sides to permit it to be changed from an agricultural machine to a truck, and vice versa.

5. A main frame of the character set forth, provided at its sides with bearings and reversible cross-members equipped with bearings connected with said first-named bearings, said second-named bearings being equipped with stub axles, and means for securing the cross-members in adjusted position on the frame, said cross members being

adapted to afford a support for parts of the vehicle between its sides to permit it to be changed from an agricultural machine to a truck, and vice versa.

[Claims 6 to 27 not printed in the Gazette.]

898,157. MAIL-BAG-DELIVERING APPARATUS. ALMON THWING, Newton, Mass. Filed Nov. 9, 1907. Serial No. 401,459.



1. A mail-bag apparatus comprising an arm adapted to be carried by a car, a pivoted hub on one side of said arm formed with a bag-holding member and a detent member, a movable detent finger arranged to engage said detent member, a spring member arranged to engage said detent finger to maintain said bag-holding member in a bag-holding position, a movable trip arm carried by said first-mentioned arm, a relatively stationary receptacle having a member arranged to engage said trip arm as the latter approaches said receptacle, and connections between said trip arm and said detent finger whereby the latter releases said detent member and permits the bag to drop from said bag-holding member.

2. A mail-bag apparatus comprising a mail-bag holder, a stop member, a relatively movable trip, arranged to engage said stop member to operate said trip, a detent member, a detent arranged to engage and hold said detent member, connections between said detent and trip, and means for supporting and carrying said trip, detent and bag-holding member.

3. A mail-bag apparatus comprising a pivoted arm, a shaft carried by said arm, a bag-holding member and a detent member carried by said shaft, a second shaft supported by said arm, a detent finger and a trip mounted on said shaft, said detent finger being arranged to engage the detent member, a relatively stationary stop for engaging said trip, and means for rotating said shafts as said arm is thrown upward to position said parts with the detent member, detent finger and spring in engagement.

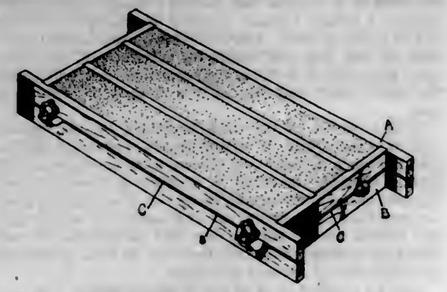
4. In an apparatus of the class specified, a movable carrier adapted to be moved into active and inactive positions, a bag-holder and a detent member connected therewith, a trip and a detent connected therewith, and means for moving said detent and detent member into interlocking position automatically upon the movement of the carrier to an inactive position.

5. A mail-bag apparatus comprising a movable mail-bag holder, a trip, locking connections between said holder and trip including a member rigidly connected to and movable with said holder and adapted to be released by the movement of the trip, and a stop member arranged to engage and operate said trip.

[Claim 6 not printed in the Gazette.]

898,158. HINGED MATCH-PLATE FOR FLASKS. LEE W. VAN CLEAVE and GEORGE O. DEWEY, St. Louis, Mo., assignors to The Buck's Stove and Range Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 18, 1908. Serial No. 427,898.

1. A flask comprising a cope and a drag, a hinge member on one of said parts having a curved bearing surface, a cooperating hinge member on the other part having an approximately cylindrical-shaped bearing surface, a match-plate arranged between the cope and drag, and hinge members on the match-plate having semi-circular-shaped flanges that rest freely upon the curved bearing surface of the member first referred to and which are adapted to form bearing surfaces for the cylindrical-shaped bearing surface of the second member referred to; substantially as described.



2. A flask comprising a cope and a drag, socket hinge members on one of said parts, coöperating hinge members on the other part that are adapted to rest freely in said socket hinge members, and a match-plate arranged between the cope and drag and provided with hinge members that are interposed between the coöperating hinge members on said parts; substantially as described.

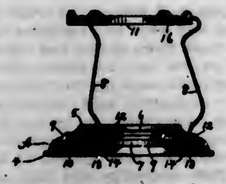
3. A flask consisting of a cope and a drag provided with coöperating hinge members, a match-plate arranged between said parts, and hinge members on the match-plate interposed between the coöperating hinge members on the cope and drag, the hinge members on the match-plate being of the same thickness as that portion of the match-plate which extends between the edge portions of the cope and drag; substantially as described.

4. A flask comprising a cope and a drag, hinge members of one of said parts consisting of approximately disk-shaped portions and fulcrum pins, hinge members on the other part consisting of webs provided with sockets for said fulcrum pins and semi-circular-shaped flanges arranged in alinement with said disk shaped portions, a match-plate arranged between the cope and drag, and hinge members on said match-plate consisting of semi-circular-shaped flanges that are interposed between the disk-shaped portions and the semi-circular-shaped flanges of the hinge members on the cope and drag; substantially as described.

5. A hinge composed of three members each of which is adapted to be connected to an object, one of said members consisting of a socket and semi-circular-shaped flanges, the other member consisting of a semi-circular-shaped portion which rests on said flanges and is provided with a curved bearing surface, and the other member consisting of approximately round portions that rest upon said curved bearing surfaces and which are provided with a fulcrum pin that fits in the socket of the member first referred to; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

898,159. LAMP-STOVE. ALONZO A. WARNER, New Britain, Conn., assignor to Landers, Frary and Clark, New Britain, Conn., a Corporation. Filed Dec. 2, 1907. Serial No. 404,812.



1. A lamp stove comprising a hollow sheet metal base, a base ring suspended within the said base, supporting legs having their lower ends secured to the said base ring within the said hollow base, and a stove top supported by the upper ends of the said legs above the said hollow base.

2. A lamp stove, comprising a hollow sheet metal base having a bottom rim that serves as the foot of the stove and having at its upper part a lamp seat, a base ring suspended within the said hollow base with an air space between the top of the said base ring and under side of the said hollow base, supporting legs rigidly secured by their lower ends to the said base ring within the said hollow base and extending upwardly therethrough, and a stove top supported by the upper ends of the said legs above the said lamp seat.

3. A lamp stove comprising a hollow sheet metal base that serves as the foot of the stove, a base ring depending from the said base with its lowermost part in a higher plane than the said foot of the stove, supporting legs rigidly secured by their lower ends to the said depending base ring underneath the said hollow sheet metal base, and an openwork stove top supported by the upper ends of the said legs above the said hollow sheet metal base.

898,160. PIANO. JOHN A. WESER, New York, N. Y. Filed Mar. 19, 1907. Serial No. 363,250.



1. In a piano, the combination with the strings, hammers and main rest rail, of a supplemental rest rail having its ends movable independently, the one of the other, toward and from the hammer stems, and independent devices to move the ends of the supplemental rest rail together or independently of each other.

2. In a piano, the combination with the strings, hammers and main rest rail, of a supplemental rest rail supported upon the main rest rail with its ends movable independently, the one of the other, toward and from the hammer stems, and independent devices to move the ends of the supplemental rest rail together or independently of each other.

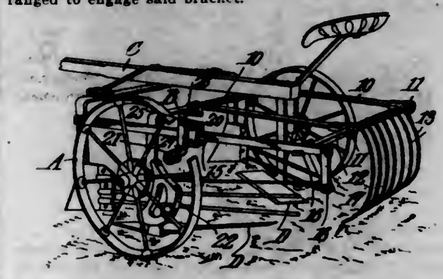
3. In a piano, the combination with the strings, hammers and main rest rail, of a supplemental rest rail, bell crank levers mounted on the main rest rail and supporting the supplemental rest rail with its ends movable independently, the one of the other, toward and from the hammer stems, and independent devices to move the ends of the supplemental rest rail together or independently of each other.

4. In a piano, the combination with the strings, hammers and main rest rail, of a supplemental rest rail, bell crank levers mounted on the main rest rail and supporting the supplemental rest rail with its ends movable independently, the one of the other, toward and from the hammer stems, independent operating handles and independent connections between the operating handles and the bell crank levers.

898,161. BUNCHING DEVICE FOR HARVESTERS. WILLIAM H. WILDER, Caledonia, N. Y. Filed Dec. 10, 1907. Serial No. 405,909.

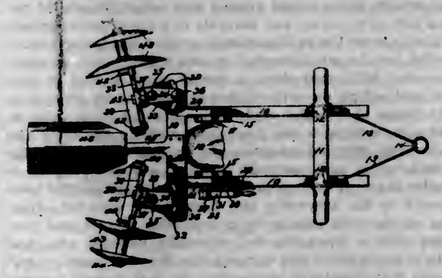
1. In a bean harvester, a frame including a pair of rearwardly extending bars or arms, a transversely extending rake head pivotally mounted therein and provided with depending tines, a crank arm secured to the rake head, a pivotally mounted operating lever connected to the crank arm, and a cam carried by one of the supporting wheels of the harvester and arranged to actuate said lever.

2. In a bean harvester, a frame including a pair of rearwardly extending bars provided with journal boxes at their rear ends, a rake head pivotally mounted in such journal boxes and provided with depending tines, a lever having its forward end pivoted to the frame, a block extending from the rake head and serving as a support for limiting the downward movement of the rear end of the lever, a crank arm secured to the rake head, a link connecting the crank arm to the lever, a bracket secured to the lever, and a cam carried by one of the supporting wheels and arranged to engage said bracket.



3. In a bean harvester, a rake head, a rake head actuating lever, a bracket mounted thereon,, a spindle carried by the bracket and having an outwardly extending arm, a roller journaled on the arm, a cam carried by one of the supporting wheels and arranged to engage said roller, and a handled crank carried by the upper end of the spindle for turning the roller to a position out of the path of movement of said cam.

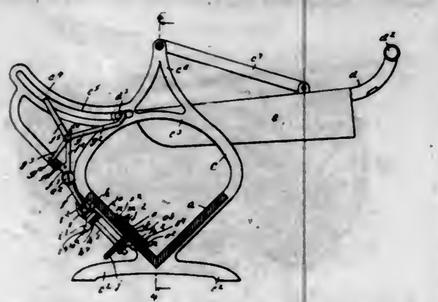
898,162. LISTER-CULTIVATOR. HENRY WILSHUSEN, Stafford, Kans. Filed May 12, 1908. Serial No. 432,343.



1. In a lister cultivator, a pair of runners spaced apart and having means for attaching the draft animals thereto, standards connected to said runners and projecting upwardly above the same and provided with bearings, a frame member provided with forwardly-extending arms having trunnions journaled in said bearings of the standards, an adjusting lever connected to one of said arms for adjusting the frame member, brackets adjustably secured to the frame member, bearing boxes adjustably secured to the brackets, disk-carrying axles journaled in said bearing boxes, and disks carried by said axles.

2. In a lister cultivator, a pair of runners spaced apart and having means for attaching the draft animals thereto, standards carried by said runners and projecting above the same, said standards provided intermediate their ends with bearings, a frame member hung from journals engaging in the bearings in said standards and having a segmental slot, a bracket pivotally mounted on the frame member and having a bolt extending through said slot, said bracket provided on its outer end with an upwardly extending portion provided with a toothed outer face, a plate provided intermediate its ends with a toothed portion engaging the toothed portion of the bracket, a bolt extending centrally through the toothed portion of said plate and through the upwardly extending toothed portion of the bracket for securing said plate to the bracket, and clip bolts carried by said plates at its ends, a bearing box carried by said clip bolts, a disk carrying axle journaled in the bearing box, disks rotatably mounted on said axle and an adjustable lever for holding the frame member in fixed position.

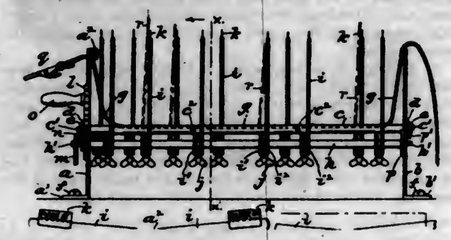
898,163. BREAD-CUTTING DEVICE. NIELS M. ANDERSEN, Detroit, Mich. Filed Sept. 10, 1907. Serial No. 392,118.



1. A bread cutting device, comprising a tray provided at one end with an open main frame having an upwardly directed member and backwardly directed arm, said member and said arm being provided with a curved slot, a link pivoted to a support at the top of said member, a knife bar pivoted to said link and provided with a pin movable in said slot, a shaft mounted transversely of the back of the tray adjacent to said frame or support, a sprocket wheel connected with said shaft, another sprocket wheel mounted at the opposite end of the tray, a feed chain mounted on said wheels and passing around and longitudinally of the back side of the tray, and movable in a longitudinal groove in the front of the said back side of the tray, a curved and slotted arm loosely mounted on said shaft, a ratchet wheel connected with said shaft, a spring pawl carried by said arm and acting on said ratchet wheel, a lever pivoted in said frame above said shaft and operating in the slot in said arm, said lever being provided with an upwardly and backwardly directed extension and rearwardly thereof with a backwardly and upwardly directed extension which is shorter than the first named extension, a supplemental lever pivoted to the upwardly and backwardly directed extension of the first named lever, centrally thereof and provided with a forwardly and upwardly directed arm, and with a backwardly and downwardly directed member, and means for adjustably connecting the last named member of the supplemental lever with the backwardly and upwardly directed extension of the first named lever, both of said levers being adapted to be operated by the pin or bolt connected with the knife and operating in the curved slot formed in the main frame and the backwardly and upwardly directed arm thereof.

2. A bread cutting device, comprising an oblong tray V-shaped in cross section, an open main frame connected with one end of said tray and provided in the rear top portion thereof with a curved slot, a link pivoted in the top portion of the main frame, a knife pivoted to said link and provided at its front end with a handle, and at its rear end with a pin or bolt movable in said curved slot, a shaft mounted transversely of the back side of the tray adjacent to the main frame, a sprocket wheel on said shaft, another sprocket wheel mounted at the opposite end of the tray, a feed chain mounted on said wheels and passing around and longitudinally of the back side of the tray, a lever pivoted in the main frame above said shaft and extending in the same direction, said lever being provided with an upwardly and backwardly directed extension and rearwardly thereof with a backwardly and upwardly directed extension shorter than the first named extension, a supplemental lever pivoted to the upwardly and backwardly directed extension of the first named lever and provided with a forwardly and backwardly directed arm and a backwardly and downwardly directed member adapted to be adjustably connected with the backwardly and upwardly directed extension of the first named lever, both of said levers being adapted to be operated by the pin or bolt connected with the knife and movable in said curved slot, and means whereby the operation of said lever by the upward and downward movement of said knife will rotate said shaft in one direction step by step.

898,164. MAIL-ARRANGING DEVICE. VERNER G. ANDERSON, Worcester, Mass. Filed Feb. 18, 1908. Serial No. 416,627.



1. In a mail arranging device, a frame having horizontal rods therebetween to serve as supports for the letter-mail; a strap to rest upon the supports of said frame; rock-shafts mounted on said frame; a series of L-shaped arms adjustably secured on each of said arms, each series of arms extending toward each other to provide different divisions for the receival of different letter-mail, and each arm having at its outer free portion a street name marked thereon, and means to operate in swinging each series of arms free of contact with the letter-mail, after the latter has been compiled in its respective division between said arms.

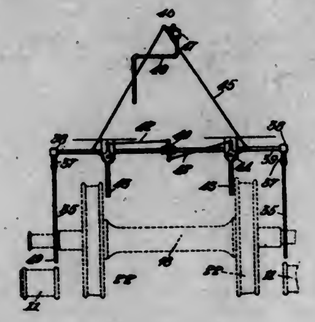
2. In a mail arranging device, a frame having a horizontal support to receive the edge of letter-mail; a strap to lay upon the support of said frame and beneath the letter-mail; rock-shafts mounted on said frame, and each shaft square-shaped in cross-section; L-shaped arms having one of their ends made to fit and slide upon each shaft and their outer free portions extending toward each other in order to provide various compiling divisions for the letter-mail; means to secure each arm to each shaft; and means to cause the arms to separate from contact with the letter-mail.

3. In a mail arranging device, a frame having a horizontal support; a removable strap to rest upon the support of said frame; two rock-shafts mounted on said frame and each shaft square-shaped in cross-section; a knee-lever secured upon each of said shafts; a plate slidably mounted on said frame and having a fixed operating handle and integral lugs, respectively, the latter to contact with each knee-lever; a series of L-shaped arms, one end of each made to fit and slide upon each of said shafts, and said arms arranged in such manner that their outer free portions extend toward each other alternately throughout each series, and each arm provided with a different street name marked thereon, and means to limit the swing-movement of each series of arms, substantially as shown and for the purpose specified.

898,165. SAFETY APPLIANCE FOR RAILROAD-CARS. JAMES T. ANDREW, Montgomery, Ala. Filed Aug. 7, 1908. Serial No. 447,361.

1. In a car truck employing a journal box, an equalizer beam and the usual pedestals, the combination of a safety frame secured to said beam, pedestals and box, and thereby adapted to hold up said box in case of accident; a bearing in said frame; a safety roller in said bearing and smaller than the same; and means controlling the brakes adapted to be operated by said roller in case of accident, substantially as described.

2. In a car truck employing a journal box, an equaliser beam and the usual pedestals, the combination of a safety frame secured to said beam, pedestals and box, and thereby adapted to hold up said box in case of accident; a bearing in said frame consisting of an open cylinder; a safety roller, provided with collars 13 and 14, in said bearing and smaller than the same; and means controlling the brakes adapted to be operated by one of said collars on said roller in case of accident, substantially as described.



3. In a car truck provided with the usual wheels and axle, the combination of a split sleeve surrounding said axle; a pair of safety wheels on said sleeve inside said usual wheels and provided with outer beveled flanges 23, inclined treads and flanges 24; safety frames outside said usual wheels, provided with bearings; safety rollers in said bearings; means operated by said safety wheels for controlling the application of the brakes in case of accident; and means operated by said rollers for also applying the brakes, substantially as described.

4. In a car truck provided with the usual wheels and axle, the combination of a split sleeve surrounding said axle; a pair of safety wheels on said sleeve inside said usual wheels and provided with outer beveled flanges 23, inclined treads and flanges 24; safety frame outside said usual wheels, provided with bearings; safety rollers in said bearings; means comprising levers operated by said safety wheels for controlling the application of the brakes, and sounding an engineer's signal in case of accident; and means operated by said rollers for also applying the brakes, substantially as described.

5. In a car truck provided with the usual wheels and axle, the combination of a split sleeve surrounding said axle; a pair of safety wheels on said sleeve inside said usual wheels and provided with outer beveled flanges 23, inclined treads and flanges 24; safety frames outside said usual wheels, provided with bearings; safety rollers in said bearings; means comprising levers operated by said safety wheels for controlling the application of the brakes, and sounding an engineer's signal in case of accident; and means operated by said rollers for also applying the brakes, comprising a rod 35 provided with a shoe 49, and a valve substantially as described.

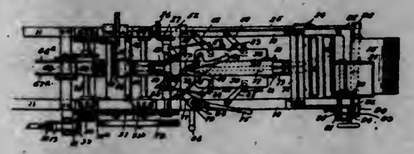
[Claims 6 and 7 not printed in the Gazette.]

898,166. METALLIC WEB OR FABRIC. GEORGES AUCOC, Paris, France. Filed Mar. 26, 1908. Serial No. 423,422.



As a new article of manufacture, a metallic web or fabric for the purposes specified, comprising a plurality of rings connected in groups, each ring having a central inset portion provided with a setting for the reception of ornamental stones, and each group of rings being centrally connected by a member comprising a stud *f* having a head *e* and a setting *h* therein, and the rings of said groups being connected in pairs by links *i*, substantially as described.

898,167. BODY-FORMING MECHANISM OF BAG-MACHINES. TRUE M. AVERY, Ottumwa, Iowa, assignor, by mesne assignments, to Union Paper Bag Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 17, 1907. Serial No. 368,630.



1. The machine for forming the bodies of paper bags, wherein are combined means for feeding the paper, means for forming the paper into tubular form, the plait forming plates, the parallel levers supporting the plates, the folders mounted on said plates, the idler wheels mounted on stationarily pivoted arms and connected to said parallel levers, said pivoted arms, and means whereby said plates and said wheels can be simultaneously moved out of acting position.

2. The machine for forming the bodies of paper bags, wherein are combined means for feeding the paper, a shaper or forming device around which the paper is bent having open sides into which the paper may be forced to form the plaits, plait forming plates at opposite sides of said shaper and mounted on pivoted and connected parallel levers, said pivoted levers, and a hand lever and connections whereby all said levers may be simultaneously actuated.

3. The machine for forming the bodies of paper bags, wherein are combined means for feeding the paper, a shaper or forming device around which the paper is bent and having open sides to receive the plaits, devices for forcing the paper into the shaper, folders 46 and 47 and movable supports therefor, and idler wheels 48 and 49 mounted upon swinging arms having stationary pivots, said swinging arms and a hand actuated lever whereby the folders and wheels may be moved into and out of action.

4. The machine for forming the bodies of paper bags, wherein are combined means for feeding the paper, a shaper or forming device around which the paper is bent, and consisting of flat plates at top and bottom and an intermediate vertical spacing device, plaiters for forcing the sides of the paper into said shaper, lever mechanism controlling the plaiters, converging idler wheels acting to fold the free edges of the paper, and swinging arms carrying said wheels, said arms being joined to the lever mechanism of the plaiters.

5. The combination with a shaper around which the paper is bent, of plaiters acting to form the plaits and located one at each side of the shaper, and parallel bars or levers pivoted to the machine frame, upon which the plaiters are mounted, the levers of one plaiter being mechanically connected to the levers of the other plaiter so that both move together.

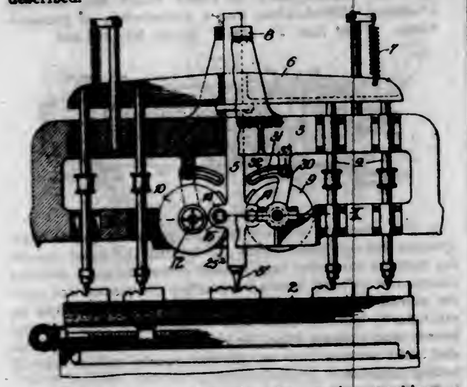
[Claims 6 to 9 not printed in the Gazette.]

898,168. RETRACTING MECHANISM FOR AUTOMATIC CARVING-MACHINES. HENRY C. BAASE, Indianapolis, Ind., assignor to Universal Automatic Carving Machine Co., Chicago, Ill., a Corporation of New Jersey. Filed Nov. 23, 1903. Serial No. 182,365.

1. In a carving machine, a pattern pressed member, in combination with a cutter, a continuously rotated device, and another device geared to said member and rotatively joining the same to said rotated device when the pattern pressed member is subjected to pattern pressure, substantially as described.

2. In a retracting mechanism for carving machines, a rotated disk, in combination with a movable tracer bar, perpendicular to the axis of said disk, and a friction clutch part interposed between said disk and the side of said bar

and movable with said disk to operate said bar when the latter is subjected to lateral pressure, substantially as described.



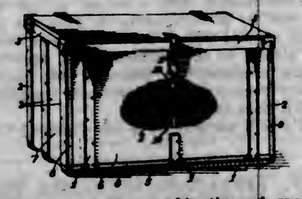
3. In a retracting mechanism, for carving machines, a driven disk, in combination with a member to be retracted, a pattern adapted for movement in a plane perpendicular to said member and normally exerting lateral pressure thereon, and a partially revoluble clutch part in peripheral engagement with said member and coöperating with said disk to move said member, the axis of said clutch member being at right angles to the member to be retracted, substantially as described.

4. In a retracting mechanism for carving machines, a driven disk, in combination with a member to be retracted, means normally exerting lateral pressure on said member, a friction clutch part interposed between said member and the periphery of said disk and adapted for occasional partial revolution with said disk to retract said member when the normal pressure thereon is exceeded, substantially as described.

5. In a retracting mechanism for carving machines, a rotated disk, in combination with a movable tracer member or bar and a clutch part interposed between said disk and member, said clutch part engaging the periphery of said disk and the side of said bar and adapted to retract the bar when subjected to pressure, substantially as described.

[Claims 6 to 36 not printed in the Gazette.]

898,169. PACKING-CASE. WILLIS D. BALLOU, Belding, Mich. Filed July 8, 1907. Serial No. 382,624.



In a packing case the combination of spaced strips arranged transversely and longitudinally of the bottom and extending vertically at the sides and ends, an inner and outer frame secured to the upper ends of the vertical strips and spaced by the latter, a canvas lining within the inner frame and secured thereto, said lining comprising two pieces arranged transversely in the bottom with one piece extending vertically at the sides and the other piece extending vertically at the ends, the bottom piece of the lining also folded at the edges against the top piece along the bottom angles and also at the corners and secured thereto, a woven wire fabric between the bottom portions of the lining, stiles opposite the vertical strips and bearing against said lining, and woven wire fabric bearing against the inner faces of the side and end portions of the lining and secured to said inner frame and also bearing against the inner surfaces of the stiles, the woven wire fabric at the sides and ends being independent of the woven wire fabric at the bottom of the case.

898,170. PACKING AND DISPLAY CASE. JOHN W. BARBER, Newton, Mass. Filed Nov. 5, 1906. Serial No. 341,982.



1. A packing and display case comprising an outer holder having an open top and an open end, an inner holder also having an open top and an open end, said holders being separable endwise from each other, the inner holder being adapted to be inserted in the outer holder in either one of a plurality of positions, and means for locking the holders in either of said relative positions.

2. A packing and display case comprising inner and outer holders, each having an open top and an open end, said holders being constructed to permit them to be longitudinally separated and reëngaged in different relative positions, and locking mechanism adapted to lock the holders together with the goods therein concealed for transportation, or in position to be exhibited.

3. A packing and display case comprising inner and outer holders each of which is open at its top and at one end, the inner holder being adapted to be inserted endwise in the outer holder with its open top uppermost to display its contents, or with its bottom uppermost to form, with the outer holder, a closed case, interengaging members carried by the inner and outer holders, and means for locking said members when engaged.

4. A packing and display case comprising an outer holder open at its top and at one end, and an inner holder also open at its top and one end, said inner holder being adapted to be inserted endwise in the outer holder with either its open top or its closed bottom uppermost, and provided with means for preventing the removal of its contents through the open top, means being provided for locking the said holders together.

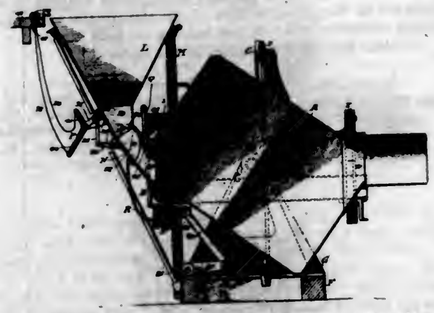
5. A packing and display case comprising an outer holder open at its top and at one end, and an inner holder also open at its top and one end and adapted to be longitudinally removed from and inserted in the outer holder with either its open top or its closed bottom uppermost, the inner holder having a locking device adapted to pass through an opening in the closed end of the outer holder in either of the described relative positions, and to be engaged by a complemental external locking device.

[Claim 6 not printed in the Gazette.]

898,171. MIXING-MACHINE. CHARLES E. BATHRICK, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Aug. 14, 1905. Serial No. 274,075.

1. In a mixing machine, a rotary mixing receptacle; a tilting frame upon which the mixing receptacle is revolubly mounted; a mouth-piece secured upon the tilting frame and arranged for directing materials into the mixing receptacle; a hopper; and a valve for opening and closing the hopper, said valve being arranged to direct material into the mouth-piece when it is open, and being arranged to be swung back and closed by the mouth-piece when the frame is tilted, and a guard R for the purpose set forth.

2. In a mixing machine, a rotary mixing receptacle provided with an annular gear; a tilting frame upon which the mixing receptacle is mounted to revolve; a rotary main driving shaft gear-connected with the annular gear on the mixing receptacle as means for revolving the latter; a rotary counter-shaft gear-connected with said main driving shaft; a clutch having one of its members provided with a worm, and adapted for connecting and disconnecting said member with and from the counter-shaft; a rotary worm-wheel engaged by said worm; a crank rigid with the worm-wheel and connected with one arm of a vibratory bell-crank by a link or pitman; a link connecting the other arm of the bell-crank with the mixing receptacle support as a means for tilting the latter; a cam-disk 16 rigid with the worm-wheel and having peripheral notches 17 and 18; a vibratory clutch shifter K pivoted to the shifting clutch member and weighted at one side of such clutch member; and a locking arm 19 pivoted to the clutch shifter and having at one end an idler roll adapted to engage in one or the other of notches 17 and 18 of the disk 16, and to ride upon the periphery of said disk when not in engagement in the said notches.



3. In a mixing machine, a rotary mixing receptacle; a tilting support upon which the mixing receptacle is mounted to revolve; a vibratory bell-crank arranged below the mixing receptacle support; a link or pitman connecting one arm of the bell-crank with one end portion of the tilting mixing receptacle support; a rotary crank; power transmitting connection between said crank and the remaining arm of the bell-crank, and means for revolving the crank.

4. In a mixing machine, a rotary mixing receptacle; a tilting support for the rotary mixing receptacle; a shaft rotatable in one direction and means for rotating the receptacle therefrom; a toggle comprising a vibratory arm 26 and a link 27 connecting said arm with the tilting mixing receptacle support, and a crank operated from said shaft for vibrating the arm 26.

5. In a mixing machine, a rotary mixing receptacle; a tilting support for the rotary mixing receptacle; mechanism for tilting the support for the rotary mixing receptacle; a rotary cam device for automatically limiting the extent to which the mixing receptacle support can be tilted in each direction; means for driving said cam device, and means for shifting the connection between the rotary cam device and the tilting device and the driving means therefor.

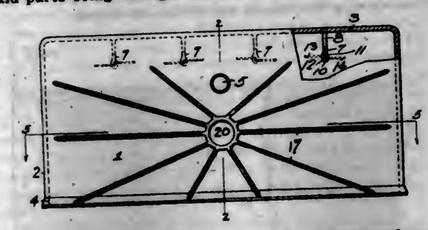
[Claims 6 to 16 not printed in the Gazette.]

898,172. ANNEALING-BOX. WILLIAM B. BENNETT, Ross township, Allegheny county, Pa., assignor to Union Steel Casting Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Apr. 17, 1908. Serial No. 427,613.

1. An annealing box having side and end walls and roof, a chord connecting the side walls near their tops, the side walls being provided with open trusses, all said parts being a single integral casting.

2. An annealing box having side and end walls and roof, the side walls being provided with wide ribs cored out at intervals from the side of the box, all of said parts being a single integral casting.

3. An annealing box having side and end walls and roof, a chord connecting the sides at the roof, and the side walls being provided with wide ribs cored out at intervals, all said parts being a single integral casting.



4. An annealing box having side and end walls and roof, the side walls having thereon diagonally disposed ribs or webs cored out at intervals, all said parts being a single integral casting.

5. An annealing box having side and end walls and roof, the side walls being provided with radially arranged ribs or webs cored out at intervals, all said parts being a single integral casting.

[Claims 6 to 10 not printed in the Gazette.]

898,173. PROCESS OF PRODUCING FERRO-ALLOYS. FREDERICK M. BECKET, Niagara Falls, N. Y., assignor to Electro Metallurgical Company, Chicago, Ill., a Corporation of West Virginia. Filed May 25, 1908. Serial No. 434,852.

1. The process of producing low-carbon ferroalloys which consists in electrically smelting a charge containing a refractory oxid ore, a source of iron and a carbid of an alkali-earth metal, the carbid being present in proportion to yield a metallic product low in carbon.

2. The process of producing low-carbon ferroalloys which consists in electrically smelting a charge containing a refractory oxid ore, a source of iron, a carbid of an alkali-earth metal, and a suitable flux, the carbid being present in proportion to yield a metallic product low in carbon.

3. The continuous process of producing low-carbon ferroalloys which consists in electrically smelting a charge containing a refractory oxid ore, a source of iron and a carmid of an alkali-earth metal, the carbid being present in proportion to yield a metallic product low in carbon, supplying fresh portions of the charge as required and withdrawing the product from time to time.

4. The process of producing low-carbon ferroalloys which consists in electrically smelting a charge containing a refractory oxid ore, a source of iron and calcium carbid, the calcium carbid being present in proportion to yield a metallic product low in carbon.

5. The process of producing low-carbon ferroalloys which consists in electrically smelting a charge containing a refractory oxid ore, a source of iron, calcium carbid, and a suitable flux, the calcium carbid being present in proportion to yield a metallic product low in carbon.

[Claims 6 to 9 not printed in the Gazette.]

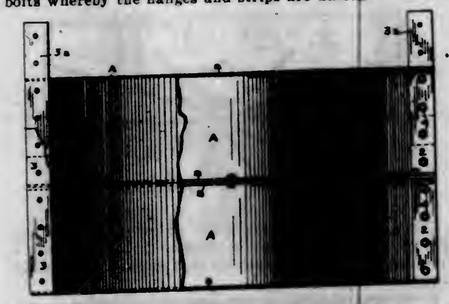
898,174. EXTENSION MINING-CAISSON. WILLIS W. BESSON, Redwood City, Cal. Filed June 24, 1908. Serial No. 440,163.

1. In an apparatus of the character described, a sectional caisson having independent sides formed with meeting flanges at the ends, means for securing said sides together to form a complete section, and means for connecting a series of superposed sections.

2. In an apparatus of the character described, a caisson composed of superposed sections, each section having independent sides with projecting parallel flanges at the ends, bolts by which said flanges are secured together, and intermediate connections by which the sections are united vertically.

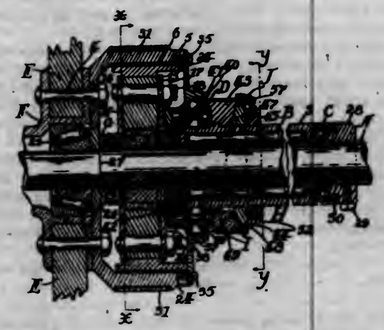
3. In an apparatus of the character described, a caisson composed of superposed sections, each section formed with separate independent sides having parallel perforated

flanges at the ends, strips of metal extending between the flanges, and overlapping the junction of the sections, and bolts whereby the flanges and strips are united.



4. In an apparatus of the character described, a caisson composed of superposed sections, each section having independent curved sides meeting at the ends and having parallel flanges projecting from said ends, plates interposed vertically between said flanges, and crossing the horizontal joints of the sections, said plates also overlapping each other and being bolted through the flanges and the overlaps to form continuous uniting and supporting members.

898,175. POWER-TRANSMISSION MECHANISM. WALLACE E. BELT, Dodge Center, Minn. Filed July 8, 1907. Serial No. 382,752.



1. In combination with the hub of a wheel to be driven, provided with a friction surface, a drive shaft, a system of levers, each provided with an eccentric surface, a friction shoe carried upon said eccentric surface, and means carried by said shaft for turning said levers and causing said shoes to impinge against said friction surface and transmit motion from said shaft and for holding said levers inoperative when the driven element rotates at a greater speed than the driving element.

2. A power transmission mechanism comprising in combination with the hub of a wheel to be driven, a friction drum on said hub, a drive shaft, a suitable cage, a pinion on said shaft, a plurality of levers fulcrumed on said cage and in mesh with said pinion, each of said levers provided with an eccentric surface, a shoe on each of said eccentric surfaces, said eccentric surfaces adapted to impinge said shoes against the friction surface of said drum when said shaft revolves in either direction, and means for retarding the movement of said cage.

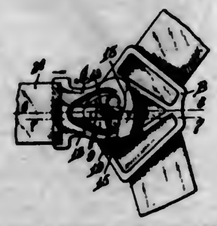
3. A power transmission mechanism comprising in combination with the hub of a wheel to be driven, a friction drum on said hub, a drive shaft on which said hub is freely journaled, a suitable cage, a pinion on said shaft, a plurality of eccentrics journaled upon said cage and in mesh with said pinion, a shoe carried upon each eccentric, means for automatically holding said shoes inoperative when the driven element rotates faster than the driving element, a thrust bearing between said cage and hub, and means for retarding the movement of said cage.

4. A power transmission mechanism comprising a drive shaft, a pinion secured on said shaft, a suitable cage, a plurality of levers fulcrumed on said cage and in mesh with said pinion, and provided with eccentric surfaces, a friction shoe carried by the eccentric surfaces of said levers, a drum connected with the part to be driven and adapted to be engaged in the inner surface of its rim by said shoes, a thrust bearing for said cage, and means for retarding the movement of said cage.

5. A power transmission mechanism comprising a drive shaft, a pinion secured on said shaft, a cage, a plurality of levers fulcrumed on said cage and in mesh with said pinion, and provided with double eccentric surfaces, a friction element carried by each of said eccentric surfaces, a drum connected with the part to be driven adapted to be engaged in the inner surface of its rim by the said frictional elements, and a thrust bearing for said cage.

[Claims 6 to 14 not printed in the Gazette.]

898,176. CLASP. HARVEY E. BERKEY, Monongahela, Pa., assignor to Pioneer Suspender Company, a Corporation of Pennsylvania. Filed July 27, 1906. Serial No. 327,992.



1. In a separable fastener, the combination of a plate provided with a boss struck up from the plane thereof, connected at its rear end and disconnected at its forward end from said plate, said plate having two rearwardly extending projections near the forward end of the boss in a plane below said boss, and a second plate provided with a boss adapted to fit within the first mentioned boss and slotted to receive the said rearwardly extending projections.

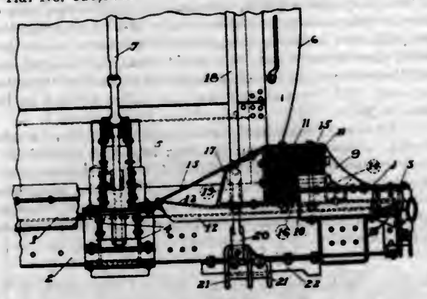
2. In a separable fastener, the combination of a plate provided with a tapered boss struck up from the plane thereof, connected at its smaller end with said plate and disconnected at its larger end from said plate, said plate having two rearwardly extending projections near the larger end of the boss in a plane below said boss, and a second plate provided with a boss adapted to fit within the first mentioned boss, and slotted to receive the said rearwardly extending projections.

3. In a separable fastener, the combination of a plate provided with a boss struck up from the plane thereof, connected at its rear end and disconnected at its forward end from said plate, said plate having two rearwardly extending projections near the forward end of the boss in a plane below said boss, a second plate provided with a boss adapted to fit within the first mentioned boss and slotted to receive the said rearwardly extending projections, and means for securing resilient coöperation between said plates to prevent accidental disengagement.

4. In a separable fastener, the combination of a plate having a tapered boss struck up from the plane thereof, said boss partly disconnected from the plate, forming an aperture between plate and boss, two projections contiguous to said aperture, extending in a plane below the boss and toward its tapered end, and a second plate having a boss adapted to fit within the boss of the first plate, and slotted to receive the said projections.

5. A clasp, comprising two flat members, each provided with a tapered boss, one larger and adapted to superimpose the other, said members apertured as follows, an aperture at the base of the larger boss with two substantially parallel prongs projecting therein and extending toward the small end of said boss, and two slots at the base of the smaller boss for receiving said prongs, and spring and projection means for preventing accidental disengagement of said two members.

898,177. TANK-CAR. MINOT C. BLEST, Bellevue, Pa., assignor to Pressed Steel Car Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Jan. 29, 1908. Serial No. 413,274.



1. In a tank car, a head block, an inclined brace for securing said head block to the underframe and a head block brace fitted between said tie member and the head block.

2. In a tank car, a head block, an inclined upper tie member for securing said head block to the underframe and a flanged head block brace having an inclined upper surface bracing said tie member.

3. In a tank car, a head block, a horizontal tie member, an inclined tie member for securing said head block to the underframe and a head block brace having an inclined surface bearing against said inclined member, a vertical surface bearing against said head block and a horizontal surface bearing against said horizontal tie member.

4. In a tank car, a head block and tie members converging and secured to the underframe at their ends.

5. In a tank car, a head block, upper and lower tie members for securing said head block to the car underframe and a head block brace member interposed between said tie members.

[Claims 6 to 33 not printed in the Gazette.]

898,178. COMBINED GRIP AND SIGHT FOR FIREARMS. GEORGE C. BOURNE, Worcester, Mass. Filed Aug. 16, 1907. Serial No. 388,928.



1. A device of the class described comprising a barrel-receiving sleeve provided at the top with a tapering enlargement having a central sight groove and extending forwardly from the rear end of the sleeve and terminating at a point between the front and rear edges thereof.

2. A device of the class described comprising a barrel-receiving sleeve provided at the top with a tapering enlargement having a central sight groove and extending forwardly from the rear edge of the sleeve and terminating at a point between the front and rear edges thereof, and a grip depending from the sleeve.

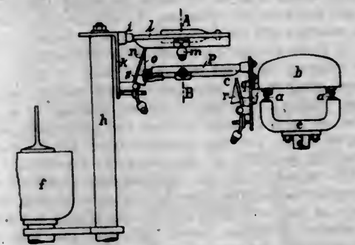
3. A device of the class described comprising a barrel-receiving sleeve split at one side and provided thereat with adjustable means for clamping it on a barrel, a thumb rest or seat located at the opposite side of the sleeve, and a grip depending from the bottom of the latter.

4. A device of the class described comprising a barrel-receiving sleeve, a thumb rest located at one side of the sleeve and consisting of an inclined flange extending downwardly and rearwardly from the upper front portion of the sleeve, and a grip depending from the sleeve.

5. A device of the class described comprising a barrel-receiving sleeve having a rear extension, and a grip depending from the sleeve and the extension thereof and consisting of a substantially ring-shaped body provided at the front with an arm forming front and bottom finger seats.

[Claims 6 and 7 not printed in the Gazette.]

898,179. APPARATUS FOR AUTOMATICALLY CONVEYING BOTTLES, &c., INTO ANNEALING-FURNACES. CARL BRAUER, Hostomitz, near Teplitz, Austria-Hungary. Filed Oct. 23, 1907. Serial No. 398,724.



1. In an apparatus for conveying bottles and other articles into annealing furnaces and in combination, a plurality of bottle receptacles suitably spaced apart and each comprising pivotally mounted holding members, supports for maintaining said holding members in their closed positions, wedge shaped members for actuating the said supports to release the holding members, a track, a trolley adapted to travel thereon, a conveyer mounted on said trolley and adapted to receive bottles from the said receptacles, means on the said conveyer for automatically actuating the said wedge shaped members to operate the holding members of said receptacles and means for delivering the bottles from the said conveyer to the annealing furnace.

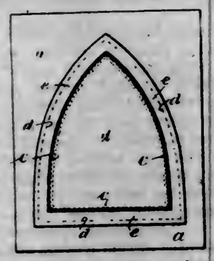
2. In an apparatus for conveying bottles and other articles into annealing furnaces and in combination, a plurality of bottle receptacles suitably spaced apart and each comprising pivotally mounted holding members, supports for maintaining the said holding members in their closed positions, wedge shaped members by which the said supports are actuated for releasing the said holding members, means whereby the said holding members return automatically to their normal positions after delivering a bottle, means whereby the said supports return to their normal positions after having released the said holding members, a track, a trolley adapted to travel thereon, a conveyer mounted on each of said trolleys and comprising pivoted holding members, a wedge shaped support for the said pivoted holding members of the conveyers, a roller for actuating the supports for the said holding members of the said receptacles and a projecting member located at the furnace for engaging the said wedge shaped support for releasing the pivoted holding members of the said conveyers.

3. In an apparatus for conveying bottles and other articles into annealing furnaces and in combination, a plurality of bottle receptacles suitably spaced apart and each comprising pivotally mounted holding members, supports for maintaining the said holding members in their closed positions, wedge shaped members by which the said supports are actuated for releasing the said holding members, means whereby the said holding members return automatically to their normal positions after delivering a bottle, means whereby the said supports return to their normal

positions after having released the said holding members, a track, trolleys adapted to travel thereon, a conveyer mounted on each of said trolleys and comprising pivoted holding members, a wedge shaped support for the said pivoted holding members of the conveyers, a roller for actuating the supports for the said holding members of the said receptacles, means whereby the said pivoted holding members of the conveyers are automatically returned to their normal position, means whereby the said wedge shaped supports for the pivoted holding members of the conveyer are automatically returned and maintained in their normal positions, a projecting member located at the furnace for engaging the said wedge shaped supports for releasing the pivoted holding members of the said conveyers, a bottle support and tilting carrier for delivering the bottles.

4. In an apparatus for conveying bottles and other articles into annealing furnaces and in combination, a plurality of bottle receptacles suitably spaced apart and each comprising pivotally mounted holding members, supports for maintaining the said holding members in their closed positions, wedge shaped members by which the said supports are actuated for releasing the said holding members, means whereby the said holding members return automatically to their normal positions after delivering a bottle, means whereby the said supports return to their normal positions after having released the said holding members, a track, trolleys adapted to travel thereon, a conveyer mounted on each of said trolleys and comprising pivoted holding members, a wedge shaped support for the said pivoted holding members of the conveyer, a roller for actuating the supports for the said holding members of the said receptacles, means whereby the said pivoted holding members of the conveyers are automatically returned to their normal positions, means whereby the said wedge shaped supports for the pivoted holding members of the conveyers are automatically returned and maintained in their normal positions, a projecting member located at the furnace for engaging the said wedge shaped support for releasing the pivoted holding members of the said conveyers, a bottle support, a tilting carrier for delivering the bottles, and a slide from the same in its tilted position to the annealing furnace whereby the bottles are delivered to the same.

898,180. IRONING WAX-PAD. ERNST A. BROMUND, New York, N. Y. Filed Dec. 16, 1907. Serial No. 406,614.



1. An ironing wax pad consisting of a flat base, a cake of wax of smaller area than the base, a border strip around the edge of the wax and separate therefrom, a fabric cover and a mat by means of which the wax, its separate border strip and the fabric cover are held to the base.

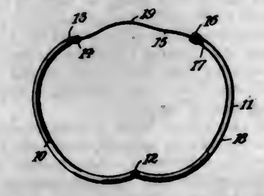
2. An ironing wax pad consisting of a flat base, a cake of wax of smaller area than the base, a border strip around the edge of the wax and separate therefrom, a fabric cover for the cake of wax and border strip, and a flat sheet of material having an opening therein through which the cake of wax projects and forming a collar or mat which lies flat upon the upper surface of the base and between which and the base the fabric cover is held thus securing the cake of wax and its separate border strip in position.

3. An ironing wax pad consisting of a flat base, a cake of wax of smaller area than the base and having inclined sides, a border strip for the wax separate therefrom and set at an inclination to conform to the inclined sides of the cake of wax, a fabric cover for the cake of wax and border strip, and a flat sheet of material having an opening therein through which the cake of wax projects and forming a collar or mat which lies flat upon the upper surface of the base and between which and the base the fabric cover is held and by which means the cake of wax and its separate border strip are held in position.

4. An ironing wax pad consisting of a flat base, a cake of wax, a border strip for the wax separate therefrom, a piece of fabric covering the wax cake and its separate border strip, and a mat by means of which the cover is drawn down smooth and tight over and around the cake of wax and its separate border strip and held to the base between the same and the mat and said mat being secured to the base by glue.

5. An ironing wax pad consisting of a flat base, a cake of wax, a border strip for the wax separate therefrom, a cover composed of a fabric saturated with phosphate of ammonium, and a mat by means of which the said cover is drawn and held smoothly and tightly upon and around the cake of wax and its separate border strip and secured to the base.

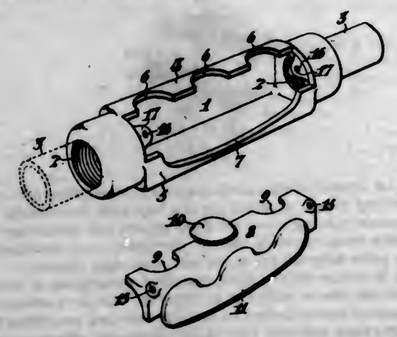
898,181. BRACELET. JOSEPH BULOVA, New York, N. Y. Filed Apr. 3, 1908. Serial No. 424,902.



1. A bracelet provided with a first member, a second tubular member pivoted thereto, a spring arm adapted to enter the second member, and a stop-hinge connecting said arm to the first member, substantially as specified.

2. A bracelet provided with a first member, a second tubular member pivoted thereto, a stud, a stop-hinge connecting said stud to the first member, and a spring arm connected to the stud and adapted to enter the second member, substantially as specified.

898,182. JUNCTION-BOX FOR ELECTRICAL CONDUCTORS. JAMES F. BURNS, Philadelphia, Pa. Filed Jan. 17, 1908. Serial No. 411,237.



1. A junction box comprising a cylindrical inlet; walls extending parallel with the axis of said inlet at right angles to each other, and having recessed edges opposed in parallel relation; a plate having recesses and projections

complementary to the recesses in said box walls; and means arranged to detachably secure said plate in said box, substantially as set forth.

2. A junction box having its respectively opposite ends provided with screw threaded openings disposed on a common axis; and side walls extending at right angles to each other, parallel with and in symmetrical relation to said axis, said walls being respectively imperforate and provided with outlets, whereby said box may be turned upon said axis to selectively present said outlets in different directions, substantially as set forth.

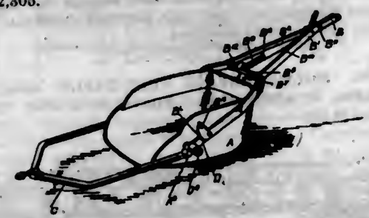
3. A junction box comprising a cylindrical inlet and walls, respectively imperforate and provided with outlets, extending at right angles with each other, parallel with and in symmetrical relation to the axis of said inlet, and arranged to be turned upon said axis to selectively present said outlets in different directions, substantially as set forth.

4. A junction box comprising a cylindrical inlet; walls extending at right angles with each other parallel with the axis of said inlet, and having recessed edges; the edge of one wall having a plurality of recesses and the edge of the other wall having a single recess coextensive with said plurality of recesses in the other wall; a plate having recesses complementary to the recesses in one of said walls and a projection complementary to the recess in the other of said walls; and means arranged to detachably secure said plate in said box, substantially as set forth.

5. A junction box having a screw-threaded opening for engagement with a conduit; an axis of rotation coincident therewith, and walls disposed transversely with respect to said axis in rectangular relation, said walls being respectively imperforate and provided with an outlet; whereby, said box may be turned upon said axis to selectively present said outlet in different directions, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

898,183. SCRAPER. JAMES BUTLER, St. Catherines, Ontario, Canada. Filed Jan. 23, 1908. Serial No. 412,305.



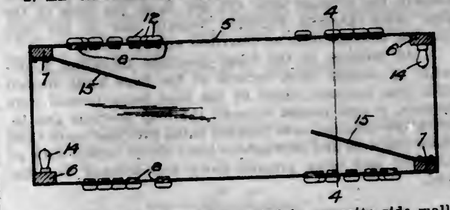
1. In a scraper of the class described, the combination with the scraper body, the handles pivoted to the side of the body and an engagement piece secured to the back of the scraper body, of a cross bar extending between the members of the handle and a catch piece pivoted to the back of the bar and extending over the same and engaging with the engagement piece as and for the purpose specified.

2. In a scraper of the class described, the combination with the scraper body, the forked handle pivoted to each side of the body and an engagement piece secured to the back of the scraper body, of a cross bar extending between the members of the handle, an open bracket frame secured to the back of the cross bar, a catch pivoted therein, a spiral spring connecting the catch above its pivot point to the back of the bracket, a lever handle pivoted in the crotch of the forked handle and a chain connecting the lever handle with the pivoted catch as and for the purpose specified.

898,184. ILLUMINATED SIGN. CHARLES L. CARTER, Marion, Ind. Filed Dec. 19, 1907. Serial No. 407,214.

1. An illuminating sign comprising a casing having opposite side walls, lenses mounted in said opposite side walls, lights carried by the opposite side walls and at diagonally opposite localities in said casing, and shields forming reflecters positioned at remaining diagonally opposite localities of the casing and in front of said lights.

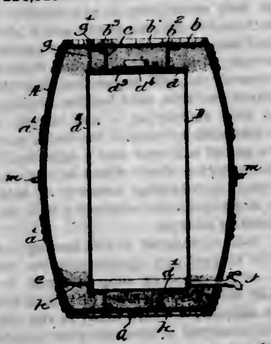
2. An illuminating sign comprising a casing having



opposite side walls, lenses mounted in opposite side walls, lamps positioned within the casing near opposite extremities thereof and diagonally disposed shield plates arranged in front of said lights, whereby the rays from the latter will be cut off from the lenses directly in advance of the said lights.

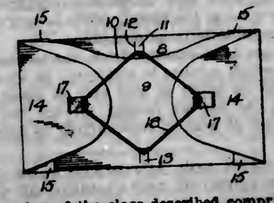
898,185. [WITHDRAWN.]

898,186. TANK FOR HOLDING HOT LIQUIDS. CLARENCE E. CLISBEE, Revere, Mass. Filed Sept. 15, 1904. Serial No. 224,515.



The combination with a receiver having a faucet at one end and a removable cap at the other end, of a wooden barrel inclosing said receiver, said barrel having a removable head to permit the receiver to be set into the barrel, said head having an opening therein situated in line with the cap in the receiver, a closure for said opening in the head, an annular partition surrounding the cap of the receiver and the opening in the barrel head and secured to both said receiver and said barrel head, said partition forming a space between said cap and said barrel head, and non-heat conducting material in said space and also in the space between the receiver and the barrel.

898,187. ENVELOP. THOMAS S. CORBITT, Kirkland, Ga. Filed Nov. 11, 1907. Serial No. 401,659.

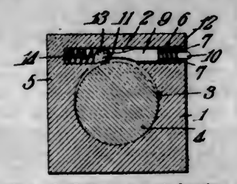


1. An envelop of the class described comprising a front, back flaps formed integral with the upper and lower edges of the front, end flaps secured to the front at the ends thereof, the back flaps being provided with parallel slits

which form between them loop portions, tongues formed integral with the end flaps adjacent their free ends, the back flaps being foldable upon the front of the envelop and the end flaps upon the outer back flap, and a cord passed through the loop portions upon the back flaps and beneath the tongues upon the end flaps, the ends of the cord being brought together beneath one of the said tongues, substantially as described and set forth.

2. An envelop of the class described including a plurality of closure flaps, certain of the flaps being formed with loop portions, other of the flaps being formed with tongues, a cord passed through the loop portions and beneath the tongues, said tongues being provided upon their under surfaces and throughout their entire extent with an adhesive and being pressed down and secured over the cord.

898,188. NUT-LOCK. CHARLES H. COVEY, Marietta, Ohio. Filed Apr. 13, 1908. Serial No. 426,796.



1. A nut lock embodying a nut having a seat intersecting the threaded opening of the nut a yielding support in one end of said seat and a locking member on said support, a sleeve fitted in the opposite end of said seat and an unlocking member in said sleeve free from but yieldingly held in engagement with said locking member.

2. A nut lock embodying a nut having a seat intersecting the threaded opening of the nut a yielding support fitted in one end of said seat and a spherical locking member on said support a sleeve fitted in the opposite end of said seat and an unlocking member in said sleeve provided with a conical nose yieldingly held in engagement with said locking member.

3. A nut lock embodying a nut having a seat parallel with one side thereof and intersecting the threaded opening of the nut, a yielding support fitted in one end of said seat and a locking member having a roughened surface on said support, a sleeve fitted in the opposite end of said seat and provided at one end with a reduced opening an unlocking member having a shank portion on one end adapted to enter this opening and a conical nose on the opposite end adapted to be yieldingly held in engagement with said locking member.

898,189. ELECTRODEPOSITION OF ALLOYS. SHERARD O. COWPER-COLES, London, England. Filed Aug. 2, 1907. Serial No. 386,838.

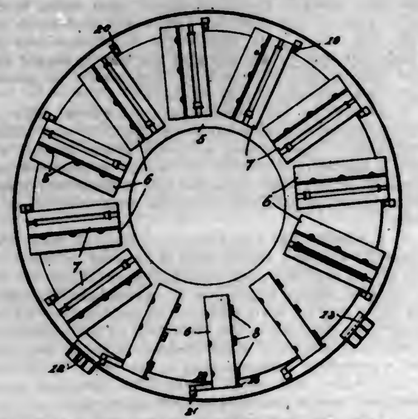
1. In the art of electrodeposition, the method of depositing alloys which consists in employing an anode of the alloy to be deposited and an anode of each of the metals composing the alloy, substantially as described.

2. In the art of electrodeposition, the method of depositing alloys which consists in employing an anode of the alloy to be deposited and an anode of each of the metals composing the alloy, and independently varying the current passing through the anodes of the metals of the alloy as desired, substantially as described.

3. In the art of electrodeposition, the method of depositing brass, which consists in employing an anode of brass together with an anode of zinc and an anode of copper and varying the current passing through the anodes of zinc and copper as desired, substantially as described.

898,190. MEANS FOR AUTOMATICALLY CONTROLLING THE OPENING AND CLOSING OF TWO-PART CASTING-MOLDS. EDGAR A. CUSTER, Philadelphia, Pa. Filed Feb. 24, 1908. Serial No. 417,399.

1. Means of the character described, comprising stationary inclined grooved blocks, in combination with a table provided with molds, each consisting of cope and a drag and angular projecting means connected with each cope to open and close successively by the same movement of the table a cope against a drag of each of said molds, substantially as and for the purposes described.



2. Means of the character described, comprising stationary inclined grooved blocks, in combination with a table provided with molds, each having a movable member and a fixed member and angular arms having terminal projections, said arms being secured to said movable member and in spanning the fixed member adapted to part the movable member from the fixed member, substantially as and for the purposes described.

3. Means of the character described, comprising stationary inclined grooved blocks, in combination with a table provided with molds, each having a movable member and a fixed member and angular arms having terminal projections, said arms being secured to said movable member and in spanning said fixed member holding said movable member in a fixed open position, substantially as and for the purposes described.

898,191. MOLD-CARRYING TURN-TABLE. EDGAR A. CUSTER, Philadelphia, Pa. Filed Mar. 4, 1908. Serial No. 419,142.



1. In combination, rails arranged at different heights with respect to each other and a turntable adapted to travel over said rails and said table poised or balanced without a central pivotal support, substantially as and for the purposes described.

2. In combination, rails arranged at different elevations with respect to each other and a turntable adapted to travel over said rails and carrying a series of opening and closing molds, and said table poised or balanced, without a pivotal support, substantially as and for the purposes described.

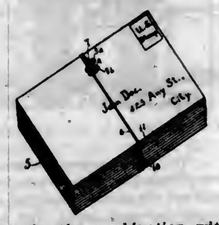
3. In combination, rails arranged at different elevations with respect to each other, a turntable provided with single flanged wheels adapted to travel over said rails and the only means of poising or balancing the table on the rails, and hinged molds arranged, in series, on said table, substantially as and for the purposes described.

4. In combination, rails arranged at different elevations with respect to each other and a turntable provided with a platform and wheels in parallel planes adapted to force the table to assume in operative position the form of a truncated cone.

5. In combination, rails arranged at different elevations with respect to each other and a turntable constructively arranged for operation in the form of a truncated cone and provided with wheels adapted to engage said rails and said rails and wheels holding said table in a fixed operative position with respect to their central vertical axis.

[Claims 6 to 8 not printed in the Gazette.]

898,192. PACKAGE-TIE. GEORGE H. DAUGHTREY, Chicago, Ill. Filed Oct. 28, 1907. Serial No. 399,557.



In a package tie, the combination with a cord, of a hook connected with one end of the cord, and a clasp connected to the other end of said cord, said clasp consisting of a wire bent into a series of parallel loops lying in the same plane, the extremities of the loops upon one side being bent away from the median line, and an eye formed in one end of said wire.

898,193. PERFORATING MECHANISM. RODERICK M. DAVIDSON, Elmira, N. Y. Filed Jan. 29, 1908. Serial No. 413,288.



1. A perforating mechanism comprising a cylinder, a cylinder segment circumferentially adjustable thereon, a perforating blade carried in a slot extending longitudinally across the segment, a shaft passing across the segment and provided with arms at each end, said arms being in engagement at their free ends with projections from the ends of the perforating blade, a crank at one end of the shaft, a cam adapted to actuate the crank to project and retract the perforating blade, a female cylinder adapted to receive the teeth of the blade, and means for rotating the cylinders.

2. A perforating mechanism comprising a cylinder, a cylinder segment circumferentially adjustable thereon, a perforating blade adapted to move radially in said segment, a shaft carried by the segment and adapted to impart motion to the blade, a crank on one end of said shaft, a crank pin mounted thereon provided with a conical roller, means for longitudinally adjusting the pin in the crank, a beveled cam engaged by the roller, a female cylinder adapted to receive the teeth of the perforating blade, and means for rotating the cylinders.

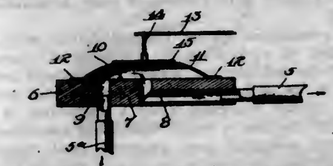
3. In a perforating mechanism, a cylinder, a perforating blade carried thereby and movable in and out of the cylinder, an oscillating shaft provided with arms coupled to said blade, an operating crank on said shaft provided with a crank pin, a stationary cam engaged by said pin, and means for rotating the cylinder.

4. In a perforating mechanism, a cylinder, a perforating blade carried thereby and movable in and out of the cylinder, an oscillating shaft coupled to said blade, an operating crank on said shaft provided with a crank pin of conical form, a beveled stationary cam engaged by said pin, means for adjusting the pin longitudinally, and means for rotating the cylinder.

5. A perforating mechanism comprising a cylinder, a perforating blade mounted thereon and provided with a plurality of teeth, a female cylinder provided with a plurality of circumferential grooves each adapted to receive a tooth of the perforating blade, and means for rotating the cylinders.

[Claims 6 to 8 not printed in the Gazette.]

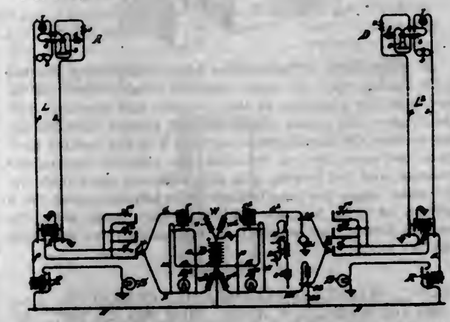
898,194. AUTOMATIC GOVERNOR FOR PNEUMATIC MOTORS. CHARLES L. DAVIS, Detroit, Mich. Filed July 27, 1905. Serial No. 271,409.



1. The combination with a vacuum producing apparatus, and a motor to be actuated thereby, of a motor controller for controlling the speed of the motor, said motor controller being provided with connections extending to the vacuum producing apparatus, and to the motor, and comprising a block having two ports in its face, one of said ports leading to the motor and the other to the vacuum producing apparatus, and a flexible diaphragm arranged over both of said ports and secured to the face of the block in which the ports open so as to cover both ports, a disk arranged centrally of the diaphragm so that there is a portion of the diaphragm on all sides of the disk between the same and the block, and spring means for holding the diaphragm away from the block.

2. A pneumatic controller, comprising a block having two passages, both of which open in the same face of the block, said face being depressed so as to form a depressed seat, and a flexible diaphragm secured to said block and covering said depressed face thereof.

898,195. SUPERVISORY SYSTEM FOR TELEPHONE-LINES. WILLIAM W. DEAN, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 31, 1903. Serial No. 179,265.



1. In a telephone system, the combination with telephone lines, of a cord circuit to establish connections for conversation with said lines, said cord circuit having two strands included one in each side of the talking circuit, a non-inductive supervisory signal in one of the strands, and a supervisory relay in the opposite strand to deprive said signal of operating current, substantially as described.

2. In a telephone system, the combination with telephone lines, of a cord circuit to establish connections

therewith for conversation, a repeating coil and a source of current bridged across said cord circuit, a supervisory signal in the path of current over one strand of the cord circuit, a supervisory relay in the opposite strand; said relay serving to normally short circuit the winding of the repeating coil that is in series with said signal, and during conversation to open the short circuit about said winding and to establish a second short circuit about the said signal, substantially as described.

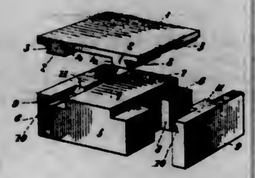
3. In a telephone system, the combination with a telephone line, of a cord circuit for establishing connections therewith for conversation, said circuit having a strand included in each side of the talking circuit, a supervisory lamp in one of said strands and a supervisory relay in the other strand, said relay being adapted when operated to complete a shunt path about said lamp, substantially as described.

4. In a telephone system, the combination with a telephone line, of a cord circuit to establish connections therewith for conversation, a supervisory signal and a resistance in the path of current over a talking strand of the cord circuit energized when a connection is established with the line, a supervisory relay associated with said circuit, energized over another strand thereof and operated during conversation by current over the telephone line to place a shunt around said signal and thereby render it inert, substantially as described.

5. In a telephone system, the combination with a telephone line, of a cord circuit to connect therewith for conversation, a source of current for the cord circuit, a resistance and a signal adapted to be placed in a circuit with said source when the cord is connected with a line, means for shunting said resistance when the line is open at the substation, whereby the signal receives sufficient current to display it and for shunting said signal when the line is closed at the substation, whereby the signal is effaced, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

898,196. ELECTROTYPE-BLOCK. ROLLIN E. DOOLITTLE, New York, N. Y. Filed Mar. 24, 1908. Serial No. 422,875.



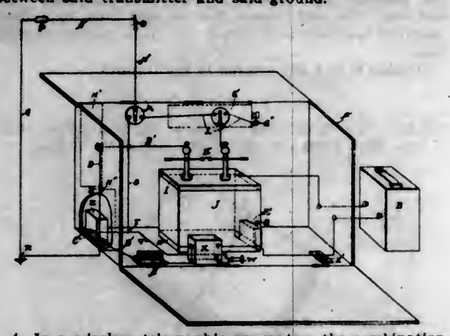
An electrotype or stereotype block comprising the top plate having upon its under side the longitudinal ribs, interrupted for a portion of their lengths and provided with the tongue and rabbet edges, the bed having upon its upper surface the longitudinal cuttings and the central platform and upon two of its sides the vertical rectangular recesses, and the locking side pieces having upon their upper inner edges the longitudinal grooves interrupted for a portion of their lengths and upon their inner sides the vertical rectangular projections, substantially as described and set forth.

898,197. WIRELESS-TELEGRAPH APPARATUS. HALSEY DUNWOODY, U. S. Army. Filed May 21, 1907. Serial No. 374,944.

1. In a radio electric circuit, the combination of an aerial, means to impress oscillations thereon, and a current rectifier or separator in said aerial, substantially as described.

2. In a radio electric circuit, the combination of an oscillating circuit having an aerial, means to impress oscillations thereon, a ground connection for the same, and a current separator or rectifier connected with said aerial, substantially as described.

3. In a wireless telegraphic apparatus, the combination of a sending spark gap, an aerial, a ground connection for the same, and a current separator or rectifier in said aerial between said transmitter and said ground.



4. In a wireless telegraphic apparatus, the combination of a wave transmitter, an aerial connected with the same, a ground connection for said aerial, and a current separator or rectifier containing silicon, in said aerial between said transmitter and said gronad, substantially as described.

5. In a wireless telegraphic apparatus, the combination of a wave transmitter, an aerial connected with the same, a ground connection for said aerial, and a current separator or rectifier containing silicon and carbon, in said aerial between said transmitter and said ground, substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

898,198. NECKTIE. ANTHONIE J. C. EGBERTS, Chicago, Ill. Filed Sept. 16, 1907. Serial No. 392,969.



1. A neck-tie comprising the usual body portion, and strap, in combination with a sleeve formed of any suitable material and arranged within said body portion, said sleeve forming a passage way throughout the extent of said body portion for the end of said strap and a clasp upon the end of said sleeve, substantially as described.

2. A neck tie comprising the usual body portion and strap, in combination with a sleeve arranged within said body portion and throughout the extent of said body portion forming a passage way for the end of the strap, ears formed upon the lower end of said sleeve and a clasp arranged between said ears, substantially as described.

3. A neck-tie comprising the usual body portion and strap, in combination with a sleeve arranged within said body portion and extending from the top to the bottom thereof, said sleeve having a flared upper end, and a clasp arranged upon the lower end of said sleeve, substantially as described.

4. A necktie comprising the usual body portion and strap, in combination with a sleeve arranged within said body portion and extending from a point at the top of said body portion to a point below the lower edge thereof and forming a passageway throughout the extent of said body portion for the end of the strap and means on the lower end of said sleeve and beneath the lower edge of said body portion for fastening said strap, substantially as described.

898,190. HOSE AND PIPE COUPLING. WENZL EISENMANN, Ford City, Mich. Filed May 13, 1907. Serial No. 373,216.



1. In a pipe coupling, the combination with the tubular pipe members having straight beveled faces at the ends thereof, of a rotatable collar mounted on each of said members and adapted to embrace the ends of both members, and coöperating means carried by said collars and pipe members for clamping the parts together by a partial rotation only of said collars.

2. In a pipe coupling, the combination with the tubular pipe members having straight oblique bearing faces at the meeting ends thereof adapted to effect a joint between the parts when placed together, of a rotatable collar upon each of said members, each of said collars adapted to embrace both members and each having a wedge-shaped portion, and a segmental flange upon each of said members having a beveled face adapted to be engaged by one of said wedge shaped projections as said collars are partially rotated.

3. In a coupling, the combination with tubular members having lapping beveled end portions whose straight meeting faces are adapted to effect a joint between said members, of rotatable collars mounted upon and embracing the lapping ends of said members through which collars the beveled end portions of the members extend, and means upon said collars and pipes for clamping the beveled faces of the members together as said collars are rotated.

4. In a coupling, the combination with the tubular members having straight beveled faces at the ends thereof, adapted to be brought into engagement by a direct longitudinal movement of said parts, each of said members having at its extreme end a segmental flange provided with a beveled face, a rotatable collar loosely mounted upon the beveled end portion of each of said tubular members under which the extreme end of the opposing part passes when said parts are placed together, each of said collars having a wedge shaped projection extending from the outer edge thereof adapted by a partial rotation of said collars to engage the beveled face of the segmental flange of the opposite part to lock the coupling members together.

5. In a coupling, the combination with the tubular members having lapping beveled end portions whose straight faces when placed together effect a joint between said parts, each of said tubular members having a rotary collar embracing the beveled end portion thereof and the beveled end portion of each of said parts having at its extreme end a segmental flange, each of said rotary collars having a channel in its inner face for the passage of said flange of the other part to enable the beveled faces of said parts to be placed together and to project through said collars, and co-acting means upon the beveled end portion of said parts and upon said collars for clamping the beveled faces of the parts together as said collars are partially rotated.

898,200. PANTALOONS-PROTECTOR. MARTIN ELZAS, Los Angeles, Cal. Filed May 21, 1907. Serial No. 374,927.

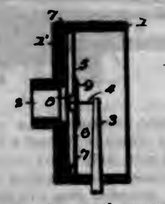
1. In a device of the character described, the combination with a protector constructed of a suitable material having a suitable binding extending continuously about the edges thereof and being folded to embrace the inner and outer portions of the garment, of concealed fasteners therefor comprising covered hinged plates within said folds having engaging straight and curved springs normally holding said plates and said folds spaced apart for the ready insertion of the garment, and adapated to hold said fasteners tightly together when the same are closed upon the garment, substantially as described.



2. In a device of the character described, the combination with a protector constructed of a suitable material folded to embrace the inner and outer portions of the garment, of fasteners therefor comprising hinged plates arranged within said folds having engaging straight and curved springs normally holding said plates and said folds spaced apart for the ready insertion of the garment, said hinged plates having opposing indented portions forming gripping jaws, and being concealed by means of a covering of a suitable material attached to said folds to prevent direct contact of said hinged plates with the garment when closed thereon, substantially as described.

3. In a device of the character described, the combination with a protector constructed of a suitable material having a suitable binding extending continuously about the edges thereof and being folded to embrace the inner and outer portions of the garment, of fasteners therefor comprising hinged plates arranged within said folds having engaging straight and curved springs normally holding said plates and said folds spaced apart for the ready insertion of the garment, said hinged plates having opposing indented portions forming gripping jaws, and being concealed by means of a covering of a suitable material attached to said folds to prevent direct contact of said hinged plates with the garment when closed thereon, substantially as described.

898,201. SOUND-BOX FOR MACHINES FOR RECORDING AND REPRODUCING SOUND. JOHN C. ENGLISH, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey Filed Mar. 27 1906. Serial No. 308,224.



1. In a sound recording and reproducing machine, the combination with a sound box, of a diaphragm provided with an integral cylindrical flange the said diaphragm being retained in said sound box by the engagement between said flange and said sound box and having the end of said flange engaging the rear wall of said sound box.

2. In a sound box having a cylindrical bore, and a circular channel opening into said bore, a diaphragm provided with a cylindrical flange at the periphery thereof tightly fitting within said bore and extending into said channel.

3. In a sound box having a cylindrical bore, and a circular channel opening into said bore and concentric therewith, a diaphragm provided with a cylindrical flange at the periphery thereof tightly fitting within said bore and filling said channel.

4. In a sound box the combination with that part of sound box provided with a sound conveying opening and having a circular channel concentric therewith, of a diaphragm provided with a cylindrical flange fitting tightly within said channel.

5. In a sound box having a groove with side walls extending longitudinally of the box, a diaphragm having a flange at its periphery fitting tightly within said groove.

[Claims 6 to 16 not printed in the Gazette.]

898,202. BOILER-TURE EXPANDER.. JOHN W. FAESSLER, Moberly, Mo. Filed Jan. 18, 1907. Serial No. 352,893.



The herein described boiler tube expander, comprising the cylindrical body 1, through the center of which is formed a longitudinally disposed opening, the flange 3 formed integral with the rear end of the body 1, there being a series of radially arranged openings 4 formed through the body and communicating with the opening therethrough, the ring 7 loosely mounted on the rear portion of the body and inclosing the rear portions of the radially arranged openings and which ring is of the same diameter as is the flange on the rear end of the body, the rollers 5 loosely arranged in the radially arranged openings, the rear ends of which rollers bear against the front face of the ring, the stems 6 integral with the rollers, which stems bear against the inner periphery of the ring, a tapered spindle adapted to pass through the opening in the cylindrical head and engage all of the rollers, and a handle detachably applied to the outer end of the spindle.

898,203. BOILER-TUBE EXPANDER. JOHN W. FAESSLER, Moberly, Mo. Filed Jan. 11, 1908. Serial No. 410,448.

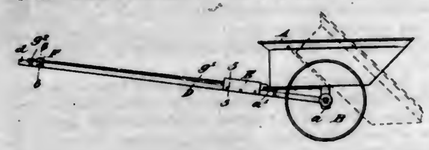


1. A tube expander, comprising a cylindrical body, through the center of which is formed a longitudinally extending opening and said body being provided with a plurality of roller openings, rollers located in said openings, an internally screw threaded ring integral with the rear end of the body, a portion of which ring incloses the rear ends of the rollers; a ring arranged for rotation on the first mentioned ring, there being a continuous annular groove formed in the inner face of the second mentioned ring, a pair of oppositely arranged pins passing through the first mentioned ring and engaging in the groove, and a screw plug seated in the screw threaded ring, the inner end of which screw plug normally covers the inner ends of the pins.

2. A tube expander, comprising a cylindrical body, through the center of which is formed a longitudinally extending opening and said body being provided with a plurality of roller openings, rollers located in said openings, an internally screw threaded ring integral with the rear end of the body, a portion of which ring incloses the rear ends of the rollers; a ring arranged for rotation on the first mentioned ring, there being a continuous annular groove formed in the inner face of the second mentioned ring, a pair of oppositely arranged pins passing through the first mentioned ring and engaging in the groove, a screw plug seated in the screw threaded ring, the inner end of which screw plug normally covers the inner ends of the pins; there being an opening in the center of the screw plug, and a mandrel adapted to pass through the openings in the screw plug and the body of the tool for engaging the rollers.

3. A tool of the class described, comprising a cylindrical body through the center of which is formed a longitudinally disposed opening, a series of rollers carried by the body, a ring integral with the rear end of the body, a portion of which ring incloses the rear ends of the rollers; a second ring arranged for rotation on the first mentioned ring, there being a continuous annular groove formed in the inner face of the second mentioned ring, a pair of oppositely arranged pins passing through the first mentioned ring and engaging in the groove in the second mentioned ring, and a plug seated in the first mentioned ring and covering the inner ends of the pins.

898,204. DUMP-CART. FRANK C. FELLER, Cleveland, Ohio. Filed Oct. 23, 1907. Serial No. 398,696.



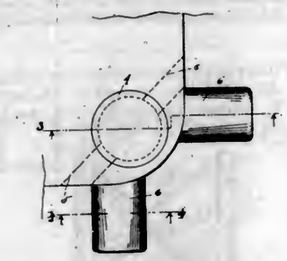
1. The combination of a dump cart body having depending perforated ears and a forwardly extended bar a', an axle rotatably mounted in said ears, a draft bar having at its rear end, two arms which are connected with the axle, a spring bolt mounted upon said draft bar and adapted to engage the top of said bar a', and provided with a long attached rod which extends forward to a point near the end of the draft rod whereby it may be operated, substantially as and for the purpose specified.

2. The combination of a dump cart body having depending perforated ears and a forwardly extended bar a', a draft bar comprising a metal strip doubled so as to bring the two parts into contact and bent in the middle to form a handle loop, which two parts are bent apart near their rear ends and then rearward to form the arms d' which are connected with the axle, an axle rotatably mounted in said ears, the straps E and F embracing and secured to the two contacting parts of the draft bar and holding them together, one of said straps being in the form of a bolt housing, and the other being adapted to serve as a guide for a bolt operating rod, a spring bolt mounted in said housing and adapted to project therefrom rearward and to engage with the top of the bar a', and a bolt operating rod connected with said bolt and extending forward out of the bolt housing and through the guide formed in the other strap and having an operating loop on its forward end arranged in convenient relation to the loop at the front end of the draft bar.

898,205. DRAINAGE SYSTEM. KARL FILSKOW, New York, N. Y. Filed Feb. 20, 1908. Serial No. 416,917.

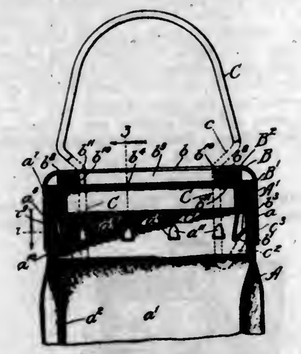
1. The herein described drainage system, consisting in the combination with the drainage basin and corner gutter, of side gutters leading to the drainage basin.

2. The herein described drainage system, consisting in the combination with the drainage basin and corner gutter, of side gutters leading into the drainage basin and short bridges arranged between the side gutters and the



corner gutter, said bridges having slanting and rounded side surfaces and leading from the sidewalk down to the roadway.

898,206. SAVINGS-BANK. CHARLES FISHER, Chicago, Ill., assignor to International Safe Company, Chicago, Ill., a Corporation of Wisconsin. Filed May 29, 1907. Serial No. 376,445.



1. In means of the character set forth, the combination with a receptacle, of a closure, a coin-admission port and a coin-gripping device comprising a flexible member provided with a slit registering with said coin-admission port.

2. The combination with a receptacle having a neck equipped with a retainer, of a closure having its top provided with a coin-slot, a retainer carried by said closure adapted to engage said first-named retainer, and coin-gripping means interposed between the top of said closure and said second-named retainer.

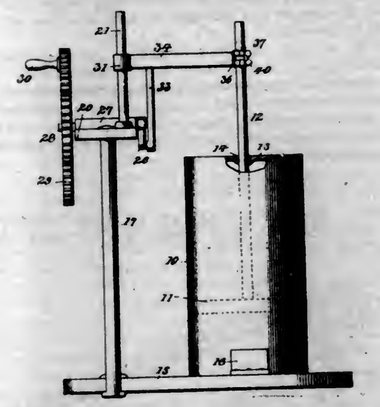
3. The combination with a receptacle equipped with a retainer, a closure provided with a coin-slot of given width, a flexible coin-gripping member having a slit registering with said coin-slot, a member beneath said coin-gripping member having a slot of greater width than said coin-slot, and retaining means carried by said closure and adapted to engage said first-named retainer.

4. The combination with a receptacle having a substantially rectangular neck equipped at its ends with retainers, a closure telescopically joined to said neck and having its top provided with a coin-slot, and a retainer carried by said closure having arms provided with yielding retaining members adapted to engage said first-named retainers.

5. The combination with a receptacle having a neck portion equipped internally with retainers, a closure telescopically connected with said neck portion and provided with a coin-slot, a flexible coin-gripping member having a slit registering with said coin-slot and provided on its lower surface with grooves, and a member provided with a slot wider than said coin-slot and having flanges engaging said grooves, said last-named member being provided with arms equipped with yielding retaining-prongs, for the purpose set forth.

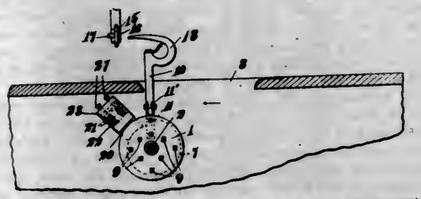
[Claims 6 to 15 not printed in the Gazette.]

898,207. CHURN-OPERATING MECHANISM. RATIO E. FLEMING, Mexico, Mo. Filed May 29, 1908. Serial No. 435,768.



A device of the class described comprising a platform having means for supporting a churn including a dasher and its rod, supporting standards spaced apart and extending from said platform, a plate carried by said standards and provided with spaced vertical guide standards, a cross head carried by said guide standards and having laterally converging arms terminating in a bearing in which said dasher rod is supported, means for clamping the bearing to the dasher rod, a shaft mounted for rotation through said plate and having a crank at one end, a connecting rod between said crank and the cross head, and means for rotating said shaft.

898,208. MAIL-POUCH-CATCHING DEVICE. GEORGE M. FOLEY, Chicago, Ill. Filed Mar. 9, 1908. Serial No. 419,839.



1. In a mail catching device a rotary member mounted within a mail car upon a vertical axis, a catching arm extending laterally from said member and adapted to swing through the doorway of the car, and a frictional device arranged in engagement with said rotary member and adapted to increase the friction as the arm swings inwardly to bring the same gradually to rest within the car, substantially as described.

2. In a mail catching device a mail car having a side doorway, in combination with a member rotatably mounted upon a vertical axis adjacent to said doorway and having a cam-face formed thereon, a pouch catching arm extending radially from said member and a friction device in engagement with said cam-face, substantially as described.

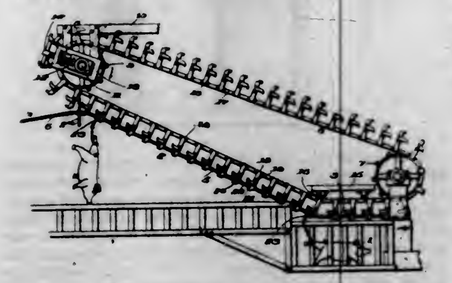
3. In a mail catching device a mail car having a side doorway, in combination with a substantially disk shaped member rotatably mounted upon a vertical axis adjacent

to said doorway and having a spiral shaped peripheral cam-face, a pouch catching arm extending radially from said member and adapted to swing into or out of said car, and a spring pressed friction shoe engaging said cam-face, substantially as described.

4. In a mail catching device a member rotatably mounted upon a vertical axis, in combination with a cam-face formed on said member, a spring pressed friction shoe in engagement with said cam-face, a pouch catching arm extending radially from said member and means for regulating the pressure of said shoe on said cam-face, substantially as described.

5. In a mail catching device a member rotatably mounted upon a vertical axis, in combination with a cam-face formed on said member, a spring pressed friction shoe in engagement with said cam-face and a pouch catching arm extending radially from said member, said arm being jointed and arranged to swing upwardly when not in use, substantially as described.

898,209. HOG-HOISTING APPARATUS. THOMAS D. FOSTER, Ottumwa, Iowa. Filed Nov. 29, 1904. Serial No. 234,712.



1. In hoisting apparatus, a stationary supporting member, a two-pronged hook contacting therewith and adapted to travel thereon and provided with an upwardly-projecting portion, and means adapted to propel said hook along said supporting member, having a part to engage the upwardly projecting portion thereof and hold the hook upon the supporting member.

2. In hoisting apparatus, a stationary supporting member having an elevating portion and a sticking rail, a two-pronged hook adapted to contact with and travel on said supporting member and to suspend an object therefrom, and an endless traveling propelling means for said hook, comprising a part adapted to force the latter along the supporting member and a part adapted to hold the hook on the supporting member.

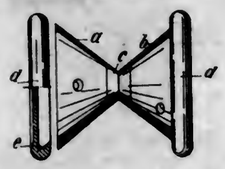
3. In hoisting apparatus, a stationary supporting member, a hook contacting therewith and adapted to travel thereon, and a propelling means for said hook, provided with outwardly projecting arms, a portion of which are adapted to engage the side of and propel the hook and a portion of which are adapted to overhang a part of the hook and hold it upon said supporting member.

4. In hoisting apparatus, a stationary supporting member, a hook adapted slidably to engage the same and provided with an upwardly projecting portion, and a chain extending substantially parallel with said supporting member and provided with outwardly projecting arms, a portion of said arms being adapted to engage the side of said hook and propel the same, and a portion of said arms adapted to extend substantially parallel to said supporting member and engage the upwardly projecting portion of said hook and hold said hook in engagement with said supporting member.

5. In hoisting apparatus, an inclined stationary supporting member, a two-pronged hook contacting therewith and adapted to travel on the same, and a flexible member extending approximately parallel to said inclined supporting member and provided with arms to engage said hook, said hook and arms being so related to each other that the former will be propelled and held down on the supporting member by said arms.

[Claims 6 to 17 not printed in the Gazette.]

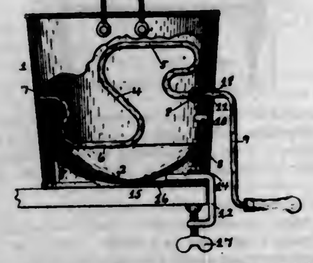
898,210. CONSTRUCTION OF TOY OR GAME IMPLEMENT. JEAN A. DE LA FRESNAYE, Bagnolet, France, assignor to Gustave Philippart, Paris, France. Filed Nov. 26, 1907. Serial No. 403,877.



1. In a toy or game implement of the character described the combination with a pair of elastic compressible cone members, of a central member of rigid material connecting the apices of said cone members, and a rigid elastic end piece for each cone member, said end piece having an undercut groove, the walls of which the base of a cone member is designed to frictionally engage.

2. In a toy or game implement of the character described, the combination with a pair of hollow soft rubber cone members, of a rigid central member connecting the apices of said cone members, and a hard rubber end piece for each cone member, each end piece having an undercut groove therein, and the base of each cone member being adapted to enter the said grooves and expand against the walls thereof to form a frictional interlocking engagement therewith.

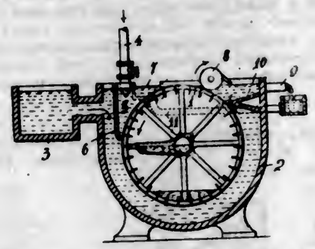
898,211. BREAD-MIXER. GOSTE FRIEDMAN, Jamestown, N. Y. Filed Aug. 2, 1907. Serial No. 386,790.



A device for mixing dough comprising a vessel for holding the dough having a concaved bottom, journaled bearings integral with the inner wall of the vessel at diametrically opposite sides, a revoluble mixer within the vessel and having a series of curves and alternated tangential portions in a plane, there being oppositely disposed sections to act directly upon the dough, an operating crank having one end engaged in one of said bearings, and a thumb screw within the vessel passed through said bearing and engaging the crank for detachably connecting the crank with one end of said mixer.

898,212. METHOD OF AND APPARATUS FOR STRAINING THE WASTE WATER IN PAPER-MILLS, WOOD-PULP FACTORIES, AND THE LIKE. HALVOR GAARA and EILIF HEM, Telemarken, Norway. Filed Apr. 20, 1908. Serial No. 428,249.

1. The method of straining the waste water in paper factories, pulp factories and the like, which consists in directing to the straining surface of a straining apparatus independently of and simultaneously with the water to be strained a quantity of long-fibered pulp so as to continually form a layer of long-fibered material on the straining surface before the latter comes into contact with the water to be strained, and removing it continuously together with the short fibers deposited thereupon.

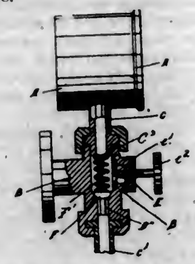


2. A strainer comprising a strainer body and a container, means for conducting the water to be strained to the container, means for conducting long-fibered straining material to the container simultaneously with but independent of the water to be strained and in direct contact with the straining surface, and means to continually remove the fibers deposited on the straining surface.

3. In a strainer a container, having a main compartment and an auxiliary compartment and a separate supply to the two compartments.

4. In a strainer a container and a rotatory cylindrical strainer body placed therein, so that on one side the strainer cylinder passes close on to the wall of the container.

898,213. PRESSURE-INDICATOR. ARTHUR H. C. GIBSON, Birmingham, England. Filed Nov. 16, 1905. Serial No. 287,578.

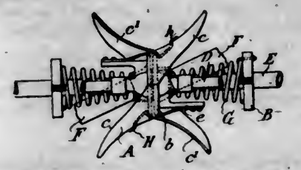


In a pressure indicator the combination of, a gage, a fluid containing chamber connected with the gage, a fluid supply pipe for the chamber, a non-return valve for the chamber, and a spring for the non-return valve of sufficient strength to prevent the passage of the pressure fluid into the fluid chamber until a predetermined pressure is reached, with, a second chamber, a partition between the second chamber and the first mentioned chamber having an orifice therein, an adjustable valve mounted in the outer wall of the second chamber to regulate the size of the orifice, and an outlet from the second mentioned chamber to the atmosphere.

898,214. AUTOMATIC PIPE-COUPLING FOR RAILWAY-CARS. EDWARD E. GOLD, New York, N. Y. Filed Nov. 27, 1903. Serial No. 182,934.

1. An automatic pipe coupling for railway cars, comprising reciprocal heads having inter-engaging projections and means for forcing them together, combined with a spring latch on each head independent of such forcing means having beveled faces adapted to engage the side of the opposite head and to resist but not prevent the prying apart of the heads by lateral stress.

2. An automatic pipe coupling for railway cars, comprising reciprocal heads having flaring wings for engaging one another as they come together, combined with a spring latch carried by one head comprising a leaf spring formed with engaging faces projecting through an opening in one of said wings and adapted to engage the opposite head.

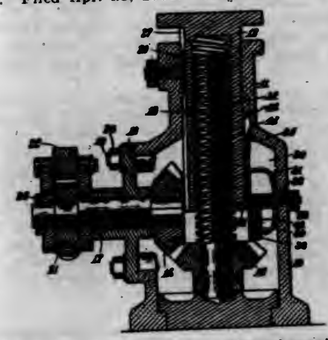


3. An automatic pipe coupling for railway cars comprising reciprocal heads having meeting faces in a plane transverse to the length of the cars, said heads having interengaging projections for alining them as they come together, springs for forcing them together, and a spring latch on each head adapted to engage the opposite head and to resist but not prevent the prying apart of the heads by lateral stress.

4. An automatic pipe coupling for railway cars, comprising reciprocal heads having flaring wings for engaging one another as they come together, combined with a spring latch carried by one head comprising a leaf spring formed with beveled faces adapted to engage the side of the opposite head, and to resist but not prevent the prying apart of the heads by lateral stress.

5. An automatic pipe coupling for railway cars comprising reciprocal heads having meeting faces in a plane transverse to the length of the cars, said heads having interengaging projections for alining them as they come together, springs for forcing them together, and a spring latch on each head adapted to engage the opposite head and to resist but not prevent the prying apart of the heads by lateral stress, each latch consisting of a leaf spring fixedly united to its head, and having a beveled face engaging the opposite head.

898,215. SCREW-JACK. FRANK L. GORMLEY, Boston, Mass. Filed Apr. 23, 1908. Serial No. 429,076.



1. In a lifting jack, the combination of a cylinder; a ram therein provided with an operating shoulder; and an audible signal adapted to be operated by said shoulder.

2. In a lifting jack, the combination of a cylinder; a ram therein provided with an operating shoulder; and a bell adapted to be operated by said shoulder.

3. In a lifting jack, the combination of a hollow base provided with a cylindrical extension; a ram therein provided with an operating shoulder; and an audible signal within said base adapted to be operated by said shoulder.

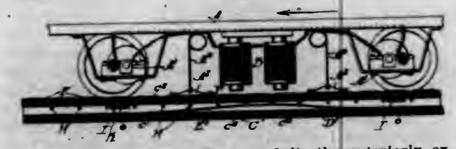
4. In a lifting jack, the combination of a hollow base provided with a cylindrical extension; a ram therein provided with an operating shoulder; a bell within said hollow base; and a spring retracted member adapted to be operated by said shoulder to strike said bell.

5. In a lifting jack, the combination of a hollow base provided with a cylindrical extension; a ram therein pro-

vided with an operating shoulder; a shank within said base; a bell thereon; a member movable at right angles to said shank provided with a striker and a projection adapted to engage said shoulder; and a spring adapted to retract said member when released from said shoulder.

[Claims 6 to 12 not printed in the Gazette.]

898,216. ELECTRIC-RAILWAY CONDUIT. ELMER E. GRANGER, Chicago, Ill. Filed Aug. 4, 1906. Serial No. 329,244.



1. The combination with a conduit, the exteriorly exposed contacts thereof and a conductor in the conduit, of a flexible strip or connector in the conduit capable of an undulatory movement throughout its length under the action of a magnet, and switches arranged along the length of the conduit through which the working circuit is closed and controlled by said strip or connector.

2. The combination with a conduit, the exteriorly exposed contacts thereof and a conductor in the conduit, of a flexible strip or connector in the conduit capable of an undulatory movement under the action of a maguet, and magnetically controlled switches in the conduit controlled by said strip or connector.

3. The combination with a conduit, the exteriorly exposed contacts thereof, and a conductor in the conduit, of a continuous flexible strip or connector in the conduit extending from end to end thereof and capable of an undulatory movement under the action of a magnet, said strip or connector being divided into a plurality of sections insulated from each other, and switches in the conduit arranged to be controlled by the strip or connector.

4. The combination with a conduit, the exteriorly exposed contacts thereof and a conductor in the conduit, of a strip or connector in the conduit capable of an undulatory movement under the action of a magnet, and switches within the conduit, spaced at distances apart not greater than the length of a car, controlled by said strip or connector.

5. The combination with a conduit, the exteriorly exposed contacts thereof and a conductor in the car, of a mechanically continuous strip or connector in the conduit extending from end to end thereof and capable of an undulatory movement under the action of a magnet and designed to constitute part of the circuit over which current is passed to the motor of an overhead car, and switches in the conduit controlled by said strip or connector, said strip or connector being divided into a plurality of sections electrically insulated from each other.

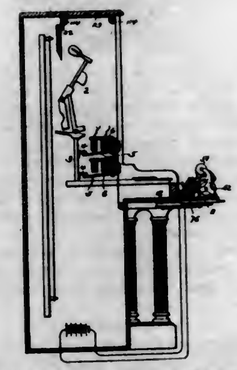
[Claims 6 to 40 not printed in the Gazette.]

898,217. NEW DISAZO DYE. OSCAR GÜNTHER and LEOPOLD HESSE, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Feb. 19, 1908. Serial No. 416,783.

1. The herein described new azo-dyestuffs obtainable from sulfurous acid ester of 1.8-aminonaphthol, amins and with 2-amino-5-naphthol-7-sulfonic acid, which dyestuffs are, after being dried and pulverized, in the shape of their alkaline salts dark powders soluble in water, soluble in concentrated sulfuric acid with from a red to violet to blue color; yielding upon reduction with stannous chlorid and hydrochloric acid 1.8-aminonaphthol, a diamin and 2.6-diamino-5-naphthol-7-sulfonic acid and dyeing cotton from violet to blue shades, substantially as hereinbefore described.

2. The herein described new azo dyestuff, obtainable from sulfurous acid ester of 1.8-aminonaphthol, cresidin and with 2-amino-5-naphthol-7-sulfonic acid, which dyestuff is, after being dried and pulverized, in the shape of its sodium salt a dark powder soluble in water with a bluish-violet color and soluble in concentrated sulfuric acid with a bluish-violet color; yielding upon reduction with stannous chlorid and hydrochloric acid 1.8-aminonaphthol, 1-methyl-2.5-diamino-4-ethoxybenzene and 2.6-diamino-5-naphthol-7-sulfonic acid; and dyeing cotton blue shades, substantially as hereinbefore described.

898,218. ELECTRICAL PIANO-PLAYING INSTRUMENT. ALVAN L. HART, Burlington, Iowa. Filed Nov. 29, 1902. Serial No. 133,250.



1. In a piano playing instrument, the combination of an electro-magnet comprising two helices, an armature lever, means for transmitting motion from said armature lever to a piano action, make-and break devices, an electric circuit including said make-and break devices and one of said helices and a normally open electric circuit including the make and break devices the other helix, and a switch.

2. In a piano playing instrument, the combination with a series of electro-magnets, each comprising two helices, and an armature lever to be actuated by each magnet for operating a piano action, of make and-break devices, electric circuits normally including said make-and-break devices and one helix of each magnet, normally open circuits including the make and break devices the other helices of said magnets, and a switch common to said normally open circuits for closing them.

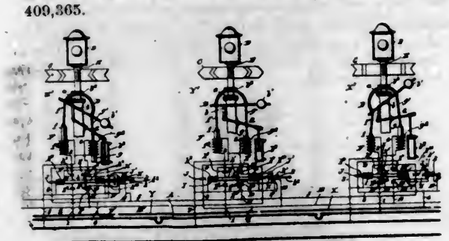
3. In a piano playing instrument, the combination with a series of electro magnets and armature levers therefor, each of said electro-magnets comprising two helices, make-and-break devices, electric circuits including said make-and-break devices and one helix of each magnet, a series of contact pins, a pivoted bar, contact fingers carried by said pivoted bar and electric circuits including the make and break devices the other helices of said magnets, and said contact pins and fingers.

4. In a music playing instrument, the combination with a series of electro-magnets, each comprising two helices, and an armature lever for each magnet, of make-and-break devices, electric circuits including said make-and-break devices and one helix of each magnet, a fixed bar, contact pins secured thereto, a strip adjacent to said bar and having a pivotal support at each end, contact fingers carried by said strip, means for moving either or both of its supports, and circuits including the make and break devices the other helices of said magnets, and said contact pins and fingers.

5. In a piano playing instrument, the combination with a series of electro-magnets, each comprising two helices, and an armature lever for each magnet, of make-and-break devices, electric circuits including said make-and-break devices and one helix of each magnet, a bar, a series of contact pins secured to said bar, pins or screws projecting laterally from the ends of said bar, a strip mounted loosely on said pins or screws, contact fingers secured to said strip, springs between the strip and bar, means at respective ends of the strip for moving it toward the bar, and electric circuits including the make and break devices the other helices of said magnets, and said contact pins and fingers.

[Claims 6 to 19 not printed in the Gazette.]

898,219. RAILWAY ELECTRIC SIGNALING. JOB HUTCHINSON, New York, N. Y. Filed May 10, 1905, Serial No. 259,813. Renewed Jan. 4, 1907. Serial No. 409,365.



1. In an electric railway block signaling system, the combination with a power conductor extending along the way for supplying motive current to the car motors, a signal conductor also extending along the way in proximity to said power conductor and divided into sections which constitute the blocks of the system, a signal biased to danger associated with each section of said signal conductor and normally electromagnetically restrained when its section is unoccupied by a car or train, and a car-carried contact adapted to engage and connect said conductors to permit said signal to go to danger when a car occupies the section.

2. In an electric railway block signaling system, the combination with a power conductor extending along the way for supplying motive current to the car motors, a signal conductor also extending along the way in proximity to and overlying said power conductor and divided into sections which constitute the blocks of the system, signals associated with the sections of said signal conductor, and a car-carried contact arranged to pass between and to engage said conductors to connect said power conductor with the car motors and with the signals.

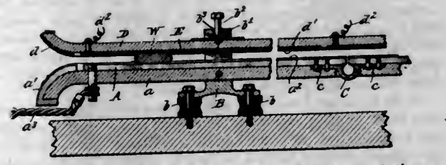
3. In an electric railway block signaling system, the combination with a power conductor extending along the way for supplying motive current to the car motors, a signal conductor also extending along the way and divided into sections which constitute the blocks of the system, a signal having a bias to danger connected to each section of said sectional conductor and said power conductor and normally maintained electrically at clear, a controlling device, and car carried means to connect said power conductor to the car motors and to a given section of said sectional conductor to operate said controlling device and set and maintain the signal at danger while the car occupies that block.

4. In an electric railway block signaling system, the combination with a power conductor extending along the way for supplying motive current to the car motors, a signal conductor also extending along the way and divided into sections which constitute the blocks of the system, a signal capable of danger position and additional plural positions connected to each section of said sectional conductor, electrical interconnections between said signals, and car-carried means to connect said power conductor with the car motors and with a given section of said signal conductor to set the signal of the given section at danger, and the signals of at least two other sections at positions different from each other and the given section signal.

5. In an electric railway block signaling system, the combination with a power conductor extending along the way for supplying motive current to the car motors, a signal conductor also extending along the way and divided into sections which constitute the blocks of the system, a three-position signal connected to each section of said sectional conductor, electrical interconnections between said signals, and car-carried means to connect said power conductor with the car motors and with a given section of said signal conductor to set the signal of that block at danger, the signal of the first block in the rear at caution, and the signal of the second block in the rear at clear.

[Claims 6 to 26 not printed in the Gazette.]

898,220. CONTACT-RAIL FOR ELECTRIC RAILWAYS. JOB HUTCHINSON, New York, N. Y. Filed May 10, 1905, Serial No. 259,829. Renewed Mar. 6, 1908. Serial No. 419,568.



1. In a contact rail, a rail proper with a support therefor, a continuous flexible cover comprising a series of strips placed end to end overlying said rail proper and movably mounted in relation thereto to permit the lateral insertion and movement of a contact shoe, and a strip upon the under side of said cover overlapping the ends of said cover strips to maintain the same in alinement, substantially as described.

2. In a contact rail, the combination with a rail proper and supporting brackets therefor, of a cover resting by gravity over said rail proper and mounted for vertical movement on said brackets, substantially as described.

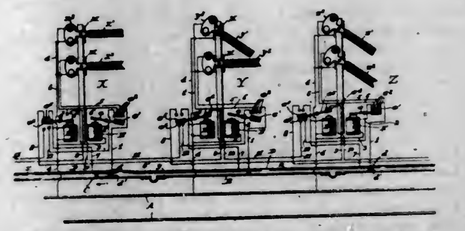
3. In a contact rail, a rail proper with a support therefor, a cover movably mounted to overlie said rail proper and carrying a supplemental rail, whereby pressure of said cover will produce intimate contact of said rails with a contact shoe, substantially as described.

4. In a contact rail, a rail proper with a support therefor, a cover movably mounted to overlie said rail proper and a supplemental rail carried by said cover adjacent said rail proper but separate therefrom, substantially as described.

5. In a contact rail, a rail proper with a support therefor, a cover movably mounted to overlie said rail proper, and a supplemental rail carried by said cover adjacent said rail proper but separate therefrom and made up of insulated sections, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

898,221. RAILWAY ELECTRIC SIGNALING SYSTEM. JOB HUTCHINSON, New York, N. Y. Filed Jan. 2, 1906, Serial No. 294,224. Renewed May 20, 1908. Serial No. 433,937.



1. In a railway electric signaling system, the combination with a sectional signal conductor and a signal device for each section of said signal conductor, of a connection for energizing said signal device from its section, means energizable from a given section and from the second sec-

tion in advance for controlling said connection and means controlled by the entrance of a car upon said given section for deënergizing said controlling means.

2. In a railway electric signaling system, the combination with a sectional signal conductor and a signal device for each section of said signal conductor, of a connection for energizing said signal device from its section, means energizable from a given section and from the second section in advance for controlling said connection, means controlled by the entrance of a car upon said given section for deënergizing said local connection, and means for preventing the energization of said controlling means from said second section in advance.

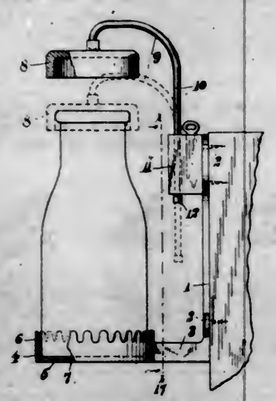
3. In a railway electric signaling system, the combination with a sectional signal conductor and a signal station for each section of said signal conductor provided with a signal device, means controlled from a given section for normally maintaining its signals at safety, said means being also controllable from the second section in advance, and means controlled by the entrance of a car upon said given section to prevent the operation of said signal device from the second section in advance.

4. In a railway electric signaling system, the combination with a sectional signal conductor and a signal station for each section of said signal conductor provided with two signal devices having a bias to danger, electromotive means energized from a given section for operating the signals of that section to safety, an electro-responsive device energizable from said section and the second section in advance for controlling said electromotive means, and a second electro-responsive device for controlling one of said signals and disabling the connection of said first electro-responsive device with said second section in advance.

5. In a railway electric signaling system, the combination with a sectional signal conductor and a signal station for each section of said signal conductor provided with two signal devices, means for controlling one of the signal devices of a given station from the next section in advance, means for controlling the other of said signal devices of the given station from the second section in advance, and means controlled from the section of the given station for taking away the control from said second section in advance.

[Claims 6 to 31 not printed in the Gazette.]

898,222. MILK-BOTTLE-LOCKING DEVICE. FRANK JOHNSON, Chicago, Ill., assignor of one-half to Fredrick von Nessen, Chicago, Ill. Filed Feb. 19, 1908. Serial No. 416,800.



1. In a device of the class described, a bracket adapted to be secured to a suitable support and having a socket to receive the bottom of the bottle, a lock case formed on said bracket, a rod slidably mounted in said case and having a curved upper end, a bell shaped cap fixed to said curved upper end and adapted to be depressed over the mouth of the bottle, and means in said case for locking said rod, substantially as described.

2. In a device of the class described, a bracket adapted to be secured to a suitable support and having a socket to receive the bottom of the bottle, a lock case formed on said bracket, a rod slidably mounted in said case and having a curved upper end, a bell shaped cap fixed to said curved upper end and adapted to be depressed over the mouth of the bottle, a spring pressed member in said case for locking said rod and said cap in depressed position, said rod being provided with a plurality of notches to receive the same, substantially as described.

898,223. MOLD FOR FORMING TILES. JAMES D. JOHNSON, Jeannette, Pa., assignor of three-fourths to George W. Blair, Pittsburg, Pa. Filed Aug. 28, 1907. Serial No. 390,475.



1. A mold body having a plunger chamber therein, said chamber having an opening in its bottom wall, a mold-forming cavity below the said opening, and extending transversely thereof, the opening extending throughout the greater portion of the length of the mold cavity, and a plunger adapted to enter said chamber and force the glass into and through said opening and laterally into the mold-cavity in both directions from said opening, substantially as described.

2. A mold body composed of separable sections and inclosing a cavity or chamber, the bottom wall of the cavity or chamber having a longitudinal slot or opening therethrough, a mold cavity with which said slot or opening communicates at its lower end, and a plunger having a rib or projection on its lower face in line with said slot or opening; substantially as described.

3. A mold body having a cavity or chamber therein formed with a longitudinal slot or opening in its bottom wall, the lateral walls of said slot or opening converging downwardly into a mold-forming cavity, and a plunger having a cut-off rib or projection on its lower face in line with the slot or opening; substantially as described.

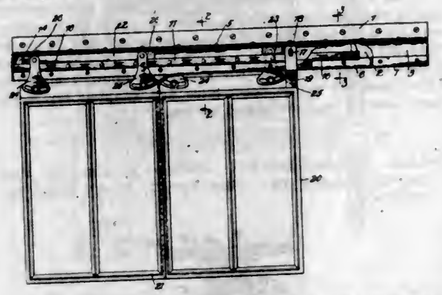
4. A mold body having a cavity or chamber therein adapted to receive a plunger, the bottom wall of the cavity or chamber having a slot or opening therein communicating at its lower end with an inclosed mold cavity, said slot or opening having shoulders or offsets at its ends, and a plunger having a cutting-off projection on its lower face in line with the said opening and arranged to partially enter the same; substantially as described.

5. A mold-body having a chamber therein to receive a plunger, the bottom wall of said chamber having an extended longitudinal slot therein which communicates with an underlying mold-forming cavity, said slot being adapted to form a central longitudinal rib on the surface of the article formed in said cavity extending throughout the major portion of the length of said article, substantially as described.

[Claim 6 not printed in the Gazette.]

898,224. HANGING MECHANISM FOR LATERALLY-MOVABLE DOORS. JACKSON L. KARL, Chicago, Ill., assignor to Winslow Brothers Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 25, 1907. Serial No. 403,673.

1. In a structure of the class described, the combination of two tracks disposed in parallel planes, means for supporting said tracks, retaining frames disposed above said tracks, ball bearings held in said retaining frames and adapted to engage said tracks, bars associated with said tracks and adapted for riding upon said ball bearings, a door secured to each of said bars, and a connecting member fastened to one of said doors and adapted to engage the retaining frame associated with the other door, movement of said door causing a relative movement of the frame associated therewith and a consequent movement of the adjacent door.



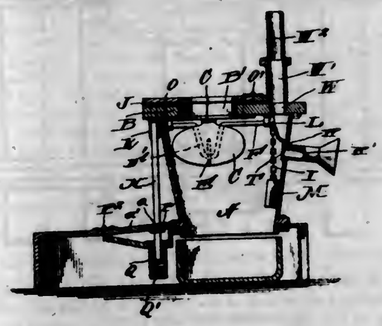
2. In a structure of the class described, the combination of grooved tracks disposed in parallel planes, means for supporting said tracks, retaining frames disposed above said tracks, ball bearings held in said retaining frames and adapted to engage said tracks, bars associated with said tracks and adapted for riding upon said ball bearings, a door secured to each of said bars, a connecting member fastened to one of said doors and adapted to engage the retaining frame associated with the other door, movement of one of said doors causing a relative movement of the frame associated therewith and a consequent movement of the adjacent door, and means in said bars for preventing friction with the supporting means.

3. In a structure of the class described, the combination of two tracks disposed in parallel planes, means for supporting said tracks, retaining frames disposed above said tracks, ball bearings held in said retaining frames and adapted to engage said tracks, bars associated with said tracks and adapted for riding upon said ball bearings, a door secured to each of said bars, and a connecting member fastened to one of said doors and having an elongated slot adapted to engage a pin extending from the retaining frame associated with the other door, movement of said door causing a relative movement of the frame associated therewith and a consequent movement of the adjacent door.

4. In a structure of the class described, the combination of two grooved tracks disposed in parallel planes, means for supporting said tracks, retaining carriages disposed above each of said tracks, spherical rollers held in recesses in said retaining carriages and adapted to engage said tracks, bars disposed above each of said retaining carriages and adapted to engage the spherical rollers, and a connecting piece fastened to one of said doors, one end of said connecting piece having an elongated slot for engaging a pin extending from one of said retaining carriages, movement of the door associated with said carriage causing a relative movement of the adjacent door, each of said doors being made adjustable, and spherical balls held in said bars for preventing friction with the supporting means.

898,225. CLOSET. CHARLES KELLEY, Toronto, Ontario, Canada. Filed May 28, 1907. Serial No. 376,194.

1. A closet comprising a bowl, a hinged seat, a vertically disposed rack bar passing freely through an opening in a flange of the bowl and adapted to bear against said seat, the teeth of said rack bar being in mesh with said pinion, a hinged basin, a rock shaft having a laterally extending portion engaging a strap upon the outer face of said basin, designed to have a sliding play intermediate the strap and basin, a pinion fixed to said rock shaft, a hinged platform at one side of said bowl adjacent to the bottom thereof, said rack bar having a free movement through the opening in said platform, a shoulder upon the rack bar upon which said platform rests, and a spring adapted to normally hold the rack bar at its highest throw, as set forth.

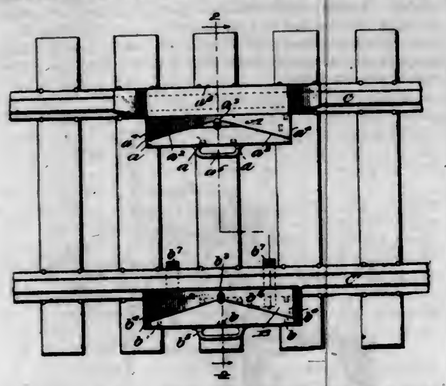


2. A closet comprising a bowl, a hinged seat, a vertically disposed rack bar passing freely through an opening in a flange of the bowl and adapted to bear against said seat, the teeth of said rack bar being in mesh with said pinion, a hinged basin, a rock shaft having a laterally extending portion engaging a strap upon the outer face of said basin, designed to have a sliding play intermediate the strap and basin, a pinion fixed to said rock shaft, a hinged platform at one side of said bowl adjacent to the bottom thereof, said rack bar having a free movement through the opening in said platform, a shoulder upon the rack bar upon which said platform rests, a casing under neath said platform, a spring positioned within the casing, a disk at the lower end of said rack bar adapted to bear against said spring and guided by the walls of said casing, as set forth.

3. A closet comprising a bowl, a hinged seat, a vertically disposed rack bar passing freely through an opening in a flange of the bowl and adapted to bear against said seat, the teeth of said rack bar being in mesh with said pinion, a hinged basin, a rock shaft having a laterally extending portion engaging a strap upon the outer face of said basin, designed to have a sliding play intermediate the strap and basin, a pinion fixed to said rock shaft, a hinged platform at one side of said bowl adjacent to the bottom thereof, said rack bar having a free movement through the opening in said platform, a shoulder upon the rack bar upon which said platform rests, the top of said casing having an apertured closure through which said rack bar has a longitudinal play, a spring mounted within the casing, a disk fitted to the lower end of the rack bar and adapted to bear against said spring, as set forth.

4. A closet comprising a bowl, a hinged seat, a vertically disposed rack bar passing freely through an opening in a flange of the bowl and adapted to bear against said seat, the teeth of said rack bar being in mesh with said pinion, a hinged basin, a rock shaft having a laterally extending portion engaging a strap upon the outer face of said basin, designed to have a sliding play intermediate the strap and basin, a pinion fixed to said rock shaft, a hinged platform at one side of said bowl adjacent to the bottom thereof, said rack bar having a free movement through the opening in said platform, a shoulder upon the rack bar upon which said platform rests, the top of said casing having an apertured closure through which said rack bar has a longitudinal play, a spring mounted within the casing, a disk fitted to the lower end of the rack bar and adapted to bear against said spring, a pivotal valve, and connections between the same and said rock shaft, as set forth.

898,226. CAR-REPLACER. WILLIAM M. KITCHEN, Havana, Fla. Filed May 15, 1908. Serial No. 432,967.

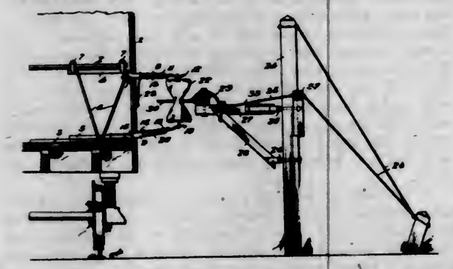


1. A car replacer comprising a pair of plates adapted to be placed along side of the rails, each having an integral flange at the side remote from the rail, the lateral face of the flange toward the rail being beveled toward each end thereof, a friction roller at the center of said face, one of said plates having a groove for receiving the tread of the rail, and the other having brackets extending beneath the adjacent rail.

2. A car replacer comprising a pair of plates adapted to be placed along side of the rail, each having an integral flange at the side remote from the rail, the lateral face of the flange toward the rail being beveled toward each end thereof, a friction roller at the center of said face, and means in connection with one of the plates for securing it to the rail.

3. A car replacer comprising a pair of plates adapted to be placed along side of the rails, each having an integral flange at the side remote from the rail, the lateral face of the flange toward the rail being beveled toward each end thereof, one of said plates having brackets extending beneath the rail, and the other having a groove for receiving the rail.

898,227. DEVICE FOR DELIVERING MAIL-BAGS FROM MOVING TRAINS. MICHAEL KLOS, Dyer, Ind. Filed May 5, 1908. Serial No. 430,932.



1. In a device for delivering mail bags from moving trains, the combination with separated mail bag holders each of which is adapted to move laterally and one of which is movable toward the other, of spring means cooperating with said holders to cushion their lateral movement and spring means coöperating with the holder which is movable toward the remaining holder.

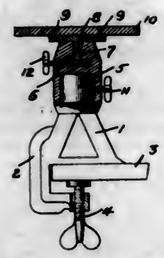
2. In a device for delivering mail bags from moving trains, the combination of separated mail bag holders one of which is movable toward the other, of spring means coöperating with said movable holder.

3. In a device for delivering mail bags from moving trains, the combination with guides, of shoes whose movements are governed by the guides and which may be moved inwardly or outwardly in relation to the car door, and spring cushioned mail bag holders carried by the shoes.

4. In a device for delivering mail bags from moving trains, the combination with guides, of shoes whose movements are governed by the guides and which may be moved inwardly or outwardly in relation to the door, mail bag holders pivoted to the shoes, and leaf springs cooperating with said holders to cushion their movements in both directions.

5. In a device for delivering mail bags from moving trains, the combination with guides, of shoes whose movements are governed by the guides and which may be moved inwardly or outwardly in relation to the door, a mail bag holder carried by one of the shoes and another mail bag holder pivoted to the other shoe and adapted for movement toward the first-named holder.

898,228. SLEEVE-BOARD. HOWARD E. KUNKLE, Vandergrift Heights, Pa. Filed Apr. 7, 1908. Serial No. 425,724.



1. The combination with a suitable support, of a member clamped thereon, a cylindrical shank carried by said member, a revoluble cap mounted upon said shank, a set screw carried by said cap for holding said cap in a fixed position, said cap having a T shaped groove formed therein, a T shaped bar slidably mounted in said groove, a set screw carried by said cap for fixing said bar in said groove, and a board secured to said bar.

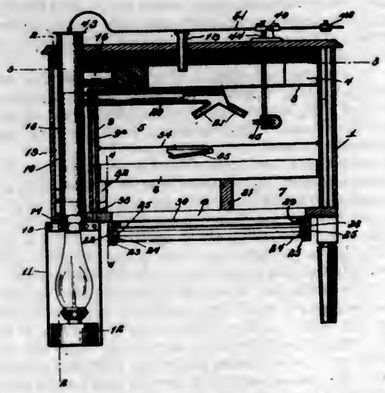
2. In an ironing board, a clamp-member terminating at its upper end in a cylindrical shank, a cap mounted on said shank to be revolved thereon and provided with a T-shaped groove, a T-shaped bar mounted on said groove, a board carried by said bar, means carried by the cap for engagement with the bar for securing the latter in adjusted position in the groove, and means also carried by the cap engaging said cylindrical shank for securing the cap in adjusted position thereon.

898,229. INCUBATOR. GEORGE KUTZ, Easton, Pa., assignor of one-half to Ella O. Hartzell, Easton, Pa. Filed Nov. 14, 1907. Serial No. 402,099.

1. In a device of the class described, a casing containing an incubating chamber and an overlying heating chamber, a deflector arranged in the heating chamber for directing heated air outwardly and rearwardly therein, a heating device, and a heating duct leading therefrom and provided with branch ducts extended into the heating chamber and arranged to deliver the heated air at opposite sides of the deflector.

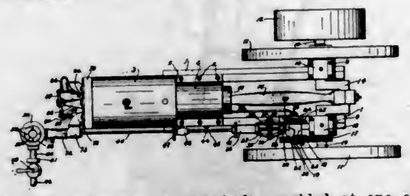
2. In a device of the class described, a casing containing an incubating chamber and a heating chamber, a substantially V-shaped deflector arranged in the latter and presenting rearwardly divergent deflecting portions, a heating apparatus including a heat conveying duct, and branch ducts leading from the latter into the heating chamber and arranged to discharge at opposite sides of the deflector.

3. In a device of the class described, a casing containing an incubating chamber and a heating chamber and having a flue opening into the latter, a deflector arranged in the heating chamber and formed to distribute the heat in the chamber, a heat conveying duct disposed in the flue and having branch ducts extended into the heating chamber for discharge at opposite sides of the deflector and a heater sustained at one end of the duct for communication therewith.



4. In a device of the class described, a casing containing an incubating chamber, means for heating the same, an inclined rail fixed in the casing, an adjustable bearing block sustained for movement longitudinally of the rail, a bearing rail arranged in the casing, and a tray sustained between its ends on the bearing rail and supported at one end on the bearing block, the latter being adapted through movement upon the inclined rail to raise or lower the adjacent end of the tray.

898,230. GAS-ENGINE. CLINTON O. LAKE, Shreve, Ohio. Filed May 17, 1907. Serial No. 374,203.



1. In a gas-engine, a cam-shaft provided at one end with a cam and a bevel-gear and at the other with a gear-wheel and connecting-arm, a lever-bar pivotally-mounted above said cam-shaft and carrying an insulating-block, a depending plate secured to said block and adapted to be engaged by the free end of said connecting-arm, and means for securing said lever-bar in adjusted position.

2. In a gas-engine, a bearing and supporting-bracket provided with a standard, a cam-shaft carried by said bearing and supporting-bracket and provided at one end with a cam and at the other with a gear-wheel and a connecting-arm, a lever-bar pivotally-mounted in said standard and carrying an insulating-block, a spring-plate secured to said block and having its free end adapted to be engaged by the free end of said connecting-arm, and means for securing said lever-bar in adjusted position.

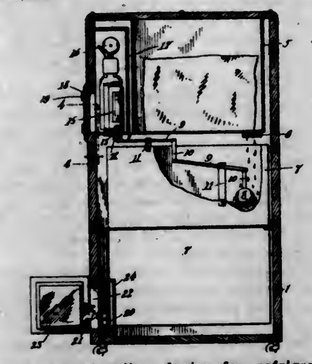
3. A gas-engine, comprising a cylinder, an outlet-valve mounted in the head thereof, a lever secured to said outlet-valve, a connecting-rod secured to said lever, a second lever secured to said connecting-rod and provided with a friction-roller, a cam-shaft provided at one end with a cam adapted to engage said roller, a gear-wheel and a connecting-arm secured to the opposite end of said cam-shaft, a lever-bar pivotally-mounted above said cam-shaft and carrying an insulating-block, a plate secured to said block and adapted to be engaged by said connecting-arm, and means for securing said lever-bar in adjusted position.

4. In a gas-engine, a cylinder, an exhaust-valve, a lever secured to said exhaust-valve, a connecting-rod, a second lever secured at its lower end to said connecting-rod and carrying at its upper end a roller, a cam-shaft provided at one end with a cam adapted to engage said roller and at the other with a connecting-arm, a bearing-bracket carrying said cam-shaft and provided with a standard, a lever-bar pivotally-mounted in said standard and provided with a block, and a plate secured to said block and adapted to be engaged by said connecting-arm.

5. A gas-engine, comprising a cylinder, an exhaust-valve mounted in the head thereof, a lever secured to said exhaust-valve, a connecting-rod secured to said lever, a second lever secured to said connecting-rod and carrying a roller, a cam-shaft adapted to engage said roller, a connecting-arm secured to said cam-shaft, a lever-bar suitably mounted and carrying a block, and a plate secured to said block and adapted to be engaged by said connecting-arm as said cam-shaft is revolved.

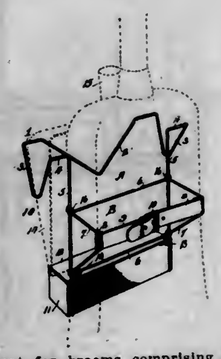
[Claims 6 and 7 not printed in the Gazette.]

898,231. REFRIGERATOR. JOSEPH O. LA MADELEINE, Montreal, Quebec, Canada. Filed May 23, 1907. Serial No. 375,192.



A low water signaling device for refrigerators comprising in combination with a water receptacle an alarm, a normally open electric circuit including said alarm, a movable contact adapted to close said circuit, a float, a link connected to said float, a lever connected to said link, a second lever, and a second link connecting said first and second levers and parallel with the first link.

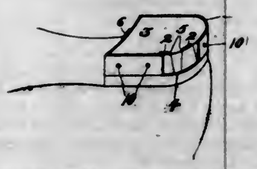
898,232. BROOM ATTACHMENT. JAMES A. LEWIS, Minneapolis, Minn. Filed Feb. 26, 1907. Serial No. 359,394.



An attachment for brooms comprising a main frame having vertical side members connected by cross bars, the

top bar being forwardly offset from said members and having an intermediate depressed V-shaped portion, rearwardly extending attaching frames connected to said side members, and straps connected to said attaching frames.

898,233. HEEL-PROTECTOR. IRVIN LINCOLN, Buffalo, N. Y. Filed Jan. 30, 1907. Serial No. 354,917.

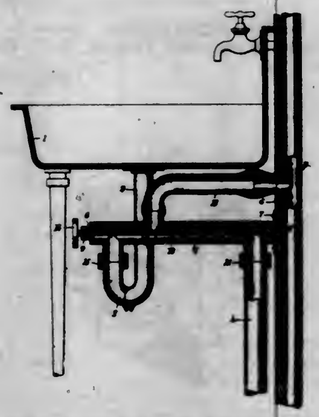


1. A heel composed of sections, one section being smaller than the other to provide a recess extending continuously and entirely around the heel and of uniform depth, said recess having a notch in its vertical wall, in combination with a band proportioned to fill the recess with its outer surface flush with the outer surface of the larger section of the heel and with its bottom edge flush with the bottom surface of the smaller section, means for securing the band firmly on the heel, and an imperforate wearing element disposed in the said notch and arranged under the band and held in place by the latter.

2. A heel composed of layers, the bottom one of which being smaller than the other to form a peripheral recess extending horizontally around the entire heel, there being a vertical recess in the inner or vertical wall of the horizontally extending recess and of a length equal to the width of the latter, in combination with a band disposed in the horizontal recess and fastened to the heel, and an imperforate wear plate detached and separate from the band and fitted in the vertical recess and bearing directly on and held in place by the band.

3. A heel provided with vertically extending recesses tapering downwardly, wear plates corresponding in shape to the recesses and prevented from moving longitudinally therefrom by the converging walls of the recesses, a band encircling the heel and bearing on the plates for preventing lateral displacement of the latter, and fastenings extending through the band and piercing the heel to hold the band tight against the plates and heel.

898,234. WASTE-PIPE CLEANER. WILLIAM T. LISENBY, Longbeach, Cal. Filed June 25, 1906. Serial No. 323,241.



1. A cylinder having a piston adapted to be reciprocated therein, a waste pipe leading to the cylinder near one end thereof, a discharge pipe leading from the cylinder near its opposite end, and a vent pipe leading from the cylinder intermediate the waste pipe and discharge pipe.

2. In combination with a kitchen sink or the like, a cylinder arranged below the same having a piston therein adapted to be reciprocated, a waste pipe leading from the sink to the cylinder, a discharge pipe leading from the cylinder, and a vent pipe leading from the cylinder intermediate the waste pipe and discharge pipe.

3. In combination with a kitchen sink or the like, a cylinder having a piston adapted to be reciprocated therein, a trap independent of the cylinder and connecting the sink with the cylinder, and a discharge pipe leading from the cylinder.

4. In combination with a kitchen sink or the like, a cylinder arranged approximately in a horizontal position thereunder, a waste pipe leading from the sink to a point near one end of the cylinder, a discharge pipe leading from a point near the other end of the cylinder, and a piston slidable in the cylinder for forcing the products passing therein through the waste pipe to the discharge pipe.

5. In combination with a kitchen sink or the like, a cylinder arranged in an approximately horizontal position under the sink, a piston slidable in the cylinder, a waste pipe leading from the sink to a point near one end of the cylinder, and a discharge pipe leading from the cylinder at a point near the opposite end thereof, said points being so located that the communication of the waste pipe and of the discharge pipe with the cylinder will be unobstructed by the piston when said piston is moved to its extreme positions.

[Claim 6 not printed in the Gazette.]

898,235. FOLDING GO-CART. MARSHALL B. LLOYD, Menominee, Mich., assignor to Lloyd Manufacturing Co., Menominee, Mich., a Corporation of Michigan. Filed June 28, 1907. Serial No. 381,233.



1. A go-cart comprising a main wheeled frame having a handle at the top, in combination with a complementary wheeled frame pivoted upon the main frame, a seat also pivoted on the main frame and limited in its downward movement by said complementary frame and links pivotally connecting the seat with the complementary frame to fold the seat against the main frame, when the wheeled ends of said frames are folded together, substantially as described.

2. A go-cart comprising a main frame having wheels at its lower end and a handle at its upper end, in combination with a complementary frame having wheels at its lower end and having its upper end pivoted upon and projecting above the main frame, a seat pivoted to the main frame at a point back of and above the juncture of the main and complementary frame, the upper end of said complementary frame limiting the downward movement of the seat and combined operating and bracing links having their ends pivoted, respectively, to the seat and the complementary frame; as and for the purpose specified.

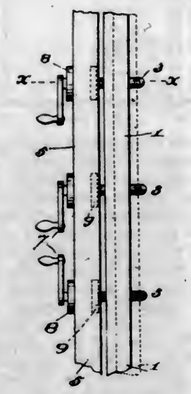
3. A folding go-cart comprising a main frame having wheels and a handle, in combination with a complementary frame having wheels pivoted upon said main frame, a seat pivoted in the main frame and adapted to rest upon the top of the complementary frame and means connecting the complementary frame and seat for operating the latter, when the main and complementary frames are closed together, substantially as described.

4. A folding go-cart comprising a main frame having wheels at its lower end and handles at its upper end, in combination with a complementary frame having wheels at its lower end and at its upper end pivoted upon the main frame, a seat pivoted upon the main frame back of the juncture of the main and the complementary frames, said seat projecting back of said main frame and links connecting the rear end of the seat with the complementary frame at points below the said juncture, substantially as described.

5. A folding go-cart comprising a main frame having wheels at its lower end, provided with a rearwardly bent portion and a handle rising therefrom, in combination with a seat, a complementary frame pivoted upon the forward part of the main frame, relatively beneath the forward part of said seat, said seat being pivoted upon the rear part of the main frame to rest upon the front or upper end of the complementary frame and links connecting the seat and complementary frame, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

898,236. WIRE-FENCE-STRETCHING CLAMP. CHAS. E. LOGAN, Mill Grove, Mo. Filed Aug. 28, 1907. Serial No. 390,532.



1. In a wire fence stretching clamp, the combination of a clamping-bar having a series of screw threaded holes throughout its length, a screw carrier and clamping bar having a series of holes recessed from its inner face throughout its length and forming journal bearings, a series of clamping screws revoluble in said bearings and screwing into the screw holes, means carried by the screws and revoluble in said recesses to hold the screws against longitudinal movement in the said carrier-bar during their screwing movement in the other bar, and means for turning the screws.

2. In a wire stretching clamp, the combination, with a pair of bars adapted to clamp woven or other fence wire therebetween, one of said bars having a series of screw holes and the other of said bars having a series of holes recessed from its inner face, of a series of clamping screws each having a portion journaled in said recessed holes, a flange on one end of said portion, a collar secured to the other end of said portion and revoluble in the recesses to hold the screws against longitudinal movement during their screwing movement, and suitable means for turning the screws.

898,237. RADIATOR FOR AUTOMOBILES. JOSEPH B. LONG and CHRISTOPHER WRIGHT, Chicago, Ill., assignors to Long Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 23, 1905. Serial No. 284,099.

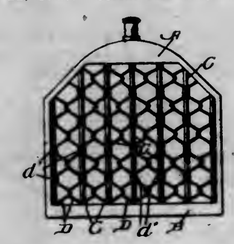


1. In a radiator, the combination with the headers, of a plurality of tubes connecting them and arranged in a row extending from side to side of the radiator, and a plurality of strips extending from side to side of the radiator, said strips having openings through which said tubes pass, said strips being corrugated transversely of their length from edge to edge and so arranged that the summits of the corrugations of adjacent strips contact with each other.

2. In a radiator, the combination with the headers of a plurality of tubes connecting them and arranged in a plurality of rows extending from side to side of the radiator, and a plurality of strips extending from side to side of the radiator, each of said strips having openings through which all of said tubes pass, said strips being corrugated transversely of their length from edge to edge and so arranged that the summits of the corrugations of adjacent strips contact with each other.

3. In a radiator, the combination with the headers, of a plurality of tubes connecting them and arranged in a row extending from side to side of the radiator, and a plurality of strips extending from side to side of the radiator, said strips being corrugated transversely of their length and having openings extending through the summits of some of the corrugations, through which openings the tubes pass, while other of the corrugations are located between the tubes, the strips being so arranged that the summits of the corrugations of adjacent strips contact with each other.

898,238. RADIATOR. JOSEPH B. LONG and FRANK TODD, Chicago, Ill.; said Todd assignor to said Long. Filed May 11, 1907. Serial No. 373,157.



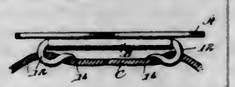
1. A radiator having a plurality of tubes and a plurality of strips of sheet metal having transverse flutes or corrugations, a pair of said strips being arranged between each two adjacent tubes, lengthwise thereof, with the flutes on the adjacent sides of each pair in contact with each other and the flutes on the remote sides of each pair in contact with adjacent tubes, the summit of one of each two contacting flutes having a groove into which the summit of the other projects.

2. A radiator having a plurality of tubes and a plurality of strips of sheet metal having transverse flutes or corrugations, the alternate flutes on one side of each strip having grooves in their summits, a pair of said strips being arranged between each two adjacent tubes with the summits of alternate flutes on one strip projecting into the grooves in the summits of alternate flutes on the other strip, the summits of the flutes on the remote sides of the strips of each pair being in contact with the sides of adjacent tubes.

3. A radiator having a plurality of tubes and a plurality of strips of sheet metal, having transverse flutes or corrugations, arranged between the tubes, lengthwise thereof, and having portions extended beyond the tubes, the flutes in the extended portion of the two strips on opposite sides of each tube being high and in contact with each other and the flutes in the remaining portion of said strips being low and in contact with the sides of the tube, the lower portions of the flutes extending from the higher portions quite to the opposite sides of the strips whereby the strips may be inserted or removed while the tubes are in place.

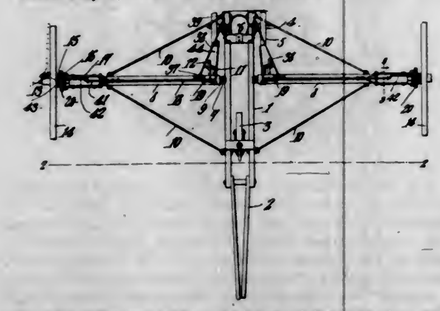
4. A radiator having a plurality of tubes and a plurality of strips of sheet metal having transverse flutes or corrugations, a pair of said strips being arranged between each two adjacent tubes, lengthwise thereof, and having portions extending beyond the tubes, the summits of the flutes on adjacent sides of the strips of each pair being in contact with each other and the summits of the flutes on the remote sides of the strips of each pair being higher in the extended portions than in the remaining portions of said strips, whereby the summits of the flutes in the extended portions of the two strips arranged on opposite sides of each tube contact with each other and the summits of the same flutes in the remaining portions of said strips contact with the sides of the tube, the lower portions of the flutes extending from the higher portions quite to the opposite edges of the strips, whereby the strips may be put in place or removed while the tubes are in place.

898,239. COLLAR AND GARMENT FASTENER. WILHELMINA M. LOWRIE, New York, N. Y. Filed May 21, 1907. Serial No. 374,968.



A mount for ornaments comprising a top section, a rod secured to the top section, said rod terminating at each end in a hook, the bill of the hook being curved inwardly toward the top section, and the free end of the bill being approximately parallel with the body of the rod on which the hook is formed.

898,240. COMBINED CENTER-DELIVERY AND DUMPING HAY-RAKE. JOHN H. LUNSFORD, Lakeside, Nebr. Filed July 8, 1907. Serial No. 382,687.



1. An implement as described comprising a truck, a rake member attached thereto and adapted to move vertically with relation to the same, wheels supporting said member and means for turning the member on an axis the axial movement being additional to the vertical movement.

2. An implement as described comprising a truck, a rake member attached thereto and adapted to move vertically while in raking position with relation to the truck and a wheel supporting said member.

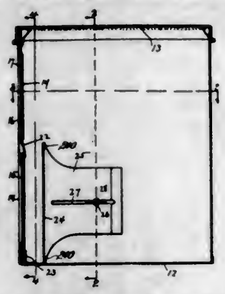
3. An implement as described comprising a truck, a vertically disposed guide carried by the same, a rake member having a stud located in said guide, and wheels supporting said member.

4. An implement as described comprising a truck, a rake member attached to the same and adapted to move vertically with relation thereto, a wheel supporting said member and means operated by said wheel for turning the member axially, the axial movement being additional to the vertical movement.

5. An implement as described comprising a truck, a beam attached thereto and adapted to move vertically with relation thereto, said beam carrying tines, a conveyer moving transversely of the tines and moving vertically with the same and a traction wheel operatively connected with the conveyer.

[Claims 6 to 13 not printed in the Gazette.]

898,241. CRACKER-BOX. GEORGE C. MACDONALD, Cambridge, Mass. Filed Aug. 5, 1907. Serial No. 387,201.



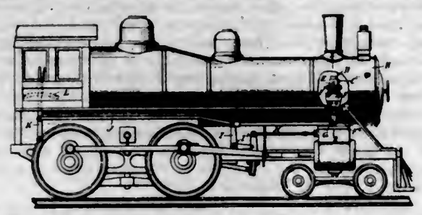
1. A box of the character stated, having a slight opening in one side, a transparent pane covering said opening, a partition located opposite the opening, and having its lower edge slidably supported by the bottom of the box, and means for adjustably holding the partition at different distances from the opening to vary the width of the sample-holding space between the partition and opening.

2. A box of the character stated, having a sight opening in one side, a transparent pane covering said opening, a partition located opposite the opening, and having its lower edge slidably supported by the bottom of the box, said partition being provided with slotted ears bearing against opposite sides of the box, and means for adjustably securing said ears to the box, whereby the partition may be adjusted toward and from the sight opening to vary the width of the sample-holding space between the partition and opening.

898,242. ADJUSTABLE EXHAUST FOR LOCOMOTIVES. HENRY H. MACKEY, Durand, Mich. Filed Mar. 31, 1908. Serial No. 424,430.

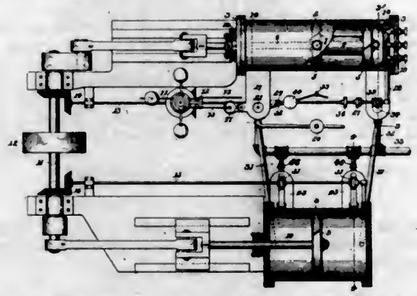
1. An adjustable exhaust for locomotive engines, comprising in combination with the reversing gear of the locomotive a nozzle stand having a fixed nozzle tip, a bushing slidable in the said nozzle tip to form an extension for the same, an arm on the said bushing and extending through a slot in the said nozzle tip, a cam engaging the said arm, and a link connecting the said cam with the reversing gear of the locomotive.

2. An adjustable exhaust for locomotive engines, comprising in combination with the reversing gear of the locomotive a nozzle stand having a fixed nozzle tip, a bushing slidable in the said nozzle tip to form an extension for the same, a flange on the bushing to limit the sliding movement thereof in the said nozzle tip, an arm on the said



bushing and extending through a slot in the said nozzle tip, a cam engaging the said arm, and a link connecting the said cam with the reversing gear of the locomotive.

898,243. COMPOUND DOUBLE-ACTING EXPLOSIVE-ENGINE. MICHAEL M. MAHER, East Liverpool, Ohio, assignor of one-half to Charles A. Smith, Chester, W. Va. Filed Aug. 29, 1907. Serial No. 390,640.



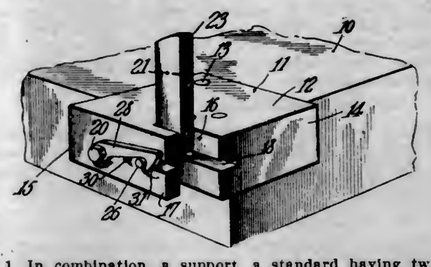
1. The combination of a high pressure cylinder and piston of four-cycle type, a low pressure cylinder and piston, a valve casing having a valve chamber with a port extending to the center thereof from the high pressure cylinder, a pipe connecting one end of the valve chamber with the low pressure cylinder, an exhaust pipe leading from the other end of the valve chamber, a spool valve in the valve chamber with one head thereof adapted to cover the passage to the low pressure cylinder and with the other head covering the exhaust passage, means holding the valve with both of said passages closed during the charging, compressing and greater portion of the explosion strokes of the high pressure piston, means moving the valve to open communication with the low pressure cylinder during the latter portion of the explosion stroke, and means moving the valve to open communication between the high pressure cylinder and the exhaust only during the exhausting stroke of the high pressure piston.

2. The combination of a high pressure cylinder and piston of four-cycle type, a low pressure cylinder and piston, a valve casing having a vertically disposed valve-chamber, a spool valve movable longitudinally in said chamber, the chamber having a port extending from the center thereof to the high pressure cylinder, a passage from the low pressure cylinder communicating with the upper portion of the valve chamber and an exhaust port in the lower portion of the chamber, the said passage to the low pressure cylinder being closed by the upper head of the spool valve during the charging, compressing and the greater portion of the explosion strokes of the high pressure piston, the lower head of the valve closing the exhaust port during all of said three strokes, means for raising the valve during the latter portion of the explosion stroke for establishing communication with the low pressure cylinder, and means for lowering the valve to open the exhaust from the high pressure cylinder during the exhausting stroke of the high pressure piston.

3. The combination of a high pressure cylinder and piston, a low pressure cylinder and piston with a communicating passage between the cylinders, an exhaust for the high pressure cylinder, a spring-pressed valve controlling the said communication and exhaust, a valve operating shaft, and a plurality of cams adjustably secured to the shaft and operatively connected to the valve, one portion of the cam surface holding the spring-pressed valve with said exhaust and cylinder communication closed, another portion of the cam surface moving the valve to establish communication between the cylinders, and another portion of the cam surface operating to establish communication between the high pressure cylinder and the exhaust.

4. The combination of a high pressure cylinder and piston, a low pressure cylinder and piston with a passage for establishing communication between the cylinders, an exhaust for the high pressure cylinder, a valve controlling said cylinder communicating passage and also said exhaust, a power shaft to which the pistons are connected, a valve-operating shaft adjacent the high pressure cylinder and geared to the power shaft, an operative connection between the valve-operating shaft and said valve for controlling said cylinder communication and said exhaust, an exhaust valve for the low pressure cylinder, and a shaft operatively connected to the last mentioned exhaust valve and geared to the power shaft.

898,244. LOG-CAR STANDARD. MARK MAJETTE, Columbia, N. C. Filed Aug. 24, 1907. Serial No. 390,049.



1. In combination, a support, a standard having two arms of unequal length and free to swing to inoperative position within the vertical plane of the outer face of the support, a holding pin engaging the lower and inclined arm of the standard when the latter is in operative position, and means for retaining said pin in operative position.

2. In combination, a support, a standard pivoted thereto and having two arms of unequal length disposed at an obtuse angle to each other, the lower face of the lower arm being rounded transversely for the purpose of assisting in freeing said arm from the holding pin said pin engaging said rounded face, and means for retaining the holding pin in operative position.

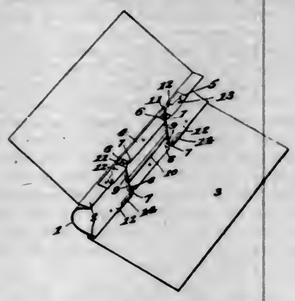
3. In combination, a support, a standard pivoted thereto, a holding pin for the standard, a pin retaining hook, the outer end or bill of the hook being inclined and arranged to be automatically lifted by the pin, and means for limiting downward movement of the hook.

4. In a device of the class specified, a casting having upper edge and end walls, the end wall being provided with a vertical slot forming an arm, and both the arm and the end wall being provided with a horizontal slot, a bolt extending across the vertical slot, a two armed standard pivoted on the bolt, and free to swing in the vertical slot, a retaining hook pivoted at the outer end of said bolt, and a holding pin pivotally mounted in the horizontal slot and arranged to support the standard.

898,245. TEMPORARY BINDER. CHARLES C. MALTBY, Cincinnati, Ohio, assignor to The Twinlock Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 28, 1905, Serial No. 284,852. Renewed Mar. 13, 1908. Serial No. 420,801.

A device of the character described comprising an integral piece of flexible material having a pair of parallel

folds extending along it at the edge of the opposite sides of its central parts, said central part, between such pairs of parallel folds, forming a back, the portions between the several pairs of parallel folds at each side of said central part forming binding portions and the portions outside said folds forming sides or covers, fastening-strips carried on said binding portions with tapered or expanded throat notches and adapted for engagement with leaf or sheet-

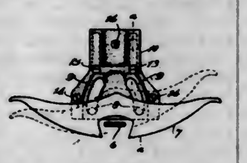


retaining means extended across the back and clamping parts pivoted on the fastening-strips, with portions movable in and out of engagement with the sheet-retaining means passed through such tapered-throat notches and other portions bent down for engagement beneath the edges of said fastening-strips to hold the clamping parts in locking positions.

898,246. METHOD OF IMPREGNATING TIMBER AND THE LIKE. ERNST MARMETSCHKE, Schöpfurth, near Eberswalde, Germany, assignor to Heinrich Brüning, Schöpfurth, near Eberswalde, Germany. Filed May 8, 1907. Serial No. 372,589.

The process of preserving wood which consists in impregnating timber and the like under hydraulic pressure with a solution of salts of heavy metals with the addition of an aluminium salt consisting in carrying on the impregnation at a temperature ranging between 60° and 98° C. substantially as described.

898,247. GATE-LATCH. JOHN MASON, Sebastopol, Cal. Filed Oct. 25, 1907. Serial No. 399,147.

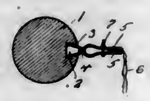


1. In a gate, the combination with a latch, of a convexed plate having a convergent notch in the lower surface to receive the latch, a plate fixed to the gate post, having segmental slots contiguous to its opposite edges, pins projecting from the convexed plate and movable loosely in said slots, and a guard plate carried by said slotted plate, having one portion to project in front of the catch and having another portion to extend up in rear of the slotted plate.

2. The combination with a latch, of a catch having a convexed lower surface and a convergent notch in the bottom and center to engage the latch, a plate having segmental slots at opposite edges, pins projecting from the catch and movable loosely within said slots, and a guard-plate extending downwardly outside of the catch, said guard-plate being bent, having one portion to extend down over the front of the catch and having another portion extending to the rear of the slotted plate and upwardly along the same, and secured to said plate.

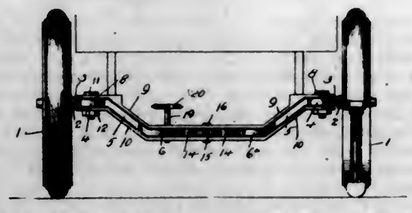
3. In a latching device for gates, a latch piece carried upon the outer swinging gate-post, a plate having segmental slots near its edges, means for securing said plate to the fixed post near which the gate swings, said plate having vertical channels made in the rear face and openings through the plate from the bottom of said channels, a catch having a notch in the lower part with which the latch is engageable, pins extending into the curved slots of the fixed plate, about which pins the catch is tiltable, and a guard-plate having the lower part extending in front of the catch, thence bent inwardly and having arms extending through the openings in the fixed plate and upwardly within the channels thereof.

898,248. CURTAIN-POLE. HOWARD D. MAYHORN, Coal Center, Pa. Filed Mar. 27, 1908. Serial No. 423,659.



A curtain pole having a dove-tailed groove in one side extending through the length of the pole, a plurality of curtain hangers slidably mounted in said groove, each hanger comprising a body section formed of a spring-metal plate doubled so as to have a V-shape in cross-section, the side walls of said body section frictionally engaging the side walls of the groove in the pole and free to be compressed towards each other, and a curtain clamp carried by each body section, substantially as described.

898,249. STEERING MECHANISM. JAMES G. MAXWELL, Washington, Pa. Filed Dec. 17, 1907. Serial No. 406,848.

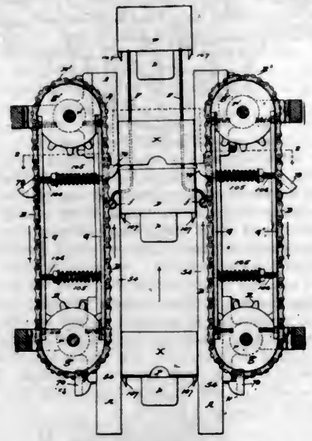


1. A steering mechanism comprising the combination with the hubs of a pair of wheels, of a pair of supporting plates, an axle mounted in each of the hubs and provided with an inward extension terminating in a bearing and positioned between the plates at one end, means extending through the plates and bearings for pivotally connecting the bearings, a pair of confronting segment shaped racks interposed between said plates and of a length greater than the width of the plates, a pinion arranged between and meshing with the racks, a vertical bearing for the pinion, a pair of connecting members one being between each rack and its adjacent bearing, said members positioned between said plates, an actuating pinion arranged within and engaging with one of the racks and adapted when operated to shift the first mentioned pinion and the racks whereby the bearings are revolved upon their connecting means, and means for operating the actuating pinion.

2. A steering mechanism comprising the combination with the hubs of a pair of wheels, of a pair of supporting plates, an axle mounted in each of the hubs and provided with an inward extension terminating in a bearing and positioned between the plates at one end, means extending through the plates and bearings for pivotally connecting the bearings, a pair of confronting segment shaped racks interposed between said plates and of a length greater than the width of the plates, a pinion arranged between and meshing with the racks, a vertical bearing for the

pinion, a pair of connecting members one being between each rack and its adjacent bearing, said members positioned between said plates, an actuating pinion arranged within and engaging with one of the racks and adapted when operated to shift the first mentioned pinion and the racks whereby the bearings are revolved upon their connecting means, means for operating the actuating pinion, each of said bearings having a grooved upper and lower face and each of said plates provided with grooves opposing the grooves in the bearings, said grooves constituting ball races, and bearing balls mounted in said ball races.

898,250. PAPER-BOX MACHINE. ALBERT W. MITCHELL, New Haven, Conn., assignor to The New England Paper Box Machine Co., New Haven, Conn., a Corporation of Connecticut. Filed Dec. 2, 1907. Serial No. 404,659.



1. The combination of a traveling series of plungers of a paper box machine with means for stripping the formed boxes from the successive plungers and consisting of two endless series of stripper blades to bear against the opposite sides of the plungers and means for traveling the stripper blades in relation to, but faster than, the plungers.

2. The combination of a traveling series of plungers of a paper box machine with endless chains on opposite sides of the series of plungers, stripper blades carried by said endless chains and means for traveling the endless chains in relation to, but faster than, the plungers.

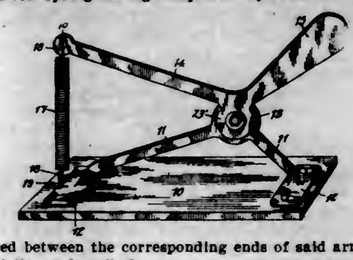
3. The combination of a traveling series of plungers of a paper box machine with endless chains on opposite sides of the series of plungers, stripper blades carried by said endless chains, pressure means to keep the blades up to the plungers and means for traveling the endless chains in relation to, but faster than, the plungers.

4. The combination of a traveling series of plungers of a paper box machine, with endless chains on opposite sides of the series of plungers, stripper blades carried by said endless chains, pressure means to keep the blades up to the plungers, the back of each plunger being beveled at its opposite sides, and means for traveling the endless chains in relation to, but faster than, the plungers.

5. The combination of a traveling series of plungers of a paper box machine, with endless chains on opposite sides of the series of plungers, stripper blades carried by the chains, means for traveling the endless chains in relation to, but faster than, the plungers, and means for ejecting the stripped boxes from the machine.

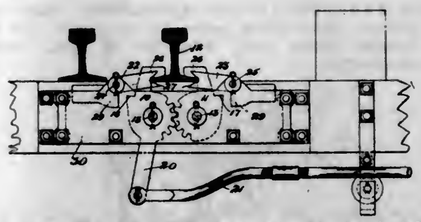
898,251. BILL OR BAG HOLDER. JAMES MORGAN, New Bedford, Mass. Filed Nov. 4, 1907. Serial No. 400,655.

A device of the character described comprising a pair of arms pivotally connected intermediate their ends, one of said arms being fixed to a support and the other movable, and a coil spring having comparatively close convolutions



secured between the corresponding ends of said arms, substantially as described.

898,252. RAIL-LOCK FOR DRAWBRIDGES. CHARLES H. MORRISON, New Haven, Conn., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed May 18, 1908. Serial No. 433,441.



1. In a rail lock for lift rails, a pair of hooks pivotally supported to engage the flanges of a rail, said hooks having intermeshing teeth concentric with their respective pivots, and an operating rod connected to one of said hooks.

2. In a rail lock for lift rails, a pair of hooks pivotally supported to engage the flanges of a rail, said hooks having intermeshing teeth concentric with their respective pivots, an arm projecting from one of said hooks, and an operating rod connected to said arm.

3. In a rail lock for lift rails, a pair of hooks pivotally supported to engage the flanges of a rail, one of said hooks having a shoulder on its outer edge, means for moving said hooks simultaneously into or out of engagement with the flanges, and a pivoted dog having a shoulder to engage the shoulder on the hook when the lock is open, said dog being movable by the rail.

4. In a rail lock for lift rails, a pair of hooks pivotally supported to engage the flanges of a rail, said hooks being geared together to move simultaneously into or out of engagement with said flanges, and a reciprocating rod for operating said hooks.

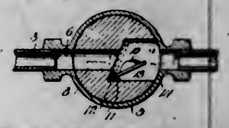
5. In a rail lock for lift rails, a pair of hooks pivotally supported to engage the flanges of a rail, said hooks being geared together to move simultaneously into or out of engagement with said flanges and each being provided with a shoulder on its outer edge, a reciprocating rod for operating the hooks, and a pair of pivoted dogs each having a shoulder to engage the shoulder of its respective hook, when the lock is open, said dogs being movable by the rail.

[Claim 6 not printed in the Gazette.]

898,253. PROCESS OF MAKING TARTARIC ACID. JOHN MCDOUGALL, Greenwich Park, England. Filed Feb. 24, 1908. Serial No. 417,319.

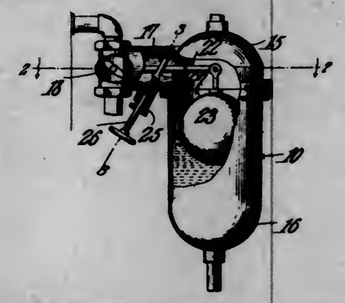
In the manufacture of tartaric acid the process which consists in adding to a solution of an alkali salt of the acid, sulfuric acid so as to produce a sulfate of the alkali and tartaric acid, then adding to the solution a suitable sulfate such as aluminium sulfate, so as to produce an alumn in the solution, and finally evaporating to crystallize this alum, substantially as described.

898,254. SAFETY DEVICE FOR SIGHT-GLASSES. IORN O. NORTHUP and EDWARD NORTHUP, Kingston, Ark., and MALEN NORTHUP, Leavenworth, Wash. Filed Mar. 29, 1907. Serial No. 365,392.



A device of the character described comprising a frusto-conical cup-shaped casing with a turnable frusto-conical shaped plug therein provided with a diametrically extending passage which is enlarged at one end to form a chamber, steam pipes on opposite ends of the casing arranged in alinement with the passage, a check valve pivoted in the chamber for closing said passage and the steam pipe adjacent thereto, said check valve having a stop at right angles therewith, the terminal of which contacts with one wall of the chamber to hold the valve in an inclined and partially open position, substantially as specified.

898,255. FEED-WATER REGULATOR. HARRY R. O'BRIAN, Oxford, Ohio, assignor of one-half to John T. Vanness, Oxford, Ohio. Filed Nov. 30, 1907. Serial No. 404,625.



1. In combination, a float chamber, a float therein, a feed water controlling valve, a rod connecting the valve to the float, a slotted block encircling the rod, and a threaded stem swiveled to said block and arranged to lock the float from movement.

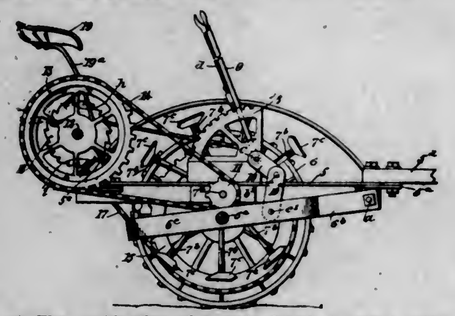
2. In combination, a float chamber, a lateral chamber extending therefrom, a valve provided with a stem extending into said chamber, a rod connecting the valve to the float and manually operated means for locking the valve from movement, comprising a slotted block encircling the rod and a threaded stem swiveled to said block and arranged to lock the float from movement.

898,256. ROTARY WEED-CUTTING MACHINE. JOHN G. OLSON, Harrington, Wash. Filed June 20, 1907. Serial No. 379,909.

1. A weed cutter, comprising a main frame, a rotary cutter mounted in the frame, gearing mounted in the frame for operating the cutter, pivoted loop-shaped supplementary frames, one at each side of the main frame, said frames being pivoted at their forward ends to the forward part of the main frame, traction wheels in the supplementary frames, means for operating the gearing from the traction wheels, and means for adjusting each supplemental frame.

2. The combination of a main frame, a rotary cutter mounted in the frame, a supplementary loop-shaped frame pivoted at one end to the main frame at each side thereof, means for adjusting each supplemental frame, traction wheels mounted in the supplementary frames, a counter shaft mounted in the main frame, means for operating the counter shaft from the traction wheels, and means for operating the cutter from the counter shaft.

3. The combination of a main frame, a rotary cutter mounted in the frame, a supplementary loop shaped frame pivoted at one end to the forward part of the main frame at each side thereof, traction wheels mounted in the supplementary frames, a counter shaft mounted in the rear part of the main frame, sprocket and chain gearing for operating the counter shaft from the traction wheels, and sprocket and chain gearing for operating the cutter from the counter shaft.



4. The combination of a main frame, a rotary cutter mounted in the frame, a sprocket wheel on each end of the cutter, a counter shaft mounted in the rear part of the main frame, large sprocket wheels loose on the counter shaft, ratchet and pawl connections between the sprocket wheels and shaft, a small sprocket wheel fixedly secured to the end of the counter shaft, two supplementary frames pivoted at one end to the forward part of the main frame at the sides thereof, traction wheels mounted in the supplementary frames, large sprocket wheels on the axles of the traction wheels, chains connecting the sprocket wheels of the traction wheels with the small sprocket wheels of the counter shaft, and chains connecting the large sprocket wheels of the counter shaft with the sprocket wheels of the cutter.

898,257. TURBINE. CHARLES A. PARSONS and GEORGE G. STONEY, Newcastle-upon-Tyne, England; said Stoney assignor to said Parsons. Filed May 15, 1906. Serial No. 316,966.



1. In turbo-machinery, a rotary baffle packing device having an opening in a baffle part thereof, substantially as and for the purpose described.

2. In turbo-machinery, a rotary baffle packing device having openings in baffle parts thereof, substantially as and for the purpose described.

3. In a turbo-machinery, a rotary baffle packing device having openings in baffling parts of fixed and rotating parts, substantially as and for the purpose described.

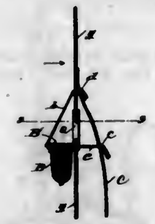
4. In turbo-machinery, a rotary baffle packing device, having an opening in a baffle part thereof and a ledged strip, substantially as and for purposes described.

5. In turbo-machinery, a rotary baffle packing device, having openings in baffle portions thereof and calking ledges on strips thereof, substantially as and for the purposes described.

[Claims 6 and 7 not printed in the Gazette.]

898,258. SUSPENSORY UNDERSHIRT. ROBERT D. PETERS, Knox, Ind. Filed Nov. 1, 1907. Serial No. 400,146.

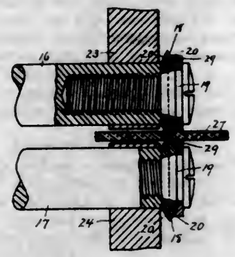
1. An undershirt having a hole in the lower front part of the same with a sack attached thereto on the inner side below the hole and a horizontal reinforce above the hole made in the form of an attached and pendent apron free at its lower edge.



2. An undershirt having a hole in the lower front part of the same with a sack attached thereto on the inner side below the hole and a horizontal reinforce above the hole made in the form of an attached and pendent apron free at its lower edge and with eyelets through the same and a supporting cord attached to the sack and extended through said eyelets.

3. An undershirt having a hole in the lower front part of the same with a sack attached thereto on the inner side below the hole and a horizontal reinforce above the hole made in the form of an attached and pendent apron free at its lower edge having two sets of eyelets in the same, a suspensory cord attached to the sack and extended through one set of eyelets and a draw cord attached to the sack and extended through the other set of eyelets.

898,259. CUTTING AND EDGE-COMPACTING MEMBER FOR CUTTING-MACHINES. ALBERT F. PRESTON, Boston, Mass. Filed Jan. 16, 1908. Serial No. 411,033.



1. The combination with a pair of rotary shafts, of a beveled-edge disk knife removably attached to the end of each shaft, said knives being adapted to form coinciding grooves in opposite sides of a sheet, and means accompanying the knives for compacting the material displaced thereby, the spaces at opposite sides of the nip of the knives being open and unobstructed to permit the sheet to be turned in different directions as it is operated upon.

2. The combination with a pair of rotary shafts, of a beveled edge disk knife removably attached to the end of each shaft, said knives being adapted to form coinciding grooves in opposite sides of a sheet, the spaces at opposite sides of the nip of the knives being open and unobstructed to permit the sheet to be turned in different directions as it is operated upon, and pressure rolls located beside the knives and adapted to bear simultaneously on the side of the sheet.

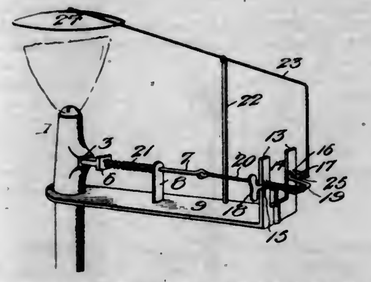
3. The combination with a pair of rotary shafts, of a beveled edge disk knife removably attached to the end of each shaft, said knives being adapted to form coinciding grooves in opposite sides of a sheet, the spaces at opposite sides of the nip of the knives being open and unobstructed to permit the sheet to be turned in different directions as it is operated upon, and rolls accompanying the knives for compacting the material displaced thereby, the inner ends of the peripheries of the rolls meeting the sides of the knives.

4. The combination with a pair of rotary shafts, of a beveled-edge disk knife removably attached to the end of each shaft, said knives being each beveled on both sides to form a cutting edge, and pressure rolls located beside the knives, the peripheries of the rolls forming obtuse angles with the sides of the knives, the spaces at opposite sides of the nip of the knives being open and unobstructed to permit the sheet to be turned in different directions as it is operated upon.

5. A pair of opposed rotary disk knives adapted to form coinciding grooves in opposite sides of a sheet, and loose pressure rolls located beside the knives, and adapted to rotate independently of the knives.

[Claim 6 not printed in the Gazette.]

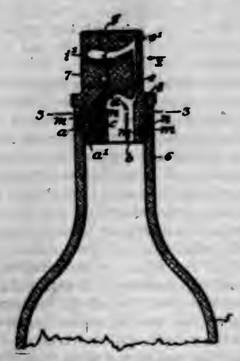
898,260. AUTOMATIC GAS-VALVE. EVERETT L. PRESTON, Dawn, Mo. Filed Aug. 21, 1907. Serial No. 389,590.



1. In combination with a gas valve and a spring tending to close the same, a rock shaft having crank elements, a pitman connecting one of said crank elements to the gas valve, an adjustable stop device to predetermine the extent of movement of said pitman angularly in one direction, and a balanced arm connected to the other crank element and having an element movable by the pressure of the current created by the light.

2. In combination with a longitudinally movable gas valve for a gas burner and a spring tending to move said valve in one direction and close the same, a crank shaft having crank elements, a pitman connecting one of said crank elements to said valve, an adjustable stop device for the said pitman for the purpose set forth, and a balanced arm connected to the other crank element and having an element movable by the pressure of the current created by the light.

898,261. CLOSURE FOR THE NECKS OF BOTTLES. THOMAS S. RAINEY, New Orleans, La. Filed Jan. 25, 1908. Serial No. 412,574.

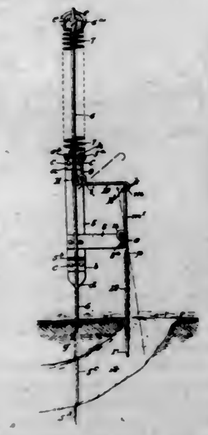


1. A closing plug for the neck of a receptacle, comprising a cylindrical body having an external thread at one

end, said end having a cupped recess therein, the plug also having a longitudinal channel extended from the recess to a point near the outer end thereof and thence laterally through the side of the plug, and further provided with a transversely disposed duct near said outer end, that extends from the longitudinal channel through the opposite side of the plug.

2. A closing plug for the neck of a receptacle, comprising a cylindrical body, a radial collar thereon near one end, an external thread on said end, the body having a cup-like recess therein at the threaded end, also a longitudinal channel extending from the recess at one side thereof to a point near the opposite end of the plug and thence laterally out through the side of the plug, the latter being further provided with a transverse duct that extends from the longitudinal channel out through the opposite side of the plug, and a spring dog embedded in a recess formed in the threaded end portion of the plug.

898,262. GOPHER-TRAP. ANTON F. RENKEN, Kramer, Nebr. Filed May 25, 1908. Serial No. 434,747.



1. The combination with a frame consisting of side members and cross bars, a stabbing fork comprising spaced parallel tines pointed at their free ends and provided with a ring at their connected ends, the cross bars having perforations through which the tines slide, a spring connected with the ring and with one of the cross bars, a laterally projecting frame having a cross bar at its outer end, a trigger bar on a cross bar of the main frame, the tines being provided with a cross bar for engagement by the inner end of the trigger bar, a hook on the outer end of the trigger bar, and a tripping bar pivoted on the lateral frame and having a looped upper end for engagement by the trigger bar.

2. The combination with a frame formed of plate metal, and consisting of two spaced parallel side members, cross bars arranged between the side members and provided with perforations, a stabbing fork formed of a single wire rod bent at its center and formed into a ring, thus producing two spaced fork tines that are parallel with each other, said tines being pointed at their free ends and slidable through said perforations in the frame cross bars, and a coiled spring connected at its ends respectively with the ring on the upper end of the stabbing fork and the upper cross bar of the frame, said spring being expanded by an upward sliding movement of the stabbing fork, of a cross bar connecting the tines of the stabbing fork, a laterally projected frame on the main frame and having a flat cross bar at its outer end, a trigger bar loosely hung from the upper cross bar of the main frame near the inner end of said trigger bar, said end being adapted for engaging the cross bar on the fork tines, a hook formed on the outer end of the trigger bar, and a tripping bar hung on the outer member of the lateral frame, and having a looped upper end that may be engaged with the hook on the trigger bar.

898,263. ADJUSTABLE STAND. JOHN W. RICE, Atlanta, Ga. Filed Dec. 26, 1907. Serial No. 408,086.



1. A stand of the character specified comprising a plurality of adjustable sections, a horizontal box support having an upwardly bent front end portion adjustably fixed to one of the sections, and an adjustable mirror support comprising upper and lower clamping members formed with spaced mirror engaging portions or teeth adjustably fixed to another of the sections, the bent end portion of the box support being designed to engage with the handle of a razor strop, and a box mounted upon said support.

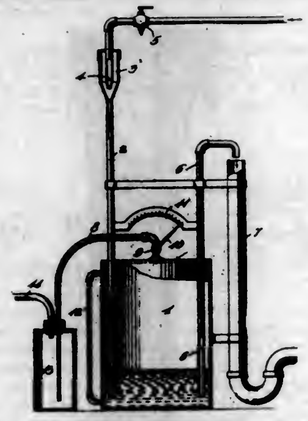
2. A stand of the character specified embracing a plurality of adjustable sections, a mirror, and a support for the mirror, said support consisting of a longitudinally slotted curved body formed at each end with laterally extending spaced mirror-engaging portions, said support being adjustably mounted on the upper section of the stand.

3. A stand of the character specified comprising a plurality of adjustable sections, a laterally extending box support adjustably connected with one of the sections, a box mounted upon said support, and a supporting arm pivotally supported by the box, the outer end of said arm terminating in a longitudinally extending forked oil burner and cup supporting extension.

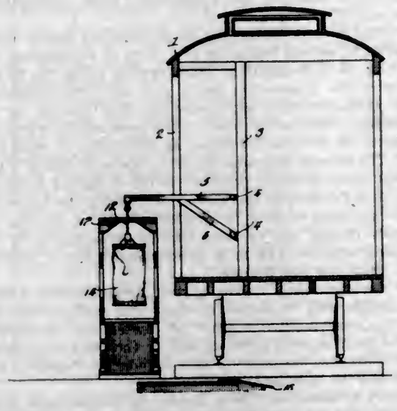
898,264. HYDRAULIC AIR-PUMP. JOHN B. RIDOUT, St. Paul, Minn., assignor of one-third to Dudley Crowther and one-third to W. H. Barth. Filed Nov. 7, 1907. Serial No. 401,142.

1. In a device of the class described, a cylinder, a feed water pipe, a water outlet pipe extending upwardly from said cylinder, an indicator scale bridged between said pipes to brace the same, a waste pipe, a support from the cylinder to the waste pipe, and a brace extending above the indicator scale and connecting the feed water pipe, the outlet pipe and the waste pipe and to brace all of said pipes.

2. In a device of the class described, a cylinder, a feed water pipe, a water outlet pipe extending upwardly from said cylinder, an indicator scale bridged between said pipes to brace the same, a waste pipe, a support from the cylinder to the waste pipe, a brace extending above the indicator scale and connecting the feed water pipe, the outlet pipe and the waste pipe and to brace all of said pipes, a gas outlet valve, and a pointer secured to the movable part of said valve to work over the scale.



898,265. MAIL-BAG CATCHER. WILLIAM ROBINSON, Ottumwa, Iowa. Filed June 23, 1908. Serial No. 439,981.

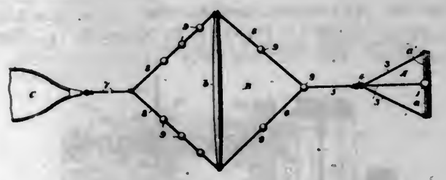


1. A mail bag support comprising a lever pivoted to an upright in the car, jaws pivoted to said lever, said jaws being connected by a spring, a headed bar connected to a mail bag and engaged by said jaws, and a receiver provided with a recess in its roof to strike said bar and deposit the bag.

2. In a mail bag catcher, a pair of jaws pivoted to a bracket, a spring for connecting said jaws, in combination with a headed rod connected to a mail bag, the head being supported by said jaws.

898,266. WAVE-BREAKER. JOHN A. ROSVOLD, Nome, Alaska. Filed Nov. 5, 1907. Serial No. 400,800.

1. In a safety device for vessels, the combination with a sea anchor or drag operative at a depth below the surface of the water, of a spar adapted to float upon the surface of the water, connections from each end approximately of said spar on one side to said sea anchor or drag, and on the other side to a connecting means for the vessel, and a plurality of floats arranged at intervals along said connections adapted to support the same the proper depth below the surface of the water and to coöperate with said spar to break the waves, substantially as described.



2. In a safety device for vessels, the combination with a sea anchor or drag operative at a depth below the surface of the water and consisting of a collapsible frame having a lower weighted bar, side-bars pivotally attached to the ends thereof and making detachable engagement with each other at their opposite ends, and a covering or drag surface for said frame; of a spar adapted to float upon the surface of the water, connections from each end approximately of said spar on one side to said sea anchor or drag, and on the other side to a connecting means for a vessel, and a plurality of floats arranged at intervals along said connections adapted to support the same the proper depth below the surface of the water and to coöperate with said spar to break the waves, substantially as described.

898,267. WRENCH. HARVEY N. ROTHWEILER, Seattle, Wash. Filed Mar. 23, 1908. Serial No. 422,859.

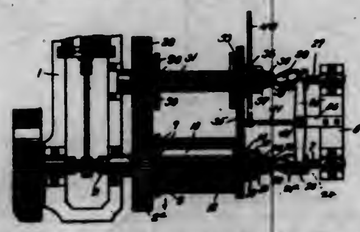


1. The improvement in wrenches comprising a wrench bar having a fixed jaw, and provided with under-cut recesses in its opposite edges, thread plates fitting in said recesses and held by the dove tail form thereof, a jaw sliding over the wrench bar and over the thread plates and having a nut engaging therewith, the said jaw operating to prevent the displacement of the thread plates when fitting thereover, a jaw face having a dove tail connection with the sliding jaw, and a spring interposed between the inner end of the said jaw face and thread plate whereby to actuate the jaw face and to steady the thread plate in position, substantially as set forth.

2. The improved wrench comprising a wrench bar having a jaw, a jaw sliding on the wrench bar and having a frame like construction to fit over an adjusting nut, an adjusting nut in said frame like sliding jaw, and screwing upon the wrench bar, a jaw face having a dove tail connection with the sliding jaw, and a spring acting between the inner end of the jaw face and the wrench bar where-

by to actuate the jaw face and to tighten the sliding jaw upon the nut and wrench bar, all substantially as and for the purposes set forth.

898,268. REVERSING MECHANISM. ALEXANDER RUSSELL and JAMES D. DINSMOOR, St. Marys, W. Va. Filed Mar. 12, 1908. Serial No. 420,630.



1. In a reversing mechanism, the combination with an engine, of shafts driven thereby, heads supported by said shafts, wood blocks carried by said heads, sprocket wheels loosely mounted upon said shafts, an endless chain connecting said sprocket wheels, wood blocks carried by said sprocket wheels, plates slidably keyed upon said shafts, a spool movably mounted upon one of said shafts between some of said blocks and one of said sprocket wheels, a drum movably mounted upon the other of said shafts between the other of said blocks and the other of said sprocket wheels, clutch heads adjustably mounted upon said shafts, clutch-arms pivotally mounted in said heads for impinging said plates and moving said plates, a spool and drum for engaging said wood blocks, a spreader slidably mounted upon each of said shafts for moving said clutch-arms, and means for alternately moving said spreaders.

2. In a reversing mechanism, the combination with an engine, of shafts driven thereby, wood blocks arranged to revolve with said shafts, sprocket wheels loosely mounted upon said shafts, a sprocket chain connecting said sprocket wheels, a drum loosely mounted upon one of said shafts and adapted to be rotated in one direction by said sprocket wheel and in an opposite direction by frictionally engaging some of said blocks, clutch heads adjustably mounted upon said shafts, clutch-arms pivotally carried by said heads for moving said sprocket wheels, spreaders for actuating said clutch-arms, and means for alternately moving said spreaders.

3. A reversing mechanism comprising oppositely rotating shafts, blocks arranged to rotate with said shafts, sprocket wheels loosely mounted upon said shafts, an endless sprocket chain adapted to travel over said sprocket wheels, a drum secured to one of said sprocket wheels and actuated thereby to rotate in one direction, means to grip some of said blocks and actuate said sprocket wheels, and drive said drum in one direction, means adapted to grip the other of said blocks and drive said drum in the opposite direction, said means including clutch heads, clutch-arms carried by said heads, and alternately operated spreaders for actuating said clutches.

4. In a reversing mechanism, a pair of oppositely driven shafts geared together to rotate in unison, friction shoes carried by the gear of each shaft, a drum mounted to rotate on one of the shafts, a spool mounted to rotate on the other shaft, one end of the drum and one end of the spool adapted to frictionally engage the friction shoes carried by said gears, sprocket wheels carried by the opposite ends of said drum and spool and having friction shoes mounted in their outer faces, friction disks carried by the shafts to engage said last mentioned friction shoes, clutch heads mounted on each shaft, clutch-arms pivoted in said heads having their inner ends disposed to engage said friction disks and move the same into engagement with the friction shoes carried by said sprocket wheels, a sprocket chain connecting said wheels, a spreader on each shaft movable longitudinally thereon to actuate said clutch-arms, and a common actuating means for said spreaders.

898,269. ORNAMENTAL FABRIC AND PROCESS OF PRODUCING THE SAME. EDWARD J. RYERSON, Jackson, Mich. Filed Mar. 1, 1907. Serial No. 360,079.



1. The process of producing ornamental fabric, consisting in sewing onto a foundation of cloth a strip of ornamental fabric, resewing with a line of cross-stitching over the first line of sewing and thereby drawing the woof threads of the foundation cloth out of their normal straight arrangement by the same threads which aid in uniting the ornamental fabric to the foundation fabric, substantially as described.

2. The process of making an ornamental fabric, which consists in sewing the edges of a strip of ornamental fabric to a cloth foundation, again sewing along the line of union of the ornamental fabric and the cloth foundation with cross stitches, and removing that portion of the foundation cloth at the rear of the ornamental fabric and between the lines of stitching, substantially as described.

3. The process of producing an ornamental fabric, which consist in securing an ornamental fabric having a selvage edge to a foundation fabric, and preventing the formation of a raw edge of said foundation fabric by bending the threads thereof out of their normal arrangement by the securing stitches and by a supplemental line of stitches that unite the two fabrics.

4. An ornamental fabric, having in combination a cloth foundation with its normal raveling edge protected by lines of cross stitching which draw the raw ends of the threads out of their normal position, and at the same time secure an ornamental member to said foundation member, substantially as described.

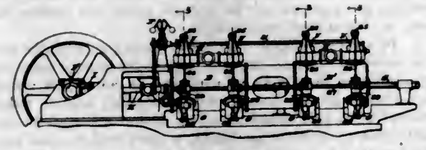
5. An ornamental fabric, having in combination pieces of cloth, the raveling edges of which are protected by lines of overcasting stitches, and an ornamental fabric united to said pieces of cloth by the threads forming said overcasting stitches, substantially as described.

898,270. EXTENSION-ROLL FOR SILK AND OTHER LOOMS. CARL SCHNEIDER, Jersey City Heights, N. J. Filed June 21, 1907. Serial No. 380,035.



An extension-roll for looms, consisting of a supporting-shaft, a central collar provided with grooves, two sets of spreading-strips provided with longitudinal shanks and with pins at their inner ends guided in the grooves of the central collar, recessed collars on the supporting-shaft at both sides of the central collar for guiding the shanks of the spreading-strips, and two sets of cams keyed to the shaft and engaging the inner and outer ends of the spreading-strips for imparting a laterally reciprocating motion to the same during the motion of the fabric over the spreading-strips.

898,271. INTERNAL-COMBUSTION ENGINE. CLARENCE N. SCOTT, Buffalo, N. Y., assignor to International Steam Pump Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 23, 1905. Serial No. 242,280.



1. A compound internal combustion four cycle reciprocating engine, having two double acting high pressure cylinders arranged tandem with their pistons on the same crank, in combination with two double acting low pressure cylinders arranged tandem and substantially parallel with and beside the high pressure cylinders with their pistons on a second crank on the same shaft and at approximately 180° from the high pressure crank.

2. In a compound internal combustion four cycle reciprocating engine, two double acting high pressure cylinders arranged tandem with their pistons on the same crank, in combination with two double acting low pressure cylinders arranged tandem and substantially parallel with and beside the high pressure cylinders with their pistons on a second crank on the same shaft and at approximately 180° from the high pressure crank, and suitable passages and mechanism for operating the high pressure pistons by the initial pressure of a charge and the low pressure pistons by the exhaust from the corresponding ends of the high pressure cylinders.

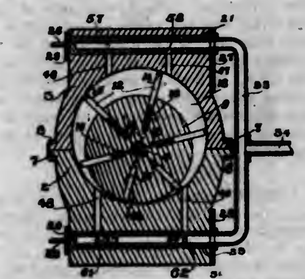
3. In a compound internal combustion four cycle reciprocating engine, two double acting high pressure cylinders arranged tandem with their pistons on the same crank, in combination with two double acting low pressure cylinders arranged tandem and substantially parallel with and beside the high pressure cylinders with their pistons on a second crank on the same shaft and at approximately 180° from the high pressure crank, and suitable passages and mechanism for operating the high pressure pistons by the initial pressure of a charge compressed by the low pressure pistons and further compressed on the high pressure compression stroke, and the low pressure pistons by exhaust from the high pressure cylinders.

4. In a compound internal combustion four cycle reciprocating engine, two double acting high pressure cylinders arranged tandem with their pistons on the same crank, in combination with two double acting low pressure cylinders arranged tandem and substantially parallel with and beside the high pressure cylinders with their pistons on a second crank on the same shaft and at approximately 180° from the high pressure crank, and suitable passages and mechanism for operating the high pressure pistons by the initial pressure of a charge and the low pressure pistons by the exhaust from the corresponding ends of the high pressure cylinders, and arranged to secure a high pressure power stroke in one end of one cylinder at each stroke and with each high pressure power stroke opposed by the back pressure of a high pressure exhaust stroke.

5. In a compound internal combustion four cycle reciprocating engine, two double acting high pressure cylinders arranged tandem with their pistons on the same crank, in combination with two double acting low pressure cylinders arranged tandem and substantially parallel with and beside the high pressure cylinders with their pistons on a second crank on the same shaft and at approximately 180° from the high pressure crank, and suitable passages and mechanism for operating the high pressure pistons by the initial pressure of a charge compressed by the low pressure pistons and further compressed on the high pressure compression stroke, and the low pressure pistons by exhaust from the high pressure cylinders, and having the strokes of the four cylinders throughout the cycle arranged substantially as herein shown and described.

[Claims 6 to 8 not printed in the Gazette.]

898,272. ROTARY ENGINE. JAMES SHAW, Dauphin, Manitoba, Canada. Filed May 29, 1907. Serial No. 376,224.



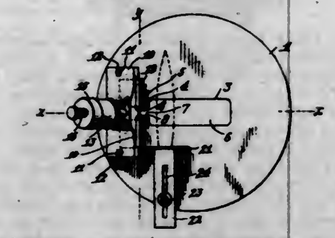
1. In a rotary steam engine the combination with the rotor carrying reciprocating wings and the inclosing casing having internal elliptical grooves forming piston chambers for the wings, of a system of hollow cylindrical valves controlled and operated for both the forward and reverse rotation of the rotor by a single lever, to admit live steam to the central chamber, to exhaust from the central chamber to the adjoining chambers, to exhaust from the side chambers to atmospheric pressure, to allow for exhaust from the central chamber to the adjoining chambers of steam carried forward of the wings beyond the initial exhaust in the central chamber, and to allow for the exhaust to atmospheric pressure of steam carried forward by the wings past the initial exhaust, from the side chambers, as and for the purpose specified.

2. In a rotary steam engine the combination with the rotor carrying sets of wings adapted to reciprocate within pockets in the rotor and an inclosing casing formed from two separate castings having internal grooves forming piston chambers to receive the reciprocating wings, of a system of hollow cylindrical valves inter-linked and controlled by a single lever, for both forward and reverse rotation of the rotor governing the passage of the steam to and from the chambers, said system of valves consisting in an upper central valve, communicating with the live steam pipe, and carrying a set of openings toward either end and at opposite sides, the openings passing from the face to the center and a spiral groove on the face, the openings being adapted to register in the rotation of the valve with the ports passing to the central chamber, and the spiral groove being adapted to inter-connect the central chamber with an upper chamber, a set of upper side valves having openings toward either end, and out of alinement, adapted to register in the rotation of the valves with ports communicating with the side chambers, a central lower valve having a set of openings towards either end passing from the face to the center and out of alinement the one with the other, the said openings being adapted in the rotation of the valve to communicate with ducts leading from the face of the central chamber, a lower side valve having openings toward either end, passing from the face to the center, and carrying facial slots one toward either end, the slots and the openings, respectively, in the valve being out of alinement, the slots being adapted to inter-connect in the rotation of the valve, the adjoining chamber with the latter ducts from the central chamber, and the openings being adapted, in the rotation of the valve, to register with the ports from the adjoining chamber, a lower opposing side valve having openings toward either end passing from the face to the center, and carrying facial slots, one toward either end, the slots and openings, respectively, being out of alinement the one with the other, the slots being adapted in the rotation of the valve to inter-connect the ports in the adjoining chambers with the aforesaid ducts, leading from the central

chamber and further, in a reverse rotation, to inter-connect the ducts leading from the adjoining chamber through side openings in the casing with the openings in the valve, a by-pass connecting the aforesaid upper chamber with the open end of the lower central valve, and exhaust pipes inter-connecting the open ends of the upper and lower side valves in pairs, as and for the purpose specified.

3. In a rotary steam engine the combination with the central chamber formed between the stator and the rotor, of a hollow cylindrical valve having sets of openings, a set towards either end and at the opposite sides, the openings passing from the face to the center of the valve, sets of ports passing from the face of the valve to the chamber, there being a port to register with each opening, the said openings being adapted to admit full pressure steam both for forward and reverse rotation of the rotor at predetermined points of the stroke of the piston, as and for the purpose specified.

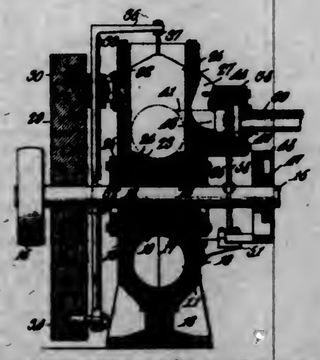
898,273. CIGAR-BANDING DEVICE. CHARLES SILGER and ISAAC DEATHERAGE, Duluth, Minn. Filed Jan. 18, 1908. Serial No. 411,427.



1. A cigar-banding apparatus comprising a cigar-supporting table provided with a slot across which a cigar may extend, said slot having a reduced extension at one end, a band-supporting follower mounted in the slot and having a tongue engaging the reduced extension thereof, a keeper arranged above said tongue, and guide plates held by said keeper and extending into the extension of the slot.

2. A cigar-banding apparatus comprising a table upon which a cigar may be supported while a band is wrapped around it, the said table having a slot to contain the bands and across which the cigar may extend transversely, a vertically-movable band-supporting follower mounted in said slot, a keeper mounted on the table and extending across one end of the slot and a guide plate held by the keeper and extending into the slot.

898,274. ROTARY ENGINE. LEE M. SINGLETON and CINCINNATUS E. MADDOX, Alpharetta, Ga. Filed Mar. 28, 1908. Serial No. 423,928.

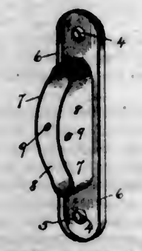


1. In a rotary engine, a valve, a valve stem connected thereto, a shaft, a pair of revolving cams mounted thereon, a frame arranged to be moved alternately in one direction by one of said cams, and in the other direction by the other cam, a valve rod rigidly attached to said frame, and a lever movably pivoted intermediate of its ends and connected at those ends to the valve stem and the valve rod.

2. In a rotary engine, a combination of a valve, a valve stem connected thereto, a shaft, a pair of eccentric cams angularly disposed upon said shaft and arranged to revolve therewith, a frame arranged to be moved alternately in one direction by one of said cams and in the other direction by the other cam, a valve rod on said frame, a lever provided with a movable pivot and having its ends connected to the valve rod and valve stem, and means for shifting the position of the movable pivot and locking the same in the shifted position.

3. In a rotary engine, a cylinder having an annular bore and provided with an exhaust port continuously open and an admission port, a valve arranged to cover said admission port at predetermined periods, a shaft held to rotate concentric to said angular bore, a piston attached to said shaft held to move in said bore, a head held in said bore, cams mounted on said shaft, and means operated by said cams synchronously to withdraw said head and close said admission port and replace said head and open the port comprising a cam rod connected to said head and actuated by one of said cams, a frame arranged to be moved alternately in one direction by one of the remaining cams, and in the other direction by the other remaining cam, and means to connect said frame with the valve, comprising a valve stem, a valve rod connected to said stem, and a movably pivoted lever connecting said valve rod and stem.

898,275. SHEET-METAL PULLEY-CASING. FRANCIS E. SLOAN, Baltimore, Md. Filed June 28, 1907. Serial No. 381,195.



1. A sheet metal pulley casing formed from a single blank and having a face plate, and said casing being provided at its inner side with concentrically-projecting integral inner and outer flanges,—the inner flange being of a greater width than the outer flange and formed by metal displaced from the center of the face plate.

2. A sheet metal pulley casing stamped from a single blank and having a face plate with a continuous unbroken outer rim edge and a central opening and a continuous unbroken flange projecting laterally from the inner surface of said face plate around said opening and formed from metal that is displaced from said central opening.

3. A sheet-metal pulley casing formed from a single blank and having a face plate with an elongated pulley opening and also having pintle supporting flanges projecting inwardly from opposite longitudinal sides of said opening,—said flanges being formed by metal that has been drawn inwardly through the opening from the face plate.

4. A stamped-up sheet-metal pulley casing formed from a single blank and having a face plate with a continuous unbroken rim edge and an elongated central opening, and also having a longitudinal flange at the longer sides of the central opening of the face plate which project inwardly from the face plate, and said flanges being of a greater width than the width of the central opening between them, said flanges being formed by metal that is drawn from the face plate and displaced inwardly through the central opening thereof.

5. A sheet-metal pulley casing formed from a single blank having a face plate of a single thickness of metal with perforations in its ends and also having a central opening with pintle-supporting flanges projecting inwardly from the opposite longitudinal sides of the central opening,—said pintle-supporting flanges being formed from metal that has been displaced from the face plate and forced inwardly through the central opening.

898,276. METHOD OF MAKING SHEET-METAL PULLEY-CASINGS. FRANCIS E. SLOAN, Baltimore, Md. Filed Dec. 31, 1907. Serial No. 408,746.



1. The method of manufacturing pulley casings from a single blank consisting in displacing the metal from within the marginal edges of the blank and forcing said displaced metal inwardly from the outer surface of the blank to form an elongated pulley-opening with pintle supporting flanges at opposite sides thereof.

2. The method of manufacturing pulley casings from a single blank consisting in displacing the metal from within the marginal edges of the blank and forcing it inwardly from the outer surface thereof to produce an elongated pulley opening with pintle supporting flanges at opposite sides of said opening and then longitudinally separating the pintle-supporting flange at one side of the opening from the flange at the other side of the opening.

3. The method of manufacturing pulley casings from a single piece of metal consisting in forming a flat blank which is narrower at its ends than between the latter, then drawing the metal at the wider portion of the blank toward the center thereof and displacing said drawn metal by forcing it inwardly from the outer surface to form an elongated pulley opening with pintle supporting flanges at its opposite longitudinal sides.

4. The method of manufacturing pulley casings from a single blank consisting in forcing the metal inwardly at a given point in the blank to form an elongated pulley housing which is closed at its inner end then removing a longitudinal strip of metal from the inner end of the housing and finally turning the remaining portions of said housing end outwardly and parallel with the sides of the housing.

5. The method of manufacturing pulley casings from a single plate consisting in forcing the metal inwardly at a given point to form a projecting hollow pulley-housing at the inner side of the plate then removing the inner end of the housing and trimming the edges of the plate and finally turning the trimmed edge of the plate to produce a laterally-projecting flange.

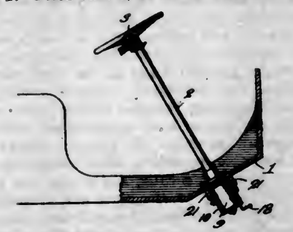
898,277. COTTER-PIN. DANIEL W. SMITH, Oyster Bay, N. Y. Filed Nov. 29, 1907. Serial No. 404,431.



1. A cotter pin having the meeting faces of its arms concaved, and a tongue having an enlarged head rounded upon two of its faces pivoted between the arms of the cotter pin near their extremities.

2. A cotter pin having a pivoted tongue member provided with an enlarged body portion, the body portion adapted to be swung between the arms of the pin and retain them in spread position at their points of contact with the body of the tongue.

898,278. STEERING-GEAR. DANIEL W. SMITH, Oyster Bay, N. Y. Filed Jan. 8, 1908. Serial No. 409,826.



1. Steering gear of the class described comprising in combination with a steering rod shaft, a gear wheel mounted fast on the shaft, an equalizing gear mounted loosely on the same shaft, a driven gear mounted on an axis at right angles to said shaft, and meshing with the fast and loose gears on said shaft, and an oscillatory arm bearing a fixed relation to the driven gear and adapted to transmit motion to the steering connections of the steering wheels.

2. The combination with a steering shaft, of a drive gear fast on said shaft, an equalizing gear loose on said shaft, a driven gear turning on an axis at right angles to said shaft and meshing with said drive and equalizing gears, a steering wheel controlling arm carried by the driven gear, a gear case and a backing spring for the driven gear operating to hold the driven gear in mesh with the drive gear and equalizing gear.

3. Steering gear for automobiles and the like comprising in combination with the steering rod or shaft, a gear case, a drive gear fast on said shaft, an equalizing gear loose on said shaft a bearing post having an opening for said shaft, ball bearings interposed between said drive and equalizing gears and the bearing post, a driven gear meshing with the drive gear and equalizing gear and mounted on said bearing post, and a controlling arm for the steering wheels mounted fast on and carried by the driven gear, substantially as described.

898,279. BOX-FASTENER. NICHOLAS A. SMITH, Grand Rapids, Mich. Filed June 5, 1908. Serial No. 436,971.



1. A box fastener comprising a case formed of an integral piece of sheet metal consisting of a plate having a forward extension provided with a slot, parallel vertical walls at the respective sides of the extension, outwardly turned flanges at the top of said walls to engage the outer surface of a box cover, and means for attaching the plate to the inner surface of said cover.

2. A box fastener comprising a case consisting of a plate having its opposite edges raised, a forward extension to the plate provided with a slot, parallel vertical walls at the respective sides of the extension and extending beyond the same, said walls being recessed at the under side where extended, outwardly extended flanges at the top of the walls, and a catch movable in the slot and having an upwardly extending loop movable between the walls.

3. A box fastener comprising a case formed of an integral sheet metal structure consisting of a plate having its opposite edges raised, a forward extension in the plane of the plate and having a slot, vertical walls at the respective sides of the extension and extending beyond the

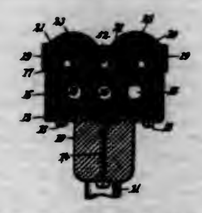
same, a tongue extending upward and rearward from the outer end of the extension and spaced apart from said walls, and a wire catch having a loop surrounding the tongue and movable between the same and the walls and also extending downward through the slot and outward between the extension of the walls.

4. A box fastener comprising a case formed of an integral piece of sheet metal having a plate portion provided with raised opposite edges adapted to be attached to the under side of the box cover, a forward extension in the plane of the plate and having a slot, a tongue on the outer end of the extension and extending inward above the extension, vertical parallel walls at the respective sides of the extension and extending outward thereform, said extended portions being recessed at the under side to the plane of the surface of said raised edges, outwardly extended flanges at the top of the walls to engage the outer surface of a box cover, and a latch consisting of a wire bent to form a spring, a catch and a loop and having the spring portion resting on the plate and attached thereto, the catch portion traversing the slot and extending outward therefrom, and the loop portion surrounding the tongue and movable between the same walls.

5. A box fastener comprising a spring a catch and a loop formed of a single piece of wire bent to form an involute spring, thence extending radially downward, outward and upward, thence inward, and thence upward in a loop and thence returning in parallel portions to the outer end of the coil.

[Claims 6 to 11 not printed in the Gazette.]

898,280. VEHICLE-WHEEL. IRVING SNELL, Little Falls, N. Y. Filed Oct. 22, 1907. Serial No. 398,556.



A vehicle wheel having a felly, a metallic band encircling the felly and rigidly secured thereto and of a width greater than said felly, a resilient band encircling said metallic band and having a plurality of cavities or openings therein, a second metallic band encircling said resilient band and connected to said first-mentioned metallic band, a second resilient band encircling the second metallic band and having a plurality of ridges on its peripheral surface, means carried by said last-mentioned metallic band for engagement with the last-mentioned resilient band for preventing lateral movement of the latter, and a plurality of wires embedded within said last-mentioned resilient band and encircling the wheel.

898,281. FLY-ESCAPE. GEORGE W. STEIN, Chicago, Ill. Filed Nov. 26, 1907. Serial No. 403,873.

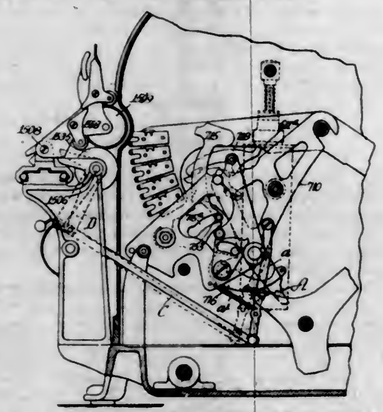


1. A fly escape consisting of a plate having an indented central recess with its inner edges terminating in reversely turned and tapered prongs whose points lie inside of the face plane of the plate.

2. A fly escape consisting of a plate having an external face flange with holes for attachment, a central recess having a central opening in its bottom and a series of tapering points attached to the edge of the central hole and projecting outwardly toward the face flange but lying inside the plane of the same.

3. A fly escape consisting of a single piece of metal formed as a plate with a circular external face flange having holes for attachment, and an indented central recess inside the face flange provided with a central hole, and a series of tapering prongs integral with the edges of the central hole and converging outwardly toward the face flange but lying inside the plane of the same.

898,282. ADDING-MACHINE. RICHARD C. STUBB, Buffalo, N. Y., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 5, 1906. Serial No. 294,772.



1. In an adding machine, the combination, with the printing mechanism, including hammers, and with a paper support arranged to swing into and out of position for receiving the impression impact, of means under the control of the paper support for preventing the movement of the hammers when the paper support is out of position to receive impressions from the printing mechanism.

2. In an adding machine, the combination with the printing mechanism, including hammers, and with a paper support arranged to swing, of means under the control of the paper support for preventing the movement of the hammers unless the paper support is in a position to receive impressions from the printing mechanism, said means tending to prevent movement of the hammers but restrained by the paper support when in position to receive impressions.

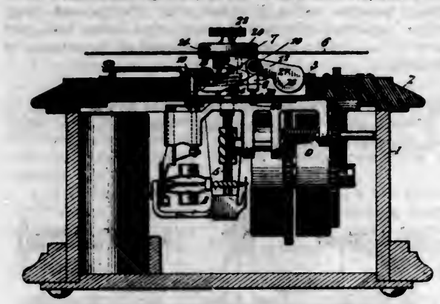
3. In an adding machine, the combination, with the printing mechanism, including hammers, and with a paper support arranged to swing, of means under the control of the paper support for preventing the movement of the hammers unless the paper support is in a position to receive impressions from the printing mechanism, said means being spring pressed towards a position to prevent the movement of the hammers but restrained by the paper support when in position to receive impressions.

4. In an adding machine, the combination, with the printing mechanism having type, hammers for striking said type and drivers for such hammers, and with a paper support arranged to swing, of means controlled by the paper support and arranged to arrest the movement of the drivers and thereby prevent hammer action unless the paper support is in a position to receive impressions from the printing mechanism.

5. In an adding machine, the combination, with the printing mechanism having type, hammers for striking said type and drivers for such hammers, and with a paper support arranged to swing, of means controlled by the paper support and arranged to arrest the movement of the drivers and thereby prevent hammer action unless the paper support is in a position to receive impressions from the printing mechanism, said means being held with a yielding pressure towards a position to arrest such drivers but restrained by the paper support.

[Claims 6 to 19 not printed in the Gazette.]

898,283. TELEGRAPHONE. HARVE R. STUART, Wheeling, W. Va. Filed Sept. 24, 1907. Serial No. 394,292.



1. In a telegraphone, a carriage longitudinally and angularly movable on a fixed axis, feeding means for said carriage, means for tilting said carriage on said axis whereby it is disengaged from its feeding means, and a telegraphone magnet yieldingly supported by said carriage.

2. In a telegraphone, a carriage longitudinally and angularly movable on a fixed axis, feeding means for said carriage, means for tilting said carriage on said axis whereby it is disengaged from its feeding means, and a telegraphone magnet also angularly movable on said axis and yieldingly supported from said carriage.

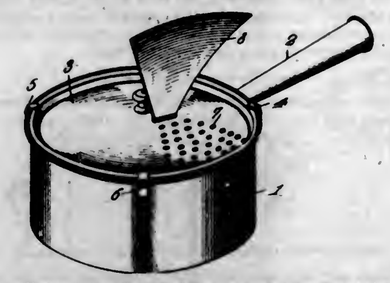
3. In a telegraphone, a carriage longitudinally and angularly movable on a fixed axis, feeding means for said carriage, means for tilting said carriage on said axis whereby it is disengaged from its feeding means, a device pivoted on said axis and longitudinally movable with the carriage, and a part having a telegraphone magnet and an erasing magnet and pivoted on said device.

4. In a device of the class described, a continuously rotating record medium, a lead screw rotating commensurately therewith, a carriage having a yielding engagement with said screw, yielding supporting means on said carriage, and a telegraphone magnet yieldingly carried by said means.

5. In a telegraphone, a continuously movable medium, a carriage movable parallel thereto and tiltable on its axis of longitudinal movement, yielding means on said carriage, and a block or frame having a plurality of devices cooperating with said medium, and yieldingly supported on said means.

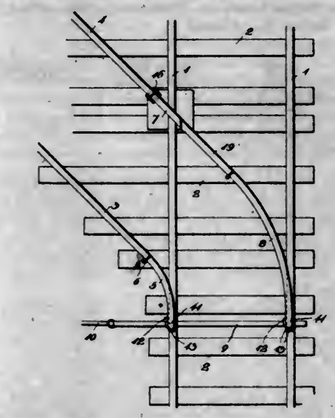
[Claims 6 to 30 not printed in the Gazette.]

898,284. CULINARY VESSEL. JOSEPH STUBER, Peoria, Ill., assignor of one-half to Henry G. Kuck, Peoria, Ill. Filed Sept. 18, 1903. Serial No. 173,722.



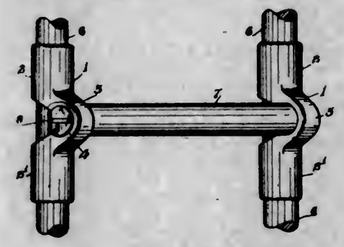
A culinary utensil embodying a vessel having a handle projecting from one side thereof, three spring clips secured to the vessel, one adjacent to the handle and the other two opposite the handle and at points equally spaced from a line drawn through the same, the upper ends of the clips being projected over the rim of the vessel, a cover arranged to be held assembled with the utensil by the clips and provided with drainage orifices, and a closure for normally sealing the orifices.

898,285. SWITCH. JOHN Q. A. TINSEY, Terry, Miss. Filed Feb. 20, 1908. Serial No. 416,897.



A frog for railway crossings comprising a body, a depression therein and a flange formed on one side of said depression at the end of the body, said body being pivoted to a rail and adapted to have another rail lie in the depression formed therein, said flange resting upon the opposite section of the rail to which the frog is pivoted.

898,286. BRACKET FOR BUILDING CONSTRUCTION. AMABLE TOUPIN, St. Agathe, Manitoba, Canada. Filed Dec. 7, 1907. Serial No. 405,622.



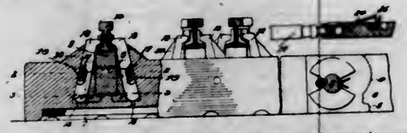
1. In a device of the class described the combination with the vertical upright and the bracket sleeved thereon, and having a laterally extending supporting band, of cross arms having their end side faces flat and tapered and fitting in the opening between the band and the upright, as and for the purpose specified.

2. In a device of the class described the combination with the upright and the bracket sleeved thereon, said bracket consisting of two extensions looped together by an outstanding band, of a cross arm having a portion of its face at the end, flattened, and tapering toward the end, the cross arms fitting within the opening bounded by the outstanding band and the upright, as and for the purpose specified.

3. In a device of the class described the combination with the upright and the bracket sleeved thereon and formed from two extensions inter-connected by an outstanding band, of a cross arm having a portion of its face at the end flattened, and tapering toward the end and means for preventing withdrawal of the arm, as and for the purpose specified.

4. In a device of the class described the combination with the upright and the bracket sleeved thereon and formed from two extensions inter-connected by an outstanding band, of a cross arm having a portion of its face at the end flattened and tapering toward the end, and a wedge to prevent withdrawal of the arm, as and for the purpose specified.

898,287. RAILWAY-TIE. AUGUST O. THUNBORG, Webster, Wis., assignor of one-sixth to A. P. Nelson and one-sixth to Simon Thoreson, Grantsburg, Wis. Filed July 3, 1907. Serial No. 382,081.



1. A tie having an approximately vertical opening and a horizontal opening, a key fitted into the vertical opening and having a recess in one side, a pin passed through the transverse opening of the tie and having a portion entering the recess of the key, and a shim interposed between said pin and the lower end of the recess formed in the side of the key.

2. In combination, a tie having an approximately vertical opening and a horizontal opening, a key fitted into the vertical opening and having a recess in a side thereof, a pin passed through the transverse opening of the tie and having a portion projected into the recess of the key, a shim interposed between the pin and lower end of the recess of the key, and interlocking means between said key and shim.

3. In combination, a railway tie having a vertical opening and a horizontal opening, the latter provided near its entrance end with a recess, a key fitted into the vertical opening, and a pin passed through said horizontal opening and engaging with the key to retain the same in place and provided near its outer end with a bit to enter the said recess.

4. In combination, a railway tie having a vertical opening and a horizontal opening, the latter provided near one end with a recess, a key fitted into the vertical opening, a pin passed through said horizontal opening and engaging with the key to retain the same in place and provided with a bit to enter the said recess near one end of the horizontal opening, and a block arranged within the tie at one side of said horizontal opening to close the entrance to said recess to exclude foreign matter after the parts have been placed in position.

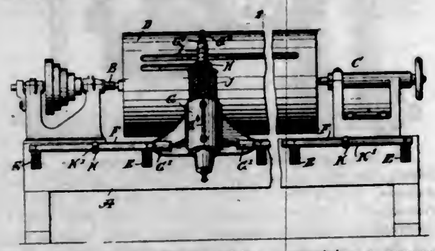
5. In combination, a tie having a vertical opening, and a horizontal opening, the latter provided near one end with a recess and with a notch forming an entrance to said recess, a key fitted into the vertical opening, a pin fitted in the horizontal opening and having a bit to pass through the aforesaid notch and enter the said recess, and a block arranged within said notch and normally closing the entrance to said recess.

898,288. BOTTLE-WASHER BRUSH. CHARLES K. VOLCKENING, New York, N. Y. Filed Feb. 1, 1908. Serial No. 413,908.



The combination of a stem, a ferrule mounted thereupon and provided with a reduced threaded portion, and a member of resilient material having an opening to be stretched over said reduced portion, said member of resilient material being provided with fingers, and being further provided with wings, each wing being wide and thick at its middle portion and tapered off to nothing at its ends.

898,289. FLUTING OR BEADING MACHINE. CHESTER R. VOORHIES, Portland, Oreg. Filed Oct. 18, 1907. Serial No. 398,082.



1. A fluting or beading machine, comprising a support for the work, a guideway, and a motor mounted to slide and to rock on the said guide-way and carrying and revolving a fluting or beading cutter and means for adjusting the motor transversely of the guide-way.

2. A fluting or beading machine, comprising a guideway, and a motor mounted to slide on the said guideway in the direction of the length of the work and capable of rocking on the guideway in a transverse direction, the shaft of the motor being arranged transversely to the guide-way and provided with a fluting or beading cutter.

3. A fluting or beading machine, comprising a lathe bed, a spindle, a tail stock, a guideway lengthwise on the lathe bed, and a motor mounted to slide lengthwise and to rock transversely on the said guideway, the shaft of the motor extending transversely to the guide-way and carrying a fluting or beading cutter.

4. A fluting or beading machine, comprising a lathe bed, a spindle, a tail stock, a guide-way lengthwise on the lathe bed, a motor mounted to slide lengthwise and to rock transversely on the said guideway, the shaft of the motor extending transversely to the guide-way and carrying a fluting or beading cutter, and means on the said shaft for limiting the cutting depth of the cutter.

5. A fluting or beading machine, comprising a lathe bed, a spindle, a tail stock, a guideway lengthwise on the lathe bed, and a rotary motor having its cylinder extending transversely to the guide-way and provided with longitudinally arranged bearings engaging the said guideway to allow of sliding the motor lengthwise on the guideway and to rock it transversely, the said motor casing having a handle for engagement by the operator and the shaft of the motor having adjustable means for adjustably securing a rotary cutter in place on the motor shaft.

898,290. COLOR-STUDY DEVICE. EMANUEL F. WAGNER, New York, N. Y. Filed Nov. 5, 1907. Serial No. 400,807.



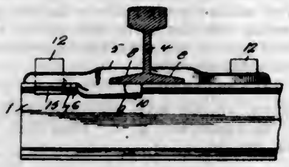
1. A device of the class described having a plurality of movable color scales, a shield with an opening adapted to expose the colors, and an overlay having a ground color and having an opening registering with said first opening.

2. A device of the class described having a color scale, and a movable shield having transverse openings, said scale having such an arrangement that when a color is exposed at one opening the harmonizing color will be exposed at the other of said openings.

3. A device of the class described having color scales arranged side by side, a movable shield having an opening therein exposing the colors of said scales, and a slidable frisket having a plurality of openings with borders of different colors, said last openings being adapted to aline with said first opening to give a ground color for the exposed colors.

4. A device of the class described having a plurality of color scales, a movable shield having openings therein adapted to expose a part of said scales, and a movable frisket having a plurality of openings with differently colored edges.

898,291. RAIL-FASTENER. WILLIAM L. WALKER and LOUIS J. EYTH, Butler, Pa. Filed Oct. 2, 1907. Serial No. 395,583.

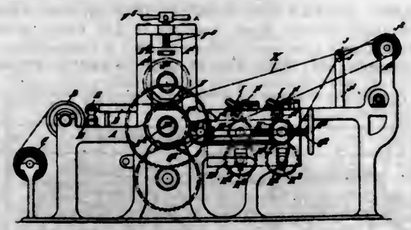


1. The combination with a rail-way rail and a metallic tie having its flange formed with openings, of clamps or fasteners, each comprising a body portion formed with a slot, and a depending pin, and a lip fitting below the flange of the tie while said body portion overlaps the base of the rail, and keys extending through said slots.

2. The combination with a railway rail and a metallic tie having its flanges formed with openings on opposite sides of its web, of clamps or fastenings arranged on opposite sides of the rail and each comprising a body portion beveled to fit the base of the rail, and formed with a slot and a depending pin, and a lip flattened to fit below the rail and beveled to fit the under surface of the flange of the tie, and wedge keys driven into said slots and having their ends bent under the flange of the tie.

3. A rail fastener comprising a body portion formed with an elongated slot and a depending pin, and beveled on its under surface, and an integral lip having a portion of its upper surface flat and the remainder thereof beveled.

898,292. APPARATUS FOR EMBOSSING AND COLORING OR PAINTING LINCRUSTA OR LIKE MATERIAL. FREDERICK WALTON, London, England. Filed July 22, 1904. Serial No. 217,710.



1. In the manufacture of lincrusta and like embossed material, the combination with an embossing device, of a heated table over which a web of backing is caused to travel while it receives the material to be embossed, a pair of pressure rollers between which said backing and material pass, painting or coloring devices bearing on their surface a fac-simile of the parts of the embossed pattern that are to be painted thereby, means for supplying the paint or color to said painting devices, and means for insuring that the patterns of the painting devices register with the corresponding patterns formed in relief by the embossing device substantially as described.

2. In the manufacture of lincrusta and like embossed material, the combination with an embossing device, of a heated table over which a web of backing is caused to travel while it receives the material to be embossed, a pair of pressure rollers between which said backing and material pass, a pair of painting rollers one of which bears on its surface a fac-simile of the part of the embossed pattern which is to be painted or colored thereby, means for supplying the paint or color to said pair of rollers, and means for insuring that the patterns of the painting rollers register with the corresponding patterns formed in relief by the embossing device substantially as described.

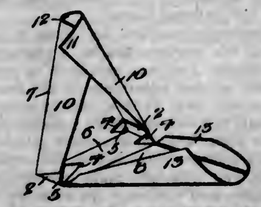
3. In the manufacture of lincrusta and like embossing material the combination with an embossing device, of a heated table over which a web of backing, is caused to travel while it receives the material to be embossed, a pair of pressure rollers between which said backing and material pass, a plurality of pairs of painting rollers, one roller of each pair bearing on its surface a fac-simile of the part of the embossed pattern which is to be painted or colored thereby, means for supplying the paint or color to each pair of said series of painting rollers, and means for insuring that the patterns of the painting rollers register with the corresponding patterns formed in relief by the embossing device substantially as described.

4. In the manufacture of lincrusta and like embossed material, the combination with an embossing device, of a heated table over which a web of backing is caused to travel while it receives the material to be embossed, a pair of pressure rollers between which said backing and material pass, a plurality of pairs of painting rollers one roller of each pair being composed of a comparatively soft material and bearing on its surface a fac-simile of the part of the embossed pattern which is to be painted or colored thereby, means for supplying the paint or color to each pair of said series of painting rollers, and means for insuring that the patterns of the painting rollers register with the corresponding patterns formed in relief by the embossing device substantially as described.

5. In the manufacture of lincrusta and like embossed material, the combination with an embossing device, of a heated table over which a web of backing is caused to travel while it receives the material to be embossed, a pair of pressure rollers between which said backing and material pass, a plurality of pairs of painting rollers, one roller of each pair bearing on its surface a fac-simile of the parts of the embossed pattern that is to be painted thereby, the said painting roller being arranged so that its pattern will register with the corresponding pattern of the material, means for revolving said painting rollers at the same surface speed as that of the embossing rollers, and means for supplying the paint or color to each pair of said painting rollers, substantially as described.

[Claim 6 not printed in the Gazette.]

898,293. CONTAINER. CHARLES W. WARREN, Marion, Ind., assignor to Warren Mfg. Co., Veedersburg, Ind. Filed Oct. 16, 1907. Serial No. 397,668.

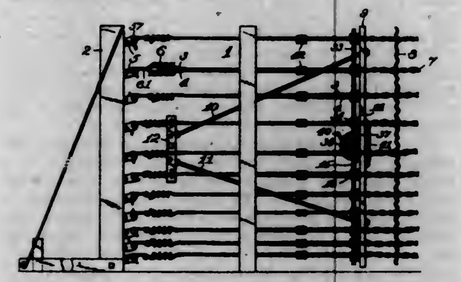


1. A container of the character described composed of a single piece of material and comprising a bottom and opposing side walls one arranged to envelop the other, said walls being of pyramidal form and arranged to produce at the apex thereof a filling mouth or opening.

2. A container of the character described formed from a blank sheet of material and comprising a bottom, upright end pieces integral with the bottom, and side pieces integral with the bottom and secured to said end pieces, said side pieces having their free side edges turned inwardly in converging relation with their upper ends overlapping, one of the side pieces having its side edges enveloping the other, thus forming a container of pyramidal form and having an opening at the apex thereof.

3. A container of the character described comprising a bottom wall and side walls fixed at their lower ends thereto, said side walls being folded into tapered form and one arranged to envelop the other, the portions of the walls being secured to provide a body of pyramidal form and having a mouth at the apex thereof.

898,294. FENCE-WEAVING MACHINE. GEORGE P. A. WEISENBORN, Clarence, Mo. Filed July 22, 1907. Serial No. 384,947.



1. A fence-weaving machine including a twisting-head comprising a main member and a follower secured detachably together with guide-openings therein, a dividing bearing ball mounted between the main member and the follower and between the guide-openings, and two pairs of bearing balls mounted at opposite sides of the dividing bearing ball between the main member and the follower, each pair of balls being at opposite sides of an opening.

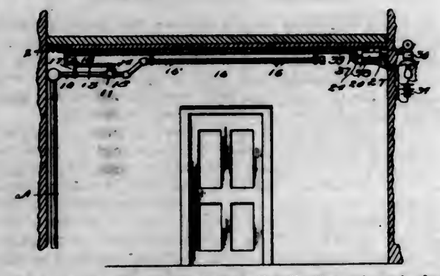
2. A fence-weaving machine including a main frame member composed of channel iron having two flanges, the member having a plurality of holes therein between the flanges, a plurality of housings mounted on the frame member and seated thereon between the flanges thereof, each housing having an annular main portion, bolts extending through the holes and securing the housings to the member against the flanges thereof, twisting heads comprising each a main member having a journal-bearing mounted rotatively in the annular portion of a housing, the twisting-head having a follower plate that is detachably secured to the main member thereof and retains the main member on its bearing, said main member of the twisting-head having gear teeth thereon and having also guide-openings therein, said follower plate also having guide-openings therein registering with the guide-openings of the main member of the twisting-head, a shaft mounted rotatively in the housings, and worms secured adjustably on the shaft and engaging the gear teeth of the twisting-heads.

3. A fence-weaving machine including a main frame member having two opposite flanges, a plurality of right-hand and left-hand housings arranged in reverse order alternately and secured adjustably to the frame member and seated against said flanges, each housing being secured by a single bolt and having an annular main portion, twisting-heads comprising each a main member having a journal-bearing mounted rotatively in the annular portion of the housing, and a follower plate secured detachably to the main member and retaining the same on its bearing, said main member having gear teeth thereon and having also guide-openings therein, said follower plate also having guide-openings therein registering with the guide-openings of the main member of the twisting-head, a shaft mounted rotatively in the housings, and worms secured adjustably on the shaft and engaging the gear teeth of the twisting-heads, alternate worms being reversed and engaging opposite sides of the different adjacent housings and preventing longitudinal movements of the shaft.

4. In a fence-weaving machine, the combination of a main frame member, a plurality of housings mounted on the frame member and having each an annular portion, twisting heads comprising each a main part that has a journal-bearing which is mounted in the annular portion of a housing, and a follower plate secured removably to the main part, said main part having gear teeth thereon and having also two guide-openings therein and a hemispherical socket-bearing between the two guide-openings, said follower plate having two guide openings and also a hemispherical socket-bearing between the two guide-openings, a ball in said hemispherical socket-bearings; a shaft mounted in the housings, and worms secured to the shaft and engaging the gear teeth of the twisting-heads.

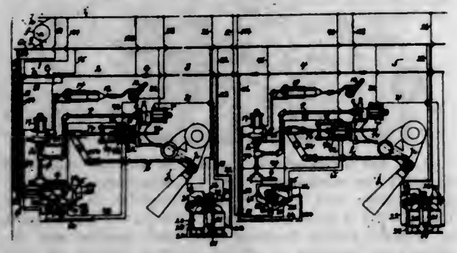
5. In a fence-weaving machine, a twisting-head comprising two parts secured detachably together, each part having two guide-openings therein and a socket-bearing at each side of each guide-opening, and also a relatively larger central socket-bearing between the two guide-openings, a dividing ball bearing in said central socket-bearings, and four balls in the socket-bearings that are at the sides of said guide-openings.

898,295. FIRE ALARM AND EXTINGUISHER. CLARK WILSON, Hackettstown, N. J. Filed Nov. 21, 1907. Serial No. 403,176.



The combination with water distributing pipes including valves therefor, operating levers for the valves, means engaged with said levers for normally holding the valves closed, non-conductive blocks, a plunger slidable within each block, a contact piece carried by each block, an electrical source, connections between the contact and the source, a bell in circuit with the source, connections between each plunger and the bell, and inflammable cords connected with each plunger and each lever respectively.

898,296. SYSTEM FOR CONTROLLING TRAINS. PAUL WINSOR, Weston, Mass., assignor to The Union Switch and Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Aug. 12, 1905. Serial No. 273,886.



1. The combination with a track provided with substantially long and substantially short block sections, of a track signal, a magnet controlling the operation of said signal, a relay connected with a substantially long block section and governing the operation of said signal magnet, an automatic stop, a magnet controlling the operation of said stop, a relay connected with a substantially short block, an armature for said short block relay governing the operation of said stop magnet, a circuit controller governing the operation of said stop magnet and itself governed by said track signal, a holding magnet coöperating with said armature, and a circuit controller governed by said track signal and controlling said holding magnet, substantially as described.

2. The combination with a track provided with substantially long and substantially short block sections, of a track signal, a magnet controlling the operation of said signal, a relay connected with a substantially long block section and governing the operation of said signal magnet, an automatic stop, a magnet controlling the operation of said stop, a relay connected with a substantially short block, an armature for said short block relay governing the operation of said stop magnet, and a circuit controller governing the operation of said stop magnet and itself governed by said track signal, substantially as described.

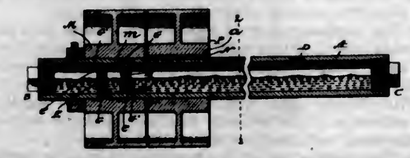
3. The combination with a track provided with substantially long and substantially short block sections, a track signal operatively connected with a substantially long block section, an automatic stop operatively connected with a short block section, an electro-magnet governing the operation of said stop, and a circuit controller for said electro-magnet governed by the track signal, substantially as described.

4. The combination with a track provided with substantially long and substantially short block sections, a track signal for a long block section, an electromagnet controlling the action of said track signal, a relay connected with a long block section and controlling the action of said electromagnet, an automatic stop, a magnet controlling the action of said stop, a relay connected with a short block section for controlling the circuit of said stop magnet, a circuit controller for said stop magnet governed by said relay, and a second circuit controller for said stop magnet governed by the track signal, substantially as described.

5. The combination with a track provided with substantially long and substantially short block sections, a track signal for a long block section, an electromagnet controlling the action of said track signal, a relay connected with a long block section and controlling the action of said electromagnet, an automatic stop, a magnet controlling the action of said stop, a relay connected with a short block section for controlling the circuit of said stop magnet, a circuit controller for said stop magnet governed by said relay, a second circuit controller for said stop magnet governed by the track signal, a holding magnet cooperating with the circuit controller governed by the stop relay to maintain the said circuit controller in its open position when the stop relay is deënergized, substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

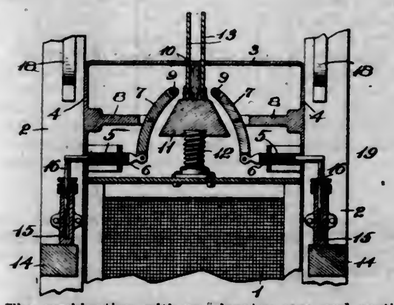
898,297. SELF-LUBRICATING SHAFT. EDWARD L. WOOD, Long Island City, N. Y. Filed June 14, 1907. Serial No. 378,912.



1. A tubular shaft provided with a filling aperture and closing means therefor, a wick tube extending diametrically nearly across and opening at one end through the periphery, the other end being within such tubular shaft, in combination with another parallel wick tube similarly conditioned but reversely arranged.

2. A tubular shaft provided with a filling aperture and closing means therefor, a wick tube extending diametrically nearly across and opening at one end through the periphery, the other end being within such tubular shaft, in combination with another parallel wick tube similarly conditioned but reversely arranged and with two wicks fitting tightly in the respective wick tubes, each having its end extending into the oil space in the interior of the tubular shaft.

898,298. SAFETY-ELEVATOR. ANDREW J. WORTHEN, St. Louis, Mo., assignor of one-third to Jacob G. Odenwalder, St. Louis, Mo., and one-third to Chester H. Lothrop, Everett, Mass. Filed Oct. 30, 1907. Serial No. 399,947.



1. The combination with an elevator cage and vertical guides therefor, of pneumatic cushioning devices located at predetermined distances apart between the guides, friction springs fixed to the inner faces of the guides, and spring actuated bolts carried by the elevator cage, and which bolts, when released, move outward so that the outer ends thereof engage between the friction springs and against the pneumatic cushioning devices when the elevator cables are broken.

2. The combination with an elevator cage and the vertical guides therefor, of a pair of spring actuated bolts arranged on the elevator cage, means whereby said bolts are normally held inoperative, friction springs arranged on the vertical guides for engaging the outer ends of the bolts when the same are moved outward into operative positions, and pneumatic cushioning devices arranged between the vertical guides and adapted to engage the outer ends of the bolts.

3. The combination with an elevator car, of a bolt carried by the car and adapted to be laterally projected therefrom, and yielding means adapted to be successively engaged by said bolt, said means being adapted to gradually stop the movement of the car.

4. The combination with an elevator car, of a bolt carried thereby and adapted to be laterally projected therefrom, and spring means adapted to be successively engaged by said bolt, said means being adapted to gradually stop the movement of the car.

5. The combination with an elevator car, of a bolt carried by the car and adapted to be projected therefrom, and means arranged for engagement by said bolt, said means comprising bowed springs spaced to position their points of greatest altitude at a distance apart somewhat less than the diameter of said bolt.

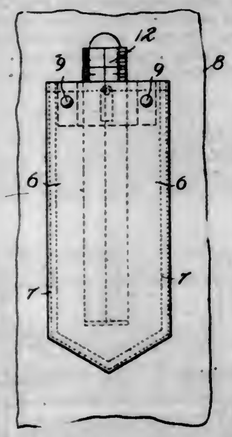
[Claims 6 and 7 not printed in the Gazette.]

898,299. POCKET. HENRIK AHNFELDT, Butte, Mont. Filed Sept. 11, 1907. Serial No. 392,377.

1. A pocket including a frame consisting of members connected together, one of said members being provided with an offset portion to maintain a formed entrance opening to the pocket, and a spring secured to the other member and projecting within the offset portion.

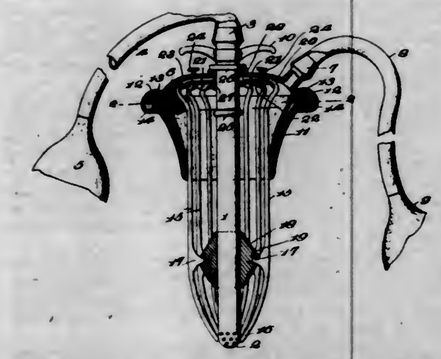
2. A pocket including a member provided with an offset portion to maintain a formed entrance opening to the pocket, and a spring disposed within the offset portion.

3. A pocket including a frame consisting of members, one of said members being provided with an offset portion to maintain a formed entrance opening to the pocket and



with laterally projecting lugs, and means passing through the pocket, lugs and the other member to secure the members together and the frame in applied position.

898,300. VAGINAL SYRINGE. WILLIS E. ALLEN, San Diego, Cal. Filed Feb. 20, 1908. Serial No. 416,889.



1. In a device of the character described, the combination of a spray tube, a series of dilating fingers surrounding said tube, means for rigidly and immovably holding said fingers at one end at different lateral adjustments around the tube, and means for expanding the opposite ends of said fingers upon the relative movement of the tube in one direction.

2. In a device of the character described, the combination of a spray tube, a series of dilating fingers surrounding said tube, a plate and a cap piece encircling said tube and in which said tube is mounted to move, means for holding said fingers rigidly at one end in laterally adjusted positions between said parts, and means for dilating the opposite ends of said fingers upon the movement of the tube in one direction.

3. In a device of the character described, the combination of a spray tube, a series of dilating fingers encircling said tube, means for dilating the fingers at one end upon movement of the tube in one direction, a radially corrugated plate encircling said tube, a cap piece also encircling said tube outside of the plate, the fingers being provided with inwardly turned extremities adapted to fit in the corrugations of said plate and between the latter and the cap piece, and means for holding said plate and cap piece together to secure the fingers in place at different lateral adjustments.

4. In a device of the character described, the combination of a spray tube, a series of dilating fingers encircling said tube and formed at one end with inwardly turned extremities, a radially corrugated plate encircling the tube, the extremities of the fingers fitting in the corrugations of said plate, a cap piece encircling said tube outside of said plate and adapted to hold said extremities in the corrugations, and set screws secured to said plate and working through the cap piece, and means for expanding the opposite ends of said fingers.

5. A device of the character described, comprising a spray tube, a series of dilating fingers encircling said tube, means for expanding said fingers at their inner ends, a plate encircling said tube, a cap piece encircling said tube outside of said plate, the fingers being held between said plate and cap piece, both the plate and cap piece being provided with washers where they encircle the tube, and the tube being provided with spaced bulged portions adapted to engage said washers upon the movement of the tube in one direction or the other, as and for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

898,301. INCUBATOR. LEIGH S. BACHE, Boundbrook, N. J. Filed Sept. 26, 1907. Serial No. 394,670.



1. The combination of an incubator, a duct and a valve both in said incubator, the duct serving to discharge gas from said incubator, the valve serving to regulate the passage of gas into the duct, and the valve and duct being substantially coaxial and one of them being movable with respect to the other.

2. The combination of an incubator, a duct and a valve both in said incubator, the duct serving to discharge gas from said incubator, the valve serving to regulate the passage of gas into the duct, the valve and duct being substantially coaxial, one of them being movable with respect to the other, and the valve being provided with means to effect its operation exteriorly of the incubator.

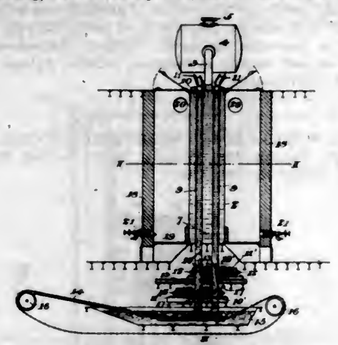
3. The combination of an incubator, a tubular duct and a tubular valve both in said incubator, the duct serving to discharge gas from the incubator and each of the two tubular parts being perforated and one of them being movable with respect to the other to put the perforations of the respective tubular parts into or out of register.

4. The combination of an incubator, a tubular duct and a tubular valve both in said incubator, each of said tubular parts being perforated and the valve being turnable with respect to the duct to put the perforations of the respective tubular parts into or out of register to regulate the admission of gas into said duct, and the latter serving to discharge such gas from the incubator.

5. The combination of an incubator, a tubular perforated gas discharge duct in the incubator for effecting the discharge of gas therefrom, and a movable tubular perforated valve also in said incubator for controlling the entrance of gas into the duct, one of said tubular parts being inclosed by the other.

[Claim 6 not printed in the Gazette.]

898,302. SLAG-HEATED BOILER. RALPH BAGGALEY, Pittsburg, Pa. Filed Apr. 19, 1904. Serial No. 203,884.



1. A steam generator comprising a setting, a boiler therein having internal and external heating surfaces, means within the setting for heating one of the heating surfaces with heated slag, and means within the setting for burning fuel to heat the other heating surface of the boiler, substantially as described.

2. A steam generator comprising a setting, a boiler therein, means for burning fuel within the setting to exteriorly heat the boiler, and means for passing heated slag through the boiler for interiorly heating the same, substantially as described.

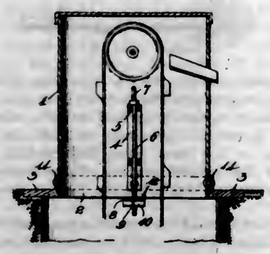
3. A steam generator comprising a setting, an upright boiler therein, means for passing heated slag through the boiler to interiorly heat it, and means for burning fuel in the setting and around the boiler to exteriorly heat the latter, substantially as described.

4. A steam generator comprising a setting, an upright boiler therein provided with open-ended longitudinal heat flues, means for conveying heated slag into the tops of the flues, means for carrying off the discharge of slag from the bottoms of the flues, and means for burning fuel within the setting around the boiler, substantially as described.

5. A steam generator comprising a setting, a boiler therein having open-ended longitudinal heating flues, means for feeding hot slag into the flues at one end of the boiler, means for carrying off the discharge of slag from the other ends of the flues, and means for burning fuel within the setting around the boiler, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

898,303. FASTENING DEVICE FOR PUMP CURBS OR FRAMES. THOMAS T. BAKER, Jonesboro, Ill. Filed Feb. 24, 1908. Serial No. 417,413.

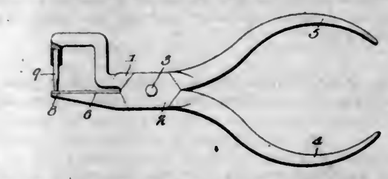


1. In a device of the character described, a pump curb adapted to be inserted into the opening of a well platform, a supporting strip secured to said curb adjacent to its lower end to engage the upper edge of the opening in the well platform whereby said curb is supported and held against lateral movement, a brace bar in said curb, a clamping bolt engaged with said bar, a clamping plate on said bolt having its opposite ends in engagement with the opposite edges of the opening in the platform, and a clamping nut on said bolt to engage said plate whereby the latter is held in operative engagement with said edges.

2. In a device of the character described, a pump curb adapted to be inserted in the opening of a well platform, means to support the curb in said opening, a bail-shaped brace bar secured at its lower end to the opposite sides of the curb, a clamping bolt engaged with said bar, a clamping plate having an aperture to receive said bolt and having its opposite ends in engagement with the opposite edges of the opening in the platform, and a clamping nut on said bolt to engage said plate.

3. In a device of the character described, a pump curb adapted to be engaged with an opening in the well platform, a supporting strip secured to said curb near its lower end to engage the upper edge of the opening in said platform whereby the curb is supported and held against lateral movement, a bail-shaped brace bar having offset lower ends secured to the opposite sides of said curb, a clamping bolt engaged with said brace bar, means on the upper end of said bolt whereby the same is operated, a clamping plate engaged with the lower end of said bolt, and with the lower edges of the opening in the well platform, a clamping nut on said bolt to engage said plate, and means to hold said nut against rotation.

898,304. WATCHMAKER'S PLIERS. EARL A. BARKER, Bemidji, Minn. Filed May 19, 1904. Serial No. 208,719.

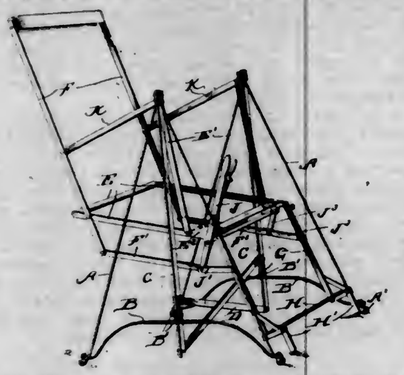


A pair of pliers adapted to be used for jewel setting comprising jaws pivoted together, one of which is straight and flagelliform and devoid of lateral projections, and having a work supporting surface occupying a plane in radial alinement with the pivot, and being provided at its outer end with a semicircular recess having its semicircular wall disposed at right angles to the plane of the work supporting surface, the other said jaw having a portion extending upward at a right angle to the radius of the pivot, then outward at a right angle to the first said portion, then downward parallel with the first said portion, the first said portion being greater in length than the last said portion, said downwardly extending portion being located opposite the recessed end of the first said jaw and having in its end a socket the center of which is alined directly opposite the center of the semicircular recess of the first said jaw, a straight punch held within the socket by frictional contact with the walls thereof, and the lower end of the downwardly extending portion of the upper jaw being spaced from the upper edge of the semicircular recess and the work supporting surface of the lower jaw when the said jaws are in closed position.

898,305. SWINGING CHAIR. JOHN C. BARNHART, Akron, Ohio. Filed May 17, 1905. Serial No. 260,815.

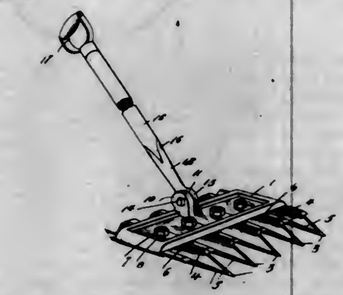
A device of the kind described comprising parallel A-shaped supporting frames, a rectangular chair seat frame, bars pivotally connected at their upper ends to the apex portions of the first mentioned frames and at their lower ends to the side members of the seat frame at points adjacent the front of said frame, a back frame pivotally connected to the sides of the seat frame, at points adjacent the rear end of said seat frame, the side members of the back frame extending below the seat frame, side arms pivotally connected to the apex portions of the first mentioned frames and to the back frame, respectively, a pivoted foot rest frame carried by the chair seat frame, links pivotally connected at their front ends to said foot

rest frame, rods pivotally connected to the lower ends of the side members of the back frame and also to the rear ends of the said links, a link pivotally connected at its upper end to one side of the seat frame and at its lower end to one of said rods and one of the first mentioned links at the pivotal point between them, a rack carried by the



opposite side of the seat frame and a lever pivoted adjacent said rack and working upon the same, the lower end of said lever being pivotally connected to and at a point of juncture between the other rod and the other first mentioned link.

898,306. ICE-CUTTING TOOL. JOHN G. BODENSTEIN, Staatsburg, N. Y. Filed Jan. 14, 1908. Serial No. 410,789.



An ice leveling tool comprising a knife bar having angularly inturned ends, a series of knives having flanged abutting edges, the said edges being recessed for a portion of their length, fastening bolts being passed up through the knife bar between such recessed edges, the bolts having squared heads engaging the flanged edges of the knives to hold them in place and said heads being tapered in thickness in a forward direction, the outermost knives having inclined sides to be engaged and held by the inwardly inclined ends of the knife bar, and a handle attached to the knife bar.

898,307. RESINOUS PRODUCT AND PROCESS OF MAKING SAME. RENÉ BOHN, Mannheim, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Apr. 3, 1908. Serial No. 425,012. (Specimens.)

1. The process of producing a product resembling resin by reacting in the presence of acid on one molecular proportion of naphthalene with more than half a molecular proportion of formaldehyde.

2. The process of producing a product resembling resin by reacting in the presence of acid on one molecular proportion of naphthalene with seven-eighths of a molecular proportion of formaldehyde.

3. As a new article of manufacture a product resembling resin obtainable by reacting in the presence of acid on one molecular proportion of naphthalene with more than half a molecular proportion of formaldehyde, which product is insoluble in water, alcohol, turpentine, and linseed oil, and soluble in benzene, toluene, xylene, naphtha, and chlorbenzene.

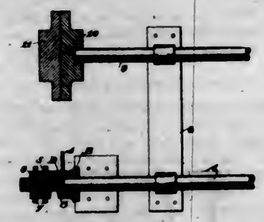
898,308. WALL-PAPER-MEASURING DEVICE. GILBERT H. BROADWATER, Thomas, W. Va. Filed May 13, 1907. Serial No. 373,468.



1. In a device of the character described, a measuring and indicating device mounted upon an arm pivoted to a support, said measuring and indicating device comprising a casing, a series of notched bearing disks projecting through the casing, a train of gearing within the casing, indicator hands, a dial, a spring for returning the hands to the zero point, and a lever and intermediate parts for holding and releasing said spring.

2. In a device of the character described, a casing mounted on a pivoted arm and provided with a series of bearing disks mounted on a shaft within the casing, said shaft comprising two sections having a flexible connection, a pinion mounted on one of said sections and adapted to engage a gear wheel mounted upon a shaft journaled in the casing, indicator hands and a dial on said casing, a spring within the casing, and a lever for throwing said pinion into and out of engagement with said gear wheel to permit the spring to return the hands to a zero point.

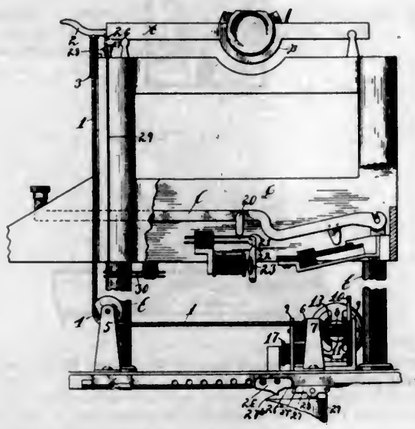
898,309. RELEASING MECHANISM FOR GRINDING-MILLS AND DISK PULVERIZERS. JAMES I. BROWN, Cripple Creek, Colo. Filed Mar. 12, 1908. Serial No. 420,568.



1. A releasing mechanism for grinding mills and disk pulverizers, comprising a shaft, a collar or bearing through which the shaft moves, a beveled washer, adjusting nuts adapted to screw on the shaft to hold the washer in position, one of the nuts being beveled and adapted to bear against the beveled portion of the washer whereby the shaft is moved longitudinally by the turning of the washer.

2. In a grinding mill the combination with a stationary disk, of a rotatable shaft, a disk mounted on the shaft, a secondary shaft, an arm connecting the two shafts together, a collar or bearing through which the secondary shaft moves, a beveled washer, adjusting nuts adapted to screw on the secondary shaft to hold the washer in position, one of the nuts being beveled and adapted to bear against the beveled portion of the washer, whereby the secondary shaft is moved longitudinally by the turning of the washer.

898,310. CARRIAGE-RETURN MECHANISM FOR TYPE-WRITERS. ELMER A. BURLINGAME, San Francisco, Cal., assignor to Burlingame Telegraphing Typewriter Company, a Corporation of Washington. Filed May 11, 1908. Serial No. 432,228.



1. The combination with a typewriter, of a friction disk having operating connections to the carriage thereof, whereby the rotation of the disk moves the carriage to return it to initial position, a friction wheel movable into and out of engagement with said disk, an armature lever for moving said friction wheel, an electro-magnet for operating said armature, a key having electrical connection for energizing said armature and a motor for operating the disk, substantially as described.

2. In a typewriter, a carriage, a winding drum having operating connections to the carriage, a motor, gearing connecting the shaft and drum, an armature adapted by its movement to engage and disengage said gearing, an electro-magnet, an electrical circuit including a source of electric energy and the said electro-magnet and motor, a switch lever also included in said circuit, a key on the typewriter for operating said switch, and means for holding said switch lever in contact position after the release of the key and until the carriage has been returned by the motor to initial position, substantially as described.

3. In a typewriter, a carriage, a rotary friction disk having operating connections to the carriage, a pivoted armature lever, a motor carried by said lever, a friction wheel carried by the shaft on the motor and located in proximity to the friction disk, a magnet coöperating with said armature lever, an electric circuit including a source of electric energy and a motor and electro-magnet, a switch lever, a key for operating the same, an armature lever adapted to engage said switch lever on its depression to hold it in a circuit closing position, and a second magnet included in said circuit and adapted to hold said armature in its locking position after the release of the key, substantially as described.

4. In a typewriter, a carriage, a rotary friction disk having operating connections to the carriage, a pivoted armature lever, a motor carried by said lever, a friction wheel carried by the shaft on the motor and located in proximity to the friction disk, a magnet coöperating with said armature lever, an electric circuit including a source of electric energy and a motor and electro-magnet, a switch lever, a key for operating the same, an armature lever adapted to engage said switch lever on its depression to hold it in a circuit closing position, and a second magnet included in said circuit and adapted to hold said armature in its locking position after the release of the key, and a second normally closed switch included in the circuit and adapted to be opened on the arrival of the carriage at initial position, substantially as described.

5. In a typewriter, a carriage, an electrical motor having operating connections thereto for returning the carriage to initial position, an electric circuit including said motor and a source of electric energy, a key operated circuit closing switch included in said circuit, and means for breaking the circuit automatically at the arrival of the carriage at or near initial position, comprising a switch lever included in said circuit, an adjustable stop on the carriage, a pivoted lever on the typewriter frame adapted to be rocked by said stop and a connection between said pivoted lever and said switch lever whereby they are operated in unison, substantially as described.

898,311. PROCESS OF MANUFACTURING NEW COMPOUNDS OF PROTEIDS WITH BISMUTH IODID. ALBERT BUSCH, Brunswick, Germany. Filed Aug. 16, 1906. Serial No. 330,895. (Specimens.)

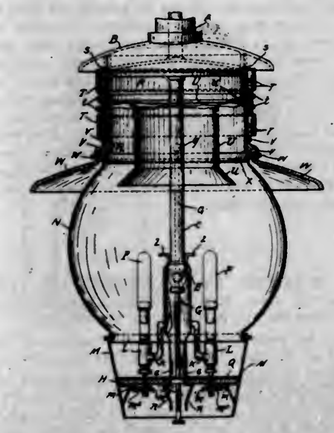
1. As a new article of manufacture an organic chemical compound of albuminous matter with bismuth iodid, sparingly soluble in water and diluted acid liquids but easily decomposable in dilute alkaline liquids, producible by heating the well known precipitate of the above ingredients for some time at raised temperatures above 100 centigrades, say from 100–130° C.

2. The method of producing a stable organic compound of bismuth iodid which consists in retaining a precipitate of bismuth iodid and albuminous matter at a temperature of 100° C. to 130° C. for a period of eight to ten hours.

3. The method of producing a stable compound of bismuth iodid, which consists in heating the precipitate of bismuth iodid and albuminous matter, at temperatures from 100°–130° C. until the compound formerly decomposable by water and dilute acids has become undecomposable and insoluble in such liquids.

4. As a new article of manufacture, a chemical compound of bismuth iodid with albuminous matter sparingly soluble in water and dilute acids, but easily decomposable in dilute alkaline liquids, produced by heating the precipitate of bismuth iodid and albuminous matter at temperatures from 100°–130° C.

898,312. GAS-LAMP. CLEMENT W. BOYSE, Chicago, Ill., assignor of one-half to Dwight B. Carmichael, Chicago, Ill. Filed Jan. 6, 1908. Serial No. 409,499.



1. The combination in a gas lamp of a gas cock casing, valve casings, gas pipes respectively communicating with

the gas cock casing and with the several valve casings, pipes mounted on the discharge sides of the several valve casings, such pipes respectively provided with air inlets and provided with branch pipes, mantles on the discharge ends of the several branch pipes, means comprising a gas supply pipe thereto, to support the gas cock casing, a receptacle in which the gas cock casing, the valve casings and the communicating pipes, the branched pipes and the mantles are contained, such receptacle comprising a base, a globe on the base, a perforated pipe forming a wind shield, and a chimney, and means to removably attach the base of the receptacle to the gas cock casing; substantially as described.

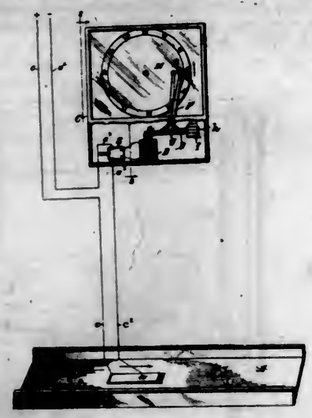
2. The combination in a gas lamp, of a gas cock casing, valve casings, a plurality of discharge adjustments to such valve casings, gas pipes respectively communicating with the gas cock casing and with the several valve casings, pipes mounted on the discharge sides of the several valve casings, such pipes respectively provided with air inlets and provided with branch pipes, mantles on the discharge ends of the several branch pipes, means comprising gas supply pipes thereto, to support the gas cock casing, a receptacle in which the gas cock casing, the valve casings and the communicating pipes, the branched pipes and the mantles are contained, such receptacle comprising a base, a globe on the base, a perforated pipe forming a wind shield and a chimney, and means to removably attach the base of the receptacle to the gas cock casing; substantially as described.

3. The combination in a gas lamp of a casing provided with a gas chamber, a gas cock casing, gas supply pipes communicating with the gas chamber and the gas cock casing, such supply pipes arranged to form the support of the gas cock casing, valve casings, and gas pipes communicating with the gas cock casing and with the respective valve casing on the supply side of such valve casings, a pipe provided with branch pipes on and communicating with the respective valve casings on the discharge sides thereof, mantles on the discharge ends of the respective branch pipes, a pipe provided with perforations adjacent to the ends thereof, means to attach the pipe to the first named casing, an additional and larger pipe open at the ends and attached to the perforated pipe concentric to the axis thereof, such additional pipe arranged to obtain an air passage between it and the first named pipe and to constitute a wind shield to the perforations in such first named pipe, a base attached to the gas cock casing and a globe on such base; substantially as described.

4. The combination, in a gas lamp, of a casing provided with a chamber, a pipe provided with perforations adjacent to the ends thereof, means to attach the pipe to the casing to form a wind guard, a chimney provided with a flaring lower end, an additional and larger pipe open at the ends, such chimney and such additional pipe respectively attached to the perforated pipe concentric to the axis of such perforated pipe, with such chimney within the perforated pipe and such additional pipe arranged to obtain an air passage between it and the perforated pipe and to constitute a wind shield to the perforations therein, a globe and means to maintain the globe with the upper end thereof adjacent to the lower end of the perforated pipe; substantially as described.

898,313. ELECTRIC RECORDER FOR ICE PLANTS. WILLIAM D. CAIN and WADE H. WILLIAMS, Durant, Okla. Filed May 9, 1908. Serial No. 431,878.

A device for recording the passage of blocks of ice, consisting of an inclined ice chute, a flat metallic strip of spring metal secured at one end to the bottom of said chute, and having its free end extending toward the lower end of said chute, a binding post located adjacent to the free end of said strip and arranged for contact with the latter, a time dial with means for rotating it, an electro-magnet, a lever with armature and trace arm, and a tracing point bearing on the time dial, a weight attached to said lever, and connections between said metallic strip and said electro-magnet, whereby the latter is operated



when the strip is forced against its contact by the downward passage of a block of ice.

898,314. COAL-WASHER AND ORE-CONCENTRATOR. ALONZO C. CAMPBELL, Asheville, N. C. Filed Aug. 4, 1906. Serial No. 329,241.



1. A machine of the class described, provided with a pan, and means for oscillating the pan and imparting percussive action to the same, the said pan being provided with inclined perforated transverse riffles having upwardly extending heads, said riffles being secured at one end to the bottom of the pan and having their heads provided with cut out portions located alternately in opposite ends of succeeding riffles to form a sig-zag passage in the pan.

2. A machine of the class described, provided with a pan and means for imparting a percussive action to the same, the said pan having perforated transverse riffles fixedly secured at their lower ends to the bottom of the pan and inclining upwardly and forwardly and provided with curved heads having cut out portions located alternately at opposite ends of succeeding riffles to form zigzag restricted regurgitating passages in the pan.

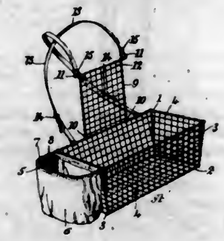
3. A machine of the class described, provided with a pan, means for oscillating the pan and imparting a percussive action to the same, the said pan having transverse perforated riffles having their lower ends fixed to the bottom of the pan and having their upper ends in the form of upwardly and rearwardly curved heads, and means for raising and lowering the said heads.

4. A machine of the class described, provided with a pan, means for oscillating the pan and imparting a percussive action to the same, the said pan having transverse perforated riffles having their lower ends fixed to the bottom of the pan and having their upper ends in the form of upwardly and rearwardly curved heads, each head having a rod extending through elongated slots in the sides of the pan, and nuts and washers for receiving the terminals of each rod to the sides of the pan.

5. A machine of the class described, provided with a pan, and means for oscillating the pan and imparting a percussive action to the same, the said pan having transverse perforated riffles fixedly secured at the lower ends to the bottom of the pan and inclining upwardly and forwardly, said pan also having interlocked barrier riffles, at intervals, forming with the bottom of the pan a percussive compacting passage.

[Claims 6 to 13 not printed in the Gazette.]

898,315. COMBINED CLOTHES AND CLOTHES-PIN RECEPTACLE. WALTER H. CARPENTER, Lehr, N. D. Filed May 11, 1908. Serial No. 432,030.



1. A device of the class described, comprising a receptacle having an extension at one end thereof, said extension forming a rim, a further receptacle independent of said first receptacle and suspended from said rim for receiving clothes-pins, and adjustable means for attaching said receptacles to the body of the user.

2. A device of the class described, comprising a receptacle for clothes, having an extension at one end thereof, a bag attached to said extension and adapted to receive clothes-pins, a shield mounted on one side of said receptacle, and means attached to said receptacle and to said shield for supporting the device.

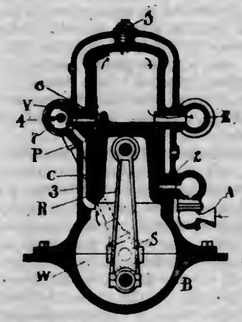
3. A device of the class described, comprising spaced wire frames, connecting members joining said frames, netting secured to said frames and constituting a receptacle for clothes, one of said frames having an extension forming a rim, a bag suspended from said rim and adapted to receive clothes-pins, a shield mounted upon one of said frames, and adjustable straps, each having an end secured to one of said frames and an end secured to said shield.

898,316. WINDOW-CLEANER ATTACHMENT. ALVIN E. CARLSON, Minneapolis, Minn., assignor to Edward Dannecker, Minneapolis, Minn. Filed Apr. 15, 1907. Serial No. 368,407.



A window cleaning device comprising a socket for the reception of a handle and having a circular extension, a sleeve provided with a like extension, each of said extensions having a serrated peripheral flange, a screw passing through one of the extensions and threaded to the other, an expansion spring mounted upon said screw and tending to separate the extensions, as set forth.

898,317. EXPLOSIVE-ENGINE. VARNUM F. CARPENTER, Cleveland, Ohio. Filed Dec. 21, 1907. Serial No. 407,527.

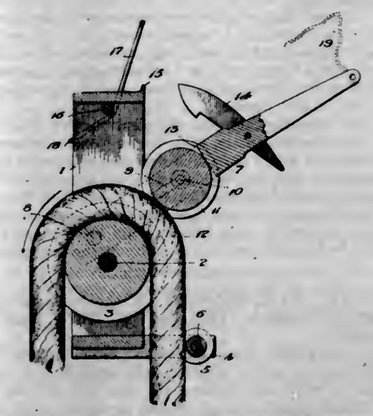


1. An engine having an explosion chamber and a piston therein, a duct for the charge leading to said chamber, a rotatable valve in said duct, means to rotate said valve and open and close the same at alternate strokes of the piston and means to retire said valve bodily from said duct and leave the duct unobstructed, whereby a two cycle engine is obtained.

2. A four cycle engine having an explosion chamber, a piston and shaft, and a gas supply duct to said chamber, a rotatable valve in said duct, means to continuously rotate the valve while the engine is in operation, and means to retire the valve from said duct to obtain two-cycle operations.

3. A four-cycle engine having a vertically disposed explosion chamber, a piston and a duct leading to the said chamber, a rotatable valve in said duct and time gears to rotate said valve once during two strokes of said piston, a shaft slidable in one of said gears and having said valve fixed thereto, and a lever to operate said shaft and retire said valve.

898,318. AUTOMATIC SAFETY PULLEY-LIFT. FRANK W. CARTER, San Diego, Cal., assignor to Automatic Safety Pulley Block Manufacturing Company, a Corporation of Arizona. Filed June 8, 1907, Serial No. 377,931. Renewed May 29, 1908. Serial No. 435,694.



1. In an automatic safety pulley lift, the combination with a frame, and a cable-sheave carried thereby, of a choke-sheave carrier eccentrically pivoted in relation to the cable-sheave, and a choke-sheave carried by said carrier and also movable in relation to said carrier.

2. In an automatic safety pulley lift, the combination with a frame, and a cable sheave carried thereby, of a choke sheave carrier eccentrically pivoted in relation to

the cable-sheave, a choke-sheave carried by said carrier and also movable in relation to said carrier, and means on the choke-sheave carrier adapted to engage the choke-sheave when it is shifted by engagement with the cable to thereby exert a braking action on said choke-sheave.

3. In an automatic safety pulley lift, the combination with a frame, and a cable-sheave carried thereby, of a choke-sheave carrier pivoted to the frame, a choke-sheave carried by the choke-sheave carrier, and braking means carried by said choke-sheave carrier adapted to engage the choke-sheave.

4. In an automatic safety pulley lift, the combination with a frame, and a cable-sheave carried thereby, of a choke-sheave carrier pivoted to the frame, a choke-sheave carried by and movable in relation to said choke-sheave carrier, and means carried by the choke-sheave carrier for exerting a braking action on said choke-sheave.

5. In an automatic safety pulley lift, the combination with a frame, of a cable-sheave carried thereby, a choke-sheave carrier pivoted to the frame eccentrically in relation to the cable-sheave, a choke-sheave carried by said carrier, and means for securing the choke-sheave carrier in inoperative position.

898,319. STRING-FASTENER. CHARLES H. CHANDLER and CHARLES L. CHANDLER, Seattle, Wash. Filed Oct. 1, 1907. Serial No. 395,400.



1. In a fastener of the character described, a tongue member formed of spring metal and having an aperture intermediate its length and recesses to one side thereof to provide a terminal head, combined with a fixedly-secured hook projecting through the aperture in said tongue member, as and for the purpose described.

2. In a fastener of the character described, a backing-plate formed with a hook at one end and an aperture in proximity of its other end, a tongue member provided with a tang at one end for engagement with the plate through said aperture and having intermediate its length an aperture, and a fixedly-secured hook projecting through the aperture in said tongue member, as and for the purposes described.

3. In a shoe fastener, the combination with the shoe-top and a hook thereof, of a tongue member provided with an aperture through which said hook extends and extending to each side of the hook, and a backing-plate secured at one end to the shank of said hook and at the other end to an end of said member.

4. In a shoe-fastener, the combination with the lacing hook and a backing-plate, of a tongue member comprising a spring plate which is secured near one of its ends to the backing-plate and is provided with an aperture through which the neck of the hook extends, the part of the member which extends beyond the hook and opposite the end which is secured to said backing-plate being formed with recesses in its sides and in proximity of the extremity.

898,320. TAPE-MEASURE. WILLIAM CHESTERMAN, Sheffield, England. Filed July 30, 1906. Serial No. 328,294.

1. In measuring tapes, means for attaching the inner end of the tape to the winding axle comprising a central axle pin, a sleeve surrounding the said axle pin and having a longitudinal slot, and means facilitating the insertion of the axle pin through the inner looped end of the tape, substantially as described.

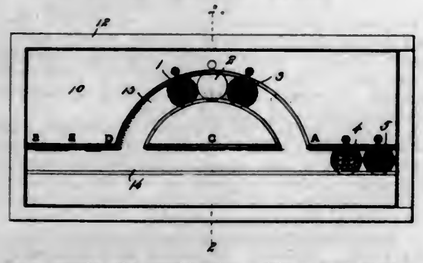
2. In a measuring tape, the combination of a central axle pin around which the end of the tape is looped, a winding handle hinged to said axle pin, and a sleeve having a longitudinal slot, said sleeve adapted to receive said end of tape around the axle pin and to operate as the winding drum; substantially as described.

3. In a measuring tape, the combination of a central axle pin having a flat portion around which the end of the tape is passed, a winding handle hinged to said axle pin, a



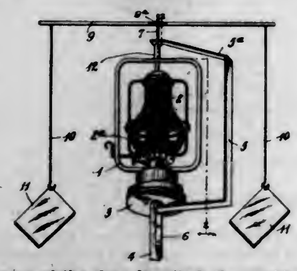
detachable slotted sleeve having a flat portion and adapted to engage over said axle pin, and end of the tape, thereby clamping the latter, substantially as described.

898,321. PUZZLE. JOHN W. CLARK, Champlain, N. Y. Filed Nov. 21, 1907. Serial No. 403,106.



In a puzzle, the combination with a base having a straight groove and a curved groove communicating therewith, the former having two stations indicated by colors near one end thereof and the curved groove having three stations indicated by different colors near the center thereof, of five disks slidable in said grooves and colored to correspond to said stations respectively, for the purpose and object described.

898,322. REVOLVING LAMP. CLAIBORN C. CLIFTON, Hailey, Idaho, assignor of one-half to Theophile E. Picotte, Hailey, Idaho. Filed Apr. 30, 1908. Serial No. 430,125.



1. In means of the class described, the combination of a support, a lantern rotatably mounted thereon, wind vanes connected with said lantern for effecting revolution of the same, said vanes being provided with reflecting surfaces upon which the light rays from the lantern are adapted to be projected.

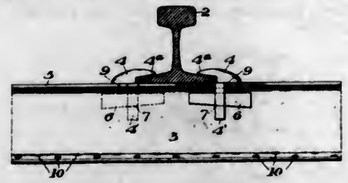
2. In means of the class described, the combination of a support, a lantern rotatably mounted thereon, wind vanes connected with the axis of the lantern and arranged upon opposite sides thereof to effect revolution of said lantern, the lantern embodying an opaque light inclosing body, having translucent portions through which the light rays are adapted to be projected upon the vanes aforesaid, and said vanes having reflecting surfaces.

3. In means of the class described, the combination of a supporting post, a bracket attached thereto and having a laterally extending arm provided with a bearing, a lantern mounted upon said post, an anti-friction bearing between the base of the lantern and the post, a journal member extending from the upper portion of the lantern and received by the bearing of the bracket arm, a bar connected with the journal member, pendent rods supported by said bar, and wind vanes carried by said pendent members.

4. In means of the class described, the combination of a supporting post, a bracket attached thereto and embodying a laterally extending arm provided with a bearing, a lantern mounted upon said post, an anti-friction bearing between the base of the lantern and the post, a journal member extending from the upper portion of the lantern and received by the bearing of the bracket arm, a bar connected with the journal member, pendent rods supported by said bar, and wind vanes carried by said pendent members, said wind vanes embodying reflecting surfaces and being arranged at opposite sides of the lantern.

5. In means of the class described, the combination of a supporting post, a U-shaped bracket secured to a side of said post and embodying at its upper end a lateral extending arm provided with a bearing, a lantern supported upon the upper end of the said post, an anti-friction bearing between the base of the lantern and the post, a journal member extending from the upper end of the lantern through the bearing in the bracket arm, a transverse bar detachably secured to the upper end of the journal member, dependent rods carried by the opposite ends of said bar, and wind vanes carried by the lower ends of the pendent rods and arranged on opposite sides of the lantern and being provided with opposite reflecting surfaces, the lantern embodying a light inclosing body having transparent portions through which the light rays are adapted to be projected upon the reflecting surfaces of the wind vanes.

898,323. RAILWAY-TIE AND RAIL-FASTENING. WILLIAM A. CLINE, Munhall, Pa. Filed June 24, 1907. Serial No. 380,420.



1. A railway tie of I-beam form having a top and bottom flange, means for securing the rails to the top flange and a series of tapering openings or holes in the bottom flange of the tie, the large end of said openings being on the outer surface of said flange; substantially as described.

2. An adjustable rail fastening comprising a tie having slotted openings therein, bolts in said openings for securing the rails to the tie, means in said openings permitting adjustment of the bolts in said slotted openings, heads on said bolts having a bearing portion contacting with the top surface of said tie and a nose portion engaging with and retaining the rails in place on the tie and means for holding the bolts in place on the tie; substantially as described.

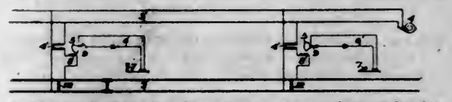
3. In a rail fastening the combination with a tie having slotted openings therein, of bolts adjustably located in said openings, heads on the bolts having bearing portions adapted to bear on the top of said tie and nose portions engaging with and retaining the rails in position on the tie, the heads of the bolts having an oval upper surface, slots in the shanks of said bolts, and tapered keys in the slots by which the bolts are secured in place in the slotted openings in the tie; substantially as described.

4. In a rail fastening the combination with a tie having slotted openings therein, of bolts adjustably located in said openings, heads on the bolts having bearing portions adapted to bear on the top of said tie and nose portions engaging with and retaining the rails in position on the tie, the heads of the bolts having an oval upper surface, slots in the shanks of said bolts, and tapered keys in the slots by which the bolts are secured in place in the slotted openings in the tie, said keys being bent to prevent their withdrawal from the slots in the shank of said bolts; substantially as described.

5. In a rail fastening the combination with a tie having slotted openings therein, of rail securing bolts in said openings, having oppositely facing nose portions adapted to engage with and hold the flanges of the rail in position on the tie, means in said openings permitting the location of the bolts and the rail being shifted lengthwise on the tie, and means for securing the bolts in place on the tie; substantially as described.

[Claim 6 not printed in the Gazette.]

898,324. ELECTRIC SIGNALING SYSTEM. ELMER R. COE, Wilkinsburg, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed May 11, 1908. Serial No. 432,041.



1. In an electric signaling system, a transformer for impressing a signaling current upon the track rails, and a signal-controlling relay having its energizing winding connected in series with the track and between the secondary winding of the transforemer and the track; substantially as described.

2. In an electric signaling system, track rails which are electrically continuous, a transformer for impressing a signaling current upon the track rails, and a signal controlling relay having its energizing winding connected in series with the track and between the secondary winding of the transformer and the track; substantially as described.

3. In an electric signaling system, track rails which are electrically continuous, a transformer for impressing a signaling current upon the track rails, and a signal-controlling relay having its energizing winding connected in series with the track and between the secondary winding of the transformer and the track, together with means for reducing the variations in the distance at which the relay will operate; substantially as described.

4. In an electric signaling system, track rails which are electrically continuous, a tranformer for impressing a signaling current upon the track rails, and a signal-controlling relay having its energizing winding connected in series with the track and between the secondary winding of the transformer and the track, together with cross-bonds connecting the track rails at intervals; substantially as described.

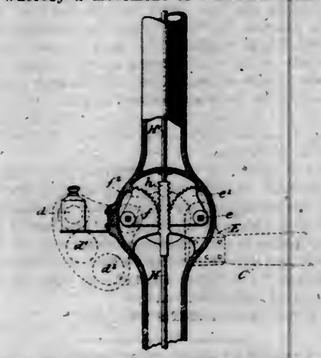
5. In an electric signaling system, track rails which are electrically continuous, a transformer for impressing a signaling current upon the track rails, and a signal-controlling relay having its energizing winding connected in series with the track and between the secondary winding of the transformer and the track, together with resistance bonds connecting the track rails; substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

898,325. RAILWAY-SIGNAL. JOHN P. COLEMAN, Edgewood Park, Pa., assignor to The Union Switch and Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Mar. 20, 1906. Serial No. 307,003.

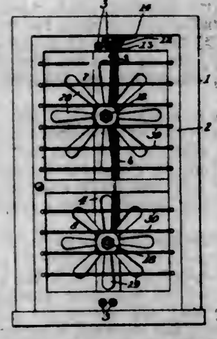
The combination with a signal comprising a blade for giving day indications and having a normal bias to danger

position by its own weight, means for giving night indications, a pivot for the blade, a support for the said means adjacent said pivot, gearing between the blade and said means, whereby a movement of the blade from or to its



biased position will cause the said means to be operated to give the same indication as the blade, means for moving the blade upward from its biased position, and a casing for the gearing.

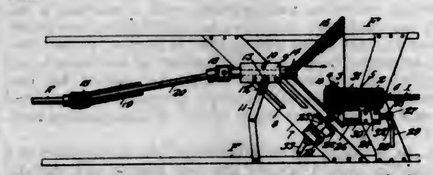
898,326. COMBINED DOOR-CLOSER AND FLY-CHASER. JOHN COSTANTINI, Tercio, Colo. Filed Aug. 28, 1907. Serial No. 390,493.



A structure of the character described, comprising a door-frame and a door, a vertical standard detachably secured to the door and having cut-away portions arranged at suitable distances apart, said standard being also provided with a longitudinal groove therein, bolts having shoulders thereon projecting through the standards and the cut-away portions, the bolts having opposite screw-threaded ends, sectional fan hubs, the inner sections of which are rotatably mounted on the bolts and provided with drums arranged within the cut-away portions of the standard, the outer sections of the hubs being adjustably secured to the outer screw-threads of the bolts, said outer sections having sleeves thereon provided with coiled springs thereon which are secured to and inclosed by said hubs, a cord suitably connected at one end and its other end secured to the drums which serve to wind the same thereon, and said cords serving to wind the springs, substantially as specified.

898,327. VARIABLE-SPEED GEAR. ROYDEN O. COUCH, Charleston, W. Va. Filed Oct. 12, 1907. Serial No. 397,138.

1. In a device of the class described, a driven shaft, a cone pulley mounted on the driven shaft, a bearing member supported for oblique movement with relation to the driven shaft, a transmission shaft journaled in the bearing member, a friction cone upon the transmission shaft adapted for direct engagement with the cone pulley upon the driven shaft, and a slidably supported pulley arranged adjacent to the pulley upon the driven shaft and adapted to force the friction cone into active engagement therewith.

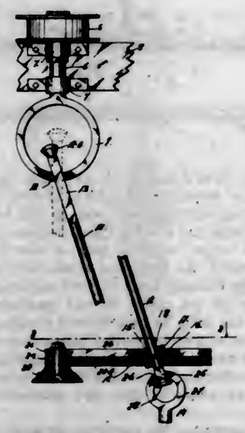


2. In a device of the class described, a driven shaft supported for rotation, a conical friction pulley and a cylindrical friction pulley upon said shaft, an obliquely movable shaft, a friction cone upon the obliquely movable shaft, a longitudinally movable shaft supported adjacent to the main driven shaft, and a cone pulley and a cylindrical pulley upon the longitudinally movable shaft adapted for simultaneous engagement with the cylindrical pulley upon the main driven shaft and with the friction cone upon the obliquely movable shaft.

3. In a device of the class described, a main driven shaft, a cone pulley mounted thereon, an obliquely movable transmission shaft, a friction cone mounted thereon, means for preventing endwise thrust or movement of the main shaft, and friction means for simultaneous engagement with and transmission of motion between the friction cone and the cone pulley.

4. In a device of the class described, a driven shaft supported for rotation, a conical friction pulley and a cylindrical friction pulley upon said shaft, an obliquely movable shaft, a friction cone upon the obliquely movable shaft, a laterally slidable spring actuated boxing supported adjacent to the main driven shaft, a longitudinally movable spring actuated shaft supported for rotation in said boxing, and a cone pulley and a cylindrical pulley upon the longitudinally movable shaft adapted for simultaneous engagement with the cylindrical pulley upon the main driven shaft and with the friction cone upon the obliquely movable shaft.

898,328. MECHANICAL MOVEMENT. CHARLES J. COULTER, Longmont, Colo. Filed Mar. 18, 1907. Serial No. 363,094.



1. The combination with a driving shaft, a ring provided with an opening angular in shape and flaring, the shaft having a portion of counterpart shape passing through the said opening, a frame, and a bearing mounted in said frame and pivoted at two opposite points and through which the said shaft passes and in which the latter is journaled.

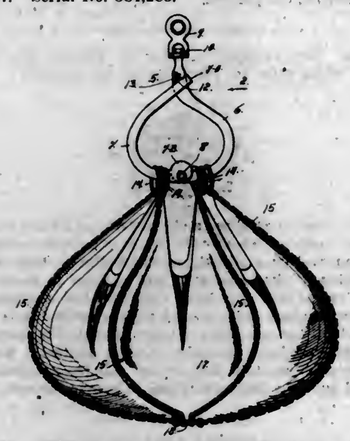
2. The combination of a driving shaft, a driven shaft having a universal joint connection with the driving shaft, a frame a block slidably mounted in said frame, and a bearing through which the shaft passes, the said bearing being pivoted at two opposite points to allow the shaft to oscillate or occupy various angles with reference to the axis of the driving shaft, substantially as described.

3. The combination with a driving shaft, of a driven shaft having a universal joint connection with the driving shaft, a frame a block slidable in the frame, two sleeves the first of which is pivoted in the block at two opposite points, while the second is pivoted in the first at two opposite points, the axes of the pivots of the two rings extending at right angles to each other, one sleeve being located within the other, and the driven shaft taking bearing in the inner sleeve, substantially as described.

4. The combination with a driving shaft, of a driven shaft having a universal joint connection with the driving shaft, a pivotally mounted frame, a block slidably mounted in the frame, a bearing for the said driving shaft mounted in the block and in which said shaft is adapted to rotate, the said bearing having a universal joint connection with the block.

5. The combination with a driving shaft, of a driven shaft having a universal joint connection with the driving shaft whereby the two shafts are connected to rotate in unison, a frame, a block slidably mounted in the frame, a bearing having a universal joint connection with the block, through which bearing the shaft passes and in which it is journaled, the frame being mounted to swing in a plane at right angles to the axis of the driving shaft, an operative connection between the driven shaft and a tool, the latter having an eye provided with an opening in its ring or periphery of angular shape and outwardly flared, the driving shaft passing through said opening and having an angular portion, the counterpart of the opening in the ring.

898,329. AUTOMATIC HOOK. CHARLES J. COULTER and EDWARD TUGGY, Longmont, Colo., assignors of one-third to Oswell T. Ellis, Golden, Colo. Filed July 17, 1907. Serial No. 384,283.



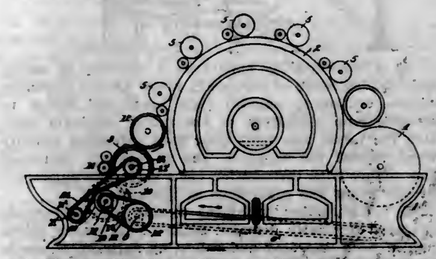
1. A hook consisting of two members pivotally connected at their lower extremities, one of the members having a beveled face, and an adjacent shoulder whereby the two hook members are adapted to automatically interlock, one of the members being composed of spring material to allow it to yield laterally as it engages the beveled face of the other member, substantially as described.

2. A hook composed of two members pivotally connected at their lower extremities, the upper portion of one member being provided with an interlocking shoulder, adapted to engage the free extremity of the other member, the shouldered member having a beveled portion adjacent the said shoulder causing the other member to yield laterally as it is pressed into interlocking engagement with the first named member, substantially as described.

3. A hook composed of two members pivotally connected, one of the members being shouldered and provided with an adjacent beveled face to automatically interlock with the other member as the latter is properly actuated, the shouldered member having an upwardly projecting separating lug formed on its pivoted extremity for the purpose set forth.

4. A hook composed of two members pivotally connected, one of the members being shouldered and beveled to automatically interlock with the other member as the latter is properly actuated, the pivoted extremities of the two members being provided with lugs both of which project upwardly when the hook is in the closed position, substantially as described.

898,330. WASTE-SAVING DEVICE. JOHN H. CROWTHER and GEORGE A. CROWTHER, Auburn, N. Y. Filed June 9, 1906. Serial No. 321,080.



1. The combination with a carding machine including the main cylinder, the licker-in and the doffer, of a spaced feeding roller contiguous to the licker-in, an endless conveyer belt arranged to receive the material falling from the doffer, a picker cylinder arranged to receive the material as it breaks over the discharge end of the belt and feed it to the licker-in between the licker-in and the feed rollers.

2. In an apparatus of the class described, a main cylinder, a licker-in at one side of the main cylinder, a doffer at the opposite side of the main cylinder, a conveyer device arranged to receive material falling from said doffer, spaced feed rollers arranged to feed the material to said licker-in, and a picker cylinder arranged to receive the material as it breaks over the discharge end of the conveyer device and feed it to the licker-in between the feed rollers and said licker-in.

3. In an apparatus of the class described, a main cylinder, a licker-in at one side of the main cylinder, a doffer at the opposite side of the main cylinder, a conveyer device arranged to receive material falling from said doffer, spaced feed rollers arranged to feed the material to said licker-in, and a picker cylinder arranged between the discharge end of the conveyer device and said licker-in and spaced from the conveyer device and with the lower portion of the periphery thereof below the upper line of the conveyer device and the upper portion of the periphery of the picker in position to feed the material to the licker-in between the licker-in and feed rollers.

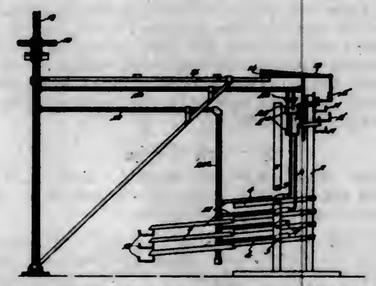
4. The combination with a carding machine including the main cylinder, the licker-in and the doffer, of a conveyer arranged to receive the material falling from the doffer, and a picker cylinder horizontally spaced from the conveyer to engage the material as it leaves the conveyer and deliver it to the licker-in.

5. The combination with a carding machine, including the main cylinder, the licker-in and the doffer, of a picker cylinder, and an endless conveyer horizontally spaced from the picker cylinder and arranged beneath the doffer to receive the waste material and foreign matter dropping from the doffer and operating to uniformly feed the waste and

foreign matter toward the picker cylinder, the latter taking the fluffy waste from the conveyer and restoring it in its fluffy state to the licker-in and permitting the foreign matter to drop through the space between it and the conveyer.

[Claims 6 and 7 not printed in the Gazette.]

898,331. CONCENTRATING APPARATUS. WILTON E. DARROW, Sutter Creek, Cal. Filed Sept. 4, 1907. Serial No. 391,340.



1. In a concentrating apparatus, a plurality of superposed annular series of stationary tables having collecting surfaces, stationary annular pulp boxes and means to distribute pulp therefrom to the tables, supports upon which the tables rest with their ends extending radially inward beyond the supports, and a centrally journaled water supply with distributing arms extending outwardly over the tables and contiguous to the supports.

2. A concentrating apparatus having in combination, superposed circularly disposed series of stationary tables provided with retarding and collecting surfaces, supports upon which intermediate portions of the tables are pivotally mounted, said tables having their inner ends extending radially and unobstructedly beyond the supports towards the center of the apparatus, means for changing the inclination of the tables independently, a central water-supply pipe and spraying branches therefrom extending over the unobstructed inner end of the tables, and means for causing the spraying devices to move transversely over the tables.

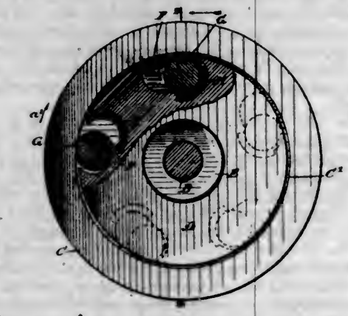
3. In a concentrating apparatus, superposed circularly disposed series of stationary tables having retarding and collecting surfaces, supports upon which said tables are pivoted intermediate of their length, with the inner ends projecting radially and unobstructedly toward the center beyond the supports, means including supports for the other or outer end of the tables, for changing the inclination of said tables independently, spraying devices projecting outwardly over the unobstructed inner ends of the tables, a central source of supply, connections between said source and the spraying devices whereby said devices may be caused to move transversely over the tables, and means to segregate and collect the products delivered from the tables.

4. In a concentrating apparatus, superposed circularly disposed series of stationary tables having retarding and collecting surfaces, supports upon which said tables are pivoted intermediate of their length, said tables having inner ends projecting radially and unobstructedly toward the center beyond the supports, means for changing the inclination of said tables independently, spraying devices projecting outwardly over the unobstructed inner ends of the tables, a central source of supply, connections between said source and the spraying devices whereby said devices may be caused to move transversely over the tables, means to segregate and collect the products delivered from the tables, said means including radially disposed launders traveling in unison with the spraying devices, and stationary circular launders into which said traveling launders discharge.

5. In an apparatus of the character described, a plurality of superposed tables arranged circularly and radially in series one above the other, fulcrumed supports upon which said tables rest intermediate of their length, said tables having their inner ends projecting radially and unobstructedly interior to the supports, exterior fixed posts, means for adjustably engaging the outer ends of the tables with said fixed supports whereby the angles of the tables may be independently adjusted, a central revoluble water supply pipe, a branch extending radially therefrom, and spray pipes projecting from said branch above the unobstructed ends of the tables, said pipes being capable of movement in a circle and transversely over the tables.

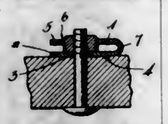
[Claims 6 to 8 not printed in the Gazette.]

898,332. FRICTION-CLUTCH. HENRY N. DAVIS, Independence, Mo. Filed Jan. 18, 1908. Serial No. 411,406.



A friction clutch comprising a driving member having elongated pockets in its periphery, each pocket having an inclined bottom, and a cut-away portion at the deeper end of the pocket, said portion having a cushion of rubber secured therein, the outer face of the rubber being continuous with the surface of the pocket, a driven member having a recess in its face into which fits the driving member, and rollers in the pockets.

898,333. NUT-LOCK. ALBERT W. DAWES, New Hope, Cal. Filed Sept. 16, 1907. Serial No. 393,080.



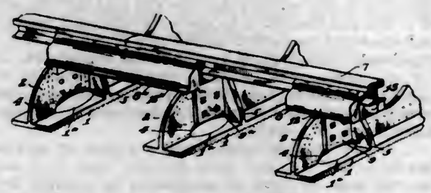
A nut lock comprising an oblong body of pliable but non-resilient material whose ends are substantially round and are connected by a slightly attenuated neck, both of said ends being of the same area and adapted to mate when folded, one of said ends being thickened and roughened on its under surface and provided with a central hole to receive a bolt, the opposite end being of equal thickness with the neck and being provided with a centrally disposed squared opening, said last named end being folded over parallel with the first named end to engage the nut.

898,334. SELF-ROLLING BALL OR GLOBE. ALBERTO L. DAY, Wesley, Me. Filed Jan. 9, 1908. Serial No. 409,971.

A self rolling ball having a shaft passing through the center thereof and fixed at diametrically opposite points to the inner face of said ball, a post carried by said shaft, a U-shaped swinging member loosely mounted on said shaft and connected at its ends by vertically spaced cross bars, a revoluble upright mounted at one end in said U-shaped member and at its other end in said post, a coiled spring fixed at one end to said upright and at its other end to said U-shaped member, a ratchet on said upright, a beveled gear wheel on said post having a pawl for engagement with said ratchet, a rotary shaft mounted in said U-shaped member and having longitudinally spaced beveled pinions for engagement with said gear wheel, a pinion carried by said rotary shaft, and a pinion fixed to said first mentioned shaft and meshing with the pinion on said rotary shaft.



898,335. RAILWAY-TIE AND RAIL-FASTENING. WILLIAM P. DAY, Altoona, Pa. Filed Nov. 4, 1907. Serial No. 400,617.



1. A metallic railway tie, comprising a base portion and a longitudinally extending web projecting upwardly therefrom, in connection with means for holding rails to the tie, the web being formed with recesses underneath the rail holding means, and the base portion being formed with openings registering with said recesses.

2. In a rail tie and fastener, the combination of a tie provided with a longitudinal web, said web being formed in its upper edge with sockets, chairs embodying fish plates and wings, the latter being designed to abut against opposite sides of the web and formed with oppositely facing thickened portions producing downwardly facing shoulders resting in said sockets, and means for securing the wings to the web.

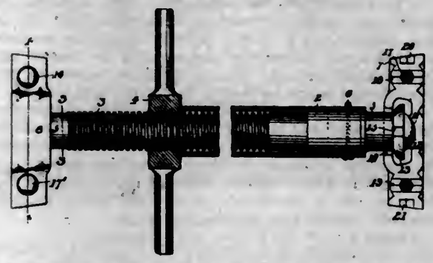
3. In a rail tie and fastener, the combination of a tie provided with a longitudinal web and inner and outer vertically extending transverse webs, the longitudinal web being formed in its upper edge with sockets, chairs embodying fish plates and depending wings adapted to be bolted to the longitudinal web on opposite sides of the same and between the transverse webs, each chair being formed with a downwardly facing shoulder resting in the socket and with a lug resting on the upper edge of the longitudinal web.

4. In a rail tie and fastener, the combination of a tie provided in its upper edge with sockets, chairs adapted to be secured to the tie and formed with downwardly facing shoulders resting in said sockets, rails, blocks interposed between the rails and the chairs, and means for securing the rails to the chairs.

898,336. TRENCH-BRACE. MURRELL R. DE FRANCE and ALBERT E. READ, Bellevue, Pa. Filed Apr. 22, 1908. Serial No. 428,693.

1. In a trench brace, the combination with a brace arm, of a shoe recessed on its inner face to form a socket and on its outer face adapted to bear against a trench wall, the shoe being formed of two half sections united on a line extending through the said inner and outer facer thereof, one-half of the bearing socket and one-half of the trench-engaging surface being carried by each section, and means for uniting the sections.

2. In a trench brace, the combination of a brace arm, a shoe open on its inner face and formed in sections with the meeting line of the sections intersecting the opening in the inner face and extending from said face to the outer bearing face of the shoe, the meeting faces of the sections recessed to embrace the extremity of the brace arm extending through said open inner face and loosely hold the same from being withdrawn, and means preventing the arm from rotating in the shoe.



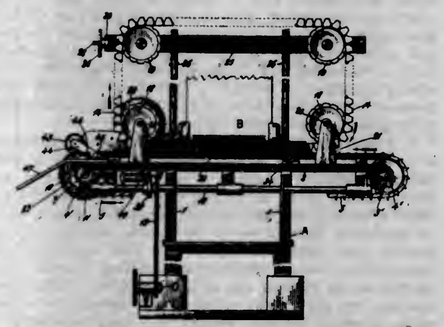
3. In a trench brace, the combination with a brace arm enlarged at its end, of a shoe formed in two half sections of like form fitting together and recessed to embrace and loosely confine the arm enlargement with means for securing together the shoe sections.

4. In a trench brace, the combination of a brace arm enlarged at its end, a shoe formed in two half sections of like form fitting together, the meeting faces of the sections recessed to embrace and confine the arm enlargement, the latter formed with notches, and lugs carried by the sections within said recessed faces which enter said notches and prevent rotation of the arm.

5. In a trench brace, the combination of a brace arm, a shoe formed in sections fitting together and recessed on their adjacent faces to embrace and form a bearing for the arm extremity with means securing the sections together, and complementary interfitting projections and depressions on the meeting faces of the sections.

[Claims 6 to 8 not printed in the Gazette.]

898,337. BOX-FILLING MACHINE. JOHN W. DENMEAD, Akron, Ohio, assignor to The Diamond Match Company, New York, N. Y., a Corporation of Illinois. Filed Jan. 15, 1904. Serial No. 189,109. Renewed Feb. 15, 1908. Serial No. 416,106.



1. In a box filler, the combination with means for supporting a series of boxes with their lids in open position, of a carrier provided with depending feed portions arranged to travel above said boxes and proportioned to afford between adjacent portions, spaces for the open lids, and means for actuating said carrier.

2. In a box filler, the combination with means for supporting a series of boxes, with their lids in open position of a carrier provided with hopper-like portions arranged to travel above said boxes, and to afford between adjacent

portions spaces for the open lids and means for actuating said carrier.

3. In a box filler, the combination with means for impelling a train of boxes with their lids in open position, of a carrier provided with depending feed portions arranged above the path of said boxes and proportioned to afford between adjacent portions, spaces for the open lids, and means for moving said carrier in concert with the train of boxes.

4. In a box filler, the combination with a carrier, to receive and support a train of boxes with their lids in open position, of a carrier having hopper-like portions arranged above the path of the boxes in the former carrier, to afford between adjacent portions spaces for the open lids and means for moving said carriers in concert.

5. In a box filler, the combination with an endless carrier to receive and support a train of boxes with their lids in open position, of an endless carrier having hopper-like portions arranged to travel above the path of the boxes and to afford between adjacent portions spaces for the open lids in the former carrier, and means for continuously driving said carriers in concert.

[Claims 6 to 21 not printed in the Gazette.]

898,338. ADJUSTABLE SCHEDULE. JOHN C. DIEFFENBACH, Cincinnati, Ohio. Filed Aug. 12, 1907. Serial No. 388,137.



1. The combination with a back member having thereon a plurality of indicating symbols arranged in a predetermined order, and also having a series of setting symbols, and a front member having a series of apertures, with a series of names arranged adjacent to said apertures, and having also a single aperture, said setting symbols being adapted to be exposed one at a time through said single aperture by adjustment of said back member, the indicating symbols, setting symbols, and apertures being so arranged that on the exposure of any one of the setting symbols, the indicating symbols on the back member and the names on the front member will be so arranged as to give certain definite information.

2. A base-ball schedule consisting of the combination with a back member having thereon a plurality of indicating symbols arranged in a predetermined order, and also having a series of setting symbols, representing the months of the year, and a front member having a series of apertures, with a series of names representing the playing clubs arranged adjacent to said apertures, and having also a single aperture, said setting symbols being adapted to be exposed one at a time through said single aperture by adjustment of said back member, the indicating symbols, setting symbols, and apertures being so arranged that on the exposure of any one of the setting symbols, the indicating symbols on the back member and the names of the clubs on the front member will be so arranged as to give certain definite information.

898,339. WIRE-FENCE TIE. WASHINGTON M. DILLON, Sterling, Ill. Filed Nov. 14, 1907. Serial No. 402,176.

1. A wire fence tie formed from a section of wire rod bent into the form of a loop and adapted to be engaged with the stay wire and line wires of the fence, and beveled or inclined guiding surfaces formed on the opposite ends of the tie wire whereby said ends when bent into engagement with the oblique looped portion of the tie will be guided thereby and permitted to tightly grip the stay wires of the fence, substantially as described.

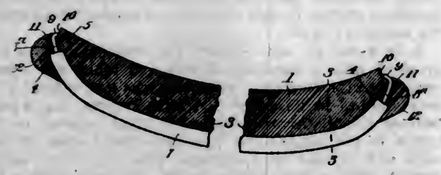


2. A wire fence tie formed of a wire rod having a flat side and adapted to be bent around the line and stay wires of a fence with the flat side of the tie in engagement with said fence wires, substantially as described.

3. A tie of the character described, formed from a section of wire rod having a flat side and bent into the form of a loop and adapted to be applied to the cross stay and line wires of a fence with the flat side of said tie wire in engagement with the stay and line wires whereby the latter are rigidly bound together, and means whereby the ends of said tie wire are guided in their movement and permitted to rigidly grip the stay and line wires of the fence, substantially as described.

4. A wire fence tie formed from a section of wire rod having a flat side and bent into the form of a loop, the flat side of which is adapted to be engaged with the stay wire and line wires of the fence, and beveled guiding surfaces formed on the opposite ends of the tie wire whereby said ends, when bent into engagement with the oblique looped portion of the tie, will be guided thereby and permitted to tightly grip the stay and line wires of the fence, substantially as described.

898,340. CUSHIONED ROCKER. WILLIAM DINGMAN, Dresden, Ohio, assignor of one-half to J. W. Lanning, Dresden, Ohio. Filed Apr. 6, 1908. Serial No. 425,583.



1. A cushioned rocker, comprising a body provided with a groove in only its lower face and with upwardly-extending sockets opening at their lower ends upon the grooves and terminating at their upper ends in apertures extending through the body, a rubber tire positioned in said groove and having its ends seated in the sockets, a metallic fastening-member extending through the tire and projecting beyond the ends thereof and through the apertures and beyond the upper or outer ends of said apertures, and fastening means positioned in the body of the rocker and engaging the metallic fastening member in the apertures, for securing the fastening member and tire against displacement off of the body.

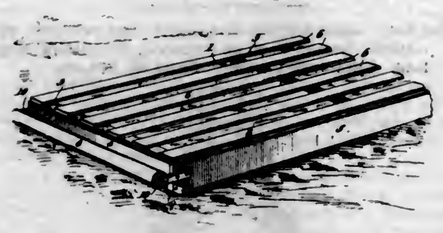
2. A cushioned rocker, comprising a body provided with a longitudinally-extending groove, formed intermediate its ends, and only upon one face, said body provided with apertures at its ends, and each aperture communicating at one end with an end of the groove, a cushioned tire, provided with a wire therein, said tire positioned in the groove, and said wire having its ends projecting beyond the body of the tire and extending through the apertures

and bent at an angle against the outer ends of the body, and detachable fastening means positioned in the apertures and engaging portions of the wire within said apertures for securing the tire in the groove.

3. A cushioned rocker, comprising a body, a tire provided with a wire extending therethrough, said tire having a portion extending beyond one face of the body and its ends extending into the body intermediate the ends of the body, the ends of the wire extending through the rocker at its ends and bent at an angle against the outer face of the body, and screws threaded into said body and biting or gripping portions of the wire for holding the tire upon the body.

4. A cushioned rocker, comprising a curved body provided at its ends with shoulders, said body provided with a longitudinally-extending groove, and with sockets at the ends of said groove, said body provided with apertures opening at one end contiguous to said shoulders and opening at their opposite ends upon said sockets, a tire positioned in said groove, said tire comprising a rubber body provided with a wire extending therethrough and projecting beyond its ends, the projecting ends of said wire extending through the apertures and bent at an angle against the shoulders, and screws threaded into the ends of the body parallel with the extended ends of the wire, and the heads of said screws serving to hold the bent ends of the wire against the shoulders.

898,341. PLANT-PROTECTOR. EDWIN R. DRAKE, De Land, Fla. Filed May 4, 1908. Serial No. 430,703.



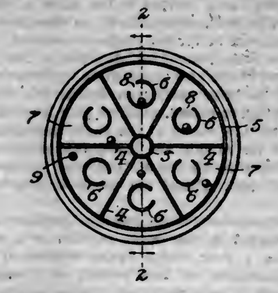
1. The improved plant-protector comprising a series of corner posts and transverse slats secured thereto, boards adapted to be supported on the slats and extended at right angles to the same, a roller journaled at one end of the frame, and a flexible covering wound on the roller and adapted to be extended over the frame, as described.

2. The improved plant-protector comprising a series of corner posts, cross slats attached to and supported thereon, protecting boards attached to the posts on the two most exposed sides of the apparatus, and a protective flexible covering and a roller for winding the same, said covering being adapted, when drawn off the roller, to be extended over the frame, and thus, coacting with the side boards, preventing access of cold air to the plants.

3. The improved plant-protector comprising a series of corner posts set in the ground, a central post resting on the ground, a series of cross slats attached to and supported on the posts, a series of boards adapted to be laid crosswise of the slats, and of such width that taken collectively they are of less width than the length of the slats so that they are adapted to be spaced apart, a roller journaled at one end of the frame, and a covering of burlap attached thereto and adapted, when drawn out, to be extended over the boards, as described.

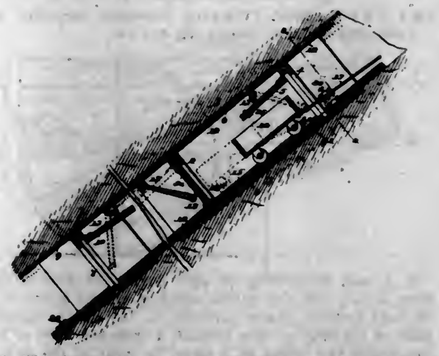
898,342. PUZZLE. CLARENCE H. DREHER, Stroudsburg, Pa. Filed Feb. 21, 1908. Serial No. 417,036.

A puzzle comprising a receptacle having a circular wall, partitions dividing the space inclosed by said wall into a plurality of non-communicating compartments, a pocket in each compartment free from the walls thereof, and



balls, one in each compartment, adapted to be entered into the respective pockets.

898,343. AIR-LOCK FOR MINES AND TUNNELS. PATRICK H. DURACK, El Paso, Tex. Filed May 12, 1908. Serial No. 432,395.



1. The improved apparatus for the purpose specified comprising two bulk-heads spaced apart and located contiguous to the mouth of the mine shaft and an elongated box or casing containing the same and anchored air tight in the shaft, the bulk-heads having doors hinged and adapted to open downward, and a safety air lock comprising a casing with doors located at the lower end of the shaft, means for opening the doors of the air locks, car-rope guides and clamps formed at the lower edges of the doors, pipes arranged in the shaft and provided with stop-cocks, one of said pipes serving for introduction of fresh air into the shaft and the heading thereof and the other for outlet and discharge of foul air, noxious gases, and water, substantially as described.

2. The improved apparatus for the purpose specified comprising a box-like or hollow section which is open at each end and located in the upper portion of a mine shaft or tunnel and two doors located therein and spaced apart, and arranged to open downward in the shaft, a block and tackle connected with the said doors for raising them and holding them elevated as may be required, ropes constituting part of such tackle and a second air lock located at the bottom of the mine shaft, the door of the same opening upward, and means connected therewith for raising it and holding it raised, and pipes arranged in the shaft and provided with stop-cocks as described for use in conveying fresh air into the shaft and mine under pressure and for removing water, foul air and noxious gases therefrom, substantially as described.

3. In an apparatus of the class described, the combination with an air lock anchored air-tight in a mine shaft, and having doors which are spaced apart and provided with doors that open downward, means for opening said

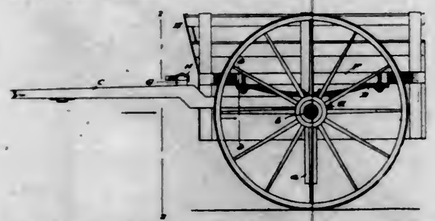
doors and holding them raised and an air pipe passing through the bulk-heads of the air lock and provided with an air discharge cock located in the space or chamber between the bulk-heads, substantially as described.

4. In an apparatus for the purpose specified, an air lock comprising a casing anchored air-tight in the lower portion of a mine shaft, and provided at its lower end with a door hinged to open vertically, means for raising such door and holding it raised, another door located above the first, or nearer the mouth of the shaft and opening downward, means for raising the last-named door, and an air pipe extending through the air lock and provided with an air discharge cock within the air lock, substantially as described.

5. In an apparatus for the purpose specified, an air lock bulk-head located in the upper portion of a mine shaft and including a door which opens downward and seats upward, and another air lock located at or near the bottom of the shaft and including a door which opens upward and seats downward, an air conducting pipe provided with a discharge cock in the space that intervenes the two bulk-heads and a pipe extending past both bulk-heads and serving for escape and discharge of water, foul air and noxious gases, substantially as described.

[Claim 6 not printed in the Gazette.]

898,344. CART. WILLIAM EARNEST, Garyville, La. Filed May 6, 1908. Serial No. 431,245.



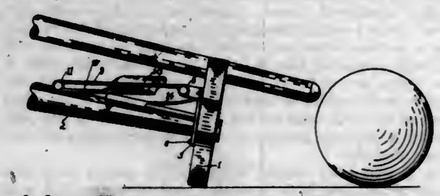
1. A cart comprising an axle having an intermediate drop portion and also having spindles, wheels mounted on the said spindles, shafts arranged on the axle at opposite sides of the drop portion thereof, a cross-bar fixed to and connecting the shafts at a point in front of the axle, a loop fixed to and depending from the said cross-bar, a body disposed in the drop portion of the axle and between the upright portions thereof and also disposed in rear of the said cross-bar and having at an intermediate point in its height longitudinal side bars disposed above and in the same vertical planes as the rear portions of the shafts and extending fore and aft of the axle, longitudinally disposed bow springs interposed between the rear portions of the shafts and the end portions of the side bars and connected with the same and also with the axle, and a resilient tongue fixed to and extending forwardly from the body and having a free forward portion movable up and down in the depending loop on the said cross-bar.

2. The combination in a cart, of an axle having an intermediate drop portion and also having spindles, a body extending down into and movable vertically in said drop portion of the axle, shafts connected with the axle at opposite sides of the drop portion thereof, longitudinal springs interposed between and connected with the body and the shafts, a cross-bar fixed to the shafts and disposed in front of the body, a depending loop fixed to said cross-bar, and a resilient tongue fixed to and extending forward from the front wall of the body and having a free forward portion disposed and movable vertically in the said loop.

898,345. BILLIARD AND POOL BRIDGE. FRANK G. FARNHAM, Honesdale, Pa. Filed Sept. 10, 1907. Serial No. 392,235.

1. A rest for billiard cues, having a portion adjustable to a position forward of the main rest so that the cue may reach over a ball or balls lying in front of the main rest, substantially as described.

2. A rest for billiard cues having a pivoted portion adjustable pivotally to a position forward of the main rest to afford a support for the cue at this point, substantially as described.



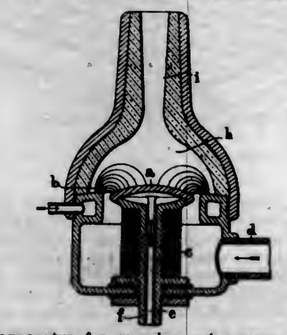
3. In combination with a rest for billiard cues, an adjustable portion movable upwardly and forwardly in respect to the main rest to afford a support for the cue at an elevated and forward point in relation to the main rest, substantially as described.

4. In combination with a billiard or pool bridge a supplemental rest comprising a member in pivotal connection with the said bridge and adapted to be raised or lowered in respect thereto, and a second member pivotally connected with the first and adapted to be folded or extended in relation thereto, each of said pivoted members affording a support for the cue, substantially as described.

5. In combination with a bridge, a rest or support in adjustable relation thereto, a second rest pivoted to the first rest and adapted to be folded in respect thereto, the said first rest having an opening to receive the second rest, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

898,346. APPARATUS FOR THE TREATMENT OF GASES. SEBASTIAN Z. DE FERRANTI, Grindleford, England. Filed June 10, 1907. Serial No. 378,290.



1. In apparatus for carrying out gaseous endothermic reactions the combination of means for heating the gases to the reaction temperature together with nozzle means for subsequently cooling said gases.

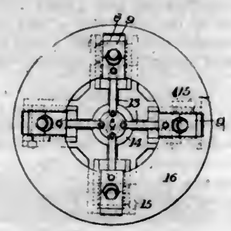
2. In apparatus for carrying out gaseous endothermic reactions, the combination of a shifting electric arc for heating the gases to the reaction temperature together with nozzle means for subsequently cooling said gases.

3. In apparatus for carrying out gaseous endothermic reactions the combination of means for heating the gases to the reaction temperature, nozzle means for cooling said gases together with means for utilizing the velocity of said gases after issuing from said nozzle means.

4. In apparatus for carrying out gaseous endothermic reactions the combination of means for heating the gases to the reaction temperature, nozzle means for cooling said gases together with a turbine for absorbing the velocity of said gases after issuing from said nozzle means.

5. In apparatus for carrying out gaseous endothermic reactions the combination of means for heating the gases to the reaction temperature, nozzle means for cooling said gases to a certain degree, together with means for further cooling said gases on issuing from said nozzle means.

898,347. METHOD OF MAKING TWYERS. GEORGE W. FIELDHOUSE, Swissvale, Pa. Filed Nov. 6, 1907. Serial No. 400,935.



1. In the art of casting hollow articles, the method which consists in forming a core and embedding therein an anchoring device, forming a drag and embedding therein a clamp for the anchoring device, and then assembling the drag and core and securing the anchoring device in the clamp; substantially as described.

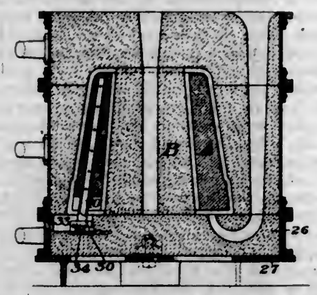
2. In the art of casting hollow articles, the method which consists in forming a core and embedding therein a vent pipe, forming a drag and embedding therein a clamp for the vent pipe, and then assembling the drag and core and securing the vent pipe in the pipe clamp to anchor the core to said drag; substantially as described.

3. In the art of casting hollow articles, the method which consists in setting and securing an anchoring device in a core mold, forming the core about said device, leaving a portion of said anchoring device exposed, setting a clamp in the drag mold, and forming the drag about the same, and then assembling the drag and core and securing the anchoring device in the clamp; substantially as described.

4. In the art of casting hollow articles, the method which consists in molding the shell core with vent pipes embedded therein, molding the drag with pipe clamps embedded therein, and then assembling the core and drag and securing the ends of the vent pipes to the clamps; substantially as described.

5. In the art of casting hollow articles, the method which consists in forming a shell-core having vent pipes embedded therein and projecting a predetermined distance from the core, forming the drag of the mold with clamps for the vent pipes embedded therein to a predetermined distance, and then assembling the core and drag, and anchoring the vent pipes to the pipe clamps to anchor the core to said drag, substantially as described.

898,348. APPARATUS FOR MAKING TWYERS. GEORGE W. FIELDHOUSE, Oak Park, Ill. Filed Apr. 30, 1908. Serial No. 430,079.



1. In apparatus for molding, a stripping member having a plurality of radially adjustable anchor supports; substantially as described.

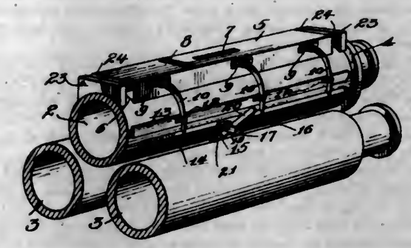
2. In apparatus for molding, a drag mold stripper plate having a plurality of radially adjustable supports, a core centering device, also having a plurality of radially adjustable supports, and means for adjusting the two sets of supports to corresponding positions; substantially as described.

3. In apparatus for molding, a drag mold stripper plate having a plurality of radially adjustable supports, a core centering device, also having a plurality of radially adjustable supports, means for adjusting the two sets of supports to corresponding positions, and means for securing said supports in their adjusted positions; substantially as described.

4. In apparatus for molding, a drag mold stripper having a plurality of radially adjustable clamp supports, a core centering device, having a plurality of radially adjustable vent pipe supports, means for adjusting the two sets of supports to corresponding positions, and means for locking the supports in their adjusted positions; substantially as described.

5. In apparatus for molding, a drag mold having a clamp for anchoring the core embedded in the said drag; substantially as described.

898,349. LEVELING DEVICE FOR CRUSHING-ROLLS. WILLIAM H. L. FIELDING, New Orleans, La. Filed May 16, 1908. Serial No. 433,265.



1. A leveling device for rolls comprising a duplex spirit level having a concave lower face adapted to be mounted upon the upper roll of a set, said duplex spirit level constituting means for leveling the upper roll and the truing of the center of the spirit level in vertical alinement with respect to the axis of the roll, means for maintaining the spirit level in the position to which it has been adjusted, a pair of suspension members supported from the spirit level and adapted to be arranged one at each side of the roll, a carriage adapted to be shifted upon either of the said members, and a gage bar adjustably connected with the carriage.

2. A leveling device for rolls comprising a spirit level, two series of inclined arms connected to the sides thereof, a supporting member attached to each series of arms, a suspension member connected to each series of arms, a carriage adapted to be shifted upon either of said suspension members, and a gage bar adjustably connected to the carriage.

3. A leveling device for rolls comprising a spirit level, two series of inclined arms connected to the sides thereof, a supporting member attached to each series of arms, a suspension member connected to each series of arms, a carriage adapted to be shifted upon either of said suspension members, a gage bar adjustably connected to the carriage, and adjustable means carried by the spirit level to maintain it from movement.

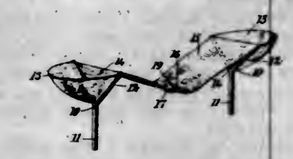
4. A leveling device for rolls comprising a spirit level having a concave lower face adapted to be mounted upon a roll, a pair of suspension members one adapted to be arranged at each side of the roll, means for connecting said members with the spirit level, a carriage adapted to be shifted upon either of said members, and an adjustable inclined gage bar connected with said carriage.

5. A leveling device for rolls comprising a spirit level having a concave lower face adapted to be mounted upon a roll, a pair of suspension members one adapted to be arranged at each side of the roll, means for connecting said members with the spirit level, a carriage adapted to be

shifted upon either of said members, an adjustable inclined gage bar connected with said carriage, and means carried by the spirit level to prevent the longitudinal and transverse shifting thereof.

[Claims 6 to 11 not printed in the Gazette.]

898,350. GAME APPARATUS. ADDIE M. FOSTER, Santa Barbara, Cal. Filed Feb. 14, 1908. Serial No. 415,812.



1. A game apparatus, comprising relatively movable cups, and means connecting said cups and actuated by a movement of said cups relatively to one another, for projecting an object, said cups being formed to receive the object.

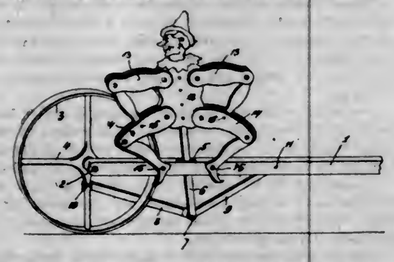
2. A game apparatus, comprising relatively movable cups, and means between said cups and operable by a movement to separate said cups, for projecting an object, each of said cups being formed to receive and hold the object.

3. A game apparatus, comprising relatively movable cups, and flexible connecting means between said cups, said connecting means being adapted to hold an object whereby the object is projected when said cups are separated to draw said connecting means taut, each of said cups being formed to receive and hold the object.

4. A game apparatus, comprising frames one adapted to be held in each hand and each having a cup, each of said cups having a flat side, and a strip of flexible material connecting said cups at said flat sides, said strip having a pocket formed to receive an object, each of said cups being formed to receive and hold an object.

5. A game apparatus, comprising frames, each having a handle, and at an end of the handle a fork, a cup secured at each of said frames at said fork and having a flat side between the arms of said fork, and a strip of flexible material connecting said cups at said flat sides, said strips having an opening intermediate said cups, and a pocket within said opening, said pocket being formed to receive an object, each of said cups being formed to receive and hold an object.

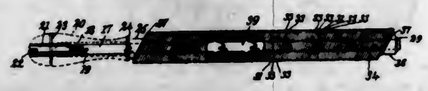
898,351. TRUNDLING TOY. EDWARD G. FREY, Pittsburg, Pa. Filed May 13, 1908. Serial No. 432,716.



1. A trundling toy comprising a handle rod, a wheel journaled at one end of said rod, uprights slidably mounted in said rod, links pivotally connected to the lower ends of said uprights and to said handle rod, a connecting bar pivotally connected to the lower end of said uprights, a pitman pivotally connected to one of said uprights and eccentrically connected to said wheel, bodies carried by the upper ends of said uprights, jointed legs pivotally connected to said bodies and to said handle rod, and jointed arms pivotally connected to said bodies and to the upper sections of said legs.

2. A trundling toy comprising a handle rod, a wheel journaled at one end thereof, an upright slidably mounted in said handle rod, a link pivotally connected to the lower end of said upright and to said handle rod, a pitman pivotally connected to the lower end of said upright and eccentrically connected to said wheel, a figure carried by the upper end of said upright and connected with said handle rod.

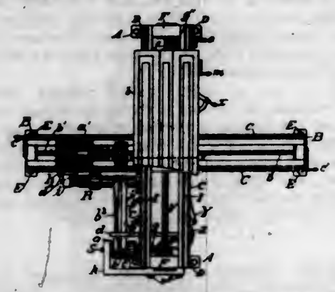
898,352. COMPOSITE FILE. HENRY GETAZ, Schenectady, N. Y. Filed July 30, 1907. Serial No. 386,191.



1. The combination of a core, cutting blades mounted thereupon, and deflector plates disposed at intervals along said core for the purpose of holding said cutting blades at a proper angle relatively to said core, each of said deflector plates being provided at one of its ends with a slot, and at its other end with a tongue for the purpose of engaging adjacent deflector plates.

2. A file provided with a core, a series of cutting blades mounted upon said core, deflecting plates disposed adjacent to said core and provided with teeth for holding said cutting blades at a proper angle relatively to said core, said deflecting blades each being provided at its ends with interlocking surfaces for engaging mating surfaces of adjacent deflecting plates, and other cutting blades encircling said core and filling voids between said first mentioned cutting blades.

898,353. MILLING-MACHINE. LORENZO GIANNELLI, Boston, Mass. Filed Mar. 20, 1908. Serial No. 422,267.



1. In a machine of the kind described, a main frame C in the form of a cross, having its four projecting portions alined in oppositely extending pairs, and each provided at its outer end with a depending leg or standard, the standards of one of said pairs having longitudinal slots at their upper ends, a vertically movable frame having longitudinally extending track bars at the sides thereof and transverse end blocks depending between and beyond said side track bars and fitting centrally the slots of said end supports, a table mounted on said vertically movable frame, and means engaging said blocks for simultaneously and uniformly raising them and thereby raising said table.

2. In a machine of the kind described, a main frame C in the form of a cross, having its four projecting portions alined in oppositely extending pairs, and each provided at its outer end with a depending leg or standard, the standards of one of said pairs having longitudinal slots at their upper ends, a vertically movable frame having longitudinally extending track bars at the sides thereof and transverse end flanged blocks depending between and beyond said side track bars and fitting centrally the slots of said end supports, a table mounted on said vertically movable frame, and means engaging said blocks for simultaneously and uniformly raising them and thereby raising said table, the flanges of said blocks overlapping the edges of the guiding slots provided therefor and projecting laterally on the opposite sides of the standard.

3. In a machine of the kind described, a main frame C in the form of a cross, having its four projecting portions alined in oppositely extending pairs, and each provided at its outer end with a depending leg or standard, the standards of one of said pairs having longitudinal slots at their upper ends, a vertically movable frame having longitudinally extending track bars at the sides thereof and transverse end blocks depending between and beyond said side track bars and fitting centrally the slots of said end supports, a table mounted on said vertically movable frame, and means engaging said blocks for simultaneously and uniformly raising them and thereby raising said table, said track bars having longitudinal tracks inclined obliquely away from each other along the top edges of the bars, and said table having correspondingly shaped grooves fitting said tracks for longitudinal movement thereon.

4. In a machine of the kind described, a main frame C in the form of a cross, having its four projecting portions alined in oppositely extending pairs, and each provided at its outer end with a depending leg or standard, the standards of one of said pairs having longitudinal slots at their upper ends, a vertically movable frame having longitudinally extending track bars at the sides thereof and transverse end blocks depending between and beyond said side track bars and fitting centrally the slots of said end supports, a table mounted on said vertically movable frame, means engaging said blocks for simultaneously and uniformly raising them and thereby raising said table, said track bars having longitudinal tracks inclined obliquely away from each other along the top edges of the bars, and said table having correspondingly shaped grooves fitting said tracks for longitudinal movement thereon, and a top table mounted on said table and provided with means permitting it to move transversely of the under table.

5. In a machine of the kind described, a main frame C in the form of a cross, having its four projecting portions alined in oppositely extending pairs, and each provided at its outer end with a depending leg or standard, a vertically movable frame mounted on one of said alined pairs, a table mounted to move longitudinally on said vertically movable frame, means for simultaneously moving vertically the opposite ends of said movable frame, means for moving said table longitudinally on its frame, a top work support carried by said table, means to move said work support transversely of said table, tool carrying means mounted in the other of said alined pairs, and mechanism for moving said tool carrying means toward and from the work support.

[Claims 6 and 7 not printed in the Gazette.]

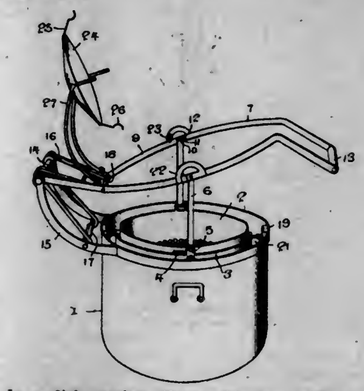
898,354. DISH-WASHER. JOEL M. GILBERT, West Somers, N. Y. Filed Feb. 18, 1908. Serial No. 416,519.

1. In a dish washer, the combination with a tank and a frame; of means to suspend the frame in the tank, comprising a lever formed in two sections which are pivotally secured together, spring actuated means carried by one of the sections adapted to engage the opposite sections and hold said sections rigid with each other and supporting arms for one end of said lever.

2. In a dish washer, the combination with a frame and standards thereon; of a two-section lever pivotally secured to the upper ends of said standards, means to pivotally mount one end of the lever, spring arms carried by one section of the lever and fingers on the free ends of said arms adapted to engage the opposite section and hold the two sections rigid.

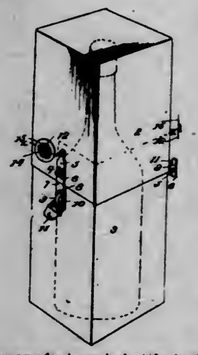
3. In a dish washer, the combination with a tank, a tray, and a frame for supporting said tray; of standards carried by the frame, and levers pivotally carried at one end by the tank, each of said levers being formed in sections pivoted one to the other and to a standard of the frame by a common pivot.

4. In a dish washer, the combination with a tank, a tray, and a frame for supporting said tray; of standards carried by the frame, and levers pivotally carried at one end by the tank, each of said levers being formed in sections pivoted one to the other and to a standard of the frame by a common pivot, and means carried by certain of the sections of the levers acting in conjunction with the remaining sections of the levers to hold said sections rigid with each other.



5. In a dish washer, the combination with a tank, a frame insertible therein and a tray engaging the frame; of parallel levers pivotally carried by the tank in connection with the tray, each of said levers being formed in sections movable one with relation to the other.

898,355. CARTON. FRANK F. GOKEY and WILLIAM R. CHAMBERS, Winooski, and WILLIAM E. LAPRESE, Burlington, Vt.; said Laprese assignor of his one-third right to Michael Dorn, Burlington, Vt. Filed Aug. 29, 1905. Serial No. 276,303.

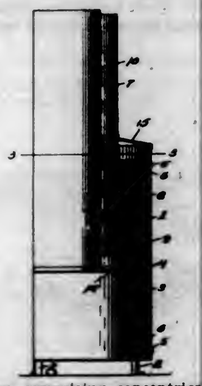


1. An original manufacturer's bottle inclosing case comprising two separable parts, a lock securing the two separable parts together, the case having a space to receive a key for said lock, and a breakable seal for said space inclosing the key as and for the purpose described.

2. An original manufacturer's package, comprising a two-part case, a separate and removable bottle within said case, a lock securing said parts closed, the case having an inwardly-extending recess to receive a key for said lock, and a breakable seal forming an outer wall for the recess to inclose said key, as and for the purpose described.

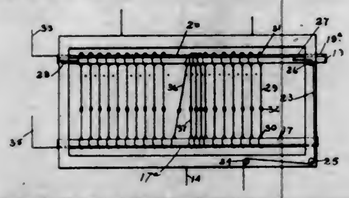
3. An original manufacturer's bottle-inclosing case, comprising a two-section telescoping case, a lock for securing the two sections in their telescoped position, the outer section having an opening therethrough opposite the inner section, a thin backing secured to the inside of said outer section over said opening, and forming a key receiving and holding recess, and a transparent seal on the outside of the outer section and closing the recess and holding the key therein.

898,356. STOVE-SHIELD. JOSIAH J. GREGORY, Jr., Punxsutawney, Pa. Filed Nov. 26, 1907. Serial No. 403,889.



A stove screen comprising concentrically curved relatively spaced members, including an outer member, an inner member and a plurality of intermediate members arranged between the outer and inner member, the outermost of said intermediate members terminating at the bottom on a plane with the bottom of the outer member and at the upper edge on a plane below the upper edge of the outer member, the inner member projecting above the outer member and terminating at the lower edge above the lower edge of the outer member, the innermost intermediate member terminating at the lower edge above the lower edge of the inner member and at the upper edge above the upper edge of the outer member, a top connecting the upper edge of the outer member with the innermost intermediate member and serving to close the space between said members above the outermost intermediate member, and a bottom connecting the lower edge of the inner member with the outermost intermediate member to close the space between said members below the lower edge of the innermost intermediate member.

898,357. WARP-THREAD-DETECTING DEVICE. WILHELM GROSS, Fall River, Mass. Filed July 5, 1907. Serial No. 382,157.



1. A warp thread detecting device for looms comprising heddles adapted to engage the warp threads, and means whereby the heddles are automatically moved to one side to separate the warp threads when one of said threads becomes broken or slack, whereby the position of the broken or slack thread is indicated.

2. A warp thread detecting device for looms comprising a heddle frame, heddles therein, a reciprocating bar adapted to move said heddles to one side to separate the warp threads when one of said threads becomes broken or slack, whereby the position of the broken or slack thread is indicated, and means for actuating said bar.

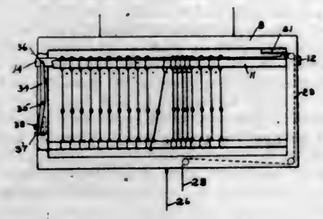
3. A warp thread detecting device for looms comprising a heddle frame, heddles in said frame and provided with means for engaging the warp threads, said heddles being suspended by said threads when the frame is down, and a reciprocating bar adapted to move said heddles to one side to separate the warp threads when one of said threads becomes broken or slack, whereby the position of the broken or slack thread is indicated.

4. A warp thread detecting device for looms comprising a heddle frame, heddles in said frame and provided with means for engaging the warp threads, said heddles being suspended by said threads when the frame is down, and a reciprocating bar provided with serrations adapted to engage said heddles and move the same to one side to separate the warp threads when one of said threads becomes broken or slack, whereby the position of the broken or slack thread is indicated.

5. A warp thread detector and stop mechanism comprising heddles through which the warp threads pass, means for automatically moving said heddles to one side to separate the warp threads when one of said threads becomes broken or slack, whereby the position of the broken or slack thread is indicated, and means for stopping the loom when one of said threads becomes broken or slack.

[Claims 6 to 10 not printed in the Gazette.]

898,358. WARP STOP-MOTION FOR LOOMS. WILHELM GROSS, Fall River, Mass. Filed Aug. 16, 1907. Serial No. 388,810.



1. In a warp stop motion for looms, a reciprocating bar, means for operating the same, a second bar arranged beside the former bar and normally at rest, a single support for both bars, and means whereby the breaking of a thread will automatically lock both bars together, whereby the second bar is moved with the first bar to cause the loom to stop.

2. In a warp stop motion for looms, a bar, means for reciprocating said bar, a second bar normally at rest, and means whereby the breaking of a thread will automatically lock both bars together to move said second bar and open the warp thread to indicate the position of the broken ends and also cause the loom to stop.

3. In a warp stop motion for looms, a reciprocatory bar, means for operating the same, a second bar normally at rest, and means for automatically locking both bars together, whereby the second far is moved with the first bar to cause the loom to stop, said locking means being normally supported in inoperative position by the warp threads.

4. In a warp stop motion for looms, a reciprocating bar, means for reciprocating said bar laterally across the loom, a shipper handle, a second bar for operating said handle to stop the loom, said bar being normally at rest and means whereby the breaking of a thread will automatically lock both bars together whereby they will both be moved to open the warp thread to indicate the position of the broken ends and also cause the loom to stop.

5. In a warp stop motion for looms, a bar, means for reciprocating said bar, a second bar normally at rest, heddles adapted to engage the warp threads, and means whereby when a thread breaks said heddles will cause said first bar to move the second bar and open the warp thread to indicate the position of the broken ends and also cause the loom to stop.

[Claims 6 to 14 not printed in the Gazette.]

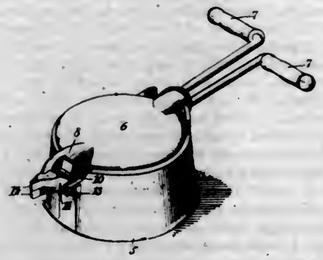
898,359. BOTTLE-STOPPER. THEODORE B. HAFSTAD, Iron Mountain, Mont. Filed Sept. 6, 1907. Serial No. 391,719.

1. A bottle or analogous vessel having its neck provided at the upper end thereof with a pair of oppositely-disposed arcuate grooves formed internally therein, each groove having its ends communicating with the outer surface of the bottle neck; a stopper fitted in the bottle neck; a fastener in the form of a closed loop having the central portion of its members embedded in said grooves, the opposite ends of said loop projecting beyond said grooves exteriorly of the bottle neck and being overlapped against the upper face of the stopper; and a member permanently fixed in the stopper and engaged with the overlapping portions of said ends, to prevent the displacement of the latter from such position.



2. A bottle or analogous vessel having its neck provided at the upper end thereof with a pair of oppositely-disposed approximately semi-circular grooves formed internally therein and arranged at opposite sides of the neck opening, each groove having its ends communicating with the outer surface of the bottle neck; a stopper fitted in the bottle neck; a single strip of wire having its ends connected to form a closed loop, the central portion of the members of said loop being embedded in said grooves and the opposite ends of the loops projecting therebeyond exteriorly of the bottle neck, said projecting portions being bent upwardly and overlapped directly against the upper face of the stopper; and a member permanently fastened in the stopper and engaged with the overlapping portions of said loop ends, to prevent displacement of the latter from such position.

898,360. HINGE. RALPH P. HAWLEY, Monongahela, Pa. Filed Nov. 25, 1907. Serial No. 403,680.



1. The combination of a cylindrical base, and hinge members having semi-cylindrical shanks placed together and revolubly mounted in the base, each hinge member having a rounded pivot rigid therewith and fitting in a corresponding groove in the opposed hinge member, and provided with a laterally offset extension, one of said extensions being adapted to engage with a notch in the base and prevent rotation of the shanks thereon, and the other provide a seat for the opposite hinge member when the hinge members are separated on their pivots.

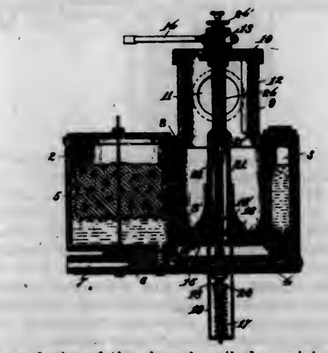
2. A hinge, comprising two separable hinge members having pivots, each pivot being rigid with its respective member and fitting into a groove in the opposed member, said members having contacting faces at each side of the pivots and arranged at the opposite sides of the longitudinal center of the hinge, whereby the members cannot be bodily separated when the hinge is closed.

3. A hinge comprising two separable members each having a pivot rigid therewith fitting in a groove in the opposed member, said members having oppositely-arranged faces movable into contact at both sides of the pivot when the hinge is closed.

4. A hinge, comprising two members having alining pivots, each pivot being rigid with its respective member, each of the members being cut out at one side at substantially right-angles to its pivot to provide a shoulder, and an extension rigid with each member, adapted to contact when the hinge is closed and providing a seat for the shoulder of the opposite hinge member when the hinge is open.

5. A hinge comprising two separable members of like construction, each member having a pivot rigid therewith fitting into a groove in the opposed member and provided with an extension adapted to contact with the extension of the other member and prevent the separation of said members when the hinge is closed.

898,361. CARBURETER. FRANK H. HEITGER, Indianapolis, Ind., assignor to Speed Changing Pulley Company, Indianapolis, Ind., a Corporation of Indiana. Filed Mar. 31, 1906. Serial No. 309,195.



1. In a device of the class described, a mixing chamber having an air inlet opening at the bottom and an outlet at the top, in combination with a liquid reservoir adjacent to said chamber and having a duct extending beneath the opening in the latter, a nozzle rising into said chamber from said duct, an air valve concentric with said nozzle for regulating the admission of air at the inlet opening, and a vapor tube within said chamber and forming a guide for said valve, substantially as described.

2. In a device of the class described, a mixing chamber having an air inlet opening at the bottom and an outlet at the top, in combination with a tubular air valve within said chamber to close said inlet opening, a vapor tube within said chamber whereby said valve is guided, means within said chamber supporting said tube, and a liquid nozzle rising through said valve and within said tube, substantially as described.

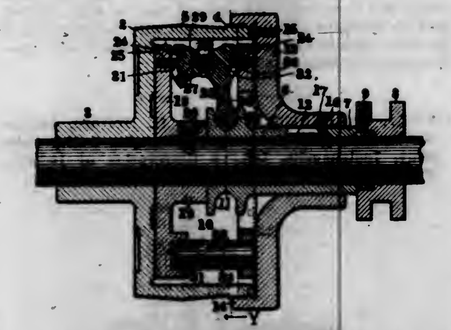
3. In a device of the class described, a mixing chamber having an air inlet at the bottom and an outlet at the top, in combination with a vapor tube hung within said chamber and having perforations below said outlet, and a spring-pressed air valve guided by said tube, substantially as described.

4. In a device of the class described, a mixing chamber having an inlet at the bottom and an outlet at the top, in combination with a throttle valve arranged in the upper part of said chamber and having a stem or hub concentric therewith, means for operating said valve, a vapor tube concentric with the inlet opening and supported by said throttle valve, a nozzle within said tube, and an air admission valve guided by said tube, substantially as described.

5. In a device of the class described, a mixing chamber having an inlet at the bottom and an outlet at the top, in combination with a suitable liquid reservoir, a float valve in the latter, an adjustable air valve at the inlet of said chamber for automatically controlling the admission of air thereto, a nozzle connected with said reservoir and rising centrally within said valve, said nozzle having a plurality of narrow slits at its upper end, and a vertically adjustable cap on said upper end for varying the length of said slits, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

898,362. FRICTION-CLUTCH. JOHN A. HOENIKA and JESSE R. TRIPLETT, Akron, Ohio. Filed May 25, 1908. Serial No. 434,958.



1. A clutch comprising a loose member adapted to be mounted upon a rotatable element, a shiftable member connected with and rotated by said element, a pair of cooperating rocking members provided with curvilinearly-formed outer faces engaging a single movable pivot, one of said rocking members provided with a depending portion oscillatory in a longitudinal direction with respect to the axis of said element and adapted to move said rocking members into engagement with said shiftable member, thereby causing clutching engagement between said shiftable member and said loose member.

2. In a clutch, the combination with a loose member adapted to be mounted upon a rotatable element, a shiftable member connected with and rotated by said element, a pair of rocking members both engaging a single movable pivot, one of said rocking members provided with a cam-shaped periphery and farther provided with a depending leg oscillating in a longitudinal direction with respect to the axis of said element disposed at one side of said shiftable member, and means for oscillating said cam-shaped member, causing thereby the moving of said shiftable member to clutching engagement with said loose member.

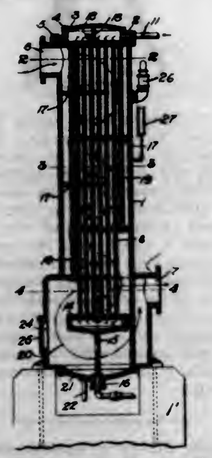
3. A clutch comprising a loose member adapted to be mounted upon a rotatable element, two fixed members connected with and rotated by said element, one of said fixed members being shiftable with respect to the other, a pair of rocking members provided with curvilinearly-formed outer faces and arranged to engage a single movable pivot, each of said faces adapted to engage one of said fixed members, one of said rocking members provided with a depending leg oscillatory in a longitudinal direction with respect to the axis of said element and means for oscillating said leg, causing thereby the moving of said shiftable member into clutching engagement with said loose member.

4. In a clutch, a loose member adapted to be mounted upon a rotatable element, a shiftable member connected with and rotated by said element, a pair of rocking members both of which are mounted on a movable pivot disposed at one side of and independent of said shiftable member and oscillating in a longitudinal direction with respect to the axis of said element, and means for oscillating one of said rocking members, causing thereby the moving of said shiftable member to clutching engagement with said loose member.

5. In a clutch, a cup-shaped loose member adapted to be mounted upon a rotatable element, a cap adapted to coöperate with and constitute a closure device for the open end of said loose member, a fixed member within said loose member connected with and rotated by said element, a shiftable member carried by said fixed member, a pair of coöperating members mounted on a movable pivot, one of which is provided with an eccentric periphery and a depending leg oscillating in a line parallel to the axis of said element, and means for oscillating said leg for causing clutching engagement between said shiftable member and said loose member.

[Claims 6 to 15 not printed in the Gazette.]

898,363. INTERCOOLER. FRED D. HOLDSWORTH, Claremont, N. H., assignor to Sullivan Machinery Company, Claremont, N. H., a Corporation of Maine. Filed Sept. 9, 1907. Serial No. 391,926.



1. An intercooler for compressors or the like comprising a casing having inlet and outlet passages for the fluid to be cooled, a head mounted upon one end thereof, said head being chambered and provided with a partition, inlet and exit pipes for the cooling medium communicating with the chambered portion of said head upon opposite sides of said partition, a stack of tubes extending from said head longitudinally of said casing a second head to which the opposite ends of said tubes are secured, said second head being unconfined except by said stack of tubes, the portion of the casing wherein the second head is located being enlarged, and means to compel a circuitous circulation of the fluid to be cooled in said enlarged portion of the casing.

2. An intercooler for compressors or the like comprising a casing having inlet and outlet openings for the fluid to be cooled, a head mounted upon one end of said casing and provided with inlet and outlet passages for the cooling medium, tubes secured to said head and extending therefrom longitudinally of said casing, a head to which the opposite ends of said tubes are secured, said head being unconfined to permit expansion and contraction of said tubes and means guarding the outlet opening for the fluid to be cooled and compelling a circuitous circulation of said fluid about the last mentioned head.

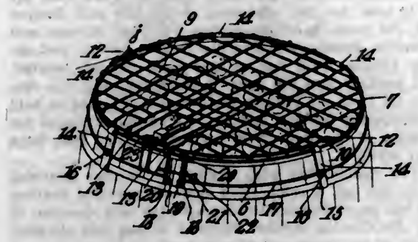
3. An intercooler comprising a casing 1 having inlet and outlet passages 6 and 7 for the fluid to be cooled, a head 2 having inlet and outlet passages 11 and 12 for the cooling medium, a stack of pipes extending from said head, a head 14 to which the opposite ends of said pipes are secured, said head 14 being unconfined laterally and longitudinally, thereby to permit expansion and contraction of the tubes means guarding the outlet opening for the fluid to be cooled and compelling a circuitous circulation of the fluid, and a draining tube 15 for the head 14.

4. An intercooler for compressors or the like comprising a casing having inlet and outlet passages 6 and 7 for the fluid to be cooled, a head 2 at one end of said casing having an inlet passage 11 for the cooling medium, a stack of pipes extending from said head longitudinally of said casing, means extending transversely of said casing and intermediate the inlet and outlet openings to direct the medium to be cooled in a path at substantially right angles to the tubes and means guarding the outlet passage 7, thereby compelling the fluid to be cooled to partake of a circuitous path about the adjacent portion of the stack of tubes.

5. An intercooler comprising a casing provided with inlet and outlet openings 6 and 7, a head having an inlet opening 11, a stack of tubes extending from said head substantially longitudinally of said casing, baffle plates 17 to compel the fluid to be cooled to partake of a circuitous route in passing from the inlet to the outlet opening the exit end of the casing being provided with an enlarged chamber and a deflecting plate in such enlarged chamber guarding the outlet 7.

[Claims 6 to 14 not printed in the Gazette.]

898,364. BARREL AND BASKET COVER. ALEXANDER HOLKER, Minneapolis, Minn. Filed Dec. 21, 1907. Serial No. 407,544.



1. A closure for containing receptacles comprising a body portion having a supporting ring, depending clamping members pivotally mounted on the ring and provided with means for engagement with the receptacle, a rod connecting the clamping members and arranged to engage the exterior walls of the receptacle, and means for adjusting the tension of the rod thereby to clamp said members in engagement with the receptacle.

2. A closure for containing receptacles including a body portion, clamping members pivotally connected with and depending from the body portion and provided with means for engagement with the receptacle, there being intermediate loops formed in the clamping members, a rod extending through said loops and adapted to surround the exterior walls of the receptacle, and means for adjusting the tension of the rod thereby to clamp the fingers in engagement with the receptacle.

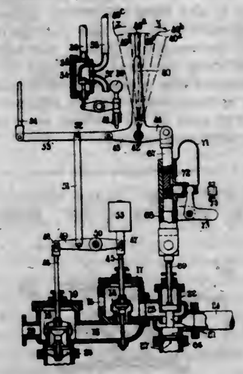
3. A closure for containing receptacles comprising a body portion having a movable section, clamping members depending from the body portion and provided with means for engagement with the receptacle, a rod connecting the clamping members, means for adjusting the tension of the rod thereby to force the clamping members in engagement with the receptacle, a keeper connected with the body portion and rod, respectively, and a locking member carried by the movable section and engaging the keeper for locking said section in closed position.

4. A closure for containing vessels including a body portion having a movable section, spaced rods carried by the movable section, a plurality of depending clamping members pivotally connected with the body portion and provided with means for engagement with the receptacle, a rod connecting said clamping members, means for adjusting the tension of the rod, a keeper secured to the body portion, a sectional casing interposed between the rods on the movable section and having registering grooves formed therein for the reception of said rod, means for locking the casing sections in engagement with the rods, and a bolt disposed within the casing and adapted to engage the keeper for locking the movable section in closed position.

5. A closure for containing vessels comprising a body portion, and clamping plates pivotally connected with the body portion and having their lower ends bent laterally to form fingers for engagement with the receptacle there being spaced longitudinal slits formed in said plates and the metal between said slits pressed outwardly to form intermediate loops, a rod extending through the loops, and means for adjusting the tension of the rod thereby to clamp the fingers in engagement with the receptacle.

[Claims 6 and 7 not printed in the Gazette.]

898,365. HYDRAULIC PRESS. THOMAS E. HOLMES, Sheffield, England, assignor of one-half to Davy Brothers Limited, Sheffield, England, a Corporation. Filed Aug. 22, 1907. Serial No. 389,659.



1. The combination of a hydraulic press, steam hydraulic intensifier apparatus for operating the same, an air vessel, valves for controlling the admission and exhaust of steam to and from the intensifier and the lifting cylinders of the press and for controlling the connection between the high pressure hydraulic system and the air vessel, a single hand lever for operating all of said valves, connections between said lever and the several valves, and trip mechanism interposed in the connection between the lever and the valve appertaining to the lifting cylinders and adapted to automatically couple and uncouple said valve to and from the lever in such manner that steam will be normally admitted to the lifting cylinders but will be exhausted therefrom during the earlier part of the working strokes of the press when working with long strokes.

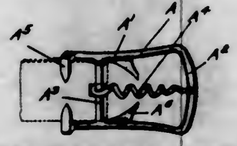
2. The combination with a hydraulic press and a steam hydraulic intensifier apparatus for operating the same, and valves for controlling the admission and exhaust of steam to and from the intensifier and the lifting cylinders of the press, of a single lever for operating said valves and trip mechanism interposed between the lever and the valve of the lifting cylinders for coupling and uncoupling said valve to and from the lever at predetermined intervals, whereby to permit the steam to exhaust from the lifting cylinders during the early part of the stroke when the press is working on long strokes.

3. The combination with a hydraulic press and a steam hydraulic intensifier apparatus for operating the same, and valves for controlling the admission and exhaust of steam to and from the intensifier and the lifting cylinders of the press and for controlling the connection between the air vessel and the high pressure hydraulic system, of a single lever for operating all of said valves, and trip mechanism interposed between the lever and the valve of the lifting cylinders for coupling and uncoupling said valve to

and from the lever at predetermined intervals, whereby to permit the steam to exhaust from the lifting cylinders during the early part of the stroke when the press is working on long strokes.

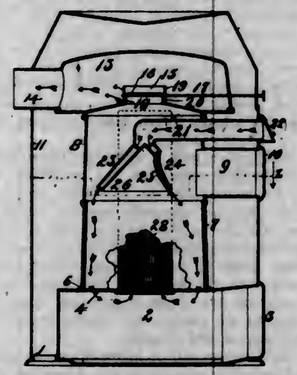
4. The combination of a hydraulic press, steam hydraulic intensifier apparatus for operating the same, an air vessel, valves for controlling the admission and exhaust of steam to and from the intensifier and the lifting cylinders of the press and for controlling the connection between the high pressure hydraulic system and the air vessel, a single lever for operating all of said valves, hunting gear comprising a lever tending to maintain a predetermined angular position and cam mechanism operated by the piston of the intensifier for displacing said lever to an angular extent corresponding to the advance of said piston, a floating lever connected to said hunting gear lever, to the handing lever, and to the valves for controlling the admission and exhaust of steam to and from the intensifier, connections between the hand lever and the valve for controlling the connection between the high pressure hydraulic system and the air vessel and between the hand lever and the valve for controlling the admission and exhaust of steam to and from the lifting cylinders, and trip mechanism interposed in the last mentioned connection and adapted to automatically couple and uncouple to and from the hand lever the valve controlled by said connection in such manner that steam will be normally admitted to the lifting cylinders but will be exhausted therefrom during the earlier part of the working strokes of the press when working with long strokes.

898,366. BELT-BUCKLE. JAMES HOUGH, Guelph, Ontario, Canada. Filed July 17, 1907. Serial No. 384,191.



A buckle having the tongue thereof twisted in the shape of a corkscrew spiral to form in the one member both a retainer for the strap and a cork puller.

898,367. STOVE AND FURNACE. HIRAM J. HOUGH, ANTHONY J. DIETRICH, and WILLIAM F. BRUNSWICK, Akron, Ohio. Filed June 26, 1907. Serial No. 380,930.



1. The combination with a stove or furnace provided with an ash-pit, a combustion chamber mounted on said ash-pit, and a fuel pouch extending from the outside of the furnace casing to within the combustion chamber, of an air distributing member positioned within said combustion chamber in front of the inner end of said pouch comprising a pair of superimposed conical-shaped imperforate plates disconnected at their lower ends thereby providing an air outlet, a portion of said plates being cut away immediately in front of the inner end of said pouch, whereby fuel fed to said combustion chamber through said pouch will have an uninterrupted entrance therein, means for connecting the edges of said cutaway portions together, and means merging into the apex of the outer plate for conveying air from the exterior of the furnace casing to said air distributing member.

2. A device of the class described comprising an ash-pit provided with a plurality of openings in its top, a combustion chamber mounted on said ash-pit in open communication with one of said openings, a fuel pouch communicating with said chamber a dome shaped member mounted on said combustion chamber provided with an opening in its base for establishing communication between the interior of said member and said combustion chamber, a damper to close said opening, an air distributing member positioned within said combustion chamber in front of the inner end of said pouch comprising a pair of superimposed conical-shaped imperforate plates disconnected at their lower ends thereby providing an air outlet, a portion of said plates being cut away immediately in front of the inner end of said pouch, whereby fuel fed to said combustion chamber through said pouch will have an uninterrupted entrance therein, means for connecting the edges of the cutaway portions of the plates together, a flue extending from the ash-pit to said dome shaped member in open communication with both, whereby when said air inlet is open for the admission of air and said damper closed, the products of combustion will pass through said combustion chamber downwardly to said ash-pit and upwardly through said flue to said dome shaped member, means merging into the apex of the outer plate for conveying air from the interior of the furnace casing to said air distributing member and an off-take flue arranged for the escape of the products of combustion from said dome shaped member.

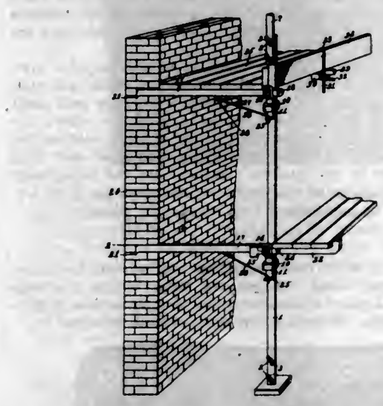
3. The combination with a stove or furnace provided with an ash pit, a combustion chamber mounted thereon and a fuel pouch communicating with the said chamber, of an air distributing member disposed within said chamber in front of the inner end of said pouch and comprising a pair of conical-shaped spaced plates disconnected at their lower ends thereby providing an air outlet, a portion of each of said plates being cut away immediately in front of the inner end of said pouch whereby fuel fed to the combustion chamber will have an uninterrupted entrance therein, means for connecting the edges of the cutaway portions together, and a laterally-extending conduit merging at its inner end in the apex of the outer plate, said conduit adapted to convey air from the exterior of the furnace casing to said distributing member.

898,368. SCAFFOLDING. GEORGE E. HUMPHRIES. Wellington, New Zealand. Filed Sept. 18, 1907, Serial No. 393,467. Renewed Aug. 10, 1908. Serial No. 447,825.

1. In scaffolding, the combination of an upright standard, clips adjustably mounted on said standard, floor bars provided with means for securing them to a support, extension bars overlapping said floor bars adjacent said standards, shiftable means carried by said clips for locking the latter in their adjusted positions, and seats on said shiftable means for supporting the overlapping portions of said floor bars and extension bars, whereby said clips will be locked by the weight on said bars, substantially as described.

2. In scaffolding, the combination of an upright standard, clips adjustably mounted on said standard, floor bars provided with means for securing them to a support, extension bars overlapping said floor bars adjacent said standards, lugs carried by the inner ends of said extension bars for engaging the bottoms of said floor bars, shiftable means carried by said clips for locking the latter in their adjusted positions, and seats on said shiftable means for supporting the overlapping portions of said floor bars and extension bars, whereby said clips will be locked by the weight on said bars, substantially as described.

3. In scaffolding, the combination of an upright standard, clips adjustably mounted on said standard, floor bars provided with means for securing them to a support, extension bars overlapping said floor bars adjacent said standards, wedges slidably carried by said clips for engaging said standards, and seats on the upper ends of said wedges for supporting the overlapping portions of said floor bars and extension bars, substantially as described.



4. In scaffolding, the combination of an upright standard provided with a series of horizontal shoulders, clips adjustably mounted on said standard for engagement with said shoulders, floor bars provided with means for securing them to a support, extension bars overlapping said floor bars adjacent said standards, wedges slidably carried by said clips for engaging said standards, and seats on the upper ends of said wedges for supporting the overlapping portions of said floor bars and extension bars, substantially as described.

5. In scaffolding, the combination of an upright standard, clips adjustably mounted on said standard, floor bars provided with means for securing them to a support, extension bars overlapping said floor bars adjacent said standards, wedges slidably carried by said clips for engaging said standards, seats on the upper ends of said wedges for supporting the overlapping portions of said floor bars and extension bars, and means for locking said bars in said seats, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

898,369. DIFFRACTION CHROMOSCOPE. FREDERIC E. IVES, Weehawken, N. J. Filed Mar. 21, 1906. Serial No. 307,215.



1. A diffraction color photograph viewing device having a plurality of separated sources of light disposed to superpose at the view point two or more of the spectra belonging to each diffraction ruling.

2. A diffraction color photograph viewing device having a plurality of separated sources of light, disposed to superpose at the view point right and left spectra belonging to each diffraction ruling.

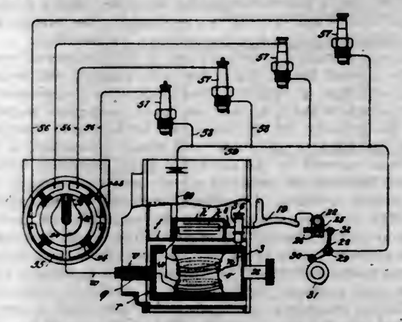
3. A diffraction color photograph viewing device having a plurality of separated sources of light disposed to superpose at the view point spectra of two or more orders belonging to each diffraction ruling.

4. A diffraction color photograph viewing device having a diaphragm with a plurality of slits disposed to superpose at the view point two or more of the spectra belonging to each diffraction ruling.

5. A diffraction color photograph viewing device having a diaphragm with a plurality of slits disposed to superpose at the view point right and left side spectra belonging to each diffraction ruling.

[Claims 6 to 16 not printed in the Gazette.]

898,370. HIGH-TENSION MAGNETO. EDWARD B. JACOBSON, Pittsfield, Mass., assignor to Pittsfield Spark Coil Company, Pittsfield, Mass., a Corporation. Filed Jan. 16, 1907. Serial No. 352,648.



1. An electric generator having in combination an armature provided with two windings in inductive relation to each other, compound field magnets, a condenser included in the primary winding, a make and break mechanism interposed between the secondary winding and one of the spark terminals, and an electrical connection extending between the other spark terminal and the secondary winding, and means for varying the magnetic flux through the armature whereby the electro-motive force produced may be varied, said means including a rotatable screen, the cylindrical surface of which is composed entirely of magnetic and non-magnetic material and having an unbroken outer cylindrical surface, as described.

2. An electric generator having in combination an armature having primary and secondary windings thereon, field magnets, a collector ring carried by the armature, one terminal of the primary connected thereto, the other terminal of the primary being grounded, a second ground connection connected to the collector ring, a make and break mechanism interposed between the collector ring and the second ground connection, the secondary winding having one terminal connected to a spark-plug and its other terminal grounded, and means for varying the magnetic flux through the armature whereby the electro-motive force produced may be varied, said means including a rotatable screen, the cylindrical surface of which is unbroken from end to end.

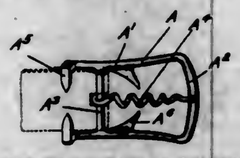
3. An electric generator having in combination, a compound field magnet, an armature provided with primary and secondary windings, an armature shaft, a secondary shaft operatively connected to the armature shaft, a distributer connected to one terminal of the secondary winding, a contact-piece adapted to be engaged by the distributer, a spark terminal connected with the contact-piece, an electrical connection extending between the spark terminal and the other terminal of the secondary, a collector, a grounded connection extending therefrom, make and break mechanism included in the primary winding and the ground terminal, a condenser connected to the primary terminal, and means for varying the magnetic flux through the armature whereby the electro motive force induced therein may be varied, said means comprising a rotatable screen, composed entirely of magnetic and non-magnetic material and having a uniform unbroken and closed outer cylindrical surface, as described.

4. A magneto electric generator having in combination an armature provided with primary and secondary windings, a rotatable screen interposed between the pole pieces and the armature, said screen being composed of magnetic and non-magnetic material whereby the inductive effect of

and from the lever at predetermined intervals, whereby to permit the steam to exhaust from the lifting cylinders during the early part of the stroke when the press is working on long strokes.

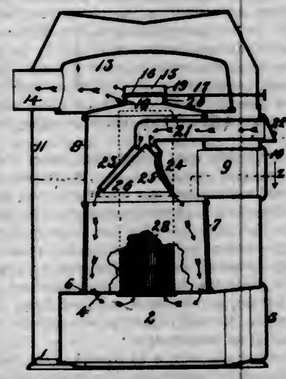
4. The combination of a hydraulic press, steam hydraulic intensifier apparatus for operating the same, an air vessel, valves for controlling the admission and exhaust of steam to and from the intensifier and the lifting cylinders of the press and for controlling the connection between the high pressure hydraulic system and the air vessel, a single lever for operating all of said valves, hunting gear comprising a lever tending to maintain a predetermined angular position and cam mechanism operated by the piston of the intensifier for displacing said lever to an angular extent corresponding to the advance of said piston, a floating lever connected to said hunting gear lever, to the handing lever, and to the valves for controlling the admission and exhaust of steam to and from the intensifier, connections between the hand lever and the valve for controlling the connection between the high pressure hydraulic system and the air vessel and between the hand lever and the valve for controlling the admission and exhaust of steam to and from the lifting cylinders, and trip mechanism interposed in the last mentioned connection and adapted to automatically couple and uncouple to and from the hand lever the valve controlled by said connection in such manner that steam will be normally admitted to the lifting cylinders but will be exhausted therefrom during the earlier part of the working strokes of the press when working with long strokes.

898,366. BELT-BUCKLE. JAMES HOUGH, Guelph, Ontario, Canada. Filed July 17, 1907. Serial No. 384,191.



A buckle having the tongue thereof twisted in the shape of a corkscrew spiral to form in the one member both a retainer for the strap and a cork puller.

898,367. STOVE AND FURNACE. HIRAM J. HOUGH, ANTHONY J. DIETRICH, and WILLIAM F. BRUNSWICK, Akron, Ohio. Filed June 26, 1907. Serial No. 380,930.



1. The combination with a stove or furnace provided with an ash-pit, a combustion chamber mounted on said ash-pit, and a fuel pouch extending from the outside of the furnace casing to within the combustion chamber, of an air distributing member positioned within said combustion chamber in front of the inner end of said pouch comprising a pair of superimposed conical-shaped imperforate plates disconnected at their lower ends thereby providing an air outlet, a portion of said plates being cut away immediately in front of the inner end of said pouch, whereby fuel fed to said combustion chamber through said pouch will have an uninterrupted entrance therein, means for connecting the edges of said cutaway portions together, and means merging into the apex of the outer plate for conveying air from the exterior of the furnace casing to said air distributing member.

2. A device of the class described comprising an ash-pit provided with a plurality of openings in its top, a combustion chamber mounted on said ash-pit in open communication with one of said openings, a fuel pouch communicating with said chamber a dome shaped member mounted on said combustion chamber provided with an opening in its base for establishing communication between the interior of said member and said combustion chamber, a damper to close said opening, an air distributing member positioned within said combustion chamber in front of the inner end of said pouch comprising a pair of superimposed conical-shaped imperforate plates disconnected at their lower ends thereby providing an air outlet, a portion of said plates being cut away immediately in front of the inner end of said pouch, whereby fuel fed to said combustion chamber through said pouch will have an uninterrupted entrance therein, means for connecting the edges of the cutaway portions of the plates together, a flue extending from the ash-pit to said dome shaped member in open communication with both, whereby when said air inlet is open for the admission of air and said damper closed, the products of combustion will pass through said combustion chamber downwardly to said ash-pit and upwardly through said flue to said dome shaped member, means merging into the apex of the outer plate for conveying air from the interior of the furnace casing to said air distributing member and an off-take flue arranged for the escape of the products of combustion from said dome shaped member.

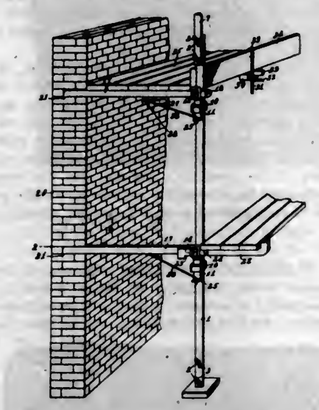
3. The combination with a stove or furnace provided with an ash pit, a combustion chamber mounted thereon and a fuel pouch communicating with the said chamber, of an air distributing member disposed within said chamber in front of the inner end of said pouch and comprising a pair of conical-shaped spaced plates disconnected at their lower ends thereby providing an air outlet, a portion of each of said plates being cut away immediately in front of the inner end of said pouch whereby fuel fed to the combustion chamber will have an uninterrupted entrance therein, means for connecting the edges of the cutaway portions together, and a laterally-extending conduit merging at its inner end in the apex of the outer plate, said conduit adapted to convey air from the exterior of the furnace casing to said distributing member.

898,368. SCAFFOLDING. GEORGE E. HUMPHRIES, Wellington, New Zealand. Filed Sept. 18, 1907, Serial No. 393,467. Renewed Aug. 10, 1908. Serial No. 447,825.

1. In scaffolding, the combination of an upright standard, clips adjustably mounted on said standard, floor bars provided with means for securing them to a support, extension bars overlapping said floor bars adjacent said standards, shiftable means carried by said clips for locking the latter in their adjusted positions, and seats on said shiftable means for supporting the overlapping portions of said floor bars and extension bars, whereby said clips will be locked by the weight on said bars, substantially as described.

2. In scaffolding, the combination of an upright standard, clips adjustably mounted on said standard, floor bars provided with means for securing them to a support, extension bars overlapping said floor bars adjacent said standards, lugs carried by the inner ends of said extension bars for engaging the bottoms of said floor bars, shiftable means carried by said clips for locking the latter in their adjusted positions, and seats on said shiftable means for supporting the overlapping portions of said floor bars and extension bars, whereby said clips will be locked by the weight on said bars, substantially as described.

3. In scaffolding, the combination of an upright standard, clips adjustably mounted on said standard, floor bars provided with means for securing them to a support, extension bars overlapping said floor bars adjacent said standards, wedges slidably carried by said clips for engaging said standards, and seats on the upper ends of said wedges for supporting the overlapping portions of said floor bars and extension bars, substantially as described.



4. In scaffolding, the combination of an upright standard provided with a series of horizontal shoulders, clips adjustably mounted on said standard for engagement with said shoulders, floor bars provided with means for securing them to a support, extension bars overlapping said floor bars adjacent said standards, wedges slidably carried by said clips for engaging said standards, and seats on the upper ends of said wedges for supporting the overlapping portions of said floor bars and extension bars, substantially as described.

5. In scaffolding, the combination of an upright standard, clips adjustably mounted on said standard, floor bars provided with means for securing them to a support, extension bars overlapping said floor bars adjacent said standards, wedges slidably carried by said clips for engaging said standards, seats on the upper ends of said wedges for supporting the overlapping portions of said floor bars and extension bars, and means for locking said bars in said seats, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

898,369. DIFFRACTION CHROMOSCOPE. FREDERIC E. IVES, Weehawken, N. J. Filed Mar. 21, 1906. Serial No. 307,215.



1. A diffraction color photograph viewing device having a plurality of separated sources of light disposed to superpose at the view point two or more of the spectra belonging to each diffraction ruling.

2. A diffraction color photograph viewing device having a plurality of separated sources of light, disposed to superpose at the view point right and left spectra belonging to each diffraction ruling.

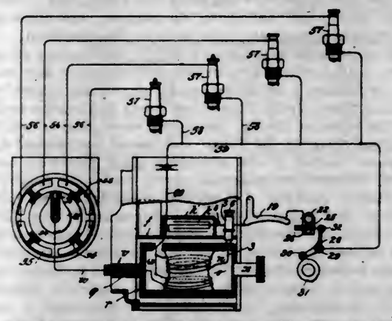
3. A diffraction color photograph viewing device having a plurality of separated sources of light disposed to superpose at the view point spectra of two or more orders belonging to each diffraction ruling.

4. A diffraction color photograph viewing device having a diaphragm with a plurality of slits disposed to superpose at the view point two or more of the spectra belonging to each diffraction ruling.

5. A diffraction color photograph viewing device having a diaphragm with a plurality of slits disposed to superpose at the view point right and left side spectra belonging to each diffraction ruling.

[Claims 6 to 16 not printed in the Gazette.]

898,370. HIGH-TENSION MAGNETO. EDWARD B. JACOBSON, Pittsfield, Mass., assignor to Pittsfield Spark Coil Company, Pittsfield, Mass., a Corporation. Filed Jan. 16, 1907. Serial No. 352,648.



1. An electric generator having in combination an armature provided with two windings in inductive relation to each other, compound field magnets, a condenser included in the primary winding, a make and break mechanism in the primary, spark terminals, a distributer mechanism interposed between the secondary winding and one of the spark terminals, and an electrical connection extending between the other spark terminal and the secondary winding, and means for varying the magnetic flux through the armature whereby the electro-motive force produced may be varied, said means including a rotatable screen, the cylindrical surface of which is composed entirely of magnetic and non-magnetic material and having an unbroken outer cylindrical surface, as described.

2. An electric generator having in combination an armature having primary and secondary windings thereon, field magnets, a collector ring carried by the armature, one terminal of the primary connected thereto, the other terminal of the primary being grounded, a second ground connection connected to the collector ring, a make and break mechanism interposed between the collector ring and the second ground connection, the secondary winding having one terminal connected to a spark-plug and its other terminal grounded, and means for varying the magnetic flux through the armature whereby the electro-motive force produced may be varied, said means including a rotatable screen, the cylindrical surface of which is unbroken from end to end.

3. An electric generator having in combination, a compound field magnet, an armature provided with primary and secondary windings, an armature shaft, a secondary shaft operatively connected to the armature shaft, a distributer connected to one terminal of the secondary winding, a contact-piece adapted to be engaged by the distributer, a spark terminal connected with the contact-piece, an electrical connection extending between the spark terminal and the other terminal of the secondary, a collector, a grounded connection extending therefrom, make and break mechanism included in the primary winding and the ground terminal, a condenser connected to the primary terminal, and means for varying the magnetic flux through the armature whereby the electro motive force induced therein may be varied, said means comprising a rotatable screen, composed entirely of magnetic and non-magnetic material and having a uniform unbroken and closed outer cylindrical surface, as described.

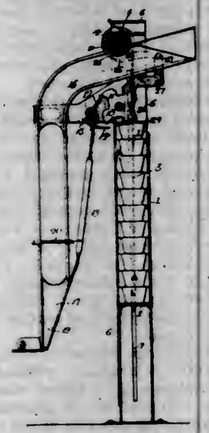
4. A magneto electric generator having in combination an armature provided with primary and secondary windings, a rotatable screen interposed between the pole pieces and the armature, said screen being composed of magnetic and non-magnetic material whereby the inductive effect of

the field on the windings may be changed, a condenser connected in the primary winding, means operatively connected to the armature shaft for electrically connecting the secondary winding to the external circuit, conducting devices interposed between the external circuit and the primary and secondary windings, a make and break mechanism included in the circuit of the primary, the make and break device including a rotatable supporting plate, and an upright, as 24^1, forming a part thereof, a lever pivoted to the supporting plate and provided with a roller at one end, a cam for engaging the roller, and a contact-point and brush carried by the upright, the brush being electrically connected to the primary, as described.

5. An electric generator having in combination an armature, a shaft therefor provided with primary and secondary windings, a secondary shaft operatively connected to the armature shaft, a make and break mechanism included in the primary circuit, means for advancing or retarding the operation of the make and break mechanism, a distributer carried by the secondary shaft, electrical connections between the external circuit and the primary and secondary windings, a condenser connected to the external circuit, and means for varying the magnetic flux through the armature whereby the electro-motive force induced in the secondary may be varied, the distributer comprising a brush-holder electrically connected to the secondary winding, and a second brush holder in electrical connection with the secondary, a sectional ring connected to the external circuit, and contact-pieces connected to the ring and engaged by the distributer, as described.

[Claims 6 and 7 not printed in the Gazette.]

898,371. VENDING-MACHINE. ALEXANDER JABOBE, Philadelphia, Pa. Filed Sept. 6, 1905. Serial No. 277,220.

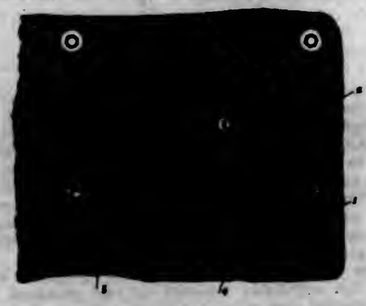


1. The combination, in a vending apparatus, of a frame or guide, a platform for the articles to be vended, a shaft, drums at the end of said shaft, bands arranged to be wound on said drums and attached at their opposite ends to said platform, a coiled spring on said shaft for turning the same to lift the platform, said spring being wound when the platform is depressed for the reception of the vendible units, escapement means comprising a toothed wheel and a pawl normally in engagement therewith for co-action with said lifting means, said wheel having rounded teeth for engagement with the uppermost vendible unit, an escapement lever carrying the pawl engaging said wheel and adapted to be swung to one side to release the same, means for swinging said lever back to its initial position thereby causing said projection to engage another tooth of the wheel while the vendible unit is being delivered, a ratchet on the spring shaft, a pawl therefor, and an arm carried by the pawl for controlling said ratchet, said arm lying in the path of the vendible units and engaged by the same so as to hold the said pawl out of engagement.

2. In a vending apparatus, the combination of a platform for the vendible units, a shaft from which said platform is suspended, means tending to raise said platform, a ratchet wheel carried by said shaft, a pawl for engagement with said ratchet wheel, and an extension carried by said pawl and lying in the path of the vendible units whereby the engagement of said extension by the vendible units holds the pawl normally out of engagement with the ratchet wheel.

3. In a vending apparatus, the combination of a platform for the vendible units, a shaft from which said platform is suspended, a torsion spring carried by said shaft and tending to raise said platform, a ratchet wheel carried by said shaft, a pawl for engagement with said ratchet wheel, and an extension carried by said pawl and lying in the path of the vendible units whereby the engagement of said extension by the vendible units holds the pawl normally out of engagement with the ratchet wheel.

898,372. CARTRIDGE-CARRIER. VICTOR H. JENNINGS, Worcester, Mass., assignor to Mills Woven Cartridge Belt Company, Worcester, Mass., a Corporation of Massachusetts. Filed Apr. 27, 1907. Serial No. 370,713.



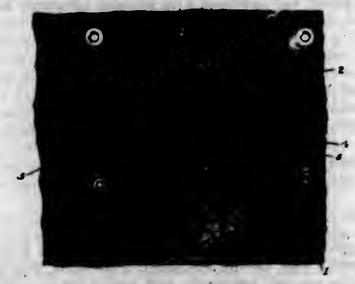
1. A cartridge carrier of woven material comprising a cartridge pocket closed at its lower end and having a front and rear wall each provided with cells or compartments for individual cartridges, said cells being open at the open end of the pocket to receive the cartridges, the cells of one series being disposed opposite to the intervals between the cells of the other series and the two series of cells normally lying in close relation but capable of separation to facilitate withdrawal of the cartridges by the distension of the outer wall of the pocket.

2. A cartridge carrier of woven material comprising a cartridge pocket having a front and rear wall each provided with cells or compartments for individual cartridges, the cells of one series being disposed opposite to the intervals between the cells of the other series and the two series of cells normally lying in close relation but capable of separation to facilitate withdrawal of the cartridges by the distension of the outer wall of the pocket, and a covering flap for covering the two series of cells when the latter are in close relation.

898,373. CARTRIDGE-CARRIER. VICTOR H. JENNINGS, Worcester, Mass., assignor to Mills Woven Cartridge Belt Company, Worcester, Mass., a Corporation of Massachusetts. Filed Jan. 8, 1908. Serial No. 409,813.
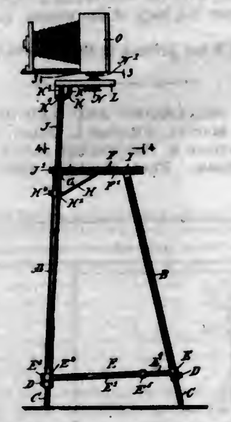
1. A woven cartridge pocket having compartments or cells to receive individual cartridges arranged upon the inner sides of its front and rear walls and woven integrally therewith.

2. A woven cartridge pocket having compartments or cells to receive individual cartridges arranged upon the inner sides of its front and rear walls, the pocket being formed of at least four plies of material, of which one forms its rear wall, one the front wall, one the loops forming the cells carried by one of said walls, and one the loops carried by the other wall.



3. A woven cartridge carrier having a pocket to receive cartridges in packages, and a pocket formed with cells or compartments to receive individual cartridges, said carrier being formed of at least four plies or warps, two of which are utilized for the inner and outer walls of the individual cartridge pocket and two for the loops forming the cells of said pocket, and one of which forms the outer wall of the cartridge package pocket and the other three the inner wall thereof.

898,374. TRIPOD. HANS J. C. JESSEN, Nevada, Iowa. Filed Apr. 22, 1908. Serial No. 428,496.



1. A tripod having connected legs connected at their tops, of which one is provided with an adjustable telescoping extension at its upper end, a table pivoted on the said extension, and means for securing the table in adjusted position.

2. A tripod having connected legs, of which one is provided with an adjustable telescoping extension, a table pivoted on the said extension and having a quadrant, and a clamping screw on the said extension engaging the said quadrant.

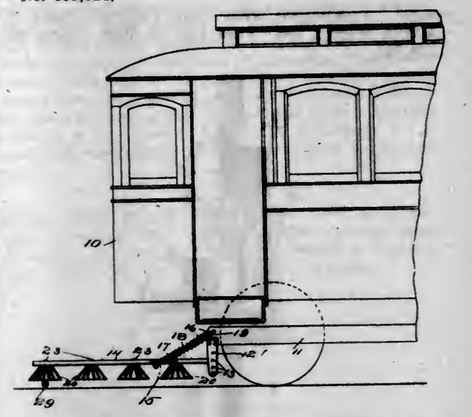
3. A tripod having connected legs, of which one is provided with an adjustable telescoping extension, a table pivoted on the said extension and provided with an elongated slot, a support held adjustably on the said table and provided with a clamping screw engaging the said slot, and means for securing the table in place on the extension.

4. A tripod comprising a main leg and auxiliary legs, an arm hinged on the said main leg and slidably engaged by the auxiliary legs, and a bottom brace connecting the legs with each other.

5. A tripod comprising a main leg and auxiliary legs, an arm hinged on the said main leg and slidably engaged by the auxiliary legs, an arm brace pivotally connected with the said arm, a collar slidably secured on the said main leg and pivotally connected with the said arm brace, and a bottom brace connecting the legs with each other.

[Claims 6 and 7 not printed in the Gazette.]

898,375. ROLLING AUTOMATIC CAR-FENDER. FRANCIS A. JOHAN, Seattle, Wash. Filed Jan. 2, 1908. Serial No. 409,024.



1. A fender embodying a frame composed of beveled strips, rollers disposed beneath the frame and bolts forming journals for the rollers and provided with heads corresponding in formation to the bevel of the strips.

2. A fender embodying a frame having beveled longitudinal edges, rollers disposed beneath the frame and bolts extending through the frame and rollers, and provided with heads supplemental in slant to the bevel of the frame pieces.

3. A fender embodying a frame composed of strips having its opposite edges beveled, frusto-conical rollers disposed beneath the frame strips and provided with inclined sides complemental to the bevel of the frame strips, and bolts extending through the strips and rollers and provided with heads upon the upper side corresponding to the slant of the taper of the strips.

898,376. FLAT KNIT CAP. NATHAN E. KAHN, Woodbine, N. J., assignor to Stephenson & Co., Philadelphia, Pa., a Corporation of New Jersey. Filed July 28, 1906. Serial No. 328,233.



1. A knit cap having a flat circular body, substantially composed of initially similar loops of knit fabric, set in a distended state in disk form; the loops upon the top of the cap converging symmetrically towards the center of circular figure; the loops upon the bottom of the cap converging towards the center of a head opening eccentric to the center of figure of the top; said head opening being provided with a selvage band, substantially as set forth.

2. A knit cap having a flat circular body substantially composed of initially similar loops of knit fabric, set in a distended state in disk form, said fabric having projecting

loops of extra thread which converge symmetrically towards the center of circular figure of the top and a relatively small central top region of ordinary knit loops; the loops upon the bottom portion converging towards the center of a head opening eccentric to the center of figure of the top; said head opening being provided with a selvage band, substantially as set forth.

898,377. COMBINED STOP AND CHECK. JOHN H. KARNS, Warren, Ind. Filed Aug. 23, 1906. Serial No. 331,792.



In a valve the combination with a T-shaped body portion having alining threaded openings and an intermediate outlet opening; of a pipe section screwed into one of the lining openings and constituting a valve seat, a check valve loosely mounted and held by gravity upon the seat, said valve having a central stem perpendicular thereto, a screw valve mounted within the other alining opening of the body and having a longitudinal axial socket for the reception of the stem, said stem being of greater length than the socket and constituting means for holding its valve out of contact with the end of the screw valve, the end wall of said socket being disposed to bear against the stem to bind the check valve upon its seat, both of said valves being disposed to separately contact with the valve seat to close communication through the body.

898,378. MANUFACTURE OF SULFUR, &c. HIPPOLYT KÖHLER, Berlin, Germany, assignor to The Firm of Rütgerswerke Actiengesellschaft, Berlin, Germany. Filed May 18, 1907. Serial No. 374,467.

1. In the process of preparing finely divided sulfur, the step which consists in fusing sulfur and naphthalene together and allowing the fused mass to become solid.

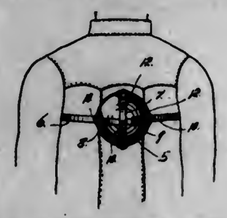
2. The process for preparing finely divided sulfur which consists in fusing sulfur and naphthalene together, allowing the fused mass to become solid and separating the naphthalene.

3. In the process of preparing finely divided sulfur, the step which consists in bringing fused naphthalene together with sulfur containing materials, and separating the formed naphthalene sulfur compound from the undissolved material.

898,379. ANTISNORING DEVICE. LOUIS F. LIEBHARDT, Denver, Colo. Filed Jan. 11, 1908. Serial No. 410,381.

1. An anti-snoring device comprising a hollow compressible ball having an imperforate wall, and suitable means for maintaining the same in position upon the back of the wearer, the ball projecting exteriorly from the securing means.

2. A device of the class described, comprising a hollow compressible ball having an imperforate wall, and a securing strap to which the ball is exteriorly applied whereby it projects outwardly from the body of the wearer when in use, the said strap being adapted to pass around the body of the patient and equipped with suitable adjusting means.



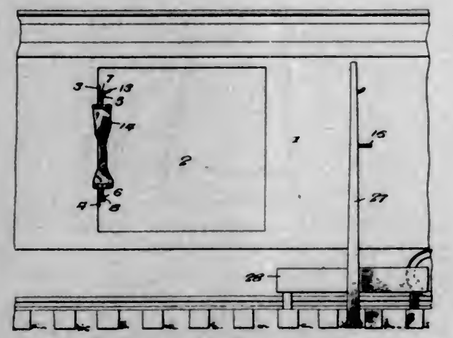
3. A device of the class described, comprising a hollow compressible ball having an imperforate wall, means for reinforcing the ball exteriorly, and means for securing the same to the body of the wearer, the ball being attached exteriorly to the securing means whereby it projects outwardly from the body of the wearer when in use, substantially as described.

4. A device of the class described, comprising a hollow compressible ball, reinforcing straps passed around the ball and secured together to maintain them in position thereon, and means for securing the ball upon the body of the wearer, substantially as described.

5. A hollow compressible ball, reinforcing straps passed around the ball exteriorly and intersecting each other, the straps being connected at their points of intersection, and means connected with the reinforcing straps for maintaining the ball upon the body of the wearer, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

898,380. DELIVERING AND CATCHING DEVICE. WILLIAM E. MARTIN, WILLIAM L. GRANT, ROBERT J. MCGAVOCK, RICHARD E. HAYNES, and JAMES C. VOORHIES, Columbia, Tenn. Filed Jan. 11, 1908. Serial No. 410,430.



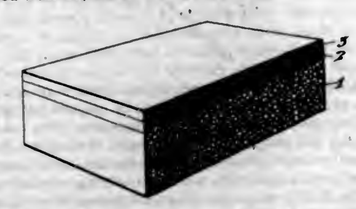
1. In a delivering and catching device of the class described, the combination with a frame adapted to hold mail bags, means to pivotally mount the frame upon a car and additional means to yieldingly hold the frame extended from the side of the car; of a standard, means to pivotally mount the standard adjacent the path of the car, a catching arm longitudinally adjustable on said standard and a hooked terminal on said arm adapted to remove the mail bag from the frame.

2. The herein described delivering and catching device, comprising the combination with a car having a door-way therein; of plates secured to the car, a frame pivotally secured to said plates, an extension on said frame, means to engage said extension and hold the frame extended from the car, a standard, a supporting post for the standard, means to pivotally mount said standard in position on the post, a catching arm adjustably secured to said standard, means at the outer end of the catching arm adapted to engage a mail bag carried by the frame and release the bag from the frame.

3. The herein described delivering and catching device, for mail bags, comprising the combination with a frame adapted to hold a mail bag and means to secure the frame to a car body; of a post adjacent the path of the car, brackets on said post, a standard pivotally mounted between said brackets, a catching arm adjustably mounted on the standard, a hooked terminal on said catching arm adapted to engage the bag and remove the same from the frame and means at the upper end of the standard to hold the catching arm into or out of the path of the mail bag.

4. The herein described delivering and catching device, comprising the combination with a car and a frame thereon adapted to support a mail bag and extend the same at the side of the car; of a post adjacent the path of the car, brackets on said post, one of said brackets having a socket therein, a projection on the bracket having a socket, a standard pivotally mounted between said brackets, a bar at the upper end of said standard, a lug on said bar adapted to engage the socket in the bracket and projections and a catching arm adjustably secured to the standard adapted to engage and remove the bag from the frame.

898,381. ARTIFICIAL FLOORING. RICHARD V. MATTISON, Upper Dublin, Pa., assignor to Keasbey & Mattison Company, Ambler, Pa., a Corporation of Pennsylvania. Filed Feb. 19, 1904. Serial No. 194,383.



1. A compound floor consisting of a base in combination with a layer above said base, which is composed of disintegrated cork chips coated superficially with cement, said chips being coated with only enough of said cementing material to unite them firmly together but with provision of abundant air spaces between the coated chips.

2. A compound floor consisting of a plurality of layers each of which contains a woody basis embedded in Sorel's cement, the woody matter being finely ground for the top layer, and more coarse below.

3. A compound floor consisting of three layers each containing a woody basis embedded in Sorel's cement; the woody basis for the top layer consisting of wood flour; that for the intermediate layer consisting of wood fiber and saw dust; and that for the bottom layer consisting of disintegrated cork.

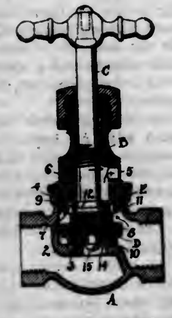
898,382. PROCESS OF PREPARING SUBSTITUTES FOR SHELLAC. JACOB MEYER, Berlin, Germany. Filed Mar. 9, 1908. Serial No. 420,113.

1. A process for preparing a substitute for shellac for polishing by dissolving 400 parts by weight of resin, soluble in alcohol, in 60 parts of dehydrated carbonate of sodium and 1000 parts of water, and then mixing said solution with a second hot solution of 8 parts by weight of stearin in 8 parts of hydroxid of potassium (containing 33 parts KOH and 67 parts of water) and 80 parts of water, whereupon the mixture of said solutions is neutralized with a mineral acid, the precipitate filtered, washed and dried.

2. A process for preparing a substitute for shellac for polishing by dissolving 400 parts by weight of resin, soluble in alcohol, in 60 parts of dehydrated carbonate of sodium and 1000 parts of water by boiling, said solution being allowed to cool, filtered and then mixed with a second hot solution of 8 parts by weight of stearin in 8 parts of hydroxid of potassium, (containing 33 parts of KOH and 67 parts of water), and 80 parts of water, whereupon the mixture of said solutions is neutralized with a mineral acid, the precipitate filtered, washed and dried.

3. A process for preparing a substitute for shellac for polishing which consists in dissolving 400 parts by weight of resins, soluble in alcohol, in 60 parts of dehydrated carbonate of sodium and 1000 parts of water by boiling, said solution being allowed to cool, filtered and then mixed with a second hot solution of 8 parts by weight of stearin in 8 parts of hydroxid of potassium, (containing 33 parts KOH and 67 parts of water) and 80 parts of water, whereupon mineral acid is added at a low temperature to the mixture of said solution, the whole mass then stirred for a longer period finally heated to about 70° C. and filtered, substantially as described and for the purpose set forth.

898,383. STOP AND WASTE VALVE. JOHN N. MORTIMER, Cleveland, Ohio, assignor to The Central Brass Manufacturing Company, Cleveland, Ohio, a Corporation. Filed Oct. 25, 1906. Serial No. 340,461.



1. The casing having a main fluid passage and a main valve seat therein, a bonnet on said casing and a valve stem threaded in said bonnet having a head on its bottom, said bonnet having an annular chamber with a waste orifice at its side and provided with a bottom edge adapted to form a valve seat, a valve member mounted on the lower end of said stem comprising a shell rotatably and detachably engaged on the head of said stem and having a piston extension adapted to fit closely in said annular chamber and having its entering edge portion adapted to close the waste chamber immediately upon initial rotation of the valve stem, and a valve body having a seating shoulder adapted to engage the valve seat on said bonnet for final sealing of said waste chamber, and said valve body having a removable connection with said shell and a seating portion at its bottom opposite the main valve seat.

2. A stop and waste valve comprising a casing having a main water passage and valve seat therein, a chambered bonnet detachably connected with said casing having a waste outlet at one side and an annular valve seat at its bottom, a valve stem having threaded connection with said bonnet and provided with a head at its lower end, and a triple seat valve detachably connected to said stem and head comprising a body having a seating portion at its bottom for the main valve seat, an annular seating shoulder about said body adapted to engage the bottom valve seat on said bonnet, and a piston portion detachably connected with said body and constructed to enter and to closely fit within the bonnet chamber and adapted to initially close the same upon initial opening movement of the main valve.

3. A stop and waste valve having a main water passage and valve seat therefor and a bonnet having a piston chamber and waste outlet therefrom, in combination with a screw valve stem mounted upon said bonnet and having a valve detachably and rotatably secured thereto at its

lower end and comprising a member recessed at its bottom and having a screw extension at its top and an annular shoulder about the member provided with an annular recess in its top surface and packing in said recesses, and a threaded fastening shell adapted to screw upon said screw extension having a tubular piston portion rotatably sleeved and secured upon said valve stem and adapted to enter said piston chamber and cut off said waste outlet upon initial opening movement of the stem and valve thereon.

898,384. DEVICE FOR THE PROTECTION OF METERS. THEODORE MULLER, New York, N. Y. Filed Feb. 27, 1908. Serial No. 418,042.



1. A meter casing having an inspection opening therein and a closure for said opening comprising transparent material thicker than the material of said casing and substantially filling said opening and projecting therethrough outwardly and having a flange bearing flat against the inner face of said casing.

2. The combination with a meter casing of relatively thin material formed with an inspection opening, of a closure for said opening comprising a flanged portion lying against the wall of the casing, and a projecting portion extending at substantially right angles to the flanged portion and projecting through the opening and beyond the wall of the casing, the portion of the closure in front of the opening being transparent.

3. The combination with a meter casing of relatively thin material formed with an inspection opening, the material of the casing about the opening being sufficiently thin to be susceptible of being readily sprung, of a closure for said opening comprising a flanged portion lying flat against the flat wall of the casing, and a projecting portion extending at substantially right angles to the flanged portion and projecting through the opening and beyond the wall of the casing, the portion of the closure in front of the opening being transparent.

898,385. TEMPORARY BINDER FOR LOOSE SHEETS. LUTHER C. MCNEAL, Rochester, N. Y., assignor of one-fourth to Howard L. Osgood and C. Schuyler Davis, Rochester, N. Y. Original application filed Mar. 10, 1904, Serial No. 197,403. Divided and this application filed Apr. 2, 1906. Serial No. 309,328.



1. A temporary binder comprising a pair of parallel rock shafts having mating prongs and laterally projecting arms and a central rock bar, parallel with said shafts, crossing the arms of both shafts and shaped to actuate said arms.

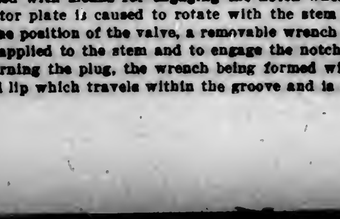
2. A temporary binder comprising a pair of parallel rock shafts having mating prongs and laterally projecting arms, springs acting on the arms in one direction, and a rock bar journaled at its ends parallel with said rock shafts and crossing the arms of both shafts to move them in opposition to the springs.

3. A temporary binder comprising a pair of parallel rock shafts having mating prongs and laterally projecting arms and a rock bar journaled between and parallel with said rock shafts and crossing the arms of both, said rock bar being wider in one dimension than the other to act operatively on said arms.

4. A temporary binder comprising a pair of parallel rock shafts having mating prongs and inwardly extending operating arms, springs pressing the arms in one direction, and a flattened rock bar parallel with the rock shafts and crossing the inner ends of said arms to actuate them against the action of their springs.

5. A temporary binder comprising a pair of spaced plates connected at their longitudinal edges, an inner bottom plate having upturned ends, parallel rock shafts journaled in the longitudinal edges of the casing, and having mating prongs and inwardly extending actuating arms, springs engaging said arms to move the prongs in one direction, a central longitudinal rock bar journaled in said upturned ends and crossing said actuating arms to move them against the action of their springs.

898,386. ANGLE-COCK. JOHN G. NAGLE, Niles, Mich., assignor to Nagle, Zane & Nagle, Niles, Mich. Filed June 17, 1908. Serial No. 438,998.



1. The combination of a valve embodying a rotary plug, a stem projecting from the plug, a removable wrench adapted to have an interlocking connection with the stem for turning the plug, and a cover upon the valve adapted to engage the stem to lock the plug against movement.

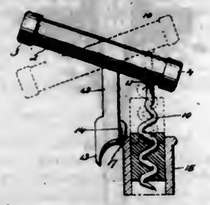
2. The combination of a valve embodying a rotary plug, a stem projecting from the plug and formed with a notch, a removable wrench adapted to be applied to the stem and to engage the notch for turning the plug, and a cover applied to the valve and formed with a wing adapted to engage the notch to lock the plug against movement.

3. The combination of a valve embodying a rotary plug, a stem projecting from the rotary plug, an indicator plate applied to the stem so as to rotate therewith and indicate the position of the valve, a removable wrench adapted to detachably engage the stem for rotating the plug, and a cover applied to the valve and adapted to engage the stem to lock the plug against movement.

4. The combination of a valve embodying a casing having a rotary plug mounted therein, the casing being provided with a groove communicating at its ends with upwardly extending channels, a stem projecting from the plug and formed with a notch, a removable wrench adapted to engage the stem and the notch therein to turn the plug, the said wrench being formed with a returned lip which travels within the groove in the casing and is opposite one of the channels at the ends of the groove when the valve is in either an open or a closed position, and a cover mounted upon the valve casing, the said cover being provided with a wing for engaging the notch in the stem to lock the plug against movement.

5. The combination of a valve embodying a casing having a rotary plug mounted therein, the casing being formed with a groove communicating at its ends with upwardly extending channels, a stem projecting from the plug and formed with a notch, an indicator plate applied to the stem and provided with means for engaging the notch whereby the indicator plate is caused to rotate with the stem to indicate the position of the valve, a removable wrench adapted to be applied to the stem and to engage the notch therein for turning the plug, the wrench being formed with a returned lip which travels within the groove and is opposite one of the channels when the valve is either in an open or a closed position, and a cover hinged upon the casing and formed with a wing designed to engage the notch in the stem to lock the plug against movement.

898,387. POCKET CORK-EXTRACTOR. HARRY W. NOYES, West Haven, Conn., assignor to H. G. Ingersoll, trustee. Filed May 31, 1907. Serial No. 376,601.



1. The combination with a tubular case handle having a contracted opening at one end and having a slot therein along one side thereof, the outer end of the slot adjacent to said opening being enlarged, of a head mounted to slide in said case and of greater diameter than the diameter of the opening in the end of the case, a cork-screw the shank of which is pivoted to said head and adapted to extend out through said slot, a flange on said shank in position to engage with the edges of said slot outside the case to hold the cork-screw at right angles to said case.

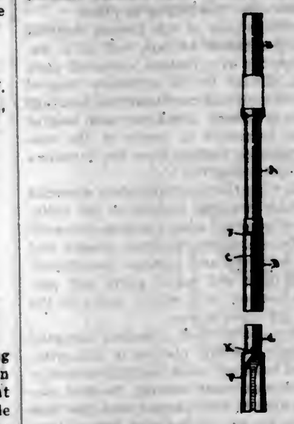
2. The combination with a tubular case handle having a slot therein along one side thereof, one end of said slot being enlarged, of a head mounted to slide in said case, a cork-screw the shank of which is pivoted to said head and adapted to extend out through said slot, a flange on said shank in position to engage with the edges of said slot outside the case to hold the cork-screw at right angles to said case, a fulcrum plate pivotally connected with said case and adapted to engage the neck of a bottle when the cork screw head is moved to a position where the shank extends through the enlarged portion of the slot, said enlarged portion of the slot being of sufficient size to allow the said flange, when disengaged from the edges of the narrower portion of the slot, to pass freely therethrough, whereby a pivotal movement of the screw shank is permitted to draw the cork.

3. The combination with a tubular case handle having a slot therein along one side thereof, of an elongated head mounted to slide in said case, a cork screw the shank of which is pivoted to said head at one end, a fulcrum plate adapted to engage a bottle neck and having a shank which is pivoted to the other end of said head, both of said shanks being adapted to extend out through said slot, means for holding said screw shank rigidly at right angles to said case throughout the greater portion of the length thereof, and means for releasing said holding means when the head is moved to one end of said case, to permit said screw shank to have a pivotal movement with respect to said handle in drawing the cork.

4. The combination with a tubular case handle having a slot therein along one side thereof, a head mounted to slide in said case, a cork screw the shank of which is pivoted to said head and adapted to extend out through said slot, a fulcrum plate adapted to engage a bottle neck pivotally connected with said case, means for holding said screw shank rigidly at right angles to said handle near the middle portion thereof, and means for releasing said holding means when the head is moved to one end of said case, to permit said screw shank to have a pivotal movement with respect to said handle in drawing the cork.

898,388. DRILL-BIT. FREDERICK W. PARSONS, Tarrytown, N. Y., assignor to Ingersoll-Rand Company, New York, N. Y. Filed Jan. 7, 1905. Serial No. 240,014.

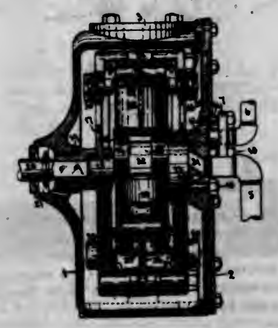
1. A drill bit comprising a shank having an elastic cylindrical metal sleeve projecting from one end, and a cutting head adapted to be forced into and out from the projecting end of said sleeve.



2. A drill bit comprising a shank and a cutting head, the contiguous ends of which are placed one against the other, in combination with an elastic cylindrical metal sleeve into the opposite ends of which the shank and head are forced to couple them together, and means for preventing the rotation of said parts with reference to one another.

3. A drill bit comprising a shank and cutting head united by an elastic metal sleeve split longitudinally, into the opposite ends of which the two are forced, said sleeve being also coupled to the shank and to the head by tongue and groove joints.

898,389. AIR-COMPRESSOR. FREDERICK W. PARSONS, Tarrytown, N. Y., assignor to Ingersoll-Rand Company, New York, N. Y. Filed Jan. 7, 1905. Serial No. 240,016.



1. The combination, with the side frames and cylinders having interconnections whereby rotary motion is imparted from one to the other, of a cylinder bearing having eccentric bearings for the side frames at each end, a hub, from which the cylinders radiate, having a bore sufficiently large to permit of its being slipped into place on the cylinder bearing over one of the end bearings, and a split bushing adapted to be inserted in said bore after the hub is in place.

2. The combination, with the side frames and cylinders having interconnections whereby rotary motion is imparted from one to the other, of a cylinder bearing having eccentric bearings for the side frames at each end, one of said end bearings being of smaller diameter than the other, a hub, from which the cylinders radiate, having a tapered bore of a diameter sufficiently large to permit of

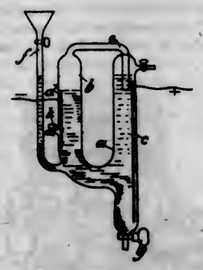
its being passed over the smaller bearing to its place on the cylinder bearing, and a tapered split bushing adapted to be inserted in said bore after the hub is in place.

3. The combination, with a pair of side frames rotating upon eccentric bearings positioned at each end of a stationary bearing, of a plurality of cylinders journaled upon said stationary bearing, pistons in the cylinders coupled to the side frames, arbors mounted in transverse bearings at the outer ends of the cylinders, cranks at each end of said arbors having pins journaled in boxes on the side frames, and ports and passages leading from the cylinders to and through the stationary bearing.

4. The combination of a plurality of cylinders mounted to rotate upon a stationary bearing, pistons in the cylinders, side frames mounted to rotate upon bearings eccentric to and at each end of the stationary bearing, cranks and pitmen connecting the cylinders and pistons respectively to the side frames, and inlet and outlet ports and passages in the stationary bearing with which ports in the cylinder register as the cylinders rotate.

5. The combination of a plurality of cylinders mounted to rotate upon a stationary bearing, pistons in the cylinders, side frames mounted to rotate upon bearings eccentric to and at each end of the stationary bearing, flexible connections between the cylinders and pistons and the side frames, a shaft attached to one of the side frames concentric with the side frame bearings, and inlet and outlet ports and passages in the stationary bearing with which ports in the cylinders register as the cylinders rotate.

898,390. PROCESS OF CONCENTRATING NITROSULFURIC WASTE ACID. HARRY PAULING, Gelsenkirchen, Germany, assignor to The Firm of Salpetersäure Industrie-Gesellschaft, G. M. B. H., Gelsenkirchen, Germany. Original application filed Aug. 13, 1906, Serial No. 330,387. Divided and this application filed July 29, 1907. Serial No. 386,072.

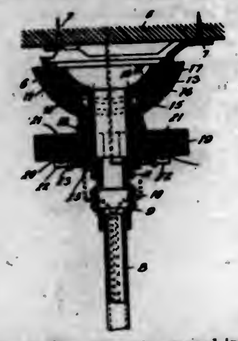


The herein described process for concentrating nitric acid consisting in filling the anode partition of a suitable electrolyzer, with nitro-sulfuric acid, and the cathode partition with diluted nitric acid, and then electrolyzing such liquid, and conducting the nitrogen oxids liberated at the cathode into the anode chamber.

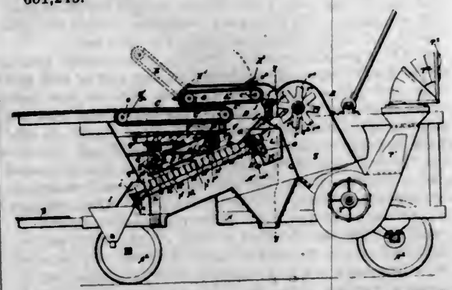
898,391. CHANDELIER-HANGING DEVICE. OLOF PETERSON, De Kalb, Ill., assignor of one-half to Thomas D. Temple, De Kalb, Ill. Filed Aug. 8, 1906. Serial No. 329,662.

1. The combination with a crow's foot, of the insulated supporting head resting in the crow's foot and having a depending extension, the connection to the lamp, and the nipple or union threaded to the extension and the connection, and having side ports for the wires.

2. The hanger for hanging electric chandeliers and lamps, having a universal joint consisting of a dished crow's foot, a head or annulus on the chandelier or lamp fitting the interior of the crow's foot, and having a depending tubular extension, a follower below the crow's foot and mounted upon said extension, an insulating washer 13 between the crow's foot and the head and having a downward flange 15, and a second insulating washer 17 between the head and the follower.



898,392. CORN-HUSKING MACHINE. WILLIAM N. SPRINGER, Peoria, Ill. Filed July 31, 1896. Serial No. 601,245.



1. In a corn husking machine, the combination with the ear husking devices, the snapping rolls, and the main feeding carrier, of the supplemental carrier arranged above and extending inwardly beyond the inner end of the main carrier, toward the snapping rolls, and means for adjustably supporting each end of said supplemental carrier whereby either end of said carrier may be adjusted about the axis of the supporting rollers at the opposite end, substantially as described.

2. In a corn husking machine, the combination with the means for removing the ears from the stalks and the flexible stalk feeding conveyer C, of means for holding the stalks against said carrier adapted to depress the upper flight of the carrier intermediate its ends to elevate the inner ends of the stalks relative to the said ear removing means as they are fed forward across the space between the inner end of the said feeding carrier and the said ear removing means, and means for directing the said elevated ends of the stalks to the said ear removing means.

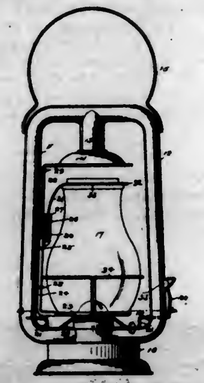
3. In a corn husking machine, the combination with the means for removing the ears from the stalks and the flexible stalk feeding conveyer C, of means for holding the stalks against said carrier adapted to depress the upper flight of the carrier intermediate of its ends to elevate the inner ends of the stalks relative to the said ear removing means as they are projected forward across the space between the said feeding carrier and the said ear removing means and also adapted to direct the said elevated ends of the stalks to the said ear removing means.

4. In a corn husking machine, the combination of the snapping rolls, the endless, flexible, primary, carrier, C, for feeding stalks to said rolls, the supplemental carrier E, arranged above and projecting beyond the main or primary carrier, and means for adjusting the outer end of said supplemental carrier toward and from the main carrier, whereby the upper surface of the inner portion of the latter can be depressed and the inner ends of the stalks be elevated as they pass therefrom and directed to the snapping rolls, substantially as set forth.

5. In a corn husking machine, the combination of devices for removing ears from the stalks, a main carrier for feeding stalks towards said devices, and a supplemental carrier arranged above and extending inwardly beyond the main carrier, said supplemental carrier being adapted to be bodily adjusted about a pivotal support at one end, whereby the space between the main carrier and the ear removing devices can be uncovered when desired, substantially as set forth.

[Claims 6 to 22 not printed in the Gazette.]

898,393. TUBULAR LANTERN. KNUT L. STENDAHL, Bridgeport, Conn., assignor to The Hurwood Manufacturing Company, Incorporated, Bridgeport, Conn., a Corporation of Connecticut. Filed Nov. 18, 1907, Serial No. 402,577. Renewed Aug. 5, 1908. Serial No. 447,084.



1. In a lantern, the combination with a globe rest having vertical and swinging movement, of a shaft having a crank arm engaging the globe rest which is raised, lowered and swung aside by oscillation of the shaft, the crank arm having a sliding connection with the globe rest for positively actuating the latter in both directions of swing.

2. In a lantern, the combination with a globe rest having vertical and swinging movement and a canopy having vertical movement, of a shaft having a crank arm engaging the globe rest, the crank arm having a sliding connection with the globe rest for positively actuating the latter in both directions of swing, and connections intermediate the canopy and the globe rest whereby the canopy is raised and lowered with the globe rest when the latter is swung aside.

3. In a lantern, the combination with a globe rest having vertical and swinging movement and a canopy, of a vertically movable canopy rod connected to the canopy, a vertically movable and oscillatory lifting rod connected to the globe rest by which the lower end of the canopy rod is engaged, and a crank arm having sliding connection with the globe rest for positively raising, lowering and swinging the globe rest outward and inward.

4. In a lantern, the combination with side tubes, a center tube connected thereto and a canopy movable on the center tube, of a canopy rod by which the canopy is carried and which is connected to one of the side tubes so as to have longitudinal movement thereon, a lifting rod upon which the canopy rod rests and which is connected to the side tubes so as to have both vertical and oscillatory movement thereon, a globe rest by which the lifting rod is carried and a shaft journaled in the side tubes and having a crank arm pivotally and slidably connected to the globe rest.

5. In a lantern, the combination with side tubes, of a shaft journaled therein and provided with a crank arm, and a globe rest pivotally and slidably connected to said crank arm.

[Claims 6 to 9 not printed in the Gazette.]

898,394. BIT. FRANK SWALES, East Sheen, England. Filed May 18, 1907. Serial No. 374,447.



1. In a bit, the combination of a mouth bar, plain snaffle rings having eyes intersecting said rings for loosely supporting said mouth bar, and side pieces formed integrally with said mouth bar and arranged exteriorly to the snaffle rings for carrying the curb chain.

2. In a bit, the combination of a mouth bar, plain snaffle rings having eyes intersecting said rings for loosely supporting said mouth bar, and short side pieces secured to the mouth bar and arranged exteriorly to the snaffle rings for carrying the curb chain.

3. In a bit, the combination of a mouth bar, plain snaffle rings having eyes intersecting said rings for loosely supporting the mouth bar, side pieces mounted on said mouth bar, and spiral shape hooks formed on the side pieces for attachment of the curb chain.

4. In a bit, the combination of a mouth bar, side pieces formed on said mouth bar for connection with the curb reins, volute shape hooks on the said side pieces for holding the curb chain, snaffle rings having eyes intersecting said rings for supporting the mouth bar so that the latter may move rotatively, the said rings being adapted for connection with the head piece of the bridle and with the snaffle rein.

898,395. CUTTER-HOLDER. AUGUST L. VALENTINE, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Apr. 18, 1906. Serial No. 312,423.



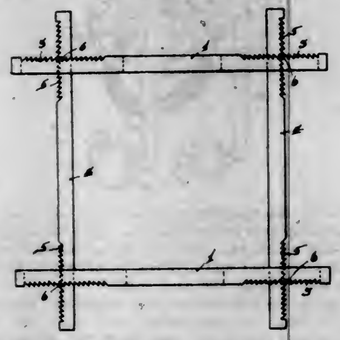
1. A stock or holder having a head provided with a chamber, and a passage at an angle to, and communicating with, the chamber, said passage having divergent walls at its lower side, combined with a rotary bushing having a series of inclined surfaces on its lower extremity; and means passing through the bore of the bushing for forcing said bushing against a tool-shank inserted in the passage.

2. The combination, with a holder provided with an enlarged and chambered head at one end, and with a passage having divergent walls to form a pocket, said passage communicating with the chamber of the head, of a perforated bushing fitting in the chamber of the head, and having a manipulating flange at its upper end, and a plurality of inclined surfaces at its lower end; and means passing through the bore of the bushing for forcing said bushing into the chamber.

3. The combination, with a holder, having a head provided with a chamber, and with a passage at right angles to said chamber and communicating therewith, said pas-

sage having divergent walls, of a perforated bushing fitted within the chamber, and having at one end a knurled flange, and at its opposite end, a series of angularly separated inclined-surfaces at different distances from one end, and a bolt passing through the perforation of the bushing, and threaded into the stock below the chamber in the head.

898,396. CLAMP. OSCAR WALLACE, Elmwood Place, Ohio, assignor of one-half to Leo J. Voell, Elmwood Place, Ohio. Filed Jan. 9, 1908. Serial No. 410,024.



1. A clamp for a plain sided angular structure, consisting of two or more bars having ratchet teeth at one end thereof, an intersecting transverse slidable bar having ratchet teeth at one end thereof opposite the teeth of the bar with which it is in transvere engagement, a triangular wedge pin adapted to engage the oppositely disposed ratchet teeth of the respective bars, substantially as described.

2. A clamp for a plain sided angular structure, having two or more bars provided with ratchet teeth on their outer faces, an intersecting bar having ratchet teeth opposite the teeth of the bars with which it is in engagement, and a triangular wedge pin adapted to engage the oppositely disposed ratchet teeth of the respective bar members, substantially as described.

3. A clamp of the class described, consisting of two or more bars having ratchet teeth on the outer faces thereof, an intersecting bar slidably supported transversely upon the opposite bar members, provided with ratchet teeth adjacent to the teeth of said members, and a triangular wedge pin adapted to engage the oppositely disposed ratchet teeth of the respective bar members, substantially as described.

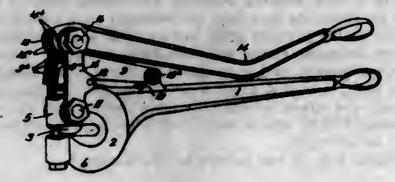
4. A clamp for a plain sided angular structure, consisting of two or more slotted bars having ratchet teeth adjacent to the slots, a transverse intersecting bar having ratchet teeth near the ends thereof and slidable in the slots of the opposing bars, and a triangular wedge adapted to engage the oppositely disposed ratchet teeth of the respective bar members, substantially as described.

5. A clamp for angular structures consisting of two bar members, one slidable with the other, each bar being provided on its outer face with a series of oppositely disposed ratchet teeth, and a triangular wedge adapted to engage the opposite faces of the opposite ratchet members, substantially as described.

[Claim 6 not printed in the Gazette.]

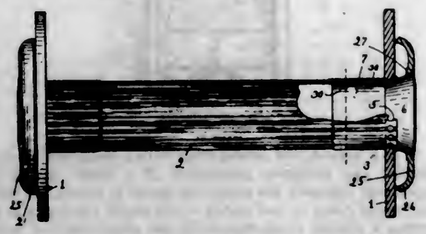
898,397. PUNCH. WILLIAM A. WHITNEY, Rockford, Ill., assignor to W. A. Whitney Manufacturing Company, Rockford, Ill. Filed Jan. 14, 1907. Serial No. 352,324.

1. The combination with a stationary handle, of a member pivotally associated therewith, a die carried by the stationary handle, a coöperating die carried by the member, a relatively movable handle, links connecting the stationary and relatively movable handle, gearing and rolls on the pivoted end portion of the relatively movable handle, gearing and cam surfaces on the free end portion of the member coöperating respectively with the gearing and rolls on the relatively movable handle, said member being operable to move its die to an active position by swinging the relatively movable handle from an open to a closed position.



2. The combination with a stationary handle, of a member pivotally associated therewith, a die carried by the stationary handle, a coöperating die carried by the member, a relatively movable handle, links connecting the stationary and relatively movable handle, gearing on the pivoted end portion of the relatively movable handle, gearing on the free end portion of the member, a cam surface on the under side of the member and a roller mounted in the connecting links, the gearing on the relatively movable handle coöperating with the gearing on the member and the cam surface on the under side of the member cooperating with the roller in the links, said member being operable to move its die to an inactive position by swinging the relatively movable handle from a closed to an open position.

898,398. SPOOL. FREDERIC B. WOOD, Providence, R. I., assignor to Rhode Island Fiber Spool Company, Boston, Mass., a Corporation of Maine. Filed Dec. 12, 1907. Serial No. 406,235.



1. In a spool, a barrel, heads on its ends having center holes, reinforcing-plates for said heads also having center holes made larger in diameter than the center holes in the heads, and plugs having tapered heads for engaging the aforesaid heads and plates, said plugs projecting through the holes in the plates and heads and entering the barrel to hold the parts assembled, substantially as described.

2. In a spool, a barrel, heads on its ends, dished reinforcing plates, the edges only of which engage said heads remote from the center thereof, and means engaging the central portions of said plates acting to draw said central portions inward and thereby forcing the edges of said plates in firm engagement with the heads, substantially as described.

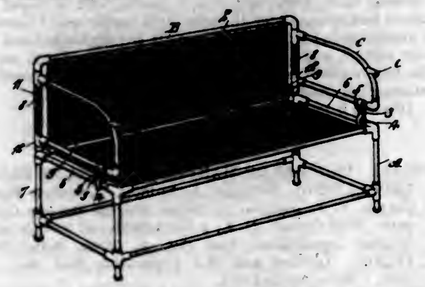
3. In a spool, a barrel, heads on its ends having center holes, reinforcing plates for said heads also having center holes made larger in diameter than the center holes in the heads, plugs adapted to be driven into the ends of the barrel having tapered heads which engage both the reinforcing plates and the heads, substantially as described.

4. In a spool, a barrel having a plurality of dovetailed fingers, heads on its ends, reinforcing plates for said heads, wedging plugs for holding said reinforcing plates in firm engagement with the heads and for also securing the heads to the barrel, said plugs being held against relative movement by the dovetailed fingers which are embedded therein substantially as described.

5. In a spool, a tubular corrugated barrel having uncorrugated ends, the ends of the outward corrugations forming shoulders at the junction with the uncorrugated ends, and heads placed on said uncorrugated ends into one side of which the ends of the outward corrugations are embedded, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

898,399. COMBINATION BED AND SOFA. LOUIS ALBERT, New York, N. Y., assignor of one-half to Harry S. Wynkoop, New York, N. Y. Filed Oct. 9, 1907. Serial No. 396,561.

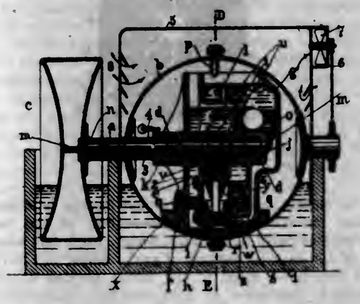


1. In a sofa and bed, the combination of a permanent stationary frame serving as a seat for the sofa and as a part of the bed, a second frame hinged to the first and reversible so as to serve at one time as a back for the sofa and at another time when reversed as a part of the bed, forming in the latter position a horizontal surface in the same plane with the seat, and frames hinged at each end of the reversible frame and being movable on said ends so that they may occupy arm positions in conjunction with the seat at one time and may be reversed at another time so as to lie underneath the reversed frame and serve as legs for the bed, and clasps for connecting said arm frames at one time to the stationary frame at one point when said arm frames are in the arm position and connecting them when they are in the leg position to another point of the main frame.

2. In a sofa and bed, the combination of a permanent stationary frame serving as a seat for the sofa and as a part of the bed, a second frame hinged to the first and reversible so as to serve at one time as a back for the sofa and at another time when reversed as a part of the bed, forming in the latter position a horizontal surface in the same plane with the seat, arm frames hinged at each end of the reversible frame and being movable on said ends so that they may occupy arm positions in conjunction with the seat at one time and may be reversed at another time so as to lie underneath the reversed frame and serve as legs for the bed, and clasps for connecting said arm frames at one time to the stationary frame at one point when said arm frames are in the arm position and connecting them when they are in the leg position to another point of the main frame, together with spring devices arranged in connection with the arm frames and the reversible frame for the purpose of automatically assisting in the unfolding or folding operation, all substantially as described.

898,400. ROTARY REFRIGERATING-MACHINE. MARCEL AUDIFFREN, Golbey, and HENRI A. SINGRÜN, Epinal, France; said Singrün assignor to Societe des Etablissements Singrün, Epinal, France, a Corporation. Filed June 20, 1906. Serial No. 322,545.

1. In a rotary refrigerating machine, a condenser, an evaporator, a hollow shaft common to both, a casting mounted loosely on the hollow shaft within the condenser, a counterweight for the casting, a reservoir surmounting the casting, compressors, means for operating the compressors from the hollow shaft, an outlet to the compressors from the evaporator through the hollow shaft, means for collecting mixed lubricant and refrigerating liquid for the reservoir, a free outflow for the lubricant from the reservoir to the compressors and other working parts and an outlet valve for the refrigerating liquid, automatically operated by a float floating on said liquid, and means for conveying the refrigerating liquid to the evaporator, substantially as described.



2. In a rotary refrigerating machine, a condenser and evaporator and hollow connecting shaft, in combination with a casting free on the shaft and a compressor in the casting, means for collecting the lubricant in the upper part of the casting from the revolving condenser, and the said casting having an outlet at the bottom proportionate to the rate of supply to maintain a constant level of lubricant above the compressors.

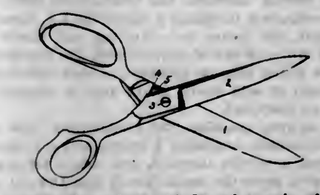
3. In a refrigerating machine, a rotary condenser and evaporator and hollow connecting shaft in combination with a casting mounted free on the shaft in said condenser, a separating reservoir surmounting the casting, a compressor, means for collecting the refrigerant and lubricant from the rotary condenser into said separating reservoir and means for conveying the former to the evaporator and the lubricant to the compressor.

4. The combination with a rotary condenser and a rotary evaporator communicating with each other, of a reservoir for the refrigerating liquid located within said condenser, means for conducting to said reservoir commingled refrigerating fluid and oil, an automatic float valve in the reservoir and a fixed pipe communicating therewith for leading away the refrigerating liquid to the evaporator as it is freed from oil, substantially as described.

5. The combination of a rotary condenser, a rotary evaporator, a hollow shaft common to both and a chambered casting freely mounted in the end of said shaft, within the condenser, through which casting said shaft opens into the condenser from the evaporator and a compressor arranged in said passage through the casting, substantially as described.

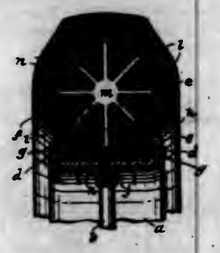
[Claims 6 to 9 not printed in the Gazette.]

898,401. SHEARS AND SCISSORS. JOHN J. BOOTH, Rockford, Ill. Filed May 1, 1908. Serial No. 430,362.



The combination of two blades of a pair of shears or scissors pivotally connected, one of the blades adjacent to the pivot formed with a transverse recess extending entirely across the blade, and a curved plate spring located in the recess having its ends in hook form and engaging the edges of the blades.

898,402. ELASTIC VEHICLE-TIRE. WILLIAM BRAMELD, Paterson, N. J., assignor of one-tenth to James T. Jordan, Paterson, N. J. Filed Aug. 14, 1907. Serial No. 388,449.

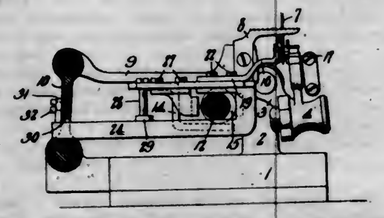


1. An elastic unitary tire member having cells arranged in lines radiating, in the cross-section of the member, from substantially a common center, each cell extending short of the exterior surface of said member but having its radial dimension equal to the major portion of the corresponding dimension of said member, substantially as described.

2. An elastic unitary tire member having relatively narrow cells arranged in lines radiating, in the cross-section of the member, from substantially a common center, each cell extending short of the exterior surface of said member but having its radial dimension equal to the major portion of the corresponding dimension of said member, substantially as described.

3. In a vehicle tire, the combination of a rim having opposed grooves and a tire having an expanding base portion formed with lateral flanges interlocked with the grooves of the rim, said tire having cells radiating, in the cross-section of the tire, from a substantially common center, each cell extending short of the exterior surface of the tire but having its radial dimension equal to the major portion of the corresponding dimension of said tire, and one of said cells extending into said base portion, substantially as described.

898,403. NEEDLE-GUARD FOR SEWING-MACHINES. DANIEL W. COREY, St. Louis, Mo., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 23, 1906. Serial No. 344,755.



1. In a sewing machine, the combination with stitch-forming mechanism including a needle and a looper, of a needle guard, and means for operating said needle guard to move it into and out of contact with the needle including devices which may be adjusted so that the timing of the movement of said needle guard may be changed; substantially as described.

2. In a sewing machine, the combination with stitch-forming mechanism including a needle and a looper, of a needle guard, a carrier therefor, and means for operating said carrier to move the needle guard into and out of contact with the needle, including devices which may be adjusted so that the timing of the movement of the carrier may be changed; substantially as described.

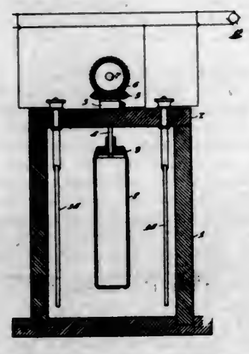
3. In a sewing machine, the combination with stitch-forming mechanism including a needle and a looper, of a needle guard, a carrier therefor, means for adjustably securing the needle guard to its carrier, and means for operating said carrier to move the needle guard into and out of contact with the needle; substantially as described.

4. In a sewing machine, the combination of a work support with stitch-forming mechanism including a needle and a looper, of a needle guard located beneath the work support, a carrier therefor, means for adjustably securing the needle guard to its carrier, and means for operating said carrier, including a device which may be adjusted so that the timing of the movement of the carrier may be changed.

5. In a sewing machine, the combination with stitch-forming mechanism including a needle, and a looper, a needle guard, a carrier therefor, said needle guard having a slotted shank whereby the same is adjustably secured to said carrier, and means for operating said carrier to move the needle guard into and out of contact with the needle; substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

898,404. PROCESS OF MAKING ARTICLES BY ELECTROPLATING. THOMAS A. EDISON, Llewellyn Park, Orange, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Original application filed Oct. 5, 1903, Serial No. 175,818. Divided and this application filed Nov. 3, 1906. Serial No. 341,861.



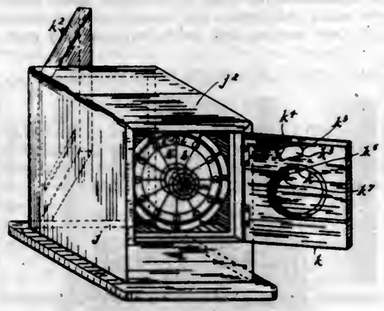
1. The process of making a storage battery can or receptacle, which consists in electro-plating a coating of copper on a former, in electro-plating a film of nickel on the copper coating, and in electro-plating a film of iron on the nickel film, whereby a seamless article will be produced, substantially as set forth.

2. The process of making a storage battery can or receptacle, which consists in electro-plating copper on a former, in electro-plating a film of nickel on the copper coating, in electro-plating a film of iron on the nickel coating, and in finally removing the copper deposit, whereby a seamless can or receptacle having a nickel-plated interior will be formed, substantially as set forth.

898,405. CHANGEABLE-DIAL WATCHMAN'S TIMER. JOSEPH J. FITZSIMMONS, Portland, Oreg. Filed Feb. 28, 1908. Serial No. 418,401.

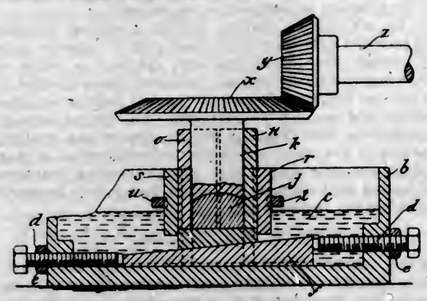
1. An employee's timer comprising a clock-movement, an hour-hand post and minute-hand post, an hour-dial mounted on and rotated by said hour-hand post, having radially spaced cipher-characters on its face arranged relatively to the figures of a clock-dial, a fixed ring on the frame of the clock-movement and appropriately marked to represent a clock-dial, said ring being arranged to encircle the said hour-dial, a minute-dial mounted on and rotated by said minute-hand post, in front of said hour-dial, also having cipher-characters on its face arranged relatively to the figures of a clock-dial, and a screen having apertures arranged to disclose certain of said cipher-characters on said hour and minute-dials to view, but concealing all the remainder of said cipher-characters.

2. An employee's timer comprising a clock-movement, an hour-hand post and minute-hand post, an hour-dial removably mounted on and rotated by said hour-hand post, having radially spaced cipher-characters on its face arranged relatively to the figures of a clock-dial, a fixed ring on the frame of the clock-movement and appropriately marked to represent a clock-dial, said ring being arranged to encircle the said hour-dial, a minute-dial removably mounted on and rotated by said minute-hand post, in front of said hour-dial, also having cipher-characters on its face arranged relatively to the figures of a clock-dial, and a screen having apertures arranged to disclose certain of said cipher-characters on said hour and minute-dials to view, but concealing all the remainder of said cipher-characters.



3. An employee's timer comprising a clock-movement, an hour-hand-post and minute-hand post, an hour-dial removably mounted on and rotated by said hour-hand post, having radially spaced cipher-characters on its face arranged relatively to the figures of a clock-dial, a fixed ring on the frame of the clock-movement and appropriately marked to represent a clock-dial, said ring being arranged to encircle the said hour-dial, a minute-dial removably mounted on and rotated by said minute-hand post, in front of said hour-dial, also having cipher-characters on its face arranged relatively to the figures of a clock-dial, and a case inclosing said clock-movement, said case having apertures in its front wall arranged to disclose certain of said cipher-characters on said hour and minute-dials to view, but concealing all of the remainder of said cipher-characters.

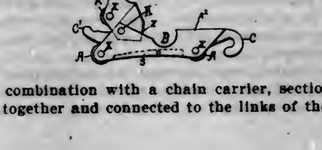
898,406. STEP-BEARING DEVICE. DAVID C. GRISWOLD, North Wilbraham, Mass., assignor of one-half to William H. Joy, North Wilbraham, Mass. Filed Nov. 23, 1907. Serial No. 403,495.



1. In a shaft-adjusting mechanism, in combination, a casing, a ribbed wedge-shaped element located therein, means for adjustably clamping the same to the casing, a second wedge-shaped element A mounted on the first wedge-shaped element, a bearing-block *j* mounted on the element *h* for receiving the lower end of a shaft, as *k*, boxes *n* and *o* engaging said shaft, said boxes having a rectangular recess to receive the block *j*, and means for adjustably securing the boxes *n* and *o*, to the casing, the ribbed wedge-shaped element constituting means to permit the free circulation of oil in the casing as described.

2. In combination, a casing provided with openings in the side portion thereof, a wedge-shaped element provided with ribs or grooves on its underside, a second wedge-shaped element located on the first mentioned element, a bearing-block mounted on the said second element, bearing-boxes inclosing the bearing-block and providing bearing means for a vertical shaft, locking means for the bearing-boxes engaging the openings in the casing, said bearing boxes being provided with means to prevent the bearing-block from rotating, and the grooves in the wedge-shaped element affording free circulation of oil in the casing, as described.

898,407. LAST-LOCK. JOHN T. HARDING, North Abington, Mass., assignor, by mesne assignments, to Krentler-Arnold Hinge Last Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 27, 1904. Serial No. 238,366.



1. A divided last, provided with a locking device, consisting of a movable member secured to one part of the last, and a part movable with relation to and carried by said member and operated by the movement of said member to detachably grip the opposite part of the last and lock the last in rigid lengthened position.

2. A divided last, one of whose parts carries a vertically movable locking member provided at its outer end with a relatively movable part adapted to be automatically and detachably engaged with the opposite part of the last by the movement of said member to lock the last in rigid lengthened position.

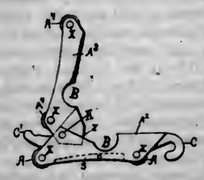
3. A divided last, one of whose parts carries a vertically movable locking member provided at its outer end with a pivoted toggle-acting part having means at its outer end for detachably engaging the opposite portion of the last for rigidly locking the latter in lengthened position.

4. A hinged last, one of whose parts is provided with a swinging member, and a toggle-acting part pivoted at one end to the free end of said member, said part having its opposite end provided with means for detachably engaging and biting into the opposite last part for immovably holding the last locked in lengthened position.

5. A hinged last, having a metal-engaging surface carried by one last part, and a toggle lever pivoted at one end to the opposite last part for engaging at its free jointed end with said metal surface.

[Claim 6 not printed in the Gazette.]

898,408. CONVEYER. WILLIAM M. HEINEY, Huntington, Ind. Filed Jan. 22, 1908. Serial No. 412,126.



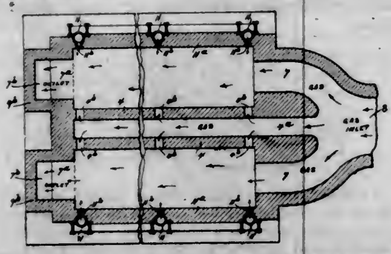
1. In combination with a chain carrier, sectional links pivoted together and connected to the links of the carrier,

a spring designed to normally hold the free ends of the sections together to form a bearing for the pintle of a conveyer receptacle, as set forth.

2. In combination with fixed tracks having curved ends, an endless chain carrier, sectional links pivoted together and connected to the links of said endless carrier, each of said sectional links having a recessed portion forming a bearing, a spring fixed to one of said sections and adapted to bear yieldingly against the other section of the link, thereby holding the free ends of the sections together, as set forth.

3. In combination with tracks having curved portions overlapping each other and spaced apart, an endless chain carrier moving about the curved portions of the inner track, pivotal sectional links in said carrier adapted to form bearing members for a receptacle, anti-friction rollers carried by said sectional links and designed to bear against the curved portions of said tracks, as set forth.

898,409. RECUPERATIVE SPELTER-FURNACE. NICHOLAS L. HEINZ, La Salle, Ill. Filed July 29, 1907. Serial No. 386,068.



1. The retort chamber having a longitudinal division wall, a gas inlet opening and an outlet opening at opposite ends, near the chamber bottom and at each side of the division wall, a large horizontal flue in the division wall near the chamber bottom and provided with ports at intervals along its length and communicating with the space at the bottom of said chamber on both sides, and a gas supply flue having common connection with the gas inlet openings and large horizontal flue.

2. The retort chamber having a longitudinal division wall, a gas inlet opening and an outlet opening at opposite ends, near the chamber bottom and at each side of the division wall, a large horizontal flue in the division wall near the chamber bottom and provided with ports at intervals along its length and communicating with the space at the bottom of said chamber on both sides, and a gas supply flue having common connection with the gas inlet openings and large horizontal flue, in combination with an air heating chamber placed under the same and having flue connections therewith.

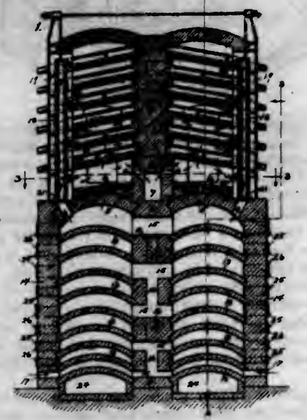
3. The retort chamber having a longitudinal division wall, a gas inlet opening and an outlet opening at opposite ends near the bottom at each side, a large horizontal flue near the bottom and provided with ports at intervals opening on each side of the division wall into the bottom of the chamber space, and air flues in the front walls of the retort chamber and provided with uniform ports emptying into the retort chamber.

4. The retort chamber having a longitudinal division wall, a gas inlet opening and an outlet opening at opposite ends near the bottom at each side, a large horizontal flue near the bottom and provided with ports at intervals opening on each side of the division wall into the bottom of the chamber space, and air flues in the front walls of the retort chamber and provided with uniform ports emptying into the retort chamber in combination with an air heater placed beneath the same and having flue connections therewith.

5. In a spelter retort furnace the combination with a long horizontal retort chamber provided with a gas inlet opening at one end and an outlet opening at the other or further end and having transversely arranged retorts, a large horizontal flue extended along near the bottom of the chamber and provided with ports at intervals along its length communicating with the chamber space below the retorts, and a gas supply flue having common connection with the gas inlet opening of the chamber and with said large horizontal flue.

[Claims 6 and 7 not printed in the Gazette.]

898,410. RECUPERATIVE FURNACE. NICHOLAS L. HEINZ, La Salle, Ill. Original application filed July 29, 1907, Serial No. 386,068. Divided and this application filed Mar. 16, 1908. Serial No. 421,524.



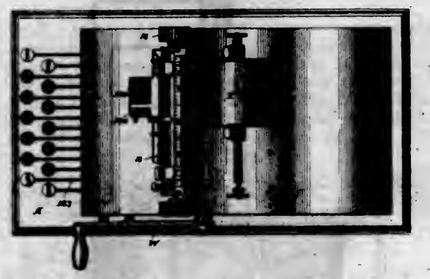
1. An air heating chamber having a vertical division wall provided with openings through it at its opposite ends and vertical flues connecting such openings, a series of arches separating the inclosed spaces at opposite sides of the division wall into alternate horizontal passages on lines between said openings through said wall, in combination with a working chamber placed upon the air heating chamber and having inlet air flues and outlet flues for the products of combustion respectively connected with the horizontal passages of the air heating chambers.

2. An air heating chamber having a vertical division wall provided with openings through it at its opposite ends and vertical flues connecting such openings, a series of arches separating the inclosed spaces at opposite sides of the division wall into alternate horizontal passages on lines between said openings through said wall, having increase in transverse area from the bottom upward, in combination with a working chamber placed upon the air heating chamber and having inlet air flues and outlet flues for the products of combustion, respectively.

3. An air heating chamber having a vertical division wall provided with openings through it at its opposite ends and vertical flues connecting such openings, a series of arches separating the inclosed spaces at opposite sides of the division wall into alternate horizontal passages on lines between said openings through said wall, having increase in transverse area from the bottom upward and cleaning openings in the outer side walls, in combination with a working chamber placed upon the air heating chambers and having inlet air flues and outlet flues for the products of combustion, respectively.

898,411. ADDING-MACHINE. ADAM HOCH, Providence, R. I., assignor to Wendling Hoch Adding Machine Company, San Francisco, Cal., a Corporation of California. Filed Sept. 18, 1907. Serial No. 393,512.

1. In an adding machine, the combination with a series of adding wheels arranged side by side, a selector having a plurality of rows of movable pins, key actuated means for moving the selector step by step beneath the adder wheels and setting pins therein in position to effect actuation of the adder wheels, a restoring blade mounted to swing over said selector to return the pins thereof to normal position, a correction key, and a link connected with said key and adapted to rock said restorer as the key is depressed, substantially as described.



2. In an adding machine, the combination with a series of adder wheels, a selector having a plurality of rows of movable pins adapted to control the extent of rotation of the adder wheels, numeral keys adapted to adjust any desired ones of said pins to operative position, means to move the selector step by step past the adder wheels, a restorer having a cross blade extending over all of the rows of pins in the selector and mounted to swing about a suitable axis, an arm connected with said restorer, a correction key, and a link extending from said correction key and engaging said arm of the restorer whereby when said key is depressed the cross blade of the restorer will be moved over the selector, substantially as described.

3. In an adding machine, the combination of a series of adding wheels of different numerical orders, a series of type wheels of corresponding numerical orders, a platen arranged adjacent said type wheels, means for transmitting movement of each of the adding wheels to the corresponding type wheel, key controlled devices for turning the adding wheels, and means for bodily moving the type wheels out of engagement with the adding wheels and against the platen at the completion of a movement of the adding wheels.

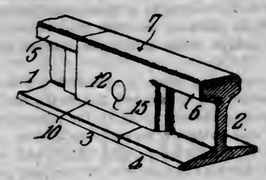
4. In an adding machine, the combination of a series of adding wheels, a platen, a series of type wheels, a vibrating carrier supporting each type wheel, key controlled devices for rotating the adding wheels, means for transmitting movement from each adding wheel to one of the type wheels, springs acting constantly to move the type wheels toward the platen, and means for preventing such movement of the type wheels while the adding wheels are turning, and adapted to be automatically released when an adding movement of the adding wheels is completed.

5. In an adding machine, the combination of a series of adding wheels, a platen, a series of type wheels, a swinging carrier for each type wheel, key controlled means for rotating the adding wheels, means for transmitting movement of each adding wheel to one of the type wheels, springs each acting to move one of the type wheels toward the platen, locking devices normally preventing such movement of the type wheels, means for releasing the locking means of each type wheel as the corresponding adding wheel is rotated, and means engaging all of the type wheel carriers and adapted to prevent movement of any of said wheels toward the platen while the adding wheels are turning and to be automatically released when the adding movement of the adding wheels is finished.

[Claims 6 to 27 not printed in the Gazette.]

898,412. RAIL-JOINT. HENRY MARKUSSEN, Flemington, N. J., assignor of one-half to Peter Ratti, Flemington, N. J. Filed Aug. 27, 1907. Serial No. 390,324.

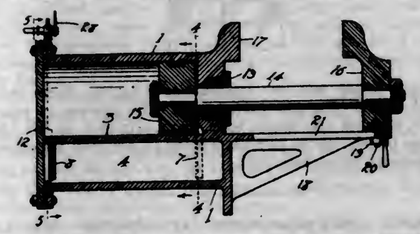
1. In a rail joint, the combination of two rails one of which has its head cut away from the web for a suitable distance back from the rail end leaving the web intact and with approximately parallel sides, the removed portions being substantially quadrangular in longitudinal section, the other rail having its base flange removed for a like distance its web thickened and a central slot cut therein to slip over the web of the first mentioned rail in either an endwise direction or from above, and a bolt extending through the interlocking webs to join the rails.



2. In a rail joint, the combination of two rails one of which has its head cut away from the web for a suitable distance back from the rail end leaving the web intact and with an elongated bolt opening therethrough and approximately parallel sides, the removed portions being substantially quadrangular in longitudinal section, the other rail having its base flange removed from its web for a distance equal to the length of head cut away from the first mentioned rail, said latter web thickened to the width of the rail head and slotted longitudinally to slip over the web of the first mentioned rail in either an endwise direction or from above and a fastening bolt extending transversely through openings in the widened slotted web and through said elongated opening in the other web.

3. In a rail joint, the combination of two rails, one of which has its web and base flange extended beyond the end of the rail, the other rail having its head and thickened web projecting an equal distance in advance of the end of the base flange, said thickened web having a longitudinal central slot made therein and open at the bottom to fit over the web of the other rail said slot being wider than the inserted rails, means adapted to be placed within said slot for alining the rails, and a fastening bolt extending through openings in the two webs and said alining means.

898,413. VISE. WILLIAM A. MERRALLS, San Francisco, Cal. Filed Oct. 3, 1907. Serial No. 395,719.



1. A vise comprising jaws, a cylinder, a piston for said cylinder, a piston rod connected therewith and also with one of the jaws, means for admitting pressure fluid into an end of the cylinder to move said latter jaw toward the other to clamp an object in the vise, or to the other end of the cylinder to move said jaw in the reverse direction to release said object, and a foot lever operatively connected to said means and arranged to be moved by a downward pressure into one position to admit said fluid into one end of the cylinder, and to be so moved into another position to admit it into the other end thereof, substantially as described.

2. A vise comprising jaws, a cylinder, a piston in said cylinder, a piston rod connected therewith, and also with one of said jaws, a three-way valve arranged in one position to permit pressure fluid into an end of said cylinder to move said jaw, and in another position to permit the escape of said fluid from said end, and a foot lever operatively connected with said valve, substantially as described.

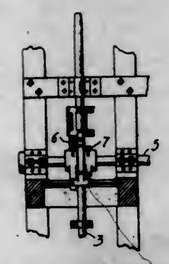
3. A vise comprising jaws, a cylinder, a piston for said cylinder, a piston rod connected therewith and also with one of said jaws, a valve for admitting pressure fluid into an end of said cylinder to move said jaw, and a foot lever operatively connected to said valve, and arranged to be moved by a downward pressure of the foot thereon into a position to open said valve and admit said fluid into said end, and also to be moved by a downward pressure of the foot into another position to close said valve and permit said fluid to escape from said end, substantially as described.

4. A vise comprising jaws, a cylinder, a piston for said cylinder, a piston rod connected therewith and also with one of said jaws, a three-way valve for admitting pressure fluid into an end cylinder to move said jaw, and a foot lever operatively connected to said valve, and arranged to be moved by a downward pressure of the foot thereon into a position to open said valve and admit said fluid into said end, and also to be moved by a downward pressure of the foot into another position to close said valve and permit said fluid to escape from said end, substantially as described.

5. In a vise, the combination of jaws, a cylinder, a piston in said cylinder, a piston rod connected with said piston and also to one of said jaws, high and low pressure chambers, means for connecting the high pressure chamber with high pressure fluid, and conduits leading to opposite ends of the cylinder from the respective chambers, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

898,414. STAMP-MILL. WILLIAM A. MERRALLS, San Francisco, Cal. Filed Jan. 14, 1908. Serial No. 410,758.



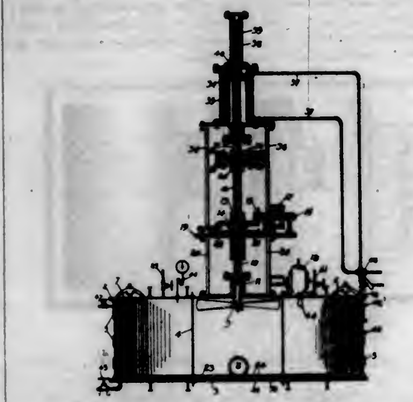
In a stamp mill, the combination with the stamp stem and tappet, of a cam shaft having cams thereon on opposite sides of the stamp stem, both arranged to lift the same tappet, one of said cams being longer than the other, substantially as described.

898,415. METALLURGICAL APPARATUS. WILLIAM A. MERRALLS, San Francisco, Cal. Filed Dec. 18, 1906, Serial No. 348,492. Renewed July 29, 1908. Serial No. 445,928.

1. Metallurgical apparatus comprising a closed tank, a filter in the lower portion thereof, a liquid outlet beneath said filter, a mechanical agitator in said tank, sources of supply for pulp, solutions and compressed air, connections between said sources of supply and the upper portion of said tank, and means for closing said connections.

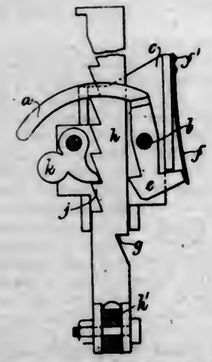
2. Metallurgical apparatus comprising a closed tank, a filter in the lower portion thereof, protecting means for the upper surface of said filter, a liquid outlet beneath said filter, a mechanical agitator in said tank, sources of supply for pulp, solutions and compressed air, connections between said sources of supply and the upper portion of said tank, and means for closing said connections.

3. Metallurgical apparatus comprising a closed tank, a filter in the lower portion thereof, a liquid outlet beneath said filter, a rotatable agitator vertically adjustable in said tank, sources of supply for pulp, solutions and compressed air, connections between said sources of supply and the upper portion of said tank, and means for closing said connections.



4. Metallurgical apparatus comprising a closed tank, a filter in the lower portion thereof, protecting means for the upper surface of said filter, a liquid outlet beneath said filter, a mechanical agitator in said tank, sources of supply for pulp, solutions and compressed air, connections between said sources of supply and the upper portions of said tank, means for closing said connections, a discharge opening in the tank wall immediately above said filter, and a closure for said discharge opening.

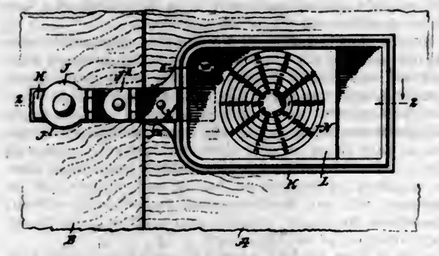
898,416. DROP-LEVER BRAKE FOR RAILWAY-VEHICLES. WILLIAM C. WATSON, Cottesloe, Western Australia, Australia, assignor of one-third to Harry Bolton and one-third to Daniel Mulcahy, Fremantle, Western Australia, Australia. Filed Mar. 16, 1908. Serial No. 421,515.



1. In brake devices, in combination, a bar forming an element of brake operating means, a casing, a second bar operatively connected to said first named bar and movable through the casing vertically thereof, said second bar having a notch in its rear face, and a lever pivoted in the casing at one side of the second bar, said lever having a tooth formed at its lower end to engage in the notch and sustain the second bar, and having its upper end projecting angularly as an operating handle beyond the casing.

2. In brake devices, in combination, a bar forming an element of brake operating means, a casing, a second bar operatively connected to said first named bar and movable through the casing vertically thereof, said second bar having a notch in its rear face, a lever pivoted in the casing at one side of the second bar, said lever having a tooth formed at its lower end to engage in the notch and sustain the second bar and having its upper end projecting angularly as an operating handle beyond the casing, and a spring secured to the casing and bearing against the toothed end of said lever, to cause the same to lie in contact with the rear face of said second bar and to engage in the notch.

898,417. PERMUTATION-LOCK. JOHN P. GERAGHTY, Jersey City, N. J., assignor of forty one-hundredths to himself, forty one-hundredths to Charles H. Good, ten one-hundredths to John J. Goodlad, and ten one-hundredths to Eugene Sullivan, Jersey City, N. J. Original application filed Mar. 29, 1907, Serial No. 365,331. Divided and this application filed Nov. 22, 1907. Serial No. 403,296.

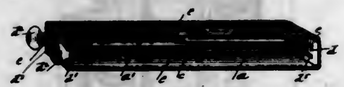


1. A lock comprising a frame having grooves and a slot extending across the grooves, a locking plate movably mounted on the frame, and tumblers mounted in the locking plate and having members engaging the grooves and adapted to register with the slot.

2. A lock comprising a lock frame having grooves and a slot extending across the grooves, a locking plate mounted to slide on the said lock frame, and tumblers mounted in the said locking plate and having pins extending into said grooves and adapted to register with the said slot.

3. A lock comprising a lock frame having concentric grooves and a slot extending radially across the grooves and a distance beyond the outermost groove, a locking plate mounted to slide on the said lock frame, and concentric ring tumblers mounted to turn in the said locking plate, and having pins extending into said concentric grooves and adapted to register with the said radial slot.

898,418. RAZOR-STROP. SIMON HAUSER and EDWARD S. SHEPHERD, New York, N. Y., assignors to The Leader Safety Razor & Strop Co., Brooklyn, N. Y., a Corporation of New York. Filed Dec. 19, 1907. Serial No. 407,197.



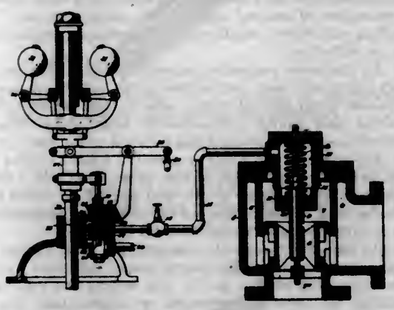
1. A razor-strop comprising a tubular center-bar formed of telescoping inner and outer tubes, means for locking the tubes in extended position, a fixed plate at the outer end of the inner tube, an adjustable plate on the outer end of the outer tube, handles on said adjustable plate, means for adjusting the plate on the outer tube, and a strop attached at their ends to the fixed plate and extending around the adjustable plate.

2. A razor-strop comprising a tubular center-bar formed of an interior and an exterior tube telescoping one into the other, a spring catch on the inner tube interlocking with the outer tube, a fixed plate at the outer end of the inner tube, an adjustable plate on the outer end of the outer tube provided with handles, means for adjusting the adjustable plate on the outer tube, and a stop attached permanently to the plate on the inner tube and passing over the adjustable plate.

3. A razor-strop comprising a tubular center-bar formed of two telescoping tubes, an inner and outer one, a spring-actuated catch at the inner end of the inner tube adapted to interlock with the outer tube, a stationary plate at the outer end of the inner tube, an adjustable plate on the outer threaded end of the outer tube, a screw-nut adjustable on the end of the outer tube, bent-up handles on the adjustable plate, and a strop the ends of which are permanently attached to the stationary plate of the inner tube and passed over the adjustable plate, said plate and strop being provided with registering openings for the threaded end of the outer tube.

REISSUES.

12,848. VALVE-CONTROLLING MECHANISM. FRANCIS HODGKINSON, Edgewood Park, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Oct. 4, 1904. Serial No. 227,169. Original No. 751,510, dated Feb. 9, 1904, Serial No. 108,799.



1. In an engine, the combination with a main valve, a spring tending to hold it to its seat and means for subjecting it to normally balanced fluid-pressures, of a normally closed auxiliary valve and a governor connected to said auxiliary valve and actuating the same to exhaust the fluid-pressure which supplements the action of the spring upon the main valve when more steam is required by the engine.

2. The combination with a main valve having a piston and a casing having chambers at the respective ends of the piston between which is a small leakage-passage that is always open, of a spring acting upon said piston and tending to hold the valve to its seat and an automatically-acting auxiliary valve for reducing the fluid-pressure which supplements the action of the spring.

3. The combination with a main valve having a casing provided with two chambers connected by a permanently-open restricted passage and the fluid-pressures in which act in opposite directions upon the valve, of a spring acting in conjunction with the fluid-pressure in one of said chambers and an auxiliary valve for relieving the pressure which acts in conjunction with said spring.

4. The combination with a valve and a casing having two chambers connected by a restricted but always-open passage and within which fluid-pressure acts in opposite directions upon the valve, of an auxiliary valve for relieving the pressure which tends to hold the main valve to its seat and means for automatically opening the auxiliary valve when the demand for fluid-pressure from the source controlled by the main valve attains a predetermined value.

5. The combination with a valve embodying or provided with a piston, a casing having two chambers connected by a restricted but always-open passage and a cylinder for the said piston, of a spring tending to hold the valve to its seat and an auxiliary valve the opening of

which relieves the fluid-pressure which acts in the cylinder and in the chamber communicating with or forming a part thereof to supplement the action of the spring.

[Claims 6 to 23 not printed in the Gazette.]

12,849. EXPLOSIVE PROJECTILE. JOHN F. MEIGS and EMIL GATHMANN, South Bethlehem, Pa., assignors to The Bethlehem Steel Company, South Bethlehem, Pa., a Corporation of Pennsylvania. Filed May 26, 1906. Serial No. 318,981. Original No. 753,504, dated Mar. 1, 1904, Serial No. 179,089.



1. An explosive projectile comprising a shell having the usual cylindrical body and conical point, said shell having an unobstructed central cavity, and having the wall surrounding said cavity reinforced by continuous longitudinal ribs or stiffeners.

2. An explosive projectile comprising a shell having the usual cylindrical body and conical point, said shell having an unobstructed central cavity, and having the walls surrounding said cavity reinforced by longitudinal ribs or stiffeners converging toward the forward end of the cavity.

3. An explosive projectile comprising a shell having the usual cylindrical body and conical point, said shell having an unobstructed central cavity, and having the walls surrounding said cavity reinforced by continuous longitudinal ribs or stiffeners projecting into said cavity.

4. An explosive projectile comprising a shell having the usual cylindrical body and conical point, said shell having an unobstructed central cavity, and having the walls surrounding said cavity reinforced by longitudinal ribs or stiffeners projecting into and converging toward the forward end of the cavity.

5. An explosive projectile comprising a shell having the usual cylindrical body and conical point, said shell having an unobstructed central cavity, and having the walls surrounding said cavity reinforced by continuous longitudinal ribs or stiffeners projecting into said cavity and terminating near its forward end.

[Claims 6 to 12 not printed in the Gazette.]

12,850. SHAFT-BENDING MACHINE. PASCHAL P. DYKE, Sidney, Ohio. Filed July 18, 1908. Serial No. 444,413. Original No. 886,359, dated May 5, 1908, Serial No. 385,909.



1. In a shaft bending machine having a former thereon for the body of the shaft, a tip-former and a tip clamp, a clamp member pivotally mounted adjacent to the inner end of said shaft and adapted to be swung on its pivot to engage said shaft practically throughout the length thereof, and also to engage said tip clamp, a swinging arm for forcing said clamp member inwardly on its pivot to engage said tip clamp and said shaft, whereby said shaft is given its lateral curvature at one operation.

2. In a shaft bending machine having a former for the body of said shaft, a tip-former and a tip-clamp, a clamp member pivotally mounted adjacent the inner end of said shaft and extending to a point adjacent the outer end of said shaft, and means for applying pressure to the free end of said clamp member to force the same into engagement with said tip-clamp and said shaft body practically throughout the length of the latter, whereby said shaft is given its lateral curvature at one operation, and adjustable means for positioning said clamp member upon its pivot.

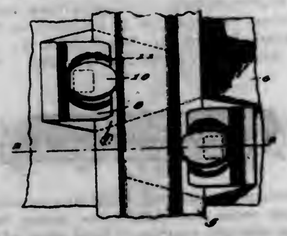
3. In a shaft bending machine having a former for the body of said shaft, a tip-former and a tip-clamp, a clamp member pivotally mounted adjacent the inner end of said shaft and extending to a point adjacent the outer end of said shaft, and means for applying pressure to the free end of said clamp member to force the same into engagement with said tip-clamp and said shaft body practically throughout the length of the latter, whereby said shaft is given its lateral curvature at one operation, and eccentric means mounted upon said pivot for positioning said clamp member with respect to said shaft.

4. In a shaft bending machine having appropriate body and tip-formers, a clamp member pivotally mounted adjacent one end thereof for forcing said shaft into engagement with said formers and extending practically throughout the length of said shaft, projections on said clamp member for engaging said shaft, eccentric means for positioning said clamp member upon its pivot relative to said shaft, and means adapted to be applied to said clamp member adjacent its free end for forcing said member into engagement with said shaft at points distributed practically throughout its length, whereby said shaft is given its lateral curvature at one operation.

5. In a shaft bending machine having appropriate body and tip formers, a clamp member pivotally mounted adjacent one end thereof for forcing said shaft into engagement with said formers and extending practically throughout the length of said shaft, projections on said clamp member for engaging said shaft, and means adapted to be applied to said clamp member adjacent its free end for forcing said member into engagement with said shaft at points distributed practically throughout its length, whereby said shaft is given its lateral curvature at one operation.

12,851. [WITHDRAWN.]

12,852. RAILWAY-TRACK FASTENER. WILLIAM H. WALDEN, East Macon, Ga. Filed Apr. 23, 1908. Serial No. 428,932. Original No. 858,124, dated June 25, 1907, Serial No. 331,194.



1. A rail fastener comprising a plate between the base of the rail and the tie, the plate having at one end a clip projecting over the base flange of the rail, and having a narrowed portion at the other end, terminating under the rail.

2. The combination with a rail and a compressible tie, of a plate one end of which is located under the base of the rail, having at the other end a clip overlapping the edge of the base of the rail, that end of the plate under the rail being of less width than the other or outer end, whereby it will more readily be depressed into the tie by weight on the rail, and means to fasten the plate to the tie.

3. The combination with a rail and a compressible tie, of a pair of plates located beside each other, between the base of the rail and the tie, and adapted to be pressed into the tie by weight on the rail, the plates having clips at their outer ends engaging over opposite edges of the rail base, and being narrowed at their inner ends under the rail base, whereby said ends will be more readily pressed into the tie than the outer ends, and means to fasten the plates to the tie.

4. The combination with a rail and a compressible tie, of a plate having a narrow inner end under the rail and a wider outer end with a clip extending over the edge of the rail base, and having a spike hole with its inner edge in line with the edge of the rail base, and a spike extending through said hole and into the tie, the head of the spike engaging the rail base at the inner side and bearing against the clip at the outer side.

5. The combination with a rail and a wooden tie, of a plate the inner end of which is under the rail and the outer end of which has a clip overlapping the edge of the rail base, that part of the plate under the middle part of the rail base being of less width than that part at the edge of the base, whereby the former part will be more readily pressed into the tie, the plate having a spike hole therein at the edge of the rail base and the clip having a recess above said hole, and a spike driven through the hole and into the tie, with its head in said recess and engaging the said base.

[Claims 6 and 7 not printed in the Gazette.]

DESIGNS.

39,499. BADGE. ALBIN L. THOMA, Piqua, Ohio. Filed May 28, 1908. Serial No. 435,573. Term of patent 14 years.



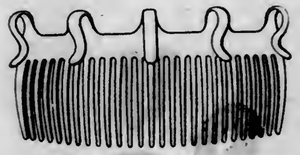
The ornamental design for a badge, as shown.

39,500. BADGE. ROY VAN ALSTINE, Winter, Wis. Filed Apr. 21, 1908. Serial No. 428,462. Term of patent 14 years.



The ornamental design for a badge, as shown.

39,501. PUFF-RETAINING COMB. TERENCE F. MCKENNA, Leominster, Mass. Filed July 17, 1908. Serial No. 444,149. Term of patent 14 years.



The ornamental design for a puff retaining comb, as shown.

39,502. HANDLE FOR MANICURING-FILES, TOOTH-BRUSHES, OR SIMILAR ARTICLES. HENRY J. HERBERT, Detroit, Mich. Filed May 1, 1908. Serial No. 430,419. Term of patent 7 years.



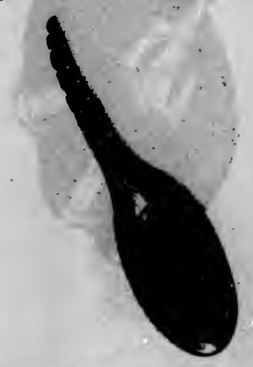
The ornamental design for a handle for manicuring files, tooth brushes or similar articles, as shown.

39,503. HANDLE FOR MANICURING-FILES, TOOTH-BRUSHES, OR SIMILAR TOILET ARTICLES. HENRY J. HERBERT, Detroit, Mich. Filed May 1, 1908. Serial No. 430,420. Term of patent 7 years.



The ornamental design for a handle for manicuring files, tooth brushes or similar toilet articles, as shown.

39,504. BACK FOR BRUSHES, MIRRORS, OR SIMILAR ARTICLES. HENRY J. HERBERT, Detroit, Mich. Filed May 1, 1908. Serial No. 430,410. Term of patent 7 years.



The ornamental design for a back for brushes, mirrors, or similar articles, as shown.

39,505. BACK FOR MIRRORS, BRUSHES, OR SIMILAR ARTICLES. HENRY J. HERBERT, Detroit, Mich. Filed May 1, 1908. Serial No. 430,414. Term of patent 7 years.



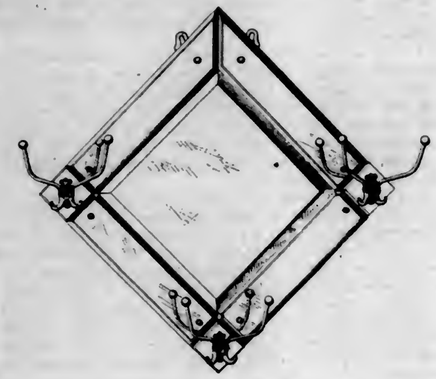
The ornamental design for a back for mirrors, brushes, or similar articles, as shown.

39,506. BACK FOR MIRRORS, BRUSHES, OR SIMILAR ARTICLES. HENRY J. HERBERT, Detroit, Mich. Filed May 1, 1908. Serial No. 430,418. Term of patent 7 years.



The ornamental design for a back for mirrors, brushes or similar articles, as shown.

39,507. MIRROR. MAX GRANT, Philadelphia, Pa. Filed July 22, 1908. Serial No. 444,873. Term of patent 3½ years.



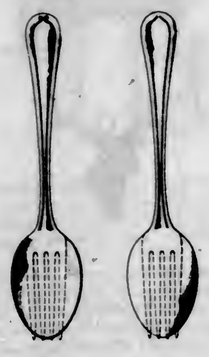
The ornamental design for a mirror, as shown and described.

39,508. CANDY-TONGS MEMBER. LEBRECHT FRITZSCHE, Newark, N. J., assignor to Richmond Brothers Company, a Corporation of New Jersey. Filed Mar. 17, 1908. Serial No. 421,747. Term of patent 7 years.



The ornamental design for a candy tongs member, as shown.

39,509. HANDLE OF SPOONS, FORKS, OR SIMILAR ARTICLES. FREDERICK HABENSACK, Sag Harbor, N. Y., assignor to Fahys Watch Case Company, New York, N. Y., a Corporation of New York. Filed July 23, 1908. Serial No. 445,059. Term of patent 7 years.



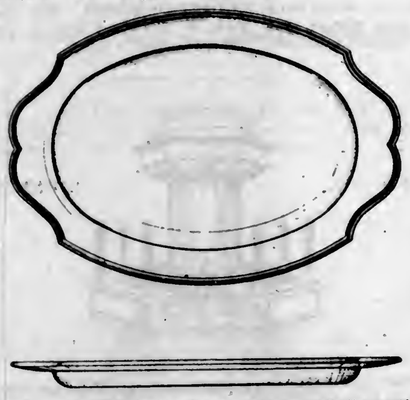
The ornamental design for the handle of a spoon, fork or or similar article, as shown.

39,510. BODY OF TEA OR COFFEE POTS OR SIMILAR ARTICLES. GEORGE E. BALL, Taunton, Mass. Filed June 11, 1908. Serial No. 437,987. Term of patent 14 years.



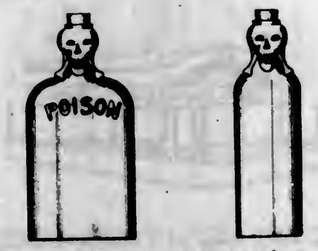
The ornamental design for the body of a tea or coffee pot or similar article as shown.

39,511. PLATTER OR SIMILAR ARTICLE. GEORGE E. BALL, Taunton, Mass. Filed June 11, 1908. Serial No. 437,988. Term of patent 14 years.



The ornamental design for a platter or similar article as shown.

39,512. BOTTLE. HARRY S. EVANS, Cleveland, Ohio. Filed July 15, 1908. Serial No. 443,742. Term of patent 7 years.



The ornamental design for a bottle, as shown.

39,513. NOSE-GUARD FOR EYEGLASSES. BENJAMIN M. LEVOY, New York, N. Y. Filed June 20, 1908. Serial No. 439,628. Term of patent 3½ years.



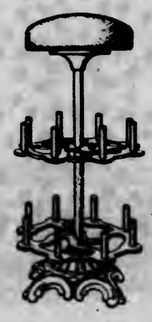
The ornamental design for a nose-guard for eyeglasses, as shown.

39,514. PINCUSHION AND RECEPTACLE. HENRY W. BUEHLER, Sr., New York, N. Y. Filed June 19, 1908. Serial No. 439,466. Term of patent 7 years.



The ornamental design for a pincushion and receptacle as shown.

39,515. THREAD-HOLDER AND PINCUSHION. WILLIAM HENRY SIMMONS, New York, N. Y. Filed June 23, 1908. Serial No. 440,082. Term of patent 7 years.



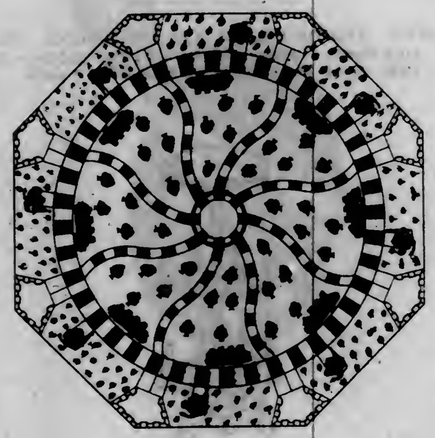
The ornamental design for a thread holder and pincushion, as shown.

39,516. CHRISTMAS BAG OR PACK. MARY PRUGH, Los Angeles, Cal. Filed June 16, 1908. Serial No. 438,866. Term of patent 14 years.



The ornamental design for a Christmas bag or pack, as shown.

39,517. GAME-BOARD. JOHN R. CAMPBELL, Des Moines, Iowa. Filed June 15, 1908. Serial No. 438,686. Term of patent 3½ years.



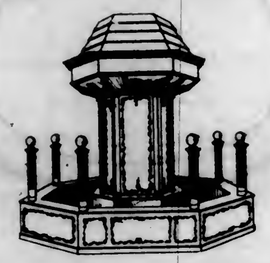
The ornamental design for a game board as shown.

39,518. PORTABLE BAND-STAND BOOTH. MAX ABRAHAM SINGER, New York, N. Y. Filed July 3, 1908. Serial No. 441,914. Term of patent 7 years.



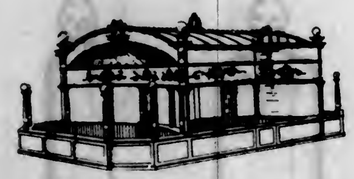
The ornamental design for a portable band stand booth, as shown.

39,519. PORTABLE EXHIBITION-BOOTH. MAX ABRAHAM SINGER, New York, N. Y. Filed July 3, 1908. Serial No. 441,912. Term of patent 7 years.



The ornamental design for a portable exhibition booth, as shown.

39,520. PORTABLE EXHIBITION-BOOTH. MAX ABRAHAM SINGER, New York, N. Y. Filed July 3, 1908. Serial No. 441,913. Term of patent 7 years.



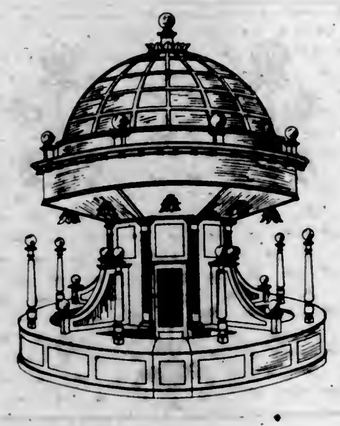
The ornamental design for a portable exhibition booth, as shown.

39,521. PORTABLE EXHIBITION-BOOTH. MAX ABRAHAM SINGER, New York, N. Y. Filed July 3, 1908. Serial No. 441,915. Term of patent 7 years.



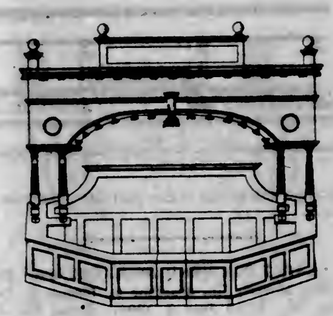
The ornamental design for a portable exhibition booth, as shown.

39,522. PORTABLE EXHIBITION-BOOTH. MAX ABRAHAM SINGER, New York, N. Y. Filed July 3, 1908. Serial No. 441,916. Term of patent 7 years.



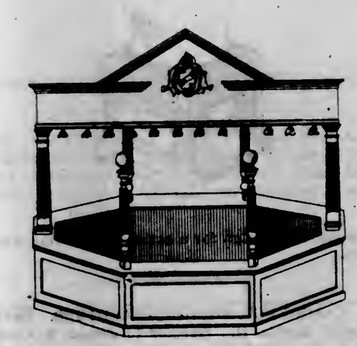
The ornamental design for a portable exhibition booth, as shown.

39,523. PORTABLE EXHIBITION-BOOTH. MAX ABRAHAM SINGER, New York, N. Y. Filed July 3, 1908. Serial No. 441,917. Term of patent 7 years.



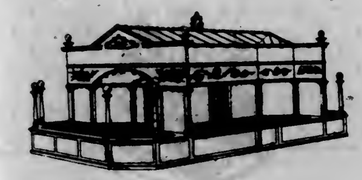
The ornamental design for a portable exhibition booth, as shown.

39,524. PORTABLE EXHIBITION-BOOTH. MAX ABRAHAM SINGER, New York, N. Y. Filed July 3, 1908. Serial No. 441,918. Term of patent 7 years.



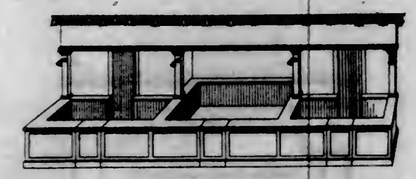
The ornamental design for a portable exhibition booth, as shown.

39,525. PORTABLE EXHIBITION-BOOTH. MAX ABRAHAM SINGER, New York, N. Y. Filed July 3, 1908. Serial No. 441,919. Term of patent 7 years.



The ornamental design for a portable exhibition booth, as shown.

39,526. PORTABLE EXHIBITION-BOOTH. MAX ABRAHAM SINGER, New York, N. Y. Filed July 3, 1908. Serial No. 441,920. Term of patent 7 years.



The ornamental design for a portable exhibition booth, as shown.

39,527. CASING FOR VENDING-MACHINES. BETHUEL M. DAVIS, Morris, Ill., assignor to Joseph G. Coleman, Chicago, Ill. Filed July 2, 1908. Serial No. 441,717. Term of patent 7 years.



The ornamental design for a casing for vending machine as shown.

39,528. CASING FOR VENDING-MACHINES. BETHUEL M. DAVIS, Morris, Ill., assignor to Joseph G. Coleman, Chicago, Ill. Filed July 6, 1908. Serial No. 442,261. Term of patent 7 years.



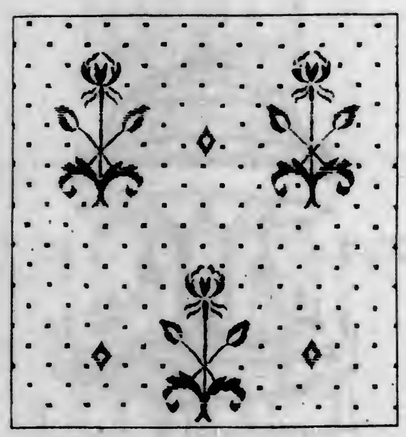
The ornamental design for a casing for vending machine as shown.

39,529. TEXTILE FABRIC. RICHARD KAFKA, Hoboken, N. J., assignor to The Firm of American Negligee Company, New York, N. Y., a Copartnership. Filed June 6, 1908. Serial No. 437,211. Term of patent 3½ years.



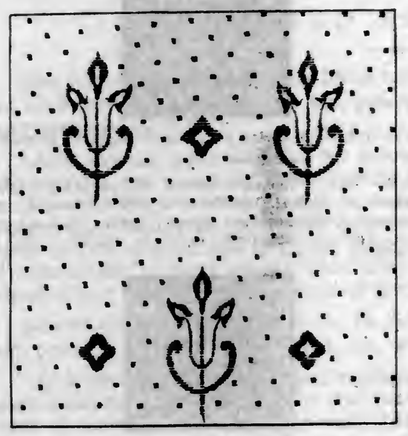
The ornamental design for a textile fabric, as shown.

39,530. LACE FABRIC. ROY S. WINGERT, Newton, Mass., assignor to Martin Manufacturing Company, Newton, Mass., a Corporation of Massachusetts. Filed June 16, 1908. Serial No. 438,861. Term of patent 3½ years.



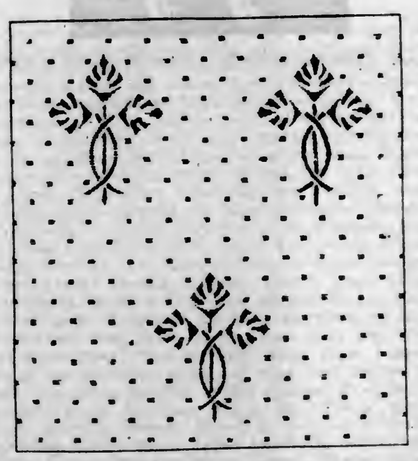
The ornamental design for a lace fabric, as shown.

39,531. LACE FABRIC. ROY S. WINGERT, Newton, Mass., assignor to Martin Manufacturing Company, Newton, Mass., a Corporation of Massachusetts. Filed June 16, 1908. Serial No. 438,862. Term of patent 3½ years.



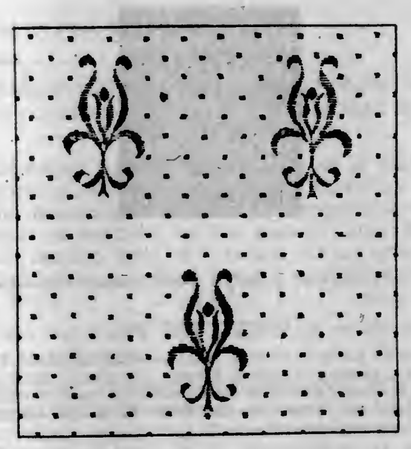
The ornamental design for a lace fabric, as shown.

39,532. LACE FABRIC. ROY S. WINGERT, Newton, Mass., assignor to Martin Manufacturing Company, Newton, Mass., a Corporation of Massachusetts. Filed June 16, 1908. Serial No. 438,863. Term of patent 3½ years.



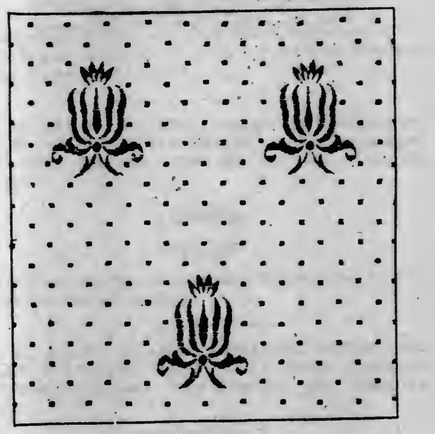
The ornamental design for a lace fabric, as shown.

39,533. LACE FABRIC. ROY S. WINGERT, Newton, Mass., assignor to Martin Manufacturing Company, Newton, Mass., a Corporation of Massachusetts. Filed June 16, 1908. Serial No. 438,864. Term of patent 3½ years.



The ornamental design for a lace fabric, as shown.

39,534. LACE FABRIC. ROY S. WINGERT, Newton, Mass., assignor to Martin Manufacturing Company, Newton, Mass., a Corporation of Massachusetts. Filed June 16, 1908. Serial No. 438,865. Term of patent 3½ years.



The ornamental design for a lace fabric, as shown.

39,535. LACE CURTAIN. WILLIAM HARDY, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed July 20, 1908. Serial No. 444,550. Term of patent 3½ years.



The ornamental design for a lace curtain, substantially as shown.

39,536. LACE CURTAIN. WILLIAM HARDY, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed July 20, 1908. Serial No. 444,551. Term of patent 3½ years.



The ornamental design for a lace curtain, substantially as shown.

39,537. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 20, 1908. Serial No. 439,622. Term of patent 3½ years.



The ornamental design for a rug substantially as shown.

39,538. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 20, 1908. Serial No. 439,623. Term of patent 3½ years.



The ornamental design for a rug substantially as shown.

39,539. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 20, 1908. Serial No. 439,624. Term of patent 3½ years.



The ornamental design for a rug substantially as shown.

TRADE-MARKS

PUBLISHED SEPTEMBER 8, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 4,789. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE THOMAS LAUGHLIN COMPANY, Portland, Me. Filed May 9, 1905.



Particular description of goods.—Bow-Plates, Brackets, Bolts, Bands, Boat-Buttons, Bells and Attachments Therefor, Hook-Blocks, Eye-Blocks, Sheet-Blocks, Bridles, Boom-Stops, Bob Stays and Straps, Burs, Combination Straps and Bands, Combination Tiller Combs and Knives, Centerboard-Rods, Clasps, Chocks, Cleats, Metallic Deck-Chimneys, Combination Hooks and Thimbles, Combination Hooks and Eyes, Combination Hooks and Rings, Chains, Combination Bands and Withes, Combination Chain Plates and Eyes, Combination Turnbuckles and Thimbles, Clips, Clamps, Clevises, Davits and Metal Trimmings Therefor, Deck-Plates, Deck-Irons, Deck-Plugs, Eyes, Forelocks, Fids, Gudgeons, Grapnels, Gromets, Hooks, Hawse-Pipes, Hinges, Hearts, Heavers, Iron Jaws for Gaffs, Jib-Hanks, Leaders, Links, Letters Formed of Metal, Lizards, Mast-Slides, Mast-Hoops, Manhole and other Metallic Plates, Mast-Clasps, Metal Trimmings for Rails, Mooring-Kits, Man-Rope Heads, Nuts, Nails, Belaying-Pins, Chain Deck-Pipes and Hawse-Pipes, Plates for Eyes, Masts, Rings, Leaders, Hooks, Snatch-Blocks, Decks and Steps, and Similar Devices, Quadrants, Rudders, Rudder Steering Attachments, Rudder-Braces, Rowlocks, Riding-Bits, Rivets, Skags, Stern-Bearings, Sockets, Stanchion-Posts, Sail-Hoists, Spreaders, Straps, Snaps, Sash-Lifts, Skylight-Lifts, Step-Plates, Swivels, Shackles, Spikes, Screws, Staples, Tillers, Toggles, Toggle-Irons, Thimbles, Turnbuckles, Trawl-Rollers, Trucks for Rigging and the Like, Water-Closets and Metal Trimmings Therefor, Metallic Washers, and Metal Trimmings for Ships and Boats.

Ser. No. 10,638. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PETER JAMIESON, Aberdeen, Scotland. Filed July 21, 1905. Used ten years.



Particular description of goods.—Preparations for Polishing Harness and Leather.

Ser. No. 10,639. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PETER JAMIESON, Aberdeen, Scotland. Filed July 21, 1905. Used ten years.



Particular description of goods.—Preparations for Polishing Harness and Leather.

Ser. No. 10,640. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PETER JAMIESON, Aberdeen, Scotland. Filed July 21, 1905. Used ten years.



Particular description of goods.—Preparations for Polishing Harness and Leather.

Ser. No. 16,207. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ILBERT & COMPANY, London, England, and Shanghai, China. Filed Sept. 1, 1905.



Particular description of goods.—Cotton Piece Goods.

Ser. No. 27,491. (CLASS 27. HOROLOGICAL INSTRUMENTS.) LANGENDORF WATCH CO., Langendorf, Switzerland, assignor to American Swiss Watch Company, of N. Y., a Corporation of New Jersey. Filed May 18, 1907.



Particular description of goods.—Watches, Watchcases, and Watch-Movements.

Ser. No. 27,515. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) S. HAMILL COMPANY, Keokuk, Iowa. Filed May 20, 1907.



Particular description of goods.—A Blend of Java and Mocha Coffee.

Ser. No. 29,262. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) HANNOVERSCHE GUMMI-KAMM-COMPAGNIE ACTIEN-GESELLSCHAFT, Hanover-Limmer, Germany. Filed Aug. 6, 1907.



Particular description of goods.—The Following Goods Made of Hard or Soft Rubber: Audiphones, Speculums of All Kinds, Clyster-Pipes, Syringes of All Kinds, Dilators, Douche-Mounts for Nose, Eye, and Ear, Politzer Douches, Douche-Mounts in Sets, Pus-Basins, Esmarch Irrigator-Basins, Stop-Cocks for Syringes, Ear-Trumpets, Inhalers, Inhalation-Masks, Sets of Mounts, Pipes, and Connecting Parts for Irrigators, Rectum-Bougies, Vagina-Pipes, Obturators, Catheters of Every Description, Pessaries of All Kinds, Pleximeters, Powder-Blowers for Nose, Ear, and Throat, Respirators, Stethoscopes, Trachea-Tubes, Spray-Diffusers, Tongue-Depressors, Rectum-Pipes, Bottle-Shaped Ice-Bags with Metal Mounts, Square and Circular Surgical Air and Water Cushions, and Hot-Water Bottles.

Ser. No. 29,263. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) HANNOVERSCHE GUMMI-KAMM-COMPAGNIE ACTIEN-GESELLSCHAFT, Hanover-Limmer, Germany. Filed Aug. 6, 1907.



Particular description of goods.—The Following Goods Made of Rubber—viz., Toilet Combs of Every Description, Ornamental Hair-Pins, and Ornamental Hair-Arrows.

Ser. No. 30,187. (CLASS 33. GLASSWARE.) ANCHOR GLASS COMPANY, Mount Pleasant, Pa. Filed Sept. 24, 1907.



Particular description of goods.—Jars, Bottles, Vault-Lights, Beer-Mugs, Ten Sets, and Tumblers.

Ser. No. 31,170. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) NATIONAL WOOD-VULCANIZING COMPANY, New York, N. Y. Filed Nov. 14, 1907.



Particular description of goods.—Vulcanized Lumber.

Ser. No. 31,253. (CLASS 20. LINOLEUM AND OILED CLOTH.) ALBERT H. SLATER, Paterson, N. J. Filed Nov. 19, 1907.



Particular description of goods.—Linoleum and Oiled Cloth.

Ser. No. 31,905. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY SOLOMON WELLCOME, London, England. Filed Dec. 23, 1907.

'HAZELINE' SNOW

Particular description of goods.—A Semisolid Toilet Preparation Containing Distilled Extract of Hamamelis Virginiana.

Ser. No. 31,921. (CLASS 12. MASONRY MATERIALS.) CREAM CITY ROOFING AND PAINT MANUFACTURING COMPANY, Milwaukee, Wis. Filed Dec. 26, 1907.



Particular description of goods.—Felt and Felt-Asphalt Roofing.

Ser. No. 32,176. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE INTERNATIONAL FACTORIES CO., Minneapolis, Minn. Filed Jan. 11, 1908.



Particular description of goods.—Washing-Machines.

Ser. No. 32,187. (CLASS 31. FILTERS AND REFRIGERATORS.) THE ODORLESS REFRIGERATOR COMPANY, Chattanooga, Tenn. Filed Jan. 13, 1908. Used ten years.

ODORLESS

Particular description of goods.—Refrigerators.

Ser. No. 32,903. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOWELL & BURSK, Philadelphia, Pa. Filed Feb. 20, 1908. Used ten years.

Victoria

Particular description of goods.—Canned Fruits and Veegtables, Corn-Syrup, Cane-Syrup, Coffee, Cream-Cheese, Extract of Vanilla, and Cider-Vinegar.

Ser. No. 33,100. (CLASS 5. ADHESIVES.) BENJAMIN & GEE, London, England. Filed Feb. 29, 1908.

Fevistick

Particular description of goods.—An Adhesive Liquid Cement.

Ser. No. 33,300. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LUTHER H. LEBER, New York, N. Y. Filed Mar. 11, 1908.

Takabracer

Particular description of goods.—Nerve-Sedatives and Tonics.

Ser. No. 33,335. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PEEK & VELSOR, New York, N. Y. Filed Mar. 12, 1908. Used ten years.



Particular description of goods.—Remedies for Asthma, Catarrh, Bronchitis, Hay-Fever, and Colds.

Ser. No. 33,646. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WESTERN GROCER COMPANY, Marshalltown, Iowa. Filed Mar. 26, 1908.

SHEEPS HEAD



Particular description of goods.—Baking-Powder, Cream of Tartar, Bicarbonate of Soda, Carbonate of Soda, Laundry Starch, Lye, Bluing, Ammonia, Salt.

Ser. No. 33,778. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) POSTUM CEREAL CO. LIMITED, Battle Creek, Mich. Filed Apr. 1, 1908.

Grape-Nuts

Particular description of goods.—A Cereal Preparation Composed of Wheat and New Orleans Molasses for Making Beverages.

Ser. No. 33,819. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JAMES N. KLINE, Williamsport, Pa. Filed Apr. 3, 1908.



Particular description of goods.—Trout-Flies.

Ser. No. 34,009. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) A. L. REID & CO., New York, N. Y. Filed Apr. 14, 1908.



Particular description of goods.—Lawn.

Ser. No. 34,114. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE CONNECTICUT TRADING COMPANY, Clinton, Conn. Filed Apr. 15, 1908.

CONTRACO

Particular description of goods.—Lamp Bodies, Burners, Brackets, and Wicks.

Ser. No. 34,242. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FOLEY BROS. & KELLY, St. Paul, Minn. Filed Apr. 21, 1908.



Particular description of goods.—Canned Fruits, Canned Vegetables, Preserved Fruits, Spices, Flavoring Extracts, Corn-Starch, Farina, Tapioca, Potato-Flour, Plum-Pudding, Baked Beans, Sauer-Kraut, Canned Fish, Canned Oysters, Canned Lobsters, Canned Shrimp, Clam-Chowder, Teas, Coffees, Pepper, and Olive-Oil.

Ser. No. 34,244. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FOLEY BROS. & KELLY, St. Paul, Minn. Filed Apr. 21, 1908.



Particular description of goods.—Canned Vegetables, Canned Fruits, Preserved Fruits, Canned Fish, Canned Oysters, Spices, Flavoring Extracts, Corn-Starch, Potato-Flour, Tapioca, Sago, Farina, Teas, Coffees, Pepper, Baked Beans, Sauer-Kraut, Hominy, Dried Fruits, Bird-Seed, and Vinegar.

Ser. No. 34,256. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE JOHNS-PRATT COMPANY, Hartford, Conn. Filed Apr. 21, 1908. Used ten years.

MOULDED MICA.

Particular description of goods.—Electrical Railway, Power, and Lighting Insulations and Insulators, Electrical Railway Conductor, Feeder, and Guard Supports, and Electrical Lamp-Sockets, Magnet-Spools, Battery-Plates, Battery-Boxes, and Brush-Holders, which Goods Contain or are Provided with Insulating Material Containing Mica and a Binder.

Ser. No. 34,407. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MANITOBA-YOB SYRUP COMPANY, Chicago, Ill. Filed Apr. 27, 1908.

KO-KA-MA

Particular description of goods.—A Syrup Compounded of Corn, Cane, and Maple.

Ser. No. 34,459. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) FRANK LEE TAYLOR, Philadelphia, Pa. Filed Apr. 29, 1908.



Particular description of goods.—A Furniture-Polish.

Ser. No. 34,579. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) AMERICAN CYSTOSCOPE MAKERS, INC., New York, N. Y. Filed May 4, 1908.

Particular description of goods.—Electrically-Lighted Diagnostic Instruments, Comprising Endoscopes, Cystoscopes, Urethroscopes, Proctoscopes, Sigmoidoscopes, Bronchoscopes, Auriscopes, and Physicians' Headlights.

Ser. No. 34,767. (CLASS 33. GLASSWARE.) THE BERGER MANUFACTURING COMPANY, Canton, Ohio. Filed May 15, 1908.

Raydiant

Particular description of goods.—Sidewalk-Lights, Vault-Lights, Skylights, and Floor-Lights.

Ser. No. 34,962. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) VINCENT B. THOMAS, New York, N. Y. Filed May 26, 1908.

Particular description of goods.—Face-Cream, Face-Lotion, Face-Powder, Hair-Tonic, Hair-Cream, Rouge, Nail-Polish, Nail-Bleach, Hand-Lotion, and Neck-Lotion.

Ser. No. 35,002. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) WILLIAM TUNNESSEN, Hazleton, Pa. Filed May 28, 1908.

"GROWN"

Particular description of goods.—A Miner's or a Driver's Oil-Lamp.

Ser. No. 35,010. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY THAYER & COMPANY, Cambridge, Mass. Filed May 28, 1908.



Particular description of goods.—Medicated Lozenges for Coughs.

Ser. No. 35,050. (CLASS 17. TOBACCO PRODUCTS.) JAMAICA TOBACCO COMPANY, New York, N. Y., and Kingston, Jamaica. Filed June 1, 1908.

GOLOFINA

Particular description of goods.—Cigars.

Ser. No. 35,060. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) ISAAC A. SHEPPARD & CO., Philadelphia, Pa. Filed June 1, 1908.

PARAGON

Particular description of goods.—Stoves, Furnaces, and Hot-Air Heaters and Steam and Hot-Water Boilers.

Ser. No. 35,074. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANCISCO ISIDORO CARRERAS, New York, N. Y. Filed June 2, 1908.

Paul Ebrey

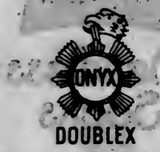
Particular description of goods.—Hair-Tonic.

Ser. No. 35,084. (CLASS 39. CLOTHING.) BATES-DUNHAM SHOE COMPANY, Portland, Me., and Boston, Mass. Filed June 2, 1908.



Particular description of goods.—Leather Boots and Shoes.

Ser. No. 35,112. (CLASS 39. CLOTHING.) LORD & TAYLOR, New York, N. Y. Filed June 3, 1908.



Particular description of goods.—Hosiery for Men, Women, and Children, of Wool, Silk, Cotton, or Admixtures of These Materials.

Ser. No. 35,149. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) RECOMETRE COMPANY OF AMERICA, New York, N. Y. Filed June 4, 1908.

RECOMETRE

Particular description of goods.—Speed-Recorders.

Ser. No. 35,160. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WHITON HARDWARE CO., Seattle, Wash. Filed June 5, 1908.

Alki

Particular description of goods.—Shovels, Spades, Scoops, Axes, Hammers, Hatchets, Files, Handsaws, Crosscut-Saws, Pocket-Knives, Razors, Shears, Butcher-Knives, Chisels, Screw-Drivers, Auger-Bits, Drawing-Knives, and Wood Handles for Tools.

Ser. No. 35,164. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE VINELAND GRAPE JUICE CO., Vineland, N. J. Filed June 5, 1908.



The band extending across the mark is in red color.
Particular description of goods.—Grape-Juice.

Ser. No. 35,229. (CLASS 39. CLOTHING.) MANHEIM HOSIERY MILLS COMPANY, Manheim, Pa. Filed June 9, 1908.



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Particular description of goods.—Hosiery.

Ser. No. 35,230. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM G. KORONY, New York, N. Y. Filed June 9, 1908.

SOLVO

Particular description of goods.—Hair-Remover.

Ser. No. 35,241. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN HOFFER FLOURING MILL COMPANY, Harrisburg, Pa. Filed June 9, 1908.

STELLA

Particular description of goods.—Wheat-Flour.

Ser. No. 35,282. (CLASS 48. MALT EXTRACTS AND LIQUORS.) PABST BREWING COMPANY, Milwaukee, Wis. Filed June 11, 1908.

Pabst Wiva

Particular description of goods.—Beer.

Ser. No. 35,296. (CLASS 11. INKS AND INKINK MATERIALS.) WARNER CARY LEWIS, Chicago, Ill. Filed June 12, 1908.



Particular description of goods.—Carbon-Paper.

Ser. No. 35,332. (CLASS 37. PAPER AND STATIONERY.) MABIE, TODD & CO., New York, N. Y. Filed June 13, 1908.



Particular description of goods.—Fountain-Pens.

Ser. No. 35,424. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ARTHUR O. PROBST, New York, N. Y. Filed June 17, 1908.



Particular description of goods.—Sheeting, Shirting, and Drills, and Cotton Flannels.

Ser. No. 35,609. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) EMIL WAHL MANUFACTURING COMPANY, Philadelphia, Pa. Filed June 19, 1908.

UNIVERSAL

Particular description of goods.—Buttons.

Ser. No. 35,614. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) READ BROTHERS, LIMITED, London, England. Filed June 19, 1908.



Particular description of goods.—Ginger-Ale.

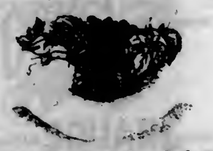
Ser. No. 35,618. (CLASS 39. CLOTHING.) ABRAM MAYER, New York, N. Y. Filed June 19, 1908.

3 IN 1

Particular description of goods.—Combination Undergarments for Ladies, Each Garment Comprising Chemise, Drawers, and Corset-Cover.

Ser. No. 35,650. (CLASS 47. WINES, EXCEPT MEDICATED.) THE ROSENBLATT CO., San Francisco, Cal. Filed June 20, 1908.

VIRGIN



Particular description of goods.—Red and White Wines.

Ser. No. 35,652. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE NEW JERSEY ASBESTOS COMPANY, Camden, N. J. Filed June 22, 1908.

"DAGGER"

Particular description of goods.—Asbestos Packing.

Ser. No. 35,666. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CONRAD WHITE, Cedar Grove, N. J. Filed June 22, 1908.

WHITE'S DISINFECTIVE SCOURING COMPOUND

Particular description of goods.—Disinfective Scouring Compound.

Ser. No. 35,671. (CLASS 39. CLOTHING.) REGAL SHOE COMPANY, Boston, Mass. Filed June 22, 1908.



THE FACTORY BEHIND THE SHOE

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 35,672. (CLASS 39. CLOTHING.) REGAL SHOE COMPANY, Boston, Mass. Filed June 22, 1908.

Regal

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 35,682. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) EMIL WAHL MANUFACTURING COMPANY, Philadelphia, Pa. Filed June 23, 1908.



Particular description of goods.—Buttons.

Ser. No. 35,732. (CLASS 39. CLOTHING.) ROBERTS JOHNSON & RAND SHOE COMPANY, St. Louis, Mo. Filed June 24, 1908.

ETERNITY

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 35,747. (CLASS 39. CLOTHING.) SAWYER BOOT & SHOE CO., Bangor, Me. Filed June 25, 1908.

Wigwam

Particular description of goods.—Moccasins.

Ser. No. 35,808. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE DECATUR BREWING COMPANY, Decatur, Ill. Filed June 26, 1908.

WHITE BANNER

Particular description of goods.—Non-Intoxicating Malt Beverage.

Ser. No. 35,820. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TROWBRIDGE CHOCOLATE CHIP COMPANY, Meadville, Pa. Filed June 27, 1908.

Eat-a-Lot

Particular description of goods.—Nut-Taffy.

Ser. No. 35,825. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) KEYSTONE SHANK CO., Brockton, Mass. Filed June 27, 1908.

KEYSTONE

Particular description of goods.—Metal Shanks for Boots and Shoes.

Ser. No. 35,833. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) WOVEN STEEL HOSE & RUBBER COMPANY, Trenton, N. J. Filed June 29, 1908.

"HERALD"

Particular description of goods.—Steam and Hydraulic Packings Formed of Superimposed Layers of Duck, Rubber, Braided Flax, and Cotton Braiding Impregnated with a Lubricant.

Ser. No. 35,873. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHURCH & DWIGHT CO., New York, N. Y. Filed June 30, 1908.

Particular description of goods.—Baking-Soda.

Ser. No. 35,881. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WYCKOFF, SEAMANS & BENEDICT, Ilion, N. Y. Filed June 29, 1908.

Particular description of goods.—Type-Writing Machines.

Ser. No. 35,895. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. S. STROUSE M'F'G CO., Philadelphia, Pa. Filed July 1, 1908.

Particular description of goods.—A Hair-Tonic.

Ser. No. 35,914. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE AUTOTONE CO., New York, N. Y. Filed July 2, 1908.

Selector

Particular description of goods.—Piano-Players, Player-Pianos, and Self-Playing Musical Instruments.

Ser. No. 35,938. (CLASS 39. CLOTHING.) WM. ERSTEIN AND BROTHER, New York, N. Y. Filed July 3, 1908.

Particular description of goods.—Petticoats.

Ser. No. 35,954. (CLASS 17. TOBACCO PRODUCTS.) T. M. KILDOW CIGAR CO., Bethesda, Ohio. Filed July 6, 1908. Used ten years.

HALF SPANISH.

Particular description of goods.—Stogies and Cigars.

Ser. No. 35,966. (CLASS 17. TOBACCO PRODUCTS.) FRANK M. HUNT, Bethesda, Ohio. Filed July 6, 1908.

366

Particular description of goods.—Cigars, Cheroots, and Stogies.

Ser. No. 35,969. (CLASS 39. CLOTHING.) BINGHAMTON SHOE & RUBBER CO., Binghamton, N. Y. Filed July 6, 1908.

Particular description of goods.—Rubber and Leather Boots and Shoes.

Ser. No. 36,015. (CLASS 17. TOBACCO PRODUCTS.) THE DEISEL-WEMMER COMPANY, Lima, Ohio. Filed July 8, 1908.

Particular description of goods.—Cigars.

Ser. No. 36,028. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SCHOELLKOPF, HARTFORD & HANNA COMPANY, Buffalo, N. Y. Filed July 9, 1908.

Particular description of goods.—Anilin Coloring Materials.

Ser. No. 36,031. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE DEFIANCE MACHINE WORKS, Defiance, Ohio. Filed July 9, 1908. Used ten years.

DEFIANCE

Particular description of goods.—Woodworking Machinery, Comprising Wood Turning, Mortising, Sawing, Planing, Polishing, Boring, Shaping, Bending, and Balancing Machines.

Ser. No. 36,050. (CLASS 48. MALT EXTRACTS AND LIQUORS.) M. B. FOSTER & SONS, LIMITED, London, N. W., England. Filed July 10, 1908.

BUGLE BRAND

Particular description of goods.—Beer.

Ser. No. 36,075. (CLASS 2. RECEPTACLES.) THE UNION BAG & PAPER COMPANY, New York, N. Y. Filed July 13, 1908.

UNION COMET SQUARE

Particular description of goods.—Paper bags.

Ser. No. 36,083. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE BECHTOLD, Brooklyn, N. Y. Filed July 13, 1908.

AMPELLA

Particular description of goods.—Medicinal Tablets Used as a Remedy for Kidney Troubles, Rheumatism, Gout, Aches, Pains, and Malaria.

Ser. No. 36,090. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) MAX SCHULTZ, Buffalo, N. Y. Filed July 14, 1908.

MONARCH

Particular description of goods.—Foot-Protectors.

Ser. No. 36,113. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) MANHATTAN ELECTRICAL SUPPLY COMPANY, Jersey City, N. J.; New York, N. Y.; Chicago, Ill., and Ravenna, Ohio. Filed July 14, 1908.

NEW YORK CHICAGO JERSEY CITY RAVENNA, O. MANHATTAN MESCO ELECTRICAL SUPPLY CO.

Particular description of goods.—Annunciators and Parts Thereof, Electric Burglar-Alarms, Cut-Outs, Electric Door-Openers, Electric Batteries, Electric Bells and Buzzers, Electrical Connectors, Rosettes, Taps, and Plugs, Electric Fans, Electric Indicators, Electric Lamps, Electric Motors, Electric Gas-Lighting Apparatus, Induction-Coils and Parts Thereof, Lightning-Arresters, Polarity-Indicators, Push-Buttons, Electric Switches, Telegraph Instruments and Parts Thereof, Telephone Instruments and Apparatus, Electric Time-Alarms, and Electric Time-Switches.

Ser. No. 36,119. (CLASS 37. PAPER AND STATIONERY.) BLAKE, MOFFITT & TOWNE, San Francisco, Cal. Filed July 14, 1908. Used ten years.

ASHLAND

Particular description of goods.—Bond and Writing Paper.

Ser. No. 36,136. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE ROBERT SMITH ALE BREWING COMPANY, Philadelphia, Pa. Filed July 15, 1908.

BRAWN BREW

Particular description of goods.—Ale, Porter, and Brown Stout.

Ser. No. 36,147. (CLASS 39. CLOTHING.) LIKES, BERWANGER & CO., Baltimore, Md. Filed July 16, 1908.

Ten Spot

Particular description of goods.—Men's and Youths' Suits and Overcoats.

Ser. No. 36,150. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) AMERICAN MACHINERY COMPANY, New York, N. Y. Filed July 16, 1908.

HERCULES

Particular description of goods.—Sash-Operating Apparatus Adapted to Open or Close a Line of Two or More Windows at One Operation.

Ser. No. 36,176. (CLASS 17. TOBACCO PRODUCTS.) F. GARCIA & BROS., New York, N. Y. Filed July 17, 1908. Used ten years.

LA TROPICAL

Particular description of goods.—Cigars.

Ser. No. 36,178. (CLASS 17. TOBACCO PRODUCTS.) F. GARCIA & BROS., New York, N. Y. Filed July 17, 1908. Used ten years.

LA PINTA

Particular description of goods.—Cigars.

Ser. No. 36,179. (CLASS 17. TOBACCO PRODUCTS.) F. GARCIA & BROS., New York, N. Y. Filed July 17, 1908. Used ten years.

ROSARIO

Particular description of goods.—Cigars.

Ser. No. 36,180. (CLASS 17. TOBACCO PRODUCTS.) F. GARCIA & BROS., New York, N. Y. Filed July 17, 1908. Used ten years.

F. GARCIA & BROS. TAMPA

Particular description of goods.—Cigars.

Ser. No. 36,181. (CLASS 17. TOBACCO PRODUCTS.) F. GARCIA & BROS., New York, N. Y. Filed July 17, 1908. Used ten years.

EL CARPIO

Particular description of goods.—Cigars.

Ser. No. 36,188. (CLASS 39. CLOTHING.) STEEFEL, STRAUSS & CONNOR, Rochester, N. Y. Filed July 17, 1908.

MUTO

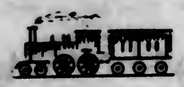
Particular description of goods.—Coats.

Ser. No. 36,189. (CLASS 39. CLOTHING.) STEEFEL, STRAUSS & CONNOR, Rochester, N. Y. Filed July 17, 1908.

MUTO CONVERTIBLE

Particular description of goods.—Coats.

Ser. No. 36,196. (CLASS 37. PAPER AND STATIONERY.) EAGLE PENCIL COMPANY, New York, N. Y. Filed July 17, 1908.



Particular description of goods.—Lead-Pencils.

Ser. No. 36,204. (CLASS 39. CLOTHING.) GEORGE W. DAVIS COMPANY, Chicago, Ill. Filed July 18, 1908.

STYADS

Particular description of goods.—Coats.

Ser. No. 36,208. (CLASS 39. CLOTHING.) CHAS. CHIPMAN'S SONS, Easton, Pa. Filed July 18, 1908.



Particular description of goods.—Hosiery.

Ser. No. 36,209. (CLASS 39. CLOTHING.) CHAS. CHIPMAN'S SONS, Easton, Pa. Filed July 18, 1908.

E.Z. Top

Particular description of goods.—Hosiery.

Ser. No. 36,224. (CLASS 39. CLOTHING.) SMITH-MCCORD-TOWNSEND D. G. CO., Kansas City, Mo. Filed July 20, 1908.

BULL-DOG

Particular description of goods.—Overalls, Jumpers, Work-Coats, Work-Pants, and Work-Shirts.

Ser. No. 36,285. (CLASS 39. CLOTHING.) MURRAY SHOE CO., Lynn, Mass. Filed July 23, 1908.

DIRECTOIRE

Particular description of goods.—Women's Leather and Cloth Boots, Shoes, and Slippers.

Ser. No. 36,377. (CLASS 17. TOBACCO PRODUCTS.) J. RICHMAN & BROTHER, Pittsburg, Pa. Filed July 28, 1908.

J. Richman & Bro. Pittsburg Pa. SMOKE. HAND MADE B & O LONG FILLER SEED STOGIES

Particular description of goods.—Stogies.

Ser. No. 36,384. (CLASS 39. CLOTHING.) T. N. FOSTER & CO., New York, N. Y. Filed July 29, 1908.



Particular description of goods.—Kid Gloves.

TRADE-MARKS

REGISTERED SEPTEMBER 8, 1908.

70,475. MEN'S DRESS AND NEGLIGÉE SHIRTS. CARSON PIRIE SCOTT & Co., Chicago, Ill.
Filed May 7, 1908. Serial No. 34,627. PUBLISHED JULY 7, 1908.

70,476. MEN'S WORK-SHIRTS. CARSON PIRIE SCOTT & Co., Chicago, Ill.
Filed May 7, 1908. Serial No. 34,628. PUBLISHED JULY 7, 1908.

70,477. HOSIERY. DOROTHY DODD SHOE COMPANY, Boston, Mass.
Filed April 24, 1908. Serial No. 34,354. PUBLISHED JULY 7, 1908.

70,478. LEATHER SHOES. LONG & DAVIDSON, Lancaster, Pa.
Filed May 6, 1908. Serial No. 34,611. PUBLISHED JULY 7, 1908.

70,479. SWEATERS. HYMAN STARR, New York, N. Y.
Filed April 25, 1908. Serial No. 34,373. PUBLISHED JULY 7, 1908.

70,480. SHIRT-WAISTS. THE STEWART, HOWE & MAY CO., Jersey City, N. J.; New York, N. Y.; Boston, Mass.; St. Louis, Mo.; Chicago, Ill., and San Francisco, Cal.
Filed May 12, 1908. Serial No. 34,700. PUBLISHED JULY 7, 1908.

70,481. HOSIERY. THOMAS G. PLANT COMPANY, Boston, Mass.
Filed April 24, 1908. Serial No. 34,357. PUBLISHED JULY 7, 1908.

70,482. GAS HEATER-FURNACE. LEWIS O. CAMERON, Pittsburg, Pa.
Filed December 26, 1906. Serial No. 24,291. PUBLISHED JULY 7, 1908.

70,483. LIME-FRUIT JUICE. EVANS SONS LESCHER & WEBB LIMITED, London, England.
Filed December 13, 1907. Serial No. 31,716. PUBLISHED JULY 7, 1908.

70,484. BLENDED AND STRAIGHT WHISKIES. G. RIESMEYER DISTILLING COMPANY, St. Louis, Mo.
Filed February 3, 1908. Serial No. 32,526. PUBLISHED JULY 7, 1908.

70,485. GRAIN-THRESHING MACHINES. GAAR, SCOTT & Co., Richmond, Ind.
Filed June 4, 1907. Serial No. 27,868. PUBLISHED JULY 7, 1908.

70,486. ALARM-WHISTLES FOR MOTOR-CARS. AUGUSTE GILDEMEISTER, Paris, France.
Filed April 14, 1908. Serial No. 34,097. PUBLISHED JULY 7, 1908.

70,487. HOSIERY. HYGIENIC FLEECED UNDERWEAR COMPANY, Philadelphia, Pa.
Filed May 14, 1908. Serial No. 34,738. PUBLISHED JULY 7, 1908.

70,488. STRAIGHT AND BLENDED WHISKIES. JOHN C. WELLER Co. INC., Louisville, Ky.
Filed February 20, 1908. Serial No. 32,886. PUBLISHED APRIL 28, 1908.

70,489. WRENCHES. MAHLON E. LAYNE, Houston, Tex.
Filed May 4, 1908. Serial No. 34,573. PUBLISHED JULY 7, 1908.

70,490. METAL, PAPER, AND PORCELAIN BOTTLE-CLOSURES. ANTHONY F. MCDONNELL, Scranton, Pa.
Filed March 25, 1908. Serial No. 33,604. PUBLISHED JUNE 23, 1908.

70,491. CERTAIN WINES. THE PURITY VALLEY WINE CO., New Orleans, La.
Filed March 2, 1908. Serial No. 33,113. PUBLISHED JULY 7, 1908.

70,492. HOT-AIR ENGINES. RIDER-ERICSSON ENGINE CO., New York, N. Y.
Filed May 12, 1908. Serial No. 34,701. PUBLISHED JULY 7, 1908.

70,493. NEWSPAPER. MARZIALE SISCA, New York, N. Y.
Filed May 9, 1908. Serial No. 34,661. PUBLISHED JULY 7, 1908.

70,494. OLD TOM STRAIGHT GIN. GEORGES STIEGLER & Co., New York, N. Y
Filed May 1, 1908. Serial No. 34,504. PUBLISHED JULY 7, 1908.

70,495. SYRINGES, WATER-BOTTLES, ATOMIZERS, AND NIPPLES. TYER RUBBER CO., Andover, Mass.
Filed May 23, 1908. Serial No. 34,899. PUBLISHED JULY 7, 1908.

70,496. SYRUPS FOR SODA-WATER. U. S. HORSE RADISH Co., Saginaw, Mich.
Filed March 26, 1908. Serial No. 33,679. PUBLISHED JULY 7, 1908.

70,497. FILES. THE W. BINGHAM COMPANY, Cleveland, Ohio.
Filed May 7, 1908. Serial No. 34,642. PUBLISHED JULY 7, 1908

70,498. BEER. YONKERS BREWERY, Yonkers, N. Y.
Filed July 24, 1907. Serial No. 29,008. PUBLISHED JUNE 16, 1908.

70,499. ALE, BEER, PORTER, AND STOUT. YONKERS BREWERY, Yonkers, N. Y.
Filed July 24, 1907. Serial No. 29,009. PUBLISHED JUNE 16, 1908.

70,500. PORTLAND CEMENT. ALPHA PORTLAND CEMENT COMPANY, Easton, Pa.
Filed May 21, 1908. Serial No. 34,856. PUBLISHED JULY 7, 1908.

70,501. FLUID FOR POLISHING LINOLEUM, FURNITURE, AND TAN LEATHER. CHARLES JOHN BADHAM, Dunedin, New Zealand.
Filed December 27, 1907. Serial No. 31,932. PUBLISHED JUNE 23, 1908.

70,502. CLEANING AND POLISHING COMPOSITION. THE CHENEY CHEMICAL COMPANY, South Manchester, Conn.
Filed March 12, 1907. Serial No. 25,925. PUBLISHED JULY 7, 1908.

70,503. SLOW-BURNING FUSES. COAST MANUFACTURING & SUPPLY CO., Berkeley, Cal.
Filed May 25, 1908. Serial No. 34,921. PUBLISHED JULY 7, 1908.

70,504. SOLID DRUG EXTRACT COMPOUND. PAUL F. DE FORD, Pasadena, Cal.
Filed March 25, 1908. Serial No. 33,606. PUBLISHED JUNE 9, 1908.

70,505. MATERIAL FOR REDYEING AND RENOVATING PLUSH. IMPERIAL CAR CLEANER CO., Newark, N. J.
Filed February 29, 1908. Serial No. 33,084. PUBLISHED JULY 7, 1908.

70,506. WHISKS, BROOMS, BRUSHES, AND WAREHOUSE-BROOMS. NEW BROOM COMPANY, Grand Island, Nebr., and Chicago, Ill.
Filed June 6, 1908. Serial No. 35,189. PUBLISHED JULY 7, 1908.

70,507. WHISKS, BROOMS, BRUSHES, AND WAREHOUSE-BROOMS. NEW BROOM COMPANY, Grand Island, Nebr., and Chicago, Ill.
Filed June 6, 1908. Serial No. 35,190. PUBLISHED JULY 7, 1908.

70,508. CERTAIN MEDICINAL PREPARATIONS. PAPE, THOMPSON & PAPE, Cincinnati, Ohio.
Filed March 11, 1908. Serial No. 33,316. PUBLISHED JUNE 23, 1908.

70,509. WASHBOARDS. S. HAMILL COMPANY, Keokuk, Iowa.
Filed May 20, 1907. Serial No. 27,512. PUBLISHED JULY 7, 1908.

70,510. WRITING FLUID. SANFORD MANUFACTURING CO., Chicago, Ill.
Filed June 1, 1908. Serial No. 35,065. PUBLISHED JULY 7, 1908.

70,511. DRAWING-INKS. TECHNICAL SUPPLY COMPANY, Scranton, Pa.
Filed June 5, 1908. Serial No. 35,168. PUBLISHED JULY 7, 1908.

70,512. REMEDY FOR CERTAIN DISEASES. ROBERT E. SAGER, Pittsburg, Pa.
Filed January 25, 1908. Serial No. 32,427. PUBLISHED JULY 7, 1908.

70,513. HIDES AND HARNESS-LEATHER. W. D. BYRON & SONS INC., Williamsport, Md.
Filed May 14, 1908. Serial No. 34,729. PUBLISHED JUNE 16, 1908.

70,514. ANIMAL SHACKLING, SLAUGHTERING, RENDERING, AND DRYING APPARATUS. WANNENWETSCH AND CO., Buffalo, N. Y.
Filed May 9, 1908. Serial No. 34,656. PUBLISHED JULY 7, 1908.

70,515. PERFUME EXTRACTS AND TOILET WATERS. A. A. VANTINE & CO., New York, N. Y.
Filed April 6, 1908. Serial No. 33,889. PUBLISHED JUNE 16, 1908.

70,516. PERFUME EXTRACTS. A. A. VANTINE & CO., New York, N. Y.
Filed April 6, 1908. Serial No. 33,893. PUBLISHED JUNE 16, 1908.

70,517. PERFUMES AND PERFUME EXTRACTS. A. A. VANTINE & CO., New York, N. Y.
Filed April 6, 1908. Serial No. 33,894. PUBLISHED JUNE 23, 1908.

70,518. WHEAT-FLOUR. THE C. HOFFMAN & SON MILLING COMPANY, Enterprise, Kans.
Filed March 11, 1908. Serial No. 33,310. PUBLISHED JULY 7, 1908.

70,519. LINIMENT. D. RANSOM, SON AND COMPANY, Buffalo, N. Y.
Filed April 30, 1908. Serial No. 34,491. PUBLISHED JULY 7, 1908.

70,520. WRITING-PAPER AND ENVELOPS. GEORGE B. HURD & Co., New York, N. Y.
Filed February 18, 1908. Serial No. 32,858. PUBLISHED JULY 7, 1908.

70,521. WRITING-PAPER AND ENVELOPS. GEORGE B. HURD & Co., New York, N. Y.
Filed February 18, 1908. Serial No. 32,859. PUBLISHED JULY 7, 1908.

70,522. WOOLEN BED AND WRAPPER BLANKETS. THOMAS KELLY & Co., Boston, Mass.
Filed June 13, 1905. Serial No. 8,061. PUBLISHED JULY 7, 1908.

70,523. WHEAT-FLOUR. THE OGILVIE FLOUR MILLS COMPANY, LIMITED, Montreal, Quebec, Canada.
Filed April 6, 1908. Serial No. 33,898. PUBLISHED JULY 7, 1908.

70,524. PRESERVES AND JELLIES. PACIFIC COAST SYRUP CO., San Francisco, Cal.
Filed March 5, 1908. Serial No. 33,181. PUBLISHED JUNE 23, 1908.

70,525. HONEY. PACIFIC COAST SYRUP CO., San Francisco, Cal.
Filed March 5, 1908. Serial No. 33,183. PUBLISHED APRIL 14, 1908.

70,526. BLEND OF MAPLE AND WHITE-SUGAR SYRUP. PACIFIC COAST SYRUP CO., San Francisco, Cal.
Filed March 5, 1908. Serial No. 33,184. PUBLISHED JUNE 23, 1908.

70,527. REMEDY FOR CERTAIN DISEASES. REMKOL COMPANY, Boston, Mass.
Filed May 23, 1908. Serial No. 34,902. PUBLISHED JULY 7, 1908.

70,528. CREAM-CHEESE. SCOTT & COMPANY, Norfolk, Va.
Filed February 20, 1908. Serial No. 32,893. PUBLISHED JUNE 9, 1908.

70,529. POISONOUS ANT-PAPER. JOHN STUMPF, Gretna, La.
Filed May 1, 1908. Serial No. 34,514. PUBLISHED JULY 7, 1908.

70,530. CANNED PEAS, BEANS, CORN, AND TOMATOES WATERLOO CAN. & PICKLING ASS'N., Waterloo, Wis.
Filed April 22, 1908. Serial No. 34,260. PUBLISHED JULY 7, 1908.

70,531. WHEAT-FLOUR. BARBER MILLING COMPANY, Minneapolis, Minn.
Filed May 25, 1908. Serial No. 34,941. PUBLISHED JULY 7, 1908.

70,532. SILK PONGEE. L. ERSTEIN & BRO., New York, N. Y.
Filed March 17, 1908. Serial No. 33,441. PUBLISHED JULY 7, 1908.

70,533. PRINTED AND DYED TEXTILE COTTON FABRICS. HELLER & LONG, New York, N. Y.
Filed April 17, 1908. Serial No. 34,187. PUBLISHED JULY 7, 1908.

70,534. DRILLS. HELLER & LONG, New York, N. Y.
Filed April 22, 1908. Serial No. 34,265. PUBLISHED JULY 7, 1908.

70,535. CANNED FRUITS AND CANNED VEGETABLES. J. F. PYLE & SON, San Jose, Cal.
Filed May 21, 1908. Serial No. 34,857. PUBLISHED JULY 7, 1908.

70,536. CERTAIN CLOTHING. JAMES R. KEISER, INCORPORATED, New York, N. Y.
Filed March 21, 1908. Serial No. 33,508. PUBLISHED JULY 7, 1908.

70,537. WHEAT-FLOUR. LISTMAN MILL COMPANY, La Crosse, Wis.
Filed May 18, 1908. Serial No. 34,811. PUBLISHED JULY 7, 1908.

70,538. SUSPENDERS, GARTERS, AND WEARING-BELTS OF LEATHER AND CLOTH. MONARCH SUSPENDER CO., New York, N. Y.
Filed April 9, 1908. Serial No. 33,973. PUBLISHED JULY 7, 1908.

70,539. SMOKED SARDINES IN OIL. STAVANGER PRESERVING COMPANY, Stavanger, Norway.
Filed September 1, 1906. Serial No. 21,858. PUBLISHED JULY 7, 1908.

70,540. CHOCOLATE AND CANDIES. W. F. SCHRAFFT & SONS, CORPORATION, Boston, Mass.
Filed May 1, 1908. Serial No. 34,513. PUBLISHED JULY 7, 1908.

70,541. RIBBONS. WM. SARASIN & Co., Basel, Switzerland.
Filed November 22, 1907. Serial No. 31,299. PUBLISHED JULY 7, 1908.

LABELS

REGISTERED SEPTEMBER 8, 1908.

14,341.—*Title:* "HOLSUM." (For Bread.) ANTHONY BAKING COMPANY, Rochester, N. Y. Filed June 27, 1908.

14,342.—*Title:* "SOUL KISSES." (For Confections.) HUYLER'S, New York, N. Y. Filed July 31, 1908.

14,343.—*Title:* "PERRY'S MAGIC TOOTH PASTE." (For Tooth-Paste.) BELLE A. PERRY, Oshkosh, Wis. Filed June 15, 1908.

14,344.—*Title:* "EXTRAIT ROSE DE FRANCE." (For Rose Perfume Extract.) CHAS. RAHAYEL, New York, N. Y. Filed July 16, 1908.

14,345.—*Title:* "QUEEN ALEXANDRIAS OF JUDEA SWEET-VIOLET-BATH POWDER." (For a Bath-Powder.) JUANO L. DE ZEABAULT, Cleveland, Ohio. Filed April 1, 1908.

14,346.—*Title:* "KASKARA PILLS." (For Cascara Pills for Chronic Constipation.) EUREKA CHEMICAL CO., Cincinnati, Ohio. Filed June 13, 1908.

14,347.—*Title:* "ARTGUM." (For a Dry Cleaner and Massager.) ADOLPH SOMMER, Cambridge, Mass. Filed June 29, 1908.

14,348.—*Title:* "EZEEWASH." (For a Detergent for Washing Soiled Clothes.) WM. A. HOAG & Co., New York, N. Y. Filed May 7, 1908.

14,349.—*Title:* "SCHOOL BOYS USEFUL SCHOOL ARTICLE U. S. A. PENCIL CASE." (For Pencil-Case.) EUGENE PEARL, New York, N. Y. Filed August 6, 1908.

PRINTS

REGISTERED SEPTEMBER 8, 1908.

2,331.—*Title:* "THE PIRATE." (For a Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed July 24, 1908.

2,332.—*Title:* "FRENCH AUTO OILS." (For Lubricating-Oil.) MARSHALL OIL COMPANY, Marshalltown, Iowa. Filed August 5, 1908.

2,333.—*Title:* "CLEANING A DRAWING." (For a Cleaning Composition.) ADOLPH SOMMER, Cambridge, Mass. Filed August 7, 1908.

2,334.—*Title:* "CLEANING A GLOVE." (For a Cleaning Composition.) ADOLPH SOMMER, Cambridge, Mass. Filed August 7, 1908.

2,335.—*Title:* "CLEANING A HAT." (For a Cleaning Composition.) ADOLPH SOMMER, Cambridge, Mass. Filed August 7, 1908.

2,336.—*Title:* "CLEANING THE WALLPAPER." (For a Cleaning Composition.) ADOLPH SOMMER, Cambridge, Mass. Filed August 7, 1908.

2,337.—*Title:* "CLEANING A SLIPPER." (For a Cleaning Composition.) ADOLPH SOMMER, Cambridge, Mass. Filed August 7, 1908.

2,338.—*Title:* "COMPASS AND LEAD BACKS, COLUMBIA PLAYING CARDS." (For Playing-Cards.) THE UNITED STATES PLAYING CARD COMPANY, Norwood, Ohio. Filed August 6, 1908.

2,339.—*Title:* "PANAMA SOUVENIR PLAYING CARDS." (For Playing-Cards.) THE UNITED STATES PLAYING CARD COMPANY, Norwood, Ohio. Filed August 10, 1908.

2,340.—*Title:* "TABLE FOR GRINDING CLEARANCE." (For Cutter-Grinders.) THE R. K. LE BLOND MACHINE TOOL Co., Cincinnati, Ohio. Filed July 8, 1908.

2,341.—*Title:* "STEVENS RIFLES, THE BULL'S EYE KIND." (For Rifles.) MILTON BRADLEY COMPANY, Springfield, Mass. Filed July 28, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

OUTCAULT *v.* THE NEW YORK HERALD COMPANY.

CANCELATION PROCEEDING.

Decided August 1, 1906.

TRADE-MARKS—CANCELATION—WITHDRAWAL OF APPLICATION THEREFOR.

After pleadings have been filed, proofs taken, and the case ready for final hearing an applicant for cancelation will not be permitted to withdraw his application without prejudice to his right to file a new application.

APPEAL on motion.

TRADE-MARK FOR COMIC SECTIONS OF NEWSPAPERS.

Messrs. Mason, Fenwick & Lawrence for Outcault.

Mr. William A. Megrath for The New York Herald Company.

MOORE, *Commissioner:*

This is an appeal by Outcault from the decision of the Examiner of Interferences denying his motion for leave to withdraw his application for cancelation of the trade-mark registration of The New York Herald Company.

On February 6, 1906, the Patent Office issued certificate No. 49,499 to The New York Herald Company for the registration of the words "Buster Brown" as a trade-mark for comic sections of newspapers. On February 16, 1906, Outcault filed his application for cancelation of this registration. This proceeding has been pending for over two years and has been vigorously contested at every step. After pleadings were filed, proofs taken, and the case ready for final hearing Outcault seeks by his present motion to terminate the proceeding without prejudice to his right to file a new application for cancelation of said registration.

Appellant contends that the United States courts permit, as a matter of course, such voluntary dismissal by the complainant at any time before final hearing and that the Examiner of Interferences was in error in not following such practice, especially in view of the provision of Rule 153 of the Rules of Practice of the United States Patent Office that—

> In contested cases the practice on points to which the rules shall not be applicable will conform, as near as possible, to that of the United States courts in equity proceedings.

Appellant's contention is believed to be erroneous. It does not appear to be the general practice of the Federal courts to permit the complainant to dismiss his bill without prejudice and upon the payment of costs when the case is ready for final hearing. The right of a complainant to dismiss his bill was discussed by Judge Taft, while circuit judge, in the case of the *City of Detroit* v. *Detroit City Ry. Co.*, (55 F. R., 569.) In that case the court said:

> The motion to dismiss presents a question of equity practice which is not as clearly settled as could be desired. It seems hardly fair that after a case has been got ready for hearing and the defendant has gone to the expense of a full preparation, the complainant may deprive the defendant of the benefit of all that preparation by a dismissal, under which he reserves full power to harass him by bringing a new bill when he shall choose to do so, on the simple condition that he pay the costs, which are so notoriously inadequate to compensate defendant for his actual expenditures.

In the later case of *Georgia Co.* v. *Bilfinger*, (129 F. R., 131,) where the complainant moved to dismiss his bill under circumstances somewhat similar to those of the present case, the court stated:

> This motion must be denied. It is well settled by authorities that a complainant cannot dismiss his bill at will after proofs are taken and the case is set for final hearing. Such motion is an address to the sound discretion of the court but will not be granted in a case where "such proceedings have been taken as entitle the defendant to a decree." (*Chicago Co.* v. *Union Rolling Mill Co.*, 109 U. S., 702.)
>
> In this case no reason is cited why complainant desires to dismiss its bill, except as it appears from the proceedings that complainant realizes the complete failure to make out a case against the defendants. * * * If this suit here should now be merely dismissed by an order on request of complainant, the same issue will be required to be litigated in the other case. This procedure may be repeated by complainant as often as it may succeed in inducing the courts to dismiss its bills before judgment, and without prejudice after the proofs are taken and the case set down for final hearing. Such proceeding would certainly be vexatious to the utmost, and work irreparable injury to defendants' interests. For these reasons, complainant's motion is denied, and the case will be considered and decided by the court on the proofs, and a judgment entered therein.

Moreover, in cases where the courts countenance dismissals without prejudice upon the payment of costs it is on the theory that the defendant is compensated by the costs. The Patent Office, however, has no authority to award costs, and this is another reason why it should not countenance such practice.

No case is found where the Patent Office has granted a motion of this character, and no such case has been cited by appellant. Rule 125, relating to interference between applications for patents, specifically states that when an interference is finally declared it will not be determined without judgment of priority unless it develops that the interference should never have been declared, and it is accordingly dissolved. The trade-mark rules apparently do not sanction the granting of motions of the character under consideration any more than the rules relating to patent applications, for Rule 55 of the Trade-Mark Rules provides:

> The proceedings, on oppositions, and on applications for cancelation, shall follow, as nearly as practicable, the practice, in interferences between applications for patents.

To grant appellant's motion and permit him to institute a new proceeding would not only work a hardship upon his opponent, but would add an unnecessary burden upon this Office. The burden of this proceeding is indicated to some extent by the fact that this is the fourth time the present case has been before the Commissioner on interlocutory appeal or petition by Outcault. Outcault desires the benefit of additional testimony. His time for taking testimony was extended on various occasions, and it would appear that he has had ample opportunity in the present case and without resorting to a new proceeding to make a satisfactory showing if he has good reasons to offer for his failure to take the testimony within the time originally assigned or the several extensions thereof.

The decision of the Examiner of Interferences is believed to indicate the proper practice to be pursued in this Office, and it is accordingly affirmed.

EX PARTE MEALUS.

APPLICATION FOR PATENT.

Decided September 1, 1908.

APPLICATION—DRAWING.

The conclusion of the chief draftsman as to whether or not drawings forming a part of the application for patent shall be accepted will not be disturbed unless there is such palpable abuse of discretion on his part as would warrant the exercise of the supervisory authority of the Commissioner.

ON PETITION.

HAY-LOADERS.

Messrs. Robinson, Martin & Jones for the applicant.

BILLINGS, *Acting Commissioner:*

This is a petition that the requirement that new drawings be furnished be withdrawn. The record shows that the chief draftsman refused to accept the drawing upon the ground that the lines were rough and the free-hand surface-shading objectionable.

It is urged by the petitioner that the drawings have solid lines which adapt them to be successfully reproduced by photographic processes, that they are of good artistic merit and sufficiently illustrate the invention, and, furthermore, that the drawings are of the nature requiring a large amount of free-hand work in their reproduction, which is necessarily more or less imperfect.

Rules 49 to 55 of the Rules of Practice state with great particularity the character of drawing which is required as part of an application for patent. As stated in Rule 51, three editions of copies of patent drawings are printed and published which necessitate great reductions in the scale of the drawing. It is therefore necessary that drawings which are to form a part of an application be of a uniform standard of excellence and that strict compliance with the rules relating to drawings be required. In order that uniformity, both in the character of the drawings and their artistic merit, may be obtained, all drawings are submitted to the chief draftsman. His conclusion as to whether or not the drawings should be accepted will not be disturbed unless there is such palpable abuse of his discretion as would warrant the exercise of the supervisory authority of the Commissioner. In the present case there appears to be no abuse of this discretion. On the contrary, the criticisms of the chief draftsman are clearly well founded and must be insisted upon.

The petition is denied.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

CUTLER *v.* LEONARD.

Decided May 6, 1908.

1. APPEAL—COURT OF APPEALS OF THE DISTRICT OF COLUMBIA—CONSIDERATION OF QUESTION NOT RAISED BELOW.

Assignments of error by the Commissioner of Patents raising the question of the sufficiency of disclosure in appellee's applications will be given but passing notice by the court of appeals where such question was not raised before the tribunals of the Patent Office. It was incumbent upon appellant to "raise this question before the Primary Examiner, whose skill in the particular art peculiarly qualified him to consider it."

2. INTERFERENCE—BURDEN OF PROOF—INADVERTENTLY-ISSUED PATENT.

Where a patent is inadvertently issued, while an application by another is pending, without an interference, no advantage accrues to the patentee on the question of burden of proof.

RENEWAL OF APPLICATION—ABANDONMENT—SECTION 4897, REVISED STATUTES, CONSTRUED.

Under section 4897, Revised Statutes, relating to the renewal of forfeited applications, providing that "upon the hearing of renewed applications preferred under this section, abandonment shall be considered as a question of fact," the question of abandonment is one to be determined upon proof of the facts and circumstances and will not be presumed from laches in filing the renewal application, although it may be within the power of the Commissioner, whenever he entertains a doubt as to whether there has been abandonment, to require an explanation of the delay.

Mr. J. R. Edson and *Mr. W. Clyde Jones* for the appellant.

Mr. C. V. Edwards for the appellee.

ROBB, *J.:*

This is an interference proceeding, in which no proofs were taken by either party, and involving an improvement in controllers for electrical vehicles as stated in the following counts:

1. The combination with a suitable controlling-circuit, of a plurality of electromagnetic windings connected in parallel between the opposite mains of said circuit, and adapted to respectively respond to variations of voltage, and a controller for varying the voltage impressed upon said controlling-circuit without thereby altering the resistance of said controlling-circuit.

2. The combination with a suitable controlling-circuit, of a plurality of electromagnetic windings connected therewith in parallel and adapted to respond to variations of voltage, and a suitable source of current-supply having means for varying at will the voltage impressed thereby, the voltage impressed by said source being substantially unaffected by the internal resistance of said circuit.

3. The combination with a suitable controlling-circuit, of a plurality of electromagnetic windings connected in parallel with said circuit and adapted to respond to variations in voltage, a generator for supplying current to said circuit, and means for varying the voltage impressed by said generator.

The interference was declared between a patent issued to Cutler November 29, 1904, on an application filed by him April 15, 1903. In his preliminary statement Cutler alleges that he conceived the invention about October, 1902.

Leonard's original application was filed January 24, 1901, and on March 22, 1902, he filed a divisional application, which he suffered to become forfeited May 11, 1905, and which on July 6, 1906, he renewed.

Upon the allowance of the patent to Cutler, Leonard petitioned the Patent Office that his divisional application, which was copending, be withdrawn from issue and placed in interference with the patent. This petition was refused by the Primary Examiner upon the ground that the claims meant one thing when applied to the patent and quite another when applied to the application, and that, therefore, there was no interference in fact. Leonard thereupon suffered his application, which was passed to issue November 10, 1904, to become forfeited, and fourteen months thereafter renewed said application and petitioned the Patent Office for an interference with the Cutler patent. Thereupon the Examiner, who had previously declined to declare an interference between Leonard's application of which the present was a renewal, granted the petition on the authority of *ex parte Cutler*, (123 O. G., 655.) In that case, which was decided prior to the filing of the petition for renewal, the Commissioner said:

In this Office a claim which is broadly drawn will be broadly read. If a narrow meaning is desired it must be secured by limitations expressed in the claims.

An interference having been declared, the Examiner of Interferences gave notice to Cutler that, inasmuch as his date of conception of the invention was subsequent to the filing date of Leonard, judgment would be given on the record against him unless he could show cause why such action should not be taken. In answer to this notice Cutler filed a motion to shift the burden of proof, basing his motion solely upon the ground of Leonard's delay in renewing his application which Cutler averred Leonard had suffered to become forfeited when he—

was cognizant of the fact that Cutler's patent had issued.

It will be noticed that no motion was made to dissolve the interference on the ground that Leonard did not have the right to make the claims.

Cutler's motion came before the Examiner of Interferences, who denied it and awarded priority to the senior party, Leonard. The Examiner in his decision said:

There is no contention made by Cutler that the invention in issue is not fully disclosed in Leonard's applications.

An appeal was prosecuted to the Examiners-in-Chief, who reversed the decision of the Examiner of Interferences on the ground that Leonard had failed to account for the delay of fourteen months between the time when his application became forfeited and the date of its renewal, and that, therefore, abandonment would be presumed. No question was raised before the Examiners-in-Chief as to Leonard's right to make the claims.

Upon appeal to the Commissioner, the decision of the Examiners-in-Chief was reversed and priority again awarded Leonard.

It is now contended by counsel for Cutler in several differently-worded assignments of error that neither Leonard's original application nor his divisional application discloses the invention in issue, and that, therefore, he has improperly enlarged his said applications. In view of the position of Cutler before the Patent Office tribunals, and in view of Rule 122 of the Patent Office Ruler, we do not deem it necessary to give these assignments of error more than passing notice. Manifestly it was incumbent upon Cutler to raise this question before the Primary Examiner, whose skill in the particular art peculiarly qualified him to consider it. The claims being of a highly technical nature, we cannot permit Cutler to try his case backward by raising this question at this stage of the proceedings. It may be noted, in passing, that the renewed Leonard application contains exactly the same drawings and disclosures as his original application.

It is next contended that the Cutler patent was regularly and legally granted, and that, therefore, the Patent Office was without power to impose the burden of proof upon Cutler in this proceeding. This contention is based upon a misapprehension of the decision of this court in *Christensen* v. *Noyes*, (15 App. D. C., 94.) In that case the decision is based upon a different state of facts than exist in the present case. It there appeared that during the period of forfeiture another inventor filed his application and took out his patent. There was, therefore, no application concurrently pending in the Patent Office when the patent issued, and no interference could have been declared. In this case, on the contrary, the applications were concurrently pending, and but for the erroneous decision of the Examiner an interference would have been declared immediately upon the issuance of the patent to Cutler. Leonard's application was pending when the patent to Cutler was granted, and, in view of the subsequent decision of the Patent Office that an interference existed, it necessarily follows that the patent to Cutler was inadvertently issued.

The real question in the case is whether the inadvertence of the Patent Office in granting a patent to Cutler without declaring an interference between Cutler's application and Leonard's divisional application and subsequently erroneously declining to declare an interference between the Cutler patent and Leonard's divisional application, shall be held to be a bar to the renewal of Leonard's divisional application. To state the proposition, we think, is to answer it. Until the patent to Cutler was granted Leonard had no means of knowing what claims it contained. As soon as he learned of the patent he asked for the declaration of an interference, which it was subsequently determined he was entitled to have. Manifestly the patent to Cutler was not regularly issued as contended by his counsel, but was inadvertently issued at a time when an interference should have been declared. Every principle of justice and right, therefore, demands that Leonard be not permitted to suffer because of the mistake or inadvertence of the Patent Office.

The contention that Leonard's delay in renewing his application constituted an abandonment remains to be noticed. Under section 4897, Revised Statutes, such a renewal may be made at any time within two years after the allowance of the original application—

and upon hearing of renewed applications preferred under this section, abandonment shall be considered as a question of fact.

In this case each party stands upon his record proof; consequently Leonard has offered no explanation of his delay in filing the renewal of his forfeited application. In *Duryea* v. *Rice* (28 App. D. C., 423) Mr. Chief Justice Shepard in delivering the opinion of the court said:

This court has heretofore held that where an application had been forfeited for failure to pay the fee on allowance of the claims, and the applicant had filed a new application within the prescribed period permitted in such cases, he was entitled to the benefit of his original application as a constructive reduction to practice of the

invention set forth therein and afterwards embodied in the second application. (*Cain* v. *Park*, 14 App. D. C., 42, 46.)

In the present case the renewal application was filed ten months before the expiration of the two years within which it might have been filed. The statute, it will be observed, confers upon the applicant—

a *right* to make an application for a patent for such invention or discovery the same as in the case of an original application—

within two years after the allowance of the original application. This right can be taken away only by a finding of abandonment, which, the statute ordains, must be determined as a question of fact. Where an affirmative right is conferred by law, we think a finding of abandonment must be predicated of facts and circumstances warranting such a finding and not upon mere presumption. There is no evidence that Leonard had abandoned his invention. On the contrary, the circumstances indicate activity and watchfulness on his part. Believing himself entitled to an interference with Cutler he tried to induce the Examiner to declare one. When he failed in that, rather than take a patent with the question of priority between him and Cutler undetermined, he availed himself of his statutory privilege and suffered his application to lapse. He knew he could have a patent for the asking at any time within two years. Within that time the ruling in *ex parte Cutler, supra*, was made, and promptly thereafter he filed his renewal application and was granted an interference. It is evident that he was carefully watching proceedings in the Patent Office, and that he was quick to avail himself of the first opportunity to obtain an interference with Cutler.

We do not wish to be understood to rule that it is not within the power of the Commissioner, whenever he entertains a doubt as to whether there has been an abandonment, to require an explanation of the delay in filing the renewal application. We confine our ruling to the facts in this case.

The decision of the Commissioner of Patents is affirmed, and the clerk of the court will certify this opinion and the proceedings in this court to the Commissioner of Patents, as required by law. Affirmed.

Court of Appeals of the District of Columbia.

ANDREW MCLEAN COMPANY *v.* ADAMS MANUFACTURING COMPANY.

Decided June 2, 1908.

1. TRADE-MARKS—OPPOSITION—"VICTORIA" ASSOCIATED WITH MEDALLION AND "VICTOR" UPON PEDESTAL SUPPORTING FIGURE OF MOUNTED KNIGHT—DISSIMILAR.

Held that a trade-mark consisting of the word "Victoria," associated with a medallion bearing the representation of the head of the late Queen Victoria and surmounted by a crown suspended from the letter "t" of said word, does not so nearly resemble the mark of the opponent, which consists of the figure of a knight on horseback resting upon an ornamental pedestal bearing the inscription "The Victor," as to be likely to cause confusion in the mind of the public.

2. SAME—SAME—BURDEN OF PROOF.

Where the Patent Office has decided that the trade-mark of each party is registrable, the burden is on the opponent to show that as a matter of fact there is such similarity between the marks as to be likely to cause confusion and deceive ordinary purchasers.

Mr. A. W. Barber, *Mr. J. C. Hedrick*, and *Mr. Lanier McKee* for the appellant.

Mr. T. E. Robertson and *Mr. B. R. Johnson* for the appellee.

SHEPARD, *C. J.*:

This is an appeal from the decision of the Commissioner of Patents dismissing the opposition of the Andrew McLean Company to the registration of a trade-mark by the Adams Manufacturing Company.

On April 8, 1905, the Adams Manufacturing Company, hereinafter referred to as the Adams Company, applied for the registration of a trade-mark used upon millinery goods, which it described as follows:

The trade-mark consists of the word "Victoria" associated with a medallion having thereon a representation of the head of the late Queen Victoria and surmounted by a crown suspended from the letter "t" of the word.

This was passed for publication. Within the time permitted after publication had been made, the Andrew McLean Company, hereinafter called McLean Company, filed opposition to the registration by the Adams Company setting up the following grounds:

First: That the said trade-mark is an infringement upon the trade-mark of the opponent consisting among other things of the words "The Victor" for the registration of which an application, was filed in the United States Patent Office on the 24th day of May, 1905, under the number 6,535 for linings and foundations, crinolines, silk-finish linings, buckrams and mulls which goods are in part identical with the goods for which registration of the trade-mark No. 285 is sought.

Second: That the trade-mark of the opponent has been continuously used in the business of the opponent or its predecessor, under whom it claims title, since the third day of October, 1881, and that such use by the opponent is prior to any use thereof by the said Adams Manufacturing Company.

This trade-mark of the McLean Company was registered December 5, 1905, and is described as follows:

The said trade-mark consists of the figure of a knight on horseback waving aloft a standard, the figure resting upon an ornamental pedestal on which are inscribed the words "The Victor," the whole being surrounded by an ornamental border in oak-leaf design, all as shown in the accompanying drawing.

The mark of the McLean Company appears to have been adopted in 1881, and that of the Adams Company in 1895. The latter's trade-mark first consisted of the word "Victoria" alone; later the representation of a crown was added; and later still, in 1901, the medallion showing a representation of the head of the late Queen Victoria. It appears that since 1896 the McLean Company has been aware of the use of the name "Victoria" by the Adams Company, and had bought some of the manufactures of the Adams Company bearing that label at various times. The first objection to that use began after the Adams Company applied for registration. It appears that while the applications of both parties were pending in the Office, the McLean Company asked for a declaration of interference which was denied.

Passing by some minor questions raised on the admission and exclusion of certain evidence as unimportant, the one for determination is: whether the trade-mark claimed by the Adams Company is identical with, or so nearly resembles the trade-mark owned and used by the McLean Company, and appropriated to merchandise of the same descriptive properties, as to be likely to cause confusion or mistake in the mind of the public, or to deceive purchasers. (See Trade-Mark Act, sec. 5.)

It is urged by the McLean Company that its goods have become known to the trade as "The Victor" goods, and that confusion and mistake in the mind of the public are necessarily caused by the use of the word "Victoria" under which the goods of the Adams Company have been offered to the trade. Assuming that the goods of the McLean Company are thus known, and that if the words "The Victor" had been used by the Adams Company, it would be a violation of the acquired right of the McLean Company, notwithstanding its association with a distinctly-different symbol, we are not prepared to say that the use of the word "Victoria" would necessarily constitute such an infringement. While there is a slight similarity in the sound of the two words when spoken, they give, especially as printed in the labels exhibited, a distinctly-different impression to the eye. But we are not considering a case of that kind, nor one of unfair competition in which the evidence of the manner of wrapping or putting up the packages of goods might be important. Neither party is using or claiming a use of the respective words alone. Each has invariably used and registered, or sought to register, not the words, merely, but those words associated with a figure. The McLean Company's figure is a knight on horseback waving aloft a standard; that of the Adams Company is a medallion showing the portrait of the late Queen Victoria, surmounting a crown, suspended from a letter of the word above it. As has been well said by the Commissioner:

It is clear from the description of the marks of the respective parties above given that they are not identical. From a mere contemplation of the marks as they are shown on the labels submitted by the parties, which accord in each case with the description contained in the application, and in the opposer's registration, it must be concluded that there is no conflict between them, there being but one feature of possible conflict, namely, between the words "The Victor," which is a part of the opposer's mark, and the word "Victoria," which is a part of the applicant's mark. The pictorial features of the marks are very different and are each very prominent in the respective marks. * * * On the whole, the marks do not, *prima facie*, conflict and we must therefore look to the evidence in the case to determine whether there has been an actual confusion, notwithstanding the different appearances of the two marks. The burden is upon the opposer to establish the existence of actual confusion.

The appellant contends that the burden of proof is not upon it to show that the public would likely be deceived by the use of the appellee's trade-mark, but upon the appellee to show that it would not. The cases cited all apply to a case where, upon the face of the marks claimed, it is doubtful whether purchasers would likely be deceived. No such case is presented here. *Prima facie*, the two marks do not conflict in this respect, and it is incumbent upon the appellant, therefore, to overcome this *prima facie* case. The principle govering the burden of proof is the same in all cases. It is for this reason, as shown in the cases cited, that in an action for infringement the onus is upon the plaintiff to show that the defendant's mark is in fact likely to deceive purchasers. Here the Patent Office has decided, that the trade-mark of each party is registrable, there being no apparent conflict between them as described in the several applications. We agree that there is no such apparent conflict. Hence, the opponent of the registration of the other's mark, has the burden of showing that, as a matter of fact, the latter will likely cause confusion and deceive ordinary purchasers.

The evidence on this point has been carefully reviewed by the Examiner of Interferences. A further review is unnecessary. Having examined it, we are satisfied that it does not establish a case of actual confusion or deception arising from the use of appellee's trade-mark.

The decision will therefore be affirmed. It is so ordered, and that this decision be certified to the Commissioner of Patents as required by the law. Affirmed.

Court of Appeals of the District of Columbia.

IN RE MASON.

Decided June 2, 1908.

PATENTABILITY—DOUBLE USE.

The mere combining of an ordinary calking tool or blade with an automatically-operating pneumatic hammer which is adapted to be controlled and adjusted by hand amounts to nothing more than an obvious double use that would naturally occur to one skilled in the art with mind directed to cheapening the cost of ship-calking and does not rise to the dignity of invention.

Mr. F. T. Chambers and *Mr. J. E. Hubbell* for the appellant.

Mr. W. S. Ruckman for the Commissioner of Patents.

SHEPARD, *C. J.*:

Appellant has appealed from a decision of the Commissioner of Patents denying the claims 3 and 4 of his application for patent, as follows:

3. A hand-tool for calking the seams of ships with oakum or the like, comprising a hollow handle, a calking-blade, an intermediate portion of which projects beyond its ends, said blade having a shank slidably supported in the handle, and an automatic hammer in the handle for operating the blade, said tool being adapted to rock freely in the hands of the operator and, in its longitudinal rocking motion, to present different portions of its calking-face to a seam under treatment, said hammer simultaneously delivering a rapid succession of blows to the blade.

4. A hand-tool for calking the seams of ships with oakum or the like, comprising a hollow handle, a calking-blade, an intermediate portion of which projects beyond its ends, said blade having a shank slidably supported in the handle and of such length as to afford a hand-grip between the handle and blade, and an automatic hammer in the handle for operating the blade, said tool being adapted to rock freely in the hands of the operator, and in its longitudinal rocking motion, to present different portions of its calking-face to a seam under treatment, said hammer simultaneously delivering a rapid succession of blows to the blade.

Without repeating the references showing the previous state of the art which are recited in the decisions of the tribunals of the Patent Office, we think it sufficient to say that the claim of invention consists in putting two well-known devices together. The applicant has combined an ordinary tool or blade, in common use in calking the seams of ships with oakum, with an automatically-operating pneumatic hammer which is adapted to be controlled and adjusted by hand. Automatic hammers of the same general character have long been used for operating tools of many kinds. They have been used in chipping stone and metal and in calking the seams of metal pipes. The automatic hammer has also been used for calking the decks of ships, operating as part of a machine and not by hand. The combination of the applicant is doubtless more effective than the one just mentioned, especially so as the latter can be made to operate in contracted spaces, in corners, and upon inclined surfaces. But the same thing is true of the automatic hammers used in chipping stone and metal, and in calking the seams of metal pipes and fittings, although the last process is a quite different kind of calking from that of calking ships.

What the applicant has done is nothing more than an obvious double use that would naturally occur to one skilled in the art with mind directed to cheapening the cost of ship-calking. That his combination will doubtless accomplish this desirable result, is not sufficient to raise it to the dignity of invention. It is only when the question of patentability is otherwise in doubt, that such considerations can have weight.

The decision was right and will be affirmed. The clerk will certify this decision to the Commissioner of Patents. Affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 27, 1908.

George H. Taylor, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Frederick O. Hanson, of Springfield, Mass., and Holyoke, Mass., for registration of a trade-mark and a trade-mark registered to George H. Taylor, of 207 Monroe street, Chicago, Ill., and the notice of said declaration sent by the Patent Office by registered mail to the said George H. Taylor having been returned undelivered, notice is hereby given to the said George H. Taylor, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 25, 1908.

Douglas & Kingsland, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Geo. H. Baker, of 48-52 Edwards street, New Haven, Conn., for registration of a trade-mark and a trade-mark registered to Douglas & Kingsland, of Middletown, Conn., and the notice of said declaration sent by registered mail to the said Douglas & Kingsland having been returned undelivered, notice is hereby given to the said Douglas & Kingsland, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents, in order that the notice of declaration herstofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 6, 1908.

Mayer Brothers & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of B. Fischer & Company, of 371-375 Greenwich street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Mayer Brothers & Company, of New York, N. Y., and the notice of said declaration sent by registered mail to the said Mayer Brothers & Company having been returned undelivered, notice is hereby given to the said Mayer Brothers & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 6, 1908.

Iler and Burgweger, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Yonkers Brewery, of Yonkers, N. Y., for registration of a trade-mark and a trade-mark registered to Iler and Burgweger, of Kansas City, Mo., and the notice of said declaration sent by registered mail to the said Iler and Burgweger having been returned undelivered, notice is hereby given to the said Iler and Burgweger, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 4, 1908.

Francis H. Reinhard, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Baird Bros. & Company, of 1435-1437 Tenth street northwest, Cleveland, Ohio, for registration of a trade-mark, a trade-mark registered to Searle & Son, of Rockford, Ill., and a trade-mark registered to Francis H. Reinhard, of 143 Maiden Lane, New York, N. Y., and the notice of said declaration sent by registered mail to the said Francis H. Reinhard having been returned undelivered, notice is hereby given to the said Francis H. Reinhard, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 29, 1908.

Searle & Son, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Baird Bros. & Company, of 1435-1437 Tenth street northwest, Cleveland, Ohio, for registration of a trade-mark, a trade-mark registered to Searle & Son, of Rockford, Ill., and a trade-mark registered to Francis H. Reinhard, of 143 Maiden Lane, New York, N. Y., and the notice of said declaration sent by registered mail to the said Searle & Son having been returned undelivered, notice is hereby given to the said Searle & Son, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

E. B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 24, 1908.

William H. Ward, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Yonkers Brewery, of Yonkers, N. Y., for registration of a trade-mark and a trade-mark registered to William H. Ward, of San Francisco, Cal., and the notice of said declaration sent by registered mail to the said William H. Ward having been returned undelivered, notice is hereby given to the said William H. Ward, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents, in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE OFFICIAL GAZETTE OF THE United States Patent Office.

[BY AUTHORITY OF CONGRESS.]

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Alaska, District of	.....	.....	New Mexico Ter't'y	.....	.....
Arizona Territory	1	.....	New York	83	28
Arkansas	3	2	North Carolina	3	.....
California	12	3	North Dakota	.....	.....
Colorado	10	.....	Ohio	39	18
Connecticut	11	1	Oklahoma	6	2
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Hawaii Territory	.....	.....	Porto Rico	1	.....
Idaho	2	.....	Rhode Island	4	4
Illinois	68	3	South Carolina	.....	1
Indiana	14	1	South Dakota	3	.....
Iowa	16	2	Tennessee	1	1
Kansas	5	.....	Texas	7	.....
Kentucky	9	.....	Utah	1	.....
Louisiana	5	1	Vermont	1	.....
Maine	1	.....	Virginia	6	2
Maryland	3	2	Washington	7	1
Massachusetts	32	10	West Virginia	4	.....
Michigan	24	2	Wisconsin	11	2
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TO CITIZENS OF FOREIGN COUNTRIES.

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Austria-Hungary	5	.....	Netherlands	.....	.....
Belgium	.....	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	.....	.....
British West Indies	.....	.....	New Zealand	.....	.....
Canada	8	.....	Norway	.....	.....
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	.....	.....
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Costa Rica	.....	.....	Russia	1	.....
Cuba	.....	.....	Scotland	3	.....
Denmark	.....	.....	South Australia	1	.....
Ecuador	.....	.....	Spain	.....	.....
England	17	1	Sweden	.....	.....
France	6	3	Switzerland	3	.....
Germany	20	3	Transvaal, South Africa	.....	.....
Haiti	.....	.....	Victoria	.....	.....
Ireland	1	.....	Western Australia	1	.....
Italy	1	.....			
Japan	.....	.....	Total to citizens of foreign countries	69	7
Java	.....	.....			
Mexico	1	.....			

NOTICE.

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Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 5, 1908.

William M. Marcus, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the J. C. Hass Soap Company, of Prairie avenue and Benedict street, St. Louis, Mo., for registration of a trade-mark and a trade-mark registered to William M. Marcus, of Talladega, Ala., and the notice of said declaration sent by registered mail to the said William M. Marcus having been returned undelivered, notice is hereby given to the said William M. Marcus, his assigns or legal representatives, that if he or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

Printed Copies of Patents.

A printed copy of the complete specification and drawings of any patent published herein can be obtained for five cents.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business September 8, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Aug. 25	May 15	797
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Aug. 24	Aug. 3	146
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Aug. 12	June 29	234
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Aug. 12	June 25	263
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Aug. 8	May 4	524
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Aug. 1	July 3	207
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	July 30	June 15	249
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	July 27	Apr. 3	711
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	July 23	June 20	722
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	July 20	June 8	493
125	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	July 20	Mar. 7	757
144	XXIV. Apparel: Apparel Apparatus: Sewing-Machines; Surgery.	July 18	July 2	444
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	July 18	Apr. 7	566
312	VII. Games and Toys: Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	July 15	June 15	563
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	July 15	May 26	413
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	July 14	June 2	366
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	July 14	May 1	604
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	July 13	June 4	488
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	July 11	June 18	654
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	July 9	June 3	472
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Masonry and Concrete Structures; Tents, Canopies, Umbrellas, and Canes.	July 7	June 1	532
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	July 6	Apr. 20	697

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	July 2	Apr. 24	442
167	V. Bookbinding; Harvesters; Jewelry; Music.	June 27	Apr. 7	548
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	June 26	July 6	755
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	June 24	May 14	482
332	X. Carriages and Wagons.....	June 23	May 29	618
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	June 22	June 8	665
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	June 22	June 8	821
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	June 20	June 9	574
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	June 17	May 15	492
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	June 15	May 5	617
321	XXXIX. Baths and Closets; Water Distribution.	June 15	Apr. 2	824
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	June 13	May 15	661
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	June 10	May 1	741
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	June 6	Mar. 2	537
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	June 5	May 4	814
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	June 1	Mar. 23	739
109	XVI. Telegraphy; Telephony.....	May 29	Mar. 21	548
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	May 4	Mar. 5	526
238	XIX. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Apr. 13	May 23	491

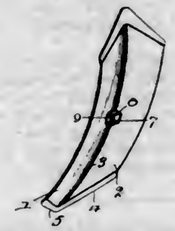
Total number of applications awaiting action..... 22,817

161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks.....	Sept. 2	Aug. 1	731
	Designs.....	Aug. 27	July 7	127
	Labels and Prints.....	Sept. 4	Sept. 3	17

PATENTS

GRANTED SEPTEMBER 15, 1908.

898,419. BLADE FOR CULTIVATORS AND SIMILAR AGRICULTURAL IMPLEMENTS. SAMUEL L. ALLEN, Moorestown, N. J. Filed Mar. 2, 1905. Serial No. 248,059.

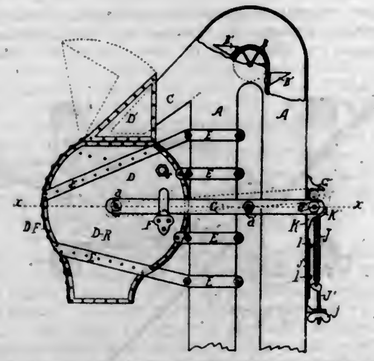


1. A cultivator blade having two side portions extending longitudinally of the blade and meeting to form a transverse convex and longitudinally concave front, and a transversely concave and longitudinally convex back to the blade, said sides tapering in thickness gradually from their line of meeting to their outer edges, the under surface of the cutting end being substantially V shaped, and extending from the front edges of the tool rearwardly and upwardly with respect to the face of the tool.

2. A cultivator blade having the under surface of the cutting end formed substantially V-shaped, with the legs of the V tapering or of diminishing thickness in a direction away from the apex thereof.

3. A cultivator blade provided with a cutting end, the under surface of which end extends from the front edges of the tool rearwardly and upwardly with respect to the face of the tool, said under surface being substantially V-shaped, with the legs of said V diminishing in thickness in a direction away from the apex.

898,420. AUTOMATIC GRAIN-WEIGHER. GEORGE M. BAIRD, Oklahoma, Okla. Filed Oct. 9, 1905. Serial No. 281,955.



1. In combination with a grain elevator having a housing-casement secured thereto, the front section of said casement being removable and having hinged to its upper edge a movable hood; the casement side walls D—R and D—L provided with vertically oblong openings centrally located therein, with concavo-convex shields *p* located immediately above said openings and secured to the said side walls, as shown and described.

2. In an automatic grain weigher having a housing-casement; the grain receptacle H, centrally located within said housing-casement and consisting of two semi-circular compartments, and having two thin circular end walls *e e* reinforced by ring-plates *f*, riveted to their inner surfaces, and having the latch-bars *g* secured to their outer surfaces, the said end walls *e* having secured to their peripheries the two equal and oppositely located sections of casement *h h*, each section having secured to one of its edges the outer edge of the partition *i*, as described.

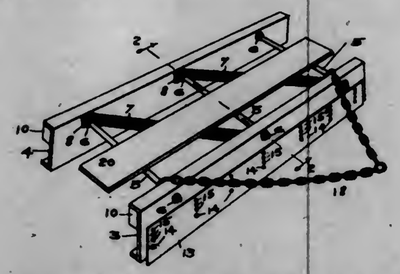
3. In an automatic grain weigher having a housing casement with vertical side walls; a rotatable grain receptacle H mounted therein; the duplicate, parallel, horizontal lever-bars G G one on each side of said casement and having a fulcrum notch cut in its under edge a perforation in each end and intermediate its ends; the lateral stay-rod *a'* encompassed by a section of tube or pipe the ends of said rod being threaded passed through the said lever-bars and having threaded nuts turned thereon to secure in proper relative position the said lever-bars; the stay-rod *a''* being encompassed by a section of tube or pipe and having its threaded ends pass through the rear ends of said lever-bars and having threaded nuts provided to press the inner surface of said lever-bars firmly against the ends of said tube or pipe to maintain the relative position of the said lever-bars; the non-rotatable shaft *a* passing through said housing-casement and through the front ends of the said lever-bars and having upon its ends nuts and jam-nuts to form a rigid support for the said grain receptacle; the lever-bar supporting pivots F having a body portion firmly secured to the outer surface of the vertical walls of the said housing-casement and having an outward off-set forming an inverted V-shaped fulcrum pivot upon which the said lever-bars rest and vibrate, the said pivots having upwardly extending guards outside their bearings to prevent displacement of the said lever-bars, as described.

4. In an automatic grain weigher, a rotatable grain receptacle H, including its supporting shaft *a* and the duplicate lever-bars supporting said shaft and having an intermediate stay-bar *a'* and a rear stay-bar *a''* securing in position the said duplicate lever-bars which are fulcrumed between their centers and their front ends upon the pivot F; the weight indicating device consisting of and including the spiral spring J having its upper end attached to the said rear stay-bar *a''*; the tension-indicator bolt J' having upon its threaded shaft the tension-thumb-nut *j* its head being attached to the said spiral springs; the scale-plate frame K having the two upper rear projections K' and G and the lower rear perforated projection containing the said tension-indicating bolt; the adjustable scale-plate *j'* secured to the scale-plate frame firmly attached to the rear portion of the elevator tube, substantially as shown and described.

5. In an automatic grain weigher having a housing-casement with vertical side walls; a grain receptacle H mounted therein; the duplicate, parallel lever-bars G G positioned one upon each side of the said housing-casement and having a fulcrum notch in its under edge midway its front end and center and having central and end perforations; the receptacle supporting shaft *a* having its

ends rigidly secured in the front end of said lever-bars by the nuts and jam-nuts threaded thereon; the duplicate stay-rods a' and a'' having their ends threaded and passed horizontally through the central and rear end perforations of said lever-bars and having threaded nuts contacting the outer surface of said lever-bars to retain their uniform position; the duplicate sections of tube or pipe encompassing said stay-rods and having their ends engaging the inner surface of the said lever-bars to afford rigidity to the same; the lever-bar supporting pivots F F having inverted V-shaped fulcrum bearings upon which the said lever-bars rest and vibrate, the said pivots being firmly secured upon the outer surfaces of the vertical walls of the said housing-casement and opposite each other, the said pivots having vertical projections outside of the said lever-bars to prevent their lateral displacement; the slotted bolts s having their slotted portions extending through the side walls of the said housing-casement to the interior of the casement; the check springs r having their rear ends resting in the slots of said bolts provided with threaded nuts upon their threaded portions by means of which the tension of the said springs is regulated, as described and for the purposes set forth.

898,421. COMBINED SCRAPER AND DRAG. WILLIAM L. BAKER, Indianapolis, Ind. Filed Mar. 23, 1908. Serial No. 422,848.



1. In a combined drag and scraper, drag-bars formed out of channel steel with the flanges turned toward the back of the machine and a cutter-plate adjustably secured to the front of the drag-bar and projecting below said bar.

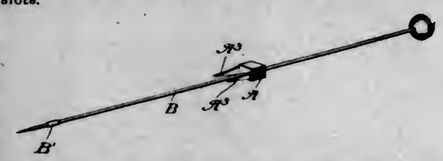
2. In a combined drag and scraper, a plurality of drag-bars each formed out of channel steel with flanges turned toward the back of the machine, rods extending transversely of the drag-bars and pieces under the top flanges through which the rods pass, said pieces being in contact with their respective flanges and acting as supports to maintain the flanges in parallelism with said rods.

3. In a combined drag and scraper, a pair of parallel drag-bars each formed out of channel steel with the flanges turned toward the back of the machine, a plurality of bolts extending transversely of the drag-bars and passing through said bars, diagonal braces between each pair of bolts, corner pieces fitting under and against the top flanges of said drag-bars through which corner pieces the bolts are passed, nuts on said bolts in pairs whereby by the screwing together of each pair a corner piece and its adjacent drag-bar will be clamped together, and a cutter-plate adjustably secured to the front drag-bar.

898,422. HAT-PIN. JOHN D. BANKS, Philadelphia, Pa. Filed Mar. 11, 1908. Serial No. 420,499.

1. The combination with a holder comprising a hollow casing having oppositely disposed slots arranged at an angle to each other, of a pin extending through said slots, said pin having a laterally extended portion thereon of greater width than the width of said slots.

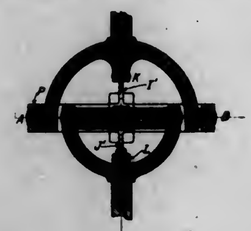
2. The combination with a holder comprising a casing having oppositely disposed slots arranged at an angle to each other, of a pin extending through said slots, said pin being provided with a flattened portion whereby the pin can be detached only when turned to register with said slots.



3. The combination with a holder, comprising a casing adapted to be secured to a hat, said casing being provided with oppositely disposed slots arranged at right angles to each other, of a hat pin extending through said slots and provided with a flattened portion, whereby said hat pin can only be removed from said holder by turning the same, so as to cause the flattened portion to register with the slots.

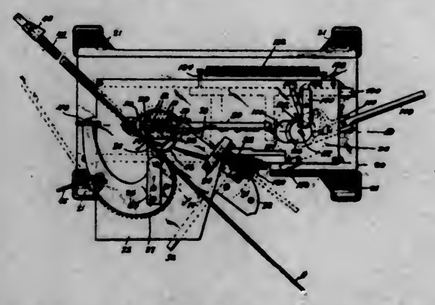
4. The combination with a hat pin provided with a flattened portion wider than the remainder of said pin, of a holder comprising a casing provided with spurs for securing it to a hat, the ends of said casing being provided with oppositely disposed slots arranged at right angles to each other, said slots being narrower than the width of the flattened portion of the pin.

898,423. FLEXIBLE SHAFT-COUPLING. GEORGE M. BARTLETT, Ann Arbor, Mich. Filed Jan. 18, 1908. Serial No. 411,514.



In a coupling, the combination of two shafts having yokes and connecting lugs at their ends, a ring connected to one yoke, a cross-piece connected to the other yoke and to the ring, collars adapted to slide on one arm of the cross piece and pairs of links connecting said collars to said lugs, substantially as described.

898,424. WIRE-ROD-BENDING MACHINE. MARCUS J. BARTLETT, Chicago, Ill., assignor to Joseph Silverman, Chicago, Ill. Filed July 18, 1907. Serial No. 384,453.



1. In a wire rod bending machine, means for holding a rod in fixed position, and mechanism for forming an eye on the end of the rod when so held, said mechanism being movable along the length of the rod during the formation of the eye.

2. In a wire rod bending machine, means for holding a rod in fixed position, and an eye-forming mechanism comprising a part engaging the end of the rod, said part being rotative on its axis and movable along the length of the wire.

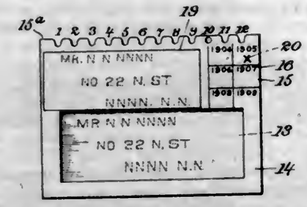
3. In a wire rod bending machine, means for holding a rod in fixed position and an eye-forming mechanism comprising a rotative part provided with a center pin and with an eccentric lug between which the rod is held, said part being movable along the length of the wire, for the purpose set forth.

4. In a wire rod bending machine, means for holding a rod in fixed position, and an eye-forming mechanism comprising a rotative part provided with a center pin and with an eccentric lug between which the rod is held, and means whereby said pin is movable to lower it below the upper face of said rotative part, said part being movable along the length of the wire, for the purpose set forth.

5. In a wire rod bending machine, means for holding a rod in fixed position, and an eye-forming mechanism comprising a rotative disk, a support therefor which is slotted to permit the disk to move endwise of the rod, means for rotating the disk, a vertically movable center pin extending upwardly through an opening in said disk, an eccentric lug rising from the disk between which and the raised center pin the end of the rod is held, and means for normally holding the pin with its end raised above said disk constructed to permit the pin to drop with its upper end below said disk.

[Claims 6 to 27 not printed in the Gazette.]

898,425. ADDRESS-BEARING CARD. EDWIN D. BELKNAP, East Orange, N. J. Filed Dec. 21, 1904. Serial No. 237,842.

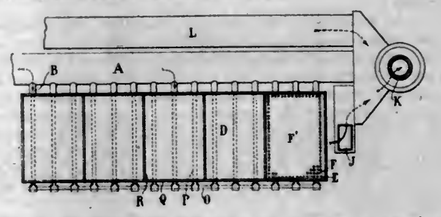


1. An address bearing card having a stenciled portion and a frame extended at the upper side, said extended portion having a facsimile of the stenciled portion thereon, and the upper portion of said frame also having a series of perforations representing different classes of a predetermined classification, all of said perforations extending to the upper edge of the card except the one corresponding to the class to which that particular card belongs.

2. An address bearing card having a stenciled portion, and a frame extended at the upper side, said extended portion having a duplicate stenciled sheet pasted thereon as a label and the upper portion of said frame having a series of perforations representing different classes of a predetermined classification, all of said perforations extending to the upper edge of the card except the one corresponding to the class to which that particular card belongs.

898,426. BAG-HOUSE. HOLLAND E. BENEDICT, Salt Lake City, Utah, assignor to United States Smelting, Refining & Mining Company, Salt Lake City, Utah, a Corporation of Maine. Filed Oct. 5, 1907. Serial No. 396,047.

1. A bag house for filtering suspended material from fumes, having a floor dividing it into a bag room above and a dust cellar below, and having substantially air-tight walls and roof for said bag room, an outlet flue for the filtered fumes communicating with said bag room, bags having upper closed ends and lower open ends communicating through said floor with said dust cellar, an inlet flue for the dust-laden fumes communicating with said dust cellar, a series of shafts extending across the upper part of the room, depending arms on said shafts having their lower ends bent to form loops in which the upper ends of the bags are attached, and means outside of the room for turning said shafts to shake the bags.



2. An apparatus for shaking bags including in combination a series of shafts, and arms on said shafts having loops at their ends through which the ends of the bags may be passed and folded.

3. An apparatus for shaking bags including in combination a shaft, means for oscillating the same, and an arm on said shaft having a substantial amount of horizontal movement as the shaft is oscillated and connected to the upper part of the bag, so as to shake the bag with a horizontal wavy motion.

4. An apparatus for shaking bags including in combination a shaft, means for oscillating the same, and a substantially vertical arm on said shaft and connected to the upper part of the bag so as to shake the bag with a horizontal wavy motion.

898,427. IGNITER FOR EXPLOSION-ENGINES. HENRI BENOIST, Paris, France. Filed Sept. 24, 1907. Serial No. 394,334.



1. In a device of the character described, the combination with a main supporting member, of an insulated stem extending therethrough, an auxiliary supporting member designed to be telescopically, removably secured to the main supporting member and terminating in an electrode, an insulating member contained within said auxiliary supporting member and a pin passing through said insulating member and terminating in an electrode, said pin being designed to contact with said stem to conduct current to the said electrodes.

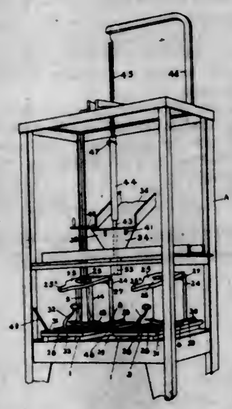
2. In a device of the character described, the combination with a main supporting member, of an insulating member therein, a stem surrounded by a metallic sleeve within said main supporting member, an auxiliary supporting member comprising a metallic tube adapted to telescope with and be secured in said main supporting member, an electrode formed on said auxiliary supporting member, an insulating member within the auxiliary supporting member, and a pin within said insulating member, said pin contacting at one end with said stem and having its other end formed into an electrode spaced from said first mentioned electrode to form a spark gap therebetween.

3. In a device of the character described, the combination with a main supporting member embodying suitable current conducting means, of an auxiliary supporting

member designed to be telescopically secured in vertical alinement with said main supporting member, means for removably securing the two members together, an electrode formed on the auxiliary supporting member, an insulated pin in said auxiliary member, an electrode formed at one end of said pin and spaced a distance from said first mentioned electrode to form a spark gap therebetween, and means for varying the distance between said electrodes.

4. In a device of the character described, the combination with a main support comprising a metallic sleeve, an insulating member partially inclosed thereby and a metallic tube holding a screw within said insulating member, of an auxiliary support comprising a metallic tube telescoping with a portion of the metallic sleeve of the main support, an insulating member partially inclosed by said metallic tube, and a pair of electrodes carried entirely by said auxiliary support, one of said electrodes having an extension adapted to make electrical contact with the screw in the main support.

898,428. CEMENT-PIPE-MAKING MACHINE. HERMAN BESSER, Alpena, Mich. Filed June 7, 1907. Serial No. 377,776.



1. A tile machine comprising a hopper, a reciprocatory tamper suspended above the hopper and moving up and down through the hopper at each stroke, a stationary depending guide surrounded by the tamper, a table capable of movement beneath and away from the hopper, a core carried by and stationary with the table and independent of the guide, and a mold mounted on the table, the mold surrounding the core and removable relative thereto and to the table.

2. A molding machine comprising a suitable support, a reciprocatory tamper suspended above the support, a pair of tables pivotally supported independently of each other, the tables lying parallel with each other, means extending between and pivotally connected to the respective tables, whereby the tables are capable of a parallel movement on the support relative to the tamper, and a core and mold coöperating with each table.

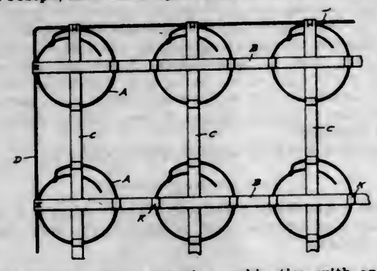
3. A molding machine comprising a stationary hopper, a neck depending from the hopper, a guide received centrally in the hopper and neck, the lower ends of the guide and of the neck terminating in substantially the same plane, a horizontally movable mold support beneath the hopper, a mold carried by and movable with the support, the upper end of the mold lying in alinement with and closely adjacent to the lower end of the neck, a reciprocatory tamper encircling the guide, and a core associated with the mold, and separate from the guide, the upper end of the core lying adjacent to and in alinement with the guide, the neck capable of having a plug of tamped material formed therein above the mold, the plug closing the neck to the loose material in the hopper.

4. A molding machine comprising a hopper, a reciprocatory tamper suspended above the hopper, the lower end of the tamper passing through the hopper at each stroke, a guide for the tamper, a mold support movably located beneath the hopper, a mold carried by and moving with the support, a core associated with the table, and separate from the guide, the upper end of the core lying adjacent to and in alinement with the guide.

5. The combination in a tile-machine, of a stationary hopper, a reciprocating tamper, a table horizontally movable relative to the hopper, a core associated with the table, a mold releasably mounted on the table and adapted to be moved beneath and away from the hopper, and a vertically movable plate carried by the table, the plate provided with an aperture having a beveled wall, the plate located between the upper end of the mold and the lower end of the hopper when the mold is to be filled, the upper end of the mold receivable in and centered by the aperture in the plate when the latter is in its horizontal position.

[Claims 6 to 27 not printed in the Gazette.]

898,429. SPRING CONSTRUCTION. CARL O. BRAGE, St. Joseph, Mo. Filed Apr. 17, 1908. Serial No. 427,589.



In a spring construction the combination with an edge wire, a plurality of spiral springs, and metal bands at the tops of said springs and intersecting each other at the center of each spring, of curved valleys adapted to receive the top coil of a spring at four opposite points, clips having bifurcated ends adapted to clasp underneath the edges of a band at the conjunction of the sides of the valley and band, to hold said coil of the spring in position, a central finger at each end of each band having an acute angle in which to seat from beneath the top coil of an outer spring, the finger tip clamping said edge wire in position on a line precisely horizontal with the band, and fingers at the sides of said central finger having acute angles to seat the edge wire from above, the finger tips around said wire clamping it against the outer side of said coil in an exact horizontal with said coil and band, substantially as shown and set forth.

898,430. ELECTRICALLY-CONDUCTIVE RAILWAY-RAIL JOINT OR CONNECTION. BANCROFT G. BRAINE, New York, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Oct. 25, 1907. Serial No. 399,225.



1. A rail joint consisting of the abutting ends of two rails having heads and base flanges, connecting plates contacting with heads and the base flanges, horizontally disposed and horizontally spaced welded portions connecting some of the contacting portions of the plates with the rails, and means for mechanically adjusting the pressure on the other contacting portions.

2. A rail joint consisting of the abutting ends of two rails having heads and base flanges, connecting plates contacting with heads and the base flanges, horizontally disposed and horizontally spaced welded portions connecting some of the contacting portions of the plates with the rails, and means passing through the rails and the plates and bearing on the outside of the plates for adjusting the pressure on the other contacting portions.

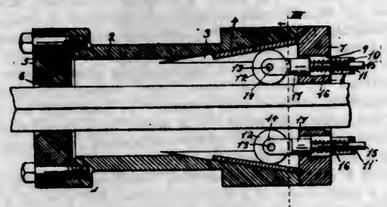
3. A rail joint consisting of the abutting ends of two rails having heads and base flanges, connecting plates contacting with heads and the base flanges, horizontally disposed and horizontally spaced welded portions connecting some of the contacting portions of the plates with the rails, and bolts passing through the rails and the plates with nuts thereon for adjusting the pressure on the other contacting portions.

4. A rail joint consisting of the abutting ends of two rails having heads and base flanges, connecting plates contacting with heads and the base flanges, horizontally disposed and horizontally spaced welded portions joining the base flanges to the connecting plates, and bolts passing through the rails and the plates for adjusting the contact between the plates and the heads of the rails.

5. A rail joint consisting of the abutting ends of two rails having heads and base flanges, connecting plates contacting with the base flanges and having clasping portions to embrace the base flanges, horizontally disposed welded portions connecting the ends of the rail clasping portions of the plates with the base flanges, and means for adjusting the pressure between the heads of the rails and the connecting plates.

[Claims 6 to 8 not printed in the Gazette.]

898,431. CLUTCH FOR FEEDING METAL RODS OR BARS. LATHAM H. BRIGHTMAN, Shelby, Ohio. Filed May 29, 1907. Serial No. 376,295.

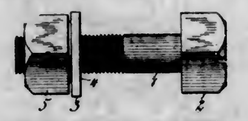


1. In a feed clutch, the combination of a clutch-sleeve formed with outwardly-diverging inclined grooves in its bore, rollers supported to travel in such grooves, longitudinally-movable individual supports upon which the rollers are separately journaled, guides for said supports, and springs, each bearing against a support to force the latter and the roller towards the shallow end of its groove.

2. In a feed-clutch, the combination of a clutch-sleeve formed with longitudinal outwardly-diverging inclined grooves in its bore, a disk secured to the end of the sleeve to cover the wide ends of the grooves and formed with a central opening for the stock and with openings registering with the ends of the grooves, rollers traveling in the grooves and journaled to shanks guided in the openings of the disk, and springs acting against the shanks to force the rollers inward in the grooves.
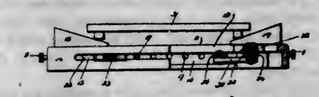
3. In a feed-clutch, the combination of a clutch-sleeve 1 having an axial bore 2 formed with inclined grooves 3 having wear-plates 4, a guide-disk 5 secured at the rear end of the sleeve and formed with a central opening 6, a guide-disk 7 secured to the front end of the sleeve and formed with a central guide-opening 8 and with openings 9 registering with the outer ends of the inclined grooves, guide-stirrups 10 secured over the outer ends of the openings 9, shanks 15 guided in the openings of the disk and stirrups, springs 16 upon said shanks and bearing against the same and the stirrups, and rollers 12 journaled upon pins 13 supported in the shanks and traveling in the inclined grooves.

898,432. NUT-LOCK. THOMAS V. BOYLE, Cleveland, Ohio. Filed Apr. 9, 1908. Serial No. 426,081.



A nut lock comprising a bolt, a nut thereon having internal and external threads of different pitch, a cap screwed on the bolt behind the nut and also having threads engaging with the external threads of the nut, the cap having an internal segmental notch with a shoulder at one end thereof and inclined at the other, and a spring catch projecting from the nut into said notch and engaging with the shoulder to prevent removal of the cap from the nut.

898,433. BOTTOM-BOARD TIGHTENER FOR MOLDING-MACHINES. WALTER BYLUND, Derby, Conn., assignor to Birmingham Iron Foundry, Derby, Conn., a Corporation. Filed Mar. 23, 1908. Serial No. 422,861.



1. A bottom board tightener for molding machines comprising a horizontal plate having slots, wedges arranged in said slots, bars connecting the wedges at opposite sides of the plate, levers mounted beneath the said plate, and links connecting said bars and levers, substantially as described.

2. A bottom board tightener for molding machines comprising a horizontal plate having two transverse slots, levers adjustably mounted beneath said plate, two reversely beveled wedges in each of said slots, the wedges at each end connected by bars, and links connecting the bars and levers at opposite sides of the plate, substantially as described.

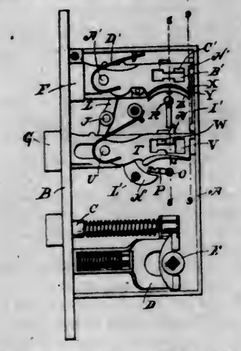
3. A bottom board tightener comprising a horizontal plate adapted to be connected with a molding machine, said plate formed with transverse slots, a flange having slots at the front and perforations at the rear levers extending through the slot in the flange and into the perforations in the opposite flange, two reversely beveled wedges in each of said slots, the two wedges at each side connected by bars, and links connecting said levers and bars, substantially as described.

898,434. LOCK. WILLIAM J. CARROLL, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Sept. 12, 1904. Serial No. 224,099.

1. In a lock, the combination with a case; of a bolt movable in said case; a key hole in said case; a movable ward adapted to be moved into operative position with said key hole; a plurality of keys, each of which is capable of being inserted in said key hole when said ward is in its operative position, the rotation of one of said keys being permitted by said ward when the key is inserted in said key hole, and the rotation of another key being prevented when so inserted; and means for moving said ward to and from its operative position, substantially as described.

2. In a lock, the combination with a case; of a plurality of bolts movable in said case; a key hole in said case corresponding to one of said bolts; a movable ward adapted to be brought into operative position with said key hole upon the movement of the other bolt; and a plurality of keys, each of which is capable of being inserted in said

key hole when said ward is in its operative position, the rotation of one of said keys when so inserted being permitted by said ward, and the rotation of another key when so inserted being prevented, substantially as described.



3. In a lock, the combination with a case; of a plurality of bolts movable in said case; a key hole in said case corresponding to one of said bolts; a plurality of keys; a movable ward adapted to be brought into operative position with said key hole upon the movement of the other bolt, said ward permitting the rotation of one key when inserted in said key hole, and preventing the rotation of another key when so inserted; and mechanism for retracting one bolt upon the protraction of the other, substantially as described.

4. In a lock, the combination with a case; of a bolt movable in said case; a key hole in said case corresponding to said bolt; a second bolt having a device connected thereto adapted to come into position to act as a ward for said key hole when said bolt is in one position, and a plurality of keys, each of which is capable of being inserted in said key hole when said device is acting as said ward, the rotation of one of said keys when so inserted being prevented by said ward, and the rotation of another key when so inserted being permitted, substantially as described.

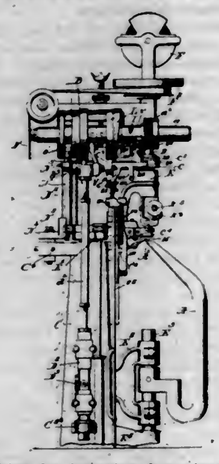
5. In a lock, the combination with a case; of a plurality of bolts movable in said case; a key for operating one bolt from one side of said case and another bolt from another side of said case; a checking device connected to one bolt to prevent the protraction of another bolt when said checking-device-carrying-bolt is protracted, means for preventing the withdrawal of said key when on the corresponding side of said case, after it has protracted said checking-device-carrying-bolt and while said bolt is protracted and means for retracting said checking-device-carrying bolt when so protracted, substantially as described.

[Claims 6 to 31 not printed in the Gazette.]

898,435. MACHINE FOR INSERTING METALLIC FASTENINGS. LOUIS A. CASGRAIN, Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., and Boston, Mass., a Corporation of New Jersey. Filed June 9, 1902. Serial No. 110,726.

1. In a machine for inserting fastenings, the combination with fastening-inserting mechanism, comprising wire feeding means and a driving member, of a constantly moving member driven by said driving member, an actuator for said wire feeding means in operative relationship to said moving member and means intermediate said moving member and actuator to stop said actuator and wire feeding means when in predetermined position while the moving member continues in operation.

2. In a machine for inserting fastenings, the combination with fastening-inserting mechanism comprising wire feeding means and a driving member, of a constantly moving member driven by said driving member, wire cutting means, actuators for said wire feeding means and wire cutting means in operative relationship to the moving member, and means intermediate said moving member and said actuators to stop said actuators and the wire feeding and wire cutting means when in predetermined position while the moving member continues in operation.



3. In a machine for inserting fastenings, a stock support, a head carrying a driving member, and having a foot plate to bear on the stock, a constantly moving member driven by said driving member, an actuator in operative relationship to said moving member, means moved by the actuator for moving the head to feed the stock and means intermediate said member and said actuator to stop the actuator when in predetermined position and restrain the movement of the head for feeding while the moving member continues in operation.

4. In a machine for inserting fastenings, a stock support, a head carrying a driving member and having a foot plate to bear on the stock, a constantly moving member driven by said driving member, an actuator in operative relationship to said moving member, means operated by said actuator to change the relative positions of the foot plate and stock support to unclamp the stock between the operations of inserting fastenings, means intermediate said moving member and actuator to stop said actuator and the means operated by it when in a predetermined position for the removal of the unclamped stock while the moving member continues in operation.

5. In a machine for inserting fastenings, a stock support, a head carrying a driving member and having a foot plate to bear on the stock, a constantly moving member driven by said driving member, an actuator, means operated by said actuator to change the relative positions of the foot plate and stock support to unclamp the stock between the operations of inserting fastenings, a clutch coacting with said moving member and actuator, and means to cause said clutch to release the actuator from the control of said moving member while the stock is unclamped for its removal from the stock support in order that said actuator and the means operated thereby may remain at rest while said member continues in operation.

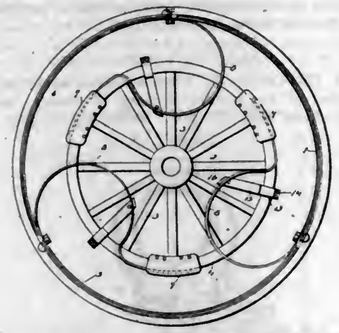
[Claims 6 to 19 not printed in the Gazette.]

898,436. VEHICLE-WHEEL. HERBERT CLIFFORD, New London, Conn., assignor to Ralph Clifford, Monson, Mass. Filed Apr. 20, 1907. Serial No. 369,353.

1. A vehicle wheel comprising a hub, spokes and felly, and a rim formed from convolute springs the ends of which are bent inward beyond said felly to which the ends of the springs are secured, substantially as described.

2. A vehicle wheel comprising a hub, spokes and felly, a rim, springs extending from said rim beyond said felly to which the ends of the springs are attached, a portion of the springs cut away to clear the felly.

3. A vehicle wheel comprising a hub, spokes and felly, a rim, springs extending from said rim beyond said felly to which the ends of the springs are attached, an opening in the spring to clear the felly.



4. A vehicle wheel comprising a hub, spokes and felly, a rim, springs extending from said rim inside of said felly, the ends of the springs secured thereto, and brackets connected with said felly and engaging said springs, substantially as described.

5. A vehicle wheel comprising a hub, spokes and felly, a rim, springs extending from said rim inside of said felly, the ends of the springs secured thereto, and brackets formed in two members adapted to surround said felly and formed with arms, and fingers extending over said springs, substantially as described.

[Claim 6 not printed in the Gazette.]

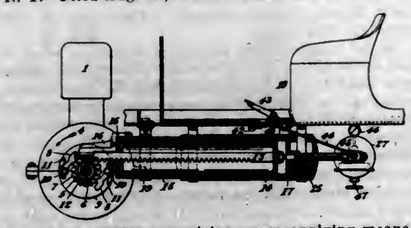
898,437. INVERTED INCANDESCENT GAS-MANTLE. SAMUEL COHN, New York, N. Y. Filed Sept. 11, 1906. Serial No. 334,109.



1. A mantle for inverted incandescent gas lamps, consisting of a tubular body of webbing formed with a hemispherical end closed by the gathered and tied end of the tubular body, which tied and gathered end is located within the hemispherical end and compacted in the direction of its thickness.

2. A mantle for inverted incandescent gas lamps consisting of a tubular body of webbing having a hemispherical head formed by shirring the webbing laterally into compacted folds, and having a string or cord passing through said folds and tied to hold the folds in a gathered condition, said tied and gathered end being located within the hemispherical head of the mantle.

898,438. ENGINE-STARTER. CLYDE J. COLEMAN, Rockaway, N. J., assignor to Conrad Hubert, New York, N. Y. Filed Aug. 13, 1904. Serial No. 220,648.



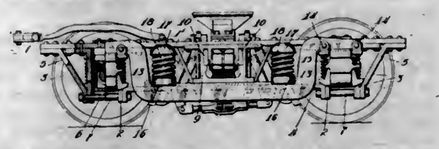
An engine starter comprising power-applying means engageable with the engine, a pressure-applying chamber, the power-applying means being actuatable by pressure in the chamber to move it in one direction to start the engine, means opposed to such movement and operative to return the power-applying means to starting position when the pressure in the chamber is relieved, pressure-storage means, and a pressure and exhaust valve controlling the communication from the storage means to the chamber and also controlling an exhaust from the chamber.

898,439. HORIZONTAL REGENERATIVE COKE-OVEN, &c. FRANCIS J. COLLIN, Dortmund, Germany. Filed Mar. 21, 1907. Serial No. 363,587.



A regenerative coke oven, comprising a pair of regenerators, a pair of coking chambers, vertical heating flues intermediate the coking chambers, means for admitting a heating medium alternately to the upper and lower ends of said flues, a first duct connecting the first regenerator with the lower end of the flues, a second duct communicating with the second regenerator, and passages intermediate the flues for connecting the upper ends of said flues with said second duct, substantially as specified.

898,440. CAR-TRUCK. EDMUND A. CURTIS, Decatur, Ill. Filed Aug. 28, 1907. Serial No. 390,418.



1. In a car truck, the combination of side frames comprising upper and lower wheel pieces and pedestal frames, all rigidly united with each other, end sill members extending across each end of the truck and rigidly uniting the two side frames, pairs of equalizers arranged to extend one at each side of each of said side frames, a spring supporting each end of each equalizer from the corresponding journal box, saddles arranged to lie across the intermediate parts of the equalizers, and main coiled, expansion springs interposed between said saddles and the overlying wheel pieces and supporting the said frames free from and above the top sides of the journal boxes.

2. In a car truck, the combination of side frames comprising upper and lower wheel pieces, pedestal frames rigid with and forming the end portions of said side frames, end sill members extending across each end of the truck and rigidly uniting the two side frames, pairs of equalizers arranged to extend one at either side of each of said side frames, a group of four springs mounted upon each journal box and unitedly serving to support the two corresponding ends of the pair of equalizers, saddles connecting the intermediate portions of each pair of equalizers, spring caps mounted in vertical register with the corresponding saddles upon the upper wheel pieces, and main, coiled, expansion springs interposed between the corresponding spring caps and saddles.

898,441. ACTUATING MECHANISM FOR TURN-TABLE PIPE-CASTING APPARATUS. EDGAR A. CUSTER, Philadelphia, Pa. Filed Mar. 27, 1908. Serial No. 423,725.

1. In a mechanism of the character described, a table carrying molds, means movably arranged in the table and

normally projecting therefrom, and means reciprocally arranged below the table and having means for raising the movable means and in conjunction therewith adapted to impart to the table a step-by-step rotary movement of the table in one direction thereof.



2. In a mechanism of the character described, a table carrying molds and actuating means for said table, said actuating means, consisting of blocks or bolts movably arranged in said table and normally projecting therefrom, and a movable cylinder having a cam for raising said blocks or bolts into an inoperative position, when moved in one direction and imparting in conjunction with the same to said table a step-by-step rotary movement, when moving in an opposite direction.

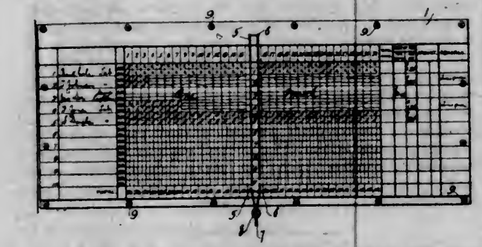
3. In a mechanism of the character described, a table carrying molds and combined coupling and actuating means, said means consisting of blocks forming one member of the coupling movably arranged in said table and normally occupying an operative position by projecting from the table and a cylinder having a projection forming the other member of the coupling connecting the table with said cylinder, the projection of said cylinder adapted when moved in one direction to raise the blocks into an inoperative position and when moved in an opposite position to impart in conjunction with said blocks to the table a step-by-step rotary movement thereof.

4. In a mechanism of the character described, a table carrying molds, blocks movably arranged in said table and normally projecting therefrom, a piston and rod held in a fixed position below the table, a cylinder adapted to reciprocate on the piston and piston-rods and having a projection, said projection adapted when the cylinder is moved in one direction to prevent movement of the table by raising said blocks into inoperative position and when the cylinder is moved in an opposite direction to shift the table in one direction by the engaging of said blocks.

5. In a mechanism of the character described, a turntable provided with a depending movable block, a fixed piston and rod and a cam surface cylinder adapted within guides to be reciprocated on said piston and rod to alternately hold and move said turntable.

[Claims 6 and 7 not printed in the Gazette.]

898,442. TIME-BOOK. FRANK J. DALEY, Chicago, Ill. Filed Oct. 30, 1905. Serial No. 285,229.



A device of the class described comprising duplicate sheets containing identical ruled and printed matter and arranged face to back with the ruled and printed matter alining upon each sheet, a manifold sheet between the duplicate sheets and coextensive therewith, means for removably sealing together said duplicate sheets along their entire edges retaining the manifolding sheet therebetween and adapted to prevent surreptitious access to the face of the protected sheet, said sheets folded centrally upon themselves and removable binding means securing said sheets together along the central fold.

898,443. CHECK-HOOK. OBIN C. DAVIS, Manistee, Mich., assignor of one-half to Richard G. Peters, Manistee, Mich. Filed Mar. 19, 1908. Serial No. 422,065.



1. A check hook comprising a hook having a recessed base, a latch having a recessed shank pivoted to the base of the hook on a horizontal axis which coincides with the longitudinal axis of the recesses in the base of the hook and in the shank of the latch, and a spring inclosed by the recessed base of the hook and the recessed shank of the latch and tending to close the latch, substantially as described.

2. A check hook comprising a hook having a base formed with a semi-cylindrical recessed bearing, a latch having a shank formed with a semi-cylindrical recess fitting over and pivotally mounted on said bearing, and a spring inclosed by the recessed base of the hook and the recessed shank of the latch and tending to close the latch, substantially as described.

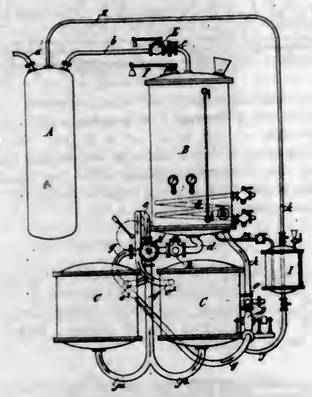
3. A check hook comprising a hook having a base formed with a fastening stem and with a semi-cylindrical recessed bearing, a latch having a shank formed with a semi-cylindrical recess fitting said bearing, a spiral spring inclosed by the base of the hook and the shank of the latch and having its ends engaged therewith so as to normally hold the latch closed, and a pivot pin connecting the shank of the latch with the base of the hook and extending transversely to the stem on the base, substantially as described.

4. A check hook comprising a curved hook having an extended base formed with a semi-cylindrical recessed bearing and a fastening stem projecting downwardly therefrom perpendicular to the axis of said bearing, a curved latch adapted to close the opening into the hook and formed with a semi-cylindrical recess fitted on said bearing, a spiral spring inclosed by the base of the hook and the shank of the latch and engaged at the ends therewith so as to hold the latch normally closed, and a pivot pin passing through said spring and connecting the latch and hook axially with relation to said bearing, substantially as described.

898,444. APPARATUS FOR SUBJECTING MATERIALS TO THE ACTION OF LIQUID UNDER PRESSURE. LÉON DÉTRÉ, Rheims, France. Filed May 4, 1905. Serial No. 258,911.

1. In an apparatus for subjecting textile or other materials to the action of liquids under pressure, in combination, a reservoir for the liquid, means for maintaining a pressure on the liquid in said reservoir, a vessel for the material and in communication with said reservoir so that the pressure facilitates the penetration of the liquid into or through the material, and means acting independently of the degree of pressure for sucking out the liquid at one side of the material in the vessel, and forcing it in at the other.

2. In an apparatus for subjecting textile or other materials to the action of liquids under pressure, in combination, a reservoir for the liquid, means for maintaining a pressure on the liquid in said reservoir, a vessel for the material and in communication with said reservoir so that the material is in constant contact with the liquid and the pressure facilitates the penetration of the liquid into or through the material, and a circulating pump for sucking out the liquid at one side of the material in the vessel, and forcing it in at the other.



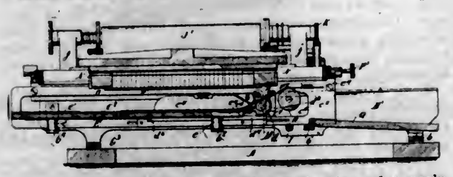
3. In an apparatus for subjecting textile or other materials to the action of liquids under pressure, in combination a reservoir B for the liquid, means for maintaining a pressure on the liquid in said reservoir, a vessel C for the material, a circulating pump D, means for connecting one end of said vessel with the bottom of said reservoir and the other end with the inlet of said pump, and means for connecting the delivery end of said pump with said reservoir.

4. In an apparatus for subjecting textile or other materials to the action of liquids under pressure, in combination, a liquid reservoir communicating with the vessel containing the material, means for applying pressure to the liquid in said reservoir, an automatic pressure reducing valve determining a minimum pressure, and an automatic safety valve determining a maximum pressure in said reservoir, whereby the pressure is maintained substantially uniform.

5. In an apparatus for subjecting textile or other materials to the action of liquids under pressure, in combination, a liquid reservoir communicating with the vessel containing the material, suitable valved connections between said reservoir and vessel to enable the direction of the liquid through the vessel to be altered at desired periods, and means independent of the action of the pressure medium for automatically limiting said periods.

[Claims 6 to 9 not printed in the Gazette.]

898,445. PRINTING-MACHINE. ALBERT B. DICK, Lake Forest, Ill., assignor to A. B. Dick Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 10, 1906. Serial No. 295,423.



1. In a printing machine, the combination of a reciprocating type-carrier, type supported therein in a plane in lines extending in the direction of movement of said carrier, and having their printing faces downward, an underlying pressure-roller, means for moving said roller

relatively to the type as the type-carrier is reciprocated, said roller being adapted to support a sheet fed to the point of coaction of the roller and said type and to permit said sheet to be simultaneously imprinted upon and passed bodily beyond said point of coaction in correspondence with the movement of said carrier, and an inking device for said type, substantially as set forth.

2. In a printing machine, the combination of a movable carriage, type supported therein in lines extending in the direction of movement of said carriage, an underlying pressure-roller movable to operative and inoperative positions, means controlled by said carriage for actuating said roller and an ink-ribbon extending between said roller and the type supported in said carriage, substantially as set forth.

3. In a printing machine, the combination of a reciprocating carriage, type supported therein in a plane in lines extending in the direction of movement of said carriage and with their printing faces downward, an underlying pressure-roller, means for moving said roller toward and away from the type as said carriage is reciprocated, feed-rolls and means for operating the same to feed a sheet over said pressure-roller, and an ink-ribbon extending between said type and pressure-roller, substantially as set forth.

4. In a printing machine, the combination of a reciprocating carriage, type supported therein in a plane with their printing faces downward, a pressure-roller underlying said carriage, and mounted with its axis at an angle to the lines of said type, means for moving said roller relatively to the type as the carriage is reciprocated, said roller being adapted to support a sheet fed to the point of coaction of the roller and said type and to permit said sheet to be simultaneously imprinted upon and passed bodily beyond said point of coaction in correspondence with the movement of said carriage, and an inking device for said type, substantially as set forth.

5. In a printing machine, the combination of a movable type-carrier, type supported therein in lines, a pressure-roller mounted below said carrier to coact with the printing faces of said type and having its axis at an angle to the lines of the type, means controlled by the carriage for moving said roller to operative and inoperative positions, and an ink-ribbon extending between said roller and the type in said carrier, substantially as set forth.

[Claims 6 to 26 not printed in the Gazette.]

898,446. PRINTING APPARATUS. ALBERT B. DICK, Lake Forest, Ill., assignor to A. B. Dick Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 10, 1906. Serial No. 295,424.

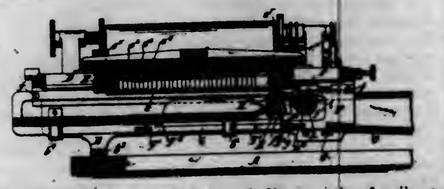


The combination of a rectangular frame having inwardly extending flanges on opposite sides thereof, a plurality of disconnected bars each cut away on one side intermediate its ends to form channels, said bars being supported within said frame upon said flanges with their ends beyond said cut away portions abutting, type having shoulders intermediate their ends adapted to be passed into said channels until arrested by the engagement of said shoulders with said bars, means for locking said bars in the frame, a detachable cover-plate for the frame, and a yielding backing between the plate and type for holding the type yieldingly in position, substantially as set forth.

898,447. SHEET-FEEDING APPARATUS. ALBERT B. DICK, Lake Forest, Ill., assignor to A. B. Dick Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 10, 1906. Serial No. 295,425.

1. Sheet-feeding apparatus including the combination of a pair of rolls, a pressure-roller, means for moving said

roller to operative and inoperative positions, means for rotating said rolls while the pressure-roller is in inoperative position to feed a sheet into coöperative relation to the pressure-roller, and mechanism for throwing such means out of feeding operation after but a portion of said sheet has been passed between said rolls, substantially as set forth.



2. Sheet-feeding apparatus, including a pair of rolls, a pressure roller, means for rotating said rolls in coaction with a sheet to feed the latter into coöperative relation to said pressure-roller, a clutch between said means and said rolls, mechanism for throwing said means out of feeding operation after but a portion of said sheet has been passed between said rolls, and means for moving said pressure-roller bodily from inoperative to operative position, substantially as set forth.

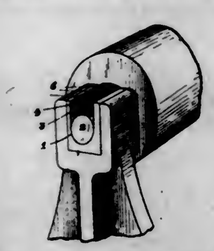
3. Sheet-feeding apparatus, including a pair of rolls, means for rotating said rolls in conction with a sheet, a clutch between said means and said rolls, mechanism for throwing said rolls out of feeding operation, and means for varying the extent of the rotation of said rolls before being thrown out of feeding operation by said mechanism, substantially as set forth.

4. Sheet-feeding apparatus, including a pair of rolls having vertical movement, means for rotating said rolls in coaction with a sheet, and mechanism for throwing said rolls to inoperative feeding position, such mechanism being adjustable, substantially as set forth.

5. Sheet-feeding apparatus, including a pair of rolls, a pressure-roller mounted in a plane parallel thereto, both said rolls and said roller being movable both bodily and upon their axes, means for rotating said rolls and said roller, and mechanism for rotating said rolls while said roller is at rest, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

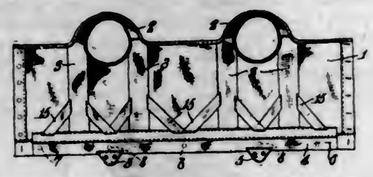
898,448. LUBRICATOR. JAMES W. DOMVILLE, Montreal, Quebec, Canada. Filed Feb. 24, 1908. Serial No. 417,418.



In a lubricant, a bag or package of cloth material containing grease in a comparatively solid mass and a compound of matter composed of animal and mineral oil in proportions varying according to weather conditions, filling the interstices of the web of said cloth material and saturating said cloth previous to the introduction of said grease into said package.

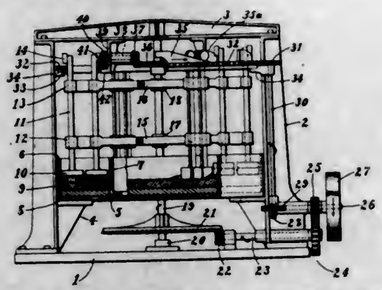
898,449. CHILD'S WAIST. KATHERINE M. DOWLING, Little Rock, Ark. Filed Mar. 16, 1908. Serial No. 421,337.

1. The combination with a waist provided at its lower edge with a band having button-holes and with a fly covering the band, of a second band carrying drawers engaging buttons and hose supporting tabs, and straps connected to the last named band and to the waist.



2. The combination with a waist provided at its lower edge with a band having button-holes and with a fly to cover one side of the band, of a second band carrying drawers engaging buttons and hose supporting tabs, straps connecting the last-named band with the upper portion only of the waist, and spacing tapes connecting the straps and the second-named band.

898,450. MACHINE FOR THE REDUCTION OF PEAT-TURF INTO HALF-STUFF. CLIFFORD E. DUNN, New York, N. Y., assignor to Pilgrim Paper Company, New York, N. Y., a Corporation of Maine. Filed Mar. 23, 1907. Serial No. 364,085.



1. In a peat stamping machine, an annular bed plate, a series of traveling vertically reciprocating stampers having faces beveled in the direction of travel thereof, throughout substantially their entire operative faces means for causing said stampers to travel and means for reciprocating the same vertically during such travel, substantially as described.

2. In a peat stamping machine, an annular fixed bed plate, a main rotating shaft, radiating arms fixed thereto, vertically reciprocating stamper carrying shafts having bearings in said arms, stampers carried by said shafts having faces beveled in the direction of their travel, throughout substantially their entire operative faces and means for reciprocating said stampers during their travel, substantially as described.

3. In a peat stamping machine, an annular fixed bed plate, a vertical central rotating shaft, radiating arms fixed thereto, vertically reciprocating stamper carrying shafts having bearings in said arms, stampers carried by said arms having faces beveled in the direction of their travel throughout substantially their entire operative faces, actuating projections on said shafts and traveling cams engaging said projections and reciprocating said stampers, substantially as described.

4. In a peat stamping machine, a fixed bed plate, a traveling stamper, a shaft therefor, a roller on said shaft, a traveling cam face adapted to pass under said roller and reciprocate said shaft, substantially as described.

5. In a peat stamping machine, a fixed bed plate, a traveling stamper having a face beveled in the direction of its travel, a shaft therefor, a roller on said shaft, a traveling cam face adapted to pass under said roller and reciprocate said shaft, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

898,451. PROCESS FOR REVITALIZING DISCARDED PLASTER-OF-PARIS. JOHN E. EASTWICK, Philadelphia, Pa. Filed Apr. 13, 1907. Serial No. 367,949.

1. A herein described process of treating waste hydrated sulfate of lime, which consists in first drying it and then saturating it in a solution of sulfuric acid, alum and water, and then calcining said material.

2. A herein described process of treating waste hydrated sulfate of lime, which consists in drying it in broken up form and then saturating it in a solution of sulfuric acid, alum and water, and then calcining said material.

3. A process of treating waste hydrated sulfate of lime, which consists in first partially drying the pieces, then saturating said pieces in a solution of sulfuric acid, alum and water, and then placing the material in a kiln and calcining.

4. A herein described process of treating waste hydrated sulfate of lime, which consists in drying the pieces of waste material and causing the water of crystallization to be driven therefrom and a portion of the saline water, and then saturating the material in a solution of sulfuric acid, ground alum and water, and then placing the material in a kiln and calcining.

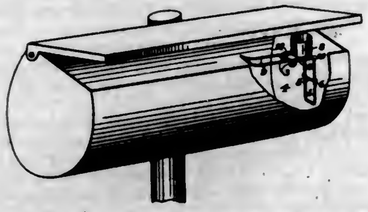
5. A process of treating waste hydrated sulfate of lime, which consists in first drying it and then saturating it in a solution of sulfuric acid, alum, water and glue, and then calcining said material.

898,452. VAT-DYE FROM INDIRUBIN AND PROCESS OF MAKING SAME. GADIENT ENGI and JAROSLAV FRÖHLICH, Basel, Switzerland, assignors to The Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Filed Apr. 23, 1908. Serial No. 428,761.

1. The herein described process for the manufacture of dihalogen derivatives of indirubin, which consists in condensing a dihalogen-derivative of an isatin with an indoxyl compound.

2. As new products, dihalogen derivatives of indirubin, obtainable by the condensation of one molecule of a dihalogenated isatin-derivative with one molecule of an indoxyl-compound, constituting in dry state brownish red powders, dissolving in concentrated sulfuric acid with a dirty brown-violet to violet coloration, dissolving in fuming sulfuric acid of 24 per cent. SO_3 with a violet color, being sparingly soluble in hot benzene, more easily in hot nitrobenzene with a violet coloration and yielding, when treated with alkaline reducing agents yellowish vats, dyeing cotton violet tints fast to washing and chlorin.

898,453. COIN-RECEPTACLE FOR RURAL MAIL-BOXES. WILLIAM ESSELBURN, Harrisville township, Medina county, Ohio. Filed Feb. 15, 1908. Serial No. 415,995.



1. A coin-receptacle for mail-boxes, comprising a supporting-member and a pivotally-mounted tilting-member consisting of oppositely-disposed loop arms and intermediate pivot-loop-eyes, one of said loop arms being provided with a coin-cup.

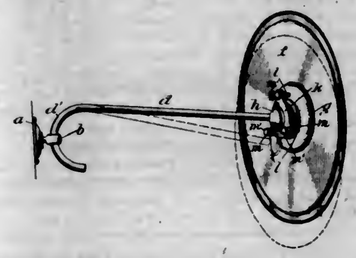
2. A coin-receptacle for mail boxes, comprising a supporting-member and a pivotally-mounted lever member consisting of a single length of wire bent upon itself forming oppositely-disposed loop arms, one of said arms carrying a coin-cup and the other forming a projecting operating-lever when the coin-cup is in its coin-holding position.

3. A coin-receptacle, comprising a stationary loop member provided with angled supporting-arms, and a movable member carried by the ends of said arms and consisting of oppositely-disposed bail arms provided with pivot loop-eyes, one of said arms carrying the coin-cup and the other forming a projecting operating-lever for moving said coin-cup to a discharging position.

4. A coin-receptacle, comprising a stationary member consisting of a loop portion bent to form an attaching-loop and terminating in angled supporting-arms, and a movable member pivotally-attached to said arms and provided with oppositely-extending bail arms, one of said arms carrying a coin-cup and resting on said supporting-arms when in its normal position and the other projecting in front of said coin-cup whereby the same may be tilted to an inverted position.

5. A coin-receptacle for mail-boxes, comprising a stationary loop member terminating in supporting-arms at right angles thereto, and a movable member pivotally-secured to said supporting-arms and comprising a wire bent upon itself forming pivot loop-eyes with oppositely-disposed loops extending from said pivot loop-eyes, one of said loops normally resting on said supporting-arms and carrying a coin-cup and the other extending outwardly therefrom whereby said coin-cup may be moved to a discharging position.

898,454. ADJUSTABLE SHAVING-MIRROR. JOHN P. EUSTIS, Newton, Mass. Filed Oct. 31, 1907. Serial No. 400,104.



1. In an adjustable mirror of the class having a ball-and-socket joint, the improvement, which consists in a sheet metal back-plate, having a rearwardly struck-up and depressed portion which flares out from the back-plate and is provided with a forwardly struck-up and depressed socket or cup with a ball joint, for substantially the purposes set forth.

2. In an adjustable mirror of the class having a ball-and-socket joint, the improvement which consists in a back-plate having a rearwardly depressed portion formed with an annular shoulder, a rearwardly opening ball cup or socket, and a return portion connecting the latter with said shoulder.

3. In an adjustable shaving mirror of the class having a ball-and-socket joint, the improvement which consists in a back-plate having a rearwardly depressed portion formed with an annular shoulder, a rearwardly opening ball-cup or socket, and a return-portion connecting the latter with said shoulder, all stamped up and formed out of a single metallic sheet, for substantially the purposes set forth.

4. In an adjustable mirror, the combination, with an arm having a ball at its outer end, of a back-plate having a rearwardly depressed portion formed with an annular shoulder provided with a forwardly depressed socket or cup for the said ball, said rearwardly depressed portion being also formed with a return portion connecting the socket with said annular shoulder, a socket-member or cap opposing said socket, and fastening screws passing through the back-plate and the socket-member or cap, the heads of the screws bearing upon the under side of said annular shoulder, for substantially the purposes set forth.

898,455. CLOTHES-HANGER. LUDWIG FADUM, Hamburg, Germany. Filed May 2, 1908. Serial No. 430,548.



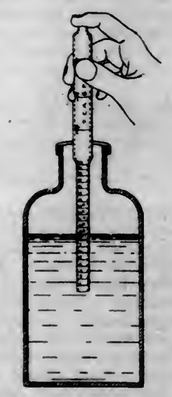
1. In a clothes hanger the combination with the hanger proper of a collar supporting member made of wire bent into the shape of an inverted U, means for securing this collar supporting member to the said hanger proper and a plurality of rollers loosely mounted on said wire supporting member, substantially as and for the purpose set forth.

2. In a clothes hanger the combination with the hanger of a collar supporting member made of wire bent into the shape of an inverted U, means for securing the said member to the hanger, a plurality of horizontal rollers symmetrically and loosely mounted on the horizontal part of said member, a plurality of rollers symmetrically and freely mounted on the descending parts of said member and a spring loop bent into the said member and adapted to separate the said horizontal rollers from the other ones, substantially as and for the purpose set forth.

3. In a clothes hanger the combination with the hanger of a collar supporting member made of wire bent into the shape of an inverted U, means for securing this collar supporting member to the hanger, a plurality of loosely mounted horizontal rollers symmetrically arranged on the horizontal part of said supporting member, a plurality of rollers symmetrically arranged and loosely mounted on the inclined parts of members, the lower ones of said rollers being cut away obliquely at their lower part and spring loops bent in the said wire supporting member and separating the said horizontal rollers from the other ones, substantially as and for the purpose set forth.

4. In a clothes hanger the combination with a hanger, of a collar supporting member secured to said hanger and provided with a plurality of members loosely mounted thereon.

898,456. LIQUID MEASURING AND TRANSFERRING TUBE. ORMSBEE T. FARNHAM, East Greenwich, R. I. Filed Nov. 13, 1907. Serial No. 401,972.



An instrument of the type described composed of a glass tube divided into two sections, one of said sections being of equal diameter throughout and formed with a flat end extremity and being graduated to indicate units of a certain measure, the other section being of greater and uniform diameter throughout its major portion and being graduated to indicate units of a different measure than those of the first named section, the outer end of said second named section being contracted and having its extremity formed flat, whereby said sections may be used interchangeably and their outer extremities sealed by one of the fingers of the user.

898,457. TRUCK-SCALE. EDWIN L. GAGE, Toledo, Ohio. Filed Mar. 2, 1908. Serial No. 418,660.



1. In a truck-scale, the combination with the scale parts, and the operating-lever movable to throw the scale parts into operative or inoperative positions, of a member adapted to coöperate with said lever to hold the same elevated to maintain the scale parts in operative position, and means for effecting an automatic release of said member from the operating-lever when the truck is moved.

2. In a truck-scale, the combination with the scale-parts, and means movable to effect a throwing of the scale-parts to operative or inoperative positions, of a member adapted to coact with said means when holding the scale-parts in inoperative position, and cam means coacting with said member and movable to effect its release from said first mentioned means when the truck is moved.

3. In a truck-scale, the combination with the scale-parts, an axle of the truck, and a lever associated with the scale-parts and adapted when elevated to move said parts to operative position and when lowered to move said parts to inoperative position, of a dog carried by the truck-frame and adapted to engage the lever when elevated and retain it in such position, and cam means carried by the axle and adapted to coact with the dog to release it from the lever when the truck is moved.

4. In a truck-scale, the combination with the scale-beam, and the scale-levers, said levers being movable to operative and inoperative positions, of a part projecting from one of said levers and adapted to coact with the scale-beam to prevent movement thereof when the levers are in inoperative positions.

5. In a truck-scale, the combination with the frame, of two U-shaped elevating-levers having their legs directed toward each other and fulcrumed to the frame-sides, said levers being provided at their outer ends near the sides thereof with slightly spaced projections adapted to form loop-supports, an operating-lever fulcrumed to the frame and having an arm in connection with the elevating-lever legs at each side of the frame, scale-levers having their inner ends pivotally connected and their outer ends provided near the sides thereof with spaced projections connected by pivots, and loops connecting the sets of spaced projections of the elevating-levers with the pivots connecting the spaced projections of the scale-levers, substantially as described.

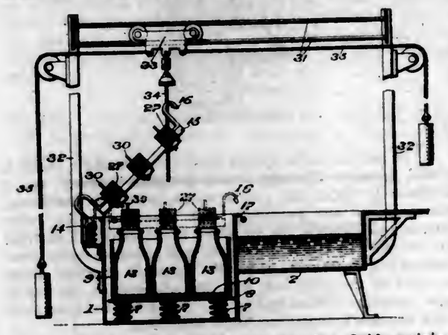
898,458. BOTTLE FILLING AND CLOSURE DEVICE. SAMUEL B. GOFF, Camden, N. J. Filed Oct. 30, 1907. Serial No. 399,827.

1. In a device of the character stated, a vessel adapted to receive both a fluid and a bottle to be filled with the latter, a plug for a bottle, and a carrier for said plug, said plug having a port therein, whereby the bottle may be filled through said plug and a foraminous inclosure protecting said port.

2. In a device of the character stated, a vessel adapted to receive both a fluid and a bottle to be filled with the same, a plug for a bottle, a carrier for said plug, said plug having a port therein, whereby the bottle may be filled through said plug, an absorbent piece to which said plug may be directed and wiped thereon, and a capping device.

3. In a device of the character stated, a bottle filling device, a support for a bottle-closing cap, a member adapted to pick-up said cap, a carrier for said member, and a holder for a bottle, said carrier being movable in directions to and from said support and holder.

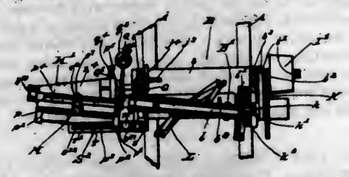
4. In a device of the character stated, a vessel adapted to contain a fluid and receive a bottle to be filled by the same, a plug for the bottle, said plug having a port therein in communication with said vessel and adapted to communicate with the interior of the bottle, a movable carrier for said plug, a support for bottle-stopping caps, and a cap pick-up on said carrier, said carrier being movable in directions to and from said support and said vessel.



5. In a device of the character stated, a fluid-receiving vessel, a follower therein, a resilient support for said follower, a bottle-containing basket adapted to be supported on said follower, a plug for the bottle, said plug having a filling port therein, and a carrier for said plug, said carrier being adapted to depress the bottle, whereby the latter may be submerged and filled through its plug.

[Claims 6 to 9 not printed in the Gazette.]

898,459. WINDING-MACHINE. JAMES F. GORDON, Lowell, Mass. Filed Feb. 6, 1905. Serial No. 244,396.



1. The combination of a stationary main frame, a spindle-shaft journaled therein, an auxiliary frame, a cam-shaft journaled in said auxiliary frame, a cam fast on said cam-shaft, a guide and connecting means between said guide and cam for causing said guide to traverse in a path parallel with the axis of said cam-shaft, said auxiliary frame being movable with respect to said main frame, to enable said guide-path and the axis of said cam and cam-shaft to be changed into or out of parallelism with the axis of said spindle-shaft.

2. The combination of a spindle-shaft, an externally-toothed pinion having an axis in a fixed position relatively to the axis of said shaft, a cam-shaft, an annular internally-toothed gear surrounding said pinion and fast on said cam-shaft, journal-boxes supporting said cam-shaft and movable to allow said internally-toothed gear to engage either side of said pinion and to vary the relative direction of the axes of said shafts, and a guide driven from said cam-shaft in a line parallel with the axis of said cam-shaft and parallel with or at will at an angle with the axis of said spindle-shaft.

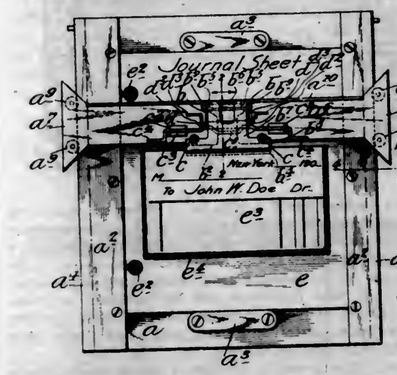
3. A rotary spindle, a guide having a notch, means for causing said guide to traverse, and a rod, fixed at one end and arranged parallel with the path of said guide, to support a yarn in the path of said guide, said guide being adapted to pass freely under said yarn in moving towards the fixed end of said rod and to engage said yarn by the following side of said notch in moving towards the free end of said rod and to carry said yarn off from said free end.

4. The combination of a rotary spindle, a yarn-guide adapted to press upon a cop carried by said spindle,. a rocking guide-way, an arm extending from said way, a weight movable on said arm, said guide and guide-way being operated by the enlargement of said cop to raise said arm, a frame having a fixed support relatively to said guide-way and a rod connecting said weight and said frame.

5. The combination of a stationary main frame, a spindle journaled therein, an auxiliary frame movable with respect to said main frame, a yarn-guide, a guide-way therefor supported on said movable frame and capable of rocking thereon, an arm extending from said way, a weight movable on said arm, and means operated by the enlargement of a cop on said spindle for moving said weight on said arm to diminish the distance between said weight and said guide-way.

[Claims 6 to 8 not printed in the Gazette.]

898,460. PAPER-HOLDING CLAMP. DE WITT C. GRAY, Rahway, N. J. Filed Dec. 23, 1907. Serial No. 407,840.



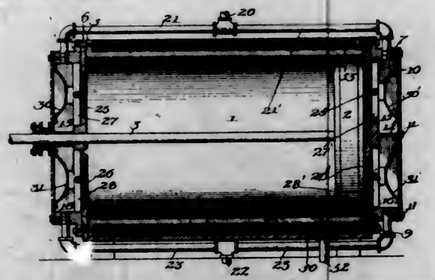
1. In a paper holding device of the class described, a base board, a strip or plate adjustable thereon and a clip connected with said strip or plate and comprising two jaw members pivotally connected with said strip or plate one above the other, springs for forcing the top jaw member downwardly so that it will bear on the bottom jaw member, the bottom jaw member being also adapted to bear on said board, means for raising both of said jaw members together, and means for raising the top jaw member above the bottom jaw member.

2. In a paper holding device of the class described, a base board, a strip or plate adjustable thereon, ears connected with said strip or plate, two jaw plates pivoted to said ears one above the other, the bottom jaw plate being provided with a horizontal jaw member, and the top jaw plate with a depending jaw member adapted to bear thereon, means for forcing the top jaw plate downwardly, means for raising both of said jaw plates when said jaw members are in contact, and other means for raising the top jaw plate independently of the botton jaw plate and separating said jaw members.

3. A paper holding device of the class described, comprising a base board, a slide plate mounted thereon and provided with ears, top and bottom jaw plates pivoted between said ears, the bottom jaw plate being provided with a horizontal jaw member, and the top jaw plate with a depending jaw member adapted to bear thereon, springs connected with said slide plate and with said top jaw plate and adapted to force the same downwardly, a rod mounted beneath the bottom jaw plate and provided with end cranks by which it may be turned, and with a central portion adapted to raise the bottom jaw plate, and another rod mounted between said jaw plates and provided with end cranks by which it may be turned and with a central portion adapted to raise the top jaw plate.

4. A paper holding device of the class described, comprising a base plate or board, a slide plate mounted thereon, two jaw plates pivotally connected with said slide plate one above the other, the bottom jaw plate being provided with a horizontal jaw member adapted to bear on the base board, and the top jaw plate with a depending jaw member adapted to bear on the horizontal jaw member, means for depressing the top jaw plate, a device for raising the bottom jaw plate and the upper jaw plate when the jaw members are in contact, and another device for raising the top jaw plate independently of the bottom jaw plate.

898,461. VACUUM-PUMP. WILLIAM P. M. GRELCK, Elgin, Ill., assignor to Elgin Milk and Cream Company, Elgin, Ill., a Corporation of Illinois. Filed Aug. 4, 1906. Serial No. 329,166.



1. In a vacuum pump, a cylinder, a piston moving therein, a casing secured to the cylinder head, a transversely-extending partition in said casing dividing the same into a plurality of chambers out of communication one with the other, ports in the cylinder head establishing communication between said chambers and the cylinder, a transversely-slidable cylinder exhaust valve in each chamber of said casing to control said ports, and an auxiliary valve carried by each exhaust valve.

2. In a vacuum pump, a cylinder, a piston moving therein, a tank exhaust chamber external to the cylinder head, a port between the said chamber and the cylinder, a valve to control the port, an exhaust chamber external to the head and separated from the tank exhaust chamber, a port between the said exhaust chamber and the cylinder, an exhaust valve to control said port, and means in connection with said exhaust valve for holding the exhaust until equilibrium with the outside pressure is obtained.

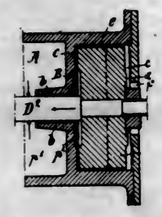
3. In a vacuum pump, a cylinder, a piston moving therein, a tank exhaust chamber external to the cylinder head, a port between the said chamber and the cylinder, a sliding valve to control the port, an exhaust chamber external to the head and separated from the tank exhaust chamber, a port between the said exhaust chamber and the cylinder, a sliding valve to control the same, and an auxiliary valve carried by said sliding valve.

4. In a vacuum pump, a cylinder, a piston acting therein, tank exhaust chambers at opposite ends of the cylinder external thereto, ports connecting said chambers and the cylinder, valves to control said ports, cylinder exhaust chambers at opposite ends of the cylinder external thereto, ports connecting the last named chambers to the cylinder, and sliding valves to control said ports, the tank chamber at each end of the cylinder being separated from the cylinder exhaust chamber at the same end, and means in connection with said sliding-valves for holding the exhaust until equilibrium with the outside pressure is obtained.

5. In a device of the character described, a cylinder exhaust valve adapted normally to control its port, and an auxiliary valve thereon adapted to prevent ingress of external air after exhaustion until the external pressure and the pressure in the exhaust end of the cylinder are in equilibrium.

[Claim 6 not printed in the Gazette.]

898,462. AUTOMATIC BALANCING DEVICE FOR CENTRIFUGAL PUMPS AND THE LIKE. FRANZ A. GRIESSMANN, Berlin, Germany. Filed Apr. 23, 1908. Serial No. 428,770.

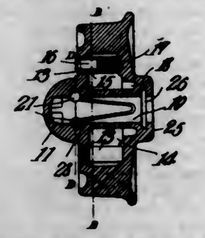


1. An automatic balancing device, comprising a shaft, a piston mounted thereon, a main pressure chamber, and a chamber in which the piston works, with but throttling-clearance at the periphery and fissures at the faces adapted to throttle the pressure agent on axial shifting of the shaft in either direction, said piston-chamber communicating on the one side with the main pressure chamber and on the other side with the atmosphere, the one of said passages presenting a throttling-fissure concentric with the shaft, substantially as described.

2. An automatic balancing device, comprising a shaft, a piston mounted thereon, a main pressure chamber, and a chamber in which the piston works with but throttling-clearance at the periphery and fissures at the faces adapted to throttle the pressure agent on axial shifting of the shaft in either direction, said piston chamber communicating on the one side with the main pressure chamber by means of a throttling-fissure concentric with the shaft and on the other side with the atmosphere, substantially as described.

3. An automatic balancing device, comprising a shaft, a piston mounted thereon, a main pressure chamber, and a chamber in which the piston works with fissures at the faces, adapted to throttle the pressure agent on axial shifting of the shaft in either direction, said piston chamber communicating on the one side with the main pressure chamber and on the other side with the atmosphere, the one of said passages presenting a throttling-fissure concentric with the shaft, substantially as described.

898,463. CAR-WHEEL. ANDREW S. GUSTAFSON, Chattanooga, Tenn. Filed Feb. 15, 1908. Serial No. 416,089.



1. The combination with an axle having an annular groove, of a wheel including a hub having a seating groove adapted to register with the annular groove, and a locking pin slidably mounted in said grooves.

2. The combination with an axle having an annular groove, of a wheel including a hub having seating grooves adapted to register with the annular groove, locking pins slidably mounted in said grooves, and removable plugs forming closures for one end of each seating groove.

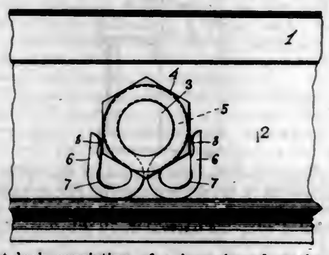
3. The combination with an axle having an annular groove, of a wheel including a hub having a seating groove adapted to register with the annular groove, a locking pin slidably mounted in said grooves, and a removable closure for one end of the seating groove.

4. The combination with an axle having an annular groove, of a wheel including a hub having a seating groove

opening through one side of the hub and adapted to register with the annular groove, a locking pin slidably mounted in said grooves, and a removable plug forming a closure for the open end of said seating groove.

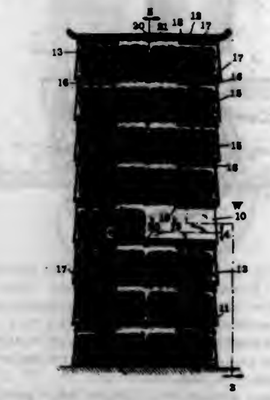
5. The combination with an axle having an annular groove, of a wheel including a hub having a seating groove adapted to register with the annular groove, said seating groove opening through one side of the hub and having its interior walls threaded, a locking pin slidably mounted in said grooves, and a removable plug forming a closure for one end of the seating groove and provided with threads engaging the threaded walls of said seating groove.

898,464. NUT-LOCK. PAUL C. HAAN, Midland Park, N. J., assignor to himself, and Horace G. Stripe, New York, N. Y. Filed Nov. 27, 1907. Serial No. 404,007.



A nut lock consisting of a loop-shaped washer portion concavo-convex in general contour and having an opening for the reception of a bolt, the ends of the loop extending outward from one face of the washer portion and then in substantially a right line parallel to the face of the washer, the inner faces of the ends being beveled, whereby a nut placed on a bolt passing through the washer portion will be secured in place by the resiliency of the washer portion and will be confined and held at opposite sides by the ends, substantially as designed.

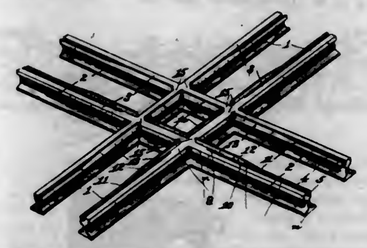
898,465. WAREHOUSE. ARTEMUS N. HADLEY, Indianapolis, Ind. Filed Sept. 7, 1905. Serial No. 277,296.



1. A storage warehouse comprising a plurality of spaced vertical partitions and horizontal floor members forming a plurality of transverse cells, and a closure for the end of each cell, each of said closures inclined with its upper edge nearer the interior of the cell than the lower edge, and means for introducing water into each of the cells, whereby water from the upper cell may not enter the lower cells.

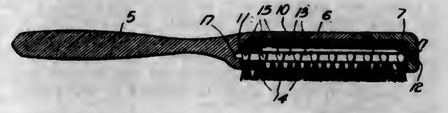
2. A storage warehouse composed of reinforced concrete arranged in a plurality of spaced vertical partitions and horizontal floor members forming a series of non-communicating open-ended cells, a water supply pipe leading into each of said cells, and a vertically inclined independent door for the open end of each of said cells.

898,466. RAILWAY-CROSSING. FERDINAND HALLEY, Chicago, Ill. Filed May 21, 1908. Serial No. 434,041.



A rail crossing comprising the intersecting grooved rails, the treads of said rails being in the same horizontal plane and unbroken throughout their extent, and the grooves and inner flanges tapering gradually upwards from a point adjacent to the ends to a point adjacent to the crossing rail, substantially as described.

898,467. HAIR-BRUSH. FRANK M. HANAWAY, Glen Mills, Pa. Filed Nov. 26, 1907. Serial No. 403,917.



1. A brush having its head formed of hinged sections, each section being formed with a plurality of sockets, and bristle heads removably engaged at their ends in said sockets.

2. A brush having its head formed of hinged sections, each section being formed with a plurality of sockets, bristle heads removably engaged at their ends in said sockets, and a concealed latch for holding said sections together.

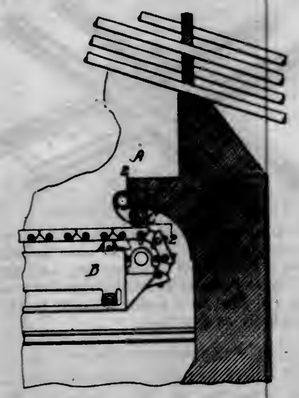
3. A brush head formed of two hinged sections, each of said sections being formed with a plurality of sockets, the sockets of one section opposing those of the other section, and bristle heads removably received at their ends in the sockets of each section, one of the sections being adapted to be swung away from the other to release the corresponding ends of the bristle heads.

898,468. TRAVELING-GRATE FURNACE. JOSEPH HARRINGTON, Chicago, Ill., assignor to Green Engineering Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 28, 1904. Serial No. 226,417.

1. The combination with a bridge wall having an overhanging part, of a pivotally mounted bridge piece located in contact with said overhanging part of the bridge wall, said overhanging part of the bridge wall being provided with a convexly curved bearing surface adapted for contact with the bridge piece in all positions of the latter.

2. The combination with the side walls of a furnace of a fuel grate, a bridge wall, a hollow tubular bridge piece of cylindric form provided at its ends with eccentric trunnions; said side walls of the furnace being provided with recesses at the ends of the bridge wall into which the ends of said bridge piece extend and which are larger than the said ends of the bridge piece to afford spaces for the lateral adjustment thereof, means for adjusting the bridge piece and holding it in its adjusted position, and water supply and return pipes connected with said bridge piece.

3. The combination with the side walls and bridge wall of a furnace, a tubular bridge piece of cylindric form provided at its ends with eccentric trunnions; said side walls of the furnace being provided with recesses at the ends of the bridge wall into which the ends of the bridge piece extend, supporting plates attached to the outer part of said side walls in which said trunnions of the bridge piece have bearing, and means for adjusting said bridge piece and holding it in its adjusted position.

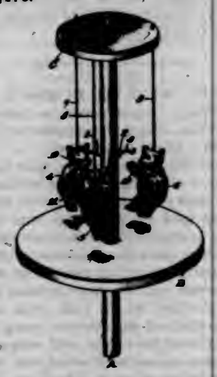


4. The combination with the side walls of a furnace, of a bridge wall provided with an overhanging part, a tubular metal bridge piece of cylindric form provided at its ends with eccentric trunnions, and supporting plates in said side walls for said trunnions, the trunnion at one end of said bridge piece being tubular and forming part of the passage by which water is supplied to the interior of the bridge piece.

5. A hollow bridge piece having oscillatory movement in a curved path provided with a water supply passage and with a water exit passage, which latter is formed in part by a separate pipe which extends into the interior space of the bridge piece and is provided with an inlet aperture located at the top of said space to permit the outward passage of air therefrom.

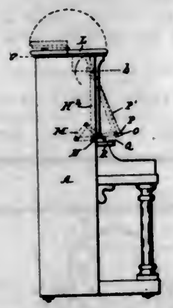
[Claims 6 and 7 not printed in the Gazette.]

898,469. GAME OR PUZZLE APPARATUS. LINCOLN E. HARRISS, Washington, D. C. Filed May 12, 1908. Serial No. 432,476.



The puzzle apparatus consisting of a plurality of toy suspended bears, with the fore limbs so disposed as to form a ring or eye, the standard carrying upper and lower disks, the elastic means for suspending the toy bears from the upper disk, hooks projecting from the standard, and the handle for giving vertical movement to the device to cause the bears to be suspended on the hooks.

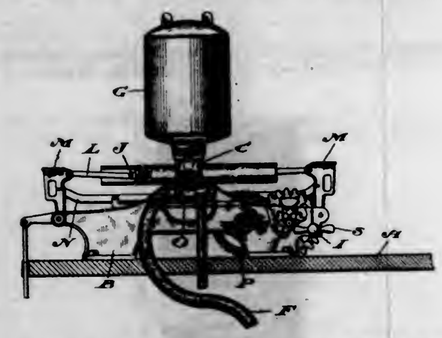
898,470. PIANO-CASE CONSTRUCTION. GEORGE G. HASBROUCK, Nyack, N. Y. Filed Feb. 19, 1908. Serial No. 416,759.



1. In a piano case, the combination of the upright ends, A, A', the pintles G, G', secured thereto, the swinging front board H^2, having slots I, I', in its side edges H, H', and being provided with the buttons J, J', substantially as described.

2. In a piano case, the combination of the upright ends A, A', having the cleats F, F', and pintles G, G', secured thereto, and the swinging front board H^2, having the slots I, I', in its side edges H, H', and being provided with the buttons J, J', substantially as as described.

898,471. PUMP. WILLIAM H. HEARD, London, Ontario, Canada. Filed Feb. 7, 1906. Serial No. 299,943.



1. In a pump having two plunger-tubes provided with plungers and extending from a common chest diametrically opposite one another, the combination of two plunger rods pivoted on the plungers; two rock arms pivotally connected with the plunger rods and to the frame of the pump; and a bar pivotally connected to each rock arm, substantially as described.

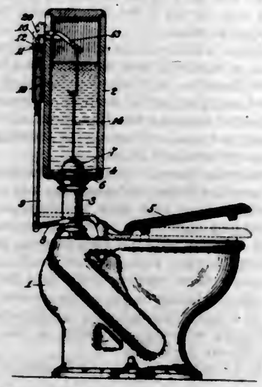
2. In a pump having two plunger-tubes provided with plungers and extending from a common chest diametrically opposite one another the combination of two plunger rods pivoted on the plungers; two rock arms pivotally connected with the plunger rods and to the frame of the pump; a bar pivotally connected to each rock arm; a crank disk journaled on the frame; and a connecting rod pivotally connected with the bar and crank disk, substantially as described.

3. In a pump having two plunger-tubes provided with plungers extending from a common chest diametrically opposite one another the combination of two plunger rods pivoted on the plungers; two rock arms pivotally connected with the plunger rods and to the frame of the pump; a bar pivotally connected to each rock arm; a crank disk journaled on the frame; a connecting rod pivotally connected with the bar and crank disk; and change speed gearing adapted to drive the crank disk, substantially as described.

4. In a pump having two plunger-tubes provided with plungers and extending from a common chest diametrically opposite one another, the combination of two plunger rods pivoted on the plungers; two rock arms pivotally connected with the plunger rods and to the frame of the pump; a bar pivotally connected to each rock arm; a toothed crank disk journaled on the frame; a connecting rod pivotally connected wtih the bar and crank disk; a second gear crank disk of different diameter to the first crank disk journaled in line beside the first and having a common wrist-pin therewith; a driving shaft; two pinions loose on the driving shaft; and a clutch between them adapted to put either of them in driving connection with the shaft, substantially as described.

5. In a pump having two plunger-tubes provided with plungers and extending from a common chest diametrically opposite one another, the combination of two plunger rods pivoted on the plungers; two rock arms pivotally connected with the plunger rods and to the frame of the pump; a bar pivotally connected to each rock arm; a toothed crank disk journaled on the frame; a connecting rod pivotally connected with the bar and crank disk; a second gear crank disk of different diameter to the first crank disk journaled in line beside the first and having a common wrist-pin therewith; a driving shaft; two pinions loose on the driving shaft; a clutch between them adapted to put either of them in driving connection with the shaft; a shifter for the clutch carrying a nut; and a threaded spindle journaled in the frame and on which the nut is screwed, substantially as described.

898,472. VALVE-OPERATING MECHANISM. MICHAEL H. HENESEY, Syracuse, N. Y. Filed Dec. 4, 1905. Serial No. 290,080.



In combination in a valve operating mechanism, a vertically reciprocable member, a vertical lug thereon, a dog pivoted in the lug and comprising a substantially horizontally projecting operating nose and a depending substantially vertical weight adapted to abut against the vertical rear portion of the lug, and a trip lever movably mounted adjacent the dog for engagement therewith and adapted to be operated by the movement of the dog in one direction but not in the other.

898,473. RAILWAY-SIGNAL. JOHN HOFFER, Louisville, Ky. Filed Jan. 14, 1908. Serial No. 410,725.

1. A railway signal adapted to be actuated by passing trains comprising a main switch, auxiliary switches located on each side of the main switch, a signal, connections leading from the main switch to the signal, the first auxiliary switch when actuated by a passing train affecting the main switch so that as the main switch is actuated by the train the signal is set, and the last auxiliary switch when actuated by the train serving to release all switches from the set position to restore the signal to normal condition.



2. A railway signal comprising a main switch and auxiliary switches, an electric signal, connections leading from the main switch to the signal, the circuit being normally open in the main switch, the first auxiliary switch being actuated by passing trains to affect the main switch so that when the train reaches the main switch the circuit is completed in the main switch and signal is set, and the last auxiliary switch when actuated by the train allowing all switches to return to normal position.

3. A railway switch comprising a main switch and auxiliary switches located on each side of the main switch, the said switches each having elements to be affected by passing trains, and a signal controlled by the main switch, the first auxiliary switch affecting the main switch so that the main switch is actuated by the train to set the signal, and the last auxiliary switch serving to release all switches from set position.

4. A signal for railway curves and the like places comprising two sets of switches located at opposite ends of the curve or like place, each set comprising a main switch and auxiliary switches located on each side of the main switch, signals at opposite ends of the curve, each switch having an element to be acted upon by a passing train, and connections between the main switches and the signals at the opposite end of the curve.

5. In railway signals for displaying signals at a distant point, a main switch, auxiliary switches spaced on each side of the main switch, mechanical connections between the switches, the switches having elements to be affected by passing trains, an electrically actuated signal located at a distant point, electrical connections leading from the main switch to the signal, there being a gap in the signal circuit provided in the main switch, a member to bridge said gap and complete the electrical circuit, said bridging member being actuated to close the gap and cause the signal to be set after the first auxiliary switch and main switch have been affected by a passing train, and the last switch when affected by the train serving to restore all switches to first position.

[Claims 6 to 8 not printed in the Gazette.]

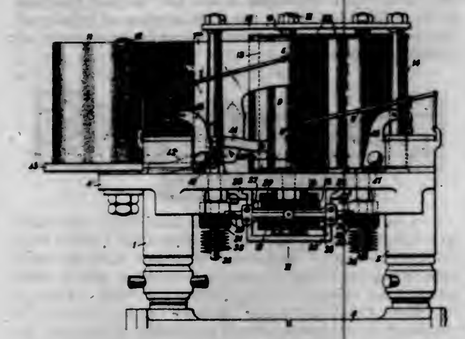
898,474. CONTINUOUS ENGINE-INDICATOR. MILTON W. HOGLE, Pittsburg, Pa. Filed Feb. 8, 1906. Serial No. 300,178.

1. The combination with an engine cylinder, of means for effecting unsuperposed continuous records of the pressure variations in both ends of the cylinder, the simultaneous pressure values being recorded upon substantially the same ordinates.

2. In an engine indicator, the combination with means for moving a record strip continuously and harmonically in one direction only at a rate proportional to the rate of movement of the engine piston, of means for simultaneously and continuously effecting records of the pressure variations in both ends of an engine cylinder, the simultaneous pressure values being recorded upon substantially the same ordinates.

3. In a continuous indicator, the combination with two pressure recording devices, of a reciprocating part, racks carried thereby, a feed roll, a spindle therefor, ratchets rigidly secured to the spindle, pinions loosely mounted

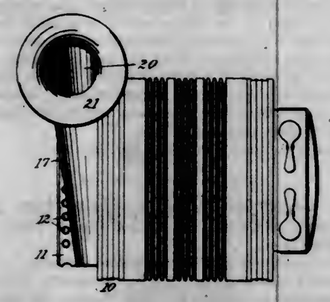
upon the spindle that mesh respectively with the racks carried by the reciprocating part, and sets of pawls that are carried by the pinions and that engage the adjacent ratchets.



4. In a continuous indicator, the combination with two pressure recording devices, of a reciprocating part, racks carried thereby, means for normally maintaining the reciprocating part at one end of its stroke, a feed roll, a spindle therefor, ratchets rigidly secured to the spindle, pinions loosely mounted upon the spindle that mesh respectively with the racks carried by the reciprocating part, and sets of pawls that are carried by the pinions and that engage with the adjacent ratchets.

5. In an engine indicator, the combination with means for moving a record strip continuously and harmonically in one direction only at a rate proportional to the rate of movement of the engine piston, of means for simultaneously and continuously effecting records of the pressure variations in both ends of an engine cylinder, the simultaneous pressure values being recorded upon substantially the same ordinates and the records for successive strokes of the engine being unsuperposed.

898,475. ACCORDION. HANS HOHNER, New York, N. Y. Filed May 22, 1908. Serial No. 434,224.



1. An accordion provided with a sound box having a bulged section that extends along said box, substantially as specified.

2. An accordion having a head, combined with a sound box having an integral bulged section extending along said box, substantially as specified.

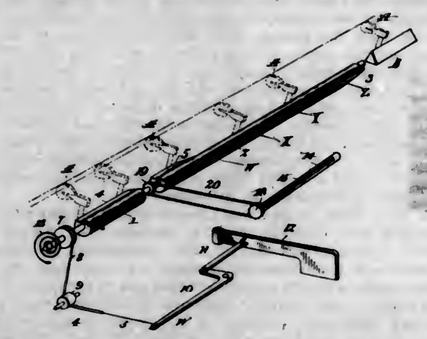
3. An accordion having a head, combined with a sound box having an integral bulged section that extends along the box and widens from end to end, substantially as specified.

4. An accordion having a head, combined with a sound box having an integral bulged and tapering section that is extended into contact with the head, substantially as specified.

898,476. SHIP'S PAINT. AUGUST P. HORN, Hamburg, Germany. Filed Dec. 26, 1907. Serial No. 408,189.

Ships' paints containing products of condensation of phenols and aldehydes.

898,477. MEANS FOR CONTROLLING EXPRESSION IN AUTOMATIC PIANOS. HENRY S. HORNBECK, Elizabeth, N. J., assignor of one-third to Charles C. McBride, Elizabeth, N. J. Filed Nov. 6, 1906. Serial No. 342,183.



1. In an automatic piano, a plurality of hammers, a body adapted to support the hammers, said body having a flat face merging into a spiral surface extending around the body, substantially as described.

2. In an automatic piano, a body adapted to support the hammers, said body having a flat face merging into a spiral surface, and means for turning said body through different angular distances whereby the hammers are positioned in different retracted relations.

3. In an automatic piano, a plurality of hammers, a body rotatable on an axis behind the hammers and constituting a hammer rest therefor said body having part of its surface cylindrical, and part of its surface of generally spiral form, the body also having a flat face forming the termination of the spiral portion.

4. In an automatic piano, a plurality of hammers, a body rotatable on an axis behind said hammers and constituting a hammer rest therefor, said body having part of its surface cylindrical and part of its surface of generally spiral form, the body also having a flat face forming the termination of the spiral portion, and means for rotating said body through any predetermined angle.

5. In an automatic piano, a plurality of hammers, a body rotatable on an axis behind said hammers and constituting a hammer rest therefor, said body having part of its surface cylindrical and part of its surface of generally spiral form, the body also having a flat face forming the termination of the spiral portion, means for maintaining said body impelled rotatably to a position with said flat face contacting with the initial hammers of the series, and means for rotating the body through any predetermined angle from such position whereby a greater or less number of hammers are thrown forwardly.

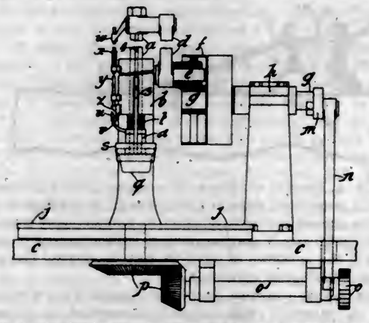
[Claims 6 to 10 not printed in the Gazette.]

898,478. MACHINE FOR FORMING OR MOLDING AND LIDDING PIES AND THE LIKE. JOSEPH H. JACKSON, Blaydon-on-Tyne, England. Filed Apr. 24, 1908. Serial No. 429,096.

1. In machines for forming or molding and lidding pies, tarts, custards and the like, the combination of a plunger adapted to be fitted with a mold or with a lidder, a trimmer mounted on said plunger, means for holding said trimmer in an inoperative position, and means for releasing and operating said trimmer to trim or remove the superfluous dough, substantially as set forth.

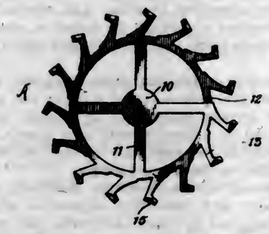
2. In machines for forming or molding and lidding pies, tarts, custards and the like, the combination of a plunger

adapted to be fitted with a mold or with a lidder, a trimmer mounted on said plunger, means for holding said trimmer in an inoperative position, means for releasing and operating said trimmer to trim or remove the superfluous



dough, a revoluble tin-carrying table, and means for intermittently rotating said table so as to bring each tin in succession below said plunger, substantially as and for the purposes set forth.

898,479. ESCAPEMENT-WHEEL. PAUL E. JEANMAIRET, Mount Carroll, Ill. Filed Aug. 9, 1905. Serial No. 273,486.

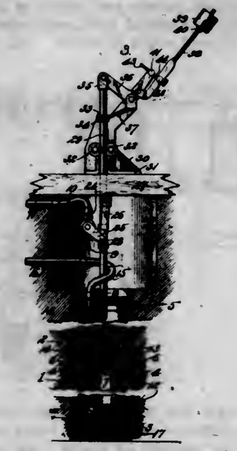


As a new article of manufacture, an escapement-wheel embodying radial teeth, each of said teeth being formed with a transversely enlarged outer end portion, each tooth being further formed in a side thereof and at its outer extremity with a U-shaped pocket arranged radially relative to the axis of the wheel, the tapering inner terminal of said pocket being located adjacent to that of the transverse enlargement of the tooth, the depth of the pocket aforesaid gradually increasing towards its outer terminal which merges into the outer edge of the tooth, whereby a maximum quantity of lubricant is retained in the pocket to supply the terminal of the tooth that cooperates with the pallet.

898,480. AUTOMATIC WATER-SUPPLY SYSTEM. JOHN JOHNSON, Overland Park, Mo., assignor to The Country Hydrant Company, St. Louis, Mo., a Corporation of Missouri. Filed July 1, 1905. Serial No. 267,909.

1. An automatic water supply system comprising a vertically movable submerged tank having a chamber provided with means for admitting water and a chamber provided with means for the outflow of water from a point near the bottom, a pipe leading from a point near the bottom of one of said chambers to a point near the bottom of the other of said chambers and provided with a check valve, means automatically controlled by the movement of said tank for admitting air under pressure to said first mentioned chamber, and means for controlling the movement of said tank.

2. An automatic water supply system comprising a vertically movable submerged tank having two sections, said sections being provided at the adjacent ends with internally threaded rings, an externally threaded flanged disk fitting in both of said rings and uniting said sections, and dividing said tank into two compartments, means for admitting water to one of said compartments, means automatically controlled by the movement of said tank



for admitting air under pressure to said compartment, the other of said compartments being provided with means for the outflow of water, means for communication between said compartments, and means for controlling the movement of said tank.

898,481. MOTOR-CYCLE. WALTER C. JOHNSON, Colemans Hatch, England. Filed July 16, 1907. Serial No. 384,078.

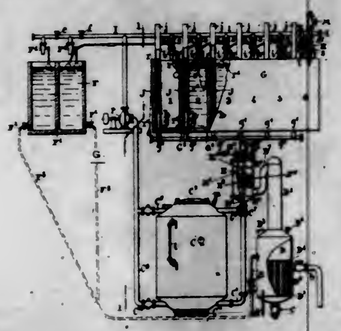


A motor cycle having a single wheel in front and a pair of wheels in rear of smaller diameter, a drop frame extending from the front wheel to the rear wheels, a steering fork connected with the front wheel, a foot platform carried by the drop frame between the rear wheels and on which the operator stands, and a motor carried by the drop frame in front of the foot platform with connections to the rear wheels to drive the same, substantially as described.

898,482. EXTRACTION APPARATUS. LOUIS F. JURY, Vernaison, France. Filed Sept. 24, 1906. Serial No. 336,047.

1. In apparatus for the purpose set forth the combination of a diffusion-chamber, a series of reservoirs, and

conduits for passage of liquid from said diffusion chamber to each of the several reservoirs of said series and for passage from each of the several reservoirs of said series to the diffusion chamber, together with means whereby the level of liquid in the several reservoirs automatically controls alternative ingress and egress of liquid to and from the conduits connected with each reservoir so that the reservoirs fill and empty in series.



2. In apparatus for the purpose set forth the combination of a diffusion-chamber, a series of reservoirs, and conduits for passage of liquid from said diffusion chamber to each of the several reservoirs of said series and for passage from each of the several reservoirs of said series to the diffusion chamber, together with means whereby the level of liquid in the several aforesaid reservoirs automatically controls alternative ingress and egress of liquid to and from the conduits connected with each reservoir so that the reservoirs fill and empty in series, a further pair of reservoirs, a conduit from the diffusion chamber thereto, a concentrator, and a conduit from this pair of reservoirs to the concentrator.

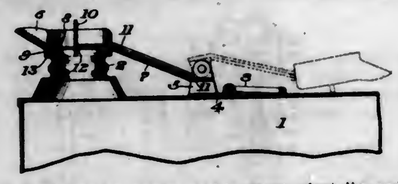
3. In apparatus for the purpose set forth the combination of a diffusion-chamber, a series of reservoirs, and conduits for passage of liquid from said diffusion chamber to each of the several reservoirs of said series and for passage from each of the several reservoirs of said series to the diffusion chamber, means whereby the level of liquid in the several reservoirs automatically controls alternative ingress and egress of liquid to and from the conduits connected with each reservoir so that the reservoirs fill and empty in series, and means controllable by the contents of the reservoirs for supply of water to the last reservoir of the series.

4. In apparatus for the purpose set forth the combination of a diffusion-chamber, a concentrator, two series of reservoirs, conduits for passage of liquid from said diffusion chamber to each of the several reservoirs of both said series and for passage from each of the several reservoirs of one series to the diffusion chamber and from each of the several reservoirs of the other series to the concentrator, means whereby the level of liquid in the several reservoirs automatically controls alternative ingress and egress of liquid to and from the conduits so that the reservoirs fill and empty in series, and conduits whereby the hot vapors from the concentrator serve to heat the extracting juices flowing into the diffusing chamber.

5. In apparatus for the purpose set forth the combination of a diffusion-chamber, a pump, a series of reservoirs, a conduit for liquid from said diffusion chamber having outlets to each of the several reservoirs of said series, float controlled valves controlling said outlets, a conduit for passage from the several reservoirs to the diffusion chamber having openings from each of said reservoirs respectively and float valves controlling said openings, and means controlling said last mentioned float valves operated by the level of liquid in the preceding reservoir of the series.

[Claim 6 not printed in the Gazette.]

898,483. SPOUT FOR CANS. CHARLES F. KELLOM, Philadelphia, Pa. Filed Mar. 16, 1907, Serial No. 362,661. Renewed June 20, 1908. Serial No. 439,599.



1. In a can, a nozzle, and a spout pivotally and invertibly supported adjacent said nozzle and adapted to be brought concentric with relation to and to coact with said nozzle, said spout having means embracing said nozzle whereby the contents of the can may be poured therefrom without leaking or spilling.

2. In a can, a nozzle, a spout, a support to which said spout is pivotally and invertibly attached, a collar on said spout concentric with and coacting with said nozzle, the mouth of said spout projecting beyond the walls of the can when in operative position, and means engageable within the nozzle for locking the spout in operative position.

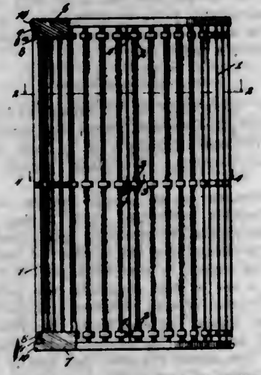
3. In a can, a nozzle, a spout, a support to which said spout is pivotally and invertibly attached, a collar on said spout concentric with and coacting with said nozzle, the mouth of said spout projecting beyond the walls of the can when in operative position, and means engageable within the nozzle for locking the spout in operative position, said means being compressible and mounted on said support.

4. In a device of the character described, a nozzle, a pivotally and invertibly mounted support and a spout carried by said support adapted to be brought into suitable relation to and to coöperate with said nozzle, said spout projecting beyond the side wall of the can when in operative position to facilitate pouring.

5. In a device of the character described, a nozzle, a spout pivotally and invertibly supported adjacent said nozzle and adapted to coact therewith, and means automatically engageable with the nozzle for locking said spout to the nozzle, said means being disposed within the spout.

[Claims 6 and 7 not printed in the Gazette.]

898,484. BARREL OR RECEPTACLE. JOHN H. KILLION, Chicago, Ill. Filed Jan. 9, 1907, Serial No. 351,436. Renewed Feb. 13, 1908. Serial No. 415,779.



1. In an article of the character described, the combination of a body element composed of a continuous strip of sheet flexible material, corrugated transversely of the strip and longitudinally of the body element, the ends of the corrugated strip being adapted to be overlapped to intermesh the adjacent corrugations, means for detachably securing the ends together, and a head removably secured within the end of the body element.

2. In an article of the character described, the combination of a body element composed of a continuous flexible strip of sheet material having corrugations extending lengthwise of the body element, the ends being adapted to be overlapped to intermesh the adjacent corrugations, means for detachably securing the ends together to constitute a continuous wall of the receptacle, and grooves formed in the edges of said strip, and heads having their edges inserted in said grooves and detachably held thereby.

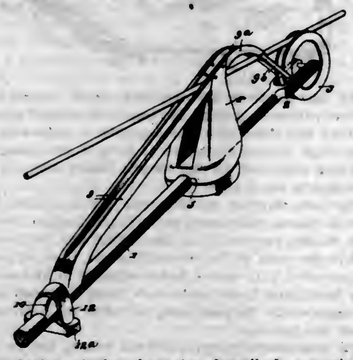
3. In an article of the character described, the combination of a body element consisting of a strip of flexible material having loops struck up in lines along the edges of the strip to form supporting means for the heads, and the heads detachably held in place at the ends of the body element by said supporting means.

4. In an article of the character described, the combination of a body element composed of a flexible strip, having corrugations extending transversely thereof and provided with loops formed in lines extending transversely of the corrugations, means whereby the extremities of said strip may be locked together when the said loops on one extremity are inter-meshed with the loops of the other extremity, and one or more heads detachably secured in the body element.

5. In an article of the character described, the combination of a body element consisting of a flexible strip having loops struck up therefrom in lines along the edges thereof to form grooves, and a head engaging the edge of the body element and having a flange fitting within the body element and engaging in and detachably supported by said groove.

[Claims 6 to 9 not printed in the Gazette.]

898,485. DEVICE TO PREVENT TROLLEY-WHEELS FROM JUMPING. WILLIAM O. LANE, Cleveland, Ohio. Filed Dec. 20, 1907. Serial No. 407,372.

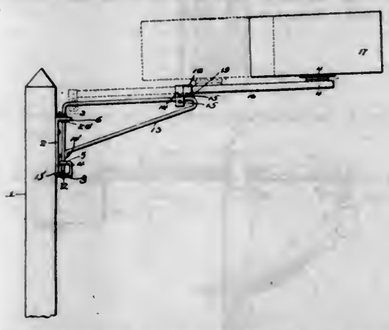


1. A device of the character described, comprising in combination with a trolley pole and trolley wheel, a forked bracket provided with a clamping plate by which it may be secured to the pole, a pair of parallel arms secured intermediate of their ends to the ends of the members of said bracket in advance of and extending at an inclination to the trolley pole, the upper ends of said arms being curved rearwardly, a stem secured to the lower ends of said arms, and means securing said stem to the trolley pole.

2. In a device of the character described, the combination with a trolley pole and its wheel, of a bracket secured to said trolley pole near the upper end thereof, a pair of spaced arms connected intermediate of their ends to said bracket and extending upwardly and rearwardly therefrom in advance of the pole, and means securing the lower ends of said arms to the pole.

3. The combination of a trolley pole and its wheel, and a forked bracket secured to the pole near the upper end of the same, a pair of spaced guide arms connected intermediate of their ends to said bracket and extending upwardly and rearwardly therefrom in advance of the pole, a grooved stem connecting together the lower ends of said arms, and a clip designed to secure said stem to the pole below the bracket.

898,486. MAIL RECEIVING AND DELIVERING APPARATUS. JAMES S. LANIER, West Point, Ga. Filed Oct. 31, 1907. Serial No. 400,220.



1. In an apparatus of the class described, the combination, of a fixed bracket plate having a slotted bracket flange and an imperforate flange, a bracket pivotally engaging the slot of the bracket flange and resting by weight upon the said imperforate flange, means for preventing vibration carried by said last mentioned bracket within said slot, and a receptacle sustained by the last mentioned bracket.

2. In an apparatus of the class described, the combination, of a slotted bracket, a bracket comprising a continuously integral strip bent into bracket form and having a vertical portion extending through the slot of the slotted bracket, a guide plate fixed to said vertical portion within said slot and formed with a detent, shoulders being formed at the ends of said slot adapted to be engaged by said detent, the upper edge of the second mentioned bracket being constructed to be disposed in outwardly and upwardly inclined planes when the said vertical portion is positioned centrally of said slot and to be in horizontal planes when the said vertical portion is at either terminus of the slot, and a receptacle sustained by said second mentioned bracket.

3. In an apparatus of the class described, the combination of a fixed bracket plate formed with a slot, a support, a bracket having a member extending through said slot and resting upon said support, the slot being formed with shoulders at its end, a guide plate within the slot fixed to the bracket member which extends through the slot, said guide plate being formed with a laterally projecting detent adapted to engage said shoulder for preventing vibration of the bracket, the bracket being constructed to have its upper edge lie in a horizontal plane when the slot engaging member of the bracket is at one terminus of the slot, and a receptacle supported by said bracket.

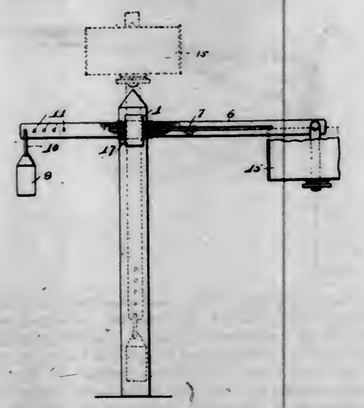
4. In an apparatus of the class described, the combination, of a slotted bracket plate, a support, a bracket having a member extending through the slot of said bracket plate and resting upon said support, the main portion of said bracket extending at such angularity with respect to the slot engaging member as to be disposed in upwardly and outwardly inclined planes when the slot engaging member is intermediate the length of the slot, and a receptacle carried by said bracket.

5. In an apparatus of the class described, the combination, of a slotted bracket plate, a support, a bracket com-

prising a strap of angular material bent into bracket form and having one member extending through the slot of said bracket plate, the second mentioned bracket being disposed to extend in upwardly and outwardly inclined planes when the slot engaging member is intermediate the length of the slot, a guiding plate fixed to and surrounding said slot engaging member within the slot, and a receptacle sustained by said bracket.

[Claims 6 to 11 not printed in the Gazette.]

898,487. MAIL RECEIVING AND DELIVERING MECHANISM. JAMES S. LANIER, West Point, Ga. Filed Nov. 2, 1907. Serial No. 400,360.



1. In article receiving and delivering apparatus, the combination of a longitudinally reciprocating bar, a pivotal support for said bar, overbalancing means at one end of the bar, and a pivotally mounted receptacle carried by the opposite end of the bar.

2. In article receiving and delivering apparatus, the combination of a slidingly mounted bar, a pivotal support therefor, a pendent weight at one end of said bar, and a pendent receptacle at the opposite end thereof.

3. In article receiving and delivering apparatus, the combination with a support, of a bar slidingly and pivotally mounted thereon, means overbalancing one of the ends of the bar, and a receptacle pivotally carried by the opposite end of the bar and having the preponderance of its weight beneath the center of gravitation.

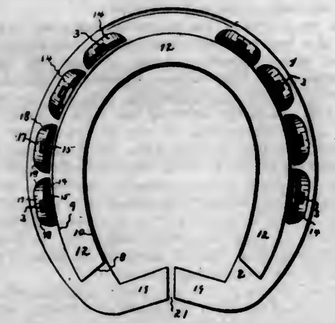
4. In article receiving and delivering apparatus, the combination of a slidingly mounted bar, a pivotal support for said bar, an adjustable overbalancing weight at one end of said bar, and a pivoted receptacle at the other end thereof.

5. In article receiving and delivering apparatus, the combination of a pivotally mounted sleeve, a bar extending therethrough and slidingly mounted therein, means overbalancing one end of the bar, and a receptacle pivotally carried by the other end of the bar.

[Claims 6 to 11 not printed in the Gazette.]

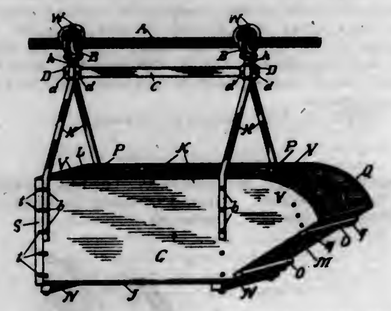
898,488. HORSESHOE. MILFORD J. LEACHEY, Omaha, Nebr. Filed July 19, 1907. Serial No. 384,512.

In a horseshoe the combination with a metallic body portion having a curved recess formed therein around its lower face and having nail holes formed therethrough outside of the curved recess, of an elastic filler which lies within said curved recess, a plurality of removable screws which pass through the body portion of the shoe and secure the said filler within the curved recess, the heads of said screws being countersunk in the upper face of the body portion and terminal ends formed upon the body portion into which the curved channel does not extend,



said terminal ends being inclined toward the front of the shoe and slightly spaced from each other.

898,489. FEED-CARRIER. WILLIAM LOUDEN, Fairfield, Iowa. Filed Dec. 23, 1907. Serial No. 407,841.



1. In feed carriers, an overhead track, trucks having wheels to run on said track, a receptacle, hanger straps attached to the sides of the receptacle, a connecting bar, and castings joining the adjacent ends of the hangers and connecting bar, and having swivel heads adapted to fit and swivel in the trucks.

2. In feed carriers, an overhead track, trucks, having wheels to run on said track, a receptacle, hanger straps attached to the receptacle, a connecting bar, and castings bolted to the ends of the connecting bar, their upper ends being provided with swivel heads adapted to fit and swivel in the truck, and their lower ends being flattened and the upper ends of the hangers being bolted to the flattened portions of the castings.

3. In feed carriers, an overhead track, trucks having wheels to run on said track, a receptacle, hanger straps attached to the receptacle, a connecting bar, and castings having their upper ends provided with swivel heads adapted to fit and swivel in the trucks, and their lower ends broadened and flattened, the ends of the connecting bar being secured to the castings by bolts passing through them and the upper ends of the hangers being placed on the flattened sides of the castings between said bolts, and being secured thereto by bolts passing through the castings above and below the connecting bar.

4. In feed carriers, an overhead track, trucks having wheels to run on said track, a receptacle, hanger straps attached to the receptacle, a connecting bar, two pairs of castings clamping the ends of the connecting bar and bolted thereto, and having ribs on their upper ends constituting a swivel head connected to the trucks and the upper ends of the hangers bolted to the castings.

5. In feed carriers, an overhead track, trucks having wheels to run on said track, a receptacle, hanger straps attached to the receptacle, a connecting bar, two pairs of castings clamping the ends of the connecting bar and bolted thereto, and having ribs on their upper ends constituting a swivel head with a neck below it to connect to and swivel in the trucks, a rib at the lower end of the neck and the upper ends of the hangers bolted to the castings.

[Claims 6 to 13 not printed in the Gazette.]

898,490. METALLIC RAILWAY-TIE. WILLIAM D. LOWRY, St. Louis, Mo. Filed Jan. 11, 1908. Serial No. 410,356.



1. A metallic skeleton railway tie, of bridge and channel shape, constructed with an elevated central portion, a longitudinal rib extending centrally of the tie, foot portions, at the ends of the tie, and cross arms extending from the foot portions at each end of the tie.

2. A metallic skeleton railway tie, of bridge and channel shape, constructed with an elevated central portion, having longitudinal parallel slots, a longitudinal rib extending centrally of the tie, between the parallel slots, foot portions, at the ends of the tie, and cross arms extending from the foot portions at each end of the tie.

3. A metallic skeleton railway tie, of bridge and channel shape, constructed with an elevated central portion, a longitudinal rib extending centrally of the tie, foot portions, at the ends of the tie, having parallel longitudinal fins, and cross arms extending from the foot portions at each end of the tie.

4. A metallic skeleton railway tie, of bridge and channel shape, constructed with an elevated central portion, having longitudinal parallel slots, a longitudinal rib extending centrally of the tie, between the parallel slots, foot portions, at the ends of the tie, having parallel longitudinal fins, and cross arms extending from the foot portions at each end of the tie.

5. A metallic skeleton railway tie of bridge and channel shape, constructed with an elevated central portion, a longitudinal rib extending centrally of the tie, foot portions, at the ends of the tie, having pedestals formed with ledges, sound deadening blocks supported upon the ledges, and cross arms extending from the foot portions at each end of the tie.

[Claims 6 to 9 not printed in the Gazette.]

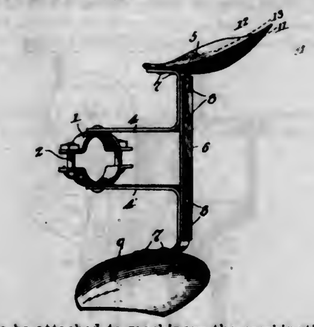
898,491. WINDOW-CATCH. ALAN MACDONALD, Danville, Ill. Filed Aug. 12, 1907. Serial No. 388,184.

The combination with the upper and lower sashes of a window of a catch adapted to limit the downward movement of the upper sash and the upward movement of the lower sash; said catch comprising hinged wings one of which is secured to the upper sash and a spring located between the wings adapted to throw the free wing into the path of travel of the lower sash and an upwardly projecting finger on the free wing adapted to be utilized to press the free wing parallel to the fixed wing against the influence of the spring whereby the upper and lower sashes



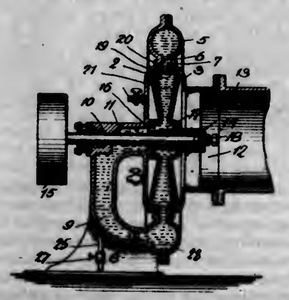
may be moved up and down to the full extent of the window frame.

898,492. CLAMP-FAN ATTACHMENT FOR MACHINERY. JOHN W. MIGRATH, Chicago, Ill. Filed Feb. 24, 1908. Serial No. 417,583.



A fan to be attached to machinery the combination with two clamp-members adapted to embrace a shaft, means for clamping them against said shaft, arms projecting from said clamp-members in the direction of the axis of the shaft and bent into directions radial to the shaft at their outer ends, fan blade secured to the extremities of the radial portions of the arms, and a brace bar secured to the radial portions of the two diametrically opposite arms.

898,493. ROTARY AIR-PUMP. HARRY M. MONTGOMERY, Chicago, Ill. Filed Feb. 26, 1907. Serial No. 359,502.



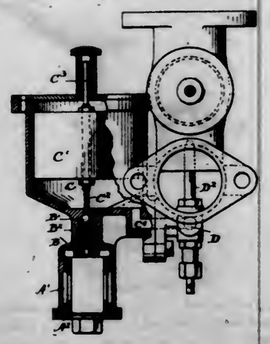
1. In a rotary air pump the combination with a housing of a rotatable impeller having blades inclined to its plane of rotation, an air inlet on one side and an air outlet on the other side of said impeller, and means for maintaining a water seal between the periphery of said impeller and said housing.

2. In a rotary air pump the combination with a rotatable impeller having inclined blades joined at their outer ends by an annular rim, of a housing for said impeller having an annular channel in which said rim rotates, and means for supplying water to said channel.

3. A fan having a rotatable impeller consisting of a hub, radial blades inclined at an angle to the plane of rotation, an annular rim connecting said blades and a passage for liquid leading from said hub to said rim, an annular chamber surrounding said rim and a passage for liquid leading from said annular chamber to said hub.

4. In a fan the combination with a rotatable impeller consisting of a hub, flat radial blades whose planes are inclined to the plane of rotation and an annular rim connecting said blades and having a passage formed therein connecting said hub with said rim, of a housing for said impeller adapted to be connected with the chamber from which air is to be exhausted on one side of said impeller and having valve outlets for air on the opposite side and an annular chamber surrounding the rim of said impeller, a passage in said housing leading from said annular chamber to and communicating with an opening in the hub of said impeller.

898,494. CARBURETER. LOUIS P. MOOERS, Cleveland, Ohio. Filed June 30, 1905. Serial No. 267,679.



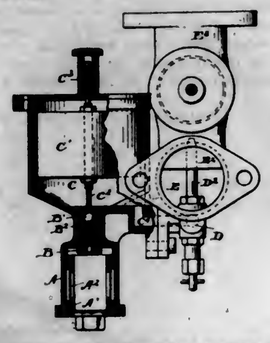
1. In an explosive engine a plurality of independent sets of carbureting means, one of the carbureting factors being the same in each set, other carbureting factors being different in each set, a mixing chamber, an engine throttle and means operating simultaneously with the closing movement of the throttle to cut off that carbureting set having the least carbureting effect for a given volumetric rate of flow of the mixture therefrom.

2. In an explosive engine a carbureter having separate spray nozzles in separate strangle passages of different feeding capacities, a mixing chamber communicating with said passages and having an outlet to the explosion chamber, a throttle controlling said outlet and means connected with the throttle arranged to cut off the feed from the feed passage of largest capacity simultaneously with the closing movement of the said throttle.

898,495. CARBURETER. LOUIS P. MOOERS, Cleveland, Ohio. Filed June 30, 1905. Serial No. 267,680.

1. In an explosive engine, a plurality of independent sets of carbureting means having different permanent carbureting factors, an engine throttle, and means operating simultaneously with the throttle for throwing any individual one of said carbureting sets out of operation, and bringing a second set having a different permanent factor into action.

2. In an explosive engine, a plurality of independent sets of carbureting means, having different permanent factors for carbureting the inflowing air, a mixing chamber and a throttle valve and means operating simultaneously with the throttle valve for throwing any single one of said sets into operation and simultaneously cutting off another of said sets.



3. In a carbureter for explosive engines, independent means for carbureting the inflowing gas, one of said means being of greater carbureting capacity per volume of air passed than the other means, an engine throttle, and means operating simultaneously with the engine throttle for throwing the means having the greater capacity alone into operation.

4. In an explosive engine, a throttle, a carbureter having separate spray nozzles in separate strangle conduits, one of said strangle conduits being of relatively larger feeding capacity, and means operating simultaneously with the throttle for opening the conduit having the larger capacity and closing the conduit of smaller capacity.

5. In an explosive engine, a throttle, a carbureter having separate spray nozzles in separate strangle tubes, one of said strangle conduits being of relatively larger feeding capacity, and means operating simultaneously with the throttle for closing the conduit having the larger capacity and at the same time opening the conduit of smaller capacity.

[Claim 6 not printed in the Gazette.]

898,496. MILLINER'S PLIERS. JULIA K. MULLENBACH, Marshall, Mo. Filed Sept. 3, 1907. Serial No. 391,118.



1. Milliners' pliers having jaws provided with narrow transverse gripping bits near their extremities, and cutting bits extended backwardly and laterally outside said jaws at an angle thereto, said jaws having recessed portions between said bits and the pivoted or hinged portions.

2. Milliners' pliers having jaws provided with transverse gripping bits near their extremities, and cutting bits extending backwardly from the gripping bits and laterally outside the jaws at an angle thereto, said jaws being recessed between said bits and the pivoted or hinged portions, the recessing being deeper at the ends adjacent to the gripping bits.

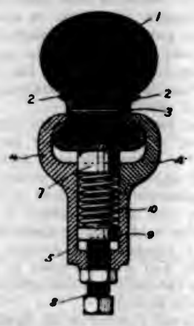
3. Milliners' pliers having jaws provided with transverse gripping bits near their extremities, and cutting bits extending backwardly and laterally from and outside the gripping bits on one side of the pliers, said jaws being cut away on the side opposite the cutting bits and recessed between the bits and the pivoted portions.

4. In milliners' pliers, the combination of gripping bits in the jaws thereof and cutting bits extending backwardly and laterally outside the gripping bits at an oblique angle thereto.

5. In milliners' pliers, the combination of narrow gripping bits at the extremities of the jaws and transverse thereto, and cutting bits on one side of the jaws having one end of each adjacent to the gripping bits and extending backwardly laterally therefrom at an oblique angle.

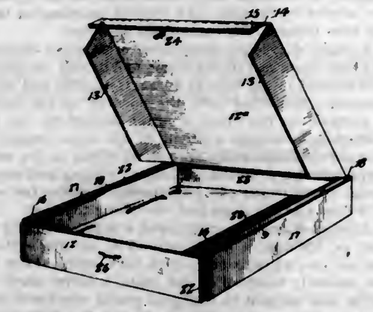
[Claims 6 to 9 not printed in the Gazette.]

898,497. AUTOMOBILE-TIRE. WILLIAM MÜLLER, Philadelphia, Pa. Filed Sept. 27, 1907. Serial No. 394,782.



In an automobile wheel, a split rim formed with opposing and inwardly curved jaws, one jaw being integral with the wheel spoke and the other jaw being removably secured to said wheel spoke, a spring chamber recessed in said split rim and formed partly in the integral and partly in the removable jaw thereof, a tire having an enlarged tread and base and a narrowed neck, a tire sheath secured to and inclosing the neck and base of said tire, a plunger secured to said tire sheath and slidably mounted in said spring chamber, a spring coiled in said spring chamber, and a tension bolt mounted in the end of said spring chamber, whereby the tension of said spring may be regulated, substantially as described.

898,498. FOLDING FILE. BENJAMIN B. MCFADDEN, Binghamton, N. Y. Filed Nov. 30, 1907. Serial No. 404,576.



1. A folding file, comprising a bottom, separate foldable angularly disposed inner side walls connected at their lower edges to the different edges of the bottom, a top connected to the upper edge of one of the side walls, angularly disposed folding outer walls irremovably connected at their ends to each other and to the ends of one of the side walls, said outer walls being long enough to surround and inclose the remaining inner side walls and maintain them in set up condition within the outer walls, and depending flaps carried by certain of the free edges of the top and slidably and detachably fitting between the outer walls and the adjacent inner walls.

2. A folding file, comprising a bottom, separate foldable angularly disposed inner side walls connected at their lower edges to the different edges of the bottom, a top connected to the upper edge of one of the side walls, angularly disposed folding outer walls irremovably connected at their ends to each other and to the ends of one of the side walls, said outer walls being long enough to surround and inclose the remaining inner side walls and maintain them in set up condition within the outer walls, and depending flaps carried by certain of the free edges of the top and slidably and detachably fitting between the outer walls and the adjacent inner walls, certain of the inner walls having their inner ends detachably interfitted with the adjacent angularly disposed inner side walls to maintain the latter against collapsing inwardly and being thus also held against collapsing by such interfitted engagement.

3. A folding file comprising a bottom, separate foldable angularly disposed inner side walls connected at their lower edges to the different edges of the bottom, angularly disposed folding outer walls connected at their ends to each other and surrounding and inclosing the inner side walls to prevent their outward collapsing, certain of the inner side walls having their ends abutted against the inner sides of the others, thereby preventing said others collapsing inwardly, and reinforcing strips secured to the inner faces of said other inner side walls and having their ends abutted against the inner faces of the first mentioned side walls to prevent said first mentioned side walls from collapsing inwardly.

898,499. ROTARY PUMP. JAMES J. O'DONNELL, Paducah, Ky. Filed Feb. 21, 1906. Serial No. 302,276.

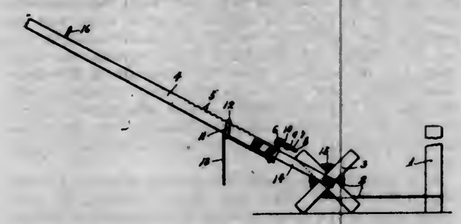


A pump comprising an inverted bowl-like casing having an open bottom, a cap plate detachably secured across the open bottom of the casing and having a central orifice, superposed fixedly disposed frusto-conical disks within and spaced throughout their extent from the wall of the casing, radial wings between and integral with the disks, the inner ends of said wings being cut away, there being a continuous annular outlet opening between the peripheral portions of the disks, a tubular casing upon the lower disk and having a reduced end projecting into the orifice in the cap plate, said extension bearing upon the cap plate, an outlet pipe extending from the top of the casing, a shaft journaled thereon and secured to the upper disk, a removable pipe section upon the first mentioned pipe, a shaft section journaled thereon and detachably engaging the first mentioned shaft section, and a motor mounted upon the removable pipe section for driving the shaft.

898,500. WIRE-STRETCHER. JOHN OLSON, Belgrade, Minn. Filed Jan. 27, 1908. Serial No. 412,753.

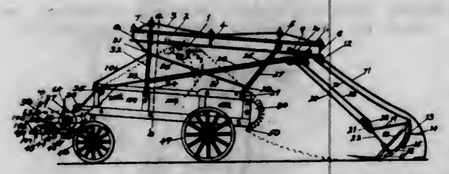
1. In a wire stretcher, the combination with a lever-acting bar, one edge of which is notched, of a hook applied

to one end of said bar, an eye-bolt applied to the other end of said bar, a wire grapple connected to said eye-bolt, a yoke adjustably mounted on the intermediate portion of said bar, and an anchoring rope or cable attached to said bar at one end, passed through said yoke and coöperating with said yoke to pivotally connect said bar to a post, substantially as described.



2. A wire stretcher comprising a lever-acting bar provided at one end with laterally spaced prongs and a wire engaging grapple, a yoke adjustably mounted on the intermediate portion of said bar, and a rope or cable coöperating with said yoke to pivotally connect said bar to a post, substantially as described.

898,501. WAGON-LOADING DEVICE. RASMUS PEDERSON, Parkersburg, Iowa. Filed Dec. 10, 1907. Serial No. 405,875.



1. In a wagon loading device, the combination with a wagon, of a beam removably supported thereabove, a track-rail suspended from and parallel to said beam and adapted to swing therefrom on hanger-bolts, such rail extending a distance beyond a rearwardly tilted support, a fork or scoop mounted to travel in suspension from said beam and track-rail, and a trip-rope connected to the said fork or scoop and adapted to cause the latter to dump, by reason of a tractive effort thereon, its load into the wagon-box at any desired location.

2. In a wagon loading device, the combination with a wagon, of a track rail removably supported thereover, a carriage mounted upon said track rail and adapted to move longitudinally thereover, a cable having one end secured to said carriage with its forward end passed over a pulley pivoted in the carriage, a pulley-block having its pulley adapted to ride upon the slack of said cable between its fixed and slidable connections with said carriage, a fork or scoop suspended from said pulley-block, a contact-piece on one end of said track rail, a hook on said pulley-block, a movable catch on said carriage adapted to interlock with the said hook and hold said fork or scoop in suspension from the carriage, said contact-piece being adapted to trip said catch and release said hook therefrom, and means for dumping said fork or scoop in a desired location.

3. In a wagon loading device, the combination with a wagon, of a track rail supported longitudinally and removably thereover, a fork or scoop mounted to travel in suspension from said track rail to a position for dumping into the wagon-box, a traction-cable attached to the upper part of said scoop and extending forwardly to some means for exercising a tractive effort, a cable attached to the rear part of said fork or scoop and having a slidable connection with said track rail, the rear end or portion of said last-mentioned cable to the rear of its slidable connection being secured to any suitable fixed body to cause it to automatically dump said fork or scoop when the latter is by means of the traction of the first-mentioned cable brought to a desired location over the wagor-box.

4. In a wagon loading device, the combination with a wagon, of a track rail located thereabove, a separable tubular framework removably supported on said wagon and adapted to sustain said track rail in suspension, a carriage provided with rollers adapted to travel lengthwise along and upon said track rail, said carriage having a pulley pivoted in its forward lower portion, a cable whose end is passed over said pulley and secured to the lower rear part of said carriage, a fork or scoop slidably suspended on the slack of the cable between the said pulley and the cable's connection to the rear end of the carriage, a pulley pivoted to the rear end of said carriage, and a second cable connected to the rear upper part of said fork or scoop and passed about the pulley on the rear end of said carriage to depend therefrom and be connected to some means of tractive effort.

5. In a wagon loading device, the combination with a wagon, of a fork or scoop mounted for travel over said wagon, means for supporting said fork or scoop in its travel over said wagon, means of detaching it therefrom, a draft cable connected to said fork or scoop carried forward therefrom and secured about a rotatable drum, means for rotating said drum to exercise a tractive effort on said cable, a ratchet-wheel secured to said drum to rotate therewith, and a guard-pawl in engagement with the teeth of said ratchet-wheel and adapted to permit it to rotate only in one direction.

[Claims 6 to 8 not printed in the Gazette.]

898,502. PENCIL-SHARPENER. ARNE T. PETERSON, Racine, Wis. Filed Jan. 6, 1908. Serial No. 409,403.



1. A sheet metal pencil sharpener, comprising a casing, a pencil-engaging tube contained in the casing and having an opening, a sheet metal plate secured to the tube at an angle thereto and having an opening registering with the opening of the tube, a slide movable on the plate, and a cutter carried by the slide and adapted to engage a pencil in the tube through the registering openings.

2. A pencil sharpener, comprising a casing, a pencil-engaging tube contained in the casing and having an opening, a plate secured to the tube at an angle thereto and having an opening registering with the opening of the tube, a slide movable on the plate, a cutter carried by the slide and adapted to engage a pencil in the tube through the registering openings, and a soft metal filling in the end of the tube forming a tapering socket to receive and support the point of the pencil and constituting a means for securing the tube and the plate and the casing together.

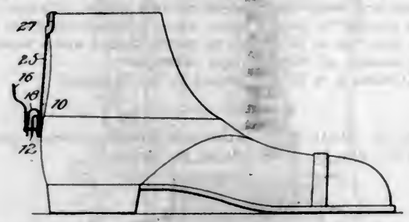
3. A pencil sharpener, comprising a pencil-engaging tube having an opening, a plate secured at an angle thereto having an opening registering with the opening of the tube, a slide movably mounted on the plate, a cutter carried by the slide and adapted to engage a pencil contained in the tube through the registering openings, and a filling in the end of the tube forming a conical socket to receive and support the point of the pencil and constituting a means for connecting the plate and tube together.

4. A pencil sharpener, comprising a casing, a pencil-engaging tube within the casing having an opening, a plate secured to the tube at an angle thereto and having an opening registering with the opening of the tube, flanges on the casing forming a guideway with the plate, a slide movably mounted in the guideway, and a cutter carried by the slide and adapted to engage a pencil in the tube through the registering openings.

5. A pencil sharpener, comprising a casing, a pencil-engaging tube therein having an opening, a plate connected to the tube at an angle thereto and having an opening registering with the opening of the tube, flanges on the casing forming a guideway with the plate, a slide movably mounted in the guideway, a cutter carried by the slide and adapted to engage a pencil in the tube through the registering openings, said flanges being closer to the plate near the end of the stroke of the slide.

[Claims 6 to 10 not printed in the Gazette.]

898,503. OVERSHOE-HOLDER AND TROUSERS-SUPPORTER. JOHN M. PLUMMER, Elk City, Kans. Filed Mar. 27, 1908. Serial No. 423,619.

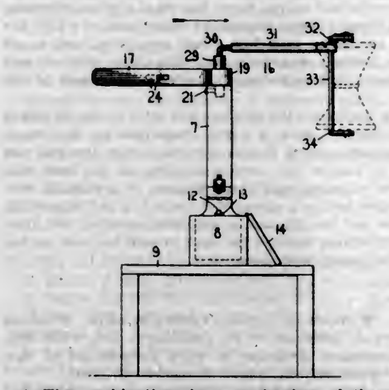


1. A device of the character described, having in combination, a hanger, a pliable connection extending from said hanger, a clasp secured to said connection, and a lever operating said clasp curved outward to serve as a trousers support, as set forth.

2. A device of the character described, having in combination, a hook formed hanger, a connection extending from said hanger, a clasp secured to said connection, comprising a U-shaped ear plate, a slotted U-shaped spring secured to said plate, and a lever carried by said ear plate having an engaging lip extending through said slot, said lever curving outward and upward to serve as and for the purposes set forth.

3. A device of the character described, having in combination, a hook formed hanger, a connection extending from said hanger, a clasp secured to said connection comprising a U-shaped ear plate, a slotted recurved spring plate carrying said ear plate, a projecting stub securing said ear plate to said spring plate, and a lever carried by said ear plate having an engaging lip extending through said slot, and being normally positioned above said stud, said lever curving outward and upward to serve as a trouser support, as set forth.

898,504. MAIL-BAG CATCHING AND DELIVERING APPLIANCE. WILLIAM M. PORTEE, Murphysboro, Ill. Filed Sept. 30, 1907. Serial No. 395,232.



1. The combination, in a mechanism of the class described, of a post, a rotatable cap provided with a finger adapted to fit in a socket formed in the upper end of the post, and a pair of horizontal bar-removing wings secured to the cap and movable therewith so as to extend to one side or the other of the post, according to the direction of travel of the mail car, one of said wings being stationary and the other wing being movable towards and from the stationary wing, to clamp a mail bag therebetween.

2. The combination, in a mechanism of the class described, of a post, a rotatable cap provided with a finger adapted to fit in a socket formed in the upper end of the post, a pair of horizontal bag-removing wings secured to the cap and movable therewith so as to extend to one side or the other of the post, according to the direction of travel of the mail car, and means adapted for engagement with said finger to retain the wings in fixed position at one side or the other of the post.

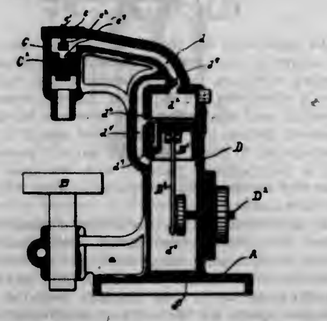
3. The combination, in a mechanism of the class described, of a post, a rotatable cap provided with a finger adapted to fit in a socket formed in the upper end of the post, a pair of horizontal bag-receiving wings secured to the cap and movable therewith so as to extend to one side or the other of the post according to the direction of travel of the mail car, one of said wings being stationary and the other movable, means for holding the movable wing in contact with the stationary wing, means for holding the movable wing away from the stationary wing against the action of the first-mentioned wings, and means adapted for engagement with said finger, to retain the wings in fixed position at one side or the other of the post.

4. In a mechanism of the class described, the combination of a post, a pair of horizontal wings carried thereby, one of said wings being movable towards and from the other, a spring adapted to bear against the movable wing, to force it towards the stationary wing, and a trigger pivoted to one of said wings and adapted to engage the other wing, to hold said wings out of contact with each other, and to extend through a slot formed in the last-mentioned wing, the disengagement of the trigger from said wing being effected by the blow of the bag removed by the wings.

5. The combination, in a mechanism of the class described, of a box, a post hinged at its lower end to the box bottom and comprising a plurality of sections foldable one upon another, to permit the post to be disposed within the box, and bag-supporting and catching mechanisms removably connected with said post.

[Claims 6 and 7 not printed in the Gazette.]

898,505. PNEUMATIC HAMMER. THEODORE C. PROUTY, Aurora, Ill., assignor to T. C. Prouty Company, Limited, Albion, Mich., a Corporation of Michigan. Filed Dec. 21, 1905. Serial No. 292,727.



1. In mechanism of the class described, fluid compressing and exhausting means comprising a closed cylinder provided with a duct for external connection, a piston reciprocable in said cylinder, and means operating in unison with said piston for periodically effecting an equalization of pressure in said cylinder on the two sides of said piston.

2. In mechanism of the class described, fluid compressing and exhausting means comprising a closed cylinder provided with a duct for external connection, a piston reciprocable in said cylinder, and ducts in said cylinder and piston, respectively, arranged and constructed to periodically connect the parts of said cylinder on the respective sides of said piston and thereby equalize the pressures in such cylinder parts.

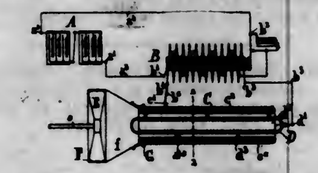
3. In mechanism of the class described, fluid compressing and exhausting means comprising a closed cylinder provided with a duct for external connection, a piston reciprocable in said cylinder, and ducts in said cylinder and piston, respectively, arranged and constructed to connect the parts of said cylinder on the respective sides of said piston at approximately the end of each stroke of the latter and thereby equalize the pressures in such cylinder parts.

4. In mechanism of the class described, fluid compressing and exhausting means comprising a closed cylinder provided with a duct for external connection, and a piston reciprocable in said cylinder, said cylinder being further provided with a duct adapted to connect the two ends thereof at approximately the end of one stroke of said piston, and said piston being provided with a duct adapted to register with said cylinder-duct to connect the two ends of said cylinder at approximately the end of the other stroke of said piston.

5. In mechanism of the class described, fluid compressing and exhausting means comprising a closed cylinder provided with a duct for external connection, and a piston reciprocable in said cylinder, said cylinder being further provided with a duct leading from a point on one side of said piston when at approximately the end of one stroke to a point on the other side thereof, and said piston being provided with a duct leading from one face thereof to a point on its side disposed to register with one of the openings of said cylinder-duct in the course of said piston's other stroke.

[Claims 6 to 11 not printed in the Gazette.]

898,506. APPARATUS FOR THE PRODUCTION OF OZONE. JOHN R. QUAIN, London, England, assignor of one-half to Edward Applegarth, London, England. Filed Feb. 12, 1907. Serial No. 357,069.



1. An apparatus for the production of ozone, comprising a source of high tension current, electrodes sealed in insulating envelops, said envelops being exhausted so that said electrodes are *in vacuo*, current conveying connections to said electrodes, said envelops being arranged in parallel planes and being spaced apart by insulated distance pieces to form relatively narrow passages whose length is substantially parallel with the axes of the envelops, and means for passing air through the space between said electrodes.

2. An apparatus for the production of ozone, comprising a source of current, a transformer, electrodes in insulating and vacuum-containing envelops, connections from said transformer to said electrodes, said envelops being arranged adjacent to one another with a space between and means for directing through said space in a direction parallel with the length of the electrodes and envelops the air to be ozonized.

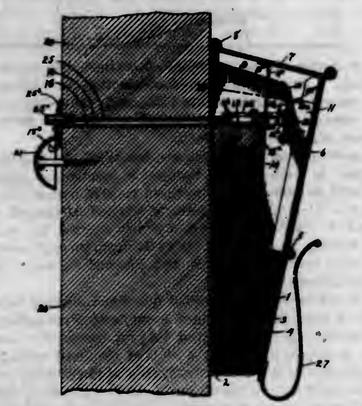
3. An apparatus for the production of ozone, comprising a source of current, a transformer, electrodes in insulating and vacuum-containing envelops, connections from said transformer to said electrodes, said envelops being arranged in parallel planes adjacent to one another with insulated distance pieces between to form a conducting space which extends lengthwise of the electrodes and inclosing envelops, and means for directing air past said distance pieces and along the envelops.

4. An apparatus for the production of ozone, comprising a source of current, a transformer, positive and negative electrodes both sealed in separate exhausted envelops, said envelops being of insulating material and adjacent to one another, and means for passing air between said envelops in the direction of the length thereof and of the electrodes.

5. An apparatus for the production of ozone, comprising a source of current, a transformer, positive and negative electrodes which are both sealed in separated exhausted envelops, said envelops being of insulating material and being arranged in parallel planes adjacent to one another to form a space whose greatest length is in the direction of the length of the electrodes, and a blower for passing air between said envelops.

[Claims 6 to 13 not printed in the Gazette.]

898,507. MAIL-BOX. ALBERT B. RHODES, Marion, Ohio. Filed Feb. 10, 1908. Serial No. 415,042.



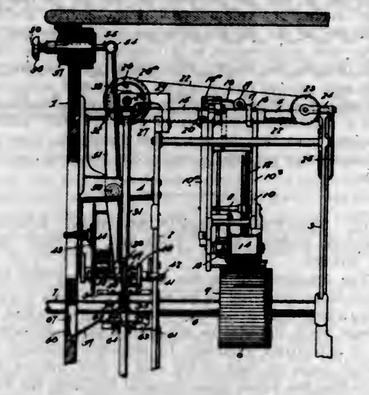
1. In a mail box, the combination with a box having a movable lid and door, of a slidably supported plate having a zigzag slot therein, a rod depending from said lid and engaging said plate, and a bell ringing rod rotatably mounted and having one of its ends engaging loosely said zigzag slot.

2. In a mail box, the combination with a box having a movable lid and a door hinged to the front of the box, and a catch projection on the inner face of said door, of spring actuated pivoted catch fingers the outer ends of which are adapted to engage said door catch projection, and a rod having a jointed connection with the inner ends of said catch fingers and extending through the rear wall of the box.

3. In a mail box, the combination with a box having a movable lid and door, a catch projection on said door, spring actuated catch fingers pivoted within the box and adapted to engage the catch projection of the door, and means for releasing said catch fingers, of a slidably supported plate having a zigzag slot therein, a rod connecting said plate and box lid, and a rotatably mounted bell ringing rod extending through the back of said box and having one end engaging said zigzag slot.

898,508. WORKMAN'S TIME-CONTROLLER. WILLIAM ROCKWELL, Syracuse N. Y., assignor to Dey Time Register Company, Syracuse, N. Y., a Corporation of New York. Filed May 24, 1907. Serial No. 375,380.

1. In a time recorder, in combination, an impression surface, printing mechanism, means for causing a relative movement between said surface and mechanism to cause the latter to make records on said surface progressively and successively at different points in determined sequence, and means independent of said first-named means to cause a relative retrograde movement between said surface and mechanism to make an impression at a point passed over in said first mentioned movement.



2. In a time recorder, in combination, an impression surface, printing mechanism, means for causing a relative movement between said surface and mechanism to cause the latter to make records on said surface progressively and successively at different points in determined sequence, and manually operable means to cause a relative retrograde movement between said surface and mechanism to enable the latter to make an impression at a point passed over in said first mentioned movement.

3. In a time recorder, in combination, an impression surface, printing mechanism, automatic means for causing a relative movement between said surface and mechanism to enable the latter to make records on said surface progressively and successively at different points in determined sequence, and means to cause a relative retrograde movement between said surface and mechanism to enable the latter to make an impression at a point passed over in said first mentioned movement.

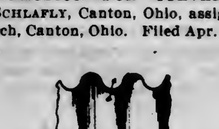
4. In a time recorder, in combination, an impression surface, printing mechanism, automatic means for causing a relative movement between said surface and mechanism to enable the latter to make records on said surface progressively and successively at different points in determined sequence, and manually operable means to cause a relative retrograde movement between said surface and mechanism to enable the latter to make an impression at a point passed over in said first mentioned movement.

5. In a time recorder, in combination, an impression surface, printing mechanism, time controlled means for causing a relative movement between said surface and mechanism to enable the latter to make records on said surface progressively and successively at different points in determined sequence, and means to cause a relative retrograde movement between said surface and mechanism to enable the latter to make an impression at a point passed over in said first mentioned movement.

[Claims 6 to 25 not printed in the Gazette.]

898,509. ELECTRICAL-CIRCUIT PROTECTOR. CHARLES A. ROLFE, Adrian, Mich., assignor, by mesne assignments, to Rolfe Electric Co., Rochester, N. Y., a Corporation of New York. Filed Dec. 29, 1903, Serial No. 187,044. Renewed Feb. 13, 1908. Serial No. 415,763.

1. In apparatus of the class specified, the combination of a pair of line springs, a heat cartridge supported by said line springs, and comprising spring members subjected to the tension of the line springs, softenable material holding said spring members normally against such tension, and a heat concentrating device adapted to soften or melt said softenable material, substantially as described.



2. In apparatus of the class specified, the combination of a pair of line springs, a heat cartridge supported thereby, and comprising a pair of springs tending to move or spring in a lateral direction and engaged by one of said line springs, softenable material holding said cartridge springs against such lateral action, and a heat concentrating device adapted to melt or soften said material, substantially as described.

3. In apparatus of the class specified, the combination of a pair of line springs, a heat cartridge supported thereby, and comprising a pair of flat springs tending to spread or separate from one another, said springs being engaged by one of the line springs, softenable material adapted to hold said cartridge springs in such spread condition, and a heat coil adapted to soften or melt such softenable material, substantially as described.

4. In apparatus of the class specified, the combination of a pair of line springs having forked ends, said line springs tending normally to separate from one another, a heat cartridge supported by said springs and comprising a metallic terminal having a head for engaging one of the line springs, a pair of leaf springs tending to spread or separate from one another, said springs being in engagement with the forked end of the other line spring, a quantity of solder normally holding said springs in their spread condition, and a heat coil associated with said solder for melting or softening the same, substantially as described.

5. In a thermal circuit-protector, in combination, a fixed member; a spring; a spring-finger fixed with relation to said fixed member and tending to lie in contact therewith, which finger is adapted to hold said spring flexed, said spring tending to separate the spring-finger from said fixed member; and a solder connection between said fixed member and said spring-finger.

[Claims 6 to 12 not printed in the Gazette.]

898,510. CONNECTION FOR CULVERT-SECTIONS. JULIUS H. SCHLAFLY, Canton, Ohio, assignor to Edward A. Langenbach, Canton, Ohio. Filed Apr. 1, 1908. Serial No. 424,526.



1. In a connection for culvert sections, culvert sections provided with notched and unnotched ends respectively, the unnotched ends provided with an unclosed lapped joint, said culvert sections being telescopically and rotatably connected together, whereby the telescopic sections are transposed, substantially as and for the purpose specified.

2. In a device of the character described, culvert sections telescopically connected together and rotated relatively with reference to each other whereby the portions of the lapped telescopic sections are transposed, substantially as and for the purpose specified.

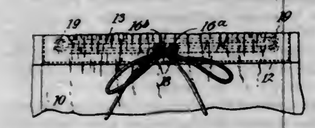
3. In a device of the character described, culvert sections adapted to be lapped one within the other at their adjacent ends, notches formed in the end of one of the sections and an open lapped joint formed in the end of the

other section, and means whereby the lapped portions may be transposed, substantially as and for the purpose specified.

4. In a device of the character described, culvert sections adapted to be lapped one within the other at their adjacent ends, notches formed in the end of one of the sections and an open lapped joint formed in the end of the other section, and means whereby the lapped portions may be transposed as to their entire contact surfaces, substantially as and for the purpose specified.

5. In a device of the character described, culvert sections adapted to be lapped one within the other at their adjacent ends, notches formed in the end of one of the sections and an open lapped joint formed in the end of the other section and means whereby the parts may be transposed for part of their contact surfaces, substantially as and for the purpose specified.

898,511. SKIRT. ALEXANDER M. SCHNEIDER, New York, N. Y. Filed June 4, 1908. Serial No. 436,559.



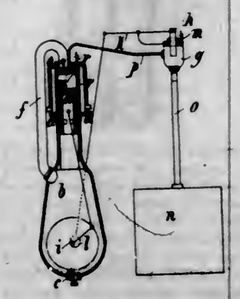
1. A skirt provided with a pocket extending along the rear waist line, a pair of openings at each end thereof, a pair of openings at the center, and a shirring string engaging said pocket and openings, substantially as specified.

2. A skirt provided with a pair of passages extending along the rear waist line, an opening at the end of each passage, a pair of openings at the center of one of said passages, and a shirring string engaging said passages and openings, substantially as specified.

3. A skirt provided with a pair of passages extending along the rear waist line, an opening at the end of each passage, a pair of spaced openings at the center of one of said passages, and a shirring string engaging said passages and openings, the ends of said string being crossed within its passage intermediate the central openings, substantially as specified.

4. A skirt provided with a pair of passages extending along the rear waist line, a double eyelet connecting the passages at each end, a pair of spaced eyelets at the center of one of said passages, and a shirring string engaging said passages and eyelets, substantially as specified.

898,512. PROCESS OF WORKING EXPLOSIVE-ENGINES. KARL E. SCHREBER, Greifswald, Germany. Filed Nov. 27, 1903. Serial No. 182,785.



1. The method of cooling the explosive charge of an internal combustion engine to increase the capabilities of compression thereof, which consists in injecting a cooling liquid directly into the working cylinder of an engine at a point during the compression of the charge when the temperature of the latter has been raised by the heat incident to said compression to a temperature equal to the boiling point of the cooling liquid and continuing the injection of said cooling liquid during the further compression of the charge.

2. The method of cooling the explosive charge of an internal combustion engine to increase the capabilities of compression thereof, which consists in injecting a cooling liquid directly into the working cylinder of an engine at a point during the compression of the charge when the temperature of the latter has been raised by the heat incident to said compression to a temperature equal to the boiling point of the cooling liquid, and then gradually injecting such cooling liquid, during the further compression of the charge so that the heat produced by the compression during a part of the increase in pressure shall suffice to evaporate the cooling liquid injected during the same time, said evaporation serving to reduce the temperature of the charge.

898,513. PROCESS OF REFINING IRON. SAMUEL B. SHELDON, Buffalo, N. Y. Filed Jan. 17, 1907. Serial No. 352,687.

1. The improvement in the art of refining iron which consists in transferring to an auxiliary furnace a part of the slag remaining at the end of a refining operation, adding fresh basic material to the slag in said auxiliary furnace in quantities sufficient to maintain uniform basic efficiency, applying heat to the slag in such auxiliary furnace to fuse the added basic material and keep the slag in a molten condition and transferring slag from said auxiliary furnace, while still in a molten condition, into a refining furnace, to be used as part of the charge for another refining operation.

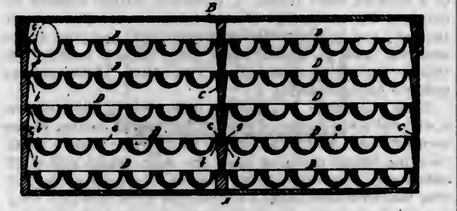
2. The improvement in the art of refining iron which consists in transferring to an auxiliary furnace slag remaining at the end of a refining operation, adding fresh basic material to the slag in such auxiliary furnace in quantities sufficient to maintain uniform basic efficiency, applying heat to the slag in such auxiliary furnace to fuse the fresh basic material and keep the slag therein in a molten condition, transferring a part of the slag from said auxiliary furnace into a refining furnace as the charge for another refining operation, and adding unrefined or partially refined pig-iron or steel in a molten state to the slag in said refining furnace.

3. The improvement in the art of refining iron which consists in transferring to an auxiliary furnace slag remaining at the end of a refining operation, adding fresh basic material to the slag in said auxiliary furnace, applying heat to the slag in said auxiliary furnace to fuse the added basic material and keep the slag in a molten condition, allowing the shotted metal in said slag to accumulate in said auxiliary furnace, transferring slag from said auxiliary furnace while still in a molten condition into a refining furnace to be used as part of the charge for another refining operation, and adding pig metal in liquid or solid form to the shotted metal which accumulates in said auxiliary furnace.

4. The improvement in the art of refining iron which consists in transferring to a blast furnace a portion of the slag remaining at the end of a refining operation, transferring to an auxiliary furnace another part of such slag, adding to the slag in said auxiliary furnace fresh additions of basic material in quantity sufficient to maintain uniform basic efficiency, applying heat to the slag in such auxiliary furnace to fuse the added basic materials and keep the slag in molten condition, and transferring slag from said auxiliary furnace to a refining furnace for use in another refining operation.

898,514. EGG-CARRIER. MELZAR SHEPARD, Wayne, Mich. Filed Jan. 11, 1908. Serial No. 410,339.

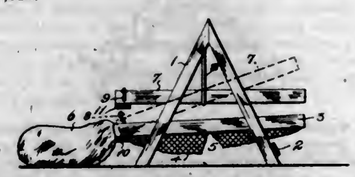
1. An egg carrier comprising a vertical series of egg-holding trays and a casing in which said trays are supported, the casing having vertical walls, two of which on opposite sides are provided with recesses into which the ends of the trays project, said recesses forming a series of inclines on the inner faces of said walls adapted to permit the insertion and removal of the trays through the top of the casing in the manner described.



2. In an egg carrier, the combination of a casing provided with a removable cover on top and having vertical end and side walls, the inner walls on two opposite sides provided with ledges formed by cutting away portions of said walls between the ledges, the faces of said walls between said ledges being inwardly inclined, and a vertical series of egg holding shelves or trays removably supported on said ledges.

3. In an egg carrier, the combination of a casing provided with a removable cover on top and having vertical end and side walls, the inner faces of the walls on two opposite sides being provided with ledges formed by cutting away portions of said walls between the ledges, the faces of the walls between the ledges being inwardly inclined and the supporting shoulders of the ledges being upwardly inclined, and a vertical series of egg holding shelves or trays removably supported on said ledges and provided with reinforced supporting edges conforming to the inclines of the supporting shoulders of the ledges.

898,515. VEGETABLE-SEPARATOR. WILLIAM J. SHERRARD, Cotton Gin, Tex. Filed Oct. 29, 1907. Serial No. 399,726.



1. In a vegetable separator the combination with a supporting frame, of a stationary screen, a movable screen arranged to coöperate with said stationary screen, and means for controlling the discharge of said movable screen said means arranged to be operated by the fixed screen.

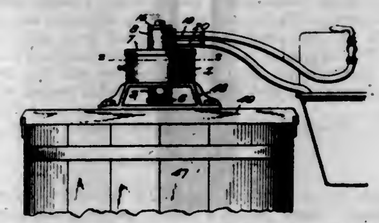
2. In a vegetable separator, the combination with supports and a screen fixed thereto, of a screen movably arranged on the supports above the fixed screen; and a closure for said movable screen frome arranged to be operated by the fixed screen.

3. In a vegetable separator, the combination with a movable screen and supports, of a screen fixed to the supports, said screen consisting of fabric sloping from each end toward an enlarged opening therein which is so shaped that one part projects lower than the other substantially as described.

898,516. WATER-MOTOR. JOSEPH P. SHEVLIN, Denver, Colo. Filed Oct. 26, 1906. Serial No. 340,713.

1. In a water motor of the oscillating type, a cylinder, a hub projecting axially from said cylinder, having two chambers, a shaft extending through said cylinder having ports which communicate with the chambers, a lateral piston on the shaft having chambers which communicate with the shaft ports, and ports communicating with the cylinder, an abutment partition in said cylinder, and slide valves for controlling the piston ports, which contact with said abutment.

2. In a water motor of the oscillating type, a cylinder, a hub projecting axially from said cylinder having two independent chambers and pipes leading from said chambers, a shaft extending through the cylinder, its upper end extending into the upper chamber of the hub, and having two ports, one of which communicates with said upper hub chamber while the other communicates with the lower chamber, a lateral piston on the shaft having two independent interior chambers, which communicate respectively with the two shaft ports, and ports which communicate with the cylinder, an abutment partition in said cylinder, and slide valves for controlling said piston ports, which contact with the abutment at each stroke of the piston.



3. In a water motor of the kind specified, the combination with a cylinder, a shaft in the cylinder having inlet and exhaust ports, a lateral piston on the shaft, having inclosed chambers communicating with the shaft ports, and lateral ports in said chambers communicating with the cylinder, of means for controlling said chamber ports, comprising a double-headed plug valve in one of said chambers, having a stem projecting from each end thereof through and beyond the ports of said chamber, a sleeve inclosing said plug valve of less length than the width of the chamber, having laterally projecting stems which extend through the sides of the chamber slightly beyond the end of the valve stem, a stem extending through the ports of the other chamber, having a valve adjacent to each end, but on the outside of the chamber, a supporting sleeve for each valve connected by stems which pass through the chamber and extend slightly beyond the ends of the valve stem, and an abutment partition in the cylinder, with which the sleeve and valve stems contact at each stroke of the piston.

4. The combination with a cylinder, a ported piston shaft in said cylinder, a lateral piston on said shaft having independent inclosed chambers communicating with the shaft ports, and which have lateral ports communicating with the cylinder, of means for controlling said lateral ports comprising double acting slide valves having laterally projecting stems, sleeves supporting said valves, adapted to slide independently of the valves and having stems which extend slightly beyond the ends of the valve stems, and an abutment partition in said cylinder, with which the valve and sleeve stems contact at each stroke of the piston.

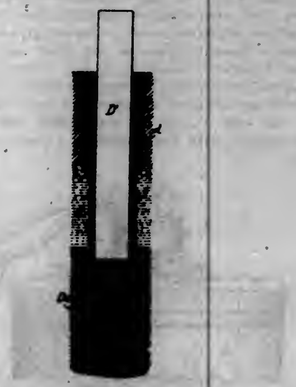
5. In a water motor as specified, the combination with a cylinder, a ported piston shaft, a lateral piston on said shaft having chambers communicating with the shaft ports, and with the cylinder by lateral ports, and slide valves, with laterally projecting stems, for controlling said lateral ports, of means for cutting off the pressure from said valves before they are unseated, and for permitting the valves to be reversed by water pressure, consisting of sleeves which inclose said valves, which slide independently of the valves and which are supported upon stems of slightly greater length than the valve stems, and an abutment partition in said cylinder with which the sleeve and valve stems contact at each stroke of the piston.

[Claim 6 not printed in the Gazette.]

898,517. CONCRETE PILE AND PROCESS OF CONSTRUCTING THE SAME. FRANK SHUMAN, Philadelphia, Pa. Filed May 31, 1906. Serial No. 319,576.

1. The method of placing a concrete pile within the ground, said method consisting in driving a hollow pre-

paratory pile into the ground, molding a concrete pile of a given diameter and when set inserting it in the hollow preparatory pile within the ground.



2. The method of placing a concrete pile within the ground, said method consisting in driving a hollow preparatory pile into the ground, molding a concrete pile of a given diameter and length, inserting the said previously molded concrete pile in the hollow pile within the ground, and then withdrawing the hollow preparatory pile, leaving the previously molded concrete pile within the ground.

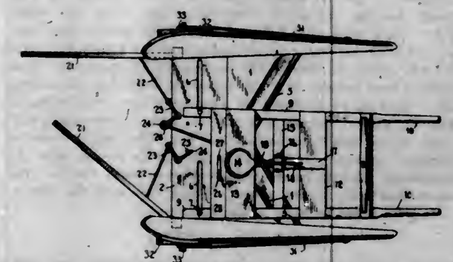
3. The method of constructing concrete piles, consisting in driving a hollow preparatory pile, filling a portion of the opening thus formed with concrete or concrete grout, then mounting a previously molded concrete pile section within the preparatory pile and upon the concrete grout.

4. The method of constructing concrete piles consisting in making an opening with a hollow preparatory pile, pouring grout in the said opening to form a base section of a pile, inserting a previously molded concrete pile section in the preparatory pile and resting said section upon the base section prior to the setting of the base section, so that when the said base section is set it will be welded to the molded section, forming a unitary structure.

5. The method of constructing concrete piles consisting in forming an opening by a hollow preparatory pile, inserting a previously molded concrete pile into the preparatory pile, gradually withdrawing the shell of the preparatory pile, and filling the space between the molded pile and the walls of the opening with grout as the shell is removed.

[Claims 6 to 12 not printed in the Gazette.]

898,518. CORN-CUTTING MACHINE. FREDERICK U. SMITH, McGinnis, Md. Filed Feb. 26, 1908. Serial No. 417,906.



1. The combination, in a machine of the class described, of a wheeled main frame; a V-shaped cutting member secured to the under face of said frame; and a shaft-carrying frame mounted upon the upper face of the main frame and shiftable from side to side, to expose either arm of the cutting member.

2. The combination, in a machine of the class described, of a wheeled main frame; a V-shaped cutting member secured to the under face of said frame at the forward end thereof; and a forwardly-extending shaft-carrying frame mounted upon the main frame and shiftable bodily from side to side thereof, to expose either arm of the cutting member for operation.

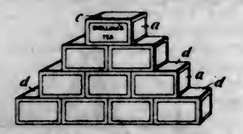
3. In a machine of the class described, in combination, a wheeled main frame; a pair of convergent cutting blades secured to the under face of the main frame; and a shaft-carrying frame mounted upon the main frame and shiftable bodily from side to side thereof, to expose either cutting blade for operation.

4. In a machine of the class described, in combination, a wheeled main frame; a pair of rearwardly extending converging cutting blades secured to the under face thereof; and a shaft-carrying frame mounted upon the main frame and shiftable bodily from side to side thereof, to expose either blade for operation.

5. In a machine of the class described, in combination, a wheeled main frame provided adjacent its rear edge with a pair of alining transverse slots, a pair of rearwardly converging cutting blades secured to the under face of said frame; a frame mounted upon the main frame and shiftable bodily from side to side thereof, said shiftable frame comprising a pair of longitudinal sills, cross pieces connecting said sills, and a forwardly extending shaft secured to each sill; and a member carried by each sill at the rear end thereof and extending through the adjacent slot, for guiding the shiftable frame during its movements.

[Claims 6 to 13 not printed in the Gazette.]

898,519. DISPLAY DEVICE. ARTHUR H. SNELLING, London, England. Filed Feb. 1, 1908. Serial No. 413,916.



1. A dummy for the purpose set forth representing a pile or group of articles and made from sheet material such as cardboard, and comprising a front portion, and side, rear and top walls, said walls being hinged to permit the dummy to be collapsed flat.

2. A dummy for the purpose set forth representing a pile or group of articles and made from sheet material such as cardboard, and comprising a front, rear, side and top walls hinged to permit of the front and back of the dummy being folded flat together, said front wall carrying collapsible representations in sheet material of the goods.

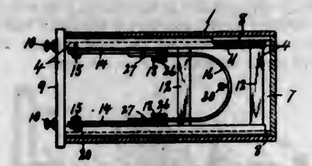
3. A dummy for the purpose set forth representing a pile or group of articles and made from sheet material such as cardboard, and comprising a front portion and side and rear walls and a hinged top flap, said walls being hinged along the vertical lines of junction to permit the dummy to be folded flat, and the dummy being held extended by folding the hinged top flap horizontally between the side walls.

4. A dummy for the purpose set forth representing a pile or group of articles and made from sheet material such as cardboard, and comprising stepped front and rear walls, hinged side walls providing the risers of the steps and hinged top walls providing the treads of the steps, the whole being collapsible.

5. A dummy for the purpose set forth representing a pile or group of articles and made from sheet material such as cardboard, and comprising stepped front and rear walls, side walls connecting their vertical edges and hinged along the lines of junction, and hinged flaps which when folded down horizontally provide top walls which cover the open spaces and hold the dummy extended.

[Claims 6 to 9 not printed in the Gazette.]

898,520. MEGAPHONE-HOLDER FOR PHONOGRAPH-CABINETS. SAMUEL D. SOLOMON, Syracuse, N. Y. Filed Aug. 27, 1907. Serial No. 390,398.



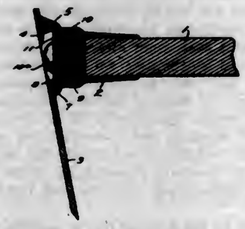
1. In combination with a phonograph cabinet and support thereon, said support having a recess in one side, a fixed pin secured to one side and centrally of and projecting through and beyond the open side of the recess, a horn holder frame hinged to the support and having one side thereof rotatable upon and movable lengthwise of said pin into and out of the recess.

2. A horn holder for phonograph cabinets comprising a support having a recess in one side, a folding horn holder hinged to the support and having one side adapted to enter said recess to lock said horn holder in its operative position, said horn holder being composed of sections, one section being adjustable lengthwise of the other, and means to clamp the adjustable section in its adjusted position.

3. In combination with a phonograph cabinet and support thereon, said support having a recess in one side, a fixed pin secured to one side and centrally of and projecting through and beyond the open side of the recess, a horn holder frame hinged to the support and having one side thereof rotatable upon and movable lengthwise of said pin into and out of the recess, and a limiting stop on the pin to limit the lengthwise movement of the adjacent side of the horn holder on said pin when forced out of the recess.

4. In combination with a cabinet having a chamber therein, a sliding frame movable in said chamber, a horn holder hinged to the sliding support, said sliding frame and horn holder being provided with interlocking shoulders near the swinging axis of the horn holder whereby the latter is held in its operative position, said horn holder having an adjustable extension.

898,521. HOE. WILLIAM A. SPARKS, St. Marys, W. Va. Filed Feb. 7, 1908. Serial No. 414,816.



1. A hoe comprising a handle carrying a screw threaded socket piece, a blade having a perforation therein, a screw threaded shank piece adapted to engage said socket piece and also having a perforation therethrough, and a rivet passed through said perforations and securing said shank piece to said blade.

2. A hoe comprising a handle carrying a screw-threaded socket piece, a blade having a square perforation therein, a screw threaded shank piece adapted to engage said socket piece and also having a square perforation therethrough, and a square shanked rivet bolt passed through said perforations and securing said shank piece to said blade.

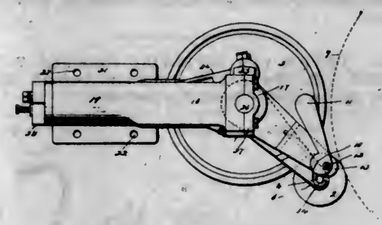
3. A hoe comprising a handle carrying a screw threaded socket piece, a blade having a square perforation therein, a screw threaded shank piece adapted to engage said socket piece and also having a square perforation therethrough, a square shanked rivet bolt passed through said perforations and securing said shank piece to said blade, and a washer interposed between the head of said rivet bolt and the blade.

4. A hoe comprising a handle carrying a screw threaded socket piece, a blade having a depression therein, the rear face of said depression being arranged at an angle with the blade, and a screw threaded shank piece secured to the rear face of said depression and adapted to engage said socket piece.

5. A hoe comprising a handle carrying a screw threaded socket piece, a blade having a depression therein, a perforation arranged in the rear face of said depression, said rear face being arranged at an angle with the blade, a screw threaded shank piece adapted to engage said socket piece and also having a perforation therethrough, and a rivet passed through said perforations and securing said shank piece to said blade.

[Claims 6 and 7 not printed in the Gazette.]

898,522. POWER AIR-PUMP. WILLARD J. SPENCER, Waterbury, Conn. Filed Nov. 25, 1907. Serial No. 403,702.



1. In a power air-pump for installation upon automobiles, the combination with a frame comprising a cylinder and a base-plate fixed with relation to each other, of a driven wheel carried by the said frame and located in the plane of the base plate, whereby, in the installation of the pump upon the frame of an automobile, the base-plate may be applied directly to the frame without the use of a bracket or other intermediate part.

2. In a power air-pump, the combination with a frame comprising a cylinder and a base-plate, of a driven wheel carried by the said frame and located in the plane of the said base-plate, a swinging arm carried by the frame and having the same center as the said driven wheel, a driving-wheel carried by the said arm in position to engage with the said driven-wheel for driving the same, an adjustable arm having the same center as the driven-wheel, and means carried by the adjustable arm for controlling the position of the driving-wheel carried by the swinging arm.

3. In a power air-pump, the combination with a frame comprising a cylinder and a base-plate, of a driven-wheel carried by the said frame, a swinging arm mounted in the said frame concentric with the driven-wheel and extending beyond the periphery thereof, a driving-wheel mounted in the outer end of the said swinging arm in position to engage with the driven-wheel, an adjustable arm extending alongside the swinging arm, and a cam-lever located in the outer end of the adjustable arm for controlling the location of the said driving-wheel with reference to the fly wheel of a motor.

4. In a power air pump, the combination with a frame comprising a cylinder and a base-plate, a crank mounted in the said frame, a driven wheel secured to one of the journals of the said crank, an adjustable arm mounted in the said frame concentric with the driven-wheel, a swinging arm also carried by the said frame and swinging on the axis of the said wheel, a driving-wheel mounted in the swinging arm, and means applied to the normally fixed adjustable arm for controlling the position of the driving wheel with respect to the fly-wheel of a motor.

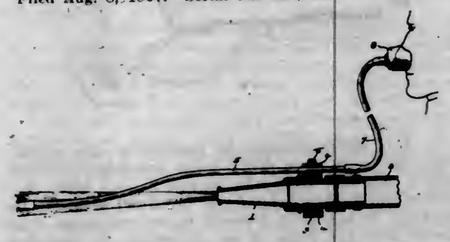
898,523. BELT-TIGHTENER. JAMES T. SULLIVAN, New castle, New Brunswick, Canada. Filed Jan. 22, 1908. Serial No. 412,138.



1. In a device of the character described, a plurality of gripping rollers, links connecting said rollers in pairs, eccentrically mounted gudgeons secured to the ends of said rollers, links secured to said gudgeons, threaded bars connected to said last named links, and means for coupling said threaded bars in pairs and for drawing the same together to draw the pairs of rollers toward each other and to simultaneously force the individual rollers of each pair together.

2. In a device of the character described, a plurality of gripping rollers, links connecting said rollers in pairs, eccentrically mounted gudgeons secured to the ends of said rollers, links connecting said gudgeons, bars pivotally connected to said last named links, and turn buckles connecting said bars in pairs and adapted to draw the same together to move the pairs of rollers toward each other and to simultaneously force the separate rollers of each pair together.

898,524. DEVICE FOR SUPPLYING FIREMEN WITH FRESH AIR. PATRICK H. SULLIVAN, Detroit, Mich. Filed Aug. 8, 1907. Serial No. 387,607.



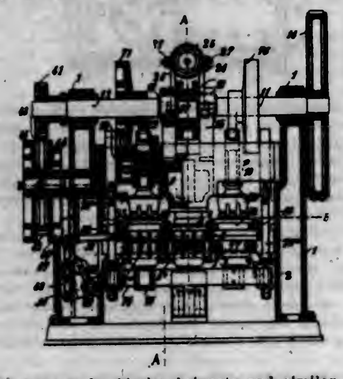
1. In a device for supplying the pipeman with fresh air for breathing, the combination with a water supply nozzle, of an air supply tube carried by the nozzle and extending forwardly therefrom to one side of the path of the stream and thence converging gradually towards and into the stream, the front end of said pipe being adapted to be wholly submerged within the stream and forming the inlet for the air into the tube.

2. In a device for supplying the pipemen with fresh air, the combination with a nozzle and hose for supplying it with water, of an intermediate coupling member bearing a loose collar, a pipe carried by the collar and projecting with its forward end into the stream from the nozzle and a breathing tube connected to the rear end of the pipe.

898,525. PRESS FOR MANUFACTURING BRIQUETS, BLOCKS, ARTIFICIAL STONE, AND THE LIKE. WILHELM SURMANN, Cologne, Germany. Filed Apr. 28, 1906. Serial No. 314,289.

1. In a press for making blocks, briquets and like articles, the combination of a pair of pressure devices and means for operating them, a mold carriage containing two molds, means for reciprocating said carriage between said stamps and presenting said molds alternately in the line of pressure, and mechanism arranged on each side of the pressure devices, to eject the finished block and recharge the mold which at the moment is not undergoing pressure substantially as set forth.

2. In a press for making blocks, briquets and the like articles, a pair of stamps movable toward and from each other, means arranged on each side of said stamps for ejecting the finished brick and recharging a mold, a mold carrier provided with two molds, means for reciprocating said mold-carrier between said stamps, to present the molds alternately thereto, the mold not between the stamps being simultaneously presented to the ejecting and recharging devices, a driving shaft, eccentrics operated thereby and intermediate devices whereby the said stamps are actuated by said shaft substantially as set forth.



3. In a press for blocks, briquets and similar articles, a pair of opposed coöperating stamps and their actuating mechanism, in combination with molds movable transversely across the line of pressure and between said stamps, means for thus reciprocating said molds in order that they may be presented alternately between said stamps and thereafter in position to be discharged and recharged on one side or the other of said stamps and charging boxes arranged on each side of said stamps for thus supplying said molds, the charging chambers of said boxes being of similar shape to that of said molds, but greater in capacity, so that some of the material will remain in them after each charging.

4. In a press for blocks, briquets, and similar articles, and in combination with the pressure applying mechanism, molds which are movable alternately into position to be charged and for the contents to be pressed, charging boxes, a pair of grooved cams turning together, gearing for driving said cams, and devices respectively connecting one of said cams to said molds and the other cam to said charging boxes, in order that said molds and boxes may be operated simultaneously and correspondingly.

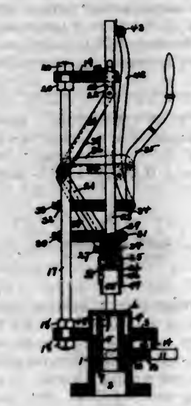
5. In a press for blocks, briquets and similar articles, the pressure mechanism and mold-carriage adapted to be moved to present each mold alternately for charging and for pressure and mechanism for reciprocating said carriage to that end, this mechanism comprising a rotary cam and means for turning the same, a slide piece actuated thereby, guides therefor, a lever operated by said slide piece and engaging and operating said mold-carriage, a longitudinally adjustable rod connecting said slide piece and insuring the accurate presentation of the molds and a weighted arm coöperating with the said rod substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

898,526. MACHINE FOR FORMING PACKING-CUPS. CHARLES SWAN, Corry, Pa. Filed Dec. 3, 1906. Serial No. 346,005.

1. In a machine for forming packing cups, the combination with a female forming die and a male die, said dies being arranged to clamp the bottom of the cup and confine the peripheral walls of the cup between them; of a compression and edge forming die arranged to enter between the male and female dies to compress the peripheral wall of the cup and form the edges thereof; and devices actuating said dies to clamp the bottom of the cup and compress the peripheral walls thereof.

2. In a machine for forming packing cups, the combination of a female die having a yielding bottom therein and a male die, said dies being arranged to clamp the bottom of the cup and confine the walls thereof between them; of a compression and edge forming die arranged to enter between the dies to compress the peripheral wall of the cup and form the edges thereof; and devices for actuating said dies.



3. In a machine for forming packing cups, the combination of a female forming die having a centering ring arranged with relation to said die; a male die arranged to enter the female die and carry with it the material centered by the centering ring, said dies being adapted to clamp the bottom of the cup and to confine the peripheral walls of the cup between them; and a compression and edge forming die arranged to enter between the dies and compress the peripheral walls of the clamped and confined cup and form the edges thereof.

4. In a machine for forming packing cups, the combination of a female forming die having a centering ring arranged with relation to said die; a male die arranged to enter the female die and carry with it the material centered by the centering ring, said dies being adapted to confine the peripheral walls of the cup between them; a compression and edge forming die arranged to enter between the dies and compress the peripheral walls of the cup and form the edges thereof; and devices for returning the yielding bottom after the formation of a cup.

5. In a machine for forming packing cups, the combination with a female forming die having a centering device for centering material over said die; a yielding bottom in said die; a male die operating in connection with said female die and with said yielding bottom to clamp the bottom of the cup between said yielding bottom and said male die and to confine the peripheral walls of the cup between the walls of the female die and the walls of the male die; a compression and edge forming die arranged to enter between the female and male die to compress the peripheral walls of the cup and form the edges thereof.

[Claims 6 to 15 not printed in the Gazette.]

898,527. FIRELESS BAKER. ALVIN T. THOITS and JOHN G. GRONBERG, Grand Rapids, Mich., assignors to Caloric Fireless Cookstove Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Feb. 4, 1908. Serial No. 414,287.

1. In a fireless baker, the combination of a case, a heat insulating lining and a fire-proof lining in the case, a removable rack in the case, and one or more heating bodies one of which is adjustably supported by the rack.

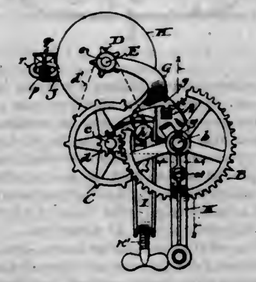
2. In a fireless baker, the combination of a case, a heat insulating and fire-proof lining in the case, heating blocks, and a removable rack in the case, said rack having spaced apart and super-posed supports for the blocks the upper support being vertically adjustable.

3. In a fireless baker, a case, heat insulating and fire-proof lining in the case, a tray, vertical rods attached to the tray near its corners and connected in pairs by transverse members forming handles, adjustable supports on the vertical rods, two super-posed and removable heating blocks, one block being in the tray and the other block resting on the adjustable supports, and a vessel to contain the material to be baked interposed between said blocks.



4. In a fireless baker, in combination with a case having a heat insulating lining, two superposed blocks of steatite, a tray to support the lower block, vertical rods attached to the tray near its respective corners, horizontal upper members connecting the vertical rods in pairs and forming handles, vertically adjustable supports on the rods to support the upper block, and a vessel interposed between the blocks.

898,528. GRINDING AND POLISHING MACHINE. JAMES M. THOMPSON, North Milwaukee, Wis., assignor to Luther Brothers Company, North Milwaukee, Wis. Filed Mar. 15, 1907. Serial No. 362,446.



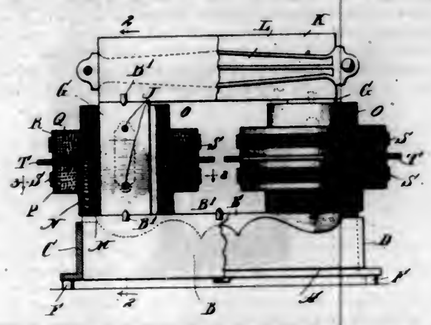
1. In a grinding-machine, having a base comprising a vertical web, rearwardly projecting lateral feet, and a depending clamping-leg extension; the combination of a vertically disposed bracket in pivotal connection with the vertical web of the base, the bracket being provided with a slot circumferentially disposed with relation to its pivot, a clamping-screw fitted into the slot and connected to the base-web, front and rear arms extending from the bracket provided with bearings at their ends, a shaft mounted in the arms, an abrading-wheel secured to the shaft, a stud projecting from said base, and a driving gear-wheel mounted upon the stud in gear-connection with the abrading-wheel arbor.

2. A grinding-machine comprising a bracket having front and rear arms terminating in bearings, an abrading-wheel shaft mounted in the bearings, a circumferentially adjustable plate fitted over one of said bearings, and a radially adjustable tool-rest carried by the plate.

898,529. ELECTRICAL LABORATORY APPARATUS. CHESTER H. THORDARSON, Chicago, Ill. Filed Apr. 17, 1905. Serial No. 255,893.

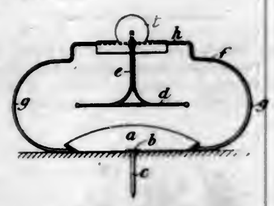
In an electrical laboratory apparatus, the combination of a magnet mass, a coil surrounding the same, a plurality of additional coils surrounding the first said coil, and an

insulating ring separating the last said coils from each other, all of said coils being independent of one another



and the last said coils being detachable and removable from the first said coil.

898,530. APPLIANCE FOR PRACTICING GOLF. CLAUDE M. TREADWELL, London, England. Filed Sept. 27, 1907. Serial No. 394,005.



1. An apparatus for imitating a hole in the ground for practicing golf comprising a plate or rim adapted to be secured to the ground and having an opening at one part and a pendent arm combined with the said plate so as to form with it a complete or practically complete circle, the said plate being inclined so as to afford a certain amount of resistance to the passage of a ball over it and the pendent arm being adapted to yield by the contact of a ball with it, substantially as described.

2. In an apparatus or appliance for use in practicing golf the combination of a crescent shaped rim of metal or the like, a frame carrying a pendent arm designed to form with the crescent a practically complete circle and a pin or spike for allowing of the device being turned to any position, substantially as described.

3. In an apparatus or appliance for use in practicing golf the combination of a crescent shaped rim of metal or the like, a frame carrying a pendent arm designed to form with the crescent a practically complete circle, a central pin or spike for allowing of the device being turned to any position and an indicator plate secured to the said frame, substantially as described.

898,531. SIGHT FOR FIREARMS. EDWARD R. TUFTS, Pittsburg, Pa., assignor of one-half to Charles E. Greenough, New York, N. Y. Filed Aug. 30, 1906. Serial No. 332,570.



1. A rear sight for firearms comprising a tubular member indented to provide a groove extending throughout its length and in centered relation to the barrel of the arm, said tubular member being formed in cross section to intercept with hair line effect an otherwise unlimited field of vision.

2. A rear sight for firearms comprising a tubular member formed in cross section to present a hair line, having an approximately U-form at a point centered relative to the barrel of the arm, to provide a sight opening.

3. A rear sight for firearms comprising a tubular member having a cross sectional form such as to present with hair line effect, in an unlimited field of vision, a plurality of sighting points at different heights above and in centered relation to the barrel of the arm, one of said points being formed as an upwardly opening notch.

898,532. SIGHT FOR FIREARMS. EDWARD R. TUFTS, Pittsburg, Pa., assignor of one-half to Charles E. Greenough, New York, N. Y. Filed Aug. 3, 1906. Serial No 329,025. Renewed Mar. 24, 1908. Serial No. 422,961.



1. The combination with a firearm, of front and rear sights for the arm of a form suitable for intercepting the field of vision with hair-line effect, said sights combining to produce a figure approximately triangular.

2. The combination with a firearm, of a rear sight for the arm presenting with hair-line effect an approximately triangular figure, and a cooperating front sight relatively arranged as the bisector of the base and the vertical angle of the triangle.

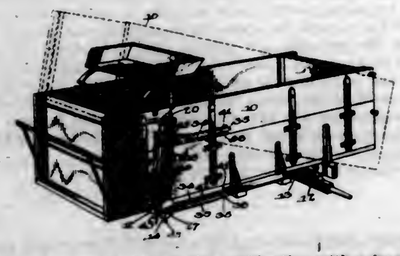
3. The combination with a firearm, of front and rear sights for the arm which combine to form with hair-line effect the legs and bisector of the included angle of a triangle.

4. The combination with a firearm and a front sight therefor, of a tubular rear sight arranged in parallel relation upon the barrel of the arm and formed in cross section to present a skeleton outline of an approximately triangular figure.

5. The combination with a firearm and a front sight therefor, of a rear sight for the arm consisting of a base, and a removable member spring-held upon the base and combining with the front sight and base to form two triangles.

[Claim 6 not printed in the Gazette.]

898,533. DUMPING-WAGON. CHARLES H. VAN DEUSEN, Verona, Ill. Filed Oct. 16, 1907. Serial No. 397,649.



1. In a dumping wagon, the combination with a frame, a wagon box, means for elevating one end of said box, and brake means adapted to travel with said end whereby said end may be lowered at any desired rate of speed.

2. In a dumping wagon, the combination with a frame, a wagon box, means for lifting one end of said box, and brake means adapted to travel with said end whereby said end may be lowered at any desired rate of speed, together with means for preventing the endwise displacement of said box.

3. In a dumping wagon, a frame, a pair of bolsters, a wagon box supported thereby, the front bolster being provided with oppositely disposed guides, and means traveling on said guides for raising said wagon box, together with brake means also carried by said guides for regulating the lowering thereof.

4. In a dumping wagon, a frame, a pair of bolsters, a wagon box supported thereby, the front bolster being provided with oppositely disposed guides, and means traveling on said guides for raising and lowering said wagon box, said means comprising a ratchet wheel and a series of levers and dogs for regulating the movement of said wheel.

5. In a dumping wagon, a frame, a pair of bolsters, a wagon box supported thereby, the front bolster having oppositely disposed guides extending close to the sides of said wagon box, provided with rack bars, and means traveling on said rack bars for raising said wagon box, together with brake means also carried by said guides for regulating the lowering thereof.

[Claims 6 to 32 not printed in the Gazette.]

898,534. SALES CHECKING AND RECORD CABINET. GEORGE C. VOISARD, New York, N. Y., assignor of one-half to William J. Bryce, New York, N. Y. Filed Jan. 7, 1907, Serial No. 351,145. Renewed Feb. 13, 1908. Serial No. 415,766.



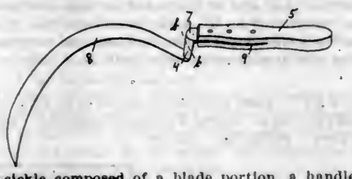
1. A sales checking and record cabinet comprising a frame having a vertical front divided by vertical parallel partitions the spaces between which are open at the front, a spool having a check-strip rolled thereon horizontally mounted in alinement in each space, a plate fixed transversely between said partitions in front of said check-roll and forming a retainer therefor and for restraining the unwinding of said check-strip and forming a cutter therefor, and a spring pressed follower mounted on the rear side of the casing for forcing and maintaining the roll against its retainer.

2. A sales checking and record cabinet, comprising a frame having a vertical front divided by vertically spaced partitions the spaces between which are open at the front, a plurality of spools mounted in horizontal rows spaced between said partitions, a check-strip wound upon each spool, a plate fixed transversely between said partitions in front of said check-roll and constituting a retainer for said check-roll and a cutter for severing said strip, and a follower adapted to constantly exert a frontward pressure bearing the check-roll against its retainer.

3. In a sales checking and record cabinet a frame having a vertical front divided by vertically spaced parallel partitions the spaces between which are open at the front and each partition having on its opposite walls a recess open at the front, said recesses formed in horizontal alinement and spaced apart vertically, a plurality of spools mounted in bearings in the partitions formed by said wall recesses, a check-strip wound upon each spool, a retainer-plate fixed transversely between the partitions in front of each check-roll, and means supported on the rear side of the frame adapted to exert a constant pressure upon each check-roll whereby to maintain it under a yielding pressure against the retainer-plate.

4. A sales checking and record cabinet comprising a frame having a front divided into spaces by parallel partitions, check-roll receiving and seating pockets formed in said spaces by a fixed front retaining plate and by a spring pressed follower in engagement with the rear side of the check-roll, the said pockets each being open at the front, at the top, at the bottom, the inner walls of the said partitions having each a recess forming offsets by which the roll-pin is guided to its seat between the retainer plate and the follower, and supported upon said offsets in inserting the roll in its pocket.

898,535. SICKLE. HUGO VOLCKMANN, Watertown, Wis., assignor to Washington Cutlery Company, Watertown, Wis., a Corporation of Wisconsin. Filed Nov. 25, 1907. Serial No. 403,597.

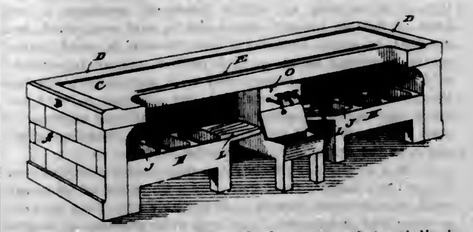


1. A sickle composed of a blade portion, a handle portion and an offset portion, formed from a flat piece of steel, said offset portion being bent approximately to the form in cross section of a semicylinder so as to withstand strains which may be imposed upon it in either of two directions, said semicylindrical form of said offset portion being continued into said blade portion and said handle portion.

2. A sickle composed of a blade portion, an offset portion and a handle portion, all made from a single integral blank of sheet steel, said offset portion being bent into substantially a semicylindrical form in cross section in order to withstand strains which may be imposed upon it in either of two directions in the use of the sickle, said semicylindrical form of said offset portion being continued into said blade portion and said handle portion.

3. A sickle composed of a blade portion, an offset portion extended at an angle from said blade portion and a handle portion extended at an angle from said offset portion, said offset portion being semi-cylindrical in cross-section, said semi-cylindrical section of the offset portion being extended to its connection with the blade portion whereby a recess is provided in the end of the blade, and also being extended to the handle portion whereby a projection is provided on the handle portion.

898,536. BAR-COUNTER. JAMES R. WEST, Peoria, Ill. Filed Sept. 23, 1907. Serial No. 394,238.



1. A bar counter constructed of cement substantially in the form of a U and having an inclined top surface sloping toward the rear thereof, said surface being provided with a drain, and a member formed integral with the counter and positioned in the recess thereof and having receptacles therein substantially as set forth and described.

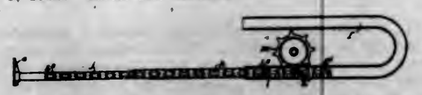
2. A bar counter comprising a solid cement member substantially in the form of a U and having a top portion overhanging the recess constituted by the form of said counter, a member beneath the overhanging top the same having receptacles therein and formed integrally with said counter.

3. A bar counter comprising a solid cement base substantially in the form of a U, and having an overhanging top portion, and also having members beneath said overhanging top, the same being provided with receptacles, said counter and members all being constructed as a unit.

4. A bar counter constructed of cement substantially in the form of a U, and having a top portion overhanging the recess constituted by the form of said counter, members beneath the overhanging portion of the top, there being a series of recesses in said members, and grooved members adjacent to one of the recesses of each said member substantially as shown, all said members and the counter constituting one single body or unit.

5. A bar counter constructed of cement substantially in the form of a U and having a top portion overhanging the recess constituted by the form of said counter, a plurality of members within the recess to constitute receptacles, the counter and the members being built in a unit.

898,537. DISCHARGING-MACHINE FOR GAS RETORTS. JOHN WEST, Southport, England. Filed Dec. 9, 1904. Serial No. 236,210.



1. In a mechanism for discharging coke retorts the combination of a plurality of hollow sections one adapted to telescope in the other, a chain located in said sections, a ram head attached to said chain, means to move or drive said chain, means to connect said chain with said hollow sections respectively whereby the movement of said chain is transmitted to said sections, and means associated with one of said sections to hold the chain rigid and thereby prevent buckling of the chain in the act of discharging the coke.

2. In a mechanism for discharging gas retorts, the combination of a number of telescopic sections, a chain operable in said sections, means associated with one of said sections to hold the portion of said chain adapted to project out of the forward end of said sections rigid, a ram head connected to said chain, means to connect said chain with said hollow sections respectively, and means to move or drive said chain.

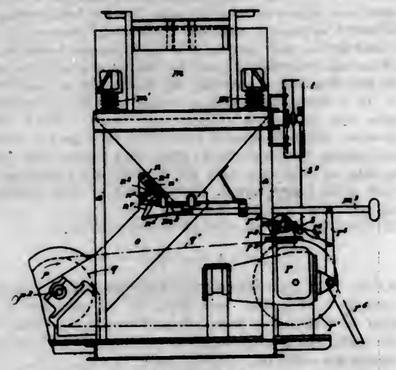
3. A machine for discharging gas retorts, comprising a ram head, a flexible element for moving said head, a rigid hollow guide in which said flexible element is adapted to travel, means associated with said guide to render said flexible element rigid during its passage through said guide, and means for actuating said flexible element.

4. In a device for discharging gas retorts, the combination of a number of hollow telescopic sections, a ram head, a flexible pusher, connected to said ram head, and adapted to move backward and forward in said hollow sections, means to move said pusher, means to connect said hollow sections respectively with said pusher whereby the movement of said pusher is transmitted to said sections, and means associated with one of said sections to hold the chain rigid and thereby prevent buckling of the chain in the act of discharging the coke.

5. In a device for discharging gas retorts, the combination with a hollow rigid guide, of a plurality of telescopic sections arranged therein and movable relatively thereto, a ram head connected to one of said sections, a flexible pusher arranged in said guide for actuating said ram head, connections between said sections for actuating the latter from the flexible pusher, means for operating the flexible pusher, and means associated with said guide to hold the pusher rigid and thereby prevent buckling of the pusher in the act of discharging the coke.

[Claim 6 not printed in the Gazette.]

898,538. CHARGING-MACHINE FOR GAS-RETORTS. JOHN WEST, Southport, England. Filed Dec. 9, 1904. Serial No. 236,211.



1. In a retort charging mechanism, the combination of a hopper adapted to contain any required charge and adapted to be varyingly positioned with relation to the mechanism that actuates the motor by the varying weight of the contents thereof, a rotary charging machine, means to convey coal from said hopper to said charging machine, means to actuate said charging machine, and means actuated by the hopper for varying the speed of the motor correspondingly with the decrease in the weight of the contents of said hopper.

2. In a retort charging apparatus, the combination of a hopper supported upon balance mechanism, a rotary charging machine connected with said hopper, a motor adapted to actuate said charging machine, means actuated by the movement of said hopper to vary the supply of power to said motor whereby the speed of the same is varied, dependent upon the weight of the contents of said hopper.

3. In a mechanism for charging gas retorts, the combination of a hopper supported upon balance mechanism, a rotary charging machine, means for delivering coal from said hopper to said charging machine, means for regulating the discharge of coal from said charging machine into the retort, a motor adapted to operate said charging machine, means actuated by the movement of the hopper for regulating the speed of said motor whereby the discharge of coal therefrom is progressively regulated with reference to the decreasing weight of the contents of said hopper.

4. In an apparatus for charging gas retorts, the combination of a hopper, a charging machine, means connecting said hopper with said charging machine for opening and closing the discharge openings of said hopper, a motor adapted to operate said charging machine, and means actuated by the hopper for varying the speed of said motor.

5. In an apparatus for charging gas retorts, the combination of a hopper, a rotary charging machine connected with said hopper and having an outlet adapted to be positioned whereby the size thereof is regulated to correspond with the amount of coal passing from said hopper into said charging machine, and means associated with the hopper for regulating the speed of the charging machine, whereby the discharge of coal therefrom is progressively regulated with reference to the decreasing weight of the contents of said hopper.

[Claims 6 and 7 not printed in the Gazette.]

898,539. WINDOW-SCREEN. JAMES A. WHITE, Philadelphia, Pa. Filed Dec. 12, 1906. Serial No. 347,418.

1. A window screen comprising opposite, metallic side-rails and a metallic end-rail connecting the same, each of said rails having at its inner side a two-fold ledge the constituent members of which are integrally connected along their inner edges, and integrally connected, each along its outer edge with said rail, said ledge extending along one of said side-rails, the end-rail aforenamed, and the opposite side-rail, upon said rails, respectively, being duly assembled; open mesh fabric disposed marginally upon and secured to the ledge aforenamed; and a metallic, clamping tie-rail, the latter connecting said side-rails oppositely to the end-rail aforenamed, and grasping and holding said fabric along its remaining margin, substantially as herein specified.



2. A window screen comprising opposite side-rails and an end-rail connecting the same, each of said rails being formed from a strip of sheet-metal, folded longitudinally and returned somewhat, thereby forming at its inner side a two-fold ledge, the constituent members of which are integrally connected along their inner edges, and integrally connected, each along its outer edge with said rail, said ledge extending along one of said side-rails, the end-rail aforenamed, and the opposite side-rail, upon said rails, respectively, being duly assembled; open mesh fabric disposed marginally upon said ledge; a hollow, metallic fillet disposed upon and marginally along said fabric; and a metallic, clamping tie-rail, the latter connecting the two-fold ledges of the opposite side-rails aforenamed, oppositely to said end-rail, and grasping and holding said fabric along its remaining margin, substantially as herein specified.

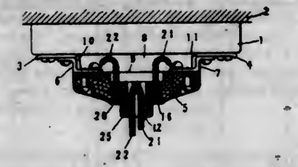
3. An adjustable window screen comprising a pair of main members, each comprising opposite, metallic side-rails and a metallic end-rail connecting the same, and each of the respective rails of each of said members having at its inner side a two-fold ledge, the constituent members of which are integrally connected along their inner edges, and integrally connected, each along its outer edge with said rail, said ledge extending along one of said side-rails, the end-rail, and the opposite side-rail of each of said members, upon the several rails thereof being duly assembled; open mesh fabric disposed marginally upon and secured to the ledge aforenamed, of each of said members; metallic, clamping tie-rails, one connecting the two fold ledges of the opposite side rails of each of said main members, and grasping and holding the remaining margin of the fabric conjoined therewith; and means for holding said main members slidably together, substantially as herein specified.

4. An adjustable window screen comprising a pair of main members, each comprising opposite side-rails and an end-rail connecting the same, and each of the respective rails of each of said main members being formed from a strip of sheet-metal, folded longitudinally and returned somewhat, thereby forming a two-fold ledge at the inner side thereof, the constituent members of which ledge are integrally connected along their inner edges, and integrally connected, each along its outer edge with said rail, said ledge extending along one of said side-rails, the end-rail, and the opposite side-rail of each of said main members, upon the several rails thereof, respectively, being duly assembled; open mesh fabric disposed marginally upon the ledge aforenamed of each of said main members; a hollow, metallic fillet disposed upon and marginally along the fabric conjoined with each of said main members; metallic, clamping tie-rails, one connecting the two-fold ledges of the opposite side-rails of each of said main members, and grasping and holding the remaining margin of the fabric conjoined therewith; and clips, the latter conjoined with the side rails, respectively, of each of said main members, and holding said members slidably together, substantially as herein specified.

5. A rail for a window screen, formed from sheet-metal, folded longitudinally and returned somewhat to form a clamping ledge at the inner side thereof, thence turned forwardly, thence outwardly, thence rearwardly, and thence inwardly and terminated in a stiffening strip, and having a guide-clip clamped by said ledge, said guide-clip projecting outwardly therefrom, thence rearwardly thereof, and terminating in a final inwardly projecting member, substantially as herein specified.

[Claims 6 and 7 not printed in the Gazette.]

898,540. ELECTRICAL FITTING. EDSON B. WILCOX, Meriden, Conn. Filed May 29, 1908. Serial No. 435,736.

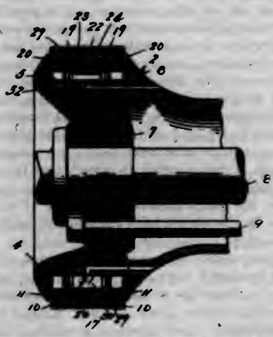


1. An electrical fitting comprising an integral body of insulating material and having a flange forming an interior chamber, terminals secured to the body within said chamber, said body also having a main vertical passage, two pairs of vertical passages and two exterior channels, each channel connecting the outer ends of the passages of one of the pairs of passages.

2. An electrical fitting comprising an integral body having a lateral flange and a central collar, a pair of terminals secured to the body within the flange, said body and collar having a passage for wires, and two pairs of eccentric passages one for each of two wires.

3. An electrical fitting comprising an integral body having a central passage and two pairs of lateral passages with internal and external connecting channels and two terminals rigidly secured to the body in a fixed position relative to said passages for the purpose specified.

898,541. PACKING FOR PISTON-VALVES AND PISTONS. JOHN T. WILSON, Jersey Shore, Pa. Filed Mar. 3, 1906. Serial No. 303,973.



1. A packing for piston valves and pistons comprising a wide ring, two expansible snap rings, means for introducing live steam beneath the snap rings and means for holding in parallel positions the inner portions or edges of the snap rings.

2. A packing for piston valves and pistons comprising a wedge ring, two wall rings, two snap rings, and a wide ring between the snap rings.

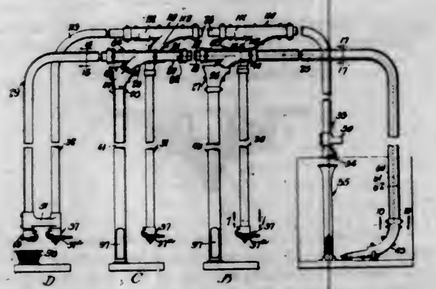
3. A packing for piston valves and pistons comprising an expansible wedge ring, two non-expansible wall rings; two expansible snap rings, and an expansible wide ring.

4. A packing for piston valves and pistons provided with two expansible snap rings, and an expansible wide ring; said wide ring interlocking with the edges of the snap rings.

5. A packing for piston valves and pistons having two bearing rings and a wide ring between said rings with its edges engaging the said bearing rings, whereby the bearing rings are held parallel.

[Claims 6 to 15 not printed in the Gazette.]

898,542. PNEUMATIC-DESPATCH-TUBE SYSTEM. FRANKLIN H. WOLEVER, Chicago, Ill., assignor to The Illinois Pneumatic Transmission Co., Chicago, Ill., a Corporation of South Dakota. Filed Oct. 12, 1907. Serial No. 397,157.



1. In a pneumatic despatch tube system, the combination with a despatch tube and its branches, said tube being provided with a plurality of angularly separated, longitudinal, interior guides, each of which extends into one of the branches, of a sending terminal formed with a widened portion in which the receiving ends of the guides are located side by side.

2. In a pneumatic despatch tube system, the combination with a despatch tube and its branches, said despatch tube being provided with a plurality of longitudinally disposed, angularly separated, interior guide grooves, each of which enters one of said branches, of a sending terminal provided with a widened portion into which certain of said guide grooves are arranged side by side.

3. In a pneumatic despatch tube system, the combination with a despatch tube and its branches, said despatch tube being provided with a plurality of longitudinally disposed, angularly separated, interior guide grooves, each of which enters one of said branches, of a sending terminal provided with a widened portion, the guide grooves having extensions located in said widened portion, said extensions having wide receiving mouths, for the purpose set forth.

4. In a pneumatic despatch tube system, the combination with a despatch tube and its branches, said despatch tube being provided with a plurality of longitudinally disposed, angularly separated, interior guide grooves, each of which enters one of said branches, of a sending terminal provided with a flat portion in which are located, side by side, receiving extensions of certain of the guide grooves of said tube, the guide groove at the side of the tube being connected with the receiving extension thereof by a downwardly curved or spiral portion.

5. In a pneumatic despatch tube system, the combination with a despatch tube and its branches, said despatch tube having a plurality of angularly separated, longitudinally disposed, interior guide grooves, each of which enters one of the branches, and a cashier's sending terminal comprising a laterally curved tubular part having internal grooves corresponding to the grooves of the despatch tube, and provided with a flat flaring portion in which continuations of certain of the grooves are located side by side.

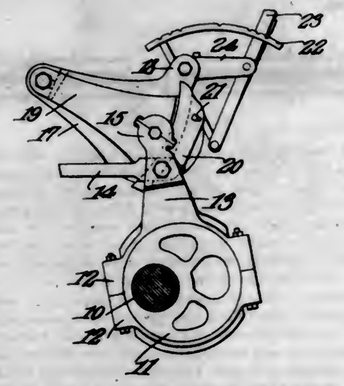
[Claims 6 to 25 not printed in the Gazette.]

898,543. VALVE-GEAR. JACOB E. YODER, Haven, Kans. Filed Mar. 24, 1908. Serial No. 422,992.

1. In a valve gear, a trunnion, an arm extending therefrom provided with pivotal means at the outer end thereof, an arced guide concentric with said pivotal means, and a shifting arm pivoted to said arm provided with an end adapted to travel in said guide.

2. In a valve gear, a trunnion, an arm extending therefrom provided with pivotal means at the outer end thereof, an adjustable arced guide concentric with said pivotal means, and a shifting arm pivoted to said arm provided with an end adapted to travel in said guide.

3. In a valve gear, a trunnion, an arm extending therefrom adapted to connect with a reverse lever, a second arm extending therefrom at approximately right angles to the first mentioned arm provided with pivotal means at the outer end thereof, an adjustable arced guide concentric with said pivotal means, and a shifting arm pivoted to said arm provided with an end adapted to travel in said guide.

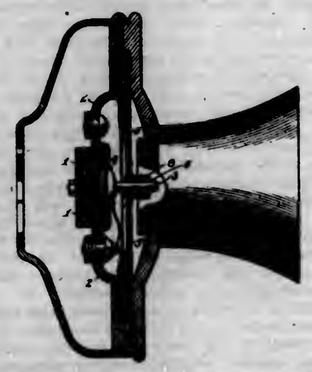


4. In a valve gear, a shaft, a trunnion, an arm extending therefrom adapted to connect with a reverse lever, a second arm extending therefrom at approximately right angles to the first mentioned arm provided with pivotal means at the outer end thereof, an adjustable arced guide concentric with said pivotal means, and a shifting arm pivoted to said arm provided with an end adapted to travel in said guide.

5. In a valve gear, a shaft, a trunnion, an arm extending therefrom adapted to connect with a reverse lever, a second arm extending therefrom at approximately right angles to the first mentioned arm provided with pivotal means at the outer end thereof, an adjustable arced guide concentric with said pivotal means, in combination with a shifting arm pivoted to said second arm provided with an end adapted to travel in said guide, and a pivot formed at or near said end, and means carried by said shaft connected to said shifting arm adapted to actuate said first mentioned arm.

[Claim 6 not printed in the Gazette.]

898,544. TELEPHONE-TRANSMITTER. HENRY F. ALBRIGHT, Elizabeth, N. J., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 28, 1907. Serial No. 399,405.



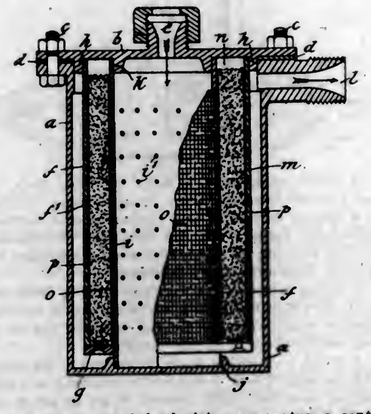
1. In a telephone transmitter, a button provided with a movable electrode having a stem projecting therefrom, a diaphragm, means for supporting said button and diaphragm, a bushing on said diaphragm having a tapered opening through which said stem projects, and means for clamping said bushing about said stem.

2. In a telephone transmitter, a diaphragm having a central opening, a button at the rear of said diaphragm having a stem projecting through said opening, a bushing upon the front face of said diaphragm about said opening, said bushing having an opening tapering from said diaphragm, and means for clamping said bushing about said stem.

3. In a telephone transmitter, a diaphragm having a central opening, a button at the rear of said diaphragm having a stem projecting through said opening, a tapered, exteriorly threaded bushing upon the front face of said diaphragm about said opening, said bushing having a conical opening tapering from said diaphragm, and a nut for clamping said bushing about said stem.

4. In a telephone transmitter, a diaphragm having a central opening, a button at the rear of said diaphragm having a stem projecting through said opening, a bushing upon the front face of said diaphragm about said opening, said bushing having an opening tapering from its intermediate portion toward each end, and means for clamping said bushing about said stem.

898,545. APPARATUS FOR DEODORIZING AND FILTERING PETROL SPIRIT. ALFRED J. BARNES, London, England. Filed Apr. 18, 1907. Serial No. 368,927.



1. In a filtering and deodorizing apparatus, a container having a single centrally located recess in the bottom and a lateral outlet near the top, a removable cover having a central inlet nozzle upon its outer face and two concentrically located rims on its inner face, two internal perforated cylinders of unequal length within the container, the inner and longer cylinder resting within the bottom recess and extending from there, up to the inner face of the cover where it surrounds the smaller of the concentric rims thereon, while the outer perforated cylinder fits within the larger of the concentric rims and, being shorter than the other cylinder, terminates above the level of the bottom of the container, an annulus secured to the bottom of said outer cylinder and surrounding the inner cylinder, whereby a free space is provided both at the bottom and at the side of the container, whereby said cylinders may be removed from said container, and whereby said cylinders may be separated, and a filtering and deodorizing material between said cylinders.

2. In a filtering and deodorizing apparatus, a vertically disposed cylindrical container, a centrally locked circular recess adapted to catch sediment formed by the annular up-standing rib, said container having a lateral outlet at the top of its side, a removable cover having a central inlet nozzle upon its outer face and two concentric lock rims on its inner face, two internal concentric perforated cylinders of unequal length within said container, the inner and longer cylinder resting within said bottom recess where it is held against lateral displacement by said up-standing rib, said inner cylinder extending upwardly to said cover and fitting around the inner of the concentric rims thereof, the outer of said internal cylinders fitting within the outer of said concentric rims and terminating at its lower end above the level of the top of said up-standing rib, said lower end being provided with an inwardly projecting flange, an annulus secured near the bottom of said inner cylinder and spaced from said up-standing rib, removable means to fasten said flange to said annulus whereby the free space for the collection of sediment is provided between the bottom of said container and the bottom of said inner cylinder and a filtering and deodorizing material between said cylinders.

898,546. MEANS FOR SECURING ARTIFICIAL DENTURES. EDGAR S. BARNES, GEORGE T. WILLIAMS, and CHARLES B. REYNOLDS, Seattle, Wash. Filed Oct. 25, 1907. Serial No. 399,208.



1. A means for securing artificial dentures in place, comprising a movable bolt member and a socket member therefor, one carried upon the artificial dentures and the other upon the natural teeth, said bolt member having a side projection for operating engagement and the bolt guide or support having a recess into which said projection may be placed by turning the bolt, thereby securing a smooth surface.

2. A means for securing artificial dentures in place comprising a bolt mounted to slide lengthwise the row of teeth within guides carried by the artificial dentures, a socket member for said bolt carried by a natural tooth, and means for turning said bolt upon its axis and thereby locking it against retraction.

3. A means for securing artificial dentures in place, comprising a sliding bolt and a socket member therefor carried, one by a natural tooth and the other by the artificial dentures, independent means carried by the same parts and engageable to prevent movement between the natural and artificial dentures in the direction of the length of the said bolt.

4. A means for securing artificial dentures in place, comprising a bolt member mounted to slide in sunken guides in the artificial denture and in the direction of the row of teeth, said bolt being rotatable in its guides and having a side projection by which it may be reciprocated, the artificial denture having a recess into which said projection may be turned to lock the bolt in place when the bolt end is projected, a socket member for the reception of said bolt end carried by a natural tooth, an arm carried by the artificial denture and lying alongside a natural tooth or a member carried thereby, said arm and tooth having pin and socket members engageable by movement transversely of the direction of the row of teeth.

5. A means for securing artificial dentures in place, comprising a bolt slidable in the direction of the row of teeth, a pin projecting transversely of said direction and a socket member engageable with said pin, said pin and socket member being fixed, one to the said artificial dentures and the other to the natural teeth.

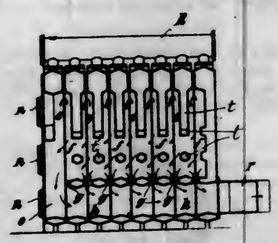
898,547. MANUFACTURE OF INSOLUBLE LIME SALTS OF FATTY ACIDS. HARVEY N. BARRETT, Baybridge, Ohio, assignor to Medusa Concrete Waterproofing Company, Sandusky, Ohio, a Corporation of Ohio. Filed Aug. 14, 1907. Serial No. 388,522.

1. The method of making lime soap, which consists in mixing a quantity of fatty matter with from 12 to 20 per

cent., by weight, of slaked or hydrate lime and heating the mixture to approximately 400 degrees F. until the reaction has subsided and substances volatile at this temperature have been expelled.

2. The method of making lime soap, which consists in mixing a quantity of fatty matter with from 12 to 20 per cent., by weight, of slaked or hydrate lime and heating the mixture to approximately 400 degrees F. until the reaction has subsided and the water and glycerin present in the mass have been expelled.

898,548. BOILER. HEINRICH A. BOLZE, Hanover, Germany. Filed Feb. 21, 1908. Serial No. 417,047.



1. In a boiler of the type described, the combination of a plurality of central sections in a row having openings forming a fire-box, flues (*f*) and smoke-channels (*h*) through the same, a front section closing said openings at the front, and a rear section closing said fire-box and flues at the rear, said flues being connected through openings (*i*) with said fire-box and connected in each section, with the exception of one or more preferably at the front of the boiler, with the smoke-channels through openings (*g*) which are smaller than said openings (*i*) connecting the flues with said fire-box.

2. In a boiler of the type described, the combination of a plurality of central sections in a row having openings forming a basket-like fire-box, lateral flues and smoke-channels below the latter through the sections, a front section closing said openings at the front, and a rear section closing said fire-box and flues at the rear, said flues being connected through openings (*i*) with said fire-box and connected in each section, with the exception of one or more preferably at the front of the boiler, with the smoke-channels through openings (*g*) which are smaller than said openings (*i*) connecting the flues with said fire-box, the arrangement of said fire-box and flues and the openings (*i*) connecting the same being such that the fire gases are able to pass from the fire-box through said openings (*i*) into the flues in such a manner that the gases, following their own tendency, rise in the already cool gaseous contents of the flues, mix with the same and then participate in the downward movement of the same.

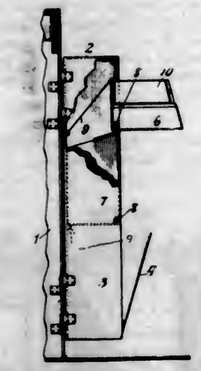
3. In a boiler of the type described, the combination of a plurality of central sections in a row having openings forming a fire-box, horizontal flues (*f*) and smoke-channels (*h*) under the latter through the sections, a front section closing said openings at the front, a rear section closing said fire-box and flues at the rear, said flues being connected through openings (*i*) with said fire-box, and connected in each section, with the exception of one or more preferably at the front of the boiler, with said smoke-channels through openings (*g*) which are smaller than said openings (*i*) connecting the flues with said fire-box, and water-tubes passing slantwise through said flues, whereby not only is the heating surface increased, but a better circulation of water is obtained in the slanting water-tubes, and when bubbles of steam form in the water-tubes they are able to rise easily.

4. A boiler comprising a series of transverse sections arranged in a row and having openings forming a fire box, horizontal flues for the fire gases, a horizontal smoke channel extending through all of the sections, passages connecting the fire box to the flues, passages connecting the flues to the smoke channel, some of these latter passages being smaller than the passages connecting the fire box to the flues, some of said latter passages being larger than the others, said larger passages being near one end of the boiler.

5. A boiler comprising a series of transverse sections arranged in a row and having openings forming a fire box, horizontal flues for the fire gases, a horizontal smoke channel extending through all of the sections, passages connecting the fire box to the flue, passages connecting the flues to the smoke channel, some of these latter passages being smaller than the passages connecting the fire box to the flues and some of said latter passages being larger than the others, said larger passages being near the front end of the boiler.

[Claims 6 to 9 not printed in the Gazette.]

898,549. TRUNK. SEYMOUR W. BONSALL, New York, N. Y. Filed Mar. 30, 1907. Serial No. 365,481.



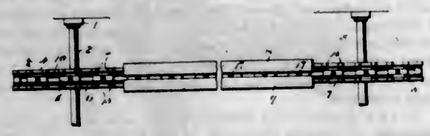
1. A trunk comprising a main swinging tray, a container pivoted near its lower front corners within said tray, a drawer carried by and sliding on said container in a horizontal plane when the container is opened, and means for limiting the movement of said container around its pivots, substantially as described.

2. A trunk comprising a container and a bent supporting bar on which said container is arranged to turn, one portion of said bar being located so as to act as a stop for outward movement of the container.

3. A trunk comprising a container and a bent supporting bar on which said container is arranged to turn, one portion of said bar being located so as to act as a stop for both inward and outward movement of the container, substantially as described.

4. A trunk comprising a fixed supporting bar having an upright portion and a rounded horizontal portion, and a tilting container pivoted upon the rounded portion of said bar, substantially as described.

898,550. ENDLESS CARRIER. DAVID F. BRODERICK, New Britain, Conn., assignor of one-half to Lewis Sperry, South Windsor, Conn. Filed Aug. 2, 1906. Serial No. 328,969.



1. In a carrier, the combination of channeled guides, sprocket wheels, a chain passing over said sprocket wheel and through said channeled guides, and rollers carried by links of the chain between the ends of said links and adapted to run between the flanges of the respective channeled guides.

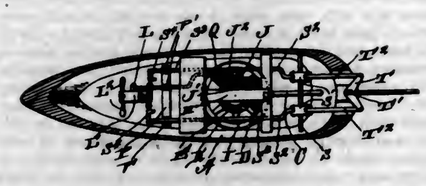
2. In a carrier, the combination with two channeled guides having their flanges projecting toward each other, and sprocket wheels, of chains passing over said sprocket wheels and through the channeled guides, and rollers carried by said chain and adapted to run between the opposing flanges of the respective channeled guides.

3. In a carrier, the combination of channeled guides, sprocket wheels, a chain passing over the sprocket wheels and through said channeled guides, rollers carried by the chain to run within said channeled guides and other rollers carried by the chain to run between the flanges of the channeled guides.

4. In a carrier the combination of two channeled guides having their flanges projecting towards each other, sprocket wheels, a chain passing over said sprocket wheels and through the channeled guides between the parallel flanges of the latter, and rollers mounted on respective ends of hinge pins of the chain and disposed to run between the parallel flanges of each channeled guide.

5. In a carrier, the combination of sprocket wheels, a carrier chain, two channeled guides having their flanges projecting towards each other and inclosing one set of links of the chain, and rollers carried by said chain to run within the respective channeled guides and mesh with the sprocket wheels.

898,551. BOAT-PROPELLER. LORENZO C. BUTLER, Arion, Iowa. Filed Jan. 22, 1908. Serial No. 412,175.



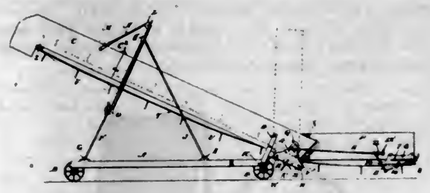
1. In combination with a boat having a rod supported by the opposite walls thereof, oscillating levers mounted upon said rod, a rudder, an angled lever connected to the rudder shaft, rods connecting the arms of said angled lever with said oscillating levers, longitudinal movable rods pivotally connected to the lower ends of the oscillating levers, the forward ends of said rods being bent to form foot rests, as set forth.

2. In combination with a boat having a rod supported by the opposite walls thereof, oscillating levers mounted upon said rod, a rudder, an angled lever connected to the rudder shaft, rods connecting the arms of said angled lever with said oscillating levers, longitudinal movable rods pivotally connected to the lower ends of the oscillating levers, the forward ends of said rods being bent to form foot rests, a grooved block mounted within the boat and in which said longitudinally movable rods are guided, as set forth.

3. In combination with a boat having a rod supported by the opposite walls thereof, oscillating levers mounted upon said rod, a rudder, an angled lever connected to the rudder shaft, rods connecting the arms of said angled lever with said oscillating levers, longitudinal movable rods pivotally connected to the lower ends of the oscillating levers, the forward ends of said rods being bent upwardly and toward each other forming foot rests for a foot, and means for guiding the same in their longitudinal movements, as set forth.

4. In combination with a boat having a recess formed in the bottom thereof, a propeller shaft, a vertically disposed shaft mounted in suitable bearings in the boat, a balance wheel fixed to said vertically disposed shaft and positioned within said recess, bevel pinions, one mounted upon each of said shafts and in mesh with each other, a pivotal propelling lever, and connections between the same and said gear wheels, as set forth.

898,552. PORTABLE GRAIN-ELEVATOR. JOSEPH E. CAMP, Washington, and CHRISTIAN W. CAMP, Metamora, Ill., assignors to Camp Bros. & Co., Metamora, Ill., a Corporation of Illinois. Filed Oct. 5, 1905. Serial No. 281,448.



1. An elevator, a tiltable raisable conveyer section pivoted thereto, a chain-driving power-wheel in the vicinity of and substantially beneath the pivot and carried by the elevator, a drag chain of a single length extending through both the elevator and conveyer and in engagement with and driven by said power-wheel, an idler wheel adjacent to the power wheel at each side thereof and carried by the elevator and in fixed positive relation to the power wheel, and a permanently positioned idler carried by the elevator for holding the drag chain in operative position upon the bottom of and at the juncture of the said elevator and conveyer.

2. In a device of the class described, an elevator, a raisable conveyer pivoted thereto, a one-piece endless drag-chain extending through the entire conveyer and elevator, a chain-driving power wheel carried by the elevator substantially beneath the pivot point of the two sections and fixed in position with reference to said pivot and in engagement with and for driving the said drag-chain, an idler wheel at each side of said drive-wheel and also carried by the elevator and permanently fixed in position relative to said wheel, said drag-chain passing between the idlers and the power wheel and idler wheels within and at the juncture of the sections substantially as and for the purposes described.

3. In a device of the class described, an elevator, a vertically raisable conveyer pivoted thereto, a one-piece drag-chain therefor, a power wheel carried by the elevator in the vicinity of the connecting pivot for driving the drag, an idler wheel at each side of the power wheel each said idlers being permanently fixed in position relatively to the power wheel and also carried by the elevator and adapted for keeping the chain in positive engagement therewith, and an idler wheel within the elevator at the pivot thereof for holding the drag in operative position upon the bottoms of the sections.

4. In a device of the class described, an elevator section, a vertically movable section pivoted thereto, a drag-chain extending through both sections, a power wheel carried by the elevator engaging the chain and for driving the under stretch thereof, and positioned beneath the connecting pivot of the sections, means at each side of the said power wheel and also carried by the elevator for holding the chain in positive engagement therewith, such means receiving slack in the chain, and means for holding the chain in operative position within the sections and receiving the slack from the first said means when the conveyer section is raised as described.

5. In a device of the class described, the combination of a pivotally carried elevator adapted to raise and lower on its pivot, a conveyer pivoted to the elevator and adapted also to be raised and lowered on its pivot, an endless drag member extending through both the elevator and conveyer, a power wheel for the under stretch of the drag, an idler at each side of the wheel, all three wheels being carried by the elevator and fixed in position relatively, the under stretch of the drag member running alternately over one and beneath the other, and an idler within and also carried by the elevator and fixed relative to the power wheel and its idlers for holding the inner stretch of the drag member

in an operative position on the bottom of said elevator and conveyer at the juncture of the latter two members substantially as shown.

[Claims 6 to 15 not printed in the Gazette.]

898,553. TELEPHONE MEMORANDUM-PAD. EDWARD J. CASEY, Chicago, Ill., assignor to Illinois Publishing and Printing Company, a Corporation of Illinois. Filed May 2, 1908. Serial No. 430,604.



1. In a device of the class described, a pad, a flexible band having one end affixed to said pad, the other end terminating in a hook, and another hook fixed on the pad and adapted to be engaged by the first mentioned hook.

2. In a device of the class described, a pad, a flexible band having hooks at the ends thereof, the portion of the band adjacent to one hook being affixed to the pad, the portion adjacent to the other hook being free, and the intermediate portion being bent in circular form to go around a telephone transmitter.

3. In a device of the class described, a pad having a metal back, a flexible wire having the portion near one end thereof soldered to said back, the adjacent portion being bent in circular form so as to adapt it to embrace a telephone transmitter, and hooks on the ends of the wires to engage one another and thus fasten the pad in definite relation to the transmitter.

898,554. METHOD OF PRODUCING COLORED PHOTOGRAPHS. BERNARD J. COOPER, London, England. Filed Dec. 31, 1906. Serial No. 350,102.

1. The method herein described of producing colored photographs, said method consisting in placing an element in contact with the sensitized surface so as to cause lighter spaces, preferably, as fine white lines, dashes or dots, to appear upon the darkened portions of the contact print whereby the said lines, dashes or dots are made visible in the shadows and half-tones of the finished print, and then applying coloring media to said lines, dashes or dots.

2. The method herein described of producing colored photographs, said method comprising the placing of a lined screen in contact with a sensitized surface whereby interrupted blank spaces are formed upon the final print in the half-tones and shadows, and then applying coloring media to such print.

3. The method of producing colored photographs, which consists in interposing between and in contact with the negative and the sensitized surface of the positive, a cross-lined screen to cause interrupted blank spaces to appear upon the final print, and then applying coloring media to said spaces.

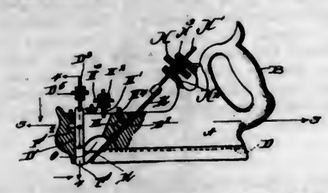
898,555. BODY-HANGER FOR VEHICLES. ISAAC CORNWELL, Northumberland, Pa. Filed Apr. 18, 1908. Serial No. 427,851.

As a new article of manufacture a hanger bar and an integral attaching plate the latter being in substantially the same plane as the body or central portion of the hanger, and provided with clip holes, the latter being formed wholly in the plate, and a centrally located inte-



gral rib connecting the hanger bar and plate intermediate the clip holes.

898,556. MORTISING-PLANE. MAURICE A. CLARK, Edmonton, Alberta, Canada. Filed Feb. 15, 1908. Serial No. 416,095.



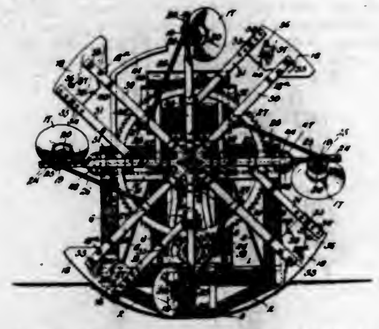
1. A mortising plane comprising a stock having a vertical slot in the forward end thereof, an inclined planer blade, blades mounted in said slot with their inner faces in contact with each other, a pin passing through apertures in said blade, a screw to which said pin is secured, a bracket arm rising from the stock and having laterally extending fingers which are spaced apart and provided with apertures, a wheel mounted between said fingers and provided with a central-threaded aperture through which said screw passes, a wedge block mounted in said slot and bearing against corresponding edges of said blades, means for moving said block, a screw having an unthreaded tapering portion passing through the stock and adapted to bear against the edges of said blades opposite said wedge block, and a nut upon said blade engaging stock, as set forth.

2. A mortising plane comprising a stock having a vertical slot in the forward end thereof, an inclined planer blade, blades mounted in said slot with their inner faces in contact with each other, a pin passing through apertures in said blade, a screw to which said pin is secured, a bracket arm rising from the stock and having laterally extending fingers which are spaced apart and provided with apertures, a wheel mounted between said fingers and provided with a central threaded aperture through which said screw passes, a wedge block mounted in said slot and bearing against corresponding edges of said blades, a second bracket arm rising from the stock and having laterally projecting fingers which are spaced apart, a screw fastened to the block and passing through the apertures in the adjacent fingers, means for raising and lowering the stock connected to the block, and a screw passing through a transverse aperture in the stock and provided with an unthreaded tapering portion bearing against the edges of said blades, as set forth.

898,557. DITCHING-MACHINE. BENJAMIN CLEMENTS, Crookston, Minn. Filed Dec. 28, 1907. Serial No. 408,387.

1. A ditching machine comprising a frame, a transversely disposed rotary auger wheel provided with alternately arranged cutters, and scoops or buckets adapted to cut transversely of a ditch and remove the loose dirt, said cutters and scoops or buckets being rigid with and projecting from the periphery of the auger wheel, and means for rotating the auger wheel.

2. A ditching machine comprising a frame, a transversely disposed auger wheel provided with cutters and having buckets or scoops for elevating the loose dirt, a chute into which the loose dirt is discharged, and a transverse conveyer arranged to receive the material from the chute.



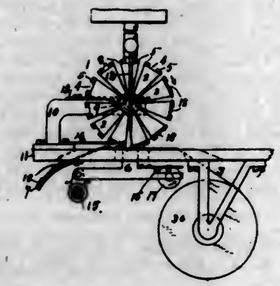
3. A ditching machine comprising a frame, a transversely disposed auger wheel provided with cutters and having buckets or scoops for elevating the loose dirt, said cutters and buckets or scoops projecting from and carried by the periphery of the auger wheel, a chute into which the loose dirt is discharged, and a conveyer arranged to receive the material from the chute.

4. A ditching machine comprising a frame, a transversely disposed auger wheel provided with cutters and having buckets or scoops for elevating the loose dirt, said cutters and buckets or scoops projecting from and carried by the periphery of the auger wheel, a transverse conveyer extending across the frame in rear of the auger wheel, and an inclined chute extending upwardly from the conveyer to the upper portion of the auger wheel and arranged to receive the lose dirt therefrom.

5. A ditching machine comprising a frame, a transversely disposed auger wheel provided with cutters and having buckets or scoops for elevating the loose dirt, an inclined chute located in rear of the auger wheel at the upper portion thereof, and a transversely disposed conveyer arranged beneath the lower end of the chute and adapted to carry the material to one side of the machine.

[Claims 6 to 28 not printed in the Gazette.]

898,558. APPARATUS FOR ATTACHING HOOKS AND EYES TO TAPE, &c. WILLIAM M. CORTHELL, Chicago, Ill., assignor to F. M. Waterman, Chicago, Ill. Filed Dec. 14, 1907. Serial No. 406,478.



1. In an apparatus for attaching hooks and eyes, the combination with a sewing mechanism comprising needles, of a rotary circular holder with means at the periphery of the holder for holding engaged hooks and eyes, and means to rotate the holder step by step to carry the hooks and eyes under the needles.

2. In an apparatus of the character described, the combination with a sewing mechanism comprising needles, and means for feeding ribbon or the like, of a vertically yielding rotary holder between said needles and adapted to carry hooks and eyes under said needles.

3. In an apparatus of the character described, a sewing mechanism comprising suitably operated needles, and means for feeding ribbon or the like, a support for the ribbon whereby the latter may pass from said support to the said feeding means and below the needles, and a rotary hook and eye holder between the needles and having a timed movement in relation thereto.

4. A rotary holder for hooks and eyes, a bearing for the axle of the holder, a spring bearing on said axle, and a feeding device for the holder.

5. A holder for hooks and eyes comprising circular substantially parallel bodies, and means for securing engaged hooks and eyes thereto at the periphery, a support on which the holder can rotate, and means for advancing the holder step by step whereby the hooks and eyes are carried to and held in position for sewing to a tape or the like.

[Claims 6 to 10 not printed in the Gazette.]

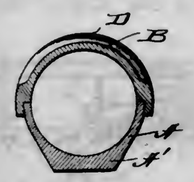
898,559. DENTAL BRIDGE. CHARLES E. CROMBIE, Minneapolis, Minn. Filed Feb. 1, 1908. Serial No. 413,736.



1. In a dental bridge structure, the combination with lateral spaced crowns, of a metal bridge reinforcement in the form of a crooked wire secured at its ends to said crowns, a body of rubber or cementitious material embedding the said reinforcing wire, and one or more artificial teeth secured to said cementitious body, substantially as described.

2. In a dental bridge structure, the combination with laterally spaced crowns, of a metal bridge reinforcement in the form of a crooked wire secured at its ends to said crowns, a body of rubber or cementitious material embedding the said reinforcing wire, and one or more artificial teeth secured to said cementitious body and having metallic projections embedded therein, substantially as described.

898,560. TILING. BERT CROSBY, Dayton township, Butler county, Iowa. Filed Jan. 23, 1907. Serial No. 353,714.



A tile made up of an upper and a lower section, the lower section having flat b ttoms with their upper surfaces semi-cylindrical, the outer surfaces of the lower sections being slightly convexed, the upper sections having flanges projecting beyond one end thereof and the longitudinal edges of the section, the flanges upon the longitudinal edges of the upper section being slightly concaved and conforming to the convexed surface of the lower section against which they bear, the outer surface of one end of each upper section having a shoulder for the reception of the projecting flange of an adjacent section, said flanges being raised above the surface of the upper section, as set forth.

898,561. TRAIN-PIPE COUPLING. ALBERT N. DAVIS, St. Louis, Mo. Filed Apr. 27, 1906. Serial No. 313,964.

1. In a train pipe coupling, the combination of a pair of coupling members, one of which is provided within with a valve seat, a valve arranged to be reciprocated to and

from said seat, a slide rod by which said valve is carried and which extends to the exterior of said coupling member, and a pusher arm pivoted upon said coupling member and adapted to be actuated by the other coupling member; said pusher arm being provided with a valve adapted to close the aperture in the coupling member through which said slide rod operates.

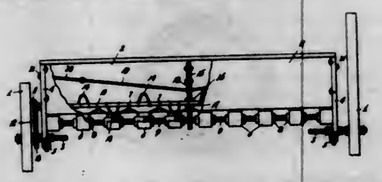


2. In a train pipe coupling, the combination with a pair of coupling members, of a valve in each of said members, a valve rod upon which said valve is rigidly secured, said valve rod being slidably supported at one end in a perforation in the wall of one of the coupling members, a valve seat in the outer end of said perforation, and a pusher arm pivoted to the coupling member; said pusher arm being adapted to act as a valve to close the aperture after the valve rod has been displaced therefrom to operate the valve.

3. In a train pipe coupling, the combination with a pair of coupling members, each of which is interiorly provided with a valve seat; of valves movable in straight lines to and from the seats; valve rods upon which the valves are fixed, one end of each of said valve rods extending through a perforation in the wall of said coupling member to the exterior thereof; pusher arms adapted to transmit movements to the valve rods to operate the valves each being provided with a valve for closing said perforations; and means carried by each member for operating the pusher arm of the other member when the coupling members are connected.

4. In a train pipe coupling, the combination with the end of a valve rod extending through an aperture in the wall of the coupling; of a valve seat in the outer end of said aperture; a pusher arm mounted on the exterior wall of the coupling and adapted to displace the valve rod in the aperture and to seat as a valve upon said valve seat.

898,562. DRILL AND SEEDER. SPENCER E. DAVIS, Minneapolis, Minn. Filed Nov. 2, 1905. Serial No. 285,643. Renewed Nov. 19, 1906. Serial No. 344,153.

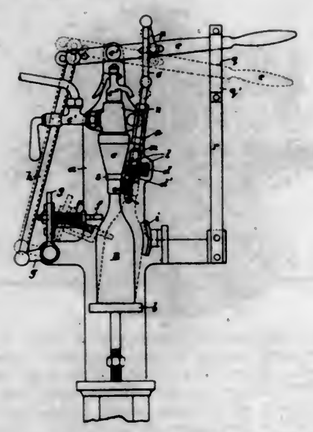


1. In a drill or seeding machine, the combination with a hopper having its sides rigidly connected by a notched bridge bar, of a truss rod attached at its ends to yokes, the prongs of which are passed through the heads of said hopper, the intermediate portion of said truss rod being engageable with any of the several notches of said bridge bar, substantially as and for the purposes set forth.

2. In a drill or seeding machine, the combination with a hopper having its sides rigidly connected by a bridge bar, of a truss rod attached at its ends to the heads of said hopper, the intermediate portion of said truss rod being engageable with said bridge bar at any one of several points, substantially as and for the purposes set forth.

3. In a machine of the kind described, the combination with a hopper having its sides rigidly connected by a bridge bar, of a truss rod attached at its ends to the ends of said hopper, the intermediate portion of said truss rod being engaged with the intermediate portion of said bridge bar, substantially as and for the purposes set forth.

898,563. MACHINE FOR FILLING AND CLOSING BOTTLES. JEAN DECEMER, Reignier, France. Filed Dec. 5, 1906. Serial No. 346,388.



1. A machine for filling and closing bottles having a stopper attached thereto comprising a bottle support, a filling tube, a pair of spring arms to yieldingly hold the stopper, a yielding arm to tilt the bottle, a stop for the tilted bottle, a plunger to force the stopper in the bottle, and manually operated means for simultaneously actuating the tilting arm and the plunger.

2. A machine for filling and closing bottles having a stopper attached thereto comprising a bottle support, a filling tube, a pair of spring arms to yieldingly hold the stopper, a yielding arm to tilt the bottle, a stop for the tilted bottle, a plunger to force the stopper in the bottle, a pivoted lever having a handle thereon, and link connections from the lever to the tilting arm and the plunger to simultaneously actuate them.

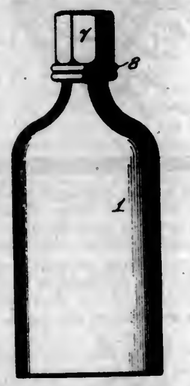
3. A machine for filling and closing bottles having a stopper attached thereto comprising a bottle support, a filling tube, a pivoted arm, a fork having a spring to take up the shock, the fork being adapted to engage the bottle to tilt it, a spring claw to hold the stopper attached to the bottle, a plunger to operate through the claw, a lever having a handle thereon, and link connections from the lever to the pivoted arm and the plunger to simultaneously actuate them.

4. A machine for filling and closing bottles having a stopper attached thereto comprising a frame, a bottle support, a filling tube, a spring claw for holding the stopper, a bell-crank having a fork on one arm, the fork being backed by a spring, means for adjusting the fork, the fork being adapted to tilt the bottle, a plunger adapted to operate through the claw, a lever pivoted to the frame and having a handle portion, a link connecting the bell-crank with the lever, a link connecting the plunger with the lever, and an adjustable connection between the links and the lever to vary the throw of the bottle and the stopper.

898,564. BOTTLE-STOPPER. CHARLES E. DOUGHERTY, Elizabeth, N. J. Filed Aug. 15, 1907. Serial No. 388,691.

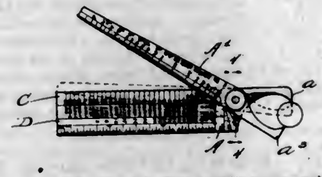
1. In combination with a bottle having a screw thread on its neck at a distance from its mouth, a cap having a sleeve portion to fit on the mouth of the bottle, said sleeve portion being interiorly threaded at its lower end to engage the threads of the bottle neck and being further provided with externally located annular beads to strengthen the construction of the threaded portion of the sleeve, and a stopper on the inner side of the cap and disposed within the sleeve, said stopper being united to the cap and movable therewith when the sleeve is screwed or unscrewed on the bottle.

2. In combination with a bottle having a screw thread on its neck at a distance from its mouth, a cap having a sleeve portion to fit on the mouth of the bottle, said sleeve portion being interiorly threaded at its lower end to engage the threads of the bottle neck and being further provided with externally located annular beads to strengthen the construction of the threaded portion of the sleeve, and



a stopper on the inner side of the cap and disposed within the sleeve, said stopper being united to the cap and movable therewith when the sleeve is screwed or unscrewed on the bottle, said sleeve having angularly disposed faces on that portion thereof which is above the beads to afford gripping surfaces.

898,565. COMBINATION CALIPER-GAGE. CHARLES A. DUNCAN, Spokane, Wash. Filed Mar. 2, 1907. Serial No. 360,274.



1. A combined tool embracing a caliper comprising pivotally connected jaws, a blade integral with each jaw and extending beyond the pivot, and scales marked on each and indicating at the intersection of the edges of the blades the measurements of the object calipered.

2. A combined tool embracing a caliper comprising pivotally connected jaws, a blade integral with each jaw projecting oppositely therefrom, beyond the pivot and graduated to gage the objects calipered, said graduations reading at the points of intersection of the edges of the blades.

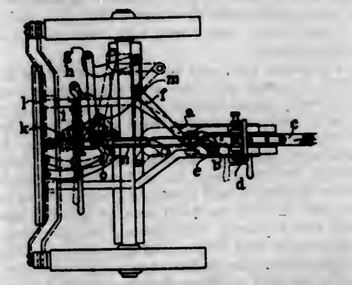
3. A combined tool embracing a caliper comprising pivotally connected coacting jaws, a blade integral with each jaw projecting oppositely therefrom beyond the pivot, and graduated to mark the dimension of the object calipered, a plurality of scales also graduated to gage the same, all said graduations reading at the intersection of the edges of the blades.

4. A combined tool embracing a caliper comprising pivotally connected jaws, a blade integral with each jaw and projecting oppositely therefrom beyond the pivot and marked to gage and measure the object calipered at the intersection of the edges of the blades and a protractor scale on one of said blades in position for the other blade to coact therewith in measuring angles.

5. A caliper embracing graduated blades pivoted to afford coacting jaws at one end, said graduations reading at the intersection of the edges of the blades the diameter of the object calipered in thousandths and sixty-fourths of an inch and in millimeters along the adjacent edges thereof and a linear scale along one of the opposite edges of one of said blades.

[Claims 6 to 17 not printed in the Gazette.]

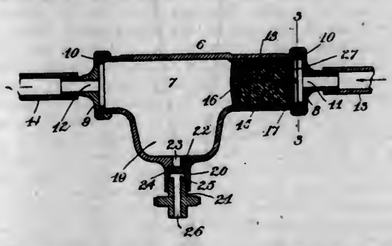
898,566. BRAKE FOR CARRIAGES. MAX EHLERT, Hanover, Germany. Filed Oct. 15, 1906. Serial No. 339,116.



1. In a brake for carriages in which the brake blocks are operated by means of a spring at a repulling of the carriage pole, the combination of a sliding carriage (*b*) located in the thill of the wagon, means to fasten the carriage pole to said sliding carriage, a spring, a system of levers and links connecting said sliding carriage with said spring, means to cause the spring to act on the free arm of the last angle lever (*h*), a draw rod (*k*), and means to operate the beam carrying the brake blocks by the motion of said draw rod (*k*) substantially as and for the purpose set forth.

2. In a brake for carriages, in which the brake blocks are operated by means of a spring at a repulling of the horses, the combination of a beam carrying the brake blocks, an adjustable draw rod (*k*) connected to said beam, a system of levers, a second angle lever (*m*) connecting the angle lever *h* with the draw rod, and means to remove the brake blocks a good distance from the circumference of the wagon wheels, substantially as and for the purpose set forth.

898,567. GASOLENE-FILTER. JOHN ELLIS, Lynn, Mass. Filed Apr. 28, 1906. Serial No. 314,141.



1. A gasolene filter and separator comprising in its construction a casing provided with a passageway extending longitudinally therethrough and having an inlet and an outlet orifice, said casing provided with a filter chamber adjacent to said inlet orifice, there being a precipitation chamber located beneath said passageway between said filter and said outlet orifice.

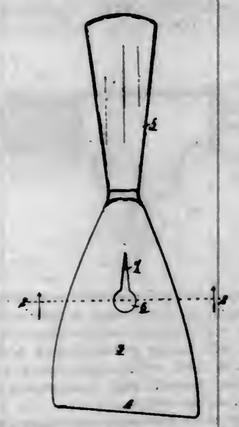
2. A gasolene filter and separator comprising in its construction a casing provided with a passageway extending longitudinally therethrough having an inlet and an outlet orifice, said casing provided with a filter chamber adjacent to said inlet orifice, there being a precipitation chamber located beneath said passageway between said filter and said outlet orifice, and a drip-cock adapted to open and close a passage leading out of said precipitation chamber.

3. A gasolene filter and separator comprising in its construction a casing provided with a passageway extending therethrough, caps having screw-threaded engagement with said casing at opposite ends of said passageway, respectively, each of said caps having a hole extending therethrough into said passageway and constituting, respectively, an inlet and an outlet orifice therefor, filtering material located in said passageway adjacent to said inlet passage, there being a precipitation chamber located beneath said passageway between said filtering material and said outlet orifice, and a drip-cock connected to said precipitation chamber.

4. A gasolene filter and separator comprising in its construction a casing provided with a passageway extending therethrough, caps having screw-threaded engagement with said casing at opposite ends of said passageway, respectively, each of said caps having a hole extending therethrough into said passageway and constituting, respectively, an inlet and an outlet orifice therefor, two strainers located in said passageway adjacent to said inlet orifice and filtering material located in said passageway between said strainers, there being a precipitation chamber located beneath said passageway between said filtering material and said outlet orifice, and means whereby the precipitation in said chamber may be removed therefrom.

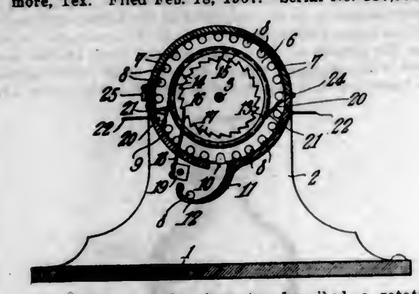
5. A gasolene filter and separator comprising in its construction a casing provided with a passageway extending longitudinally therethrough and having an inlet and an outlet orifice, said casing provided with a filter chamber adjacent to said inlet orifice, there being a precipitation chamber located beneath said passageway between said filter and said outlet orifice, said precipitation chamber having a passage leading out of the bottom thereof, and a plug having screw-threaded engagement with said casing, the upper end of said plug adapted to bear against a seat provided in said casing adjacent to said last named passage to close the same and having the periphery of its upper end of reduced diameter, whereby when said plug is moved away from contact with said seat the precipitation in said chamber may pass from said chamber along the reduced portion of said plug and out through a passage provided in said plug.

898,568. CALCIMINER'S KNIFE. CHARLES N. EMMERSON, Chicago, Ill. Filed Oct. 15, 1907. Serial No. 397,547.



A calciminer's knife comprising a handle and a broad flat blade connected with the handle and forwardly extending therefrom, the blade having formed therein, a considerable distance from the acting edge, a hole tapered away from the edge and toward the handle, and adapted to engage a nail or tack and permit the same to be drawn by raising the handle upon the blade as a fulcrum, substantially as described.

898,569. SINGE-REGISTER. JOHN W. B. FARIS, Skidmore, Tex. Filed Feb. 18, 1907. Serial No. 357,993.

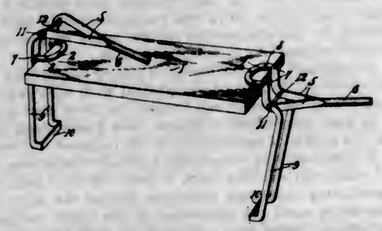


1. In a device of the character described, a rotatable drum having a peripheral series of pockets for holding tapers, a casing coacting with the drum for retaining the tapers in the pockets, electric circuit terminals housed in the drum, and a bridging contact carried by the drum within the casing and arranged to close the circuit and then to open the same on the movement of the drum toward the discharge position and before the taper is discharged.

2. In a device of the character described, a rotatable drum constituting a carrier for tapers; a casing for the drum having a discharge opening through which the tapers from the carrier may escape, an annular conductor at one end of the drum provided with radial contact projections, and circuit terminals carried by the casing and arranged to be bridged by the contact projections of the annular conducting member as the drum is rotated and to break the circuit before a taper is discharged through the opening.

3. In a device of the character described, a rotatable drum having longitudinal pockets on its periphery for the reception of tapers, a casing housing said drum and coacting with the same to retain the tapers in the pockets, openings through the casing sufficient to permit one taper at a time to fall therethrough, a downwardly-extending lip depending from the lowermost point of the casing and terminating in a trough below the bottom of the casing, and electric circuit terminals and bridging means therefor contained within the casing for causing the operation of the distant signal before a taper escapes to the trough.

898,570. PRESSING DEVICE. OLAF E. FELLAND, Stoughton, Wis. Filed Apr. 4, 1908. Serial No. 425,208.



1. A device of the character described comprising a press board adapted to engage the material to be pressed, and clamps at the opposite ends of said press board, each of said clamps having a link member with a jaw to engage a base or support upon which the material to be pressed is placed and an angular locking lever for actuating said link member.

2. The combination with a box or receptacle having an open top, of a press board to engage the material in said box, and clamps arranged upon the opposite ends of said press board and each comprising a link member having a jaw to engage the bottom of the box and an angular locking lever for actuating the link member.

3. A device of the character described comprising a press board, bearings at opposite points on the latter, angular levers forked at their angular ends and pivoted to the bearings and substantially U-shaped link members having offset jaws at their united free ends and having their other offset ends pivoted to the angular portions of the levers.

4. A device of the character described comprising a press board and clamps carried by the opposite ends of said board and each consisting of an angular locking lever pivoted to the board and a link member pivoted to the lever and having an engaging jaw at its free end, substantially as and for the purpose set forth.

5. A device of the character described comprising a press board and clamps arranged at the opposite ends of said board and each comprising a locking lever and a substantially U-shaped link having its arms pivoted to the lever and its closed portion or end laterally offset to provide an engaging jaw, substantially as and for the purpose set forth.

898,571. WINDROWER. LEWIS FRANZMEIER, Newton, Wis. Filed Dec. 31, 1907. Serial No. 408,722.



1. A windrower comprising a plurality of rods having their front ends bent laterally, a plurality of transversely disposed rod supporting sections having longitudinal grooves to receive the laterally bent terminals of the rods and provided with rearwardly extending fingers having grooves receiving the rods, and a transversely disposed connecting cap bar fitted over the said sections and secured to the same and provided with rearwardly projecting lugs arranged over the said fingers.

2. A windrower comprising a plurality of rods having their front ends bent laterally, a plurality of transversely disposed rod supporting sections having longitudinal grooves to receive the laterally bent terminals of the rods and provided with rearwardly extending fingers having grooves receiving the rods, and a transversely disposed connecting cap bar fitted over the said sections and secured to the same and confining the rods in the grooves, the latter being of greater depth than the diameter of the rods to permit the latter to have a limited independent upward and downward movement.

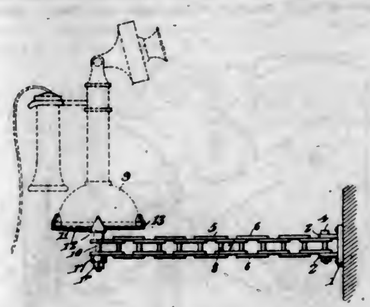
3. In a windrower, the combination of a rod supporting section provided with a longitudinal groove and having rearwardly extending fingers provided with grooves, said section being also provided with an outer enlarged rearwardly extending finger having a pair of grooves, rods having their front ends bent laterally and fitted in the said grooves, and a cap bar arranged upon the said section and confining the rods in the grooves.

4. In a windrower, the combination of a rod supporting section having a longitudinal groove and provided with rearwardly extending fingers having grooves, said fingers being also provided at the bottom of the grooves with slots, rods having laterally bent ends arranged in the said grooves and having a limited vertical movement, and a cap bar arranged upon the said section and retaining the rods in the said grooves.

5. A windrower comprising a series of longitudinal rods, means arranged transversely of the rods for connecting the front ends of the same, a longitudinal bar located at the inner side of the series and extending rearwardly from the said connecting means, and a group of rearwardly diverging rods connected at their front ends to the said longitudinal bar.

[Claims 6 to 9 not printed in the Gazette.]

898,572. FOLDING BRACKET FOR DESK-TELEPHONES, &c. WILLIAM H. GERHARD, Austin, Tex. Filed Sept. 27, 1907. Serial No. 394,858.



1. A foldable bracket for telephones, etc. comprising a flexible supporting member consisting of a sprocket chain composed of short overlapped horizontal links arranged in pairs and having their pivots vertically disposed so that each link can swing independently in a horizontal plane but is held against vertical movement, means for attaching one end of the chain to a support, and means carried by the free end of the chain for holding an object.

2. A foldable bracket for telephones, etc. comprising a flexible supporting member consisting of a sprocket chain composed of short overlapped horizontal links arranged in pairs and having their pivots vertically disposed so that each link can swing independently in a horizontal plane, means for attaching one end of the chain to a support, and an adjustable clamp mounted on the free end of the sprocket chain and carried by the same and composed of jaws having relative horizontal adjustment.

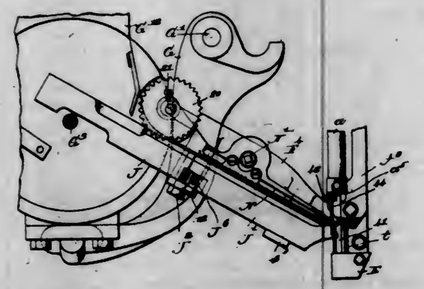
3. A foldable bracket for telephones, etc. comprising a sprocket chain composed of links disposed in pairs and provided with vertically disposed pivots so that each link can swing independently in a horizontal plane, means for attaching one end of the sprocket chain to a support, an adjustable clamp carried by the free end of the sprocket chain and consisting of relatively rigid jaws provided with connecting shanks arranged at an angle, and an adjustable jaw having a shank and a fastening device piercing the said shank and also connecting the pairs of links at the outer end of the chain.

4. A foldable bracket for telephones, etc. comprising a horizontally movable sprocket chain composed of links having their pivots vertically disposed so that each link can swing independently in a horizontal plane, means for attaching one end of the sprocket chain to a support, and an adjustable clamp composed of relatively rigid upwardly extending jaws provided with connected shanks arranged at an angle to each other, an upwardly extending adjustable jaw provided with a shank having a slot, and a fastening device extending through the slot of the adjustable jaw and through the connected ends of the shanks of the relatively rigid jaws and securing the same to and connecting the pairs of links at the outer end of the sprocket chain.

5. A foldable bracket for telephones, etc. comprising an attaching bracket consisting of a plate having projecting lugs arranged in vertical alinement, a horizontally movable sprocket chain composed of horizontal links arranged in pairs and having their pivots vertically disposed so that each link can swing independently in a horizontal plane, the pair of links at the inner end of the chain being connected to the said lugs, a vertical fastening device carried by and connecting the pairs of links at the free end of the sprocket chain, and a clamp secured to the sprocket chain

by the fastening device and composed of relatively rigid jaws having integral shanks arranged at an angle to each other, and an adjustable jaw provided with a shank having a slot to receive the said fastening device.

898,573. MACHINE FOR DRIVING LOOSE NAILS. GEORGE GODDU, Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 22, 1903. Serial No. 174,139.



1. In a machine of the class described, a movable head, a raceway having a plurality of nail-guiding grooves, and means actuated by a movement of the head for shifting the raceway.

2. In a machine of the class described, a movable head, a driver, a nose carried by the head and having a driver passage, a raceway, and means actuated by a movement of the head for changing the relative positions of the raceway and nose.

3. In a machine of the class described, a movable head provided with a nose having a driver passage, a driver mounted in the head, a movable raceway for delivering nails to the driver passage in the nose, means actuated by a movement of the head for shifting the raceway, and means for locking the raceway to prevent accidental movement thereof.

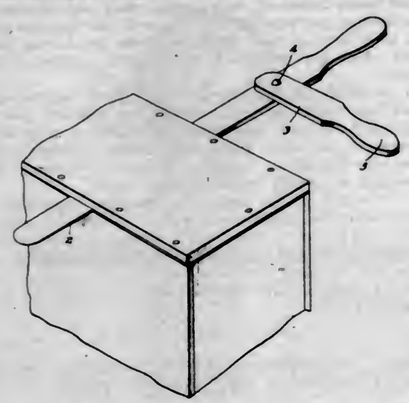
4. In a machine of the class described, a movable head provided with a nose having a driver passage, a driver mounted in the head, a movable raceway for delivering nails to the driver passage in the nose, means actuated by a movement of the head for shifting the raceway, and means for locking the raceway to prevent accidental movement thereof, said locking means being inoperative during a portion of the movement of the head.

5. In a machine of the class described, a nose having a driver passage, a driver, a multi-part hopper for containing different kinds of nails, a raceway comprising a nail-receiving portion and a separate nail-delivering portion, each provided with a plurality of grooves for conducting nails from the hopper to the driver passage, and means for moving the nail-delivering portion of said raceway with relation to the nail-receiving portion thereof, to bring any desired groove into position to deliver nails to the driver passage.

[Claims 6 to 23 not printed in the Gazette.]

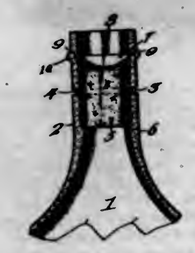
898,574. LID-REMOVER. GEORGE A. GOTCHALL, Manning, Iowa. Filed May 2, 1907. Serial No. 371,465.

A box lid opener comprising a relatively wide straight flat blade of gradually increasing thickness from its front to its rear end and provided at its rear end with an integral handle, and a lever pivoted to the blade at a point near the rear handled end thereof, whereby the blade proper is wholly unobstructed through its entire length for proper entrance beneath the box lid, said lever being disposed to swing in the plane of the flat face of the blade and to a position transversely to the longitudinal axis of the latter and being designed when in the latter position for use in rotating the blade to pry off the box lid, said lever having an integral handle which, when the lever is in



normal position, registers with and conforms to the outline of the blade handle.

898,575. BOTTLE. REUBEN R. GRAVES, Salem, Oreg., assignor of one-half to Homer A. Dove, Salem, Oreg. Filed Jan. 3, 1907, Serial No. 350,583. Renewed Feb. 11, 1908. Serial No. 415,368.

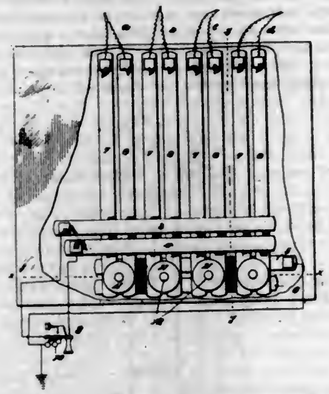


A bottle having a portion of its neck constructed in straight cylindrical form and terminating with an annular shoulder, an annular reinforcing bead next to the upper end of the neck, said neck having an internal annular groove arranged in alinement with the bead, a weakened portion arranged midway between the shoulder and bead, a cork stopper mounted in the straight portion of the neck so as to extend above the said weakened portion, and a concavo-convex slitted dished guard for engaging the internal groove and having one portion of the convex part bearing against the upper surface of the cork so as to keep the lower surface of the cork in contact with said shoulder, substantially as specified.

898,576. TELEPHONE-SWITCH. VERNE E. GREEN, Galva, Ill. Filed Aug. 6, 1907. Serial No. 387,354.

1. In a switch of the character specified, the combination of a pair of contact plates, pairs of switch blades having one blade of the respective pairs in electrical connection with one of said plates and electrically insulated from the other plate, and having the other switch blade electrically insulated from the first mentioned plate and electrically connected with the other plate, and a second pair of contact plates arranged to electrically connect pairs of switch blades when moved out of contact with the first mentioned pair of plates.

2. A switch of the character specified, comprising a pair of plates 3 and 4, pairs of switch blades having one blade of each pair electrically connected with one of said plates and electrically insulated from the other plate and having the other blade electrically insulated from the plate with which the first mentioned blade is in electrical connection



and electrically connected to the other plate, and a second pair of plates 5 and 6 normally out of contact with the switch blades and adapted to electrically connect the same.

898,577. CUSPIDOR. DAVID L. HARDEN, Newaygo, Mich. Filed Apr. 7, 1908. Serial No. 425,747.

1. A collapsible spittoon made of a single sheet of material having flaps which are adapted to overlap one another and fold against the sides of the receptacle, resilient wires each bent to form a plurality of coils designed to hold the folded flaps against the sides of the receptacle, the ends of the wire extending in opposite directions, as set forth.

2. A collapsible spittoon made of a single sheet of material having flaps which are adapted to overlap one another and fold against the sides of the receptacle, resilient wires each bent to form a plurality of coils designed to hold the folded flaps against the sides of the receptacle, the ends of the wire bearing against the inner surface of the walls of the receptacle and in alinement with each other, as set forth.

898,578. ELECTRIC HEATER. ANDREW J. HOLMES, Tacoma, Wash. Filed May 10, 1906. Serial No. 316,175.

1. An electric heater for use with alternating currents having a coil to be placed in the primary circuit and composed of a material which is strongly resistant to the molecular changes induced by the current reversals.

2. An electric heater for use with alternating currents comprising a core, and a coil therefor composed of a conductor which is strongly resistant to the molecular changes induced by the current reversals.

3. An electric heater for use with alternating currents, comprising a coil and core, both being composed of materials highly resistant to the molecular changes induced by the current reversals.

4. An electric heater for use with alternating currents, comprising a coil and core, both composed of magnetic metals.

5. An electric heater for use with alternating currents, comprising a coil and core, both composed of hard iron or steel having permanent magnetic qualities.

[Claims 6 to 9 not printed in the Gazette.]

898,579. ADVERTISING DEVICE. LEMUEL J. HUSTED, Denver, Colo., assignor to The National Rural Route Advertising Company, Denver, Colo. Filed Sept. 9, 1907. Serial No. 391,913.



1. An advertising structure comprising a supporting post and two plates having integral interlocking hinge sleeves formed upon their opposite edges, the plates being bent to form a structure elliptical in cross section, rods for connecting the opposite edges of the plates, and means for locking the plates upon the posts, substantially as described.

2. An advertising device comprising two members whose opposite edges are connected by hinge rods, a post embraced by the said members, and suitable means for fastening the plates to the post, substantially as described.

3. An advertising device comprising a post and a number of sets of advertising plates arranged thereon one above another, each set of plates consisting of two members and all the plate sets being connected by hinge rods connecting the meeting edges of the plates on opposite sides of the post, and suitable means for fastening the advertising structure to the post, substantially as described.

4. The combination with an upright support, of a number of sets of advertising plates mounted thereon one above another, each set consisting of two plates whose edges are detachably connected, the said plates surrounding the post and being elliptical in cross section or plan view, the abutting end edges of any two sets being provided with flanges whereby the said edges are reinforced to prevent any tendency of the plates to slip past or overlap each other, substantially as described.

898,580. TEMPORARY BINDER. MONTGOMERY W. HYER, New York, N. Y. Filed June 1, 1908. Serial No. 436,177.

1. A temporary binder comprising a supporting base provided with longitudinally spaced uprights, and a clamping member provided with slots to receive said uprights, spring metal plates attached to said clamping member adjacent to the slots therein, and each having a T shaped slot, the side walls of the stems of said slots forming

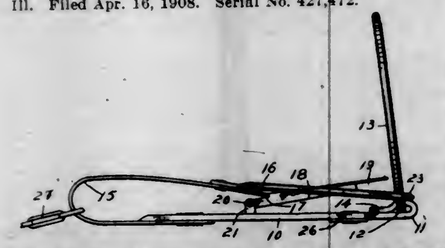
spring tongues, the tongues of one plate being arranged at the inner end of one of the slots in said clamping member, and those of the other plate at the outer end of the other slot.



2. A temporary binder comprising a base plate provided with longitudinally spaced uprights, with a standard or post arranged between said uprights, and a clamping member having apertures at its opposite ends for engagement with said uprights, and an elongated slot formed intermediately of its ends for receiving said standard, and spring means carried by said clamping member for engaging said uprights to lock said clamping member in operative position.

3. A temporary binder comprising a supporting base L-shaped in cross section provided with longitudinally spaced upright bars projecting from the lower arm thereof, and with a post formed intermediately of said upright bars, and a clamping member having slots arranged to pass over said bars and post and provided with means for frictionally engaging said bars to hold said clamping plate in operative position.

898,581. ANIMAL-TRAP. GUST H. JOHNSON, Roseville, Ill. Filed Apr. 16, 1908. Serial No. 427,472.



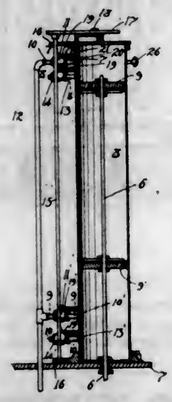
1. An animal trap comprising a base member, a U-shaped spring connected at one end thereof to said base at one end of the same, an endless loop supported from said base at the other end, a choke member connected at one end to the free end of said spring and formed with a terminal loop movable over said endless loop, and a bait trigger carried by said base and operating to hold said spring and the choke member carried thereby in depressed position.

2. In an animal trap, an endless loop of wire flattened at one part, a base member comprising a metallic bar bent upon itself at one end and around said flattened portion of the endless loop and maintaining the same at an angle to the base, a U spring connected at one end thereof to the other end of the base, a choke member connected at one end to the free end of said spring and formed with a terminal loop movable over said endless loop, and a bait trigger carried by said base and operating to hold said spring and the choke member carried thereby depressed.

3. An animal trap comprising a base member, an endless loop connected to said base member at one end and maintained at an angle thereto, a U spring connected at one end to the other end of said base member, a choke member formed from a single piece of wire bent intermediate its ends into an elongated loop for movably engaging the endless loop and with the remaining portions converging and connected to the free end of the spring, guard wires connecting the sides of the elongated loop and extending through the endless loop, and a trigger device carried by the base and operating to maintain the spring in depressed position.

898,582. MEANS FOR OPERATING CAR-FENDERS. ROBERT J. KELLETT, San Francisco, Cal. Filed Feb. 10, 1908. Serial No. 415,030.

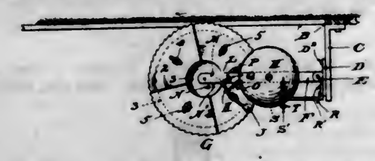
1. In means for operating street car fenders, the combination, with the fender, of a fluid pressure cylinder, a piston therein, a piston rod therefor, operatively connected with the fender, an inlet and an exhaust pipe for each end of the cylinder, four valves for the respective pipes, a vertical shaft adjacent to the cylinder, a handle turning said shaft, and operative connections between said shaft and valves, whereby all four valves may be simultaneously operated, to open the inlet valve at one end and the outlet valve at the other end, and to close the other inlet and outlet valves, substantially as described.



2. In means for operating street car fenders, the combination, with the fender, of a fluid pressure cylinder, a piston therein, a piston rod therefor, operatively connected with the fender, an inlet and an exhaust pipe for each end of the cylinder, four valves for the respective pipes, a vertical shaft adjacent to the cylinder, a handle turning said shaft, an arm carried by each valve stem, an arm for each valve carried by said shaft and a link connecting the arm on the shaft with the arm on the corresponding valve, substantially as described.

3. In means for operating street car fenders, the combination, with the fender, of a fluid pressure cylinder, a piston therein, a piston rod therefor, operatively connected with the fender, an inlet and an exhaust pipe for each end of the cylinder, four valves for the respective pipes, a vertical shaft adjacent to the cylinder, a handle turning said shaft, operative connections between said shaft and valves, whereby all four valves may be simultaneously operated, to open the inlet valve at one end and the outlet valve at the other end, and to close the other inlet and outlet valves, and a safety valve in the upper end of the fluid pressure cylinder, substantially as described.

898,583. ALARM ATTACHMENT FOR BALING-PRESSES. LYMAN B. KIMBLE, Chillicothe, Ill. Filed Nov. 15, 1907. Serial No. 402,350.



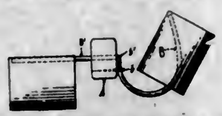
1. An alarm device for baling-presses comprising a pivoted arm, a support therefor, a wheel carried by said arm to engage the bale, a gong and a clapper also carried by the arm, means carried by the wheel for operating the clapper, a rigid arm extending from the support substantially parallel to the pivoted arm, and a compression spring interposed between the rigid arm and the said pivoted arm and exerting pressure upon the latter in a direction substantially at right angles to its length.

2. An alarm device for baling-presses comprising a pivoted arm, a support therefor, a wheel carried by said arm to engage the bale, a gong and a clapper also carried by the arm, means carried by the wheel for operating the clapper, a rigid arm extending from the support substantially parallel to the pivoted arm, a compression spring interposed between the rigid arm and the said pivoted arm and exerting pressure upon the latter in a direction substantially at right angles to its length, and means for adjusting said spring for the purposes set forth.

3. An alarm device for baling presses comprising an arm pivoted at one end, a support for its pivoted end, a disk carried at the free end of the arm, a series of wheel-sections extensibly carried by the disk and forming a wheel to contact with the bale, a gong and a clapper also carried by the arm, means carried on the disk separate from the sections for operating the clapper, a rigid arm extending from the support substantially parallel to the pivoted arm, and a spring interposed between the rigid arm and the said pivoted arm and extending substantially at right angles to the latter for the purposes described.

4. An alarm device for baling presses comprising an arm pivoted at one end, a support for its pivoted end, a disk carried at the free end of the arm, a series of sections extensibly carried by the disk and forming a wheel to contact with the bale, a gong and a clapper also carried by the arm, means carried on the disk separate from the sections for operating the clapper, a rigid arm extending from the support substantially parallel to the pivoted arm, a spring interposed between the rigid arm and the said pivoted arm and extending substantially at right angles to the said pivoted arm, and means for adjusting said spring for the purposes set forth.

898,584. CAN-STACKER. CLAYTON T. LA BAU, Indianapolis, Ind. Filed Sept. 30, 1907. Serial No. 395,242.



1. A can stacking device comprising a wooden bar and a plurality of metal can engaging arms carried thereby, each of said arms having a part passing through the bar and an angular turned part lying against the face of the bar, and a staple engaging said angular turned part for holding it in place, substantially as described.

2. A can stacking device comprising a bar and a plurality of metallic rods carried thereby, each of said rods having a straight portion passing through the bar and providing a straight can engaging arm on one side, the remaining portion of the rod being substantially semi circular and stapled to the bar and forming a curved can engaging arm, substantially as described.

898,585. RIM-COMPRESSOR. ADAM MAGNETT and JOE M. CLEMENTSON, Westfield, Iowa. Filed Dec. 19, 1907. Serial No. 407,256.



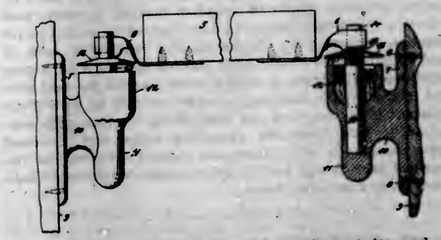
1. A device of the character described, comprising a hollow elongated casing provided, at one end, with a bifurcated portion, embodying a pair of flat, parallel extensions, said extensions provided with registering apertures, a band engaging said casing, said band comprising a pair of curved sections, each of said sections provided at its inner end with an integral, horizontal, apertured lip disposed at right-angles to the body portion of the section, the lips of said band overlapping and being positioned between the parallel extensions of the hollow casing and having their apertures registering with the apertures of said extensions, detachable fastening means extending through the apertures of the extension and through the apertures of said lips for pivotally securing the sections in the bifurcated portion of the casing, the outer ends of the section overlapping, means fastening said overlapping ends together, an L-shaped bar having its body portion positioned in the casing, said body portion provided upon one side with pockets, a set-screw threaded through one side of the casing and normally positioned at its inner end, in a pocket, and clamping means carried by the outer end of said bar.

2. A device for compressing rims, comprising an elongated hollow casing provided with a bifurcated end, semi-circular sections having inner, parallel portions, said parallel portions overlapping and positioned in the bifurcated end of said casing, fastening means pivotally securing the parallel portions within said bifurcated portion, detachable means securing the outer ends of said sections together, said sections comprising a clamping-band, a bar slidably mounted in said casing, means carried by said casing for locking said bar in an adjusted position therein, and clamping means carried by the outer end of said bar.

3. A device of the class described, comprising a hollow, elongated casing, said casing provided with a bifurcated end and open at its other end, expansible clamping means pivotally secured in the bifurcated end of said casing, a bar slidably mounted in said casing and having a portion projecting beyond the open end thereof, means for locking said bar in an adjusted position in said casing, said bar provided with clamping means at its outer end.

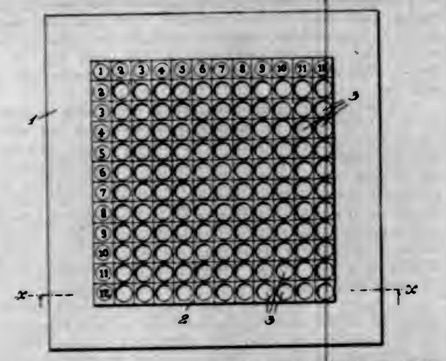
4. A device of the class described, comprising an elongated, hollow casing provided at one end with a pair of flat, parallel extensions, producing a bifurcated portion and the opposite end of the casing being open, said extensions provided with registering apertures, a sectional band engaging said casing, each section of said band comprising a curved body provided near its outer end with an aperture and at its inner end with an integral horizontal apertured-lip, disposed at right-angles to the central and outer portion of the body, and each lip positioned between the parallel extensions and overlapping the other lip between said extensions, fastening means extending through the apertures of the lips and pivotally securing said sections upon the bifurcated end of the casing, whereby said sections can be quickly swung apart for permitting the outer ends of the sections to be quickly positioned over a hub, detachable fastening means extending through the apertures formed near the outer ends of the curved sections for securing the outer ends in their over-lapping fastened position, a flat bar slidably mounted in the open end of the casing and said bar being adapted to engage, at its inner end, the lips of the sections of the band, limiting its inward sliding movement, the lower face of said bar adapted to engage one side of one of the inner faces of the casing, and its upper face provided with a plurality of pockets, a set-screw threaded through the upper portion of the casing and adapted to be positioned in one of the pockets for clamping the bar against the lower face of the casing and away from the upper portion of said casing, and clamping means carried by the outer end of said bar.

898,586. PERCH-SUPPORT. COLUMBUS MATTHEWS, Mattoon, Ill. Filed Feb. 1, 1908. Serial No. 413,789.



The combination with a perch having at its ends a hanger, of a support comprising a plate carrying a socketed stem which is enlarged at its upper end to form a cup, and a pin fitting in the socket of said stem, and having a slot above the cup to receive the hanger.

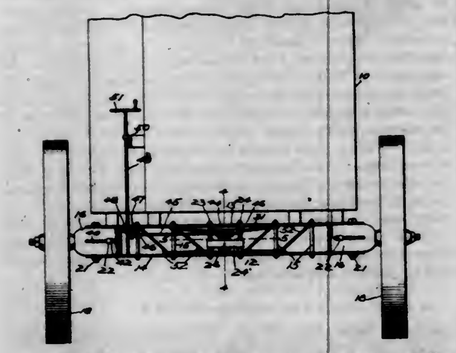
898,587. GAME-BOARD. MARY C. MATTHIAS, Van Wert, Ohio. Filed Dec. 2, 1907. Serial No. 404,693.



1. A game board comprising a suitable base, an apertured board smaller than the base secured thereon to rise thereabove, and a series of checkers of greater height than the depth of the apertures of the board adapted to be played in the said apertures, said checkers having multiplication numbers thereon.

2. In a device of the class described, a base, an apertured board thereon raised from the base, numbers along the top of said board and along the side thereof, a plurality of checkers having greater height than the depth of the apertures in the board, said checkers having numbers thereon which are multiples of the longitudinal rows or numbers on the board, and a marginal supporting flange on the base for the support of the idle checkers.

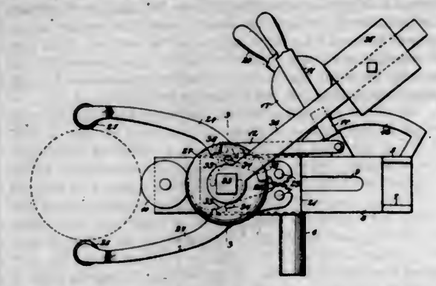
898,588. VEHICLE-AXLE. WILLIE G. MEYER, Loganville, Wis. Filed Feb. 19, 1908. Serial No. 416,731.



A rear axle for vehicles comprising spaced metallic plates, pivotally mounted spindles located between said plates, a forwardly extending arm carried by each of said spindles, a rearwardly extending arm carried by each of said spindles, a revoluble drum carried by said axle, a gear carried by said drum, a driven worm carried by said axle and in mesh with said gear, a cable carried by said drum adjacent to its forward end and having its free ends connected to said forwardly extending arms, and a second cable carried by said drum and located adjacent to the rear end thereof and having its free ends connected to said rearwardly extending arms.

898,589. BACK-REST FOR TURNING-LATHES. JOHN T. MEYERS, Delphos, Ohio. Filed Nov. 23, 1907. Serial No. 403,518.

1. A back-rest for turning-lathes comprising a support, an adjustable plate thereon, bearings carried by the plate and engageable yieldingly with the work, and a stationary bearing on the support between the yielding bearings.



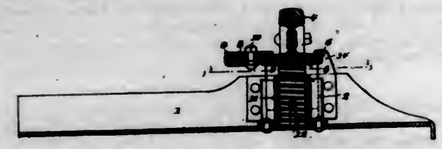
2. A back-rest for turning-lathes comprising a support, a slide mounted thereon, a plate adjustable on the slide, bearings carried by the plate and engageable yieldingly with the work, and a stationary bearing on the slide between the yielding bearings.

3. A back-rest for turning-lathes comprising a support, a slide mounted thereon and having a longitudinal slot and a groove on one side, a plate on the slide having a rib fitting in the slot and extending into the groove, jaw-members pivoted to the plate and provided with bearings engageable with the work, a similar bearing on the slide between the jaw-members, a stud screwed into the plate and passing through the aforesaid slot into the groove, the aforesaid rib being cut away adjacent the projecting end of the stud to form a recess, a nut screwed on said end of the stud and seating in the recess, the base of said nut engaging the floor of the groove, a disk rotatably mounted on the opposite end of the stud and having cam-grooves, and studs on the jaw-members entering said cam-grooves.

4. A back-rest for turning-lathes comprising bearings engageable with the work yieldingly, and a stationary bearing between the yielding bearings.

5. A back-rest for turning-lathes comprising bearings engageable with the work yieldingly, a stationary bearing between the yielding bearings, and means for varying the relative position of said bearings.

898,590. RAILWAY-TIE. LEE A. MILLER, Milwaukee, Wis., assignor of one-half to Frederic C. Inbusch, Milwaukee, Wis. Filed Nov. 29, 1907. Serial No. 404,316.



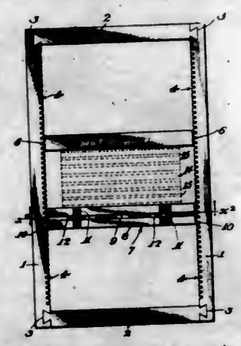
1. In a U-shaped metallic tie having brackets secured to its side-walls, pockets in the brackets, rail-supporting means fitted into the pockets, and springs interposed between the rail-supporting means and bottom wall of the metallic tie.

2. In a U-shaped metallic tie, having brackets secured to its side-walls, pockets in the brackets, chairs provided with depending legs fitted into the pockets, means for securing the chairs and rails together, and springs interposed between the chairs and bottom wall of the metallic tie.

3. In a U-shaped metallic tie, having brackets secured to its side-walls, pockets in the brackets, chairs provided with depending legs fitted into the pockets, means for securing the chairs and rails together, thimbles secured in the bottom wall of the tie, and springs seated in the thimbles, the springs being adapted to impinge against said chairs.

4. In a U-shaped metallic tie, having brackets secured to its side-walls, pockets in the brackets, chairs comprising bridge-piece members having depending legs fitted in the pockets, rails seated upon the bridge-pieces, adjustable rail-clamping mechanism carried by the bridge-pieces of the chairs, and springs interposed betwen said bridge-pieces of the chairs and bottom wall of the tie.

898,591. CHASE. JAMES E. MCCLELLAN, Los Angeles, Cal. Filed Dec. 16, 1907. Serial No. 406,805.



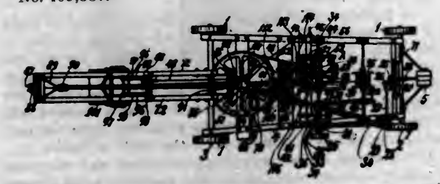
In a printer's chase, a frame, the opposite sides of which are provided with square shoulders and notches, a solid invertible and reversible bar substantially as thick as the frame and having a tongue at each end substantially at the middle of its width and adapted to engage with said shoulders, and pressure applying means comprising two bars, each of which is substantially as thick as the frame and provided with screw threaded perforations, and one of them has smooth ends and is adapted to move freely within the frame and the other one has a tongue at the rear corner of each end adapted to engage with said shoulders, and a pair of right and left screws in said perforations for permanently holding the bars together and adjusting them relatively to each other, the central portion of each screw being angular in cross section.

898,592. SUGAR-PRODUCING PRODUCT. GEORGE W. MCMULLEN, Chicago, Ill. Filed July 22, 1907. Serial No. 384,970.

1. As a new article of manufacture, sugar producing plant, dried, containing less than 30% moisture, comminuted, adapted for indefinite preservation without deterioration, and containing practically the same amount of uninverted sugar as before being dried, substantially as described.

2. As a new article of manufacture, sugar beet, dried, containing less than 30% moisture, reduced to the condition of meal, adapted for indefinite preservation without deterioration, and containing practically the same amount of uninverted sugar as before being dried, substantially as described.

898,593. DIGGING AND LOADING MACHINE. NELS H. NELSON, Willmar, Minn. Filed Jan. 6, 1908. Serial No. 409,387.



1. In a machine of the kind described, the combination with a wheel-supported main frame, of an upstanding frame fixed thereon and having near its top a plate with a segmental slot therein, a mast pivotally mounted near one end of the main frame and adapted to stand plumb up and also to be folded upon the main frame, a bracket fixed on the mast, a removable bolt passed through the bracket and said slot in the plate and a nut on the bolt for clamping the bracket and the plate together.

2. In a machine of the kind described, the combination with a wheel-supported main frame, of a stud fixed vertically in the frame, a turn-table rotatable on the stud, a mast pivotally secured with its lower end to said stud to enable it to be folded and raised at said pivot joint, and means for raising and folding the mast, means for supporting it in an inclined position and means for holding it in upright position.

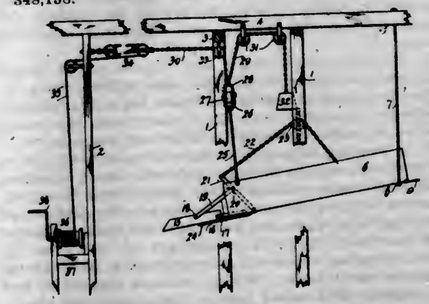
3. In a machine of the kind described, the combination with a wheel-supported frame, of a stud projecting upward therefrom, a turn-table revoluble on the stud, a mast foldably supported on the stud above the turn-table and means for holding the mast upright; a derrick beam pivotally mounted on the turn-table and having near its middle an upward extension, two skeleton pendants link-connected together and pivotally suspended from said upward extension, a scoop or fork trunnioned in the lower end of one of the pendants and having a handle extending into the other pendant, a spring-held latch pivoted in said other pendant and adapted to engage the handle and hold the scoop in operative position, means for tripping said latch, means for operating the scoop and means for elevating the beam substantially as set forth.

4. In a machine of the kind described, the combination with a mast and a derrick beam adjacent thereto, of two substantially parallel pendants suspended from the beam at different distances from its end, a link connecting the two pendants to insure their parallel position, a scoop or the like means trunnioned in the lower end of the pendant nearest the outer end of the beam, a latching and tripping mechanism in the other pendant for holding the scoop in operative position and trip it when it is to unload itself, a bail pivoted to the scoop-supporting pendant, a sheave in the bail, sheaves in the free end of the beam, a rope secured with one end to the bail and extending back and forth over said sheaves so as to pull the scoop toward the end of the beam with increased force, and a winding mechanism on the machine connected with the other end of the rope, and means for raising and lowering the beam.

5. In a machine of the kind described, the combination with a wheel-supported portable device having parts for digging, hoisting and loading or the like, of a wheel-supported horse-power device secured thereto and operatively connected with the working parts of the machine.

[Claims 6 to 14 not printed in the Gazette.]

898,594. CAR-LOADING DEVICE. THOMAS NEWSAM, Jr., Farmington, Ill. Filed Dec. 17, 1906. Serial No. 348,158.



1. In an apparatus of the class described, the combination of a pan, supplemental inner walls for the forward portion of said pan to produce a contracted mouth therefor, an apron, and means projecting from between outer and supplemental walls of said pan, to which said apron is pivoted.

2. In an apparatus of the class described, the combination of a pan, supplemental walls secured to the side walls of the pan and extending diagonally forwardly have portions parallel with and spaced apart from the walls of said pan, an apron, and means projecting from between outer and supplemental walls of said pan to which said apron is pivoted, said apron at its inner end adapted to engage with the bottom of the forward end of the pan.

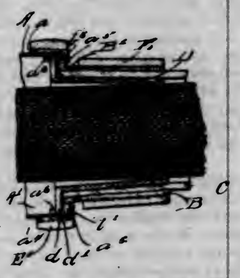
3. In an apparatus of the class described, the combination of a pan, supplemental inner walls for the forward portion of said pan to produce a contracted mouth therefor, arms extending forwardly from said pan and secured to the bottom thereof, intermediate the outer and supplemental wall thereof, and an apron pivotally connected with the outer ends of said arms.

4. In an apparatus of the class described, the combination of a pan, supplemental inner walls for the forward portion of said pan to produce a contracted mouth therefor, arms extending forwardly from said pan and disposed between the outside and supplemental walls thereof, and an apron pivotally connected with said arms.

5. In an apparatus of the class described, the combination of a pan, supplemental inner walls for the forward portion of said pan to produce a contracted mouth therefor, arms extending forwardly from said pan, an apron pivotally connected to said arm, levers pivoted to the pan, connections between levers and aprons, and connections between the outer ends of levers and outside walls of said pan.

[Claims 6 to 16 not printed in the Gazette.]

898,595. SPLICE-COUPLING FOR CABLES. EDWARD J. NOBLETT, Chicago, Ill. Filed Mar. 29, 1907. Serial No. 365,414.



1. A coupling for conduits and the like embracing a split casing having interfitting edges, means adapted to engage the edges of said casing together, means adapted to engage within the end of the conduit and expand the same and means connected at one end with the casing adapted to engage outside the end of the conduit and clamp said conduit between the same and expanding means.

2. A coupling embracing a split tubular casing, means adapted hermetically to seal the edges of said casing together and tapered mechanical means expanding and hermetically connecting the ends of conduits in the casing and corrugated or threaded to embed into the conduits.

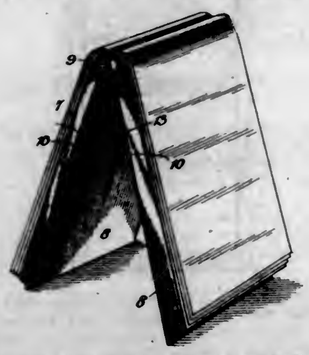
3. A coupling embracing a split casing, arms adapted to hermetically engage the edges of said casing together, mechanical means fitting within and outside a conduit, means for forcing the outer means to grip the conduit and afford an impervious joint and means for rigidly securing said mechanical means to the casing.

4. A coupling embracing a longitudinally split tubular casing of sheet metal, mechanical means adapted to seal the edges of said casing together and interfitting clamping members part of which are in sections capable of removal without removal of the other parts and hermetically connecting each end of the casing with the end of a conduit which communicates in the casing.

5. A coupling embracing a longitudinally split tubular casing having male and female edges adapted to interfit, packing means in the female edge, means for jamming said casing sections firmly into engagement and coacting clamping means rigidly connected to the casing at one end and adapted to rigidly engage the end of a conduit therebetween, one of said clamping members being sectional.

[Claims 6 to 22 not printed in the Gazette.]

898,596. COPY-HOLDER. ARTHUR W. NYCE, Jr., Washington, D. C. Filed May 12, 1908. Serial No. 432,469.



1. In a copy holder of the character set forth, the combination with hingedly connected supports, of an elastic connection between the supports that permits them to be placed and holds them at different angles of inclination, said supports having means for holding the elastic connection in a predetermined position and against displacement while permitting the relative adjustment of the supports.

2. In a copy holder of the character set forth, the combination with hingedly connected supports, having seats, of an elastic band that engages in the seats, said band constituting a connection between the supports that permits them to be placed and holds them at different angles of inclination.

3. In a copy holder of the character set forth, the combination with hingedly connected supports having notches in their opposite margins, of an elastic band that surrounds the supports and engages in the notches.

4. In a copy holder of the character set forth, hingedly connected supports, both of said supports having notches in their opposite margins for the reception of an elastic band.

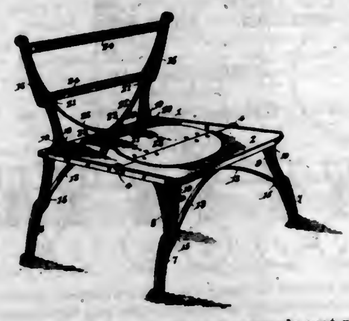
5. In a copy holder of the character set forth, hingedly connected supports, both of said supports having notches in their opposite margins for the reception of an elastic holding band, the walls of the notches that are nearest the hinge connection being disposed at not greater than a right angle to the adjacent edges of the supports.

898,597. CHILD'S PORTABLE COMMODE-CHAIR. BENJAMIN W. PATTINSON, Manitou, Colo. Filed Jan. 29, 1906. Serial No. 298,539.

1. A foldable chair comprising a seat composed of front and rear sections hinged together and adapted to fold on each other, the rear section being extended beyond the front section when the seat is folded, foldable legs supporting the seat, and a back mounted upon the upper face of the rear section of the seat and foldable transversely of the latter and arranged wholly upon the extended portion of the said rear section when the chair is folded.

2. A foldable chair comprising a commode seat composed of hinged sections arranged to fold together, a lid hinged to the upper face of the rear section of the seat and also composed of hinged sections arranged to fold together, and foldable legs supporting the seat.

3. A foldable chair comprising a commode seat composed of hinged sections arranged to fold together, a lid hinged to the upper face of the rear section of the seat and also composed of hinged sections arranged to fold together, the lid when folded being received between the folded sections of the seat, and foldable legs supporting the seat.

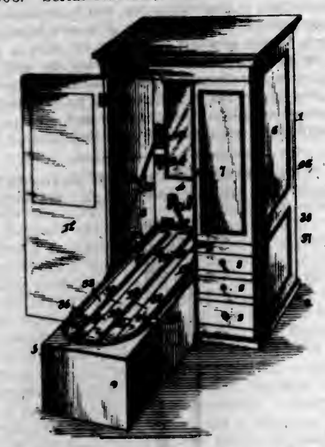


4. A foldable chair comprising a commode seat provided with front and rear sections hinged together and arranged to fold, a lid hinged to the seat and also provided with front and rear sections hinged together, the front section of the lid being foldable beneath the rear section of the same, and the front section of the seat being foldable over the lid.

5. A foldable chair comprising a commode seat composed of front and rear sections hinged together and arranged to fold, a lid also, composed of front and rear sections and arranged to fold, legs supporting the seat connected with and arranged to fold against the same, and a back connected with and foldable against one of the sections of the seat.

[Claims 6 and 7 not printed in the Gazette.]

898,598. FOLDING COT AND BATH-TUB CABINET. BENJAMIN W. PATTINSON, Manitou, Colo. Filed Apr. 21, 1906. Serial No. 313,042.



1. The combination with a cabinet, of a bath tub foldable within the cabinet, said bath tub being provided with a surrounding frame forming a compartment and having a door located at the bottom of the bath tub when the latter is in use, and arranged at the front of the cabinet when the bath tub is folded within the same.

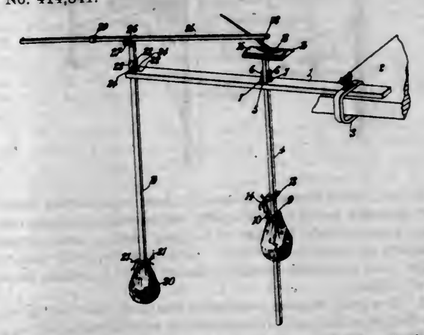
2. The combination with a bath tub, of a mattress support consisting of spaced longitudinal slats, and transverse connecting bars having terminal hooks detachably engaging over the upper side edges of the bath tub and supporting the said longitudinal slats wholly within the bath tub and with their upper faces close to the upper edges of the bath tub to permit an ordinary mattress to rest upon and be supported by both the upper edges of the bath tub and the mattress support.

3. The combination with a cabinet, of a bath tub foldable in the same and projecting beyond the cabinet when in a horizontal position, eyes mounted within the cabinet and located above the inner end of the bath tub when the latter is in a horizontal position, a fabric canopy inclosing the projecting portion of the tub, and an oblong supporting frame receiving and connected with the canopy and composed of sides and a connecting outer portion, the inner terminal of the sides being bent downwardly to form hooks, the latter detachably engaging the said eyes and being adapted to be removed therefrom to permit the canopy to be detached.

4. The combination with a cabinet, of a bath tub foldable within the same and projecting beyond the cabinet when in a horizontal position, a fabric canopy inclosing the projecting portion of the tub and provided with an extension arranged over the portion of the tub within the cabinet, and a supporting frame connected with the canopy at the side edges of the top and detachably interlocked at its inner end with the cabinet.

5. The combination of a cabinet having a compartment and provided in the rear wall thereof with openings, pulleys mounted in the openings, a bath tub foldable within the compartment, guides arranged on the exterior of the rear wall of the compartment and extending above the pulleys, flexible connections arranged on the pulleys and connected to the tub, and weights slidable in the guides and attached at their lower portions to the flexible connections, said weights being provided in their upper portions with slots receiving the flexible connections and permitting the weights to extend above the pulleys.

898,599. PENDULOGRAPH. HERBERT PEARCE, Salcombe, Bowdon, England. Filed Feb. 7, 1908. Serial No. 414,841.



1. In a pendulograph, the combination with a principal pendulum, of a secondary pendulum oscillating at right angles with the former; a marker operatively connected with the secondary pendulum; a recorder sheet supported on the principal pendulum; and means for holding the marker in operative contact with the said sheet.

2. In a pendulograph, the combination of principal pendulum, adapted to support a sheet on its top in a position curved to the radius thereof; a secondary pendulum having its axis in the same plane as the principal pendulum but mounted to oscillate in a plane at right angles with that of the said pendulum; an arm pivoted upon the secondary pendulum and extending towards the sheet above mentioned; and a marker carried by the said arm and held by it in touch with the said sheet.

3. In a pendulograph, the combination of principal pendulum, adapted to support a sheet on its top in a position curved to the radius thereof and having its weight vertically adjustable on its rod; a secondary pendulum having

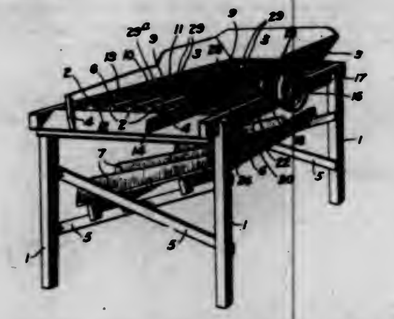
its axis in the same plane as the principal pendulum but mounted to oscillate in a plane at right angles with that of the said pendulum; an arm pivoted upon the secondary pendulum and extending towards the sheet above-mentioned; and a marker carried by the said arm and held by it in touch with the said sheet.

4. In a pendulograph, the combination of frame; principal pendulum hung thereon; table on the said pendulum having its top curved to the radius of the respective part of the pendulum; a secondary pendulum mounted on the frame above-mentioned to oscillate in a plane at right angles with that of the principal pendulum; an arm pivoted upon the secondary pendulum and extending towards the table above-mentioned; and a marker carried by the said arm and held by it in touch with the said table.

5. In a pendulograph, the combination of frame; principal pendulum hung thereon and having a weight vertically adjustable; table on the said pendulum having its top curved to the radius of the respective part of the pendulum; a secondary pendulum mounted in the frame above-mentioned to oscillate in a plane at right angles with that of the principal pendulum; an arm pivoted upon the secondary pendulum and extending towards the table above mentioned; and a marker carried by the said arm and held by it in contact with the said table.

[Claims 6 to 10 not printed in the Gazette.]

898,600. FRUIT-SORTING MACHINE. FRANKLIN B. PEASE, Rochester, N. Y. Filed Nov. 18, 1907. Serial No. 402,651.



1. In a fruit sorting machine, a channel, a bottom therefor having a series of removable, changeable, yielding bottom pieces, each having a sorting orifice, and means adapted to project into each orifice from beneath and to move fruit therefrom to the orifice of the next bottom piece in the series.

2. In a fruit sorting machine, a channel, a bottom therefor having a series of tilting bottom pieces, each having a sorting orifice, and means adapted to project into each orifice from beneath and to move fruit therefrom to the orifice of the next bottom piece in the series.

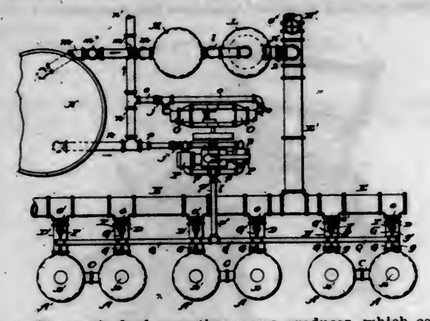
3. In a fruit sorting machine, a channel, a bottom therefor having a series of tilting bottom pieces, each pivoted in said channel and each having a sorting orifice, and means adapted to project into each orifice from beneath and to move fruit therefrom into the next orifice in the series.

4. In a fruit sorting machine, a channel, a bottom therefor having a series of removable, changeable, yielding bottom pieces, each having a sorting orifice, a series of movable fingers, one for each orifice, and means for moving said fingers upward into the orifices and toward the next orifices in the series.

5. In a fruit sorting machine, a channel, a bottom therefor having a series of tilting bottom pieces, each having a sorting orifice, a series of movable fingers, one for each orifice, and means for moving said fingers upward into the orifices and toward the next orifices in the series.

[Claims 6 to 17 not printed in the Gazette.]

898,601. PROCESS OF MANUFACTURING GAS. HAWLEY PETTIBONE, New Rochelle, N. Y., assignor to The Power and Mining Machinery Company, a Corporation of New Jersey. Filed Jan. 11, 1907. Serial No. 351,859.



1. The method of operating a gas producer, which consists in compressing combustible gas and by means of a jet thereof, under pressure, drawing air into a body of ignited fuel and drawing off the resulting gas and discharging it to a place of storage or use.

2. The method of producing gas which consists in making producer-gas, compressing part of it and returning it to a jet exhauster at the generator and thereby drawing the gas from the generator and delivering it under pressure to a place of use.

3. The method of producing gas which consists in making producer-gas, compressing part of it and returning it to a jet exhauster at the generator and thereby drawing down air into a body of fuel and drawing the resulting gas from the generator and forcing it to a holder or other place of use.

4. The method of operating a gas producer, which consists in making producer-gas, operating therewith a gas-engine and thereby operating a gas-compressor, compressing part of the gas generated, and by means of a jet of such compressed gas, drawing gas off from the producer and forcing it to a place of storage or use.

5. The method of producing gas, which consists in making producer-gas, compressing part of it and by means of a jet thereof, under pressure, drawing air into a body of ignited fuel and drawing off the resulting gas and delivering it hot to a metallurgic or other furnace, whereby the sensible heat in the gas is utilized and no change is made in the thermal quality of the gas delivered.

[Claims 6 to 12 not printed in the Gazette.]

898,602. LAND-MARKER. GEORGE B. RANDOLPH, Anniston, Ala. Filed May 14, 1908. Serial No. 432,938.

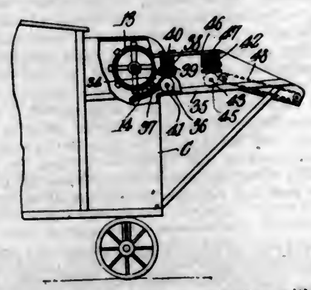


1. A marker comprising a body having a shaft portion with a reduced conical shank and a base merging with the smaller end of the shank and being of greater transverse dimensions than the superposed portions and having a groove which lies beyond vertical lines coincident with the extremities of the transverse dimensions of the superposed portions.

2. A marker comprising a body having a shaft portion with a reduced conical shank and a bell shaped base merging with the smaller end of the shank and being of greater transverse dimensions than the superposed portions, said base having in its lower side a conical hollow for the reception of earth.

3. A marker comprising a body having a shaft portion with a reduced conical shank and a hollow bell-shaped base merging with the smaller end of the shank and being of greater transverse dimensions than the superposed portions, said base being grooved at its outer portions, the under surface of the base beyond the bounds of the hollow therein occupying a plane.

898,603. BAND-CUTTER AND FEEDER. GEORGE E. RICHMOND, Houston, Tex., assignor of one-half to Frank Brown Weeks, Houston, Tex. Original application filed Sept. 1, 1906, Serial No. 332,966. Divided and this application filed Feb. 8, 1908. Serial No. 414,948.



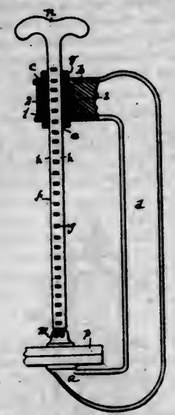
1. In a grain separator the combination with a casing, and a table; of superposed longitudinally grooved feed rollers mounted within the casing at one end of the table, a longitudinally grooved roller mounted within the casing adjacent the other end of the table, a series of revoluble band cutting blades disposed above and coöperating with the last mentioned roller, said blades and the roller thereunder having mechanism for rotating them at a slower speed than the feed rollers, and a conveyer for directing material between the blades and the roller thereunder.

2. In a grain separator the combination with a casing, and a table; of a longitudinally grooved roller within the casing adjacent one end of the table, a shaft journaled thereabove and parallel therewith, a series of band cutting blades upon and revoluble with the shaft, said blades being arranged in diagonally disposed series, a conveyer for directing material between the blades and the roller thereunder, and superposed longitudinally grooved feed rollers within the casing and adjacent the other end of the table, said feed rollers having mechanism for rotating them at a greater speed than the knives and the roller thereunder.

3. In a machine of the character described the combination with a casing, a table, and a conveyer; of a band cutter interposed between the table and conveyer and comprising a longitudinally corrugated roller, a spring pressed shaft journaled above the roller, and a plurality of knives secured to and revoluble with the shaft, said knives being arranged in diagonal series, the adjoining series being oppositely inclined, each blade comprising a disk and oppositely disposed outstanding curved cutting projections on the disk.

898,604. ADJUSTABLE CLAMP. JOHN RIVERS, Detroit, Mich. Filed Dec. 16, 1907. Serial No. 406,685.

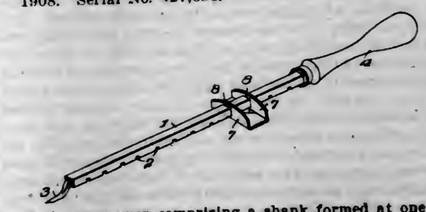
1. An adjustable clamp comprising a frame having a fixed arm and a head, a bushing having a threaded engagement in the head provided with rows of interior flanges and separated longitudinal grooves or spaces, a rod provided with rows of teeth and separated longitudinal grooves or spaces engaged within the bushing, whereby the rod may be moved freely through the bushing to adjust the rod in the bushing, the interior flanges of the bushing being extended transversely of the bushing to constitute firm supports for the teeth of the rod, and the interior flanges of the bushing being curved or turned downward at one extremity thereof, for the purpose described.



2. An adjustable clamp comprising a frame having a fixed arm and head, a bushing having a threaded engagement in the head provided with rows of interior flanges and separated longitudinal grooves or spaces, a rod provided with rows of teeth and separated longitudinal grooves or spaces engaged within the bushing, whereby the rod may be moved freely through the bushing to adjust the rod in the bushing, the interior flanges of the bushing being extended transversely of the bushing to constitute firm supports for the teeth of the rod, and a longitudinal rib connecting the inner extremities of each row of said interior flanges within the bushing, the interior flanges of the bushing being curved or turned downward at their extremities opposite the corresponding ribs, for the purpose described.

3. An adjustable clamp comprising a frame having a fixed arm and head, a bushing having a threaded engagement in the head provided with rows of interior flanges and separated longitudinal grooves or spaces, a rod provided with rows of teeth and separated longitudinal grooves or spaces engaged within the bushing, whereby the rod may be moved freely through the bushing to adjust the rod in the bushing, the interior flanges of the bushing being extended transversely of the bushing to constitute firm supports for the teeth of the rod, a longitudinal rib connecting the inner extremities of each row of said interior flanges within the bushing, and ledges projecting from the corresponding ribs on the opposite side thereof from said flanges for the purpose described.

898,605. CAN-OPENER. RAYMOND A. RODGERS and WILLIAM R. HENDERSON, Steubenville, Ohio. Filed Apr. 17, 1908. Serial No. 427,654.

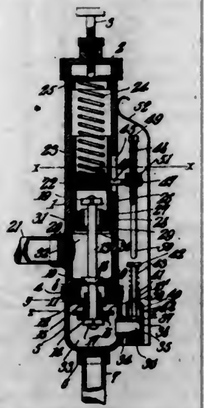


1. A can opener comprising a shank formed at one end with a prong and provided at its other end with a handle,

and a cutter formed with a blade and with angularly disposed flanges having openings designed to accommodate the shank to slidingly mount the cutter thereon, said shank being formed with a plurality of transverse recesses designed to receive portions of the flanges to hold the cutter in adjusted position upon the shank.

2. A can opener comprising a shank formed at one end with a prong and provided at its other end with a handle, and a cutter formed with a depending blade and with upwardly disposed flanges having openings designed to accommodate the shank to slidingly mount the cutter thereon, said shank being formed in its lower side with a plurality of transverse recesses arranged to receive the portions of the flanges defining the lower walls of the openings, as and for the purpose set forth.

898,606. AUTOMATIC GOVERNOR FOR FLUID-COMPRESSORS. EDWARD J. ROHRBACHER, Blaine, Wash. Filed Feb. 15, 1908. Serial No. 416,091.



1. In a governor for fluid compressors a normally closed valve, means under the control of the fluid being compressed, yieldable under a predetermined pressure to engage and open the valve, means controllable by fluid pressure for operating suitable mechanism, means controlled by the valve for closing communication between the fluid compressor and the means for operating the said mechanism timed to act after the valve has been opened, and means for reducing the air pressure for operating the said mechanism, said means being controlled by a reduction of pressure on the active side of the valve.

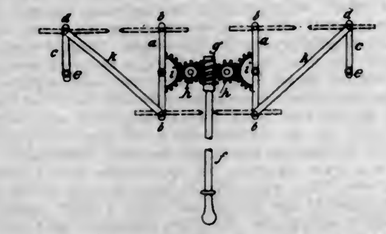
2. A means for governing the application of compressed fluids to mechanism set in action by said fluid comprising a valve interposed between the source of compressed fluid and the mechanism to be operated thereby, means for operating said valve yieldable to a predetermined pressure on the power side of the valve, another valve structure under the control of the first-named valve for closing communication between a source of compressed fluid and the mechanism to be driven thereby, and means controllable by a reduction in pressure on the supply side of the valve for reducing the pressure on the other side of the valve.

3. A governor for controlling the application of fluid under pressure to mechanism to be operated thereby comprising a casing, a valve therein dividing the casing into two compartments, a spring-controlled piston on the reservoir side of the valve yieldable to a predetermined pressure and arranged to engage and open the valve when moved by such pressure, another valve member on that side of the main valve seat remote from the reservoir and movable by the first-named valve to close communication between the two chambers of the casing after the main valve has been actuated, and an exhaust valve communicating with the chamber remote from the reservoir and controlled by the movement of the piston when the reservoir pressure falls.

4. A governor for controlling the application of compressed fluids to mechanisms to be operated thereby, comprising a suitable casing divided into two compartments, one communicating with a source of compressed air and another compartment communicating with the mechanism to be operated by the compressed air, a valve interposed between the two compartments, a spring-controlled piston in the first-named compartment movable under a predetermined pressure to open the valve, another valve structure in the second-named compartment controlled by the first-named valve to close communication between the two compartments after the first-named valve has been opened, an exhaust valve communicating with the second compartment, and adjustable means connected to the piston for operating the exhaust valve when the pressure on the reservoir side of the first-named piston has reached a predetermined minimum.

5. A governor for controlling the application of compressed fluids from a reservoir of the same to mechanism to be operated by said compressed fluids, comprising a suitable casing having two compartments, one compartment being connected to the source of compressed fluid and the other compartment being connected to the mechanism to be operated, a valve interposed between the two compartments, a sliding piston within the first compartment, a spring opposing the movement of the piston under fluid pressure, connections between the sliding piston and the valve arranged to permit an inactive movement of the piston before engaging the valve, a valve structure within the second-named chamber movable by the first-named valve to close communication between the two chambers after the first-named valve has been opened, a normally closed valve between the second-named chamber and the atmosphere, and an adjustable member carried by the piston and movable into operative relation to the last-named valve after the piston has traveled on its return movement sufficient to close the first-named valve.

898,607. ILLUMINATING APPARATUS. JEAN SCHMIDT, Frankfort-on-the-Main, Germany. Filed May 8, 1907. Serial No. 372,513.



1. An illuminating apparatus comprising a casing, a plurality of pairs of electrodes supported within the casing and arranged in different parallel planes, and means for simultaneously adjusting an electrode of each pair to regulate all of the arcs.

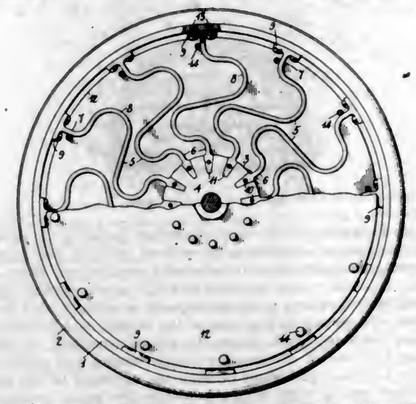
2. An illuminating apparatus comprising a casing, a plurality of pairs of electrodes pivotally supported within the casing and forming arcs arranged at different elevations, the electrodes of one pair lying in a different plane from those of another.

3. An illuminating apparatus comprising a casing, a plurality of pairs of electrodes pivotally supported within the casing at different elevations, and means for simultaneously adjusting a plurality of the electrodes to vary all of the arcs.

4. An illuminating apparatus comprising a casing, a plurality of pairs of electrodes arranged at different elevations in the casing, the electrodes of the several pairs being supported by parallel, pivotally mounted, arms, and means connecting the electrode-supporting arms, whereby they will all be moved to the same extent when any one thereof is adjusted to regulate one of the arcs.

5. An illuminating apparatus comprising a casing, a plurality of pairs of electrodes arranged at different elevations in the casing and pivotally supported to move about parallel axes, a rotary spindle, gearing connected with the supports of one pair of electrodes and said spindle, and connections between the supports of said pair of electrodes and the supports of the other electrodes, whereby by turning the spindle all of the arcs will be simultaneously regulated.

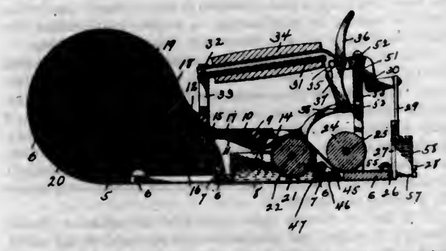
898,608. VEHICLE-WHEEL. CHRISTIAN SEEWALD, Williamsport, Pa. Filed Apr. 22, 1907. Serial No. 369,540.



1. A vehicle wheel having a hub, spring spokes with their inner ends secured to said hub, a rim to which the outer ends of said spokes are fastened, disks at the ends of the hub bearing respectively against the opposite sides of the spokes and means connecting said disks and engaging said spokes near their outer ends for transmitting driving stress to said spokes near their outer ends.

2. A vehicle wheel having spring spokes and disks on the opposite sides of said spokes connected to the inner portions thereof, said disks incasing said spokes throughout the greater portion of their length for bracing them laterally and pins connecting said disks near their outer edges and arranged to bear against the outer ends of the spokes.

898,609. MAILING OR STAMPING MACHINE. ROBERT D. SIMPSON, Columbus, Ohio, assignor to The Main Automatic Mailing Machine Company, Columbus, Ohio, a Corporation of Ohio. Filed Oct. 24, 1907. Serial No. 398,018.



1. In a device of the character described, the combination with a supporting frame, of a moistening roll and a feeding roll mounted in said frame, a fixed knife carried by said frame, a movable knife, a pivoted bar, connections between said pivoted bar and said movable knife, a cam member, a member carried by the pivoted bar and adapted to engage said cam member, a pawl, a connection between said pawl and said cam member, a ratchet carried by the feed roll and adapted to be engaged by said pawl, a removable guide, and a spindle adapted to receive a roll of material, said spindle lying in alinement with said removable guide.

2. In a device of the character described, the combination with a supporting frame, of a mucilage box removably mounted in said frame, a mucilage roller journaled in the walls of said box, a knife pivoted to the supporting frame, a pivoted bar, a link connecting the outer end of said bar and said knife, a cam finger, a member carried by the pivoted bar and adapted to engage said cam finger, a feed roller, a ratchet carried by the feed roller, a pawl adapted to engage said ratchet, a connection between said pawl and said cam finger, and a locking pin adapted to engage the upper surface of said pawl when it is at its rearmost limit of movement.

3. In a device of the character described, the combination with a frame of a feeding roller mounted therein, a moistening mechanism mounted therein, a transverse shaft, a crank carried by said shaft, a pawl and ratchet connected between said crank and the feeding roller, a vertically disposed member carried by the shaft and having a cam formed thereon, a knife, a longitudinally extending, pivoted bar connected at its rear end to a portion of the frame, means for connecting the free end of said bar to the knife and a member carried by the bar adapted to engage the cam of the vertically disposed member.

898,610. STEAM-CALORIMETER. CARL C. THOMAS, Ithaca, N. Y. Filed Sept. 29, 1906. Serial No. 336,756.

1. A steam calorimeter adapted to permit the flow of steam therethrough, and comprising electrical heating means, and electrically-operated measuring means for measuring the energy used.



2. A steam calorimeter adapted to permit the flow of steam therethrough, and comprising electrical heating means, electrically-operated measuring means for measuring the energy used, and means for measuring the rate of flow of steam through the calorimeter.

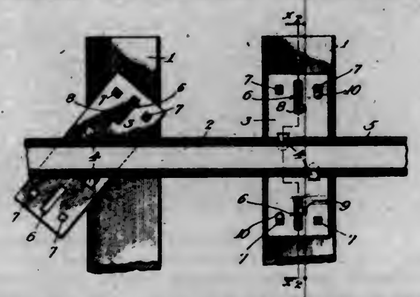
3. In a steam calorimeter, the combination with a chamber adapted to permit the flow of steam therethrough, of an electrical heating coil in said chamber in the direct path of the steam, and means for measuring the energy used.

4. In a steam calorimeter, the combination with a chamber adapted to permit the flow of steam therethrough, of an electrical heating coil in said chamber in the direct path of the steam, means for measuring the energy used, and means for measuring the rate of flow of steam through said chamber.

5. In a steam calorimeter, the combination with a chamber adapted to permit the flow of steam therethrough, of an electrical heating coil in said chamber, means for measuring the rate of flow of steam through said chamber, and means for measuring the flow of current through said coil.

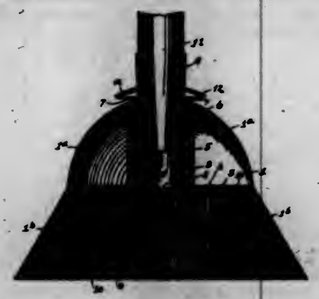
[Claims 6 to 22 not printed in the Gazette.]

898,611. RAIL-FASTENING. WALTER L. VAIL, Jr., Pantano, Ariz. Filed June 25, 1907. Serial No. 380,636.



A rail fastening comprising a plate formed from an elongated sheet of metal, provided with perforations and a slot at each end and upturned lugs in its intermediate portion to receive and retain the flange of the rail, the lugs being staggered to permit of the entrance of the flange when the plate is at less than a right angle to the rail, and the slots being closed at their ends and located on a line intermediate said lugs.

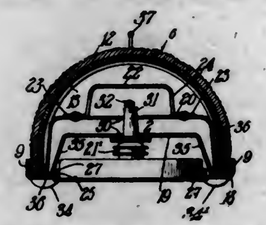
898,612. COMPRESSED-AIR WASHING DEVICE. JOSEPH A. VANCE, Columbus, Ohio. Filed Feb. 25, 1908. Serial No. 417,747.



1. In a clothes pounder, the combination with a handle receiving tube, of a sleeve surrounding said tube, a horizontal partition to which both the sleeve and the tube are secured there being openings formed through said partition, a dome shaped member rising from the outer edges of the horizontal partition and extending inwardly to the handle receiving tube, there being openings formed through said dome shaped member to establish communication between the interior of the casing and the atmosphere, a deflector plate secured to the handle tube above said openings, a vertically corrugated outwardly flaring casing depending from the outer edge of the horizontal partition and a second vertically corrugated casing depending from the horizontal partition located within the first named corrugated casing, said second corrugated casing terminating short of the bottom of the outwardly flaring casing.

2. In a clothes pounder, the combination with a handle receiving tube, of a sleeve surrounding said tube, a horizontal partition to which both the sleeve and the tube are secured there being openings formed through said partition, a dome shaped member rising from the outer edges of the horizontal partition and extending inwardly to the handle receiving tube, there being openings formed through said dome shaped member to establish communication between the interior of the casing and the atmosphere, a deflector plate secured to the handle tube above said openings, a vertically corrugated, outwardly flaring casing depending from the outer edge of the horizontal partition, a second vertically corrugated casing depending from the horizontal partition located within the first named corrugated casing, said second corrugated casing terminating short of the bottom of the outwardly flaring casing and a third casing located within the second corrugated casing, the lower edge of both of these last named casings, lying flush with each other, the openings in the partition serving to establish communication between the interior of said third named casing and the interior of said sleeve.

898,613. HEATER. CHARLES E. VARNUM, Lawrence, Kans. Filed Nov. 25, 1907. Serial No. 403,823.



1. A device of the class described including a casing having spaced longitudinal partitions defining superposed heating compartments, the opposite longitudinal edges of the partitions being bent downwardly on converging lines with their terminal portions disposed in contact with each other and resting on the base of the casing, said partitions being provided with vertically alined openings, a lamp seated in one of the heating compartments and provided with a burner extending through the openings in the partitions, and a hood disposed within the upper compartment at said burner.

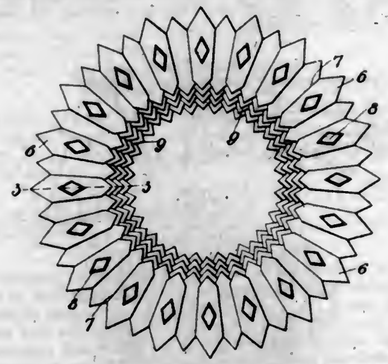
2. A device of the class described including a casing having a base provided with a circular opening the walls of which are bent upwardly to form a vertically disposed reinforcing flange, there being oppositely disposed depressions formed in the walls of the opening and also in the vertical flange, longitudinal partitions arranged within the casing and forming spaced heating compartments, a lamp engaging the opening in the base of the casing and provided with lugs adapted to register with the depressions and engage the vertical flange when the lamp is partially rotated, a flange extending laterally from the base of the lamp for engagement with the bottom of the casing, said lamp being provided with a burner extending through the partitions, and a shield disposed within the upper compartment and engaging the adjacent partition at said burner.

3. A device of the class described including a casing having a flat base and perforated end walls provided with terminal over-hanging flanges extending in the direction of the length of the casing, a semi-circular plate engaging the base and flanges and provided with a pocket, insulating material seated in said pocket, a jacket surrounding the insulating material, and means for heating the casing.

4. A device of the class described including a casing having a flat base and perforated end walls, the longitudinal edges of the base being bent upwardly to form vertically disposed flanges terminating in attaching ears, a semi-circular plate forming the cover of the casing, insulating material engaging the cover and interposed between the flanges and said cover, said ears being bent laterally in engagement with the end walls of the casing, and means for heating the latter.

5. A device of the class described including a casing having a flat base and provided with perforated end walls, the opposite longitudinal edges of the base being bent upwardly to form vertically disposed flanges, a semi-circular plate forming the top of the casing and having its opposite ends extended longitudinally beyond the end walls of the casing to form grooves, an insulating jacket surrounding the top of the casing and engaging the vertical flanges, lateral flanges formed on the end walls and engaging the grooves in the cover of the casing, and a lamp arranged within the casing for heating the latter.

898,614. PICTURE-FRAME. CHARLES WARD, Chicago, Ill. Filed Sept. 23, 1907. Serial No. 394,145.



1. A picture frame consisting of a series of superposed layers fastened together, each layer comprising a plurality of pieces of conventional form all of which are arranged radially in the frame to form a design, the pieces of the adjacent layers being arranged to lap the longitudinal edges of each other, to break joints.

2. A picture frame consisting of a series of superposed layers each of which is formed of a plurality of tapered pieces extending radially, said layers and pieces being fastened together.

898,615. BOTTLE-CLOSURE. ETTA W. WHEELOCK, Arlington, Mass. Filed Oct. 19, 1907. Serial No. 398,150.



1. In combination, a bottle having an orifice and provided with a plurality of grooves extending longitudinally thereof and provided also with a plurality of circumferential grooves communicating with said longitudinal grooves, respectively, a cap adapted to cover said orifice, arms on said cap provided with projections located in said circumferential grooves, respectively, said cap being adapted to be rotated, whereby said projections may be moved into said longitudinal grooves, respectively, and a projection on said bottle which one of said arms is adapted to engage, whereby said cap may be held against rotation.

2. In combination, a bottle having an orifice and provided with a plurality of grooves extending longitudinally thereof and provided also with a plurality of circumferential grooves communicating with said longitudinal grooves, respectively, a cap adapted to cover said orifice, projections on said cap located in said circumferential grooves, respectively, said cap being adapted to be rotated, whereby said projections may be moved into said longitudinal grooves, respectively, a portion of said cap being provided with a depression, and a projection on said bottle adapted to enter said depression, whereby said cap may be held against rotation.

3. In combination, a bottle having an orifice and provided with two oppositely located grooves extending longitudinally thereof and having closed ends and provided also with two oppositely located circumferential grooves communicating with said longitudinal grooves, respectively, a cap adapted to cover said orifice, arms on said cap provided with projections located in said circumferential grooves, respectively, said cap being adapted to be rotated, whereby said projections may be moved into said longitudinal grooves, respectively, and a projection on said bottle which one of said arms is adapted to engage, whereby said cap may be held against rotation.

4. In combination, a bottle having an outlet orifice and provided with a plurality of grooves extending longitudinally thereof and provided also with a plurality of circumferential grooves communicating with said longitudinal grooves, respectively, a cap adapted to cover said orifice, projections on said cap located in said circumferential grooves, respectively, said cap being adapted to be rotated, whereby said projections may be moved into said longitudinal grooves, respectively, and a rounded lateral projection on said bottle which a portion of said cap is adapted to engage, whereby said cap may be held against rotation.

5. In combination, a bottle having an orifice and provided with a plurality of helical shoulders, a cap adapted to cover said orifice, projections on said cap adapted to engage said shoulders, respectively, said cap adapted to be rotated, whereby said projections may be moved longitudinally of said shoulders, and a projection on said bottle which a portion of said cap is adapted to engage, whereby said cap may be held against rotation.

[Claims 6 to 8 not printed in the Gazette.]

898,616. BASE-BOARD HEATER. JAMES M. WILLIAMSON, Moundsville, W. Va. Filed Mar. 1, 1906. Serial No. 303,707.



1. The combination with a floor and wall, said wall having a recess adjacent to the floor, of a base-board heater comprising a hollow body having its rear portion arranged in the recess and spaced from the rear wall thereof and its front portion projecting beyond the wall to form a base-board therefor, said body having feet that support the same above the floor and in spaced relation to the top of the recess, said arrangement forming a heating chamber in the recess, a lower inlet thereto and an upper outlet therefrom, a grating secured to the wall and covering the outlet, and a grating secured to the floor and covering the inlet, said gratings and their fastenings constituting upper and lower base-board moldings and means for maintaining the heater in place.

2. The combination with a tubular base-board body having means for supporting the lower portion thereof in spaced relation to the floor, of a grating adapted to be placed on the floor, said grating constituting a lower molding for the base-board and a guard over the space between the floor and body, and means for securing the grating to the floor, said grating also constituting retaining means for said body.

3. The combination with a tubular base-board body having means for supporting the lower portion thereof in spaced relation to the floor, of a perforate molding higher than the supporting means and separate from the body adapted to be placed on the floor against the lower mar-

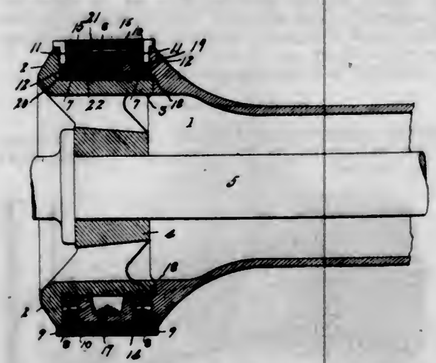
gin of the body, said grating constituting a guard over the space between the floor and body and also acting as retaining means for said body, and furthermore forming a lower base-board molding, and means for securing the grating to the floor.

4. The combination with a tubular base-board body having means for supporting the lower portion thereof in spaced relation to the floor, of a lower perforate molding for the body, covering the space between the same and the floor and adapted to be secured to the floor, said lower molding constituting holding means for the lower portion of the body and a guard for the space, and a perforate upper molding for the body located on the same and adapted to be secured to a wall, thereby constituting holding means for the upper portion of the body.

5. The combination with a heater body comprising separate hollow base-board sections, of means detachably coupling the sections together and permitting the passage of the heating medium from one to the other, and a casing detachably fitted over the coupling means between the sections and constituting a continuation of the base-board.

[Claims 6 to 13 not printed in the Gazette.]

898,617. PACKING FOR PISTONS AND PISTON-VALVES. JOHN T. WILSON, Jersey Shore, Pa. Filed Oct. 3, 1904. Serial No. 226,902.



1. A packing for pistons and piston valves comprising a wide ring and two snap rings interlocked, each of said snap rings being substantially in one piece and expansible.

2. The combination with a piston or piston valve, of a packing comprising two snap rings and a wide ring between the snap rings and positively engaging said rings, but movable relative to said snap rings, each of said snap rings being expansible.

3. The combination with a piston or piston valve, of a packing comprising two snap rings, and a wide ring; the said rings having tongues and grooves.

4. The combination with a piston or piston valve, of two snap rings, a wide ring, and a bull ring.

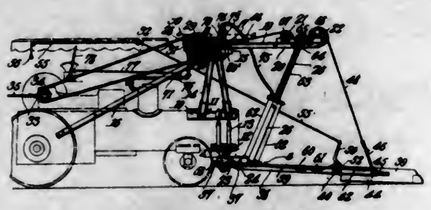
5. The combination with a piston or piston valve, of a packing comprising two expansible snap rings each being substantially in one piece, and a wide ring positively engaging the snap rings, and means for introducing motive fluid beneath one of the snap rings.

[Claims 6 to 13 not printed in the Gazette.]

898,618. STEAM-SHOVEL. CYRUS H. WOLFE, Charlotte, N. C. Filed Feb. 18, 1908. Serial No. 416,513.

1. A shovel attachment for traction engines comprising a shovel, a pivoted shovel carrying frame, means for raising and lowering the shovel and frame, and means for maintaining the shovel in horisontal position during the vertical movement.

2. A shovel attachment for traction engines comprising a shovel, a pivoted frame connecting the shovel to the engine, means for raising and lowering the shovel, means for maintaining the shovel in horizontal position during the raising movement, and a latch for holding the shovel from tilting movement.



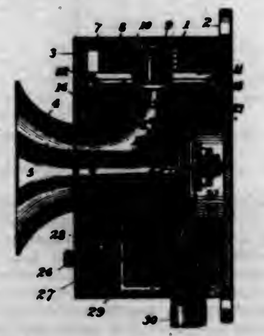
3. A shovel attachment for traction engines comprising a pivotally mounted frame, a pair of levers pivoted to the upper end of the frame, a shovel pivotally swung between said levers, and tension members connecting the rear ends of the levers to a relatively fixed point and extending approximately parallel with the pivoted frame to thereby hold the shovel and levers in horizontal position.

4. In a shovel attachment for traction engines, a block or support, a frame having its lower end pivoted thereto, a pair of levers pivoted to the outer end of the frame, a shovel pivoted between the forward ends of said levers, tension rods connecting the rear ends of the levers to the block or support at a point to the rear of the pivotal connection of the frame, and means for raising and lowering the shovel and frame.

5. In a machine of the class described, a shovel arranged to be pushed forward to effect loading, a pivoted frame carrying the shovel, means for elevating the frame, and means for maintaining the shovel in a horizontal position during its vertical movement.

[Claims 6 to 12 not printed in the Gazette.]

898,619. TELEPHONE APPARATUS. FRANK W. WOOD, Newport News, Va., assignor to Charles Cory and John M. Cory, New York, N. Y. Filed Apr. 17, 1907. Serial No. 368,666.



1. A telephonic apparatus comprising a concentrically arranged mouth piece and trumpet, the one projecting through the wall of the other.

2. A telephonic apparatus comprising a casing, a removable front wall therefor a mouthpiece and a trumpet formed integral with said wall, and with each other, and concentrically arranged.

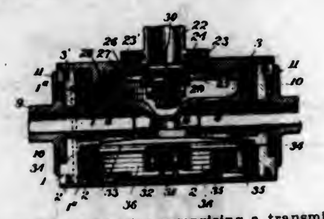
3. A telephonic apparatus comprising a casing, and a mouthpiece and trumpet formed integral with each other, and mounted in said casing, the rear ends of said mouthpiece and trumpet lying in planes substantially at right angles to each other.

4. A telephonic apparatus comprising a trumpet and a mouthpiece, formed integral, and concentrically arranged, the one projecting through the wall of the other.

5. A telephonic apparatus, comprising a trumpet with flaring mouth and curved body extending to the receiver, and a mouthpiece concentrically arranged therein, and having a body portion extending through the curved wall thereof to the transmitter.

[Claims 6 to 9 not printed in the Gazette.]

898,620. TELEPHONIC APPARATUS. FRANK W. WOOD, Newport News, Va., assignor to Charles Cory and John M. Cory, New York, N. Y. Filed Apr. 5, 1907. Serial No. 366,594.



1. A telephone apparatus comprising a transmitter and a receiver, a casing inclosing the same, and provided with substantially flat, opposing ends, one of which is adapted to rest against the body of the user, a mouthpiece or trumpet mounted in the opposite end of said casing, and curving upwardly and backwardly, and a receiver arm swiveled in the side of the casing, and adapted to extend to the ear of the user.

2. In a telephone apparatus, a transmitter and a receiver, a cylindrical casing therefor, a partition extending across said casing parallel with the ends thereof, sleeves carried thereby, and receiver arms having projecting ends journaled in said sleeves.

3. In a telephone apparatus, a casing, a partition therein, a receiver on one side of said partition, a transmitter on the other side of said partition, and a hollow receiver arm journaled in said partition.

4. In a telephone apparatus, a cylindrical casing a partition dividing the same into two compartments, a transmitter in one compartment, a receiver in the other compartment, and a hollow receiver arm swiveled in bearings in said partition, and communicating with one compartment only.

5. In a telephone apparatus, a casing, a receiver and a transmitter therein, receiver arms mounted in said casing, and a mouthpiece swiveled in said casing adjacent said transmitter, the swivel joint comprising a groove in said mouthpiece, an undercut ring secured to the casing and a ring lying in said groove and under said first ring.

[Claims 6 to 10 not printed in the Gazette.]

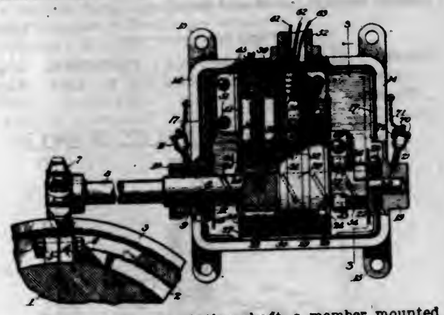
898,621. AUTOMATIC CONTACT MECHANISM FOR ELECTRIC REVOLUTION-INDICATORS. FRANK W. WOOD, Newport News, Va., assignor to Charles Cory and John M. Cory, New York, N. Y. Filed Mar. 20, 1907. Serial No. 363,361.

1. In a device of the class described, a rotating member, terminals of a plurality of circuits arranged to bear against said member, and means controlled by the direction of rotation of said member for shifting the same into position for selecting and closing periodically one of said circuits.

2. In an electrical contact mechanism, a plurality of brushes, a rotating member on which said brushes bear, and means carried by said member for bridging, periodically, one pair of brushes only when rotating in one direction, and means for shifting said member into position to bridge another pair of brushes when rotating in the other direction.

3. In a device of the class described, a rotating member, capable of occupying a plurality of positions longitudinally of its shaft, a plurality of electrical circuits, and means controlled by said second member for closing one or another of said circuits, according to its position on its shaft.

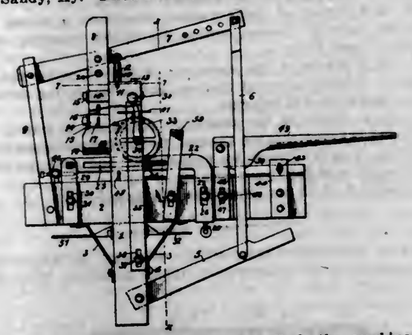
4. In a device of the class described, a rotating member, a second rotating member driven thereby, and mounted on a shaft, so as to be capable of longitudinal movement thereon, and means controlled by changes in the direction of rotation of said first member, for shifting said second member to different positions on its shaft.



5. In combination, a rotating shaft, a member mounted for longitudinal movement thereon, terminals for a plurality of circuits any of which is adapted to be periodically closed by said member while said shaft rotates continuously in one direction, and means for automatically shifting said member into operative relation with a different pair of terminals for each change in the direction of rotation of said shaft.

[Claims 6 to 16 not printed in the Gazette.]

898,622. SPOKE-MACHINE. WILLIAM J. ADKINS, Little Sandy, Ky. Filed Feb. 6, 1908. Serial No. 414,608.

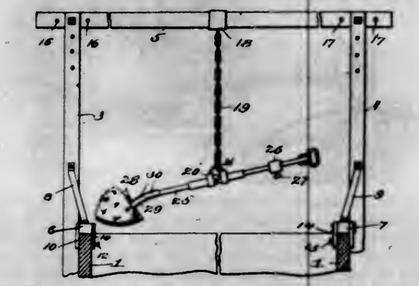


1. In a device of the class described, the combination with a spoke support, a standard secured thereto, a pair of combined shoulder and tenon knives adapted to reciprocate on the standard, means for operating said knives, an edging knife traveling parallel with the support and transversely to the movement of the tenon knives, means for operating the edging knife independently of the tenon knives, work guiding means upon the support, and an adjustable cam lever carried by the support for clamping the work thereupon.

2. In a device of the class described, the combination with a spoke support, of a standard secured thereto, a pair of tenon knives adapted to reciprocate on the standard, a foot lever for operating said tenon knives, an edging knife traveling parallel to the support and transversely to the movement of the tenon knives, a rack upon the upper edge of said edging knife, a hand controlled gear for engaging said rack to operate the edge of the knife independently of the tenon knives, means to adjust the edging knife, means to adjust the operating gear therefor, guiding means for the work carried by the support, clamping means for the work, and an adjustable cam lever carried upon the support adapted to hold the work in position to be acted upon by the knives.

3. In a spoke machine, a horizontal spoke support, knife supporting guides adjustably carried thereby, an edging knife slidably mounted in said supports, means for operating said knife, adjustable means for limiting the operating means in both directions, and a resilient retaining device for holding the operating means in normally inoperative position against one of said stops.

898,623. SHOVEL AND SUPPORT THEREFOR. JOHN AUSTIN, St. Regis, Mont. Filed Oct. 21, 1907. Serial No. 398,510.



1. In a device of the character described, a frame, a fulcrum, a chain for supporting said fulcrum means for mounting a shovel on said fulcrum and means for varying the position of said chain.

2. In a device of the character described, a movable frame, means for adjusting the position of said frame, a swinging fulcrum secured to said frame, and a sleeve for removably securing a shovel to said fulcrum.

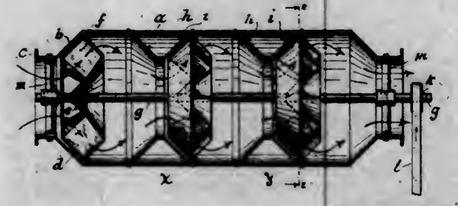
3. In a device of the character described, a frame, a fulcrum secured thereto, and a sleeve for securing the shovel to said fulcrum.

4. In a device of the character described, a frame, a movable fulcrum secured thereto, and a sleeve for securing a shovel to said fulcrum.

5. In a device of the character described, a frame, a swinging fulcrum secured thereto, means for changing the position of said fulcrum on said frame, and a sleeve for securing to said fulcrum a shovel.

[Claims 6 to 15 not printed in the Gazette.]

898,624. CENTRIFUGAL FAN. WILLIAM J. BALDWIN, Brooklyn, N. Y. Filed July 7, 1906. Serial No. 325,064.

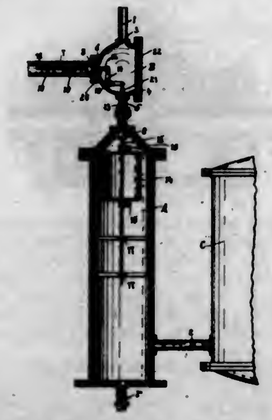


1. The combination of a casing, a plurality of forward direction fans arranged tandem therein, and throats *h* between each pair of fans inclined inwardly and forwardly to direct the air from the rearward fan into the center of the forward fan, substantially as described.

2. The combination of a casing open at both ends, a plurality of forward direction fans arranged tandem therein, and inclined throat plates *h* and backing plates *i* between each pair of fans adapted to direct the air from a rearward fan into the center of a forward fan and to prevent back currents, substantially as described.

3. The combination of a casing open at both ends, a plurality of forward direction fans therein each having a conical closed center *e* and a conical shell *d* with open center; and inclined throat plates *h* and backing plates *i* between each pair of fans adapted to direct the air from a rearward fan into the open center of a forward fan and prevent back currents, substantially as described.

898,625. FEED-WATER REGULATOR. WALTER H. BARTHOLOMEW, East Orange, N. J., assignor to Charles B. Hill, trustee, Montgomery, N. Y. Original application filed Feb. 7, 1906, Serial No. 299,927. Divided and this application filed Nov. 22, 1906. Serial No. 344,623



1. A device for automatically regulating the supply of feed water, comprising a receptacle, a supply conduit to the receptacle, a chamber in the supply conduit, an outlet from the chamber, a valve in the outlet and a valve in said conduit between the chamber and receptacle, said valves being arranged to receive water pressure, operating means disposed on the interior of said chamber and connected to each of said valves for actuating the latter in unison, and a float connected to one of said valves.

2. A device for automatically regulating the supply of feed water, a receptacle, a chamber overlying said receptacle and connected thereto, a supply conduit for said chamber, an outlet leading from said chamber, a valve in said outlet, a valve in the connection between said chamber and receptacle, said valves being arranged to receive pressure from the water in said chamber, operating means disposed between said valves and connected to each, and a float connected to said valve between the chamber and receptacle.

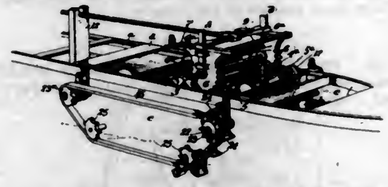
3. A device for automatically regulating the supply of feed water, comprising a receptacle for the feed water, a supply conduit to the receptacle; a chamber in the supply conduit, an outlet from the chamber, a valve in the outlet and a valve in the conduit between the chamber and the receptacle; a conduit from the receptacle to where the water is to be fed; a float in the receptacle, a bell crank lever fulcrumed in the chamber, a rod connecting the valve in the outlet with one arm of the bell crank lever, a second rod, connecting the other arm of the bell crank lever with the valve in the conduit and with the float in the receptacle, substantially as herein shown and described.

4. A device for automatically regulating the supply of feed water, a receptacle, a chamber connected to said receptacle, a supply conduit to and an outlet for said chamber, a valve in the outlet, a second valve between said chamber and receptacle, said valves being arranged to receive pressure from the water in said chamber, means connected to said first valve, and to one end of said second valve for operating the valves in unison, and means connected to the opposite end of said second valve for automatically actuating said parts by the rise and fall of the water level in the receptacle.

5. A device for automatically regulating the supply of feed water, a receptacle having a supply conduit, a chamber communicating with said supply conduit, an outlet from said chamber, a valve in the supply conduit and a valve in the outlet, each valve being apart from the other and each having a stem projecting into the said chamber, and means arranged within the chamber for operating said valves in unison connected to the stems thereof.

[Claims 6 to 8 not printed in the Gazette.]

898,626. PROPELLING MECHANISM. ROBERT H. BOWMAN, Canon City, Colo. Filed Aug. 15, 1907. Serial No. 388,627.



1. A propelling mechanism comprising a suitable frame, a pair of power transmitting shafts having direct gear connection with each other, a driven shaft geared with each of the transmitting shafts, and means for alternately maintaining direct motion to the said transmitting shafts, each of said means including a ratchet faced gear loosely mounted on the shaft, clutch pawls carried on the shafts normally out of engagement with the ratchet faced gear, and a lever operated means on each shaft for shifting the clutches into operative engagement with the ratchet faced gear on the transmitting shafts alternately.

2. In combination with a suitable supporting frame, a pair of power transmission shafts and a power shaft journaled in the said frame, of a clutch mechanism on each of the transmission shafts, an actuating mechanism on the power shaft coupled with the two clutch mechanisms adapted for adjustments to the clutch mechanisms alternately, and means for throwing the clutch mechanisms out of operation whereby to provide for imparting movements to the transmission shafts from the power shafts in opposite directions, and mechanism coupled to the transmission shafts to be actuated therefrom.

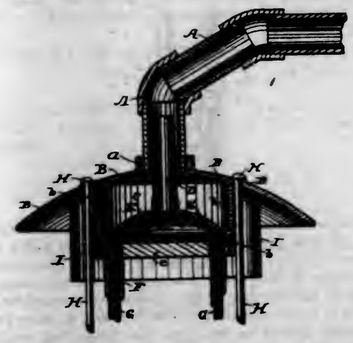
3. A mechanism for the purposes stated, that comprises the following elements in combination; a suitable framing, a pair of power transmission shafts mounted thereon, a driven shaft coupled with each transmission shaft, the two transmission shafts being directly geared with each other, a ratchet faced gear loosely mounted on each transmission shaft, a clutch disk fixedly mounted on each transmission shaft, said disks coöperating with the ratchet faced gears, a means for adjusting the ratchet faced gears into and out of active position, and an oscillatory hand controlled gear that meshes with the two ratchet faced gears loosely mounted on the transmission shaft.

4. A mechanism of the class described, which comprises in combination with a framing, a pair of transmission shafts mounted thereon, and a drive shaft coupled with each transmission shaft, said transmission shafts being directly geared with each other; of a ratchet faced gear loosely mounted on each transmission shaft, said gears having ratchet portions on each of their opposite faces, clutch disks mounted on each transmission shaft and disposed on the opposite sides of the ratchet gears, said disks having pawls for engaging with the ratchet portions of said ratchet gears, an oscillating hand operated gear that meshes with the ratchet gears for imparting alternate reverse motion to the said gears, and means mounted on the frame for shifting the clutch disks to bring their pawls into alternate engagement with the opposite sides of the ratchet gears and to release the said clutch disks from the said gears.

5. In a mechanism of the class described, the combination with the framing, a pair of transmission shafts mounted thereon, a driven shaft coupled with the transmission shaft, said transmission shafts being directly geared with each other, of a ratchet faced gear loosely mounted on each transmission shaft, a clutch disk loosely mounted on each transmission shaft to turn therewith, a means for adjusting the clutch disks into and out of active position, an oscillatable gear held in mesh with both of the ratchet faced gears, said oscillatable gear having means combined therewith for actuating it.

[Claims 6 to 13 not printed in the Gazette.]

898,627. GAS-LAMP. CLEMENT W. BOYSE, Chicago, Ill., assignor of one-half to Dwight B. Carmichael, Chicago, Ill. Filed Nov. 26, 1907. Serial No. 403,914.



1. In a gas lamp, the combination of a casing arranged to form a dome, and provided with a gas and water receiving chamber, a pipe attached to the dome and arranged to discharge into the chamber, such casing provided with an additional chamber, a pipe arranged to communicate with the first named chamber above the bottom thereof and to communicate with and discharge into the additional chamber, and an additional pipe arranged to form an outlet to such additional chamber; substantially as described.

2. In a gas lamp, the combination of a casing arranged to form a dome and provided with a gas and water receiving chamber, a pipe attached to the dome and arranged to discharge into the chamber, such casing provided with an additional chamber, a pipe arranged to communicate with the first named chamber above the bottom thereof and to communicate with and discharge into the additional chamber, and an additional pipe arranged to form an outlet to such additional chamber, such additional pipe arranged to communicate with the additional chamber to one side of the discharge end of the communicating pipe; substantially as described.

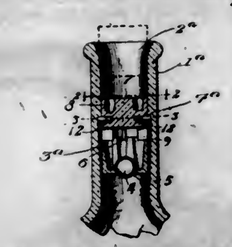
3. In a gas lamp, a casing arranged to form a dome and provided with a plurality of chambers, arranged one above the other and the bottom of the lower one of the chambers removable, such casing provided with a passage way communicating with the upper chamber to form an inlet, and provided with a passage way communicating with the lower chamber to form an outlet, and such casing provided with a passage way communicating with the lower chamber to form an inlet thereto and with the upper chamber above the bottom thereof to form an outlet therefrom; substantially as described.

4. In a gas lamp, a casing arranged to form a dome and provided with a plurality of chambers therein, such casing provided with an inlet to one of such chambers and with an outlet from the other of such chambers, and provided with a passage way communicating with the chamber having an inlet above the floor of said chamber, and with the chamber having an outlet and such chambers arranged so that the one provided with an outlet is underneath the other one; substantially as described.

5. In a gas lamp the combination of a casing provided with a gas and water receiving chamber, a pipe arranged to support the casing and to form an inlet to deliver fluid into such chamber, an additional chamber, an outlet from

such gas and water receiving chamber arranged to communicate therewith above the bottom thereof and to discharge into the additional chamber, a gas burner and an outlet from such additional chamber arranged to communicate with the burner, such burner arranged relative to the casing so that heat generated by the burner is directed onto the side walls of the chambers in said casing and onto the bottom of the additional chamber; substantially as described.

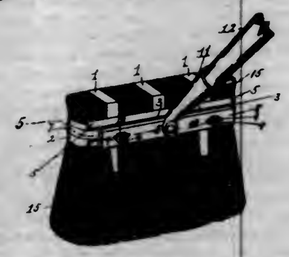
898,628. BOTTLE. CZAR K. BRINER and HOWARD T. FOX, Veedersburg, Ind. Filed Nov. 1, 1907. Serial No. 400,235.



1. A non-refillable bottle having the internal circumference of its neck provided with a flaring recess and a shoulder above the recess, a cap having locking pins engaging the shoulder of the recess, the body of the cap being provided with angular ports and downwardly extending fingers, and a valve cup having a valve seat, a valve for the seat loosely placed in the cup, ribs projecting vertically above the valve seat for guiding the valve in operation, and the fingers of the cap adapted to limit the movement of the valve.

2. In a bottle stopper, a valve cup formed with a valve seat, a valve for the seat loosely placed in the cup, and ribs projecting vertically above the valve seat for guiding the valve in operation, the upper end of the cup being formed with slots, a cap for the valve cup, having fingers adapted to engage within the slots in the cup and to limit the movement of the valve when the valve is unseated.

898,629. BROOM. EDWARD BROWN, Fort Hunter, N. Y. Filed Apr. 22, 1907. Serial No. 369,448.



1. In a device of the class described a head comprising spacing and supporting blocks an inclosing telescoping head-band, and fastening devices inserted through lapping portions of said head-band and certain of said blocks.

2. In a device of the class described, the combination with a head comprising spacing and supporting blocks, an inclosing telescoping head-band, one member of which has retroverted edge flanges to receive the other member thereof and fastening devices inserted through lapping portions of said head-band and certain of said blocks: of stock inserted and secured in the spaces between said head-band and fastening blocks.

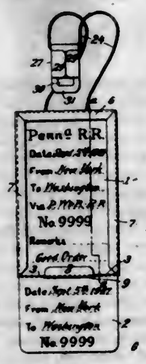
3. In a device of the class described, a head-band comprising two U-shaped sheet-metal members, one having retroverted flanges on its parallel arms adapted to receive the edges of the parallel arms of the other member in combination with fastening devices inserted through lapping portions of said band-members.

4. In a device of the class described, a head-band comprising two U-shaped sheet-metal members, one having retroverted flanges on its parallel arms adapted to receive the edges of the parallel arms of the other member, said other member having tapered, outwardly bent ends.

5. In a device of the class described, the combination with a head-band having lapping members, and bolts having screw-threaded ends projecting through the lapping members of the head-band on one side of the head; of a handle-plate provided with apertures to receive said bolts; and nuts on the ends of said bolts, whereby said plate and the lapping members of the head-band are secured together.

[Claim 6 not printed in the Gazette.]

898,630. TRANSPORTATION-CHECK AND HOLDER. WILLIAM H. CARROLL, Jersey City, N. J. Filed Sept. 12, 1907. Serial No. 392,473.



1. A transportation check and holder, comprising a slotted shipping check including a detachable claim coupon, and a holder having marginal flanges overlying the face of the check, one of said flanges being narrower than the check and entering the check slot at the line of severance of the coupon from the check, substantially as described.

2. A transportation check holder having a pocket, a hook in said pocket, a baggage-engaging loop held at one end to the holder, and a catch device held to the other end of said loop and having two leaves, one leaf having a slot adapted to engage around the holder hook in the pocket and the other leaf being adapted to guard the catch against disengagement from the hook by a tool, substantially as described.

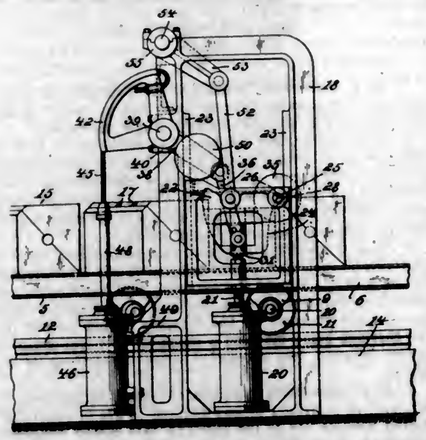
3. A transportation check holder having a pocket, primary and secondary hooks in said pocket, a baggage-engaging loop secured at one end to the holder, and a catch device held to the other end of said loop and having two leaves, one leaf having a slot adapted to finally engage around the primary hook in the holder pocket while the secondary hook prevents disengagement of said slotted leaf from the primary hook, the other catch leaf being adapted to guard the catch against disengagement from the primary hook by a tool, substantially as described.

4. A transportation check holder having a pocket, a hook in said pocket, a baggage-engaging loop held to the check holder, and a catch secured at the free end of said loop and provided with a slotted inner portion adapted to be engaged by the hook within the holder pocket, said catch being formed with folded inner face portions which when the catch is engaged by the hook are overlaid by portions of the holder frame to prevent opening of the catch folded portions for disengaging the catch from the loop and to prevent insertion of a tool for disengaging the catch from the hook, substantially as described.

5. A transportation check holder having a pocket, a hook in said pocket, a wire baggage-engaging loop held to the check holder, and a catch comprising a single piece of material doubled and retaining at its bend the outer part of said wire loop and having laterally overbent flanges holding opposite sides of the catch together, the two diverging ends or leaves of the catch projecting beyond said flanges, one leaf being slotted to engage the holder hook and the other leaf being adapted to guard the catch against disengagement from the hook by a tool, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

898,631. METAL-POURING MECHANISM FOR PIPE-CASTING APPARATUS. EDGAR A. CUSTER, Philadelphia, Pa. Filed Mar. 14, 1908. Serial No. 421,054.



1. In a mechanism of the character described, standards, a ladle having trunnions, means slidably arranged in the standards and engaged by the trunnions of said ladle, means for supporting, raising and lowering the slidable means and by the same said ladle, means for partially rotating the ladle on said trunnions, and means for connecting the slidable means with the ladle rotating means, said connecting means being arranged to prevent simultaneous actuation of the slidable and ladle rotating means.

2. In a mechanism of the character described, standards, means slidably arranged in the standards, means for supporting, raising and lowering said slidable means, means carried by said slidable means, a ladle having trunnions pivotally engaging said slidable means and a projection loosely engaging said carried means, and means for tilting said ladle by partially rotating the same on said trunnions and by lifting the same from said carried means.

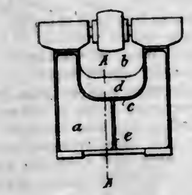
3. In a mechanism of the character described, standards, means slidably arranged in said standards, means for supporting, raising and lowering said slidable means, means carried by said slidable means, a ladle having trunnions and a ledge arranged opposite to each other, means for tilting said ladle by lifting the ledge of the same out of engagement with said carried means and by partially rotating the ladle on the trunnions, and means for connecting the slidable means with each other, said connecting means arranged to permit of the holding of the spouts of said ladle in all positions thereof, in a horizontal line.

4. In a mechanism of the character described, standards, a ladle having trunnions and a projection, means slidably arranged in said standards and engaging the trunnions of said ladle, means carried by said slidable means and loosely engaging the projection of said ladle, means for supporting, raising and lowering said slidable means and by the same said ladle, and means for tilting said ladle by lifting the ledge thereof out of engagement with said carried means and by partially rotating the ladle on said trunnions, said tilting means, consisting of sections arranged to be coupled to each other in the lowered position of the ladle and to be substantially uncoupled in the raised position thereof.

5. In a mechanism of the character described, standards, a ladle having trunnions and a projection, means slidably arranged in said standards and engaging the trunnions of said ladle, means carried by said slidable means and loosely engaging the projection of said ladle, means for supporting, raising and lowering said slidable means and by the same said ladle, means for tilting said ladle by lifting the ledge thereof out of engagement with said carried means and by partially rotating the ladle on said trunnions, said tilting means, consisting of sections arranged to be coupled to each other in the lowered position of the ladle and to be substantially uncoupled in the raised position thereof.

[Claims 6 to 14 not printed in the Gazette.]

898,632. PEDESTAL-BEARING. SAMUEL C. DAVIDSON, Belfast, Ireland. Filed June 8, 1907. Serial No. 378,031.



1. A pedestal having a base, a top, a thin body portion extending upwardly from said base to said top, said body portion formed with a gap at its upper part, a lateral web extending along the edges of said gap, and a vertical web extending across said gap, and connecting the sides thereof together, said top having means for mounting a shaft longitudinally of said vertical web, and said gap being adapted to receive a shaft pulley, and to permit a downward extension of its belt.

2. A pedestal having a base, a top, a thin body portion extending upwardly from said base to said top, and formed with a U-shaped gap, a flange on each side of said body portion, a lateral web extending along the edges of said gap and a vertical web extending across said gap and connecting the sides thereof together, said top having means for mounting a shaft longitudinally of said vertical web, and said gap being adapted to receive a shaft pulley and to permit a downward extension of its belt.

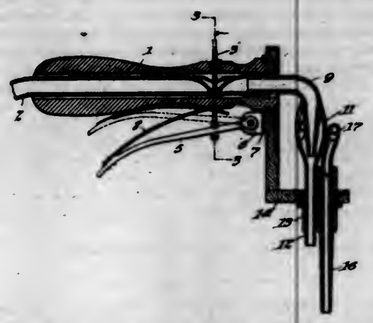
3. A pedestal having a base, a top, a thin body portion extending upwardly from said base to said top, said body portion formed with a gap at its upper part, a lateral web extending along the edges of said gap, and a vertical web extending across said gap, and connecting the sides thereof together, said lateral web extending materially above the upper edge of said vertical web, and said top having means for mounting a shaft longitudinally of said vertical web, and said gap being adapted to receive a shaft pulley and to permit a downward extension of its belt.

898,633. FILLING APPARATUS FOR STORAGE-BATTERY JARS, &c. THOMAS A. EDISON, Llewellyn Park, Orange, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Filed Dec. 10, 1903. Serial No. 184,691.

1. In a filling apparatus, a supply pipe having a suction chamber with a contracted outlet, a suction pipe of transparent material leading into said chamber, the lower portion of said suction pipe being arranged substantially parallel to said supply pipe, substantially as set forth.

2. In a filling apparatus, a supply pipe having a suction chamber with a contracted outlet, a suction pipe leading into said chamber, said suction pipe comprising a goose-

neck of transparent material and a lower portion arranged substantially parallel to said supply pipe, substantially as set forth.



3. In a filling apparatus, a supply pipe having a suction chamber with a contracted outlet, a suction pipe of transparent material leading into said chamber, and a plug, the lower portion of said suction pipe and of said supply pipe passing through said plug, in substantial parallelism to each other, substantially as set forth.

4. In a filling apparatus, a supply pipe having a suction chamber with a contracted outlet, a suction pipe of transparent material leading into said chamber, the lower portion of said suction pipe being arranged substantially parallel to said supply pipe, and a flexible supply tube connected to the inlet end of said supply pipe, substantially as set forth.

5. In a filling apparatus, a supply pipe having a suction chamber with a contracted outlet, a suction pipe of transparent material leading into said chamber, the lower portion of said suction pipe being arranged substantially parallel to said supply pipe, a flexible supply tube connected to the inlet end of said supply pipe, and means for controlling the flow of liquid through said supply pipe, substantially as set forth.

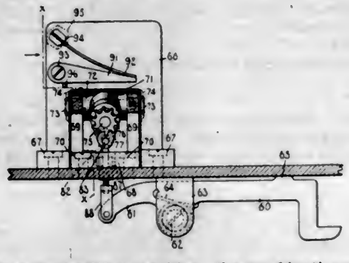
898,634. SAFETY ATTACHMENT FOR GAS-BURNERS. JOHN H. EISENHAUER, Canton, Ohio. Filed Mar. 19, 1908. Serial No. 421,979.



1. The combination of a gas-burner body provided with sub burner and main burner apertures, chambers formed in the burner body, a rod connected to the burner body, said rod formed of soft metal, a rod formed of hard metal having a needle point, said hard metal rod connected to and carried by the soft metal rod and a sub-burner valve and valve rod, said valve located between the chambers in the burner body, substantially as and for the purpose specified.

2. In a safety device for gas burners a burner body said burner body provided with chambers, said chambers provided with gas apertures, a rod connected to the burner body and a rod carried by the rod connected to the burner body, said two rods having different co-efficients of expansion and a valve located between the chambers formed in the burner body, substantially as and for the purpose specified.

898,635. TYPE-WRITING MACHINE. JACOB FELBEL, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Jan. 31, 1906. Serial No. 298,737.



1. In a typewriting machine, the combination with a carriage, of means for intermittently and partially checking the speed of the carriage during a single run thereof.

2. In a typewriting machine, the combination with the carriage, of retarding means adapted to act intermittently during a single run of the carriage, the relation of said means to the carriage being such that the carriage is movable a plurality of letter-space distances between two successive retarding actions of said means.

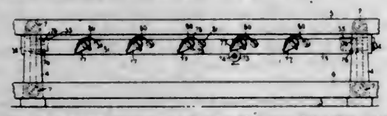
3. In a typewriting machine, the combination with the carriage, of retarding means adapted to act intermittently during a single run of the carriage, said mechanism comprising coöperative devices, and one of said devices being movable continuously by the carriage during its run, and the carriage being movable a plurality of letter-space distances between two successive retarding actions of said means.

4. In a typewriting machine, the combination with the carriage, of retarding means adapted to act intermittently during a single run of the carriage, said means comprising a device movable by the carriage while traveling a plurality of letter-space distances and while a portion of said means is inactive.

5. In a typewriting machine, the combination with the carriage, of retarding means adapted to act intermittently during a single run of the carriage, said means comprising coöperative devices, and one of said devices being movable continuously by the carriage during its run, and a portion of said means being inactive at times while the carriage travels a plurality of letter-space distances.

[Claims 6 to 32 not printed in the Gazette.]

898,636. TYPE-WRITING MACHINE. JACOB FELBEL, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Feb. 1, 1906. Serial No. 299,005.



1. In a typewriting machine, the combination with a power-driven carriage, of letter-spacing mechanism including feed dogs, a tabulator-stop, a stop coöperative with said tabulator-stop, means including a key for arranging said stops in coöperative alinement and for releasing the carriage from the control of the letter-spacing mechanism, and carriage-retarding means comprising two devices arranged to co-act while the feed dogs are at rest, one of said devices being included in a series, and the other being coöperative with each device of said series and with only a single device of the series at a time.

2. In a typewriting machine, the combination with a power-driven carriage, of letter-spacing mechanism including feed dogs, a tabulator-stop, a stop coöperative with said tabulator-stop, means including a key for arranging said stops in coöperative alinement and for releasing the carriage from the control of the letter-spacing mechanism, and carriage-retarding means comprising two coöperative devices arranged to co-act while the feed dogs are at rest, one of these devices including a spring tending to keep it in its normal position on its support, and one of said devices being included in a series and the other being coöperative with each device of said series.

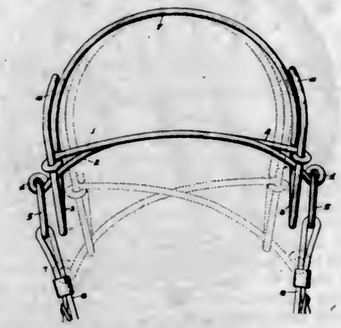
3. In a typewriting machine, the combination with the carriage, of a tabulator-stop, a stop coöperative with said tabulator-stop, means including a key for arranging said stops in coöperative alinement and for releasing the carriage from the control of the escapement, and carriage-retarding means comprising two coöperative devices, one of them being adapted to be forced by the carriage into contact with the other, and one of said devices including a spring tending to keep this device in its normal position on its support, and this device being movable from its normal position by the action on it of the other device forcing said spring to yield, one of said devices being included in a series, and the other being coöperative with each device of said series.

4. In a typewriting machine, the combination with the carriage, of a tabulator-stop, a stop coöperative with said tabulator-stop, means including a key for arranging said stops in coöperative alinement and for releasing the carriage from the control of the escapement, and carriage-retarding means comprising a movable device including a spring tending to keep the device in its normal position, and a coöperative device adapted to be forced by the carriage into contact with the other device and into the space normally occupied by the latter device, one of said devices being included in a series, and the other being coöperative with each device of said series.

5. A typewriting machine provided with carriage-retarding means comprising two coöperative devices, one of them being adapted to be forced by the carriage into contact with the other, and one of said devices including a pivoted arm and a spring tending to keep the arm in its normal position on its support, and said arm being movable from its normal position by the action on it of the first mentioned device forcing said spring to yield, one of said devices being included in a series, and the other being coöperative with each device of said series.

[Claims 6 to 30 not printed in the Gazette.]

898,637. BRIDLE-BIT. DANIEL S. GALLATIN, Dalton, Ohio. Filed Feb. 24, 1908. Serial No. 417,426.



1. A bridle bit formed of a single piece of wire of sufficient size, said wire bent to form loops and rings, bit bars having free opposite ends and relatively fixed opposite ends the free ends of the bit bars extended through rings, and provided with rein rings, all arranged, substantially as and for the purpose specified.

2. A bridle bit formed of a single piece of metal, said wire bent to form loops and rings, a portion of said wire constituting bit bars, said bit bars held in fixed relative position at their opposite ends and free at the opposite ends to which they are fixed and an integral nose member, the free ends of the bit bars extending through the rings, and rein rings connected to the free ends of the bit bars, substantially as and for the purpose specified.

898,638. PROCESS OF CASTING COPPER AND COPPER ALLOYS. CONRAD GAUTSCH, Munich, Germany. Filed Apr. 27, 1906. Serial No. 314,085.

1. In the process of casting copper and copper alloys, the step which consists in adding to the metal bicarbonate of soda, substantially in the absence of free carbon.

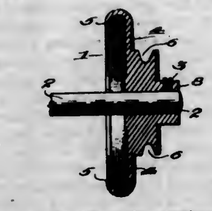
2. In the process of casting copper and copper alloys, the step which consists in adding bicarbonate of soda to the metal, then melting the latter and then adding more bicarbonate of soda.

3. In the process of casting copper and copper alloys, the step which consists in adding during the melting process from one to two-fifths percent. of bicarbonate of soda.

4. In the process of casting copper the step which consists in adding bicarbonate of sodium to molten pure copper.

5. In the process of casting copper, the step which consists in adding bicarbonate of sodium to pure copper, then melting the latter, and then adding more bicarbonate of sodium to the molten copper.

898,639. SEWING-MACHINE FLY-WHEEL. WALLACE W. GOULD, Bridgeport, Conn. Filed Feb. 24, 1906. Serial No. 302,690.



1. A cup shaped fly wheel for sewing machines having an inwardly turned rim adapted to form a channel around the inside the edge of the wheel, the open or cup side of the wheel being towards the bearing of the shaft and said wheel being mounted directly on the shaft so that the oil from the shaft can spread along the closed side of the wheel into said rim.

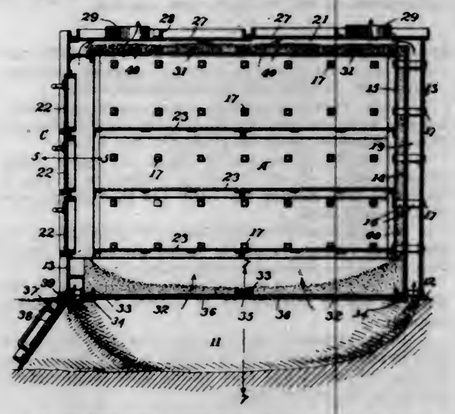
2. A combined pulley and fly wheel for sewing machines comprising a pulley section and an integral fly wheel section, the latter having an open cup faced surface on the side towards the bearing of the shaft and an inwardly turned rim adapted to form a channel around the inside the edge of the wheel, the flat side of the cup being in direct contact with the shaft so that the oil from the shaft passes along said flat side to said rim.

898,640. SKIRT-SUPPORTER. PETER G. GIROUD, New York, N. Y. Filed June 29, 1907. Serial No. 381,419.



A skirt supporter comprising an S-shaped body, one part being adapted to engage the waistband of the skirt, another part being adapted to receive an ornamental buckle and an intermediate part being connected with the aforesaid parts by bends and an extended lateral bearing perforated to receive the body of the supporter and located at the bend in proximity to the part which is to engage the waistband of the skirt for receiving the weight of the skirt.

898,641. CAMP-OVEN. WILLIAM H. HART, U. S. Army, assignor of one-half to Harry B. Leary, Washington, D. C. Filed June 20, 1908. Serial No. 439,577.



1. A portable oven comprising an outer wall adapted to rest upon the ground at the margin of a fire pit, an intermediate wall supported by the outer wall, the space between said walls being adapted to receive and conduct the hot gases from the fire pit, an inner wall, a suitable bottom arranged over the fire pit, and a top having an interspace through which the gases pass to a suitable outlet.

2. A portable oven comprising an outer wall adapted to rest upon the margin of a fire pit, an intermediate wall, a bottom supported by the intermediate wall, an inner wall, a lower top plate supported by the inner wall and an upper top plate supported by the outer wall and provided with a suitable outlet, the hot gases being adapted to circulate from the fire pit between the outer and intermediate walls and between the upper and lower top plates to said outlet.

3. A portable oven comprising an outer wall adapted to rest upon the margin of a fire pit, an intermediate wall, a bottom supported by the intermediate wall, an inner wall, a lower top plate supported by the inner wall, an upper top plate supported by the outer wall, and a protecting layer of heat distributing material extending over the lower top plate, between the inner and intermediate walls, and over the bottom.

4. A portable oven comprising detachable sides, front, back, top and bottom, the sides, front and back each having an outer wall adapted to rest upon the margin of a fire pit, an intermediate wall and an inner wall, the said walls being connected together at their vertical edges whereby separate heating flues are formed in the sides, back and front, and means for detachably connecting the sides, back and front.

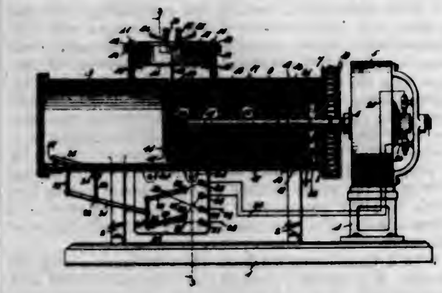
5. An oven comprising side, front and rear walls detachably connected together and having flues for the passage of hot gases therethrough and a top having an interspace in communication with said flues in combination with a fire pit beneath said oven and upon the margin of which the oven rests, and a covering of earth or similar material over the sides, top and back of the oven, the said covering being adapted to retain the heat in the oven and close the joints thereof.

[Claim 6 not printed in the Gazette.]

898,642. PHONOGRAPH ATTACHMENT FOR TELEPHONES. ANDREW HATCHETT, Louisville, Ky. Filed Nov. 4, 1907. Serial No. 400,625.

1. In combination, a telephone line and a transmitter for the same, a phonographic record to vibrate said transmitter, a motor to move said record in one direction, and a spring to return said record to its original position.

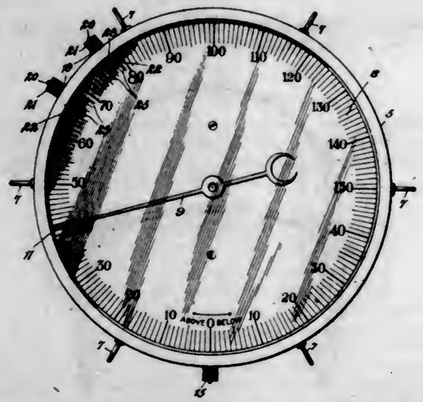
2. In combination, supporting parts, a phonographic record adapted to rotate in two directions, both forward and backward, a diaphragm box pivoted so that its needle will contact said record when the same is rotating in one direction, so that the diaphragm will be vibrated, said box being so pivoted that when the record is rotated in the other direction the needle will pass lightly over said record.



3. In combination, a transmitter, a connecting line, a plurality of receivers, one of said receivers being adapted to magnify sound and being adapted to be thrown in or out of circuit with the other at will, a phonographic record to vibrate said transmitter, a motor to move said record in one direction and a spring to move it in the other, a transmission line to operate said motor, and an automatic switch to stop said motor when one limit of movement of said cylinder is reached.

4. In a device of the class described, a motor, having an angular shaft projecting therefrom, a phonograph having an internally threaded cylindrical outer casing, and an inner cylinder having an outwardly projecting threaded flange to engage the threads of said casing, and having an angularly, longitudinally extending opening adapted to snugly receive said shaft.

898,643. INDICATOR. WALTER O. HAYMOND and JOHN O. POTTER, Muncie, Ind. Filed May 29, 1907. Serial No. 376,410.



1. In alarm mechanism of the character set forth, the combination with a casing, of a conductor strip located within the same and insulated therefrom, a rotary indicator, and a contact element adjustably mounted on and supported by the casing independently of the strip, said element being insulated from the casing and having a portion electrically and adjustably engaged with the conductor strip and a portion located in the path of movement of the indicator, said indicator having a clamping portion projecting through a wall of the casing.

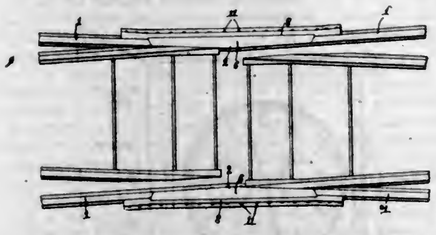
2. In alarm mechanism of the character set forth, the combination with a casing having a slot, of a ring of insulating material carried by the casing, a conductor strip mounted on the ring, a rotatable contact element, another contact element adjustably mounted on the casing independently of the strip and movable in the slot, said latter element having an offset finger in electrical contact with the strip, and an offset flange located in the path of movement of the rotary element.

3. In alarm mechanism of the character set forth, the combination with a casing having a slot, of a ring of insulating material carried by the casing, a conductor strip mounted on the ring, a rotatable indicator, and a contact element adjustably mounted on the casing independently of the conductor strip and movable in the slot, said element having a portion in adjustable and electrical contact with the strip and a portion located in the path of movement of the indicator, and binding posts carried by the casing and connected respectively to the indicator and conductor strip.

4. In alarm mechanism of the character set forth, the combination with a casing having a slot, of contact rings located on opposite sides of the slot, a rotary contact member, and a plurality of separate contact elements adjustably mounted in the slot, each element having an engagement with one of the contact rings and having a portion disposed in the path of movement of the rotary element.

5. In alarm mechanism of the character set forth, the combination with a casing and a dial located therein, said casing having a slot, of a rotary indicator operating over the dial and having a roller on its free end, insulator rings located within the casing on opposite sides of the slot, conductor rings mounted in the insulator ring, a plurality of binding posts connected respectively to the conductor rings and to the rotary indicator, insulator sleeves adjustable in the slot of the casing, and contact elements located in said sleeve, each contact element having an offset finger in engagement with one of the conductor rings and having a portion disposed in the path of movement of the roller.

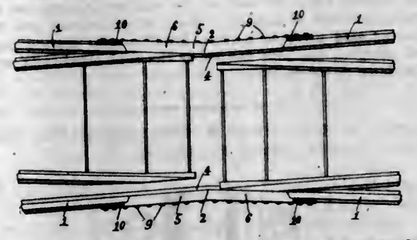
898,644. MOVABLE-POINT CROSSING. WILLIAM M. HENDERSON, Steelton, Pa. Filed Oct. 2, 1907. Serial No. 395,611.



1. In a movable point crossing, a track-rail bent to form the usual apex or "knuckle," and having its head cut away and removed on both sides of said knuckle, the hard metal piece having the head portion replacing the said cut-away portion of the track-rail, said hard-metal portion resting upon and being supported by the web of the track-rail, the reinforcing rail extending the length of and beyond the ends of said hard metal piece, and having the recess in the inner side of its head to which said hard metal piece is fitted, together with means for securing said track-rail, hard metal piece, and reinforcing rail together, substantially as set forth.

2. In a movable point crossing, a track-rail bent to form the usual apex or "knuckle," and having its head cut away and removed on both sides of said knuckle, the hard metal piece having the head portion replacing the said cut-away portion of the track-rail, said hard-metal portion resting upon and being supported by the web of the track-rail, the reinforcing rail extending the length of and beyond the ends of said hard metal piece, and the end portions of the head of which reinforcing rail lie against the track-rail head, said reinforcing rail having a recess to which said hard metal piece is fitted, said hard metal piece also being provided with end extensions between the track-rail and the reinforcing rail, together with means for securing said track rail, hard metal piece, and reinforcing rail together, substantially as set forth.

898,645. MOVABLE-POINT CROSSING. WILLIAM M. HENDERSON, Steelton, Pa. Filed Oct. 2, 1907. Serial No. 395,612.



1. In a movable point crossing, a track-rail bent to form the usual apex or "knuckle", and having its head cut away and removed on both sides of said knuckle, the hard metal piece having the head portion replacing the said cut away portion of the track-rail, said hard-metal head portion resting upon and being supported by the web of the track rail, together with means for securing said track rail and hard-metal piece together, substantially as set forth.

2. In a movable point crossing, a track-rail bent to form the usual apex or "knuckle", and having its head cut away and removed on both sides of said knuckle, the hard-metal piece having the head portion replacing the said cut-away portion of the track rail, said hard metal head portion resting upon and being supported by the web of the track rail, the web on said hard-metal piece whose lower edge is supported on the base of the rail, together with the bolts securing said webs together.

3. In a movable point crossing, a track-rail bent to form the usual apex or "knuckle", and having its head cut away and removed on both sides of said knuckle, the hard-metal piece having the head portion replacing the said cut-away portion of the track-rail, said hard-metal head portion resting upon and being supported by the web of the track rail, said hard metal piece being provided with the end extensions comprising head and web portions, the said head portions being beveled downwardly at their free ends to constitute pick-ups for guttered wheels, together with means for securing said track-rail and hard-metal piece together, substantially as set forth.

898,646. HEEL-BLOCK FOR RAILROAD-FROGS AND THE LIKE. WILLIAM M. HENDERSON, Steelton, Pa. Filed Oct. 2, 1907. Serial No. 395,613.



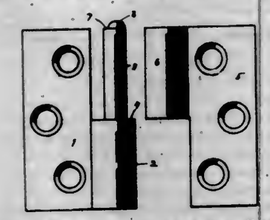
1. A heel block for railroad frogs and the like, comprising the head portion fitting the space between the heads of the point-rails, together with the depending leg portions fitted respectively to the under side of the head, inner side of the web, and resting upon the base of the said point rails, substantially as set forth.

2. A heel block for railroad frogs and the like, comprising the head portion fitting the space between the heads of the point rails, the depending leg portions fitted respectively to the under side of the head, inner side of the web, and resting upon the base of the said point rails, and provided with the webs connecting said legs at suitable intervals, substantially as set forth.

3. A heel block for railroad frogs and the like, comprising the head portion fitting the space between the heads of the point-rails, the depending leg portions fitted respectively to the under side of the head, inner side of the web, and resting upon the base of the said point-rails, the upper surface of the rear end of said heel block being beveled downwardly, substantially as set forth.

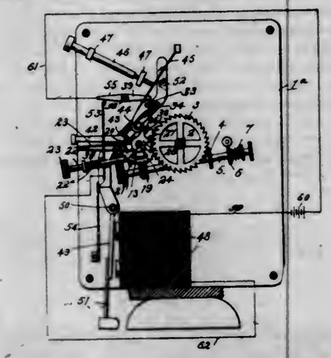
4. A heel block for railroad frogs and the like, comprising the head portion fitting the space between the heads of the point-rails, the depending leg portions fitted respectively to the under side of the head, inner side of the web, and resting upon the base of the said point-rails, the extreme rear end of said heel block being inverted and the floor of said inverted portion fitted to and resting upon and bridging the base flanges of the said point-rails, substantially as set forth.

898,647. HINGE. HARRY M. HERR, Lampeter, Pa. Filed Nov. 22, 1907. Serial No. 403,345.



In a detachable hinge of the class described, having the lower leaf provided with a pintle extending beyond the socket of the upper leaf, a shoulder formed upon the top of said pintle at the rear side thereof, for the purpose set forth.

898,648. ELECTRIC CLOCK. MONNOSUKE HIGUCHI, New York, N. Y. Original application filed Nov. 3, 1903, Serial No. 179,661. Divided and this application filed Dec. 2, 1905. Serial No. 290,008.



1. In a clock, an electric alarm bell ringing mechanism, comprising a minute arbor and a separate indicator shaft, each independently operated, a latch on said indicator shaft, a circuit controller operated by said latch, a cam on the indicator shaft actuating the latch to place the controller in position to throw the bell ringing mechanism into operation, and said latch also operated by the minute arbor to release the circuit controller and throw the bell ringing mechanism out of operation.

2. In a clock, an electric alarm bell ringing mechanism, comprising a minute arbor, and a separate indicator shaft, each independently operated, a hand operated shaft geared to and capable of rotating said indicator shaft, a latch on said indicator shaft, a circuit controller operated by said latch, a cam on the indicator shaft actuating the latch to place the controller in position to throw the bell ringing mechanism into operation, and said latch also operated by the minute arbor to release the circuit controller and throw the bell ringing mechanism out of operation.

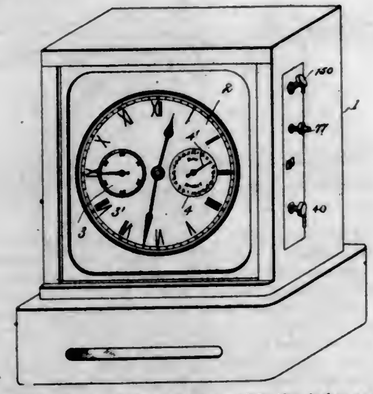
3. In a clock, an electric alarm bell ringing mechanism, comprising a minute arbor and a separate indicator shaft, each independently operated, a cam mounted on said indicator shaft, a dogging member rotatably mounted on said indicator shaft and controlled by said cam, a spring actuated latch controlled by said dogging member, a circuit controller operated by said latch when the cam and dogging member coact, to throw said bell ringing mechanism into operation, and said latch also capable of being operated by the minute arbor to throw the bell ringing mechanism out of operation.

4. In a clock, an electric alarm bell ringing mechanism, comprising a minute arbor, a separate indicator shaft capable of independent movement, a driving shaft operating said minute arbor, a cam rigidly mounted on said indicator shaft, a member freely mounted on said indicator shaft operated by the driving shaft and adapted to engage said cam, a spring latch operated by said cam, a circuit controller actuated by the latch to throw the bell ringing mechanism into operation, and means on the minute arbor for actuating said latch to throw said bell ringing mechanism out of engagement.

5. In a clock, an electric bell ringing mechanism comprising a minute arbor, a separate indicator shaft, each independently operated, a cam rigidly mounted on said indicator shaft, a gear wheel rotatably mounted on said indicator shaft capable of axial movement and engaging said cam, a driving shaft operating the minute arbor and said gear wheel, a latch movable with said gear wheel, a controller actuated by said latch to throw the bell ringing mechanism into operation, means on the minute arbor engaging the latch to throw the bell ringing mechanism out of engagement, and means for rotating the gear wheel to place the latch and controller in normal position.

[Claims 6 to 8 not printed in the Gazette.]

898,649. ELECTRIC CLOCK. MONNOSUKE HIGUCHI, New York, N. Y. Filed Nov. 3, 1903, Serial No. 179,661. Renewed Mar. 17, 1908. Serial No. 421,709.

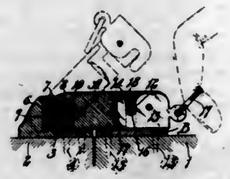


1. In a clock, the combination with the balance wheel and the hair spring, of an actuating lever for said balance wheel, an electromagnet adapted to attract said lever, circuit closing contact pieces electrically connected to said magnet, a balance governing lever, a contact arm mounted on said governing lever for closing a circuit through said contact pieces, and means on said balance wheel for engaging said contact arm to close a circuit, but adapted when the force of oscillation of the balance wheel is of sufficient strength to strike said governing lever with sufficient force to displace the same and carry said contact arm out of the path of engagement.

2. In a clock, the combination with the balance wheel, an electrical means for impelling said balance wheel when a circuit is closed, circuit closing devices, a balanced governing lever, a pivoted contact arm mounted on said lever and adapted when actuated to engage said circuit closing devices to close a circuit, and means carried by the balance wheel for engaging said contact arm to close a circuit, but adapted when the force of oscillation of the balance wheel is of sufficient strength to strike said governing lever with a force sufficient to displace the same and carry said contact arm out of the path of engagement.

3. In a clock, the combination with a balance wheel, means for electrically impelling said balance wheel, circuit closing contact devices for controlling an electrical impulse, a balanced governing lever, a contact closing arm pivoted on said lever and in engagement with one of said circuit closing devices, and means carried by the balance wheel for striking said governing lever and intermittently engaging said contact closing arm and depending for its intermittent engagement with said contact closing arm upon the force of its blow upon said governing lever.

898,650. DOOR-FASTENER. JOHN F. HIRSH and HAROLD M. HIRSH, St. Louis, Mo. Filed May 25, 1908. Serial No. 434,880.



1. A device of the character described, comprising a stationary element provided with a retaining member, a movable element provided with a pivotally mounted dog that is adapted to engage said retaining member, a bolt carried by the movable element and coöperating with said retaining member for locking the movable element in position, and a key-controlled device for moving said bolt; substantially as described.

2. A device of the character described, comprising a stationary element provided with a retaining member, a movable element provided with a catch that is adapted to be moved into engagement with said retaining member, a device on the movable element that coöperates with said retaining member to lock said movable element, and key-operated means for moving said locking device; substantially as described.

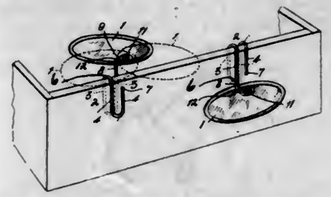
3. A device of the character described, comprising a stationary element provided with a retaining member, a pivotally mounted movable element provided with a slot for receiving said retaining member, a dog on the movable element that is adapted to be moved underneath said retaining member, a locking device on the movable element, and key-operated means for moving said locking device underneath said retaining member; substantially as described.

4. A device of the character described, comprising a stationary element provided with a retaining member, a pivotally mounted movable element, a device on the movable element that is adapted to be moved underneath said retaining member, and a spring for moving the movable element away from the stationary element; substantially as described.

5. A device of the character described, comprising a stationary element provided with a retaining element, a movable element provided with a pivotally mounted dog that is adapted to be moved underneath said retaining member, and a spring for engaging said dog to hold it in position; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

898,651. MECHANICAL TAG. FREDERICK R. HOISINGTON, New York, N. Y. Filed Oct. 24, 1907. Serial No. 398,923.



A mechanical tag comprising a single tang having a plurality of box-side receiving spaces, one at an angle to another, and a display-card movably and permanently connected with one end portion of the tang.

898,652. METALLIC TIE. ELMER HUDSON, Camp Point, Ill., assignor of one-half to James H. Pittman, Camp Point, Ill. Filed Oct. 7, 1907. Serial No. 396,244.



1. The combination with a metal tie, of a clamping plate freely movable under a rail on the tie, said plate having jaws to engage the respective flanges of the rail, a bolt pivotally connecting the plate with the tie at one side of the rail, and means engaging said bolt and the clamping plate for locking the latter in normal position.

2. The combination with a metal tie serrated on its upper face near its ends, of clamping plates having serrated under faces and provided with upwardly projecting jaws adapted to overlap the base flanges of a rail, each clamping plate being freely movable under the rail and having a lateral extension, a single bolt for each plate passing through the lateral extension of each plate and constituting a pivotal connection for the clamping plate with the tie at a point laterally removed from the rail, and means on the upper end of said bolt engaging the lateral extension of the plate.

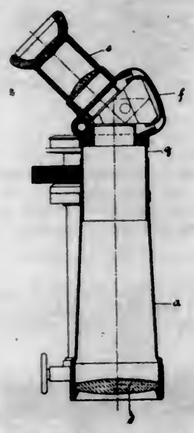
3. The combination with a metal tie having transverse serrations near its ends, of a clamping plate comprising a body having upwardly projecting diagonally disposed jaws and integral outwardly projecting arms, a single bolt passing between said arms and entering the tie, said bolt constituting a pivotal connection of the plate with the tie, the said body and arms being serrated on their under faces, and a retaining plate engaging the outer sides of the arms and through which the bolt passes.

4. The combination with a metal tie having transverse serrations near its ends, of clamping plates each comprising a body having upwardly projecting diagonally disposed jaws and an integral outwardly projecting member, the said body and member being serrated on their lower faces, a retaining plate having end flanges which overhang the sides of the outwardly projecting member and upwardly projecting lugs, a stay bolt passing through said plate and member and screwed into the tie and a pin passing through the head of the stay bolt.

898,653. PRISMATIC DOUBLE TELESCOPE. HEINRICH JACOB, Steglitz, near Berlin, Germany, assignor to The Firm of Optische Anstalt C. P. Goerz Aktiengesellschaft, Friedenau, near Berlin, Germany. Filed July 16, 1907. Serial No. 383,959.

1. In a prismatic double telescope comprising two telescope barrels provided with object glasses, said telescope barrels connected to each other by a hinge-joint, ocular tubes capable of rotation relative to the telescope-barrels

and inclined with regard to the axes of the object-glasses and the pivotal axis of the hinge-joint, and means of preserving parallelism of the axes of said ocular tubes when the telescope barrels are adjusted relatively to each other by rotation about said pivotal axis.



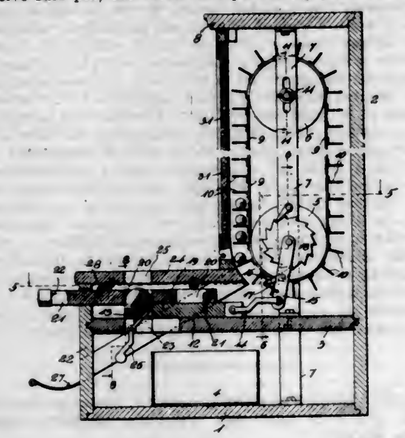
2. In a prismatic double telescope comprising two telescope barrels provided with object-glasses, said telescope barrels connected to each other by a hinge-joint, ocular tubes capable of rotation relative to the telescope barrels and inclined with regard to the axes of object-glasses and the pivotal axis of the hinge-joint, rectilinear guide members, each ocular tube firmly connected with one of said guide members, guiding means coöperating with said ocular tube guide members and adapted to keep same permanently in alinement with each other.

3. In a prismatic double telescope comprising two telescope barrels provided with object-glasses, said telescope barrels connected to each other by a hinge-joint, ocular tube members each comprising two parts arranged at an angle with relation to each other, the part remote from the eye-piece rotatably mounted on the corresponding telescope barrel, rectilinear guide members, each ocular tube member firmly connected with one of said guide members, guiding means coöperating with said ocular tube guide members and adapted to keep same permanently in alinement with each other.

4. In a prismatic double telescope comprising two telescope barrels provided with object-glasses, said telescope barrels connected to each other by a hinge-joint, ocular members each comprising two tubular parts arranged at an angle with relation to each other and an intermediate prism chamber, the tubular part remote from the eye-piece being rotatably mounted on the corresponding telescope barrel, rectilinear guide members, each ocular member firmly connected with one of said guide members, guiding means coöperating with said ocular tube guide members and adapted to keep same permanently in alinement with each other.

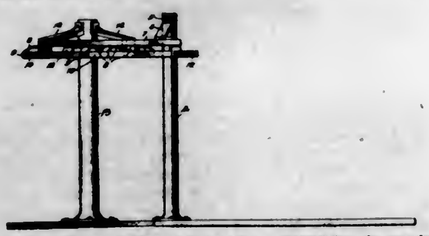
898,654. CIGAR-VENDING MACHINE. FIRMEN C. JENKINS, Villisca, Iowa. Filed Dec. 12, 1907. Serial No. 406,126.

In combination with a delivery apparatus, a horizontal supporting shelf having a longitudinal slot and coin controlled mechanism mounted upon the supporting shelf for actuating the delivery apparatus, said mechanism comprising an actuating block having a coin receiving slot of less length and to register with the slot of the supporting shelf, a coin supporting device pivoted to one side wall of the slot of the supporting shelf and having a portion to normally project into the slot of the actuating block, a pin arising from the actuating block and an operating member mounted upon the actuating block, said member having a coin receiving slot to normally register with that of the actuating block and a second longitudinal slot to receive said pin, the latter slot permitting predetermined



longitudinal movement of the supporting member independently of the actuating block.

898,655. MAIL-BAG-DELIVERY APPARATUS. ARTHUR E. KAILER, Naperville, Ill., assignor of one-half to Matthew C. Morlock, Chicago, Ill. Filed Oct. 14, 1907. Serial No. 397,254.



1. A mail-bag delivery apparatus, comprising in combination a mail-car crane, a station-receiving structure having therein an endless open rail support for a mail bag and means for conducting a mail bag thereto, whereby the velocity and momentum of a mail bag delivered from a moving train to a station crane may with uniformity be gradually reduced and destroyed, substantially as described.

2. A mail-bag delivery apparatus, comprising in combination a mail-car crane, a station-receiving structure having therein an endless open rail trackway for a mail bag and means for conducting a mail bag from a moving car thereto, substantially as and for the purpose described.

3. A mail-bag delivery apparatus, comprising in combination a mail-car crane, an elevated station-receiving structure having therein a circular rail track support for a mail bag and means for conducting a mail bag into said structure from a moving train, substantially as and for the purpose described.

4. A mail-bag delivery apparatus, comprising in combination a mail-car crane, a receiving structure at said station having therein an endless parallel rail support for a mail bag, and means for conducting a mail bag thereto from a moving train, substantially as and for the purpose described.

5. A mail-bag delivery apparatus, comprising in combination a mail-car crane, a station-receiving structure having therein an endless parallel rail support for a mail bag, and another support rail projecting tangentially therefrom in the path of the mail bag suspended from the car crane, substantially as and for the purpose described.

[Claims 6 to 10 not printed in the Gazette.]

898,656. BUILDING-BLOCK. ROY E. KEAGLE, Lodi, Cal. Filed Oct. 24, 1907. Serial No. 398,866.



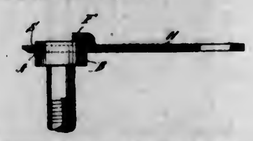
1. In a device of the character described, a block, tongues outward therefrom, one face of said tongues being corrugated, said tongues being formed with vertical grooves intermediate said corrugations, and with horizontal grooves in their tops and bottoms, said last named grooves being in substantial transverse alinement with said corrugations, as described.

2. A building block comprising a block proper provided with top and bottom longitudinal grooves, tongues outward from said block, said tongues being corrugated on one face and provided with vertical grooves intermediate said corrugations, and with horizontal grooves, said last named grooves being in substantial transverse alinement with said corrugations, as set forth.

3. A building block comprising a block proper, tongues formed outward therefrom, one face of said tongues being corrugated and formed with vertical grooves intermediate said corrugations, and with transverse grooves in substantial alinement with said corrugations, as set forth.

4. A building block comprising a block, tongues outward therefrom, one face of said tongues being corrugated, said tongues being provided with bottom and top grooves disposed in transverse alinement with said corrugations, and a binding member disposed in said grooves, as set forth.

898,657. WRENCH. PERLEY L. KIMBALL, Bellows Falls, Vt., assignor to Vermont Farm Machine Company, Bellows Falls, Vt., a Corporation of Vermont. Filed June 9, 1908. Serial No. 437,536.

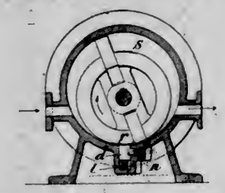


1. In a spanner wrench, a socket for a nut or bolt-head, which will encompass more than 180° of the periphery of the head, an inwardly projecting spur to engage a hole in the periphery of the head and one or more bearing pieces which project over the socket opening and rest upon the top of the nut or bolt-head when in operative position thereon.

2. In a spanner wrench, a circular opening to fit over the nut or bolt-head, a spur projecting radially into such opening to engage a hole in the periphery of the bolt-head and a finger which projects over the circular opening upon the side substantially opposite to said spur, and which rests upon the top of the bolt-head when the wrench is in operative position thereon.

898,658. ROTARY ENGINE. FRIEDRICH C. KRÜGER, Hanover, Germany. Filed May 7, 1907. Serial No. 372,346.

1. In a device of the class described, the combination with a cylindrical casing, having a suitable inlet and outlet of a rotary piston arranged in the said cylindrical casing and provided with radially slidable wings, a packing strip slidably arranged in the said cylindrical casing and yieldingly pressed against the peripheral surface of the piston, means for causing the said packing strip to be forced radially outward an instant before the passage of a piston wing, and means for immediately forcing it in again, after the passage of the wing.



2. In a device of the class described, the combination with a cylindrical casing, having a suitable inlet and outlet of a rotary piston arranged in the said cylindrical casing and provided with radially slidable wings, a packing strip slidably arranged in the said cylindrical casing and yieldingly pressed against the peripheral surface of the piston, mechanical means for causing the said packing strip to be forced radially outward an instant before the passage of a piston wing, and means for immediately forcing it in again after the passage of the wing.

3. In a device of the class described, the combination with a cylindrical casing provided with suitable inlet and outlet ports, of a rotary piston inclosed in the said cylindrical casing and provided with radially slidable wings, a radially slidable packing strip yieldingly pressed inward against the piston, and automatic means for shifting the said packing strip radially outward an instant before the passage of a piston wing and to free it again immediately afterwards.

4. In a device of the class described, the combination with a cylindrical casing provided with suitable inlet and outlet ports, of a longitudinal radially slidable packing strip yieldingly pushed inward toward the axis thereof, a rotary piston inclosed and journaled in the said cylindrical casing and provided with radially slidable wings, this piston being adapted to be engaged by the said packing strip, of mechanical means adapted to shift the said packing strip radially outward an instant before the passage of a piston wing over the said packing strip, and to free it again immediately afterwards.

5. In a device of the class described, the combination with a cylindrical casing having suitable inlet and outlet ports, of a longitudinal radially slidable packing strip yieldingly pushed inward toward the axis thereof, a rotary piston inclosed and journaled in the said cylindrical casing, this piston being provided with radially slidable wings and adapted to be engaged at its peripheral surface by the said packing strip, of mechanical means actuated from the outside of the cylindrical casing and adapted to shift the said packing strip radially outward an instant before the passage of a piston-wing over the said packing strip, and to free it again immediately afterwards.

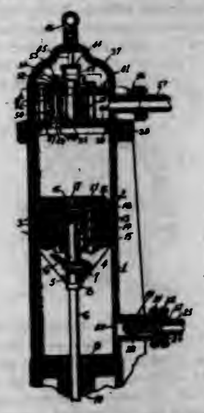
[Claims 6 to 11 not printed in the Gazette.]

898,659. COMPRESSOR. HENRY KUEHL, Philadelphia, Pa., assignor of one-half to Theodore Kolischer, Philadelphia, Pa. Filed Aug. 22, 1907. Serial No. 389,698.

1. In a compressor, the combination with a cylinder, of a piston movable therein, a piston rod for driving said piston, a valve member having a seat on said piston, a guide nut upon said piston rod upon which said valve member is movable, and resilient means on either side of said nut engaging said valve member.

2. In a compressor, the combination with a cylinder, of a piston movable therein, a piston rod for driving the same, a valve member having a seat on said piston, a nut upon said piston rod, a hollow valve stem upon said valve member, said nut engaging in said hollow stem and

operating as a guide therefor, and resilient means on either side of said nut engaging said valve member.



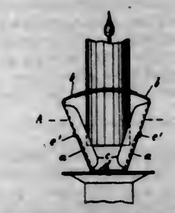
3. In a compressor, the combination with a cylinder, of a suction tube communicating therewith, a suction pipe secured to said tube, a valve seat secured by and intervening between said tube and pipe, a valve member engaging with said seat and having a stem, a hollow guide for said valve stem, a spring within said hollow guide for opposing said valve stem, and means supporting said guide and secured to said valve seat.

4. In a compressor, the combination with a cylinder, of a dome thereon, and a valve system disposed in said dome and comprising separated fixed plate members, a plurality of valve seats in one of said plate members, a valve cooperating with each seat and having a stem, and a valve stem guide for each valve secured in the other plate member, a spring within the valve stem guide, a spring opposing the opening of each valve, and means engaging said dome and holding said valve system in fixed position.

5. In a compressor, the combination with a cylinder, of a piston movable therein, a piston rod for driving said piston, a valve having a seat in said piston, a hollow valve stem upon said valve, a guide member secured upon said piston rod and engaging within said valve stem, resilient means confined between the bottom of said valve stem and said guide member, and resilient means on the other side of said guide member and confined in said valve stem between said guide member and a valve stem closure.

[Claims 6 to 11 not printed in the Gazette.]

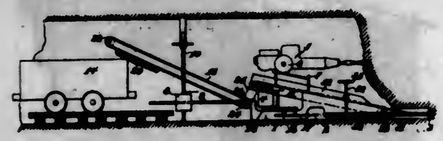
898,660. CANDLE-HOLDER. ERNST P. LEHMANN, Brandenburg, Germany. Filed Mar. 18, 1905. Serial No. 250,879.



1. In a candle holder, the combination, with a pedestal, arms secured thereto and extending upwardly therefrom, said arms arranged to embrace the candle out of contact therewith along the medial portion and the edges only presenting upwardly diverging narrow lines of contact with the candle-foot, of arms carried by the first arms to embrace the candle shank to prevent lateral displacement.

2. In a candle holder, the combination, with a pedestal, spring arms secured thereto and upwardly diverging therefrom, said arms hollowed to embrace the candle out of contact therewith in the deeper portion and the edges only presenting knife edge lines of contact with the candle-foot, of arms carried by the spring arms to embrace the candle shank to prevent lateral displacement.

898,661. COAL-WORKING APPARATUS. NILS D. LEVIN, Chicago, Ill. Filed Oct. 1, 1906. Serial No. 336,952.

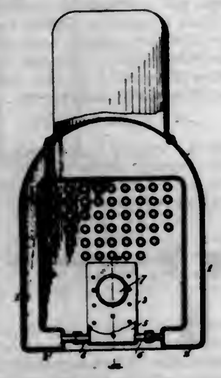


1. In combination, a supporting frame, an undercutting mechanism mounted thereon, a motor for operating such mechanism, and a pick machine mounted for universal movement upon the frame above the undercutting mechanism.

2. In combination, a supporting frame, an undercutting mechanism mounted thereon, a motor for operating such mechanism, a pick machine mounted upon the frame above the undercutting mechanism, and means for adjusting the frame laterally.

3. In combination, a supporting frame, an undercutting mechanism mounted thereon, a motor for operating such mechanism, a pick machine mounted upon the frame above the undercutting mechanism, and means for adjusting the front end of the frame vertically.

898,662. BAFFLE FOR OIL-BURNING FURNACES IN STEAM-ENGINES. JOSHUA LIMERICK, West Medford, Mass. Filed Sept. 17, 1907. Serial No. 393,296.

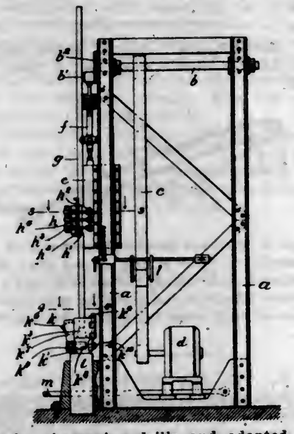


1. A target for use in connection with a liquid fuel burner, said target having a part of its wall made spherically convex to receive the direct action of the flame and spread the same in all directions, said spherically convex portion being thicker than the remaining portion of the wall, substantially as and for the purpose set forth.

2. A target for use in connection with a liquid fuel burner, said target having an opening in a wall thereof, a spherically-convex flame spreader fitted in said opening in the wall of the target, and struts bracing opposite walls of the target.

898,663. MACHINE FOR SHARPENING ROCK-DRILLS. BRADFORD H. LOCKE, New York, N. Y. Filed June 4, 1907. Serial No. 377,160.

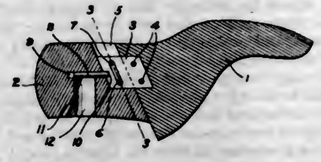
1. A die for sharpening drills and adapted to be secured to the drill head, the same comprising a head block, die members pivotally mounted thereon and adapted to embrace the drill head, and a clamping device carried by the head block and engaging the die members to hold them securely about the drill head.



2. A die for sharpening drills and adapted to be secured to the drill head, the same comprising a head block, a stud carried thereby, die members mounted upon said stud and having projecting lips and a yoke pivoted upon the head block and engaging said projecting lips to hold the die members securely about the drill head.

3. A die for sharpening drills and adapted to be secured to the drill head, the same comprising a head block, a stud carried thereby, die members mounted upon said stud and having projecting lips and a yoke pivoted upon the head block and engaging said projecting lips to hold the die members securely about the drill, said yoke having a weighted arm to hold it in engagement with the lips of the die members.

898,664. LAST. HENRY F. LOEWER, Rochester, N. Y. Filed Dec. 16, 1907. Serial No. 406,690.

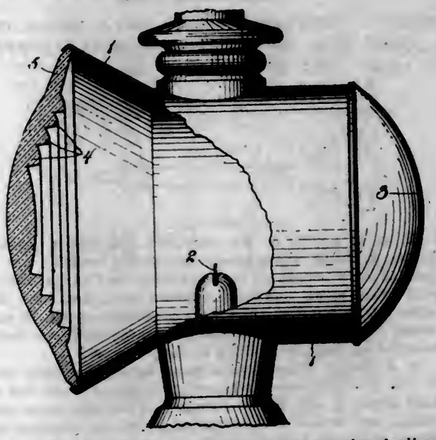


A last comprising a toe part and heel part, one of said parts having a socket therein, and the other having a plate rigidly attached to it; a pin and slot connection between said socketed part and said plate, whereby said toe and heel parts are movable with reference to each other; a bolt adapted to slide across said socket and to engage said plate in order to lock said toe and heel parts together; and a flat spring secured at one end along side said socket, extending diagonally therethrough and attached at its other end to said bolt, whereby said bolt is withdrawn by a jack entering said socket.

898,665. LENS. GEORGE A. MACBETH, Pittsburg, Pa., assignor to C. T. Ham Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed May 21, 1908. Serial No. 434,076.

1. A lens comprising a concave convex ringed refracting portion and an integral surrounding plain annulus of greatest thickness at its inner edge and tapering therefrom to the outer edge.

2. A lens comprising a concave convex refracting portion ringed on its concave side, and an integral surrounding plain annulus decreasing in thickness from its inner to its outer edge and having its outer surface inclined forwardly from the line of curvature of the convex surface of the refracting portion.

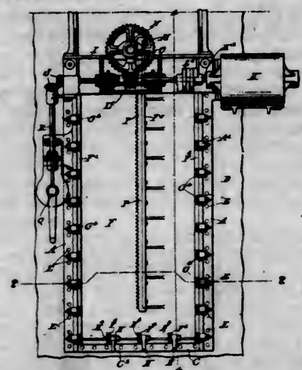


3. A lens comprising an outer plain annulus inclined forwardly with respect to the axis of the lens, and an inner integral refracting portion of concave convex form ringed on its concave face and having its convex face curved out past the line of curvature of the outer surface of the annulus.

4. A lens comprising a thickened central refracting portion and an integral surrounding plain annulus of greatest thickness at its inner edge and tapering therefrom to the outer edge.

5. A lens comprising a concave-convex ringed refracting portion and an integral plain annulus, said refracting portion having its convex face curved forwardly past the line of curvature of the front face of the annulus, and said annulus tapering from said refracting portion to its outer edge.

898,666. BULKHEAD-DOOR. DE COURCY MAY, Philadelphia, Pa. Filed Sept. 4, 1906. Serial No. 333,125.

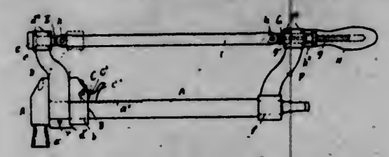


1. In combination, a door frame member, a sliding door member, one of said members being provided with a wedging surface and rollers coöperating with said surface and adjustably carried by the other of said members.

2. In combination, a door frame, studs supported thereby so as to be angularly adjustable, rolls journaled on said studs and eccentric with respect to the bodies thereof, and a door provided with wedging surfaces engaging said rolls.

3. In combination, a door having side ribs F^2 and end ribs F^3 and F^4 and coöperating angularly adjustable members having eccentrically mounted rollers.

898,667. COMBINATION-TOOL. JOHN I. MELTON, Cincinnati, Ohio. Filed Feb. 4, 1907. Serial No. 355,581.



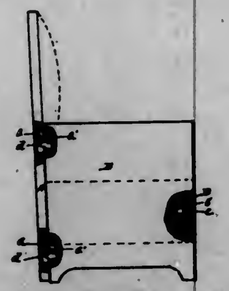
1. In an article of the character indicated a wrench having a shank, a stationary jaw and a movable jaw, a pair of arms supported laterally upon said shank, one of said arms being supported between said jaws, and the other arm being supported upon a reduced section of said shank at the opposite end from said jaws, said arms being adapted at their extremities to support a saw.

2. A wrench comprising a shank having clamping jaws at one end and a reduced section at the opposite end of said shank, a pair of arms supported laterally upon said shank, one of said arms being supported by clamping between said jaws and the other arm supported by means of an eye upon said reduced section of the shank, and means at the outer extremities of said arms to support a saw blade.

3. A wrench comprising a shank having clamping jaws at one end and a reduced section at the opposite end of said shank, a pair of curved arms supported laterally upon said shank and adapted to be reversed relative thereto so as to vary the distance between the extremities of said arms, one of said arms being supported by clamping between said jaws and the other arm supported upon said reduced section of the shank, and means at the extremities of said arms to support a saw blade.

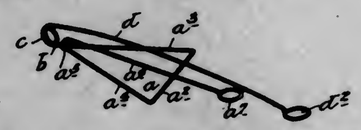
4. A wrench comprising a polygonal shank having teeth upon one face, a stationary wrench jaw, a movable wrench jaw, a spring pawl to lock said movable jaw and a reduced polygonal section at the opposite end of said shank, a pair of arms supported laterally upon said shank, one of said arms being supported between said jaws by clamping, and the other arm supported by an eye upon said reduced section of the shank, the outer extremities of said arms being provided with means to support a saw blade.

898,668. KNOCKDOWN CHAIR. BURTON W. MIDDLETON, Union City, Pa. Filed Nov. 13, 1907. Serial No. 401,976.



The combination in a knock-down chair, of a chair-back having hook engaging slots therein near the edges thereof, a chair-seat hinged to said chair-back having hook engaging slots in its edges near the front end thereof, detachable chair-sides, rearwardly and upwardly extending hooks in the rear edges thereof adapted to engage the slots in the chair-back, and laterally and upwardly extending hooks on the inner faces thereof adapted to engage the slots in the front edges of the chair-seat, substantially as set forth.

898,669. BOOK-MARK. JOHN T. MOORE and GEORGE T. MOORE, Rahway, N. J. Filed Apr. 7, 1908. Serial No. 425,592.



A device of the class described composed of spring wire bent centrally to form a loop c, one part of said wire being bent to form a triangular jaw a having a spring arm a^4 connected therewith adjacent to the loop c, and the other part of said wire being bent to form the spring arm d.

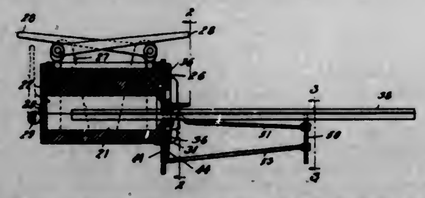
898,670. PIN AND PIN-JOINT. EUGENE W. MOREHOUSE, Providence, R. I., assignor to B. A. Ballou & Company, Incorporated, Providence, R. I., a Corporation of Rhode Island. Filed Feb. 17, 1908. Serial No. 416,349.



1. As a new article of manufacture, the jeweler's finding herein described, comprising in one piece a base and two ear pieces, the edge of each ear piece being curved in an arc of approximately 270° in extent and is outwardly convex and inwardly concave in a section parallel to said base and also outwardly concave and inwardly convex in a section perpendicular to said base, and each provided with a pivot hole concentrically located; said article being adapted to locate accurately within itself a pin tongue provided with a pivot the latter in registration with said pivot holes and said ear pieces of said article being adapted to be flattened by pressure first to engage said pivot in said pivot holes thereof, and then to be further flattened to assume the form of straight, parallel ear pieces extending at right angles with said base.

2. The improved pin joint for brooches and similar articles, made of a single piece of soft metal, comprising two centrally perforated ear pieces and an intermediate base, each of which ear pieces is outwardly convex and inwardly concave in a section parallel to said base and also outwardly concave and inwardly convex in a section perpendicular to said base, and adapted, when subjected to pressure, to be flattened into straight parallel ear pieces extending from said base at right angles.

898,671. APPARATUS FOR MOLDING BASES ON FENCE-POSTS. MARSHALL C. MUNN, Sycamore, Ill. Filed Mar. 16, 1908. Serial No. 421,487.

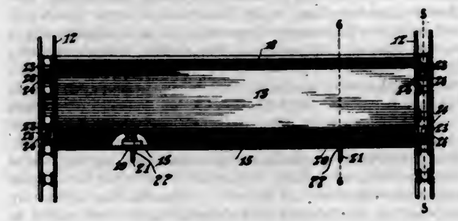


1. The combination with apparatus for molding bases upon metal fence posts, of devices for supporting the outer end of the post during the molding operation, said devices being vertically movable so as to permit the portion of the post supported by them to move downward with the portion within the mold.

2. The combination with apparatus for molding bases upon metal fence posts, such apparatus being provided with a depressible block or plate at the opening through which the body of the post extends, of devices for supporting the projecting body of the post, such devices being attached to and vertically movable with the depressible block or plate of the apparatus.

3. The combination with apparatus for molding bases upon metal fence posts, of means acting to support the projecting end of the post during the molding operation, such means permitting the projecting part to move downward with the portion within the mold.

898,672. ELEVATOR MECHANISM. JACOB MUSSELL, Homedale, Idaho. Filed Oct. 5, 1906, Serial No. 337,660. Renewed July 13, 1908. Serial No. 443,348.



1. In an elevator of the character described, the combination with an endless chain, of elongated narrow buckets mounted thereon, each bucket having a contracted mouth and an opening in its bottom, a flexible valve disk located in each bucket and movable to a position across the opening, and a screw eye having a head disposed outside the bucket, and a shank extending through the opening in the bottom and threaded into the disk.

2. In an elevator of the character described, the combination with end walls, of chains extending across the rear sides of the buckets adjacent to the end walls, said chains including links having off-set webs that are disposed against the buckets and having openings, and headed fastening devices loosely passing through the openings into the rear edges of the end walls, said devices permitting the relative movement of the links and buckets.

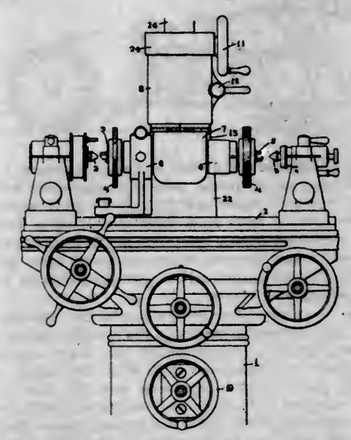
3. In an elevator of the character described, the combination with an upper shaft and spaced sprocket wheels thereon, of a lower drum having a substantially smooth peripheral wall, spaced sprocket chains extending around the wheels and drum, said chains including links having offset webs that are provided with openings, buckets having contracted mouths and openings in their bottoms, said buckets having their rear walls disposed against the offset webs of the links, headed bolts passing through the openings of the webs and engaging the buckets, valve disks located in the buckets and controlling the bottom openings, and screw eyes having shanks passing through the openings and threaded into the valve disks.

4. In an elevator of the character described, the combination with an upper shaft having spaced sprocket wheels, of a lower drum disposed at one side of the vertical plane in which said shaft is located, sprocket chains passing around the wheels and drum, the upper stretches of said sprocket chains being disposed at an inclination, buckets connected to the sprocket chains and having rear walls provided with margins that are inclined away from said chains and form contracted mouths, guide strips located longitudinally of and beneath the upper stretches of the sprocket chains, and means for supporting said strips.

5. In an elevator of the character described, the combination with an upper shaft and spaced sprocket wheels thereon, of a lower drum having a substantially smooth peripheral wall, spaced sprocket chains extending around the wheels and drum, buckets having contracted mouths and openings in their bottoms, and valve disks located in the buckets and controlling the bottom openings.

[Claim 6 not printed in the Gazette.]

898,673. GRINDING-MACHINE. SUBBO NIKOLOFF, Worcester, Mass. Filed Nov. 21, 1904. Serial No. 233,605.



1. In a grinding machine, the combination with a framework and work holding means, of a bearing for a spindle, a spindle vertically adjustable therein and having at its upper end an overhanging extension, a bearing supported by said overhanging extension, a sleeve rotatively adjustable in said bearing, means for adjusting said sleeve in its bearing, a journal bearing in said sleeve, and a grinding wheel shaft in said journal bearing.

2. In a grinding machine, the combination with a framework and work holding means, of a vertically adjustable spindle provided with an overhanging extension, a sleeve journaled vertically in said overhanging extension, a horizontal grinding wheel shaft supported by said sleeve, and means for the axial adjustment of said sleeve in its bearing.

3. In a grinding machine, the combination of a vertically adjustable spindle provided with an overhanging extension, a sleeve journaled in said overhanging extension, means for the axial adjustment of said sleeve in its bearing, a grinding wheel shaft supported by said sleeve, a pulley carried by said shaft and inclosed within said sleeve.

4. In a grinding machine, the combination with a framework, of a hollow post supported on said framework, a spindle adjustable in said post, a sleeve carried by said spindle and overlapping said post, an overhanging extension on said spindle, and a grinding wheel shaft carried by said extension.

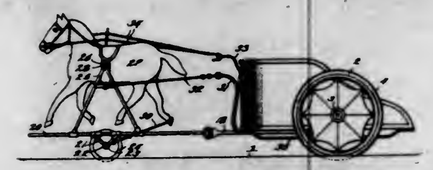
5. In a grinding machine, the combination with a framework, of a bearing, a spindle slidable in said bearing, means for the vertical adjustment of said spindle, an overhanging extension carried by said spindle, and having a bearing for a vertical sleeve, a vertical sleeve held in said bearing and having an opening in its upper end, means for the axial adjustment of said sleeve in its bearing, a grinding wheel shaft supported by said sleeve, a pulley held on said shaft and inclosed in said sleeve, and a belt connection for said pulley inclosed in said sleeve.

[Claims 6 to 9 not printed in the Gazette.]

898,674. AMUSEMENT DEVICE. LAWRENCE O'DONNELL, Scranton, Pa. Filed Jan. 31, 1908. Serial No. 413,605.

1. In an amusement device, a chariot, a frame supporting figures of horses pivotally secured to the frame, an

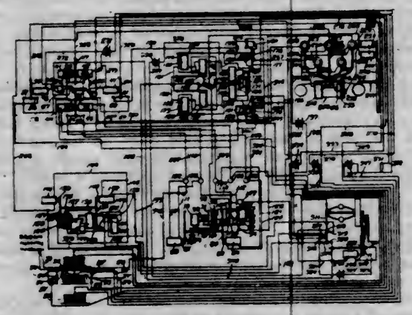
axle upon the chariot, wheels upon the axle, means provided by sprockets for rotating the wheels, pedals upon the axle of one of the sprockets, boxings upon the chariot, a bifurcated seat support carrying a seat, within said boxings, teeth upon the arms of the support, a spring dog engaging the teeth, and a handle for the support of the operator.



2. In an amusement device, a chariot, a tongue provided by said chariot, a frame pivotally connected with said tongue, brackets upon said frame, an axle within said brackets, offsets upon said axle, wheels upon said axle, braces upon said frame, eyes upon the braces, a transverse shaft connecting the eyes, figures of horses upon the shaft, and links connecting one of the legs of each horse with one of the offsets of the axle.

3. In an amusement device, a chariot provided with wheels and means for revolving the wheels and an adjustable seat for the operator of the chariot, a tongue upon the chariot, a frame connected with the tongue, wheels upon the frame, a transverse axle upon the wheels having offsets, a brace upon the frame having a shaft, figures of horses upon the shaft, links connecting one of the legs of each horse with one of the offsets of the axle, traces upon the figures connected with a goose neck provided by the chariot, reins upon the figures supported in brackets provided by the shaft and connected with an eye provided by the chariot.

898,675. PASSENGER-RECORDING SYSTEM FOR TRAINS. WALTER E. PARR, Sparta, Mo. Filed Dec. 6, 1906. Serial No. 346,672.



1. In a system of the class described, the combination with a car including steps, of an electric circuit, a whole fare checking mechanism and a half fare checking mechanism interposed in the circuit, the whole and half fare checking mechanisms being designed to check the number of whole and half fare passengers respectively who board the car, a switch system interposed in the circuit, means operable by pressure upon the steps to close the circuit through the switch system and bring into circuit either the whole or the half fare mechanisms, a transfer mechanism interposed in the circuit and adapted while the car is in motion, to check up the results of the whole and the half fare mechanisms, and a recorder operable through the medium of the transfer mechanism.

2. In a system of the class described, the combination with a car including steps, of an electric circuit, a whole fare checking mechanism and a half fare checking mechanism interposed in the circuit, the whole and half fare checking mechanisms being designed to check the number of whole and half fare passengers respectively who board the car, a switch system interposed in the circuit, means operable by pressure upon the steps in ascending succession to close the circuit through the switch system and bring into circuit either the whole or the half fare mechanisms and thereby check up the whole or the half fare passengers ascending the steps, said means being operable by pressure upon the steps in descending succession to close the circuit through the switch system and bring into circuit either the whole or the half fare checking mechanism whereby the person descending the steps will be discounted from the number previously checked up, a transfer mechanism interposed in the circuit and adapted while the car is in motion to check up the final results of the whole and the half fare mechanisms, and a recorder operable through the medium of the transfer mechanism.

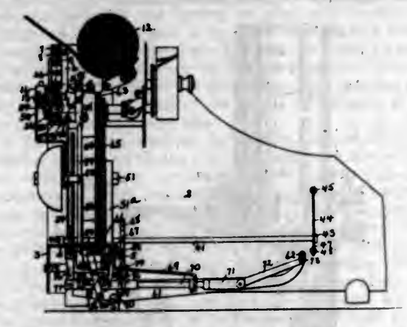
3. In a system of the class described, the combination with a car including steps, of an electric circuit, a whole fare checking mechanism and a half fare checking mechanism interposed in the circuit, the whole and the half fare checking mechanisms being designed to check the whole and half fare passengers respectively who board the car, a switch system interposed in the circuit, means operable by pressure upon the lowermost step to close the circuit through the switch system and bring into circuit either the whole or the half fare checking mechanism, means operable by pressure upon the next step above to operate either the whole or the half fare checking mechanism, means operable by pressure upon the next step above to open the circuit and cut the whole or the half fare checking mechanisms out of circuit, a transfer mechanism interposed in the circuit and adapted while the car is in motion to check up the final results of the whole and the half fare checking mechanisms, and a recorder operable through the medium of the transfer mechanism.

4. In a system of the class described, the combination with a car including steps, of an electric circuit, a whole fare checking mechanism and a half checking mechanism interposed in the circuit, the whole and half fare checking mechanisms being designed to check the number of whole and half fare passengers respectively who board the car, a switch system interposed in the circuit, means operable by pressure upon the lowermost step to close the circuit through the switch system and bring into circuit either the whole or the half fare checking mechanism, means operable by pressure upon the next step above to operate either the whole or the half fare checking mechanism, means operable by pressure upon the uppermost step to open the circuit first formed and to open a discounting circuit through either the whole or the half fare checking mechanisms, means operable by pressure upon the next step below, when the last mentioned circuit has been formed, to operate either the whole or the half fare mechanisms to discount the passenger descending the steps, pressure upon the lowermost step resulting in the closing of the circuit last formed, a transfer mechanism interposed in the circuit and adapted, while the car is in motion, to check up the final results of the whole and the half fare checking mechanisms, and a recorder operable through the medium of the transfer mechanism.

5. In a system of the class described, the combination with a car including steps, of an electric circuit, a whole fare checking mechanism and a half fare checking mechanism interposed in the circuit, the whole and half fare checking mechanisms being designed to check the number of whole and half fare passengers who board the car and to discount the passengers leaving the car, a switch system interposed in the circuit, means operable by pressure upon the steps to close the circuit through the switch system and bring into circuit and operate either the whole or the half fare checking mechanism, a mile checking mechanism, a transfer mechanism interposed in the circuit and adapted, while the car is in motion, to check up the results of the whole, the half fare, and the mile mechanisms, and a recorder operable through the medium of the transfer mechanism.

[Claims 6 to 11 not printed in the Gazette.]

898,676. TYPE-WRITING MACHINE. JOHN W. PAUL, Kittanning, Pa. Filed May 10, 1907. Serial No. 372,842.



1. In a typewriting machine the combination of a frame; a carriage movable on the frame; a dog carried by the carriage; a tabulator bar having stops thereon; devices carrying the tabulator bar arranged to guide its movement to throw the stops thereon into and out of the path of the dog on the carriage; a line lock stop carried by the frame; and means carried by the tabulator bar for releasing the line lock stop.

2. In a typewriting machine the combination of a frame; a carriage movable on the frame; a dog carried by the carriage; a tabulator bar having stops thereon; devices carrying the tabulator bar arranged to guide its movement to throw the stops thereon into and out of the path of the dog on the carriage; a line lock stop carried by the frame; and a single actuating mechanism for actuating the tabulator bar and releasing the line lock.

3. In a typewriting machine the combination of a frame; a carriage movable on the frame; a dog carried by the carriage; a tabulator bar having stops thereon; devices carrying the tabulator bar arranged to guide its movement to throw the stops thereon into and out of the path of the dog on the carriage; a line lock stop carried by the frame in the path of the said dog on the carriage; a line lock stop carried by the frame; and means carried by the tabulator bar for releasing the line lock stop.

4. In a typewriting machine the combination of a frame; a carriage movable on the frame; a dog carried by the carriage; a tabulator bar having stops thereon; devices carrying the tabulator bar arranged to guide its movement to throw the stops thereon into and out of the path of the dog on the carriage; a line lock stop carried by the frame in the path of the said dog on the carriage; and a bail extending across the machine parallel with the tabulator bar and secured thereto for releasing the line lock.

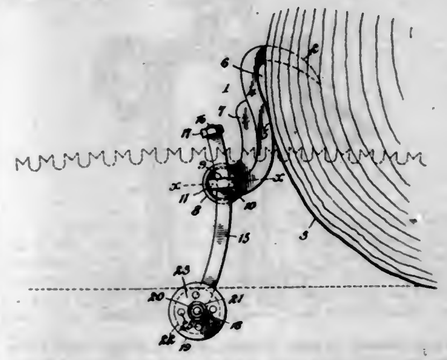
5. In a typewriting machine the combination in a line lock and tabulator mechanism with their respective stops of a single yielding and spring actuated stop dog adapted to coöperate with both of said stops, said dog yielding initially under the action of the stops and returning to normal position by a movement past the stops when said dog is released.

[Claims 6 to 13 not printed in the Gazette.]

898,677. UNDERCUT-SAW GUIDE. JOHN W. PETTIJOHN, Montesano, Wash. Filed Feb. 20, 1907. Serial No. 358,368.

1. An undercut saw guide provided with a dog having a bill at the top and provided below the bill with an intermediate forwardly bowed body portion arranged to fit against a log to steady the device, said bill and forwardly bowed portion forming a loop or opening adjacent to the bill for the purpose set forth.

2. An undercut saw guide provided with a dog consisting of a bill, and a substantially sigmoidally curved body extending downwardly from the bill and forming an intermediate forwardly projecting log-engaging portion, providing an upper loop or opening located adjacent to the bill to permit the introduction of a tool for withdrawing the bill from a log.



3. An undercut saw guide comprising a dog consisting of a body provided at one end with a bill, and having its other end bent upon itself to form an eye and extending beyond the eye to provide a reinforcing portion, a saw supporting hanger, and fastening means passing through the eye of the dog for securing the hanger to the latter.

4. An undercut saw guide comprising a dog provided with an enlarged eye having a tapered opening at one side forming a conical seat, a fastening bolt extending through the opening of the dog and provided with an integral eye, a hanger bar passing through the eye of the bolt and provided at its lower portion with saw supporting means, a conical clamping washer fitted partially within the said seat and bearing against the inner edge of the eye of the bolt and also against the inner side face of the hanger bar, and a nut mounted on the fastening bolt for adjusting the parts to clamp the hanger bar.

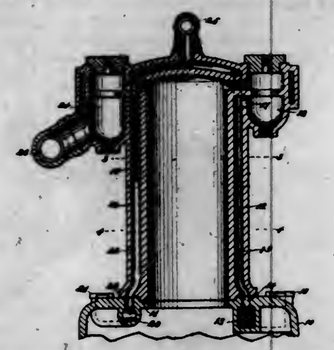
5. An undercut saw guide comprising a dog having one end doubled back on itself and forming an enlarged eye, the latter being tapered to provide a conical seat, a fastening bolt extending through the eye of the dog and having an integral eye beveled at the inner side, a curved hanger bar passing through the eye of the bolt and provided at its inner side with a flat face, a conical clamping washer fitted partially within the said seat and bearing against the flat face of the hanger bar, a nut mounted on the bolt for adjusting the parts to clamp the hanger bar, and saw supporting means carried by the hanger bar.

898,678. CASING AND CYLINDER CONSTRUCTION FOR GAS-ENGINES AND THE LIKE. CHARLES R. PIGGINS, Racine, Wis., assignor of one-half to Frederick Piggins, Racine, Wis. Filed Feb. 26, 1908. Serial No. 417,837.

1. A gas engine casing, comprising a base having a cylinder seat, a water conduit and a gas conduit within the base each having an opening leading to the top of the base, an engine cylinder mounted on the cylinder seat of the base and provided with a water passage and a gas passage within its walls adapted to register with the openings of the water conduit and the gas conduit respectively, a water jacket communicating with the water passage, and an intake valve chamber communicating with the gas passage.

2. A multiple cylinder gas engine casing, comprising a base provided with seats for the engine cylinders, a water conduit and a gas conduit formed in the base near the edges of the cylinder seats on opposite sides thereof and each having its walls integral with the base and provided with openings leading through the base to each of the cylinder seats, cylinders mounted on the cylinder seats of the base and each provided with a water passage and a gas passage formed in the cylinder walls and registering

with the openings of the water conduit and the gas conduit respectively, a water jacket communicating with the



water passage of each cylinder, and an intake valve chamber communicating with the gas passage of each cylinder,

898,679. BRACE ATTACHMENT FOR FLUID-PRESSURE-OPERATED TOOLS. WILLIAM PRELLWITZ, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 20, 1907. Serial No. 389,379.



1. A hollow protective casing, a tool slidably supported therein, a brace carried by the casing forming an end support therefor and an adjustable end piece carried by the brace for engaging the ground or other surface.

2. A hollow protective casing, a tool slidably supported therein, a brace removably carried by the casing forming an end support therefor and an adjustable end piece carried by the brace for engaging the ground or other surface.

3. A protective casing, a percussive tool supported therein having its handle located exterior to said casing and a brace carried by the casing extended to the rear of the handle and forming an end support for the casing.

4. A protective casing, a percussive tool supported therein having its handle located exterior to said casing, a brace carried by the casing extended to the rear of the handle and forming an end support for the casing and an end piece carried by the brace for engaging the ground or other surface.

5. A fluid pressure feed hand rotated percussive tool, a protective casing therefor, a brace carried by the casing and an end piece carried by the brace in alinement with the axis of the tool.

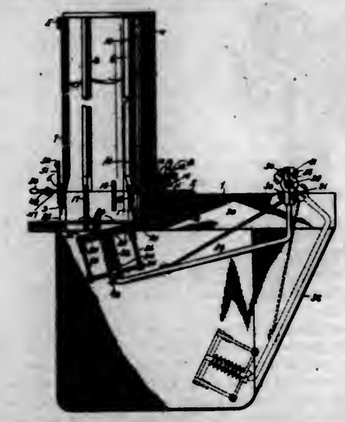
[Claims 6 to 8 not printed in the Gazette.]

898,680. HEEL-MAKING MACHINE. JAMES L. RAKEBD, Kansas City, Mo. Filed July 15, 1907. Serial No. 383,851.

1. In a heel making machine, the combination with a holder, of a plunger for successively forcing the lifts flatwise against each other in said holder, means for reciprocating said plunger, and means carried by said plunger for applying cementing material to one side of each lift.

2. In a heel making machine, the combination with a holder, of a plunger for feeding the lifts successively into said holder, and a cementing pad movable by said plunger into position for applying cementing material to the flat side of each lift.

3. In a heel making machine, the combination with a holder, of means for feeding the lifts one at a time flatwise against each other into said holder, means normally actuated at each operation of the said feeding means for applying cementing material to the flat side of the lift which is being fed, and means by which said cementing means may have its operation suspended.

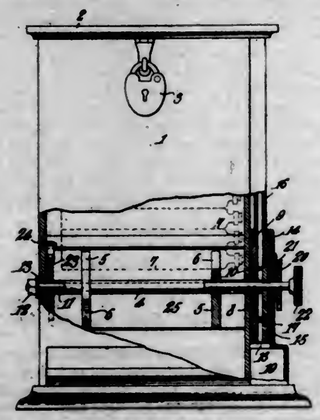


4. In a heel making machine, the combination with a holder, of a plunger for feeding the lifts one at a time flatwise against each other into said holder, means normally actuated at each operation of the plunger for applying cementing material to one flat side of the lift which is being fed, and means by which the operation of the cementing means may be prevented when the plunger is operated.

5. In a heel making machine, the combination with a holder, of a reciprocative plunger for feeding the lifts one at a time flatwise against each other into said holder, means for reciprocating said plunger, means normally actuated at each reciprocation of the plunger for applying cementing material to one flat side of the lift which is being fed, and means by which the operation of the cementing means may be prevented when the plunger is reciprocated.

[Claims 6 to 20 not printed in the Gazette.]

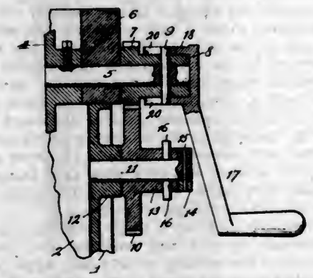
898,681. VENDING-MACHINE. PATRICK J. REGAN, Iowa City, Iowa. Filed Feb. 11, 1907. Serial No. 356,823.



1. In a vending machine, a shaft provided with carriers for articles to be vended, a rotatable disk on the shaft adjacent to the carriers and having pins projecting from one face thereof, another rotatable disk more remote from the carriers than the first-named disk and parallel with but spaced from the first-named disk and provided with a pin projecting toward the first-named disk, said pin having a path of rotation of greater diameter than the path of rotation of the pins of the other disk, a casing inclosing said disk and having its inner wall in coactive relation to the pins and to an inserted coin, and a coin chute opening into the space between the disks substantially tangentially thereto to direct an inserted coin between one of the pins of the first-named disk and into contact with the inner wall of the casing in the path of the pin on the second-named disk.

2. In a vending machine, two parallel spaced rotatable disks, a cylindrical casing closely housing but out of contact with said disks, a coin chute entering the casing in alinement with the space between the disks and substantially tangentially thereto, a pin on one disk projecting toward the other disk, and other pins on the second disk projecting toward the first disk and having a path of rotation so related to the inner wall of the casing and to the coin chute that a coin entering through the chute will be lodged between one of the pins and the inner wall of the casing and will then be in the path of the pin of the first-named disk, the said casing acting to hold any coin in operative relation to the pins during the active operation of the mechanism.

898,682. GEARING. JAMES W. RIFFIE, Kansas City, Mo. Filed Dec. 10, 1907. Serial No. 405,866.

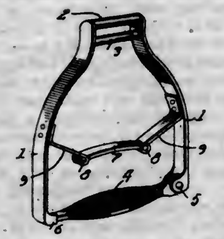


1. In a machine of the character described, in combination, a rotatable element, journaled trunnions carrying the same, a pinion for rotating said element having a hub projecting from one side thereof, a pin for securing the hub to one of the trunnions, said pin having its ends projecting from the periphery of the hub, a cog-wheel larger than the pinion intermeshing therewith and provided with a hub extending in the same direction and substantially of the same diameter as the hub on the pinion, a stub-shaft projecting from one side of the machine upon which the cog-wheel is journaled, pins projecting from the hub of the cog-wheel, and a crank having a barrel adapted to fit either hub and provided with notches to receive the projecting ends of the pins, substantially as described.

2. In combination with a frame, a rotatable element journaled thereon and having trunnions, a pinion having a hub secured to one of said trunnions, a pin passed diametrically through said hub and trunnion and having its ends projecting beyond said hub, a stub shaft on said frame, a cog wheel on said stub shaft having a hub, a pair of pins secured in said last named hub and projecting outwardly therefrom, a collar on the outer end of said stub shaft, a pin passed through said collar and said stub shaft, and a crank having a barrel to be received over said hubs and having portions to engage said projecting parts of said pins.

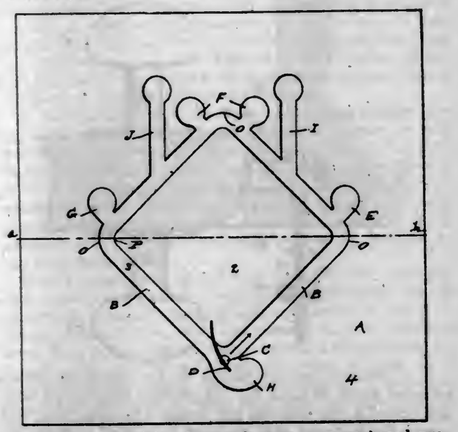
898,683. SAFETY-STIRRUP. THOMAS B. RILEY, Louisville, Ky. Filed Oct. 23, 1907. Serial No. 398,838.

1. A stirrup embodying yieldable side bars, a foot rest attached by a permanent pivotal connection at one end to one of the side bars and having an interlocked engagement at its opposite end with the other side bar, and a foot operated trip interposed between the side bars and adapted to be moved by the rider's foot to spread the side bars apart and allow the foot rest to swing on its pivotal connection.



2. A stirrup embodying yieldable side bars, a foot rest interposed between the side bars and normally held in engagement therewith, and a spreader for forcing the side bars apart to release the foot rest, said spreader comprising a toe piece and arms or links connecting said toe piece with the side bars of the stirrup, substantially as described.

898,684. GAME-BOARD. JAMES B. RITTENHOUSE, Toronto, Ontario, Canada. Filed Sept. 24, 1907. Serial No. 394,416.



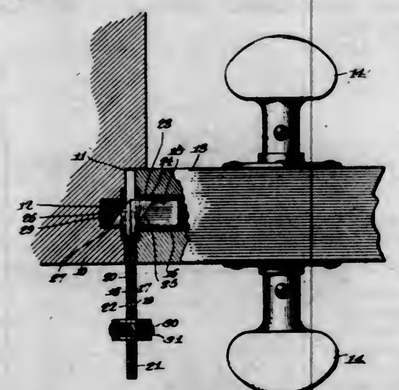
1. As a new article of manufacture, a game-board provided with a base; a diamond-shaped center portion provided with rounded corners, associated with said base; an outer portion surrounding said diamond-shaped portion and also associated with said base, and separated from said diamond-shaped portion by a continuous run-way which has a flat or level bottom; the said outer portion being provided on its inner configuration with rounded corners whereby the balls used in playing the game are deflected in their course, and being further provided with a plurality of areas opening into said run-way with their floors or bottoms substantially on a level with the floor or bottom of said run-way, and forming the first, second, third, and home bases, and a spring secured to the game-board so that its free end may be manipulated in order to drive the said balls from the home base.

2. As a new article of manufacture, a game-board provided with a base; a diamond-shaped center portion provided with rounded corners, associated with said base; an outer portion surrounding said diamond-shaped portion and also associated with said base, and separated from said diamond-shaped portion by a continuous run-way which has a flat or level bottom; the said outer portion being provided on its inner configuration with rounded corners whereby the balls used in playing the game are deflected in their course and being further provided with a plurality of areas opening into said run-way with their floors or bottoms substantially on a level with the floor or bottom of said run-way, and forming the first, second, third,

and home bases, the said outer portion being further provided with two run-ways communicating with said diamond-shaped run-way with their floors or bottoms substantially on a level with the floor or bottom of said run-way, one between the first and second bases, and the other between the second and third bases, and a spring secured to the game-board so that its free end may be manipulated in order to drive the said balls from the home base.

3. As a new article of manufacture, a game-board provided with a diamond-shaped run-way having a level bottom or floor, the inner corners of said run-way being rounded, and the outer corners of said run-way being rounded whereby the balls used in playing the game are deflected in their course; and being further provided with a plurality of areas opening into the said run-way with their floors or bottoms substantially on a level with the floor or bottom of said run-way, and forming the first, second, third, and home bases, and a spring secured to the game-board so that its free end may be manipulated in order to drive the said balls from the home base.

898,685. DOOR-FASTENING DEVICE. SIMON N. RITTER, Allentown, Pa. Filed Mar. 30, 1908. Serial No. 424,249.



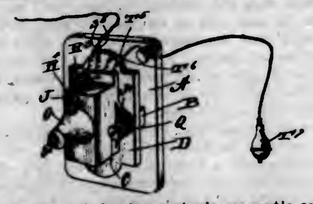
1. A door securer consisting of two members having enlarged heads adapted for engagement respectively with the lock of a door and the lock keeper of a door jamb, and means for retaining said members in a door loocking position.

2. A door securer consisting of two members having a threaded shank and a locking head, the head of one member being adapted to engage with the lock of a door and the head of the other member being adapted to engage with the lock keeper of a door jamb, and a nut engaging with said threaded shanks to hold the members in a door-locking position.

3. A door securer consisting of two members having elongated flat, threaded shanks and angular heads, said heads presenting oblique faces, the head of one member being adapted for engagement with the lock of a door, and the head of the other member presenting an angular lip for engagement with a lock keeper of a door jamb, and a nut adapted to engage with the said threaded shanks to hold said members in a door-locking position.

898,686. ELECTRIC BELL. TITO ROSATI, Florence, Italy, assignor of one-fourth to Ferdinand R. Sari and Bartolomeo G. Giuliani, Washington, D. C. Filed Aug. 7, 1907. Serial No. 387,466.

1. An electric bell having a single magnetic coil of high ohmic resistance wires, a high potential wire connection with one end of the winding of said coil, a low potential wire connected to the other end of the winding of said coil, an insulated bell hammer, a circuit closer with low potential wire connections between the same and said hammer, low potential connections between the circuit closer and coil, a circuit breaker co-acting with said hammer, and low potential wire connections between said circuit breaker and the source of energy, as set forth.



2. An electric bell having a single magnetic coil of high ohmic resistance wires, a high potential wire connection with one end of the winding of said coil, a low potential wire connected to the other end of the winding of said coil, a bracket plate and support therefor and upon which plate said coil is mounted, an insulation block fitted to said plate, a pivotal hammer mounted upon said block, a spring carried by the latter and retracting said hammer, a circuit closer with low potential wire connections between the same and said hammer, low potential connections between the circuit closer and the coil, a circuit breaker co-acting with said hammer, and low potential wire connections between said circuit breaker and the source of energy, as set forth.

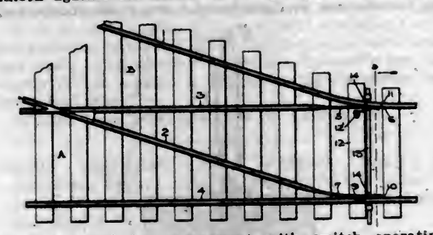
3. An electric bell having a single magnetic coil of high ohmic resistance wires, a high potential wire connection with one end of the winding of said coil, a low potential wire connected to the other end of the winding of said coil, a bracket plate and support therefor upon which plate said coil is mounted, an insulation block fitted to said plate, a pivotal hammer mounted upon said block, a spiral spring connected to the hammer, a circuit closer with low potential wire connections between the latter and said coil, a circuit breaker co-acting with said hammer, and low potential wire connections between the circuit breaker and the source of energy, as set forth.

4. An electric bell having a single magnetic coil of high ohmic resistance wires, a high potential wire connection with one end of the winding of said coil, a low potential wire connected to the other end of the winding of said coil, a bracket plate and support therefor and upon which plate said coil is mounted, an insulation block fitted to said plate, a pivotal hammer mounted upon said block, a spring carried by the latter and bearing against said hammer acting as a circuit breaker, a spiral spring fastened to one end of the hammer, an adjusting screw to which said spiral spring is connected, a circuit closer with low potential wire connections between the same and said hammer, low potential connections between the circuit closer and coil, and low potential wire connections between the circuit breaker and source of energy, as set forth.

5. An electric bell having a single magnetic coil of high ohmic resistance wires, an insulated support for said coil, insulated metallic strips mounted upon the support, a high potential wire connection with one of said plates which in turn is electrically connected with one end of the winding of said coil, a low potential wire connected through one of said strips with the other end of the winding of the coil, a pivotal insulated hammer, a low potential wire having connections through one of the strips with said hammer, an insulated spring bearing against the hammer and having a low potential connection through one of said strips, and a circuit closer mechanism between the same and said hammer.

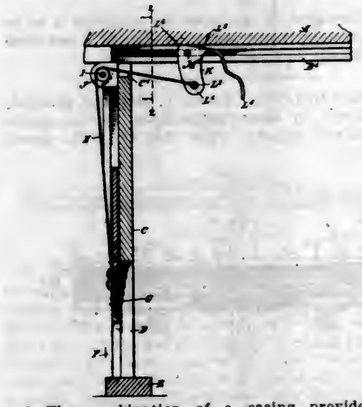
898,687. RAILROAD-SWITCH. FREDRICK SALLEE, Kildare, Okla. Filed Mar. 3, 1908. Serial No. 418,963.

A railroad switch comprising resilient rails, beveled and arranged to lie in close engagement with main line rails, springs engaged against said resilient rails to hold one yieldably in engagement with one main line rail and the other yieldably in spaced relation with the opposite main line rail, and a cross bar having projections upon its upper face said projections being arranged to engage on a common side of the resilient rails to force them in unison against the action of the springs, said cross bar



being arranged for engagement with switch operating mechanisms of various types.

898,688. DOOR FOR AUTOMATIC PIANOS. JOSE SAMPERE, New York, N. Y., assignor to The Regina Company, Rahway, N. J., a Corporation of New Jersey. Filed Dec. 6, 1907. Serial No. 405,311.



1. The combination of a casing provided with an opening in one of the walls, a door arranged to travel adjacent to said opening and a member connected with said door for operating it and for maintaining said door in any position, said member being arranged to travel in a path at an angle to the plane in which the door travels.

2. The combination of a casing provided with an opening in one of the walls, a door arranged to travel adjacent to said opening and a sliding member connected with said door for operating it and for maintaining said door in any position, said sliding member being arranged to travel in a path at an angle to the plane in which the door travels.

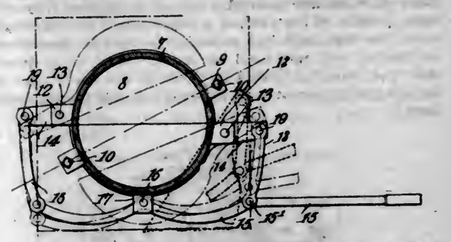
3. The combination of a casing provided with an opening in one of the walls, a sliding door adapted to travel adjacent to said opening, guideways arranged at an angle to the wall in which the opening is located, an operating member movable in said guideways and connected with said door, and a nose on said operating member arranged to engage a portion of the casing to maintain the door in any desired position.

4. The combination of a casing provided with an opening in one of its walls, a door adapted to travel adjacent to said opening, guideways arranged at an angle to the wall in which the opening is located, and means movable in said guideways for operating said door and for maintaining it in any desired position.

5. The combination of a casing provided with an opening in one of its walls, guideways arranged to each side of said opening, a door adapted to travel in said guideways, a second set of guideways arranged at an angle to the first named guideways, an operating member movable in said second named guideways and a flexible connection from said operating member to the door.

[Claim 6 not printed in the Gazette.]

898,689. HOPPER-VALVE. FRED L. SAWYER, Americus, Ga. Filed Dec. 19, 1906. Serial No. 348,586.



1. In an apparatus of the class described, a hopper having a discharge mouth, a valve forming a closure for the mouth and comprising co-acting members mounted on diametrically disposed pivot pins and adapted to swing in a plane at substantially right angles to the axis of said mouth, said members having meeting edges, and means for simultaneously swinging said valve members in opposite directions.

2. In an apparatus of the class described, a hopper having a discharge mouth, a valve forming a closure for the mouth and comprising co-acting members mounted on diametrically disposed pivot pins and adapted to swing in a plane at substantially right angles to the axis of said mouth, said members having meeting edges, an operating lever fulcrumed to a fixed part of said apparatus, and a link pivoted in like manner to each valve member and to the lever on opposite sides of its fulcrum.

3. In an apparatus of the class described, a hopper having a discharge mouth, a valve forming a closure for said mouth and comprising co-acting sections disposed in the same plane and having meeting edges, pivots for said valve sections on opposite sides of said meeting edges, and means connected to said valve sections on opposite sides of said meeting edges and on the same side as their pivot pins for simultaneously swinging said valve sections to and from each other.

4. In an apparatus of the class described, the combination with an inverted frusto-conical discharge mouth comprising separable mating sections spaced to form between them a valve way and having parallel opposing faces, lugs projecting from each section and connected by fastening devices for adjusting the width of said valve way, hinged coöperating valve members lying in the same plane and mounted in said valve-way on diametrically disposed pivot pins, and a rocking lever fulcrumed to said hopper and connected to the valve members for opening and closing the discharge mouth.

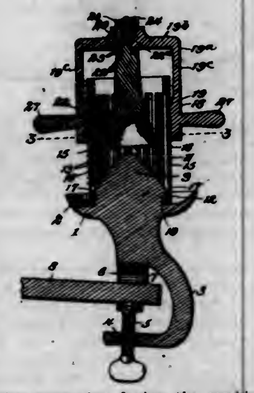
5. In an apparatus of the class described, the combination with a hopper having a discharge mouth formed of two separable sections having apertured lugs disposed to register, bolts extending through the apertured lugs for supporting one section on the other with a space between them, a pair of valve members lying in the same plane and mounted on diametrically disposed pivot pins, said valve members being slidably mounted on one of the sections and movable to and from each other, a lever supported on the discharge mouth, and links connected with the lever on opposite sides of the fulcrum thereof and with the valve members for simultaneously operating the same.

[Claim 6 not printed in the Gazette.]

898,690. LEMON-SQUEEZER. WILLIAM S. SCHWARTZ, Amity, Oreg. Filed Feb. 15, 1908. Serial No. 416,139.

1. In a juice expressing device, the combination with a clamp, of a bowl carried thereby and having its center in alinement with said clamp, a juice-expressing means mounted on the bowl and arranged in alinement with the clamp and bowl, legs depending from the clamp and diverging outwardly so as to straddle the vertical plane of the clamp, and means mounted on the clamp below the legs and in alinement with the juice expressing device and coöperating therewith to secure the said juice expressing device to a table or other support.

2. In a juice expressing device, the combination with a clamp comprising a yoke having spaced legs, the lower faces of which are inclined, said legs depending from the upper portion of the yoke, of a bowl carried by said clamp above the legs, said legs causing the bowl to assume an inclination, and said bowl having an outlet at its lower side, and clamping means mounted in the lower part of the yoke in alinement with the said legs and spaced therefrom.



3. In a juice expressing device, the combination with a clamp, of a bowl mounted thereon, a slotted cylinder mounted on the bowl, a cone at the bottom of the cylinder and within the same, and an expressing mechanism mounted on and moving over the cylinder and also within the same and coöperating with the cone.

4. In a juice expressing device, the combination with a clamp, of a bowl mounted thereon and carried thereby, a slotted cylinder detachably mounted on the bowl, a cone at the bottom of the cylinder and within the same and integral with the bowl, and a plunger mounted within the cylinder and coöperating with the cone.

5. In a juice expressing device, the combination with a clamp, of a bowl carried by the said clamp and having a centrally arranged cone, a cylinder detachably mounted on the cone and provided with a series of vertical slots, a plurality of spaced vertical ribs secured to the cylinder, and an expressing mechanism mounted on the cylinder and coöperating with said ribs for expressing the juice from the cylinder into the bowl.

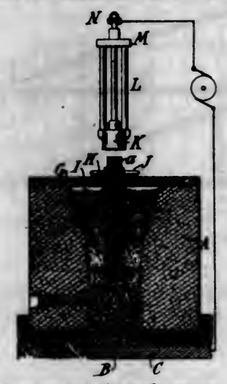
[Claims 6 to 12 not printed in the Gazette.]

898,691. ELECTRIC-FURNACE PROCESS. GEORGE O. SEWARD and FRANZ VON KÜGELGEN, Holcombs Rock, Va., assignors, by mesne assignments, to Electro Metallurgical Company, a Corporation of West Virginia. Filed Feb. 21, 1906. Serial No. 302,232.

1. The process of operating an electric furnace, which consists in maintaining a deep layer of the charge into which the electrode projects and by which it is surrounded, so that the arc is buried beneath the charge, and effecting renewal of the electrode material by progressive feeding in of new lengths without withdrawal of the electrode from the charge.

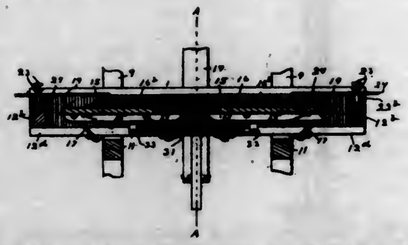
2. The process of electric smelting, which consists in maintaining a deep layer of the charge above the molten bath and surrounding the lower part of an upright sectional electrode, so that the arc is buried beneath the charge, fusing the charge by a current from such electrode, and renewing the latter by successively attaching new sections thereof above the charge without withdrawing the electrode from the charge.

3. The process of electric smelting in an electric furnace wherein an arc is maintained between an upright electrode and the molten bath beneath, which consists in maintaining a deep layer of the charge of granulated material above the molten bath and surrounding the lower part of the electrode, so that the arc is buried beneath the charge, gradually feeding the electrode downward as it is consumed, and renewing the electrode by successively attaching thereto new sections thereof above the charge and



without withdrawing the electrode nor so lifting it as to permit the granular charge to fall in beneath it and close the space normally occupied by the electrode.

898,692. COPY-HOLDER. FRANK P. SHEPARD, Edmond, Okla., assignor, by mesne assignments, to Copyograph Manufacturing Company. Filed May 31, 1907. Serial No. 376,612.



1. In a copy holder, a copy support comprising two separate parts adapted to support the two portions of an open book, said supporting parts being adapted to advance toward and retreat from a predetermined plane, means whereby each of said parts moves toward the center line of the copy support in its advancing movement, means whereby the advancing movement of one part limits the advancing movement of the other.

2. In a copy holder, a copy support comprising two parts adapted to support the two portions of an open book, said parts being adapted to advance forwardly and inwardly of the support, a brace connection between said parts, said brace having freedom of lengthening movements and having adjustable means for limiting its shortening movements.

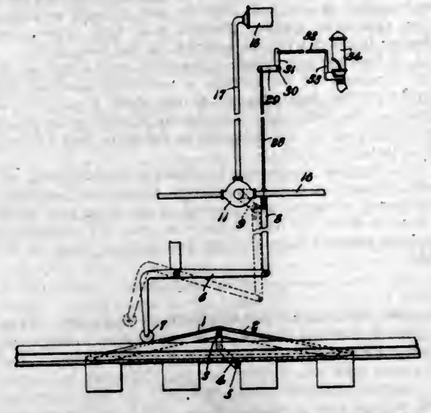
3. In a copy holder, a support for an open book, a clamp on said support adapted to press the exposed pages of the book into a predetermined plane, the support carrying two separate plates adapted to support the book and press it into engagement with the clamp, means whereby said plates move toward the center of the book support as they move toward the clamp, a brace connection between said plates, said brace having freedom of lengthening movement, and having adjustable means for limiting its shortening movement.

4. In a copy holder, a support for an open book, a clamp on the support adapted to engage the exposed pages of the book, the support carrying two separate plates adapted to support the book and press it into engagement with the clamp, the plates being each secured pivotally to the support by parallel arms, the pivotal connection of said arms with the support being so positioned with respect to their pivotal connections with the plates that said plates move toward the center of the support in moving toward the clamp, springs interposed between said plates and the support, a tension spring connecting said plates.

5. In a copy holder, a copy support comprising two parts adapted to support the two portions of an open book, said parts being adapted to advance forwardly and inwardly of the support, a tension spring connection between said parts.

[Claims 6 and 7 not printed in the Gazette.]

898,693. RAILROAD SIGNAL SYSTEM. MARION L. SHEPHERD, Newark, Ohio, assignor of one-half to David M. Smith, Newark, Ohio. Filed Apr. 13, 1908. Serial No. 427,094.



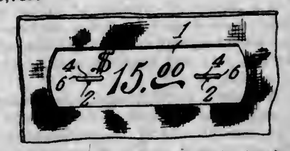
1. In an apparatus of the character described, the combination of an actuating lever, means for automatically rocking said lever, a valve case, a valve mounted therein, an operative connection between said valve and said actuating lever, a train pipe, and an air supply pipe connected to said valve case, another air pipe connected to said valve case, the parts being so arranged that the valve will establish communication between the train pipe and the atmosphere and between the two air pipes upon the rocking of the actuating lever, an air cylinder connected to said last named air pipe, a piston mounted in said cylinder, a plunger rod connected to said piston projecting forwardly from the cylinder, a throttle lever, means for holding said lever locked, and a releasing lever for said holding means interposed between the throttle lever and the plunger rod and arranged to be actuated by the latter upon its forward movement.

2. In an apparatus of the character described, the combination with a throttle lever, of a ratchet wheel carried thereby, a pinion movable with said ratchet wheel, a toothed segment with which said pinion meshes, a detent designed to engage said ratchet, a releasing lever fulcrumed on the throttle lever and secured to said detent to move the same into and out of engagement with the ratchet, an air cylinder, a piston in said air cylinder, and provided with a plunger rod adapted to strike the releasing lever to rock the same in a direction to release the detent from the ratchet, and means for automatically admitting air into the cylinder back of the piston.

3. In an apparatus of the character described, the combination with a throttle lever, of a ratchet wheel journaled on said lever, a pinion movable with said ratchet wheel, a toothed segment with which said pinion is designed to mesh, an inverted T-shaped releasing lever fulcrumed by one arm on the throttle lever, a detent arranged to engage said ratchet wheel and connect it to another arm of said releasing lever, an air cylinder, a piston and plunger rod mounted in said cylinder, the plunger being adapted to strike the remaining arm of the lever for the purpose specified, and means for automatically admitting air into the cylinder back of the piston.

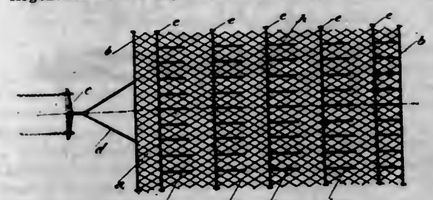
4. In an apparatus of the character described, the combination of an actuating lever, means for rocking the same, a train pipe, a throttle lever, a whistle, and means actuated by said actuating lever for venting said train pipe and for simultaneously sounding the whistle, and moving said throttle lever towards closed position.

898,694. MERCHANDISE-TICKET. THOMAS H. SHERMAN, Traverse City, Mich. Filed Oct. 3, 1907. Serial No. 395,732.



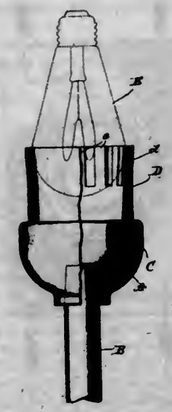
A ticket comprising a flexible strip having a surface for the reception of inscriptions and pins located in alinement with each other at the opposite end portions of the strip and having their pointed ends disposed in opposite directions, the pointed end portions of said pins being spaced from the strip, each pin when in position upon the strip having all of its parts lying in the same plane and with its opposite ends disposed in the same direction.

898,695. HARROW. FRANCISCO R. SOSA, Buenos Ayres, Argentina. Filed Sept. 9, 1907. Serial No. 391,867.



An agricultural harrow having a body consisting of wire netting, rods fitted in the meshes of said netting and extending crosswise of said body, and a series of blades carried by said rods, in combination with a splinter swing bar secured to the harrow in order to draw the same, substantially as described and set forth.

898,696. ELECTRIC-LIGHT-BULB CHANGER. CHARLES F. SOUTHWORTH, Cambridge, Mass. Filed Feb. 13, 1908. Serial No. 415,654.



1. An electric light bulb changer, comprising a base for attachment to a handle, an extended, continuous, elastic, annular rim projecting from said base, provided on its in-

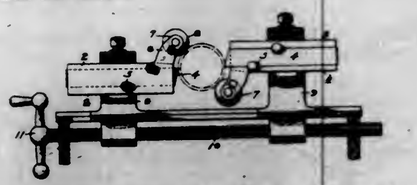
ner surface with longitudinal corrugations and adapted to slip over and grip the bulb to allow of its placement or removal.

2. An electric light bulb changer, comprising a base for attachment to a handle, a cylinder of rubber projecting upwardly from said base and provided on its interior surface with longitudinal corrugations, whereby it is adapted to slip over and grip the bulb to allow of its placement or removal.

3. An electric light bulb changer, comprising a base for attachment to a handle, a cylinder of rubber projecting from said base, beveled on its interior surface and provided thereon with longitudinal corrugations, whereby it is adapted to slip over and grip the bulb to allow of its placement or removal.

4. An electric light bulb changer, comprising a cup-shaped base adapted to be attached to a handle and provided with an annular slot at its periphery, a cylinder of rubber fitting in said slot and projecting upwardly therefrom and provided on its inner surface with longitudinal corrugations, whereby it is adapted to slip over and grip the bulb to allow of its placement or removal.

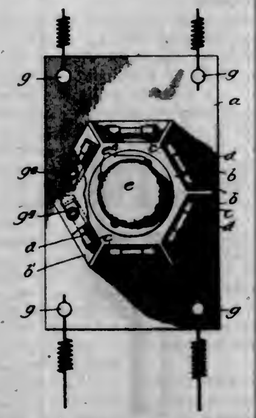
898,697. TOOL FOR CUTTING PIPE AND THE LIKE. JOHN F. SPITT, McKees Rocks, Pa. Filed Mar. 11, 1908. Serial No. 420,376.



1. A pipe cutting tool having a body portion, a fixed knife carried thereby, a disk adjustably mounted in a forked arm at the forward end of the body portion adjacent the working end of the knife and adapted to bear on the pipe at an angle of about forty-five degrees with the cutting line; substantially as shown and described.

2. In a pipe cutting tool having a body portion, a fixed knife carried thereby, a disk mounted on the forward end of the body portion at an angle of about forty-five degrees with the cutting line of the tool, and adapted to nick the pipe in advance of the knife; substantially as shown and described.

898,698. FUSE-BOX. JOHN O. STIVERS, Denver, Colo. Filed Oct. 26, 1906. Serial No. 340,693.



1. A fuse box comprising a base plate provided with pairs of contacts having circular recesses, a movable fuse carrier provided with pairs of contacts having rounded heads, and means for yieldingly holding the carrier contacts and the base plate contacts in engagement.

2. A fuse box comprising a base plate provided with terminal contact plates and a plurality of recesses some of said recesses being formed in the terminal contact plates, a carrier yieldingly mounted on the base plate said carrier having a plurality of projections arranged in pairs, the projections of each pair being connected by a fuse, said carrier being rotatably mounted whereby it may be adjusted to place any desired pair of contacts thereon in operative relation to the terminals on the base plate.

3. In a device of the class described, a base plate, a pair of contacts thereon, a fuse carrier pivoted to said base plate and overlying said contacts, a plurality of fuse holders mounted on said fuse carriers, and contacts extending from said fuse holders through said fuse carrier and adapted to coact with the contacts on the base plate.

4. A fuse box comprising a flat plate with a pair of circuit terminals on its surface, a rotatably mounted disk having its flat face adjacent to the plate, a plurality of fuses on the disk, each fuse having a pair of terminals on the face of the disk adjacent to the plate, and a handle for rotating the disk.

5. A fuse box comprising a rotatably mounted disk, metallic contacts arranged uniformly around its periphery, consecutive contacts being united in pairs by fuse wires, a base on which the disk is mounted, and two contacts on the base adapted to coact with each pair of those on the disk.

898,699. PORTABLE TELEPHONE APPARATUS. FREDERICK F. STRONG, Boston, Mass. Filed Apr. 3, 1905. Serial No. 253,539.



1. In an apparatus of the kind described, a magnetic shell having centrally and integrally secured on its inner side a core, an electro-magnet, winding and supporting spool, a carbon disk secured to the projecting end of said spool, a thin iron diaphragm secured to the rim of said shell in front of said disk, balls held in slight engagement with said diaphragm, and held loosely in pockets provided therefor in the face of said disk and circuit wires connected to the shell and to the magnet winding, said winding, disk, balls, diaphragm and shell being in series in the main circuit.

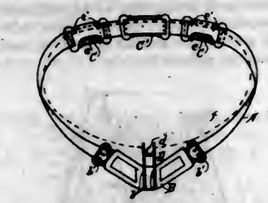
2. In an apparatus of the kind described, a telephone transmitter-receiver, having a sound collector provided with a centrally apertured sound receiving device leading to the ear mounted within the mouth piece thereof.

3. In an apparatus of the kind described, a telephone transmitter-receiver, having transmitter mechanism provided with an externally open mouth piece, a sound collector mounted within the mouth piece thereof, and an ear tube independent of said mouthpiece extending from said sound collector.

4. In an apparatus of the kind described, a telephone transmitter-receiver, having a sound collector mounted within the mouth piece thereof, said collector having a concave surface facing the instrument, and a tube extending outwardly at the center of said concave surface.

5. In an apparatus of the kind described, a telephone transmitter, and its mouth piece, and a disk mounted centrally within said mouth piece and extending within the inner end of the mouthpiece to a greater diameter than the latter, leaving an annular opening between said transmitter and said mouth piece, said disk having a convex outer surface for directing the sound to the transmitter.

898,700. BELT. LEONA TANNER, Grand Rapids, Mich. Filed Jan. 26, 1907. Serial No. 354,275.

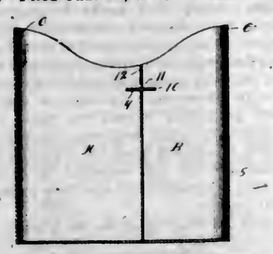


1. In a belt, a girdle, a front plate secured to the girdle, a wire support secured to the plate at right angles therewith and projecting above it, an outwardly curved hook at the upper end of the wire and inwardly curved hooks at the lower end of the wire, and small supporting buckles secured to the girdle, substantially as and for the purpose set forth.

2. In a belt, a girdle, a front plate secured to the ends of the girdle and a wire support secured to and projecting up from the plate, an outwardly curved hook at the upper end of the wire and inwardly curved hooks at the lower end of the wire, and supporting buckles formed with a plate and a wire woven around the edges of the plate with hooks projecting outward from the plate, as shown and described.

3. A belt consisting of a girdle, a plate curved downward to form a "dip" in the belt, a wire secured to the plate, an outwardly curved hook at top of said wire and inwardly curved hooks at the lower end of the wire inside of the plate, and small supporting buckles consisting of plates, wire extending longitudinal of one side of the plate, bent and passed over the edge of and across one surface of the plate and the ends of the wire bent over the other edge of the plate and projecting outward to form supporting hooks, substantially as and for the purpose set forth.

898,701. LIQUID-MEASURE. CURTIS L. TATE, Connersville, Ind. Filed Jan. 22, 1908. Serial No. 412,129.



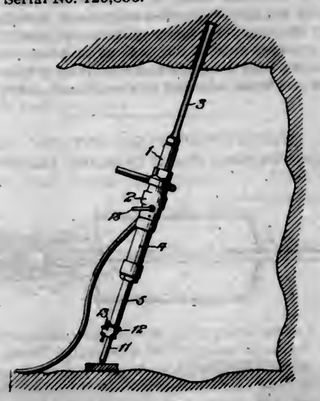
1. A liquid measure comprising a body portion, a transverse wall dividing said body portion into two compartments and an overflow retaining lip located upon each side of said dividing wall below the top of the body portion.

2. A liquid measure comprising a body portion, a transverse wall dividing said body portion into two compartments and overflow retaining lips carried by said transverse wall, and located upon opposite sides thereof, there being an opening formed through said dividing wall above said retaining lips.

3. A liquid measure comprising a body portion, the ends of which are upwardly extended to form spouts and a dividing wall which divides said body portion into a plurality of compartments of varying capacities and overflow retaining lips carried by said dividing wall.

4. A liquid measure comprising a body portion, the ends of which are upwardly extended to form spouts and a dividing wall which divides said body portion into a plurality of compartments of varying capacities, and overflow retaining lips carried by said dividing wall, there being an opening formed through said dividing wall above said overflow retaining lips.

898,702. HAMMER-DRILL. ALBERT H. TAYLOR, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 13, 1908. Serial No. 420,856.



1. A pneumatic tool, an air pressure feeding device therefor and an adjustable extension secured to said device, forming an end support for the tool.

2. A pneumatic tool, an air pressure feeding device therefor comprising a cylinder and its piston, and an adjustable piston extension forming an end support for the tool.

3. A pneumatic tool, an air pressure feeding device therefor comprising a cylinder and its piston, an adjustable piston extension forming an end support for the tool, and means for locking the extension to and releasing it from the piston.

4. A pneumatic tool, an air pressure feeding device therefor comprising a cylinder and its hollow piston, and an adjustable extension telescoping within the piston, forming an end support for the tool.

5. A pneumatic tool, an air pressure feeding device therefor comprising a cylinder and its hollow piston, an adjustable extension telescoping within the piston, forming an end support for the tool, and means for locking the extension to and releasing it from the piston.

[Claims 6 to 8 not printed in the Gazette.]

898,703. MANUFACTURE OF STONE OR MARBLE ARTIFICIALLY. THOMAS M. THOM, Woodlands, Cheshunt, England, assignor to The Lithographic Stone and Marble Company Limited, London, England, a Corporation of Great Britain. Filed Aug. 2, 1907. Serial No. 386,760.

The process of carbonating artificial stone consisting in treating the blocks or slabs with carbonic acid gas at an increasing pressure beginning at less than atmospheric pressure and ending at greater than atmospheric pressure.

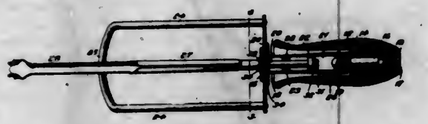
898,704. RAZOR-BLADE HOLDER. JOSEPH R. TORREY, Worcester, Mass. Filed Jan. 17, 1908. Serial No. 411,310.



1. A clip or blade holder comprising two integral leaves of thin metal folded together longitudinally and having between them, adjacent to their fold or point of connection, a sharp V-shaped space the adjacent walls of which, near the said fold, are adapted to engage the beveled surfaces of a double-edged blade and thus prevent the edge of the blade near said surfaces from being injured by contact with the metal at the bottom of said space.

2. A clip or holder comprising two leaves of thin metal folded together longitudinally and having, closely adjacent to their fold or point of connection, a sharp V-shaped space the adjacent walls of which, near said fold, are adapted to engage the beveled surfaces of a blade and thus prevent the edge thereof from being injured by contact with the holder at said fold, one of said leaves being provided at its ends with inwardly projecting lips to engage the ends of a blade inserted in the clip or holder.

898,705. RAZOR-STROPPING DEVICE. JOSEPH R. TORREY, Worcester Mass. Filed Jan. 17, 1908. Serial No. 411,311.



1. In a razor sharpening device, the combination with a suitable frame or support, of a swinging frame mounted thereon, a razor holder, a rack and pinion device for reversely rotating said razor holder as the swinging frame is moved back and forth, and an oscillating plate pivotally connected with said swinging frame and serving to hold the parts of said rack and pinion device in mesh.

2. In a razor sharpening device, the combination with a suitable frame or support, of a swinging frame mounted thereon and the shank of which is provided with side lugs, a U-spring the free ends of which bear against said lugs, and an oscillating blade-holder mounted in said swinging frame.

3. In a razor-sharpening device, the combination with a frame or holder 13 provided with an upwardly projecting lug 14 and a curved rack 15, of a swinging frame comprising a shank having side lugs and a bearing lug, an oscillating blade holder having a shank provided with a pinion meshing with said rack, and which shank is swiveled or journaled in said bearing lug, and a U-sping attached to said stationary frame and having free ends bearing against said side lugs.

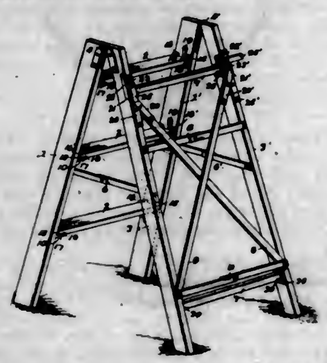
4. In a razor-sharpening device, the combination with a frame or holder 13 provided with an upwardly projecting lug 14 and a curved rack 15, of a swinging frame comprising a shank having side lugs and a bearing lug, an oscillating blade holder having a shank provided with a pinion meshing with said rack, and which shank is swiveled or journaled in said bearing lug, an oscillating plate serving to hold said pinion in mesh with said rack, and a U-spring attached to said stationary frame and having free ends bearing against said side lugs.

5. In a razor sharpening device, the combination with the stationary frame 13 provided with the upwardly projecting lug 14, of an oscillating or reversely rotating blade-holder, a swinging frame in which said blade-holder is mounted, and the shank of which is provided with side lugs, a U-spring the free ends of which bear against the outer sides of said lugs, and the bolt 16 between the head of which and the said upwardly projecting lug 14 the loop or neck portion of said spring is clamped.

898,706. COLLAPSIBLE STEP-LADDER. JOSEPH M. TURNER, Philadelphia, Pa. Filed June 23, 1906. Serial No. 322,989.

1. In a step ladder having a pair of back legs hinged thereto, cross braces having their lower extremities pivoted to the said back legs, angle pieces each having one arm thereof secured and projecting beyond the upper end of each cross brace, the other arm of each angle piece being folded around to engage the side of its respective leg when the ladder is in its braced position, and means for locking the said angle pieces into engagement with said legs.

2. In a step ladder, back legs having recesses therein, cross braces pivotally secured at their lower extremities to said legs, angle pieces each having one arm thereof secured to and projecting beyond the upper extermity of each cross brace, the other arm being bent at an angle to engage the side of its respective leg when the ladder is in its braced position, and means for locking said first mentioned arm in the recess of its respective leg.



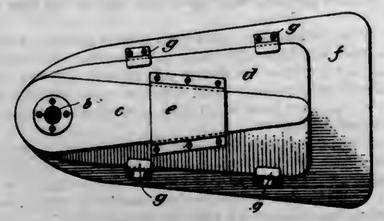
3. In a step ladder having a pair of back legs, a pair of straps secured to each leg forming a recess between them, cross braces pivotally secured at their lower extremities to said legs, angle pieces each having one arm thereof secured to and projecting beyond the upper extremity of each cross brace, the other arm being bent at an angle to engage the side of said leg when the ladder is in its braced position, and means for locking said first mentioned arm in the recess of its respective leg.

4. In a step ladder having a pair of back legs, a pair of straps secured to each leg forming an inclined recess between them, cross braces pivotally secured at their lower extremities to said legs, angle pieces each having one arm thereof secured to and projecting beyond the upper extremity of each cross brace, the other arm being bent at an angle to engage the side of said leg when the ladder is in its braced position, and means for locking said first mentioned arm in the recess of its respective leg.

5. In a step ladder having a pair of back legs, a pair of straps secured to each leg forming a recess between them, cross braces pivotally secured at their lower extremities to said legs, angle pieces each having one arm thereof secured to and projecting beyond the upper extremity of each cross brace, the other arm being bent at an angle to engage the side of said leg when the ladder is in its braced condition, and pivoted lugs adjacent to each recess for locking the said first mentioned arm into engagement with its respective leg.

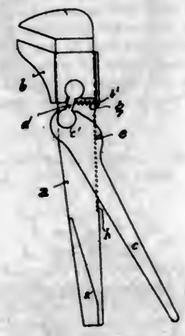
[Claims 6 to 12 not printed in the Gazette.]

898,707. IRONING-BOARD. BENJAMIN T. WARD, Saratoga, N. Y. Filed May 9, 1907. Serial No. 372,821.



In an ironing board, the combination with a horizontally disposed base, a column rising from one end thereof, a horizontal sleeve board sustained at one end by the column and tapered from said end toward the other, a top board wider than the sleeve board and tapered oppositely thereto, a U-shaped tapering guide secured to the under side of the top board and receiving and inclosing the sleeve board removably to secure the top board to the sleeve board, a third board larger than the top board and guide brackets secured to the under side of the third board in position snugly to engage the side edges of the top board and removably secure the third board on the top board.

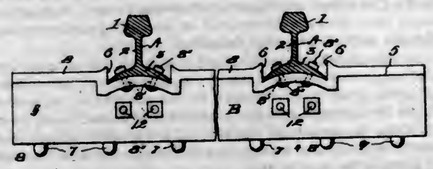
898,708. WRENCH. WILHELM WEIDEMANN, Dusseldorf, Germany. Filed Feb. 27, 1906, Serial No. 303,317. Renewed Apr. 29, 1908. Serial No. 429,944.



1. A wrench comprising a fixed jaw with a double blade shank, a movable jaw sliding between the blades of the shank, a lever being loose between the blades of the shank, a tooth on the edge of the lever and projecting on both sides for about the thickness of the blades, ratchet teeth on the rear edge of the blades adapted to be engaged by the tooth and a toggle link, connecting the lever and the movable jaw substantially as described.

2. A wrench comprising a fixed jaw with a double blade shank, a movable jaw sliding between the blades of the shank, a lever being loose between the blades of the shank, a tooth on the edge of the lever and projecting on both sides for about the thickness of the blades, ratchet teeth on the rear edge of the blades adapted to be engaged by the tooth and a toggle link connecting the lever and the movable jaw and a spring pressing the toggle link outwardly as described and for the purpose set forth.

898,709. RAILROAD-TIE. ANDREW A. WHITBRED, Altoona, Pa. Filed June 5, 1907. Serial No. 377,392.

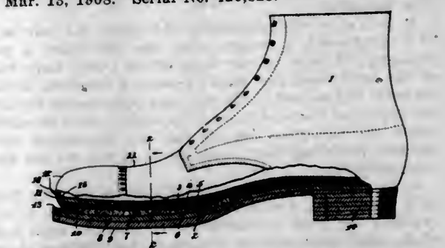


1. A railway tie comprising a U-shaped metal structure having laterally extending flanges at the upper edges of the side portions and having rail-receiving recesses and provided with apertures under the recesses, rails seated in the recesses, supporting members disposed in the said metal structure and having their upper surfaces flush with the bottoms of the recesses, bolts passing through the apertures for holding the members in fixed position, bolts passing through the bases of the rails and members for securing the rails in position, and upwardly-extending flanges on the said members engaging the edges of the bases of the rails.

2. A tie comprising a metal structure of U-shaped cross-section having recesses in the top edges of the side portions and provided with laterally-extending perforated flanges at the recesses, rails disposed in the recesses, and bolts passing through the bases of the rails and the flanges.

3. A tie comprising a metal structure of U-shaped cross-section having recesses in the top edges of the side portions and provided with laterally-extending perforated flanges at the recesses, rails disposed in the recesses, bolts passing through the bases of the rails and the flanges, inverted U-shaped supporting members on which the rails rest, upwardly-extending flanges on the members for engaging the bases of the rails, bolts for securing the rails to the supporting members, and bolts for securing the members to the said structure.

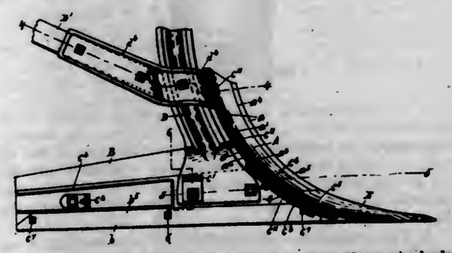
898,710. SHOE. LORINO Q. WHITE, Brockton, Mass. Filed Mar. 13, 1908. Serial No. 420,825.



1. In a shoe the combination of an upper, a vamp and a waterproof lining, a composite insole, the upper part of the said insole being composed of cork and covered by a layer of leather, the lower part of the said insole being composed of leather and having a ridge struck up therefrom, the said ridge and the lower surface of the said insole being covered with rubber, the said parts of the composite insole sewed together and the insole and upper and lining; being secured together by sewing through the said ridge, the seams and needle holes being filled with a waterproof material.

2. In a shoe the combination of an upper, a vamp, an oiled lining, a composite insole formed of a leather piece having a ridge, a strip of cork, a leather covering the top and a rubber sheet covering the bottom of the said insole, a welt, the said parts attached together by a waterproof thread and the seams filled by a waterproof material, a tarred felt cushion located underneath the said insole and filling the space formed by the said ridge, outer soles attached to the said welt.

898,711. PLOW. HARRY WIARD, Syracuse, N. Y. Filed May 28, 1897, Serial No. 638,545. Renewed Feb. 6, 1907. Serial No. 356,097.



1. In a plow, the combination of a point, the main body of a mold-board, a shin-piece for the mold-board, said shin-piece being lapped upon the adjacent part of the main body of the mold-board, and a frog secured to the point, the main body of the mold-board and to the shin-piece and having a groove or cutout in its front face for receiving the adjacent part of the shin-piece, substantially as and for the purpose specified.

2. The combination with the standard and frog of a plow; of the main body of a mold-board, a detachable shin-piece for the mold-board, and means for securing the

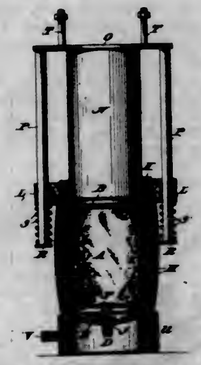
main body of the mold-board and the detachable shin-piece to said standard and frog, substantially as and for the purpose set forth.

3. In a plow, the combination of a point, the main body of a mold-board, a shin-piece for the mold-board, said shin-piece having a part lapped under the rear face of the main body of the mold-board, and the exposed face of the shin-piece being flush with the outer face of said main body of the mold-board, a frog engaging the inner or rear faces of the point, main body of the mold-board and the shin-piece, and bolts passed through the point and frog, and through the main body of the mold-board, the underlapping part of the shin-piece and the frog, for detachably securing said parts together, substantially as and for the purpose described.

4. In a plow, the combination of a point, the main body of a mold-board, a shin-piece for the mold-board, a frog engaging the inner or rear faces of the point, main body of the mold-board and the shin-piece, a standard having its lower end secured to the frog, and bolts passed through the point and frog and through the main body of the mold-board, the shin-piece and the frog, for detachably holding said parts together, substantially as and for the purpose specified.

5. In a plow, the combination of a point, the main body of a mold-board, a shin-piece for the mold-board, a frog engaging the inner or rear faces of the point, main body of the mold-board and the shin-piece, a landside engaging the outer face of a branch of the frog, a standard engaging the inner face of said branch, bolts passed through the landside, standard and said one branch of the frog, and other bolts passed through the point main body of the mold-board and shin-piece and the other branch of the frog, substantially as and for the purpose set forth.

898,712. PNEUMATIC VEHICLE-SPRING. TRUMAN G. WILKINSON, South Williamsport, Pa. Filed July 18, 1907. Serial No. 384,467.



1. The combination in pneumatic vehicle springs of an air chamber within a flexible air cell forming the supporting spring; an inflexible disk secured to the top of the air cell, a cell box supporting the air cell, a plunger directed by guides acting on the air cell, and with check springs adapted to retain the plunger in contact with the air cell, as described.

2. The combination in pneumatic vehicle springs of an air chamber within a flexible air cell forming the supporting spring, a cell box adapted to support the air cell, a plunger directed by guides acting on the air cell, and with coil springs on the said guides adapted to form check springs, with the said pneumatic vehicle spring interposed between an extra frame, composed of bars secured to the highest point of, and extending from one to the other of the ordinary steel springs commonly used on a vehicle, and the body of a vehicle as described.

3. The combination in pneumatic vehicle springs of an air chamber within a flexible air cell forming the supporting spring, a cell box, a plunger, a plate secured to the said plunger and guide bars attached to the said plate, with check springs to restrain the rebound as described.

4. The combination in pneumatic vehicle springs of an air chamber within a flexible air cell forming the supporting spring, a cell box with guide frames secured to the said cell box, a plunger acting on the air cell, a plate secured to the plunger and guide bars attached to the said plate, with an accessory air chamber to adjust the spring as described.

5. The combination in pneumatic vehicle springs of an air chamber within a flexible air cell forming the supporting spring, a cell box, with means of securing the said cell box to a vehicle, a plunger directed by guides acting on the air cell, a plate attached to the plunger, with means of securing the said plate to a vehicle and with check springs acting on the guides as described.

[Claims 6 to 9 not printed in the Gazette.]

898,713. TEAPOT. ARTHUR E. WILSON, Newlands, Glasgow, Scotland. Filed Nov. 9, 1907. Serial No. 401,511.



1. The combination with a tea pot, of a turnable and removable infuser fitted in the mouth of the tea pot and projecting into the interior thereof, said infuser being mounted directly on the neck of the pot and capable of being turned through an angle into either a horizontal or vertical position within the pot without removal from the pot.

2. The combination with a tea pot having a mouth at the upper side thereof and at an incline, of a turnable and removable infuser fitted in the mouth of the tea pot and projecting into the interior thereof, said infuser being mounted directly on the neck of the pot and capable of being turned through an angle into either a horizontal or a vertical position within the pot without removal from the pot.

3. The combination with a tea pot, of a turnable and removable infuser which at one end is circular and adapted to fit in the mouth of the pot and at the other end is of segmental shape, said infuser being mounted directly on the neck of the pot and capable of being turned through an angle into either a horizontal or vertical position within the pot without removal therefrom.

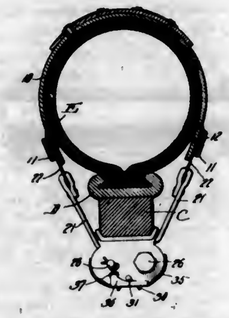
4. The combination with a tea pot having a mouth at the upper side thereof which is inclined, of an infuser mounted directly on the neck of the pot and of segmental shape at its inner end and circular at its outer end so as to fit in the mouth of the pot, a lid for said infuser, and means whereby the infuser can be turned through an angle of 180° while in the pot.

5. The combination with a tea pot having a conically shaped mouth, of an infuser of angled shape having a conically shaped neck adapted to fit in said mouth, said infuser being curved at its upper side and flat on its lower side the upper side being perforated, and means whereby the infuser can be turned through an angle of 180°.

[Claims 6 to 12 not printed in the Gazette.]

898,714. ANCHORING AND TENSION DEVICE FOR TIRE-PROTECTORS. SAMUEL C. WOLFE, Angola, Ind. Filed Nov. 14, 1907. Serial No. 402,121.

1. In a tire protector of the class described, the combination of a tire receiving sleeve having free edge portions, means for securing said sleeve to a wheel and comprising rigid split rings detachably applied to the free edge portions of the sleeve, means for adjusting the connection between the ends of the split rings, and tension devices connected with the split rings, each consisting of a housing, windlass shafts mounted in said housing, flexible members connected with the windlass shafts and with the split rings, and means whereby the flexible members may be wound on the shafts for the purpose specified.



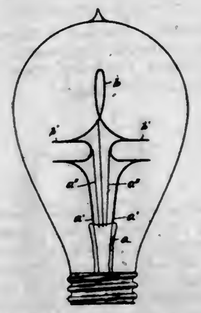
2. In a tire protector of the class described, the combination of a tire receiving sleeve, curved plates detachably connected with the opposite free edge portions of the sleeve, and means for securing the sleeve to a wheel and consisting of a housing formed with a felly seat at one side thereof adapted to engage the felly of a wheel and position the housing with respect thereto, separate tension members extending from the opposite ends of the housing and detachably connected with the curved plates applied to the sleeve, and members mounted in the housing for independently adjusting the tension of said tension members to firmly connect the sleeve with a wheel.

3. In a tire protector of the class described, the combination of a tire receiving sleeve provided at its free edge portions with a plurality of hooks, curved plates arranged at the edge portions of the sleeve and engaged by the hooks aforesaid, means for securing the sleeve to a wheel including housings, each housing being formed with a felly seat to receive and engage the felly of a wheel, the opposite ends of the housing being open, shafts journaled in the housing, each shaft being provided with a turning head, and the turning heads aforesaid being arranged on opposite sides of the housing, flexible tension members extending from opposite ends of the housing connected with and adapted to wind about the shafts and adjustable independently of one another, and clips secured to the outer ends of the tension members and detachably engaging the curved plates aforesaid.

4. In a tire protector of the class described, the combination of a tire receiving sleeve, detachable reinforcing plates applied to the edge portions of the sleeve and means for securing the sleeve to a vehicle wheel comprising a plurality of housings and tension devices connected with the plates aforesaid, each housing being formed with a felly seat and having its ends open, the tension device for each housing embodying flexible tension members passing through the opening in the opposite ends of said housing, shafts mounted in each housing and formed with turning heads, the turning heads of the shafts being located on opposite sides of the housing and said shafts being connected with the flexible tension members for independent operation thereof, each housing being provided with a covering plate at its outer portion, said plate having lateral flanges overlapping the sides of the housing and formed with projections interlocking therewith, and ratchet pawls coöperating with the shafts in the housing to hold the tension members at a predetermined adjustment, the covering plate of each housing having openings through which handles of the ratchet members pass.

5. An anchor for detachable tire protectors comprising a housing having a gripping face, power shafts journaled for rotation in said housing, flexible sleeve engaging members secured at their inner ends to said shafts and provided at their outer ends with flat metal clips, and pawl and ratchet devices to normally prevent backward rotation of said power shafts.

898,715. INCANDESCENT LAMP. FREDERICK M. BENNETT, New York, N. Y. Filed Mar. 6, 1908. Serial No. 419,536.



1. In an incandescent lamp, a spread coil filament comprising a substantially vertically disposed loop, and a plurality of loops each constructed and arranged to lie in a relatively approximately horizontal direction the planes of the latter loops intersecting the longitudinal axis of the lamp.

2. In an incandescent lamp, a spread coil filament comprising a substantially upwardly disposed loop to throw the light sidewise from the lamp, and a loop at a relatively approximate right angle to the first loop to throw the light substantially in the direction of the longitudinal axis of the lamp.

3. In an incandescent lamp, an upwardly disposed filament loop, and a plurality of outer loops sidewise disposed so that the plane of each of which latter loops intersects the plane of the central loop at an angle.

4. In an incandescent lamp, an upwardly disposed filament loop, a sidewise disposed loop the planes of which two loops are constructed and arranged to intersect at an angle, and an anchor for the upwardly disposed loop, the point of anchorage lying approximately in the plane of the side loop.

5. In an incandescent lamp, an upwardly disposed filament loop, anchors located on each side of the same at the base thereof, the said filament being turned outwardly from said anchor points and then deflected in a substantially circular form, and curved downward and fastened to the leading in wires approximately vertically below the anchor points to form a plurality of sidewise disposed loops, one of each lying in a plane at an angle to that of the central loop, the said planes having an approximate common line of intersection.

[Claim 6 not printed in the Gazette.]

898,716. HOG-WATERER. PHILIP BERNARD, Jefferson, S. D. Filed May 26, 1906. Serial No. 318,920.



The combination of a trough, a tank supported by the trough, a nut fixed to the bottom of the tank, a threaded

tube extending through and engaging the threads of the nut, whereby the tube is adjustably and rigidly connected with the bottom of the tank and is held against upward and downward movement, a float, an elastic gasket seated on the float and arranged to engage the lower end of the tube to cut off the flow of water from the tank to the trough, and a stem mounted on the float and piercing the elastic gasket to retain the latter in place and extending into the tube for guiding the float.

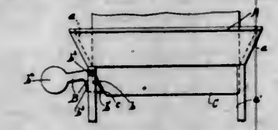
898,717. REVOLVER. THOMAS F. BOWKER, Fitchburg, Mass., assignor, by mesne assignments, to Mary Elizabeth Johnson, trustee, Fitchburg, Mass. Filed Apr. 24, 1905. Serial No. 257,070.



1. The combination with a hammer provided with a recess, of a sliding piece held in said recess and provided with a shoulder, means for preventing the rotation of said sliding piece in the hammer and a hammer spring arranged to bear upon the hammer and having its end resting against the shoulder of said sliding piece.

2. The combination with a hammer provided with a recess and a hammer spring, with its end bent to bear against the contacting surface of the hammer, of a supplemental sliding piece held in said recess and bearing against the end of the hammer spring, said supplemental piece being held in the hammer at an oblique angle to the end of the hammer spring, whereby the rocking movement of the hammer relatively to the hammer spring will cause a sliding movement of said supplemental piece.

898,718. TIME-RECORDER. WILLARD H. BUNDY, Syracuse, N. Y. Filed Aug. 29, 1902. Serial No. 121,482.



1. In a time-recorder, a card-guide, and a stop normally projecting into the path of the card for preventing movement of the card in the guide when not arranged in the predetermined position and movable out of said path by the card when arranged in the predetermined position, substantially as and for the purpose described.

2. In a time-recorder, a card-guide, and a stop normally projecting into the path of the card for preventing movement of the card in the guide when not arranged in the predetermined position and movable laterally out of said path by the card when arranged in the predetermined position, substantially as and for the purpose specified.

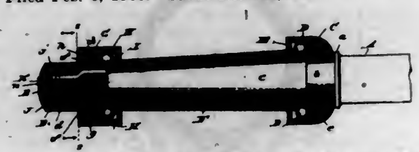
3. In a time-recorder, a card-guide, and a pivoted stop normally projecting into the path of the card for preventing movement of the card in the guide when not arranged in the predetermined position and movable on its pivot out of said path by the card when arranged in the predetermined position, substantially as and for the purpose set forth.

4. In a time-recorder, a card-guide, and a stop normally projecting into the path of the card for preventing movement of the card in the guide when not arranged in a predetermined position, and movable laterally out of said path by the card when arranged in the predetermined position, said stop being provided with means for returning the stop to its normal position, substantially as and for the purpose specified.

5. In a time-recorder, a card-guide, and a stop normally projecting into the path of the card for preventing movement of the card in the guide when not arranged in the predetermined position and movable laterally out of said path by the card when arranged in the predetermined position, said stop being provided with a weight for rocking the same on its pivot into operative position, substantially as and for the purpose described.

[Claims 6 to 12 not printed in the Gazette.]

898,719. NUT-LOCK. LOUIS BURG, Dallas City, Ill. Filed Feb. 6, 1908. Serial No. 414,628.



1. In a nut lock for ball bearing cups, the combination of a spindle having a longitudinally grooved and threaded end portion; the outer portions of the said grooves being deeper than the inner portions thereof, a ball cup interiorly threaded to receive the threaded portion of the spindle and interiorly grooved, a key having inner and outer portions disposed in different planes; the said key being removably arranged in registered grooves of the spindle and cup, and a nut removably arranged on the threaded portion of the spindle.

2. In a nut lock for ball bearing cups, the combination of a spindle having a longitudinally grooved and threaded end portion; the outer portions of the said grooves being deeper than the inner portions thereof, a ball cup interiorly threaded to receive the threaded portion of the spindle and interiorly grooved, a key having inner and outer portions disposed in different planes and also having a head at its outer end; said key being removably arranged in registered grooves of the spindle and cup, and a cap nut arranged on the threaded portion of the spindle.

898,720. MOISTENER. HARRY G. CAMPBELL, Chicago, Ill., assignor of one-half to Charles C. Smith, Chicago, Ill. Filed Nov. 4, 1907. Serial No. 400,555.



1. The combination with a receptacle of a cover for the receptacle having an opening therein a table arranged under said opening, a wick on said table, a moisture receiving device arranged in said opening above the table and normally out of contact with the wick thereon and elastic means connecting the moisture receiving device and cover.

2. The combination with a receptacle of a cover for the receptacle having an opening therein a table under said opening, a wick on said table, a moisture receiving device arranged in said opening above and normally out of contact with the wick on said table and with its moisture receiving surface normally above the cover of said receptacle and elastic means connecting the moisture receiving device and cover.

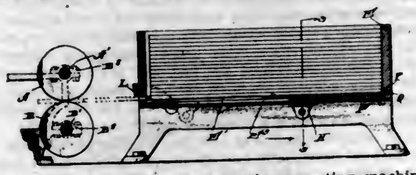
3. The combination with a receptacle, of a cover for the receptacle having an opening therein, a body of absorbent material arranged under said opening, a moisture receiving device arranged in said opening above the body of absorbent material, and normally out of contact with the same, and elastic means connecting the moisture receiving device and the cover.

4. The combination with a receptacle having an inturned rim, of a dished, perforated plate having a flange extending under said rim, springs upon which said dished plate is mounted, and a body of absorbent material in said receptacle under the dished plate.

5. The combination with a receptacle, of a cover having an opening therein, a dished, perforated plate arranged in the opening so that the perforated part thereof stands above the top of the receptacle, springs on which said plate is mounted, and a body of absorbent material within the receptacle and under said plate.

[Claims 6 to 8 not printed in the Gazette.]

898,721. APPARATUS FOR FEEDING SOLES TO CEMENTING-MACHINES. GEORGE R. CHEESMAN, Auburn, N. Y., assignor to Dunn and McCarthy, Auburn, N. Y., a Corporation. Filed Dec. 27, 1907. Serial No. 408,288.



1. A self feeding device for sole cementing machines comprising a hopper, friction rollers between which soles are fed from the hopper, one of the side walls of the hopper having an extension projecting from the bottom thereof and provided with an elongated slot, a bar mounted with one end in said slot, means for guiding the bar as it is moved back and forth in the slot, a pitman connected at one end to said bar and its other end connected to one of the friction rollers, the bottom of the hopper having a recess, a slide movably held in said recess, an apertured lug projecting from the bottom of said slide through a slot in the bottom of the hopper and engaged by the inner end of said bar, the rear end of said slide having a shoulder projecting above its upper surface, the outer edge of said shoulder being curved and adapted to seat in a rabbeted portion in the end wall of the hopper, as set forth.

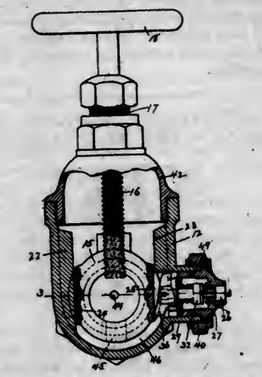
2. A self feeding device for sole cementing machines comprising a hopper, friction rollers between which soles are fed from the hopper, one of the side walls of the hopper having an extension projecting from the bottom thereof and provided with an elongated slot, a bar mounted with one end in said slot, said bar provided with an integral flange designed to bear against the inner surface of the extension of said wall of the hopper, a disk fitted upon the projecting end of said bar, a pitman retaining said disk in place upon said bar, and pivotally connected to the latter and adapted to be driven by connections with one of said rollers, the bottom of the hopper being recessed, a slide seated in said recess and having a shoulder at its inner end, an apertured lug projecting from said slide through a slot in the bottom of the hopper, the inner end of said bar engaging the aperture in said lug, as set forth.

898,722. AUTOMATICALLY-DRAINED GATE-VALVE. CHARLES A. CLAFLIN, Medford, Mass. Filed Sept. 6, 1907. Serial No. 391,621.

1. A gate valve comprising a casing having a gate seat and a drain outlet at the outlet side of said seat, an automatically closed drain valve controlling said outlet, a slidable gate controlling the liquid passage through the casing, and means operated by the closing movement of the gate for opening the drain valve, said means being located in a path of movement of a side portion of the gate.

2. A gate valve comprising a casing having a gate seat and a drain outlet at the outlet side of said seat, a drain valve controlling said outlet, a slidable gate having a drain conduit, and means operated by the closing movement of the gate for moving the drain valve from its seat to open the drain outlet, said means being located in a path of movement of a side portion of the gate.

3. A gate valve comprising a casing having a gate seat and a drain outlet at the outlet side of said seat, an automatically closed drain valve controlling said outlet, and having an inwardly-projecting stem, a lever pivoted to the inner end of the stem, and fulcrumed at one side of the stem, and a slidable gate controlling the liquid passage through the casing, the said lever projecting into the path of movement of a side portion of the gate and being movable by the closing movement of the gate to open the drain valve.



4. A gate valve comprising a casing having a passage extending through it from end to end, a gate seat within said passage, and an externally threaded nipple projecting laterally from the casing between its ends and the outlet side of the seat, a drain terminal closely fitting the interior of said nipple, and provided with an external collar abutting against the outer end of the nipple, a drain outlet, and an outwardly closing valve controlling said outlet, a coupling nut engaged with said nipple and collar, a slidable gate controlling the liquid passage through the casing, and means operated by the closing movement of the gate for opening the drain valve, the casing having a sediment pocket located below the drain valve, said means being carried by the drain terminal and removable therewith.

5. A gate valve comprising a casing having a gate seat and a drain terminal detachably secured to the casing at the outlet side of said seat, and provided with a drain outlet and with an automatically-closed valve controlling said outlet, a slidable gate controlling the liquid passage through the casing, means operated by the closing movement of the gate for opening the drain valve, said means being carried by the drain terminal within the casing, and means for determining the adjustment of the terminal relatively to the gate.

[Claim 6 not printed in the Gazette.]

898,723. MIDDLE RING FOR PIPE-COUPLINGS. JAMES CLARK, Bradford, Pa., assignor to S. R. Dresser Manufacturing Company, Bradford, Pa. Filed Mar. 25, 1907. Serial No. 364,380.



1. A middle ring for rubber packed pipe couplings comprising a weldless cylinder of wrought metal, having its ends provided with packing engaging portions, substantially as described.

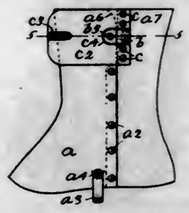
2. A middle ring for rubber packed pipe couplings comprising a weldless cylinder of wrought metal having its ends provided with packing engaging portions, and having

integral inwardly projecting portions on its interior between its ends, substantially as described.

3. A middle ring for rubber packed pipe couplings comprising a weldless cylinder of wrought metal, having its end portions bent outwardly to form packing recesses, and provided interiorly with an annular integral inwardly projecting stop, substantially as described.

4. A middle ring for rubber packed pipe couplings comprising a weldless cylinder of wrought metal, having its ends provided with packing engaging portions, and its interior provided between its ends with annular inwardly projecting upset portions forming a centering stop, substantially as described.

898,724. LEG-COVERING. HYMAN COHEN, Brooklyn, N. Y. Filed Jan. 9, 1908. Serial No. 409,907.



1. A leg covering, comprising a body member, flaps thereon means for securing said flaps together over said body member and means for securing said body member over said flaps.

2. A leg covering, comprising a body member, flaps detachably connected therewith, means for securing said flaps together over said body member and means for securing said body member over said flaps.

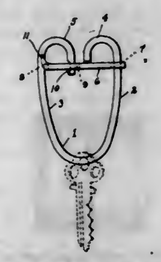
3. A leg covering, comprising a body member open at one side and provided with a vertical slot in the opposite side, flaps connected with said body member and means for securing said flaps inside or outside said body member.

4. A leg covering, comprising a body member provided with oppositely arranged vertical slots, flaps on said body member and adapted to pass through said slots and means for securing said flaps inside or outside said body member.

5. A leg covering, comprising a body member provided with oppositely arranged slots, flaps detachably connected with said body member and adapted to pass through said slots and means for securing said flaps inside or outside said body member.

[Claims 6 to 9 not printed in the Gazette.]

898,725. KEY-RING AND DOOR-SECURER. LYMAN M. COOPER, Flint, Mich., assignor of one-half to Alfred Adair, Flint, Mich. Filed Feb. 17, 1908. Serial No. 416,267.



1. A combined key ring and door securer comprising a bar adapted to be wedged between the edge of a door and its opposing jamb and a key hoop with separated ends movably attached to the bar and adapted to be turned transversely across the adjacent margins of the door and its jamb when the bar is so engaged, said bar being adapted to be detachably locked across the hoop ends when otherwise disengaged.

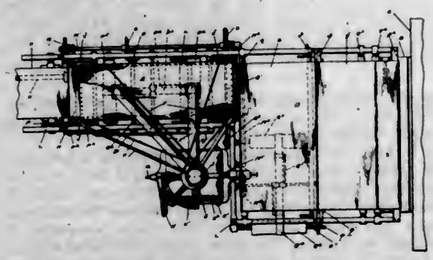
2. A combined key ring and door securer comprising a locking bar with a transversely spurred end adapted to be wedged between the edge of a door and its opposing casing, and an open key hoop loosely engaging an aperture in the other end of the bar, the hoop being adapted to be turned transversely across the adjacent margins of the door and casing when the bar is secured between them, and to interlock with the bar across its open ends when the bar is disengaged from the door.

3. A combined key ring and door securer comprising a locking bar with a transversely spurred notched inner end adapted to be wedged between the edge of a door and its opposing casing, and a key hoop of spring metal wire with substantially parallel arms having inbent parallel spaced ends, one of said arms being loosely engaged in an aperture in the outer end of the bar, and the other of said arms being adapted to have spring pressed interlocking engagement with the indented end when the bar is turned transversely across the opening between the hoop ends.

4. A combined key ring and door securer comprising a flat hoop of spring wire having substantially parallel arms with inbent parallel spaced ends, and a bar having an apertured inner end loosely engaging one of the hoop arms and an indented and transversely spurred outer end adapted to snap into the inbent end of said hoop when the bar is turned between the arms across the separated ends, one of which is extended and notched to interlock with an aperture in the bar, the bar being adapted to be wedged between the edge of a door and its jamb and secured there by its spurred end, and the hoop being adapted to be turned transversely across the adjacent margins of the door and its jamb when the bar is wedged between them.

5. A combined key ring and door securer comprising a flat heart shaped hoop of spring wire with parallel spaced inturned ends one of which is longer than the other and has a peripheral notch substantially opposite the other end, and a flat key guard and lock bar having an aperture at one end loosely engaging the arm of the hoop opposite the larger end, an indented free end to interlock with the opposite hoop arm when the bar is forced between the arms against the shorter end, and an aperture near the indented end adapted to receive the longer hoop end and interlock with its notched periphery, the indented end having lateral spurs whereby the bar may be secured between the edge of a door and its opposing jamb with the ring transversely disposed across the door margin as a stop.

898,726. DOUGH-FEEDING MECHANISM. ALEXANDER W. COPLAND, Detroit, Mich. Filed Nov. 10, 1906. Serial No. 342,882.



1. In a dough feeding mechanism, means for angularly moving sections of dough in the plane in which they lie to rearrange the same in relation to each other.

2. The combination with means for feeding a strip of cut dough, of means for successively transferring sections of dough by an angular movement in the plane of feed, and rearranging them in relation to each other.

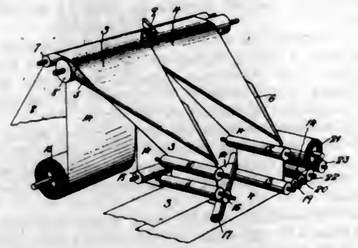
3. In a dough feeding mechanism, two carriers and means for transferring sections of dough from the one to the other by an angular movement in the plane of feed.

4. In a dough feeding mechanism, two carriers having the same direction of movement and means for transferring sections of dough from the one to the other and for rearranging said sections in relation to each other.

5. In a dough feeding mechanism, two carriers having the same direction of movement, and means for transferring sections of dough from the one to the other by an angular movement in the plane of feed.

[Claims 6 to 13 not printed in the Gazette.]

898,727. ANTISMUTTING DEVICE FOR PRINTING MACHINERY. EDGAR H. COTTRELL, Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of New Jersey. Filed July 18, 1907. Serial No. 384,365.



1. In a cutting and folding machine, a plurality of formers, means for passing a plurality of printed webs over the formers, smut web delivery and winding rolls and means for passing the smut web from the delivery roll successively between the formers and the printed webs at the same speed as the printed webs and from the last former to the winding roll.

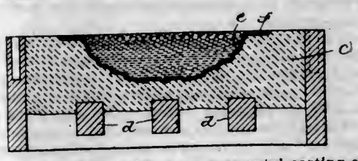
2. In a cutting and folding machine, a plurality of formers, means for passing a plurality of printed webs over the formers, smut web delivery and winding rolls, friction driving rolls forming a support for the winding roll, and means for passing the smut web from the delivery roll successively between the formers and the printed webs at the same speed as the printed webs and from the last former to the winding roll.

3. In a cutting and folding machine, a plurality of formers, means for passing a plurality of printed webs over the formers, a smut web delivery roll mounted on an axis transversely of the machine, a smut web winding roll mounted longitudinally of the machine, a turning bar and means for passing the smut web from the delivery roll between one former and its printed web, thence around the turning bar, thence between a succeeding former and its printed web and from thence to the winding roll.

4. In a cutting and folding machine, a plurality of formers, means for passing a plurality of printed webs over the formers, a smut web delivery roll mounted on an axis transversely of the machine, a smut web winding roll mounted longitudinally of the machine, friction driving rolls forming a support for the winding roll, a turning bar and means for passing the smut web from the delivery roll between one former and its printed web, thence around the turning bar, thence between a succeeding former and its printed web and thence to the winding roll.

898,728. METHOD OF MAKING MOLDERS' PATTERNS. JOSEPH F. COX, Watertown, Mass. Filed Apr. 8, 1908. Serial No. 425,829.

1. The method of making an ornamental casting of substantially uniform thickness, consisting in making a plaster cast from the pattern, filling the cavity in the cast with a fluid material capable of hardening to a thickness varying according to its temperature and the period of contact with the cast whereby a lining is formed in the cast, pouring off the surplus or unhardened material, producing sand molds from the said lining and the pattern, and then assembling the sand molds and casting metal between them.



2. The method of making an ornamental casting of substantially uniform thickness, consisting in making a plaster cast from the pattern, uniformly chilling the plaster cast, then lining the chilled cast with wax, producing sand molds from the wax lining and the pattern, and then assembling the sand molds and casting metal between them.

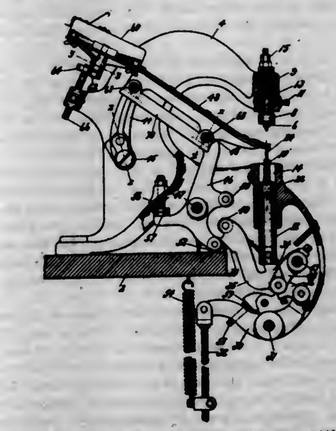
3. The method of making an ornamental casting of substantially uniform thickness, consisting in making a plaster cast from the pattern, wetting the plaster cast to uniformly chill it, lining the chilled cast with wax, producing sand molds from the wax lining and the pattern, and then assembling the sand molds and casting metal between them.

4. The method of making a metal pattern of substantially uniform thickness, said method including molding a reverse of the face of a wood pattern, treating said reverse to cause all of its surface to possess a substantially uniform temperature, filling the cavity, of said reverse with a fluid material capable of hardening by contact with said reverse to form a film, pouring off the surplus or unhardened material, and then making a cope impression from the inner surface of the film.

5. The method of making a metal pattern of substantially uniform thickness, consisting in forming a molded reverse of the face of a block pattern, treating said reverse to cause all of its surface to possess a substantially uniform temperature, filling the cavity of said reverse with a fluid material capable of hardening by contact with said reverse to form a film, pouring off the surplus or unhardened material, then making the cope and nowel impressions from the film and block pattern respectively, and then casting a metal pattern from said impression.

[Claim 6 not printed in the Gazette.]

898,729. EYELETING-MACHINE. JOHN F. DAVEY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 24, 1904. Serial No. 214,023.



1. In a machine of the class described, a setting device; a holder for said device; and a fastening device, carried

by the holder intermediate the holder and setting device, which is supported by the inner wall of said holder and grips the shank of the setting device on all sides with uniform pressure to secure said setting device in alinement with the holder.

2. In a machine of the class described, a setting device; a holder for said device; a fastening device carried by the holder intermediate the holder and setting device and held against sidewise movement by said holder; and means for causing the fastening device to grip the setting device.

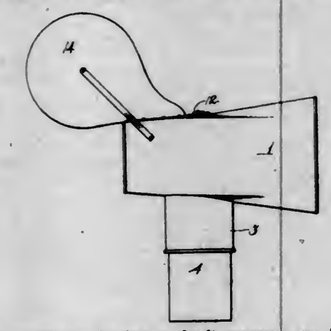
3. In a machine of the class described, a setting device; a holder for said device; compressible fastening means carried by the holder and supported by the inner wall of the holder; and means for compressing said fastening means to grip the setting device.

4. In an eyeleting machine, a setting device; a holder for said device; a split sleeve intermediate the holder and setting device and held against sidewise movement by said holder; and means for causing said sleeve to grip the setting device uniformly on all sides.

5. In an eyeleting machine, a setting device; an adjustable holder for said device; means for securing said holder in adjusted position and means for adjuating said device independently of said holder.

[Claims 6 to 13 not printed in the Gazette.]

898,730. VENTILATOR. WILLIAM H. DAVIDSON, Boston, Mass., assignor of one-half to W. Osgood Eddy, Middleboro, Mass. Filed Apr. 10, 1908. Serial No. 426,246.



1. A ventilator having a draft passage, an induction passage, and means governed by the pressure in the draft passage for varying the effective transverse area of the induction passage.

2. A ventilator having a draft passage, an induction passage, and a gate actuated by the draft pressure within the draft passage to obstruct more or less the induction passage.

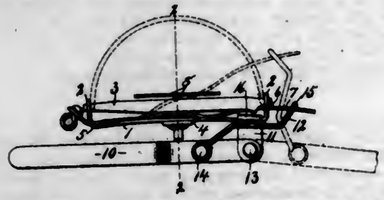
3. A ventilator consisting of a body open at its ends to provide a draft passage and having an induction inlet in the side, a partition separating the interior into distinct longitudinal chambers into one of which the said inlet opens, and means operated by pressure of the wind for restricting the outlet from the induction chamber.

4. A ventilator consisting of a body open at its ends to provide a draft passage and having an induction inlet in the side, a partition separating the interior into distinct longitudinal chambers into one of which the said inlet opens, means operated by pressure of the wind for restricting the outlet from the induction chamber, and yielding opposed means acting to enlarge such outlet upon diminution of the wind pressure.

5. A ventilator consisting of a body open at its ends to provide a draft passage, a partition therein providing a distinct induction chamber closed at the inlet end and open at the outlet end of the ventilator, an inlet at the side of the ventilator opening into the induction chamber, and a stop member operable by increase of pressure in the air flowing through the draft passage for reducing the outlet opening of the induction chamber.

[Claims 6 to 10 not printed in the Gazette.]

898,731. DEVICE FOR SETTING ANIMAL-TRAPS. FERRAND F. ELLIS, Oneida, N. Y., assignor to Oneida Community, Limited, Kenwood, N. Y., a Corporation of New York. Filed June 13, 1907. Serial No. 378,868.



1. A setting device for animal traps comprising a lever, and means on the lever for engaging and tensioning the spring of the trap and holding the same in its tensioned position.

2. In combination with the jaw operating spring of an animal trap, a lever and fulcrum therefor, a link pivotally connected to the lever and engaging the spring whereby the rocking of the lever on its fulcrum in one direction operates the link to tension the spring.

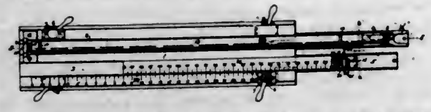
3. In combination with the jaw operating spring of an animal trap, a lever and fulcrum therefor supported by the trap, and a link connecting the lever to the spring whereby when the lever is rocked in one direction the spring is tensioned.

4. In combination with the jaws, supporting frame and spring tongue of an animal trap, a bracket detachably engaged with the frame, a lever fulcrumed on the bracket and a link pivoted to the lever at one side of its fulcrum and engaged with the spring whereby when the lever is operated in one direction the spring will be tensioned.

5. In combination with an animal trap having a pair of jaws, and a spring for closing the jaws, a spring setting device including a lever and connections between the lever and spring whereby when the lever is rocked in one direction the spring will be tensioned, said spring and connections operating to hold the lever in its operative position.

[Claims 6 to 8 not printed in the Gazette.]

898,732. SHADE-TRIMMER. HENRY M. FISHERING, Canton, Ohio. Filed May 4, 1908. Serial No. 430,691.



1. A mounted-shade trimming-machine including a base with pivot-bearings thereon for the shade-stick, a knife on the base having one end pointed and sharpened and presented to the side of the shade-roll, with means for moving the knife to impinge and impress its point against and into the side of the shade-roll, and means for releasably holding the knife away from the roll.

2. A mounted-shade trimming-machine including a base with pivot-bearings thereon for the shade-stick, a knife on the base having one end pointed and sharpened and presented to the side of the shade-roll, with means for moving the knife to impinge and impress its point against and into the side of the shade-roll.

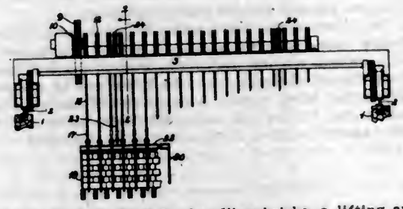
3. A mounted-shade trimming-machine including a base with pivot-bearings thereon for the shade-stick, a knife on the base having one end pointed and sharpened and presented to the side of the shade-roll and adapted to cut into the same.

4. A mounted-shade trimming-machine including a base with pivot-bearings thereon for the shade-stick and a knife on the base presented to the side of the shade-roll and adapted to cut into the same, the knife being flat on one side to squarely abut the trimmed end of the shade-roll.

5. A mounted-shade trimming-machine including a base with pivot-bearings thereon for the shade-stick, a knife on the base presented to the side of the shade-roll with automatic means for moving the knife to cut into the side of the roll.

[Claims 6 to 11 not printed in the Gazette.]

898,733. BRICK-LIFT. JONATHAN P. B. FISKE, Newton, Mass. Filed Jan. 2, 1907. Serial No. 350,358.



1. In an apparatus for handling bricks, a lifting apparatus having yielding lifting fingers for entering between rows of bricks in stack formation said fingers being separately movable horizontally and means for lowering and raising the same.

2. In an apparatus for handling bricks, a lifting apparatus having yielding lifting fingers for entering between rows of bricks in stack formation, said apparatus being provided with means permitting the fingers to move vertically with relation to each other, and means for lowering and raising the same.

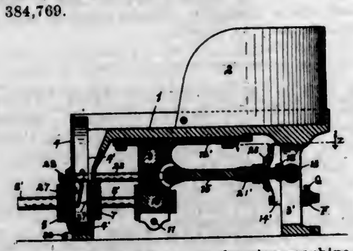
3. In an apparatus for handling bricks, a lifting apparatus having separably movable fingers provided with means permitting said fingers to move vertically with relation to each other for entering between rows of bricks in stack formation, and means for lowering and raising the same.

4. In an apparatus for handling bricks, a lifting apparatus having separably movable fingers provided with means permitting said fingers to yield laterally and vertically with relation to each other for entering between rows of bricks in stack formation, and means for lowering and raising the same.

5. In an apparatus for handling bricks, a lifting apparatus having yielding lifting fingers for entering between rows of bricks in stack formation, stack maintainers cooperating with said fingers in holding a stack of bricks as an entire body for transportation, and means for lowering and raising the same.

[Claims 6 to 10 not printed in the Gazette.]

898,734. CORE-FORMING MACHINE. WILLIAM N. GAARTSIDE, Richmond, Ind. Filed July 20, 1907. Serial No. 384,769.



1. In combination with a core forming machine having a mixing-chamber and one or more former-tubes leading therefrom and a plunger for each former-tube operating back and forth through said chamber; a swiper-blade for each former-tube, each of the swiper-blades being adjustably mounted on a shaft having a constant rotation in one direction and extending across the mixing-chamber parallel with the plungers, said swiper-blades being disposed at an angle with reference to the inner end of the former-tube over which it is adapted to move on its upward rotation to press the core material thereinto during the interval that the plunger therefor is withdrawn and at same time removing the surplus material from the path of the plunger, means for changing the axial inclination of the swiper-blades, and means for operating the plunger and the swipers in succession, all substantially as shown and described and for the purposes set forth.

2. In combination with a core forming machine having a core material chamber and a former-tube leading out therefrom, and a plunger adapted to pass through said chamber and enter the former-tube; of a swiper-blade adapted to pass over the inner end of the former tube and press a portion of the core material into the former tube and at same time removing the surplus core material from in front of the plunger, the forward stroke of the plunger following directly after said action of the swiper-blade, all substantially as shown and described.

3. In combination with a core forming machine having a core material chamber and a pair of former-tubes leading out from the chamber and a plunger for each of said tubes, each plunger being adapted to operate across through the material chamber and enter its respective former tube at each forward stroke; a pair of swiper blades turning in opposite directions through the material chamber and operating at right angles to the operations of the plungers and adjoining the inner ends of the former-tubes and adapted on their upward movements to fill the former tubes with the core material immediately in advance of the entrance of the plungers thereto, one of said swiper blades being timed slightly in advance of the other by which their paths of rotation may overlap each other, all substantially as shown and described.

4. In combination with a core forming machine having a core material chamber and formers leading out from said chamber and plungers reciprocating through said chamber; of swipers adapted to pass across the inner ends of the formers and deposit therein an amount of core material equal to the amount of material pressed forward in the tube by the plungers on their preceding forward stroke, and means whereby the angular inclination of the swiper blades may be adjusted.

5. In combination with a core forming machine of the character set forth, a set of shafts of constant rotation in one direction and opposite to each other, a swiper blade carried by each shaft and disposed at right angles thereto, means for adjusting the angular inclination of each blade by the means whereby it is secured to its shaft, all substantially as shown and described.

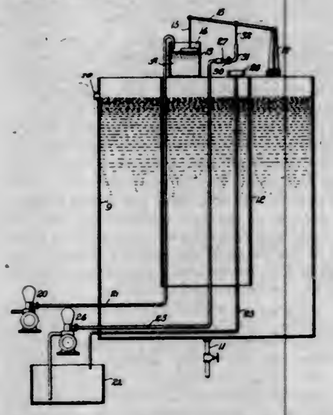
898,735. WATER-PURIFIER. WALTER H. GREEN, Chicago Heights, Ill., assignor to Kennicott Water Softener Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 18, 1907. Serial No. 397,960.

1. In a water-purifying apparatus, the combination with a precipitating-tank, of a water-box having a fixed discharge and containing a float, a reagent-supply pipe having a fixed discharge, and a movably-supported tubular extension of said pipe forming an overflow for the reagent-supply and operatively connected with said float, for the purpose set forth.

2. In a water-purifying apparatus, the combination with a precipitating-tank, of a water-box having a fixed discharge and containing a float, a reagent-supply pipe having a fixed discharge, a chemical-solution-tank from which said pipe leads, a movable tubular extension of said pipe operatively connected with said float, and a receptacle supported to receive the overflow from said extension and having a return-pipe leading from it to said solution-tank, for the purpose set forth.

3. In a water-purifying apparatus, the combination with a precipitating-tank, of a water-box containing a float and a slot forming a fixed-discharge to said tank, a reagent-supply pipe having a tubular arm containing a slot forming a fixed discharge to said tank, and a movably-supported extension of said pipe forming an overflow for the

reagent-supply and operatively connected with said float, for the purpose set forth.

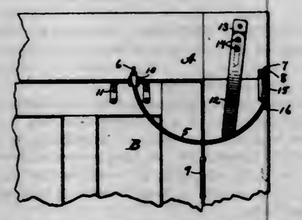


4. In a water-purifying apparatus, the combination with a precipitating-tank, of a water-box containing a float and a slot forming a fixed discharge to said tank, a reagent-supply pipe having a tubular arm containing a slot forming a fixed discharge to said tank, a rotatably-supported extension of said pipe operatively connected with said float, a chemical-solution tank from which said pipe leads, a receptacle supported to receive the overflow from said extension, and a return-pipe leading from said receptacle to the solution-tank, for the purpose set forth.

5. In a water-purifying apparatus, the combination with a precipitating-tank, of a water-box containing a float and a slot forming a fixed discharge to said tank, a reagent-supply pipe having a tubular arm containing a slot forming a fixed discharge to said tank, a rotatably-supported extension of said pipe forming an overflow for the reagent-supply, a lever fulcrumed on a suitable support and having said float suspended from it, and a link connection between said lever and extension, for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

898,736. DOOR-CLOSER. JOHN W. HAGEARTY, New Britain, Conn. Filed Mar. 20, 1908. Serial No. 422,252.



1. In a door closer, the combination of a bail pivotally connected by its ends to a door frame, with one of the said connections above the door and with that end of the said bail bearing downwardly and inwardly on the door, and a spring acting on the said bail between its ends to force it downwardly and inwardly and keep the said bail bearing on the door.

2. In a door closer, the combination of a swinging bail of a curved form adapted to be pivotally connected by its ends to a door frame, with a roller guard loosely mounted by a horizontal axis on the door for engaging the under side of the said bail, and a spring for forcing the said bail downwardly and inwardly.

3. In a door closer, the combination of a swinging bail adapted to be pivotally connected by its ends to a door frame, one of the said ends being above the door, with a spring acting to force the said bail downwardly and inwardly, a roller guard on the door for engaging the under side of the said bail and an offset in the under side of the said bail, for receiving the said roller guard to hold the door open.

4. In a door closer, the combination of a swinging bail adapted to be pivotally connected by its ends to a door frame, with a bracket adapted to be mounted on the said door frame, and a sheet metal spring adjustably mounted upon the said bracket by one end and with its other end bearing on the said bail for closing the door.

5. In a door closer, the combination of a swinging bail pivotally connected by one end to a door frame over a door, a vertical rod and bracket mounted on the said frame to one side of the said door, the other end of the said swinging bail being loosely mounted on the said rod, and a spring for forcing the said bail downwardly and inwardly against a guard at the upper end of the door.

[Claim 6 not printed in the Gazette.]

898,737. SWITCH-LOCK. EDWARD T. HARDIN, Hot Springs, Ark. Filed Mar. 6, 1908. Serial No. 419,541.



1. In a railway track structure, a movable switch-point, an arm projecting laterally from said switch-point and being formed of spring metal, a roller carried by said arm, and a coöperating roller carried by a stationary support; substantially as described.

2. In a railway track structure, a movable switch-point, a laterally projecting spring arm adjustably connected to said switch-point and provided at its outer end with a roller, and a coöperating roller carried by a support; substantially as described.

3. In a railway track structure, a movable switch-point, a yielding arm projecting laterally from said switch-point and provided with a locking member, a support, and a co-operating locking member adjustably connected to said support; substantially as described.

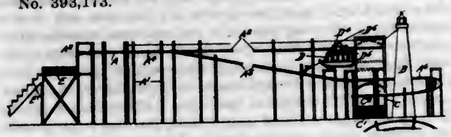
4. In a railway track structure, a movable switch-point, a spring arm projecting laterally from said switch-point, a roller carried by said arm, a stationary support, a block adjustably connected to said support, and a roller on said block which coöperates with the roller on said spring arm; substantially as described.

898,738. OXID OF THIOINDIGO DYES. BENNO HOMOLKA, Frankfort-on-the-Main, Germany, assignor to Fabwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed May 6, 1908. Serial No. 431,189.

1. The process for the manufacture of oxids of the thio-indigo dyestuffs which consists in treating the thio-indigo dyestuffs with oxidizing agents.

2. As a new product the oxid obtainable by oxidation of a thio-indigo dyestuff, being a red crystalline powder, insoluble in water, ether and ligroin, soluble with a red color in boiling chloroform and xylene, also soluble with a reddish-violet color in concentrated sulfuric acid, dissolving with an orange-yellow color in dilute caustic sodalyes and in aqueous solutions of the neutral sulfites, which latter solution yields, when heated, with dilute mineral acids a red precipitate.

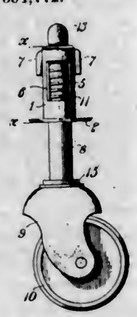
898,739. AERIAL RAILWAY. FRANCIS HOOKER, Toronto, Ontario, Canada. Filed Sept. 16, 1907. Serial No. 393,173.



1. An aerial railway comprising a divided looped track suitably supported on poles, the divided ends of which are separated in a vertical and horizontal direction, a car hung on the track, means for driving the car, a horizontal rail section upon which the car is hung and means for raising the section in a horizontal position from contact at one end with the lower end of the divided loop into contact at the other end with the upper end of the divided loop as and for the purpose specified.

2. An aerial railway comprising a divided looped track having a gap formed between the divided ends of the loop one being in proximity to the ground and the other at a considerable elevation from the ground, poles supporting the track, a track section, a car designed to be supported on the said section and provided with a suitable motor, an electric circuit supported on the said poles, trolley wheels supported on standards electrically connected to the terminals of the motor, an elevator designed to raise the track section in a horizontal position from contact with the end of the track in proximity to the ground into contact with the elevated end of the track and also bring into contact the trolley wheels with circuit wires, as and for the purpose specified.

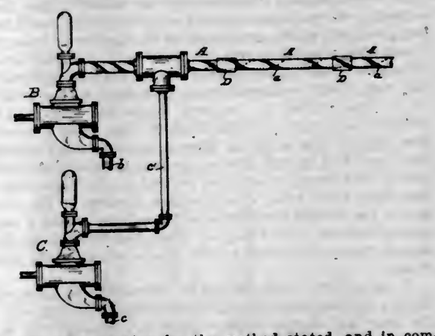
898,740. CASTER. EDWIN H. HUMPHREY, Battle Creek, Mich., assignor of one-third to Charles C. Blakely and one-third to Daniel W. Connors, Albion, Mich., and one-twelfth to Simon H. Bodenheim and one-twelfth to Gabriel S. Bodenheim, New York, N. Y. Filed Jan. 29, 1907. Serial No. 354,772.



A caster comprising a one-piece spindle carrying at one end portion a roller and having its other end portion circumferentially reduced and provided with a head and cleft at right angles to the roller axle through a part of the length of the reduced portion, a coiled spring mounted upon the said reduced portion and bearing at one end on the shoulder produced by the reduction, and a loose sleeve having one end surrounding the spindle below the shoulder and provided with an outward extending flange, and its other end provided with laterally projecting wings and with an inward extending flange that is engaged by the other end of the spring.

898,741. HELICALLY-CORRUGATED PIPE-LINE. JOHN D. ISAACS, Chicago, Ill., assignor to Rified Pipe Company, San Francisco, Cal., a Corporation of California. Filed Aug. 5, 1907. Serial No. 387,061.

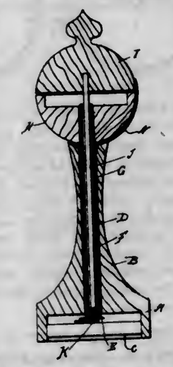
1. In a pipe-line for the method stated, the combination of pipe sections, each section, throughout ite entire length, being helically corrugated by corresponding exterior indentations and interior elevations, and a coupling sleeve encircling the adjacent ends of the pipe sections, said sleeve being interiorly corrugated to correspond with the exterior corrugations of the pipe sections, substantially as and for the purpose described.



2. In an apparatus for the method stated, and in combination with means for supplying the lighter and heavier fluids to a pipe-line, the pipe-line comprising pipe sections, each section, throughout its entire length, being helically corrugated by corresponding exterior indentations and interior elevations, and a coupling sleeve encircling the adjacent ends of the pipe sections, said sleeve being interiorly corrugated to correspond with the exterior corrugations of the pipe sections, substantially as and for the purpose described.

3. In a pipe line, for the method stated, the combination of a plurality of abutting pipe sections, a coupling member fitting over the respective sections at their adjoining ends, each pipe section being helically corrugated by exterior indentations and interior elevations and the coupling member being interiorly corrugated to correspond with the exterior corrugations of the pipe sections, through the medium of which complementary corrugations the sections are held together, the terminals of the corrugations on the respective sections constituting continuations one of the other, and the interior wall of the respective sections being otherwise free from perturbances.

898,742. CLOCK. GUSTAVE JAEGER, Philadelphia, Pa. Filed Aug. 14, 1907. Serial No. 388,455.



1. In a clock of the character described, a base, a stem formed therewith, said stem having a central opening therethrough, a clock works secured in the base, a tube D secured to the hour wheel of the clock works and passing through the stem, a spacing tube fitted over the tube D, a tube G also fitted over the tube D and adapted to revolve therewith by friction, a semisphere secured to the outer

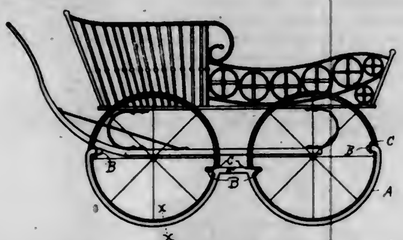
end of the tube G and adapted to indicate the hours, a spindle passed through the tube D, a squared socket formed upon the lower end of said spindle adapted to engage the squared end of the minute wheel arbor, a semisphere secured to the outer end of the spindle, said last named semisphere adapted to indicate the minutes, a stationary pointer adapted to register with the number upon both semispheres, and a base formed with the pointer, said base being secured to the upper end of the spindle and adapted to act as a washer bearing for the tube G, as specified.

2. In a clock, a base having a stem with an opening in the stem, clock works secured in the base, a tube secured to the hour wheel of the clock works and extending up through said stem opening, a short tube fitted over said first named tube, a second short tube frictionally engaged with said first named tube to revolve therewith, the lower end of said second short tube resting on the upper end of said first short tube, a semi-sphere secured to the outer end of the second short tube, and a spindle having a semi-sphere secured to its outer end extending through the first named tube and secured to the minute wheel of the clock works.

3. In a clock, a base having an apertured stem, a curved pointer having a portion rigidly secured to the top end of the stem and formed with an aperture alining with said aperture of the stem, a semi-sphere, a tube connected thereto and passed through said aperture of the pointer said pointer serving as a bearing for said tube, a second semi-sphere overlying the first, and means to support and operate each of said semi-spheres.

4. In a clock, a base having an apertured stem, a tube in said stem at the lower end of the latter, a pointer secured on the top end of the stem and having an aperture alining with the stem aperture, a second tube supported on the first tube and carrying a semi-sphere, said second tube extending through the pointer aperture, a second semi-sphere overlying the first semi-sphere, and means to operate each of said semi-spheres.

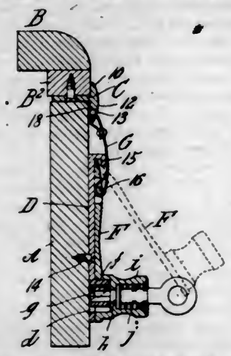
898,743. SLEIGH-RUNNER FOR VEHICLES. SADIE J. JENNINGS, Tremont, N. Y. Filed July 12, 1907. Serial No. 383,372.



In combination with the wheels of a vehicle, sleigh runners therefor each composed of two runner members of arc-like form, a horizontal connecting member rigidly secured to the inner ends of said runner members and having its end extremities projecting beyond said inner ends of said runner members to form clamp lugs, the outer ends of said runner members extending up and above said horizontal connecting member and being turned inwardly to form clamp lugs, a thumb screw for each pair of lugs, said horizontal connecting member serving as a brace which extends in the space between said wheels at points adjacent to their centers.

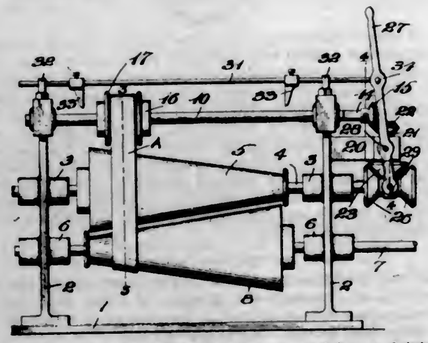
898,744. TRUNK-LOCK. JAMES B. JOHNSON, Springfield, Mass. Filed Nov. 21, 1907. Serial No. 403,175.

1. In a locking device, the combination of a stationary part and a hinged part designed to rest thereupon, a plate secured to the stationary part and having at one end thereof an opening, said plate having oppositely located and curved lugs, outstanding from one side thereof on each side of the opening, said lugs affording an interrupted cylindrical barrel and having relatively opposite side edges thereof inclined as cams and terminating in relatively opposite shoulders, a second plate hung for pivotal movement from the hinged part and provided at its free end with a forwardly projecting barrel, a key operated spindle fitted within the barrel and formed at its inner end with laterally and oppositely projecting wings which ride upon said inclined edges and engage under said shoulders, said second plate having a recess formed in its inner face and inclosing the inner end of said spindle, said lugs projecting into said recess in the locked relation of the parts and a torsional spring fitted within the barrel and connected thereto and to the spindle, said spring acting to hold the spindle in position to engage its wings under the shoulders.



2. In a locking device, the combination of a stationary part and a hinged part designed to rest thereupon, a plate secured to the stationary part and having at one end thereof an opening, said plate having oppositely located and curved lugs projecting forwardly therefrom at each side of the opening, said lugs affording an interrupted cylindrical barrel and having relatively opposite side edges thereof inclined as cams, said lugs having widened base portions formed with relatively opposite undercut shoulders, a second plate hung for pivotal movement from the hinged part and provided at its free end with a forwardly projecting barrel, a key operated spindle fitted within the barrel and formed at its inner end with laterally and oppositely projecting wings which ride upon said inclined edges and engage under said shoulders, said second plate having a recess formed in its inner face and inclosing the inner end of said spindle, said lugs projecting into said recess in the locked relation of the parts and a torsional spring fitted within the barrel and connected thereto and to the spindle, said spring acting to hold the spindle in position to engage its wings under the shoulders.

898,745. VARIABLE-SPEED MECHANISM. VICTOR JOHNSON, St. Louis, Mo. Filed Jan. 7, 1908. Serial No. 409,733.

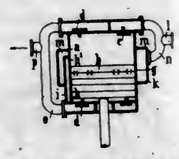


1. A variable speed mechanism, comprising a driving shaft, a driven shaft, oppositely disposed cone pulleys fixed on said shafts, a carriage arranged to travel longitudinally adjacent one of the cone pulleys, a pair of pulleys arranged for rotation in the carriage, a belt passing beneath the cone pulleys and over the pulleys on the carriage, and means thrown into operation by the carriage for automatically reversing the movement of said carriage.

2. A variable speed mechanism, comprising a driving shaft, a driven shaft, oppositely disposed cone pulleys fixed on said shafts, a carriage arranged to travel longitudinally adjacent one of the cone pulleys, a pair of pulleys arranged for rotation in the carriage, a belt passing beneath the cone pulleys and over the pulleys on the carriage, means actuated by the driving shaft for shifting the carriage longitudinally, and means whereby the shifting means is automatically reversed when the carriage reaches points in alinement with the ends of the cone pulleys.

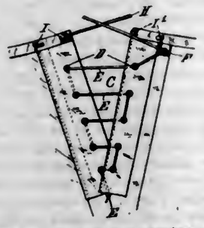
3. A variable speed mechanism, comprising a driving shaft, a driven shaft, oppositely disposed cone pulleys fixed on said shafts, a pair of supports adjacent one of the cone pulleys, one of which supports is adjustable, a carriage adapted to travel on the supports, pulleys arranged in the carriage, and a belt passing beneath the cone pulleys and over the pulleys on the carriage.

898,746. DOUBLE-ACTING WET-AIR PUMP. EMIL JOSSE, Berlin, Germany. Filed July 23, 1907. Serial No. 385,179.



The improved high speed upright double acting wet air pump comprising in combination with the cylinder *a* and the piston *b*, a passage *l* by which air and water are led from the condenser to said cylinder, a casing *m* surrounding said cylinder and adapted to communicate with the cylinder through slots *g* in the walls of said cylinders, said slots being located at a distance from the top end of the cylinder just greater than the distance of the lower end of the piston from said top end, a connection *n* between said passage *l* and said casing *m*, a connection between said passage and the upper part of said cylinder, said connection being partitioned into two branches, inlet and outlet valves *c* and *d* disposed in the respective branches, an external passage *i* communicating with the interior of the cylinder through openings in the walls of the cylinder, said openings being a distance apart slightly greater than the length of the piston, the lower opening located near the lower end of the cylinder, an outlet pipe *p*, branch connections *o*, from said outlet pipe to the upper and lower ends of the cylinder, and pressure valves *d* disposed in the branch connection *o*, as shown and described.

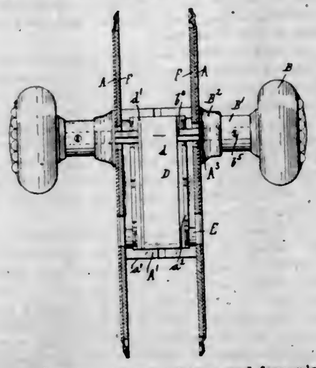
898,747. SKIRT. ABRAM KASSE, New York, N. Y., assignor of one-third to Simon Manheimer and one-third to Frederick C. Ficker, New York, N. Y. Filed Jan. 16, 1908. Serial No. 411,036.



1. A skirt having a placket, a series of eyelets to each side thereof, a tab secured to said skirt adjacent to the placket and having an eyelet, a draw string having its one end secured to the body of the skirt and extending through said eyelets from side to side, and finally extending through the eyelet in said tab and a tie string arranged to be tied with the free end of said draw string.

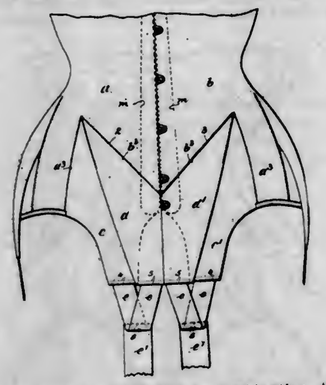
2. A skirt having a placket, a series of eyelets to each side of said placket, a tab having its one end free and its other end secured to the skirt adjacent to the placket, a draw string extending through both series of eyelets, and also through the eyelet in said tab, and having its one end secured to the skirt and a tie string arranged to be tied with the free end of the draw string.

898,748. LOCK. HENRY F. KEIL, Bronxville, N. Y. Filed May 14, 1906. Serial No. 316,656.



In a lock, a combined escutcheons and face plate to rest against the sides of a door and extending around its front edge and of greater dimensions than and overlapping a notch cut in the stile of the door, a lock-case inclosed in and supported by the said structure, means lying adjacent to an escutcheon to reinforce the same, and means whereby the face plate may be expanded in width.

898,749. APPAREL-CORSET. DANIEL KOPS, New York, N. Y. Filed Nov. 4, 1907. Serial No. 400,492.



1. In an apparel corset and in combination, two adjacent co-acting fabric parts prolonged from the fabric body of the corset and at least one of which in its entirety is free from its sewed line of union with the fabric body, and hose supporter devices connected thereto and applying tension in use, one of said parts under said tension pulling directly down upon the corset and the other part having an outwardly inclined line of tension pulling from the side and back and at an inclination to the other part.

2. In an apparel corset and in combination, two adjacent co-acting fabric parts prolonged from the fabric body of the corset, the sewed lines of union or connection therewith being at an angle to one another and at least one of which in its entirety is free from its sewed line of union with the fabric body, and hose supporter devices connected thereto and applying tension in use, one of said parts under said tension pulling directly down upon the corset and the other part having an outwardly inclined line of tension pulling from the side and back and at an inclination to the other part.

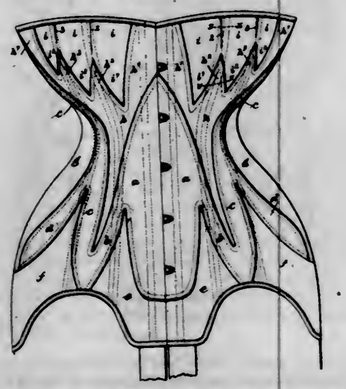
3. In an apparel corset and in combination, two adjacent co-acting fabric parts secured to and prolonged from the fabric body of the corset, and hose supporter devices connected thereto and applying tension in use, one of said parts under said tension pulling directly down upon the corset and the other part having an outwardly inclined line of tension pulling from the side and back and at an inclination to the other part.

4. In an apparel corset and in combination with the respective halves of the corset, two adjacent co-acting tapering parts in pairs, one pair upon each half of the corset and said co-acting parts connected to the fabric body upon lines of union that are at an angle to one another with the adjacent vertically disposed edges of similar members of the pair coming to the vertical center of the corset steels, and the lines of union of similar tapering parts being at a rising outwardly extending inclination from the abutting edges of the corset steels.

5. In an apparel corset and in combination with the respective halves of the corset, two adjacent co-acting tapering parts in pairs, one pair upon each half of the corset and said co-acting parts connected to the fabric body upon lines of union that are at an angle to one another, with the adjacent vertically disposed edges of similar members of the pair coming to the vertical center of the corset steels, the lines of union of similar tapering parts being at a rising outwardly extending inclination from the abutting edges of the corset steels, and tapering inclined straps f f^1, with skirt extensions or prolongations g g^1 and hose supporters h h^1 with the free ends of said straps f f^1 provided with series of eyelets and posts fastened in the corset steels at their lower ends adapted to engage said eyelets.

[Claims 6 to 10 not printed in the Gazette.]

898,750. APPAREL-CORSET. DANIEL KOPS, New York, N. Y. Filed Mar. 12, 1908. Serial No. 420,714.



1. A corset comprising in each half at the front, a part or member of fabric approximately of the letter M in form and said parts set in opposition and the edges of which come together when the corset is clasped.

2. A corset comprising in each half at the front, a part or member of fabric approximately of the letter M in form and said parts set in opposition and the edges of which come together when the corset is clasped and extend from near the upper end to near the lower end of the corset.

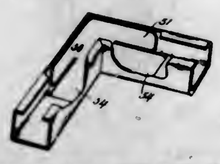
3. A corset comprising in each half at the front, a part or member of fabric approximately of the letter M in form and said parts set in opposition and the edges of which come together when the corset is clasped and extend from near the upper end to near the lower end of the corset and are associated in the upper part with main and auxiliary gore members coming between the upper prolongations of the parts of said letter M fabric form.

4. A corset comprising in each half at the front, a part or member of fabric approximately of the letter M in form and said parts set in opposition and the edges of which come together when the corset is clasped and extend from near the upper end to near the lower end of the corset, and between the lower ends of the limbs of which fabric form are flexible fabric portions extending below the same down over the hips.

5. A corset comprising in each half at the front, a main gore tapering at its lower end to a point and at its upper end formed with outer limbs that reach to the upper edge of the corset, and an intermediate auxiliary gore fitting within the former gore with inter-meshing or inter-locking gore points between the main and auxiliary gores.

[Claims 6 to 9 not printed in the Gazette.]

898,751. CONDUIT-COUPLING. HUBERT KRANTZ, New York, N. Y. Filed Oct. 18, 1907. Serial No. 398,086.



1. In combination, two conduit sections having an open face and turned over edges, having their ends in substantial contact, a coupling of approximately the cross sectional shape of the conduit within the conduit sections and means for securing said coupling to each conduit section.

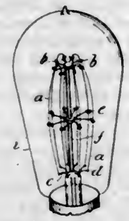
2. In combination, two conduit sections having an open face and turned over edges, having their ends in substantial contact, a coupling of approximately the cross sectional shape of the conduit within the conduit sections and means for securing said coupling to each conduit section, said means comprising a hooked member on the coupling, and a recess into which said hooked member may enter in the conduit.

3. In combination, two conduit sections having an open face and turned over edges, having their ends in substantial contact, a coupling of approximately the cross sectional shape of the conduit within the conduit sections and means for securing said coupling to each conduit section, said means comprising a hooked member on the coupling and a recess into which said hooked member may enter in the conduit, said hooked member extending as a plain sheet from that portion of the coupling which is of the approximate cross section of the conduit.

4. In combination, two conduit sections in substantial contact one with the other so as to provide a continuous through throughout the two, a coupling entirely within the two sections and spring means adapted to lock said coupling in place, said coupling lying against the inner wall of the conduit sections, whereby an open through is preserved.

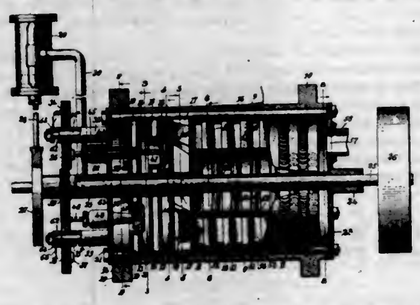
5. In combination, two conduit sections in substantial contact one with the other so as to provide a continuous trough throughout the two, a coupling entirely within the two sections and spring means adapted to lock said coupling in place, said coupling lying against the inner wall of the conduit sections, whereby an open trough is preserved, the conduit having turned over edges and an open face, the coupling having a flat bottom plate of the width of the conduit and upstanding sides of the height of the conduit.

898,752. METAL FILAMENT FOR ELECTRIC INCANDESCENT LAMPS. HANS KUZEL, Baden, near Vienna, Austria-Hungary. Filed July 16, 1907. Serial No. 383,954.



In an electric incandescent lamp, the combination of supply wires, a plurality of horse-shoe shaped metal filaments having their free ends connected to such supply wires, holding devices, means for supporting such holding devices in the bulb, the said holding devices being adapted to loosely guide longitudinally both legs of each filament at points intermediate between the points of connection of such legs to the supply wires and the bight of such filament, the distance of the points of connection between the free ends of the filament and the supply wires from the longitudinal axis of the lamp being different from the distance of the holding devices from the said axis, bight holders adapted to support such filaments at the bights and means for supporting the said bight holders, the distance of such bight holders from the longitudinal axis of the lamp being different from the distance of the neighboring holding devices from the said axis, substantially as and for the purpose described.

898,753. ELASTIC-FLUID TURBINE. WILLIAM F. LEES, HARRY A. LEES, and CHARLES W. GRISE, San Diego, Cal. Filed July 8, 1907. Serial No. 382,580.

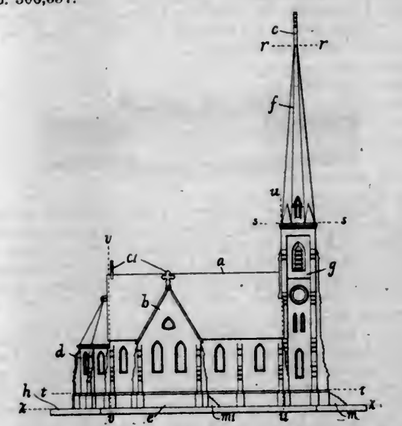


1. The combination of a receptacle for holding an explosive aeriform body under pressure, an explosion chamber, a valve for opening and closing communication between said receptacle and said explosion chamber, an expansion chamber connected by a passage with said explosion chamber, a second valve for opening and closing communication from said explosion chamber to said expansion chamber, turbine mechanism connected with said expansion chamber and driven thereby, stems connected to both of said valves for actuating them, and means for actuating said stems alternately.

2. The combination of a receptacle for holding an explosive aeriform body under pressure, an explosion chamber, a valve for opening and closing communication between said receptacle and said explosion chamber, an expansion chamber connected by a passage with said explosion chamber, a second valve for opening and closing communication from said explosion chamber to said expansion chamber, turbine mechanism connected with said expansion chamber and driven thereby, stems connected with said valves for actuating the same, and means controllable by said turbine mechanism for actuating said stems alternately.

3. The combination of an explosion chamber, a valve located therein, a gear provided with means for opening and closing said valve, a mounting for said gear, and means controllable at will for shifting the position of said gear relatively to said mounting for the purpose of varying the degree of control of said gear relatively to said valve.

898,754. EDUCATIONAL APPLIANCE. JOHN S. LITTELL, Brockport, N. Y. Filed Mar. 16, 1906. Serial No. 306,357.



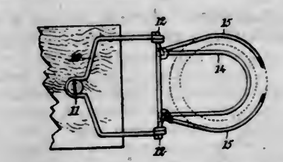
1. An educational appliance comprising a model of an edifice adapted to be used by an association or institution, divided into sections each illustrating a different feature of such institution.

2. An educational appliance comprising a model of an edifice adapted to be used by an association or institution, divided into sections each illustrating a different feature of such institution, the relations between the sections illustrating the relations between such features.

3. An educational appliance comprising a model of an edifice adapted to be used by an association or institution, divided into sections adapted in the natural order of their assemblement to illustrate the natural sequence of different features of such institution.

4. An educational appliance comprising a model of an edifice adapted to be used by an association or institution, divided into sections each illustrating a different feature of the institution, and adapted, in the natural order of their assemblement, to illustrate the natural sequence of such features.

898,755. RECEPTACLE-HOLDER. CHARLES C. LITTLE, San Jose, Cal. Filed Oct. 9, 1907. Serial No. 396,585.

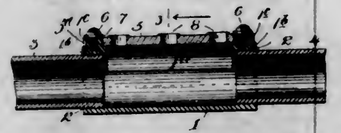


1. A receptacle holder comprising a wire hanger having the lower portion thereof bent at substantially right-angles thereto into U-form to provide a base on which the bottom of the receptacle is adapted to seat, a wire arm of substantially U-form from which the hanger is supported and extending in an opposite direction from that of the base and in a plane substantially parallel therewith when

the holder is in normal position, and wire loops rigidly attached at each side of the hanger providing spring-arms to bindingly embrace the receptacle when seated on said base.

2. A receptacle holder, comprising a wire arm bent into the form of a yoke with the free ends thereof coiled to provide apertures, a wire hanger having the free ends thereof oppositely turned and arranged within said apertures, the lower portion of said hanger being angularly bent to provided a base, and means carried by the hanger for embracing the receptacle when seated on said base.

898,756. OUTLET-BOX. GEORGE A. LUTZ, New York, N. Y., assignor to American Circular Loom Company, Portland, Me., a Corporation of Maine. Filed Jan. 5, 1907. Serial No. 350,864.



1. An outlet box in tubular form provided with an opening on one side between its ends providing ring-like parts adjacent the ends of said opening, combined with a cap having a gain provided with inner surfaces corresponding to said ring like parts adapted to fit over said box and close its side opening, and means for holding said cap upon the box.

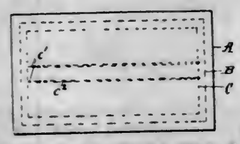
2. An outlet box in tubular form having an opening in one side providing ring-like parts adjacent the ends of said opening, combined with a cap having a gain provided with curved walls adapted to fit on the exterior of said ring-like parts and close the side opening in the box, and means for holding the cap upon the box.

3. An outlet box provided with an opening in one side and having studs near opposite ends, combined with a cap having a gain adapted to fit upon said box to close its side opening and provided with recesses to receive said studs, and screws entering threaded apertures in said studs and passing through the recesses in the cap to hold the latter upon the box.

4. An outlet box in tubular form provided with interior threads at its ends and having one side open between its ends providing ring-like parts adjacent the ends of said opening, combined with a cap having a gain provided with inner surfaces corresponding to said ring like parts adapted to fit over said box and close the side opening therein, and means for holding said cap upon the box.

5. An outlet box in tubular form having interior screw threads at its ends and provided with an opening in one side between its ends providing ring-like parts at the ends of the box adjacent the ends of said side opening, and studs projecting from said ring-like parts, combined with a cap adapted to fit over said box to close its side opening and provided with recesses to receive said studs, and means to hold the cap upon the box.

898,757. ADVERTISING DEVICE. EDWIN A. MASTICK, Jr., Cleveland, Ohio. Filed Nov. 21, 1907. Serial No. 403,133.

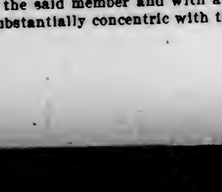


1. In a device of the class described, the combination of a folded inclosure, means for securing the latter in its folded condition, two cards placed within the folds of the inclosure, and an elastic band in tension secured to a corresponding end of each card passing around the outside of the other end of each card and adapted to eject said cards from the inclosure when the latter is unfolded.

2. In a device of the class described, the combination of a folded inclosure, means for securing the latter in its folded condition, two cards placed face to face within said inclosure, and an elastic band in tension secured near the edge of one card and passing around the opposite ends of both cards and secured near the edge of the other card corresponding to that of the other card to which said band is secured; said band adapted to eject said card from the inclosure when the latter is unfolded.

3. In a device of the class described, the combination of a folded inclosure, means for securing the latter in its folded condition, two flexible cards placed within said inclosure, and an elastic band in tension secured to a corresponding end of each card passing around the outside of the other end of each card, and adapted, when the inclosure is unfolded, to flex said cards and eject same from the latter inclosure.

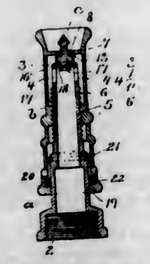
898,758. CARD-HOLDER. PETER M. MATHESON, San Juan, Porto Rico. Filed July 31, 1907. Serial No. 386,481.



1. A card holder formed of a single piece of wire bent intermediate of its length to form a loop shaped head from which project straight parallel members, one of said members being extended to form a pin and the other member being bent downward approximately parallel with the first mentioned portion thereof, and having its terminal projecting across the said head and forming therewith and with the said parallel members a clamp for securing the holder to a card.

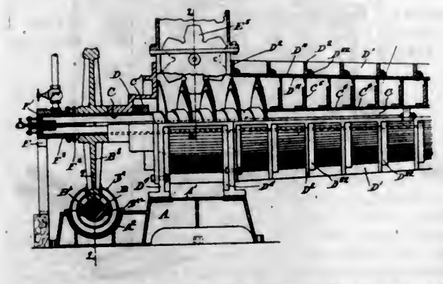
2. A cardholder formed of a single piece of wire bent intermediate of its length to form a loop shaped head from which project straight parallel members of unequal length, the shorter member being extended outwardly and downward to form a fastening pin, and the longer member extended in the opposite direction and extending downward approximately parallel with the straight portion thereof and having its terminal extending across the head.

898,759. HOSE-NOZZLE. JOHN H. MELAVIN, Cambridge, Mass. Filed Aug. 14, 1907. Serial No. 388,454.



A hose nozzle comprising a conduit member adapted for engagement with a hose, a tip carried by the conduit, and having a valve portion and a deflector portion outside the valve portion, and a sleeve adjustable longitudinally on the conduit member, and provided with a chamber communicating with the said member and with a contracted delivery outlet substantially concentric with the axial center of the conduit member, and of larger diameter than the said deflector portion, the wall of said outlet constituting a valve seat on which the valve portion of the tip is adapted to close, while the deflector portion of the tip is adapted to pass through the outlet, the tip being loosely mounted on the conduit member and adapted to have a limited lateral movement, whereby the deflector portion is prevented from binding on the wall of the delivery outlet while passing through the same, and is adapted to be automatically centered relatively to the said outlet.

898,760. CONTINUOUS-SCREW PRESS. ROBERT G. MERZ, Newark, N. J., assignor to American Process Company, New York, N. Y., a Corporation of West Virginia. Filed Apr. 30, 1907. Serial No. 371,182.



1. A continuous screw press comprising a screw and screw shaft, a frame carrying parallel slats and having legs, a cast bed plate on which the legs are mounted, an integral extension of the bed plate having a trough and a grooved bearing face, a sliding journal box in the grooved bearing face, a power shaft supported in the journal box carrying a worm gear rotating in the trough, and a gear wheel on the screw shaft meshing with the worm gear, substantially as described.

2. A continuous screw press comprising a screw and screw shaft, a frame carrying parallel slats and having legs, a cast bed plate on which the legs are mounted, an integral extension of the bed plate containing a trough and a grooved bearing face, a sliding journal box in the grooved bearing face, a slotted oil casing in the trough, a power shaft rotating in the journal box and carrying a worm gear rotating in the oil casing, and a gear wheel on the screw shaft passing through the slotted oil casing and meshing with the worm gear, substantially as described.

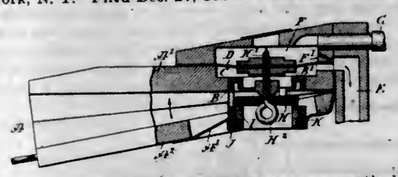
3. A continuous screw press comprising a screw and screw shaft, a frame carrying slats and having legs, a cast bed plate on which the legs are mounted having a trough, a slotted oil casing having side flanges resting on the bed plate and cylindrical extensions for supporting it in the trough, a power shaft carrying a worm gear rotating in the oil casing, and a gear wheel on the screw shaft passing through the slotted oil casing and meshing with the worm gear, substantially as described.

4. A continuous screw press comprising a screw and screw shaft, a frame carrying parallel slats and having legs, a cast bed plate on which the legs are mounted, an integral extension of the bed plate containing a trough, a slotted oil casing supported in the trough, a power shaft carrying a worm gear rotating in the oil casing, a gear wheel on the screw shaft passing through the slotted oil casing and meshing with the worm gear, and an inclined trough for returning the drippings from the gear wheel through the slot to the oil casing, substantially as described.

5. A continuous screw press comprising a frame, a screw and a hollow screw shaft therewithin, a plug in the hollow shaft, a blow-out pipe secured therein and a steam supply pipe passing into the blow-out pipe and upon which the blow-out pipe rotates, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

898,761. PNEUMATIC ACTION. HERMANN MEYER, New York, N. Y. Filed Dec. 27, 1907. Serial No. 408,292.



1. A pneumatic action provided with a pneumatic having a fixed member and a movable member provided with a flexible portion, a valve within the said pneumatic, and a valve casing connected with the said fixed member and with the flexible portion of the said movable member.

2. A pneumatic action provided with a pneumatic having a fixed member and a movable member provided with a flexible portion, a valve within the said pneumatic, and a valve casing connected with the said fixed member and with the flexible portion of the said movable member, the stem of the valve extending to the outside at the said flexible portion.

3. A pneumatic action provided with a pneumatic having a fixed member and a movable member provided with a flexible portion, a valve within the said pneumatic, a valve casing connected with the said fixed member and with the flexible portion of the said movable member, and a diaphragm connected with the stem of the said valve, the stem extending to the outside at the said flexible portion.

4. A pneumatic action, comprising a pneumatic having a fixed member and a movable member provided with a flexible portion, a diaphragm, a diaphragm chamber containing the said diaphragm, a wind chest connection for the said diaphragm chamber at one side of the diaphragm, a tracker board connection for the said diaphragm chamber at the other side of the diaphragm, a valve casing secured to the fixed member of the pneumatic and having a valve seat connected with the diaphragm chamber on the side of the said wind chest connection, a valve seat adjustably secured to the said valve casing, a valve adapted to be seated on either of the said valve seats and connected with the diaphragm, the said valve casing and the said adjustable valve seat being secured to the flexible portion of the movable member of the said pneumatic.

5. A pneumatic action, comprising a pneumatic having a fixed member and a movable member having a flexible portion, a diaphragm forming an air chamber at one side and a suction chamber at the other side, a valve casing secured to the said fixed pneumatic member and having a valve seat for connecting the said suction chamber with the interior of the said pneumatic, a second valve seat screwing in the said valve casing for connecting the interior of the pneumatic with the atmosphere, the said casing and the second valve seat being connected with the said flexible portion of the movable pneumatic member, a valve adapted to be seated on either of the said valve seats, and a valve stem for the said valve screwing in the said diaphragm.

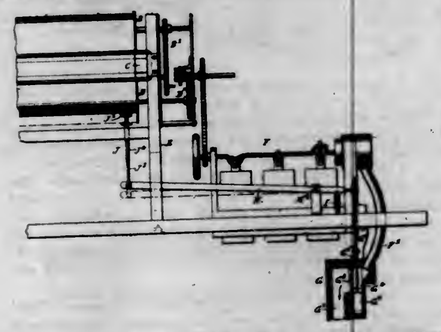
[Claims 6 to 8 not printed in the Gazette.]

898,762. SPEED-CONTROLLING DEVICE FOR NOTE-SHEETS. HERMANN MEYER, New York, N. Y. Filed May 5, 1906. Serial No. 315,412.

1. In a self-playing musical instrument, the combination of a winding mechanism having a winding up roller for the note sheet, a pneumatic motor for driving the said winding mechanism, a motor valve for controlling the speed of the motor, a compensating device having a lever connected with the said motor valve, and a rod mounted to slide and connected with the said lever, the rod having a button for engagement with the note sheet at the winding up roller.

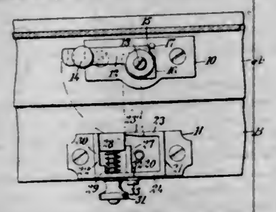
2. In a self-playing musical instrument, the combination of a winding mechanism having a winding up roller for the note sheet, a pneumatic motor for driving the said

winding mechanism, a motor valve for controlling the speed of the motor, a compensating device having a lever connected with the said motor valve, and a rod made in sections adjustably connected with each other, one end of the rod being connected with the said lever and the other end being adapted to be engaged by the note sheet at the winding up roller.



3. In a self-playing musical instrument, the combination of a winding mechanism having a winding up roller for the note sheet, a pneumatic motor for driving the said winding mechanism, a motor valve for controlling the speed of the motor, a compensating device having a lever connected with the said motor valve, a rod mounted to slide and connected with the said lever, the rod having a button for engagement with the note sheet at the winding up roller, and a spring connected with the compensating device, for holding the said button in frictional contact with the note sheet.

898,763. WINDOW-LOCK. LEON G. MILLER, New York, N. Y. Filed May 8, 1908. Serial No. 431,572.



1. In combination, a pivoted locking bolt, a keeper adapted to receive one end of said bolt, a longitudinally movable spring-pressed catch for engaging with said bolt and holding it in operative position, a handle for withdrawing said catch, and means for locking said catch against withdrawal.

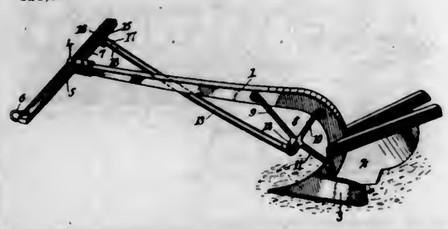
2. In combination, a pivoted locking member having a groove adjacent the end thereof, a keeper having a flange adapted to enter said groove, and an opening in the side of the keeper through which the end of said member may enter, and a spring-pressed catch within said keeper and normally closing said opening, said catch being forced inwardly by the movement of said operating member to its operative position and serving to prevent the return movement of said locking member.

3. In combination, a pivoted locking member, a longitudinally movable spring-pressed catch adapted to engage with one side of said member for holding it in operative position, a handle for withdrawing said catch, a projection carried by said handle, and means adapted to engage with said projection for normally preventing the withdrawal of the handle and catch.

4. In combination, a pivoted locking bolt, a keeper adapted to receive one end of said bolt, and a longitudinally movable spring-pressed catch carried by said keeper and adapted to be forced longitudinally in one direction by the movement of said locking bolt to its operative position and adapted to move in the opposite direction by the action of its spring to engage with the side of said locking bolt to prevent the return movement of the latter from its operative position.

5. In combination, a pivoted locking bolt, a keeper adapted to receive one end of said bolt, a longitudinally-movable spring-pressed catch carried by said keeper and adapted to be forced longitudinally in one direction by the movement of said locking bolt to its operative position and adapted to move in the opposite direction by the action of its spring to engage with the side of said locking bolt to prevent the return movement of the latter from its operative position, and a member carried by said catch and rotatable to prevent said longitudinal movement of said catch.

898,764. DRAFT DEVICE FOR PLOWS. ALBERT J. MINOR, Canton, S. D. Filed Mar. 2, 1908. Serial No. 418,674.



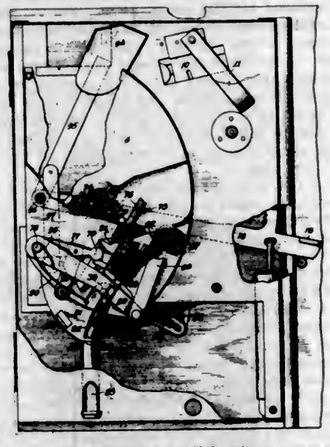
1. A plow comprising a beam, an evener pivotally attached to the forward end thereof and extending transversely of said beam, said evener having an arm projecting toward the left and an arm projecting toward the right, means for attaching draft animals to one of said arms, a strut crossing said beam in a diagonal direction, means for pivotally mounting the rear end of said strut near the rear end of said beam, a member telescoping with said strut at the forward end thereof, means for pivotally attaching said member to said evener in a plurality of different positions, and a removable member between said member and the end of said strut and against which said first member seats.

2. A plow comprising a beam, an evener pivotally attached to the forward end of said beam, with an arm extending toward the left and an arm extending toward the right, one of said arms having a plurality of openings therein, a strut extending diagonally with respect to said beam, means for pivotally mounting said strut near the rear end of said beam, a fork pivotally attached to said evener in one of said openings and having a stem telescoping with said strut, and a removable sleeve disposed around said stem and between said fork and the end of said strut.

898,765. VENDING-MACHINE. CHARLES E. MORRIS, Lane, Kans., assignor of one-half to Thomas D. Morrow, Lane, Kans. Filed Aug. 26, 1907. Serial No. 390,166.

1. In a vending machine, the combination of an article receptacle, means for discharging articles from said receptacle, an article chute for delivering the articles in succession, a hopper adapted to guide articles between said receptacle and chute, mechanism for causing said hopper to discharge toward one side such articles as fail to enter said chute, and mechanism for returning to said receptacle the articles so discharged from said hopper.

2. The combination of an article receptacle having a contracted throat, a reciprocating member movable across said throat for successively discharging articles therefrom, an article chute for delivering articles so discharged and having an open mouth at its upper end, mechanism for discharging articles at the lower end of said chute, said reciprocating member being adapted to deliver articles to said chute at a greater rate than said articles are discharged therefrom, and mechanism for returning to said receptacle articles which fail to enter said article chute.



3. The combination of an article storage receptacle, a vertically disposed article chute having an open upper end, means for delivering articles from said article receptacle to the upper end of said chute, mechanism for discharging articles from said chute, said means being operated through the operation of said mechanism and at each operation adapted to discharge from said storage receptacle a number of articles in excess of the number discharged from said chute, and means for returning to said storage receptacle articles which are discharged therefrom when said article chute is full.

4. In a vending machine, the combination of an article chute open at its upper end, a movable hopper mounted at the upper end of said chute and adapted to guide articles to said chute, means for intermittently delivering articles to said hopper, mechanism for shifting said hopper to cause the same to discharge toward one side articles which fail to enter said article chute, and mechanism for returning the articles so discharged to said delivery mechanism.

5. The combination of a chute adapted to support a series of articles endwise one above the other, a movable hopper mounted at the upper end of said chute and adapted to direct such articles endwise into said chute, said hopper being movable toward one side of said chute for discharging such of its contents as fail to enter said chute, mechanism for alternately shifting said hopper into and out of alinement with said chute, and mechanism adapted to receive the articles discharged from said hopper when out of alinement with said chute and to return such articles to said hopper when the same has returned to alinement with said chute.

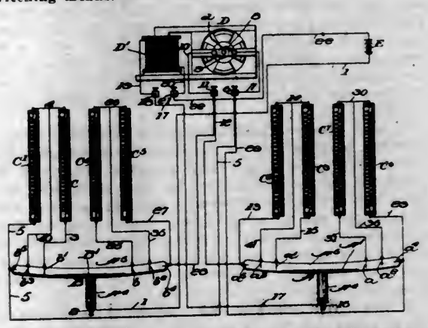
[Claims 6 to 12 not printed in the Gazette.]

898,766. ELECTRIC SWITCH AND SYSTEM OF CONTROL. JOSEPH V. MOTT, New York, N. Y. Filed Feb. 2, 1907. Serial No. 355,385.

1. A system of control, comprising a source of electric energy, an electric motor in circuit therewith, and a pole changing gravity operating switch mechanism having means whereby it includes variable resistance in the circuit between the motor and source of energy.

2. A system of control, comprising a source of electric energy, an electric motor, partial circuits between the motor and source of energy, and a pole changing switch mechanism which is responsive to rolling movements and is adapted to be tilted thereby in either direction and to selectively and successively close partial circuits according with the direction of the tilting movement.

3. A system of control, comprising an electric motor, a source of electric energy therefor, a plurality of partial circuits arranged in operative relation with the motor and source of energy, prescribed resistance included in said circuits, and a gravity operated switching means adapted to open and close said circuits in automatic succession to produce a varying and directional flow of current according with the direction and extent of movement of said switching means.

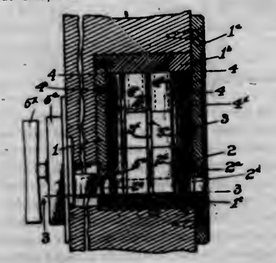


4. A system of control, comprising an electric motor, a source of electric energy therefor, a plurality of partial circuits arranged in operative relation with the motor and source of energy, prescribed resistance included in said circuits, and a gravity actuable switching means having a plurality of terminals and a mobile conducting means adapted to open and close said circuits in automatic succession to produce a varying and directional flow of current according with the direction and extent of movement of said switching means.

5. A system of control, comprising an electric motor, a source of electric energy, circuit connections between the same, a plurality of series of resistances, each having a plurality of resistance elements adapted to be included in series in, and partially and wholly excluded from the circuit to the motor, successively, and a gravity operating pole changing switching mechanism provided with means whereby it controls the inclusion of said resistance elements.

[Claims 6 to 17 not printed in the Gazette.]

898,767. LOCK. ALFONSO MERCER, Norfolk, Va., assignor of one-fourth to Herbert E. Page and one-fourth to William R. Butcher, Norfolk, Va. Filed Dec. 30, 1907. Serial No. 408,691.



1. In a lock, the combination of a casing, a set of disks therein provided with coincident slots, one of said disks being fast, tumblers in said slots normally locking the several disks together, a bolt, and means on the movable disk for operating said bolt; with a key adapted to engage said movable disk and move the tumblers into position to free the disk from the fixed disk, whereupon said movable disk can be rotated to actuate the bolt.

2. In a lock, the combination of a casing, a plurality of axially alined disks therein, having coincident slots, one

end disk being fixed, and the other end disk rotatable and having a bolt actuating device and provided with a key-way intersecting the slots; with a series of tumblers in said slots normally interlocking the disks, and a key adapted to enter said key-way and move the tumblers until they free the movable disk from the fixed disk.

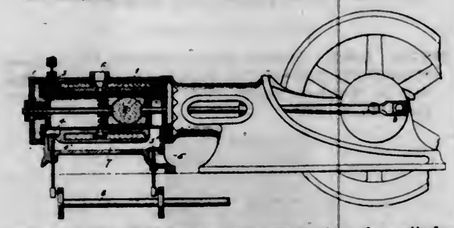
3. In a lock, the combination of a cylindric casing, a set of superposed disks therein provided with vertical coincident slots, tumblers in said slots, one of said disks being fast and the others movable, the tumblers however normally locking the several disks together, and bolt actuating devices on one of the movable disks; with a key adapted to engage the lowermost movable disk and raise the tumblers into position to free said movable disk from the fixed disk whereupon said movable disk can be rotated to actuate the bolt.

4. In a lock, the combination of a cylindric casing, a plurality of disks therein having radially disposed coincident slots, said disks being arranged one above the other, one end disk being fixed, the other disks being rotatable, and the outermost movable disk having a bolt actuating finger, and a curved key-way intersecting the slots; with a series of tumblers in said slots normally interlocking the several disks, and a key adapted to enter said key-way and raise the tumblers to free the movable disks from the fixed disk.

5. The herein described lock comprising a cylindric casing attached to a face-plate, a series of disks fitted in said casing, one above the other, the uppermost disk being fixed and the other disks rotatable, the lowermost disk having a bolt actuating device, and a key-way communicating with a key opening in the face-plate, each of said disks having a plurality of radially disposed slots registering when the disks are in normal position, a series of tumblers of different lengths in said slots, said tumblers normally interlocking the said disks and preventing rotation thereof; with a bolt engaged by the finger on the movable disk, and a key adapted to enter the key-way and raise the tumblers until the movable disk is freed from the fixed disk, whereupon the movable disk can be rotated by lateral thrust on the key.

[Claim 6 not printed in the Gazette.]

898,768. TWO-CYCLE DIESEL ENGINE. GEORGE F. MURPHY, Jersey City, N. J. Filed July 2, 1907. Serial No. 381,920.



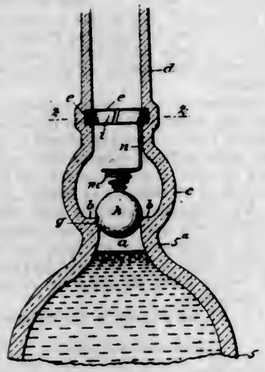
1. In a two cycle engine, the combination of a cylinder and piston, the space on one side of the piston being for combustion and having a clearance space so proportioned to the effective piston displacement at this end of the cylinder as to produce a compression and resulting temperature high enough to ignite the fuel to be consumed, the space on the other side of the piston being for initial compression, a valve controlled passage between the two spaces and coöperating with the movement of the piston to cause an initial compression simultaneously with the working or power stroke, and an exhaust port communicating with the said combustion and space at the conclusion of the combustion stroke and producing a diminution of effective piston displacement at this end of the cylinder greater than said clearance space thereat, whereby a scavenging charge in excess of the charge to be compressed for the working stroke is supplied.

2. In a two cycle engine, the combination of a cylinder and piston, the space on one side of the piston being for combustion and having a clearance space so proportioned to the effective piston displacement at this end of the cylinder as to produce a compression and resulting temperature high enough to ignite the fuel to be consumed, said cylinder having an exhaust port near its middle portion uncovered by the piston at the end of the piston stroke, said clearance space being of less volume than the displacement of the piston in passing said exhaust port, the space on the other side of said piston being for initial compression, and a valve controlled passage between the two spaces and coöperating with the movement of the piston to cause an initial compression simultaneously with the working or power stroke, whereby a scavenging charge in excess of the charge to be compressed for the working stroke is supplied.

3. In a two cycle engine, the combination of a cylinder and piston, the space on one side of the piston being for combustion and having a clearance space so proportioned to the effective piston displacement at this end of the cylinder as to produce a compression and resulting temperature high enough to ignite the fuel to be consumed, said cylinder having an exhaust port opened to the atmosphere during a distance of the piston movement corresponding to a displacement greater than said clearance space, the space on the other side of said piston being for initial compression, and a valve controlled passage between the two spaces and coöperating with the movement of the piston to cause an initial compression simultaneously with the working or power stroke, whereby a scavenging charge in excess of the charge to be compressed for the working stroke is supplied.

4. In an internal combustion engine, means for compressing a charge at one end of the engine cylinder, means whereby the compression is maintained at such end of the cylinder while the crank is passing the dead center, and means for thereupon admitting the charge so compressed to the combustion end of the cylinder.

898,769. BOTTLE-NECK AND CLOSURE THEREFOR. ANDREW MCCAMBRIDGE, Williamstown, N. J. Filed Apr. 9, 1908. Serial No. 426,043.



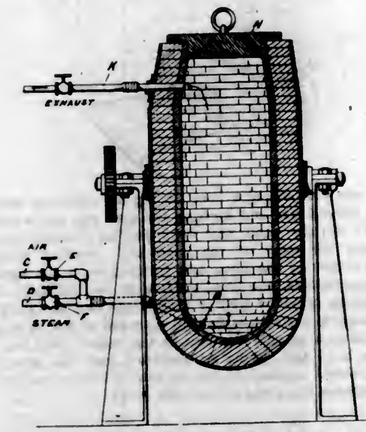
1. The combination with a bottle neck, having a valve seat therein, and an annular channel in its inner surface above the valve seat, of a spherical valve that engages the valve seat, an expansible split ring seated in the channel, an arm depending from the ring, and a spring on the lower end of said arm which presses on the valve.

2. The combination with a bottle neck, having a valve seat therein, and an annular channel in its inner surface above the valve seat, of a spherical valve that engages the valve seat, an expansible split ring seated in the channel, an arm depending from the ring, and an integral coiled spring on the lower end of said arm which presses on the valve.

3. The combination with a bottle having a valve seat in its neck, of a valve engaging the valve seat, a spring pressing on the valve to hold it to its seat, and a split ring secured in the bottle neck and to which one end of the spring is secured.

4. In a device of the character described, the resilient split ring, the wire rod arm depending from the ring, and the integral coiled spring formed on the lower end of the arm.

898,770. METHOD OF PRODUCING INGOTS FREE FROM BLOW-HOLES. WILLIAM F. M. MCCARTY, Pleasantville, N. Y., assignor of one-fourth to George O. Eaton, one-fourth to Thomas M. Acken, and one-thirtieth to Alexander J. Guttman, New York, N. Y. Filed July 12, 1907. Serial No. 383,488.



1. A process of treating metal to remove occluded or otherwise held gases therefrom which consists in subjecting said metal, while in the same molten state, to the action of superheated steam and to the action of a vacuum.

2. A process of treating metal to remove occluded or otherwise held gases therefrom which consists in subjecting said metal, while in the same molten state, to the action of superheated steam in intermittent jets or impulses and to the action of a vacuum.

3. A process of treating metal to remove occluded or otherwise held gases therefrom which consists in first passing superheated steam through said metal, while in a molten state, and then subjecting said metal, while in the same molten state, to the action of a vacuum.

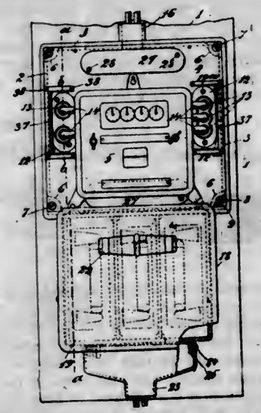
4. A process of treating metal to remove occluded or otherwise held gases therefrom which consists in passing superheated steam in intermittent jets or impulses through the metal, while in a molten state, and then subjecting said metal, while in the same molten state, to the action of a vacuum.

5. The hereindescribed method of producing ingots free from blowholes which consists in climinating occluded or otherwise held gases from molten metal by treating the metal, while in the same molten state, with superheated steam and vacuum, withdrawing said metal into a mold by and under the action of a vacuum, and permitting said metal to set or harden under diminished atmospheric pressure.

[Claim 6 not printed in the Gazette.]

898,771. COMBINATION ELECTRIC-SERVICE CUT-OUT AND METER-PANEL. HENRY E. MCGOWAN and EDWIN R. ELLSWORTH, New York, N. Y. Filed Mar. 9, 1907. Serial No. 361,443.

1. Means for inclosing electric service connections comprising a casing having two compartments, one of which has a movable cover plate adapted to support a meter and apertured for the passage of the meter connections into such compartment, and the other compartment being adapted to contain a cut-out and having a movable cover plate, said compartments being in communication with each other to permit electrical conductors connected with the cut-out in one compartment to be extended in the other compartment and through the apertured cover plate thereof for connection with the meter to retain the parts in relation.



2. Means for inclosing electric service connections comprising a shallow flattened casing having a compartment and provided with a flat movable cover plate adapted to support a meter and apertured for the passage of the meter connections into such compartment, and an extension pendent below the said casing and provided with a compartment having a movable cover plate and adapted to contain a cut-out, the said compartments of the casing and extension being in communication with each other to permit electrical conductors connected with the cut-out in one compartment to be extended in the other compartment and through the apertured cover plate thereof for connection with the meter to retain the parts in relation.

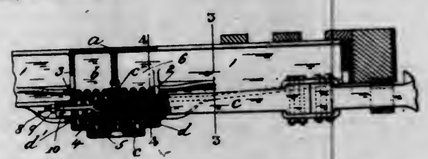
3. Means for inclosing electric service connections comprising a casing having a compartment and provided with a removable cover plate extended across said compartment and adapted to support a meter, said cover plate being provided with apertures for the passage of meter connections into said compartment, and being of symmetrical form to permit it to be turned about, when removed from the casing, and re-applied thereto, to present its apertures at different sides of the meter, whereby the device is rendered capable of employment in connection with meters of different types.

4. Means for inclosing electric service connections comprising a casing having two compartments, one of which has a removable cover plate adapted to support a meter and provided with apertures for the passage of the meter connections into said compartment, and the other compartment being adapted to contain a cut-out and having a movable cover plate, said compartments being in communication with each other to permit electrical conductors connected with the cut-out in one compartment to be extended in the other compartment and through the apertures in the cover plate thereof for connection with the meter to retain the parts in relation, and said meter supporting cover plate being of symmetrical form to permit it to be turned about, when removed from the casing, and re-applied thereto, to present its apertures at different sides of the meter, whereby the device is rendered capable of employment in connection with meters of different types.

898,772. DRAFT-GEAR FOR RAILROAD-CARS. WILLIAM MCINTOSH, Plainfield, N. J., assignor to Transom Draft Gear Company, St. Louis, Mo., a Corporation of Delaware. Filed June 15, 1907. Serial No. 379,275.

1. In draft-gear of the class described, the combination with the car body-bolster, of a draw-bar, two springs horizontally alined to each other at each side of the longitudi-

nal center of the said bar, a housing for the springs integral with the bolster, one of the said springs being adapted to bear at its outer end against the front wall of the housing and the other said spring at its outer end against the rear wall of the housing, and a cross-head on the said bar extending between and adapted to bear against the inner ends of, and to compress the said springs against the corresponding said walls respectively, in the "draft" and "buffing" movements of the said bar, the said housing having an inlet for the said springs and cross-head, and for the play of the said bar, substantially as described.



2. In draft-gear of the class described, the combination with the car body-bolster, of a draw-bar, a front spring and a rear spring at each side of the longitudinal center of the said bar, a housing for the springs integral with the bolster, the said rear springs being adapted to bear at their outer ends against the rear wall of the housing, a cross-head on the said bar adapted to bear against the inner ends of the rear springs, a bolt projecting from the cross-head and adapted to play through, an opening therefor in the said wall, a nut on the bolt, and a block removably interposed between the said nut and wall, substantially as described and for the purpose set forth.

898,773. SHAVING-MUG. THOMAS D. MCKOWN, Pittsburg, Ga. Filed Oct. 7, 1907. Serial No. 396,225.

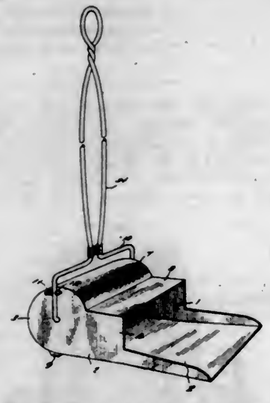


1. A shaving mug, comprising a covered water-container having openings in the top, and a soap holder removably arranged in one of said openings and extending into said container, the other of said openings permitting a brush to be inserted in said container, said openings being so positioned that said soap holder is held spaced from the sides of said container to permit water in said container to surround said soap holder, and that a brush can be inserted through the other of said openings without interference by said soap holder.

2. A shaving mug, comprising a water container having a top, said top having openings intermediate the edges and remote therefrom, a soap holder removably arranged in one of said openings and extending into said container, said container constituting a water jacket for said holder, and removable covers for said holder and the other of said openings.

3. A shaving mug, comprising a water container having a top, said top having openings intermediate the edges and remote therefrom, a soap holder having a laterally disposed flange and removably arranged in one of said openings, said flange seating at the top of said container, said holder extending into said container to a point intermediate of the top and bottom thereof and being spaced from the sides thereof, said container constituting a water jacket for said holder, and removable covers for said holder and the other of said openings.

898,774. DUST-PAN. JOSEPHINE M. NIVER, Chicago, Ill. Filed May 18, 1907. Serial No. 374,321.



A dust pan comprising a base having an upwardly and forwardly curved rear end forming the rear and top walls of a nearly circular hood, side walls having circular rear ends closing the sides of the hood and provided with steps in advance of the hood and forming with the base the entrance thereto, the front portion of the top wall of the hood being provided with a rearwardly and upwardly curved extension forming with said rear end of the base a coil, providing a trough disposed in the upper front portion of the hood and having an upturned rear end, and a horizontal shield closing the top of said entrance and extending between the steps of the side walls.

898,775. AIR CONVEYER. EDWIN NORTON, Lake Placid, N. Y. Filed Apr. 14, 1908. Serial No. 427,073.



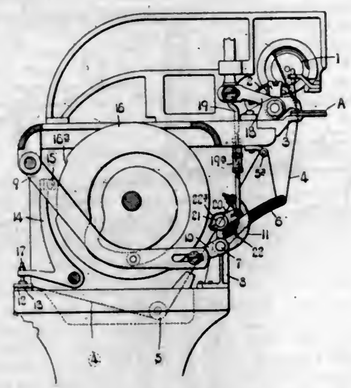
1. The combination of a sheet or pack rolling-mill, an air conveyer for the hot rolled sheets or packs, said air conveyer comprising a casing provided with air ducts constructed so as to direct air from the casing upwardly against the sheets or packs and forwardly in the direction in which the the same are to be conveyed, and means for artificially cooling the air before it is discharged against the said sheets or packs being conveyed.

2. The combination of a sheet or pack rolling-mill, an air conveyer for the hot rolled sheets or packs, said air conveyer comprising a casing provided with air ducts constructed so as to direct air from the casing upwardly against the sheets or packs and forwardly in the direction in which the same are to be conveyed, and pipes for the circulation of a refrigerating material arranged in the path of the air before its contact with said sheets or packs.

898,776. THREAD-MEASURING MECHANISM FOR SEWING-MACHINES. CHRISTIAN PEDERSEN, St. Louis, Mo., assignor to Landis Machine Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 10, 1907. Serial No. 405,926.

1. A sewing machine provided with a thread-measuring mechanism, comprising a shuttle which is adapted to enter a loop in the needle thread, a device for taking up the slack in the thread between the source of supply and

the stock being operated on, and means controlled by the presser-foot of the machine for arresting the movement of said take-up device before the shuttle has passed out of the loop in the thread so that the shuttle will draw thread from the supply; substantially as described.



2. A sewing machine provided with a thread-measuring mechanism, comprising a shuttle which is adapted to enter a loop in the needle thread, a device for taking up the slack in the thread between the source of supply and the stock being operated on, a member for arresting the movement of the take-up device before the shuttle has passed out of the loop in the thread to cause the shuttle to draw thread from the supply, a presser-foot, and a connection between said member and presser-foot; substantially as described.

3. A sewing machine provided with a thread-measuring mechanism which consists of the following elements, a shuttle that is adapted to enter a loop in the needle thread, automatic means for intermittently clamping and releasing the needle thread, a take-up device engaging the thread between the stock being operated on and said clamping means, and means controlled by the presser-foot of the machine for arresting the movement of said take-up device before the shuttle has passed out of the loop in the thread so that said shuttle will pull different quantities of thread off the supply as the stock varies in thickness; substantially as described.

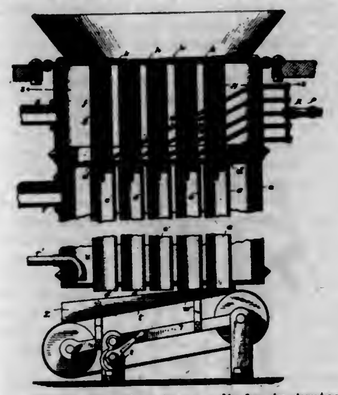
4. A sewing machine provided with a thread-measuring mechanism, comprising a shuttle that is adapted to pull thread from the supply, a take-up arm, a cam adapted to engage and limit the upward movement of said arm, a presser-foot, and a connection between said cam and presser-foot; substantially as described.

5. A sewing machine provided with a presser-foot, a take-up arm for keeping the needle thread taut, a cam for limiting the movement of said take-up arm in one direction, a presser-foot, a connection between said cam and presser-foot, and a shuttle for pulling thread from the supply after said take-up arm has come to rest; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

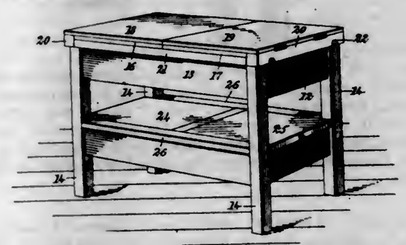
898,777. APPARATUS FOR CONTINUOUS COOKING. HENRY D. PERKY, Niagara Falls, N. Y.; Laban Sparks, administrator of said Henry D. Perky, deceased, assignor to The Shredded Wheat Company, Niagara Falls, N. Y. Filed Oct. 1, 1903. Serial No. 175,379.

An apparatus for continuous cooking consisting of an upright steam vessel, having a ventilating compartment, and above said compartment a hopper, a plurality of open-end cooking tubes in said steam vessel and having perforated ventilating portions located in said compartment, a series of valved water pipes extending into the upper portions of said cooking tubes, and an adjustable



moving receiver below the steam cylinder in juxtaposition to the discharging ends of said tubes.

898,778. TABLE. AGNES B. PHELAN, Alliance, Nebr. Filed Apr. 28, 1908. Serial No. 429,624.

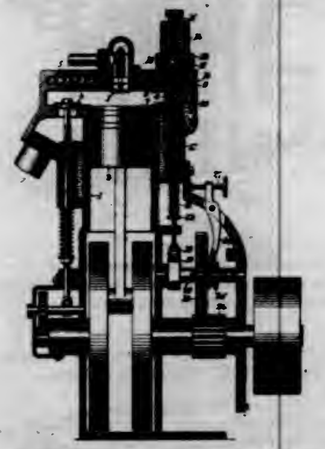


A table having a chamber or compartment and a table top, said top being formed of four sections, two sections being hinged upon each end of the compartment, whereby all of the sections may be folded over the compartment, or all of the sections may be folded outwardly to uncover the compartment, or two of said sections may remain over said compartment to close the same and the other two of said sections folded outwardly and into alinement with the two compartment-covering sections.

898,779. GAS-ENGINE IGNITER. WILLIAM C. PLANK, Las Flores, Lower California, Mexico. Filed Sept. 11, 1906. Serial No. 334,095.

1. An internal combustion engine, comprising a main cylinder, an auxiliary cylinder communicating with the main cylinder by inlet and exhaust ports entering the main cylinder adjacent the outer end thereof, a piston within the auxiliary cylinder, serving to close the inlet port of said auxiliary cylinder, a second piston within said auxiliary cylinder and normally closing the exhaust port thereof, a piston rod carried by said second piston, means for supporting and guiding said piston rod, said means having a cylindrical recess, a collar carried by said piston rod and adapted to coöperate with said recess to form a cushion upon the inward movement of the last-mentioned piston, and a spring in engagement with said collar and normally forcing the piston into its exhaust port closing position, the auxiliary cylinder being provided with an air exhaust port intermediate its ends and communicating with the outside atmosphere, whereby the movement of the exhaust port closing piston is cushioned when the latter approaches either of its two limiting positions.

2. An igniter for internal combustion engines, comprising an ignition cylinder having an exhaust port delivering to the engine cylinder, a piston within said ignition cylinder, means for reciprocating said piston to compress the charge in the ignition cylinder to the point of ignition, a second piston within said ignition cylinder and normally closing the exhaust port thereof, a piston rod carried by said second piston, a collar carried by said piston rod, and



a spring in engagement with said collar, the wall of the auxiliary cylinder being provided with a passage communicating with the atmosphere, whereby the air may escape to permit outward movement of the second piston, and said wall being also provided with a recess adapted to receive the collar and cushion the inward movement of the piston.

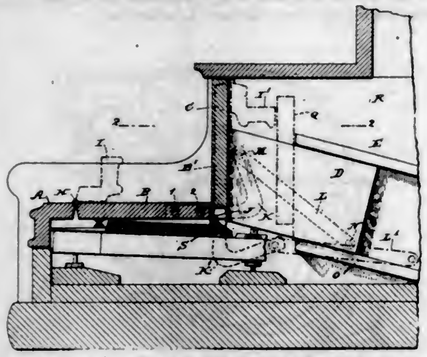
898,780. SAW-SET. WILLIAM M. POTTER, Syracuse, N. Y., assignor to E. C. Stearns & Co., Syracuse, N. Y. Filed Dec. 28, 1901. Serial No. 87,570.



In a saw-set, a rotary eccentrically pivoted anvil provided with a concentric beveled anvil-face in combination with a setting device to coöperate with the said beveled face, substantially as shown and described.

898,781. FALL-BOARD MECHANISM FOR PIANOS. CLARENCE E. PRYOR, Binghamton, N. Y. Filed July 12, 1907. Serial No. 383,531.

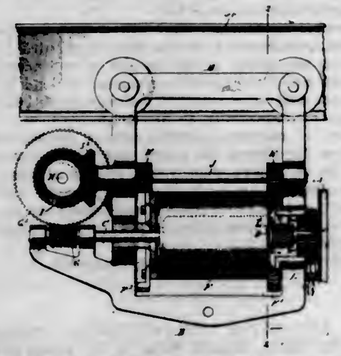
1. In a piano, the piano body having a fall board comprising two sections, one in front of the other, the first section hinged to the second section, the second section hinged to the piano body, projecting metallic arms firmly attached to the second section of the fall board; links within the piano body having pivotal connection with the arms on the second section of the fall board; an upright back fall behind such fall board forming the front of the piano case, sliding blocks secured to the back fall and projecting into the interior of the piano body; parallel shoulders projecting from either side of the piano body and between which said sliding blocks move and are guided, the links having pivotal connection with the sliding blocks, and when moved inward by the lifting of the second section, pushing inward the blocks so that when the second section is tipped, the upright back fall will be caused to move inward guided by the sliding blocks and leaving an open space for the reception of the second section, which then becomes raised to an upright position.



2. In a piano, the piano body having a fall board composed of two sections hinged together, the front section extending down over the outer ends of the key bars, its inner edge hinged to the second section, and so connected as to permit of its being folded over back upon the second section, the second section hinged on its inner edge to the piano body, and capable of being raised by this hinged connection into an upright position, carrying with it the first section folded over upon it; said piano body having an upright movable front, having on each end arms extending within the body and parallel with the sides of the body, inclined guides carried by the piano body to receive said arms, each arm having link connection with the second section of the fall board.

3. The combination with a piano or like instrument, of a fall board protecting the keys thereof, a back fall in rear of the fall board and adapted to be shifted backward into the piano case, downwardly and rearwardly inclined arms carried by the back fall, similarly inclined guides on the sides of the piano to receive said arms and direct the fall board, and connections between the fall board and back fall to cause the back fall to retreat into the piano case as the fall board is opened.

898,782. ELECTRIC HOIST. GUSTAV RASMUS, New York, N. Y. Filed Jan. 28, 1908. Serial No. 412,955.



1. In a device of the class described, a carriage, a drum journaled in the frame of the carriage and provided at each end with gear wheels, a shaft provided with an armature journaled in the drum, said shaft having at one end a worm, a shaft journaled in the frame above the drum, and provided with pinions meshing with the gear wheels, and on its end with a bevel gear wheel, a shaft arranged transversely of the drum, and provided with a worm wheel in mesh with the worm, and with a bevel gear wheel in mesh with the first named bevel gear wheel, and magnets within the drum and connected thereto, and coöperating with the armature of the shaft.

2. A device of the class described, comprising a carriage, a drum, journaled in the frame of the carriage, a shaft provided with an armature journaled in the drum, and having at one end a worm, a shaft journaled in the frame above the drum, a driving connection between the shaft and the drum, a shaft arranged transversely of the drum, a worm wheel thereon meshing with the worm, a bevel gear connection between the said shaft and the last named shaft, and magnets within the drum, and connected thereto and coöperating with the armature of the shaft.

898,783. VARIABLE-SPEED MECHANISM FOR CHAINLESS BICYCLES. FRANCIS H. RICHARDS, Hartford, Conn. Filed Apr. 20, 1898, Serial No. 678,235. Renewed Oct. 11, 1905. Serial No. 282,323.



1. The combination with a casing having interiorly a hub provided with a projecting bracket, the latter being connected to the casing, of a driving shaft mounted in said hub; differential gears carried by said driving shaft; a gear carrier journaled in the bracket and casing; gears of different sizes loosely mounted on said gear carrier and meshing with the shaft differential gears; a gear fixed to said gear carrier; a driven shaft having a gear in mesh with said fixed gear; and a clutch for locking the desired loosely-mounted gear to the gear carrier.

2. The combination, with a pedal-shaft, of a casing having a hub in which said shaft is mounted; a differential gear secured to the pedal-shaft and inclosed by the casing; brackets projecting from the hub and the casing; a tubular gear-carrier journaled in said brackets; a gear fixed to said gear-carrier; gears of different sizes loosely mounted on the gear-carrier; a clutch; a shiftable member working in the tubular gear-carrier and serving to actuate said clutch; and means connecting the fixed gear on the gear-carrier with the driven wheel of the velocipede.

3. The combination, with a casing having a partition and a hub, of a pedal-shaft mounted in the hub; an internal gear having a series of sets of teeth, one set of different diameter from another set, secured to the pedal-shaft and mounted in one of the compartments of the casing; a gear-carrier journaled in a bracket projecting from the hub and in said partition; a series of gears of different sizes loosely mounted on said gear-carrier; a fixed gear carried by the gear-carrier; a shiftable member carrying a clutch for engagement with notches in either of the gears loosely mounted on the gear-carrier; means for actuating said shiftable member; a side shaft carrying a gear at one end in mesh with the fixed gear of the gear-carrier, and also having a gear at its opposite end; and a driving-wheel the hub of which has a gear in engagement with the gear of the side shaft.

4. In a velocipede, the combination with a casing, of a pedal shaft mounted in the casing; gearing comprising sets of driving teeth of different pitch diameters carried by said pedal shaft; a gear carrier located forwardly of the pedal shaft; gears of different pitch diameters loosely mounted on the gear carrier and having clutch-receiving notches; a shiftable member having a clutch pin; means for actuating said shiftable member to cause the clutch pin thereof to engage one of the loosely-mounted gears or to assume an idle position between said gears; a fixed gear carried by the gear carrier; and gearing for connecting said fixed gear with the driving wheel of the velocipede, comprising a rearwardly-extending side shaft located above the pedal shaft and operatively connected with said fixed gear on the gear carrier.

5. In a velocipede, the combination with a casing having an interiorly-located hub portion with a laterally-projecting bracket, of a pedal shaft mounted in said hub; an internal gear having rings of teeth of different diameters carried by the pedal shaft; a gear carrier located forwardly of the pedal shaft and mounted in the bracket projecting from the hub and in a part of the casing; loosely mounted gears of different diameters carried by the gear carrier; a clutch for locking any of said gears to said gear carrier; means for actuating the clutch; a bevel gear fixedly secured to the gear carrier; a side shaft passing through the casing above the pedal shaft and having a bevel gear at one end forwardly of the pedal shaft in mesh with the bevel gear on the gear carrier; a casing surrounding said shaft; a bevel gear at the opposite end of said shaft; and a bevel gear on the driving wheel with which said last-named bevel gear is in mesh.

[Claims 6 to 15 not printed in the Gazette.]

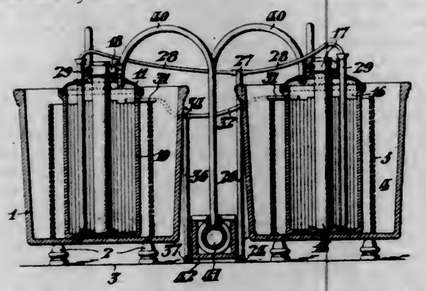
898,784. FISHING-FLOAT. WILLIAM VON ROSENBERG, Jr., Austin, Tex. Filed June 2, 1908. Serial No. 436,260.



A fishing float, comprising a buoyant body having elongated rigid projections at each end and having its greatest diameter at a point intermediate said ends, and means for engaging the fish line in a manner to permit of the line responding to its tendency to assume an approximately straight line when put under tension by resistance, and to permit of the ready attachment and detachment of the float without cutting the line or removing the hooks or sinker, said means comprising a friction clamp on the float at about its point of greatest diameter, guides secured to the rigid end projections of the float, each of the said end guides consisting for its major portion of an elongated, flexible member projecting from the float in the

form of a straight shank approximately coincident with the longitudinal axis of the float, and a plurality of spiral coils formed on the outer end of the straight shank, the coils having an axis extending in the direction of the straight flexible shank, and said shank being of a length to permit the coils to move under the strain exerted by a tension on the line to a plane about parallel with the longitudinal axis of the float and approximately in line with the friction clamp located at about the point of greatest diameter of the float.

898,785. ELECTROLYTIC APPARATUS. MARCUS RUTHENBURG, Lockport, N. Y. Filed Jan. 18, 1907. Serial No. 352,901.



1. In an electrolytic apparatus, the combination with cells, comprising outer tanks and inner porous cups, means to exclude the atmosphere from said cups, and electrodes respectively interior and exterior with respect to said cups; of means connecting said electrodes with a generator; means connecting said cups with a supply of sodium chlorid solution arranged to deliver said solution into said cups at the bottom thereof and withdraw it from the top thereof; means arranged to direct a solution of sodium hydrate from the bottom of one cell, exterior to its cup, to the top of the next cell, exterior to its cup; and means connecting said porous cups, at the tops thereof, with a chlorin conduit leading to absorbing material, substantially as set forth.

2. In an electrolytic cell, an electrode comprising a cylinder formed of volute layers of wire cloth; and, means maintaining said layers in spaced relation, comprising a connection bar extending parallel with the axis of said cylinder, washers interposed between said layers, and bolts connecting said washers with said bar, substantially as set forth.

3. In an electrolytic cell, an electrode comprising a cylinder formed of volute layers of wire cloth; and means maintaining said layers in spaced relation, comprising a connection bar, washers interposed between said layers, and bolts connecting said washers with said bar, substantially as set forth.

4. In an electrolytic apparatus, the combination with cells, comprising outer tanks and inner porous cups, means to exclude the atmosphere from said cups, and electrodes respectively interior and exterior with respect to said cups; of means connecting said electrodes with a generator; means connecting said cups with a supply of liquid, arranged to deliver said liquid into said cups at the bottom thereof and withdraw it from the top thereof; means arranged to direct another liquid from the bottom of one cell, exterior to its cup, to the top of the next cell, exterior to its cup; and means connecting said porous cups, at the tops thereof, with a conduit leading to absorbing material, substantially as set forth.

5. In electrolytic apparatus, the combination with a series of cells; of porous cups in the respective cells; anodes and cathodes in said cells, respectively within and without said porous cups; a conduit common to all of said cups, having branches arranged to respectively deliver fluid therein; and outlet pipes arranged to direct a fluid from the bottom of each cell, exterior to its cup, to the top of the next cell, exterior to its cup; whereby the concentrated portion of fluid in the cathode chamber of each cell may be delivered to the cathode chamber of the next succeeding cell, substantially as set forth.

898,786. PACKING DEVICE. JAMES SAUNDERS, East McKeesport, Pa. Filed May 29, 1908. Serial No. 435,794.

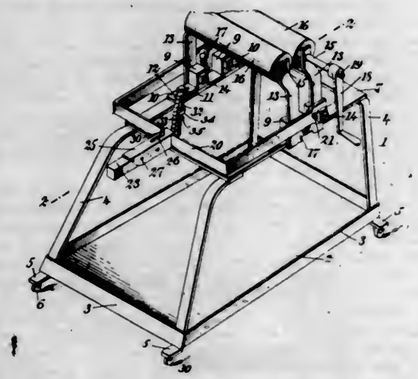


1. A packing comprising a split ring having a beveled seat, said ring having a plurality of recesses formed therein, a spring mounted in each recess, confronting ends of said ring having slots formed therein, a connecting member of less length than said slots and adapted to fit therein, said member being beveled to conform to the seat of said ring, and pins arranged transverse of one end of said ring for holding said member within said slots.

2. A packing comprising a split ring having a beveled seat, said ring having a plurality of recesses formed therein, a spring mounted in each recess, confronting ends of said ring having slots formed therein, a connecting member of less length than said slots and adapted to fit therein, said member being beveled to conform to the seat of said ring, and means for securing said member to one end of said ring.

3. A packing comprising a split ring having a beveled seat, and a connecting member secured in one end of said ring and extending into the opposite end thereof, said member being beveled to conform to the seat of said ring.

898,787. WRINGER. DAVID A. SAWYERS, Unionville, Iowa. Filed July 24, 1907. Serial No. 385,255.



1. A wringer, comprising movable members provided with wringing means, said members having parts in engagement whereby the movement of one member in one direction effects a movement of the other member in an opposite direction, a bail movably mounted upon one of said members and having a part controlling the same whereby a pivotal movement of said bail approaches or separates said members, said part of said bail being so formed that said bail by a predetermined adjustment can be rendered pivotally movable, independently of said member upon which it is pivoted.

2. A wringer, comprising movable members constituting wringing means, said members having parts normally in engagement such that a movement of one of said members in one direction effects a movement of the other of said members in an opposite direction, one of said members having a stud, and a bail having an opening adapted to receive said stud whereby said bail is movably mounted upon said member having said stud, said opening having a part formed to receive said stud whereby said bail can be operated to control said members by a pivotal movement, said opening further having a part formed to receive said stud whereby said bail can move pivotally independently of said member.

3. A wringer, comprising pivoted supports, wringing means carried by said supports, said supports engaging, one with the other whereby each of said supports is moved in one direction when either of said supports is moved in the opposite direction, a pivoted handle bail having means for engaging one of said supports operatively and inoperatively and controlling the movement thereof, and resilient means for holding said bail in position such that said supports are substantially adjacent.

4. A wringer, comprising a frame adapted to support a receptacle and having pivoted roller supports, rollers carried by said roller supports, said roller supports engaging one with the other, whereby each of said rollers is moved in one direction when the other of said rollers is moved in the opposite direction, a pivoted handle bail having means for engaging one of said roller supports operatively and inoperatively and controlling the movement thereof, and resilient means for holding said bail in position such that the rollers are substantially adjacent.

5. A wringer, comprising a frame adapted to support a receptacle, pairs of roller supports pivotally mounted upon said frame at opposite sides thereof and having toothed segments normally in mesh, rollers mounted between corresponding roller supports, a bail pivotally connected with corresponding roller supports and controlling the same whereby said rollers are approached or separated as said bail is swung in one direction or the other, and resilient means for holding said bail in position such that the rollers are substantially adjacent.

[Claims 6 to 8 not printed in the Gazette.]

898,788. CURTAIN-FIXTURE. CHARLES A. SCHEIF, Pittsburg, Pa. Filed Sept. 11, 1907. Serial No. 392,292.



1. A curtain pole comprising a coil spring, a rod fitting within the spring and extending approximately to the ends thereof, and fastening means carried by the ends of said coil spring.

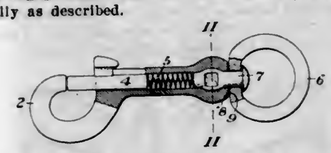
2. A curtain pole comprising a coil spring, a rod fitting within the spring and extending approximately the length thereof, and fastening means detachably-secured to the ends of said spring.

3. A curtain pole comprising a closely wound coil of wire, a rod fitting neatly in the coil and extending approximately the length thereof, and fastening means carried by the ends of said coil.

4. As a new article of manufacture, a curtain pole comprising an outer sleeve formed of a closely wound wire coil, a rod inclosed thereby and on which the coils of the wire are free to expand and retract, the said rod extending approximately the length of the outer sleeve, and fastening means carried by the ends of said sleeve.

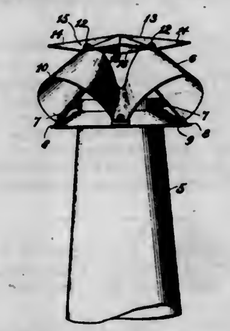
898,789. SNAP-HOOK. WILLIAM A. SCHLEICHER, Cleveland, Ohio. Filed Oct. 7, 1907. Serial No. 396,133.

1. In a swivel snap hook, a hook proper having a tubular shank, a loop or eye, and a stud or rivet passed loosely through the end bar of the loop or eye into the opening in the tubular shank and having an enlarged portion in locking engagement with the walls of the opening, substantially as described.



2. In a swivel snap hook, a hook having a tubular shank, a loop or eye, and a stud or rivet passed loosely through the end bar of the loop or eye and into the end of the tubular shank, the latter being recessed or cut away at opposite sides, and the end of the stud or rivet being enlarged at these recessed or cut-away portions and in securing engagement with the walls of the opening, substantially as described.

898,790. CHIMNEY CAP AND VENTILATOR. AUGUST A. SCHUPINSKY, Milwaukee, Wis. Filed Apr. 29, 1907. Serial No. 370,788.



An improved chimney cap and ventilator, comprising a wind guard, a ventilator formed of sheet metal bent into inverted U-shaped bends, the converging lower connecting portions of which are slightly flattened to receive bolts, a cap connected to said ventilator, and an inverted cone like shaped deflector provided with channels, said channels being in line radially with the vertical centers of the space between the inverted U-shaped portions of the ventilator and disposed above said ventilator and adapted to deflect gases and smoke therefrom, and also deflect and converge air currents across the flue of the chimney.

898,791. SOUND-REPRODUCING MACHINE. JULIUS SCHWAN, New York, N. Y. Filed Aug. 20, 1907. Serial No. 389,386.

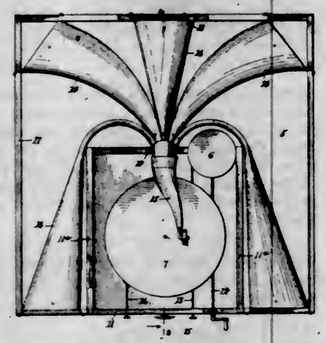
1. In combination with a support having a flat top, a sound reproducing machine having a casing supported from and movably mounted directly under said top.

2. In combination with a support having a top provided with a depending marginal flange, a horn fixed directly beneath said top leading to an opening in said depending marginal flange, and a sound reproducing machine having a casing movably supported under the top and provided with a horn adapted to telescope with the first mentioned horn when the casing is disposed in normal operative position.

3. In combination with a support having a top provided with a depending marginal flange having openings therein, radiating horns laterally disposed directly beneath said top leading to said openings and having a common neck, and a sound reproducing machine located under said top having a horn adapted to telescope with the neck of said radiating horns when in operative position.

4. In combination with a support having a flat extended top provided with a depending marginal flange having

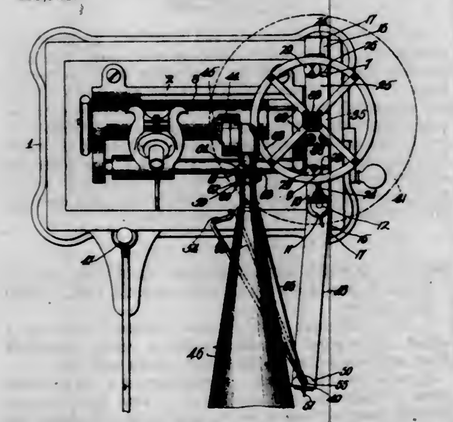
openings therein, a series of radiating horns fixed directly beneath the top of the support and connecting with said openings, and a sound reproducing machine located directly under the top of the support at substantially the same elevation as the said horns and connected therewith.



5. In combination with a support having a flat top provided with a depending marginal flange having openings therein, a series of radiating horns substantially horizontally disposed and secured directly beneath said top and leading to said openings, perforated plates covering said openings, and a sound reproducing machine concealed under the top of the support at substantially the same elevation as the radiating horns and connected therewith.

[Claims 6 to 11 not printed in the Gazette.]

898,792. DISK-RECORD ATTACHMENT FOR SOUND-REPRODUCING MACHINES. CHARLES W. SCHWANK, Kansas City, Mo. Filed Mar. 10, 1908. Serial No. 420,128.



1. An attachment of the character described, comprising a bar provided with standards, a bridge bar connecting the standards, a suitably journaled shaft supported from the bridge bar and equipped with a disk-record-carrying plate and a circular track rotatable with said disk and arranged near one face of and capable of being pressed into contact with said plate.

2. An attachment of the character described, comprising a bar provided with standards, a bridge bar connecting the standards, means for adjusting said bar on its standards toward or from the standard-carrying bar, a suitably journaled shaft supported from and adjustable with the bridge bar and equipped with a disk-record-carrying plate, and a circular track rotatable with said shaft.

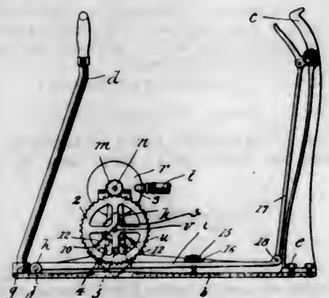
3. An attachment of the character described, comprising a bar provided with standards, a bridge bar connecting the standards, means for adjusting said bar on its standards toward or from the standard-carrying bar, a suitably journaled shaft supported from and adjustable with the bridge bar and equipped with a disk-record-carrying plate, and a circular track rotatable with said shaft, and of resilient material and provided with a friction face.

4. An attachment of the character described, comprising a bar provided with standards, a guide pin between and parallel with said standards, a bridge bar slidingly mounted on the standards and said guide pin and provided with an opening, a bearing bracket secured to and projecting upward from the bridge bar and overlying the opening thereof, a bracket depending from the bridge bar and provided with a foot underlying the said opening of the bridge bar, having a guide opening engaging said guide pin, a shaft journaled in the overlying bracket, and extending through said opening of the bridge-bar and resting on the foot of the said underlying bracket, a disk-record-carrying plate secured to the upper end of said shaft, and a resilient circular track underlying and rotatable with said plate.

5. An attachment of the character described, comprising a bar provided with standards, a bridge bar connecting the standards, a suitably journaled shaft supported from the bridge bar and equipped with a disk-record-carrying plate, a circular track rotatable with said shaft and arranged near one face of and capable of being pressed into contact with said plate, and means for securing the standard-carrying bar rigidly to a stationary part of a sound-reproducing instrument.

[Claims 6 to 14 not printed in the Gazette.]

898,793. FLOOR-PLANING TOOL. WILLIAM W. SCOTT, Montreal, Quebec, Canada. Filed July 28, 1906. Serial No. 328,257.

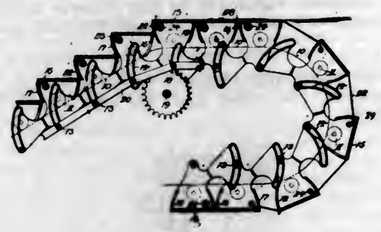


1. A floor planing tool consisting of a base plate adapted to be slid upon the floor and having an opening therein, a plate located above such base plate and pivoted at one end thereto, a rotary cutter supported upon the adjustable plate in position to have the cutting portion thereof project through the opening in such base plate, a pair of handle-bars projecting upwardly from the base plate, a bell crank lever fulcrumed to one of the handle bars near the handle portion thereof, a link connecting such bell crank lever to the adjustable plate, and means whereby the rotary cutter is driven.

2. A floor planing tool consisting of a base plate adapted to be slid upon the floor and having an opening therein, a plate located above such base plate and pivoted at one end thereto, a rotary cutter supported upon the adjustable plate in position to have the cutting portion thereof project through the opening in such base plate, a pair of handle-bars projecting upwardly from the base plate, a bell crank lever fulcrumed to one of the handle bars near the handle portion thereof a link connecting such bell crank lever to the adjustable plate, means for adjusting the normal position of the pivoted plate relatively to the base plate and means whereby the rotary cutter is driven.

3. A floor planing tool comprising a base plate having an opening, a plate pivoted at one end to the base plate and carrying a transverse shaft; a rotary cutter mounted upon one end of such shaft and a gear upon the opposite end thereof the cutter being in juxtaposition with the opening in the base plate and adapted to be projected therethrough; a counter shaft carried by such pivoted plate; a gear mounted upon one end of the counter shaft and intermeshing with the first mentioned gear, and a motor upon the opposite end of such counter shaft; a pair of handle bars carried by opposite ends of the base plate; a bell crank lever mounted near the top of one of such handle bars and a link connecting such bell-crank-lever to the free end of the pivoted plate; and a set screw carried by the said pivoted plate and bearing upon the base plate, for the purpose set forth.

898,794. CONVEYER. CHARLES D. SEEBERGER, Yonkers, N. Y. Filed Jan. 3, 1903, Serial No. 137,817. Renewed Feb. 17, 1908. Serial No. 416,385.



1. In a device of the class described, the combination with tracks, of independent steps thereon, and the flexible risers connecting said steps.

2. In a device of the class described, the combination with the tracks, of steps thereon, and the extensible risers connecting said steps.

3. In a device of the class described, the combination with tracks, of steps thereon, and an extensible flexible riser connected to the front nose of the following step and to the rear nose of the preceding step.

4. In a device of the class described, the combination with the tracks, with steps thereon, an extensible flexible riser connected to the front nose of a following step and passing into the rear nose of the preceding step, and means for extending and retracting the riser as may be necessary at different points on the tracks.

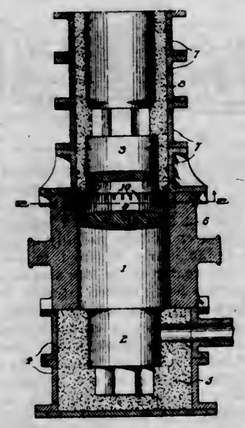
5. In a device of the class described, the combination with the tracks, with steps thereon, an extensible flexible riser connected to the front nose of a following step and passing into the rear nose of the preceding step, and means for extending and retracting the riser as may be necessary at different points on the tracks, consisting of a spring roller mounted in the preceding step and upon which the riser is wound when it is retracted.

[Claims 6 to 14 not printed in the Gazette.]

898,795. MOLD. HENRY C. SHAW, Glensbaw, Pa. Filed Mar. 21, 1908. Serial No. 422,403.

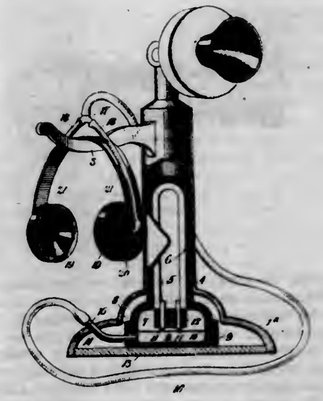
1. In a vertical mold for casting rolls, a chill for the body of the roll, a sand section for one neck of the roll above the chill and for the upper end of the roll, and a circle of metal pins in the sand and flush with or projecting into the chill mold so as to be engaged by the molten metal during the casting operation.

2. In a vertical mold for casting rolls, a chill for the body of the roll, a sand section for one neck of the roll above the chill and for the upper end of the roll, and a circle of spaced metal pins in the sand and flush with or



projecting into the chill mold so as to be engaged by the molten metal during the casting operation.

898,796. TELEPHONE SET. SOL S. SONNEBORN, New York, N. Y. Filed Oct. 1, 1907. Serial No. 395,393.

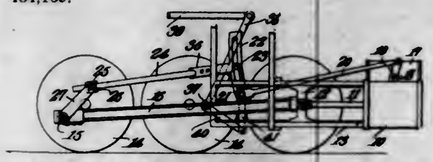


1. In a desk telephone, a hollow standard or column having a transmitter and a switch hook, a telephone receiver forming part of said standard, a pair of ear cups or pieces, and tubular connections therefrom to said receiver.

2. In a desk telephone, a hollow standard or column having a transmitter and a switch hook, a telephone receiver having a longitudinal magnet co-axially contained in and forming part of said standard or column, an ear cup or piece, and tubular connections therefrom to said receiver.

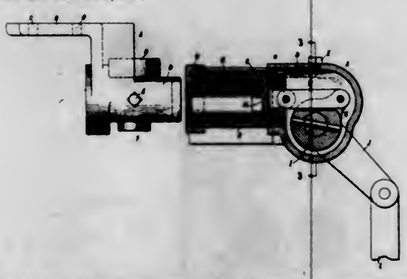
3. In a desk telephone, a hollow standard or column having a transmitter and a switch hook, said standard being enlarged at its base to form a correspondingly enlarged interior cavity, a telephone receiver having a longitudinal magnet co-axially contained in and forming part of said standard, said receiver having its diaphragm end within said enlarged portion of the standard, an ear cup or piece, and tubular connections therefrom to said receiver.

898,797. VALVE-GEAR FOR ENGINES. JAMES S. SPURGEON, Jericho, Ky. Filed May 21, 1908. Serial No. 434,169.



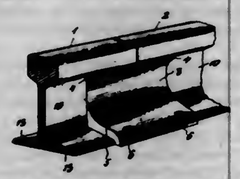
In a valve gear, a valve, a link bearing, an arcuate link provided with a radially disposed arm extending from the median point thereof, and lying in substantially the same plane as the arcuate portion, a link supporting arm attached to the outer end of the radially disposed arm provided with a rectangularly disposed journal portion in alinement with the center of the link and supported in the bearing, said portion being spaced laterally from the link, an extension formed on said link supporting arm, a slide mounted on said extension, a crank, a connecting link pivotally connected to the crank, a bolt passing through the free end of said connecting link and the slide to hold the same in desired position on the extension of the link supporting arm, a link block held to slide in said link, a valve rod provided with a forked end to embrace said block an each side of the link and pivotally connected thereto, and means to vary the disposition of the block in the link.

898,798. SHOCK-ABSORBER FOR AUTOMOBILES. IRVING STANLEY, New York, N. Y., assignor to Merritt S. Middleton, Brooklyn, N. Y. Filed Aug. 8, 1907. Serial No. 387,584.



In a shock absorber, an integral casting comprising a hollow casing and an attaching plate having bolt holes, whereby the structure may be rigidly attached to the car, a cylinder closed at one end and threaded into the casing, a piston in the cylinder provided with an unobstructed passageway of permanent and uniform capacity, whereby the material in the cylinder may pass from one side to the other of the piston, a rock shaft journaled in the casing, two cranks on the rock shaft, one within and the other without the casing, means connecting the crank within the casing with the piston and other means connecting the other crank with an appropriate part of the car.

898,799. RAIL-JOINT. JOHN D. STITZELL, Pittsburg, Pa. Filed May 6, 1908. Serial No. 431,174.



1. The combination with rails having the webs thereof cut away at the ends of the rails, and having their base flanges cut away centrally for a length equal to the distance of the cut away portion of the web, the treads of said rails being provided on the underneath face with a groove equal in length to the cut away portion of the web and base flange, of a connecting member fitting in the cut away portions of said rails, longitudinal flanges carried adjacent to the upper edges of said member for bracing the treads of said rails, outwardly extending flanges carried by the lower edges of said member for engaging the base flanges of said rails, said outwardly extending flanges having spike openings formed therein adapted to aline with similar openings formed in the base flanges of said rails, and means mounted in said openings for retaining said member in engagement with said rails.

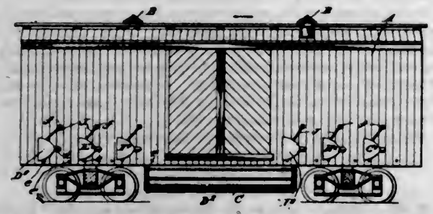
2. The combination with rails having the webs thereof cut away at the ends of the rails and having their base flanges cut away centrally for a length equal to the distance of the cut away portion of the web, the treads of said rails being provided on their underneath face with a groove equal in length to the cut away portion of said web and base flange, of a connecting member fitting in the cut away portions of said rails, flanges carried by said member and adapted to engage the underneath face of the tread of said rails, and the upper face of the base of said rails, and means engaging in the base flanges of said rails for holding said member in engagement with said rails.

898,800. FASTENER OR STAY. WELLS R. STOKELY, St. Augustine, Fla. Filed Sept. 24, 1907. Serial No. 394,296.



The combination with a receptacle having a body and a hoop surrounding and connected to the body, and a cover arranged on the receptacle; of a fastener, formed of a strip of flat sheet-metal, and comprising a body having its upper portion bent over and connected to the cover, a loop at the lower end of the body receiving the lower edge of the hoop, and a tongue extending upward from said loop and resting between the body and the hoop of the receptacle and having a swell extending from a point adjacent to its lower end to a point adjacent to the upper end and opposed to the inner side of the hoop and inclined upward and inward throughout its height.

898,801. CAR VENTILATION. WELLS R. STOKELY, St. Augustine, Fla. Filed Sept. 30, 1907. Serial No. 395,138.



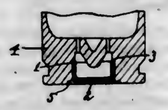
1. The combination of a car body, an inductor arranged at the outer side of one side wall of the body and connected with the interior of the body and mounted to swing vertically and in the direction of the length of the body, and stops extending laterally from said side wall of the body and arranged in a horizontal plane below that of the center of movement of the inductor and in vertical planes at opposite sides of the vertical plane of said center of movement and also arranged to limit downward movement of the inductor and to support the same.

2. The combination of a car body, an inductor arranged at the outer side of one side wall of the body and connected with the interior of the body and mounted to swing vertically and in the direction of the length of the body, stops extending laterally from said side wall of the body and arranged in a horizontal plane below that of the center of movement of the inductor and in vertical planes at opposite sides of the vertical plane of said center of movement, and also arranged to limit downward movement of the inductor and to support the same and a keeper pivoted to the said side of the body at a point above the center of movement of the inductor and arranged to swing in the direction of the length of the body and engage the inductor in the two working positions thereof.

3. The combination of a car body having a floor proper and a foraminous false floor disposed slightly above the floor proper, means for exhausting air from the upper portion of the interior of the body, inductors arranged at opposite sides of the body and in the plane of the space between the floor proper and the false floor and mounted to swing vertically and in the direction of the length of the body, stops extending laterally from the side walls of the body and arranged in a horizontal plane below that of the centers of movement of the inductors and in vertical planes at opposite sides of the vertical planes of said centers of movement and also arranged to limit downward movement of the inductors and to support the same, and a separate conduit extending directly through a side wall of the body and connecting each inductor with the space in the body between the floor proper and the false floor.

4. The combination of a car body having a floor proper and a foraminous false floor disposed slightly above the floor proper, means for exhausting air from the upper portion of the interior of the body, inductors arranged at opposite sides of the body and in the plane of the space between the floor proper and the false floor and mounted to swing vertically and in the direction of the length of the body, stops extending laterally from the side walls of the body and arranged in a horizontal plane below that of the centers of movement of the inductors and in vertical planes at opposite sides of the vertical planes of said centers of movement and also arranged to limit downward movement of the inductors and to support the same, and a separate conduit extending through a side wall of the body and connecting each inductor with the interior of the body; some of the said conduits extending directly to points below the foraminous false floor at different points in the horizontal area of the body, and the other conduits extending to and having their discharge ends arranged in the upper portion of the body at points adjacent to the corners thereof and directed toward the center of the car and slightly downward.

898,802. MEANS FOR SECURING PERCUSSION-CAPS IN CARTRIDGES. RICHARD H. STRIBECK, Grunewald, near Berlin, Germany. Filed May 25, 1907. Serial No. 375,742.



1. A cartridge having a cap chamber in its head, an annular shoulder formed in said chamber, a cap having its inner edge adapted to bear against said shoulder, and a projection on the cartridge head adapted to bear on a part of the cap head to hold the cap in the chamber.

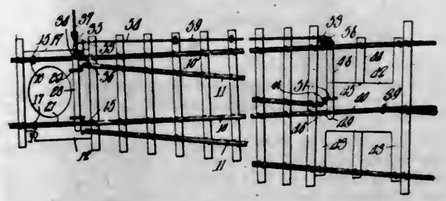
2. A cartridge having a chamber in its head, an annular shoulder in said chamber, a cap adapted to enter said chamber and to have its inner edge rest against said shoulder, and an annular raised portion on the cartridge surrounding said chamber, said portion being adapted to be forced over on the cap to hold the same in place.

898,803. PROCESS OF GENERATING WATER-GAS. HUGO STRACHE, Vienna, Austria-Hungary. Filed Nov. 30, 1901. Serial No. 84,210.



The process of producing water gas which consists in first blasting air into the fuel until the average contents of the combustion gases amount to 12 to 6% of carbonic acid and at least to about 15% of carbon monoxid and while the temperature condition of the fuel is light red, and then blasting steam into the fuel, substantially as described.

898,804. RAILWAY SWITCH FROG. ALVIN M. THREEWITS, Centerville, Ind. Filed Oct. 3, 1907. Serial No. 395,706.



1. In railway switches, a base plate, permanent main line and siding rails having their ends secured to the base plate, fish plates secured to the main line rails on either side and base plate and projecting beyond the ends of such rails to form pockets, switch rails having their ends loosely pivoted in said pockets, means for moving the free ends of such switch rails to form a continuous main line or continuous tread between the main line and siding, and single fish plates secured to the sides of the main and siding rails and having integral projections projecting beyond the ends of said rails to form stops for limiting the movement of the free ends of said switch rails.

2. In switch mechanism, a base plate, permanent main line and siding rails having their ends secured to the plate, fish plates secured to and projecting beyond the ends of the permanent rails, one of such fish plates being bent to form an angular pocket, switch rails having their ends within such angular pockets, cross bolts extending through the fish plates, and the switch rails and forming loose pivots for the latter, single fish plates secured to the opposite permanent rails and forming stops against which the free ends of the switch rails abut, a tie bar connecting such switch rail and provided with upturned flanges presenting convex faces to the webs of said switch rails, shoes at the outer faces of the switch rail, connecting bolts extending through the flanges, the switch rails and shoes, and means for operating said switch rails.

3. In switching mechanism, permanent main line and siding rails, the converging ends of the adjacent main line and siding rails being cut away to form a tread approximately equal in width to that of a single rail tread, fish plates secured to said rails and projecting beyond the ends thereof to form a pocket, and a switch rail having one end mounted within the pocket and movable into alinement with either the permanent main or permanent siding rails to form a continuous tread.

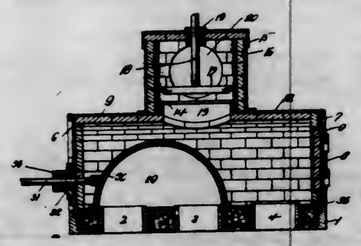
4. In railway switching devices, a base plate, main line and siding rails having their ends permanently secured thereto, the converging ends of the adjacent main and siding rails being cut away to form a tread of a width equal to that of a single rail, fish plates secured to the opposite sides of such converging rails and projecting beyond the end thereof, the fish plates being bent to form an

angular pocket, a switch rail having one end pivotally mounted in said pocket, and single fish plates secured to the opposite ends of the main and siding rails and base plate and forming stops for limiting the movement of said switch rails.

5. In apparatus of the class described, a pair of switches, a rock shaft extending from switch to switch, and rocker arms extending from the shaft to the switches, the arms being of unequal length so that the rod will be subjected to torsional strain during the final portion of the switch operating movement.

[Claims 6 to 9 not printed in the Gazette.]

898,805. VALVE. ALFRED TOMKINS, Pittsburg, Pa. Filed Mar. 27, 1908. Serial No. 423,622.

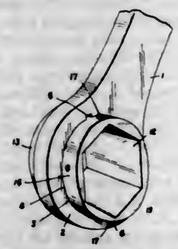


1. A valve of the type described comprising a base having walled ports formed therein, a valve structure arranged upon said base and consisting of walls, a roof having an opening formed therein, and a cupola, said walls, roof and cupola being lined with a non-fusible material, a valve located in said cupola for closing the opening of said roof, frames arranged at the sides of said base, a hood supported from said frames and adapted to inclose two of said ports, said hood having a water cooled chamber formed therein, a hollow piston connecting with the chamber of said hood, a movable stuffing box carried by one of said walls and surrounding said piston, cams located beneath said frames for elevating said frames and hood, means arranged upon the outside of said valve structure for operating said cams, said hood having openings formed therein for admitting water to said base, and one of said walls having an opening formed therein for the overflow water of said base.

2. A valve of the type described comprising a base having walled ports formed therein, a valve structure arranged upon said base and consisting of walls, a roof having an opening formed therein, said wall and roof being lined with a non-fusible material, a valve located in said cupola for closing the opening of said roof, frames arranged at the sides of said base, a hood supported from said base and adapted to inclose two of said ports, said hood having a water cooled chamber formed therein, a hollow piston connecting with the chamber of said hood, a movable stuffing box carried by one of said walls and surrounding said piston, cams located beneath said frames for elevating said frames and hood, means arranged upon the outside of said valve structure for operating said cams, said hood having openings formed therein for admitting water to said base, and one of said walls having an opening formed therein for the overflow water of said base.

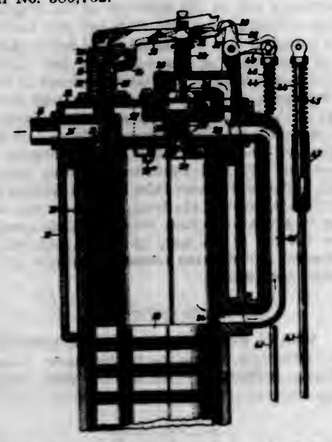
3. A valve of the type described comprising a base having ports formed therein, a valve structure mounted upon the base and embodying walls, a roof and a cupola, said roof having an opening, a valve within the cupola for closing the opening in the roof, a hood supported from said base and adapted to inclose a plurality of said ports, said hood having a water cooled chamber formed therein, a hollow piston connecting with the chamber of said hood, means for elevating said hood, means for operating said elevating means, said hood having openings for admitting water to the base, and one of said walls having an opening for the overflow of water from the base.

898,806. RATCHET-WRENCH. WILLIAM P. WALKER. Edmonton, Alberta, Canada. Filed Jan. 13, 1908. Serial No. 410,684.



In a device of the class described, in combination, a lever having an enlarged end and a hole through said end, said hole having an inwardly extending flange intermediate of its depth forming a ledge, a nut grip piece having a retaining ring outer portion abutting the inner surface of said enlarged end around said hole, a ring of teeth adjacent to said retaining ring, a plain surface adjacent to said ring of teeth and a projecting plain surface beyond said hole, pins projecting outwardly from said outer plain surface of the nut grip piece, a spring-held pawl engaging said teeth, and a keeper ring having L shaped slots from its inner edge diametrically arranged and sliding over said pins, said keeper ring being suitably secured to and turning with said nut grip piece.

898,807. VALVE MECHANISM FOR ENGINES. WILLIAM L. WAYRYNEN, Dolph, S. D. Filed June 25, 1907. Serial No. 380,762.

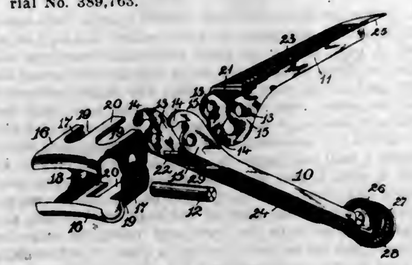


1. In an engine, a cylinder having an inlet valve, a valve stem carried thereby and extending to the exterior of the cylinder, a casing inclosing the outer end of said valve stem and having an opening in the side thereof, a lever pivoted to said casing and having a portion thereof adapted to enter said opening to engage with said valve stem, an exhaust valve, a valve stem therefor, and engaging with said lever to intermittently move it into and out of engagement with said inlet valve stem, and means adapted to engage with said lever to cause the latter to lock the inlet valve in its closed position when the engine exceeds a predetermined speed.

2. In an engine, a cylinder having a spring-pressed inwardly-opening inlet valve, a spring-pressed inwardly-opening exhaust valve, valve stems for each of said valves extending to the exterior of said cylinder, a casing inclosing the outer end of one of said valve stems and having an opening in the side thereof, a lever pivoted to said casing and having portions thereof adapted to engage with both of said valve stems, and locking mechanism for engaging with said lever to hold the inlet valve closed and the exhaust valve open when the engine exceeds a predetermined speed.

3. In an engine, a cylinder having an inlet valve, an inwardly-opening exhaust valve, a valve stem for said exhaust valve and extending exteriorly of said cylinder, a spring for normally closing said exhaust valve, a pivoted lever having one end thereof in engagement with said valve stem, a bell crank lever having one end thereof adapted to engage with said lever to lock the exhaust valve in its open position, centrifugal governor mechanism, and an extensible rod connecting said governor mechanism and the other end of said bell crank lever and comprising two telescoping sections, and a spring for resisting the telescoping movement.

898,808. NAIL-CLIPPER. HENRY WILCOX, Newark, N. J., assignor, by mesne assignments, to S. Charles Hirschberg, New York, N. Y. Filed Aug. 23, 1907. Serial No. 389,763.



1. A nail clipper comprising a pair of levers pivoted together near one end, and a pair of cutter-blades pivotally arranged on the pivot of the levers and having opposed cutting edges, each lever forming a handle portion on its long end, the long end of each lever engaging a cutter-blade on one side of the pivot and the short end of each lever engaging the outside of the cutting blade opposed to the one engaged by its long end.

2. A nail clipper comprising a pair of levers pivoted together near one end, a pair of cutter-blades pivotally arranged on the pivot of the levers and having opposed cutting edges, each lever forming a handle portion on its long end, the long end of each lever engaging a cutter-blade on one side of the pivot and the short end of each lever engaging the outside of the cutting blade opposed to the one engaged by its long end, and means on the ends of the handle portions for locking them together.

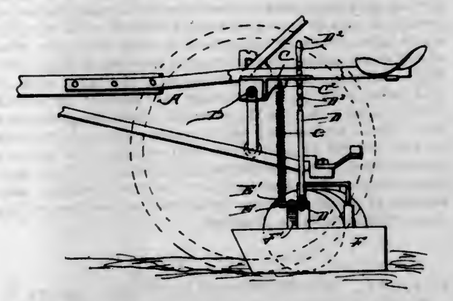
3. A nail clipper comprising a pair of levers crossed and pivoted near one end, the long ends of the levers forming handle portions, a pair of cutter-blades having opposed cutting edges on one end and having spring tongues on the other end, the blades being pivoted between the ends, each lever engaging the spring tongue of one cutter-blade and the cutting end of the opposed cutter-blade, whereby the levers actuate the cutter-blades, and the cutter-blades tend to normally throw the levers slightly apart.

4. A nail clipper comprising a pair of levers crossed and pivoted near one end, a pair of cutters pivoted intermediate of their ends recessed to receive the levers, one end of each cutter-blade forming a cutting edge, and the other end having a projecting spring tongue, each lever engaging alternately the tongue on one blade and the outside of the cutting end of the other blade.

5. A nail clipper comprising a pair of levers crossed and pivoted near one end, each lever having cheek-pieces, a pair of cutter-blades pivoted on the pivot of the levers and having recesses for the passage of the cheek-pieces, the cutter-blades having opposed cutting edges on one end and spring tongues on the other end, a transverse portion on each lever to engage the outside of the spring tongue of one cutter-blade, each lever engaging the outside of the cutting end of the blade other than that engaged by its transverse portion, and means for locking the levers together in their closed position.

[Claims 6 to 14 not printed in the Gazette.]

898,809. CULTIVATOR-FENDER. CYRUS WILLIAMS, Turney, Mo. Filed Nov. 26, 1906. Serial No. 345,207.



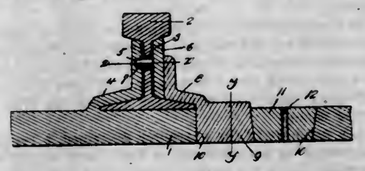
1. The combination with a cultivator provided with an axle, of a vertically movable fender, a plate having at its free end a slot, said plate being secured to the axle, a rod provided adjacent its upper end with annular grooves to engage the slot of the plate, means for connecting said rod to the fender, and a coil spring arranged substantially parallel to the rod when the rod is in its normal position, the spring being connected at its upper end to a portion of the cultivator frame, and its lower end having common connection with the rod to the fender.

2. The combination with a cultivator, of a flanged plate secured thereto having a V-shaped slot in one end, a fender, a coiled spring secured to the plate, a rod engaging the slot, and means for connecting the lower ends of the spring and rod to said fender, as set forth.

3. The combination with a cultivator, of a flanged plate secured thereto provided with a V-shaped slot, a grooved rod adjustably mounted in said slot, a bowed fender, a plate secured to the middle portion of said fender, a spring depending from the flanged plate, and means for connecting the spring and rod to the plate carried by the fender, as set forth.

4. The combination with a cultivator, of a flanged plate secured thereto provided with a V-shaped slot and having an apertured brace on its under side, a coiled spring secured to the flanged plate through the opening in said brace, a rod provided with annular grooves engaging said slot, a plate carrying a fender, and means for connecting the spring and rod to the last mentioned plate, as set forth.

898,810. METALLIC TIE AND RAIL-JOINT. WILLIAM F. WILSON, Jeannette, and CHARLES K. BARNHART, McKees Rocks, Pa. Filed Jan. 28, 1908. Serial No. 413,015.

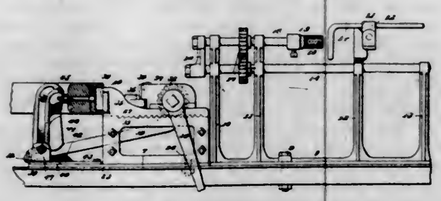


1. The combination with rails, of a metallic tie for supporting said rails, said tie having slots formed therein, a portion of each of said slots being inclined, integral splice bars carried by said tie for bracing the outer sides of said rails, said splice bars having recesses in their inner faces, movable splice bars fitting against the inner sides of said

rails, pins carried thereby and adapted to extend through said rails into the recesses in said integral splice bars, braces engaging said movable splice bars, inclined tongues integral with said braces and adapted to engage in the inclined portions of said slots in the tie and of a thickness equal to the thickness of the tie and tapering blocks fitting in the slots and engaging the inner ends of the tongues for holding said tongues in the slots, said blocks having openings formed therein, substantially as described.

2. The combination with rails, of a metallic tie for supporting said rails, said tie having slots formed therein, a portion of each of said slots having inclined walls, integral splice bars carried by said tie for bracing the outer sides of said rails, said splice bars having recesses in their inner faces, movable splice bars fitting upon the inner sides of said rails, pins carried thereby and adapted to extend through said rails into the recesses in said integral splice bars, braces for engaging said movable splice bars, inclined tongues carried by said braces and engaging the inclined walls of said slots, and means mounted in the inner portions of said slots and engaging the inner ends of said tongues to retain the latter in the inclined portions of the slots, substantially as described.

898,811. WHEELWRIGHT-MACHINE. ARTHUR H. WILSON, Loogootee, Ill., assignor of one-half to Disken Pryor, Loogootee, Ill. Filed Feb. 11, 1908. Serial No. 415,382.



1. A machine of the character described, comprising a support, a standard rising from said support, a plate mounted to turn on said standard and provided with a sleeve, and a bracing hook longitudinally adjustable in said sleeve.

2. A machine of the character described, comprising a bench provided with a longitudinal slot, a hub post supported by the bench and movable along said slot, a wrench mechanism mounted on the bench, and other bolt working appliances mounted on the bench in longitudinal alinement with the wrench mechanism, such appliances being pivotally mounted on the bench and adapted to be swung to one side out of the way of the hub post whereby to permit the latter to be brought near the wrench mechanism.

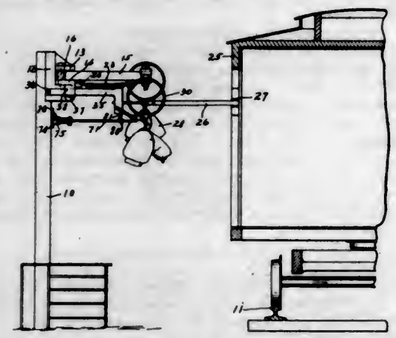
3. In a machine of the character described, the combination with a support, of a casing mounted on said support, of a draw head supported by and movable longitudinally on the casing, means for moving the draw head, and a vertically swinging bolt starting hook carried by said draw head and adapted to project out of one end of the casing.

4. In a machine of the character described, a support, a casing carried by the support, a draw head supported by and movable along the casing, a bolt starting hook carried by said draw head, and a bolt extracting claw also carried by said draw head, and means for moving the draw head along the casing.

5. In a machine of the character described, a support, a casing carried by said support, a draw head supported by and movable along the casing, means for moving the draw head, said means embodying a shaft journaled in the draw head, pinions carried by the shaft and racks mounted in the casing, the pinions meshing with said racks, and a bolt starting hook pivotally mounted on said shaft and adapted to project out of one end of the casing.

[Claims 6 to 15 not printed in the Gazette.]

898,812. MAIL-BAG CATCHER AND DELIVERER. JAMES WOOD, Noblesville, Ind., assignor of one-half to John Owen, Noblesville, Ind. Filed May 21, 1908. Serial No. 434,029.



1. Means for delivering mail bags to passing cars which includes a mail bag holder to which a mail bag may be secured, a post, a pair of arms projecting therefrom one above the other, a pin on the upper arm for supporting the upper part of the mail bag holder, and means connected with the lower arm releasably engaging said mail bag holder and tending to hold the mail bag holder on said pin.

2. Means for delivering mail bags to passing cars which includes a mail bag holder to which a mail bag may be secured, a post, a pair of arms projecting therefrom horizontally one above the other, a pin on the upper arm for supporting the upper part of the mail bag holder, and means connected with the lower arm releasably engaging said mail bag holder and tending to draw it downwardly and thus hold it temporarily on the pin on the upper arm.

3. Means for delivering mail bags to passing cars which includes a mail bag holder to which a mail bag may be secured, a post, a pair of arms projecting therefrom horizontally one above the other, the lower of said arms being laterally movable, a pin on the upper arm for supporting the upper part of the mail bag holder, and means connected with the lower arm releasably engaging said mail bag holder and tending to draw it downwardly and thus hold it temporarily on the pin on the upper arm.

4. Means for delivering mail bags to passing cars which includes a mail bag holder to which a mail bag may be secured, a post, a pair of arms projecting therefrom one above the other, a pin on the upper arm for supporting the upper part of the mail bag holder, means on the outer end of the lower arm for engaging said mail bag holder, and a spring acting on said means to cause it to press downwardly on the mail bag holder.

5. Means for delivering mail bags to passing cars which includes a mail bag holder to which a mail bag may be secured, a post, a pair of arms projecting therefrom one above the other, a pin on the upper arm for supporting the upper part of the mail bag holder, and means connected with the lower arm releasably engaging said mail bag holder and tending to hold the mail bag holder on said pin, said lower arm being mounted so as to oscillate both horizontally and vertically, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

898,813. TOY. ALBERT E. WOOLNOUGH, New York, N. Y. Filed Feb. 4, 1908. Serial No. 414,223.

1. A figure toy, comprising a body, a plurality of movable members mounted to turn on the said body, and sounding devices within the said body and one for each movable member and connected thereto to be actuated by the same independent of the other members and sounding devices.

2. A figure toy, comprising a body, a movable member, a friction device for connecting the said movable member with the said body, and a sounding device within the said body and connected to the said movable member to be actuated thereby.



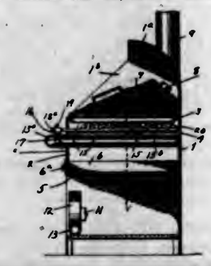
3. A figure toy, comprising a body, a movable body member, a friction device for connecting the movable member with the said body, a frame within the said body, a star wheel journaled in the said frame and connected with the friction member on the said movable body member, and a spring secured on the said frame and having its free end engaging the said star wheel.

4. A figure toy in the form of a bear, comprising a body, legs for the said body, a frame within the said body and made in two parts having a swivel connection, star wheels journaled in the said frame independent one of the other, springs held on the frame and engaging the said star wheels, friction disks secured on the outer ends of the star wheel shafts and attached to the said legs, and friction disks loose on the said star wheel shafts and arranged in the said body opposite the friction disks in the legs.

5. A figure toy in the form of a bear, comprising a body, legs for the said body, a frame within the said body and made in two parts having a swivel connection, star wheels journaled in the said frame independent one of the other, springs held on the frame and engaging the said star wheels, friction disks secured on the outer ends of the star wheel shafts and attached to the said legs, friction disks loose on the said star wheel shafts and arranged in the said body opposite the friction disks in the legs, and means for pressing the said body friction disks outward.

[Claims 6 to 8 not printed in the Gazette.]

898,814. BROILING-STOVE. JULIUS H. ZEHRING, Columbus, Ohio. Filed Jan. 13, 1908. Serial No. 410,592.

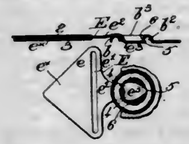


1. In a broiling stove, the combination with a stove body, of a frame adapted to support a broiler, a support for non-flaming fuel located beneath said frame, a valve controlled gas pipe adjacent said support and serving to impart an initial heating to the non-flaming fuel, an air discharge pipe supported beneath said fuel support, and means for forcing air through said air discharge pipe.

2. In a broiling stove, the combination with a stove body, said body having an opening in its upper side over which a meat containing broiler is adapted to be supported, of a chamber below said opening adapted to contain non-flaming fuel, a valve controlled gas burner adapted to discharge a gas flame into said fuel chamber, an air discharging pipe adjacent to said fuel chamber, a motor operated fan, and a conductor leading from the casing of said fan to said air discharging pipe.

3. In a broiling stove, the combination with a stove body comprising a plurality of compartments, means for supporting a broiler above each compartment, and a removable cover for each compartment having an outlet therein, of a grate in each compartment adapted to support non-flaming fuel, a gas burner lying adjacent said grate and serving to impart an initial heating to the non-flaming fuel, and means for discharging air under pressure through the openings of the grate and through the fuel thereon.

898,815. SEPARABLE FASTENER. ALFRED M. ZIEGLER, Boston, Mass., assignor to A. Ziegler & Sons Company, Boston, Mass., a Corporation of Massachusetts. Filed Feb. 1, 1906. Serial No. 299,047.



1. A separable fastener comprising a circularly apertured metal plate having a concentric raceway with the lower circular edge of its inner wall above the plane of the lower side of the plate and laterally separated from the body portion of the plate, and an attaching plate having a leg and a foot, the latter in the line of its toe and heel being in excess of the diameter of the aperture and adapted to rest against the said circular edge substantially flush with the under side of the apertured plate.

2. A separable fastener comprising an apertured metal plate having a concentric circular bearing edge in the plane of the upper side of the plate, and an attaching plate having a leg and a foot, said foot being adapted to pass through the aperture and rest upon the bearing edge substantially flush with the under side of the apertured plate, the distance from the heel to the toe of the foot being greater than the diameter of the bearing edge.

3. A separable fastener comprising a circularly apertured metal plate having on its upper side an annular concentric raceway the lower edge of the inner, downturned wall thereof bounding the aperture, and an attaching plate having a leg provided with a foot adapted to pass through the aperture, the foot presenting diametrically opposite heel and toe portions to extend beyond and contact with the lower circular edge of the inner wall of the raceway, maintaining the plates connected.

4. A separable fastener comprising a circularly apertured metal plate having a concentric tubular raceway on its upper side, the lower circular edge of the inner wall thereof being substantially in the plane of the upper side of the plate, and an engaging plate having a leg curved to embrace the raceway and terminating in a foot to rest against said circular edge, the foot having heel and toe portions extended beyond the edge, the under faces of the foot and apertured plate at such time being substantially flush with each other.

5. A separable fastener comprising a metal plate having a hole, and an engaging plate slotted for the passage therethrough of a band, said plate having at one side of said slot an extension and at its other side a leg and foot.

898,816. GARMENT-CLASP. ALFRED M. ZIEGLER, Boston, Mass., assignor to A. Ziegler & Sons Company, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 26, 1906. Serial No. 340,617.

1. A garment clasp comprising a body having an upturned end and a toggle pivotally mounted on said body,

the toggle being composed of a spring member holding yieldingly its co-acting member.



2. A garment clasp comprising a body portion and a toggle composed of two parts, one of which is made as a spring holding the other part yieldingly, the end of the spring part being curved and bearing constantly against the back of the frame to maintain the said toggle in any position where it may be left out of engagement with the fabric.

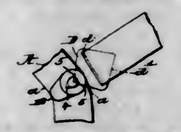
3. In a garment clasp, a body having its end upturned, and a two part toggle, one part B of which is made as a spring embracing the other part C, the latter part having arms co-acting with projections and points of the part B.

4. A garment clasp comprising a body slitted at its upper end for the reception of a strap, upturned at its lower end, provided at its sides with flanges, and having between its ends a stop; and a toggle curved at its upper end and provided with a stop, said toggle being pivotally mounted in said flanges, the stop of said toggle engaging the stop of said body when the garment clasp occupies its inoperative position.

5. In a garment clasp, a body portion upturned at one end and provided with an adjacent abutment, and a toggle pivotally mounted on the other end of the body portion, the free end of the toggle sliding upon and being sustained by said abutment when the toggle is closed to coact with the upturned end of the body, the abutment causing the free end of the toggle to assume a higher position than its central portion when said toggle is closed and straightened to pass over center.

[Claims 6 to 11 not printed in the Gazette.]

898,817. STOCKING-SUPPORTER. ALFRED M. ZIEGLER, Boston, Mass., assignor to A. Ziegler & Sons Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 20, 1907. Serial No. 363,355.

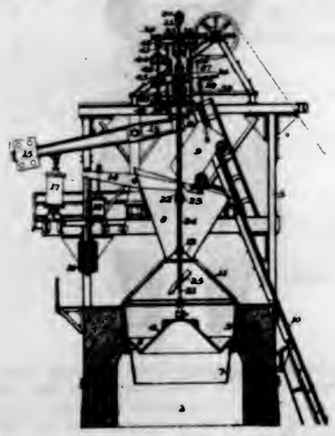


1. In a stocking supporter, a web woven to present a crook or bend and provided with a slit having selvage edges, a washer applied to the outer side of the web above the slitted portion, and a plate having a tubular shank applied to the opposite side of said web, the shank being passed through said slit and also through the hole in the washer, the end of the shank being upset on said washer to clamp the web firmly between said plate and washer.

2. In a stocking supporter, a web woven to present a crook or bend and provided near its longitudinally convex edge with a slit having selvage edges, a washer applied to the outer side of said web above the slitted portion, and a plate having a tubular shank applied to the opposite side of said web, the shank passing through the slit and through the hole in said washer, the end of the shank being upset on the washer to clamp the web firmly between the plate and the washer, the shank having a connected extension lying on the face of the web.

3. A web having a slit formed therein near one edge and at a distance from the opposite edge, a socket inserted in said slit, and an extension connected at one end to said socket and free at its opposite end, said extension extending from said socket towards the opposite edge of the web and lying on the face thereof.

898,818. BLAST-FURNACE-CHARGING APPARATUS. ALBION P. AIKEN, Braddock, Pa., assignor of one-third to John F. Lewis and one-third to Michael Killeen, Braddock, Pa. Filed Apr. 25, 1907. Serial No. 370,217.



1. Apparatus for charging blast furnaces comprising a bell and hopper discharging into the furnace, a stationary supplemental hopper discharging radially inward above the first hopper, an inclined distributing chute or deflector between said hoppers and mechanism for rotating said distributing chute or deflector; substantially as described.

2. Apparatus for charging blast furnaces comprising a bell and hopper discharging into the furnace, a supplemental bell and hopper discharging radially inward above the first hopper, said supplemental hopper being stationary, an inclined deflector between said hoppers, and mechanism for rotating said deflector; substantially as described.

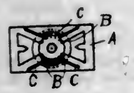
3. Apparatus for charging blast furnaces comprising a bell and hopper discharging into the furnace, a supplemental bell and hopper discharging radially inward above the first hopper, said supplemental hopper being stationary, a hood connecting said hoppers to form a gas seal, an inclined deflector between said hoppers and mechanism for rotating said deflector; substantially as described.

4. Apparatus for charging blast furnaces comprising a bell and hopper discharging into the furnace, a supplemental bell and hopper discharging into the first hopper, means for opening and closing said bells, and inclined deflector between said hoppers and mechanism adapted to rotate said deflector when said supplemental bell is actuated; substantially as described.

5. Apparatus for charging blast furnaces comprising a bell and hopper discharging into the furnace, a stationary supplemental hopper discharging radially inward above the first hopper, a rotating deflector or distributing chute located below the supplemental hopper and mechanism for turning the rotary deflector to distribute the stock to varying points about the axis of the bell and hopper; substantially as described.

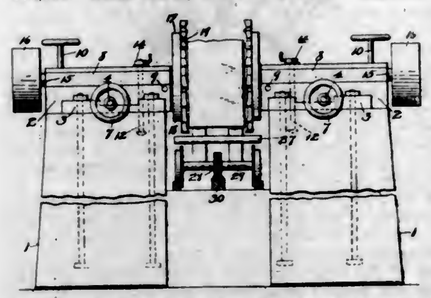
[Claims 6 to 11 not printed in the Gazette.]

898,819. FASTENER FOR ENVELOPS AND THE LIKE. JOHN S. APPLEGATE, Philadelphia, Pa. Filed Nov. 8, 1907. Serial No. 401,222.



A fastener for envelops comprising two members, one member being a skeleton plate of rectangular form, said plate being formed at opposite sides thereof with inwardly extending resilient tongues having oppositely and concavely curved spaced adjacent edges, the material connecting said tongues constituting in effect end cross pieces, said cross pieces being each provided with projecting prongs adapted to be clenched upon the envelop, the other member being in the form of a cylinder and having at one end an annular circumscribing head designed to be engaged under said tongues and at its other end an annular circumscribing base of greater size than said head.

898,820. STONE-DRESSING MACHINE. JOHN C. ARMSTRONG, Newkirk, Okla. Filed May 18, 1907, Serial No. 374,333. Renewed July 6, 1908. Serial No. 442,250.

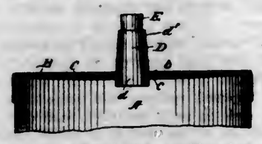


1. A cutter head for stone dressing machines comprising a wheel, a ring secured to the wheel, one edge of said ring projecting from the edge of the wheel, the projecting portion being perforated, cutting blades having shanks to fit in the perforations aforesaid, and blocks secured to the ring between the cutting blades, substantially as shown and described.

2. A stone dressing machine comprising a suitable base, a frame slidably mounted on said base, another frame pivotally secured to said sliding frame, a shaft journaled in said sliding frame having a pinion keyed thereto, a gear rack secured to the base and meshing with the pinion aforesaid, screw shafts secured to the pivoted frame and engaging the sliding frame to raise the free end of said pivoted frame, and the cutting tool secured to the pivoted frame, substantially as shown and described.

3. A stone dressing machine comprising a suitable base, a frame slidably mounted on said base, another frame pivotally secured to said sliding frame, a shaft journaled in said sliding frame having a pinion keyed thereto, a gear rack secured to the base and meshing with the pinion aforesaid, screw shafts secured to the pivoted frame and engaging the sliding frame to actuate the free end of the pivoted frame, the pivoted frame provided with slots, bolts secured to the base and extending through the slots in the frame, hand nuts on said bolts to lock the frames in an adjusted position, a shaft journaled on said pivoted frame, a wheel secured to said shaft, a ring secured to the wheel having a projecting perforated rim, and cutting blades secured in the perforations in said rim, substantially as shown and described.

898,821. PACKAGE. ROBERT P. BEATTY, Cleveland, Ohio. Filed Dec. 26, 1907. Serial No. 408,033.



1. A package comprising the combination of the outer shell provided with an opening therethrough; an auxiliary member inside the shell and in proximity to said opening; and a spout in the latter secured in place by said shell and auxiliary member.

2. A package comprising the combination of the outer shell provided with an opening therethrough; an auxiliary member inside the shell provided with an opening registering with said shell opening; and a spout projecting through both said openings and held by said shell and auxiliary member.

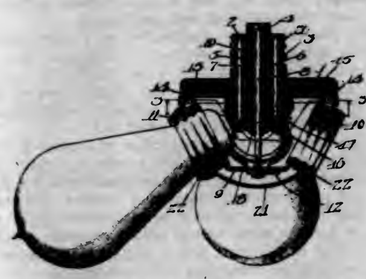
3. A package comprising the combination of the outer shell provided with an opening therethrough; an auxiliary member inside the shell and in proximity to said opening; and a spout in the latter and held by said shell and auxiliary member, and provided with a portion capable of passing through the shell opening but incapable of passing said auxiliary member.

4. A package comprising the combination of the outer shell provided with an opening therethrough; an auxiliary member inside the shell provided with an opening registering with said shell opening; and a spout projecting through both said openings and provided with a portion capable of passing through the shell opening but incapable of passing through said registering opening; such portion being held by said shell and auxiliary member.

5. A package comprising the combination with a receptacle having a portion of its wall formed of two thicknesses of material provided with registering openings; of a removable spout held between said two thicknesses.

[Claims 6 and 7 not printed in the Gazette.]

898,822. PLURAL LAMP-SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 23, 1907. Serial No. 358,060.



1. In a plural lamp socket, a base having a plug upon one of its sides and a plate upon its opposite side disposed to engage the center contacts of a plurality of lamps, an outer contact member upon said plug, and means providing electrical connection between said plate and said outer contact.

2. In a plural lamp socket, a base having a plug provided with inner and outer contacts, a plate arranged to engage the inner terminals of a plurality of lamps, and a member extending longitudinally through the plug and providing an electrical connection between the outer contact of the plug and said plate.

3. In a plural lamp socket, a base having a plug upon one of its sides, said plug being provided with an outer contact member and an inner contact for engagement with the contacts of a suitable socket and a plate upon the opposite side of said base in electrical communication with the outer contact of the plug, said plate being arranged to engage the inner terminals of the lamps.

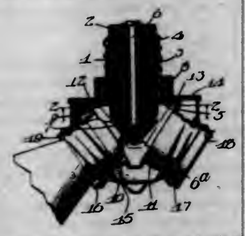
4. In a plural lamp socket, a base having a plug, said plug having an outer contact member thereon, a lamp-terminal-contacting plate, and a bolt extending longitudinally through the plug and securing said outer contact member and said plate in position and providing electrical communication therebetween.

5. In a plug-cluster, the combination of a plurality of threaded shells, a plate secured to said shells, a plug having an outer contact, an inner contact for said plug comprising a bolt extending to and supporting said plate, a

casing supported by said shells, and inner contacts opposite said shells electrically connected with the outer contact of the plug.

[Claims 6 to 12 not printed in the Gazette.]

898,823. PLURAL LAMP-SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 27, 1907. Serial No. 359,667.



1. In a plug-cluster, a plug of insulating material carrying a plurality of lamp-holding devices, a central and an outer contact member upon said plug to coöperate with the contacts of a suitable socket, said outer contact member having a shoulder upon its inner end, and a lamp-terminal-contacting plate supported by said shoulder.

2. In a plug-cluster the combination of a plug carrying a plurality of lamp-holding devices, a central and an outer contact member upon said plug to coöperate with the contacts of a suitable socket, said outer contact member having a flanged inner end, and a contact-plate carried by and in electrical connection with said flange.

3. In a plug-cluster the combination of a plug carrying a plurality of lamp-holding devices, a central and an outer contact member upon said plug to coöperate with the contacts of a suitable socket, said outer contact member having an out-turned inner end, and a lamp-terminal-contacting plate supported by said out-turned end.

4. In a plug-cluster the combination of a plug carrying a plurality of lamp-holding devices, a central contact upon the outer end of said plug, a contact-plate upon the inner end of said plug, electrical connection between said center contact and said plate, an outer contact member upon said plug, said member being formed with a shoulder adjacent the inner end of the plug, and a contact-plate supported by and in electrical connection with said shoulder.

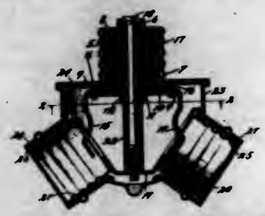
5. In a plug-cluster, a plug adapted to coöperate with a suitable socket and carrying a plurality of lamp-holding devices, said plug having a center contact upon its outer end and an outer contact member extending longitudinally thereof, a plate secured to the inner end of said outer contact member and forming a lamp-terminal contact for each of the lamps, and a plate upon the inner end of the plug and in electrical connection with the center contact of said plug, said last-named plate forming the other contact for each of the lamps.

[Claims 6 to 18 not printed in the Gazette.]

898,824. PLURAL LAMP-SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 28, 1907. Serial No. 359,885.

1. In a plug-cluster, a plug adapted to coöperate with a suitable socket and carrying a plurality of lamp-holding devices, said plug having a center contact upon its outer end and an outer contact member extending longitudinally thereof, a plate secured to the inner end of said outer contact member and forming an inner lamp-terminal-contact, and a plate in electrical connection with the center contact of said plug, said last-named plate carrying a plurality of lamp holding devices.

2. In a plug-cluster, a plug adapted to coöperate with a suitable socket and carrying a plurality of lamp-holding devices, said plug having a center contact upon its outer end and an outer contact-member extending longitudinally thereof, a plate secured to the inner end of said outer contact member and forming an inner lamp-terminal-contact, and a plate in electrical connection with the center contact of said plug, said laat named plate carrying the outer contact for each of the lamp-holding devices.



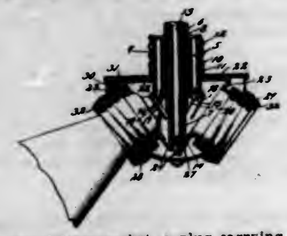
3. The combination with a plug, of an outer contact member extending longitudinally of the plug and having a flange on its inner end, an inner lamp-terminal-contacting plate supported by said flange, an inner contact member on said plug, a plate electrically connected with said inner contact member and a plurality of lamp-holding devices supported thereby.

4. In a plug-cluster, the combination of a plug carrying a plurality of lamp-holding devices, a central contact upon the outer end of said plug, means for providing electrical connection between said center contact and the outer contacts of the lamps, an outer contact member upon said plug, said member being formed with a shoulder adjacent the inner end of the plug, and a contact-plate supported by and in electrical connection with said shoulder, said plate being adapted to engage the center contact of a lamp.

5. In a plug-cluster, the combination of a plug carrying a plurality of lamp-holding devices, a center contact upon the outer end of said plug, means providing electrical connection between said center contact and the outer contacts of the lamps, an outer contact member upon said plug, said member being formed with an outturned end adjacent the inner end of the plug, and a contact member supported by and in electrical connection with said outturned end and adapted to engage the center contact of each of the lamps.

[Claims 6 to 8 not printed in the Gazette.]

898,825. PLURAL LAMP-SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 1, 1907. Serial No. 360,090.



1. In a plural lamp socket, a plug carrying a plurality of lamp-holding sockets and provided with a center contact and an outer contact adapted to coöperate with the contacts of a suitable socket, means extending longitudinally through said plug adapted to conduct current to a plurality of lamps, a lateral projection on said plug, an annular disk disposed against said projection, means for securing said disk in such position, said disk forming a part of the casing of the device, a cover adapted to engage said disk around its edge and having openings for the insertion of the lamps, and insulating bushings inserted into said openings and engaging the lamp sockets, said bushings being adapted, when in place, to support said cover and to hold the same in contact with said disk.

2. In a plural lamp socket, a plug provided with a center contact and an outer contact adapted to coöperate with the contacts of a suitable receptacle, said plug having a shoulder extending therearound and an extension on its inner end, a disk of insulating material surrounding said plug and engaging the shoulder on said plug, a plate having an annular portion surrounding said plug, the ends of said plate approaching each other and overlapping at the end of the extension of said plug, said plate carrying the outer contacts of a plurality of lamps, and a member extending longitudinally through said plug, said member securing said plate to said plug and constituting the center contact of said plug.

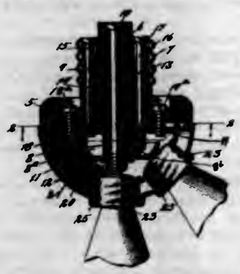
3. In a plural lamp socket, the combination of a plug having an extension on its inner end, a bolt extending longitudinally through said plug and said extension, a lamp-supporting plate having an annular portion through which the plug extends, said plate being bent so that its ends approach each other and overlap on the end of said extension, said bolt securing said plate to said plug and also forming the center contact of said plug.

4. In a plural lamp socket, the combination of a plug, a plate bent to triangular form and having an annular portion surrounding said plug, said plate carrying lamp-holding devices and having its ends meeting at the inner end of the plug, and a bolt extending longitudinally through the plug and securing the ends of said plate to said plug and also forming the center contact of said plug.

5. In a plural lamp socket, the combination with a plug, of a metallic plate having an annular portion between its ends and surrounding said plug, the ends of said plate meeting each other at the inner end of the plug, lamp-contacting means carried by said plate, and a bolt securing said plate to the plug and providing a center contact for said plug.

[Claims 6 to 10 not printed in the Gazette.]

898,826. PLURAL LAMP-SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 1, 1907. Serial No. 360,091.



1. In a plug-cluster, the combination of a base having a plug upon one of its sides and a contact plate upon its opposite side, center and outer contacts upon said plug, electrical connection between said center contact and said plate, a bowl-shaped shell mounted upon said base, a plurality of circularly arranged lamp-holders and an axially disposed lamp-holder carried by said shell, and electrical connection between the outer contact of the plug and said shell.

2. In a plug-cluster, the combination with a base having a plug on one of its sides, of a threaded shell mounted upon the plug to form the outer contact thereof, a plate mounted on the inner side of said base, a center contact upon the plug electrically connected with said plate, a circular shell mounted upon the inner side of said base and having a plurality of openings, one of said openings being in axial alinement with said plug, a threaded lamp-receiving shell in each of said openings, and electrical connection between the outer contact member of the plug and said circular shell.

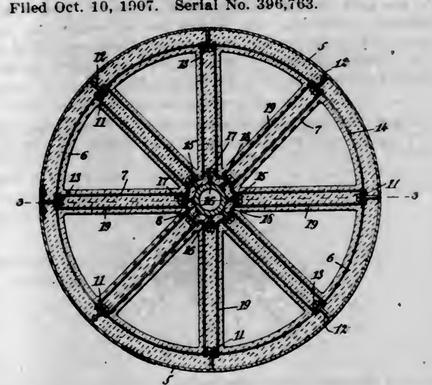
3. In a plug-cluster, the combination with a plug having a center contact and an outer contact adapted to coöperate with the contacts of a suitable receptacle, of a plurality of lamp-holding devices carried by said plug, one of said lamp-holding devices being disposed in axial alinement with said plug, lamp-terminal-contacting devices associated with said lamp-holding devices, and electrical connection between the contacts of the plug and said contacting devices.

4. In a plug-cluster, the combination with a plug having a center contact and an outer contact adapted to coöperate with the contact of a suitable receptacle, of a lamp-holding device carried by and disposed in axial alinement with said plug, a plurality of circularly arranged lamp-holding devices carried by said plug, lamp-terminal-contacting devices associated with said lamp-holding devices, and electrical connection between the contacts of said plug and said contacting devices.

5. In a plug-cluster, the combination with a plug having a center contact and an outer contact adapted to coöperate with the contacts of a suitable receptacle, of a circular shell carried by said plug and supporting a plurality of lamp-holding devices, said shell being electrically connected with one of the contacts of the plug, and means for conducting current from the other contact of said plug to the center terminals of all the lamps, one of said lamp-holding devices being disposed in axial alinement with said plug.

[Claims 6 and 7 not printed in the Gazette.]

898,827. ROLLER. JOHN M. BRALY, Villapark, N. J. Filed Oct. 10, 1907. Serial No. 396,763.



1. A roller, having a hub, a body of concrete encompassing said hub, and radial reinforcing members embedded in said body.

2. A roller having an outer shell, and within said shell a concrete body comprising a rim and spokes.

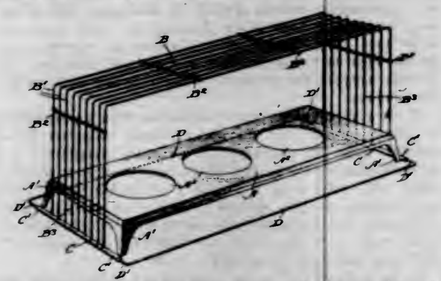
3. A roller having an outer shell, a hub, a concrete body between said shell and said hub, members embedded in said body and arranged longitudinally of said shell and said hub, and further members embedded in said body and arranged transversely of said shell and said hub.

4. A roller having an outer shell, a hub, a concrete body between said shell and said hub, members embedded in said body and arranged longitudinally of said shell and said hub and secured thereto, and further members embedded in said body and arranged radially, said further members being secured to said first members.

5. A roller having an outer shell, a hub, a concrete body between said shell and said hub, members embedded in said body and arranged longitudinally of said shell and said hub, and V-shaped members having the apexes engaging certain of said first members, and the ends engaging others of said first members, said body having openings formed therein between the sides of said V-shaped members.

[Claims 6 to 12 not printed in the Gazette.]

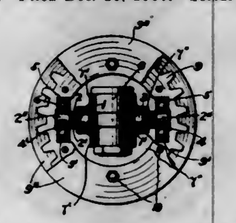
898,828. SELF-SUPPORTING SHELF FOR COOK-STOVES. AUGUSTA L. BROWN, Chicago, Ill. Filed Nov. 21, 1906. Serial No. 344,521.



1. A shelf of the kind described consisting of the combination of a series of parallel wires, spaced from each other and securely bound together; a series of transverse wires adapted to secure said parallel wires together; tubular bases adapted to admit the ends of said parallel wires and be secured thereto; and a pair of connecting rods, insertible in the ends of said tubular bases, said shelf being thereby adapted to be removably supported by said tubular bases, on or over the top of a stove as described and for the purposes specified.

2. A shelf of the kind described, consisting of a main portion, the ends thereof being bent at right angles to the central part, each of said ends of said main portion being secured in a tubular base; a tubular base secured to each of the ends of said main portion adapted to receive and support connecting rods; and a pair of connecting rods insertible in the ends of said tubular bases, said shelf being thereby adapted to be removably supported by said tubular bases on or over the top of a stove.

898,829. UNIVERSAL JOINT. TRACY V. BUCKWALTER, Altoona, Pa. Filed Dec. 10, 1907. Serial No. 405,896.



1. A universal joint comprising a pair of bearing members having concentric races, balls in said races, a second pair of bearing members having concentric races, and balls in said races last named, the exterior bearing member of said first pair being fixed to the interior bearing member of said second pair so that the two sets of balls act in transverse planes.

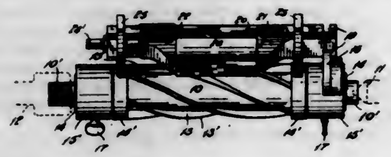
2. A universal joint comprising a pair of concentric annular bearing members, balls between said bearing members, the exterior of said bearing members having diametrically disposed bosses thereon, an annular bearing member fixed on each of said bosses, an annular bearing member concentric with each of said last named bearing members, and balls disposed between said last named concentric bearing members.

3. A universal joint comprising an annular bearing member, a concentric annular bearing member exterior thereto, balls between said bearing members, one of said bearing members having a flange fixed thereto and overlapping the other of said bearing members, a pair of diametrically disposed annular bearing members fixed to said exterior bearing member, an exterior annular bearing member concentric with each of said diametrically disposed bearing members, and balls between the last named concentric bearing members.

4. A yoke, an annular bearing member between the bifurcations of said yoke, means for fixing said parts together, an annular bearing member exterior to the first named bearing member, balls between said bearing members, parallel annular bearing members fixed diametrically to said exterior bearing member in planes transverse thereto, an annular bearing member exterior to each of said parallel bearing members, balls between the corresponding members of the last named bearing members, and a power transmitting member fixed to said last named exterior bearing members.

5. The combination of a journaled shaft, a bearing member with a race way carried by said shaft, a second bearing member with a race-way surrounding said first race-way, balls disposed between said race ways, bearing members carried by said second bearing member with race-ways disposed transversely to the plane of said first named race-ways, bearing members having race-ways surrounding said third mentioned race-ways, balls disposed between said third and fourth mentioned race-ways, and power transmission mechanism fixed to said last named bearing members.

898,830. PATTERN-CUTTING DEVICE. WILLIAM L. CARSON and GEORGE R. COULS, Seattle, Wash. Filed July 3, 1907. Serial No. 381,988.



1. The combination with the rotary cutter having coaxially arranged extremities, journal-bearings having eccentrically-disposed openings for said extremities, a work-holder, templets carried by said holder, means carried by the bearings for supporting the templets, and devices for adjusting said bearings whereby the cut of the cutter is regulated.

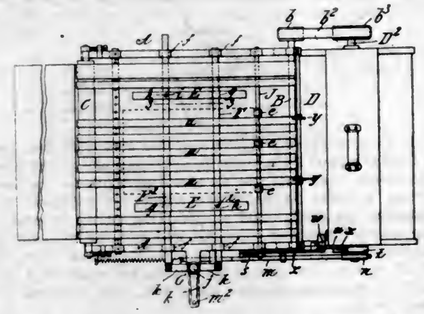
2. The combination with a rotary cutter having helical shaped cutting blades and provided with journals, bearings having eccentric openings for said journals, and collars upon said bearings, and of a diameter so as to have the periphery thereof flush with the cutting edges of the blades of a work-holder, templets detachably secured to said holder and arranged to be supported by said collars for regulating the cut of the cutters.

3. The combination with the platform, a rotary cutter, journal bearings having eccentric openings for the cutter carried by said platform, and means for adjusting said bearings whereby the position of the cutter is regulated relatively of the platform, of a work-holder, templets adapted to be detachably secured to said holder, and supporting devices for the templets whereby the cut of the cutter upon the work is regulated.

4. The combination with the rotary cutter provided with coaxially disposed extremities, an eccentric bushing for each said extremity and respectively provided with collars, a platform provided with hooked extensions adapted to embrace the respective bushings, and set screws for adjustably securing said bushings, of a work-holder, and templets adapted to be detachably secured to said holder.

5. The combination with the rotary cutter provided with coaxially disposed extremities, an eccentric-bushing for each said extremity and respectively provided with hooked extensions adapted to embrace the respective bushings, set screws for adjustably securing said bushings, and a guide adjustably secured to said platform, of a work-holder provided with jaws for clamping the work, means to effect such clamping, and templets adapted to be detachably secured to said holder and arranged to coact with said collars whereby the cut of the cutters upon the work is regulated.

898,831. SHEET-FEEDING APPARATUS. EDWARD J. CASEY, Springfield, Mass. Filed Apr. 6, 1908. Serial No. 425,406.



1. The combination with a plurality of endless feed tapes, of one or more movable stops for temporarily arresting each sheet and means for moving said stops across and away from the plane of sheet feed, a pair of horizontal, transversely movable bars, a longitudinally ranging sheet squaring member towards one side of the machine and secured to one of said bars and having a free guiding engagement with the other of said bars, a second longitudinally ranging sheet squaring member towards the other side of the machine, secured to the other one of said bars, and having a free guiding engagement with the first squaring member carrying bar, and means for imparting reciprocatory movements to said bars in reverse directions transversely of the line of tape feed.

2. The combination with a frame having forwardly and rearwardly located bar guides at the opposite side members thereof, and a plurality of feed tapes mounted to run longitudinally between the frame sides, of a pair of bars extending across the machine movable through said guides and having their locations one forward of the other relatively to the line of tape feed, a longitudinally ranging squaring member towards one side of the frame, adjustably secured to the rearward one of said bars and having by an aperture therethrough a supporting and guiding engagement on the forward bar, and a second squaring member towards the other side of the frame connected with the forward bar and having an aperture therethrough, a supporting and guiding engagement with the rearward bar, an intermediately pivoted lever with which the ends of said bars are engaged and means for imparting a rocking movement to said lever for reciprocating the bars and squaring members simultaneously in reverse directions.

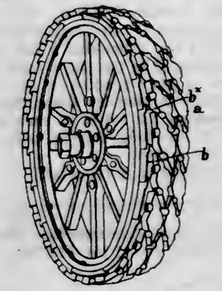
3. In a sheet feeding mechanism, the combination with a plurality of endless feed-tapes, of one or more movable stops for temporarily arresting each sheet in its travel on the feed tapes, a pair of oppositely located straight, parallel, longitudinally ranging, and transversely movable sheet squaring members, a transversely arranged pair of bars, on each of which one only of said squaring members is secured, a pivoted T-shaped lever with the opposite arms of which said bars are engaged, a slide-bar engaging the third arm of said T-shaped lever, a rotatable cam for moving said slide bar in one direction, and a spring for retracting said slide-bar.

4. In a sheet feeding mechanism, the combination with a plurality of endless feed-tapes, onto which the sheets may be laid, one at a time, and by which they are forwardly progressed, of a transverse rock shaft between the upper and lower courses of the tapes having a plurality of substantially radially projecting stop fingers, for temporarily arresting each sheet in its travel on the feed tapes, means for imparting rocking movements to said finger carrying rockshaft, a pair of oppositely located straight, parallel, longitudinally ranging, and transversely movable sheet squaring members, to the rear of said stop fingers, and means for imparting transverse approaching and receding movements to said squaring members.

5. In a sheet feeding mechanism, the combination with a plurality of feed-tapes, of a transverse rock shaft between the upper and lower courses of the tapes, having a plurality of substantially radially projecting stop fingers, and provided with a lever arm, a rotatable cam, thrust-rod actuated thereby, a pivoted lever to which said thrust rod is connected, and a link connecting said lever, and said rock shaft lever arm, a pair of oppositely located straight, parallel, longitudinally ranging, and transversely movable sheet squaring members, to the rear of said stop fingers, and means for imparting transverse approaching and receding movements to said squaring members.

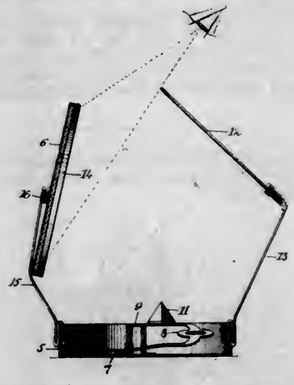
[Claims 6 and 7 not printed in the Gazette.]

898,832. ELASTIC TIRE FOR WHEELS. FELIX J. CHARY, Paris, France. Filed Jan. 13, 1906. Serial No. 295,920.



In a tire for vehicle-wheels, the combination, with the rim, of a plurality of frames of parallelogrammic form secured in said rim independently of each other, each frame having a groove at its under part on all sides and inwardly-projecting tongues intermediately of the length of all of the sides, and tread-blocks secured within said frames by means of base-flanges which extend beneath said tongues and into said grooves, the grooves or spaces between adjacent blocks extending obliquely of the tread-surface.

898,833. PUZZLE. GEORGE CHAPMAN, Arlington, N. J. Filed Oct. 31, 1907. Serial No. 399,993.



1. In a puzzle, a movable body, an inclined track over which the body is to be moved by the operator in the solution of the puzzle, means for obscuring the operator's direct view of the track and body, and a mirror through which the operator may observe the track and body.

2. In a puzzle, an inclined track having a sinuous portion and a ring in the course of its length, a post arranged adjacent to and separated from the highest termi-

nal of the track, and a body movable over said track, adapted to be unbalanced and topple over in certain positions thereof when passing over said ring and from the terminal of the track to the post.

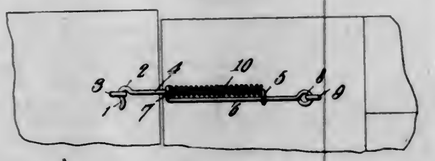
3. In a puzzle, an inclined track, a post arranged adjacent to the highest terminal of the track and separated a slight distance therefrom, and an angular body one of whose dimensions is less than the distance between the post and the track adapted to be moved over said track to the post only when a longer dimension of the body is turned to bridge the space between the post and the adjacent track terminal.

4. In a puzzle, a box comprising a top and a body, a mirror carried within the top, a track arranged within the body of the box, a body adapted to be moved over said track, a shield, and supports one for supporting the shield and one for supporting the top from the box body in such a position that the shield will obscure the operator's direct view from both the track and body, but permit their indirect observance through the mirror, said supports, shield and body being adapted to be contained within said box.

5. In a puzzle, a box comprising a top and a body portion, a mirror arranged in the top, a track carried by the body of the box, a body adapted to be moved over the track, a shield, and means for supporting the top and means for supporting the shield in such a position that the movement of the body may be only indirectly observed through the mirror.

[Claim 6 not printed in the Gazette.]

898,834. HASP. JOHN CHRISTENSON, Northport, Wash. Filed Apr. 2, 1908. Serial No. 424,769.

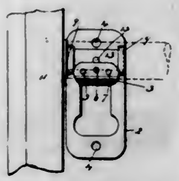


1. A hasp embodying engaging and attaching members having their opposed inner terminals yieldingly held for relative longitudinal movement.

2. A hasp embodying engaging and attaching members and a spring connecting the opposed inner terminals of said members.

3. A hasp having an engaging member with an eye formed on one end thereof, and an attaching member adapted to be inserted in said eye, and having a loop on the end thereof adapted to embrace the engaging member, and a coiled spring held by the engaging member.

898,835. PICTURE-MOLDING BRACKET. EDWARD CHRISTIAN, Waterbury, Conn. Filed Feb. 24, 1908. Serial No. 417,572.



The herein described molding bracket comprising a plate, an integral hook-shaped finger projecting outward therefrom and provided with perforations, said plate formed with offset straps at each side of the plate near the upper end, and a slide passed beneath said straps and formed with an outwardly projecting perforated arm, substantially as described.

898,836. NUMBERING-MACHINE. BENJAMIN B. CONRAD, New York, N. Y., assignor to American Numbering Machine Company, a Corporation of New York. Filed Dec. 30, 1907. Serial No. 408,505.



1. In a numbering machine of the character described a frame, a pawl swing and its actuating pawls, the number wheels, their ratchets, an operating shaft for the pawl swing, a sleeve on which the wheels are rotatable surrounding the shaft, and an operating means exterior to the sleeve connecting the shaft and pawl swing, said operating means comprising an arm extending from the shaft on the outer side of the frame, and carrying a projection extending through the frame, and engaging the pawl swing.

2. In a numbering machine of the character described a frame, a pawl swing and its actuating pawls, the number wheels, their ratchets, an operating shaft for the pawl swing, a sleeve on which the wheels are rotatable surrounding the shaft, and an operating means exterior to the sleeve connecting the shaft and pawl swing, said operating means comprising an arm extending from the shaft on the outer side of the frame, and carrying a projection extending through the frame, and engaging the pawl swing, the end of said frame being recessed to house the arm, the arm and recess at one end of each being semicircular.

3. In a numbering machine of the character described a frame, a pawl swing and its actuating pawls, the number wheels, their ratchets, an operating shaft for the pawl swing, a sleeve on which the wheels are rotatable surrounding the shaft, and an operating means exterior to the sleeve connecting the shaft and pawl swing, said operating means comprising an arm extending from the shaft on the outer side of the frame, and carrying a projection extending through the frame, and engaging the pawl swing, the end of said frame being recessed to house the arm, the arm and recess at one end of each being semicircular, and a shoulder of considerable surface at the side of the recess of the frame against which the arm may abut.

4. In a numbering machine of the character described a frame, a pawl swing and its actuating pawls, the number wheels, their ratchets, an operating shaft for the pawl swing, a sleeve on which the wheels are rotatable surrounding the shaft, and an operating means exterior to the sleeve connecting the shaft and pawl swing, said operating means comprising an arm extending from the shaft on the outer side of the frame, and carrying a projection extending through the frame, and engaging the pawl swing, the end of said frame being recessed to house the arm, the arm and recess at one end of each being semicircular, and a shoulder of considerable surface at the side of the recess of the frame against which the arm may abut.

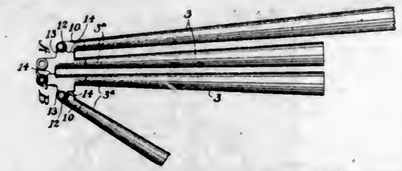
5. In a numbering machine of the character described a frame, a pawl swing and its actuating pawls, the number wheels, their ratchets, an operating shaft for the pawl swing, a sleeve on which the wheels are rotatable surrounding the shaft, and an operating means exterior to the sleeve connecting the shaft and pawl swing, said operating means comprising an arm extending from the shaft on the outer side of the frame, and carrying a projection extending through the frame, and engaging the pawl swing, the end of said frame being recessed to house the arm, and a removable end plate for the arm.

[Claims 6 to 8 not printed in the Gazette.]

898,837. VEHICLE BOW-SOCKET. JAMES C. COSS, Cleveland, Ohio. Filed Jan. 17, 1908. Serial No. 411,275.

1. In a bow-socket forging, a pivot connection comprising male and female members, said female member being provided with a stop extension above the pivot and engaging with said male member when the top is folded.

2. A bow-socket forging, comprising a male member and a female member, said female member being provided with a stop extension at the base of its lug or recess portion and abutting against the adjacent portion of the male member when said members are moved to their folded position.



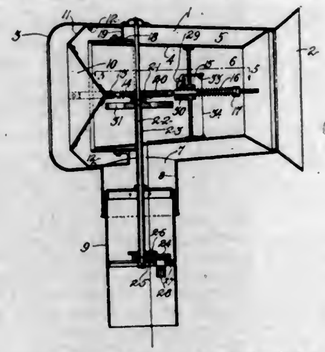
3. In a bow-socket forging, a pivot connection comprising a male and female member one of which is provided with a stop extension above the pivot engaging the other member when the top is folded.

4. In a bow-socket forging, a pivot connection provided with an extension or stop on one member adapted to engage with the other or opposite member whereby the bow-sockets are separated when the top is folded.

5. In a bow-socket forging, a pivot connection having its members extended and adapted to engage with each other above the pivot whereby to separate the attached bow-sockets when the top is folded.

[Claims 6 to 11 not printed in the Gazette.]

898,838. VENTILATOR. WILLIAM H. DAVIDSON, Boston, Mass. Filed Apr. 10, 1908. Serial No. 426,247.



1. A ventilator consisting of a body having a longitudinal draft passage, an internal partition dividing off an induction chamber or passage which is closed at the front and open at the rear or outlet of the ventilator, a side opening for the admission of an induced current to the induction chamber, and a baffle in the draft passage movable by the force of the current flowing through such passage toward the outlet to restrict the same.

2. A ventilator consisting of an outer casing, an inner casing open from end to end to provide a longitudinal draft passage and joined at its front or inlet end to the outer casing, thereby providing an outer annular chamber, an opening through the side of the outer casing, and a baffle between the adjacent ends of the casings movable by the force of the current flowing through the ventilator to obstruct more or less the outlet therefrom.

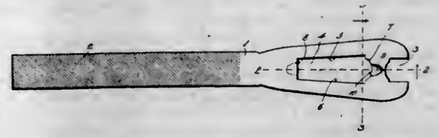
3. A ventilator consisting of an outer casing, an inner casing open from end to end to provide a longitudinal draft passage and joined at its front or inlet end to the outer casing, the latter being contracted at its rear or outlet end and extending beyond the inner casing, thereby providing an outer annular chamber joining with the draft passage, an opening through the side of the outer casing, and a baffle between the adjacent ends of the casings movable by the force of the current flowing through the ventilator toward the contracted end of the outer casing to obstruct more or less the outlet therefrom.

4. A ventilator consisting of a body having a longitudinal draft passage, an internal partition dividing off an induction chamber or passage which is closed at the front and open at the rear or outlet of the ventilator, a side opening for the admission of an induced current to the induction chamber, a baffle in the draft passage movable by the force of the current flowing through such passage toward the outlet to restrict the same, and means for preventing back draft in the induction passage when the outlet is restricted.

5. A ventilator consisting of a body having a longitudinal draft passage, an internal partition dividing off an induction chamber or passage which is closed at the front and open at the rear or outlet of the ventilator, a side opening for the admission of an induced current to the induction chamber, a baffle in the draft passage movable by the force of the current flowing through such passage toward the outlet to restrict the same, and a member, operable upon movement of said baffle in restricting the outlet, to extend said partition and prevent back draft in the induction chamber.

[Claims 6 to 11 not printed in the Gazette.]

898,839. COMBINATION-TOOL. MICHAEL F. DAVITT and LEMUEL J. FENNER, Dickson City, Pa. Filed Nov. 25, 1907. Serial No. 403,776.

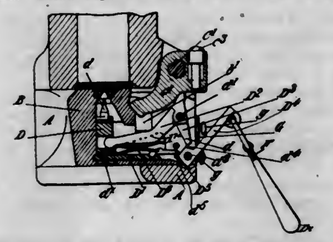


1. In a device of the class described, a shank having at one end a handle and having an enlargement at the other end, said enlargement having openings adapted to receive nuts, one of said openings comprising a tapering slot having a square face at one end and a rounded face at the other end, each of said faces being cut away to form a concaved cylindrical surface meeting said faces to form a curved cutting edge, said curved cutting surfaces being on opposite flat sides of the tool, whereby the cutting edges are oppositely disposed.

2. In a tool of the class described, a shank having flat sides and a slot therein, said slot being provided with cutting edges formed by the meeting of a cylindrical plane, with a plane having lines perpendicular to said flat sides.

3. In a device of the class described, a shank having a slot therein, the faces of said slot being substantially perpendicular to the faces of said shank, cutting edges at each end of said slot, said edges being formed by cut-away portions forming cylindrical surfaces meeting said faces.

898,840. BREECH MECHANISM OF GUNS. ARTHUR T. DAWSON and GEORGE T. BUCKHAM, London, England, assignors to Vickers Sons & Maxim Limited, London, England. Filed Sept. 27, 1906. Serial No. 336,422.



1. In gun breech mechanism of the horizontally sliding block type, the combination of a block-actuating hand lever situated above the breech chamber, a vertical spindle carrying said hand lever and situated at one side of the

breech chamber, a block-actuating crank on said vertical spindle, a cartridge extractor mounted on said spindle, and means whereby said extractor is operated by the block during the opening movement of the latter substantially as described.

2. In gun breech mechanism of the horizontally sliding block type, the combination of a block-actuating hand lever situated above the breech chamber, a vertical spindle carrying said hand lever and situated at one side of the breech chamber, a block-actuating crank on said vertical spindle, a cartridge extractor mounted on said spindle, inclines on said block operating on the extractor during the early part of the opening movement of the block, and shoulders on said block operating on the extractor during the completion of the opening movement of the block, substantially as and for the purposes specified.

3. In gun breech mechanism of the horizontally sliding block type, firing mechanism mounted in a detachable casing in the block and comprising a cocking lever engaging the firing pin, a tripping shoe, a pivoted trigger bar, a retaining lever, a main spring interposed between said cocking lever and said retaining lever, means for actuating said pivoted trigger bar, means whereby the outward movement of the trigger bar causes the tripping shoe to retract the cocking lever and the firing pin and to subsequently release the same, and means whereby the said retaining lever under the influence of the main spring returns the trigger bar to its normal position when it is released substantially as described.

4. In gun breech mechanism of the horizontally sliding block type, firing mechanism mounted in a detachable casing in the block and comprising a cocking lever mounted on an axis pin and engaging the firing pin, a tripping shoe mounted on said axis pin, a pivoted trigger bar mounted on an axis pin adjacent to the free end of the tripping shoe, a retaining lever whose free end engages with the pivoted trigger bar near its fulcrum, a main spring interposed between said cocking lever and said retaining lever, means for actuating said trigger bar, means whereby the outward movement of said trigger bar causes the tripping shoe to retract the cocking lever and the firing pin and to subsequently release the same, and means whereby the said retaining lever under the influence of the main spring returns the trigger bar to its normal position when it is released substantially as described.

5. In gun breech mechanism of the horizontally sliding block type, firing mechanism mounted in a detachable casing in the block and comprising a cocking lever engaging the firing pin, a tripping shoe, a pivoted trigger bar, a retaining lever, a main spring interposed between said cocking lever and said retaining lever, a projection near the fulcrum of said pivoted trigger bar adapted to operate the tripping shoe when the trigger bar is pulled outwardly and through it to retract the cocking lever and firing pin and to subsequently release the same, and a second projection near the fulcrum of the said pivoted trigger bar with which the free end of the said retaining lever engages for returning the trigger bar to its normal position when released substantially as described.

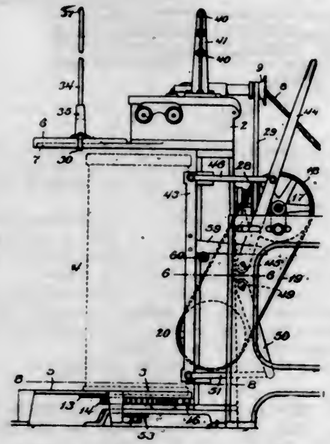
[Claims 6 and 7 not printed in the Gazette.]

898,841. MACHINE FOR LOOSELY PACKING FIBER. ROBERT DAWSON, Framingham, Mass.; Frances E. Dawson executrix of said Robert Dawson, deceased. Filed May 5, 1906. Serial No. 315,453.

1. A machine for loosely packing fiber, comprising means for feeding and coiling a sliver of loosely-engaged fibers into a can having a cylindrical inner wall in its central portion, means for simultaneously rotating the can, whereby the sliver is deposited in a series of coils in the annular space surrounding the central portion of the can, and a presser shaped to fit the space occupied by the coiled sliver.

2. A machine for loosely packing fiber, comprising means for feeding and coiling a sliver of loosely-engaged fibers into a can, a support holding said feeding and coiling means, and means for pressing the coiled fiber into the can held by said support.

3. A machine of the character described, comprising means for feeding and coiling a sliver of loosely-engaged fibers into a can, means for simultaneously rotating the can, whereby the sliver is deposited in a series of coils surrounding the central portion of the can, and means adjacent the coiling and feeding means for pressing the coiled fiber into the can.



4. A machine of the character described, comprising means for feeding and coiling a sliver of loosely-engaged fibers into a can, means for simultaneously rotating the can, whereby the sliver is deposited in a series of coils surrounding the central portion of the can, means for pressing the coiled fiber into the can, and means for moving the can from the coiling and feeding means into proximity with the pressing means.

5. A machine of the character specified, comprising means for feeding in a coil a sliver of loosely-engaged fibers, a support for a can having in its central portion a cylindrical inner wall, said support arranged to hold the can in position to receive the sliver in the annular space between its inner and outer walls, means for rotating said support, whereby the coils of the sliver are deposited so as to surround the inner wall of the can, and an annular plunger arranged to enter the space between the walls of the can for pressing down the fiber therein.

[Claims 6 to 25 not printed in the Gazette.]

898,842. GALLOCYANIN DYE AND PROCESS OF MAKING SAME. CHARLES DE LA HARPE and RUDOLF BURCKHARDT, Basel, Switzerland, assignors to The Firm of Dye Works formerly L. Durand, Huguenin & Co., Basel, Switzerland. Filed May 28, 1908. Serial No. 435,509.

1. The described process for the manufacture of a new gallocyanin-dyestuff which consists in heating a gallocyanin derived from gallamid with ammonia in presence of an aromatic nitrohydrocarbon.

2. The described process for the manufacture of a new gallocyanin-dyestuff, which consists in heating a gallocyanin derived from gallamid with ammonia in presence of an aromatic nitrohydrocarbon and in treating the condensation product thus obtained with a reducing agent.

3. The described process for the manufacture of a new gallocyanin-dyestuff which consists in heating a gallocyanin derived from gallamid with ammonia in presence of dinitrobenzene.

4. The described process for the manufacture of a new gallocyanin-dyestuff which consists in heating a gallocyanin derived from gallamid with ammonia in presence of dinitrobenzene and in treating the condensation product thus obtained with a reducing agent.

5. As a new product, the described gallocyanin dyestuff derived from ammonia and a gallocyanin derived from gallamid, the said dyestuff giving on chromium mordanted fibers vivid, pure, green-blue tints and dissolving in concentrated sulfuric acid with a red-brown coloration.

[Claim 6 not printed in the Gazette.]

898,843. MUSIC-RACK. ALBERT DE LONG, Sr., Shamokin, Pa. Filed Dec. 14, 1907. Serial No. 406,505.

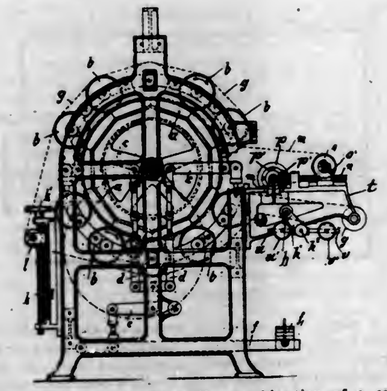


1. A device of the character described, embracing a plurality of clamps, supporting means therefor, longitudinally movable means of connection between said clamps, and resilient means applied to one of said clamps for the automatic retention of said clamps in effective position, said latter clamp being adapted as pressure is applied thereto, to effect by the aid of said means of connection the synchronous movement with said clamp of the other clamps.

2. A music rack having a standard, a clamp mounted on the lower portion thereof, clamps mounted on the upper portion thereof, and adapted to coöperate with the former, rods connecting the upper and lower clamps and a spring mounted in said lower clamp for actuating all of said clamps simultaneously.

3. A device of the class described, comprising a standard, a clamp mounted on said standard, said clamp being provided with arms pivotally connected thereto, said arms having clamps in their upper ends, actuating rods connecting the lower clamp with the upper clamps, all of said clamps being vertically adjustable.

898,844. MANGLING-MACHINE. FRIEDRICH W. DENZLER, Zwickau, Germany. Filed Mar. 22, 1906. Serial No. 307,490.



In a mangling machine, the combination of a central drum, peripheral pressure rolls and two endless feed webs between said drum, and its rolls and mechanical tension devices for each web; an automatic tension device comprising a roll resting on said outer web, arms for carrying said roll, a rocking shaft to which the arms are fixed beneath the front brackets of the machine, two opposite levers fixed on said rocking shaft, and a shifting weight on each lever as set forth.

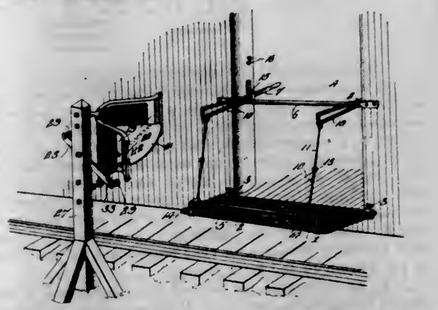
898,845. CAP FOR ATOMIZER-BOTTLES OR THE LIKE. THOMAS A. DE VILBISS, Toledo, Ohio, assignor to The De Vilbiss Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Jan. 31, 1908. Serial No. 413,510.



1. The combination with a bottle, of a ferrule incasing the neck thereof and having its outer end portion turned inwardly upon itself, said outer end portion being provided with an inner annular seat which is countersunk relative to the outer end of the ferrule and provided with a threaded opening, and a plug member threaded into said opening and having a gasket-faced portion for seating against said seat.

2. A cap of the class described, comprising a ferrule having one end portion rolled inwardly, a separate bushing piece secured within the ferrule in abutment with the inturned end thereof and forming an annular internal shoulder which is countersunk relative to the ferrule end, a gasket disposed on said shoulder, and a plug having an enlarged portion for seating within the ferrule end against said gasket and a reduced portion which coöperates with the bushing to effect a tightening of the enlarged portion against the gasket.

898,846. MAIL-BAG-DELIVERY APPARATUS. WALTER B. DE WITT, Jacksonville, Fla. Filed Mar. 4, 1908. Serial No. 419,217.



1. In mail delivery apparatus, the combination with a receiver, of a delivering element comprising a pivoted and swinging mail bag holder, a tilting shelf on which the bag is supported, and means located within the path of the receiver and adapted to be struck thereby for imparting a

swinging movement to the delivering element, the latter acting to project the bag toward the receiver.

2. In mail bag delivering apparatus, the combination with a receiver mounted on the car, of a delivering element mounted adjacent to the railway and comprising a pivoted and swinging mail bag holder, a tilting shelf on which the bag is supported, and means located within the path of the receiver and adapted to be struck thereby for imparting a swinging movement to the delivering element, the latter acting to project the bag toward the receiver.

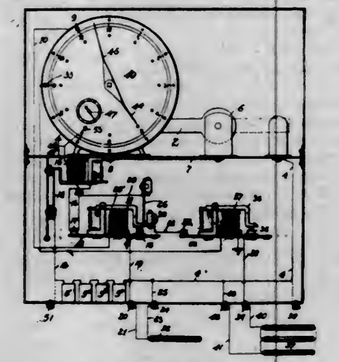
3. In mail bag delivery apparatus, the combination of a bag receiving element, and a bag delivering element substantially U-shaped in horizontal section and mounted to swing horizontally, said delivering element comprising a bag supporting shelf, and means adapted to be arranged in the path of a part of the receiver.

4. In mail bag delivery apparatus, the combination with a receiving device carried by the car, of a swinging bag supporting and throwing element mounted adjacent to the railway and comprising a bag supporting shelf, means arranged to be struck by the receiving device on the car, a latch for retaining the throwing element in a predetermined position, and a bumper carried by said latch.

5. In mail bag delivery apparatus, the combination with a receiving device carried by the car, of a bag holding and throwing device mounted adjacent to the railway and adapted to swing horizontally, a tilting bag supporting shelf connected with said holder, means for limiting the tilting movement of the shelf, means for holding the throwing element in a predetermined position, and means on said throwing element adapted to be struck by the receiving device on the car, substantially as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

898,847. APPARATUS FOR EXPLODING MINE CHARGES. CHARLES I. DODSON, Pittsburg, Kans. Filed Apr. 6, 1907. Serial No. 366,729.



1. In an apparatus for exploding mine charges, a main circuit including a source of electric energy, a normally open switch included in said circuit, a clock having means for automatically operating said switch to close the primary circuit at a predetermined time, a normally open auxiliary circuit, forming part of the main circuit and including said source of electrical energy and the mine charge, said auxiliary circuit being incapable of being closed to fire the charge prior to the closing of the main circuit and means carried by the clock for automatically closing said auxiliary circuit at a time subsequent to the closing of the switch in the main circuit.

2. In an apparatus for exploding mine charges, a main circuit including a source of electric energy, a normally open switch in said circuit, a clock having means for sounding an alarm and closing said switch, a plurality of normally open auxiliary circuits, each forming part of the primary circuit and including said source of electric energy and each arranged to explode an independent mine charge, and means carried by the clock for independently and successively closing said auxiliary circuits at times subsequent to the closing of the switch in the main circuit, said auxiliary circuits being incapable of being closed to fire the charge prior to the closing of the main circuit.

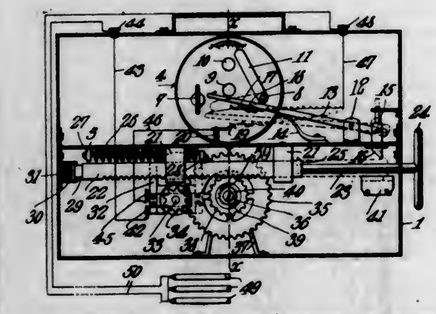
3. In an apparatus for exploding mine charges, a main circuit including a source of electric energy and having two breaks therein, a clock having means for automatically closing the first break at a predetermined time, means carried by the clock for closing the second break at a time subsequent to the closing of the first break, a normally open auxiliary circuit forming part of the main circuit and including said source of electric energy, a mine charge adapted to be fired by the passage of current through said auxiliary circuit, and means controlled by the passage of current through the main circuit for closing said auxiliary circuit, said auxiliary circuit being incapable of being closed prior to the closing of the main circuit.

4. In an apparatus for exploding mine charges, a main circuit including a source of electric energy and having two breaks, a spring switch lever included in said circuit for closing one break, an alarm clock having an alarm arbor engaging said switch lever to hold it in open position until the sounding of an alarm at a predetermined time, means whereby the arrival of one of the hands at a determined position closes the other break, a normally open auxiliary circuit forming part of the main circuit and including said source of electric energy, means whereby the passage of current through the main circuit closes said auxiliary circuit, and a mine charge adapted to be fired by the passage of current through said auxiliary circuit said auxiliary circuit being incapable of being closed prior to the closing of the main circuit.

5. In an apparatus for exploding mine charges, a main circuit including a source of electric energy and having two breaks, a switch lever included in said circuit for closing one break, a spring tending normally to close said switch, an alarm clock having means for holding said switch lever in open position until a predetermined time, means carried by the clock for closing the other break at a time subsequent to the closing of the first break to establish a complete circuit, an auxiliary circuit forming part of the main circuit, and including the source of electric current and mine charge, a normally open switch controlling said auxiliary circuit, and an electro-magnet in the main circuit for operating said switch.

[Claims 6 to 8 not printed in the Gazette.]

898,848. MEANS FOR EXPLODING BLAST CHARGES. CHARLES I. DODSON, Pittsburg, Kans. Filed Feb. 14, 1908. Serial No. 415,844.



1. A means for exploding blast charges comprising a suitable casing, a mechanical generator of electricity therein, means for actuating said generator, a latch for holding the actuating means in the inactive position, a circuit closer in the circuit of the generator, and time controlled means for closing the circuit and releasing the generator actuating means.

2. In a means for exploding blast charges, a mechanical generator of electricity, means for actuating the same, a latch for holding said actuating means in inactive position, a circuit closer in circuit with the generator, a time piece, and means under control of the time piece for simultaneously actuating the circuit-closing means and unlatching the generator actuating means.

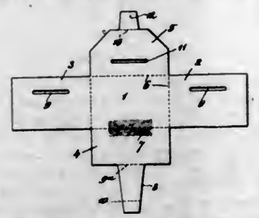
3. In a means for exploding blast charges, a mechanical generator of electricity, means for actuating the same, a time piece, a latch carried by the lever for engaging and locking the actuating means for the generator, circuit terminals carried by the lever, and means on the time piece for engaging the lever to move the same to close the circuit at the circuit terminals and to release the generator actuating means.

4. In a device of the character described, a mechanical generator of electricity, a train of gear for actuating the same, a longitudinally-movable rack-bar engaging said train of gear and active to the same in one direction, a spring for impelling the rack-bar on its active movement, a latch for holding the rack-bar in its inactive position and against the action of its spring, a lever carrying the latch, a contact finger carried by the lever, another contact finger in the path of the lever-carried finger, and both contacts included in the generator circuit, and means under the control of the time piece for moving the lever to close the circuit and release the rack-bar.

5. In a device of the character described, a time piece of the alarm clock type, a mechanical generator of electricity, spring-actuated means for actuating the generator, a latch for holding the generator impelling means against action when its spring is under tension, circuit terminals in the circuit of the generator, an arm carried by the alarm side of the time piece, and means under the control of said arm for causing the closure of the generator circuit and the release of the generator-actuating means.

[Claims 6 and 7 not printed in the Gazette.]

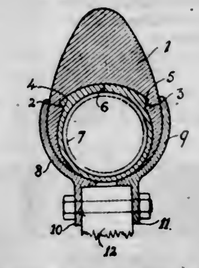
898,849. ENVELOP. FRANCIS V. DONNELLY, Greensburg, Pa. Filed Apr. 30, 1908. Serial No. 430,196.



1. An envelop comprising a body portion, end flaps, a bottom flap adapted to have its lower edge adhesively secured to said body, a tongue carried by said bottom flap, a sealing flap, and an auxiliary tongue carried by said sealing flap, said end flaps having slots formed therein adapted to receive the tongue of said bottom flap, said sealing flap having a slot formed therein adapted to receive the tongue of said bottom flap, said tongues being adapted to be bent forward upon the lower front edge of said envelop, a plate adapted to be bent in engagement with the lower edge of said envelop, and prongs carried by said plate for engaging in said envelop, substantially as described.

2. An envelop comprising a body, a bottom flap adapted to fold thereon, a tongue carried by said bottom flap, end flaps adapted to fold upon said bottom flap, said end flaps having slots formed therein to receive the tongue of said bottom flap, a sealing flap adapted to fold upon said end flaps, said sealing flap having a slot formed therein to receive the tongue of said bottom flap, an auxiliary tongue carried by said sealing flap, said auxiliary tongue and the first mentioned tongue being bent upon the lower edge of said envelop, and a seal adapted to engage the lower edge of said envelop and pierce said tongues.

898,850. PNEUMATIC TIRE. WILLIAM DRURY, Swansea, Wales, England. Filed Apr. 14, 1905. Serial No. 255,520½.



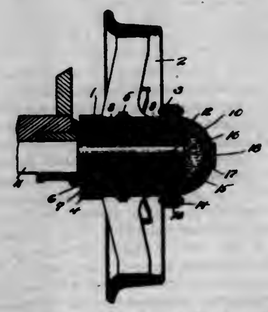
1. In a pneumatic tire, the combination of an inner strain cover divided longitudinally upon its outer part, an outer tread cover divided longitudinally upon its inner part, interlocking means intermediate between said covers, such means acting to interlock the parts under inflation, said interlocking means comprising longitudinally extending recesses and interlocking projections.

2. In a pneumatic tire, the combination of an inner strain cover divided longitudinally upon its outer part, an outer tread cover divided longitudinally upon its inner part, interlocking means intermediate between said covers, such means acting to interlock the parts under inflation, said interlocking means comprising longitudinally extending recesses on the inner walls of said tread cover and corresponding longitudinally extending projections on the outer walls of said strain cover.

3. In a pneumatic tire, the combination of an outer tread cover divided longitudinally, an inner strain cover divided longitudinally, and the latter nested within the former, and the longitudinal edges of one of said covers overlapping each other, and longitudinally extending interlocking recesses and corresponding projections on said respective covers interlocking with each other under inflation.

4. In a pneumatic tire, the combination of an outer interlocking tread cover divided longitudinally, an inner strain cover also divided longitudinally and nested within said outer cover, interlocking means intermediate between said covers and comprising longitudinally extending recesses and projections adapted to interlock with each other under inflation.

898,851. SELF-OILING WHEEL. VERNON DUFF, Burnside, Pa. Filed Mar. 2, 1908. Serial No. 418,781.



A self oiling wheel comprising a wheel hub provided at the outer end with a flange, a sleeve fitting within the bore of the hub and having a flange on its inner end abutting against the inner end of the hub, said sleeve provided approximately midway its length with an interior annular groove and having a plurality of interior longitudinal grooves leading from the annular groove to the outer end

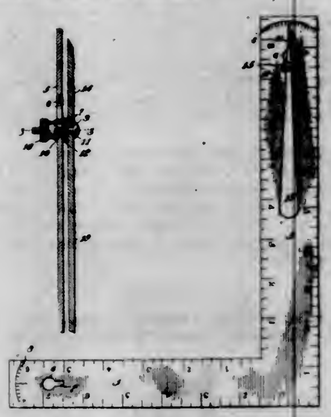
of the sleeve, means passed through the periphery of the hub and engaging the sleeve to hold it against longitudinal movement in the hub, and a cap having a flange fitted with and bolted to the flange on the outer end of the hub, said cap having a central filling port, and a plug normally closing said filling port.

898,852. INSECT-TRAP. TIMOTHY A. DUGGAN, New Orleans, La. Filed Jan. 8, 1908. Serial No. 409,827.



An insect trap comprising a body having an annular compartment and an annular flange spaced from the inner wall of said compartment, in combination with a lid having an annular flange engaging the outer wall of the compartment and a central aperture surrounded by a depending flange positioned intermediate the inner wall of the annular compartment of the body and the annular flange of said body.

898,853. GRAVITY LEVELING AND PLUMBING ATTACHMENT. GEORGE DURST, Savannah, Ga., assignor of one-half to Henry Wood, Atlanta, Ga. Filed July 17, 1906. Serial No. 326,583.



1. As an article of manufacture, a plumbing or leveling attachment comprising a pivot having a head at one end, a clamping element adjustably mounted on the other end, an abutment disposed between the head and clamping element and fixed thereon against movement by the clamping element, and a freely swinging weighted indicator journaled on the pivot between the abutment and head.

2. As an article of manufacture, a plumbing or leveling attachment comprising a pivot shank having a threaded portion, another portion provided with a knife edge, a head located at one end of the knife edge, a clamp nut screwed on the threaded portion, an abutment located on the shank between the threaded and knife edge portions, and a freely swinging weighted pointer journaled on the knife edge portion of the shank and located between the abutment and head.

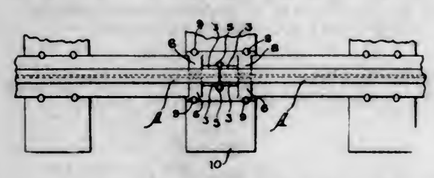
3. The combination with a support having a keyhole slot, of a stem that detachably engages in the smaller portion of the slot, an indicator pivoted on one portion of the stem, and a clamping device adjustably mounted on another portion of the stem, said clamping device being movable through the larger portion of the key hole slot and being of too great a size to pass through the smaller portion thereof.

4. The combination with a supporting plate having a key hole slot, of a pivot shank that detachably engages in the smaller portion of the slot, a head carried by one end of the shank, an abutment mounted on an intermediate portion of the stem in spaced relation to the head and arranged to engage one side of the blade, a weighted indicator mounted on the stem between the head and abutment, and a clamp nut threaded on the opposite end of the shank to that carrying the head, said nut being movable through the larger portion of the key hole slot and being of too great a size to pass through the smaller portion.

5. The combination with a support comprising angularly disposed blades, each blade having a key hole slot in its outer end, and a curved scale concentric to the smaller portion of said slot, of a pivot shank having a threaded portion, and another portion provided with a knife edge, said threaded portion being arranged to engage in the smaller portion of either key hole slot, a head carried by one end of the shank, an abutment screwed on an intermediate portion of the shank, a weighted pointer journaled on the knife edge portion of the shank and arranged to coact with the scale of either blade accordingly as the pivot shank is placed in either slot thereof, and a clamping nut screwed upon the threaded portion of the shank, said clamping nut being small enough to pass through the larger portion of either key hole slot and being of too great a size to pass through the smaller portion thereof.

[Claims 6 and 7 not printed in the Gazette.]

898,854. RAIL-JOINT. JOHN A. EICHOLZ, Homestead, Pa., assignor of one-third to Edward Walton, Homestead, Pa. Filed Mar. 23, 1908. Serial No. 422,723.

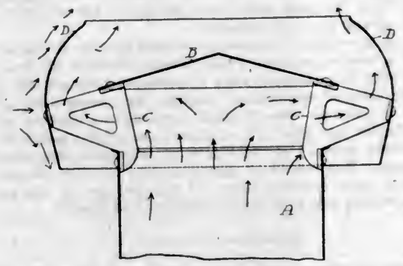


1. In a rail joint, the combination with rails having their base flanges cut away to provide base heads, of a rail chair for connecting the confronting ends of said rails, said chair comprising a base plate having an oblong opening and oppositely disposed spike notches, said opening being adapted to receive the base heads of said rails, rail braces carried by the ends of said chair for embracing the webs of said rails at the cut away portions thereof, and end projections carried by said chair for engaging the edges of the bases of said rail, substantially as described.

2. In a rail joint, the combination of rails having their base flanges cut away to provide base heads, a chair for engaging said base heads and retaining said rails together, said chair comprising a base plate having an opening extending therethrough to receive said base heads, rail braces carried by the ends of said chair, and means for securing said base heads in the opening of said base plate, the base flanges of said rails when in position being in the same plane as the base plate of the chair.

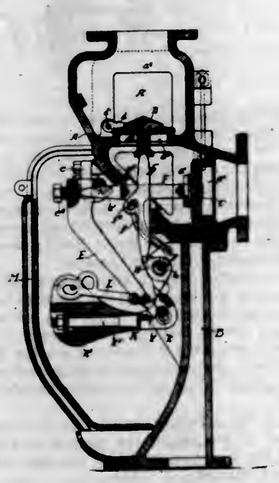
898,855. VENTILATOR. POWELL EVANS, Philadelphia, Pa. Original application filed June 9, 1904, Serial No. 211,829. Divided and this application filed Nov. 23, 1904. Serial No. 234,016.

1. The combination in a ventilator of a bottom section forming a conduit for gas, a cover section, and a side section extending around said first two sections, said side section increasing in diameter from its bottom edge until it is opposite the opening between the top and bottom sections and then decreasing in diameter until its upper edge is adjacent to a straight line or lines drawn through the edges of the top and bottom sections, the upper and lower portions of the side section being formed respectively as double and single curved surfaces and the said lower portion passing gradually and continuously into the upper portion, substantially as described.



2. The combination in a ventilator of a bottom section, brackets supported thereby, a conical top section carried by said brackets and extending over the edges of the bottom section, with a side section also carried by the brackets and extending inwardly both above and below the point of its engagement by said brackets, the upper portion of said side section being formed as a double curved surface and the lower portion as a single curved surface passing continuously and gradually into the said double curved upper portion, said brackets supporting the top section so that it is wholly below the plane of the top of the side section, substantially as described.

898,856. DRY-PIPE VALVE. POWELL EVANS, Philadelphia, Pa., assignor to International Sprinkler Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 4, 1907. Serial No. 405,086.



1. The combination in a dry pipe valve of a casing, a plurality of valves controlling the flow of fluid through said casing, and mechanism operatively connecting said valves, said mechanism including a plurality of levers of which one is composed of a non-corrodible metal, with a weight made of some other metal rigidly connected to said latter lever.

2. The combination in a dry pipe valve of a casing, a plurality of valves controlling the flow of fluid through said casing, and mechanism operatively connecting said valves, said mechanism including a connecting lever having a bolt-like extension, with a weight separate from but mounted on said extension.

898,857. FLY-TRAP. WILLIAM P. EVERETT, Hornbeck, La. Filed May 8, 1908. Serial No. 431,636.



1. A fly-trap, comprising, a ceiling-plate having depending portions, a bait-section frictionally and detachably connected thereto, a trap-section adapted to inclose the bait-section and release the same from its support, and means for raising and lowering the sections, substantially as shown and described.

2. A fly-trap, comprising a ceiling-plate having depending spring fingers flared outward at their lower ends, a bait-section adapted to frictionally and detachably engage said fingers, a trap-section adapted to inclose the bait-section and engage the fingers to release said bait-section, and means for raising and lowering the sections, substantially as shown and described.

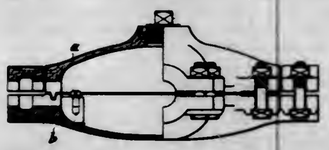
3. A fly-trap, comprising a ceiling-plate having depending portions, a bait-section frictionally and detachably connected thereto, a trap-section adapted to inclose the bait-section and release the same from its support, sleeves on the sections adapted to telescope one within the other, and means for raising and lowering the sections, substantially as shown and described.

4. A fly-trap, comprising a ceiling-plate having depending spring fingers flared outward at their lower ends, a bait-section adapted to frictionally and detachably engage said fingers, a trap-section adapted to inclose the bait-section and engage the fingers to release said bait-section, sleeves on the sections adapted to telescope one within the other, a sheave carried by the ceiling-plate, and a cord passing over the sheave and depending through the sleeves, said cord having a hook at one end, substantially as shown and for the purpose set forth.

5. A fly-trap, comprising a ceiling-plate having a depending tube and sheave, a bait-section frictionally and detachably connected to the ceiling-plate and having a sleeve slidable on the tube, a trap-section having a sleeve slidable on the tube and adapted to inclose the bait-section and release the same from its support, and a cord passing over the sheave and having a hook at one end, substantially as shown and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

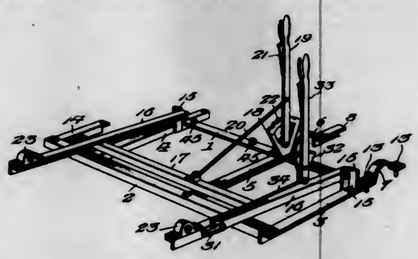
898,858. MEANS OF OBVIATING THE DELETERIOUS EFFECTS OF OSCILLATIONS. CLARENCE FELDMANN, Delft, Netherlands, and JOSEF HERZOG, Budapest, Austria-Hungary. Filed Jan. 30, 1907. Serial No. 354,890.



1. An iron-sheathed cable system having its fittings constructed with non-magnetic metal.

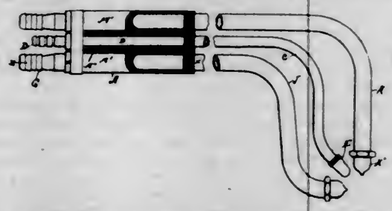
2. An iron-sheathed cable system having its fittings constructed with their upper parts of non-magnetic metal.

898,859. TEDDER ATTACHMENT FOR MOWING-MACHINES. WILLIAM T. FIERS and LUTHER MANOR, Redkey, Ind. Filed Mar. 29, 1907. Serial No. 365,367.



In combination with a mowing machine having an axle and a tongue, a tedder attachment comprising a frame including side bars, a front bar, a rear bar and an intermediate longitudinal brace bar, said brace bar and one side bar being provided at their front ends with arch members, the arch member at the front end of the brace bar carrying an angle bar engaging the tongue of the mowing machine and the arch member at the front end of the side bar constituting a clip member, the rear bar of the frame being extended at one end and provided with a forwardly extending member, uprights upon the front bar of the frame, an auxiliary frame pivoted upon said uprights, means for adjusting the tedder frame, a crank shaft carried by the latter, tedder arms pivoted upon the crank of said shaft, means for transmitting motion to the said crank shaft from the axle of the mowing machine, and links pivotally connected to the tedder arms and to the front bar of the frame.

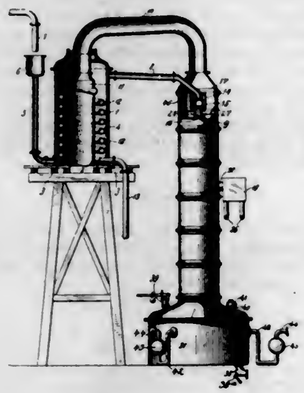
898,860. INTERCHANGEABLE BLOWPIPE. ROBERT FITZSIMMONS, Philadelphia, Pa., assignor, by direct and mesne assignments, to Cornelius D. Fitzsimmons, Philadelphia, Pa. Filed Jan. 24, 1907. Serial No. 353,761.



1. A blow pipe composed of a head formed of two members spaced apart and each provided with a pair of passages arranged adjacent the ends thereof, a centrally arranged connecting web connected to said members, each pair of said passages being inclined towards one another and merging into a single passage, said web being formed with a single central passage which extends throughout the length of said head and is disposed between said single passages, each of said single passages and said passage of the web being threaded at their rear ends, and a coupling secured to the front end of said passage of the web and to each of said pairs of passages.

2. A blow pipe composed of a head formed at one end with a central passage which extends through its length and with two separate pairs of passages arranged on opposite sides of said central passage, the passages of each pair of passages being inclined towards one another and meeting to join and form a single passage at a point substantially midway of the length of said head, said single passages being continued and extending through the rear of said head, whereby there are five passages at one end of said head and three at the opposite end thereof.

898,861. DISTILLING APPARATUS AND METHOD OF DISTILLATION. ALFONSO DE FOCATIIS, New Orleans, La. Filed Mar. 8, 1904. Serial No. 197,131.



1. A distilling apparatus including a column, a boiling chamber, a liquid feeding means, and means arranged intermediate the height thereof and adapted to withdraw the liquid from the column, heated and returned thereto.

2. A still including a column, a boiling chamber, a liquid feeding means, a chamber arranged externally of the column intermediate the height thereof and communicating with the same and with the liquid feeding means, and a steam coil arranged within the chamber.

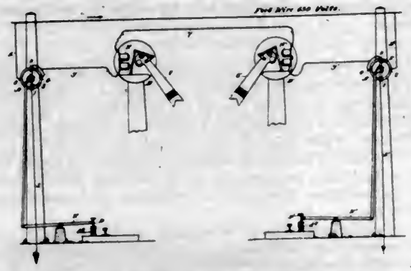
3. The combination with a still column having at its lower end devices for vaporizing the liquid to be distilled, of means for introducing such liquid into the upper part of the column, means for withdrawing such liquid from the column and returning it thereto at a point between its point of entrance and said vaporizing devices and means without the column for at will imparting heat to the liquid as withdrawn.

4. A still having a boiling chamber at its base, a liquid feeding means at the top of the column, and means for withdrawing the liquid as it passes through the column, heating it and returning it thereto.

5. A still having a boiling chamber at its base, a liquid feeding means at the top of the column and means for withdrawing the liquid as it passes through the column, heating it and returning it thereto at substantially the point from which it was withdrawn.

[Claims 6 to 8 not printed in the Gazette.]

898,862. ELECTRIC RAILROAD-SIGNAL. TIMOTHY C. FOGARTY, FRANK W. BROCK, and FRANK A. BOWDLE, Chatham, Ill. Filed Jan. 13, 1908. Serial No. 410,632.

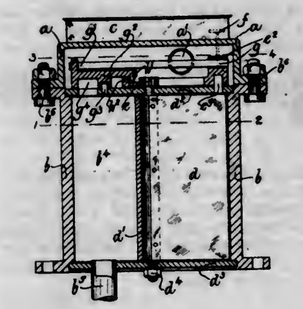


1. A rail road signal, consisting of a continuous feed wire and a block section comprising a visual signal at each end of the block, a separate block circuit connecting the two signals, a switch at each end of the block connected to said block circuit, said switch being formed as a ring with four equally spaced stationary contacts quadrantally arranged, two of said contacts of each switch ring being connected to one end of the block circuit and the other two contacts of each switch ring being connected—one to the continuous feed wire and the other to the ground, a shaft with diametrical conducting bar arranged in the plane of the ring and connecting its opposite contacts, a ratchet wheel rigid with the shaft, a swinging arm arranged on the shaft and having a pawl engaging the ratchet wheel and a movable track device operated upon by the passing car and connected to and operating the swinging arm and pawl.

2. A rail road signal, consisting of a continuous feed wire and a block section comprising a semaphore arm and electro-magnet controlling the same arranged at each end of the block to form a visual signal, a separate block circuit connecting the two signals, a switch at each end of the block connected to said block circuit, said switch being formed as a ring with four equally spaced stationary contacts quadrantally arranged, two of said contacts of each switch ring being connected to one end of the block circuit and the other two contacts of each switch ring being connected—one to the continuous feed wire and the other to the ground, a shaft with diametrical conducting bar arranged in the plane of the ring and connecting its opposite contacts, a ratchet wheel rigid with the shaft, a swinging arm arranged on the shaft and having a pawl engaging the ratchet wheel and a movable track device operated upon by the passing car and connected to and operating the swinging arm and pawl.

3. A rail road signal, consisting of a continuous feed wire and a block section comprising a visual signal at each end of the block, a separate block circuit connecting the two signals, a switch at each end of the block connected to said block circuit, said switch being formed as a ring with four equally spaced stationary contacts quadrantally arranged, two of said contacts of each switch ring being connected to one end of the block circuit and the other two circuits of each switch ring being connected—one to the continuous feed wire and the other to the ground, a shaft with diametrical conducting bar arranged in the plane of the ring and connecting its opposite contacts, a ratchet wheel rigid with the shaft, a swinging arm arranged on the shaft and having a pawl engaging the ratchet wheel and a movable track device operated upon by the passing car and connected to and operating the swinging arm and pawl, said track device consisting of two long rails having their outer ends mounted upon widely separated and detached bearing shoes and their inner ends connected together, a spring arranged below the inner jointed ends of the rails for holding them normally above the track rails and a housing and base for said spring.

898,863. POSITIVE WATER-METER. EDMUND J. FRYER, Claremont, Western Australia, Australia, assignor of one-half to Edward Bolton Roark, Claremont, Western Australia, Australia. Filed Feb. 10, 1908. Serial No. 415,214.



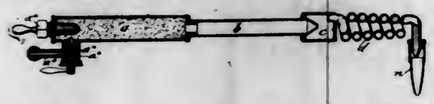
1. In a water meter of the type set forth, in combination, a cylindrical casing constructed with independent measuring and discharging chambers, said casing being formed with top and bottom walls closing said chambers, the top wall being formed with two inlet openings communicating with the measuring chamber at each side of the discharge chamber and with an outlet opening communicating with the discharge chamber, a blade mounted for oscillating movement in the measuring chamber, a shaft carrying the blade and projecting beyond the top wall, a pinion on the projecting end of the shaft, a pivotally mounted segment on the top wall, said segment having teeth meshing with said pinion, a valve pivotally mounted on the top wall and having a chambered under face proportioned to cover said outlet port and either of said inlet ports and an operative connection between said segment and said valve for operating the latter from the former.

2. In a water meter of the type set forth, in combination, a cylindrical casing constructed with independent measuring and discharging chambers, said casing being formed with top and bottom walls closing said chambers, the top wall being formed with two inlet openings communicating with the measuring chamber at each side of the discharge chamber and with an outlet opening communicating with the discharge chamber, a blade mounted for oscillating movement in the measuring chamber, a shaft carrying the blade and projecting beyond the top wall, a pinion on the projecting end of the shaft, a pivotally mounted segment on the top wall, said segment having teeth meshing with said pinion, a valve pivotally mounted on the top wall and having a chambered under face proportioned to cover said outlet port and either of said inlet ports and a flexible resilient rod connected to said segment along a line radial of its pivot and to said valve along a line radial of its pivot.

3. In a water meter of the type set forth, in combination, a cylindrical casing constructed with independent measuring and discharging chambers, said casing being formed with top and bottom walls closing said chambers, the top wall being formed with two inlet openings communicating with the measuring chamber at each side of the discharge chamber and with an outlet opening communicating with the discharge chamber, a blade mounted for oscillating movement in the measuring chamber, a shaft carrying the blade and projecting beyond the top wall, a pinion on the projecting end of the shaft, a pivotally mounted segment on the top wall, said segment having teeth meshing with said pinion, a valve pivotally mounted on the top wall and having a chambered under face proportioned to cover said outlet port and either of said inlet ports, a flexible resilient rod connected to said segment along a line radial of its pivot and to said valve along a line radial of its pivot, said segment having an arcuate ridge formed with a central gap, and opposite pro-

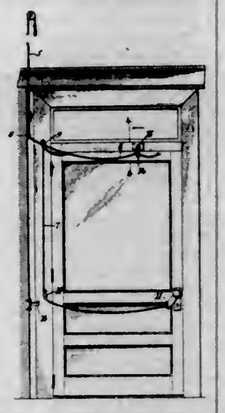
jections carried by said valve and constructed with pins which alternately ride against the inner and outer faces of said ridge and work through the gap.

898,864. GAS-HEATED WELDING-TOOL. AARON FUTTERMAN, New York, N. Y. Filed Apr. 29, 1908. Serial No. 429,859.



A welding tool comprising a mixing chamber provided with means for receiving illuminating gas and oxygen, an auxiliary smaller mixing chamber, a tube connecting the two mixing chambers, and a heating coil connected with the smaller mixing chamber and having a nozzle to which all the gaseous mixture received in said smaller mixing chamber is carried by said coil.

898,865. DOOR OPENER AND CLOSER. PETER D. GALARNEAU and WILLIAM S. NEWTON, East St. Louis, Ill. Filed Dec. 13, 1907. Serial No. 406,275.



1. In combination with a door having a lock, an opener therefor comprising a bracket attached to the door casing above the door and extending outwardly therefrom, a pulley suspended from the outer end of said bracket, an arm attached to the latching spindle of the lock, and a single line passing to the point from which the door is to be operated having two branches connected together adjacent to the door, one of which passes over the suspended pulley and is attached to the door, and the other of said branches is connected to said spindle arm.

2. In combination with a door having a lock, an opener therefor comprising a bracket attached to the door casing above the door and extending outwardly therefrom, a pulley suspended from the bracket, an arm fixed to the latching spindle of the lock, sheaves fixed at one side of the door casing, and a line leading to the door having two branches, one for unlatching the door, passing over said sheaves and attached to said arm, and the other for moving the door to and from closed position, passing over said suspended pulley and connected with the door.

3. In combination with a hinged door having a revoluble latching spindle, an opening and closing device for the door comprising a support arranged outwardly from the door intermediate its side edges, a flexible member attached to a fixed part of the door near the top of the free edge thereof and movably connected with said support, whereby when said member is pulled, that portion of the member between the door and support will pass through the support as the door swings toward the support, and the said member will pass through the support in the opposite direction as the door swings past and from the support, an arm attached to the latching spindle, and a second flexible member connected to the first mentioned flexible member and to said arm for operating the latching spindle.

898,866. PROCESS OF TREATING SUBSTANCES CONTAINING CRUDE TARTAR. VICTOR J. GARIN, Annemasse, and FERNAND DAVID, Cette, France, assignors to Compagnie Française des Produits Tartriques, Beziers, France. Filed Apr. 5, 1907. Serial No. 366,527.

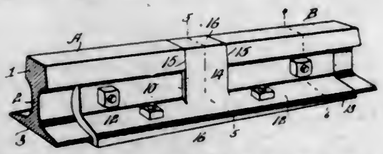
1. In the treatment of substances containing crude tartar to facilitate the removal of the coloring matter therein, the addition thereto of a substance of formaldehyde character.

2. In the treatment of substances containing crude tartar to facilitate the removal of the coloring matter therein, the addition thereto, in the presence of an albuminoid, of a substance of formaldehyde character.

3. In the treatment of substances containing crude tartar to facilitate the removal of the coloring matter therein, the addition thereto of an albuminoid and a substance of formaldehyde character, substantially as described.

4. In the treatment of substances containing crude tartar to facilitate the removal of the coloring matter therein, the addition thereto, in the presence of an albuminoid, of a substance of formaldehyde character and of a dissolving fluid whereby said coloring matter is carried down in the form of an insoluble lake, substantially as described.

898,867. RAIL-JOINT. MARY E. GILCREST, Mount Sterling, Ky. Filed June 21, 1907. Serial No. 380,138.



1. A rail joint comprising a pair of rail sections having their heads reduced at the top and sides to form a recess at the abutting ends of the sections, a fish-plate fitted to the webs of the sections and provided with a flange extending below the bases of the sections, a supporting plate under the sections having one edge presented to the said flange of the fish-plate and provided with an upwardly-extending flange at the opposite edge for engaging the bases of the sections, a second fish-plate fitted to the webs of the sections and extending over the flange of the supporting plate, bolts passing through the fish-plates and webs of the sections, bolts passing through the fish-plates and supporting plate and through the bases of the sections for holding the parts together, and tongues on the fish-plates extending into the recesses in the heads of the sections, one tongue provided with a lateral extension disposed flush with the tread surface of the sections.

2. A rail joint comprising a pair of rail sections having their head portions reduced at the top and sides to form a recess at the abutting ends of the sections, fish plates disposed at opposite sides of the sections and having their top edges fitting under the heads of the sections, tongues rising from the top edges of the fish plates and fitting in the vertical portions of the recesses, one of the tongues being provided with a horizontal extension fitting in the recess and extending from one side of the rail sections to the other and bearing on the other tongue, and means for securing the fish plates to the rail sections.

898,868. BALING-PRESS. SAMUEL G. GILLELAND, Spring Garden, Mo. Filed Sept. 9, 1907. Serial No. 391,861.

1. In a baling press, a suitable frame, a power shaft, journaled therein, an elliptic cam rotatable with said shaft, and provided at one end with an outwardly projecting hook, a guide arranged concentrically of the axis of the shaft with its internal diameter barely exceeding the external diameter of the cam at its point of greatest diameter and provided with a channel and in its inner side with a slot opening into said channel and adapted to receive said hook as the cam rotates, a link arranged slidingly in said channel with its front end bridging the communicating slot and adapted to be engaged by the hook of the cam, and a cable attached to the rear end of the link and adapted as the latter is advanced in said channel by the hook to swing inwardly through the slot and bear against the periphery of the cam.



2. In a baling press, a suitable frame, a power shaft journaled therein, an elliptic cam rotatable with said shaft and provided at one end with an outwardly projecting hook, a guide arranged concentrically of the axis of the shaft with its internal diameter barely exceeding the external diameter of the cam at its point of greatest diameter and provided with a channel and in its inner side with a slot opening into said channel and adapted to receive said hook as the cam rotates, a link arranged slidingly in said channel with its front end bridging the communicating slot and adapted to be engaged by the hook of the cam, a cable attached to the rear end of the link and adapted as the latter is advanced in said channel by the hook to swing inwardly through the slot and bear against the periphery of the cam, and means to trip the link from engagement with said hook.

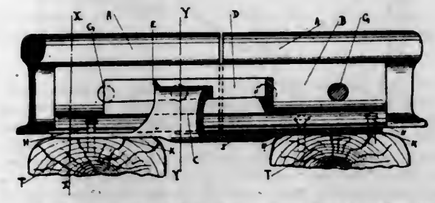
3. In a baling press, a suitable frame, a power shaft journaled therein, an elliptic cam rotatable with said shaft and provided at one end with an outwardly projecting hook, a guide arranged concentrically of the axis of the shaft with its internal diameter barely exceeding the external diameter of the cam at its point of greatest diameter and provided with a channel and in its inner side with a slot opening into said channel and adapted to receive said hook as the cam rotates, a link arranged slidingly in said channel with its front end bridging the communicating slot and adapted to be engaged by the hook of the cam, a cable attached to the rear end of the link and adapted as the latter is advanced in said channel by the hook to swing inwardly through the slot and bear against the periphery of the cam, a lever carried by the cam contiguous to the hook and means to operate said lever at a predetermined point and cause it to force the link off the hook.

4. In a baling press, a suitable frame, a power shaft journaled therein, an elliptic cam rotatable with said shaft and provided at one end with an outwardly projecting hook, a guide arranged concentrically of the axis of the shaft with its internal diameter barely exceeding the external diameter of the cam at its point of greatest diameter and provided with a channel and in its inner side with a slot opening into said channel and adapted to receive said hook as the cam rotates, a link arranged slidingly in said channel with its front end bridging the communicating slot and adapted to be engaged by the hook of the cam, a cable attached to the rear end of the link and adapted as the latter is advanced in said channel by the hook to swing inwardly through the slot and bear against the periphery of the cam, a lever carried by the cam contiguous to the hook, and a pin projecting from the frame in the path of said lever to operate the same and cause it to trip the link from engagement with the hook.

5. In a baling press, a suitable frame, a power shaft journaled therein, an elliptic cam rotatable with said shaft and provided at one end with an outwardly projecting hook, a guide arranged concentrically of the axis of the shaft with its internal diameter barely exceeding the external diameter of the cam at its point of greatest diameter and provided with a channel and in its inner side with a slot opening into said channel and adapted to receive said hook as the cam rotates; said channel being widened at its ends and deepened between said widened portions to provide a pair of forwardly disposed shoulders contiguous to the rear widened portions, a link fitting slidingly in the channel and normally converging forward in the widened rear end of said channel with respect to the slot and having its front end in the path of the hook of the cam and provided at such end with lugs occupying the deepened portion of the channel and normally bearing against said shoulders, a cable attached at its front end to said link, a guide sheave for the cable at the rear end of the guide, and means for swinging the link outward at its front end until disengaged from the hook, when the former has been moved by the latter into the widened portion of the channel at the front end of the guide.

[Claims 6 to 9 not printed in the Gazette.]

898,869. MEANS OF FORMING JOINTS AND BONDS IN RAILS. HORATIO G. GILLMOR, Bath, Me. Filed Dec. 4, 1905. Serial No. 290,161.



1. A self locking wedge clamp, comprising a clamp body with suitably formed, resilient, arms extending upwardly and inwardly and a self locking wedge constructed with wedging surfaces to engage with the clamp body and other bodies to secure pressure between the clamp and said bodies, the said wedge and one of the said clamp arms being constructed with suitably formed surfaces adapted, automatically, to interlock to prevent slackening of the wedge when driven into position, for substantially the purposes set forth.

2. A self locking wedge clamp, comprising a clamp body with suitably formed, resilient, arms extending upwardly and inwardly, and self locking wedges each constructed with wedging surfaces to engage with the clamp body and other bodies to secure pressure between the said clamp and other bodies, the said wedges and said clamp arms being constructed with suitably formed surfaces adapted, automatically, to interlock to prevent slackening of the wedges when driven into position, for substantially the purposes set forth.

3. A self locking wedge clamp, comprising a clamp body with suitably formed, resilient, arms extending upwardly and inwardly, and a self locking wedge constructed to engage with the clamp body and other bodies to secure pressure in two directions, approximately at right angles, between said clamp and other bodies, the said wedge and one of the said clamp arms being constructed with suitably formed surfaces adapted automatically to interlock to prevent slackening of the wedge when driven into position, for substantially the purposes set forth.

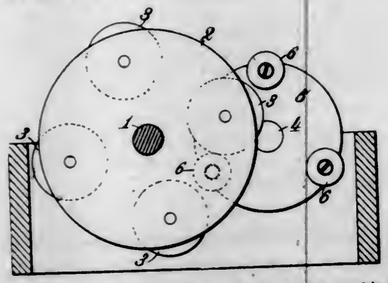
4. A self locking wedge clamp, comprising a clamp body with suitably formed, resilient, arms extending upwardly and inwardly, and self locking wedges, each constructed with double wedging surfaces to engage with the clamp body and other bodies to secure pressure in two directions approximately at right angles between said clamp and other bodies, the said wedges and the said clamp arms being constructed with suitably formed surfaces adapted automatically to interlock to prevent slackening of the wedges when driven into position, for substantially the purposes set forth.

5. A rail joint; comprising the rails; a chair, having resilient arms extending upwardly and inwardly; and self locking wedges, constructed to engage with the chair and

other parts of the joint at opposite sides of the rails to retain them in surface and alinement, each of the said wedges and the said chair arms being constructed with suitably formed surfaces adapted, automatically, to interlock to prevent slackening of the wedges when driven into position; for substantially the purposes set forth.

[Claims 6 to 28 not printed in the Gazette.]

898,870. POWER-TRANSMITTING MECHANISM. JAMES J. GILROY, Lost Creek, Pa. Filed Mar. 9, 1905. Serial No. 249,255.



1. In a power transmitting mechanism, the combination of shafts in the same horizontal plane and also in parallel planes and extending in opposite directions, one terminal of each shaft being adjacent to the terminal of the other, heads or disks fixed to the contiguous terminals of the two shafts and having their faces partially overlapping and in planes parallel to each other, the disks differing in diameter, and sets of rollers on the faces of the respective disks, the rollers on the disks of greater diameter being of greater diameter than the rollers on the smaller disk, the rollers being movable inwardly and outwardly over the disks between each other, the inner opposing faces of the rollers being also in planes parallel with the contiguous faces of the disks, and the rollers of one disk having the most forceful contact with the rollers of the other disk when arriving in coöperative relation with the vertical diameters of the latter rollers and subsequently moving past such diameters of the respective rollers to avoid forcing the shafts with greater pressure against parts of the shaft bearings than against the remaining portions of said bearings.

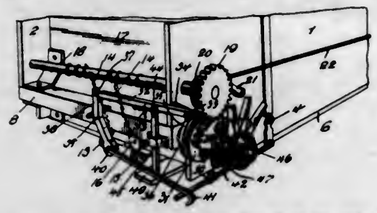
2. In a power transmitting mechanism, the combination of shafts arranged in the same horizontal plane, heads or disks of differing diameters fixed to the shafts and having overlapping contiguous faces, and sets of rollers held on the contiguous faces of the heads for edge engagement of one set of rollers with the other set of rollers, the rollers having their axes located inwardly a distance from the peripheries of their respective heads or disks to bring the said rollers nearer the centers of the disks, and the rollers on the larger disk being of greater diameter than those on the smaller disk.

3. In a power transmitting mechanism, the combination of a driving shaft, a head or disk fixed thereon, rollers having their axes located inwardly a distance from the periphery of the disk, a driven shaft, a head or disk fixed on the said driven shaft and of less diameter than the aforesaid head or disk, rollers arranged on the latter disk similarly to those on the said head or disk of the driving shaft, the opposing faces of the two disks in parallel planes and overlapping, and the rollers on the head or disk of the driving shaft being greater in diameter than those on the head or disk of the driven shaft and both sets of rollers having their inner faces parallel with the contiguous faces of the disks carrying the same.

4. In a power transmitting mechanism, the combination of parallel shafts, heads or disks fixed to the shaft terminals and having overlapping contiguous faces, the heads or disks differing in diameter, and rollers on the contiguous faces of the heads or disks, the axes of the rollers being located inwardly a distance from the peripheries of the respective heads or disks and the rollers of one disk contacting with and movable inwardly and outwardly between the rollers of the other disk.

5. In a power transmitting mechanism, the combination of a driving shaft and a driven shaft, a head fixed to the driving shaft, a head fixed to the driven shaft and of less diameter than the head upon the driving shaft, said heads having overlapping contiguous faces, and rollers on the contiguous faces of the heads, the rollers upon the head carried by the driving shaft being of greater diameter than the rollers upon the head carried by the driven shaft, and the rollers of one head contacting with the rollers of the other head.

898,871. DUMP-WAGON. COULTER E. GLENN, Evans City, Pa. Filed Dec. 26, 1907. Serial No. 408,079.



1. A dump wagon comprising side walls, an end wall, drop doors hinged to said side walls, trucks supporting said side walls, a shaft journaled in said side walls, a gear wheel carried by said shaft, a ratchet wheel carried by said shaft, a pawl normally engaging said ratchet wheel, chains loosely connected to said doors and attached to said shaft, a gear wheel loosely carried by one of said trucks and meshing with the first mentioned gear wheel, a clutch member carried by one of said trucks, pins carried by said clutch member, and extending into the last mentioned gear wheel, a grooved hub forming part of said truck and adapted to receive the pins of said clutch member, a spring pressed lever carried by one of said side walls for holding the pins of said clutch member in engagement with said hub, a weighted lever for normally holding said spring pressed lever in an elevated position with the pins of said clutch member out of engagement with said hub, extensions carried by one of said doors, a hook carried by said weighted lever and resting upon one of said extensions, a depending arm carried by said spring pressed lever and adapted to be impinged by the other of said extensions, and means carried by one of said side walls for moving said pawl out of engagement with said ratchet wheel.

2. A dump wagon comprising a body having hinged drop doors, a front truck, a rear truck, a shaft journaled in said body adjacent to said rear truck, chains connected to said body and to said shaft and passing along the confronting edges of said doors, a gear wheel mounted upon said shaft, a gear wheel carried by said rear truck and meshing with the first mentioned gear wheel, a movable clutch member for engaging the gear wheel of said truck and one of the wheels thereof, a lever for moving said clutch member, a weighted lever for normally holding said clutch lever in an elevated position, extensions carried by one of said doors, a hook carried by said weighted lever and engaging one of said extensions, a depending arm carried by said clutch lever and adapted to be impinged by the other of said extensions, and means carried by said body for normally holding said shaft stationary.

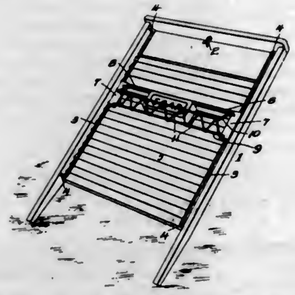
3. A dump wagon comprising a body, a rear truck, drop doors carried by said body, a shaft journaled in said body, chains connected to said body and said shaft and passing along the confronting edges of said doors, a clutch member movably mounted upon said truck for engaging one of the wheels thereof, means retained by said clutch member for imparting a rotary movement to said shaft, a lever for moving said clutch, a weighted lever for maintaining said clutch lever in an elevated position, means carried by one of said doors for moving said weighted lever and releasing said clutch lever, means carried by one of said doors for elevating said clutch lever, and means carried by said body for normally holding said shaft stationary.

4. A dump wagon comprising a body, drop doors carried thereby, a rear truck, a shaft journaled in said body, chains connecting with said shaft for closing said doors, a movable clutch member carried by said rear truck and adapted to engage a wheel thereof, means engaged by said clutch member for imparting a rotary movement to said shaft in unison with the wheel of said truck, means carried by said body and actuated by the dropping of one of said doors for moving said clutch member into engagement with the first mentioned means, means carried by said body and actuated by the closing of one of said doors for moving said clutch member out of engagement with the first mentioned means, and means carried by said body for controlling the operation of said shaft.

5. A dump wagon comprising a body, drop doors carried thereby, wheels supporting the rear end of said body, a shaft journaled in said body, chains connecting with said shaft for closing said doors, a movable clutch member carried by said body and adapted to engage one of said wheels, means engaged by said clutch member and operable in unison with said wheel for imparting a rotary movement to said shaft, means carried by said body and actuated by the dropping of one of said doors for moving said clutch member and actuating said shaft, means carried by said body and actuated by the closing of one of said doors for moving said clutch member and causing a cessation in the operation of said shaft, and means carried by said body for controlling the operation of said shaft.

[Claims 6 to 10 not printed in the Gazette.]

898,872. ADJUSTABLE SOAP-HOLDER. GERTRUDE GOFF, Millard, W. Va. Filed June 18, 1907. Serial No. 379,614.

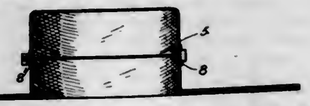


1. A washboard provided with a rubbing surface, guide rods secured to the board at opposite sides of the rubbing surface, said rods extending the full length of said surface and over the board above the same, and a soap holder having members slidably engaging said rods, whereby the holder may be adjusted along or reciprocated upon the rods, and means upon the board to secure the holder in an elevated or inoperative position.

2. A washboard provided with a rubbing surface, guide rods connected therewith at the opposite sides of said rubbing surface, said rods extending the full length of the rubbing surface and over the board above the same, and a soap holder provided with end members slidably engaging said rods, whereby the holder may be adjusted up and down or reciprocated upon the rods.

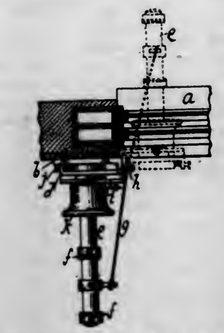
3. A washboard provided with a rubbing surface, guides upon the board extending over the full length of the rubbing surface and above the same, a soap holder slidably mounted upon said rods and provided with a cross bar, and a spring catch upon the upper end of the board adapted to engage said cross bar to secure the holder in an elevated or inoperative position.

898,873. HAT-PIN. WILLIAM GOLDENBERG, Brooklyn, N. Y. Filed June 21, 1907. Serial No. 380,116.



A hat fastener comprising perforated plates, a head with a pin secured thereto having a ball on its free end, said pin serving to be inserted through the perforations of the plates and projecting beyond the same, a retainer for the ball consisting of plates secured together and spaced apart, one of said plates having an opening and a flaring mouth, and a spring-actuated slide in said retainer and having a right-angular jaw formed therewith, said ball and a portion of the pin being passed through the said flaring opening so that the ball will contact with the said right-angular jaw to prevent displacement of the pin, substantially as described.

898,874. FIRE-ESCAPE. PHILIPP GOLDMANN, New York, N. Y. Filed Feb. 21, 1908. Serial No. 417,033.



1. A fire escape comprising a plate, a bracket hingedly connected to said plate, a spring catch in the bracket, a rod releasably placed in the bracket provided with an annular groove and engaged by the spring catch and bracing means made to engage the plate and rod.

2. A fire escape comprising a plate, a bracket hingedly connected to the plate, a spring catch in the bracket, a rod separate from and adapted to be placed in the bracket, an annular groove at one end of the rod adapted to be engaged by the spring catch, bracing means for the rod and a catch on the plate to hold the bracing means in position.
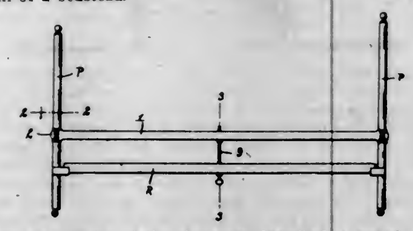
3. A fire escape comprising a plate, a bracket hingedly connected to the plate, a spring catch adapted to engage the bracket when swung into outward position, a rod dismountably engaged by the bracket, a spring catch for engaging the rod, and bracing means for the rod releasably engaging the plate.

898,875. GUARD-RAIL FOR BEDS. WILLIAM M. GOLDSMITH, Sparta, Mo. Filed Nov. 22, 1907. Serial No. 403,263.

1. In a device of the character described, a guard rail having an aperture intermediate its ends, means for securing the ends of the guard rail to the corner posts of a bedstead, a brace having a screw threaded portion passed through the aperture in the guard rail, nuts upon the threaded portion of the brace above and below the guard rail, and means for securing the lower portion of the brace to the side rail of a bedstead.

2. In a device of the character described, a guard rail having an aperture intermediate its ends, means for securing the ends of the guard rail to the corner posts of a

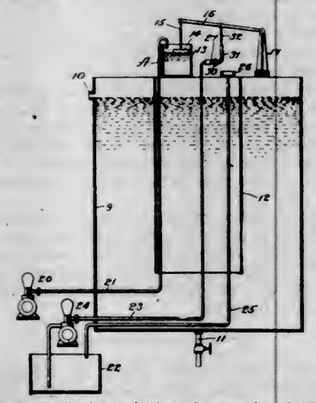
bedstead, a brace having a screw threaded portion passed through the aperture in the guard rail, nuts upon the threaded portion of the brace above and below the guard rail, and a clamp carried by the brace to engage the side rail of a bedstead.



3. In a device of the character described, a guard rail having clamps at its ends to engage the corner posts of a bedstead, a brace having its upper end threaded and passed through an aperture in the guard rail, nuts on the threaded portion of the brace above and below said rail, a U-shaped clamp at the lower end of the brace adapted to engage the side rail of a bedstead and a set screw arranged in said U-shaped clamp.

4. In a device of the character described, a guard rail having its ends shaped to engage the corner posts of a bedstead, clamping plates to engage the bed posts and disposed opposite the ends of the guard rail, clamping bolts passed through the plates and the ends of said guard rail, a brace having a screw threaded portion passed through an aperture in the guard rail, nuts upon the threaded portion of the brace above and below the guard rail, a U-shaped clamp at the lower end of the brace adapted to engage the side rail of the bedstead and a set screw arranged in said U-shaped clamp.

898,876. METHOD OF PURIFYING WATER. WALTER H. GREEN, Chicago Heights, Ill., assignor to Kennicott Water Softener Company, Chicago, Ill., a Corporation of Illinois. Original application filed Oct. 18, 1907, Serial No. 397,960. Divided and this application filed Feb. 17, 1908. Serial No. 416,264.



1. The method of regulating the supply of treating reagent to the raw water under treatment in a water-purifying apparatus of the character described, which consists in overflowing the reagent-supply and automatically varying the head of the reagent-supply by varying the level of the overflow thereof, with relation to an immovable discharge-outlet for said supply to said water, in accordance with variation in the supply of said water to the apparatus.

2. The method of regulating the supply of treating reagent to the raw water under treatment in a water-purifying apparatus of the character described, which consists in supplying the water and chemical solution each through an immovably fixed discharge to the apparatus, overflowing the solution-supply and automatically varying the head of solution by varying the level of its overflow relative to its fixed discharge correspondingly with variation of the head of water relative to its discharge.

898,877. TOBACCO-PIPE. EMIL GAUNDEL, San Francisco, Cal. Filed Jan. 21, 1908. Serial No. 411,915.

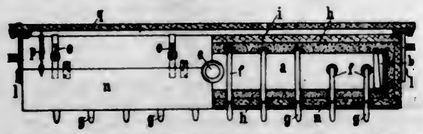


1. A tobacco pipe having in combination a bowl and a stem, said bowl having a hermetically closing cover and having an igniting and draft opening in the bottom, and said stem having a plurality of substantially parallel passages one of said passages adapted to convey air from the bowl to a mouth piece, and the other passage connecting with the first-named one and adapted to return the liquid discharge towards the bowl end of the pipe, a receiver with which the return passage connects, and a mouth piece secured to the stem and having its passage connecting with the passages in the latter.

2. A tobacco pipe having in combination a bowl and a stem, said bowl having a hermetically sealing cover and an igniting and draft opening in the bottom, and said stem having a chamber at the front end and having a tortuous passage, one end of said passage connecting with the bowl of the pipe and the intermediate portion of the passage connecting with said chamber, and a mouth-piece fitted to the stem and having its inner end connecting with the chamber at the front of the stem.

3. In a tobacco-pipe, a bowl having a removable, hermetically closing cap, an igniting and draft opening in the bottom, a chamber located within the stem of the pipe, an air draft opening connecting said chamber with the mouthpiece, a passage in the lower part of the pipe, a receiver with which it connects, a passage connecting the chamber with the upper part of the pipe bowl, said passage including abutting tubes, and a slidable joint-forming sleeve between said tubes.

898,878. SUCKLING ARRANGEMENT FOR PIGS. AUGUST GRÜNENWALD, Hohentwiel, Germany. Filed Sept. 16, 1907. Serial No. 392,991.

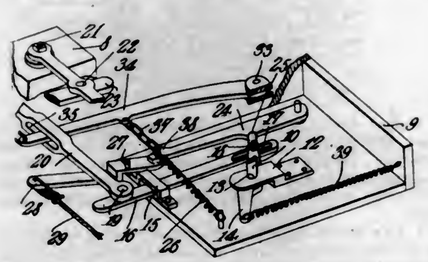


1. In a suckling apparatus, the combination of a pivotally mounted casing, springs for holding said casing in normal position, but permitting tilting thereof, a milk vessel in said casing, and sucking tubes connected with said vessel so as to draw milk from the bottom thereof, and extended up to the top of the casing and then down to the side thereof, and provided with nipples, substantially as described.

2. A suckling apparatus, comprising a tiltable casing having an opening for sucking tubes in its front side, supports on which the casing is mounted, springs connected to the casing and adapted to normally hold it in vertical position and to return it to normal position after displacement, a buffer on the front side of the casing, a milk vessel in said casing, sucking tubes communicating with the bottom of said vessel and extending up to the top thereof and down to the opening in the front side of the casing, and nipples on the outer ends of said tubes, substantially as described.

3. The herein described suckling apparatus, comprising a cylindric casing having an opening for the sucking tube in its front side and provided with trunnions on its ends, supports on which the trunnions are mounted, springs connected to the top and bottom of the casing and to fixed points, and adapted to return the casing to normal position after displacement, a cylindric milk vessel in said casing, and a sucking tube communicating with the bottom of said vessel and extending up over the upper side of the vessel and down to the opening in the front side of the casing.

898,879. AUTOMATIC SWITCH. FRANCIS M. HALL, Potomac, Ill., assignor of one-third to John Goodwine, Jr., and one-third to Ulysses S. Goodwine, Potomac, Ill. Filed Mar. 9, 1908. Serial No. 420,032.



1. The combination with the main rails and siding, of the switch rails, a housing, an arm pivotally mounted in the housing, a sliding bar connected with the arm, a pivoted switch throwing lever having one end thereof pivotally connected with the free end of the arm, a connection between the intermediate portion of the switch throwing lever and the switch rails, a locking member engaging the arm for locking the switch in open position, and track devices operatively connected with the locking member for releasing the latter to effect the closing of the switch.

2. The combination with the main rails and siding, of the switch rails, a housing, a standard journaled in the housing, an arm secured to and movable with the standard, a sliding bar operatively connected with the arm, a switch throwing bar disposed at substantially right angles to the sliding bar and operatively connected with the switch rails, a locking member engaging the arm for locking the switch in open position, and track devices operatively connected with the locking member for releasing the latter to effect the closing of the switch.

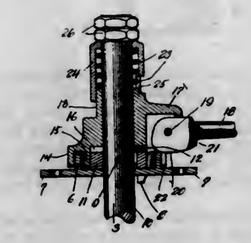
3. The combination with the main rails and siding, of the switch rails, a housing, an arm pivotally mounted in the housing, a sliding bar having a pin and slot connection with the arm, a pivoted switch throwing lever having one end thereof pivotally connected with the free end of the sliding arm and its opposite end operatively connected with the switch rails, a locking lever adapted to engage the arm for locking the switch in open position, a pivoted lever for releasing the locking member, and a tappet operatively connected with the pivoted lever and actuated by a passing train.

4. The combination with the main rails and siding, of the switch rails, a housing, an arm pivotally mounted in the housing, a sliding bar operatively connected with the arm, a connection between the sliding bar and switch rails, a locking lever engaging the arm for normally locking the switch in open position, tappets disposed on opposite sides of the switch, a pivoted bar having a flexible connection with the locking lever, a pivoted lever engaging said locking lever, and connections between the tappets and the pivoted bar and pivoted lever, respectively.

5. The combination with the main rails and siding, of the switch rails, a housing, an arm pivotally mounted in the housing, a sliding bar having a pin and slot connection with one end thereof, a locking member adapted to engage the arm for normally holding the switch in open position, a lever pivotally mounted near the main rail and pivotally connected with one end of the sliding bar, a bridle bar pivotally connected with the intermediate portion of said lever, tappets disposed on opposite sides of the switch, and a connection between the tappets and the locking member for actuating the latter to close the switch.

[Claim 6 not printed in the Gazette.]

898,880. BRAKE-HANDLE. STEWART J. HANLIN, Pittsburg, Pa., and GEORGE W. RIGNEY, Battle Creek, Mich. Filed May 29, 1908. Serial No. 435,796.



1. In a brake handle, the combination with a car having a brake-shaft, of a collar carried by said car, a toothed member arranged within said collar and fixed to said shaft, a movable spring pressed sleeve mounted upon said shaft and having interiorly arranged teeth for engaging said toothed member, depending flanges carried by said sleeve for embracing said member and said collar, a housing carried by said sleeve, a handle pivotally mounted in said housing and adapted to support said sleeve in an elevated position, and a cap mounted upon the upper end of said sleeve, substantially as described.

2. In a brake handle, the combination with a brake-shaft, of a toothed member fixed thereon, an interiorly toothed sleeve movable on said brake shaft, a depending flange carried by said sleeve for bracing said member, a spring bearing against said sleeve and tending to normally hold said sleeve in engagement with said member, a housing carried by said sleeve, a brake-handle pivoted in said housing, and means comprising a stationary element co-acting with a shoulder on said brake-handle whereby in one position of a brake-handle the said spring is held under compression and the movable sleeve disengaged from said member.

898,881. GLOBE FOR INVERTED BURNERS. THOMAS HANNA, Columbus, Ohio. Filed Oct. 12, 1907. Serial No. 397,118.



1. In an incandescent gas burner of the inverted type, a globe of fine wire mesh constructed to protect the mantle from drafts of air and to diffuse the light.

2. An incandescent gas burner of the inverted type comprising a mantle inclosure of fine wire mesh constructed to form a light diffusing medium.

898,882. ELBOW CONNECTION. SAMUEL A. HAWKINS, Chicago, Ill., assignor to The Economic Engineering & Construction Company, Chicago, Ill., a Corporation of Illinois. Filed May 23, 1907. Serial No. 375,224.



1. An elbow connection comprising a main section adapted for connection to members of a pipe line or conduit, a separate wear section, a renewable lining therefor, and independent means for detachably securing said wear section to said main section, whereby said wear section may be removed and replaced without disturbing the connections of said main section to said pipe line or conduit members.

2. An elbow connection comprising a main section adapted for connection to members of a pipe line or conduit, a separate wear section, a renewable refractory lining therefor and independent means for detachably securing said wear section to said main section, whereby said wear section may be removed and replaced without disturbing the connections of said main section to said pipe line or conduit members.

3. An elbow connection comprising a main section adapted for connection to members of a pipe line or conduit, and a separate section provided with a recess adapted to receive a lining, a separate lining removably secured in said recess and independent means for detachably securing said wear section to said main section, whereby said wear section may be removed and replaced without disturbing the connections of said main section to said pipe line or conduit members.

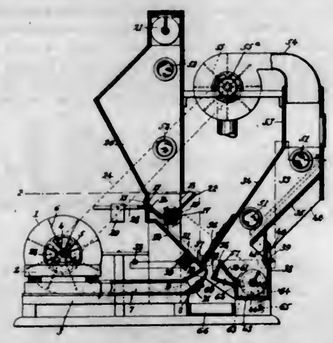
4. An elbow connection comprising a main section adapted for connection to members of a pipe line or conduit, a separate wear section, lugs on said sections provided with bolt holes and securing bolts which pass through said bolt holes whereby said wear section may be removed and replaced without disturbing the connections of said main section to said pipe line or conduit members, a separate lining for said wear section and means for securing the same in position comprising screws which extend through holes in said wear section and are threaded into said lining.

5. An elbow connection comprising a main section adapted for connection to members of a pipe line or conduit, a separate wear section and independent means for detachably securing said wear section to said main section, whereby said wear section may be removed and replaced without disturbing the connections of said main section to said pipe line or conduit members, the joint between said sections extending substantially on straight lines.

898,883. SEED-CLEANER. JOHN H. HEMPEN, Alexandria, La. Filed Nov. 13, 1907. Serial No. 401,978.

1. In a device of the class described, an air flue, means for forcing air through said air flue, said flue forming a tapering outlet provided with a lip slidable in the direction of the taper whereby said outlet can be adjusted, means for directing the material over said outlet, and an air-blast separator arranged to receive the material adjacent to said air flue outlet.

2. In a device of the class described, an air flue having a tapering outlet provided with an inclined flute adjustable in the direction of the taper whereby said outlet can be adjusted, means for forcing air through said flue, means for directing the material across said outlet of said flue, an air-blast separator, means for directing the material from said flue outlet into said separator, and means for adjusting said directing means.



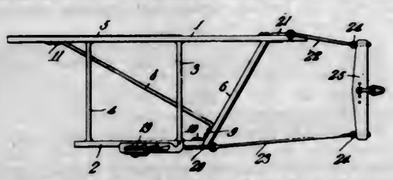
3. In a device of the class described, a separator, air blast producing means for directing material into said separator, pivoted carriers arranged between said means and said separator, a cant board pivoted upon said carriers, and means for holding said carriers in a plurality of positions.

4. In a device of the class described, feeding mechanism, an air flue having an outlet, means for forcing air through said outlet, means for conducting material from said feeding mechanism to said outlet, an air blast separator, a movable carrier, a swinging cant board arranged upon said carrier, and means for holding said carrier in a plurality of positions.

5. In a device of the class described, automatic feeding mechanism, an air flue having an outlet, means for forcing air through said outlet, means for conducting material from said feeding mechanism to said outlet, an air blast separator, a pivoted carrier, a swinging cant board arranged upon said carrier, and means for holding said carrier in a plurality of positions, said separator being adjustable to permit the cross-sectional area thereof to be altered.

[Claims 6 to 12 not printed in the Gazette.]

898,884. ROAD-GRADER. THOMPSON HENRY, Jamestown, Ind. Filed May 18, 1908. Serial No. 433,582.



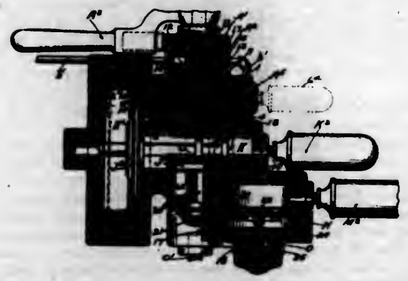
1. A road grader embodying a pair of parallel runners of unequal lengths, a scraper having one end fastened to the end of the shorter runner and its opposite end secured on the inner face and adjacent the front end of the opposite or longer runner, and mechanism carried by the shorter runner for raising and lowering the said runner and scraper.

2. A road grader embodying a pair of parallel runners a scraper extending diagonally and having its terminals secured to said runners, a lever pivotally mounted on the outer face of one of said runners and a wheel rotatably mounted at the end of said lever and adapted to be moved by said lever above and below the plane of the lower edge of the adjacent runner.

3. A road grader embodying a pair of parallel runners, a scraper extending diagonally and having its terminals secured to said runners, a rack on one of said runners, a bell crank lever pivotally mounted on one of said runners and having one arm in engagement with said rack, a wheel rotatably mounted on the opposite arm of said bell crank serving to raise and lower the adjacent runner and scraper.

4. A road grader embodying a pair of parallel runners having U-shaped bars secured thereto, a scraper extending diagonally and having its opposed ends secured to said runners, a whiffletree and a pair of draft bars having one end secured to said whiffletree and having their opposite ends secured to said U-shaped bars.

898,885. FLUID-PRESSURE BRAKE. HERBERT T. HERR, Roanoke, Va., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Dec. 23, 1903. Serial No. 186,320.



1. In a fluid pressure brake, the combination with a main reservoir, train pipe, and an engineer's brake valve having a service application position for making a gradual reduction in train pipe pressure and an emergency position for making a sudden and rapid reduction in train pipe pressure for operating the automatic train brakes, of means operated by the movement of the engineer's brake valve to service position for supplying air from the main reservoir to the locomotive brake cylinders.

2. In a fluid pressure brake, the combination with a main reservoir, train pipe, and an engineer's brake valve having a service application position for making a gradual reduction in train pipe preasure and an emergency position for making a sudden and rapid reduction in train pipe pressure, of a valve operating to supply air from the main reservoir directly to the locomotive brake cylinder when the engineer's brake valve is moved to service position for applying the automatic train brakes.

3. In an automatic fluid pressure brake system, the combination with a main reservoir, engineer's brake valve, train pipe and brake cylinder, of means operated by variations in train pipe pressure for controlling the supply of fluid under pressure from the main reservoir to the brake cylinder.

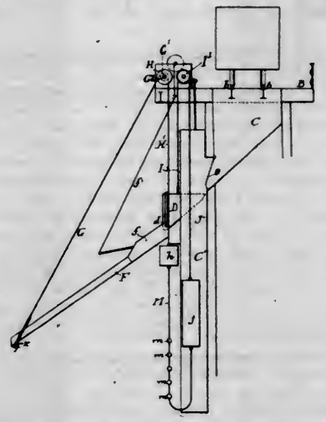
4. In an automatic fluid pressure brake, the combination with a main reservoir, engineer's brake valve, train pipe and brake cylinder, of means operated by the reduction in train-pipe pressure made by the engineer's brake valve in applying the brakes, for supplying fluid from the main reservoir to the brake cylinder.

5. In an automatic fluid pressure brake, the combination with a main reservoir, engineer's brake valve, train pipe and brake cylinder, of a valve device operated by variations in train-pipe pressure produced by the engineer's brake valve, for controlling the supply of fluid from the main reservoir to the brake cylinder.

[Claims 6 to 38 not printed in the Gazette.]

898,886. ADJUSTABLE CHUTE. FREDERIC V. HETZEL, and HARRY P. COCHRANE, Philadelphia, Pa., assignors to Link-Belt Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 15, 1907. Serial No. 362,470.

1. The combination of a vertically adjustable hopper, a chute pivoted to the hopper, a counterweight connected to the chute, a counterweight connected to the hopper, a series of supplemental weights connected to the counterweight of the chute and the counterweight of the hopper, said supplemental weights being so arranged that when the chute is extended the supplemental weights will add their weight to the counterbalance weight of the chute, and when the chute is raised their weight will be transferred to the counterweight of the hopper, substantially as described.



2. The combination of a vertically adjustable hopper, a chute pivoted to the hopper, a counterweight for the chute and a counterweight for the hopper, a series of supplemental weights so arranged in respect to the two counterweights that when the chute is extended they will add their weight to the weight of its counterbalance and when the chute is raised they will add their weight to the counterbalance of the hopper, substantially as described.

3. The combination in apparatus for loading vessels, of a track hopper, a vertically arranged extension of the track hopper, an adjustable hopper mounted in the extension, means for raising and lowering said adjustable hopper, a counterbalance weight for the said hopper, a chute pivoted to the hopper, a counterbalance weight for the chute, a rope attached to two counterbalance weights, a series of supplemental weights on the rope so situated in respect to the said weights that when the chute is lowered the supplemental weights will be added to the weight of the chute counterweight and when the chute is raised the supplemental weight will be added to the counterweight of the hopper, substantially as described.

4. The combination of a structure, a track hopper, a vertical extension of the track hopper, two shafts mounted on the structure, two drums on each shaft, a vertically adjustable hopper mounted on the vertical extension of the track hopper, a rope extending from the adjustable hopper to one of the drums on one shaft, a rope extending from the end of the chute to one of the drums on the other shaft, a chute, a counterweight attached to the other drum on the said chute shaft, and a rope attached to a counterweight and to the drum on the other shaft, means for turning the shafts independently one of the other, a looped rope having an end attached to the underside of each counterweight, a series of supplemental weights on the looped rope so arranged in respect to the said counterweights that when the chute is extended the supplemental weights will be added to the counterweight of the chute and when raised the supplemental weights will be transferred to the weight of the hopper according to the elevation of the chute, substantially as described.

898,887. STUMP-PULLER. JOSEPH C. HEYMAN, Minneapolis, Minn. Filed Dec. 14, 1907. Serial No. 406,481.

1. A stump puller embodying an actuating shaft formed with oppositely threaded portions, nuts mounted upon the respective threaded portions and formed in sections pivot-

ally secured together, and means for holding said sections rigidly together and in engagement with the threads of the actuating shaft.



2. A stump puller comprising an actuating shaft formed with oppositely threaded portions, nuts mounted on the respective threaded portions, said nuts being constructed in sections pivotally secured together and formed with two angularly disposed sectional lugs, and means for engaging said lugs, to hold the sections thereof together.

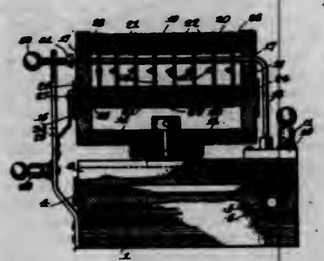
3. A stump puller compriqing an actuating shaft formed with oppositely threaded portions, nuts mounted on the respective threaded portions, and flexible connecting members secured to the nuts, said nuts being constructed in separable sections, as and for the purpose set forth.

4. A stump puller embodying an actuating shaft formed with oppositely threaded portions, nuts mounted on the respective threaded portions and formed in sections pivotally secured together, and connecting members secured to the respective nuts and adapted to hold the sections thereof rigidly together.

5. A stump puller comprising an actuating shaft formed with oppositely threaded portions, nuts mounted on the respective threaded portions, said nuts being constructed in sections pivotally secured together and being formed with two angularly disposed sectional lugs, and connecting members embodying stirrups formed at their ends with eyes normally encircling the lugs, as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

898,888. SPARK-GAP. ISAAC S. HIASCH, New York, N. Y., assignor to E. B. Meyrowitz, New York, N. Y. Filed July 18, 1907. Serial No. 384,370.



1. In a spark gap, one member thereof consisting of a revoluble frame, and non-rotatable, conducting disks secured to said frame, substantially as shown and described.

2. In a spark gap, one member thereof consisting of a revoluble frame including two uprights, and disks secured between said uprights, substantially as shown and described.

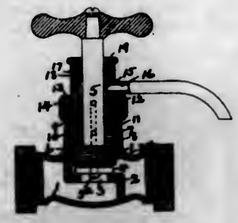
3. In a spark gap, a stationary base, a horizontal bar of non-conducting material revolubly secured thereto, upright posts of metal secured to the ends of said horizontal bar, rods of non-conducting material connecting said posts, and a series of disks spaced apart on said rods, the end disks being in circuit with the posts, substantially as shown and described.

4. A spark-gap operating mechanism for X-ray machines, comprising stationary bases, bars slidably mounted on said bases, the two members of each gap secured to the bases and bars respectively, and means to actuate said bars, substantially as shown and described.

5. A spark-gap operating mechanism for X-ray machines, comprising stationary bases, one member of the spark-gap adjustably mounted on each base, the other member of the gap comprising a series of disks having central points projecting from one side thereof, said disks secured to a frame revolubly mounted on the base, substantially as shown and described.

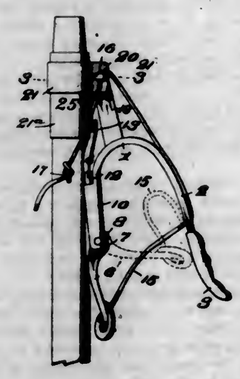
[Claims 6 to 10 not printed in the Gazette.]

898,889. VALVE. OTTO G. HITCHCOCK, Erie, Pa., assignor to Hays Manufacturing Company, Erie, Pa., a Corporation of Pennsylvania. Filed Apr. 23, 1908. Serial No. 428,854.



In a valve, the combination of a valve body having a screw threaded extension chamber 7 thereon, said chamber being provided with a packing chamber terminating in the shoulder 10; a metal disk resting on the shoulder 10, packing means resting on the metal disk and located within the chamber; a valve disk operating upon the valve seat; a stem secured to the disk, and having a screw thread thereon for operating in the screw thread extension, said stem having a passage forming a means of communication through the packing when the valve is closed, said passage being closed by the packing when the valve is open; a follower entering the chamber and resting upon the packing and containing a drain passage; and a nut for exerting pressure upon the follower.

898,890. CATCHING AND HOLDING DEVICE. ELLET L. HITT, Weiser, Idaho. Filed Oct. 26, 1907. Serial No. 399,368.



1. A catching and holding device of the class described, comprising a body having arms, ears on one of said arms, a lever pivotally and adjustably mounted between said ears, a head at the pivoted end of said lever, teeth on said head; a plunger adapted to engage said teeth and hold the lever in its adjusted position, means to release said plunger from the teeth, a shank on said body, a handle, means to secure said handle to the shank, a strap extending across the space in said body and engaging the free end of said lever, said strap forming a cushion over the end of said lever, one of the arms of the body having an opening therethrough to receive the strap and means to anchor the end of the strap, whereby a loop will be formed between the arms when the device is directed into engagement with an object.

2. The herein described catching and holding device, comprising a body, arms on said body, one of said arms having an opening therein, ears at the free end of the opposite arm, a lever pivotally and adjustably mounted between said ears, a head on the pivoted end of the lever, teeth on said head, a plunger adapted to engage said teeth and hold the lever in its adjusted position, means to release the plunger from the teeth, a shank on said body, a handle, a collar adapted to surround said handle, ears on said collar to receive said handle and eye-bolts adapted to clamp the collar on the handle and form a pivot for said shank, a strap adapted to extend through the opening in the arm and engage the upper end of said lever, said strap forming a cushion for the upper end of the lever, the opposite end of said strap being extended through said eye-bolts and anchored to the handle, whereby a loop will be formed in the strap between said arms when the body is directed into engagement with an object.

3. A catching and holding device of the class described, comprising a substantially U-shaped body, arms extending from said body, one of said arms having an opening therethrough, a lever pivotally and adjustably secured to one of said arms, means to hold said lever in its adjusted position, a strap extending through said opening in the arm and across the space in the body, a cushion at the upper end of said lever, formed by extending said strap over the end of the lever, and means to anchor the end of the strap extending through the opening in the arm.

4. A catching and holding device of the class described, comprising a substantially U-shaped body, paralleling arms extending from said body, one of said arms having an opening therethrough, a lever pivotally secured to one of said arms, means to hold said lever in its open or closed position, a strap extending through the opening in the arm and across the space in the body, one end of said strap being extended over the upper end of said lever to form a cushion, said strap being adapted to be adjusted longitudinally, whereby the length of that portion of the strap between the arm and the end of the lever may be increased or decreased.

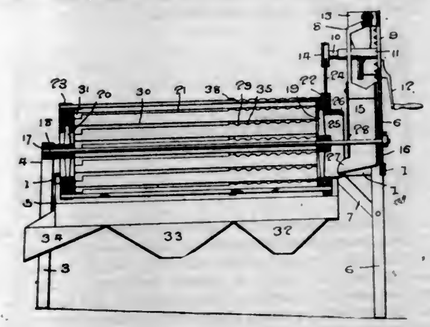
898,891. HOOK AND EYE. WILLMOT G. HOFFMAN, San Francisco, Cal. Filed Nov. 20, 1907. Serial No. 404,458.



A garment fastener comprising a hook member constructed of a strand of wire having attaching eyes, upwardly bent members provided with inwardly extending portions and a tongue extending towards the inward portions, and an eye constructed of a strand of resilient material having an elongated mouth and spaced body members provided with attaching eyes, the mouth of the eye member adapted for engagement beneath the tongue of the hook member and the body members of the eye adapted to engage the upturned portions of the hook and to lie beneath the inturned portions thereof.

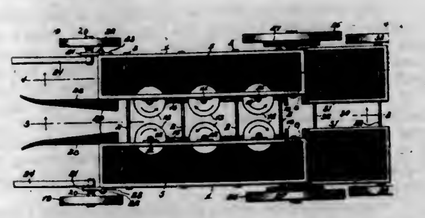
898,892. GRADER AND CLEANER FOR GRAIN, BEANS, &c. ANDREW HOHNER, Ottawa, Ill. Filed Mar. 26, 1908. Serial No. 423,410.

A grader of the class described, comprising a frame and a cylinder rotatably held thereby, said cylinder including a plurality of longitudinal ribs, said ribs being spaced one from the other, the space between each succeeding rib being increased at intervals by stepping one of the opposed edges of the ribs, each rib being triangular in cross section, the broadest portion of each rib having notches in an



edge thereof, each notch being in alinement with a concave recess in a face of the rib.

898,893. COTTON-HARVESTER. THOMAS R. HOLLINGSWORTH and ROBERT D. HOLLINGSWORTH, Waters, Ark. Filed Aug. 15, 1907. Serial No. 388,671.



1. A cotton harvesting machine having a pair of boxes spaced apart to move on opposite sides of a row of cotton plants, said boxes having narrow openings in their opposing sides, and revolving cotton picking saws each projecting through one of such openings.

2. A cotton harvesting machine having a pair of boxes spaced apart to move on opposite sides of a row of cotton plants, said boxes having narrow openings in their opposing sides, vertically disposed shafts mounted on the outer sides of the opposing walls of such boxes, cotton picking saws on such shafts, each projecting through one of such openings, and means to revolve such shafts.

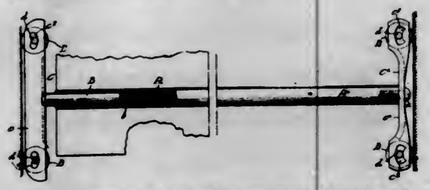
3. A cotton harvesting machine having a box provided with narrow horizontal openings in one side, revolving cotton picking saws each extending through one of such openings, and a conveyer in the bottom of such box to carry cotton therefrom.

4. A cotton harvesting machine having a box provided with narrow horizontal openings in one side, revolving cotton picking saws each extending through one of such openings, a conveyer in the bottom of such box to carry cotton therefrom, and a cotton receiving box detachably connected to the rear end of the first mentioned box and to which cotton is carried by such conveyer.

5. A cotton harvesting machine having a pair of boxes spaced apart to move on opposite sides of a row of cotton plants and provided with openings in their opposing sides, revoluble cotton picking saws extending through said openings, supporting wheels for such boxes, gears actuated by certain of said supporting wheels to drive such saws, and deflecting wings at and projecting forwardly from the front ends of the boxes, diverging from the inner front corners thereof, said deflecting wings provided at their lower ends with rearwardly and upwardly extending surfaces, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

898,894. CURTAIN-FIXTURE. PAUL A. HOUGHTALING, Riverton, N. J., assignor to The Curtain Supply Company, Newark, N. J., a Corporation of New Jersey. Filed Apr. 15, 1905. Serial No. 255,765.



1. The combination with a frame having guideways, of a curtain, a rod carried thereby, a head on said rod, and a friction roller for said head, the head having segmental bearings for said rollers to permit variation of the distance between the head and the guideways, the respective ends of the bearing being the portions nearest the guideways substantially as described.

2. The combination with a frame having guideways, of a curtain, a rod carried thereby, a head on said rod, and a friction roller for said head, said rollers having spindles acting in elongated bearings in the head, and said bearings having different portions at different distances from the guideways of the frame, the respective ends of the bearings being the portions nearest the guideways substantially as described.

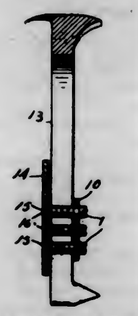
3. The combination with a curtain, of a rod carried thereby, a yieldable head on the rod, friction rollers carried by the head adjacent opposite ends thereof, the said head having elongated bearings for said rollers, and the said bearings being similarly curved relative to the head.

4. The combination with a curtain, of a rod carried thereby, a yieldable head on the rod, a friction roller carried by the head, said roller having a bearing permitting it to be movable in a circular arc relative to said head, the respective ends of the bearing being the portions nearest the guide-ways.

5. The combination with a curtain, of a rod carried thereby, a resilient head on the rod, friction rollers carried by the head, said head having an elongated bearing curved in a circular arc, for said roller.

[Claims 6 and 7 not printed in the Gazette.]

898,895. ATTACHMENT FOR HORSESHOES. HORACE D. HOVIS, Waterford, Pa. Filed June 1, 1908. Serial No. 436,085.

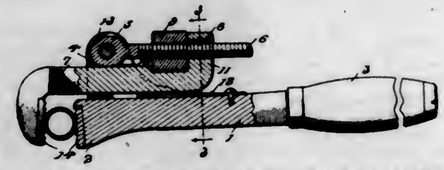


1. An attachment for horseshoes comprising a bar adapted to be attached to the shoe and extended laterally intermediate the ends and with a plurality of spaced threaded apertures in the extended portion, a plate adapted to bear beneath the frog portion of the hoof of the horse, and a plurality of screws operating through said threaded apertures and bearing beneath said plate and providing means for adjustably connecting said plate to said bar.

2. An attachment for horseshoes comprising a bar adapted to be attached to the shoe and extended laterally intermediate the ends and with a plurality of spaced threaded apertures in the extended portion, a plate adapted to bear beneath the frog portion of the hoof of the horse and with the sides diverging toward the heel, and a plurality of screws operating through said threaded apertures and bearing beneath the plate and providing means for adjustably connecting said plate to said bar.

3. An attachment for horseshoes comprising a bar adapted to be attached to the shoe and extended laterally intermediate its ends and with spaced threaded apertures in the extended portion, a plate adapted to bear beneath the frog portion of the hoof of the horse and provided with sockets corresponding to the threaded apertures of the bar, and a plurality of screws operating through said threaded apertures and reduced at one end to rotatively engage the sockets of the plate.

898,896. WRENCH. RICHARD J. JONES and FRANK H. CUNNINGHAM, Sebring, Ohio. Filed Apr. 16, 1907. Serial No. 368,540.



1. A wrench comprising a shank or bar having a fixed head or jaw and a rocking or pivotal screw, a movable jaw interposed between said fixed jaw and the fulcrumed part of the screw and slidably mounted on said screw, and a nut adapted to advance or retract said movable jaw, substantially as specified.

2. A wrench comprising a shank or bar provided with a fixed head or jaw, cheek pieces projecting from said bar and having a fulcrum pin or stud, a screw mounted on said stud, a movable jaw interposed between said fixed jaw and the fulcrumed part of the screw and having a lug bored to permit the passage of said screw and slidable on said screw, and a nut carried by the screw and adapted to advance or retract the movable jaw, substantially as specified.

3. A wrench comprising fixed and movable jaws, a rocker fulcrumed on the fixed jaw, said movable jaw being interposed between the fixed jaw and the fulcrumed part of the rocker and adapted to bear against said fulcrumed part when under working strain, and means carried by the rocker for advancing or retracting the movable jaw, substantially as specified.

4. A wrench comprising fixed and movable jaws, a screw fulcrumed on the fixed jaw, said movable jaw being interposed between said fixed jaw and the fulcrumed part of the screw, adapted to bear on the fulcrumed part of the screw and having a lug slidably mounted on the screw with a recess adjacent said lug, and a nut carried by the screw and engaging said recess, whereby the movable jaw is caused to respond to adjustments of the nut, substantially as specified.

5. A wrench comprising a shank or bar having a fixed head or jaw and a rocking or pivotal screw, a recessed movable jaw interposed between the fixed jaw and the fulcrumed part of the rocker or screw and slidably mounted on said screw, a nut carried by said screw and penetrating said recess, whereby the jaw is caused to respond to adjustments of the nut and a spring interposed between said jaws, substantially as specified.

898,897. SOAP-HOLDER. PETER H. JUNGCLAUS, Glencoe, Minn. Filed Oct. 23, 1907. Serial No. 398,833.

1. A soap holder comprising a tubular body, a block movably mounted within the body, locking lugs pivotally mounted upon the block, said locking lugs being adapted to project beyond the body when the block is in operative position, a rod having threaded engagement with the body, said rod providing means by which the block can be moved into operative position, and a flexible element secured to the rod.

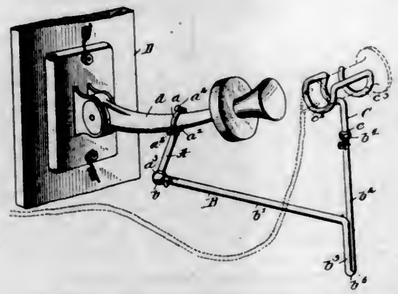


2. A soap holder comprising a tubular body provided with an operating head, a block movably mounted within the body, locking lugs pivotally mounted upon the block and adapted to project beyond the body when the block is in operative position, a rod having threaded engagement with the body, said rod providing means by which the block can be moved into operative position, an operating head secured to the rod, and a flexible element secured to the operating head.

3. A soap holder including a body, a block movably mounted within the body and provided with a locking lug adapted to project beyond the body when the block is in operative position, and a rod by means of which the block can be moved into operative position, said rod having threaded engagement with the body.

4. A soap holder including a body, a block movably mounted within the body and provided with a locking lug adapted to project beyond the body when the block is in operative position, means adapted to limit the movement of the block in one direction, and means by which the block can be moved into operative position, said means having threaded engagement with the body.

898,898. TELEPHONE-RECEIVER SUPPORT. MOSE M. KAHN, Louisville, Ky. Filed Aug. 30, 1907. Serial No. 390,747.



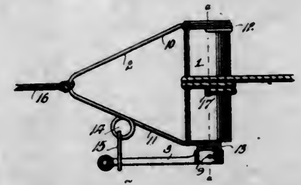
1. A telephone receiver support, comprising a bracket composed of three sections having an adjustable universal joint connection, one of the end sections being provided with means for attaching the bracket to the transmitter support, the other end section having its free end bent to form spaced open loops for seating the receiver, the openings of the loops being restricted to prevent accidental displacement of the receiver, the intermediate section being doubled upon itself to form a handle or foot and laterally at right angles to its connection with the first end section.

2. A telephone receiver support comprising a bracket, composed of three sections having an adjustable universal joint connection, one of the end sections being provided with means for attaching the bracket to the transmitter support, the other end section having its free end bent to form spaced open loops for seating the receiver, the openings of the loops being restricted to prevent accidental displacement of the receiver, the intermediate section being doubled upon itself at approximately the center thereof to form a foot or handle.

3. A telephone receiver support comprising a bracket composed of three sections having a universal joint connection, one of the end sections having means for attaching the bracket to the transmitter support, the other end section being provided at its free end with spaced open loops for seating the receiver, the openings of the loops being restricted to prevent accidental displacement of the receiver, the intermediate section being doubled upon itself to form a foot or handle.

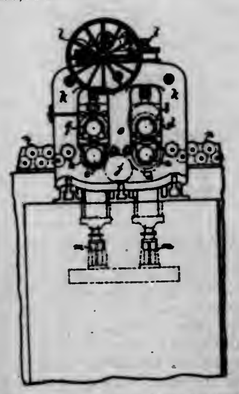
4. A telephone receiver support, comprising a bracket having one end provided with means for connecting it with the transmitter support, and having the other end provided with means for supporting the receiver, said bracket having its intermediate portion doubled upon itself to form a handle or foot for the purpose set forth.

898,899. LINE-TIGHTENER. ADDISON KECK, Schenectady, N. Y. Filed Nov. 16, 1907. Serial No. 402,507.



The herein described line tightener comprising a drum having a journal at one end, said journal having a cylindrical portion and an angular portion; a V-shaped bail having arms each provided with coils, said coils being of such size as to respectively engage the journal and one end, directly, of the drum, one arm of said bail being further provided with an eye, a handle having an opening receiving said journal and a link attached to the said eye and adapted to be engaged and disengaged from the handle.

898,900. METHOD OF ROLLING PLATES. ANDREW LAMBERTON, Coatbridge, Scotland. Filed Apr. 6, 1907. Serial No. 366,744.

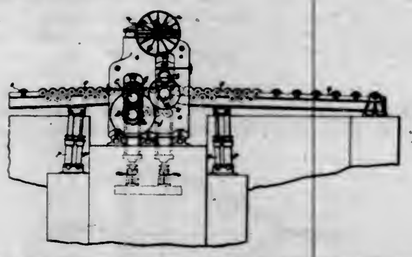


1. The method of rolling plates in a two high reversing mill having pairs of roughing and finishing rolls arranged

in tandem, which consists in passing the plate back and forth between said rolls while the roughing rolls are closed and the finishing rolls are open until the plate is ready for the latter, then opening the roughing rolls and closing the finishing rolls and passing the plate back and forth between the latter until the plate is finished, substantially as described.

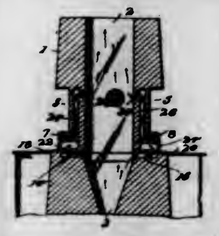
2. The method of rolling plates in a two high reversing mill having pairs of roughing and finishing rolls arranged in tandem and simultaneously rotating in the same direction, which consists in passing the plate back and forth between said rolls while the roughing rolls are closed and the finishing rolls are open until the plate is ready for the latter, then opening the roughing rolls and closing the finishing rolls and passing the plate back and forth between the latter until the plate is finished, substantially as described.

898,901. METHOD OF ROLLING PLATES. ANDREW LAMBERTON, Coatbridge, Scotland. Filed Apr. 6, 1907. Serial No. 366,745.



The method of rolling plates in a mill provided with roughing and finishing rolls arranged in tandem on different levels and driven in opposite directions which consists in passing the plate between the closed roughing rolls, bringing it to the level of the finishing rolls, returning it between the open finishing rolls, bringing it to the level of the roughing rolls, passing it again through the latter and repeating this process until the plate is ready for the finishing rolls, and then passing the plate between closed finishing rolls, bringing it to the level of the roughing rolls, passing it back between open roughing rolls, bringing it to the level of the finishing rolls and passing it again between the latter and so on until the finishing is completed, substantially as described.

898,902. KILN. JAMES W. LE GORE, Le Gore, Md. Filed June 22, 1907. Serial No. 380,296.



1. The method of burning lime or other material which consists in leading all the gases from the furnaces through a combustion chamber in the walls of the kiln of sufficient dimension to insure practically complete combustion and to afford room within the burning chamber of the kiln for the proper curing and calcining of the lime.

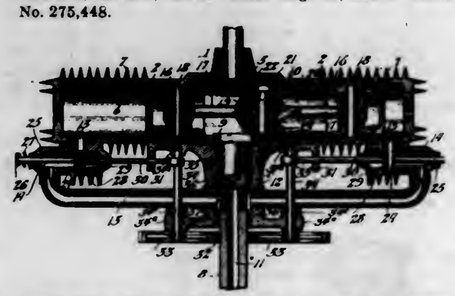
2. The method of burning lime or other material which consists in leading the heated air from the cooling chamber through the furnaces, leading all the gases from the furnaces through a combustion chamber in the walls of the kiln of sufficient dimension to insure practically complete combustion and to afford room within the burning chamber of the kiln for the proper curing and calcining of the lime, whereby as the lime is cooled in the lower part of the kiln heated air is drawn therefrom and led into the furnace and then into the kiln at a height to afford combustion and form a space for the burning and calcining of the lime.

3. A kiln comprising a burning chamber, a cooling chamber at the bottom thereof, a discharge chamber under said cooling chamber, a furnace, and a flue or passageway leading directly from the cooling chamber to the furnace, whereby air is drawn directly through the cooling lime and used for the draft and dampers controlling the said flue or pasageway from the cooling chamber to the furnace, and said kiln also having a chamber above the cooling chamber of sufficient dimension to insure the proper curing and calcining of the lime.

4. A kiln comprising a burning chamber, a cooling chamber at the bottom thereof, a discharge chamber under said cooling chamber, a furnace, and a flue or passage-way leading directly from the cooling chamber to the furnace, whereby air is drawn directly through the cooling lime and used for the draft, and a combustion chamber in the wall of the kiln of sufficient dimension to insure practically complete combustion and to form a burning chamber between the entrance of the combustion chamber into the kiln and the aforesaid cooling chamber and said combustion chamber conducting all the gases to the burning chamber.

5. In a kiln, a burning chamber, an exterior furnace, and a combustion chamber between said furnace and said burning chamber of sufficient dimension to insure practically complete combustion and forming a chamber below the entrance of the combustion chamber in the kiln to permit the burnt material to thoroughly calcine before being cooled.

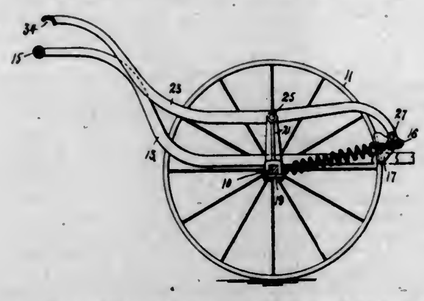
898,903. ROTARY GASOLENE-ENGINE. CHARLES W. LINDSAY, Anthon, Iowa. Filed Aug. 23, 1905. Serial No. 275,448.



1. In an engine, the combination of a pair of sections each comprising a cylinder and half a crank chamber, bolts for connecting the sections together, bearings formed on the sections and lying in the plane of division thereof, a crank shaft mounted in the bearings and having a bore extending short of the inner end thereof and provided with a plurality of transverse passages leading out of the bore, sleeves in one of the shaft bearings and arranged in spaced relation to form a chamber into which the said passages discharge, pistons in the cylinders, connections between the pistons and crank shaft, a valve chamber on each cylinder, an inlet valve in each chamber, an exhaust valve in each chamber, stems on the exhaust valves extending parallel with the cylinders and disposed on opposite sides of the crank shaft, bearings on the cylinders for the valve stems, secondary shafts disposed parallel with the crank shaft, bearings on the cylinders for the inner ends of the secondary shafts, oppositely disposed bearings on one of the crank shaft bearings for the secondary shafts, a pinion on the crank shaft, and gear wheels on the secondary shafts meshing with the pinion.

2. In an engine, the combination of a crank shaft, cylinders rotatably mounted thereon, bearings connected with the cylinders and divisible in the plane of the crank shaft, webs on the bearings, bolts passing through the webs, a supply conduit carried by the crank shaft, a chamber in one of the bearings, valveless ports between the conduit and chamber, valve chambers on the cylinders, pipes having their inner ends threaded in the chamber-containing bearing and communicating through the ports with the said conduit, detachable connections between the outer ends of the pipes and valve chambers, each pipe being removable with its respective cylinder of the engine, an exhaust valve in each chamber, a valve gear for each exhaust valve removable intact with the adjacent cylinder, a pinion on the crank shaft, each gear comprising a secondary shaft disposed parallel with the crank shaft and extending across the adjacent supply pipe, bearings formed one on the cylinder and the other on the crank shaft bearing for the said secondary shaft, a cam on the inner end of the secondary shaft, a stem on the exhaust valve arranged in coöperative relation with the cam, a guide arranged on the cylinder for the stem, and a gear wheel on the outer end of the secondary shaft arranged to mesh with the pinion.

898,904. VEHICLE-BRAKE. GEORGE LONDRESS, Grafton, W. Va. Filed Nov. 14, 1907. Serial No. 402,206.

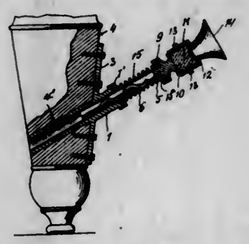


1. The combination with a vehicle including an axle having bearing wheels and a supporting frame including a handle bar, of a brake beam carrying brake shoes for bearing upon said wheels and movable vertically, springs connected between said brake shoes and axle and operating to normally maintain said shoes yieldably in engagement with the wheels, standards carried by said axle, levers pivoted intermediate their ends to said standards and pivoted at one end to said brake beam, and an auxiliary handle bar connected to said levers at their other ends and extending contiguous to the handle bar of said supporting frame.

2. The combination with a vehicle including an axle having bearing wheels and a supporting frame including a handle bar, of a brake beam extending transversely above said frame and movable upwardly therefrom, brake shoes carried by said beam and adapted to engage said wheels, springs connected at one end to said beam and at their other ends to said axle, standards spaced apart and supported by said axle, levers pivoted intermediate their ends to said standards and pivoted at one end to said brake beam, and an auxiliary handle bar connected to said levers at their other ends and extending contiguous to the handle bar of said supporting frame.

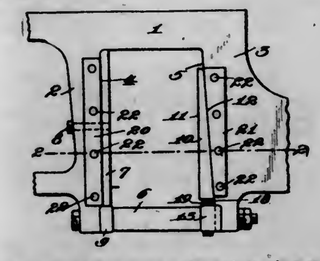
898,905. CUE-CHALKING DEVICE. FORREST R. MAGUIRE, New Florence, Pa., assignor of one-half to Curtis P. Geary, New Florence, Pa. Filed Feb. 20, 1908. Serial No. 416,854.

In a cue chalking device, a tube or cylinder provided intermediate its ends with a securing plate, the greater portion of said tube or cylinder projecting beyond the rear face of said plate and the outer end of the tube or cylinder having an annular groove, a plunger rod extending into said cylinder and provided adjacent its outer end with a collar having an annular groove, said plunger rod provided intermediate its ends with a sinuous groove, a roller mounted in the cylinder and received in said groove, a spring surrounding the plunger rod having its ends seated respectively in the groove in the outer end of the cylinder



and in the groove in the collar on said rod, a chalk holding cup carried by the outer end of said plunger rod, and a cap secured to said cup and provided with a flaring guide mouth communicating with the chalk holding cup.

898,906. PEDESTAL FOR CAR-TRUCKS. CHARLES MARKEL, Clinton, Iowa. Filed Mar. 14, 1908. Serial No. 421,074.



1. A car pedestal having a flangeless shoe at one side and a flangeless member or wedge at an opposite side to engage a journal box, the flangeless member or wedge being adjustable longitudinally and laterally.

2. A car pedestal having a flangeless shoe and a laterally adjustable flangeless member or wedge in opposition to the shoe to engage a journal box.

3. A car pedestal having a flangeless shoe and separate flanges secured to opposite portions thereof and engaged by the said shoe.

4. A pedestal for locomotive driving boxes having frame jaws, a shoe and a wedge disposed in operative position and in opposition against the jaws to engage a driving box, and separate flanges secured to opposite sides of the frame jaws and engaged by the shoe and wedge.

5. A pedestal for driving boxes of locomotives having frame jaws inclosing a space for a driving box, a shoe immovably held against one wall of the space, and an adjusting wedge member disposed against the opposite wall of the space, the shoe and wedge member being flangeless and having their inner walls clear for direct engagement with the driving box.

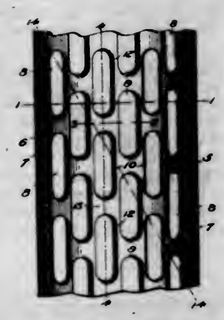
[Claims 6 to 8 not printed in the Gazette.]

898,907. TIRE FOR VEHICLE-WHEELS. TOD J. MELL, Youngstown, Ohio, assignor to The Republic Rubber Company, Youngstown, Ohio, a Corporation of Ohio. Filed May 25, 1908. Serial No. 434,915.

1. A tire for vehicle wheels provided with outwardly projecting circumferentially arranged elongated studs each having inwardly diverging walls, a flat outer surface, and a relatively large base, substantially as described.

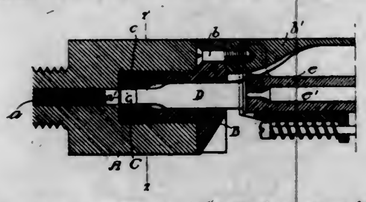
2. A tire for vehicle wheels provided with outwardly projecting elongated studs having inwardly diverging walls

arranged in parallel circumferential series the studs of one series overlapping those of adjacent series, substantially as described.



3. In a tire for vehicle wheels, the combination with a tread-surface, of a multiplicity of elongated surface studs each having inwardly diverging walls said studs being staggered across the tread-surface in a succession of parallel transverse series, substantially as described.

898,908. MEANS FOR PREVENTING DISTORTION OF CARTRIDGE-SHELLS. LUDWIG MEATENS, London, England. Filed July 18, 1908. Serial No. 444,161.



1. A firearm having a cartridge chamber, means for exploding a cartridge therein, and means provided with passages placed to conduct gas from the bore of said firearm to the outside surface of a shell in said cartridge chamber so as to equalize the pressure within and without said shell after the explosion of a charge.

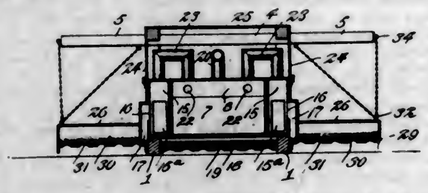
2. The combination with the barrel of a firearm, of a chambered block fitting the end of the same, and means for exploding a cartridge inserted in the chamber of said block, with a structure having passages extending parallel with the bore of the firearm and connecting the chamber with said bore so as to equalize pressure inside and outside of the cartridge shell immediately after the cartridge has been fired.

3. The combination of a barrel having a threaded recess in its rear end, a piece threaded into said recess and spaced some distance from the bottom thereof, a block also threaded into the recess and spaced some distance away from said piece, there being a cartridge chamber extending through the block and the piece and a passage or passages through the piece connecting the spaces adjacent to its two faces, with means for exploding a cartridge.

4. The combination in a firearm of a barrel having a recess in its rear end in line with its bore, a piece mounted in said recess having passages parallel to said bore, a block also entering the recess and having a chamber for the reception of a cartridge, said piece also having a central opening in line with the bore and cartridge chamber, there being passages leading respectively from the bore and the chamber to said parallel passages, with means for exploding a cartridge in said chamber.

898,909. INSECT-DESTROYER. JERRY M. MUAFF, Sweetwater, Tex. Filed Nov. 1, 1907. Serial No. 400,266.

1. An insect destroyer comprising a carrier, a heating device thereon, a vapor generator heated from but closed against communication with said heating device, a vapor discharging device communicating with the generator, and means leading from the heating device to the vapor discharging device for commingling the hot air and products of combustion from the heating device with the discharging vapor.



2. An insect destroyer comprising a carrier, a heating device thereon, a vapor generator heated from but closed against communication with said heating device, a vapor discharge device, a vapor supply pipe leading from the vapor generator to the vapor discharge device, and a pipe leading from the heating device to said vapor discharge device for conducting the hot air and products of combustion thereto.

3. An insect destroyer comprising a carrier, a heating device thereon, a vapor generator and drums heated by the heating device, discharge devices connected with the generator and drums, pipe connections between the vaporizer and drums, and means for discharging the hot air and products of combustion from the heating device to commingle with the vapor expelled through said discharge devices.

4. An insect destroyer comprising a carrier, a heating device mounted thereon, heating chambers at the opposite sides of the heating device and heated therefrom, said heating chambers having ejecting nozzles, a vaporizing device arranged to be heated by the heating device, a vapor distributer, and means for conducting the vapor from said vaporizing device to the heating chambers and distributer.

5. An insect destroyer comprising a carrier, a heating device mounted thereon, heating chambers at the opposite sides of the heating device and heated therefrom, said heating chambers having ejecting nozzles, a vaporizing device arranged to be heated by the heating device, a vapor distributer, means for conducting the vapor from said vaporizing device to the heating chambers and distributer, and means for commingling the hot air and products of combustion from the heating device with the discharging vapor.

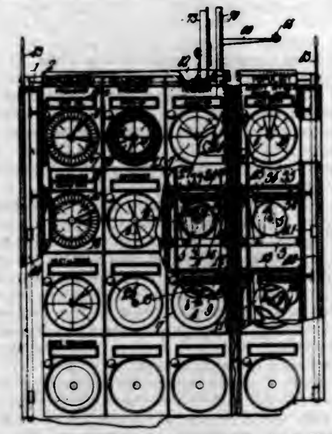
[Claims 6 to 12 not printed in the Gazette.]

898,910. VOTING-MACHINE. ELI MCCLAIN, Paris, Tex. Filed Oct. 25, 1907. Serial No. 399,176.

1. In a voting machine, a series of push bars, one for each candidate to be voted for, a spring for each push bar, an individual lock for each push bar consisting of a rock shaft having a projecting finger in the path of a notch in the push bar and an arm on the rock shaft out of the path of the push bar, and means for restoring all of the push bars to normal position after being operated comprising rods each in contact with all of the arms on all of the rock shafts of a series and connections between all the rods whereby they may be moved simultaneously, to move all of the rock shafts to release all the actuated push bars, to the action of their springs.

2. In a voting machine, a series of push bars, one for each candidate to be voted for, a spring for each push bar, an individual lock for each push bar consisting of a rock shaft having a projecting finger in the path of a notch in the push bar and an arm on the rock shaft out of the path of the push bar, and means for restoring all of the push bars to normal position after being operated, comprising rods movable to and from the push bars and rock shafts and engaging the arms on the latter and causing the shafts to rock to release the said push bars when said rods are moved towards the shafts.

3. In a voting machine, a bar movable in a direction at right angles to its length, rock shafts each having an arm in the path of the bar, also a projecting finger, and push bars each controlled by a spring and in operative relation to the finger on its respective rock shaft and provided with means in the path of the bars controlling the rock shaft to engage said bar and to be locked thereby.

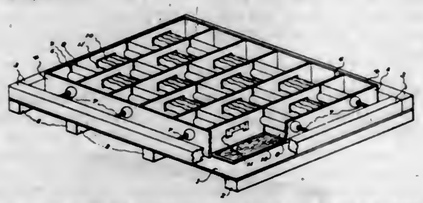


4. In a voting machine, a bar movable in a direction at right angles to its length, rock shafts each having an arm in the path of the bar, also a projecting finger, and push bars each controlled by a spring and in operative relation to the finger on the respective rock shaft and provided with spaced lugs arranged to receive the bars, controlling the rock shafts, between them and to be locked thereby against movement.

5. In a voting machine, a series of push bars, one for each candidate to be voted for, a spring for each push bar, an individual lock for each push bar consisting of a rock shaft having a projecting finger in the path of a notch in the push bar, and an arm on the shaft out of the path of the push bar, and means for restoring all of the push bars to normal position after being operated, comprising rods movable to and from the push bars and rock shafts, and engaging the arms on the latter and causing the shafts to rock to release the push bars when the said rods are moved toward the shaft, common connections for all the rods, and cam levers controlling the common connections.

[Claims 6 to 8 not printed in the Gazette.]

898,911. CONCRETE-MOLDING DEVICE. WILLIAM C. NEELEY, Pueblo, Colo. Filed Feb. 6, 1908. Serial No. 414,601.



1. In a concrete molding device the combination with a floor and brace beams of side partitions, with slotted plates that receive end partitions and with plates provided with holes to receive extended portions of a collapsible core, all operative, to be assembled collectively and be held securely and firmly by jack screws, substantially as shown.

2. In a concrete molding machine, brace beams, means for supporting the brace beams, side and end partitions, slotted plates on the side partitions to receive the ends of the end partitions, apertured plates on the side partitions, a collapsible core having extensions fitting in the apertures, and means for pressing the side plates into engagement with the end partitions and cores.

3. In a concrete molding device, partitions having apertured plates, a collapsible core comprising hinged sections having extensions fitted to the apertures of the plate and means for holding the partition and cores in assembled relation.

898,912. WIRE-TWISTING TOOL. ALBERT H. NELLER, Fairfield, Iowa, assignor to Louden Machinery Company, Fairfield, Iowa, a Corporation of Iowa. Filed Dec. 14, 1907. Serial No. 406,433.



1. A wire twisting tool adapted to twist one end of a wire around another by catching over and being turned around the latter while in a position of approximately right angles thereto, said wire ends standing at approximately right angles to each other, and said tool comprising a tubular handle to receive and hold the end of the wire to be twisted, and a hook to catch over and turn upon the other.

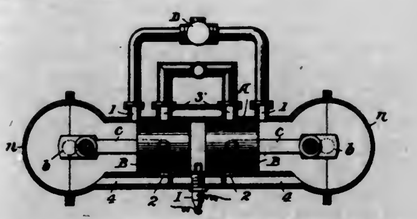
2. A wire twisting tool adapted to twist one end of a wire around another by catching over and being turned around the latter, while in a position of approximately right angles thereto, said ends standing at approximately right angles to each other, and said tool comprising a tubular handle fitted with a head having an opening corresponding with the tubular opening in the handle, so as to receive and hold the end of the wire to be twisted, and a hook to catch over and turn upon the other.

3. A wire twisting tool comprising a tubular handle and a head provided with an opening corresponding with the opening in the handle, said opening being adapted to receive the end of the wire to be twisted, also having a hook to catch over the wire about which the twist is to be made, and an extended face on the opposite side to press against and bend the end of the wire to be twisted.

4. A wire twisting tool comprising a tubular handle, a head having an opening of different diameters, the inner part to fit over and connect to the outer side of the handle, the central portion being recessed to make the opening larger, and the outer portion contracted to correspond with the inside opening of the handle, and a hook on one side of said outer opening, as and for the purpose set forth.

5. A wire twisting tool provided with a bending face adapted to bear against the wire to be twisted, and a hook to grip the wire or other object about which a twist is to be formed and turned at an angle to one side of the said bending face to follow the slope of the wire and allow the turns of the twist to be formed closely together.

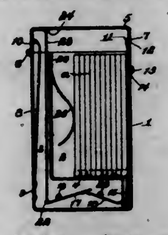
898,913. TWO-CYCLE GAS-ENGINE. EMIL A. NELSON, Detroit, Mich., assignor to William J. Newton and Charles J. Woodall, Detroit, Mich. Filed Mar. 16, 1906. Serial No. 306,444.



The combination in a gas engine of a cylinder, two pistons arranged to reciprocate therein, casings communi-

cating with the outer ends of the cylinder, and crank shafts having cranks in said casings connected to the pistons, and two inlet ports each arranged to be uncovered by one of the pistons as it completes its inner movement, two exhaust ports each arranged to be uncovered by one of the pistons as it completes its outer movement, and two other ports each in constant connection with one of the casings and arranged to be uncovered by one of the pistons as the adjacent exhaust port is uncovered.

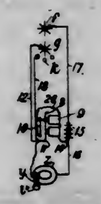
898,914. MATCH-BOX. EDGAR B. NICHOLS, Mount Airy, N. C. Filed July 2, 1907. Serial No. 381,827.



1. A match box having an inner compartment spaced from one side and the bottom thereof, and also having a hinged cover, a plunger at one side and the bottom of the inner compartment, means to move the matches in such direction as to cause one of them to register with the plunger, a rod in the space at one side of the inner compartment and connected to the cover, and a lever in the space between the bottoms of the box and inner compartment, said lever connected to the said rod and the said plunger and causing the plunger to be automatically operated to eject a match when the cover is opened.

2. A match box having an inner compartment spaced from one side and also from the bottom thereof, said box further having a hinged cover, a plunger at one side and the bottom of the inner compartment, means to move the matches in such direction as to cause one of them to register with the plunger, a rod in the space at one side of the inner compartment and connected to the cover, and a compound lever in the space between the bottoms of the box and inner compartment, one of the members of the compound lever being connected to the rod, the other member being connected to the plunger, and said members being slidably connected together, substantially as and for the purpose described.

898,915. ELECTRIC SIGNALING OR TELEGRAPH APPARATUS FOR USE ON VEHICLES. ROBERT B. NORTH, Soho, England. Filed June 4, 1907. Serial No. 377,247.



1. In an electric signaling apparatus for communicating instructions from a passenger in a vehicle to the driver thereof the combination with a switch device comprising a casing, a plurality of contact plates each contact plate having a separate designation or order, two series of radial spring arms or blades, and means for causing said radial spring arms to contact with said contact plates, of a source of electricity, an audible signaling device, an electric circuit for said audible signaling device controlled by the said switch device, a plurality of electric lamps, a casing to contain said lamps each lamp having a separate designation or order and a plurality of electric circuits, one for each lamp, controlled by the said switch device substantially as set forth.

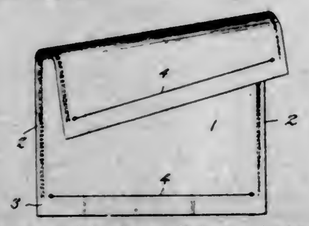
2. In an electric signaling apparatus for communicating instructions from a passenger to the driver of a vehicle the combination with a switch device comprising a casing, a plurality of contact plates in said casing, two series of radial spring arms or blades to form a plurality of pairs and a plurality of pushes for causing pairs of said spring arms to contact with said contact plates each of said pushes having a separate designation or order, of a source of electricity, an audible signaling device, an electric circuit for said audible signaling device controlled by the said switch device, a plurality of electric lamps each lamp having a separate designation or order, a casing to contain said lamps, and a plurality of electric circuits, one for each lamp, controlled by the said switch device substantially as set forth.

3. In an electric signaling apparatus for communicating instructions from a passenger to the driver of a vehicle, the combination with a switch device comprising a casing, a plurality of contact plates in said casing, two series of radial spring arms or blades to form a plurality of pairs, a blade of one series and a blade of the other series forming a pair and adapted to contact with a contact plate, and a plurality of pushes for causing pairs of said spring arms to contact with said contact plates, each of said pushes having a separate designation or order, of a source of electricity, a casing, an audible signaling device, an electric circuit for said audible signaling device controlled by the said switch device, a plurality of electric lamps, each lamp having a separate designation or order, one contact of each of said lamps connected to a contact plate, the other contact of each of said lamps connected by a common conductor to one pole of the source of electricity, the said contact plate and the conductor from the other pole of the battery connected to the said switch device, substantially as set forth.

4. In an electric signaling apparatus for communicating instructions from a passenger to the driver of the vehicle, a visual signaling device comprising a casing, an insulator disk in said casing, a circular series of perforations in said disk, a lamp terminal contact in each of said perforations, a plurality of electric lamps, each having a separate designation or order and fitting into one of said perforations, and a contact ring fixed to the rear of said disk and common to all of the other terminals of the lamps, substantially as set forth.

5. In an electric signaling apparatus for communicating instructions from a passenger to the driver of the vehicle, a visual signaling device comprising a casing, an insulator disk in said casing, a circular series of perforations in said disk, a lamp terminal contact in each of said perforations, a plurality of electric lamps, each having a separate designation or order and fitting into one of said perforations, a contact ring fixed to the rear of said disk and common to all of the other terminals of the lamps, and an audible signaling device arranged at the rear of and concentric with the disk supporting the lamps, said signaling device being in circuit with each of said lamps, substantially as set forth.

898,916. TYPE-WRITER BACKING-SHEET. HYDESABURO OHASHI, New York, N. Y. Filed Nov. 5, 1906. Serial No. 342,092.
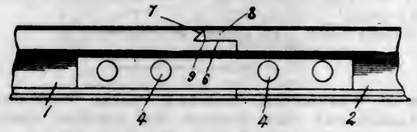


1. As a new article of manufacture, a typewriter gage comprising a uniformly flexible backing sheet having at its lower end a transverse slit arranged a sufficient distance from the adjacent edge thereof to form a cover portion to overlie the end of a sheet of typewriter paper inserted in said slit, the side margins of said backing sheet being provided with line-indications numbered in reverse order, said indications extending in rows from a point immediately adjacent the ends of said slit to a point immediately adjacent the other end of the backing sheet.

2. As a new article of manufacture, a typewriter backing sheet having a row of numerals disposed adjacent to and in line with the right hand side edge of the sheet, said numerals progressively decreasing from the upper to the lower end of the row and terminating at a point spaced from the lower end edge of the sheet, said sheet having a transverse slit extended throughout substantially the entire width of the sheet and in line with the lowermost numeral in the row.

3. A typewriter backing sheet adapted to underlie the impression receiving paper on a typewriter and comprising a sheet having a row of numerals arranged adjacent to one of its side edges, said numerals progressively decreasing from the upper numeral and being respectively spaced a distance equal to the line spacing feed of the typewriter platen, the lowermost numeral being spaced from the lower edge of the sheet a distance in excess of that between the adjacent numerals.

898,917. RAIL-JOINT. TOMMIE OLSEN, Iron River, Mich. Filed Apr. 17, 1907. Serial No. 368,708.



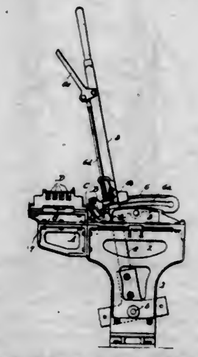
1. A rail having an end portion of its head reduced to form an undercut shoulder and a supporting shelf extending longitudinally from said shoulder and having a plane horizontal face, said shelf and shoulder being coextensive in width with the head so as to extend fully to the lateral faces thereof.

2. In a rail joint, a rail section having an end portion of its head reduced to form an undercut shoulder and a supporting shelf extending logitudinally from said shoulder to the end of the rail and having a plane horizontal face, said shelf and shoulder being coextensive in width with the head so as to extend transversely fully to the lateral faces thereof, and a coöperating rail-section having an end portion of its head reduced to form a tongue constituting a longitudinal extension from the upper portion of the head, said tongue having a plane horizontal lower bearing face to rest upon said shelf and a beveled outer end inclined outwardly and downwardly to said face to engage the said undercut shoulder.

3. In a rail joint, a rail section having the upper portion of its head transversely cut away for a distance from its end to form a shelf having a plane or unbrokenly-smooth face throughout its length and extending inwardly from the end and terminating in an undercut shoulder, said shelf being coextensive in width with the head, and extending to the lateral faces thereof, and a coöperating rail section provided with a tongue extending from and coextensive in width with its head and having a plane or smooth bottom face to slidably engage and rest upon said shelf, whereby the rail sections may be engaged and disengaged by a relative sliding movement in their normal plane, said tongue being provided witn a beveled end to engage said undercut shoulder.

898,918. INTERLOCKING SWITCH AND SIGNAL MECHANISM. GEORGE H. PAINE, Chicago, Ill., assignor to Continental Signal Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 21, 1908. Serial No. 417,147.

1. In an interlocking switch and signal mechanism, the combination of rocking links, operating levers therefor, actuating bars movable endwise transversely with reference to the movements of the links, means connecting the ends of the actuating bars directly with the ends of the rocking links to cause the actuating bars to move endwise relatively to the movement of the links, and locking bars having operative connections with the actuating bars.



2. In an interlocking switch and signal mechanism, the combination of rocking links movable vertically at opposite ends, operating levers for actuating said bars, a locking bed arranged horizontally, horizontally arranged endwise-movable actuating bars adapted to operate the locking bed, and means connecting the ends of the actuating bars directly with the ends of the rocking links, said means acting to cause the vertical motion of the links to shift the actuating bars endwise.

3. In an interlocking switch and signal mechanism, the combination of operating levers, rocking links operated thereby and formed in their ends with slots extending in the direction of movement of the links, actuating bars movable transversely with reference to the movements of the links and engaging in said slots, and locking bars operatively connected with the actuating bars.

4. In an interlocking switch and signal mechanism, the combination with horizontally arranged vertically rocking links formed in their forward ends with oblique slots, of operating levers for said links, horizontally arranged actuating bars engaging at their ends in said slots; whereby the rocking movements of the links will shift the actuating bars endwise, and locking bars arranged horizontally and operatively connected with the actuating bars.

5. In an interlocking switch and signal mechanism, the combination of horizontally arranged vertically rocking links adapted at their opposite ends by their vertical movements to operate actuating bars, operating levers for said links, endwise movable locking bars, and endwise movable actuating bars operatively connected with the locking bars, said actuating bars adapted when connected respectively with the front or rear ends of the links in horizontal or vertical planes respectively, to be shifted endwise by the rocking movements of the links, and to thereby shift the locking bars endwise.

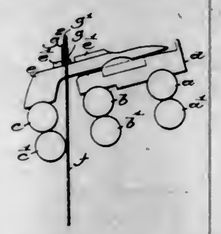
898,919. TOP-ROLL SADDLE AND STIRRUP. CLARENCE A. PIERCE, Manchester, N. H., assignor to Ezra Dixon, Bristol, Tenn. Filed Jan. 10, 1906. Serial No. 295,330.

1. The combination with a top roll saddle, of a stirrup and a rotatable locking device carried by the stirrup and adapted to engage the upper side of the saddle thereby to lock the stirrup in position on the saddle.

2. In apparatus of the class described, a saddle having notches, combined with a stirrup suspended from said saddle and provided with a locking device, said locking device being movable on the stirrup into its operative or inoperative position.

3. A stirrup for a top roll saddle, said stirrup having a rotatable locking device presenting a parti-circular saddle-

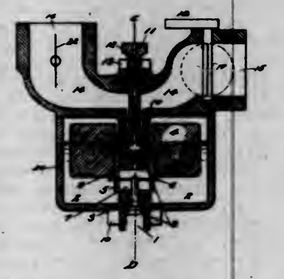
engaging edge and another edge intersecting said parti-circular edge as a chord, the rotation of the locking device on the stirrup bringing the parti-circular saddle-engaging edge either into its operative position to engage the saddle thereby to lock the stirrup thereto or into its inoperative position out of engagement with the saddle.



4. The combination with a top roll saddle, of a stirrup and a locking device carried by the stirrup and movable thereon into operative position in locking engagement with the saddle or into inoperative position out of locking engagement with the saddle, said saddle being shaped to cooperate with the locking device when in its operative position thereby to lock the stirrup to the saddle.

5. The combination of a front top roll saddle having a row of upwardly-extending projections forming a series of deep notches on the top of the saddle, and a weight stirrup having a square opening for the front saddle, a nick formed in the upper edge of the opening for the projections on the saddle and a catch pivotally secured to the weight stirrup in a position to cover or uncover the nick in the weight stirrup, whereby the weight stirrup is adjustable on the saddle and locked in the adjusted position to the saddle.

898,920. CARBURETER. GEORGE S. PIERSON, Kalamazoo, Mich. Filed Oct. 7, 1907. Serial No. 396,228.



1. In a carbureter; the combination of a fuel reservoir; means for maintaining the fuel in said reservoir substantially at a constant level; a main air passage; a chamber or well opening upwardly into said air passage and depending into said reservoir; a fuel opening in the bottom of said well communicating with said reservoir; an air tube hanging in said well, said tube supplying air to the bottom of said well independently of said main air passage, said tube being adjustable to vary the space between its lower end and the bottom of said well for the purpose of regulating the discharge of mixed air and fuel through said space and upwardly through said well.

2. In a carbureter; the combination with a fuel reservoir in which liquid fuel is held at substantially a constant level; of a well; a fuel opening connecting said reservoir and well; a main air passage communicating with said well; and an adjustable tube admitting air to said well independently of said main air passage, said tube being adapted to regulate the discharge from the well into the main air passage of the mixture formed by air passing through said tube and fuel passing through said fuel opening by regulating the opening between the walls of said tube and the walls of said well.

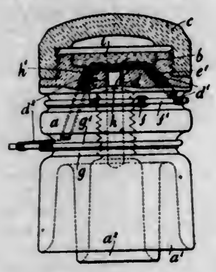
3. In a carbureter; the combination of a fuel reservoir; a cover for said reservoir; a main air passage through said cover; a stud depending from said cover; a chamber or well in said stud, said chamber or well being open into said main air passage; a fuel opening in said stud discharging centrally into the bottom of said well from said reservoir; a float guided on said stud; a tube discharging air at the bottom of said well; said tube being adjustable to vary the space between its lower end and the bottom of said well for the purpose of regulating the discharge of mixed air and fuel through said space and into said main air passage.

4. In a carbureter; the combination of a main air passage; a well depending from said air passage and opening upwardly into it; an air tube hanging in said well so as to leave an annular space in said well exterior to said tube, said tube supplying air to said well independently of said main air passage; an opening delivering fuel into said well; and a valve controlling the admission of air into said main air passage.

5. In a carbureter; the combination of a main air passage; a well depending from said air passage and opening upwardly into it; an air tube hanging in said well so as to leave an annular space in said well exterior to said tube, said tube supplying air to said well independently of said main air passage; an opening delivering fuel into said well; and a valve controlling the discharge from said main air passage.

[Claims 6 and 7 not printed in the Gazette.]

898,921. INSULATOR. THOMAS F. PUAVES, Wandsworth, London, and JOHN SINNOTT, East Finchley, London, England. Filed Feb. 3, 1908. Serial No. 414,114.



1. A leading-in insulator for telephones and other electrical wiring systems, provided with a sealing chamber or cavity adapted to be filled with insulating material, and a series of holes or passages directed into said chamber from the outside of the insulator, one of the said holes providing for the introduction of a sheathed duplex or multiple-conductor cable into the sealing-chamber, while the other holes provided for the connection of the said cable, by the separated individual conductors of the cable, to two or more line-wires which are attached to the exterior of the said insulator, substantially as herein described.

2. An insulator of the type set forth comprising a body portion formed with a chamber and with a cable passage extending into said chamber from the exterior of said insulator, said chamber being for the reception of an insulating agent, said body portion having wire passages extending from said chamber to the outer face of said body portion, and a closure for said chamber.

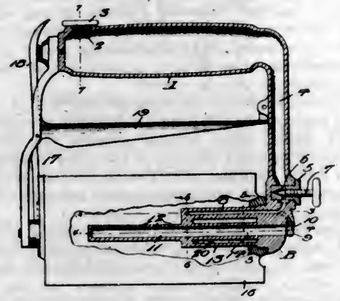
3. An insulator of the type set forth comprising a body having a chamber to contain insulating material, said body having a cable passage extending from the exterior to said chamber and having a wire passage extending from said chamber to its exterior face, and a closure for said chamber.

4. An insulator of the type set forth comprising a body

portion constructed with an interior chamber to receive an insulating agent and with passages extending to and communicating with said chamber from the outer face of said body portion, as and for the purpose set forth.

5. An insulator of the type set forth comprising a body portion constructed with a chamber to contain an insulating agent, said body portion being formed with spaced petticoats and with an annular groove in its outer face, said body portion having a cable passage extending from a point between said petticoats to and in communication with said chamber and having a wire passage extending from said chamber to and in communication with said groove, as and for the purpose set forth.

898,922. SELF-HEATING SAD-IRON. THOMAS PURVIS, North Birmingham, Ala. Filed July 9, 1907. Serial No. 382,888.

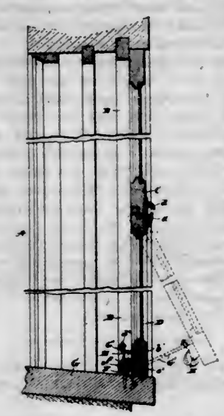


1. In a sad iron, the combination of a single piece structure comprising a hollow horizontally-extending handle closed at one end, a tubular depending arm on the opposite end of the handle and communicating with the hollow thereof, a burner body extending under the handle from the bottom end of the arm, said body having a longitudinal passage provided with upwardly-discharging openings and having a passage communicating with the hollow arm and terminating adjacent the outer end of the longitudinal passage, and a pan formed under the said body, the exterior of the body at the point adjacent the lower end of the said arm being of circular exterior to form a journal, with a hollow iron journaled at one end on the said body, an arm secured to the closed end of the said handle and depending therefrom, means for connecting the iron to the lower end of the second arm, and a valve controlling the flow of fuel from the first-mentioned arm to the vaporizing passage of the burner body.

2. A single piece casting comprising a hollow handle, a tubular arm on one end thereof, a burner body integrally connected with the arm and provided with a return vaporizing passage communicating with the arm and provided with a longitudinal passage having upwardly-discharging openings, and a pan formed at the bottom of the body for heating the vaporizing passage, said arm having an internally-threaded chamber, in combination with a ported plug screwed therein, a valve seat in the plug, a valve arranged to engage the seat, and a nipple arranged on the burner body at the discharge end of the vaporizing passage for delivering into the said longitudinal passage, the burner body having one portion provided with a circular exterior to form a journal.

898,923. STORM OR SCREEN SASH FASTENER. JAMES G. RALPH, Aurora, Ill. Filed Aug. 18, 1906. Serial No. 331,201.

In a window or like construction, the combination of a frame, a member mounted to swing in the frame, a turn button on said member, a pin for coöperation with the turn button secured to the frame, and a rod connected with the turn button and adapted to engage said pin



when the member is swung to an open position, to hold the same therein.

898,924. HORSE-BLANKET FASTENING. JOHN REICHERT, Racine, Wis. Filed Feb. 11, 1907, Serial No. 356,766. Renewed Mar. 5, 1908. Serial No. 419,393.



1. A fastening consisting of two members having means for attachment to the ends of the band to be coupled together, one member comprising an elongated loop having rigid longitudinal side bars and a hook rising from the closed outer end of the loop and extending longitudinally thereof with its bill extending into the loop adjacent to and spaced from the closed inner end of the loop and at its inner extremity terminating outwardly beyond the plane of the inner side face of the loop, the other member comprising an elongated eye in length shorter than said hook and formed to pass into said loop and receive said hook and having non-elastic walls, substantially as described.

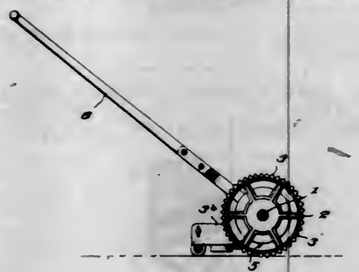
2. A horse blanket fastener consisting of two members, each formed in one piece, one member consisting of a transverse loop to receive a band and having a central depending closed loop frame provided with a rigid hook extending from the lower end of said frame outwardly and upwardly and formed with an inturned bill adjacent to the upper end of said frame, the other member consisting of a transverse closed loop to receive a band and a rigid closed eye projecting from the central portion of one bar of the loop, said eye elongated and curved, substantially as described.

3. A fastening consisting of two members, one member comprising a rigid narrow, longitudinally elongated closed eye provided with means whereby said eye is adapted to be secured to a band end, the other member comprising a longitudinally elongated closed loop provided with means whereby said loop is adapted to be secured to a

band end, said loop formed with a hook rising from the lower end thereof and terminating adjacent to the upper end of the loop, said hook being greater in length than said elongated eye and having its bill extending into the upper end portion of the hook opening.

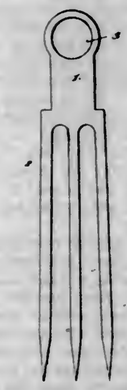
4. A fastening for horse blankets, or the like, consisting of two members, each formed in one piece, one member consisting of a transverse band loop having a central projecting rigid closed eye, and the other member consisting of a transverse band loop having a central projecting rigid longitudinally elongated closed loop frame having a rigid hook rising from its outer end and from thence arranged longitudinally in front of the frame opening and extending toward the inner end thereof and having its bill projecting into the inner end portion of the frame opening, said bill being spaced from the inner end and longitudinal side walls of said frame to permit said eye to move transversely through the upper end of the frame opening, and then longitudinally thereof to pass around the bill and onto the hook.

898,925. LAWN-MOWER. JOHN C. REIMERS, Stella, Nebr. Filed Nov. 6, 1907. Serial No. 400,992.



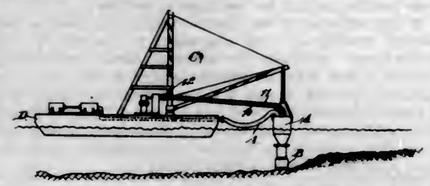
In combination with a mower including rotatable cutting blades; a fixed plate carried by the mower beneath the cutting blade arranged in a horizontal plane the forward edge of said plate being provided with a series of teeth having their tops beveled in the same plane.

898,926. SKEWER. SARAH C. REYER, Carthage, Ill. Filed Nov. 27, 1907. Serial No. 404,076.



The herein described meat skewer stamped from a single piece of material and comprising a shank provided at one end with an enlargement having an opening formed therein to permit of ready withdrawal of the skewer while the opposite end is provided with three parallel and spaced prongs, the middle prong being arranged in alinement with the longitudinal axis of the skewer while the remaining prongs are offset therefrom.

898,927. VACUUM MINING DEVICE. JERRY B. RIDDLE, Sacramento, Cal. Filed June 15, 1908. Serial No. 438,623.



1. In an apparatus of the character described, a vacuum chamber, a material receiving chamber connected therewith, an upwardly closing valve located between the chambers, and mechanical means whereby said valve is positively opened.

2. In an apparatus of the character described, a vacuum chamber, a material receiving chamber having inwardly opening valves or gates, a valve located between the two chambers, a cylinder with reciprocating piston and rod, and connections between said piston-rod and the valve whereby the latter may be opened.

3. In an apparatus of the character described, a vacuum chamber superposed upon a material-receiving chamber, an upwardly closing valve located between the chambers, means for producing a vacuum in the upper chamber, mechanical means by which the valve may be opened against the upward pressure, and automatically operating gates in the lower part of the receiving chamber.

4. In an apparatus of the character described, a vacuum chamber superposed upon a material-receiving chamber, said vacuum chamber having a funnel-shaped bottom connecting with a reduced passage between the two chambers, an upwardly closing valve located in said reduced portion, inwardly opening valves or gates located in the lower chamber, means by which a vacuum is produced in the upper chamber, controllable means by which the intermediate valve is opened to allow the vacuum pressure to act within the lower chamber, means for raising and transferring the apparatus to a point of deposit, and means for releasing the vacuum and allowing the material to be discharged.

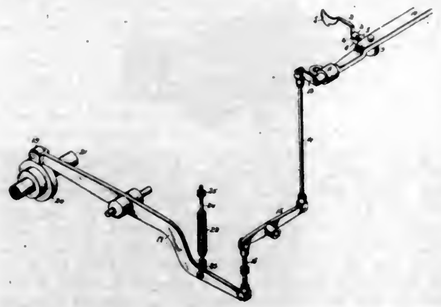
5. In an apparatus of the character described, a vacuum chamber, a material-receiving chamber connected therewith, an intermediate upwardly closing valve, means for producing a vacuum in the upper chamber, mechanical means by which the intermediate valve may be opened to allow the vacuum to act in the lower chamber, inwardly opening valves or gates in said lower chamber, a hinged bottom upon which said valves are located, a latch by which said bottom is normally closed, the releasing of said latch allowing the entire bottom to swing open.

898,928. PILE-WIRE SUPPORTER FOR LOOMS. FREDERICK W. ROCHELLE, Philadelphia, Pa., assignor to Ivins, Dietz & Metzger Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 10, 1907. Serial No. 378,240.

1. The combination, in a loom for weaving pile fabrics, of a hook constructed to engage the upper edge of the last inserted pile wire and retain the same in position while the loops are being formed over the same, with means for raising and lowering said hook, whereby it can be moved to position free from engagement with the upper edge of the wire when the same is being beaten up.

2. The combination, in a loom for weaving pile fabrics, of a series of hooks, each constructed to engage the upper edge of the last inserted pile wire and retain the same in position while the loops are being formed over the same, a bar carrying said hooks, and means for rocking said bar to cause the hooks to engage with or be disengaged from the wire.

3. The combination, in a loom for weaving pile fabrics, of a series of hooks constructed to engage the upper edge of the last inserted pile wire, and retain the same in position while the loops are being formed over the same, a bar carrying said hooks, and means for rocking said bar, said means having an adjustable element whereby the position of the hook in respect to the upper edge of the wire can be varied.

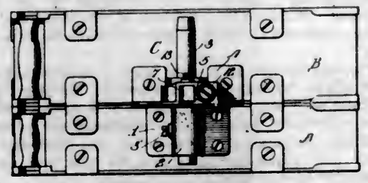


4. The combination of a pile-wire-retaining hook, with a laterally yielding mount therefor.

5. The combination of a pile-wire-retaining hook, with a mount therefor free to yield laterally in either direction.

[Claims 6 to 10 not printed in the Gazette.]

898,929. PIN AND GUIDE FOR MOLDING-FLASKS. JULIUS ROST, Milwaukee, Wis. Filed Aug. 17, 1907. Serial No. 389,012.



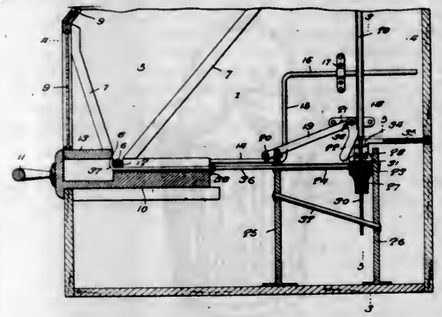
1. In a flask, the combination of a pin, a holder having a socket in which the pin is longitudinally movable, a set screw on the holder for securing the pin in place, a guide provided with a recess for receiving the pin, a member slidably mounted on the guide and having a portion disposed in the recess for engaging the pin, teeth on the member, a worm on the guide and engaging the teeth for moving the member, and bearings on the guide in which the worm is held against longitudinal movement.

2. In a flask, the combination of a pin, a holder therefor, means for clamping the pin in the holder, a guide, a follower mounted in the guide, a semi-circular member on the follower for engaging the pin, teeth on the follower, and a worm meshing with the teeth for adjusting the follower.

3. In a flask, the combination of a pin of round cross section, a holder having a cylindrical socket for receiving the pin and permitting the latter to move longitudinally thereon, a set screw on the holder for clamping the pin therein, a guide provided with a chamber and a recess communicating therewith, a member arranged in the chamber and having a portion disposed in the recess for engaging the pin, means in the chamber for moving the said member, and a device for clamping the member in fixed position.

898,930. VENDING-MACHINE. ALEXANDER RUNYON, Muscatine, Iowa. Filed Mar. 3, 1908. Serial No. 418,979.

1. In a vending machine, the combination with a casing having a receptacle therein adapted to hold articles; of a plunger slidably mounted below said receptacle and having a gutter to receive one of the objects from the receptacle, means adapted to lock said plunger in its inward position, a coin receptacle, and means to move the coin receptacle upon the presence of an article in the gutter coincident to the movement of the plunger and release the locking mechanism when a coin is in the receptacle, the movement of the coin receptacle depending on the article within the gutter.



2. In a vending machine, the combination with a casing having a receptacle therein adapted to contain articles and deliver the same one at a time; of a plunger slidably mounted below said receptacle adapted to receive said article, a coin receptacle slidably mounted in the rear of said plunger, means extending from said coin receptacle adapted to be engaged by the article on the plunger and cause the coin receptacle to move forwardly and a locking mechanism having means thereon adapted to extend in the path of said coin-receptacle and be operated by coin in the receptacle, whereby the plunger will be released and permitted to move forwardly its full stroke.

3. In a vending machine, the combination with a casing having a receptacle therein adapted to contain articles and deliver the same one at a time; of a plunger adapted to receive said article, locking bars carried by said plunger, a shaft adapted to engage portions of said locking bar and hold the plunger against longitudinal movement, means depending on the article to be delivered to elevate said shaft and additional means to move a coin into engagement with the elevating mechanism, whereby the shaft may be moved out of engagement with the locking bars and the plunger released.

4. In a vending machine, the combination with means for delivering articles; of a plunger, a coin receptacle having a vertical slot, means to deliver a coin in said slot, a rod carried by the coin receptacle adapted to engage the article carried by the plunger and move the coin receptacle forwardly and a locking mechanism between the plunger and coin receptacle adapted to be engaged and operated by the coin.

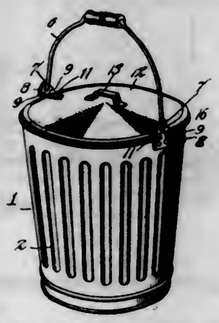
5. In a vending machine, the combination with an article-delivering mechanism therefor; of a coin receptacle having a slot therein, means to deliver a coin in said slot, additional means to limit the downward movement of the coin and release the coin from the slot when the coin receptacle is moved forwardly and means coöperating with the article delivering mechanism adapted to move the coin receptacle forwardly and engage the coin with the locking mechanism, whereby said locking mechanism will be released.

[Claims 6 to 9 not printed in the Gazette.]

898,931. VEGETABLE-PEELER. KARL SCHAAL, Seward, Nebr. Filed Feb. 9, 1907. Serial No. 356,636.

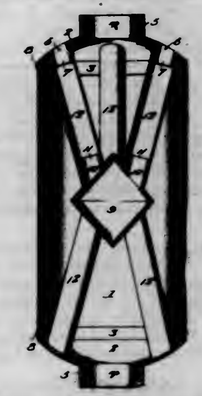
1. A device of the class described comprising a pail, internal ribs on the pail, ears secured to the pail at diametrically opposite points and rising from the upper edge thereof and provided with recesses in corresponding sides, a handle pivotally connected with the ears, a cover adapted to rest on the pail, members secured to the top of the cover and projecting beyond the periphery thereof to

engage in corresponding recesses of the ears, said members being of less transverse dimension than the height of the recesses to provide sufficient play to permit the cover to tilt open when the pail is turned on its side to pour out the washing fluid and the said members being arranged to prevent the cover from turning independently of the pail as the latter is oscillated.



2. A device of the class described comprising a pail, internal members forming ribs, rivets for securing the members to the pail, ears secured outside the pail by the rivets, a handle attached to the ears, a cover, and means on the cover adapted to engage the ears to hold the cover in position.

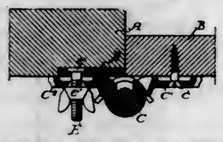
898,932. STOVEPIPE-DRUM. LOUIS J. B. SCHNUG, Saginaw, Mich. Filed Nov. 6, 1907. Serial No. 400,978.



The herein described drum comprising an outer casing open at its ends, heads each provided with an opening for the attachment of a smoke pipe, inwardly extending flanges fitting in the ends of the casing, and further provided with air openings and collars around and extending inwardly from said air openings, said collars converging toward the center of the drum, an air heating box of double conical form in the center of the casing and provided with air openings and collars extending outwardly from said air openings toward the collars of the heads and air heating tubes in said casing having their inner ends on the collars of the said box and their outer ends on the collars of the heads, said air heating tubes converging toward the box and forming supporting means therefor.

898,933. HINGE-SUPPORT. THOMAS SETTLE, Philadelphia, Pa. Filed Oct. 23, 1907. Serial No. 398,745.

1. The combination of a door, a supporting structure therefor, hinges for the door, pieces on said structure having undercut slots, with means for detachably and adjustably securing each of the hinges to one of said pieces, the same including bolts having heads operative in the undercut parts of said slots, and removable nuts for the bolts placed to be accessible from a face of the door, said bolts being removable from the slotted pieces without requiring the removal of said pieces from the supporting structure.



2. The combination of a door, a supporting structure therefor, hinges each having one member fastened to the door, plates mounted on the supporting structure and provided with undercut slots each having an enlarged portion, and bolts having nuts removably connecting each hinge with one of the plates, the connections between the plates and the hinges being adjustable and the heads of the bolts being operative in the undercut portions of the slots as well as removable through the enlarged portions thereof.

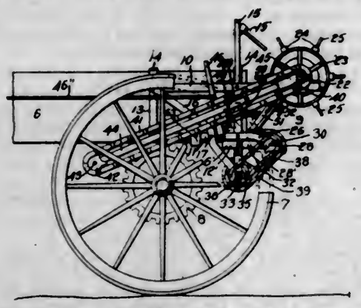
3. The combination of a door, a supporting structure therefor, vertically slotted plates permanently mounted upon said structure, hinges each having one member permanently fixed to the door, and bolts for the slots respectively in engagement with the second members of the hinges for vertically adjusting the position of said hinges relatively to the plates, substantially as described.

4. The combination of a door jamb, a door therefor, a pair of plates permanently attached to the door jamb apart from each other and supported at a distance therefrom substantially equal to the thickness of the door, with hinges permanently attached to the door and detachably connected to the said plates, substantially as described.

5. The combination of a door jamb, a door therefor, a pair of plates permanently attached to the door jamb apart from each other and supported at a distance therefrom substantially equal to the thickness of the door, with hinges permanently attached to the door and detachably and adjustably connected to the said plates, substantially as described.

[Claim 6 not printed in the Gazette.]

898,934. MANURE-SPREADER. FRED E. SHIELDS, Massena, Iowa. Filed Sept. 19, 1907. Serial No. 393,665.



1. An apparatus of the class described, comprising a frame including upper and lower parallel bars at each side thereof, vertical bars connecting the respective pairs of upper and lower bars, said vertical bars having recurvate upper ends, a brace member arranged transversely of said frame, said upper bars being constructed at their rear ends with bearings, a transverse shaft journaled in said bearings, a distributing cylinder mounted on said shaft, said lower bars having their rear ends constructed with bearings, a second transverse shaft supported between said bearings, sprocket wheels mounted on said second transverse shaft, a conveyer including parallel chains trained over said sprocket wheels, the rear ends of said vertical bars being provided with bearings at their lower ends, a winding shaft journaled in said last named bearings, sprocket wheels carried thereon to receive the chains of said conveyer, gearing for driving said winding shaft from said second shaft, gearing for driving said second shaft from said first shaft, said first shaft carrying at one end thereof a sprocket wheel, a bar having its end constructed to pivotally surround said first shaft, a sprocket wheel provided at the other end of said bar, a chain trained over said last named sprocket wheel and means for raising and lowering said bar.

2. In an apparatus of the class described, the combination with a wagon body, of a frame having upper and lower parallel bars at each side thereof, vertical bars connecting the said upper and lower bars, each of said vertical bars having hooks for detachably connecting the frame to the wagon body, a distributing drum carried by the frame, a rake head on the frame, a conveyer mechanism receiving the load within the wagon and mounted on the frame, means for driving said distributing drum, and driving means between said distributing drum and conveyer mechanism.

3. In an apparatus of the class described, the combination with a wagon body, of a frame having upper and lower parallel bars at each side thereof, vertical bars connecting the said upper and lower bars, each of said vertical bars having hooks for detachably connecting the frame to the wagon body, a distributing drum carried by the frame, a rake head on the frame, a conveyer mechanism receiving the load within the wagon and mounted upon the frame, means for driving said distributing drum, driving means between said distributing drum and the conveyer mechanism, and independent manually operable means for releasing the driving means for the distributing drum and the conveyer mechansim.

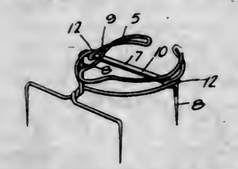
898,935. GAS-GENERATOR. ALBERT J. SLADEK and LEON STONE, Paris, Mo.; said Sladek assignor to said Stone. Filed June 5, 1907. Serial No. 377,387.



1. A gas generator comprising an upright outer tube, a cross coupling at the upper end thereof having a closure at one end, a tube attached to the opposite end of said cross coupling, and having a closure and a valve at its outer end, a cross coupling at the lower end of said upright tube, having closures at its ends, and a tube leading from one of said closures; an upright tube of less diameter than and extending through the outer tube and the cross couplings and forming a duct for a heating medium, and means to apply a liquid hydrocarbon to the exterior of that portion of the said inner tube within the outer tube, for the purpose set forth.

2. A gas generator comprising an upright tube, a cross coupling at the upper end thereof having a closure at one end, a tube attached to the opposite end of said cross coupling, and having a closure and a valve at its outer end, a cross coupling at the lower end of said upright tube having closures at its ends, and a tube leading from one of said closures; an upright tube of less diameter than and extending through the upper tube and the lower cross coupling and provided at its lower end with a closure, said inner upright tube having an exterior spiral thread, an inverted conical cap at the upper end of said inner tube in said upper cross coupling, and having an exterior spiral thread, an exteriorly threaded tube of less diameter than said inner tube communicating with said inner tube, connected to said cap and the upper side thereof, a cup on the said smaller tube and provided with a perforated bottom and means to supply liquid hydrocarbon to said cup.

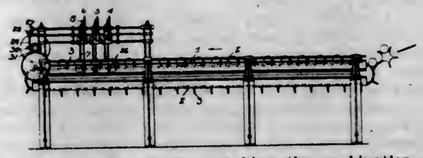
898,936. HOOK AND EYE. NELLIE K. SMALL, Los Angeles, Cal. Filed Aug. 22, 1907. Serial No. 389,687.



1. A member of a hook and eye fastener consisting of a pair of intertwisted wires, one of which is bent to form a U-shaped support having the terminals of its legs sharpened, the other wire being bent to form a loop having its arms coiled around the bight portion of said support and directed rearwardly thereof, and intertwisted, the free ends of said arms being bent downwardly parallel with the legs of said supporting member, and having sharpened terminals.

2. An eye comprising a vertical U-shaped support formed of a strip of wire, and a second strip of wire bent to form a central semi-circular loop resting at opposite ends upon the upper face of the bight portion of said support, the arms of said loop being coiled around the corresponding ends of said bight portion and directed rearwardly thereof and twisted together, the free ends of said arms being bent downwardly parallel with the legs of said support.

898,937. CAN-SOLDERING MACHINE. GEORGE H. STEWART, Los Angeles, Cal. Filed July 15, 1907. Serial No. 383,766.



1. In a can end-soldering machine, the combination of means for moving the cans past the solder point, means for heating the cans at and adjacent to the surfaces to be soldered, means for feeding solder to the end seam and controlling means for the solder feeding means, said controlling means engaging the head of the can and having traversing movement proportional to the diameter of the same, the solder being fed only during the said traversing movement, substantially as described.

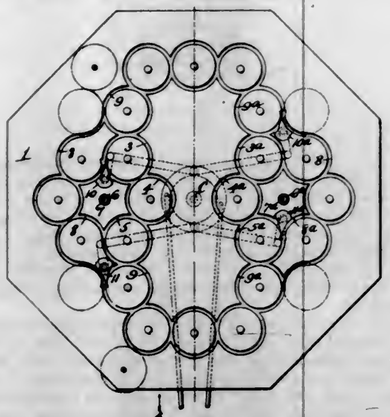
2. In a can end-soldering machine, the combination of means for moving the cans past the solder point, means for heating the cans, means for feeding solder to the end seam, and controlling means for the solder feeding means, said controlling means engaging the face of the head of the can and having relative traversing movement across the same, the solder being fed only during the said traversing movement, substantially as described.

3. In combination in a can end-soldering machine, means for supporting and moving a can past the solder point said

means receiving cans of different diameters, means for heating the can prior to reaching the solder point, and mechanism for feeding the solder directly to the end seam of the can, said mechanism being controlled in its feeding action by the can to an extent corresponding to and varied automatically in accordance with the length of the end seam of the can, substantially as described.

4. In combination in a can end soldering machine, means for moving a can past the solder point, means for heating the can, solder feeding devices, and a pivoted member arranged to bear on the can head, said pivoted member being moved aside by contact with the can and thereby controlling the feed of the solder to the end seam, substantially as described.

898,938. CORD-BRAIDING MACHINE. FERDINAND THUN, Wyomissing, Pa., assignor to Textile Machine Works, Wyomissing, Pa., a Corporation of Pennsylvania. Filed Aug. 12, 1905. Serial No. 273,850.



1. A tubular braiding machine for telephone cords or the like having a main carrier course, a cut-out carrier course comprising a series of three or more additional race-circles the end ones only of which connect with the main course, a guide way for a continuous core cord located between said additional race-circles and the main carrier course, and switches at the connected race-circles substantially as set forth.

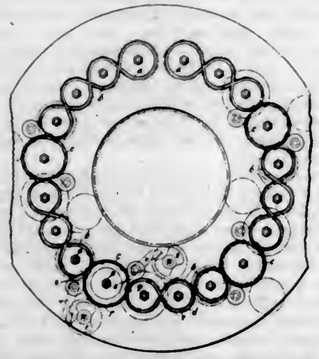
2. A tubular braiding machine for telephone cords or the like having a main carrier course, a cut-out carrier course comprising separate series of three or more additional race-circles, the end circles only of each of said series being connected with the main course, guide ways for separate continuous core cords located respectively between each series of additional race-circles and the main course, and switches at the connected race-circles, substantially as set forth.

3. A tubular braiding machine for telephone cords or the like having a main carrier course and a core cut-out carrier course a guide way for a continuous core cord located outside of said cut-out course switches for diverting the carriers at intervals from one to the other of said courses to form alternate core-covering braid portions and empty-braid portions, and differential take-off mechanism for said portions whereby excess lengths of the empty braid portions are produced substantially as set forth.

4. A tubular braiding machine for telephone cords or the like having a main carrier course and a core cut-out carrier course, a guide way for a continuous core cord located outside of said cut-out course, switches for diverting the carriers at intervals from one to the other of said courses to form alternate core-covering braid portions and empty-braid portions, a main take-off, a supplementary take-off for the empty-braid portions, and means for throwing said supplementary take-off into action as required.

5. A tubular braiding machine for telephone cords or the like having a main carrier course and a core cut-out carrier course a guide way for a continuous core cord located outside of said cut-out course, a switch mechanism for diverting the carriers from one to the other of said courses to form alternate core-covering braid portions and empty braid portions, a main take-off, and a supplementary take-off for the empty braid portions operatively connected to said switch mechanism.

898,939. BRAIDING-MACHINE. FERDINAND THUN, Wyomissing, Pa., assignor to Textile Machine Works, Wyomissing, Pa., a Corporation of Pennsylvania. Filed Aug. 4, 1906. Serial No. 329,161.



1. A braiding machine having carriers, drive mechanism therefor, and a top plate provided with a continuous race-way comprising series of uniform sized race-circles and a connecting enlarged circle upon which the carriers may be either passed through or reversed for plain or stripe braiding respectively, substantially as set forth.

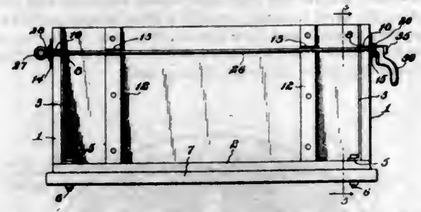
2. A braiding machine having carriers, drive mechanism therefor, a top plate provided with a continuous race-way comprising series of uniform sized race-circles and a connecting enlarged circle, and carrier controlling switches for said enlarged race-circle, whereby the carriers may be either passed through or reversed for plain or stripe braiding respectively, substantially as set forth.

3. A braiding machine having a top plate provided with a continuous race-way comprising series of uniform sized race-circles and a connecting enlarged circle, carriers traversing said race-way, means for controlling the movement of the carriers at said enlarged race-circle, and four horn drive gears for all of the race-circles one of which is of enlarged size and removably mounted for said connecting race-circle, substantially as set forth.

4. A braiding machine having a top plate provided with a continuous race-way comprising three or more series of uniform sized race-circles and single enlarged race-circles connecting adjacent series, means for controlling the movement of the carriers at each enlarged race-circle, and four horn drive gears for all of the race-circles certain of which are of enlarged size and removably mounted for said connecting race-circles, substantially as set forth.

898,940. END-GATE. ROSCOE A. TRUMBULL, Hicksville, Ohio. Filed July 20, 1907. Serial No. 384,782.

1. A wagon body or box having rearwardly opening slots in its side boards and wear plates on its outer sides having openings coincident with such slots, the said opening of one of said plates being downwardly inclined at the front end and the said plate having a curved cam flange on its outer side disposed eccentrically with reference to the downwardly inclined inner end of the opening, in combination with an end gate fastening rod to lie in such slots and openings, and a lever revoluble on said rod and having means to engage and coact with the outer side of such cam flange to move said rod eccentrically and force the same downwardly into said opening of said wear plate.



2. A wagon body or box having rearwardly opening slots in its side boards and wear plates on its outer sides having openings coincident with such slots, one of said wear plates having its said opening downwardly inclined at the front end and further provided with a cam flange on its outer side disposed eccentrically with reference to the inner end of such opening in combination with an end gate fastening rod to lie in such slots and openings, and a lever screwed on said rod and having means to coact with such cam flange to move such rod eccentrically and force the same downwardly into the downwardly inclined front end of the said opening.

3. A wagon box having its side boards provided at their rear ends with rearwardly opening slots, a device on the outer side of one of such boards having an opening coincident with the slot thereof, said opening inclined downwardly at the front end, the said device being further provided with an annular cam flange disposed eccentrically with reference to the said inclined front end of the said opening, said cam flange having an outer surface which recedes in one direction from said side board, in combination with a fastening rod to lie in said slots and in said opening, and a lever on said rod, said lever having a stud to bear on the outer side of said annular cam flange and coact therewith when said lever is turned in one direction to force the said fastening rod downward into the downwardly inclined front end of the said opening.

898,941. FABRIC. EMIL J. VOGEL, Lawrence, Mass. Filed Oct. 30, 1906. Serial No. 341,218.



1. A fabric consisting of wefts and warps comprising two sets of wefts disposed in vertical order from top to bottom of the fabric and of relatively quite thick and soft twist each alternate weft being of but substantially half the thickness of the other wefts in each pick forward in the construction of the fabric, the wefts being tied in by the sheds formed by the various warps from the top to the bottom of the fabric.

2. A fabric consisting of wefts and warps comprising a series of wefts of quite thick and soft twist woven in vertical order each alternate weft being but half the thickness of the other weft in each pick forward in the construction of the fabric, the wefts being tied in by regularly formed sheds in the warp, the similar wefts being beaten into the chinks between the larger wefts and warps.

3. A thick woven fabric comprising a series of fine hard twisted warps, a series of soft twisted wefts, and a second series of larger soft twisted wefts, the wefts being disposed alternately and vertically in each pick forward in the formation of the fabric.

898,942. PROCESS OF MAKING AROMATIC CARBONYL DERIVATIVES. ADOLF WACK, Belleville, N. J., assignor to Verona Chemical Company, Newark, N. J., a Corporation of New Jersey. Filed July 2, 1907. Serial No. 381,835.

1. The improvement in the manufacture of a hereinbefore defined aromatic carbonyl derivative which consists in submitting a mixture containing a hereinbefore defined primary aromatic amino-substance and a hereinbefore defined aromatic substance to oxidation.

2. The improvement in the manufacture of acetyl vanillin which consists in submitting a mixture of acetylisoeugenol and a hereinbefore defined primary aromatic amino substance to oxidation.

3. The improvement in the manufacture of acetyl-vanillin which consists in submitting a mixture of acetylisoeugenol and sulfanilic acid to oxidation.

898,943. PROCESS OF MAKING CAMPHOR. ADOLPH WACK, Belleville, N. J., assignor to Verona Chemical Company, Newark, N. J., a Corporation of New Jersey. Original application filed July 2, 1907, Serial No. 381,835. Divided and this application filed Dec. 27, 1907. Serial No. 408,331.

1. The improvement in the manufacture of camphor which consists in submitting a mixture containing a borneol compound and a hereinbefore defined primary aromatic amino substance to oxidation.

2. The improvement in the manufacture of camphor which consists in submitting a mixture of isoborneol and sulfanilic acid to oxidation.

898,944. POWDER-CAN. JOSEPH WEBER, Jasonville, Ind., assignor of one-half to Alfred G. Cummings, Terre Haute, Ind. Filed Aug. 21, 1907. Serial No. 389,473.



1. A powder can having a discharge aperture formed in the top thereof in immediate proximity to its edge, an apertured fastening member secured to the top above the aperture therein and having a portion thereof secured in the seam uniting the top and sides of the can, and a closure adapted to coöperate with the said member.

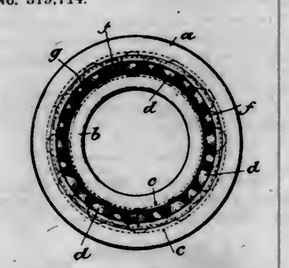
2. A can of the character described embodying a body and top united by a folded seam, the top being provided with a discharge aperture tangential to the body of the can, a fastening member arranged on the top provided with an aperture registering with that of the top and having a surrounding depending flange extending through the aperture in the top and crimped against the latter, a tang on the outer side of the said member folded into the seam uniting the top and the body of the can, and a closure adapted to coöperate with the said member.

3. A can of the character described embodying a body and top united by a folded upwardly projecting seam, the top being provided with a discharge aperture adjacent to the seam, an attaching member secured to the top and

having a tang thereon folded into the seam uniting the top and body of the can, and a closure adapted to cooperate with the said member and having an upturned lip arranged to lie against the tang thereof.

4. A powder can embodying a body and top united by a folded peripheral seam, the top having a discharge aperture therein adjacent to the peripheral seam thereon, a closure attaching member fitted on the upper surface of the top having a depending annular flange extending through the aperture in the top and crimped against the underside of the latter, a tang proceeding from the outer edge of the said member and folded in the seam uniting the top and body of the can, a closure member having a depressed portion fitting within the annular flange of the said member and provided with an upturned lip adapted to coöperate with the tang thereon, and flexible fingers proceeding from the edge of the said member and adapted to be folded into coöperative relation with the closure member to secure the latter.

898,945. BALL-BEARING. JOSEF WEIBEL-MULISCH, Zurich, Switzerland, assignor to Alfred Wild-Siegfried, Thalwil, near Zurich, Switzerland. Filed June 1, 1906. Serial No. 319,714.



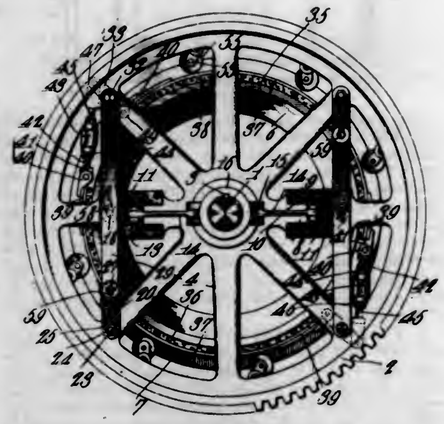
1. A ball bearing comprising two concentric continuous rings having grooved faces coöperating to form a ball raceway between them, running balls and spacing balls in the raceway, the distance between the facing edges of the rings on one side being greater than on the other, the edges on one side of the rings having the lesser distance between them, retaining both the running and the spacing balls in the raceway, and the edges of the other side of the rings retaining the running balls, and a spacing ball retaining ring out of contact with the bearing balls beyond the bearing surface of the raceway and secured to one of said rings within the space having the greater distance between the facing edges.

2. A ball bearing comprising two concentric continuous rings having similar grooved faces forming a raceway between them, running balls and spacing balls in the raceway, the distance between the facing edges of the rings when in concentric position being less than the diameter of the running balls said edges retaining them in the raceway, and a locking ring at one side of the bearing surface of the raceway forming the edge of one of the aforementioned rings to lock the spacing balls in the raceway.

3. A ball bearing comprising two concentric continuous rings having similar grooved faces coöperating to form a ball raceway between them, running balls and spacing balls for the running balls in the raceway, the distance between the facing edges of the rings when in concentric position being less than the diameter of the running balls said edges retaining them in the raceway, and a continuous locking ring at one side of the bearing surface of the raceway forming the edge of one of the aforementioned rings to lock the spacing balls in the raceway.

898,946. FRICTION-CLUTCH. THOMAS O. WERNER, Bangor, Pa. Filed Jan. 29, 1908. Serial No. 413,225.

1. A friction clutch comprising a drive member, a driven member, friction shoes or straps encircling the driven member, rock-shafts carried by the drive member, rock-arms on the rock-shafts connected to the contiguous ends of the friction shoes or straps, another rock-arm for each rock-shaft, a lever for each last-named rock-arm and carried by the drive member, radially sliding blocks carried by the drive member and each connected to one of the levers, a sliding sleeve upon the drive member, and a toggle link between the sleeve and each sliding block.



2. A friction clutch comprising a drive member, a driven member, friction straps or shoes encircling the driven member, rock-shafts upon the drive member, rock-arms upon each rock-shaft, one rock-arm being connected directly to one end of one of the friction straps, adjustable connections between each of the other rock-arms and the corresponding ends of the friction straps, another rock-arm on each rock-shaft, a lever for each rock-arm having a pivot support on the driven member, and connected to the last-named rock-arm at an intermediate point in the length of the lever, radially sliding blocks on the driven member connected to the ends of the levers remote from their pivot points, a sleeve movable to and from the driven member, and toggle links between the sleeve and the sliding blocks.

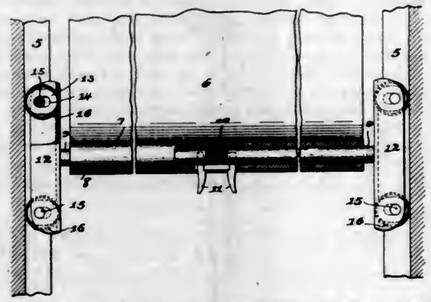
3. In a friction clutch, a means for operating the friction members comprising rock arms connected to the friction members, a lever for each rock arm, said lever being carried by one clutch member and at an intermediate point connected to the end of the rock arm, radially sliding blocks one for each lever and connected thereto at the end remote from its point of connection with the clutch member, and means for moving said radially sliding blocks to actuate the clutch.

4. In a friction clutch, a means for operating the friction members comprising rock shafts connected to the friction members, rock arms on the shafts, a lever for each rock arm carried by one of the clutch members at one end and movable about the point of connection as a fulcrum, said lever being connected to its rock arm at a point closer to the fulcrum than to the other end of the lever, a radially sliding block for each lever and connected to the free end thereof, a sliding sleeve on the clutch member carrying the levers, and a toggle link between each sliding block and the sleeve.

5. In a friction clutch, a drive member, a driven member in the form of a drum, straps or shoes encircling the drum, and stops on the drive member exterior to and in operative relation to the straps or shoes, said stops each consisting of a roller, a rotatable mounting upon which the roller is supported eccentrically, and means for locking the mounting in any position of adjustment comprising a curved slotted strap connected at one end to the roller mounting and at the other end held adjustably by a securing means extending through the slots.

[Claim 6 not printed in the Gazette.]

898,947. SHADE-FIXTURE. DALE WHINERY, Hoboken, N. J., assignor to The Curtain Supply Company, Newark, N. J., a Corporation of New Jersey. Filed July 16, 1906. Serial No. 326,386.

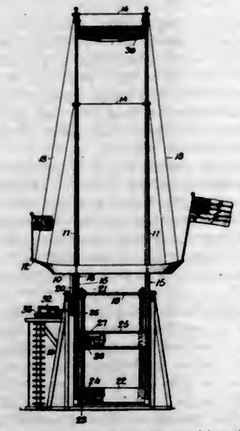


1. In a shade fixture, the combination with a shade stick and a spring-pressed shoe engaged therewith, of a non-circular roller mounted in said shoe on a lost-motion bearing, and a yieldable spring member incorporated with said roller and affording a yieldable spring resistance to the rotation thereof when engaged with the window casing guide, substantially as described.

2. In a shade fixture, the combination with a shade stick and a spring-pressed shoe engaged therewith, of a non-circular roller mounted in said shoe on a lost-motion bearing, and a circular flexible spring ring incorporated with said roller and affording a yieldable spring resistance to the rotation thereof when engaged with the window casing guide, substantially as described.

3. In a shade fixture, the combination with a shade stick and a spring-pressed shoe engaged therewith, of an oblong roller mounted in said shoe on a lost-motion bearing, and a circular flexible spring ring surrounding the periphery of said roller and affording a yieldable spring resistance to the rotation thereof when engaged with the guide of the window casing, substantially as described.

898,948. AMUSEMENT DEVICE. JOHN WILDERMAN, New York, N. Y. Filed July 9, 1907. Serial No. 382,896.

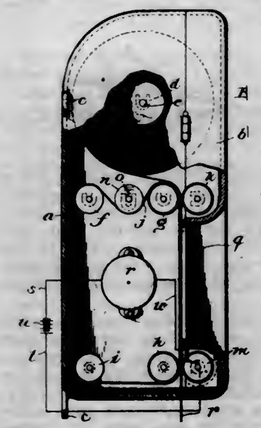


1. In an amusement device, the combination with a supporting frame, of a shaft journaled therein, radial beams carried by the shaft, a car carried by the beams near one end, counter weights at the other ends of the beams, means for adjusting the weights along the beams, a motor means for rocking the car, and means for connecting the motor with the rocking means or the adjusting means.

2. In an amusement device the combination with a supporting frame, of a shaft adapted to rock in same, a structure on the shaft, a hanging car on the structure, adjustable weights hung from the structure and beneath the shaft, gearing carried by the structure to rock it, pulleys on the shaft to adjust the weights, a motor and a driving pulley on the motor shaft adapted to alternately rock the structure or adjust the weights.

3. In an amusement device, the combination of a supporting frame, a shaft mounted on said frame for oscillating movement, an oscillating frame on said shaft, a fixed weight at the lower end of said oscillating frame, an adjustable weight on said oscillating frame, a gear carried by the oscillating frame, a gear carried by the shaft, means actuated by the gear on the shaft, to raise and lower the adjustable weight, and a motor having an element movable into and out of engagement with either the gear on the shaft or the gear in the oscillating frame, at will, to cause said motor to supply power for the purpose of raising or lowering the adjustable weight, or for the purpose of oscillating the oscillating frame, as may be required.

898,949. ADVERTISING DEVICE. CHARLES T. WILKS, Woodlawn, Ala. Filed May 21, 1908. Serial No. 434,135.



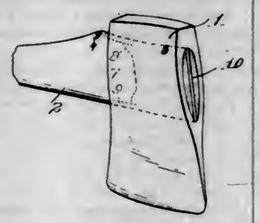
1. The combination of a cabinet, a transparent window, a roll of paper movably supported therein, a series of guide rollers located below said paper roll, an advertisement carrying strip, passing around some of said rollers, an operating hand wheel fixed on the axle of one of said rollers, an electric lamp, a circuit leading through said lamp and the axle of the roller carrying the hand wheel, and means whereby the movement of said hand wheel automatically opens and closes the circuit leading to said lamp, substantially as described.

2. The combination of a cabinet provided with a transparent window, a roll of paper movably supported in the upper part of said cabinet, a series of guide rollers located below said paper roll, an advertisement strip passing around some of said rollers, a spring pressed idler roller bearing against said strip, some of said rollers being provided with felt covers, and one of said rollers having its axle projecting through the casing and provided with a hand wheel, an electric lamp located behind said window, an electric circuit for said lamp, and means whereby the operation of said hand wheel alternately opens and closes said circuit, substantially as described.

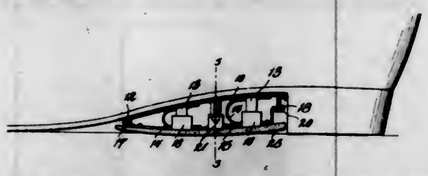
898,950. WEDGE FOR SECURING THE HANDLES OF AXES, HAMMERS, &c. WILLIAM WYATT, Sydney, New South Wales, Australia, assignor to Thomas Douglas Percy Holden, Redfern, near Sydney, New South Wales, Australia. Filed May 11, 1908. Serial No. 432,219.

A metallic wedge for securing handles to tools comprising a tapering body portion having formed integral therewith at each side thereof an extension of a length as to

project from the inner edge of the body portion and clear of the tool head for which the wedge is used, said extensions providing means whereby the wedge can be driven from either side thereof when it is desired to remove the wedge.



898,951. SPRING ATTACHMENT FOR SHOES. JOHN ZOOBOAVCH, Brooklyn, N. Y. Filed Feb. 8, 1908. Serial No. 414,977.



1. In a spring attachment for boots and shoes, a base plate having a socket at one end, a movable plate having a tongue engaging said socket, springs interposed between the base plate and the movable plate, and connecting means such as a bolt connected with the base plate and extending through a slot in the movable plate and having a nut whereby the movement of said movable plate may be limited.

2. In a spring attachment for boots and shoes, a base plate having a socket at one end and provided with projections or brackets, springs fitted between said projections and having lugs projecting through the base plate, a movable plate having a tongue engaging the socket upon the base plate and provided with guide lugs engaging the projections upon the base plate, and means for loosely connecting the movable plate with the base plate.

3. In a spring attachment for boots and shoes, a base plate having a socket at one end and provided with pairs of struck-up projections, springs fitted between said projections and secured upon the base plate, a movable plate having guide lugs engaging the projections upon the base plate and provided with a bail, and a bolt extending through the base plate and through the bail of the movable plate and having a nut to limit the movement of said plate.

898,952. CAR STRUCTURE. JOHN E. ANGER, Preston, England. Filed July 29, 1907. Serial No. 386,054.

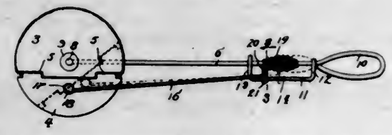
1. In a car structure, side stanchions, rabbets in said stanchions for the upper and lower sashes made of different depths, the one for the lower sash being shallower than the one for the upper sash, and metallic strips screwed against the shoulder or the side of one of the rabbets so as to form a division piece or guide for the lower sash, these metallic strips extending from the bottom of the grooves to the top of the lower sash only, so as to allow the top sash to be brought inwards, and slid down on the inside of the lower sash, substantially as described.

2. In a car structure having side stanchions sash rabbets in said stanchions, a top sash whose movement is determined by one set of rabbets, a bottom sash made somewhat narrower and whose movement is also determined by the other set of rabbets, and the two sets of rabbets made of different depths to correspond to the sashes, whereby where the two sets of rabbets meet, abutments will be formed on which the top sash rests in the raised position, so that it cannot fall into the rabbets of the lower sash, substantially as described.



3. In a car structure, side stanchions, rabbets in said stanchions for the upper and lower sashes made of different depths, the ones for the lower sash being shallower than the ones for the upper sash, so that between these rabbets shoulders are formed, which will prevent the upper sash entering the rabbets of the lower one, substantially as described.

898,953. CORN-POPPER. WILLIAM AYRES, Plainfield, N. J. Filed Feb. 14, 1908. Serial No. 415,929.



1. A corn popper comprising a supporting rod having a handle, a receptacle mounted to oscillate upon the rod, a pivoted cover for said receptacle, a pitman operatively connected with the cover and provided with a handle mounted to reciprocate and rotate upon the rod, and coengaging catch members on said rod and pitman for normally holding the pitman in operative position and the cover in closed position.

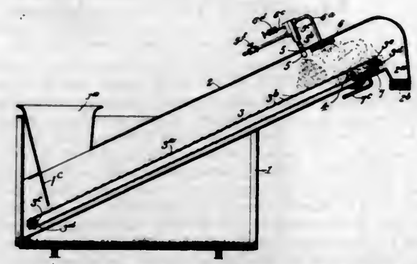
2. A corn popper comprising a supporting rod provided with a handle and a spring catch, a receptacle mounted for oscillation upon the rod, a pivoted cover for said receptacle, and an actuating device comprising a pitman connected with the cover and having an operating member mounted to reciprocate on the rod and a guide member engaged with the catch to normally hold the cover in closed position.

3. A corn popper comprising a supporting rod, a receptacle mounted to oscillate thereon, said receptacle being provided with a pivoted cover, an actuating device connected with the cover, said device being mounted to reciprocate on the rod for oscillating the receptacle and pivotally mounted on the rod for opening and closing the cover, and guiding means on the rod and actuating device forming coengaging catch members to normally hold the cover in closed position.

4. A corn popper comprising a supporting member, a receptacle mounted to oscillate thereon and provided with a pivoted cover, an actuating device having a pitman portion connected with the cover and a handle arranged to reciprocate and rotate on the supporting member, a guide upon the supporting member, forming a spring catch, and a runner upon the actuating device acting as a catch engaging said spring catch to retain the cover in closed position.

5. A corn popper comprising a supporting rod having a handle and provided with a spring guide member forming a catch, a receptacle mounted to oscillate upon the rod, said receptacle being provided with a pivoted cover, an actuating device consisting of a pitman connected with the cover and provided with an operating handle mounted to slide and turn upon the rod, whereby the receptacle may be oscillated and the cover opened and closed, said actuating device being formed with a runner slidably engaging said catch and holding said device from pivotal movement on the rod, said catch being retractable under pressure to disengage the runner therefrom.

898,954. MACHINE FOR WASHING AND SCALDING FRUITS, &c. PAUL S. BAKER and OWEN E. VANCE, Muscatine, Iowa. Filed Oct. 22, 1907. Serial No. 398,568.



1. In combination, a tank, a trunk connected therewith, an endless carrier for removing fruit from the tank through the trunk, a water spray in the trunk beyond the tank, a steam spray in the trunk beyond the water spray, both said sprays discharging onto the carrier below the upper end thereof, an inspirator connected with the water spray and with the tank to supply the spray from the tank, and means for passing steam through said inspirator to the steam spray.

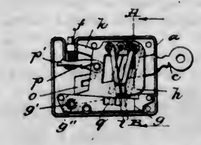
2. In combination, a tank, a trunk connected therewith, a carrier for removing fruit from the tank through the trunk, a water spray in the trunk beyond the tank, a steam spray in the trunk beyond the water spray, both said sprays discharging onto the carrier below the upper end thereof, and a second steam spray below the carrier in advance of the first steam spray; with an inspirator connected with the water spray and with the tank to supply the spray from the tank, and means for passing steam through said inspirator to one of the steam sprays, substantially as described.

3. In combination, a tank, a trunk extending therefrom, a hopper at the lower end of the trunk, a discharge outlet at its upper end, a carrier in said trunk, and means for moving said carrier; an inspirator, a water pipe connecting said inspirator with the tank; and a water spray in the trunk connected with said inspirator; a steam spray in the trunk connected with the inspirator-head, said steam spray being above the carrier; and a second steam spray arranged below the carrier, said steam sprays being beyond the water spray, substantially as described.

898,955. CYCLE-LOCK. KARL BALLOD, Riga, Russia. Filed Dec. 9, 1907. Serial No. 405,815.

1. In a cycle provided with forks, the combination of a pivoted lever secured to one of said forks, and a lock secured to the other, said lock having a slot to receive said lever, and provided with a pivoted locking bolt adapted to traverse said slot and pass above said lever; pivoted tumblers for holding said bolt in its locking position; and a key for releasing said tumblers, substantially as described.

2. In a cycle provided with forks, the combination of a pivoted lever; a clip securing the same to one of said forks; a lock; a clip securing the same to another of said forks; said lock provided with a slot to receive said lever; a pivoted spring controlled locking bolt adapted to traverse said slot; locking tumblers pivoted to said bolt; a key to release said tumblers; and a trigger o adapted to limit the inward movement of said key, substantially as described.

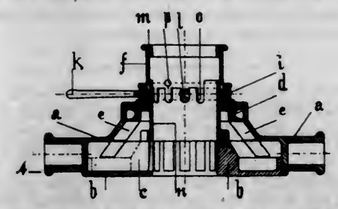


3. In a cycle provided with forks, the combination of a pivoted lever; a clip securing the same to one of said forks; a lock; a clip securing the same to another of said forks; said lock provided with a slot to receive said lever; a pivoted spring controlled locking bolt adapted to traverse said slot; locking tumblers pivoted to said bolt; a U-shaped frame provided with slots to receive said tumblers; a key to release said tumblers; and a trigger o adapted to limit the inward movement of said key, substantially as described.

4. In a cycle provided with a pair of forks, the combination of a spring controlled lever; a clip securing the same to one of said forks; a lock; a clip securing the same to the other of said forks; bolts connecting said lever and lock to their respective clips; said lock provided with a slot in its casing adapted to receive said lever; a spring pressed pivoted locking bolt; a spring pressed lever *p* for controlling said bolt; locking tumblers pivoted to said bolt; a fixed U-shaped frame provided with notches to receive the ends of said tumblers; and a trigger *o* to limit the movement of said key, substantially as described.

5. In a cycle provided with a pair of forks, the combination of a spring controlled lever, a clip securing the same to one of said forks; a lock; a clip securing the same to the other of said forks; bolts connecting said lever and lock to their respective clips; said lock provided with a slot in its casing adapted to receive said lever; a spring pressed pivoted locking bolt; a spring pressed lever *p* for controlling said bolt; locking tumblers provided with projections, and hooked shaped ends, pivoted to said bolt; a fixed U-shaped frame provided with notches to receive the ends of said tumblers; a key to release the said tumblers; and a trigger o to limit the movement of said key, substantially as described.

898,956. DIE-STOCK. RUDOLF BARTHOLOMÄUS, Dresden, Germany. Filed Oct. 3, 1907. Serial No. 395,723.



1. A die stock, comprising a radially perforated box, a plurality of sets of dies slidable in the perforations thereof, said dies having beveled portions, a collar having splayed feet to engage the beveled portions of the dies and mounted in the box to move axially, said collar being also rotatably adjustable to engage selectively with different sets of dies and means for moving the collar axially.

2. A die stock comprising a radially perforated box carrying an upright tube with notches in its upper edge, a plurality of sets of dies slidable in the perforations of the box, said dies having beveled portions, a collar having

splayed feet to engage the beveled portions of the dies and an inward projection to engage the notches of said tube, said collar being mounted to move axially and being rotatably adjustable to engage selectively with different sets of dies, and means for moving the collar axially.

3. A die stock comprising a radially perforated box carrying an upright tube with notches in its upper edge, a plurality of sets of dies slidable in the perforations of the box, said dies having beveled portions, a collar having splayed feet to engage the beveled portions of the dies, an inward projection to engage the notches and an upper tubular extension having spirally located slots, a rotary ring encircling the tubular extension and provided with inward projections to engage in said slots, and means for rotating the ring whereby the collar is axially moved.

898,957. GAS-MANTLE SUPPORT. CARL J. BARTON, Big Rapids, Mich. Filed Mar. 30, 1908. Serial No. 424,031.



1. The combination, with an inverted burner having its body provided with vertical grooves and intervening thickened portions having recesses in their upper edges, of a metal mantle-support comprising rings pivoted together to form a gimbal, or universal joint, the outer ring having inwardly projecting convergent arms adapted to slide upward in the grooves of the burner and to seat on the recessed portions of the same, substantially as described.

2. The combination, with a pendent burner, of a gas mantle and support therefor, the latter comprising parts forming a universal joint that allows the mantle proper to rock laterally in any direction, the outer portion of such joint having projections that engage the burner detachably, as shown and described.

3. The improved gas-mantle support comprising an inner ring and a surrounding ring which are pivoted together at opposite points, and a third or outer ring to which the intermediate ring is also pivoted so as to form a universal joint, the outer ring being constructed with inwardly projecting convergent arms, adapted for attachment to a burner, substantially as described.

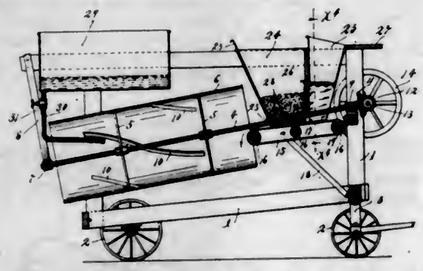
4. The improved gas-mantle support, comprising three rings which are pivoted together to form a gimbal and the outer ring provided with devices adapted for detachable engagement with a pendent burner, substantially as described.

5. The improved gas-mantle support comprising an outer porcelain ring provided with integral, inwardly projecting and convergent horizontal arms, an inner porcelain ring to which the mantle is, in practice, attached, and a third intervening ring which is pivoted both to the inner and outer ones, substantially as described.

898,958. CONCRETE-MIXER. THEODORE H. BOLTE, Kearney, Nebr., assignor of one-half to Edward F. Bolte, Eau Claire, Wis. Filed Mar. 7, 1908. Serial No. 419,668.

1. In a concrete mixer, the combination with a rotary mixing cylinder and a pair of supply hoppers, one for the sand and the other for the cement, set tandem with respect to each other and the cylinder, and provided with gate controlled discharge outlets staggered with respect to each other crosswise of the underlying feed belt, and an endless feed belt extending in the general direction of the axis of said cylinder with its upper running fold forming the bottom walls of said hoppers and operative to receive the sand and cement on different zones thereof and to deliver the same directly into the receiving end of said cylinder, substantially as described.

2. The combination with the rotary mixing cylinder and means for supplying water to the interior of the lower or delivery end portion of said cylinder, of the pair of supply hoppers, one for sand and the other for cement, set tandem with respect to each other and the cylinder and having the staggered gate controlled discharge outlets, the endless feed belt extending in the general direction of the axis of said cylinder and operative to receive the sand and cement on different zones thereof and to deliver the same to the receiving end of said cylinder, and a drive for imparting motion to said cylinder and feed belt, all for co-operation, substantially as described.



3. In a concrete mixer, the combination with a rotary mixing cylinder set low on the main frame and at an incline lengthwise thereof, with its shaft extended upward beyond the upper or receiving end of said cylinder, of a pair of supply hoppers, one for sand and the other for cement, set tandem with respect to each other and said cylinder, with their lower ends extending below said shaft and said shaft passing through the hoppers and having radial feed pins on that portion thereof located within the sand hopper, and an endless feed belt directly underlying the lower ends of said hoppers and extending in the general direction of the axis of said cylinder with its upper running fold receiving the sand and cement from said hoppers and delivering the same directly into the receiving end of said cylinder, substantially as described.

898,959. MECHANISM FOR SEALING AND CAPPING BOTTLES. SAMUEL C. BOND, Wilmington, Del., assignor, by mesne assignments, to Bond Bottle Sealing Company, a Corporation of Delaware. Filed Oct. 11, 1907. Serial No. 396,988.



1. In a machine for applying flanged sealing-caps to bottles, the combination with a bottle-support, and means adapted to move inwardly to engage the cap-flange, of means for moving one of said parts relatively to the other in a direction lengthwise of the bottle and thereby force the body of the cap into sealing contact with the lip of the bottle.

2. In a machine for applying flanged sealing-caps to bottles, the combination with a bottle-support, and means adapted to engage the cap-flange only in a single intermediate peripheral line, of means for moving one of said parts relatively to the other in a direction lengthwise of the bottle and thereby force the body of the cap into final sealing position on the lip of the bottle.

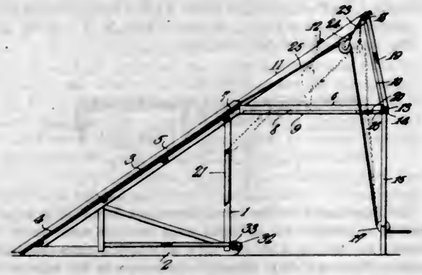
3. In a machine for applying flanged sealing-caps to bottles, the combination with a bottle-support, of means adapted to engage the cap-flange only in a single intermediate peripheral line, and means for moving one of said parts relatively to the other, whereby said flange-engaging means is caused to force the body of the cap into final sealing position on the lip of the bottle, and to bend the flange of the cap into locking engagement with the bottle.

4. In a machine for applying flanged sealing-caps to bottles, means adapted to engage the cap-flange only in a single intermediate peripheral line, and operative by such engagement to force the body of the cap into final sealing position on the lip of the bottle.

5. In a machine for applying flanged sealing-caps to bottles, means adapted to engage the cap-flange only in a single intermediate peripheral line, and operative by such engagement to first force the body of the cap into final sealing position on the lip of the bottle, and then bend the flange of the cap into locking engagement with the bottle.

[Claims 6 to 14 not printed in the Gazette.]

898,960. MANURE-LOADER. FOSTER R. BROWN, Pawnee City, Nebr. Filed May 5, 1908. Serial No. 431,019.



1. A loader comprising a frame, an inclined skid supported thereby, a superstructure pivotally connected with the skid and having inwardly-disposed ledges located below the upper end of the skid, and a post pivotally connected with that end of the superstructure remote from the skid and being located in the vertical plane lying between the pivotal connections between the superstructure and the skid.

2. A loader comprising a frame mounted upon runners, an inclined skid supported thereby, a superstructure pivotally connected with the skid, and braces pivotally mounted upon the frame and adapted to engage the superstructure to support the same in fixed position with relation to the skid.

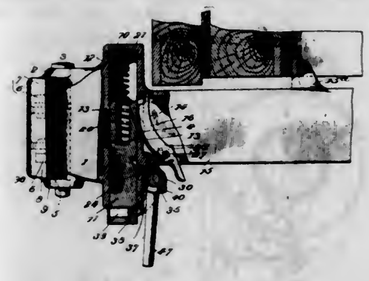
3. A loader comprising a skid supported in an inclined position, a superstructure mounted at one end upon the skid and being suitably supported at its opposite end, a flexible member mounted upon the superstructure, a pulley block attached to the flexible member, a draft cable passing over the pulley of said block, a scraper attached to said cable, and a button fixed to the cable.

4. A loader comprising a skid supported in an inclined position, a superstructure attached at one end to the skid, a post supporting the opposite end of the superstructure, a pulley journaled to said post, a pendent flexible member supported upon the superstructure, a pulley block attached to said flexible member, a draft cable operatively engaging the pulley of the block and the pulley upon the post, a scraper attached to said cable, and a button mounted upon the cable.

5. A loader comprising a skid supported in an inclined position, a superstructure connected therewith, a flexible pendent member supported by the superstructure, a pulley block attached to the flexible member, a draft cable engaging the pulley of the block, a scraper attached to the cable, said cable having at a point in advance of said scraper means for increasing its transverse diameter.

[Claim 6 not printed in the Gazette.]

898,961. CAR-COUPLING. PERRY BROWN, Wilmington, Del. Filed Oct. 27, 1903. Serial No. 178,726.



1. In a car coupler and in combination with the swinging knuckle thereof, a vertical recess or opening having its upper end closed, a vertically operating locking pin working in said vertical recess or opening, said pin snugly fitting said recess or opening and having no horizontal movement therein, the walls of said vertical recess or opening extending above and below the center of said pin whereby the latter has a bearing on each side of the knuckle, the aforesaid vertical operating pin having an opening or groove in its lower end, a transverse bearing on the coupler, a rock shaft transversely supported in said bearing, and an arm projecting from said rock shaft co-acting with the grooved lower end of said locking pin, substantially as described.

2. In a car coupler and in combination with the swinging knuckle thereof, a vertical recess or opening having its upper end closed, a vertically operating locking pin working in said vertical recess or opening, said pin snugly fitting said recess or opening and having no horizontal movement therein, the walls of said vertical recess or opening extending above and below the center of said pin whereby the latter has a bearing on each side of the knuckle, the aforesaid vertical operating pin having an opening or groove in its lower end, a transverse bearing on the coupler, a rock shaft transversely supported in said bearing, and a crank or lever connected with the other end of the said rock shaft, substantially as described.

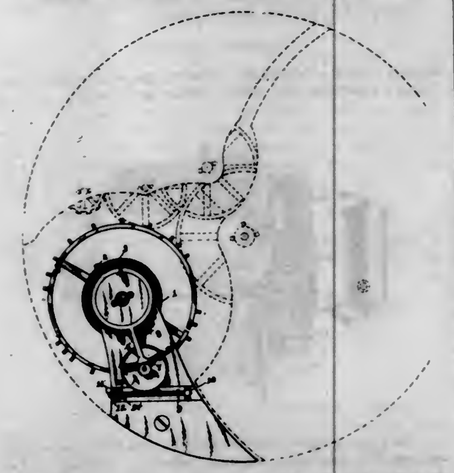
3. In a coupler and in combination with the swinging knuckle and its tail, a housing having a vertical opening therein, a vertically operating pin contained with said housing, said housing having an opening near its front through which passes the tail of the knuckle and an opening at the rear, and a lock-set projecting through said opening at the rear of the housing, substantially as described.

4. In a coupler, a locking pin and means for operating said locking pin from its lower end, said means comprising a rock-shaft, an arm projecting from said shaft and co-acting with said locking pin and a spring arranged to hold said parts in locking position, substantially as described.

5. In a coupler, the combination with a locking pin, of a rock-shaft suitably supported, an arm at one end of said rock-shaft having operative connection with said locking pin and an operating baudle or lever connected with the other end of said rock-shaft, and a spring for holding said parts so that the locking pin is in its locked position, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

898,962. REGULATOR FOR WATCHES. FRANK W. BUCKINGHAM, Greensburg, Pa., assignor of two fifths to J. Harvey Harrison, Pittsburg, Pa. Filed Feb. 28, 1907. Serial No. 359,833.



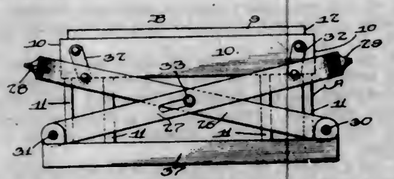
1. A watch regulator comprising a worm, a wheel meshing therewith, a lever having a segment operated by said wheel, said worm being spring pressed lengthwise.

2. In regulating mechanism for watches, a toothed segmental bar rigid with the regulator, a small pinion meshing with said bar, a gear wheel of larger diameter rigid with and concentric with said pinion, a worm shaft, adapted to be engaged by the watchmaker's tool, meshing with said gear wheel and a spring tension device engaging said worm shaft, substantially as and for the purpose set forth.

3. In regulating mechanism for watches, a toothed segmental bar rigid with the regulator, a small pinion meshing with said bar, a gear wheel of larger diameter rigid with and concentric with said pinion, both of said wheels being pivotally mounted on the cock, a worm shaft, adapted to be engaged by the watchmaker's tool, meshing with said gear wheel and a spring washer mounted on said shaft, substantially as and for the purpose set forth.

4. A watch regulator comprising a worm, a wheel having V shaped teeth meshing therewith, a lever having a segmental rack operated by said wheel, said worm being spring pressed lengthwise.

898,963. DEVICE FOR APPLYING LIQUIDS. HARRY G. CAMPBELL, Chicago, Ill., assignor of one-half to Charles C. Smith, Chicago, Ill. Filed Oct. 3, 1907. Serial No. 395,731.



1. The combination with means pervious to a liquid on one side of which the article to be moistened is placed, of a carrier for liquid, and means for moving the carrier against the side of the holding means opposite the side on which the article to be moistened is placed, whereby liquid from the carrier is transferred through the holding means to said article.

2. The combination with means pervious to a liquid on one side of which the article to be moistened is placed, of a receptacle for liquid, a carrier in said receptacle, and means for moving the carrier against the side of the holding means opposite to the side on which the article to be moistened is placed, whereby liquid is transferred from the receptacle through the holding means to said article.

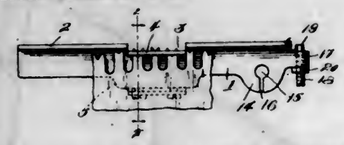
3. The combination with depressible means for holding the article to be moistened of a carrier for liquid, and connections between the holding means and the carrier, whereby they are brought together when the holding means is depressed and the liquid from the carrier transferred to said article.

4. The combination with a receptacle for liquid, means pervious to said liquid located over said receptacle upon the upper side of which the article to be moistened is placed, a carrier in said receptacle, and means for bringing the carrier up against the under side of said holding means, whereby liquid from the carrier is transferred to said article.

5. The combination with a receptacle, of depressible means located over said receptacle for holding the article to be moistened, a carrier in said receptacle, and connections between the holding means and the carrier, whereby the latter is raised against the under side of the holding means when the same is depressed.

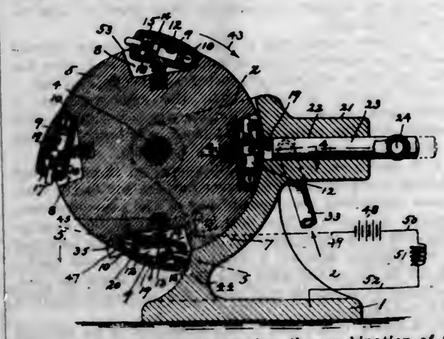
[Claims 6 to 14 not printed in the Gazette.]

898,964. SAW-JOINTING AND SAW-SWAGING IMPLEMENT. JOHN CARLIN, Newton Falls, N. Y. Filed Jan. 10, 1908. Serial No. 410,202.



An implement of the class described comprising a body having a flanged or straight edge for the saw teeth recessed in the top and one side, a jointing gage having a body portion which is inlaid in the recess in the side of the body, a slotted head or gage plate which is movable up and down in the recess in the top of the body, and a body flange extending under the body, and one or more adjusting screws passing through said bottom flange and slotted head plate and journaled in said parts and also having a threaded engagement with the body of the implement, substantially as described.

898,965. ROTARY EXPLOSIVE-ENGINE. EDWIN P. CARPENTER, Pawtucket, R. I. Filed Oct. 19, 1907. Serial No. 398,278.



1. In a rotary explosive engine, the combination of the engine-bed having standards provided with bearings to receive the engine-shaft, and said bed disposing a curved grooved extension, which has an abutment at one end thereof and its opposite portion provided with an intake-chamber to receive the actuating vapor; a compressor-shaft mounted in the intake-chamber; a revoluble disk secured on the engine-shaft and having its peripheral surface arranged to contact in the grooved extension of the engine bed, and said disk provided with sockets formed in its peripheral surface; a shell pivotally mounted in each socket of the disk and provided with an explosive-chamber; a spring actuated piston mounted in the chamber of each shell; a gearing arrangement to impart a reciprocating movement to the compressor-shaft to cause each shell to be charged with the actuating vapor; a spark plug mounted at the pivot center of each shell, and means to ignite the vapor in each shell that the thrust upon the piston by the explosion will be given against the abutment of the engine-bed.

2. In a rotary explosive engine, the combination of the engine-bed formed in one casting, having standards provided with bearings to receive the engine-shaft, and a curved extension terminating with an outwardly projecting head, which is provided with a bore communicating with an intake passage; a disk made fast on the engine-shaft and having its circular face in contact with the surface of the bed-extension, and said disk provided with a series of sockets formed in its face; explosive shells pivotally mounted in the sockets; means mounted in the disk to swing outwardly said shells; a spring-actuated piston in each shell; a shaft mounted in the head of the engine-bed; means to move last mentioned shaft whereby each shell is caused to be charged with an actuating vapor; a spark plug mounted at the pivot center of each shell and each plug having its center ignition rod slidable, and electrically controlled means mounted on the engine-bed to force the rod from contact with the terminal post of each plug and thus explode the vapor charge in the shell and cause the piston of the latter to thrust against the engine-bed at a point below its curved extension.

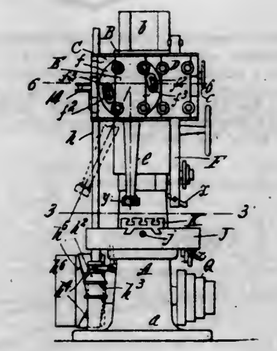
3. In a rotary explosive engine, the combination of the engine-frame having an extension disposing a curved bearing surface; a disk secured on the engine-shaft and having its circular face in contact with the bearing surface of the extension; a plurality of explosive shells pivotally mounted in the circular face of said disk and each shell having a spring-actuated piston; an intake chamber; means to charge each shell with an actuating vapor when it reaches said chamber; means to swing outwardly each shell to permit its piston to strike against an abutment of the engine-frame; an electrically-actuated spring blade secured on the engine-frame; and a spark plug mounted at the pivot center of each shell and each plug having a spring-actuated ignition rod to come in contact with said blade and cause a spark firing for the vapor charge in the shell.

4. In a rotary explosive engine, the combination of a rotatable disk provided with a series of sockets arranged in its circular face; a tube secured through the walls of each socket; an explosive shell mounted on the tube of each socket; means to automatically charge each shell with an actuating vapor; a spring-actuated piston in each shell; a spark plug having a spring-actuated ignition rod; and electrically controlled means mounted on the engine-frame for the head of said rod to come in contact with and cause a spark firing for the charge in the shell.

5. In a rotary explosive engine, the combination of the engine-frame having a curved body portion which terminates with an abutment at one end and an intake chamber at the other portion thereof; a disk having its peripheral surface in contact with the curved portion of the engine-frame; a plurality of shells pivotally mounted in the peripheral surface of said disk; a spring-actuated piston movable in the explosive chamber of each shell; means to automatically charge each shell with an actuating vapor at the moment the shell arrives at the intake chamber; an electrically charged spring blade secured on the engine-frame; and a spark plug for each shell and each plug to contact with said blade, whereby the explosion of vapor takes place the moment the shell leaves the curved portion of the engine-frame, and permits its piston to strike against the abutment of the latter.

[Claims 6 to 8 not printed in the Gazette.]

898,966. BORING OR REAMING AND GRINDING MACHINE. EDSON A. CHAMBERLIN, Worcester, Mass., assignor of one-third to James H. Wylie and one-third to Frederick S. Wylie, Holyoke, Mass. Filed July 10, 1906. Serial No. 325,330.



1. In a machine tool, a frame, upper and lower bearings in said frame, a vertical shaft mounted in said bearings, an annular flange at the upper end of said shaft and provided with a V-shaped rib, and an annular seat supported by said frame and adapted to receive said rib and support said shaft.

2. In a machine tool, a frame, a vertical shaft journaled therein and provided at its top with an annular flange, a rotating work table removably secured to said flange, a separate, removable annular driving gear secured to the bottom of said table and clamped between said table and flange, and a pinion meshing with said driving gear, and also journaled in said frame.

3. In a machine tool, a work table, a sliding head disposed above said table, and capable of both transverse and perpendicular adjustment, a fixed and rotatable tool both carried by said head, said rotatable tool being also capable of an angular adjustment on said head.

4. In a machine tool, a rotary work-holding table, a fixed tool arranged above the same, and capable of a plurality of different adjustments, and a rotating tool also arranged above said table, and having angular, vertical, and horizontal adjustments.

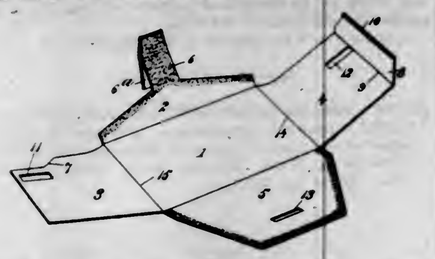
5. In a machine tool, in combination, a rotating work-holder, and means for driving the same, a fixed tool, capable of adjustments, mounted above the holder, a revolving tool, and means for driving it, also mounted above said holder, and means whereby said revolving tool may be swung aside, when the fixed tool is in use.

[Claim 6 not printed in the Gazette.]

898,967. ENVELOP. JAMES E. COCKROFT, San Francisco, Cal. Filed Dec. 16, 1907. Serial No. 406,598.

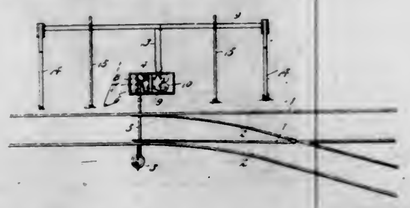
In an envelop blank, a rectangular blank having flaps on each of its four edges three of said flaps having slots which register when they are folded together, a separate stiffening piece gummed to the fourth flap and adapted to pass through the flaps having the slots therein, and a fifth

flap carried by one of the others and adapted to be folded over the slots within the envelop and having a thickened



creased edge to assist in placing the stiffened tongue through the slots.

898,968. SIGNAL. DAVID H. COKER, Piedmont, and WHITFIELD A. SCARBROUGH, Choccolocco, Ala. Filed Jan. 23, 1907. Serial No. 353,756.

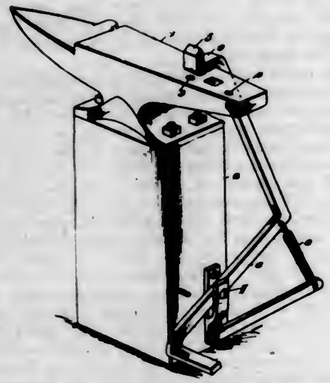


1. In an apparatus of the class described, the combination of a railroad switch, a signal circuit, means for opening and closing the circuit by the operation of the switch, and a signal device, said signal device comprising a support, a casing thereon having a depending portion provided with openings, a lever fulcrumed in the casing, an electro magnet, an armature connected with the lever and disposed above the electro magnet and arranged at one side of the fulcrum of the lever, a weight mounted on the lever at the side of the fulcrum opposite from the armature, a vertically-extending link depending from the lever at the end thereof opposite from the weight, and a target suspended on the link and movable back and forth with respect to the opening of the casing and counterbalanced by the said weight.

2. In an apparatus of the class described, the combination of a railroad track, a switch, a member for throwing the switch, a circuit closer disposed at one side of the switch and including normally separated contacts, an element connected with the extremity of the said member and arranged to move the contacts into engagement, a plurality of signaling devices arranged at distant points in opposite directions from the switch, a metallic return circuit between both signaling devices, and a shunt between the two sides of the circuit and connected with the said contacts, each signaling device comprising a casing having an opening, a lever fulcrumed in the casing, a weight on the lever at one side of its fulcrum, a target suspended from the extremity of the lever opposite from that having the weight, an electro magnet supported in the casing and connected with the said circuit, and an armature suspended on the lever at a point between its fulcrum and the target and arranged to lower the target when the circuit is completed.

3. In an apparatus of the class described, the combination of a track switch, signaling devices located at a distance from the switch at each side of the latter, a metallic return circuit between both devices, a shunt circuit between the two sides of the said metallic circuit, a circuit closer including a pair of normally separated contacts and connected in the shunt circuit, a source of current connected in series with the circuit closer, a casing mounted at one side of the switch and inclosing the said source and circuit closer, a member extending into the casing and mounted to engage one of the contacts for pressing the latter against the other contact to close the circuit, means in the casing for guiding the said element, a member connected with the switch to move the same, and a hinge joint between the member and element for actuating the latter simultaneously with the opening and closing of the switch.

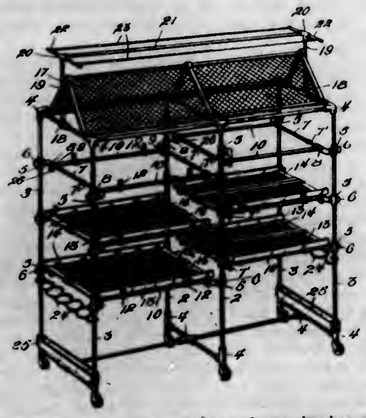
898,969. HARDY ATTACHMENT FOR ANVILS. GEORGE W. COLE, Niles, Ohio. Filed Dec. 4, 1907. Serial No. 404,991.



1. In combination with an anvil, a hardy normally held out of engagement therewith, a lever carrying said hardy and having a treadle and a bent portion, said bent portion being immediately adjacent to said hardy and designed to rest upon the face of the anvil when the hardy is in use.

2. In combination with an anvil, a hardy, a lever with which such hardy is formed integral, said lever immediately adjacent to the hardy being bent so as to rest directly on the anvil, said lever having at its other end a treadle, and a spring acting on said lever for holding the hardy out of engagement with the anvil.

898,970. DISPLAY-RACK. HERBERT F. COOK, Colorado Springs, Colo. Filed Jan. 24, 1908. Serial No. 412,516.



1. A display rack comprising a frame having display trays pivotally secured together and slidably mounted upon the vertical members of the frame, means for adjusting the ends of the tray upon the members of the rack, and means for adjusting the members of the tray at any desired angle in relation to each other.

2. A display rack comprising a frame having display trays, the display trays comprising a pair of frames pivoted together and provided with slidable coupling members coacting with the vertical members of the frame, means whereby the ends of the trays may be adjusted and secured upon the vertical members of the frame, and means whereby the members of the tray may be adjusted at any desired angle in relation to each other and held in said adjusted position.

3. A display rack comprising a frame, display trays adjustably secured upon the frame, said display trays comprising frames pivoted longitudinally together and provided with means whereby their ends may be adjusted at any angle upon the frame and retained in such adjusted position, and means whereby the trays may be adjusted at any desired angle in relation to each other and retained in such adjusted position.

4. A display rack having a suitable frame, slidable collars upon the frame, telescoping tubes upon the collars, connecting members for each of the tubes, hinges upon the members, and centrally pivoted display trays connected with the hinges.

5. In a display rack, a frame comprising upright members and connections therefor, collars upon the members, telescoping tubes transversely connecting the collars, horizontal telescoping tubes connecting the transverse tubes, hinges upon the horizontal tubes, centrally pivoted trays connecting the hinges, and means for retaining the tubes upon the upright members of the frame.

[Claims 6 and 7 not printed in the Gazette.]

898,971. MILK-PAIL. JOSEPH A. CORNELL, Youngs, N. Y. Filed Mar. 24, 1908. Serial No. 422,979.

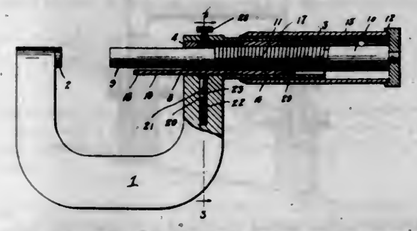


1. A milk pail comprising a receptacle having the edge of its open top disposed in a plane inclined upwardly from front to rear, a removable cover upon the top of the pail and comprising a ring of increasing width or height from front to rear, a depending annular flange to enter the pail, an outwardly projecting annular shoulder to rest upon the upper edge of the pail, the inwardly extending annular flange 10 arranged within the cover ring in a downwardly and forwardly inclined plane and having the enlarged portion 11 at its lowermost or front side, and a flat strainer secured to the flange 10 to cover the opening within the same, substantially as and for the purposes specified.

2. A milk pail cover comprising an upstanding ring of gradually increasing width or height from front to rear, a depending annular flange to enter the pail, an outwardly projecting annular shoulder between said ring and flange and adapted to rest upon the upper edge of the pail, the annular flange 10 arranged within the ring in a downwardly and forwardly inclined plane and having the enlarged portion 11 at its lowermost point, and a flat strainer secured to the flange, substantially as and for the purposes specified.

898,972. QUICK-ADJUSTING MICROMETER. HENRY O. COSTELLO, Providence, R. I. Filed Jan. 9, 1908. Serial No. 409,994.

1. In combination, a frame, a sliding piece adjustably secured thereto, said sliding piece being provided with a screw-threaded bore, and a spindle having a screw-threaded portion adapted to be received by said bore, the range of adjustment of said sliding piece being substantially equal to the capacity of the micrometer.



2. In combination, a U-shaped frame, having a sleeve on the outer extremity of one arm thereof, a bushing slidable in said sleeve, said bushing having a screw-threaded bore, a spindle having a screw-threaded portion adapted to be received by said bushing, a rack rigidly secured to said bushing, and means on said frame adapted to engage said rack.

3. In combination, a frame having a pair of arms, a laterally disposed sleeve on the end of one of said arms, a rack and spindle bushing rigidly secured in said sleeve and having an axially disposed bore, and a seat in the lower side thereof a sliding bushing in said sleeve and having an axially disposed screw-threaded bore and a rack rigidly secured thereto and adapted to slide within said seat, a pawl fastened to said frame and adapted to engage the teeth of said rack, a spindle having a screw-threaded portion adapted to be received by said screw-threaded bore and a smooth portion adapted to be received by said first-mentioned bore, and a thimble fastened to said spindle, said thimble being provided with a scale and said sleeve being provided with a line near said scale.

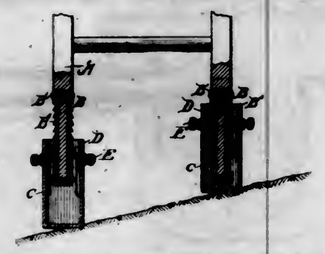
4. In combination a frame having a bore in one side thereof, a bushing slidable in said bore, said bushing having a screw threaded bore, a spindle having a screw threaded portion adapted to be received by said screw threaded bore, a rack connected to said bushing and mounted in said frame and means adapted to engage and hold said rack at any desired adjustment.

5. In combination, a U-shaped frame having an anvil at the extremity of one arm and a laterally disposed sleeve at the extremity of the other arm, a fixed bushing in the inner end of said sleeve and provided with an axially disposed smooth bore, a resilient slotted reduced extension, and a rectangular key seat extending longitudinally of the lower portion thereof, a screw adjustably mounted in the upper part of said sleeve and adapted to press against said extension, a sliding bushing in said sleeve and having an axially disposed screw-threaded bore and a screw-threaded slotted reduced end, a rack rigidly secured to said sliding bushing and passing through said seat, a spindle having a threaded portion adapted to be received by said threaded bore, a nut on said screw-threaded reduced end, a spacing collar on the outer end of said spindle, a thimble secured to said spacing collar and receiving said sleeve, said sleeve being provided with a linear scale longitudinally disposed thereof and said thimble being provided with an annular scale thereof adapted to coöperate with said linear scale, a plunger adapted to coöperate with the teeth of said rack and seated in a bore extending longitudinally of the arm of said frame which carries said sleeve, said arm being provided with a slot communicating with said bore, a thumb press rigidly secured to said plunger and slidable in said slot, and a spring adapted to normally hold said plunger in engagement with said rack.

898,973. LADDER ATTACHMENT. EDWARD J. CURRAN, Alton, Ill. Filed Jan. 28, 1908. Serial No. 413,116.

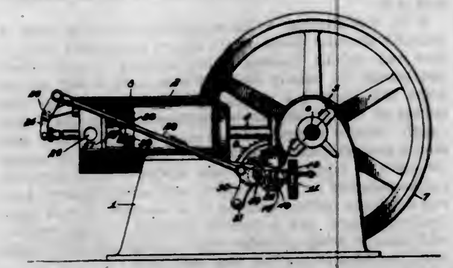
The combination with a ladder having reduced lower ends, of sleeves secured over said ends by screws having teeth formed upon opposite sides, of caps mounted over

said sleeves provided with oppositely disposed springs normally held in engagement with the teeth of said sleeve,



threaded bosses formed on the sides of said caps and set-screws mounted in said bosses for engaging said springs.

898,974. EXPLOSIVE-ENGINE. ARTHUR W. DANIEL, Owensboro, Ky. Filed Jan. 20, 1906. Serial No. 297,030.



1. In an internal combustion engine, the combination of a piston and cylinder, a shaft connected with and driven by the piston, an ignition device having a movable electrode in the cylinder, an arm connected with said electrode and disposed outside the cylinder, a secondary shaft, a member actuated by the shaft and slidably connected with the arm, a spring arranged on the member to cause the arm to move therewith, a valve mechanism, a speed responsive device controlling the valve mechanism, and a connection between the mechanism and said arm for rendering the latter inoperative during abnormal speed conditions.

2. In an internal combustion engine, the combination of a cylinder, a piston therein, an ignition device, a shaft driven by the piston, a movable member associated with the ignition device, a reciprocating rod actuated by the shaft, a lost motion connection between the rod and member, a yielding device normally preventing lost motion in said connection, a valve mechanism, means for controlling the valve mechanism to regulate the speed of the engine, and a connection between the mechanism and said member for rendering the latter inoperative and causing the second device to yield.

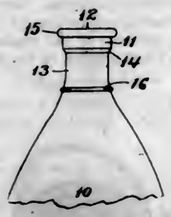
3. In an internal combustion engine, the combination of a cylinder, an ignition device having a movable electrode disposed within the cylinder, a member connected with the electrode and disposed outside the cylinder, a rod operating continuously with the moving parts of the engine and yieldingly connected with the member, an abutment on the rod engaging the member to move the same in one direction, a spring on the rod bearing against the said member and yieldable when the said member is held stationary, a rock shaft, a valve operated thereby, means for actuating the rock shaft, and a connection between the rock shaft and member for holding the latter stationary during abnormal speed conditions and while the said rod continues to operate.

4. In an internal combustion engine, the combination of a cylinder, an ignition device including a movable electrode disposed within the cylinder, an oscillating arm connected with the electrode and disposed outside the cylinder, a rod positively engaging the arm for moving the latter in one direction, a spring on the rod through which the latter operates to move the arm in the opposite direction, an eccentric for actuating the rod, a valve mechanism, and a member connected with the mechanism and arm for preventing movement of the latter for controlling the speed of the engine.

5. In an internal combustion engine, the combination of a cylinder, a piston therein, a main shaft driven by the piston, a secondary shaft, an ignition device having a movable electrode and disposed at one side of the cylinder, an actuating rod yieldingly connected with the electrode for actuating the latter, means on the secondary shaft for operating the said rod, an exhaust valve at the head of the cylinder, a rock shaft extending transversely to the axis of the cylinder and disposed at the head of the latter, means for actuating the valve from the shaft, a mechanism between the secondary shaft and rock shaft for moving the latter, a speed responsive device controlling the said mechanism, and means between the rock shaft and ignition device for preventing movement of the electrode when speed becomes excessive.

[Claims 6 to 10 not printed in the Gazette.]

898,975. NURSING-BOTTLE. CLARENCE W. FOX, Saugus, Mass. Filed Jan. 5, 1907. Serial No. 350,985.



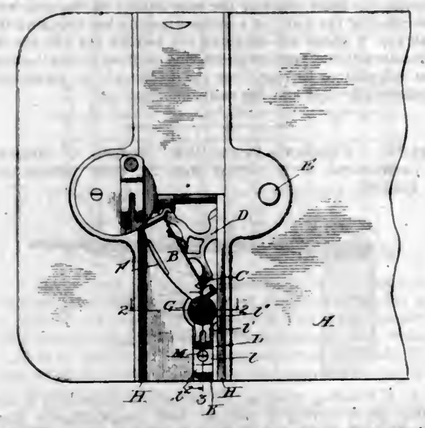
The combination with a bottle, of a non-elastic ring permanently located on the neck of the bottle and adapted to clamp the mouth of an elastic cap surrounding said neck, the neck of the bottle having three portions of distinctly different sizes so graduated that the largest of these portions, namely a lip, is nearest the mouth, the intermediate portion next to the lip, and the smallest portion farthest from the lip, and a shoulder intervening between the intermediate and smallest portions whereby the ring may be slipped over the edge of the cap while said edge and the ring surround the smaller portion of the neck, and the cap and ring may be then raised to cause the ring to clamp the cap on the intermediate portion of the bottle neck.

898,976. SEWING-MACHINE. WILLIAM C. FREE, Chicago, and JOSEPH B. ANGOVE, Rockford, Ill., assignors to Illinois Sewing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed May 11, 1905. Serial No. 260,050. Renewed Jan. 13, 1908. Serial No. 410,665.

1. The combination with the base-plate of a sewing machine, of a depressible device secured thereto adjacent to the shuttle race and having a portion projecting over the shuttle race and lying in a plane above the horizontal plane of the shuttle, said device being adapted when depressed to engage the point of the shuttle and thereby flip it out of the carrier, substantially as described.

2. The combination with the base-plate of a sewing machine, said base-plate having a shuttle race and a cove at the front end of said race, into which the point of the shuttle projects when at the limit of its forward movement, of a depressible device secured to the base-plate and having a portion projecting over said cove in position to engage the point of the shuttle when depressed, substantially as described.

3. The combination with the base-plate of a sewing machine, having a shuttle race, of a spring secured to the base-plate adjacent to the shuttle race and having a depressible portion projecting over the shuttle race in position to engage the point of the shuttle, substantially as described.

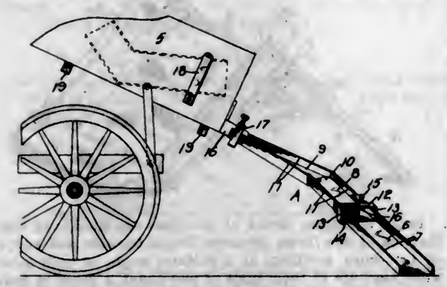


4. The combination with the base-plate of a sewing machine, having a shuttle race, of a spring secured to the base-plate adjacent to the shuttle race and having an enlarged head projecting over the shuttle race and adapted to engage the point of the shuttle, substantially as described.

5. The combination with the base-plate of a sewing machine, having a shuttle race and a slide for covering the said race, of a spring secured to the base-plate beneath the slide and engaging the under side thereof for preventing its random movement, said spring having a depressible portion projecting over the shuttle race in a plane above the shuttle and in position to engage the point of the shuttle, substantially as described.

[Claim 6 not printed in the Gazette.]

898,977. COAL-CHUTE. ROBERT T. GREENLEAF, Philadelphia, Pa. Filed Oct. 19, 1907. Serial No. 398,239.



A coal chute of the class described comprising a straight section, a curved section telescopically receivable at either of its ends in the straight section, a clamp for holding the sections in connected relation, said clamp being of yoke formation and having portions arranged for engagement with the under side of one of the two sections, and a hand screw threaded through the connecting portion of the clamp and arranged to bear upon the other of the two sections when the sections are in connected relation.

898,978. GARMENT-HOLDER. HUGO C. KRAUSE, Chicago, Ill., assignor of one-third to Charles Turner Brown, Chicago, Ill. Filed May 16, 1906. Serial No. 317,213.

In a garment holder, a base, a movable member mounted on the base, one end of the movable member and one end of the base forming the jaws of the holder, an additional movable member mounted on the base, and provided with an aperture therein, a button shank, provided with a button head, on the base, one end of such additional movable member engaging with the first named movable member to actuate it and the other end closing over the button

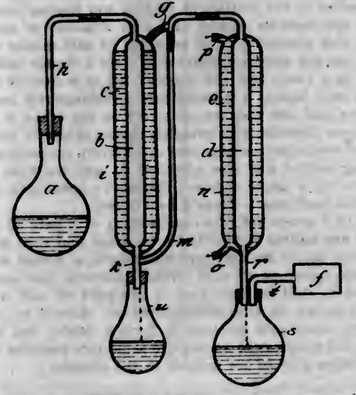


shank with the button of such shank through the aperture thereof, and a latch to lock such additional lever in position with the jaws of the holder closed, substantially as described.

898,979. PROCESS OF ELECTRICALLY CONNECTING FILAMENTS TO SUPPLY-WIRES IN ELECTRIC GLOW-LAMPS. HANS KUZEL, Baden, near Vienna, Austria-Hungary. Original application filed Jan. 19, 1906, Serial No. 296,684. Divided and this application filed Mar. 26, 1907. Serial No. 364,732.

The process of electrically connecting filaments to supply wires in electric glow lamps which consists in mixing finely powdered metals melting and forming carbids at high temperatures with carbonaceous substances and with an agglomerant whereby a plastic mass is obtained, applying such plastic mass to the points to be connected and gradually heating such mass in the absence of air to a white heat whereby carbids of the said metals are formed and fused and finally permitting the same to cool, substantially as and for the purpose described.

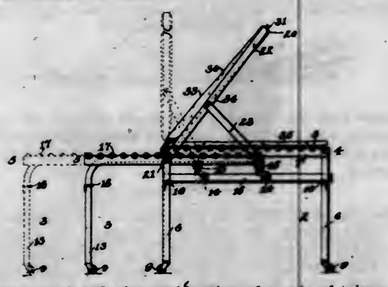
898,980. PROCESS FOR THE FRACTIONAL CONDENSATION OF VAPORS. LEO LÖWENSTEIN, Vienna, Austria-Hungary. Filed Apr. 8, 1908. Serial No. 425,926.



1. The herein described method for the fractional condensation of vapors which consists in distilling a mixture of liquids under a reduced pressure influence and in cooling the vapors by an agent under the same reduced pressure influence as the mixture of liquids, which agent has a boiling temperature equal to the boiling temperature of one of the liquids of said mixture and is heated to such temperature, the remainder of the liquids having boiling temperatures higher than that of the cooling agent and being condensed thereby.

2. The herein described method for the fractional condensation of vapors which consists in distilling a mixture of liquids under a reduced pressure influence, and in cooling the vapors by an agent under the same reduced pressure influence as the mixture of liquids, which agent has a boiling temperature equal to the boiling temperature of one of the liquids of said mixture and is heated to such temperature by the said liquid, the remainder of the liquids having boiling temperatures higher than that of the cooling agent and being condensed thereby.

898,981. SLIDING COUCH-BED. JOSEPH LUPPINO, New York, N. Y., assignor to American Couch Company, New York, N. Y., a Corporation of New York. Filed May 9, 1908. Serial No. 431,767.



1. In a couch-bed, the combination of a pair of telescoping bed-sections each having a metallic fabric permanently connected thereto and one movable relatively to the other, a folding mattress therefor, and means attached to said sections and to said mattress and operative by a movement of said means in one direction to open both the bed and the mattress to form a double bed.

2. In a couch-bed, the combination of a pair of bed-sections each having a metallic fabric directly connected thereto and one slidable relatively to the other, a folding mattress therefor, and means attached to said sections and to said mattress and operative by a single forward movement to open both the bed and the mattress to form a double bed.

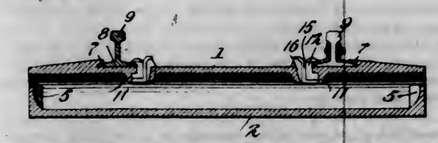
3. In a couch-bed, the combination of a pair of telescoping bed-sections each having a metallic fabric connected directly thereto and one movable relatively to the other, a folding mattress therefor, and swinging means pivotally connected to the stationary section and having connection with the movable section and also attached to said mattress and adapted on the swinging of said means to open both the bed and the mattress to form a double bed.

4. In a couch-bed, the combination of a pair of bed-sections each having a metallic fabric permanently connected thereto and one slidable relatively to the other, a folding mattress therefor, and swinging means pivotally connected to the stationary section and operatively connected to the sliding section and also attached to said mattress and effective by a single forward motion to open both the bed and the mattress to form a double bed.

5. In a couch-bed, the combination of a pair of bed-sections one sliding relatively to the other and each having a metallic fabric directly secured thereto, a folded mattress resting upon one of said metallic fabrics, and means attached to said sections and to one part of said mattress and adapted on the pulling forward thereof to simultaneously open said sections to form a double bed and unfold said mattress to spread the same into position for use.

[Claims 6 to 26 not printed in the Gazette.]

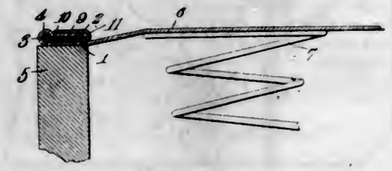
898,982. RAIL-TIE. WILLIAM H. MAYER and IRA O. BURCH, Kansas, Ill. Filed Mar. 7, 1908. Serial No. 419,820.



1. A metallic rail tie comprising a hollow element having a rounded top provided with flattened rail receiving portions, outwardly inclined sides, a flat base, and partially closed ends.

2. A hollow metallic tie comprising a rounded top having flattened receiving portions, lips upon said flattened portions adapted for the reception of one edge of the base flange of rails, the flattened portion being provided with longitudinal recesses adjacent the opposite edges of the base flange of the rails, the recesses being provided with vertical side walls, and inclined end walls and their outer walls being provided with offsets, a rail key adapted to engage the inner edges of the base flanges of the rails and the offset of the wall, an L-shaped locking key engaging the rail key, a wedge key engaging the locking key and the inclined wall, the vertical projecting portion of the locking key adapted to be bent over the wedge key to secure the fastening devices and the rails upon the tie.

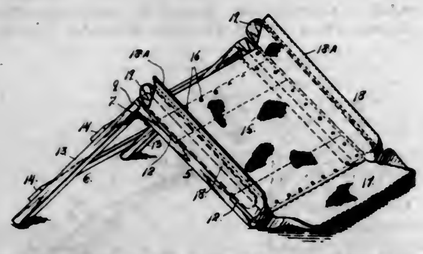
898,983. WEBBING-ATTACHER. JOSEPH C. MELICK, Canajoharie, N. Y. Filed Mar. 20, 1908. Serial No. 422,309.



1. A webbing attacher for furniture comprising a metallic plate having a portion bent longitudinally upon itself forming a round edge around which the webbing is turned, and a portion rebent upon the first named bent portion forming a clamp for securing the terminal of the webbing in position.

2. A webbing attacher for furniture comprising a metallic plate having a portion bent longitudinally upon itself and provided with a beaded edge around which the webbing is turned and another portion rebent upon the first named bent portion the outer end and inner face of which form respectively a round bearing surface and a clamping surface for the said webbing.

898,984. IRRIGATING DEVICE. MALCOLM D. MCFARLANE, Aspen, Colo. Filed June 25, 1907. Serial No. 380,680.

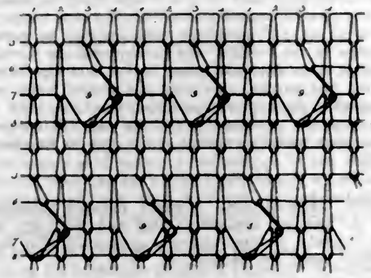


In an irrigating device of the class described, the combination of two frame members hinged together and adapted to occupy positions at a suitable angle to each other when both are at their limit of movement, a cover of flexible material with which one of the members is provided, the said material extending downwardly beyond the frame member and outwardly at the sides thereof forming wings, and stiffening or reinforcing slats with which the said wings are equipped, substantially as described.

898,985. KNIT FABRIC. JAMES MCNAMEE, Amsterdam, N. Y. Filed Sept. 30, 1907. Serial No. 395,197.

1. As a new article of manufacture, an open-mesh knitted fabric having one loop of one course elongated and bent laterally at its intermediate portion and engaged by the loops of the two succeeding courses.

2. As a new article of manufacture, an open-mesh knitted fabric having one loop of one course elongated and extended laterally, at its intermediate portion, said intermediate portion being engaged, and bound in, by the loops in an adjacent wale of the succeeding course, and having its closed end engaged by the loop in its original wale, and of the second succeeding course.



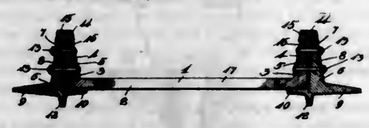
3. As a new article of manufacture, an open-mesh knitted fabric having one loop of one course engaged with a loop of the preceding course said loop being flanked in adjacent wales of said course by disengaged float threads, said first mentioned loop being extended and bent laterally at its intermediate portion and engaged by the loops of the two succeeding courses.

4. As a new article of manufacture, an open-mesh knitted fabric having one loop of one course engaged with a loop of the preceding course and the material or thread proceeding from each side of the first mentioned loop passing over but disconnected from the adjacent loops of said preceding course, said first mentioned loop being extended and bent laterally at its intermediate portion, said intermediate portion being engaged on that side by the loops of an adjacent wale, and its closed end being engaged by a loop of its own wale.

5. As a new article of manufacture, an open-mesh knitted fabric having two loops of one course extended and engaging with the corresponding loops of the second course therefrom, the loop between said two loops being of normal length and the loop of the succeeding course that engages with said normal loop being of triple length and extended laterally substantially at its middle so as to be engaged by the adjacent loops on that side in a following course, and having a third course whose loops engage with the loops of the second, first and fourth courses, respectively.

[Claim 6 not printed in the Gazette.]

898,986. COMBINED RAILWAY RAIL AND BED-PLATE. JOHN C. PHILLIPS, Akron, Ohio. Filed Dec. 2, 1907. Serial No. 404,702.



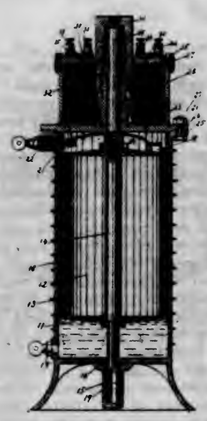
1. In a railway track, an integral bed plate extending between and forming a support for the opposite track rails, longitudinally disposed side flanges on said bed plate, sleeper rails adapted to be bolted to said side flanges, and track rails connected to and supported by said flanges and sleeper rails, substantially as described.

2. In a railway track, a bed plate, upwardly projecting side flanges formed on the outer edges of said plate, said flanges having formed therein longitudinally disposed recesses, sleeper rails adapted to be secured to said flanges of the bed plate, said sleeper rails having formed therein longitudinally disposed recesses, which, together with the recesses in the flanges of the bed plate, form longitudinally disposed channels, and track rails adapted to be secured in said channels, substantially as described.

3. In a railway track, a bed plate, longitudinally disposed flanges formed on the outer edges of said plate, said flanges having formed therein recesses, sleeper rails adapted to be secured to said flanges, said rails having formed therein recesses adapted to coincide with the recesses in said flanges to form longitudinally disposed channels, means on the lower edges of said sleeper rails, whereby the same and said bed plate are anchored, track rails adapted to be supported by said bed plate and sleeper rails, said track rails comprising a head or track portion, and a web portion, said web portion being adapted to be engaged with said channels formed by the recesses in the flanges and sleeper rails, substantially as described.

4. In a railway track, a bed plate having formed therein a series of drain passages, longitudinally disposed upwardly projecting flanges formed on the side edges of said plate, said flanges having formed in their outer walls longitudinally disposed recesses, the lower edges of which form shoulders, sleeper rails adapted to be bolted to said flanges, said rails having formed in their inner walls longitudinally disposed recesses, the lower edges of which form shoulders, said recesses, together with the recesses in the flanges, forming channels, a laterally projecting supporting flange formed on the lower edge of said sleeper rails and adapted to project beneath the outer edges of said bed plate, anchor flanges formed on the outer lower edges of said sleeper rails, stop flanges formed on the lower edge of said rails, track rails adapted to be supported by said sleeper rails and bed plate, said track rails comprising a head or tread portion, and web portions adapted to be engaged with the channels formed by the recesses in said flanges and sleeper rails and to rest on the shoulders formed by said recesses, substantially as described.

898,987. RHEOSTAT. HEINRICH POTH, Brooklyn, N. Y. Filed Dec. 8, 1905. Serial No. 290,906.



1. In a motor starting device, the combination with a motor, and a rheostat having a resistance medium in series with the motor armature; of an electromagnet adapted to vary the active amount of said resistance medium and having a coil in series with the motor armature and a coil connected directly at the motor brushes in shunt with the motor armature.

2. In a motor starting device, the combination with a motor and a rheostat having a resistance medium in series with the motor armature; of an electromagnet adapted to vary the active amount of said resistance medium and having one coil in series with the motor armature and in shunt to the resistance medium and another coil in shunt to the motor armature.

3. In a motor starting device, the combination with a motor and a rheostat having a resistance medium in series with the motor armature, and a vessel containing conductive liquid in said circuit adapted by its movement to vary the active amount of said resistance medium, of an electromagnet having a coil in series with the motor arma-

ture and a coil connected directly at the motor brushes in shunt to the motor armature, and means whereby the electromagnet causes the movement of said conductive liquid.

4. In a motor starting device, the combination with a motor and a rheostat having a resistance medium in series with the motor armature and a vessel containing conductive liquid in said circuit adapted by its movement to vary the active amount of said resistance medium, of an electromagnet having a coil in series with the motor armature and in shunt to the resistance medium and a coil in shunt to the motor armature and means whereby the electromagnet causes the movement of said conductive liquid.

5. In a motor starting device, the combination with a motor and a rheostat having a resistance coil in series with the motor armature and a vessel containing mercury in its circuit adapted by its movement to vary the active length of said resistance coil, of an electromagnet having a coil in series with the motor armature and a coil connected directly at the motor brushes in shunt to the motor armature and means whereby the electromagnet causes the movement of said mercury.

[Claims 6 to 14 not printed in the Gazette.]

898,988. FIREARM. JAMES W. PRICE, Konawa, Okla. Filed Nov. 9, 1907. Serial No. 401,486.



1. In a firearm, the combination with a magazine, a breech block, a receiver and a pivoted cartridge carrier mounted within said receiver and raised and lowered by a connection with said block, said cartridge carrier having an elongated cartridge seat, opening into its front end, and being formed at its front end along its under side with a slot, of a pivoted cartridge stop, a spring for raising said stop on its pivot, said block having an extension for engagement with said stop to depress the same against the force of said spring, said stop having a part designed to partially overlie the end of said magazine when said stop is raised and a detent pivoted at the front end of said receiver and having two projecting portions, one of which projects through said slot into said seat when the other is depressed, said stop being designed to engage and depress the other projecting portion of said detent.

2. In a firearm having a magazine, a movable breech block, a pivotal cartridge receiver and carrier arranged and lowered by the said block, a pivotal detent arranged in the path of movement of the said carrier and adapted to limit the movement of a cartridge entering the same when in a lowered position, and a movable cartridge stop operable by the block to regulate the feed of the cartridge to the carrier from said magazine.

3. In a firearm, a breech block, a movable cartridge receiver and carrier having a socket for receiving cartridges of varying lengths, a tension cartridge stop actuated by the said block, and a detent operated upon by said stop to limit the movement of a cartridge when entering the said socket.

4. In a firearm, the combination with a magazine, of a slidable breech block having a cam surface, a pivotal cartridge receiver and carrier operative by the block, a spring controlled cartridge stop held normally in the path of movement of the cartridges from the magazine and operated upon by the cam surface during the movement of the breech block, and a detent controlled by the movement of the cartridge stop to limit the entrance of a cartridge from the magazine.

5. A firearm, a firing chamber, a breech block movable into and out of position to close the firing chamber, a magazine, a cartridge receiver and carrier disposed to receive cartridges from the magazine and carry them into position for movement to the firing chamber, means for operating the receiver and carrier, a detent disposed to limit initial movement of a cartridge from the magazine into the receiver and carrier, a cartridge stop constructed and arranged for movement into position between the cartridge in the receiver and carrier and the succeeding cartridge upon final movement of the cartridge into the receiver and carrier, said stop and detent being so arranged that the stop will hold the detent operative when the stop is out of operative position and will release the detent upon initial movement of the stop to its operative position.

898,989. LAST-BLOCK. EDWIN J. PRINDLE, Washington, D. C. Original application filed Aug. 14, 1901, Serial No. 72,081. Divided and this application filed Mar. 6, 1905. Serial No. 248,568.



1. A block for forming last parts, such block having two or more geometrical surfaces formed thereon in the same relation they are to bear in the finished last part.

2. A block for forming last parts, such block having an abutting surface and a geometrical hinge-attaching surface formed thereon in the relation which such surfaces are to have in the finished last part.

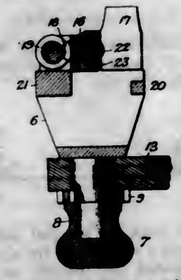
3. A block for forming last parts, such block having a finished surface, and having a slot or opening in which the hinge of the last is adapted to be received.

4. A block for forming last parts, such block having a finished surface and having hinge-attaching means on the end thereof on which such surface is formed.

5. A block for forming last parts, such block having a finished surface, and having dog attaching means on the end thereof, on which such surface is formed.

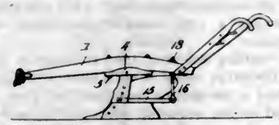
[Claims 6 and 7 not printed in the Gazette.]

898,990. WRENCH. AUGUSTUS T. RAIFORD, New York, N. Y. Filed June 13, 1907. Serial No. 378,879.



The herein described wrench comprising a hollow conical rotating head, a fixed jaw provided with a horizontal slot, a finger on one side of said jaw, a tongue extending transversely through the slot, a movable jaw provided with a finger, a stem carried by the jaw, said stem being provided with teeth and having a groove in its lower side for engagement with said tongue, a worm gear engaging the teeth on the stem for adjusting the movable jaw, a stud fixed to the lower portion of the jaw, a handle having pawls carried by the stud, means for operating the pawls carried by the handle, a ratchet wheel mounted on the stud beneath the handle and adapted to be engaged by the pawls for rotating the head, and a knob attached to the lower portion of the stud and adapted to secure the said handle and ratchet to the stud.

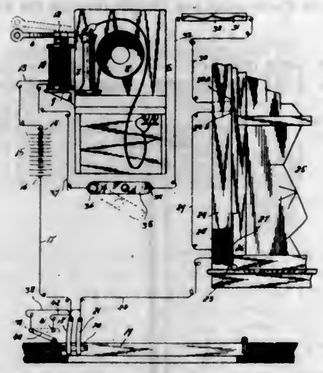
898,991. PLOW. JOHN RAY, Koran, La. Filed Apr. 10, 1908. Serial No. 426,328.



1. In a plow, the combination of a beam, a bracket secured to the underside of the beam and having a socket, a standard having a tongue at its upper end fitted and secured within said socket, a rod secured to and depending from the beam in rear of the standard and a bracing link pivotally connected with said rod and adjustably connected with the standard for attachment thereto at different elevations.

2. In a plow, the combination of a beam, a bracket secured to the underside thereof, a standard connected with the bracket and bifurcated to form spaced arms, each of said arms being provided with a series of openings, a rod secured to and depending from the beam in rear of the standard, a bracing link pivotally connected at its rear end to said rod, and a bolt adapted to be passed through the forward end of the link and the openings in the arms of the standard for securing the link to the standard at different elevations.

898,992. ALARM. JAY A. ROBINSON, Denver, Colo. Filed Oct. 26, 1907. Serial No. 399,371.



1. The combination with a telephone whose hook is provided with a magnetic part, of an electro-magnet located in suitable proximity to the receiver hook to hold the latter in the depressed position, the hook being equipped with a magnetic part, an electric circuit in which the magnet is located, and means for breaking the circuit whereby the magnet is deënergized, substantially as described.

2. The combination with a telephone having its receiver hook equipped with a magnetic part, of an electro-magnet located in such proximity to the hook that when the magnet is energized the hook will be drawn downwardly to its normal position as when the receiver is placed thereon, an electric circuit in which the magnet is located, and means for breaking the said circuit.

3. The combination with a telephone, of an electro-magnet located in such proximity to the receiver hook that when the magnet is energized, the hook is drawn downwardly to its normal position as when the receiver is thereon, an electric circuit in which the coils of the magnet are located, a pair of separated contacts located in the circuit, and a third contact mounted on a movable part and adapted to bridge the first named contacts whereby the circuit is kept closed when the said part is in the closed position, the arrangement being such that when the aforesaid part is moved to the open position the circuit will be opened and the magnet deënergized, substantially as described.

4. The combination with a telephone, of an electro-magnet located in such proximity to the receiver hook that when the magnet is energized, it will act to draw the receiver hook downwardly, the latter being equipped with a magnetic part, an electric circuit in which the coils of the magnet are located, a movable part having a contact normally located in the circuit but arranged to break the circuit when the movable part is actuated, and a switch arm also located in the circuit whereby the same may be opened and closed at will independently of the aforesaid part, substantially as described.

5. The combination with a telephone, of an electro-magnet located in such proximity to the receiver hook, that when the magnet is energized the hook will be drawn downwardly, the latter being equipped with a magnetic part, a circuit in which the magnet coils are located, a pair of contacts mounted on a stationary support, a door having a third contact arranged to bridge the space between the first named contacts and close the circuit when the door is in the closed position, the first named contacts being of such length that the door may be partly opened, without breaking the circuit, and a switch arm located in the circuit and in such proximity to the door jamb, that the arm may be manipulated before the contact upon the door leaves the first named contacts for the purpose set forth.

[Claim 6 not printed in the Gazette.]

898,993. ADVERTISING DEVICE. JAMES T. A. ROSEMERGEY, Calumet, Mich., assignor of one-half to James Rosemergey, Sr., Calumet, Mich. Filed Oct. 24, 1907. Serial No. 399,014.

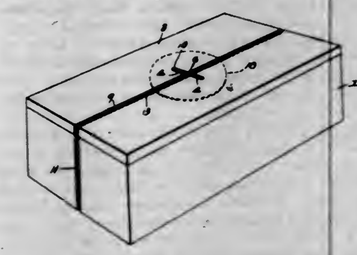


1. In a device of the class described, a spool supporting member, consisting of a bracket having a supporting hook and an upward extending tubular spool-supporting arm, said bracket being provided with a thread-guiding aperture at the lower end of the tubular arm.

2. In a device of the class described, the combination with a base board of a spool supporting member consisting of a bracket formed of sheet metal and provided at its rear end with a downturned hook extending through the base and engaging the rear side of the latter, said bracket being provided adjacent to its front end with an upward extension coiled to form a tubular arm upon which a spool may be supported for rotation.

3. In a device of the class described, the combination with a base-board, of a spool supporting member consisting of a bracket provided at its rear end with a downturned hook extending through the base and engaging the rear side of the latter, said bracket being provided adjacent to its front end with an upward extension coiled to form a tubular spool-supporting arm, and with a thread-guiding aperture registering with the lower end of said arm.

898,994. BOX AND PAIL FASTENER. JOB F. SCOTT and ALBERT B. CURTIS, Toledo, Ohio, assignors of one-third to Jerome H. Smith, Toledo, Ohio. Filed June 2, 1905. Serial No. 263,440.



The combination with a receptacle having a longitudinal channel, and a transverse channel intersecting the same; of a tie seated within the longitudinal channel and comprising a single metallic strip having its end portions extending perpendicular thereto and constituting parallel arms, each arm terminating in a pointed prong extending at right angles therefrom, the two prongs being extended in opposite directions, each prong and its arm being located in a plane parallel with the plane of the other arm and its prong, said arms being disposed to engage at the point of intersection of the longitudinal and transverse grooves and being bent in opposite directions into the transverse grooves to force the prongs into engagement with the receptacle, and a seal disposed to be placed flat upon the receptacle to cover said arms and the intersecting portions of the channels.

898,995. COIN-CONTROLLED VENDING-MACHINE. ROBERT D. SIMPSON, Columbus, Ohio, assignor to W. T. Wells, Columbus, Ohio. Filed Nov. 6, 1907. Serial No. 400,994.



1. In a vending machine, the combination with a casing having a coin slot leading therein and having an outlet chute inclined therefrom, and a reservoir surmounting said casing, of a horizontally disposed rotatably mounted member within the casing having a pocket therein, a spring actuated pivoted locking plate within the casing normally holding said rotatable member against rotation said plate having two rows of teeth formed thereon, and means whereby a preliminary rotary movement of said rotatable member against an inserted coin, results in sufficient pressure of said coin on said locking plate to release the latter from engagement with said rotatable member and permit the continued rotation of said last named member.

2. In a vending machine, the combination with a casing having a coin slot and outlet chute, and a receptacle surmounting the casing, of a spring actuated plate pivoted in the casing said plate having a plurality of teeth formed thereon, a rotatable pocket carrying member in said casing with which said toothed plate is adapted to normally engage, a coin receiving recess in said rotatable member adapted to receive a coin inserted through said coin slot, said coin adapted by the rotary movement of said rotatable member to press upon said toothed plate and force the latter out of locking engagement with the rotatable member permitting a free rotative movement of said last named member.

3. In a vending machine, the combination with a casing having a discharge chute, a coin inlet slot and a coin outlet slot, and a receptacle surmounting said casing, of a pivoted and spring actuated plate within said casing, said plate having inner and outer rows of teeth and being normally pressed toward the outer wall of the casing, a spring actuated rotatable member mounted in said casing and having a depending lug adapted to normally engage one of the inner teeth of said toothed plate when movement is imparted to said rotatable member, and having a coin receiving recess, a coin inserted therein adapted by a preliminary movement of said rotatable member to press said toothed plate out of engagement with said rotatable member and permit the movement of the coin thereby to the discharge opening.

4. In a device of the character described, the combination with a fixed, horizontally disposed plate of a movable horizontally disposed disk having a coin receiving pocket formed therein, a member having a plurality of teeth formed thereon, carried by the fixed plate, means for normally forcing said toothed member toward the coin receiving pocket and a member carried by the movable disk and adapted to engage the toothed member until a coin is inserted in the coin receiving pocket—said coin serving when so inserted to throw the toothed member out of engagement with the member of the movable disk, there being a coin discharging slot formed through the fixed plate.

898,996. NUT-WRENCH. GEORGE P. SPRAGUE, Arlington, Mass. Filed Sept. 9, 1907. Serial No. 391,850.

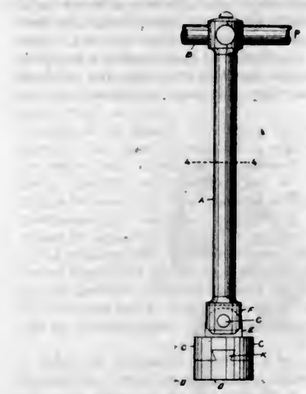


A wrench for nuts, bolt-heads, etc., composed of a handle-bar, a head hung on one end of said handle-bar, so as to be placed axially coincident with, or at an angle thereto, and a socket-member suitable by its socket to grasp a nut, bolt-head, etc., and arranged to turn on said head, and having an axial or central opening, and crown ratchet-teeth in a plane at right angles to said axial-opening, in combination with a pawl-pin carried by said head and in position and arranged to engage and work on said crown-ratchet-teeth of said socket-member, substantially as described and for the purposes specified.

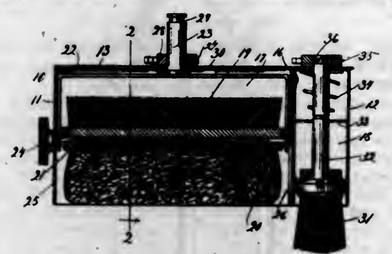
898,997. NUT-WRENCH. GEORGE P. SPRAGUE, Arlington, Mass. Filed Sept. 11, 1907. Serial No. 392,387.

A wrench for nuts, bolt-heads, and such like, which comprises a bar having, at one end, a handle and, at its other end, a head hung thereon so that it may be axially placed at different angles relative to the axis of said bar, and

which is in two separable parts or members joined together by a tongue and groove that tapers from end to end relative to the axis of the head and one of which parts has a socket to engage the nut, etc.



898,998. SHOE-BRUSH. HERMAN F. STUBENRAUCH, Chicago, Ill. Filed Apr. 20, 1908. Serial No. 428,133.



1. In combination, a chambered handle for a brush having an open face, a plunger in yoke form within the chamber of the handle and reciprocable toward and away from its open face, and a brush having a plurality of working faces rotatably mounted in the yoke whereby any face of the brush may be projected through the mouth of the chamber of the handle by the advance of the plunger.

2. In combination, a chambered handle for a brush having an open face, a plunger in yoke form within the chamber of the handle and reciprocable toward and away from its open face, and a brush having a plurality of working faces rotatably mounted in the yoke whereby any face of the brush may be projected through the mouth of the chamber of the handle by the advance of the plunger, the mouth of the chamber being contracted to prevent rotation of the brush in the yoke when the plunger is advanced.

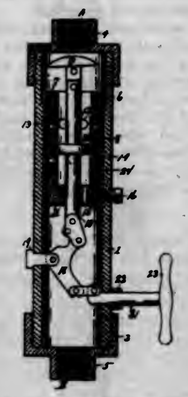
3. In combination, a chambered handle for a brush having an open face, a plunger in yoke form within the chamber of the handle and reciprocable toward and away from its open face, and a brush rotatably mounted in the yoke whereby either the face or the back of the brush may be projected toward the mouth of the chamber of the handle by the advance of the plunger.

4. In combination, a chambered handle for a brush having an open face, a plunger in yoke form within the chamber of the handle and reciprocable toward and away from its open face, and a brush rotatably mounted in the yoke whereby either the face or the back of the brush may be projected toward the mouth of the chamber of the handle by the advance of the plunger, the mouth of the chamber being contracted to prevent rotation of the brush in the yoke when the plunger is advanced.

5. In combination, a chambered handle for a brush having an open face, a plunger in yoke form within the chamber of the handle and reciprocable toward and away from its open face, a brush rotatably mounted in the yoke whereby either the face or the back of the brush may be projected toward the mouth of the chamber of the handle by the advance of the plunger, and a spring latch for maintaining the plunger in advanced position.

[Claims 6 and 7 not printed in the Gazette.]

898,999. SELF-CLOSING MEASURING-VALVE. ARTHUR J. SWEET, Jackson, Mich., assignor of one-half to George W. Sweet, Ann Arbor, Mich. Filed Aug. 10, 1907. Serial No. 387,983.



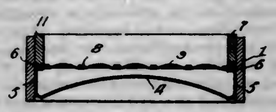
1. A measuring valve, having in combination a main casing, a cylinder therein having apertured ends and sides, a piston stem extending within the cylinder through an apertured end thereof, and a valve carried on one end of said stem, adapted to close the adjacent end of said cylinder, substantially as described.

2. A measuring valve, having in combination a main casing, a cylinder therein having a terminal inlet portion and apertures through its side walls, a main valve adapted to close the inlet portion, a piston within said cylinder, and a stem whereon said main valve and said piston are fixed, passing through the opposite end of the cylinder from that adapted to be closed by said main valve, substantially as described.

3. A measuring valve, having, in combination with a main casing, a cylinder with apertured ends and side walls inclosed within said casing, a closure member for one end of said cylinder, a piston within said cylinder, a stem whereon said closure member and said piston are mounted, means for regulating the outflow from said cylinder, and means whereby said valve may be manually opened from the outside of said casing, substantially as described.

4. In a measuring valve, in combination with a casing having apertured end portions through which water may flow, a cylinder fixed therewithin, said cylinder being apertured at the ends and side walls, and being spaced from the inner face of said casing along a portion of its length, a movable valve piece adapted to close one end of said cylinder, a piston within said cylinder, a stem whereon said valve piece and said piston are mounted, and a manually operated opening device connected with said stem, substantially as described.

899,000. SEED-CORN TESTER. CLARENCE G. TAYLOR, Sibley, Iowa. Filed Apr. 17, 1908. Serial No. 427,747.



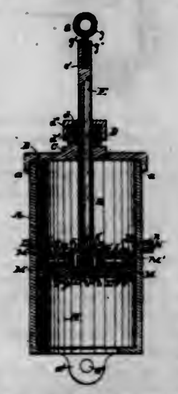
1. A seed corn tester comprising an outer box having a bottom which extends upwardly as it recedes from the sides

and approaches the center of the box, supporting devices at the sides of said box at a point higher than the highest portion of the bottom and a tester member fitted within the outer box, supported by such supporting devices and provided with a bottom having seed openings.

2. A seed tester comprising an outer case or box having a concavo-convex bottom secured thereto, said box being provided with air holes, a tester member comprising a frame fitted within the box and provided with a bottom formed by interwoven strips, said bottom providing seed openings each numbered for identification, the tester member projecting above the box and the concaved bottom being secured within the box at a slight distance above the lower edge, for the purpose described.

3. A seed corn tester comprising an outer box or casing having a concaved bottom and inwardly extending marginal flanges, said box being provided with air holes, a tester member provided with interwoven strips at the bottom thereof to form a bottom having seed openings therein, each numbered for identification, said tester member being removable and lifting the covering soil from the plants, and said tester member projecting above the box and concaved bottom secured at a slight distance above the lower edge, for the purpose described.

899,001. SHOCK-ABSORBER. JOHN C. BECK, Sycamore, Ill., assignor of one-half to Charles Turner Brown, Chicago, Ill. Filed Oct. 17, 1907. Serial No. 397,772.



1. The combination of a casing provided with a cylindrical chamber, a piston in the chamber, a stem to the piston, such stem extending through one of the end walls of the cylindrical chamber, means to adjust the length of the piston stem and to maintain it at an adjusted length, a passage way through the piston, a disk on the piston, such disk movable relative to the piston, and such disk provided with a passage way therethrough, and such disk and piston arranged so that upon a change of direction of movement of the piston a corresponding change in relative position of the disk and piston will be effected and the passage way through the piston will thereby be opened and again closed; substantially as described.

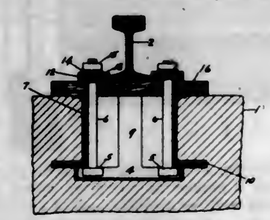
2. The combination of a casing provided with a cylindrical chamber, a piston in the chamber, a stem to the piston, such stem extending through one of the end walls of the cylindrical chamber, means to vary the length of the stem and to maintain it at a determined length, a passage way one end whereof opens into the cylindrical chamber on one side of the piston and the other end whereof opens into such chamber on the other side of the piston, means actuated by the piston at the beginning of the movement of such piston in a given direction to open the passage way and to again close such passage way by the continuation of such movement of the piston; substantially as described.

3. The combination of a cylinder provided with an end integral therewith and with screw threads adjacent to the open edge thereof, a removable end to the cylinder provided with screw threads corresponding with the screw threads on the cylinder, a stuffing box on such end, a piston arranged to obtain chambers in the cylinder, a piston stem extending through the stuffing box, such chambers provided with a communicating passage way, means to open such passage way on the change of movement of the piston from one direction to the opposite direction and to close such passage way on the continued movement of the piston.

4. The combination of a cylinder closed at its ends a piston arranged to obtain a chamber on each side thereof within such cylinder, a stem to the piston, such stem extending through one of the ends of the cylinder, such chambers provided with a passage way by means of which communication may be effected between the chambers, means to open such passage way on the change of movement of the piston from one direction to the opposite direction and to close such passage way on the continued movement of the piston in the new direction, a stuffing box to the stem and means to vary the length of the stem and to maintain it at a determined length; substantially as described.

5. The combination of a cylinder closed at its ends, a piston arranged to obtain a chamber on each side thereof within such cylinder, a stem to the piston, such stem extending through one of the ends of the cylinder, such chambers provided with a communicating passage way, means to open such passage way on the change of movement of the piston from one direction to the opposite direction and to close such passage way on the continued movement of the piston.

899,002. MEANS FOR ATTACHING BOLTS TO CONCRETE. WILLIAM E. BEILHARZ, San Francisco, Cal. Filed Aug. 8, 1907. Serial No. 387,589.



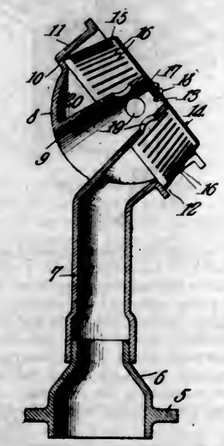
In a device of the character described, in combination with masonry construction, a metallic housing or socket, having in its lower portion a long narrow box-like chamber adapted to receive the head of a bolt, and having parallel walls extending upwardly from said box-like portion and a sufficient distance from each other, for the main portion of their length, to receive the stem of a bolt but to exclude its head, and having at the center offset portions at a sufficient distance to receive therebetween the head of the bolt, substantially as described.

899,003. HYDROCARBON-BURNER. ADOLF BELER, Pittsburg, Pa., assignor to Beler Water Heater Co., Pittsburg, Pa. Filed Oct. 31, 1907. Serial No. 400,014.

1. In a heater the combination with a base and a partition therein having an upstanding nipple opening therethrough, and means for directing fuel into the nipple; of a burner comprising an inclined head for receiving fuel from the nipple, said head having a central air passage therethrough, and a cap seated within the head having outlet openings in the peripheral portion thereof.

2. In a heater the combination with a base having a partition, there being a nipple upstanding from the partition; of a burner comprising a tubular standard detachably mounted upon the nipple, a head integral with the standard and having a central air passage therethrough, and a flame distributing cap within the head, there being an inclined water channel surrounding the cap and having an outlet.

3. In a heater the combination with a base having a partition, there being a nipple upon the partition, and means for directing fuel into the nipple; of a tubular standard engaging the nipple, an inclined head having a tubular air conducting core centrally disposed therein, said head opening into and inclined in relation to the standard, and an inclined flame distributing cap within the head and surrounding the core, said core opening into and through the cap.



4. A burner comprising an inclined fuel receiving head having an annular supporting shoulder, there being a flange partly surrounding the shoulder and having a cut away portion constituting an outlet, and a cap seated upon the shoulder and having a central portion extending across the end of the head in an inclined plane, said inclined portion being disposed beyond the flange and constituting water shedding means, said cap having fuel outlets surrounding said inclined portion, there being a channel between the cap and flange and below the fuel outlets.

5. A burner comprising an inclined fuel receiving head, and an inclined apertured flame distributing cap partly located within the head, said cap having a central inclined portion disposed beyond or outside of the head and constituting water shedding means, there being an inclined drain channel surrounding the cap and below the apertures and having an outlet, said channel being positioned to receive the shed water.

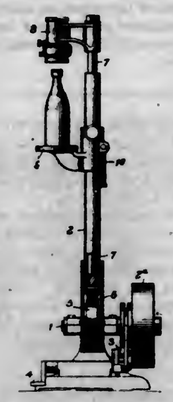
[Claims 6 to 9 not printed in the Gazette.]

899,004. METHOD OF SEALING AND CAPPING BOTTLES. SAMUEL C. BOND, Wilmington, Del., assignor, by mesne assignments, to Bond Bottle Sealing Company, a Corporation of Delaware. Original application filed Oct. 11, 1907, Serial No. 396,988. Divided and this application filed Feb. 3, 1908. Serial No. 414,065.

1. The method of applying flanged sealing caps to bottles, which consists in exerting force upon the flange of the cap only in a single intermediate peripheral line to seat the body of the cap in final sealing position on the lip of the bottle, and bend the flange of the cap into locking engagement with the bottle.

2. The method of applying flanged sealing caps to bottles, which consists in causing the cap to rest upon the lip of the bottle, gripping the flange of the cap, projecting the bottle and cap against the gripping strain to seat the body of the cap in sealing contact with the lip of the bottle and bend the flange of the cap into locking engagement with the bottle, and continuing the movement of the bottle to release the cap and bottle from further pressure.

3. The method of applying flanged sealing caps to bottles, which consists in gripping the flange of the cap peripherally only, forcing the body of the cap into sealing contact with the lip of the bottle by bodily movement of the gripping means, and bending the flange of the cap into engagement with the bottle by contraction of the gripping means.

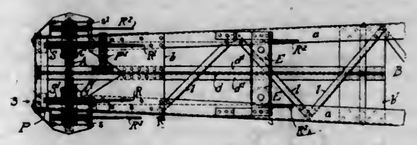


4. The method of applying flanged sealing caps to bottles, which consists in gripping the cap peripherally only and by a movement of the gripping means seating the cap in final sealing position on the lip of the bottle and locking the flange in engagement with the bottle.

5. The method of applying sealing caps to bottles, which consists in imparting a movement to the cap and bottle in a direction lengthwise of the bottle, and in such movement locking the cap in sealing engagement with the bottle and releasing the cap from engagement with the seal-applying means.

[Claims 6 and 7 not printed in the Gazette.]

899,005. CRANE-BOOM. ALEXANDER E. BROWN, Cleveland, Ohio. Filed Apr. 1, 1908. Serial No. 424,657.



1. In a boom for cranes, and like constructions, the combination of sheaves in its outer end, movable transversely of the same, and, suitable means of securing said sheaves at different points of their said movement, substantially as shown and described.

2. In a boom for cranes, and like constructions, the combination, at its outer end, of a transverse axle, sheaves slidably mounted thereon, and suitable means of securing said sheaves at different points on said axle, substantially as shown and described.

3. In combination with a boom for cranes, and like constructions, a transverse axle through its outer end which projects laterally therefrom, sheaves slidably mounted on said axle within said boom, sheaves mounted on said lateral projections of the same, together with suitable means of securing said sheaves, within the boom, at different points on said axle, substantially as shown and described.

4. In a boom for cranes and like constructions, the combination, at its outer end, of a transverse axle that projects laterally therefrom, sheaves on said axle within and without the boom, and a guard-piece extending across the same, above said sheaves, the extremities of which guard-piece pass through said laterally projecting portion of said axle, substantially as shown and described.

5. In a boom for cranes, and like constructions, the combination of sheaves in its outer end movable transversely of the same, suitable means of securing said sheaves at different points of their said movement, and suitable means for interchangeably securing the actuating ropes to said end of the boom, in order to conform said ropes to different angular positions of the vertically moving sheaves with respect to said boom, substantially as shown and described.

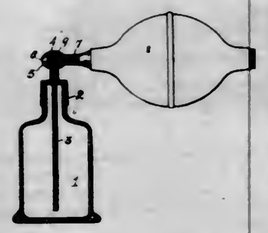
899,006. PROCESS FOR UTILIZING SAPPED TANNING LIQUORS. GEORGE W. CHILDS, New York, N. Y. Original application filed May 16, 1906, Serial No. 317,141. Divided and this application filed Jan. 20, 1908. Serial No. 411,720.

1. The process of treating sapped or exhausted organic tan liquors containing alkaline mineral impurities and adapting them for impregnating leather, which consists in precipitating said impurities by the addition of a chemical capable of forming an insoluble compound therewith; separating the precipitate; then heating the supernatent liquor *in vacuo* until the volatile impurities are eliminated and the resultant liquid is concentrated to a specific gravity of from 1.05 to 1.3.

2. The process of treating sapped or exhausted organic tan liquors containing alkaline mineral impurities and adapting them for impregnating leather, which consists in precipitating said impurities by the addition of a chemical capable of forming an insoluble compound therewith; separating the precipitate and concentrating the resultant liquid to a specific gravity of from 1.05 to 1.3.

3. The process of treating sapped or exhausted organic tan liquors and adapting them for impregnating leather, which consists in precipitating lime compounds therein, by adding a chemical capable of forming an insoluble compound with lime; separating the precipitate and concentrating the resultant liquid to a specific gravity of from 1.05 to 1.3.

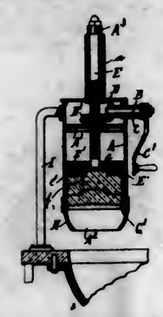
899,007. ATOMIZER. THOMAS A. DE VILBISS, Toledo, Ohio, assignor to The De Vilbiss Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Dec. 26, 1907. Serial No. 408,006.



1. In an atomizer, a spray-head having a throat bore restricted at one end to provide a discharge orifice, a liquid-tube having its discharge end opening into said throat bore, and an air-tube having its discharge end adjustably projected into the throat bore in the direction of the discharge orifice and constructed to restrict or enlarge the communicating passage between the liquid-tube and the spray-head throat as the air-tube and spray-head are relatively adjusted.

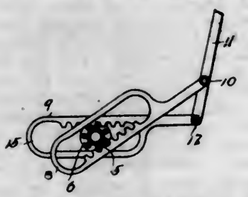
2. In an atomizer, a spray-head having a bore therethrough which is restricted at one end to form a discharge orifice, an air-tube threaded into the large end of said bore, said tube having its discharge end terminating short of the restricted end of the bore and reduced to form a surrounding vacuum chamber, and a liquid-tube projecting laterally from the head with its channel opening into said bore at the side of the reduced portion of the air-tube to the rear of its end.

899,008. ART OF COMMINUTING FRANGIBLE ARTICLES. CHARLES H. J. DILG and JONATHAN O. FOWLER, New York, N. Y. Original application filed May 15, 1905, Serial No. 260,435. Divided and this application filed Oct. 25, 1906. Serial No. 340,465.



The art of progressively reducing solid material, which consists essentially in assembling into a column or series a plurality of units having engaging faces, and presenting such column or series endwise to the action of an abrading device, the engaging faces of the units and of the operative part of the abrading device being non-correspondent in form, so that different points of the juncture of the units shall lie at various distances from the said operative part, whereby it commences the reduction of a succeeding unit of the series before it has completed that of the preceding one.

899,009. WINDOW-LIFTER. NEWTON R. EVANS, Richmond, Ind., assignor to John A. Evans, Richmond, Ind. Filed May 27, 1905. Serial No. 262,605.



1. In a window or other lifter, the combination of a power or operating shaft, a pinion on the shaft, rack-links engaging the pinion from opposite sides, and a connecting arm to which the rack-links are pivoted.

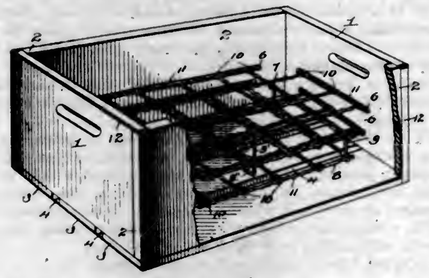
2. In a window or other lifter, the combination of a power or operating shaft, a pinion borne by the shaft, a pair of crossed rack-links with opposing racks engaging the pinion, and a connecting arm to which the rack-links are attached.

3. In a window or other lifter, the combination of a power or operating shaft, yoke-links embracing and engaging the pinion and each having an enlargement at one end through which the pinion may pass, and a connecting arm to which the links are attached.

899,010. CRATE. FRIEDRICH C. H. HAUGK and JOSEPH F. SCHOEPPL, Baltimore, Md., assignors to said Schoeppl. Filed July 30, 1906. Serial No. 328,442.

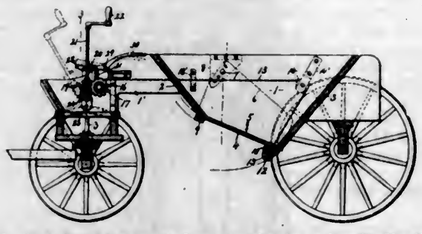
1. In a crate, the combination with boxing formed with horizontal grooves in its walls, of a grating arranged therein, said grating formed of rods having terminal eyes extending into said grooves and terminal rods formed of crimped material extending through said eyes and positioned in said grooves, for holding said eyes in position.

2. In a crate, the combination with a boxing of a grating secured within said boxing and formed of rods of crimped material, a similar grating spaced above the first mentioned grating, centrally positioned links connecting the rods of the upper and lower grating, some of said links formed with supporting members.



3. In a crate, the combination with boxing, of upper and lower gratings arranged therein, links connecting said gratings, and an angular foot formed integral with and projecting downwardly from one of said links in position for engaging the floor of the boxing.

899,011. DUMP-WAGON. JOHN W. HAYWOOD, Baldwinsville, N. Y. Filed Nov. 1, 1907. Serial No. 400,158.



1. In a dump wagon, a dump box having a longitudinally swinging bottom door, and means for changing the position of its axis.

2. In a dump wagon, a dump box having a downwardly and forwardly swinging bottom door, and means for changing the position of its swinging axis.

3. In a dump wagon, a dump box having a downwardly and forwardly swinging bottom door provided with upwardly projecting sides extending under the outside of the box some distance above its bottom, supports for the door secured to the sides of the box, said supports and sides of the door being provided with a plurality of apertures, and pivotal bolts passed through alined apertures at the opposite sides of the box, said bolts being adapted to be placed in either of the apertures to change the position of the swinging axis of the doors.

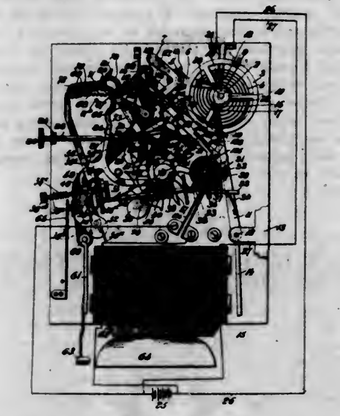
4. In a dump wagon, a dump box having a downwardly and forwardly swinging bottom door, and adjustable pivots for said door.

5. In a dump wagon, a dump box having substantially parallel sides and downwardly converging front and rear ends, the rear end extending downwardly a greater distance than the front end, a downwardly and forwardly swinging bottom door having upwardly extending sides hinged to the sides of the box, the hinge-bearing being adjustable to change the swinging axis of said door, and means for controlling the operation of the door.

[Claims 6 and 7 not printed in the Gazette.]

899,012. ELECTRIC CLOCK. MONNOSUKE HIGUCHI, New York, N. Y. Original application filed Nov. 3, 1903, Serial No. 179,661. Divided and this application filed Sept. 15, 1905. Serial No. 278,544.

1. In a clock, the combination with an hour arbor and a striking lever, of means for intermittently actuating said lever to effect an hour and minute strike, controlling means to throw said lever actuating means into operation to temporarily throw said lever actuating means out of operation at the completion of the hour strike and to permanently throw said lever actuating means out of operation at the completion of the minute strike to determine the number of hour and minute strikes and means mounted to rotate with said hour arbor to gage the operation of said controlling means.



2. In a clock, the combination with an hour arbor and a striking lever, of means for intermittently actuating said lever to effect an hour and minute strike, means for controlling said lever actuating means to throw said lever actuating means into operation, to temporarily throw said lever actuating means out of operation at the completion of the hour strike and to permanently throw said lever actuating means out of operation at the completion of the minute strike, means mounted to rotate with said hour arbor for automatically operating said controlling means and means mounted to rotate with said hour arbor to gage the extent of operation of said controlling means.

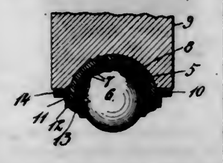
3. In a clock, the combination with an hour arbor and a striking lever, of means for intermittently actuating said lever to effect an hour and minute strike, means for controlling said lever actuating means to temporarily throw said lever actuating means out of operation at the completion of the hour strike and to permanently throw said lever actuating means out of operation at the completion of the minute strike, hand operated means for throwing said controlling means into operation, means mounted to rotate with said hour arbor to throw said controlling means into operation, and means mounted to rotate with said hour arbor to gage the extent of operation of said controlling means.

4. In a clock, the combination with an hour arbor and a striking lever, a stop gage mounted to rotate with said arbor, means for intermittently actuating said lever, a pivoted hour strike controlling segment or rack, a minute strike controlling segment or rack pivoted to said hour strike controlling segment or rack and adapted to engage said gage to limit the movement of said segments or racks when released from their normal positions, pawls carried by said striking lever in engagement with said segments or racks, to feed said segments or racks back to normal positions upon actuation of the striking lever, means actuated by the hour segment or rack when it reaches its normal position for temporarily throwing the lever actuating means out of operation, means actuated by the minute segment or rack when it reaches its normal position for permanently throwing said lever actuating mechanism out of operation and means for releasing said segments or racks from dogging engagement with said pawls.

5. In a clock, the combination with an hour arbor and a striking lever, of means for intermittently actuating said lever, a stop gage mounted to rotate with said arbor and having a graduated series of notches, a pivoted hour strike controlling segment or rack, a minute strike controlling segment or rack pivoted to said hour strike controlling segment or rack and adapted to engage any one of the graduated series of notches in said stop gage to limit the movement of said segments or racks when released from normal positions, means for returning said segments or racks to normal position, a governor actuated by the hour strike controlling segment or rack when it returns to normal position for temporarily throwing the lever actuating means out of operation, means actuated by the minute strike controlling segment or rack for permanently throwing out of operation said lever actuating mechanism when said minute strike controlling segment or rack reaches its normal position, and means for releasing said segments or racks from dogging engagement with their pawls.

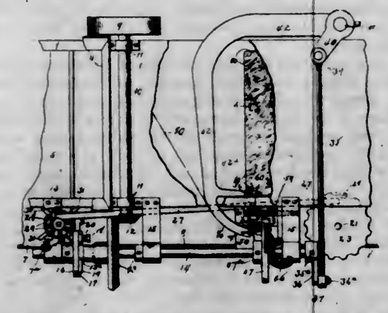
[Claims 6 to 17 not printed in the Gazette.]

899,013. BALL-CASTER. AUGUSTUS KLOTZBACH, Cleveland, Ohio. Filed May 29, 1908. Serial No. 435,731.



In a caster, the combination with a cup adapted to fit in a socket in the part to which the caster is applied and project at its edge therefrom, the projecting edge of the cup being externally screw-threaded, a ball in the cup, anti-friction rollers interposed between said ball and the inner surface of the cup, a retaining ring screwed on the threaded edge of the cup into contact with the said part and having a lower shoulder to support the rollers, and an opening through which the ball protrudes, and an upper attaching flange on the ring, said flange projecting beyond the periphery of the cup and being adapted for fastening to the said part, and the ring serving to retain the cup in the said part and to retain the balls in the cup.

899,014. WIRE-UNITING MECHANISM FOR BALING-PRESSES. WILLIS L. LYON, Pontiac, Ill. Filed Nov. 12, 1906. Serial No. 343,169.



1. A device of the character described including an integral twisting pinion, twisting rolls and a shear member, said elements provided with registering slots and immovable with relation to each other.

2. In a device of the character described, a mechanism comprising a base, a slotted twisting wheel, means for driving it, means fixed to said wheel for severing the baling wire, and a lever for holding one end of the wire.

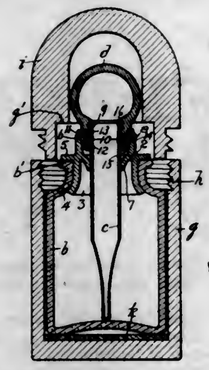
3. In a device of the character described, a mechanism comprising a base, a slotted twisting wheel, means for driving it, means for severing the baling wire, and a lever for holding an end of the wire.

4. In a baling press, mechanism including a base, a wire-intertwisting wheel mounted to rotate thereon, and a locking lever carried on said base.

5. In a device of the character described, an intertwisting mechanism comprising a base, a twisting wheel journaled in bearings thereon, said wheel provided with a radial slot, means for driving said wheel, a wire-cutting member fixed to said wheel and adapted to revolve therewith, a stationary wire-cutting member fixed to said base, and a wire-locking lever mounted on said base.

[Claims 6 to 27 not printed in the Gazette.]

899,015. CLOSURE, FITTING, AND CASE FOR INK AND LIKE BOTTLES OR VESSELS. JOHN F. FITZSIMMONS, Hillsdale, Mich., assignor to Ferris Ink Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 17, 1908. Serial No. 421,701.



1. The combination with an ink-bottle, of a rubber stopper therefor provided with an apertured diaphragm at the bottle-mouth and with a bell mouthed tube fitting within the bottle-neck and retaining the stopper by friction.

2. The combination with an ink-bottle, of a rubber stopper therefor provided with an external flange resting on the neck-end, a bell mouthed tube fitting within the bottle-neck and retaining the stopper by friction, and an apertured diaphragm at the bottle mouth.

3. The combination with an ink-bottle, of a rubber stopper therefor provided with a bell mouthed tube fitting within the neck and retaining the stopper by friction and, with a tubular flange above the bottle-mouth, and a filling tube having a plug for coaction with said flange.

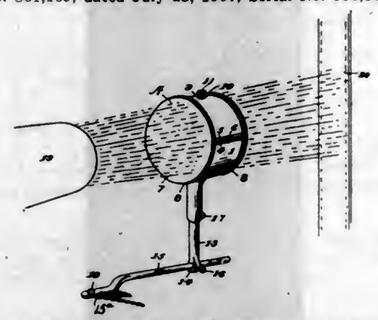
4. The combination with an ink-bottle, of a rubber stopper therefor provided with a bell mouthed tube fitting within the bottle-neck and retaining the stopper by friction, with an external flange resting on the neck-end, and with a tubular upright flange above the bottle, and a filling tube having a plug for coaction with said tubular flange.

5. The combination with an ink-bottle, of a rubber stopper therefor provided with a bell mouthed tube fitting within the bottle-neck and retaining the stopper by friction, with an external flange resting on the neck-end, with an upright tubular flange above the bottle, and with a perforated diaphragm at the bottle-mouth, and a filling-tube having a plug for coaction with said tubular flange.

[Claims 6 to 9 not printed in the Gazette.]

REISSUES.

12,853. SAFETY APPLIANCE FOR MOVING-PICTURE APPARATUS. ARTHUR F. ELKINS and HENRY HUNTER, Ironton, Ohio, assignors of one-fourth to Frank L. McCauley and one-fourth to Thomas J. Kennedy, Ironton, Ohio. Filed Jan. 3, 1908. Serial No. 409,244. Original No. 861,169, dated July 23, 1907, Serial No. 366,803.



1. A safety appliance for the films of moving picture apparatus, comprising a holder composed of two hingedly connected members, a transparent reservoir mounted in said holder, one of the members of the holder being provided with a downwardly projecting tubular shank, a supporting bracket, and a post secured on said bracket and fitting within the tubular shank, the shank being provided with means for rigidly connecting it to the post.

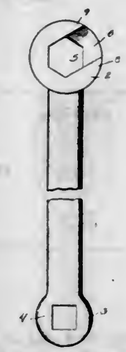
2. A safety appliance for the films of moving picture apparatus, comprising a tubular holder composed of two hingedly connected members provided with abutting flanges along their free edges, means for securing said flanges together, and a transparent reservoir mounted in the holder and containing a clear transparent liquid.

3. A safety appliance for the films of moving picture apparatus, comprising a holder having a downwardly projecting tubular shank provided with a set screw, a transparent reservoir supported in the holder and containing a clear transparent liquid, a supporting bracket, and a post having an eye engaging said bracket and provided with a set screw, whereby it may be secured adjustably in position upon said bracket, said post engaging the shank of the holder, the set screw of the shank working through the same and serving to secure the shank adjustably upon the post.

12,854. WRENCH. HARRY JEFFREY, Louisville, Ky., assignor to The Ohio Malleable Iron Company, Columbus, Ohio, a Corporation of Ohio. Filed June 13, 1908. Serial No. 438,439. Original No. 873,437, dated Dec. 10, 1907, Serial No. 357,453.

1. A wrench of the type set forth comprising a handle having formed integral therewith at one end thereof an enlarged head provided with a hexagonal-shaped opening, said head further having one face thereof formed with an angularly-disposed groove having two of the sides thereof alining in a plane with two oppositely-disposed walls of the said opening, said groove disposed permanently at an angle with respect to the handle and said head further having on the opposite face thereof a groove, the side walls of which aline with two opposite side walls of the opening, said last mentioned groove permanently extending in the direction in which the handle extends.

2. A wrench for engaging nuts and bolt-heads comprising a handle having formed integral therewith a head provided with an opening to receive nuts and bolt-heads, jaws having inner faces flush with the sides of the opening and integral with the handle and head adapted to slidably engage with the sides of nuts or bolt-heads in a direction transverse of their axes, and a bracing tie-web integral with both jaws, said web being thinner than the body part of the head along lines parallel to the axis of the aperture, substantially as set forth.



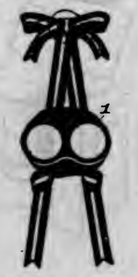
3. A wrench for polygonal nuts and bolt-heads comprising a handle, a head 2 integral with the handle and formed integrally with relatively thick jaws, and with a polygonal nut-receiving aperture or cavity at the inner ends of and flush with the inner faces of said jaws, and with a connecting tie-web integral with and thinner than the jaws, whereby the wrench can laterally engage with a nut and, while engaged, be moved transversely thereof, and whereby the jaws will be prevented from spreading under strain, all of said parts being formed in a single piece of metal, substantially as set forth.

4. A wrench comprising a handle having formed integral therewith a head provided with a nut-receiving opening extending through the head, said head having on one face a groove extending radially outward from said opening in one direction with the sides of the groove alining with the two opposite walls of the opening, and having on the other face a groove extending from the opening radially outward in another direction, said head having a single mass of metal integral with the handle and extending integrally around the nut-receiving opening, and said grooves permitting engagement of the head with the nuts at points radially outside of said opening, substantially as set forth.

5. A wrench comprising a handle having formed integrally therewith a head provided with a polygonal nut-receiving opening extending through the head and with a groove alining flush with two opposite sides of said opening and extending across one face of the head from the opening to the head periphery whereby two nut-engaging jaws are formed connected by a relatively thin strengthening web.

DESIGNS.

39,540. CAMPAIGN-BADGE. ALFRED M. PARKS, Philadelphia, Pa. Filed June 29, 1908. Serial No. 441,039. Term of patent 3½ years.



The ornamental design for a campaign badge, as shown and described.

39,541. FLAG. MATTHEW GEORGE COKER, New York, N. Y. Filed May 21, 1908. Serial No. 434,197. Term of patent 7 years.



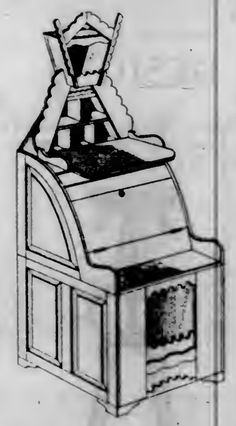
The ornamental design for a flag as shown.

39,542. ERASER. ELIJAH MCCOY, Detroit, Mich., assignor to Jacob A. Pfeifer, Detroit, Mich. Filed July 16, 1908. Serial No. 443,940. Term of patent 3½ years.



The ornamental design for an eraser as shown.

39,543. DESK. WILLIAM JACOB SALLY, Oakland, Miss. Filed June 3, 1908. Serial No. 436,492. Term of patent 14 years.



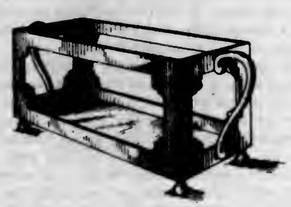
The ornamental design for a desk, as shown.

39,544. BLOTTING-PAPER. JOHN GIBSON, Jr., Middletown, Ohio, assignor to The Wrenn Paper Company, Middletown, Ohio, a Corporation of Ohio. Filed Sept. 5, 1907. Serial No. 391,539. Term of patent 3½ years.



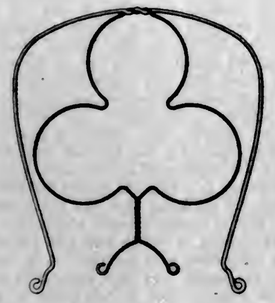
The ornamental design for blotting paper, as shown and described.

39,545. CARTON-HOLDER. HULSER M. GALE, Syracuse, N. Y. Filed Apr. 30, 1908. Serial No. 430,240. Term of patent 3½ years.



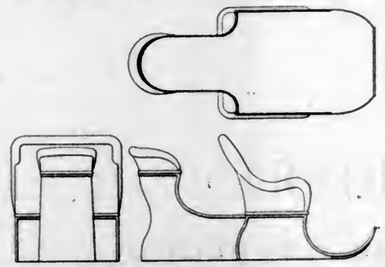
The ornamental design for a carton holder as shown and described.

39,546. CHAIR-BACK. FREDERICK L. WATTERS, Shelby, Ohio. Filed June 15, 1908. Serial No. 438,687. Term of patent 14 years.



The ornamental design for a chair back, as shown.

39,547. ROLLING-CHAIR BODY. CHARLES D. MONTAGUE, New York, N. Y., assignor to Motor Rolling Chair Company, a Corporation of New York. Filed July 2, 1908. Serial No. 441,716. Term of patent 7 years.



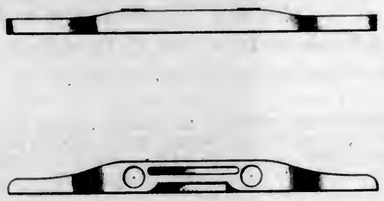
The ornamental design for a rolling-chair body as shown.

39,548. VENDING-MACHINE CASING. WILLIAM C. BRIGGS, Winston Salem, N. C. Filed June 29, 1908. Serial No. 441,037. Term of patent 14 years.



The ornamental design for a vending machine casing, substantially as shown in the accompanying drawing.

39,549. HEAD OF HOTEL-REGISTER STANDS. EMMET MILLER, Oklahoma, Okla. Filed July 31, 1908. Serial No. 446,348. Term of patent 7 years.



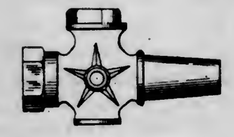
The ornamental design for the head of a hotel register stand as shown.

39,550. SUPPORTING-LEG. JAMES ALLINGHAM, Chicago, Ill. Filed July 13, 1908. Serial No. 443,382. Term of patent 3½ years.



The ornamental design for a supporting leg, as shown.

39,551. VALVE-SHELL FOR STOP-COCKS. HERMAN M. HOELSCHER, Chicago, Ill., assignor to L. Wolff Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 10, 1903. Serial No. 152,182. Term of patent 14 years.



The ornamental design for a valve shell for a stop cock, as shown.

TRADE-MARKS

PUBLISHED SEPTEMBER 15, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

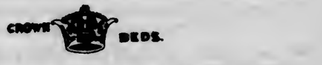
"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 13,132. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) G. SIEGLE & CO. G. M. B. H., Stuttgart, Germany. Filed Sept. 29, 1905.



Particular description of goods.—Carmine, Carmine Lakes, Genuine Vermilions, Vermilion Imitations, Madder and Alizarin Lakes, Paris and Milori Blues, Permanent Greens, Aniline Lakes, and Vegetable, Mineral, and Aniline Colors Soluble in Oil, Varnish, and Benzin.

Ser. No. 14,254. (CLASS 32. FURNITURE AND UPHOLSTERY.) P. D. BAKER, Atlanta, Ga. Filed Nov. 3, 1905.



Particular description of goods.—Iron Beds.

Ser. No. 19,068. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) ABRAHAM IRVING JORDAN, New York, N. Y. Filed Apr. 25, 1906.



Particular description of goods.—Absorbent Pads, Catamenial Devices, and Thigh-Shields and Waist-Belts Therefor.

Ser. No. 19,300. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARMOUR & COMPANY, Chicago, Ill. Filed Apr. 7, 1906.



Veribest

Particular description of goods.—Corned, Potted, and Luncheon Beef, Tripe, Soup and Bouili, Devlied Ham, Devlied Tongue, Potted Ham, Potted Tongue, Veal and Ham Paté, Veal and Ham Loaf, Minced Collops, Lamb's Tongue, Sauer-Kraut and Vienna-Style Sausage, Corned-Beef Hash, Boiled Beef, Ox-Marrow, Beef Suet, Stewed Kidneys, Minced Steak, Beefsteak and Onions, Solid Ox-Tails, Beef and Vegetables, Irish Stew, Beef-Stew Army Style, Ox-Tongue, Luncheon-Sausage, Lunch-Tongue, Beef-Loaf, Veal-Paté, Beef-Paté, Ham-Paté, Ham-Loaf, Veal-Loaf, Calf's Tongue, Sausage-Meat, Pork Sausage-Meat, Vienna-Style Sausage, Cervelat-Style Sausage, Oxford-Style Sausage, D'Arles-Style Sausage, Cambridge-Style Sausage, Pigs' Feet, Roast Mutton, Sliced Smoked Beef, Dried Beef, Brisket-Beef, Roast Beef, Ham, Mince-Meat, Boned Turkey, Boned Chicken, Chicken-Paté, Chicken-Loaf, Potted Chicken, Devlied Chicken, Devlied Turkey, Potted Turkey, Pork and Beans, Ready Lunch of Pork and Beans and Biscuit, Hamburger Steak, Chicken, Tamale.

Ser. No. 19,610. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany. Filed May 16, 1906.

MERCÉDÈS

Particular description of goods.—Oil-Vapor and Gas Heating and Lighting Lamps, Oil-Vapor and Gas Burners, Honeycomb Radiators, and other Ventilated Coolers, Foot-Warmers, Metal Reflectors, Lamp-Brackets.

Ser. No. 19,612. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany. Filed May 16, 1906.

MERCÉDÈS

Particular description of goods.—Oils, Greases, and Compositions Thereof for Lubricating Purposes, Oils for Heating and Illuminating Purposes, Benzin, and Petroleum.

Ser. No. 19,667. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MINTO BROS., Toronto, Canada. Filed May 18, 1906.

MELAGAMA

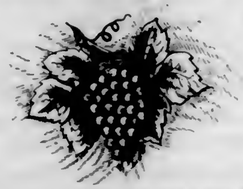
Particular description of goods.—A Blend of Ceylon and Himalayan Tea.

Ser. No. 22,199. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) SOCIÉTÉ ANONYME DE LA VÉRITABLE LIQUEUR D'HENDAYE, Bayonne, France. Filed Sept. 20, 1906.



Particular description of goods.—Liqueurs.

Ser. No. 27,210. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GRAPE CAPSULE COMPANY, Allentown, Pa. Filed May 8, 1907.



Particular description of goods.—Soft Gelatin Capsules Filled and Unfilled.

Ser. No. 28,716. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany. Filed July 11, 1907.

MERCÉDÈS

Particular description of goods.—Fluid-Capacity Measures, Lineal and Volumetric Measuring Devices, Volt and Ampere Meters, Pressure and Vacuum Gages, Templets, Cyclometers, Grade-Meters, Field-Glasses, Opera-Glasses, and Eyeglasses, Spectacles, and Goggles.

Ser. No. 28,717. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany. Filed July 11, 1907.

MERCÉDÈS

Particular description of goods.—Surgical Instruments and Cases Therefor, Surgical Bandages, Medicine-Chests, Splints, Arm-Slings.

Ser. No. 29,188. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) HANNOVERSCHE GUMMI-KAMM-COMPAGNIE ACTIEN-GESELLSCHAFT, Hanover-Limmer, Germany. Filed Aug. 3, 1907.

SHAMROCK

Particular description of goods.—The Following Goods Made of Rubber: Audiphones, Speculums of All Kinds, Clyster-Pipes, Syringes of All Kinds, Dilators, Douche-Mounts for Nose, Eye, and Ear, Politzer Douches, Douche-Mounts in Sets, Pus-Basins, Esmarch Irrigator-Basins, Stop Cocks for Syringes, Ear-Trumpets, Inhalers, Inhalation-Masks, Set of Mounts, Pipes, and Connecting Parts for Irrigators, Rectum-Bougies, Vagina-Pipes, Obturators, Catheters of Every Description, Pessaries of All Kinds, Plexímeters, Powder-Blowers for Nose, Ear, and Throat, Respirators, Stethoscopes, Trachea-Tubes, Spray-Diffusers, Tongue-Depressors, Rectum-Pipes, Bottle-Shaped Ice-Bags with Metal Mounts, Square and Circular Surgical Air and Water Cushions, and Hot-Water Bottles.

Ser. No. 31,091. (CLASS 39. CLOTHING.) THE BURNHAM-MUNGER MFG. CO., Kansas City, Mo. Filed Nov. 8, 1907.



FITZ

Particular description of goods.—Overalls, Jumpers, Shirts, and Pants Made of Duck, Denim, Canvas, and Similar Textile Materials.

Ser. No. 31,114. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) WILLIAM D. CRAIG, Kansas City, Mo. Filed Nov. 11, 1907.



Particular description of goods.—Packing Materials Consisting of Wood Shavings.

Ser. No. 31,706. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) EHRICH & GRAETZ, Berlin, Germany. Filed Dec. 13, 1907.

Graetzin

Particular description of goods.—Burners for Gas and Oil Street, House, Desk, Lighthouse, Signal, and Portable Lamps Using Combustible Fluid, Gaseous and Liquid Fuel Heated Room-Stoves, Gaseous and Liquid Fuel Heated Cooking-Stoves, Metal Lamp-Shades, and Lamp-Shade Frames.

Ser. No. 32,113. (CLASS 43. THREAD AND YARN.) THE AMERICAN THREAD COMPANY, Jersey City, N. J. Filed Jan. 7, 1908. Used ten years.

MILAN

Particular description of goods.—Spool-Cotton, Sewing-Cotton, and Thread.

Ser. No. 32,259. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) BIRRESBORNER MINERALBRUNNEN H. LÖHR & EYLERT, Düsseldorf, Germany. Filed Jan. 16, 1908.



Particular description of goods.—Natural Carbonated Mineral Waters.

Ser. No. 32,317. (CLASS 17. TOBACCO PRODUCTS.) MASPERO FRÈRES, LIMITED, London, England. Filed Jan. 20, 1908.



Particular description of goods.—Cigarettes, Cigars, Smoking-Tobacco, and Chewing-Tobacco.

Ser. No. 32,740. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BARCLAY & BARCLAY, New York, N. Y. Filed Feb. 13, 1908.

TRICOFÉRO de BARRY

Particular description of goods.—A Medicated Preparation for the Hair, Scalp, and Skin.

Ser. No. 32,781. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BADISCHE ANILIN & SODA FABRIK, Ludwigshafen-on-the-Rhine, Germany. Filed Feb. 15, 1908.

Anthraflavon

Particular description of goods.—Coal-Tar Dyestuffs, Indigo, and Indigo Preparations, Coal-Tar Derivatives Used in the Manufacture of Dyes, Mineral Acids, Alkalies, and Alkali Salts, Chlorin, Chromic Acid, Chromates, and Chrome Salts, Mordants and Chemicals for Dyeing, Discharging, and Printing, Chemical Preparations for Photographic Purposes.

Ser. No. 32,939. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COREY COMMISSION COMPANY, New York, N. Y. Filed Feb. 21, 1908.

TUXEDO

Particular description of goods.—Canned Salmon.

Ser. No. 33,286. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DODGE CITY MILLING & ELEVATOR COMPANY, Dodge City, Kans. Filed Mar. 10, 1908.

POPLAR

Particular description of goods.—Wheat-Flour.

Ser. No. 33,409. (CLASS 31. FILTERS AND REFRIGERATORS.) STANDARD GAUGE MANUFACTURING COMPANY, Syracuse, N. Y. Filed Mar. 16, 1908.

ECLIPSE

Particular description of goods.—Oil-Filters.

Ser. No. 33,618. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FAVREAU & COLLETTE, Marlboro, Mass. Filed Mar. 25, 1908. Used ten years.



Particular description of goods.—A Remedy for Coughs, Colds, Bronchitis, Catarrh, Whooping-Cough, Croup, and Asthma.

Ser. No. 33,739. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) INDIANA COTTON MILLS, Cannelton, Ind. Filed Mar. 30, 1908.

COTTON BELT

Particular description of goods.—Cotton Sheetings.

Ser. No. 33,741. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) INDIANA COTTON MILLS, Cannelton, Ind. Filed Mar. 30, 1908.

A1

Particular description of goods.—Cotton Sheetings.

Ser. No. 33,869. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE KRETOL COMPANY, Washington, D. C. Filed Apr. 4, 1908.

KRETOL

Particular description of goods.—Disinfectant, Germicide, Antiseptic, Insecticide, Deodorant, Remedies for Skin Diseases.

Ser. No. 34,143. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CONTINENTAL MFG. CO., Indianapolis, Ind. Filed Apr. 16, 1908.

DUSTOLINE

Particular description of goods.—Sweeping Compounds

Ser. No. 34,155. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWIN C. BERG, Chicago, Ill. Filed Apr. 16, 1908.

GLADOSIA



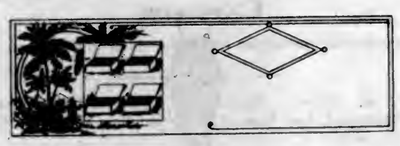
Particular description of goods.—Teething-Syrup.

Ser. No. 34,240. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SAGE ALLEN & COMPANY, Hartford, Conn. Filed Apr. 21, 1908.

Amulet

Particular description of goods.—Dress-Shields.

Ser. No. 34,251. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. B. WASHBURN & CO. CORPORATION, Brockton, Mass. Filed Apr. 21, 1908.



Particular description of goods.—Cocoanut Biscuits.

Ser. No. 34,361. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHRISTIANS NATURAL FOOD COMPANY, Jersey City, N. J., and New York, N. Y. Filed Apr. 25, 1908.

CHRISTIANS NATURAL FOOD COMPANY

Particular description of goods.—Cereal Breakfast Foods, Barley-Meal, Wheat-Meal, and Rye-Meal, Bread, Fruit Wafers, and Grated Cocoanut.

Ser. No. 34,458. (CLASS 39. CLOTHING.) E. W. MAGEE, St. Louis, Mo. Filed Apr. 29, 1908.



Particular description of goods.—Hat and Bonnet Frames.

Ser. No. 34,630. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. W. ROSE MEDICINE CO., St. Louis, Mo. Filed May 7, 1908.

RUMAX



Particular description of goods.—A Medicinal Preparation for the Treatment of Rheumatism.

Ser. No. 34,723. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ATLANTIC MACARONI CO., New York, N. Y. Filed May 13, 1908.

LA GLORIA

Particular description of goods.—Macaroni.

Ser. No. 34,724. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ATLANTIC MACARONI CO., New York, N. Y. Filed May 13, 1908.



Particular description of goods.—Macaroni.

Ser. No. 34,827. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) LOUISVILLE AXE & TOOL COMPANY, Louisville and Highland Park, Ky. Filed May 19, 1908.

W. J. Sager

Particular description of goods.—Axes.

Ser. No. 34,978. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROYKROSS CHEMICAL COMPANY, Whitehall, Mich. Filed May 27, 1908.

ROYKROSS

The cross being red.

Particular description of goods.—Compounds Intended and Employed for Use as Absorbents or Gatherers of Dust and other Impurities and as a Destroyer of Moths and Germs in Connection with the Sweeping or Cleaning of Carpets, Floors, Upholstered Furniture, or Analogous Uses.

Ser. No. 34,988. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FRANK H. HAYES, New York, N. Y. Filed May 27, 1908.

MORAVIN

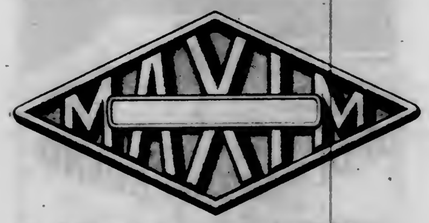
Particular description of goods.—Dress Goods in the Piece.

Ser. No. 35,073. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. H. FLICKINGER CO., San Jose, Cal. Filed June 1, 1908.



Particular description of goods.—Canned Fruits.

Ser. No. 35,089. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MAXIM CHEMICAL COMPANY, New York, N. Y. Filed June 2, 1908.



Particular description of goods.—Liquid Soap.

Ser. No. 35,169. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) SAMUEL H. ROBERTS, Chicago, Ill. Filed June 5, 1908.

· BULL DOG ·

Particular description of goods.—Horseshoe Calks.

Ser. No. 35,172. (CLASS 39. CLOTHING.) MERRILL SILK COMPANY, Hornell, N. Y. Filed June 5, 1908.



Particular description of goods.—Gloves, Mitts, Underwear, Hosiery, and Stockings Made Wholly or in Part of Silk.

Ser. No. 35,207. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. C. DE WITT & COMPANY, Chicago, Ill. Filed June 8, 1908.

Kodol

Particular description of goods.—Chewing-Gum.

Ser. No. 35,210. (CLASS 39. CLOTHING.) LOUIS MEYERS & SON, New York, N. Y. Filed June 8, 1908.



Particular description of goods.—Leather Gloves, Gauntlets, and Mittens.

Ser. No. 35,235. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CASCADE CARPET COMPANY, Little Falls, N. J. Filed June 9, 1908.

CASCADE

Particular description of goods.—Carpets and Rugs.

Ser. No. 35,341. (CLASS 39. CLOTHING.) FRANK BROTHERS, New York, N. Y. Filed June 13, 1908. Used ten years.

FRANKS

Particular description of goods.—Boots and Shoes of Leather, Cloth, and Satin.

Ser. No. 35,404. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) ERNECKE AND SALMSTEIN, Chicago, Ill. Filed June 15, 1908.



Particular description of goods.—Enamel-Paint.

Ser. No. 35,413. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HELLER & LONG, New York, N. Y. Filed June 16, 1908.



Particular description of goods.—Handkerchiefs.

Ser. No. 35,436. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) SIMMONS HARDWARE COMPANY, St. Louis, Mo. Filed June 17, 1908.



Particular description of goods.—Horse-Collars.

Ser. No. 35,437. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) SIMMONS HARDWARE COMPANY, St. Louis, Mo. Filed June 17, 1908.



Particular description of goods.—Horse-Collars.

Ser. No. 35,642. (CLASS 17. TOBACCO PRODUCTS.) COMPÀNIA GENERAL DE TOBACOS DE FILIPINAS, Barcelona, Spain. Filed June 20, 1908.



Particular description of goods.—Cigars.

Ser. No. 35,695. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) WILLIAM F. CHASE, Los Angeles, Cal. Filed June 23, 1908.



Particular description of goods.—Fireless Cookers.

Ser. No. 35,826. (CLASS 2. RECEPTACLES.) MYER KAMENSTEIN, New York, N. Y. Filed June 27, 1908.



Particular description of goods.—Sheet-Metal Umbrella and Cane Holders.

Ser. No. 35,845. (CLASS 39. CLOTHING.) HOOD RUBBER COMPANY, Boston, Mass. Filed June 29, 1908.

OLDCOLONY

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 35,887. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) BUFFALO WEAVING & BELTING CO., Buffalo, N. Y. Filed July 1, 1908.

R-F

Particular description of goods.—Rubber-Covered Fabric Belting.

Ser. No. 35,888. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) BUFFALO WEAVING & BELTING CO., Buffalo, N. Y. Filed July 1, 1908.

R·F·& C·

Particular description of goods.—Rubber-Covered Fabric Belting.

Ser. No. 35,928. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) COLUMBIA OIL CO. OF NEW YORK, New York, N. Y. Filed July 3, 1908.

X RAYS

Particular description of goods.—Illuminating-Oils.

Ser. No. 35,930. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) E. C. BEETEM & SON, Philadelphia, Pa. Filed July 3, 1908.

LOG CABIN

Particular description of goods.—Rag Rugs and Rag Carpets.

Ser. No. 35,931. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) E. C. BEETEM & SON, Philadelphia, Pa. Filed July 3, 1908.

GRETCHEN



Particular description of goods.—Rag Rugs and Rag Carpets.

Ser. No. 35,944. (CLASS 39. CLOTHING.) PILLING & MADELEY INC., Philadelphia, Pa. Filed July 3, 1908. Used ten years.

Pilling & Madeley

Particular description of goods.—Hosiery, Undershirts, Drawers, and Union Suits.

Ser. No. 35,947. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ADOLPH NAHASS, Boston, Mass. Filed July 6, 1908.



Particular description of goods.—Neckties, Cravats, Scarfs, and Neckcloths.

Ser. No. 35,948. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ADOLPH NAHABS, Boston, Mass. Filed July 6, 1908.

Marquis

Particular description of goods.—Neckties, Cravats, Scarfs, and Neckcloths.

Ser. No. 35,972. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH R. HARRIS, St. Louis, Mo. Filed July 6, 1908.

JH

CORNGOLD

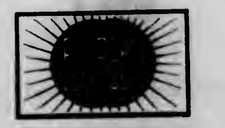
Particular description of goods.—Stomach-Bitters.

Ser. No. 35,977. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE OHIO SUSPENDER COMPANY, Mansfield, Ohio. Filed July 6, 1908.

THE "MIDGET"

Particular description of goods.—Garters and Arm-Bands.

Ser. No. 36,082. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) INDIANA ULTRAMARINE COMPANY, South Bend, Ind. Filed July 13, 1908.



Particular description of goods.—Washing-Bluing.

Ser. No. 36,092. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) NORTON PRATT CO., Memphis, Tenn. Filed July 14, 1908.

CACTUS

C

Particular description of goods.—Cotton Piece Goods.

Ser. No. 36,106. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM GERSBACHER, Jr., Springerton, Ill. Filed July 14, 1908.

MINERVA



Particular description of goods.—A Remedy for Cancers and Tumors.

Ser. No. 36,107. (CLASS 41. CANES, PARASOLS, AND UMBRELLAS.) WILLIAM H. BEEHLER, Baltimore, Md. Filed July 14, 1908.

NAME - ON

Particular description of goods.—Umbrellas and Parasols.

Ser. No. 36,126. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) EMANUEL M. SILBERMAN, Philadelphia, Pa. Filed July 15, 1908.

WIZARD

Particular description of goods.—Lubricating-Oils.

Ser. No. 36,153. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GRISWOLD DRUG CO., Winterset, Iowa. Filed July 16, 1908.

MENTHOCAMPH
THE SALVE TO HAVE

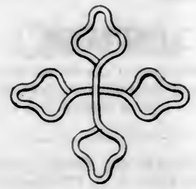
Particular description of goods.—A Salve to be Used for the Treatment of Catarrh, Hay-Fever, Coughs, Colds in the Head, Croup, Burns, Bites, and Sting of Insects, Piles, Ulcers, Chilblains, Cold-Sores, or Any Inflammation.

Ser. No. 36,199. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE SHARPINE CO., Brooklyn, N. Y. Filed July 18, 1908.

SHARPINE

Particular description of goods.—Sharpening and Polishing Material for Razors, Cutlery, and Surgical Instruments.

Ser. No. 36,228. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE AMERICAN PIN COMPANY, Waterville, Conn. Filed July 20, 1908.



Particular description of goods.—Dress-Eyes.

Ser. No. 36,241. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) L. W. LEVY & CO., Galveston, Tex. Filed July 21, 1908.

Pearl of Kentucky

Particular description of goods.—Blended Whisky.

Ser. No. 36,250. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JOS. S. FINCH & CO., Pittsburg, Pa. Filed July 21, 1908. Used ten years.

GOLDEN WEDDING

Particular description of goods.—Straight Rye Whisky.

Ser. No. 36,271. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) LEWIS OPPENHEIMER'S SONS, Philadelphia, Pa. Filed July 22, 1908.

Se-No

Particular description of goods.—Suspenders.

Ser. No. 36,279. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) M. C. MIGEL & CO., New York, N. Y. Filed July 23, 1908.

DIRECTOIRE

Particular description of goods.—Satins and Dress-Silks.

Ser. No. 36,280. (CLASS 37. PAPER AND STATIONERY.) THE TAYLOR-BURT CO., Holyoke, Mass. Filed July 23, 1908.

PUBLIC SERVICE

Particular description of goods.—Ledger, Record, and Bond Paper, Envelops, Cover-Paper, Cover-Boards, and Book-Paper.

Ser. No. 36,309. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JNO. T. BARBEE & CO., Louisville, Ky. Filed July 24, 1908. Used ten years.

'TIP 'TYLER

Particular description of goods.—Straight Whisky.

Ser. No. 36,320. (CLASS 12. MASONRY MATERIALS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed July 25, 1908.

TOUCHSTONE

Particular description of goods.—Felt Roofing.

Ser. No. 36,330. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ROSENHEIM BROTHERS CO., Philadelphia, Pa. Filed July 25, 1908.

That's the Ticket

Particular description of goods.—Tapestries, Draperies, and Upholstering Fabrics.

Ser. No. 36,332. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ROSENHEIM BROTHERS CO., Philadelphia, Pa. Filed July 25, 1908.

ARREO

Particular description of goods.—Tapestries, Draperies, and Upholstering Fabrics.

Ser. No. 36,336. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) TOOTLE-CAMPBELL DRY GOODS CO., St. Joseph, Mo. Filed July 25, 1908.

TOTEM

Particular description of goods.—Cotton Piece Goods.

Ser. No. 36,342. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SUN TYPE-WRITER COMPANY, Newark, N. J. Filed July 27, 1908. Used ten years.

SUN

Particular description of goods.—Type-Writing Machines.

Ser. No. 36,355. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HENRIE CLAUSS, Fremont, Ohio. Filed July 27, 1908.

THE RAZOR OF QUALITY

Particular description of goods.—Razors.

Ser. No. 36,363. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) STANDARD OIL CO. OF NEW YORK, New York, N. Y. Filed July 28, 1908. Used ten years.

PRATT

FROM NEW YORK WORKS

Particular description of goods.—Refined Petroleum for Illuminating, Heating, and Power Purposes.

Ser. No. 36,369. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FRIEDMAN & KRIEGER, New York, N. Y. Filed July 28, 1908.



Particular description of goods.—Cotton and Linen Canvas Used for Garment-Facings.

Ser. No. 36,376. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WERTZ & FIELD, Reading, Pa. Filed July 28, 1908.



Particular description of goods.—Stomach-Bitters.

Ser. No. 36,387. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) WOVEN STEEL HOSE & RUBBER COMPANY, Trenton, N. J. Filed July 29, 1908.



Particular description of goods.—Steam and Hydraulic Packings Formed of Superimposed Layers of Rubber and Duck Incased in Steel.

Ser. No. 36,388. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) WOVEN STEEL HOSE & RUBBER COMPANY, Trenton, N. J. Filed July 29, 1908.

PROTECTOR

Particular description of goods.—Steam and Hydraulic Packings Formed of Superimposed Layers of Rubber and Duck Inclosed in a Cotton Casing and Lubricated.

Ser. No. 36,399. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) C. F. GARDNER PRINTING CO., Princeton, Ind. Filed July 31, 1908.

ROYAL

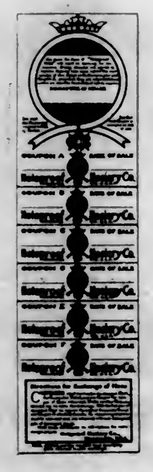
Particular description of goods.—Sleeve-Protectors.

Ser. No. 36,413. (CLASS 39. CLOTHING.) CHARLES N. FREEDMAN, New York, N. Y. Filed July 31, 1908.

Kingly

Particular description of goods.—Workingmen's and Negligée Shirts.

Ser. No. 36,442. (CLASS 39. CLOTHING.) HOLEPROOF HOSIERY COMPANY, Milwaukee, Wis. Filed Aug. 3, 1908.



Particular description of goods.—Hosiery.

Ser. No. 36,474. (CLASS 37. PAPER AND STATIONERY.) C. H. DEXTER & SONS, Windsor Locks, Conn. Filed Aug. 4, 1908. Used ten years.

Duchess

Particular description of goods.—Cover-Papers.

Ser. No. 36,522. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) EDWIN L. GODING, Portland, Me. Filed Aug. 6, 1908.

Quirlicut

Particular description of goods.—Card, Block, and Picture Games.

Ser. No. 36,558. (CLASS 39. CLOTHING.) HAYNES, SPARRELL & Co., Boston, Mass. Filed Aug. 8, 1908.

John Hancock

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 36,560. (CLASS 39. CLOTHING.) HAYNES, SPARRELL & Co., Boston, Mass. Filed Aug. 8, 1908.



Particular description of goods.—Leather Boots and Shoes.

Ser. No. 36,561. (CLASS 39. CLOTHING.) HAYNES, SPARRELL & Co., Boston, Mass. Filed Aug. 8, 1908.



Particular description of goods.—Leather Boots and Shoes.

Ser. No. 36,579. (CLASS 39. CLOTHING.) OCONEE KNITTING MILL, Walhalla, S. C. Filed Aug. 10, 1908.



Particular description of goods.—Hosiery.

Ser. No. 36,636. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JEFFERSON B. CLAYTON, Athens, Ohio. Filed Aug. 13, 1908. Used ten years.

DR. SETH HART'S

Particular description of goods.—Cough and Croup Syrup.

TRADE-MARKS

REGISTERED SEPTEMBER 15, 1908.

70,542. INDIA-RUBBER, REGENERATED FROM RUBBER WASTE. J. Basler & Co., Paris, France.
Filed November 5, 1907. Serial No. 31,012. PUBLISHED JULY 14, 1908.

70,543. INDIA-RUBBER, REGENERATED FROM RUBBER WASTE. J. Basler & Co., Paris, France.
Filed November 5, 1907. Serial No. 31,013. PUBLISHED JULY 14, 1908.

70,544. POWDER FOR CLEANING AND POLISHING. Joseph H. Bearns, Jr., New York, N. Y.
Filed April 25, 1908. Serial No. 34,358. PUBLISHED JULY 14, 1908.

70,545. CLEANING COMPOUND. George M. Buskey, Worcester, Mass.
Filed May 21, 1908. Serial No. 34,863. PUBLISHED JULY 14, 1908.

70,546. LEATHER BOOTS, SHOES, AND SLIPPERS. Dizer-Copeland Co., Brockton, Mass.
Filed April 30, 1908. Serial No. 34,486. PUBLISHED JULY 14, 1908.

70,547. FELT HATS. E. A. Mallory and Sons, Incorporated, Danbury, Conn.
Filed January 23, 1908. Serial No. 32,394. PUBLISHED JULY 14, 1908.

70,548. SOAP. The J. P. Davies Company, Dayton, Ohio.
Filed May 29, 1908. Serial No. 35,031. PUBLISHED JULY 14, 1908.

70,549. SOAP. The M. Werk Co., Cincinnati, Ohio.
Filed June 10, 1907. Serial No. 28,023. PUBLISHED JULY 14, 1908.

70,550. SOAP FOR LAUNDRY USE. The Procter & Gamble Company, Ivorydale and Cincinnati, Ohio; Kansas City, Kans., and Staten Island, N. Y.
Filed February 8, 1908. Serial No. 32,668. PUBLISHED JULY 14, 1908.

70,551. SOAP FOR LAUNDRY USE. The Procter & Gamble Company, Ivorydale and Cincinnati, Ohio; Kansas City, Kans., and Staten Island, N. Y.
Filed February 8, 1908. Serial No. 32,672. PUBLISHED JULY 14, 1908.

70,552. SOAP FOR LAUNDRY USE. The Procter & Gamble Company, Ivorydale and Cincinnati, Ohio; Kansas City, Kans., and Staten Island, N. Y.
Filed February 8, 1908. Serial No. 32,674. PUBLISHED JULY 14, 1908.

70,553. SOAP FOR LAUNDRY USE. The Procter & Gamble Company, Ivorydale and Cincinnati, Ohio; Kansas City, Kans., and Staten Island, N. Y.
Filed February 8, 1908. Serial No. 32,676. PUBLISHED JULY 14, 1908.

70,554. SOAP FOR LAUNDRY USE. The Procter & Gamble Company, Ivorydale and Cincinnati, Ohio; Kansas City, Kans., and Staten Island, N. Y.
Filed February 17, 1908. Serial No. 32,826. PUBLISHED JULY 14, 1908.

70,555. SOAP FOR LAUNDRY USE. The Procter & Gamble Company, Ivorydale and Cincinnati, Ohio; Kansas City, Kans., and Staten Island, N. Y.
Filed February 17, 1908. Serial No. 32,827. PUBLISHED JULY 14, 1908.

70,556. SOAP FOR LAUNDRY USE. The Procter & Gamble Company, Ivorydale and Cincinnati, Ohio; Kansas City, Kans., and Staten Island, N. Y.
Filed February 17, 1908. Serial No. 32,832. PUBLISHED JULY 14, 1908.

70,557. SOAP FOR LAUNDRY USE. The Procter & Gamble Company, Ivorydale and Cincinnati, Ohio; Kansas City, Kans., and Staten Island, N. Y.
Filed February 17, 1908. Serial No. 32,833. PUBLISHED JULY 14, 1908.

70,558. SOAP FOR LAUNDRY USE. The Procter & Gamble Company, Ivorydale and Cincinnati, Ohio; Kansas City, Kans., and Staten Island, N. Y.
Filed February 27, 1908. Serial No. 33,042. PUBLISHED JULY 14, 1908.

70,559. SOAP FOR LAUNDRY USE. The Procter & Gamble Company, Ivorydale and Cincinnati, Ohio; Kansas City, Kans., and Staten Island, N. Y.
Filed March 21, 1908. Serial No. 33,536. PUBLISHED JULY 14, 1908.

70,560. CHESTNUT-TREES. Coleman K. Sober, Lewisburg, Pa.
Filed March 23, 1908. Serial No. 33,553. PUBLISHED JULY 14, 1908.

70,561. LADIES' WAISTS AND WASH SUITS. Teller, Sternfeld & Company, Philadelphia, Pa.
Filed March 30, 1908. Serial No. 33,735. PUBLISHED JULY 14, 1908.

70,562. LEATHER SHOES. V. K. & A. H. Jones Co., Lynn, Mass.
Filed April 27, 1908. Serial No. 34,425. PUBLISHED JULY 14, 1908.

70,563. CERTAIN CLOAKS, FUR SACKS, COLLARS, AND MUFFS. Zaidenberg & Michaelis, New York, N. Y.
Filed May 12, 1908. Serial No. 34,707. PUBLISHED JULY 14, 1908.

70,564. WEIGHTED FIGURE TOYS. The A. Schoenhut Company, Philadelphia, Pa.
Filed May 2, 1908. Serial No. 34,534. PUBLISHED JULY 14, 1908.

70,565. SHEETS, BARS, TUBES, AND FORGINGS OF IRON. The American Rolling Mill Company, Middletown, Ohio.
Filed April 30, 1908. Serial No. 34,499. PUBLISHED JULY 14, 1908.

70,566. OPERA-GLASSES, MARINE-GLASSES, AND FIELD-GLASSES. Baille-Lemaire & Fils, Paris, France.
Filed October 25, 1906. Serial No. 22,902. PUBLISHED JULY 14, 1908.

70,567. WATERPROOFED ROOFING AND SHEATHING FABRIC. J. A. & W. Bird & Co., Boston, Mass.
Filed October 29, 1907. Serial No. 30,862. PUBLISHED JULY 14, 1908.

70,568. FLEXIBLE COMPOSITION FLOORING. J. A. & W. Bird & Co., Boston, Mass.
Filed April 10, 1908. Serial No. 33,994. PUBLISHED JULY 14, 1908.

70,569. WATERPROOFED ROOFING FABRIC. J. A. & W. Bird & Co., Boston, Mass.
Filed April 17, 1908. Serial No. 34,178. PUBLISHED JULY 14, 1908.

70,570. POWDER-TRAIN FUSES. COAST MANUFACTURING & SUPPLY CO., Berkeley, Cal.
Filed January 5, 1907. Serial No. 24,460. PUBLISHED MARCH 31, 1908.

70,571. POWDER-TRAIN FUSES. COAST MANUFACTURING & SUPPLY CO., Berkeley, Cal.
Filed February 4, 1907. Serial No. 25,110. PUBLISHED MARCH 5, 1907.

70,572. SHIRT-WAISTS AND SHIRT-WAIST SUITS. CRESCENT MANUFACTURING COMPANY OF DELAWARE, Wilmington, Del., and Baltimore, Md.
Filed April 3, 1908. Serial No. 33,814. PUBLISHED JULY 14, 1908.

70,573. ELECTRIC INCANDESCENT AND ARC LAMPS. DEUTSCHE GASGLÜHLICHT AKTIENGESELLSCHAFT (AUERGESELLSCHAFT), Berlin, Germany.
Filed July 2, 1906. Serial No. 20,693. PUBLISHED JULY 14, 1908.

70,574. CERTAIN VALVES, FAUCETS, KEYS, VENTS, COUPLINGS, AND CONNECTIONS. GOLDEN GATE MANUFACTURING COMPANY, New York, N. Y.
Filed May 14, 1908. Serial No. 34,739. PUBLISHED JULY 14, 1908.

70,575. PLASTER-BOARD. J. B. KING & CO., New York, N. Y.
Filed May 22, 1908. Serial No. 34,881. PUBLISHED JULY 14, 1908.

70,576. CERTAIN HARDWARE. JOH. BERNHD. HASENCLEVER & SOHNE, Remscheid, Germany.
Filed January 15, 1907. Serial No. 24,646. PUBLISHED JUNE 23, 1908.

70,577. STAINED GLASS SUBSTITUTES. EDWARD MAYHEW, New York, N. Y.
Filed April 4, 1908. Serial No. 33,856. PUBLISHED JULY 14, 1908.

70,578. PORTLAND CEMENT. NORTHWESTERN STATES PORTLAND CEMENT CO., Mason City, Iowa.
Filed April 27, 1908. Serial No. 34,420. PUBLISHED JUNE 23, 1908.

70,579. BOATS AND FRAMES FOR BOATS. PIONEER BOAT & PATTERN CO., Bay City, Mich.
Filed May 25, 1908. Serial No. 34,918. PUBLISHED JULY 14, 1908.

70,580. SOAP FOR LAUNDRY USE. THE PROCTER & GAMBLE COMPANY, Ivorydale and Cincinnati, Ohio; Kansas City, Kans., and Staten Island, N. Y.
Filed February 8, 1908. Serial No. 32,670. PUBLISHED JULY 14, 1908.

70,581. TELEPHONE ATTACHMENTS. RECTOR HELP-A-PHONE COMPANY, New York, N. Y.
Filed February 17, 1908. Serial No. 32,916. PUBLISHED JULY 14, 1908.

70,582. ENAMELED-STEEL COOKING UTENSILS AND ENAMELED WASHING AND DRINKING VESSELS. THE STRONG-BATTELLE MANUFACTURING COMPANY, Bellaire, Ohio.
Filed April 13, 1908. Serial No. 34,069. PUBLISHED JULY 14, 1908.

70,583. WIRE ROPE AND CABLES. THE TRENTON IRON COMPANY, Trenton, N. J.
Filed May 25, 1908. Serial No. 34,949. PUBLISHED JULY 14, 1908.

70,584. CERTAIN FIREARMS AND PARTS THEREOF. WAFFENFABRIK MAUSER, AKTIENGESELLSCHAFT, Oberndorf-on-the-Neckar, Würtemberg, Germany.
Filed June 3, 1908. Serial No. 35,116. PUBLISHED JULY 14, 1908.

70,585. HAND-FIREWORKS. EDWARD H. WAGNER, New York, N. Y.
Filed June 11, 1908. Serial No. 35,289. PUBLISHED JULY 14, 1908.

70,586. ELECTRIC TAPES. THE WESCO SUPPLY COMPANY, St. Louis, Mo., and Fort Worth, Tex.
Filed May 14, 1908. Serial No. 34,728. PUBLISHED JULY 14, 1908.

70,587. WIRELESS-TELEGRAPHY DETECTORS. WIRELESS SPECIALTY APPARATUS COMPANY, New York, N. Y.
Filed May 12, 1908. Serial No. 34,706. PUBLISHED JULY 14, 1908.

70,588. WHIPS. CHAS. H. CLARK, Westfield, Mass.
Filed February 10, 1908. Serial No. 32,698. PUBLISHED JULY 7, 1908.

70,589. CORN AND BUNION SALVE. CHARLES HERCHER, Pine Bluff, Ark.
Filed May 8, 1908. Serial No. 34,653. PUBLISHED JULY 7, 1908.

70,590. INSECTICIDE. R. A. WALLACE, Bradley, Okla.
Filed August 12, 1907. Serial No. 29,368. PUBLISHED MAY 26, 1908.

70,591. INSECTICIDE. RUFUS A. WALLACE, Lindsay, Okla.
Filed November 21, 1907. Serial No. 31,271. PUBLISHED APRIL 28, 1908.

70,592. PERFUMES. ALFRED H. SMITH CO., New York, N. Y.
Filed May 7, 1908. Serial No. 34,623. PUBLISHED JULY 14, 1908.

70,593. PERFUMES. ALFRED H. SMITH CO., New York, N. Y.
Filed May 7, 1908. Serial No. 34,624. PUBLISHED JULY 14, 1908.

70,594. CIGARS. BAY STATE CIGAR COMPANY, Westfield, Mass.
Filed April 29, 1908. Serial No. 34,464. PUBLISHED JULY 14, 1908.

70,595. SALVE. BERGERON & BERGERON, Baltimore, Md.
Filed April 8, 1908. Serial No. 33,944. PUBLISHED MAY 26, 1908.

70,596. PERFUMES, TOILET WATERS, SACHET-POWDERS, AND TOILET POWDERS. THE C. B. WOODWORTH SONS CO., Rochester, N. Y.
Filed May 4, 1908. Serial No. 34,569. PUBLISHED JUNE 16, 1908.

70,597. CLUTCH-PULLEYS. HENRY DRUSCHEL, Philadelphia, Pa.
Filed May 8, 1908. Serial No. 34,649. PUBLISHED JULY 14 1908.

70,598. LEAD-PENCILS. EAGLE PENCIL COMPANY, New York, N. Y.
Filed March 26, 1906. Serial No. 18,265. PUBLISHED JULY 14, 1908.

70,599. GAS-STOVES. GILBERT & BARKER MFG. CO., Springfield, Mass.
Filed April 3, 1907. Serial No. 26,435. PUBLISHED JULY 14, 1908.

70,600. MECHANICAL DEVICES FOR EXERCISING THE EYE TO IMPROVE THE EYESIGHT. THE IDEAL CO., New York, N. Y.
Filed May 4, 1908. Serial No. 34,577. PUBLISHED JULY 14, 1908.

70,601. MECHANICAL DEVICES FOR EXERCISING THE EYE TO IMPROVE THE EYESIGHT. THE IDEAL CO., New York, N. Y.
Filed May 4, 1908. Serial No. 34,578. PUBLISHED JULY 14, 1908.

70,602. HEADACHE-POWDERS. WILLIAM L. KUCHYNSKI, Wauwatosa, Wis.
Filed June 1, 1908. Serial No. 35,071. PUBLISHED JULY 14 1908.

70,603. CERTAIN TOBACCO PRODUCTS. LUDWIG LIPTAI, New York, N. Y.
Filed January 21, 1908. Serial No. 32,344. PUBLISHED MARCH 17, 1908.

70,604. SAWS. MANNING, MAXWELL & MOORE, INC., New York, N. Y.
Filed April 30, 1908. Serial No. 34,493. PUBLISHED JULY 14, 1908.

70,605. REMEDY FOR RHEUMATISM. MESAL CHEMICAL CO., Chattanooga, Tenn.
Filed May 29, 1908. Serial No. 35,040. PUBLISHED JULY 14, 1908.

70,606. BOOKS OF FICTION. THE NEW FICTION LIBRARY, New York, N. Y.
Filed May 1, 1908. Serial No. 34,519. PUBLISHED JULY 14, 1908.

70,607. MAGAZINES, PRINTED BOOKS, AND PRINTED ESSAYS PERTAINING TO THE SCIENCE OF CHIROPRACTIC. THE PALMER SCHOOL AND INFIRMARY OF CHIROPRACTIC, Davenport, Iowa.
Filed March 23, 1908. Serial No. 33,558. PUBLISHED JULY 14, 1908.

70,608. GENERAL TONIC, HAIR-TONIC, LINIMENT, AND TOOTH-WASH. THE POMPEIAN COMPANY, Washington, D. C.
Filed March 21, 1908. Serial No. 33,525. PUBLISHED JUNE 2, 1908.

70,609. LEATHER AND SHOE DRESSINGS. S. M. BIXBY & Co., New York, N. Y.
Filed November 10, 1906. Serial No. 23,210. PUBLISHED JUNE 11, 1907.

70,610. DECORATIVE FABRICS FOR WALLS AND CEILINGS. SANATILE COMPANY, New York, N. Y.
Filed April 25, 1908. Serial No. 34,385. PUBLISHED JULY 14, 1908.

70,611. MEDICINAL PREPARATION FOR THE TREATMENT OF GENITO-URINARY DISEASES. SHARP & DOHME, Baltimore, Md.
Filed March 26, 1908. Serial No. 33,662. PUBLISHED JULY 14, 1908.

70,612. SPOOL-COTTON. THE SEWING THREAD CO., Pawtucket, R. I., and New York, N. Y.
Filed April 1, 1908. Serial No. 33,790. PUBLISHED JULY 14, 1908.

70,613. SPOOL-COTTON. THE SEWING THREAD CO., Pawtucket, R. I., and New York, N. Y.
Filed April 1, 1908. Serial No. 33,792. PUBLISHED JULY 14, 1908.

70,614. SPOOL-COTTON. THE SEWING THREAD CO., Pawtucket, R. I., and New York, N. Y.
Filed April 1, 1908. Serial No. 33,793. PUBLISHED JULY 14, 1908.

70,615. SPOOL-COTTON. THE SEWING THREAD CO., Pawtucket, R. I., and New York, N. Y.
Filed April 1, 1908. Serial No. 33,794. PUBLISHED JULY 14, 1908.

70,616. ANTISEPTIC AND DISINFECTANT PREPARATION. THE VALLEY CITY PHARMACAL CO., Grand Rapids, Mich.
Filed February 19, 1908. Serial No. 32,869. PUBLISHED JULY 14, 1908.

70,617. LAUNDRY STARCHING AND CHEMICAL LAUNDRY WASHING COMPOUNDS. CORNELIUS WARD VAN ZILE, West Hoboken, N. J.
Filed April 16, 1908. Serial No. 34,154. PUBLISHED JULY 14, 1908.

70,618. ELECTRIC, GAS, AND COMBINATION LIGHTING FIXTURES. FREDERICK W. WAKEFIELD, Vermilion, Ohio.
Filed February 10, 1908. Serial No. 32,696. PUBLISHED JULY 14, 1908.

70,619. PORTABLE SANATORIUMS AND CERTAIN MEDICAL APPARATUS. GEORGE L. WARNKEN, Jamestown, Cal.
Filed March 3, 1908. Serial No. 33,150. PUBLISHED JULY 14, 1908.

70,620. CERTAIN VETERINARY MEDICINES AND PREPARATIONS. THE WATSON COMPANY, Pine Bluff, Ark.
Filed May 7, 1908. Serial No. 34,614. PUBLISHED JULY 14, 1908.

70,621. CATHARTIC PILLS. THE BLACKBURN PRODUCTS COMPANY, Dayton, Ohio.
Filed May 15, 1908. Serial No. 34,766. PUBLISHED JUNE 30, 1908.

70,622. STRAIGHT RYE WHISKY. JACOB ALEXANDER BUMGARDNER, Greenville, Va.
Filed January 7, 1908. Serial No. 32,121. PUBLISHED MARCH 24, 1908.

70,623. STRAIGHT MALT WHISKY. THE DUFFY MALT WHISKEY CO., Rochester, N. Y.
Filed April 20, 1908. Serial No. 34,230. PUBLISHED JULY 14, 1908.

70,624. COMPOUNDED BUCHU GIN. J. GROSSMAN'S SONS, New Orleans, La.
Filed March 21, 1908. Serial No. 33,509. PUBLISHED JULY 14, 1908.

70,625. AMERICAN WHITE WINES. HAMMONDSPORT WINE COMPANY, Hammondsport, N. Y.
Filed April 9, 1908. Serial No. 33,985. PUBLISHED JUNE 30, 1908.

70,626. CANNED SALMON. KELLEY-CLARKE CO., Seattle, Wash.
Filed November 29, 1907. Serial No. 31,431. PUBLISHED JULY 14, 1908.

70,627. CORNMEAL AND CORN-GRITS. KEMPER MILL & ELEVATOR CO., Kansas City, Mo.
Filed April 18, 1908. Serial No. 34,210. PUBLISHED JUNE 2, 1908.

70,628. MOLASSES. OELERICH & LAUX, Chicago, Ill.
Filed April 9, 1908. Serial No. 33,961. PUBLISHED JULY 14, 1908.

70,629. WAFERS, BISCUITS, CRACKERS, CAKES, AND BREAD. PERFECTION BISCUIT COMPANY, Fort Wayne, Ind.
Filed January 17, 1908. Serial No. 32,286. PUBLISHED JULY 14, 1908.

70,630. BEER. PIEL BRO'S, New York, N. Y.
Filed May 8, 1908. Serial No. 34,647. PUBLISHED JULY 14, 1908.

70,631. COTTON PIECE GOODS OF ALL KINDS. RICHARD HAWORTH AND COMPANY LIMITED, Manchester, England.
Filed October 14, 1907. Serial No. 30,594. PUBLISHED JULY 14, 1908.

70,632. BRAIDS, TAPES, BINDINGS, AND TRIMMINGS. SANFORD NARROW FABRIC CO., Pawtucket, R. I., and New York, N. Y.
Filed April 1, 1908. Serial No. 33,795. PUBLISHED JULY 14, 1908.

70,633. NON-ALCOHOLIC CARBONATED SWEETENED BEVERAGES. SUMTER BOTTLING WORKS, Sumter, S. C.
Filed April 8, 1908. Serial No. 33,948. PUBLISHED JULY 14, 1908.

70,634. BOTTLED GINGER-ALE. VIRGINIA BOTTLING CO. INC., Clifton Forge, Va.
Filed March 19, 1908. Serial No. 33,457. PUBLISHED JULY 14, 1908.

TRADE-MARKS CANCELED

67,937. MILK. THE LACTO-BACILLINE COMPANY OF NEW YORK, New York, N. Y.
Registered February 25, 1908. Canceled August 28, 1908.

LABELS

REGISTERED SEPTEMBER 15, 1908.

14,350.—*Title:* "BOHEMIAN NATIONAL BLENDED OLD RYE WISKEY." (For a Blend of Rye Whiskies.) LEWIS MAXA, Cleveland, Ohio. Filed August 4, 1908.

14,351.—*Title:* "SUPERB CHOCOLATE CREAMS." (For Chocolate Creams.) DOUGLAS CANDY CO., St. Joseph, Mo. Filed August 4, 1908.

14,352.—*Title:* "LEWIS' TEA." (For Tea.) GEO. LEWIS & CO., INCORPORATED, Chicago, Ill. Filed August 10, 1908.

14,353.—*Title:* "MINT-ALE NON-INTOXICANT BEVERAGE." (For a Beverage.) HENRY E. KNAUST, St. Louis, Mo. Filed June 17, 1908.

14,354.—*Title:* "THE MERRY WIDOW." (For Perfumery.) JOHN D. SAUTER, Poughkeepsie, N. Y. Filed July 23, 1908.

14,355.—*Title:* "HERLIG'S SPARKLING PIANO POLISH. (For a Piano-Polish.) HERLIG MANUFACTURING COMPANY, Chicago, Ill. Filed May 23, 1908.

14,356.—*Title:* "OWEN'S RHEUMATIC REMEDY." (For a Rheumatic Remedy.) JOSEPH H. OWENS, Milwaukee, Wis. Filed July 20, 1908.

14,357.—*Title:* "SOLIN." (For a Preparation to Increase the Durability of Shoe-Soles.) WILLIAM FRANCIS CHASE, New York, N. Y. Filed March 30, 1908.

14,358.—*Title:* "HEALTH HOSE." (For Hosiery.) WILKES BARRE KNITTING MILLS COMPANY, Wilkes-Barre, Pa. Filed August 12, 1908.

PRINTS

REGISTERED SEPTEMBER 15, 1908.

2,342.—*Title:* "HERBO-NERVO." (For a Nerve-Tonic.) BLANCHE E. THOMAS, New York, N. Y. Filed August 13, 1908.

2,343.—*Title:* "MASSAGING THE FACE." (For a Massaging Composition.) ADOLPH SOMMER, Cambridge, Mass. Filed August 7, 1908.

2,344.—*Title:* "TWO SOLES WITH BUT A SINGLE HEART, THE HEART OF OAK." (For Shoes.) CHARLES B. E. BANKS, New York, N. Y. Filed August 3, 1908.

2,345.—*Title:* "PRODUCES TYPEWRITTEN LETTERS AND OFFICE FORMS—CAPACITY OF 100 TYPEWRITERS." (For Duplicating-Machines.) THE WRITERPRESS COMPANY, Buffalo, N. Y. Filed August 13, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE MEIER.

APPLICATION FOR PATENT.

Decided July 22, 1908.

APPLICATION—DATE OF FILING.

Where by reason of a foreign patent it was necessary that the applicant file his application in the United States Patent Office not later than March 15, 1908, and application papers were deposited in the mail at Paterson, N. J., on Friday, March 13, 1908, at five o'clock, but did not reach the Patent Office until Monday, March 16, *Held* that the Commissioner is without authority to give the application the date of March 14, 1908, as requested.

ON PETITION.

MACHINE FOR SECURING TAGS TO RIBBONS AND LACES.

Mr. John W. Steward for the applicant.

MOORE, *Commissioner:*

This is a petition that the filing date of the above application be changed from March 16, 1908, to March 14, 1908.

It appears that applicant has a patent granted in Switzerland prior to the filing of his United States application on an application filed March 15, 1907. Consequently it was necessary for him to file his application in the United States Patent Office not later than March 15, 1908, in order that his foreign patent might not constitute a bar to the grant of a patent in this country under the provisions of section 4887 of the Revised Statutes.

The application papers were received in the Patent Office by mail on the morning of March 16, 1908. The Commissioner is clearly without authority to extend the year fixed by the statute to cover an application filed March 16, 1908, or a year and a day after the filing date of the foreign application.

Applicant's attorney has filed an affidavit to the effect that he received the application papers, properly executed, at his office in Paterson, N. J., in the forenoon of Friday, March 13, 1908, and that he inclosed said papers in an envelop addressed to the "Hon. Commissioner of Patents, Washington, D. C.," and deposited it in the United States mail before 5.30 o'clock of the same day, and that the papers should have reached the Patent Office on March 14, 1908.

These papers, however, were not received in the Patent Office until the morning mail of March 16. Unfortunately for applicant March 15 was Sunday, and if the papers reached the post-office in Washington on Sunday or on Saturday too late for the 12.30 p. m. delivery they would not reach the Patent Office until Monday morning, for the reasons stated in the Commissioner's decision *ex parte Dempsey* (132 O. G., 1072) and the decision of the Secretary of the Interior *ex parte Cannon* (C. D., 1901, 263; 94 O. G., 2165.)

It was held by the Secretary of the Interior in the cases of *Dempsey* (132 O. G., 1074) and *Cannon, supra,* that the postal authorities are not the agents of the Government for the collection of Patent Office fees. For similar reasons application papers in the custody of the postal authorities cannot be held to be on file in the Patent Office.

Applicants and attorneys should take note of the fact that the last regular mail delivery at the Patent Office is at about noon each day, and it would seem to be an act of prudence, where the matter is of vital importance, as in the present case, and it is doubtful whether the papers will reach the Patent Office in time by the regular mail, to employ some other agency or at least to affix a special-delivery stamp to the envelop.

For the reasons stated above and in the similar case of *ex parte Ravelli* (130 O. G., 982) the petition must be denied.

EX PARTE BECHSTEIN.

APPLICATION FOR REGISTRATION OF TRADE-MARK.

Decided August 26, 1908.

TRADE-MARKS—APPLICATION—DECLARATION.

The requirements of the sworn declaration prescribed by Rule 32 of the Trade-Mark Rules for marks sought to be registered under the ten-years proviso of section 5 of the act of 1905 must be complied with. The filing of a certified copy of registration in a foreign country for a stated period does not constitute evidence of exclusive use of the mark for ten years next preceding February 20, 1905, and is not the equivalent of the sworn statement of the applicant as to exclusive use during that period.

ON PETITION.

TRADE-MARK FOR PIANOFORTES.

Messrs. Frothingham & Wentworth for the applicant.

BILLINGS, *Acting Commissioner:*

This is a petition that the Examiner be directed to waive the requirement of the formal declaration prescribed by Rule 32 of the Trade-Mark Rules relating to "ten-year" marks.

The trade-mark sought to be registered is admittedly the name of an individual, and therefore not registrable

as a technical trade-mark. Instead, however, of filing a declaration averring that the trade-mark has been in actual and exclusive use by the applicant for ten years next preceding the passage of the Trade-Mark Act of 1905 the applicant has relied upon the certified copy of his certificate of registration in Great Britain showing that "The user claimed for the said trade-mark is since thirteen years prior to August 13th, 1875," and it is contended that this certificate should be accepted as having the same effect as the sworn declaration of the individual of exclusive use of the trade-mark for that period. The ten-year proviso of section 5 of the Trade-Mark Act is as follows:

That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act.

Rule 32 of the Trade-Mark Rules reads as follows:

32. Where application is made under section 5 of the act of February 20, 1905, on the ground that the mark has been in actual and exclusive use as a trade-mark by the applicant, or his predecessors from whom he derived title, for ten years next preceding the passage of said act, the applicant shall, in addition to the requirements of section 2 of said act, make oath to such actual use of the mark as a trade-mark by himself, or his predecessors or by those from whom title to the same is derived, for the period specified, and that, to the best of his knowledge and belief, such use has been exclusive.

This rule prescribes the manner in which the applicant shall establish a *prima facie* right to registration of a non-technical mark. It is based upon the provisions of the statute above quoted, and no reason appears why its requirements should be departed from. While in force this rule must be observed.

The certificate of registration in a foreign country claiming user of a mark for a stated period does not constitute evidence of exclusive use of the mark for ten years next preceding the passage of the act of February 20, 1905, which is a prerequisite to the registration of a non-technical mark under the ten-year proviso of that act. It does not, therefore, have the same effect as the sworn declaration of the applicant that the trade-mark has been in actual and exclusive use for ten years next preceding the passage of the act of February 20, 1905.

The petition is denied.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

DUFF *v.* LATSHAW.

Decided April 14, 1908.

1. INTERFERENCE—TESTIMONY—CIRCUMSTANCES AND PRESUMPTION.

The testimony reviewed and *Held*, in view of the unquestioned facts of the case and the circumstances surrounding the transactions between L. and D. to sustain D.'s claim that he was the original inventor.

2. SAME—SAME—SAME.

K., who succeeded D. as superintendent of L.'s factory, filed an application for the invention in issue at L.'s suggestion and for his benefit. L.'s application not being filed until after the interference was declared between K. and D. *Held* that this strongly discredits L.'s claim to inventorship.

3. SAME—ABANDONED EXPERIMENT.

D. constructed a model pulley embodying the invention in issue in 1895, but made no attempt to introduce the invention into commercial use or patent it, but passed it over in favor of another construction until 1904. *Held* that this model was nothing more than an abandoned experiment, which was unavailing as against a later conception by L.

Mr. C. P. Byrnes and *Mr. George H. Parmelee* for the appellant.

Mr. F. W. Winter and *Mr. James I. Kay* for the appellee.

SHEPARD, *C. J.:*

This is an interference proceeding involving priority of invention of an improvement in pulleys described in the following issue:

1. A sectional metal pulley comprising rim-sections provided with spoke-receiving holes countersunk on the outer faces, angle-ears riveted on the inner faces at the ends of said rim-sections, means for connecting together the angle-ears of adjacent rim-sections, hub-sections formed of wrought metal having body portions semitubular in shape and provided with spoke-receiving holes extending therethrough radially to the axis of the pulley and being countersunk on the inner face, said hub-sections having at their edges radially-projecting portions provided with bolt-receiving holes, and spokes having straight end portions provided with square shoulders and tenons, said shoulders bearing against the inner face of the rim and outer face of the hub-sections and tenons being inserted in the spoke-holes of the rim and hub and upset therein.

2. A sectional metal pulley comprising rim-sections provided with spoke-receiving holes countersunk on the outer face, hub-sections, each being an integral solid member provided with spoke-holes extending therethrough radially to the axis of the pulley and having flat seats surrounding said holes and radially-projecting ears, bolts connecting said radially-projecting ears, spokes having straight end portions provided with square shoulders and tenons, the shoulders bearing against the inner face of the rim, and against the seats of the hub and the tenons extending through the holes in the rim and hub and being upset therein.

The invention is a split pulley, in which the hub and the rim are each made in two parts and bolted together. The essential feature consists in using solid arms or spokes having square shoulders and straight tenons at their ends which enter countersinks formed at the outer face of the rim and the inner face of the hub and are riveted therein.

The first application for this invention was filed by Joseph A. Kaplan June 30, 1905. This application was filed at the suggestion of Latshaw, who had an assignment from Kaplan.

John T. Duff filed July 11, 1905, and the interference was first declared between him and Kaplan. The latter failed to prosecute his claim and dropped out of the proceeding.

William H. Latshaw filed on March 9, 1906.

Duff alleged conception in 1894, disclosure in September, 1894, and in 1895, and reduction to practice in February, 1905.

Latshaw alleged conception December 1, 1904, disclosure same day, drawings March 29, 1905, model constructed March 5, 1905, and reduction to practice April 1, 1905.

The question at issue between the parties is one of originality.

Duff was a mechanic and the holder of several inventions relating to pulleys and other devices. McNaugher was his friend who had advanced money to Duff for making and patenting inventions, and had interest in the same. Latshaw was a man of capital who had been connected with various manufacturing enterprises. He was familiar with the business of manufacturing and selling pipes and tubes.

In June, 1904, Latshaw, joined by Rhodes another capitalist, entered into a contract with Duff and McNaugher, by the terms of which the former were to furnish necessary funds to undertake the manufacture of pulleys and bells covered by patents owned by the

latter; and if, after construction and test, the inventions were found satisfactory, a corporation was to be organized for manufacture and sale. Forty per cent. of the capital stock was to be given Duff and McNaugher as payment for the patents which were to be assigned to the corporation. Latshaw and Rhodes, thereafter, purchased the buildings and plant of the Bradley Co., then about to suspend business. Duff was made superintendent of the work, mechanics were employed and experiments begun. McNaugher had a desk in the office, but seems not to have been specially employed. It was soon discovered that the threaded-arm pulley of Duff was not a commercial success. The threaded ends inserted in rim and hub had a tendency to become loose, and were thought insufficient to bear the strain. Two kinds of pipe-arm construction were tried, during the summer, fall and winter of 1904. The first of these had arms made of sections of tubes extended from hub to rim and were united thereto, respectively, by short rivets extending through holes for the purpose. The ends of the rivets projected into the ends of the tubular arms. They were first secured by shrinking. This was found impracticable, and the tubular end was next secured to the rivet by a cross-rivet passing through both. This was not deemed commercial, and a long rivet was substituted for the two short ones. This long rivet passed through the tube from hub to rim, and was secured in each. Some forty or fifty pulleys were built after this plan. Some preparations were made for building the solid-arm pulley, but before they were completed, the relations between Duff and Latshaw became strained, and about the middle of March, 1905, Duff was discharged. The plant was closed for a few days, but opened up before April 1, 1905, with Kaplan as foreman or superintendent of construction. Thereafter, the solid-arm pulley was manufactured for commercial use. For a time, a beaded rim described in Duff's patent was used in this construction; but it was abandoned for a differently-made rim. After doing this, on May 23, 1905, Latshaw addressed a letter to Duff and McNaugher as follows:

Pittsburg, Pa., May 23d, 1905.

DEAR SIRS:

This is to notify you, in pursuance of the articles of agreement between us, dated June 9, 1904, that the result of the demonstration, provided for in the articles of agreement mentioned, of the utility of patents mentioned and referred to in said agreement, has proved unsatisfactory to us and we hereby express our desire and willingness to reassign to you all of the interest in the said patents and applications for patents referred to in the said agreement now held by us, and to discontinue and disclaim any interest that we or either of us might or could claim in said patents or application for patents, and do hereby now determine and declare that the contract above mentioned and all the provisions therein, shall from this date be null and void and not binding upon any of the parties thereto, as provided therein.

Yours very truly,

JOSHUA RHODES,
WM. H. LATSHAW.

McNaugher ceased to visit the premises thereafter.

Latshaw claims that the tube-arm constructions proving unsatisfactory he conceived the invention of the issue on December 1, 1904, and caused it to be constructed by Kaplan on or about April 1, 1905.

Duff claims to have conceived the invention long before this and to have urged its construction upon Latshaw as early as September, 1904; but that the latter opposed it on the ground of greater expense. Before or after December 1, 1904, a model was made in the factory under the direction of Duff. This consisted of a solid steel bar with tenons and shoulders riveted at each end into pieces representing, respectively, sections of hub and rim. It fully illustrates the invention of the issue. The question of originality turned chiefly upon the date of the construction of this model. If made, as alleged by Duff, in September, 1904, then he is entitled to the award of the invention, as Latshaw does not claim to have had the idea before December 1, 1904.

Duff's testimony to the construction of this model in December, 1904, was corroborated by McNaugher, his son Hugh Duff, and by Cowen, Ley and Heron, who were mechanics working in the factory. The Examiner of Interferences, after a review of the evidence, was of the opinion that these witnesses were mistaken as to the date of this construction, and awarded priority to Latshaw. The Examiners-in-Chief affirmed this decision but stated that they were "somewhat at a loss as to how this case should be decided." The Commissioner concluded his review of the testimony by saying that the witnesses might have been mistaken as to the time when the model was made, and added: "However, on the whole, the evidence so far considered seems to be in favor of Duff." In common with the others he laid great stress upon certain circumstances in the case and upon certain conduct of Duff, and concluded to reject the evidence of the certain date of the construction of the model as testified to by Duff and his witnesses. This conclusion was based largely upon certain time-cards of the factory showing work by Cowen on the long-riveted tube-arms late in November and early in December, 1904.

Notwithstanding the great weight that is always given to the concurring decisions of the Patent Office tribunals on questions of fact, we are constrained, after a careful consideration of all the facts and circumstances in evidence, to differ with them.

We think that sufficient weight has not been given to some of the evidence tending to show that Duff had a conception of the invention of the issue, not derived from Latshaw, and that the model illustrating it had been constructed as early as September, 1904. As before observed, it was not without doubt that the Examiners-in-Chief and the Commissioner rejected the sufficiency of that evidence. There were also certain well-established facts and circumstances in the case, to some of which great weight was given while others received little or no consideration.

It is to be borne in mind that the burden of proof was upon Latshaw as the junior party, and that in respect of the facts of conception and disclosure of the invention, his own testimony is not sufficient for the purpose. Again, as the model illustrating the invention was undoubtedly made by workmen under the instructions of Duff and not of Latshaw, the latter had to overcome the presumption arising therefrom in favor of Duff, by showing that Duff was merely carrying out instructions previously given to him.

Among the circumstances, before alluded to as entitled to some weight in determining the contested claim of invention, are these: Latshaw, though a manufacturer of experience had no practical knowledge of pulley construction, and was not a practical mechanic, and had not invented anything before:

while Duff was both a mechanic and a former inventor of pulleys. Duff's evidence tended to show that a solid-arm-pulley model produced by him in evidence, had been constructed by him in the year 1895. The Commissioner found this to be true, and that this model contained the essential features of the invention of the issue. There seems to be no reason to doubt the soundness of this conclusion. But Duff had laid this model away and had made no previous attempt to introduce it into commercial use or to patent it. He evidently passed it by in favor of his screwed-arm construction, and the pipe-arms which he had interested Latshaw in. The Commissioner rightly held that this model was not a reduction to practice, and nothing more than an abandoned experiment, which was unavailing as against a later independent conception of Latshaw.

The importance of this earlier construction as a circumstance supporting Duff's claim to the revival of the conception in September, 1904, as claimed by him, was, however, overlooked.

Having conceived the solid-arm pulley in 1895 and embodied that conception in a model, it is within the range of reasonable probability that the idea may have recurred to him after the failure of later conceptions, especially when, under the arrangement with Latshaw and Rhodes, he had a considerable pecuniary interest in devising a successful pulley. It was more natural, therefore, that the disappointment of his expectations in regard to his other construction should have brought back to his recollection this former invention than that it should have occurred to Latshaw as an entirely original conception of his own.

Passing by the evidence of Duff, his son Hugh, and McNaugher to the construction of the solid-arm exhibit September, 1904, we have the testimony of three mechanics to the same effect. Cowen, apparently a skilled mechanic and a fair and disinterested witness, testified that in September, 1904, he, under Duff's directions, made the model, with which Duff said he wanted to demonstrate the idea to Latshaw. He said also that Duff told him that he had formerly made a pulley with solid arms. He had no memorandum by which to fix the date of this construction, but was positive that it was made in September, 1904. He said also that about a week later Latshaw and Duff talked of the solid-arm pulley in his presence in the shop, and that Latshaw said he could purchase the tubing cheaper than the solid stock for the arms. In January, 1905, he turned out six solid arms for a pulley under the direction of Duff, and saw Hugh Duff rivet them in a pulley. The works closed on March 18, 1905, and witness left. Ley and Heron, two subordinate mechanics, testified to the construction of the model in September, 1904, and to the making of a solid-arm pulley before Duff was turned away. Ley also said that after Kaplan took charge as superintendent or foreman about the last of March, 1905, he explained to Kaplan how the pulley was assembled.

The dates given by these witnesses were rejected as mistaken, on the strength of certain time-cards showing that work had been done on sample long rivets for tube-arms late in November, 1904, and on the evidence that work on long rivets preceded the construction of the model. There were no time-cards in September showing work on these long rivets. Those time-cards showed general tool-work. During August, September and October, no pulleys were made for market, but the work was in putting machinery in order, experimenting, and making tools. The witnesses testified that it was customary to enter general tool-work on the time-cards, unless there was a job of some special nature requiring some length of time. They stated that a long-rivet pulley had been constructed, about that time, and that its construction for trade was at last contemplated. That the time-cards of November, 1904, were for work done on sample rivets which were to be sent to several manufacturers to go by in filling orders therefor.

Latshaw's own testimony as to the conception of the solid-arm pulley on December 1, 1904, and the construction of the model thereafter has some support in these time-cards as to the date which he claims. But he has no other witness to his conception and disclosure at that time.

Mrs. Hite, his stenographer and confidential clerk, testified that Latshaw talked of the solid-arm construction the latter part of November or first part of December, 1904, when he paid bills for the long rivets that had been ordered. She also said that she had heard arguments and discussions between Latshaw and Duff in which Duff objected to the solid arms because of the additional weight. He wanted the pipe-arm and Latshaw the solid arm. In her cross-examination she stated that she had heard these discussions "along in September or October." Instead of sustaining Latshaw this evidence tends to corroborate Duff's witnesses as to the earlier date of the construction of the model, although it shows that Duff was opposed to its use because of its additional weight. The important fact is that she heard these discussions in September or October, 1904, at which time, according to Latshaw, the invention had not been thought of by him.

Another witness for Latshaw was one Hough. This witness was a traveling salesman for pulley manufacturers, now selling for Latshaw. He fixed his dates of visits to Latshaw's works by means of a diary. His first visit was November 9, 1904; his second March 14, 1905. On this first visit Latshaw asked his opinion about the pipe-arm construction, and Duff's knowledge of the pulley business. On the second visit, Latshaw asked him what he thought of a pulley built with a solid arm, and witness gave it his approval, when Latshaw described it. On May 27, 1905, he saw a solid-arm pulley constructed in accordance with the description. This date of disclosure to Hough, March 15, 1905, adds no weight of consequence to Latshaw's claim of earlier conception, as it was long after the construction of the model and the turning out of a lot of solid arms for the construction of a pulley, and but a day or two before Duff's discharge and the temporary close of the works. The cross-examination of Hough developed the fact that there was shown him on his first visit November 9, 1904, a finished pulley having the pipe-arms with long rivets. This supports the statements of Cowen and others in regard to the construction of such a pulley before the date that the time-cards showed work on the long-rivet samples. The witness did not know, of course, when the pulley was actually

constructed, but he saw it in the shop at least ten days before the issue of the time-cards on which such reliance has been placed. He was not mistaken as to the date because he kept a memorandum showing where he was each day. The work on this pulley must, therefore, have gone on the time-cards of earlier date under the head of general work, as testified to by Cowen.

There is another circumstance in the case, apparently ignored by the tribunals of the Office, which we think tends strongly to discredit the claim of Latshaw to the invention. The first application for patent for the invention was filed by John A. Kaplan on June 30, 1905. This was done at the suggestion of Latshaw and through his patent solicitors, and for his benefit as he took an assignment from Kaplan at the same time. This action, utterly opposed to his own claim of invention, he undertook to explain by saying that he was ignorant of the law and supposed that the mechanic who constructed the device was the one entitled to the patent for its invention. It may be true that he labored under this erroneous impression, but the statement is an improbable one under all the circumstances. Latshaw was a shrewd man of business who had been connected with manufactures for years, and must have known the important part that patent rights played therein. He knew that Kaplan had done nothing but assemble the parts of a device that had been completely planned with the intention to manufacture and put upon the market. He thoroughly appreciated the importance of securing the patent, and took the precaution of procuring Kaplan's assignment of it. Kaplan must have known better, as he stated that he had before taken out one or more patents. It seems strange, moreover, that all the facts were not communicated to the solicitors who were called on to prepare the application, and remained undisclosed until the interference was declared with the application of Duff filed eleven days later.

On the whole we think that Latshaw has not only failed to overcome the burden imposed upon him, but also that the facts and circumstances in evidence sustain the claim of Duff.

The decision will therefore be reversed. It is so ordered and the clerk will certify this decision to the Commissioner of Patents as required by law. Reversed.

Court of Appeals of the District of Columbia.

MCARTHUR *v.* MYGATT.

Decided June 2, 1908.

INTERFERENCE—REDUCTION TO PRACTICE—DILIGENCE.

Where the appellant established conception and disclosure of the invention in the summer of 1903, but took no steps toward reducing the invention to practice until April 21, 1904, when he instructed his attorney to prepare an application for patent, which was not, however, filed until September 19, 1904, while his opponents entered the field on March 1, 1904, and in excuse of his lack of diligence urged that his financial condition was such that it was impossible for him to reduce the invention to practice earlier, but the testimony showed that in the meantime he had enlarged his business and that his gross income amounted to about two hundred dollars a month, *Held* that the showing is insufficient to excuse the appellant's lack of diligence.

Mr. Vernon M. Dorsey and *Mr. Thos. Ewing, Jr.*, for the appellant.

Mr. F. B. Brock for the appellee.

VAN ORSDEL, *J.*:

This is an appeal from a decision of the Commissioner of Patents in an interference proceeding affirming the decision of the Board of Examiners-in-Chief, which, in turn, affirmed the decision of the Examiner of Interferences, awarding priority of invention to appellee.

The invention involved in this controversy is a combined lamp-shade and reflector, and is embraced in the following counts:

1. A shade and reflector composed of a single piece of glass and having a neck for engaging the walls of a chimney or electric bulb, the inside of said reflector being smooth, the outer surface of said reflector being substantially covered with series of integral prisms calculated to reflect the light-rays back into the reflector and out at the open mouth thereof, those of one series being raised in step-like formation above those of the adjacent series.
2. A reflector composed of a single piece of glass having a smooth inside, and an exterior surface covered with a series of light-reflecting prisms, the different series being superimposed relatively above one another in step-like formation.
3. A reflector having series of reflecting-prisms disposed along its outer surface, those of one series being disposed along a curved surface and removed a suitable distance from the surface of disposition of the next adjacent series.

Appellee is the senior party, having filed his application on March 24, 1904. The application of appellant was not filed until September 19, 1904, but, through inadvertence, was allowed to eventuate into a patent on March 14, 1905. Appellee then amended his application by inserting claims (the counts of the issue) corresponding to certain claims in appellant's patent, and requested that an interference be declared. This was accordingly done. A motion was filed by appellant to dissolve the interference on the ground that appellee had no right to make the claims, and this motion was granted by the Primary Examiner. On appeal, the Board of Examiners-in-Chief reversed the decision.

Appellee testified that he conceived the invention in issue and made sketches thereof as early as September 30, 1903, but this is not corroborated. The testimony of Bartlett, attorney for appellee, however, clearly establishes that he received from the latter, on March 1, 1904, sketches disclosing the invention in issue, from which his application drawings and papers were prepared.

Appellant testified to conception in February, 1902, but no corroborating evidence was offered. It appears, however, that in July, 1903, he discussed with one Unger the invention in controversy and showed him a wooden pattern. Unger, upon being shown two sketches, (Exhibits Nos. 6 and 7,) which disclose the invention in issue, stated that he recognized Exhibit No. 7 as a sketch of the wooden pattern and that he saw something similar, either in wood or on paper, to Exhibit No. 6. The witness Lopez testified that appellant showed him a drawing (Exhibit No. 3) and a wooden model (Exhibit No. 4), which show the construction of the prisms one above the other, in August, 1903. Appellee has attempted to show by the testimony of the witness Lenshutz that the wooden model has been altered since the declaration of interference. It appears that this witness saw this model in February, 1903, and that he does not believe the lower cuts were on it at that time. However, even if the witness was correct in his statement, it does not follow that the model was not in its present condition when Lopez saw it in August, 1903. There is also

another set of prisms on this model, which are not referred to by the witness. The testimony of these two witnesses is deemed sufficient to establish conception and disclosure of the invention by appellant as early as the summer of 1903.

Appellant has, however, failed to establish a reduction to practice prior to the filing date of his application. Although the first to conceive, he was the last to reduce to practice; and, therefore, it is incumbent upon him to show diligence just before and subsequent to March 1, 1904, the date on which appellee entered the field, unless he can be excused because of poverty or other extenuating circumstances. Appellant admits taking no steps in this direction until April 21, 1904, when he gave his attorney instructions to prepare an application, which was accordingly done and the papers sent him a few days after the letter was written. The application, however, was not filed until September 19, 1904.

Appellant attempts to excuse his lack of diligence by the statement that he had intended to make molds and file papers at or about the time he made the wooden model in June, 1903, but his financial condition was such that it was impossible for him to reduce the invention to practice until, in September, 1904, he "cleaned up in gross sales about $1,000 in cash." It seems, however, from his own testimony, that he preferred to enlarge his old business rather than perfect his new invention. His gross income amounted to about $200 a month, and, in December, 1903, he acquired a second office at a monthly rental of $35. He also sought to excuse his delay by the fact that he was seriously embarrassed by the defaulting of one Wharton, an employee, but this did not occur until the summer (the month is not given) of 1904. This was after appellee's filing date. It must be held that this evidence does not excuse appellant's lack of diligence.

It is contended by counsel for appellant that there is no interference in fact. This matter has been determined by the tribunals of the Patent Office and with this conclusion we agree.

The decision of the Commissioner of Patents is affirmed, and the clerk is directed to certify these proceedings, as by law required. Affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 27, 1908.

George H. Taylor, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Frederick O. Hanson, of Springfield, Mass., and Holyoke, Mass., for registration of a trade-mark and a trade-mark registered to George H. Taylor, of 207 Monroe street, Chicago, Ill., and the notice of said declaration sent by the Patent Office by registered mail to the said George H. Taylor having been returned undelivered, notice is hereby given to the said George H. Taylor, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 25, 1908.

Douglas & Kingsland, their assigns or legal representatives, take notice:

An interference having b en declared by this Office between the application of Geo. H. Baker, of 48-52 Edwards street, New Haven, Conn., for registration of a trade-mark and a trade-mark registered to Douglas & Kingsland, of Middletown, Conn., and the notice of said declaration sent by registered mail to the said Douglas & Kingsland having been returned undelivered, notice is hereby given to the said Douglas & Kingsland, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 6, 1908.

Mayer Brothers & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of B. Fischer & Company, of 371-375 Greenwich street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Mayer Brothers & Company, of New York, N. Y., and the notice of said declaration sent by registered mail to the said Mayer Brothers & Company having been returned undelivered, notice is hereby given to the said Mayer Brothers & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 6, 1908.

Iler and Burgweger, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Yonkers Brewery, of Yonkers, N. Y., for registration of a trade-mark and a trade-mark registered to Iler and Burgweger, of Kansas City, Mo., and the notice of said declaration sent by registered mail to the said Iler and Burgweger having been returned undelivered, notice is hereby given to the said Iler and Burgweger, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 4, 1908.

Francis H. Reinhard, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Baird Bros. & Company, of 1435-1437 Tenth street northwest, Cleveland, Ohio, for registration of a trade-mark, a trade-mark registered to Searle & Son, of Rockford, Ill., and a trade-mark registered to Francis H. Reinhard, of 143 Maiden Lane, New York, N. Y., and the notice of said declaration sent by registered mail to the said Francis H. Reinhard having been returned undelivered, notice is hereby given to the said Francis H. Reinhard, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

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Patents	479	No. 899,016 to No. 899,494, inclusive.
Designs	32	No. 39,552 to No. 39,583, inclusive.
Trade-Marks	63	No. 70,635 to No. 70,697, inclusive.
Labels	15	No. 14,359 to No. 14,373, inclusive.
Prints	5	No. 2,346 to No. 2,350, inclusive.
Reissues	3	No. 12,855 to No. 12,857, inclusive.
Total	597	

TO CITIZENS OF THE UNITED STATES.

State.	Patents and Designs.	Trade-Marks, Labels, and Prints.	State.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	.....	New Hampshire	2	.....
Alaska, District of	2	.....	New Jersey	20	2
Arizona Territory	.....	.....	New Mexico Ter't'y	.....	.....
Arkansas	.....	.....	New York	67	32
California	17	3	North Carolina	1	1
Colorado	9	.....	North Dakota	3	.....
Connecticut	9	1	Ohio	34	6
Delaware	.....	.....	Oklahoma	.....	.....
District of Columbia	6	.....	Oregon	4	1
Florida	2	.....	Panama	.....	.....
Georgia	4	.....	Pennsylvania	48	5
Hawaii Territory	1	.....	Philippine Islands	.....	.....
Idaho	.....	.....	Rhode Island	3	.....
Illinois	45	5	South Carolina	.....	.....
Indiana	13	2	South Dakota	.....	.....
Iowa	12	1	Tennessee	8	2
Kansas	9	.....	Texas	3	.....
Kentucky	5	.....	Utah	1	.....
Louisiana	1	1	Vermont	1	1
Maine	4	1	Virginia	5	.....
Maryland	4	2	Washington	5	.....
Massachusetts	36	1	West Virginia	.....	.....
Michigan	17	1	Wisconsin	11	1
Minnesota	16	1	Wyoming	1	.....
Mississippi	.....	.....	U. S. Army	.....	.....
Missouri	17	2	U. S. Navy	.....	.....
Montana	1	.....			
Nebraska	8	1	Total to citizens of the United States	459	73
Nevada	1	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Algeria	.....	.....	Natal	.....	.....
Austria-Hungary	3	1	Netherlands	1	.....
Belgium	.....	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	.....	.....
British West Indies	.....	.....	New Zealand	.....	.....
Canada	4	.....	Norway	.....	1
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	1	.....
China	.....	.....	Roumania	1	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	1	.....	Scotland	1	.....
Denmark	1	1	South Australia	.....	.....
Ecuador	.....	.....	Spain	.....	.....
England	15	2	Sweden	3	.....
France	4	4	Switzerland	2	.....
Germany	12	1	Transvaal, South Africa	1	.....
Haiti	.....	.....	Victoria	1	.....
Ireland	.....	.....	Western Australia	.....	.....
Italy	.....	.....			
Japan	1	.....	Total to citizens of foreign countries	52	10
Java	.....	.....			
Mexico	.....	.....			

Amendment to Rules of the Court of Appeals of the District of Columbia.

The following amendment to the rules of the Court of Appeals of the District of Columbia is published for the information of those practicing before that court.

EDWARD B. MOORE,
Commissioner of Patents.

It is ordered that section 3 of Rule VIII of this court be, and is hereby, amended by adding thereto the following paragraph:

(4) Whenever a decision of this court, that has been published in the official reports of the Court, shall be cited in a brief, the reference shall include the volume and page of the report wherein the same has been published.

This rule shall take effect on the first Tuesday in October, 1908, and apply to all cases submitted for hearing thereafter.

By the COURT,
June 9, 1908.

Test:

HENRY W. HODGES, *Clerk.*

Promulgated June 9, 1908.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business September 15, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Aug. 28	Aug. 17	180
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Aug. 26	May 18	818
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Aug. 21	July 15	275
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Aug. 12	July 7	192
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors, Pumps; Sewerage.	Aug. 12	July 6	233
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Aug. 11	June 18	238
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Aug. 11	May 18	503
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Aug. 5	July 21	456
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Aug. 4	Apr. 6	663
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	July 30	June 29	413
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	July 30	June 25	668
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	July 29	Apr. 11	574
125	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	July 27	Mar. 9	742
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	July 23	June 2	349
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	July 22	June 20	526
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	July 22	Apr. 24	683
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Masonry and Concrete Structures; Tents, Canopies, Umbrellas, and Canes.	July 20	June 2	530
167	V. Bookbinding; Harvesters; Jewelry; Music.	July 16	Apr. 29	508
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	July 15	June 15	582
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	July 14	June 10	468
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	July 14	May 2	553
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	July 13	June 4	522
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	July 13	June 3	482
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	July 11	June 29	672
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	July 8	May 1	399
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	July 3	June 19	676
332	X. Carriages and Wagons	July 2	June 17	626
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	July 1	June 27	792
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	June 26	May 6	728
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	June 23	June 23	562
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	June 17	June 1	408
321	XXXIX. Baths and Closets; Water Distribution.	June 17	Apr. 2	831
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	June 16	May 22	680
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	June 15	May 15	641
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	June 8	Apr. 22	549
109	XVI. Telegraphy; Telephony	June 8	Apr. 15	545
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	June 6	Mar. 23	775
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	June 5	May 4	827
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	May 14	Apr. 30	774
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	May 7	Mar. 5	528
238	XIX. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	May 2	May 23	471

Total number of applications awaiting action 22,602

161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks	Sept. 8	Aug. 14	791
	Designs	Sept. 5	July 13	123
	Labels and Prints	Sept. 10	Sept. 8	37

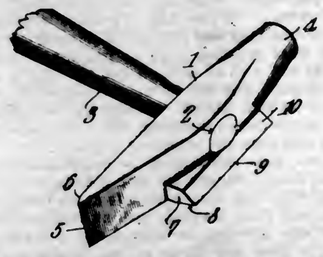
Printed Copies of Patents.

A printed copy of the complete specification and drawings of any patent published herein can be obtained for five cents.

PATENTS

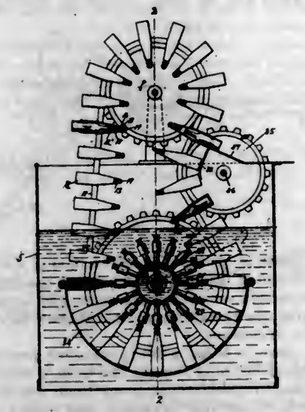
GRANTED SEPTEMBER 22, 1908.

899,016. ROOFING-TOOL. ALVA ALLEN, North English, Iowa. Filed Dec. 5, 1907. Serial No. 405,248.



A roofing tool comprising a hammer head consisting of a nose, a butt, and a handle receiving eye, and a wing integral with the head and adjacent the eye, said wing being wedge-shaped in transverse section and having opposite faces converging to form a straight edge extending longitudinally of the head, one of said converging faces merging into one side face of the head but inclined thereto and the other converging face extending to the eye opening, and the ends of the wing being parallel to each other and perpendicular to the straight edge, said ends constituting striking faces.

899,017. BOTTLE-SOAKING MACHINE. GARFIELD J. ARNOLD, Chicago, Ill., assignor, by direct and mesne assignments, of one-half to said Arnold and one-half to Charles L. Bastian, Chicago, Ill. Filed Feb. 4, 1907. Serial No. 355,605.



1. In a bottle soaking machine, the combination of a liquid tank, a bottle carrier operating in the tank to fill the bottles with the tank liquid by submersion, and means for injecting jets of liquid into the bottles while they are full of the tank liquid.

2. In a bottle soaking machine, the combination of a liquid tank, a bottle carrier operating in the tank to fill the bottles with the tank liquid by submersion, and means for injecting jets of liquid into the bottles while they are submerged and are full of the tank liquid.

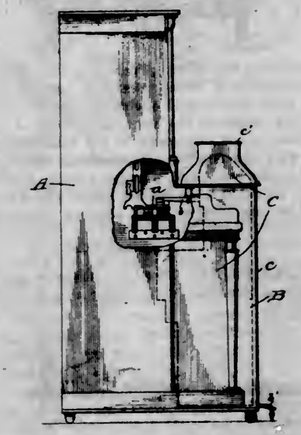
3. In a bottle soaking machine, the combination of a liquid tank, a bottle carrier operating in the tank to fill the bottles with the tank liquid by submersion, said bottles remaining open constantly to permit the free ingress and egress of liquid, and means for injecting jets of liquid into the bottles while they are full of the tank liquid.

4. In a bottle soaking machine, the combination of a liquid tank, a bottle carrier operating in the tank to fill the bottles with the tank liquid by submersion, a distributing pipe for each row of bottles, a revoluble drum in the tank, means for filling the drum with liquid under pressure, radial tubes carried by the drum, and valves on said tubes adapted to be automatically opened after the bottles are submerged in the tank liquid to permit the discharge of liquid from the drum into the distributing pipes and bottles while the latter are full of the tank liquid.

5. In a bottle soaking machine, the combination of a liquid tank, a bottle carrier operating in the tank to fill the bottles with the tank liquid by submersion, a distributing pipe for each row of bottles, injector tubes on said pipe to enter the bottles, a nipple on the pipe, a revoluble drum in the tank, means for filling the drum with liquid under pressure, radial tubes carried by the drum, and valves on said tubes adapted to be automatically operated by engagement of the nipples therewith to permit the discharge of liquid from the drum into the bottles.

[Claims 6 and 7 not printed in the Gazette.]

899,018. PLAYER-PIANO. GEORGE A. BAKER, Jr., Chicago, Ill., assignor to Mattie J. Baker, Chicago, Ill. Filed Mar. 2, 1906. Serial No. 303,879.



1. A player-piano comprising a piano and a player, the piano having a casing from the front portion of which the

player is removable by itself as a unit, said player provided with an interior and horizontal set of rearwardly projecting fingers, said fingers all disposed in one level, each finger adapted to strike downward from its normal position in the said level, and an interior row of members for communicating the downward movements of said fingers to the piano action, said members disposed below the depressible rear ends of said fingers.

2. A player-piano comprising a piano and a player, the piano having a casing in front of which said player is disposed as a unit, said player provided with an interior and horizontal set of rearwardly projecting fingers, said fingers all disposed in the same level, each finger adapted to strike downward from its normal position in the said level, and interior means for communicating the downward movements of said fingers to the piano-action, said means disposed below the depressible rear ends of said fingers.

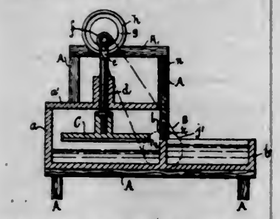
3. A player-piano comprising a piano and a casing provided with a chamber in the front portion thereof, a keyboardless action for said piano, a player mechanism disposed in said chamber and provided with a set of rearwardly and downwardly acting fingers, and means by which the downward strokes of said fingers are communicated to said action.

4. A player-piano comprising a piano and a casing provided with a chamber in the lower front portion thereof, a keyboardless action for said piano, a unitary player mechanism disposed in said chamber and provided with actuating devices at the rear thereof, and means disposed in a horizontal row to connect the said devices with the lower part of said piano action.

5. A player-piano comprising a piano and a casing provided with a chamber in the front portion thereof, a keyboardless action in said piano, a unitary player mechanism disposed in said chamber and constituting the sole means for operating said action, and means at the rear of said mechanism for actuating said piano action.

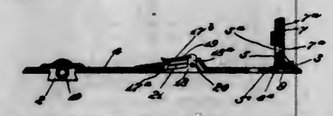
[Claims 6 to 17 not printed in the Gazette.]

899,019. APPARATUS FOR THE PRODUCTION OF PROCESS PRINTING-PLATES. HARRY G. BARTHOLOMEW and HERBERT M. BUSSY, London, England. Filed Sept. 10, 1907. Serial No. 392,243.



An apparatus for etching half tone or other printing plates comprising a closed chamber having an opening therein, a door closing said opening, a vessel adjacent said chamber and opposite the opening therein, a plunger in said chamber, a rod connected to the said plunger, a cam engaging with the rod for reciprocating the same, means for rotating the cam, said plunger having a recess in its under face provided with beveled edges and a plate carrying frame having beveled edges adapted to engage in said recess.

899,020. GUN-SIGHT. JOHN Y. BASSELL and FRED C. BLENKNER, Columbus, Ohio. Filed Aug. 2, 1907. Serial No. 386,700.



1. A gun sight comprising, in combination, a pivoted sight leaf, a rotatable member thereon provided with sighting openings of various sizes the sighting centers of which are located equally distant from the axis of rotation of the rotatable member, said sight leaf having extending therefrom a member having a sight notch, a plate to support the pivoted sight leaf, and means for adjusting said plate laterally with reference to the barrel to provide for windage, and means for raising and lowering said leaf and its pivotal connection.

2. A gun sight comprising, in combination, a spring plate provided at its rear end with a suitable sighting device, and at its forward end with means for attaching it to a barrel, said plate provided with an inclined surface at its under side, a wedge having a continuously straight edge to work between said plate and the barrel and located to coöperate with said inclined surface of the plate, and a cam device carried by said wedge and movable with reference thereto to fix the wedge in adjusted position with reference to said plate for the purpose explained.

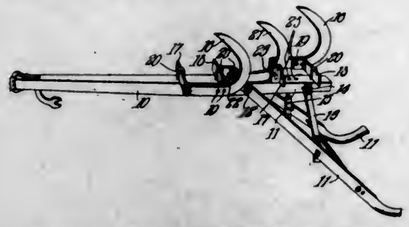
3. A gun sight comprising, in combination, a spring plate provided at its rear with a suitable sighting device, means for attaching said plate at its forward end to a barrel, said plate provided with an inclined surface at its under side and with an inclined slot, a wedge to work between the plate and the barrel and located to coöperate with said inclined surface whereby the elevation of the sighting device can be regulated, and a pin connecting said wedge to said plate and extending into said slot.

4. A gun sight comprising, in combination, a spring plate provided at its rear end with a suitable sighting device, means for attaching said plate at its forward end to a barrel, said plate provided with an inclined surface at its under side and with an inclined slot, a wedge to work between the plate and the barrel and located to coöperate with said inclined surface whereby the elevation of the sighting device can be regulated, a pin connecting said wedge to said plate and extending into said slot, and a scale on said plate, said pin provided with an indicator to indicate the elevation of said sighting device.

5. A gun sight comprising, in combination, a spring plate provided at its rear end with a suitable sighting device, means for attaching said plate at its forward end to a barrel, a wedge device to work between said plate and the barrel whereby elevation of the sighting device may be regulated, and means for adjusting said plate on its attaching means laterally with reference to the barrel to compensate for windage.

[Claim 6 not printed in the Gazette.]

899,021. PLOW. WILLIAM C. BAYLESS, Jefferson City, Tenn. Filed Feb. 25, 1908. Serial No. 417,734.



1. In a plow, a beam, a standard having two parallel portions extending longitudinally beneath the beam, and a transverse portion connecting the same, and a single hook bolt engaging the transverse portion of and securing said standard to said beam.

2. In a plow, a beam, a front standard provided with arms extending laterally beneath the beam, a second standard held longitudinally beneath the beam and in contact with an arm of the first standard, and means to secure said standards to said beam.

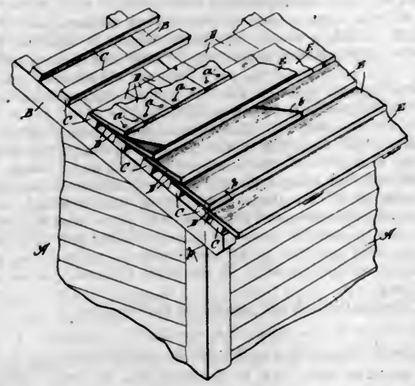
3. In a plow, a beam, a standard provided with arms extending laterally beneath the beam, a hook bolt engaging each of said arms, a second standard having two parallel portions extending longitudinally beneath the beam and a transverse portion connecting the same, said standard being held in contact with the first standard, and a single hook bolt engaging the transverse portion of the second standard.

4. In a plow, a beam, a pair of spaced standards arranged on opposite sides of the beam each provided with a pair of lateral arms extending transversely beneath the beam, an intermediate standard arranged longitudinally beneath said beam and in contact with the adjacent arms of the pair of standards, and means to secure said standards to the beam in continuous braced relation.

5. In a plow, a beam, a pair of spaced standards arranged on opposite sides of said beam each provided with a pair of lateral arms extending transversely beneath said beam, a hook bolt engaging each of said arms, an intermediate standard arranged longitudinally beneath said beam and in contact with the adjacent arms of the said pair of standards, and a single hook bolt held to secure said intermediate standard to said beam, in continuous braced relation to the pair of standards.

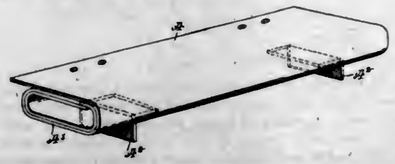
[Claim 6 not printed in the Gazette.]

899,022. ROOF. JENS C. P. BENSON, Chicago, Ill. Filed Nov. 29, 1907. Serial No. 404,273.



In a roof, the combination with rows of shingles, and supports for the same, of a series of flexible strips, each strip extending at one edge beneath the butt ends of one row of shingles and being secured in place at said edge by nails passing through said shingles and the strip into one of said supports, said strip being bent or turned around said shingle-ends and covering said securing nails, and having its other edge extended beneath the flexible strip that covers the next adjacent row of shingles.

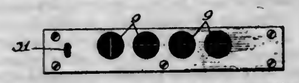
899,023. RAILROAD-TIE. ROBERT L. BOWER, Blandburg, Pa. Filed May 28, 1907. Serial No. 376,094.



1. A railroad tie made of a piece of sheet metal rolled up to form a tube, the outermost convolution of the rolled up tube having integral transverse projections for embedment in the road-bed.

2. A railroad tie made of a piece of sheet metal rolled up to form a tube, the outermost convolution of the said rolled up tie having integral struck-up lugs extending transversely of the tie for embedment in the road-bed.

899,024. PARTY-LINE-INDICATING KEY. CLIFFORD C. BRADBURY, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 3, 1907. Serial No. 386,897.



1. In an operator's indicating key, a plurality of switch actuating buttons, each button having a normal unactuating position, a depressed actuating position and a partially rotated unactuating indicating position, substantially as described.

2. In an operator's indicating key, the combination with a suitable frame, of a plurality of reciprocating switch actuating buttons supported by the frame, each button being adapted to rotate to an indicating position after it has been depressed and released, substantially as described.

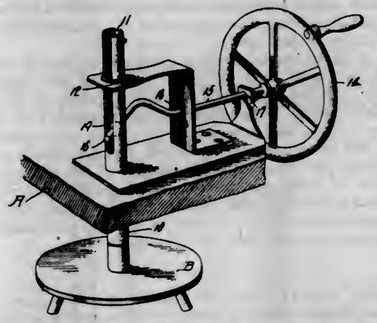
3. In an operator's indicating key, the combination with a plurality of sets of switch springs, of a vertically reciprocating button for actuating each set, and means to indicate the last button depressed by the angular position of the buttons upon their reciprocating axis, substantially as described.

4. In an operator's indicating key, the combination with a plurality of sets of switch springs, of a plurality of actuating buttons, one for each set of springs, each button having a reciprocating movement for the actuation of the springs and a rotary movement for indicating purposes, substantially as described.

5. In an operator's indicating key, the combination with a plurality of sets of switch springs, a plurality of buttons, each adapted to be depressed to individually actuate its associated set of switch springs, said buttons having normally a symmetrical appearance, and means to rotate the button last depressed out of its symmetrical position with respect to the other buttons, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

899,025. MECHANICAL MOVEMENT FOR WASHING-MACHINES. GEORGE W. BREWER and JOHN K. GIBSON, Clay Center, Nebr. Filed Jan. 30, 1908. Serial No. 413,438.



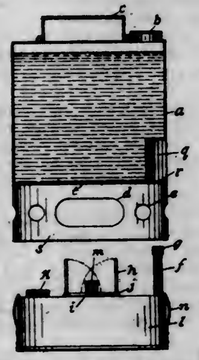
1. In a mechanical movement of the class specified, the combination of a driving shaft having an angularly disposed portion, a driven shaft disposed at an angle to the aforesaid shaft and guided for longitudinal and rotary motions, the said driven shaft being hollow and slitted, the slit of the said shaft receiving therein the angular portion of the driving shaft, and means mounted upon the said angular portion of the driving shaft to prevent longitudinal movement of the driving shaft.

2. In a mechanical movement of the class specified, the combination of a driving shaft having an angularly disposed portion, a driven shaft disposed at an angle to the driving shaft, guides for supporting said driven shaft for reciprocation and rotation, the said vertical shaft receiv-

ing the angularly disposed portion of the driving shaft therethrough, and means journaled on the driving shaft and coöperating with the driven shaft whereby the driving shaft is prevented from longitudinal movement.

3. In combination, a hollow vertical beater shaft diametrically slitted at its upper end, guides for supporting said shaft for rotation and vertical reciprocation, a horizontally disposed driving shaft having an angularly disposed goose neck received in the aforesaid slit, a ball mounted for rotation on the goose neck and substantially fitting the interior of said hollow shaft, and means to prevent longitudinal movement of the ball on the goose neck, substantially as specified.

899,026. LUNCH-HEATER. CORNELIUS C. BURRN, Waterloo, Iowa, assignor of one-fourth to Quigg F. Robinson and one-fourth to Roy R. Robinson, Waterloo, Iowa. Filed Mar. 25, 1907. Serial No. 364,262.



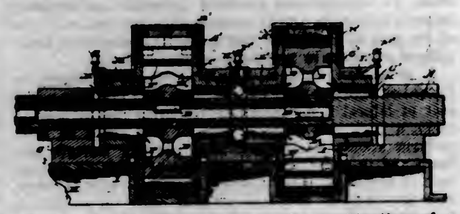
1. A lunch-heater, comprising the combination with a lamp-bowl, said bowl having a projecting and communicating tube provided with means for closing it, of a receptacle having a depending sleeve supplied with ventilating orifices and adapted to fit closely and removably over said bowl, and said receptacle and said sleeve having a passage extending from the interior of the sleeve to the exterior of the receptacle adapted to receive and contain the said projecting tube, and means for removably securing said sleeve to said bowl.

2. A lunch-heater, comprising the combination with a lamp-bowl, said bowl having a projecting and communicating tube provided with means for closing it, of a receptacle having a depending sleeve supplied with ventilating orifices and adapted to fit closely and removably over said bowl, and said receptacle and said sleeve having a passage extending from the interior of the sleeve to the exterior of the receptacle adapted to receive and contain the said projecting tube, means for spacing said receptacle a certain distance apart from said bowl, and means for removably securing said sleeve to said bowl.

899,027. ROTARY AIR-COMPRESSOR. GEORGE F. BURTON, Woodlawn, Ala., assignor of one-fourth to Le Roy A. Christian, Woodlawn, Ala. Filed June 3, 1907. Serial No. 377,093.

1. In a rotary air compressor, the combination of a shaft, a disk concentric therewith, a cylinder eccentric thereto, a piston fixed to one of said parts and slidably and pivotally connected with the other, packing boxes on said disk consisting of two plates K and L, and a third plate M slidingly joining said plates K and L, means permitting the pressure to be balanced on the outer surfaces of said boxes and means to admit air to said cylinder, substantially as described.

2. In a rotary air compressor, the combination of a rotary shaft, a rotary disk concentric therewith, a rotary cylinder eccentric thereto, a piston fixed to one of said parts and slidably and pivotally connected with the other, packing boxes on said disk consisting of a plurality of plates and provided with flanges, rings P, engaging said flanges, springs to press said rings outward, openings Q, in said disk permitting the pressure to be balanced on the outer surfaces of said boxes, and means to admit air to said cylinder, substantially as described.



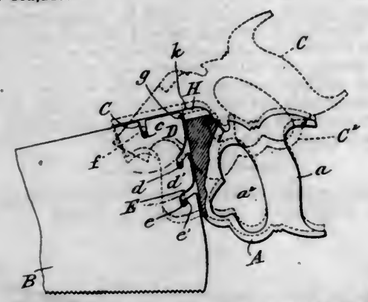
3. In a rotary air compressor, the combination of a shaft, a disk concentric therewith, a rotary cylinder eccentric thereto, a piston fixed to said cylinder and slidably and pivotally attached to said disk, means to admit air to said cylinder, means to permit the air to escape from said cylinder after a predetermined pressure has been attained, and a water jacket open to the atmosphere surrounding said cylinder, substantially as described.

4. In a rotary air compressor, the combination of a shaft, a disk, a rotary cylinder eccentric to said shaft, a piston permanently connected to said disk and cylinder, air inlet ports, a spring-controlled air outlet port, and a water jacket open to the atmosphere surrounding said cylinder, substantially as described.

5. In a rotary air compressor, the combination of a shaft, a disk rigidly attached thereto and concentric therewith, a rotary cylinder eccentric thereto, and a series of packing-boxes around the periphery of said disk, each box consisting of two plates and a third plate slidingly connecting said two plates together, said boxes provided with springs to radially press the same outward, said disk provided with openings Q, for permitting the pressure on the outside of said boxes to be balanced, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

899,028. DETACHABLE SAW-HANDLE. THOMAS P. J. COLEMAN, New York, N. Y. Filed Nov. 14, 1907. Serial No. 402,111.



1. In a device of the class described, a saw blade having a transverse slot in its back edge and a plurality of curved slots opening through its rear end edge, each of said curved slots being struck from a center positioned near the lower end of said transverse slot, a handle provided with studs adapted to enter the curved slots and the transverse slot, whereby the blade and the handle are fitted into interlocking relation by a swinging movement of one part relative to the other part, a notch in the saw blade, and an automatic locking mechanism normally occupying a fixed position on the handle and adapted for engagement with said notch for locking said blade and handle against relative movement.

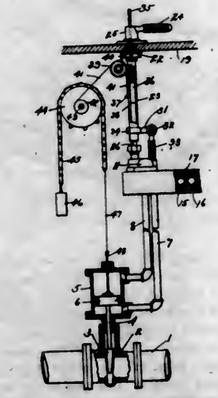
2. In a device of the class described, a saw blade having a transverse slot in its back edge and a plurality of curved slots opening through its rear end edge, each of said curved slots being struck from a center positioned near the lower end of said transverse slot, and each slot having a downwardly extending portion offset to the curved portion thereof, a handle provided with studs adapted to enter the transverse and curved slots, whereby the blade and the handle are assembled into interlocking engagement by a swinging movement and by a subsequent sliding movement of one part relative to the other part, a notch in the saw blade, and an automatic locking mechanism having a supporting member which occupies normally a fixed position on the handle, said locking mechanism being positioned for engagement with the notch and operating to lock the handle and the blade from relative movement.

3. In a device of the class described, a handle provided with a kerf and with a groove, the latter being dovetailed in cross section, a blade occupying said kerf of the handle, a casing fitted snugly in said dovetailed groove of the handle, means for securing the casing fixedly in position in the handle, and a locking member supported in the casing and interlocking with the blade.

4. In a device of the class described, a handle provided with a kerf and with a groove, the latter being dovetailed in cross section, a slotted blade occupying said kerf, locking means fixed in the handle and engaging the slots in the blade, a casing occupying the groove in the handle, means for securing the casing fixedly in position, and locking mechanism coöperating with said casing for securing the blade to the handle.

5. In a device of the class described, a handle provided with a saw blade kerf and with a groove which opens into said kerf, said groove being dovetailed in cross section, a slotted blade in said kerf, locking members in the handle and engaging the slots of the blade, a casing fitting snugly in the groove of the handle, means for securing the casing from lengthwise movement, and a spring-actuated locking member held in said casing and adapted for engagement with said blade.

899,029. VALVE-POSITION CONTROLLING AND INDICATOR DEVICE. FREDERICK N. CONNET, Providence, R. I., assignor to Builders Iron Foundry, Providence, R. I., a Corporation. Filed Jan. 8, 1907. Serial No. 350,623.



1. In a device of the character described, the combination of an automatically operated main valve, an auxiliary valve for controlling the action of said main valve, a shaft by means of which said auxiliary valve is moved, and means in said shaft for indicating the opening through said main valve.

2. In a device of the character described, the combination of a hydraulically operated main valve, a valve auxiliary to said main valve, a shaft through which said auxiliary valve is moved, and mechanically actuated means in said shaft for indicating the opening through said main valve.

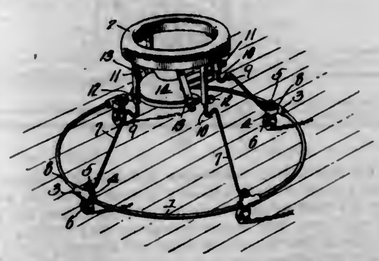
3. In a device of the character described, the combination of a hydraulically operated main valve, a valve auxiliary to said main valve, a hollow stem by which said auxiliary valve may be moved, and means in said stem for indicating the opening through said main valve.

4. In a device of the character described, the combination of a hydraulically operated main valve, a valve auxiliary to said main valve, a hollow stem by which said auxiliary valve may be moved, and mechanically actuated means in said stem for indicating the opening through said main valve.

5. In a device of the character described the combination of a hydraulically operated main valve, a valve auxiliary to said main valve, a hollow stem by which said auxiliary valve is moved, a graduated spindle in said stem, and means for moving said spindle in said stem to indicate the position of said main valve.

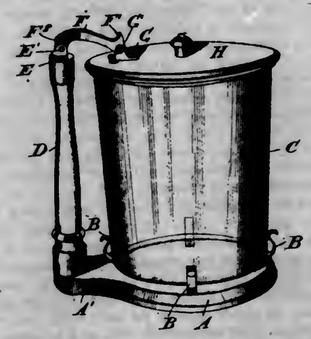
[Claims 6 to 10 not printed in the Gazette.]

899,030. BABY-WALKER. MILTON S. DAVIS, Muncie, Ind. Filed Nov. 6, 1907. Serial No. 400,967.



A device of the kind described comprising a base ring, an upper ring, castings carried by the base ring, bosses formed on said castings, casters having threaded shanks passing through said bosses, supporting rods detachably secured at their upper ends to the upper ring and having their lower ends bent around the caster shanks, and nuts working upon said shanks and binding supporting rods and the casters to the base ring.

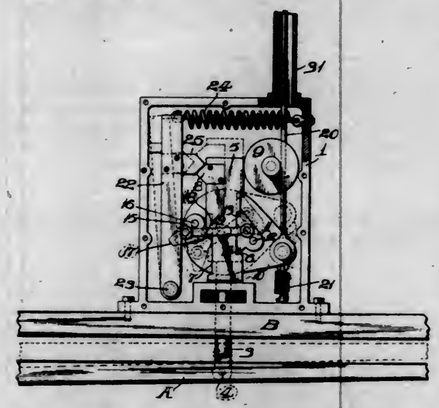
899,031. JAR AND COVER HOLDER. ISAAC N. DAVIS, Wyalusing, Pa., assignor of one-half to Fisher Welles, Wyalusing, Pa. Filed Feb. 26, 1907. Serial No. 359,328.



A jar and cover holder comprising a circular base provided with an outwardly projecting portion, spring clips arranged on said base for supporting and holding a jar a standard secured on the outwardly projecting portion of the base, a plate secured on the upper end of said standard provided with vertical spaced apertured ears, a pin

secured in said ears, a curved arm mounted on said pin, a cover provided with spaced apertured ears pivotally connected to the free end of said arm, and a shoulder formed on said arm adapted to engage the plate carried by the standard so as to hold the arm up in a vertical position.

899,032. ALTERNATING MECHANISM FOR OPERATING RAILWAY-SWITCHES OR OTHER DEVICES. MARK A. DEES, St. Louis, Mo. Filed Oct. 16, 1907. Serial No. 397,619.



1. An alternating mechanism comprising a throw rod having a head, a lever adjacent to said throw rod across which the head of the throw rod extends, means for actuating said lever, and means carried by said lever on opposite sides of the throw rod head for engaging the latter whereby said throw rod may be alternately shifted first in one direction and then in an opposite direction, substantially as set forth.

2. An alternating mechanism comprising a throw rod having a head, a lever adjacent to said throw rod across which the head of the throw rod extends, means for actuating said lever in one direction, means for retracting said lever, and means carried by said lever on opposite sides of the throw rod head for engaging the latter whereby said throw rod may be alternately shifted first in one direction and then in an opposite direction, substantially as set forth.

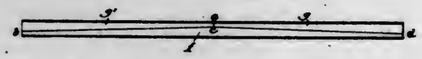
3. An alternating mechanism comprising a throw rod having a head, a lever adjacent to said throw rod across which the head of the throw rod extends, means for actuating said lever, and a pair of pawls carried by said lever on opposite sides of the throw rod head and one of which is adapted to engage the throw rod head so as to move said throw rod in one direction and the other of which is adapted to move said throw rod reversely relative to the first mentioned movement, substantially as set forth.

4. An alternating mechanism comprising a throw rod, a lever adjacent to said throw rod, a pair of pawls carried by said lever and adapted to impart movement to said throw rod first in one direction and then in an opposite direction, and a connection between said pawls whereby one of the pawls is thrown into engagement with said throw rod while the other pawl is thrown out of engagement with said throw rod, substantially as set forth.

5. An alternating mechanism comprising a throw rod, a lever adjacent to said throw rod, means for actuating said lever, a pair of pawls carried by said lever and arranged for engagement with said throw rod, and a connection between said pawls; said pawls being provided with heels for impingement against said throw rod whereby when one of the pawls is moved out of engagement with said throw rod, the other pawl is moved into engagement with said throw rod, substantially as set forth.

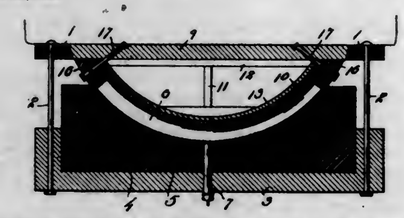
[Claims 6 to 9 not printed in the Gazette.]

899,033. STRUCTURAL METAL PART. ETHAN I. DODDS, Avalon, Pa., assignor to Pressed Steel Car Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Feb. 13, 1904. Serial No. 193,421.



A blank for a structural metal part composed of a channel beam slit or cut in a longitudinal direction from each end at points near one edge of the beam upwardly to a central point near the opposite edge of said beam and slit or cut transversely of the beam from the near edge to said central point.

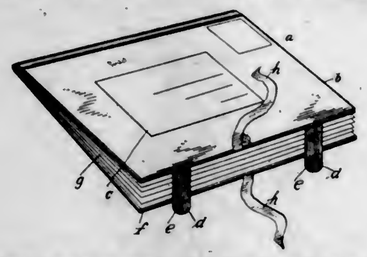
899,034. CAR-SEAT CUSHION. JAMES J. DOWNEY, Gloucester, Mass. Filed July 11, 1907. Serial No. 383,265.



1. In a device of the character described, the combination of a block having a recess in a face, an inflatable tube within the recess, a seat, a member depending from the seat resting on the tube, and blocks carried by the seat contacting with the ends of the tube.

2. In a device of the character described, the combination of a block of yielding material having a recess in a face, an inflatable tube within the recess, a seat, a member depending from the seat resting on the tube, and blocks of yielding material carried by the seat contacting with the ends of the tube.

899,035. LETTER-BOOK. RAYMOND A. DUNN, Stinesville, Ind. Filed Nov. 9, 1907. Serial No. 401,874.



A letter book consisting of a cover having two sides formed by folding the cover; letter sheets inserted between said sides; sealing tabs one end of each of which is attached to the inner face of one side of said cover and the other end of each of which is adapted to be folded inwardly around an edge of said letter sheets and to be pasted to the inner face of the other side of said cover with the fold lying within the edges of said cover for protection against tearing; and ribbons fastened to each of the sides of said cover and adapted to be tied together.

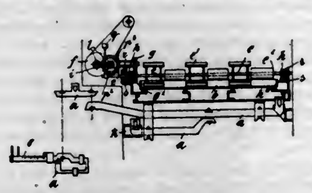
899,036. GARMENT-CREASER. GEORGE L. EDGERTON, Goldsboro, N. C. Filed May 17, 1907, Serial No. 374,193. Renewed July 14, 1908. Serial No. 443,512.

1. A garment creaser comprising a pair of strips, and a hinge member forming a loose connection to permit free folding and unfolding of the strips, the ends of said hinge member being continued to form a spring clamp movable over the strips to force the same firmly together.



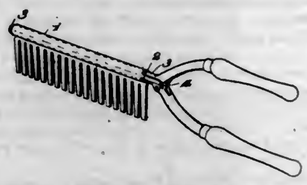
2. A garment creaser comprising a pair of strips having alined openings, and a combined hinge and clamp member formed of spring wire, the central portion of the length of wire being bent into approximately U-shape, the wire being thence bent to form two arms at a right angle to the central portion, said arms being arranged on slightly convergent lines, and their terminals being outwardly curved.

899,037. APPARATUS FOR DRYING GREEN MALT. JOSEPH ELSNER, Berlin, and CURT GUTTWEIN, Aschersleben, Germany. Filed Jan. 25, 1907. Serial No. 354,146.



Apparatus for weighing green malt in the course of drying, comprising a weighing machine, a malt receptacle carried by the same, traveling, rotary malt agitating means located in the receptacle, and means for driving the same, substantially as described.

899,038. HAIR-DRYING COMB. THOMAS H. FURMAN, Denver, Colo. Filed Oct. 8, 1907. Serial No. 396,456.



1. A metallic comb having a hollow back adapted to receive a heated iron, said hollow back being longitudinally split to provide for contraction and expansion to adapt the back to receive heated irons varying in size.

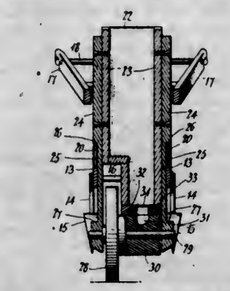
2. A metallic comb provided at one end with a spring clamp for securing the same to an iron or like device.

3. A metallic comb having a hollow back to receive an iron and having a spring clamp at one end of the hollow back and in line therewith to secure the comb upon the iron or like device.

4. A metallic comb having a hollow back longitudinally split throughout its length to enable the same to contract or expand and provided at one end with complemental spring clamp members whose outer terminals flare.

5. As a new article of manufacture, a comb formed of sheet metal having teeth along one end and having its opposite edge rolled to form a hollow back and having oppositely disposed spring clamp members in line with the back to secure the comb upon an iron or like device slipped into the space formed in the back of said comb.

899,039. SEED-PLANTER. WILLIAM T. GIBBS, Louisville, Ga. Filed May 9, 1908. Serial No. 431,975.



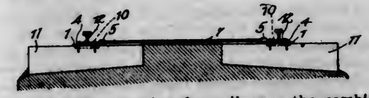
A corn planter, comprising in combination, a frame including spaced side sills; a pair of spaced parallel uprights mounted upon each sill; a hopper movable freely in a vertical plane and interposed between said pairs of uprights; a vertically-disposed slide secured to each side of said hopper and fitted between the adjacent pair of uprights, said slides extending above and below the sills and being cut away intermediate their ends to provide longitudinal seats adapted to receive said sills, for limiting the upward and downward movement of the hopper; an axle carried by the lower ends of said slides; and a ground wheel carried by the axle.

899,040. ROTARY ENGINE. JOHN GILL, Edinburgh, Scotland. Filed July 2, 1907. Serial No. 381,887.



In a rotary motive-power engine, the internal surface of the casing of which is composed of two opposite concentric circular arcs and two opposite involute curves as described, a piston blade of invariable length having one half of each of its edges shaped to fit the part of the involute curve at one side of the casing, which has the shortest radius of curvature, and the other half shaped to fit the similar part of the involute curve at the other side of the casing, substantially as described.

899,041. TRACK CONSTRUCTION FOR RAILWAYS. OSCAR B. GRANT, Davenport, Iowa. Filed Mar. 25, 1907. Serial No. 364,332.



1. In track construction for railways, the combination of two rows of tie blocks, one row under each of the rails

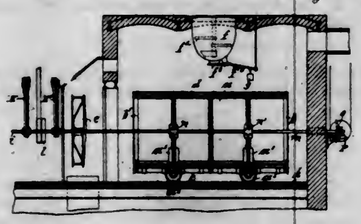
of the track, ballast under the tie blocks and between the inner ends thereof, a tie plate on each block under the rail thereon, spikes passing through each tie plate and engaging the rail thereon to secure the tie plate and rail to the block, tie rods connecting together the tie plates on opposite blocks to hold the track to gage, the lower faces of the blocks being inclined downwardly and outwardly so that water will flow away from the road bed.

2. In track construction for railways, the combination of two rows of short tie blocks, one row under each of the rails of the track, tie plates under the rails having spike holes for receiving the spikes which secure the track to the tie blocks, lugs extending from each tie plate and forming a groove, tie rods for engaging in the grooves of opposite tie plates, heads on the tie rods, and locking extensions on the lugs for engaging with the heads to lock the tie rods to the plates.

3. In track construction for railways, the combination of two rows of short tie blocks, one row under each of the rails of the track, metallic tie plates on each block under the rails having spike holes through which pass spikes which engage the rails, a set of vertical lugs on each tie plate forming a groove, a locking pocket formed at the inner end of each set of lugs, and a tie rod connecting together opposite tie plates, said tie rod engaging at its ends in the grooves and having heads for engaging in the locking pockets to lock the tie rods in place.

4. In track construction for railways, the combination of two rows of tie blocks, one row under each of the rails of the track, the upper faces of the tie blocks being in a horizontal plane, rails secured to the blocks, tie rods connecting together the rails and blocks, the lower faces of the blocks being inclined downwardly and outwardly, and ballast under and between the blocks.

899,042. APPARATUS FOR CUTTING UP SUPERPHOSPHATE MASSES. FRITZ GAIESEL, Schellmühl, near Dansig, Germany, assignor to Chemische Fabrik-Actien-Gesellschaft vormals Moritz Milch & Co., Zweigniederlassung Dansig, Danzig, Germany. Filed Apr. 26, 1907. Serial No. 370,465.

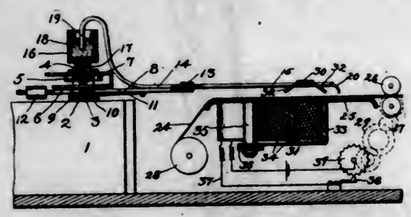


1. An improved apparatus for cutting up superphosphate masses comprising in combination a tank holding the mass, a horizontally disposed shaft journaled in supports outside and independent of said tank, a cutting device fixedly mounted upon said shaft and means for gradually advancing the cutting device and the tank towards each other.

2. An improved apparatus for cutting up superphosphate masses comprising in combination a tank holding the mass, a horizontally disposed shaft journaled in supports outside and independent of said tank, the extended center line of which shaft coincides with the center line of the tank, a cutting device fixedly mounted upon said shaft and means for gradually advancing the cutting device and the tank towards each other.

3. An improved apparatus for cutting up superphosphate masses comprising in combination a cylindrical tank holding the mass, said tank having a suitable top opening and a slot extending the whole length of the bottom, a removably attached cover for said tank, side covers also removably attached, a horizontally disposed shaft, journaled in supports outside and independent of said tank, the extended center line of which shaft coincides with the center line of the tank, a stationary cutting device fixedly mounted upon said shaft and means for gradually advancing the transportable tank towards the stationary cutting device.

899,043. RECORDING INSTRUMENT. JESSE HARRIS, La Fayette, Ind., assignor to Central Laboratory Supply Company, La Fayette, Ind., a Corporation of Indiana. Filed June 14, 1907. Serial No. 378,954.



1. A recording measuring instrument, comprising a system mounted for angular movement on an axis, an arm pivoted on said axis, angularly movable by said system laterally and movable upon said pivot in a direction substantially at right angles to said lateral movement, a reservoir for recording fluid, a tube secured to said arm and adapted to dip at one end into said reservoir out of contact therewith and movable by said arm in said reservoir, on an axis coinciding substantially with the axis of said system, said tube adapted to form at its other end a rigid extension to said arm, a pen attached to said tube to receive recording fluid therefrom, an armature attached to said extension, and a magnet in operative relation to said armature.

2. A recording instrument, comprising a reservoir for recording fluid, a pointer mounted for angular movement radially about a given axis, said pointer comprising a pen located at its end distant from said axis, and a tube connected to said pen to feed fluid thereto from said reservoir, said tube dipping into said reservoir in line with said axis and rotatable therein longitudinally about a continuation of said axis, the relative lateral motion between said tube and the fluid in said reservoir thereby becoming substantially zero.

3. A recording instrument, comprising a reservoir for the recording fluid, adjustably mounted to vary the feed of said fluid, a pointer mounted for angular movement radially about a given axis, said pointer comprising a pen located at its end distant from said axis, and a tube connected to said pen to feed fluid thereto, from said reservoir, said tube dipping into said reservoir in line with said axis and rotatable therein longitudinally about a continuation of said axis, the relative lateral motion between said tube and the fluid in said reservoir thereby becoming substantially zero.

4. A recording instrument, comprising the moving system of a measuring instrument, a reservoir for recording fluid, a pointer mounted for angular movement radially about a given axis by said system, said pointer comprising a pivoted arm, a tube carried by said arm and dipping into said reservoir in line with said axis and rotatable therein longitudinally about a continuation of said axis, the relative lateral motion between said tube and the fluid in said reservoir thereby becoming substantially zero, and a pen connected to the end of said tube distant from said reservoir.

5. A recording instrument, comprising a moving system, a recording fluid containing reservoir, recording means movable by said system and comprising a recording point and fluid conducting means movable therewith relatively to said reservoir and adapted to convey fluid from said reservoir to said point, the said reservoir being supported independently of said recording means, and the said fluid conducting means dipping into the fluid in said reservoir substantially in line with the axis of the moving system so that the lateral movement of said fluid conducting means due to the movement of said system is zero within said fluid.

899,044. THERMOMETER-CASE. FRANK B. HART, Suisun City, Cal. Filed Oct. 4, 1907. Serial No. 395,890.



1. A thermometer case comprising an outer tube, an inner tube formed of hard, tenacious and coherent material, and having an inner surface conformed to fit closely against the thermometer when in position, and having therethrough capillary passages for conducting a liquid to said thermometer, said inner tube being screwed at the top within the outer tube, and the bottom of said inner tube being spaced from the bottom of the outer tube to provide a receptacle for a liquid, substantially as described.

2. A thermometer case formed to provide a receptacle for a liquid, also formed with an opening angular in cross section adapted to fit closely around an angular thermometer therein, also formed with capillary passages for conducting a liquid from said receptacle to the thermometer therein, in combination with a cap screwed on said case having a cylindrical inner surface, and an inner sleeve contained within the cap, and freely rotatable therewithin, having a cylindrical outer surface, and an opening angular in cross section conformed to fit closely around an angular thermometer, substantially as described.

3. A thermometer case formed to provide a receptacle for a liquid, also formed with angular inner surface adapted to fit closely around an angular thermometer therein, also formed with capillary passages for conducting a liquid from said receptacle to the thermometer therein, in combination with a cap screwed on said case having a cylindrical inner surface, and an outer sleeve contained within the cap, and freely rotatable therewithin, having a cylindrical outer surface, and an angular inner surface conformed to fit closely around an angular thermometer, said cap being provided with means for permanently retaining said sleeve within said cap, substantially as described.

899,045. SASH AND SCREEN FASTENER. WILLIAM O. HAYS, Roosevelt, Wash. Filed Apr. 20, 1907. Serial No. 369,338.

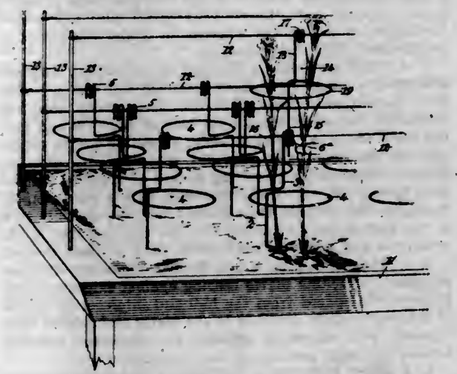


1. A fastener of the character described comprising a swinging latch which is provided at its free end with a laterally-directed arm having a T-head at the outer end of the arm and in substantial parallelism with the shank.

2. As an article of manufacture, a swinging latch having a shank provided at its free end with a laterally directed arm having a T-head at the outer end of the arm in substantial parallelism with the shank, the other end of the shank terminating in a segment having a pivot opening eccentric to the curved surface thereof.

3. A fastener of the character described comprising a swinging shank having a lateral arm at its free end and a T-head upon the outer end of the arm, the head and shank being disposed at opposite sides of the arm, and shoulders upon the inner edge of the head.

899,046. FLOWER-STAKE. WILLAM HENSHAW, Springfield, N. J. Filed Oct. 18, 1907. Serial No. 398,002.



1. A flower stake consisting of an extensible loop normally disposed in a horizontal plane having unattached ends which may overlap, one of said ends having a staff extending downwardly to be thrust into the ground, said loop further having an upwardly extending stem with a head adapted to engage removably a line wire, said stem and said staff being arranged outside of the space surrounded by said loop whereby the opening of said loop is unobstructed.

2. A flower stake formed of wire and consisting of an extensible loop having ends which may overlap, one end of said loop having an integral staff extending downwardly therefrom, the other end of said loop having an integral stem extending upwardly therefrom and adapted to engage a line wire, said staff and said stem being disposed outside the space surrounded by said loop whereby the opening through said loop is unobstructed.

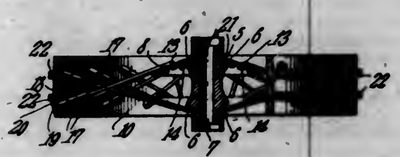
3. A flower-stake consisting of an extensible loop having overlapping ends, one of said ends having an integral staff extending downwardly, to be thrust into the ground, the other of said ends having an integral stem extending upwardly and terminating in a convolute head to engage a line wire, said staff and said stem lying substantially in tangent planes to said loop, whereby the circular opening through said loop is unobstructed.

4. A flower stake comprising a loop normally disposed in a substantially horizontal plane and adapted to encircle a plant, a stem extending upwardly from said loop, the upper end of said stem being bent laterally and downwardly to form a downwardly projecting tongue composed of a double bar, and a downwardly projecting tail beyond said tongue.

899,047. TRACTION-WHEEL. GEORGE HOHLENCAMP, Denver, Colo. Filed Oct. 24, 1907. Serial No. 398,986.

1. A wheel including a hub having oppositely disposed shoulders, attaching plates bearing against said shoulders and provided with radial openings disposed in staggered

relation, and intersecting spokes of different lengths seated in said openings and secured to the rim of the wheel.



2. A wheel including a hub having oppositely disposed shoulders, attaching plates engaging said shoulders a rim spaced from the hub and provided with circumferential ribs, intersecting spokes of different lengths secured to the attaching plates and having their opposite ends extended through the wheel rim and provided with enlarged heads disposed near the circumferential ribs, and means for adjusting the spokes whereby to clamp the plates in engagement with the shoulders.

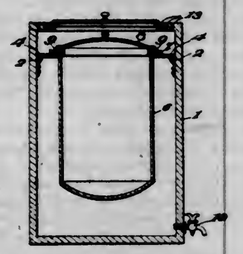
3. A wheel including a hub having oppositely disposed shoulders, a wheel rim spaced from the hub and provided with spaced circumferential ribs, there being openings formed in the wheel rim on one side of each rib and having their end walls counter sunk, attaching plates engaging the shoulders and provided with radially disposed key-hole slots, and intersecting spokes of different lengths each having one end thereof provided with a head adapted to engage the walls of the adjacent slot, the opposite ends of the spokes being extended through the openings in the wheel rim and seated in the counter sunk portions thereof.

4. A wheel including a hub having oppositely disposed shoulders, attaching plates bearing against said shoulders, a wheel rim spaced from the hub and intersecting spokes of different lengths attached to the plates and having their opposite ends extending through and projected laterally beyond the tread surface of the wheel rim.

5. A wheel including a hub having oppositely disposed shoulders, attaching plates bearing against the shoulders and having their inner faces provided with a plurality of key-hole slots disposed in staggered relation, a rim spaced from the hub of the wheel and provided with circumferential ribs, there being openings formed on one side of each rib, sockets extending through said openings and projecting beyond the tread surface of the wheel at the circumferential ribs, and spokes each having one end thereof provided with an enlarged head adapted to engage the adjacent key-hole slot, the opposite ends of said spokes being threaded for engagement with the spoke sockets.

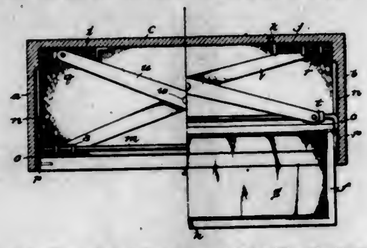
[Claim 6 not printed in the Gazette.]

899,048. WATER-COOLER. SIMON HOLUB, New York, N. Y. Filed Nov. 4, 1907. Serial No. 400,720.



The herein-described water cooler comprising a water tank, brackets secured to the inner surface of the tank and extending upwardly and inwardly therefrom, an annular frame provided with radially extending arms formed with slots extending therethrough, the brackets protruding through the slots in the respective arms to sustain the frame in position, and an ice can mounted within the water tank and provided near its upper edge with an outstanding flange arranged to bear against the annular frame, to suspend the can in position.

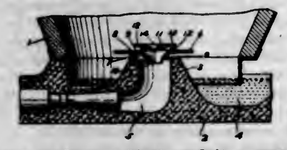
899,049. BOOKCASE. FREDERICK J. HONOR, Detroit, Mich. Filed Jan. 27, 1908. Serial No. 412,890.



1. A section of a bookcase provided with a bottom, back, sides and top, a swinging and sliding cover, and means for guiding said cover, consisting of a rod in the ends of which said cover is pivotally mounted, supporting rods in the rear of the section, brackets on said rods, and links crossing each other and pivoted together and connected to said brackets, substantially as described.

2. A section of a bookcase comprising a bottom, back, top and sides, a swinging and sliding cover, and means mounted above the top for guiding said cover, said means including a rod bent at both ends, said bent ends engaging grooves in the sides of the section, and said cover being pivotally mounted in said bent ends, rods at the back of the section, sliding brackets on said rods and on the front rod two of said brackets being mounted above the corresponding rods and two below, and links crossing each other and connected to the diagonally opposite brackets, said links being pivoted together at their centers, substantially as described.

899,050. GAS-PRODUCER. WILLIAM B. HUGHES, Cleveland, Ohio. Filed Mar. 23, 1908. Serial No. 422,737.



1. In a gas producer, a blast conduit, a spreading device having a downwardly extending interior part and a laterally extending part disposed so as to divide and direct the blast issuing from said conduit, and a second spreading device disposed so as to further direct said blast.

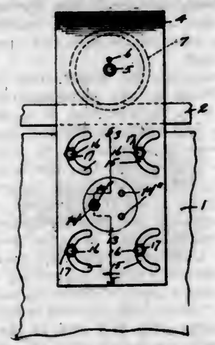
2. In a gas producer, a spreader and guard having a downwardly extending mouth, and a second spreader and guard disposed above said mouth.

3. In a gas producer, a spreader and guard having a downwardly extending mouth with a part or parts extending laterally therefrom, and a second spreader and guard having a downwardly extending angular part above said mouth and a part or parts extending laterally therefrom.

4. In a gas producer, a blast conduit, a spreading and guarding mechanism having a laterally extending disk like part with an opening therethrough, said mechanism being disposed so that there is a passage or passages beneath it through which blast from said conduit is directed, and a second spreading and guarding mechanism disposed above said opening so that there is a passage or passages between said mechanisms through which blast from said opening is directed.

5. In a gas producer, spreading and guarding mechanism consisting of a laterally extending main portion and a downwardly extending interior portion forming a mouth having walls expanding into said main portion, and a spreading and guarding device above said mouth.

899,051. ROLLING-DOOR HANGER. MILTON E. HUNT, Waterville, Me. Filed Sept. 30, 1907. Serial No. 395,178.



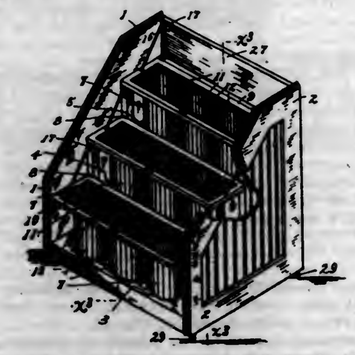
1. A door hanger comprising a hanger member having a central opening near one end, a turning plate eccentrically pivoted in said opening, means for maintaining the door in an adjusted position, and means for permitting movement of the door relatively to the hanger member.

2. A door hanger of the character specified, adapted to be secured to a door and comprising a hanger member having an opening near its lower end, a supporting track, a roller carried by the hanger member and adapted to travel on the track, a turning plate eccentrically pivoted in the opening of the hanger member, means for maintaining the door in an adjusted position, and means for permitting relative movement of the door with the hanger member.

3. A door hanger comprising a hanger member adapted to be secured to a door, said member having an opening near its lower end, and a plurality of slots disposed in a common direction near said opening, a turning plate eccentrically pivoted in said opening, bolts extending through the door and the slots of the hanger member, and nuts screwing on said bolts and being adapted to clamp said hanger to the door.

4. A door hanger of the character specified, comprising a hanger member adapted to be secured to a door, said member having a circular opening near its lower end and a plurality of arc-shaped slots disposed in a common direction and being located adjacent to said opening at points directly opposite each other, a turning plate, eccentrically pivoted in said opening, bolts extending through the door and the slots of the hanger member, and nuts screwing on said bolts and being adapted to clamp said hanger to the door.

899,052. SHOW-CASE FOR DISPLAYING PICKLES AND THE LIKE. DUDLEY W. IMUS, Los Angeles, Cal. Filed May 5, 1908. Serial No. 431,052.



1. In a device of the character described, a frame, a plurality of shelves arranged on said frame in a stepped series, open-topped receptacles on said shelves, and hinged lids to cover said receptacles, said lids carrying a transparent covering for said receptacles and admitting air to the receptacles when closed.

2. In a device of the character described, supporting means, a plurality of receptacles mounted thereon, and a lid to cover said receptacles said lid comprising a sash and a pane of glass therein, said lid resting on said receptacles when down, said sash being provided with padding adjacent said pane of glass.

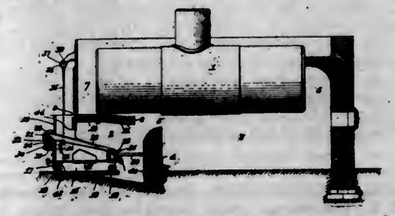
3. In a device of the character described, supporting means, a receptacle mounted thereon, a lid to cover said receptacle, said lid comprising a sash and a pane of glass therein, hinges for said lid, a stop against which said lid abuts to limit the opening movement thereof, a flexible connection fastened to said lid, a weight fastened to said connection tending to open said lid, and padding at the edges of said glass to prevent the jarring against the glass when said lid strikes said stop.

4. In a device of the character described, a frame, a plurality of supports on said frame, open-topped receptacles mounted in a stepped series on said supports, and lids for said receptacles, said lids carrying a lower section of screen cut away to permit a clear view of the interior of said receptacles, and an upper section of transparent material.

5. In a device of the character described, a receptacle, a transparent cover therefor, said cover being spaced above said receptacle to allow entrance of air into said receptacle, and means to prevent entrance of insects through the space between said cover and receptacle.

[Claims 6 and 7 not printed in the Gazette.]

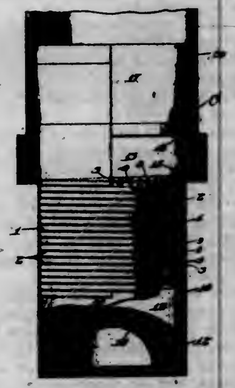
899,053. FURNACE. AARON JAY, Chicago, Ill. Filed July 31, 1907. Serial No. 386,450.



1. In a furnace, the fire-chamber, the combustion-chamber communicating with said fire-chamber at their upper parts, a bridge-wall separating the lower parts of the fire and combustion-chambers, a removable carriage in the front part of the fire-chamber, grate-bars movably mounted on said carriage, means for oscillating said grate-bars to feed the fuel into the fire-chamber, a secondary grate hinged to said bridge-wall at the rear of said carriage to receive the fuel from the grate-bars, and a rod connected with said secondary grate for operating the same extending through and detachable from said carriage so that the latter can be moved clear of the rod.

2. In a furnace, the fire-chamber, the combustion-chamber communicating with said fire-chamber at their upper parts, a bridge-wall separating the lower parts of the fire and combustion-chambers, a removable carriage in the front part of the fire-chamber, a shaft journaled in the forward part of said carriage, means for rotating said shaft, eccentrics on said shaft alternately projecting in opposite directions, inclined grate-bars journaled at their upper ends on said eccentrics, a hollow box on the rear part of said carriage to form a support for the lower ends of said grate-bars, balls interposed between said box and the ends of the grate-bars, a secondary grate hinged to said bridge-wall at the rear of said carriage and adjustable relatively to the lower ends of said grate-bars, a rod connected with said secondary grate extending through and detachable from said carriage so that the latter can be moved clear of said rod, and a rack on said rod to engage an edge of the frame of said carriage to hold said secondary grate in its adjustments.

899,054. WELL-STRAINER. EDWARD E. JOHNSON, White Bear, Minn. Filed Feb. 6, 1905. Serial No. 244,266.



1. A strand of wire adapted to interlock on itself to form a strainer wall, substantially as described.

2. A strainer wall composed of parallel interlocking strands between which the water is admitted, substantially as described.

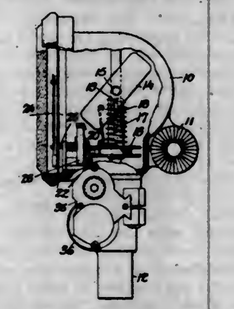
3. As a new article of manufacture, a strip or wire having longitudinal grooves and flanges constructed to interlock with the flanges and grooves of a corresponding parallel strip or portion to form a strainer wall, substantially as described.

4. As a new article of manufacture, a strip or wire having a series of perforations and longitudinal grooves and flanges constructed to interlock with the flanges and grooves of a corresponding parallel strip or portion to form a strainer wall, substantially as described.

5. A strainer wall composed of adjacent interlocking portions or strips of wire between which the water is admitted, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

899,055. SPEEDOMETER. JOSEPH W. JONES, New York. N. Y. Filed Nov. 5, 1907. Serial No. 400,787.



1. In a speedometer, the combination with a shaft adapted to be driven by the mechanism or vehicle the speed of which is to be measured, of a device movable longitudinally on said shaft, means for imparting movement to said device proportionately to the speed of the shaft, means operated by said longitudinally-movable device for indicating the extent of its longitudinal movement and thereby the speed at which said mechanism or vehicle is being operated, and means intermediate the said longitudinally-movable device and the said indicating means adapted to adjustably operatively connect the same together; said indicating means comprising a shaft bearing an index or pointer; and said intermediate means comprising a slotted disk fast on said index shaft, a pin operatively connected with said disk in the slot thereof and also operatively connected with the said longitudinally-movable device on the driven shaft, and means adapted to move said pin in said slot toward or away from the index shaft.

2. In a speedometer, the combination with a shaft adapted to be driven by the mechanism or vehicle the speed of which is to be measured, of a device movable longitudinally on said shaft, means for imparting movement to said device proportionately to the speed of the shaft, means operated by said longitudinally-movable device for indicating the extent of its longitudinal movement and thereby the speed at which said mechanism or vehicle is being operated, and means intermediate the said longitudinally-movable device and the said indicating means adapted to adjustably operatively connect the same together; said indicating means comprising a shaft bearing an index or pointer; and bearing a radially slotted disk, a pin operatively connected with said disk in the slot thereof and also operatively connected with the said longitudinally-movable device on the driven shaft, a link adapted to move said pin in said slot radially toward or away from the index shaft, and an eccentric cam for operating said link.

3. In a speedometer, the combination with a shaft adapted to be driven by the mechanism or vehicle the speed of which is to be measured, of a weight pivoted on said shaft and adapted to rotate therewith, a grooved wheel on said shaft and adapted to rotate therewith and to slide longitudinally thereupon, a link connecting said grooved wheel with said weight, a shaft bearing an index or pointer; and bearing a radially slotted disk, a pin operatively connected with said disk in the slot thereof and operatively connected with said grooved wheel, and means adapted to move said pin in said radial slot and to secure it therein at any desired point.

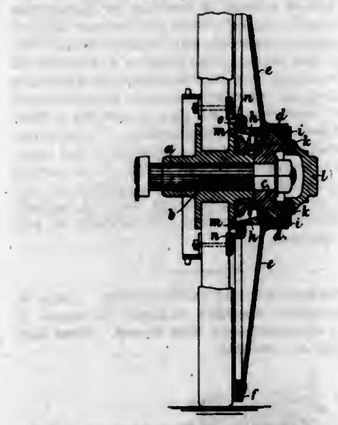
4. In a speedometer, the combination with a shaft adapted to be driven by the mechanism or vehicle the speed of which is to be measured, of a weight pivoted on said shaft and adapted to rotate therewith, a grooved wheel on said shaft and adapted to rotate therewith and to slide longitudinally thereupon, a link connecting said grooved wheel with said weight, a shaft bearing an index or pointer; and bearing a radially slotted disk, a pin operatively connected with said disk in the slot thereof and also operatively connected with the said longitudinally-movable device on the driven shaft, and means adapted to move said pin in said radial slot and to secure it therein at any desired point, said means comprising a link and an eccentric cam journaled in said disk.

5. In a speedometer, the combination with a shaft adapted to be driven by the mechanism or vehicle the speed of which is to be measured, of a device movable longitudinally on said shaft, means for imparting movement to said device proportionately to the speed of the shaft, means operated by said longitudinally-movable device for indicating the extent of its longitudinal movement and thereby the speed at which said mechanism or vehicle is being operated, and means intermediate the said longitudinally-movable device and the said indicating means adapted to adjustably operatively connect the same together; said indicating means comprising a graduated dial and a shaft bearing an index or pointer; and said intermediate means comprising a slotted disk fast on said index shaft, a pin operatively connected with said disk in the slot thereof and also operatively connected with the said longitudinally-movable device on the driven shaft, and means adapted to move said pin in said slot toward or away from the index shaft.

[Claim 6 not printed in the Gazette.]

899,056. NON-SKIDDING DEVICE FOR WHEELS OF VEHICLES. HENRY H. KENSHOLE, Ilford, England. Filed Jan. 8, 1907. Serial No. 351,384.

1. A non-skidding device for wheels of vehicles comprising a dummy wheel mounted alongside the vehicle wheel, means allowing of lateral motion of said vehicle wheel upon its axle, a rising and falling bearing carrying said dummy wheel, and automatic operating and connecting means between said bearing and said vehicle wheel to raise and lower said dummy wheel.

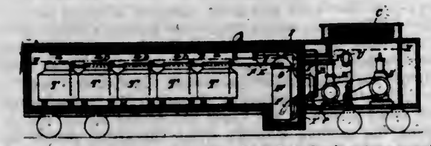


2. A non-skidding device comprising a vehicle wheel mounted to slide as well as rotate upon its axle, a dummy wheel mounted to rotate alongside the vehicle wheel, a vertically movable bearing carrying said dummy wheel, means connecting the said wheels and means raising and depressing said dummy wheel.

3. A non-skidding device comprising a vehicle wheel capable of sliding as well as rotating upon its axle, a concentric boss fixed on said axle, an eccentric bearing boss mounted to rotate on said concentric boss, a dummy wheel mounted to rotate on said bearing boss means connecting the vehicle wheel with the eccentric bearing boss, and means partially rotating said bearing boss when said vehicle wheel slides upon its axle, as set forth.

4. A non-skidding device comprising a vehicle wheel capable of sliding as well as rotating upon its axle, a dummy wheel mounted alongside the vehicle wheel and means depressing said dummy wheel into contact with the road, said means comprising a concentric bearing boss fixed on said axle, an eccentric boss mounted to rotate on said bearing boss a helical connection between said bosses, a concentric flange on said eccentric boss, an annular flange plate on said vehicle wheel engaging said boss flange, and a spring adapted to return said eccentric boss to its normal position, as set forth.

899,057. METHOD OF PRESERVING LIVE FISH DURING LONG PERIODS OF TRANSPORT OR IN STORE. FRIEDRICH KLEINSCHMIDT, Bucharest, Roumania. Filed Dec. 28, 1903. Serial No. 186,899.

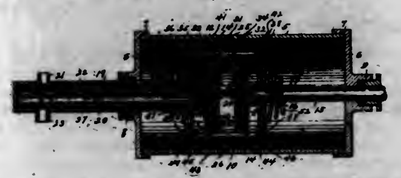


1. The method of preserving live fish during transportation or in storage, which consists in continuously drawing off water from the tank containing the fish, bringing it into intimate contact with ozone thereby regenerating it, and returning the regenerated water to the fish tank; thus maintaining a continuous circulation through said tank.

2. The method of preserving live fish during transportation or in storage, which consists in drawing off water from a tank containing the fish, and bringing it into intimate contact with ozone, returning the regenerated water to the tank and maintaining the water of the tank at a low temperature to control the movements of the fish.

3. The method of preserving live fish during transportation or in storage, which consists in supplying to a tank containing the fish a quantity of water in which the fish have lived, substantially equal to the quantity of fish in said tank, continuously drawing water from the tank, regenerating it by bringing it into intimate contact with ozone, and returning the regenerated water to the tank; substantially as described.

899,058. WATER-MOTOR. LEWIS C. LEWIS, Columbus, Ohio, assignor to The Monarch Specialty Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Oct. 7, 1907. Serial No. 396,210.



In a water motor, the combination with a piston having a transverse wall which divides said piston into two chambers, said piston having ports formed through the walls thereof, of valves controlling the flow of liquid through said ports, a cylinder in which said piston is slidably disposed, a tubular member which passes through one end of said cylinder and is connected to said piston, a wall which divides said tubular member longitudinally into an inlet passage and exhaust passage, said tubular member being closed at its outer end, a nipple adapted to have a flexible conductor connected thereto, said nipple serving to conduct fluid to the inlet passage, a second nipple also adapted to have a flexible conductor secured thereto, there being a port formed through the second nipple for the conducting of fluid from the exhaust passage, the outlet through said second nipple being of greater area than the inlet through the first named nipple, the inlet passage communicating with one of the chambers of the piston and the outlet passage communicating with the other chamber of the piston, there being a groove formed in the edge of the transverse wall, a conducting member seated in said groove, the free edge of the divided wall of the tubular member being reduced to enter said groove, and means for binding said tubular member tightly against said piston.

899,059. INSULATOR FOR ARMATURE-CONDUCTORS. ALLERT R. LOCKE, Chicago, Ill. Filed Dec. 20, 1907. Serial No. 407,382.



1. An insulating joint-covering, comprising a separable hood of insulating material, forming an integral unbroken structure closed at one side and end.

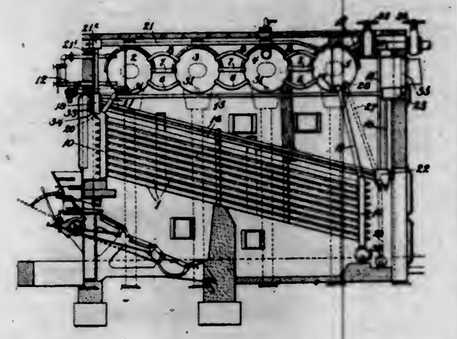
2. As an article of manufacture, a hood for covering electric joints in armature construction, comprising an integral unbroken molded structure of insulating material open only at one side and end.

899,060. SUPERHEATER. JULIUS H. MEISSNER, Pittsburg, Pa. Filed June 14, 1907. Serial No. 378,919.

1. The combination with a boiler, of a tubular superheater having the tubes thereof arranged in a vertical plane in the form of a triangle, and means communicating with the boiler above and below the water line thereof.

2. The combination with a boiler, of a tubular superheater comprising a set of horizontal tubes and a set of inclined tubes communicating at both ends, together with

means whereby the steam from the boiler is passed through the superheater and means for filling the superheater with water from the boiler whereby the superheater may be used as a generator.



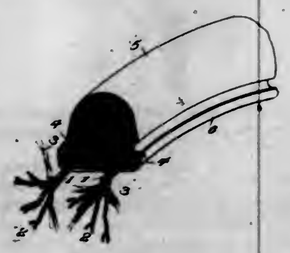
3. The combination with a boiler, of a tubular superheater comprising a set of horizontal tubes and a set of inclined tubes communicating at both ends and having such ends adjacent to and accessible from the ends of the boiler, together with means whereby the steam from the boiler is passed through the superheater and means for filling the superheater with water from the boiler whereby the superheater may be used as a generator.

4. The combination with a boiler having a steam drum and water tubes, of a superheater intermediate the drum and water tubes comprising a pair of rear boxes arranged one above the other, a set of tubes between the said boxes, an outlet therefor, a front box, inclined and substantially horizontal tubes from the front box to the rear lower and rear upper boxes respectively, and an inlet to the front box from the steam drum.

5. The combination with a boiler having a steam drum and water tubes, of a superheater intermediate the drum and water tubes comprising a pair of rear boxes arranged one above the other, a set of tubes between the said boxes, an outlet for the lower box, a front box, inclined and substantially horizontal tubes from the front box to the rear lower and rear upper boxes respectively, and an inlet to the front box from the steam drum.

[Claims 6 to 8 not printed in the Gazette.]

899,061. VEHICLE-TIRE. ROBERT M. MEARIMAN, Youngstown, Ohio. Filed Mar. 13, 1907. Serial No. 362,167.

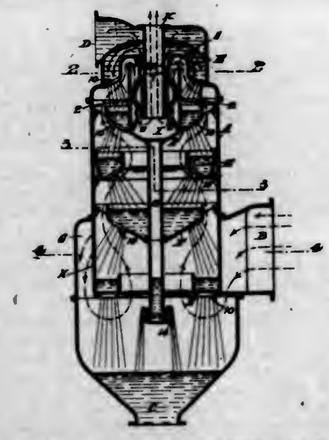


The herein-described reinforcing cable for rubber tires, the said cable consisting of a plurality of metal and textile strands, the metal strands being twisted together and the textile strands being twisted and interwoven so as to completely cover the metal strands, the cable being saturated with a rubber cement which penetrates the textile strands so that when the cable is embedded and vulcanized in the tire the reinforcement and tire are practically inseparable from each other.

899,062. PROCESS OF TREATING AND PRESERVING METAL PATTERNS FROM CORROSION. CHARLES K. MILNE, Hamilton, Ontario, Canada. Filed June 22, 1908. Serial No. 439,735.

The improved art or process of treating metal patterns for the prevention of rust, consisting of the treatment of the pattern, (1), to a wind blast, (2), to the action of sulfuric-acid and boiling water, (3), then in a solution of boiling potash and water, (4), then subjected to the action of powdered emery, (5) then subjected to the action of sulfuric acid and cold water, (6) then dipped in a solution of cyanid of potassium and cold water, (7), then immersed and treated electrically in a solution of sal soda, white stick potash, sulfate of copper, cyanid of potassium and hot water, and afterwards given a coating of hot paraffin wax, all the ingredients mixed and the pattern treated in or about the proportions substantially as and for the purpose specified.

899,063. COUNTER-CURRENT CONDENSER. OTTO H. MUELLER, Camberwell, England, assignor to Henry R. Worthington, a Corporation of New Jersey. Filed Dec. 18, 1907. Serial No. 406,983.



1. A counter current condenser having a water inlet above the condensing chamber, a series of inner and outer trays provided with openings forming water jets between which the steam passes, a steam inlet in the lower part of the condenser, and a steam distributing sleeve opposite the steam inlet forming a steam inlet chamber surrounding the condensing chamber and open at the bottom to the condensing chamber.

2. A counter current condenser having a water inlet above the condensing chamber, a series of inner and outer trays provided with elongated openings forming narrow water jets between which the steam passes, a steam inlet in the lower part of the condenser, a steam distributing sleeve opposite the steam inlet forming a steam inlet chamber surrounding the condensing chamber and open at the bottom to the condensing chamber, the bottom water tray being placed at the lower end of the sleeve and inclosing the opening through which the steam passes upward to the condensing chamber.

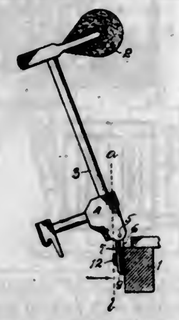
3. A counter current condenser having a water inlet at the top and a steam inlet at the bottom, a series of water trays provided with openings to form water jets between which the steam passes upward, an air cooler and supplementary condenser at the top of the condensing chamber, and a drain pipe for the air cooler extending downward through the condensing chamber.

4. A counter current condenser having a water inlet at the top and a steam inlet at the bottom, a series of water trays provided with openings to form water jets between which the steam passes upward, an air cooler and supplementary condenser at the top of the condensing chamber, connections for spraying condensing water into said cooler, and a drain pipe for the air cooler extending downward through the condensing chamber and water sealed at its lower end.

5. A counter current condenser having in its upper part a chamber receiving the air and uncondensed steam and cooled by the condensing water, an air delivery pipe from said chamber, and a water discharge pipe from said chamber extending downward through the condensing chamber and water sealed at its lower end.

[Claims 6 to 9 not printed in the Gazette.]

899,064. PIANO-FLANGE. WILLIAM W. MCCALL, Kansas City, Mo. Filed Dec. 17, 1906. Serial No. 348,247.



1. In a piano flange, the combination with a hammer center pin, of two plates pivotally adjustable one relative to the other, one plate having a groove to receive the hammer center pin on the side adjacent to the other plate, and one of said plates being resilient, the plates having means for engaging with each other for limiting said adjustability, and means for clamping said plates together.

2. In pianos, the combination with a rail, of two plates, one plate being pivotally adjustable relative to the other, and one plate having means for engaging the other to limit said adjustability, and means for securing said plates together and to the rail.

3. In pianos, the combination with a rail, of a hammer center pin, two plates for clamping between them the hammer center pin, one plate having a groove for receiving the said pin, the grooved plate being pivotally adjustable relative to the rail, and one of the plates having means for engaging the other plate for limiting such adjustability, and means for securing the plates together and to the rail.

4. In pianos, the combination with a rail, of a hammer center pin, two plates adapted to clamp between them the hammer center pin, one plate having a groove to receive said pin, one of said plates being resilient, and the grooved plate being pivotally adjustable relative to the rail, the other plate having a projection for engaging the rail to prevent pivotal movement of said other plate, said projection having an opening to receive the grooved plate and also serving to limit the pivotal adjustment of the grooved plate, and means for securing the plates together and to the rail.

5. The combination with a rail having a longitudinal groove, of two plates, one plate having a groove, the grooved plate being pivotally adjustable relative to the rail and the other plate having a projection entering the groove of the rail, and means for securing the plates together and to the rail.

[Claims 6 and 7 not printed in the Gazette.]

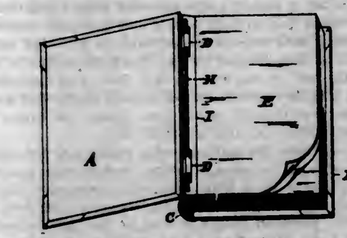
899,065. ICE-WALKER. WESLEY S. PAULSON, Pittsburg, Pa. Filed Nov. 9, 1907. Serial No. 401,504.

1. A device of the character described comprising a casing provided in its bottom with openings, a plate mounted in said casing and of a length to fit against the ends thereof, said plate being thereby guided for a movement laterally in the casing, that is, directly away from and towards the bottom thereof, said plate being provided on its bottom side with spurs adapted to project from the openings in the bottom of the casing, and on its opposite side with a plurality of undercut cams all facing in the same direction, and a longitudinally movable plate mounted to slide in the casing, and provided with a plurality of undercut cams, coacting with the cams of the first named plate.



2. A device of the character described comprising a casing provided at its bottom with openings, a plate mounted in said casing and movable bodily towards and away from the bottom and formed with spurs adapted to project through said openings, and a longitudinally movable slide plate mounted in the casing and arranged, upon its movement in one direction, to force the first named slide plate in a direction to project its spurs through said openings, the two slide plates being provided with a plurality of undercut cams, the cams of one plate facing in the same direction and oppositely to the cams of the other plate, the two sets of cams being arranged for an interlocking engagement adapted to hold the laterally movable plate retracted in the casing upon the movement of the longitudinally movable slide plate in the opposite direction.

899,066. BINDER FOR BOOKS, JOURNALS, PAPER, MUSIC, &c. WILLIAM PEIN, Chicago, Ill. Filed June 29, 1908. Serial No. 440,928.

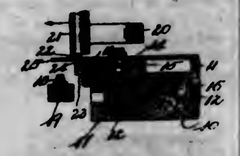


1. A binder for books, pamphlets, &c., consisting, essentially, of two covers flexibly secured together; base-pieces secured to the back of the covers; sheet-metal guide-pieces secured to said base-pieces, there being projecting members of said guide-pieces extending beyond the edges of said base-pieces.

2. A binder for books, pamphlets, &c., consisting, essentially, of two flexibly connected covers; base-pieces secured to the back of the covers, there being a series of grooves in the face of said base-piece; sheet-metal guide-pieces, secured to the face of said base-piece, there being projecting portions of said guide-pieces overlapping the base-pieces; and a series of sheets, signatures and sections, there being T-shaped notches in said sheets, signatures and sections adapted to engage the base-pieces and the guide-pieces.

3. A binder for books, pamphlets, &c., consisting, essentially, of two flexibly-jointed covers; base-pieces secured to the back of the covers, said base-piece having a curved upper surface, there being a series of grooves in said curved surface; sheet-metal guide-pieces secured to said base-pieces, there being projecting portions of said guide-pieces overlapping the base pieces; a series of sheets, signatures, and sections, there being T-shaped notches in the edges of said sheets, signatures and sections adapted to engage the base-pieces and the guide-pieces; and rods passed through said notches in the base-pieces close to the outermost sections, &c. of the book.

899,067. LACING-HOOK-SETTING MACHINE. JOSEPH E. PERRAULT, Waltham, Mass., assignor to American Lacing Hook Co., a Corporation of New Jersey. Filed Sept. 9, 1907. Serial No. 391,940.



1. In a machine for setting lacing hooks and the like in sheet material, a punch, a die provided with a hole adapted to surround and fit said punch and to coact therewith in perforating said sheet material, said die provided with a groove in one face thereof of less depth than that of said hole leading out of one side of said hole.

2. In a machine for setting lacing hooks and the like in sheet material, a punch, and a die provided with a hole extending vertically therethrough adapted to surround and fit said punch and to coact therewith in perforating said sheet material, said die provided with a groove in its upper face of less depth than that of said hole leading out of one side of said hole and opening out of one end of said die.

3. In a machine for setting lacing hooks and the like in sheet material, a die provided with a hole adapted to surround and fit said punch and to coact therewith in perforating said sheet material, said die provided with a groove in one face of less depth than that of said hole leading out of one side of said hole, mechanism to impart a vertical reciprocatory motion to said punch, and mechanism to impart a lateral motion to said punch while the same projects through said sheet material.

4. In a machine for setting lacing hooks and the like in sheet material, a punch, a die provided with a hole adapted to surround and fit said punch and to coact therewith in perforating said sheet material, said die provided with a groove in one face thereof of less depth than that of said hole leading out of one side of said hole, and mechanism to impart a reciprocatory motion to said punch and also a lateral motion thereto while the punch is projecting through said material and into said die.

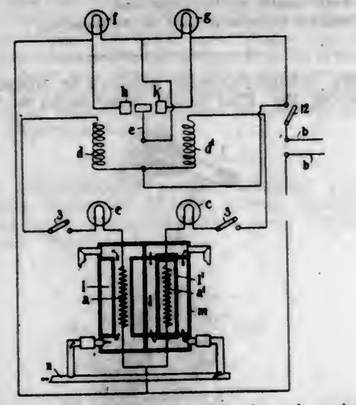
5. In a machine for setting lacing hooks and the like in the upper of a boot or shoe, a lacing hook carrier, a punch, a die provided with a hole adapted to surround and fit said punch and to coact therewith in perforating said upper, said die provided with a groove in one face thereof of less depth than that of said hole leading out of one side of said hole, mechanism to impart a vertical reciprocatory motion to said punch, and mechanism to impart a lateral movement to said punch while the same projects through said upper, whereby said upper may be fed into position to have a lacing hook set therein with said punch projecting therethrough.

[Claims 6 to 10 not printed in the Gazette.]

899,068. APPARATUS FOR DETECTING INFLAMMABLE GASES IN AIR. ARNOLD PHILIP and LOUIS J. STEELE, Portsmouth, England. Filed Sept. 9, 1907. Serial No. 391,990.

1. In an apparatus for the detection of combustible gases, the combination of a catalytic agent and means for heating same, with parallel electrical resistances one including a catalytic agent and adapted to be varied by the catalytic action, a relay with two parallel coils in series with one of said resistances, indicating lamps, connections between said lamps and a source of electric supply, an armature operated by said relay and means for causing said armature to short circuit one of said lamps, with a system of pipes and means for drawing gases through said pipes and passing them over the catalytic agent.

2. In an apparatus for the detection of combustible gases, the combination of a catalytic agent and means for heating the same, a system of pipes, means for drawing gases through said pipes and passing them over the catalytic agent, electrical devices adapted to be effected by the catalytic action of said agent, with casings and guards for protecting said devices, a source of electrical power, circuits including said source and the electrical devices, switches in said circuits adapted on opening to separate respective devices from the source of power, and means for effecting the opening of said switches when the protection of their respective devices is disturbed.



3. In an apparatus for the detection of combustible gases, the combination with parallel electrical resistances one adapted to be varied by catalytic action, a relay with two parallel coils each in series with one of said resistances, indicating lamps, a source of supply, connections between said lamps and a source of supply, an armature operated by said relay and means for causing said armature to short circuit one of said lamps, of guards and casings for protecting said resistances and lamps, switches arranged in the circuits of said resistances and lamps, and mechanical connections between the switches and the guards and casings whereby any switch is opened upon the disturbance of the corresponding protective device.

4. In an apparatus for the detection of combustible gases, the combination with a catalytic agent, means for heating same and means for demonstrating the activity of said agent, of apparatus for causing the air to be tested to pass over the catalytic agent, a U-tube arranged to form part of the path of the air and a non-volatile liquid in said tube through which the air bubbles, whereby an indication is given that circulation of air is proceeding.

5. In an apparatus for the detection of combustible gases, the combination of a catalytic agent and means for heating same, electrical devices for demonstrating the activity of said agent, means for causing the air to be tested to pass over said agent, means for indicating that the circulation of air is proceeding, with guards for protecting said electrical devices, a source of electrical power, circuits including the electrical devices, switches in said circuits, and connections between said switches and the guards whereby any switch is opened when the corresponding guard is removed.

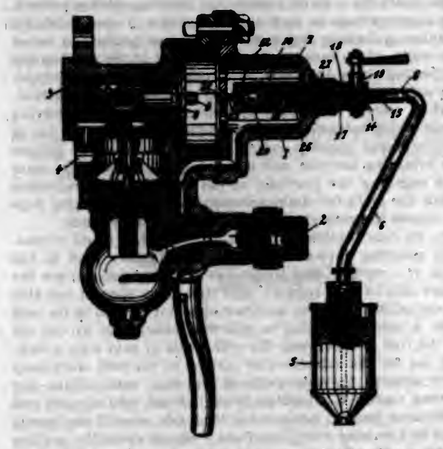
[Claims 6 to 11 not printed in the Gazette.]

899,069. BRAKE MECHANISM. EMANUEL V. PLANTA and FRITZ ADAM, Berne, Switzerland. Filed Nov. 14, 1905, Serial No. 287,280. Renewed May 7, 1908. Serial No. 431,333.

1. The combination, with the main piston of the triple valve, of a sanding device, and means operated directly by the main piston for actuating the sanding device.

2. The combination, with the main piston of a triple valve, of a yielding abutment for said main piston, and means controlled by said yielding abutment for applying sand to the tracks.

3. The combination, with the main piston of a triple valve, and a sanding device for applying sand to the tracks, of means for supplying fluid pressure to operate said sanding device, and a graduating stop for said main piston, said stop being provided with a valve arranged to control the supply of fluid pressure which operates the sanding device.

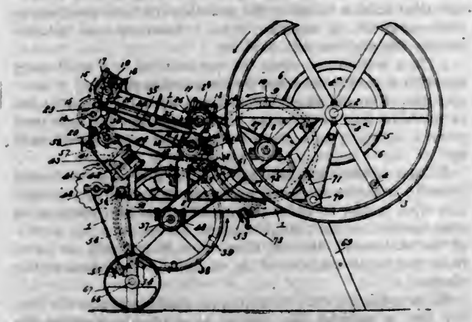


4. The combination, with a triple valve having a main piston, of a sleeve secured to the triple valve case, a valve located in said sleeve arranged to close the inner end of the same, and provided with a stem arranged to serve as a graduating stop for the main piston, a sanding device arranged to be operated by air pressure, an air pipe between said sanding device and the interior of said sleeve, and yielding means for holding said valve normally closed.

5. The combination, with a triple valve having a main piston, of a sleeve secured to the triple valve and having a valve seat at its inner end, a plug secured in the outer end of the sleeve and having an exhaust valve seat and an exhaust port leading to the outer air, a valve arranged to cooperate with the valve seat at the inner end of the sleeve, a stem for said valve whose inner end serves as a graduating stop for the main piston and whose outer end is arranged as a valve to close the exhaust port in the plug, means for normally pressing the valve stem toward the main piston, a sanding device, and means for conducting air from the interior of the sleeve to the said sanding device to operate the same.

[Claim 6 not printed in the Gazette.]

899,070. FIBER CLEANING MACHINE. ANGEL PONS, Buffalo, N. Y. Filed Nov. 22, 1905. Serial No. 288,523.



1. A fiber cleaning machine comprising a leaf cleaning means, a feed mechanism for feeding the leaf to the cleaning means, and means to be moved by the leaf for reversing the direction of movement of the feeding means, whereby the leaf may first be fed into the cleaning mechanism and may then be drawn back through said cleaning means in the reverse direction.

2. A fiber cleaning machine comprising a cleaning mechanism, a positive feed mechanism adapted to deliver the leaf to the cleaning means, and means to be moved by the leaf for automatically reversing the direction of movement of the feeding means to draw the leaf back through the cleaning mechanism.

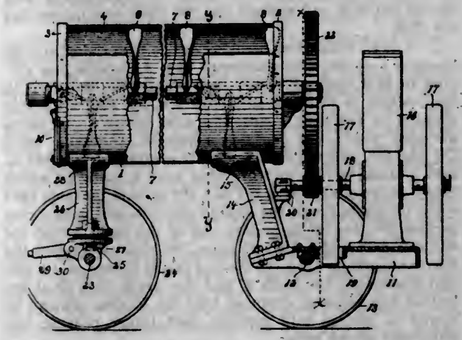
3. A fiber cleaning machine comprising a rotary cleaning means, means for giving said cleaning means a constant movement in one direction, a positive feeding means, means for operating the feeding means, and means to be moved by the leaf for reversing the direction of movement of the feeding means without reversing the movement of the cleaning device, whereby the leaf may be passed through the cleaning means and drawn back therefrom by the feeding means during the rotation of the cleaning device in one direction.

4. A fiber cleaning machine comprising a rotary cleaning means, rotary longitudinally corrugated positive feed rolls adapted to intermesh, means for rotating the cleaning means and the feed rolls, and means to be moved by the leaf for reversing the direction of rotation of the feed rolls without reversing the movement of the cleaning device, whereby the leaf may be fed to the cleaning means in one direction and drawn back through said cleaning means in the opposite direction during the rotation of the cleaning means.

5. A fiber cleaning machine comprising a pair of receiving rolls, a pair of positive feed rolls to take the leaf from the receiving rolls, a cleaning device adapted to receive the leaf from the positive feed rolls, and means controlled by the entrance of one end of the leaf to be treated between the receiving rolls and the exit of said leaf from said receiving rolls for reversing the direction of the rotation of the positive feed rolls, whereby the leaf may be fed almost entirely to the cleaning means in one direction and may then be drawn back through said cleaning means, whereby the cleaning device will operate for a second time on the leaf.

[Claims 6 to 45 not printed in the Gazette.]

899,071. CEMENT OR CONCRETE MIXER. JAMES A. RANDALL, Detroit, Mich., assignor to United States Concrete Machine Co., Detroit, Mich., a Corporation of Michigan. Filed Dec. 6, 1905, Serial No. 290,508. Renewed June 26, 1908. Serial No. 440,511.

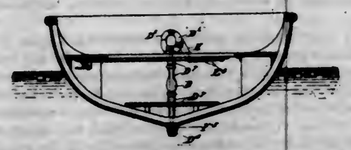


1. In a concrete mixer, the combination of a cylindrical drum, a shaft in the axis of said drum, blades on said shaft, a platform, wheels attached to the platform to support the same, a bracket secured at its lower end to the platform and extending upward therefrom at an inclination thereto and provided at its upper end with a curved seat to receive the lower side of the drum to which it is secured, a bolster secured to the lower side of the drum

near its discharge end, a truck frame to which the bolster is pivotally attached, and supporting wheels for the truck frame.

2. In a concrete mixer, the combination of a cylindrical drum having a longitudinal opening in its top and provided with heads formed with bearings at their axes, a shaft in said bearings, blades on said shaft, a door in the head at the discharge end of the drum, a cover hinged at one edge to one edge of the opening in the drum, a hopper secured to one end of said cover and hinged at one edge to said edge of the opening to turn with the cover, a platform, an axle secured to the platform, wheels on the axle, a bracket bolted at its lower end to the platform and extending upwardly therefrom, said bracket having a curved seat in its upper end by which it is secured to the lower side of said drum, an engine mounted on said platform, a bearing on the bracket for the end of the engine shaft, a pinion on said engine shaft, a gear on the end of the drum shaft engaging the pinion, a bolster formed with a curved bearing to receive the lower side of the drum and secured thereto near the discharge end thereof, a truck frame, a king bolt pivotally connecting the truck to the bolster, wheels on the truck frame, and a tongue or handle pivotally attached to the truck frame.

899,072. RELEASING DEVICE FOR BOATS. WILLIAM G. RANDLE, Chester, Pa. Filed Mar. 23, 1907. Serial No. 364,050.



1. A davit connection securing device comprising a stationary part in the form of a vertical link open at one side of and adjacent the top of the link, a movable part pivoted to said stationary part at the top of the link and provided with arms at opposite sides of the pivotal connection, said arms being so shaped that when the movable part is in the retaining position, one arm completes the link and the other arm extends along the stationary part of the link, and a locking dog normally holding said movable part in the position in which the link is closed, but being movable to release said movable part, said movable part and dog having cam surfaces which cooperate as the dog is moved to release the movable part to turn the latter about its pivotal support so that the link-closing arm swings outward and upward and the other arm moves into the link.

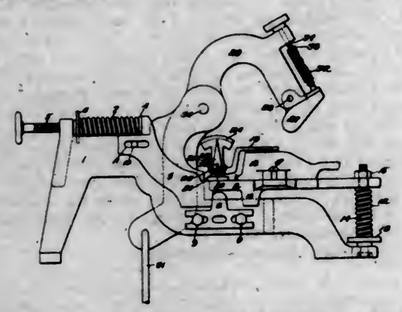
2. A davit connection securing device comprising in combination a partly open stationary link, a movable part pivoted to said stationary link and adapted to be locked in the position in which it completes the link and is directly engaged by the davit connection, said movable part being provided with a dog engaging extension D^{20} having teeth D^{12} and D^{12}, and the locking dog E pivotally connected to said stationary link and provided with a tooth E^1 which enters between the teeth D^{12} and D^{12} on said movable part when the parts are in the locking position, and with a cam portion E^4 adapted to engage one of the teeth D^{12} of the movable part and positively move the latter to release the davit connection when the locking dog is turned on its pivotal connection, the tooth E^1 and the cam portion E^4 of the locking dog being so arranged that the locking dog can be moved to release said movable part before causing any movement of the latter.

3. In combination, a boat having seats and provided at each end with a davit connection securing device projecting above said seats, each device having a pivoted retaining member for, and adapted to directly engage said connection and a locking dog having a portion projecting below the seats, normally holding said member in the retaining position, but movable to release said member, said member and dog having cam surfaces which directly engage to move the retaining member out of the retaining position, when the dog is moved to release the retaining member, and means located beneath the seats and engaging the portions of the locking dogs projecting below the seats for simultaneously moving the locking dogs to release the retaining members controlled by them.

4. In combination, a boat having seats and provided at each end with a davit connection securing device projecting above said seats, each device having a pivoted retaining member, a locking dog having a portion projecting below the seats, and a housing for the portion of the locking dog projecting above the seats, said locking dog normally holding said member in the retaining position, but being movable to release said member, said member and dog having parts which coöperate to move the retaining member out of the retaining position, when the dog is moved to release the retaining member, and means located beneath the seats and engaging the portions of the locking dogs projecting below the seats for simultaneously moving the locking dogs to release the retaining members controlled by them.

5. In combination a horizontal support, a davit connection securing device comprising a stationary part in the form of a vertical link bearing at its lower end against the upper side of said support, said link being open at one side of and adjacent its top and having a slot formed in its long side, a tumbler pivoted to said stationary part at the top of the link and between the side walls of said slot, a locking dog for the tumbler also pivoted to the said stationary part between the side walls of said slot, said locking dog having a portion extending down through said support and a housing bearing against the long side of said stationary part and uniting with it to form a casing about the portion of the locking dog, above said support.

899,073. MOLDING-MACHINE. JOSEPH A. RHOULT, Haverhill, Mass., assignor of one-half to Harris W. Spaulding, Haverhill, Mass. Filed Aug. 16, 1907. Serial No. 388,783.



1. In a molding machine the combination of a stationary die with a cavity bordered by an overhanging lip; a movable die; means to move the movable die into position to pass under the lip and then move it laterally into the stationary die and beneath said lip.

2. In a molding machine the combination of a stationary die with a cavity bordered by an overhanging lip; a movable die; a single member connected with the movable die to move it into position to pass under the lip and then move it laterally into the stationary die and beneath said lip.

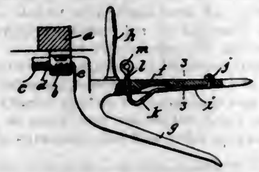
3. In a molding machine the combination of a stationary die with a cavity bordered by an overhanging lip; a movable die; means to move the movable die into position to pass under the lip with the blank forced into the cavity of the stationary die and then move it laterally so as to force the blank under said lip to turn in the edges of the blank.

4. In a toe molding machine, in combination, a stationary die; a movable die; means to shift the movable die toward the stationary die to force the blank or the like into the latter, and then to shift the movable die laterally to force the blank against the side wall of the stationary die; and means to yieldingly support the stationary die against the perpendicular and lateral pressures of the movable die.

5. In a toe molding machine in combination a yieldingly supported stationary die; a movable die; and a lever with a stationary fulcrum on which the movable die is mounted, said lever being adapted to swing the movable die toward the stationary die to force the blank or the like into the latter and laterally so as to force the blank against the side wall of the stationary die.

[Claims 6 to 10 not printed in the Gazette.]

899,074. MAIL-BAG DELIVERER AND CATCHER. WILLIAM H. ROGERS, Lookout Mountain, Tenn. Filed June 20, 1908. Serial No. 439,512.



A mail pouch receiving device consisting of a pair of diverging arms, one of the arms being provided with a spring latch consisting of a substantially straight portion lying in a groove in the inner face of the arm and having its forward end extending transversely through the arm, a clamp nut on this transversely bent end, the rear end of said latch inclining rearwardly and outwardly into the throat of the receiver and being turned back through a transverse hole in the arm, the extremity being provided with a finger-hold.

899,075. FILTER. FRITZ ROSENSTEIN, Los Angeles, Cal. Filed Oct. 8, 1906. Serial No. 337,985.



1. A portable filter comprising a hollow body having a bulging extremity, an elastic body fitting said bulging extremity, a foraminous cage in said elastic body, a stone beneath said cage, and a sieve in the end of said elastic body.

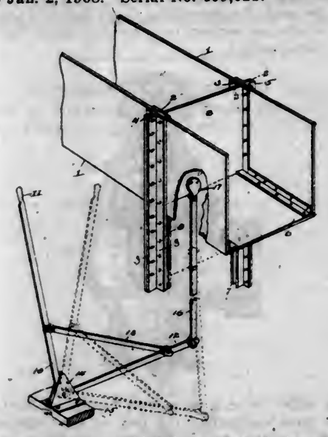
2. A portable filter comprising a hollow transparent body, having a bulging extremity, a nipple removably fitting said extremity, a cage in said nipple and a filter medium in said cage.

3. A portable filter, comprising a transparent hollow tube having a distended end, a flexible nipple removably fitting said distended end, a filter medium in said nipple, and a screen inclosing said filter medium.

4. A portable filter comprising a hollow transparent body having at one end a distention and a constricted opening in said distention, a flexible nipple fitting said distention, a fibrous filter in said nipple, a stone beneath said fibrous filter, and a cage inclosing said fibrous filter and stone, said cage being within said nipple.

5. A portable filter comprising a hollow transparent body having at one end a distention and a constricted opening in said distention, and an elastic body fitting said distention, a two-part foraminous cage in said elastic body, a filter medium in said cage, and a stone beneath said filter medium.

899,076. ORE-CHUTE. JOHN ROSS, Landlock, Alaska. Filed Jan. 2, 1908. Serial No. 409,023.



1. In a chute, the combination with a chute proper, having side walls and a bottom section, of ways positioned interiorly on said walls, angle irons positioned exteriorly on said walls forming a bracing thereof and a vertical extension for said ways, a chute section extending away from said ways provided with an opening in its bottom portion in line with said ways, a gate slidably mounted in said ways, a link pivotally connected with said gate, a lever pivotally engaging said link, and independent means for supporting said lever.

2. In a chute having side walls and a bottom section, ways vertically positioned on said side walls and away from the end of said chute, downwardly extending braces formed of angle bars exteriorly positioned on said side walls and forming an extension for said ways, a gate slidably mounted in said ways, a link pivotally secured to said gate, and a lever independently supported and pivotally connected to said link for operating said gate.

3. In a device of the character described, a chute, guide ways formed therein, reinforcing members, auxiliary guide ways secured to said reinforcing members and forming an extension of said first mentioned guide ways, a door designed to operate in said guide ways, and means for operating said door.

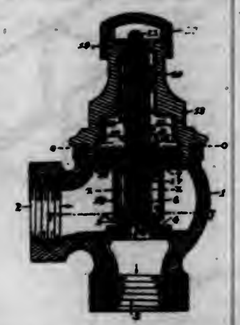
4. In a chute having side walls and a bottom section provided with an opening away from the end thereof, ways interiorly positioned on said side walls in line with said bottom opening, braces exteriorly positioned on said side walls and forming downward extensions for said ways, a door adapted to slide in said ways, and means connected to said door for moving the same.

5. In a chute having side walls and a bottom section provided with an opening positioned a short distance from the end thereof, ways vertically positioned on said side walls, braces forming a downward extension for said ways, a gate slidable in said ways, an inclined discharge section extending away from said ways, a link pivotally mounted on said gate, an independently supported L shaped lever operatively connected to said link and adapted to downwardly withdraw said gate from said chute.

899,077. RELIEF-VALVE. JOHN W. ROWE, Somerville, Mass., assignor to Norwall Manufacturing Company, New York, N. Y., a Corporation of Illinois. Filed June 10, 1907. Serial No. 378,069.

1. In a relief valve, a valve body having an inlet and an outlet, a valve controlling the flow of liquid through said

valve body and formed with parallel sides, a motor device embodying a piston carried by the stem of said valve and dividing the space in the valve body into two chambers, a sleeve depending from said piston and partly overlapping the parallel sides of the valve and slightly spaced therefrom, said piston provided with two restricted passages, one connecting the chamber above the piston with the chamber between the depending sleeve and the valve stem and the other connecting the chamber above the piston with the valve outlet.



2. In a relief valve, a valve body having an inlet and an outlet, a valve controlling the flow of fluid through said valve body, a motor device embodying a piston carried by the stem of said valve and dividing the space in the valve body into two chambers, and provided with a vent, a sleeve depending from said piston exteriorly of the vent thereof with its free end overlapping said valve and slightly spaced therefrom, the vent in said piston connecting the chamber above the piston with the chamber between the depending sleeve and the valve stem, and a restricted passage through the piston connecting the chamber above the piston with the valve outlet.

3. In a relief valve, a valve body having an inlet and an outlet, a valve controlling the flow of fluid through said body, a motor device embodying a piston carried by the stem of said valve and dividing the space in the valve body into two chambers, a sleeve depending from said piston with its free end overlapping said valve and slightly spaced therefrom, a restricted air passage through the piston connecting the chamber above the piston with the chamber between the depending sleeve and the valve stem, and a second restricted air passage through the piston connecting the chamber above the piston with the outlet, and means for regulating the flow of air through said last named passage.

899,078. HEATING SYSTEM. HERBERT SALMON, Cassopolis, Mich. Filed Feb. 6, 1907. Serial No. 356,071.



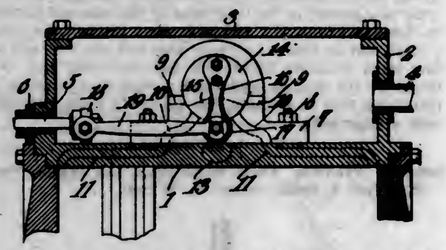
1. In a heating system, the combination with a concrete floor or floor base, of header chambers formed therein; headers arranged in said chambers; connecting pipes or conduits for said headers arranged in the said concrete floor or floor base; valves for said conduits arranged in said header chambers; a supply connection for the delivery header; a delivery connection for the discharge header; a valve for said delivery connection; covers for said header chambers; discharge connections for the discharge header adapted to deliver through the chamber cover; and valves for said discharge connections.

2. In a heating system, the combination with a concrete floor or base, of header chambers formed therein; pipes or conduits embedded in said concrete floor or base and projecting into said header chambers; headers for said pipes or conduits; valves for the ends of said conduits for cutting off their connection to said headers, said valves being arranged in said header chambers; a supply connection for the delivery header and a delivery connection for the discharge header, said delivery connection having a valve therein.

3. In a heating system, the combination with a concrete floor or base, of header chambers formed therein; pipes or conduits embedded in said concrete floor or base and projecting into said header chambers; headers for said pipes or conduits; valves for the ends of each of said conduits for cutting off their connection to said headers, said valves being arranged in said header chambers; and a supply connection for the delivery header.

4. In a heating system, the combination with a concrete floor or base of a plurality of conducting pipes or conduits embedded in said concrete floor or base, supply connections for said pipes; and valves for said pipes or conduits by which they may be controlled independently of each other.

899,079. VALVE. HENRY D. SNELL, Mawrglen, Pa. Filed Apr. 30, 1908. Serial No. 430,157.



1. In an engine, a steam chest, a valve casing detachably mounted therein, a rotary valve held in said casing, a retaining and rocking member secured to each end of said valve lying and bearing against the ends of said casing, a valve stem, a yoke mounted on said valve stem, and rods connecting said rocker arms with said yoke.

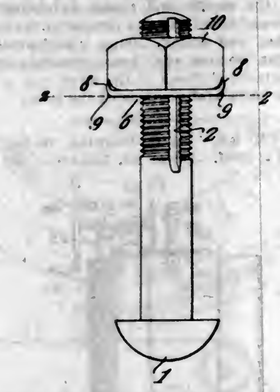
2. In an engine, a steam chest, a valve casing detachably mounted therein, a rotary valve held in said casing, a pair of rocker arms secured to said valve and having their ends overlying and bearing against the ends of said casing, a valve stem, a yoke mounted on said valve stem, and rods connecting said rocker arms with said yoke.

899,080. NUT-LOCK. CHARLES W. STARK, Asbury Park, N. J. Filed Feb. 14, 1908. Serial No. 415,910.

1. In a nut lock, a nut, a bolt, a locking plate substantially circular in outline provided with a plurality of pairs of secant incisions, each pair forming an angle coterminous with one of the angles of said nut and having portions exterior of each pair of the incisions upwardly bent to engage two adjacent sides of said nut, and interlocking means carried by said bolt and locking plate.

2. In a nut lock, a nut, a bolt, a locking plate substantially circular in outline provided with a pair of secant incisions forming an angle coterminous with an angle of said nut and having portions exterior of said incisions upwardly bent to engage two adjacent sides of said nut, a pawl carried by said locking plate, and means carried on said bolt adapted to be engaged by said pawl and prevent the rotation of said nut in one direction.

3. In a nut lock, a nut, a bolt, a locking plate substantially circular in outline provided with a pair of secant incisions forming an angle coterminous with an angle of said nut and having portions exterior of said incisions upwardly bent to engage two adjacent sides of said nut, a locking washer held on said bolt against rotation and provided with a peripheral series of teeth, and a pawl on said locking plate arranged to engage said teeth.

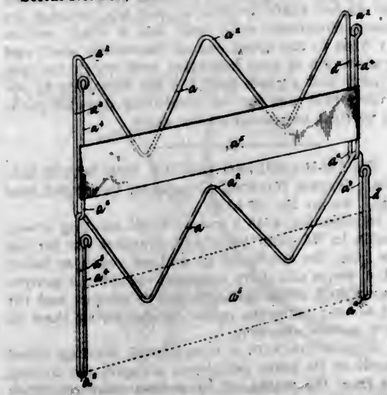


4. In a nut lock, a nut, a bolt, a locking plate substantially circular in outline provided with a plurality of pairs of secant incisions each pair forming an angle coterminous with one of the angles of said nut and having portions exterior of each pair of the incisions upwardly bent to engage two adjacent sides of said nut, a pawl mounted on said locking plate and teeth supported by said bolt to engage said pawl and to prevent rotation of said nut in one direction.

5. In a nut lock, a nut, a bolt, a locking plate substantially circular in outline provided with a plurality of pairs of secant incisions each pair forming an angle coterminous with one of the angles of said nut and having portions exterior of each pair of the incisions upwardly bent to engage two adjacent sides of said nut, a washer mounted upon said bolt provided with a peripheral series of teeth, and a pawl carried by said washer adapted to engage said teeth.

[Claims 6 and 7 not printed in the Gazette.]

899,081. MEANS OF USING NEWSPAPER AND LIKE STANDS FOR ADVERTISING PURPOSES. FRANK STEBBINGS, Walthamstow, England. Filed July 22, 1907. Serial No. 385,069.



1. In an advertising device, sections formed with approximately W-shaped upper portions and having extensions for supporting papers or the like, a suitable advertising plate secured between the extensions, and means for interlocking a series of sections.

2. In an advertising device, sections formed with approximately W-shaped upper portions and having extensions for supporting papers or the like, a plate secured between the said extensions at their lower ends for containing advertisements.

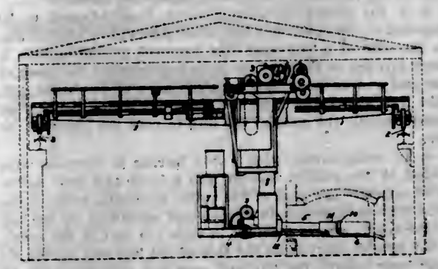
3. In an advertising device, sections formed with approximately W-shaped upper portions and having extensions for supporting papers or the like, a suitable advertising medium secured between the extensions at their lower ends.

899,082. UNIVERSALLY-EXTENSIBLE TOOL-SHAFT. JOSEPH L. STEINGÄSSER, Mombach, near Mainz, Germany. Filed Nov. 5, 1907. Serial No. 400,765.



In a telescopic tool shaft, the combination of an outer pipe, an inner pipe and a medial pipe rotatable with said outer pipe and provided with grooves, a handle mounted on the inner pipe, a tool clamp on said pipe, a filling pot on said pipe, a ring on said pipe, keys on said ring, adapted to engage with grooves of the medial pipe, an extensor spring actuating said ring and a ball sleeve mounted on the outer pipe said sleeve being rotatably mounted in a frame member, substantially as described and for the purpose set forth.

899,083. CHARGING-CRANE. CLARENCE L. TAYLOR, Alliance, Ohio, assignor to The Morgan Engineering Company, Alliance, Ohio. Filed Oct. 1, 1907. Serial No. 395,441.



1. In a crane, the combination with a traveling bridge and a trolley thereon, of a frame suspended from the trolley, a fixed charging bar projecting from said frame, and a peel adapted to be moved outwardly with relation to the head of the charging bar for discharging the slabs or sheets onto the floor of the furnace.

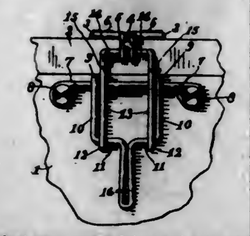
2. In a charging crane, the combination with a traveling trolley, of a frame suspended therefrom, a fixed charging bar carried by said frame, a peel movable outwardly with relation to the head of the charging bar for discharging the sheets or slabs onto the floor of the furnace, and means for moving the peel.

3. In a charging apparatus the combination with a movable support and a fixed charging bar carried thereby, of a peel mounted to move outwardly on the charging bar for discharging the sheets or slabs onto the floor of the furnace, and means for moving the peel.

4. In a charging apparatus, the combination with a movable support and a fixed charging bar carried thereby, the latter having a head at its free end, of a peel mounted to move outwardly on the charging bar for discharging the slabs or sheets, and means for moving the peel.

5. In a charging apparatus, the combination with a movable support and a fixed charging bar carried thereby, of a peel located in a plane below the charging bar and provided with a hub mounted to slide on said bar, and means for moving the hub longitudinally.

899,084. BOX-FASTENER. ALVIN T. THOITS and JOHN G. GRONBERG, Grand Rapids, Mich., assignors to Caloric Fireless Cook Stove Company, Grand Rapids, Mich., a Corporation of Michigan. Filed June 19, 1908. Serial No. 439,408.



1. A box fastener, comprising a hook adapted to be attached to a box cover, a bar adapted to be attached to a box at its respective ends, and having its middle spaced apart from the box, a lever pivoted to the bar, and a link pivoted to the lever and adapted to engage the hook.

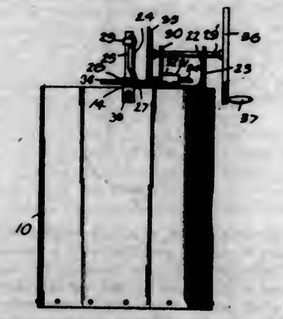
2. A box fastener comprising a hook made of a piece of wire folded at the middle and formed into a hook, and having diverging arms each terminating in an eye to receive a fastening, a bar bent outward at the middle and having each end terminating in an eye to receive a fastening, a lever formed of a wire having its ends pivoted on the bar and having parallel sides spaced apart and also having middle horizontal and inwardly turned portions and a handle portion formed of the folded middle part of the wire, and a wire link pivoted on the horizontal portion of the lever and adapted to engage the hook.

3. A box fastening, comprising a hook adapted to be fastened to the cover of a box, a bar adapted to be fastened to the side of a box and bent outward at the middle, a lever pivoted to the bar, and a link pivoted to the lever at one end and adapted to engage the hook at the other end, said link also being bent to afford a yielding connection and to permit the ends of the link to pass the plane of the bar.

4. In combination with a box having a cover, a wire folded at the middle, formed into a hook and bent downward opposite the edge of the cover, diverging arms to the wire each terminating in an eye and extending on the top of the cover, screws inserted in each eye and in the cover, a bar spaced apart from the side of the box and having its ends bent toward the box and each end provided with an eye, a screw in each eye and inserted in the box, a lever consisting of a wire having an eye in each end surrounding the bar, parallel portions extending from the bar and spaced apart, alined inwardly turned portions, and a handle portion formed of the folded middle portion of said wire; and a link formed of a wire having a loop in each end surrounding the inwardly turned portions of the lever, and a horizontal middle portion to engage the hook, said link also being bent to extend rearward above the bar.

5. In combination with a box having a cover, a wire hook attached to the cover and extending downward opposite the edge of the same and thence outward and upward, and also having diverging arms secured to the top of the cover, a bar secured to the box below the hook and spaced apart from the side of the box at the middle, a toggle lever consisting of a piece of wire folded at the middle to form a handle, thence extending outward horizontally near the middle and thence extending upward parallel and spaced apart and also pivoted at the respective ends on the bar, and a link having a horizontal middle portion engaging the hook and thence extending downward between the parallel portions of the lever, and pivoted at its ends to the horizontal portions of the lever.

899,085. CHURN. IRA C. VANKIRK, Huffman, Nebr. Filed July 11, 1907. Serial No. 383,270.



1. A churn comprising a body, a top removably supported at the top of the body, a dasher shaft journaled vertically in the body, a dasher carried by the shaft and attached vertically thereon, a shaft section removably connected upon the upper end of the shaft including a portion of gear formation, a beveled gear mounted for rotation upon said top, a drive shaft, a beveled gear carried by said shaft and meshing with the first-mentioned gear, and a rack bar pivotally connected with the first-mentioned beveled gear and meshing with that portion of the shaft section which is of gear formation.

2. A churn comprising a body and a top removably supported upon the body, a dasher shaft journaled vertically in the body, a shaft section removably connected to the upper end of the dasher shaft and including a portion of gear formation, and a rack bar movable in a reciprocatory manner and in mesh with said gear to rotate said dasher shaft.

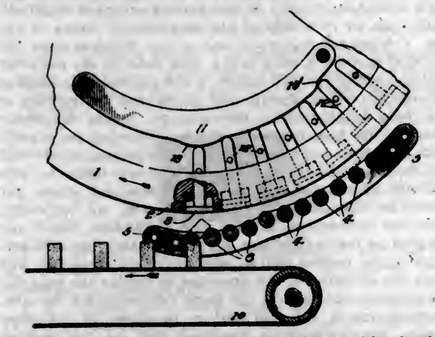
3. A churn comprising a body, a dasher shaft mounted for rotation in the body, a top through which the upper end of the dasher shaft projects, a rack bar mounted for reciprocatory movement upon said top, a shaft section removably fixed to the upper end of the dasher shaft and including a portion of gear formation with which the rack bar is in mesh, and a guide upon the top extending to one side and above said rack bar for preventing sidewise movement and vertical movement of the same.

899,086. BRICK-HANDLING DEVICE FOR BRICK-MACHINES. JOSEPH WALKER, Alexandria, Va. Filed May 17, 1907. Serial No. 374,150.

1. The combination with a rotary brick molding wheel, having molds in its outer periphery, plungers for forcing the bricks from the molds, of an endless conveyer below the wheel, a series of rollers arranged around the periphery of the molding wheel and arranged to support and tilt the bricks as they leave the molds for delivering them on edge to the endless conveyer.

2. The combination with a rotary brick molding wheel having molds in its outer periphery, plungers for forcing the bricks from the molds, of an endless conveyer below the wheel, a series of rollers arranged around the periphery of the molding wheel, and means for forcing the bricks a part of the way out of the molds and supported by the rollers, and means for forcing the bricks all of the way out when they reach the end of the rollers.

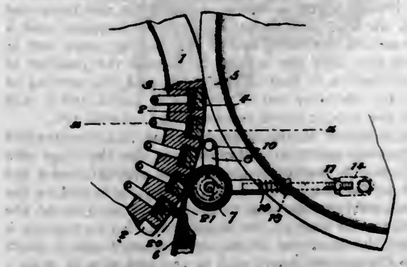
3. The combination with a rotary brick molding wheel having molds in its outer periphery, plungers for forcing the bricks from the molds, of a conveyer below the wheel, a series of rollers arranged around the periphery of the molding wheel, and a cam for forcing the plunger a part of the way out, whereby the bricks are supported by the rollers within the molds, and means for forcing each successive brick entirely out of the mold as it reaches the last roller of the series, substantially as set forth.



4. The combination with a rotary brick machine having the usual plungers for forcing the bricks from the mold, of an endless belt below the mold wheel, a series of rollers between the endless belt and the mold wheel one portion of the series of rollers arranged parallel with the arc of the molding wheel, and the other portion of the series arranged at an angle to the arc of the molding wheel, and a cam arranged for operating said plungers and having a surface to correspond with the arrangement of the rollers and said cam so positioned that when the plungers are forced in their outermost position the end roller of said series is adjacent one side of the mold, such as described.

5. The combination with a rotary brick machine having the usual plunger for forcing the bricks from the mold, an endless belt below the mold wheel, a series of rollers between the endless belt and the mold wheel, one portion of the series of rollers arranged parallel with the arc of the molding wheel, and the other portion of the series arranged at an angle to the arc of the molding wheel, the end roller of the last series having a covering of soft material, and a cam arranged for operating said plungers and having a surface to correspond with the arrangement of the rollers, the said cam so positioned that when the plungers are forced into their outermost position the end roller of the said series is adjacent one side of the mold, substantially as described.

899,087. ROTARY BRICK-MACHINE. JOSEPH WALKER, Alexandria, Va. Filed May 17, 1907. Serial No. 374,151.



1. The combination with a rotary brick machine, of a pressure roller bearing against the outer periphery of the brick molding wheel, a knife operating upon the outer face of the brick while under pressure of the roller, and means for supplying steam between the knife and the brick.

2. The combination with a rotary brick machine, of a pressure roller bearing against the outer periphery of the brick molding wheel, a spring holding the roller under tension, means for varying the tension of the spring, a knife operating upon the outer periphery of the brick just below the point of contact of the roller with the brick, and a pipe between the knife and wheel to supply steam to the brick at the point of contact of the knife with the brick.

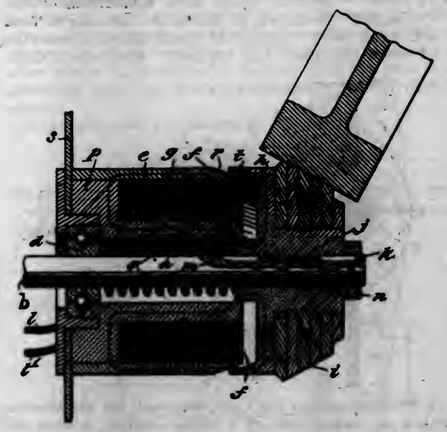
3. The combination with a rotary brick machine, of pivoted arms carried by the machine, a roller mounted between the lower end of said arms and bearing upon the outer periphery of the brick molding wheel, springs bearing against said arms, and a knife operating upon the outer face of the brick just below the point of contact of the roller with the brick.

4. The combination with a rotary brick machine, of L-shaped arms pivotally mounted at their upper ends within the machine, a roller rotatably mounted between said arms, rods pivotally and adjustably mounted upon the frame of the machine and telescoping within said arms, and springs surrounding the rods and bearing against said arms and normally holding the roller against the wheel under tension.

5. The combination with a rotary brick machine of an auxiliary pressure roller bearing against the outer periphery of the brick molding wheel, spring tension means for said auxiliary pressure roller, a knife upon the outer face of the brick wheel under pressure of the roller and a steam supply pipe between the knife and the brick molding wheel and having openings adapted to supply steam between the point of the knife and the brick.

[Claims 6 and 7 not printed in the Gazette.]

899,088. GOVERNOR FOR DYNAMOS. CHARLES L. WEICHELT, Philadelphia, Pa. Filed Dec. 11, 1907. Serial No. 405,989.



1. In a speed governing device of the character described, in combination, a dynamo, an armature and shaft, a driven pulley, a hub or armature slidingly carried by said shaft and carrying said pulley, a spring for controlling the movement of said hub or armature in one direction, an electro-magnet for controlling the movement of said hub or armature in the other direction, and connections leading from the field coils of said dynamo to the winding of said electro-magnet.

2. In a speed governing device of the character described, in combination, a dynamo and its shaft, a stationary controlling electro-magnet surrounding the armature shaft of said dynamo and subject to the changes of electro-motive force generated by said dynamo, an armature mounted slidingly upon the armature shaft of said dynamo, a friction pulley carried by said sliding armature; and a spring for forcing said armature and pulley away from said magnet.

3. In combination, a dynamo, an armature and its shaft, a stationary electro-magnet, carried by the frame of the dynamo, the core of which is hollow and which surrounds said armature shaft, an armature for said magnet mounted slidingly upon said shaft, a friction pulley carried by said magnet armature, a spring within said hollow magnet core operating to force said magnet armature and pulley outward, and connections between the field coils of said dynamo and the winding of said electro-magnet.

899,089. METALLIC CORE FOR RAILWAY-TIES. WILLIAM B. WESTBROOK, Cliff, Ky. Filed Nov. 20, 1907. Serial No. 403,021.

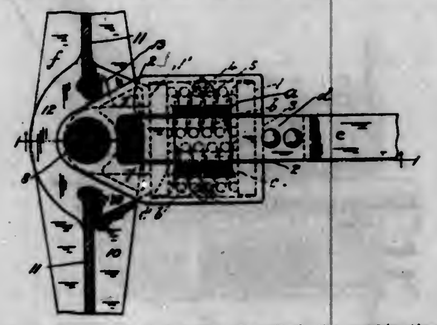


1. A core for concrete railway ties, comprising tubular shaped metal having rail block slots, and a series of perforations throughout its sides, bottom, and top between said slots.

2. A core for concrete railway ties, composed of metal shaped to form a tube having concaved top and convexed sides, said top having alternating perforations, and said sides having perforations, and a bottom having alternating perforations.

3. A tubular core for concrete railway ties having portions of its top removed to form rail-block slots or openings, and a series of alternating perforations between the slots, perforated sides, and a series of alternating perforations in the bottom of the core.

899,090. DRAFT-GEAR FOR RAILROAD-CARS. CHARLES T. WESTLAKE, St. Louis, Mo., assignor to Transom Draft Gear Company, St. Louis, Mo., a Corporation of Delaware. Filed Aug. 26, 1907. Serial No. 390,171.

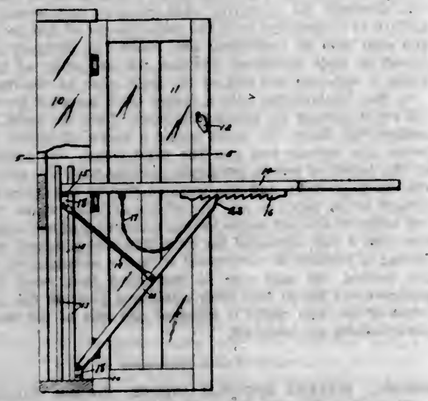


1. In draft-gear of the class described, the combination with a car underframe, of a spring member, a front follower-plate and a rear follower-plate for the said member, a draw-bar, a yoke fixed to the draw-bar and straddling the said plates, a suitable housing adapted to contain the said member and plates and for the play of the yoke longitudinally therethrough, the said housing being pivoted rearwardly, but otherwise unattached to the said frame, and movable radially about its pivotal point in a horizontal plane, and means for inclining the rear follower-plate relatively to the front follower-plate upon the swinging of the draw-bar, substantially as described and for the purpose set forth.

2. In draft-gear of the class described, the combination with a car underframe, of two springs arranged longitudinally, one on each side of the longitudinal center of the car, a front follower plate and a rear follower-plate for the said springs, a draw-bar, a yoke fixed to the draw bar and straddling the said plates, a suitable housing adapted to contain the said springs and plates, and for the play of the yoke longitudinally therethrough, and a pin removably fixed to the said frame, the said housing being rearwardly pivoted, but otherwise unattached to the said frame, and movable radially about the said pin in a horizontal plane, and means for inclining the rear follower-plate relatively to the front follower-plate upon the swinging of the draw-bar, substantially as described and for the purpose set forth.

3. In draft-gear of the class described, the combination with a car-body-bolster, of two springs arranged longitudinally, one on each side of the longitudinal center of the car, a front follower-plate and a rear follower-plate for the said springs, a draw-bar, a yoke fixed to the draw-bar and straddling the said plates, a suitable housing adapted to contain the said springs and plates, and for the play of the yoke longitudinally therethrough, a pin removably fixed in the body-bolster, an arm projecting rearwardly from the housing and perforated for the passage of the said pin therethrough, the said housing and arm being movable radially about the said pin in a horizontal plane, but otherwise unattached to the car, and a lug projecting from the body-bolster at each side of the said center and adapted to bear at its free end against the rear follower-plate in the normal central position of the draw-bar, and upon the swinging of the draw-bar to incline the rear follower plate relatively to the front follower-plate for compressing one of the said springs in excess of the other spring, substantially as described and for the purpose set forth.

899,091. IRONING-BOARD. MATHIAS B. WONSMOS and JENS P. SCHONBOE, Audubon, Iowa. Filed Oct. 25, 1907. Serial No. 399,150.



1. In a device of the class described, the combination of an ironing board, a sliding support for the inner end thereof, an arm pivoted to a stationary support, and a rod pivoted to the inner end of the ironing board and to the said arm, said rod serving to control the position of the arm relative to that of the board, and also serving as a brace for the inner end of the ironing board, and a rack fixed to the ironing board to be engaged by said arm.

2. In a device of the class described, the combination of an ironing board, a sliding support for the inner end thereof, an arm pivoted to a stationary support, and a rod pivoted to the inner end of the ironing board and to the said arm, said rod serving to control the position of the arm relative to that of the board, and also serving as a brace for the inner end of the ironing board, and a chain fixed to the ironing board and to the said arm in such a manner as to move the arm upwardly and inwardly when the ironing board is placed in a substantially vertical position with its lower end adjacent to the pivot point of said arm.

3. In a device of the class described, the combination of a cabinet, guide strips on the sides of the cabinet spaced apart, an arm pivoted to the cabinet, an ironing board, a cross piece fixed to the ironing board with its ends between said guide strips, said cross piece being of such shape as to engage the strips when the ironing board is in a horizontal position, and to freely slide between them when the ironing board approaches a vertical position, a rack secured to the ironing board to be engaged by said arm, and rods pivoted to the inner end of the ironing board, and the central portion of said arm.

899,092. WOVEN HOSE. CLINTON ALVORD, Worcester, Mass., assignor to Fabric Fire Hose Company, a Corporation of New York. Filed Aug. 30, 1905. Serial No. 276,368.

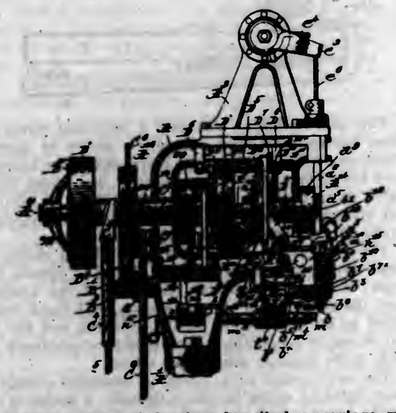


1. A tubular hose fabric comprising a plurality of twilled plies, the spirals of the twills in adjacent plies extending in opposite directions.

2. A tubular hose fabric comprising a plurality of twilled plies and a series of binder warps by which said plies are united, the spirals of the twills in adjacent plies extending in opposite directions.

3. A tubular hose fabric comprising a plurality of twilled plies woven together into a unitary structure, the filling threads in the several plies being substantially parallel and the twills in the adjacent plies extending in opposite directions.

899,093. MACHINE FOR MAKING AND DRIVING STAPLES. ORRELL ASHTON, Lawrence, Mass., assignor to United Shoe Machinery Company, Boston, Mass., a Corporation of New Jersey. Filed May 16, 1901. Serial No. 60,528.



1. In a machine of the class described, a carriage, means for moving said carriage automatically as the stock varies in thickness, wire-feeding rolls sustained by said carriage and adapted to engage opposite sides of the wire, means to cause said wire-feeding rolls to grasp the wire, means to separate said wire-feeding rolls to release the wire preparatory to the backward movement of the rolls, and means while said carriage is at rest to rotate said wire-feeding rolls in a forward direction for feeding the wire grasped by said rolls according to the thickness of the stock and to rotate said rolls backwardly, the latter having been separated to release the wire, the backward movement of said feeding mechanism over the wire being completed while said carriage is yet at rest.

2. In a machine of the class described, wire feeding wheels to grasp the wire between them, actuating means to turn said wheels forwardly always to a positively defined point when feeding the wire, means to separate said wheels to release the wire that said actuating means may turn said wheels backwardly into starting position without moving the wire, and a stop controlled automatically as to its position by differences in thickness of the stock to arrest sooner or later the backward movement of the feeding wheels.

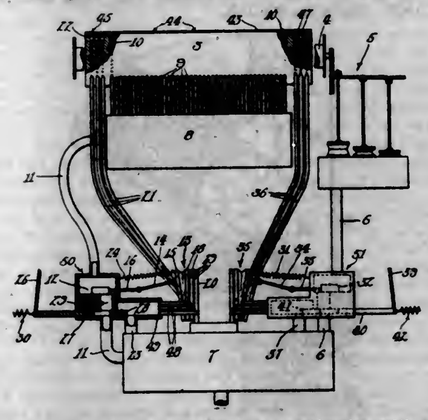
3. In a machine of the class described, wire-feeding means comprising wire-gripping means having movement in two directions, means for rendering said gripping means inoperative to grip the wire during movement in one direction, actuating means constructed to control positively the movement of said gripping means in both directions, and means operating to prevent overthrow of said wire feeding means by temporarily locking said actuating means always at the same point in its wire-feeding movement.

4. In a machine of the class described, wire-feeding means comprising wire-gripping means having movement in two directions, means for rendering said gripping means inoperative to grip the wire during movement in one direction, means automatically controlled by the thickness of the stock to determine the amount of inoperative movement of the gripping means, actuating means constructed to control positively the movement of said gripping means in both directions, and means for temporarily locking said actuating means always at the same point in its wire-feeding movement.

5. In a machine of the class described, wire-feeding wheels to grasp the wire between them, actuating means to turn said wheels forwardly to a positively defined point when feeding the wire, means to separate said feeding wheels to release the wire at the end of their feeding movement said actuating means being constructed to rotate the feeding wheels backwardly while the wire remains at rest, a spring to cause said feeding wheels to grasp the wire with a yielding pressure during their feeding movement, a feed-varying stop, and means acting automatically as the stock varies in thickness to position said stop to arrest sooner or later the backward movement of the feeding wheels.

[Claims 6 to 48 not printed in the Gazette.]

899,094. EXPRESSION AND FEED CONTROL FOR PIANO-PLAYERS, &c. ROY F. BANCROFT, Tropico, Cal. Filed July 31, 1906. Serial No. 328,628.



1. A piano player comprising, in combination with the tracker board and the action connected thereto, valve means controlling the force of the action and a pneumatic controlling means for said valve means comprising a plurality of elements operative individually and conjointly on

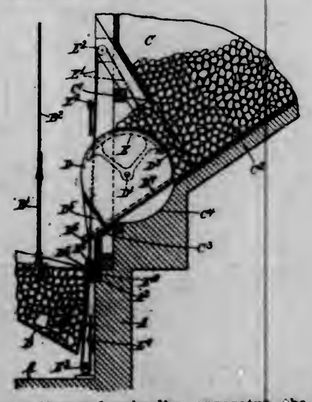
said valve means to produce variant movements thereof, a plurality of pneumatic connections from the respective pneumatic elements to the tracker board, and a manual valve for controlling the force of the action, said manual valve being provided with means for disabling the operating means for the pneumatically controlled valve, when the manual valve is in operative position.

2. A piano player comprising, in combination with the tracker board and the action connected thereto, a motor for the music sheet, speed control means therefor comprising a valve and a pneumatic controlling means for said valve consisting of a plurality of elements operative individually and conjointly on said valve to produce variant movements thereof, a plurality of pneumatic connections from the tracker board to the respective pneumatic elements of the speed controlling means, and a manual valve for controlling the speed of the motor, said manual valve being provided with means for disabling the operating means for the pneumatically controlled valve, when the manual valve is in operative position.

3. A piano player comprising, in combination with the tracker board and the action connected thereto, valve means controlling the force of the action and a pneumatic controlling means for said valve means comprising a plurality of elements operative individually and conjointly on said valve means to produce variant movements thereof, a plurality of pneumatic connections from the respective pneumatic elements to the tracker board, and a manual valve for controlling the force of the action, said manual valve being provided with means for cutting off communication through the said controlling pneumatic for the pneumatically controlled valve, when the manual valve is in operative position.

4. A piano player comprising, in combination with the tracker board and the action connected thereto, a motor for the music sheet, speed control means therefor comprising a valve and a pneumatic controlling means for said valve consisting of a plurality of elements operative individually and conjointly on said valve to produce variant movements thereof, a plurality of pneumatic connections from the tracker board to the respective pneumatic elements of the speed controlling means, and a manual valve for controlling the speed of the motor, said manual valve being provided with means for cutting off communication through the said controlling pneumatic for the pneumatically controlled valve, when the manual valve is in operative position.

899,095. LOADING AND UNLOADING APPARATUS. EDWARD E. BARRETT, La Grange, Ill. Filed Oct. 19, 1907. Serial No. 398,172.



1. In a loading and unloading apparatus, the combination of a hoisting bucket, moving in a definite path with a fixed supply hopper at one side of such path, and intermediate such path and hopper, a pivotally mounted combined gate, measure and chute.

2. In a loading and unloading apparatus, the combination of a hoisting bucket, moving in a definite path with a fixed supply hopper at one side of such path, and intermediate such path and hopper, a pivotally mounted combined gate, measure and chute, said chute member projecting into the path of the bucket when serving as a chute.

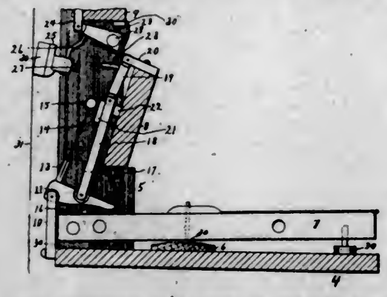
3. In a loading and unloading apparatus, the combination of a hoisting bucket, moving in a definite path with a fixed supply hopper at one side of such path, and intermediate such path and hopper, a pivotally mounted combined gate, measure and chute, said chute member lying parallel with and outside of such path when serving as a gate.

4. In a loading and unloading apparatus, the combination of a hoisting bucket, moving in a definite path with a fixed supply hopper at one side of such path, and intermediate such path and hopper, a pivotally mounted combined gate, measure and chute, said chute member tangential to a circle about its axis of rotation.

5. In a loading and unloading apparatus, the combination of a hoisting bucket, moving in a definite path with a fixed supply hopper at one side of such path, and intermediate such path and hopper, a pivotally mounted combined gate, measure and chute, which contains two plates which alternately act as gates and one of them as a chute.

[Claims 6 to 8 not printed in the Gazette.]

899,096. ACTION FOR KEYBOARD STRINGED MUSICAL INSTRUMENTS. PETROWITSCH BISSING, Topeka, Kans. Filed Nov. 29, 1907. Serial No. 404,242.



1. The combination of a frame; a tensioned string; a hammer having a resilient element; a device to operate the hammer; a check to limit the movement of the hammer toward the string; said string, hammer, and check being adjusted so as to cause the tensioned string and said resilient element to coöperate in maintaining a prolonged vibration of the hammer-head against the string.

2. The combination of a frame; a tensioned string; a hammer having a resilient shank; a device to operate the hammer; a check to limit the movement of the hammer toward the string; said string, hammer, and check being adjusted so as to cause the tensioned string and the resilient shank to coöperate in maintaining a prolonged vibration of the hammer against the string.

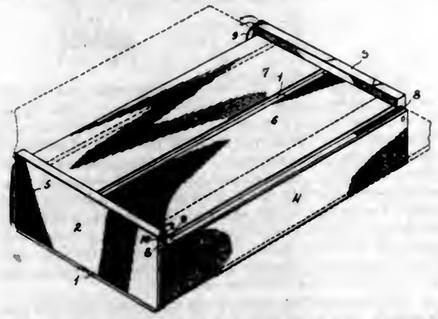
3. The combination of a frame; a tensioned string; a hammer having a spring shank; a damper; a device to operate the hammer and the damper; and a check to limit the movement of the hammer toward the string; said string, hammer, and check being adjusted so as to cause the tensioned string and the spring shank to coöperate in maintaining a prolonged vibration of the hammer against the string.

4. The combination of a frame; a tensioned string; a hammer having a spring shank; a damper; a lever to operate the hammer and the damper; and a check to limit the movement of the hammer and adjusted so as to naturally check the hammer with the head close to but not in contact with the string and so as to permit the head by reason of the momentum acquired in its action toward the string and the flexure of the spring shank to strike the string, in which construction the tensioned string and the spring shank are adapted to coöperate in maintaining a prolonged vibration of the hammer-head against the string.

5. The combination of a frame; a tensioned string; a hammer having a resilient shank; a device to operate the hammer; a check to limit the movement of the hammer toward the string; said string, hammer, and check being arranged so as to cause the tensioned string and the resilient shank to coöperate in maintaining a prolonged vibration of the hammer against the string; and a hammer-throwing element coöperating with said hammer to initially throw the hammer-head toward the string.

[Claims 6 to 10 not printed in the Gazette.]

899,097. PACKING-CASE. ALONZO B. BOYLAN, CASTELLA F. BOYLAN, and CLAYTON L. BENNETT, Victor, Colo. Filed Oct. 18, 1905. Serial No. 283,264.



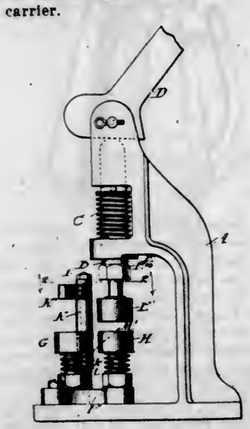
1. A packing case comprising a body having a bottom, two sides and two ends, the inner side of each end being horizontally grooved its full length above the upper edges of the sides, a cover comprising two members disposed side by side and slidable in said grooves inwardly and outwardly over the upper edges of the sides respectively, and two locking devices pivotally mounted on the body and movable to and from positions for obstructing the outward movement of the two members respectively of the cover.

2. A packing case comprising a body having a bottom, two sides and two ends, the ends on their inner sides each having a horizontal groove extending the full length of the end and disposed above the upper edges of the sides, a cover comprising two members disposed side by side and slidable in said grooves, inwardly and outwardly over the upper edges of the sides, and two resilient devices pivoted to the body and movable respectively into and out of the box and to and from positions obstructing the outward movement of the cover members respectively, the free ends of said resilient devices, when the devices are so positioned, bearing against the inner sides respectively of the sides of the body.

3. A packing case comprising a body having a bottom, two sides and two ends, a cover slidably mounted between the ends, inwardly and outwardly over the upper edge of one of the sides of the body, and a resilient plate pivoted to the body and having an outwardly extending projection at its free end, said resilient plate being movable into and out of the box to and from a position in which the projection thereon will engage the inner side of the adjacent side of the body, in which position said plate will obstruct the outward movement of the cover.

899,098. PRESS FOR BUTTON-MAKING AND LIKE PURPOSES. JULIUS G. BREITENSTEIN, Chicago, Ill., assignor to Independent Button and Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 8, 1907. Serial No. 367,003.

1. In a machine for the purpose stated, in combination with a standard, a reciprocating die having a yielding member; a carrier mounted on the standard for movement transverse to said reciprocating movement; a plurality of dies mounted on such carrier; an arm extending transversely to the direction of said reciprocation mounted on the carrier for movement therewith and also for movement in the direction of said reciprocation, adapted to be carried between and out from between the yielding and unyielding members of the upper die by said transverse movement of the carrier.



2. In a machine for the purpose stated, in combination with a standard, a reciprocating die having a yielding and an unyielding member; a die-carrier mounted for movement transverse to that of the reciprocating die; a plurality of dies mounted on such carrier in position to be brought into line one by one with the reciprocating die for coöperation therewith; an element on the carrier mounted for reciprocation parallel with the reciprocating die, and means for holding it yieldingly at one limit of its path of reciprocation, said element having an arm adapted when the element is at said limit to be carried between the yielding and unyielding members of the reciprocating die by the transverse movement of the carrier and also to be withdrawn by transverse movement from said interposed position.

3. In a machine for the purpose stated, in combination with a standard, a reciprocating die having a yielding and an unyielding member; a die carrier mounted for movement transverse to that of the reciprocating die; a plurality of dies mounted on such carrier in position to be brought into line one by one with the reciprocating die for coöperation therewith; a rock shaft on the carrier mounted for reciprocation parallel to the reciprocating die and also for oscillation in transverse direction; a spring which yieldingly holds said rock shaft at one limit of its path of reciprocation and at one limit of its range of oscillation, said rock shaft having an arm adapted when said rock shaft is at said limit to be carried between the yielding and unyielding members of the reciprocating die by the transverse movement of the carrier and to be withdrawn from such interposed position by transverse movement.

4. In a die press, the combination with a reciprocating die having fixed and yielding members, of a carrier having a plurality of dies thereon and movable to bring either of its dies opposite the first-mentioned die, and a yielding arm pivotally mounted on the carrier and arranged to swing between said fixed and yielding members in one direction and to clear the same in the other direction.

5. In a die press, the combination with a reciprocating die having fixed and yielding members, of a carrier having a plurality of dies thereon and movable to bring either of its dies opposite the first-mentioned die, a rod projecting from the carrier, and a swinging arm yieldingly mounted on the rod and projecting in position to strike the reciprocating die between said fixed and yielding members when moved in one direction and to clear the same when moved in the other direction.

[Claim 6 not printed in the Gazette.]

809,099. COFFEE-MAKER. ROYLE A. BUCKNER, Nevada, Mo. Filed May 9, 1908. Serial No. 431,925.



1. A coffee maker comprising a receptacle, a strainer extending across one end of the receptacle, a strainer-holding ring encircling a portion of the receptacle and having an annular flange, supports on the side of the receptacle for the fingers of the hands, to enable the thumbs to engage said flange, and said flange having a dished or concaved surface that is uppermost when the receptacle is in an inverted position with the strainer constituting its bottom and said flange projecting outward clear of any contiguous surface of the receptacle.

2. A coffee maker comprising a receptacle, a strainer at one end of the receptacle, a vent tube on the outside of the receptacle extending alongside of the same but separated therefrom to enable it to be grasped by the hand, said vent tube communicating with the receptacle at the end opposite the strainer, a brace arm extending from the receptacle to said tube, a finger-engaging loop on the outside of the receptacle, and a removable strainer-clamping ring having an annular flange situated with reference to said loop and said brace arm, so that with the fingers of the hands engaging the same, the thumbs may bear against said flange to remove the ring from the receptacle.

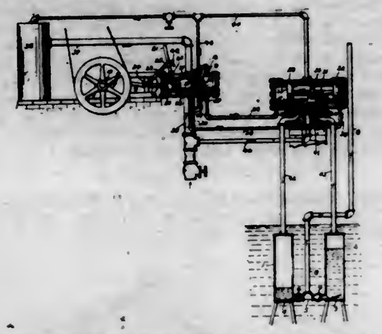
899,100. CORSET. THOMAS G. BOWERS, New Haven, Conn., assignor to The Gilbert Mfg. Co., New Haven, Conn., a Corporation. Filed Mar. 23, 1908. Serial No. 422,787.



The herein described corset having bone pockets and bones therein, said bones terminating at a point below the upper edge of the corset, a binder for the outer edge of the corset, and guards located in the upper end of said pockets and extending from the edge of the corset over the upper end of the bones and into the line of the binder which is stitched through said guards whereby the guards are held in place.

899,101. CONTROLLER FOR PNEUMATIC PUMPS. ELIAS W. CONKELL, Canton, Ohio. Filed Apr. 25, 1907. Serial No. 370,141.

1. The combination with an air compressor cylinder and its piston, of a valve casing at one side therof, a rock valve therein, a valve cylinder, a piston therein, ports and connections between said casing and valve cylinder, a lever on the shaft of said rock valve, a slotted link pivotally connected at one end to said lever, a ratchet, a wrist pin thereon connected pivotally with the slotted end of said link, a lever pivotally attached to the shaft of the ratchet, a gravitating detent pivotally attached to said lever, a cross head connected with the piston of the compressor cylinder, and a link pivotally connected to the cross head and the last named lever.



2. The combination with an air compressor and its piston, of a valve casing, a rock valve therein, a valve cylinder, a piston therein, ports and connections between said casing and valve cylinder, a lever on the shaft of said rock valve, a slotted link pivotally connected at one end to said lever, a ratchet, a wrist pin attached thereto and connected pivotally with the slotted end of said link, a lever pivotally attached to the shaft of the ratchet, a gravitating detent pivotally attached to said lever, a cross head connected with the piston of the compressor cylinder, and a link adjustably connected to the last-named lever and pivotally connected with the cross head.

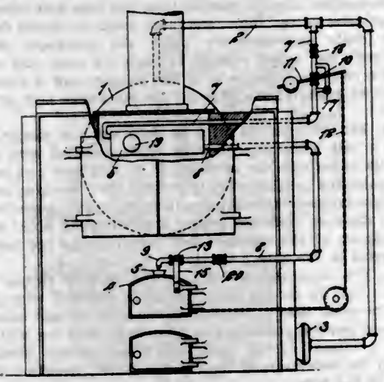
3. The combination with an air compressor cylinder and its piston, of a valve casing, a rock valve therein, a valve cylinder, a piston therein, ports and connections between said casing and valve cylinder, a lever on the shaft of the rock valve, a slotted link pivotally connected at one end to said lever, a ratchet connected with said link, a lever pivotally attached to the shaft of the ratchet, a gravitating detent pivotally carried by the last-named lever, a cross head connected with the piston of the compressor cylinder, a link connected to the last-named lever and pivotally connected with the cross head, a storage tank, a pipe connecting the same and the air compressor cylinder, and a pipe connecting the said storage tank and the piston cylinder.

4. The combination with an air compressor cylinder and its piston, of a valve casing, a rock valve therein, a valve cylinder, its piston, ports and connections between said casing and valve cylinder, a lever on the shaft of the rock valve, a slotted link pivotally connected at one end to said lever, a ratchet connected with said link, a gravitating detent for engagement with said ratchet, a lever pivotally attached to the shaft of said ratchet and carrying said detent, a cross head connected with the piston of the compressor cylinder, a link connected to the last named lever and pivotally connected with the cross head, a storage tank, a pipe connecting the same and the air compressor cylinder, a pipe connecting the said storage tank with the piston cylinder, and a pipe leading from the last named pipe to the valve casing.

899,102. AIR-REGULATOR FOR FURNACES. ALFRED COTTON, Newark, N. J. Filed Nov. 4, 1907. Serial No. 400,479.

1. An air regulator for a furnace comprising a reservoir, means for supplying steam to said reservoir, a pipe leading the steam from said reservoir to the fire in the furnace, in combination with a fire door and means operated by said door in opening and closing to permit steam to flow to said reservoir when the fire door is open, and to stop the flow of steam to said reservoir when the fire door is closed.

2. An air regulator for a furnace comprising a reservoir, a pipe connecting said reservoir to a steam supply, a pipe leading steam from said reservoir to the fire in the furnace, in combination with a fire door and means operated thereby in opening and closing to permit steam to flow from said reservoir to the fire when the door is closed and to prevent steam flowing from said reservoir when the door is open.



3. An air regulator for a furnace comprising a reservoir, means for supplying fluid under pressure to said reservoir, means for permitting the fluid to flow from said reservoir to the fire in the furnace in combination with a fire door, and means controlled by the movement of the fire door to charge the reservoir when the door is open and to permit the escape of fluid from said reservoir when the door is closed.

4. An air regulator for a furnace comprising a reservoir, means for supplying fluid under pressure to said reservoir, a valve controlling said supply, a pipe connected to said reservoir and arranged to deliver fluid therefrom to the fire in the furnace, a valve in said pipe controlling the movement of fluid from said reservoir in combination with a fire door, and means whereby the opening and closing of said door will operate said valves to first charge the reservoir when the door is open and to permit the fluid from said reservoir to flow to the fire in the furnace when the fire door is closed.

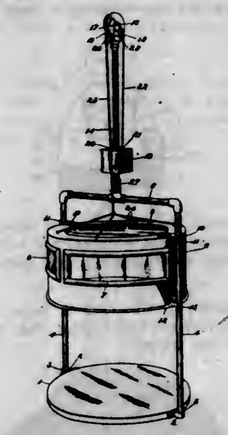
5. An air regulator for a furnace comprising a reservoir, a pipe for supplying fluid under pressure to said reservoir, a pipe to permit the escape of fluid from said reservoir and arranged to deliver said fluid to the fire in the furnace, an inlet valve in the supply pipe, an outlet valve in the escape pipe in combination with a fire door and means connected thereto and adapted to alternately operate the inlet valve and the outlet valve, whereby the reservoir will be charged when the fire door is open and the fluid will be permitted to escape therefrom and be delivered to the fire when the fire door is closed.

[Claims 6 to 9 not printed in the Gazette.]

899,103. CHEESE-COVER AND SHOW-CASE. SAMUEL DITSON, Collingwood, Ontario, Canada. Filed May 18, 1908. Serial No. 433,534.

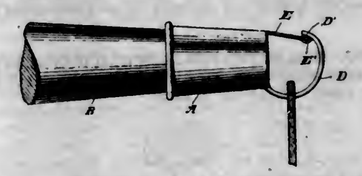
1. A combined cheese cover and show case, comprising, a base, uprights rigidly secured to said base and extending upwardly therefrom, a cover having arms extending therefrom and engaging said uprights and forming guides, a pulley supported from said uprights, a counter balance weight, a flexible connection extending over said pulley and connecting said cover and said weight, and a brake engaging said pulley.

2. A combined cheese cover and show-case, comprising, a base, a pair of uprights rigidly secured to said base and extending parallelly upwardly therefrom and connected at their upper ends, a rod secured to the connection between said uprights and extending vertically upward therefrom, a pulley rotatably supported at the upper end of said rod, a cover having arms projecting therefrom and engaging said uprights, a weight slidably arranged on said vertical rod, and flexible means connecting said cover and said weight extending over said pulley.



3. A combined cheese cover and show-case, comprising, a base, a pair of uprights rigidly secured to said base and extending parallel upwardly therefrom and connected at their upper ends, a rod secured to the connection between said uprights and extending vertically upward therefrom and having a jaw shaped upper end, a grooved pulley rotatably supported in said jaw, a cover having arms extending therefrom and sliding on said uprights, a weight slidably arranged on said vertical rod, a flexible connection secured at one end to said weight and extending over said grooved pulley and connected at its other end to said slidable cover, a spring held shoe engaging said pulley, and a spring encircling the lower end of said vertical rod and forming a cushion for said weight.

899,104. SWINGLETREE-HOOK. CARSON C. ENDERS, Enders, Pa. Filed Mar. 25, 1908. Serial No. 423,083.



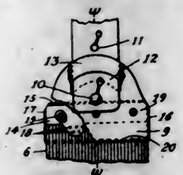
1. A swingletree hook comprising a cap like body adapted to fit over and be secured to the end of a swingletree, said body having a laterally flat hooked portion projecting therefrom provided with a ball on the end thereof, and a flat spring attached to said cap, the outer end thereof having a semi-spherical recess on its upper face to receive said ball.

2. A swingletree hook comprising a cap like body adapted to fit over and be secured to the end of a swingletree and having a longitudinal recess formed therein, said cap having a hooked portion projecting therefrom provided with a ball formed on the underside of the end thereof, and a flat spring located in the recess of said cap and riveted thereto, the outer end of said flat spring projecting beneath the end of the hook and provided with a semi-spherical recess adapted to engage with the ball on said hook.

899,105. CLAMP AND BUCKLE FOR JOINING WEBBING. ERICK H. ERICKSON, Minneapolis, Minn. Filed Apr. 25, 1907. Serial No. 370,318.

A clamp for connecting the ends of straps, comprising two flat plates of unequal length having their adjacent

faces roughened and their edges flanged, the shorter plate having its front end bent inward to contact with the longer plate, the latter having its front end bent outward and providing a slot for receiving a strap and a tongue



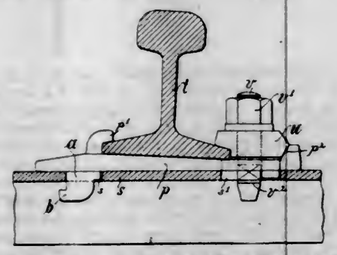
projecting outward for engaging said strap, and screws for clamping the adjacent bodies of the plates to the end of the other strap, substantially as set forth.

899,106. SAFETY-PIN. FANNIE V. GAGE, near Downey, and HENRY T. HAZARD, Los Angeles, Cal. Filed Aug. 15, 1904. Serial No. 220,863.



As an article of manufacture, a safety pin comprising two members, the penetrating member having a straight central portion off-set from the ends of said penetrating member, and the main portion of the other member parallel therewith whereby bearing shoulders are formed between the central portion and the ends of the penetrating pin.

899,107. BED-PLATE FOR IRON RAILWAY-SLEEPERS. AUGUST HAARMANN, Osnabrück, Germany. Filed May 20, 1907. Serial No. 374,639.



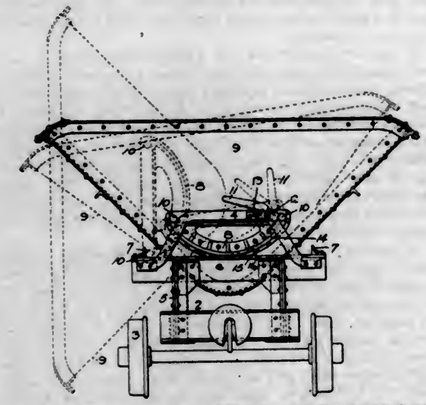
1. The combination with a metallic railway sleeper having a hole in its top on each side of the rail flange, of a rail chair extending over both holes having a lug on its under side near one end and of the same length as one of said holes to prevent longitudinal displacement of the chair, and a projecting portion of said lug with a horizontal prolongation distanced from the under face of the chair approximately twice the thickness of the sleeper's top in said hole, and a clamping member engaging the other end of the chair and the rail flange and passing through the other hole.

2. The combination with a metallic railway sleeper, having a hole in its top on each side of the rail flange, of a rail chair extending over both holes provided with a lug on its underside near one end and having a portion the same length as one of said holes and filling said hole when in place to prevent longitudinal displacement of the chair, and a projecting portion of said lug with a horizontal prolongation slightly shorter than the hole and extending lengthwise of the chair, distanced from the under face of the chair approximately twice the thickness of the sleeper's top, a bolt passing through the other end of the chair and the other hole in the sleeper, and a clamping member engaging the edge of the rail flange held by said bolt.

3. The combination with an iron railway sleeper having a hole in its top, of a rail chair provided with a lug on its under side the same length as said hole and having a projecting portion slightly shorter than the hole with a horizontal projection forming a hook whose upper face is at a distance from the sleeper approximately equal to the thickness of the sleeper's top, whereby the lug may be inserted in the hole.

4. The combination with an iron railway sleeper having a hole in its top, of a rail chair provided with a lug on its under side of the same dimensions as said hole and a hook portion forming an extension of said lug and having a lateral curved face, said hook portion distanced from the under side of the chair to permit insertion of the lug in the hole.

899,108. DUMP-CAR. KARL H. HANSEN, Pittsburg, Pa., assignor to Arthur Koppel Company, Pittsburg, Pa. Filed Nov. 11, 1907. Serial No. 401,684.



1. In a dump car, the combination of the truck frame, a car body, a cradle resting on said frame, a projection on said cradle at one end thereof, a locking lever engaging said projection, and means for throwing said lever into locking position by the projection on said cradle on its return.

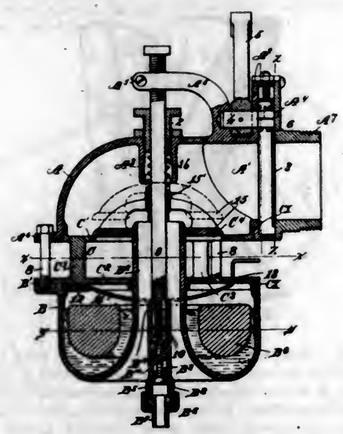
2. In a dump car, the combination of a truck frame, a car body, a guide carried by said truck frame, a cradle resting on said frame, and projections at each end of said cradle adapted to engage said guide.

3. In a dump car, the combination of the truck frame, a car body, a cradle on said frame, projections at opposite ends of said cradle, and inclined guide arms on said truck frame with which said projections engage.

4. In a dump car, the combination of the truck frame, a car body, a cradle on said frame, projections at opposite ends of said cradle, inclined guide arms on said truck frame with which said projections engage, and stops at the lower end of said guide arms.

5. In a dump car, the combination of the truck frame, a car body, an inverted U shaped guide bar carried by said truck frame, a cradle resting on said frame, and projections at each end of said cradle adapted to engage the downwardly extending inclined arms of said guide bar.

899,109. CARBURETER. FRANK H. HEITGER, Indianapolis, Ind., assignor to Speed Changing Pulley Company, Indianapolis, Ind., a Corporation of Indiana. Filed May 16, 1906. Serial No. 317,162.



1. In a device of the class described, a reservoir containing a central vapor tube opening through its bottom and extending above its top, in combination with a suitable nozzle communicating with the reservoir and located in the lower part of said tube, a suitable cover or top for said reservoir through which said tube extends, a mixing chamber having an opening in its bottom and arranged above the top of the reservoir, said mixing chamber having a suitable outlet, and an automatic air admission valve arranged about the upper end of said vapor tube for closing the inlet opening in said mixing chamber, substantially as described.

2. In a device of the class described, a reservoir containing a central vapor tube which opens through the bottom of the reservoir and extends above the top thereof, a fuel nozzle in said vapor tube, a mixing chamber arranged above the reservoir and having an inlet opening concentric with said vapor tube, said mixing chamber having a suitable outlet, there being an air admission space between the top of the reservoir and the bottom of the mixing chamber, substantially as described.

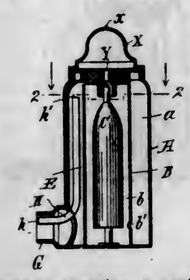
3. In a device of the class described, a reservoir containing a central vapor tube and equipped with a suitable nozzle for injecting liquid into said tube, a mixing chamber above said reservoir and having an inlet concentric with said tube, means separating said reservoir and chamber to provide air admission space between them, said mixing chamber having a suitable outlet and an automatic air admission valve arranged in the inlet of said mixing chamber surrounding the upper end of said tube, substantially as described.

4. In a device of the class described, a reservoir containing a central vapor tube open at its upper and lower ends and of greater height than said reservoir, in combination with a suitable nozzle in said tube and communicating with said reservoir, an upper chambered member having a suitable outlet, an intermediate member comprising suitably connected rings closing the top of said reservoir and the bottom of said chambered member, the upper of said rings containing an air admission opening concentric with said tube, and an automatic air valve arranged in said chambered member, to close said opening, substantially as described.

5. In a device of the class described, a reservoir having a central vapor tube and equipped with a suitable nozzle in said tube, in combination with a ring fitting the upper end of said tube and closing the top of said reservoir, a second ring supported above the first mentioned ring and containing an opening that is concentric with said tube, a chambered member provided with a suitable outlet and having its bottom formed by said second ring and a valve closing the opening in the second ring, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

899,110. AUTOMATIC AIR-VALVE. GEORGE D. HOFFMAN, New York, N. Y., assignor to Norwall Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 30, 1907. Serial No. 390,727.



1. In an automatic air-valve, a casing comprising a float-chamber and an air-chamber connected with the lower part of said float-chamber, a drainage-chamber connected at its upper end with the float-chamber, a radiator-nipple extending outwardly from the drainage-chamber, and a siphon, having its inner leg in the float-chamber and leading therefrom, and with its outer leg within the drainage-chamber and stopping short of the opening through said nipple.

2. In an automatic air-valve, a casing comprising a float-chamber and an air-chamber connected with the lower part of said float-chamber, a drainage-chamber entirely closed from the air-chamber and connected at its upper end with the float-chamber, a radiator-nipple extending outwardly from the drainage-chamber, a siphon leading from the float-chamber aforesaid and with its outer leg in the drainage-chamber and stopping short of the opening through said nipple, and a separate pipe extending downwardly within said drainage-chamber and with its lower end extending outwardly and within the opening of said nipple.

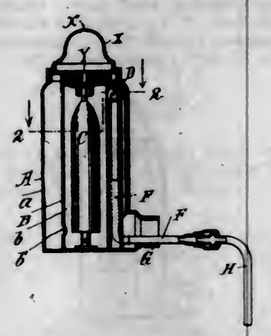
3. In an automatic air-valve, a casing comprising a float-chamber and an air-chamber connected with the lower part of said float-chamber, a drainage-chamber entirely closed from the air-chamber and connected at its upper end with said float-chamber, a radiator-nipple extending outwardly from said drainage-chamber, a siphon having its inner leg depending into the float-chamber, and with its outer leg in the drainage-chamber leading towards and stopping short of the opening through the nipple, and a separate pipe having its lower end outwardly extending within said nipple-opening and said pipe leading upwardly within the drainage-chamber towards and stopping short of the connection with the float-chamber.

4. In an automatic air-valve, a casing comprising a float-chamber, a drainage-chamber, a radiator-nipple leading to the drainage-chamber and extending from the outside of said casing, an air-chamber connected with said float-chamber, and closed from said nipple, a siphon having its inner leg within the float-chamber for discharging into the drainage-chamber towards the opening of said nipple, and a separate pipe connected with the float-chamber above the inner leg of the siphon.

899,111. AUTOMATIC AIR-VALVE. GEORGE D. HOFFMAN, New York, N. Y., assignor to Norwall Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 30, 1907. Serial No. 390,728.

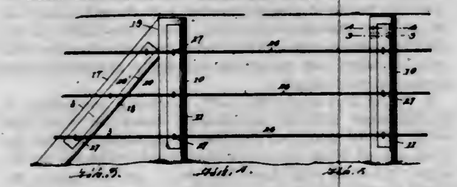
1. In an automatic air-valve, a casing comprising a float-chamber and an air-chamber connected with the lower part of said float-chamber, a radiator-nipple also con-

nected with the float-chamber, and extending from the outside of the casing, a siphon having its inner and higher end within the float-chamber and having its outer and lower end passing through said nipple, and a tubular continuation from said lower end of said siphon having a swiveling connection therewith and extending outwardly and downwardly from said outer end of the siphon.



2. In an automatic air-valve, a casing comprising a float-chamber and an air chamber also connected with the lower part of said float-chamber, a drainage-chamber connected with the upper end of the float-chamber, a radiator-nipple connected only with the drainage-chamber and extending outwardly therefrom, a siphon passing through the drainage-chamber and having its inner and higher end depending in the float-chamber and its outer and lower end passing through said nipple, and a tubular continuation from the outer end of said siphon having a swiveling connection therewith and extending outwardly and downwardly from said outer end of the siphon.

899,112. FENCE. PINKSTON HOWARD, Wilberforce, Ohio. Filed Oct. 25, 1907. Serial No. 399,141.

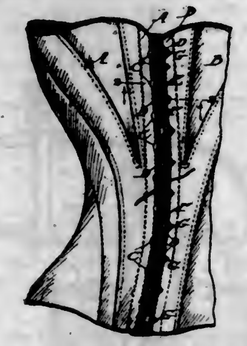


1. In a fence structure, the combination with a plastic post having a longitudinally disposed strip upon one face, the post having recesses adjacent its upper end and at its side faces, of a brace post of plastic material having a projection at its upper end disposed in one of the recesses, an anchor carried by the brace post at its lower end, and a bolt engaged with the brace post and with the anchor respectively.

2. In a fence structure, the combination with a plastic post having a longitudinally disposed wire attaching strip, said post having a recess in one of its side faces, of a plastic brace post having a projection disposed in the recess, said brace post having a centrally located strengthening rod terminating at its upper end within the projection, and an angularly disposed anchor carried by the brace post at the lower end thereof.

899,113. CORSET. CHARLES B. HOWD, Belvidere, Ill. Filed Jan. 25, 1907. Serial No. 353,943.

1. In a front-laced corset, in combination with the two members to be connected by lacing, a rigid stay in the edge of each member; engaging devices secured to the stay in one of the members; lacing guides on the stay in the other member; a lace engaged with such guides, and other guides devoid of rigid connection with each other alternating therealong with said first mentioned guides and adapted to be disengageably engaged with the engaging devices of the first member.



2. In a front-laced corset, in combination with the two members to be connected by lacing, a rigid stay in the edge of each of said members; engaging devices on the stay in one of the members; lacing guides on the stay of the other member; a flexible fabric strip planchet having lacing guides secured to it and a lacing engaging alternately the guides on the stay and the guides on the planchet, said guides on the planchet being provided with means for disengageably engaging the engaging devices on the first mentioned stay.

3. In a front-laced corset, in combination with the two members of the garment to be connected by lacing, a rigid stay in the edge of each member; lacing guides on one of said stays; a lacing extending through said lacing guides; other lacing guides devoid of rigid connection with each other alternating along the lacing with those on the stay, and means for disengageably engaging said other lacing guides with the other stay.

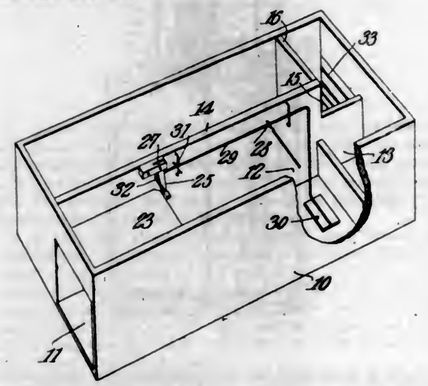
4. In a front-laced corset, in combination with the two members of the garment to be connected by lacing, a lacing cord on one member and means connecting the cord with said member at a plurality of points along the length of the cord; engageable devices on the other member alternating in position with the points of connection of the lacing cord on the first member and devices having cord run-ways and mounted on the cord in the intervals between the engagement of the cord with the first member, said devices each comprising, in addition to the cord runway, a feature for engaging such engageable devices on the other member.

5. In a front-laced corset, in combination with the two members to be connected by lacing, a rigid stay in the edge of each member; engaging devices secured to the stay in one of the members; lacing guides on the stay in the other member; a lacing engaged with such guides, and other lacing guides alternating therealong with the first mentioned guides free for movement independent of each other along the lacing between said first mentioned guides respectively, and provided with a feature for disengageably engaging the engaging devices of the first member.

899,114. ANIMAL-TRAP. EDWIN S. LIPP, Myrtle Point, Oreg. Filed Apr. 11, 1908. Serial No. 426,512.

1. An animal trap comprising a body having an entrance passage therein and an outlet therefrom, a door in said entrance passage arranged to be open when said trap is set, a latch having a cam thereon to engage said door when open a trip to release said latch and permit the door to close, and means actuated by the passage of an animal through said outlet to open said door and reset said trap.

2. An animal trap comprising a body having an entrance passage therein and an outlet therefrom, a door in said entrance passage arranged to be open when said trap is set, a latch having a cam thereon to engage said door and retain the same in the open position, a lever to be operated by pressure thereon to engage said cam and withdraw said latch and release said door and means actuated by the passage of an animal through said outlet to open said door and reset said trap.



3. An animal trap comprising a body having a horizontal entrance passage and a vertical chute forming an outlet therefrom, a door in said entrance passage arranged to be open when said trap is set, a latch having a cam thereon to engage said door and retain the same in the open position, a treadle, a lever supporting said treadle provided with a finger to engage the cam on said latch and withdraw the latch from engagement with the door when said treadle is depressed, a trap door at the bottom of said chute, and means attached to said trap door to reset said entrance door.

899,115. PARLOR BOWLING-ALLEY. CHESTER A. LONGWELL, Pittsburg, Pa. Filed Jan. 18, 1908. Serial No. 411,382.



1. In a portable bowling-alley, an alley, a box in which one end of the alley is secured and having its walls provided with notches, a cover arranged when open to increase the height of the end of the box, a brace pivotally connected to the cover, and an arm carried by the brace, said arm being arranged to enter a notch in the box to hold the cover open, said notch having a downwardly and rearwardly inclined rear wall.

2. In a portable bowling-alley, an alley, a box in which one end of the alley is secured and having its walls provided with notches, a cover arranged when open to increase the height of the end of the box, a brace pivotally connected to the cover, and an arm carried by the brace, said arm being arranged to enter one notch in the box to hold the cover open and the other notch to hold the cover closed.

3. In a portable bowling-alley, an alley, a box in which one end of the alley is secured and having its walls provided with notches, a cover arranged when open to increase the height of the end of the box, a brace pivotally connected to the cover, and an arm carried by the brace, said arm being arranged to enter a notch in the box when the cover is closed, said notch having a downwardly and rearwardly inclined rear wall.

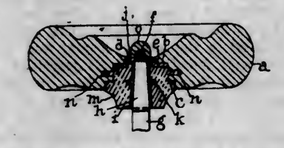
899,116. WINDOW-SHADE BRACKET. REUBEN C. LOUGHNER, Johnstown, Pa. Filed Jan. 10, 1908. Serial No. 410,266.



1. A shade roller bracket comprising a base plate provided with pivot eyes, a right angular hinge member having an outer arm provided with means to support one end of a shade roller and an inner arm adapted to lie flat against the outer face of the base plate, pivots adjacent to the angle of the hinge member and arranged for rotation in the pivot eyes upon the base member, and a flat leaf spring secured at one of its ends upon the outer face of the base plate and having its other end bearing upon the outer face of the inner arm of the hinge member to press the latter inwardly against the base member, substantially as described.

2. A shade roller bracket comprising a base plate provided with pivot eyes, a right angular hinge member having an outer arm provided with an opening to receive the shade roller and its inner arm provided with pivots to enter the eyes upon the base member, said inner arm being formed with a notch or recess, and a flat spring secured to the base member and projecting into said notch or recess and bearing upon the inner portion of the outer face of said inner arm.

899,117. VALVE-HANDLE. WALTER P. MARBLE, Cambridge, Mass. Filed July 24, 1907. Serial No. 385,288.



1. In a handle of the class described, in combination, a handle proper provided with an opening extended through it and of different widths, a cap inserted into said opening and provided with a flange engaging a shoulder within said opening, a sleeve inserted in said opening and angular in cross-section to fit the valve stem, and a soft metal filling the said opening to secure the said cap and sleeve to said handle, substantially as described.

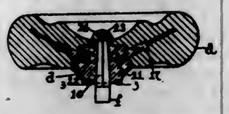
2. In a handle of the class described, in combination, a handle proper provided with an opening extended through it and having a socket extended from said opening, a cap inserted into said opening to close the opening at one end and provided with means to prevent said cap passing through said opening, a sleeve inserted in said opening and into which the valve stem is inserted, and soft metal filling said opening and the socket extended therefrom, substantially as described.

3. In a handle of the class described, in combination, a handle proper provided with an opening extended through it and of different widths, a cap inserted into said opening from one end thereof and provided with means for preventing said cap from passing through said opening at the other end thereof, a sleeve separate from said cap inserted into said opening, said sleeve coöperating with the valve stem and being smaller in cross-section than the widest part of said opening to leave a space between it and the walls of the larger part of said opening, and means interposed between said sleeve and the walls of said opening to retain said sleeve and cap in said chamber, substantially as described.

4. In a handle of the class described, in combination, a handle proper provided with an opening through it, a sleeve inserted into said opening and projecting beyond

one face of the handle, and a metal body filling the opening in the handle between the said sleeve and the walls of said opening and enveloping the portion of said sleeve which projects beyond the handle, substantially as described.

899,118. VALVE-HANDLE. WALTER P. MARBLE, Cambridge, Mass. Filed Jan. 18, 1908. Serial No. 411,390.



1. In a handle of the class described, in combination, a non-metallic member provided with a chamber or opening extended through it and of different widths, and having substantially radially extended sockets leading from it, a softer material in said chamber and sockets and provided with a tapering opening of angular cross-section extended through it, and an anchoring device of stronger meterial than said softer material and secured to the non-metallic member and embedded in said softer material, substantially as described.

2. In a handle of the class described, in combination, a non-metallic member provided with a chamber or opening extended through it and of different widths, a softer material in said chamber provided with an opening through it of angular cross-section, and an anchoring device of stronger material than said softer material and secured to the handle proper and embedded in said softer material, substantially as described.

3. In a handle of the class described, in combination, a non-metallic member provided with an opening extended through it, a softer material in said opening provided with an opening through it of angular cross-section, and an anchoring device of stronger material than said softer material and secured to the handle proper and embedded in said softer material, substantially as described.

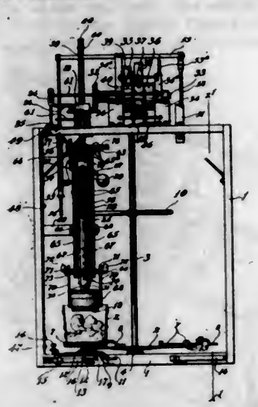
4. In a handle of the class described, in combination, a handle proper provided with a chamber or opening extended through it, a different material from the handle proper in said opening, and an anchoring device stronger than said material and secured to the walls of said opening and embedded in said different material, substantially as described.

5. In a handle of the class described, in combination, a handle proper of fibrous material having an opening through it of different widths at its ends and provided with sockets which incline away from the wider end of the said opening, a material hardened from a plastic state filling said opening and said sockets and provided with an opening through it, substantially as described.

899,119. BUTTER-PACKING MACHINE. JOHN MATTSON, Dresser Junction, Wis. Filed Apr. 20, 1907. Serial No. 369,259.

1. In a machine of the kind described, the combination with a plunger and means for reciprocating the same, of adjustable means for reversing the plunger actuating mechanism under predetermined force applied to the plunger, which reversing mechanism comprises a trip rod, an adjustable stop sleeve on said trip rod and a tripping element operative on said sleeve and adapted to be coupled for movement with said plunger, substantially as described.

2. In a machine of the kind described, the combination with a plunger and means for reciprocating said plunger, of means for reversing said plunger actuating mechanism comprising a plunger, a plunger carrier and means for reciprocating said plunger carrier, means for reversing the action of said plunger actuating mechanism under predetermined force applied to said plunger, said reversing means comprising a yieldingly supported tripping rack, means for coupling said tripping rack to said plunger carrier under predetermined pressure applied to said plunger, a yieldingly supported tripping rod, and an adjustable stop sleeve on said tripping rod subject to said tripping rack, substantially as described.



3. In a machine of the kind described, the combination with a plunger, of a two part plunger carrier including a yielding element, means for reciprocating said plunger carrier, means for reversing the action of said plunger actuating means, when said plunger reaches the upper limit of its movement, and means for reversing the movement of said plunger actuating mechanism at the other limit of the plunger's movement and under predetermined pressure applied to the plunger, said latter reversing means comprising a yieldingly supported tripping rack, a rack engaging dog carried by the positively moved member of said plunger carrier, means carried by the yieldingly supported member of said plunger carrier normally holding said dog out of action on said rack, but permitting said dog to become active on said rack when said plunger is subjected to predetermined pressure, a tripping rod, and an adjustable stop on said tripping rod arranged to be actuated by said tripping rack under predetermined but variable movement of the latter, substantially as described.

4. In a machine of the kind described, the combination with a plunger, of a two part plunger carrier including a yielding element, means for reciprocating said plunger carrier, means for reversing said plunger actuating mechanism at the limit of its upward movement, means for reversing the plunger actuating mechanism at the limit of the plunger's downward movement and under predetermined pressure applied to the plunger, comprising a tripping rack, means for coupling said tripping rack to said plunger carrier under predetermined compression of the yielding element of said plunger carrier, a stripper surrounding said plunger, a plunger carrier having a limited movement with respect to said plunger carrier, means for locking said stripper and its carrier in a lowered position while said plunger is given an initial return movement, and means for releasing said stripper and its carrier under continued return movement of said plunger, substantially as described.

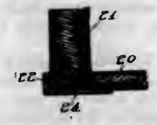
5. In a machine of the kind described, the combination with a plunger, of a two part plunger carrier including a sleeve, a threaded shaft and an interposed spring, a gear working as a nut on the threaded end of said shaft, a reversible drive to said gear, and means for reversing the said drive under predetermined pressure applied to said plunger at the limit of its downward movement, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

899,120. RAIL-BOND. GEORGE A. MEAD, Mansfield, Ohio. Filed Mar. 20, 1906. Serial No. 306,945.

1. A rail bond comprising a body portion having integral terminals, and a separate protector secured to the bond at a point adjacent the terminals.

2. A rail bond comprising a stranded body having its ends formed into terminals, and a separate protector plate surrounding and secured to the body at the base of the terminal and projecting beyond the side thereof and in contact with one of the faces of the body.



3. A rail bond comprising a stranded body having its ends formed into terminals, and a separate protector plate surrounding and secured to the base of each of the terminals and provided with lateral projections engaging one face of the body, said projections being provided with flanges engaging the edges of the body.

4. A rail bond comprising a stranded body having its ends formed into terminals, a separate protector plate surrounding and secured to the base of the terminals, said protector being provided with a lateral projecting portion engaging one face of the body, and flanges extending from the edges of the projecting portion and engaging the sides of the body, and of a size to be bent into engagement with the opposite face of the body.

5. A rail bond consisting of a flexible body having its ends formed into solid terminals, and provided with a separate protecting sheath at the point where the flexible body merges into the solid terminal.

899,121. BUCKLE. CONRAD MEINHARDT, Washington, D. C. Filed Feb. 21, 1908. Serial No. 417,120.



1. A buckle comprising a member, a sliding bridge mounted thereon and having an eye portion to permit passage of a strap and adapted to clamp the strap in between itself and said member, said member having ears, a lever pivotally mounted between said ears and having a heel for coöperatively engaging said bridge to move the same along said member.

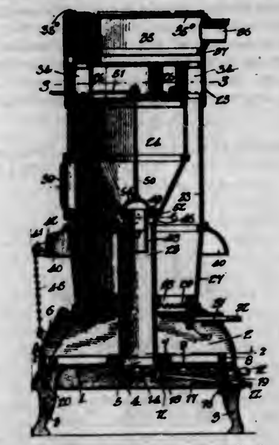
2. In a buckle, an open member having upturned ears, a bridge having an eye and having a portion to embrace said open member and slidable thereon, and a lever pivotally mounted between said ears to engage said bridge to move the same.

3. In a buckle, an open member having upturned ears, a bridge having an eye and having portions to embrace said open member to be slidable thereon, said bridge having a portion to project between said ears, said portion having an aperture, a lever pivotally mounted between said ears and having a heel to engage said apertured portion of the bridge to operate the same.

899,122. STOVE. LEWIS MILLER, Elwood, Ind. Filed Nov. 12, 1907. Serial No. 401,845.

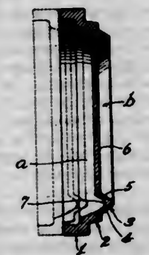
1. The combination in a stove of the character described, of the ash-pit provided with an opening therethrough, a sliding door normally closing said opening, an annular scraper arranged within said ash-pit provided with a lower rack face, and a rotatable vertically movable shaft mounted below said opening and carrying a pinion adapted for engagement with said rack when said door is opened to rotate said scraper, substantially as described.

2. The combination in a stove of the character described, of the ash-pit with an opening through the base thereof, a rotary scraper arranged within said ash-pit and provided with a circular rack, a sliding door normally closing said opening a vertically movable rotatable shaft mounted below said opening and provided with a pinion adapted for engagement with said rack to rotate the same when said door has been opened, and means for holding said pinion in engagement with said rack, substantially as described.



3. In a stove of the character described, the combination of an outer shell forming a combustion chamber, an inner air chamber mounted within said combustion chamber having communication through said outer shell to the atmosphere adjacent its upper end, an air supply pipe communicating with said air chamber from below said combustion chamber, said air pipe having openings formed therethrough and communicating with said combustion chamber, and a valve comprising a tubular portion of reduced diameter within said pipe, having a circular flange closing said pipe above said openings therein, and provided with spaced blocks corresponding to said openings, and means for rotating said valve to register said blocks and the spaces between the same with said openings, substantially as described.

899,123. TARGET-PIGEON. FREDRICK B. MILLS, Longbeach, Cal. Filed May 15, 1907. Serial No. 373,865.



1. A target comprising an integral unit having a series of gradually-diametrically diminishing uninterrupted annuli, the smallest of which has inwardly and outwardly inclined walls, the inwardly-inclined walls terminating in a flat area and forming substantially a plain-faced dish on one side of the target, said dish constituting approximately one-third the thickness of the unit.

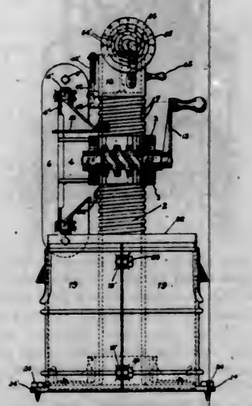
2. A target comprising a hollow annular body having a depression centrally thereof in the uppermost portion forming a dish, said central depression being plain-faced and bound by a hollow inclined wall, and constituting approximately one-third the thickness of the body.

3. A target comprising a hollow body having formed integral therewith a series of diametrically-diminishing unin-

terrupted annuli the smallest of which is hollow and is in the apex of the body and has inwardly and outwardly inclined walls, the inwardly-inclined wall terminating in a flat area forming a plain-faced dish on one side of the target, the reverse side being hollow, and said dish constituting approximately one-third the thickness of the body.

4. A target comprising a hollow annular disk having in the uppermost portion of the same a plain-faced depression bounded by a hollow annular wall having uninterrupted annular faces inclined inwardly and outwardly, and being in depth about one-third the depth of the body.

899,124. DISPENSING APPARATUS. WILLIAM R. MITTENDORF, Dayton, Ohio. Filed May 4, 1906. Serial No. 315,199.



1. In an apparatus for dispensing lard and material of a similar nature in retail quantities from the cans or receptacles in which it is packed by the shipper, the combination with a piston having an orifice therein, a pipe projecting from said orifice and providing a delivery port through which the contents of the receptacle below the piston is discharged, a measuring cap pivoted at the discharge end of said pipe and adapted to receive the contents from said pipe in specific quantities, said measuring cap being movable to one side of the pipe to deliver the contents thereof, and means for holding the receptacle from which the material is delivered to said pipe and for sustaining the sides of said receptacle against the pressure exerted thereon by the descending piston.

2. In a dispensing apparatus, means for holding and protecting the receptacle containing the article to be dispensed, a piston having a delivery port therein, means for forcing said piston against the surface of the article within said receptacle and for conducting quantities displaced from the receptacle, and a cap for receiving quantities of the article so discharged through the piston and for delivering the same.

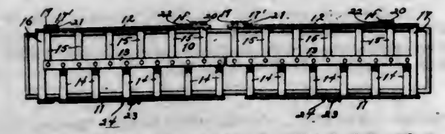
3. In a dispensing apparatus, means for holding and protecting the receptacle containing the article to be dispensed, a piston having a delivery port therein, means for forcing said piston against the surface of the article within said receptacle and for conducting quantities displaced from the receptacle, a cap for receiving and delivering quantities of said article discharged through said port, and means for indicating the values of the quantities of the material received and delivered by said cap.

4. In an apparatus for dispensing lard and material of a similar nature in retail quantities from the cans or receptacles in which it is packed by the shipper, the combination with a piston having an orifice therein, a pipe projecting from said orifice and providing a delivery port through which the contents of the receptacle below the piston is discharged, a measuring cap pivoted at the discharge end of said pipe and adapted to receive the contents from said pipe in specific quantities, said measuring cap being movable to one side of the pipe to deliver the contents thereof, means for relieving the partial vacuum formed within the receptacle below the piston when the contents are removed from the receptacle, and means for holding the receptacle from which the material is delivered to said pipe and for sustaining the sides of said receptacle against the pressure exerted thereon by the descending piston.

5. In a dispensing apparatus, means for holding and protecting the receptacle containing the material to be dispensed, a piston having a delivery port therein, means for forcing said piston against the surface of the article within said receptacle and for conducting quantities displaced from the receptacle, a cap to receive and deliver quantities of the article so discharged, a piston within said cap, and means for computing and indicating by the movement of the piston within said cap the values of the quantities of material introduced into said cap by the movement of the piston within said cap.

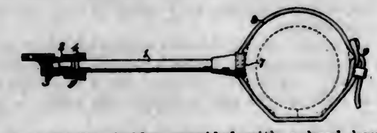
[Claims 6 to 20 not printed in the Gazette.]

899,125. RACK FOR FEEDING-TROUGHS. WILLIAM A. MCCOLLOUGH, Marshalltown, Iowa. Filed Apr. 5, 1907. Serial No. 366,489.



In combination, a rectangular box like feed trough and a skeleton cover hinged to said trough at one side thereof and comprising longitudinal side bars, a longitudinal median bar, spaced partition bars connecting said median bar with each side bar and a straight cross piece connecting said side bars and having downturned end portions secured thereto, said end portions lying in contact with the outer faces of the side walls of the trough, said median bar being disposed above said side bars whereby said cover has an arch shaped cross section.

899,126. SPARE-TIRE HOLDER. LEO P. MCKINNEY, Boston, Mass., assignor of one-half to John L. Snow, Boston, Mass. Filed Dec. 31, 1907. Serial No. 408,768.



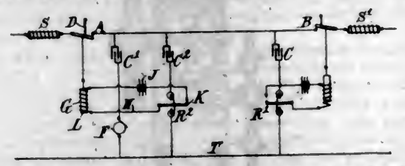
1. A spare-tire holder provided with a head having a tire-engaging portion presenting a broad tire-engaging surface, and means for securing the tire against said surface comprising a strap passing directly and completely around both the tire and said tire-engaging portion.

2. A spare-tire holder provided with a head having a broad tire-engaging surface and a slot passing transversely through the head close to and substantially parallel with the tire-engaging surface, and a strap passing through the slot in the head and surrounding the tire.

3. A spare-tire holder provided with a shank, a head at one end of the shank, provided with a broad tire-engaging surface substantially concentric with and perpendicular to the shank and a transverse slot close to and substantially parallel with the tire-engaging surface, and a strap passing through the slot and surrounding the tire.

899,127. MEANS FOR PROTECTING HIGH-TENSION OVERHEAD ELECTRIC CONDUCTORS. LUCIEN NEU, Lille, France. Filed Apr. 3, 1906. Serial No. 309,685.

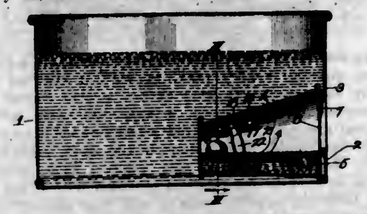
1. A means of protection in case of rupture of a line carrying electric current, including inductive resistances introduced at opposite ends of the section of the line to be protected, a shunt between the ends of said section including condensers and a source of current of high frequency, means for interrupting the circuit, and a relay controlled by said high-frequency current and having a movable part operating the means for interrupting the circuit.



2. A means of protection in case of rupture of a line carrying electric current, including inductive resistances introduced at opposite ends of the section of the line to be protected, a shunt between the ends of said section, including condensers and a source of current of high frequency, means for interrupting the circuit at each end of said section, a pair of relays controlled by said high-frequency current, the first having a movable part operating the means for interrupting the circuit at one end of said section, and the second having a movable part operating the means for interrupting the circuit at the opposite end of said section.

3. A means of protection in case of rupture of a line carrying electric current, including inductive resistances introduced at opposite ends of the section of the line to be protected, a shunt between the ends of said section, including condensers and a source of current of high frequency, means for interrupting the circuit at one end of said section, and a relay controlled by said high-frequency current and having a movable part operating said means, one of said condensers being of greater capacity than the other.

899,128. STOCK AND POULTRY DRINKING-FOUNTAIN. EMANUEL E. NORQUIST, Kansas City, Mo. Filed July 23, 1907. Serial No. 385,185.



1. A stock and poultry drinking fountain, comprising a tank having a drink opening in its side, a bucket within the tank and provided with a cap having an opening registering with said drink opening and bearing an interlocked relation with the latter, a tubular portion establishing communication between the tank and bucket and secured to the latter, a rod suitably hinged in the bucket, a float attached to said rod, a valve for engagement with said tubular portion, and a connection between the valve and said rod to compel the former to engage the tubular portion or move therefrom accordingly as the float rises or descends in the bucket.

2. A stock and poultry drinking fountain, comprising a tank having a drink opening in its side, a bucket within the tank and provided with a cap having an opening registering with the opening of the tank and bearing an interlocked relation with the latter, a tubular portion establishing communication between the tank and bucket and secured to the latter, a rod suitably hinged in the bucket, a float attached to said rod, a valve for engagement with said tubular portion, a connection between the valve and said rod to compel the former to engage the tubular portion or move therefrom accordingly as the float rises or descends in the bucket, and a partition within and hinged to the bucket and disposed between the float and cap.

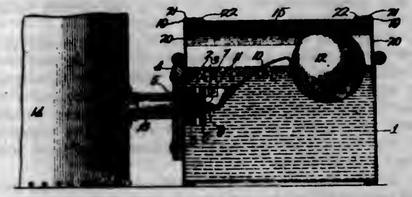
3. A stock and poultry drinking fountain, comprising a tank having a drink opening in its side, a bucket within the tank and provided with a cap having an opening registering with the opening of the tank and bearing an interlocked relation with the latter, a tubular portion establishing communication between the tank and bucket and secured to the latter, a rod suitably hinged in the bucket, a float attached to said rod, a valve for engagement with said tubular portion, a connection between the valve and said rod to compel the former to engage the tubular portion or move therefrom accordingly as the float rises or descends in the bucket, and a partition within and hinged to the bucket and disposed between the float and cap comprising a hinged frame, and a scoop detachably engaging the frame.

4. In a device of the character described, a tank having a drink opening and a frustum-shaped flange surrounding said opening and projecting inward of the tank, and a bucket within the tank and having its lower portion inclined downward and outward and provided with a cap at its outer end having an opening and a flange surrounding said cap opening and engaging the inner edge of the flange of the tank and flaring outward to also engage the outer side of such frustum-shaped flange.

5. In a device of the character described, the combination of a tank provided with a drink opening in its side, a bucket in the tank provided with a valve-opening and with an opening communicating with said drink-opening, a valve, and a float within the bucket and connected to the valve to cause the same to cover or uncover the said valve-opening of the bucket accordingly as the float rises or falls within the bucket.

[Claim 6 not printed in the Gazette.]

899,129. GUARD AND CLEANING ATTACHMENT FOR STOCK-WATERING TROUGHS. EMANUEL E. NORQUIST, Kansas City, Mo. Filed Jan. 24, 1908. Serial No. 412,380.

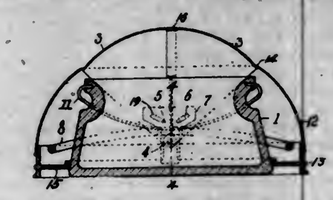


1. The combination with a watering trough of a supply tank connected to said watering trough through one of the walls thereof, a valve controlling such connection, a float connected to the valve and located in the trough and adapted when the latter is charged with the required volume of water to cause said valve to close and when the water level in the trough falls, to descend and open said valve, and an attachment fitting in said trough and comprising an arched central portion overlying and protecting or guarding the float, and arms projecting outwardly from the lower ends of said arch and substantially covering the bottom of the trough at opposite sides of the arch.

2. A watering trough attachment, comprising an arch having outwardly projecting arms at its lower ends equipped with marginal walls.

3. The combination with a watering trough of a supply tank connected to said watering trough through one of the walls thereof, a valve controlling such connection, a float connected to the valve and located in the trough and adapted when the latter is charged with the required volume of water to cause said valve to close and when the water level in the trough falls, to descend and open said valve, and an attachment fitting in said trough and comprising an arched central portion overlying and protecting or guarding the float, and arms projecting outwardly from the lower ends of said arch and substantially covering the bottom of the trough at opposite sides of the arch, and flanges or walls projecting upwardly from the margins of said outwardly projecting arms.

899,130. SPITTOON. OTTO A. OTTOSSON, Strömsund, Sweden. Filed Sept. 20, 1907. Serial No. 393,859.



1. A spittoon comprising in combination, a casing provided with a mouth, a plurality of closures for closing and opening the mouth, each closure being provided with an operating pin, a receiver in said casing, a treadle provided with an operating member engaging said pins to open and close said closures, and a spring mounting forming the sole support for said treadle and acting normally therethrough to close and maintain said closures in a closing position.

2. A spittoon comprising in combination, a casing provided with a mouth, a plurality of pivotally mounted closures for closing and opening said mouth, each closure being provided with an operating pin, a receiver in said casing, a treadle provided with an operating member having slots through which said pins project whereby said closures may be opened by said treadle, and a spring mounting for said treadle serving to normally close said closures.

3. A spittoon comprising in combination, a casing provided with a mouth, a plurality of closures pivotally mounted on said casing and each provided with an operating pin, a treadle having an operating member provided with inclined slots adapted to be engaged by said pins whereby said closures may be operated on movement of the treadle, a receiver in said casing, and a spring mounting for said treadle secured to said casing and serving to act through said treadle to shut said closures.

4. A spittoon comprising in combination, a casing provided with a mouth, movable means for opening and closing said mouth, a treadle device operatively associated with said means to open and close said mouth, and a receiver in said casing resting on a support common to said casing, said casing being provided with means engaging said receiver to hold the same in prescribed relation with respect to said casing.

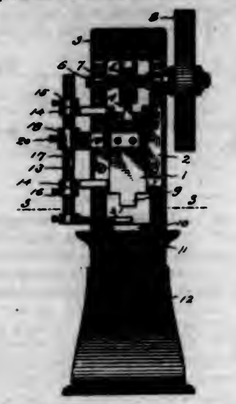
5. A spittoon comprising in combination, a casing provided with a mouth, movable means for opening and closing said mouth, a treadle device operatively associated with said means to open and close said mouth, and a receiver in said casing and projecting through the same so as to rest upon a support common thereto, said casing being provided with a flange engaging said receiver to hold the same in prescribed relation with respect to said casing.

[Claim 6 not printed in the Gazette.]

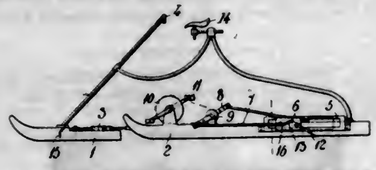
899,131. CLEARANCE DEVICE FOR PUNCH-PRESSES. ROBERT H. PEARSON, Mariner Harbor, N. Y., assignor to The Travelers Insurance Company, Hartford, Conn., a Corporation of Connecticut. Filed Mar. 28, 1908. Serial No. 423,863.

1. The combination with a punch press having a bed, a frame and a reciprocating gate, of shaft bearings attached to the frame above the bed, a rotatory shaft supported vertically above the bed by said bearings and provided with a spiral groove, an arm attached to and movable with the gate, a stud projecting from said arm into the spiral groove in the shaft, and an arm extending from the shaft and adapted to be swung over the bed by the rotation of the shaft when the shaft is turned by the movement of the arm attached to the gate, substantially as specified.

2. The combination with a punch press having a bed, a frame and a reciprocating gate, of shaft bearings attached to the frame above the bed of the press, a rotatory shaft supported vertically above the bed by said bearings and provided with a spiral groove, an arm attached to and movable with the gate, a stud projecting from said arm into the spiral groove in the shaft, an arm extending from the shaft and adapted to be swung over the bed by the rotation of the shaft when the shaft is turned by the movement of the arm attached to the gate, and a wiper attached to the arm and movable therewith back and forth across the bed, substantially as specified.



899,132. ICE-VELOCIPEDE. OLOF PEHRMAN, Stenbacken, Sweden. Filed Dec. 11, 1907. Serial No. 406,038.



1. An ice velocipede comprising in combination, a frame, a front steering runner provided with a steering post movably connected with said frame, a rear runner rigidly secured to said frame, a link connection uniting said front and rear runners and permitting relative movement of one runner with respect to the other, cross-heads slidably mounted on said rear runner, dogs pivotally mounted on said cross-heads and provided with sharp propelling ends, the opposite ends of said dogs projecting beyond said pivotal mountings, crank arms mounted on said rear runner, connecting rods pivotally secured to said cranks and cross-heads and projecting beyond their point of pivotal connection with said cross-heads, springs uniting the projecting ends of said rods and dogs, said rods serving when operated to alternately raise and lower the propelling ends of said dogs out of and into contact with the traction surface, and means for actuating said cranks.

2. An ice velocipede comprising in combination, a frame, a front steering runner connected with said frame, a rear runner secured to said frame, cross-heads slidably mounted on said rear runner, dogs pivotally mounted on said cross-heads and provided with sharp propelling ends, the opposite ends of said dogs projecting beyond said pivotal mountings, crank arms mounted on said rear runner, connecting rods pivotally secured to said cranks and cross-heads and projecting beyond their point of pivotal connection with said cross-heads, springs uniting the projecting ends of said rods and dogs, said rods serving when operated to alternately raise and lower the propelling ends of said dogs out of and into contact with the traction surface, and means for actuating said cranks.

3. An ice velocipede comprising in combination, a frame, a front steering runner connected with said frame, a rear runner secured to said frame, cross-heads slidably mounted on said rear runner, dogs pivotally mounted on said cross-heads and provided with sharp propelling ends and projecting ends, crank arms mounted on said rear runner, connecting rods pivotally secured to said cranks and cross-heads and provided with projecting ends connected with the projecting ends of said dogs and serving when operated to alternately raise and lower the propelling ends of said dogs into and out of contact with the traction surface, and means for operating said cranks.

4. An ice velocipede comprising in combination, a frame, a runner connected with said frame, cross-heads slidably mounted on said runner, dogs movably mounted on said cross-heads and provided with sharp propelling ends, cranks mounted on said runner, connecting rods operatively connecting said cranks and cross-heads and operatively connected with said dogs so that the propelling ends thereof are alternately raised and lowered out of and into contact with the traction surface, and means for operating said cranks.

5. An ice velocipede comprising in combination, a frame, a runner connected with said frame, cross-heads slidably mounted on said runner, dogs movably mounted on said cross-heads and provided with sharp propelling ends, cranks mounted on said runners, connecting rods connecting said cranks and cross-heads, and yielding connections for said rods and dogs serving when the former are operated to alternately raise and lower said dogs yieldingly out of and into contact with said traction surface.

[Claims 6 and 7 not printed in the Gazette.]

899,133. SHEET-FEEDING MECHANISM. JACOB RANZ, St. Louis, Mo., assignor of one-half to Jacob F. Lang, St. Louis, Mo. Filed Mar. 23, 1908. Serial No. 422,718.

1. In an apparatus of the character described, a support adapted to hold a pile of sheets, pick-up arms, means for moving said pick-up arms toward the pile and relatively to each other to cause them to engage the topmost sheet of the pile, lift it bodily from the pile and thereafter release it, and means for carrying said sheet to mechanism which subsequently acts on it; substantially as described.

2. In an apparatus of the character described, an inclined support adapted to hold a pile of sheets, pick-up arms, means for moving said pick-up arms downwardly and relatively to each other to cause them to engage the topmost sheet of the pile, lift it bodily from the pile and thereafter release it, and a guideway onto which the sheet drops after it has been released by said pick-up arms; substantially as described.

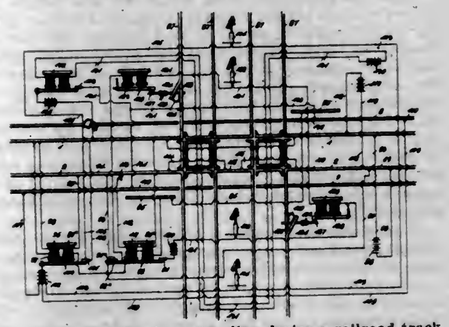
3. In an apparatus of the character described, an inclined support adapted to hold a pile of sheets, pick-up arms, means for moving said pick-up arms toward the pile and relatively to each other to cause them to engage the topmost sheet of the pile, lift it bodily from the pile and thereafter release it, a guideway onto which the sheet drops after it has been released by said pick-up arms, and feeding mechanism which acts on the sheet after it has left said guideway; substantially as described.

4. In an apparatus of the character described, a support adapted to hold a pile of sheets, a pair of pivotally mounted pick-up arms, means for forcing said arms downwardly to engage the topmost sheet of the pile, and thereafter toward each other to crimp or ruffle up said topmost sheet, and means for raising said arms to bodily lift said topmost sheet from the pile; substantially as described.

5. In an apparatus of the character described, a support adapted to hold a pile of sheets, rockable bearings, pivotally mounted pick-up arms carried by said bearings, and a rotating cam adapted to engage said arms and rock the bearings so as to move the arms downwardly into engagement with the topmost sheet of the pile and thereafter move the arms together so that they will ruffle up said topmost sheet; substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

899,134. ELECTRIC SIGNALING SYSTEM FOR RAILWAYS. ARA P. RICKMIRE, Waterloo, Iowa. Filed Dec. 30, 1907. Serial No. 408,540.



1. In combination in a signaling device a railroad track comprising an electrical continuous track rail and sectional track rail divided into a plurality of insulated sections, a source of current 64' having one terminal thereof connected to said continuous rail and the other terminal connected to one of said sections near one end thereof, a relay magnet 65 having one end of its winding electrically connected to said continuous rail and the other end of said winding electrically connected to one of said sections and adjacent to said first named section, a railroad switch situated near the adjacent ends of said adjacent sections, electrical connection between said adjacent sections, an electric switch in said connecting means operatively connecting said electric switch and said railroad switch, an armature for said relay magnet, a contact for said armature, an additional source of current, an auxiliary rail section, a conductor connecting one terminal and one said additional source of current to said continuous rail; the other terminal of said additional source of current being connected to said contact and a conductor between said armature and said auxiliary rail section.

2. In combination with a railway crossing, a track comprising a continuous rail and a sectional rail having inner and outer adjacent rail sections 94 and 113 and an opposite rail section 89 on the opposite side of said crossing from said adjacent rail sections, and an outer rail having an electro magnet, an armature, conductors connecting the ends of the winding of said electro magnet with said continuous rails and said outer adjacent rail sections respectively, a contact for said armature, a source of current and an outer signal, conductors connecting said source of current and said signal in series with said armature and said contact, an inner rail comprising an electromagnet and a divided armature consisting of outer and inner separately insulated portions, outer and inner contacts for said outer and inner portions respectively, a conductor connecting said inner contact with said outer adjacent rail section, a contact connecting said inner portion with said opposite rail section, a primary source of current having its terminals connected respectively with said continuous rail and said opposite rail section, an inner signal, electrical operating means having a pair of terminals for said inner signal, a conductor connecting

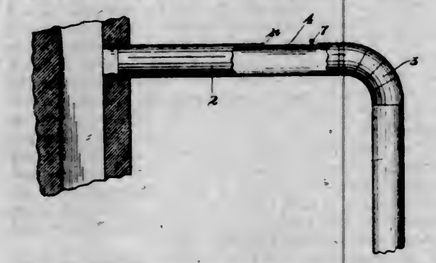
one terminal of said inner signal, operating means with said outer contact, a source of current in series with said last named conductor, a conductor connecting the other terminal of said inner signal operating means with said outer portion, and an additional source of current having its terminals connected with said continuous and said inner adjacent rail section.

3. In a signaling system a vehicle, a roadway for said vehicle, movement controlling means for said vehicle, a pair of contacts on said roadway, a source of current having its terminals connected to said contacts, an electro-magnet on said vehicle, means electrically connecting said electro-magnets to said pair of contacts, an armature for said magnet, levers for said controlling means, a weight secured to said levers and a flexible means connecting said armatures to said levers.

4. In a signaling system a vehicle, a roadway for said vehicle, movement controlling means for said vehicle, a pair of contacts on said roadway, a source of current having its terminals connected to said contacts, an electro-magnet on said vehicle, means electrically connecting said electro-magnets to said pair of contacts, an armature for said magnet, levers for said controlling means, a weight secured to said levers and a pair of armature contacts for said armature, a source of current, an electric bell, a conductor connecting said bell with one terminal of said source of current and a conductor connecting said bell with one of said armature contacts, the other of said armature contacts being connected to the other last named terminals.

5. In a signaling system a vehicle, a roadway for said vehicle, movement controlling means for said vehicle, a pair of contacts on said roadway, a source of current having its terminals connected to said contacts, an electro-magnet on said vehicle, means electrically connecting said electro-magnets to said pair of contacts, an armature for said magnet, levers for said controlling means, a weight secured to said levers and a bell striker secured to said armature.

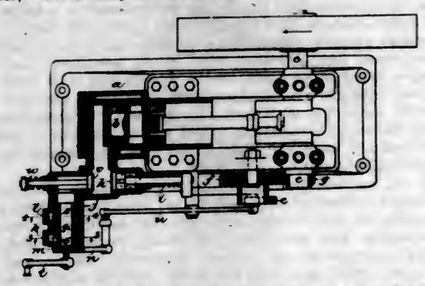
899,135. STOVEPIPE. LARS C. SCOTT, Minneapolis, Minn. Filed Mar. 16, 1908. Serial No. 421,411.



In a stove pipe, the combination with vertical and horizontal portions and an elbow connecting the same, the horizontal portion of said pipe having an opening in its top, of longitudinally extended U-shaped guides within said horizontal portion and secured to the edges of said opening, a door slidably located inside of said pipe and mounted in said U-shaped guides normally closing said opening, the edges of the door being formed with U-shaped folds adapted to slide within and overlap the inner edges of the U-shaped guides, substantially as described.

899,136. INTERNAL-COMBUSTION ENGINE. CHARLES E. SHADALL, Milwaukee, Wis., assignor, by direct and mesne assignments, of one-fourth to Frederick L. Horneffer, Milwaukee, Wis., and one-fourth to Frank H. Durbin, Wauwatosa, Wis. Filed Aug. 8, 1904. Serial No. 219,877.

1. In an internal combustion engine the combination with a cylinder and piston, of a cylindrical valve chamber having separate air and explosive mixture supply connections, a hollow oscillating valve fitted in said chamber and having ports in constant communication with said connections, a hollow regulating cylinder adapted to turn within said valve and having ports arranged to register one at a time with the valve ports, and means for adjusting said regulating cylinder to vary the relative volumes of air and mixture admitted to the engine cylinder which communicates with the interior of said regulating cylinder, substantially as described.



2. In an internal combustion engine the combination with a cylinder and piston, of a valve chamber having separate air and explosive mixture supply connections, a hollow cylindrical valve fitted to turn in said chamber and having ports communicating with said connections, a connection with the piston for rocking said valve, a regulating cylinder adapted to turn within said valve and having ports arranged to register one at a time with the valve ports and to admit air in advance of the mixture into the engine cylinder, and means for turning said regulating cylinder to vary the relative volumes of air and mixture, substantially as described.

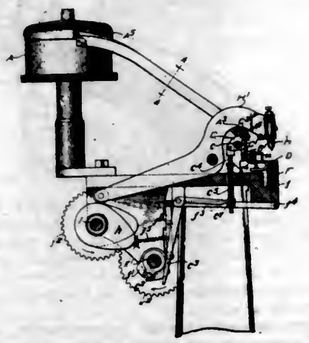
3. In an internal combustion engine the combination with a cylinder and piston of a valve chamber having separate air and explosive mixture supply connections, a hollow cylindrical valve fitted to turn in said chamber and having ports communicating with said connections, a connection for rocking said valve synchronously with the movement of the piston, a hollow regulating cylinder communicating with the engine cylinder and having ports arranged to register one at a time with the ports in said valve, means for adjusting said regulating cylinder to vary the proportions of air and mixture admitted into the engine cylinder, and an inwardly opening check valve in the passage between the regulating cylinder and the engine cylinder, substantially as described.

4. In an internal combustion engine the combination with the cylinder and piston, of a cylindrical valve chamber having separate air and explosive mixture supply connections, a cylindrical valve fitted in said chamber and having ports in constant communication with said connections, a connection for rocking said valve, a throttling cylinder fitted in said valve and having ports arranged to register one at a time with the ports in said valve, a regulating cylinder fitted in said throttling cylinder and having ports corresponding with the ports therein, and means for turning said regulating cylinder to vary the time of closing the air port and of opening the mixture port, said regulating cylinder being capable of a limited movement with relation to the throttling cylinder for partially closing the ports therein, substantially as described.

899,137. MACHINE FOR SETTING LACING-HOOKS. WILLIAM SIMPSON, Quincy, and WILLIAM C. BRAY, Newton, Mass., assignors to Tubular Rivet & Stud Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 31, 1903. Serial No. 141,258.

1. A machine for setting lacing hooks having in combination a hook carrier provided with a series of recesses and supporting plates to receive and support a series of hooks with their shanks vertical, means for feeding a series of hooks to said recesses and plates, reciprocating anvils for cooperating with said carriers to set the hooks, and means for moving said carrier to disengage the carrier from the hooks after the setting, substantially as described.

2. A machine for setting lacing hooks having in combination, a raceway for the hooks, and means for separating a plurality of hooks from the series of hooks in the raceway and feeding them to a series of setting devices, substantially as described.



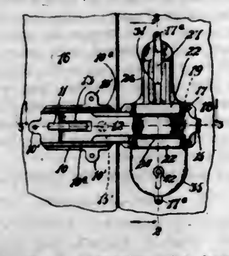
3. A machine for setting lacing hooks having in combination, a raceway for the hooks, a series of guideways leading from different points in the raceway, and means for transferring individual hooks from said raceway to each of said guideways, substantially as described.

4. A machine for setting lacing hooks having in combination, a hook carrier provided with a series of recesses and supporting plates to receive and support a series of hooks, a series of guideways leading to said recesses and plates, and a raceway for supplying hooks to said series of guideways, substantially as described.

5. A machine for setting lacing hooks having in combination, a hook carrier provided with a series of recesses and supporting plates to receive and support a series of hooks, a raceway for the hooks, a series of guideways extending from said raceway to said recesses and plates, a series of separators for separating individual hooks from the series in the race-way and delivering them into the guideways and means for advancing the hooks in the guideway to the recesses and plates, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

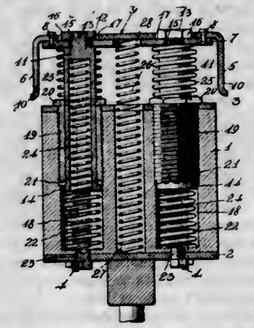
899,138. HASP-LOCK. CHARLES T. SLEEPER, Chicago, Ill., assignor of four-fifths to Charles F. Sleeper, Evanston, Ill. Filed Nov. 17, 1906. Serial No. 343,824.



1. In a lock, the combination of a hasp, a bracket to which the hasp is pivotally connected, a lock-bolt for the hasp, a bracket in which said bolt is slidably mounted, a lock for the bolt in the bracket in which the bolt is held, the lock-bracket having an extension with a chamber therein, and a friction plate held in said chamber and for holding the bolt in its assigned position.

2. In a lock, the combination of a hasp, a bracket to which the hasp is pivotally connected, a lock-bolt for the hasp, a bracket in which said bolt is slidably mounted, a lock for the bolt in the bracket in which the bolt is held, said lock bracket having an extension having a slot therein, and a chamber in back of said slot, a friction device located in said chamber, and a stud on the bolt adapted to engage with the friction device to hold the bolt in assigned position.

899,139. CUSHION-TIRE. JOHN G. SMITH, Wahoo, Nebr. Filed Mar. 18, 1907. Serial No. 362,898.



1. A cushion tire comprising a rim having a series of radially movable spring-cushioned tread elements arranged therearound in openings therein, and each comprising an outer approximately U-shaped member with an inner reinforcing member secured thereto, and a plurality of spring-pressed plungers secured at one end to each of said tread elements and operable at their other ends in said rim.

2. A cushion tire comprising a rim having a series of radially movable spring-cushioned tread elements arranged therearound in openings therein, and each comprising an outer approximately U-shaped member with an inner reinforcing member secured thereto, a plurality of tubular plungers having closed outer ends provided with reduced screw-threaded projections for engagement with said tread members, the inner ends of said plungers being open, springs arranged in said plungers and bearing on the bottoms of the openings in said rims, and larger springs arranged in said openings and surrounding said first named springs and bearing at one end on said plungers.

3. A cushion tire comprising a rim having a series of radially movable spring-cushioned tread elements arranged therearound in openings therein, and each comprising an outer approximately U-shaped member with an inner reinforcing member secured thereto, a plurality of tubular plungers having closed outer ends provided with reduced screw-threaded projections for engagement with said tread members, the inner ends of said plungers being open and provided with exterior annular flanges, guide sleeves arranged in the openings in said rim and in which the plungers operate, the inner ends of said guide sleeves being serrated for engagement by the flanges on said plungers to prevent clicking resulting from connection of the plungers and the sleeves, and springs for forcing said plungers and the tread members connected therewith normally downward.

899,140. SHEARS-SHARPENER. EDWIN H. SAFFORD, Oak Park, Ill. Filed Dec. 30, 1907. Serial No. 408,574.



1. In a device of the class described, a suitable casing, in combination with a member mounted in said casing and having an angularly disposed recess therein, a sharpening element mounted in said recess and said casing being slotted to permit the blade of the shears to contact said sharpening element, substantially as described.

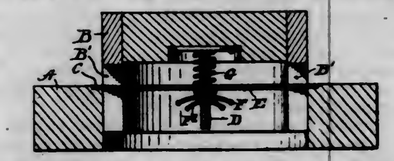
2. In a device of the class described, a casing, in combination with a member mounted in said casing and having an angularly disposed recess, therein, a sharpening element arranged in said recess and said casing having a slot extending downwardly beyond the upper surface of said sharpening element, the lower portion of said slot being offset substantially as described.

3. In a device of the class described, a casing, comprising a rectangular member open at the ends, in combination with a member mounted in said casing and having an angularly disposed recess therein, a slot of less width than said recess extending therefrom to the edge of said member and a sharpening element mounted in said recess, said casing having a slot extending below the upper surface of said element, substantially as described.

4. In a device of the class described, a casing comprising a hollow rectangular member open at the ends, in combination with a member mounted in said casing and having an angularly disposed recess therein, a slot of less width than said recess extending therefrom to the edge of said member and a sharpening element mounted in said recess, said casing having a slot comprising a vertical portion extending from the upper edge thereof to a point above the upper surface of the sharpening element and an offset portion extending angularly therefrom to a point below said surface, substantially as described.

5. In a device of the class described, a hollow rectangular casing open at the ends, in combination with a member fitting snugly within said casing and having an angularly disposed recess and a slot of less width than said recess extending therefrom to the upper edge of said member and a sharpening element mounted in said recess, said element being square in cross section and of equal thickness with said member, said casing having a slot extending from its upper edge to a point below the upper surface of said element, substantially as described.

899,141. HAT-BLOCK. CLIFFORD E. STEVENS, East Orange, N. J. Filed Oct. 17, 1907. Serial No. 397,888.



1. In a hat block, a brim section, a crown section and independent means movably carried by one of said sections for adjustably supporting the crown section on and relatively to the brim section.

2. In a hat block, a brim section, a crown section and independent means movably carried by the crown section for adjustably supporting the crown section on and relatively to the brim section.

3. In a hat die, a brim section, a crown section, a flange projecting laterally from the crown section and arranged to be supported upon the brim section, and means for adjusting said flange on said crown section to vary the height of the same relatively to the brim section.

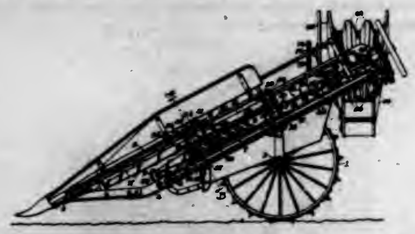
4. In a hat block, a brim section, a crown section, a supporting flange on the crown section and adjustable thereon, and a recess in the brim section arranged to receive said flange.

5. In a hat block, a brim section, a crown section, a ring around the crown section and adjustable thereon, and a recess in the brim section arranged to receive said ring flush with the surface thereof.

[Claims 6 to 8 not printed in the Gazette.]

899,142. CORN-HARVESTER. JOHN A. STONE, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Mar. 21, 1908. Serial No. 422,432.

1. A corn harvester having, in combination, stalk advancing and ear severing mechanism, including a stalk passageway, rollers mounted upon opposite sides of said passageway, and means for rotating said rollers in opposite directions, said rollers having tapered portions at their forward ends, and means for rotating one of said tapered portions in a direction opposite to that of the body portion of the roller.



2. A corn harvester having, in combination, a pair of stalk advancing and ear severing rollers arranged to operate upon opposite sides of a row of corn, and means for rotating said rollers in opposite directions, one of said rollers having two parts and means for rotating one of said parts in a direction opposite to the direction of rotation of the other part.

3. A corn harvester having, in combination, a pair of stalk advancing and ear severing rollers arranged to operate upon opposite sides of a row of corn, and means for rotating said rollers in opposite directions, one of said rollers having two parts, one of said parts journaled upon a shaft forming a core for the other part, and means for rotating one of said parts in a direction opposite to the direction of rotation of the other part.

4. A corn harvester having, in combination, stalk advancing and ear severing mechanism, including a stalk passageway, rollers mounted upon opposite sides of said passageway, and means for rotating said rollers in opposite directions, said means including a longitudinally arranged shaft in rear of said rollers and operatively connected therewith by means of intermeshing pinions, said rollers having tapered portions at their forward ends, and means for rotating one of said tapered portions in a direction opposite to that of the body portion of the roller, said means including a shaft arranged at one side of said roller and substantially parallel therewith, said shaft being driven by means of gear connections at its rear end with the roller driving mechanism, and having gear connections at its forward end with said tapered portion of said roller.

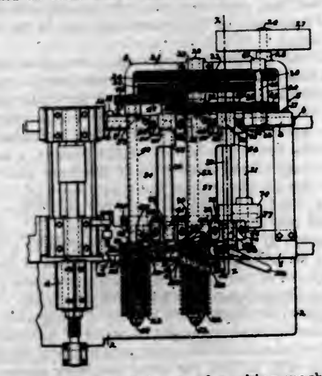
5. In a corn harvesting machine, in combination, stalk advancing and ear severing rollers inclined upward and rearward and arranged in a manner to receive the standing stalks between their forward ends and advance them rearward and downward, one of said rollers being journaled in a higher plane than the other, an ear conveyer at one side of the lower roller, means for deflecting the severed ears toward said conveyer, said means including a roller journaled in a plane above the higher roller and upon the same side of the machine, and having its forward end extended beyond the receiving end of the ear severing rollers and having a spirally arranged rib on said extended end, the axis of said roller being inclined upward and toward said ear conveyer.

[Claims 6 to 9 not printed in the Gazette.]

899,143. FEEDING DEVICE FOR WOODWORKING MACHINERY. JOHN R. THOMAS and JOHN J. MEYERS, Cincinnati, Ohio, assignors to J. A. Fay & Egan Company, Cincinnati, Ohio, a Corporation of West Virginia. Filed June 10, 1908. Serial No. 437,705.

1. In a feeding device for wood-working machinery, the combination with the main frame, of a gear-frame adjustably mounted at one side thereof, and feed-roll cross-shafts having gear-ends and journaled at their gear-ends on said gear-frame and at their other ends on said main frame.

2. In a feeding device for wood-working machinery, the combination with the main frame, of a gear-frame adjustably mounted at one side thereof, swiveling bearings, and feed-roll cross-shafts having gear-ends and journaled at their gear-ends in said swiveling bearings on said gear-frame and at their other ends on said main frame.



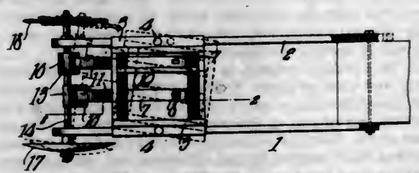
3. In a feeding device for wood-working machinery, the combination with the main frame, table and feed-rolls above said table, of a gear-frame at one side of said main frame, feed-roll shafts journaled on said gear-frame at one end and on said main frame at their other end, and means for adjusting said gear-frame longitudinally of said main frame whereby the leads of the feed-rolls above said table are simultaneously adjusted to equal extent.

4. In a feeding device for wood-working machinery, the combination with the main frame, of a table and feed-rolls at one side and a gear-frame at the other side thereof, a main feed-roll drive-shaft and an intermediate feed-roll drive-shaft journaled on said gear-frame, feed-roll cross-shafts journaled at one end on said gear-frame and at their other end on said main frame; gearing between said main drive-shaft, said intermediate drive-shaft and said feed-roll cross-shafts on said gear-frame; and means for adjusting said gear-frame longitudinally of said main frame, whereby said drive-shafts and gearing are shifted longitudinally of said main frame and the angle of said feed-rolls above said table is adjusted, substantially as described.

5. In a feeding device for wood-working machinery, the combination with the main frame, of a table and feed-rolls at one side and a gear-frame at the other side thereof, a main feed-roll drive-shaft and an intermediate feed-roll drive-shaft journaled on said gear-frame, swiveling bearings, feed-roll cross-shafts journaled at one end in said swiveling bearings on said gear-frame and at their other end on said main frame; gearing between said main drive-shaft, said intermediate drive-shaft and said feed-roll cross-shafts on said gear-frame; and means for adjusting said gear-frame longitudinally of said main frame, whereby said drive-shafts and gearing are shifted longitudinally of said main frame and the angle of said feed-rolls above said table is adjusted, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

899,144. PLANTER AND FERTILIZER-DROPPER. JOHN TUGGLE, Watertown, Tenn. Filed Dec. 28, 1907. Serial No. 408,442.



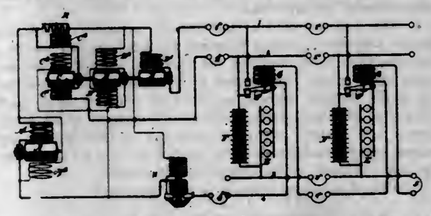
1. A planter having a dropping mechanism, an axle journaled for rotation and carrying means for operating the dropping mechanism, a side delivery earth casting disk mounted upon the axle and a traction means also mounted upon the axle.

2. A planter having a dropping mechanism, an axle journaled for rotation and carrying means for operating the dropping mechanism, means for varying the angle of the axle with relation to the line of draft, a side delivery earth casting disk mounted upon the axle and a traction means also mounted upon the axle.

3. A planter comprising a hopper having means for attachment with a furrow opener, a dropping mechanism carried by the hopper, a spring engaging the dropping mechanism, a pedal slidably mounted upon said spring, a rotating means engaging said pedal and a coverer carried by the planter.

4. In combination with a hopper a slide mounted for longitudinal movement therein, a hook mounted upon said slide, a spring attached to the hopper and having an opening which receives said hook, means for moving the slide against the tension of the spring and a detachable means for limiting the movement of the slide in the line of movement of the spring.

899,145. ELECTRICAL SYSTEM OF DISTRIBUTION. WILLIAM A. TURBAYNE, Lancaster, N. Y., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Feb. 25, 1907. Serial No. 359,240.



1. In an electric system of distribution, a main generator, two circuits fed thereby, a supplementary generator in series in each circuit, and means for acting upon both supplementary generators responsively to changes of electrical condition of one of the circuits to oppositely affect the voltage of the two circuits.

2. In an electric system of distribution, a main generator, two circuits fed thereby, a supplementary generator in series in each circuit, and means for acting upon both supplementary generators responsively to changes in current strength of one of the circuits to oppositely affect the voltage of the two circuits.

3. In an electric system of distribution, a main generator, two circuits fed thereby, a supplementary generator in series in each circuit, and means for oppositely varying the electro-motive forces of said supplementary generators responsively to changes of electrical condition of one of the circuits.

4. In an electric system of distribution, a main generator, two circuits fed thereby, a supplementary generator in series in each circuit, and means for oppositely varying the electro-motive forces of said supplementary generators responsively to changes in current strength.

5. In an electric system of distribution, a main generator, two circuits fed thereby, a supplementary generator in series in each circuit, a controlling coil for one supplementary generator arranged to reduce the electro-motive force thereof, a controlling coil for the other supplementary generator arranged to increase the electro-motive force thereof, said coils being connected to vary responsively to current changes of one of the two circuits.

[Claims 6 to 29 not printed in the Gazette.]

899,146. EXTRACTION OF METALS FROM THEIR ORES. JABEZ TURTON, Johannesburg, Transvaal. Filed Dec. 20, 1905. Serial No. 292,682.

1. The process of extracting metals from ore which consists in subjecting the ore to the action of a solvent solu-

tion of sulfuric acid, sodium chlorid, a nitrate of an alkali metal, a permanganate of an alkali metal, saccharin and water, and subsequently precipitating the metal from said solution.

2. The process of extracting metals from ores which consists in crushing the ore, then treating the crushed ore with a solvent solution of sulfuric acid, salt, nitrate of an alkali metal, and permanganate of an alkali metal, with the addition of saccharin and water, and subsequently precipitating the gold from said solution, substantially as described.

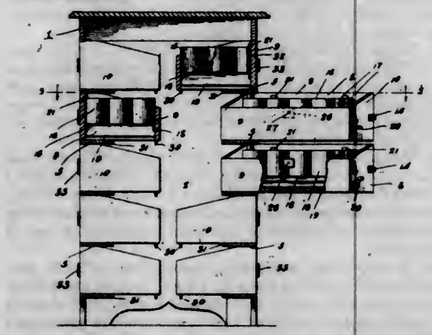
3. The process of extracting metals from ores which consists in crushing the ore, then treating the crushed ore with a solvent solution of sulfuric acid, salt, nitrate of an alkali metal and permanganate of an alkali metal, and water, with the addition of saccharin, and subsequently precipitating the gold from the solvent solution on charcoal, and then burning the charcoal and adding flux to the ashes and reducing same to recover the gold, substantially as described.

4. The process of treating pyritic ores for extracting metals therefrom, which consists in reducing the ore to a suitable size, then roasting the same to render it porous, crushing it after calcination is completed, then treating the same with a solvent solution of sulfuric acid, salt, nitrate of an alkali metal, and permanganate of an alkali metal, and water, with the addition of saccharin and subsequently precipitating the gold from the solvent solution, substantially as described.

5. The process of treating pyritic ores for extracting metals therefrom, which consists in reducing the ore to a suitable size, then roasting the same to render it porous, crushing it after calcination is completed, then treating the same with a solvent solution of sulfuric acid, salt, nitrate of an alkali metal, and permanganate of an alkali metal, and water, with the addition of saccharin, and subsequently precipitating the gold from the solvent solution on charcoal, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

899,147. CABINET. CHARLES R. WEGENER and HENRY E. HANSON, Winona, Minn. Filed June 8, 1908. Serial No. 437,395.



1. An upright cabinet of the class specified comprising a front and back vertical series of supporting shelves, each of the shelves provided in its inner side edge with a catch receiving socket a pivot rod extending through each series of shelves, and a front and back series of record containing drawers arranged to swing in a horizontal plane on the supporting shelves, each of the drawers of the respective series being formed at one of its front outer corners with a tubular block to receive the pivot rod and at its opposite corner with a catch adapted to enter the socket of its supporting shelf and hold the drawer in a position approximately at right-angles with the cabinet.

2. In a record cabinet, a drawer, longitudinally extending supporting strips arranged at the inner faces of the front and back pieces of the drawer and extending from one end of the drawer to within a suitable distance of the opposite end thereof, a record holder comprising two or more series of tubes mounted to slide on said supporting strips, a series of cleats arranged at the inner face of the front piece to normally engage certain of one series of the holder tubes, and a securing block detachably arranged between the rear piece of the drawer and two of the tubes of another series.

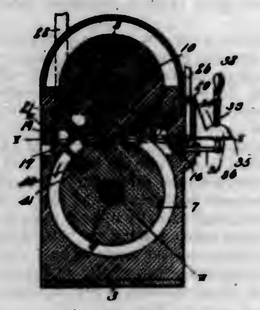
3. A cabinet comprising a drawer, a record holder comprising a number of series of connected tubes, supporting strips arranged at the inner faces of the front and rear pieces of the drawer and extending from one end of the drawer a greater portion of its length to support the record holder above the bottom of the drawer, a series of cleats arranged at the inner face of the front piece of the drawer to engage adjacent of the front series of tubes and a securing block arranged between the rear piece of the drawer and two of the rear series of tubes.

4. A cabinet of the class described comprising a drawer, supporting strips arranged at the inner faces of the front and rear pieces of the drawer and extending from one end thereof the greater portion of its length, a strip of cushioning material arranged in the bottom of the drawer, a record holder comprising a number of series of integral tubes, the outer portions of the front and back series of tubes being flattened to slide against the front and back pieces of the drawer, a series of cleats arranged at the inner face of the front piece to engage the edges of the front series of tubes, and a securing block detachably positioned between the back piece of the drawer and adjacent of the rear series of tubes, the cleats serving to hold the holder against upward displacement and the securing block against longitudinal displacement.

5. In a record cabinet, a drawer, longitudinally extending supporting strips arranged at the inner faces of the front and back pieces of the drawer and a record holder comprising a plurality of series of tubes mounted to slide upon said supporting strips.

[Claim 6 not printed in the Gazette.]

899,148. ROTARY ENGINE. ALPHONS L. WESTRICH, Vantrent, Cal., assignor to Westrich Manufacturing and Supply Company, a Corporation. Filed Mar. 14, 1908. Serial No. 421,093.



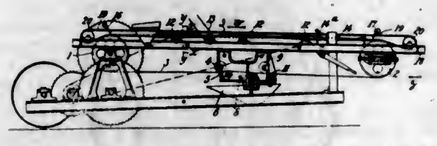
1. In a rotary engine, a casing provided with an inlet-port and an exhaust-port, a cylinder-wheel arranged in the casing and having a radial flange extending over half the periphery of the wheel and of less thickness than the wheel and adapted to alternately open and close said inlet-port, and an abutment-wheel in peripheral contact with the cylinder-wheel and having a peripheral groove adapted to receive the flange of the cylinder-wheel.

2. In a rotary engine, a casing provided with inlet-ports and exhaust-ports, a cylinder-wheel arranged in the casing and having a pair of radial flanges extending over half the periphery of the wheel and located on opposite sides of the wheel both circumferentially and transversely, a piston-blade carried by the cylinder-wheel, an abutment-wheel having grooves for the flanges and having a pocket for the piston-blade, and a valve shiftable to alternately open and close the exhaust ports and inlet-ports to reverse the engine; the flanges of the cylinder-wheel being adapted to keep the inlet-ports closed during half the revolution of the cylinder-wheel.

3. A cylinder-wheel for rotary engines provided with a radial flange of less thickness than the wheel and extending over half the periphery of the wheel.

4. A cylinder-wheel for rotary engines provided with a pair of radial flanges of less thickness than the wheel and each extending over half the periphery of the wheel; said flanges being located on opposite sides of the wheel, both transversely and circumferentially.

899,149. SEPARATION OF METALS FROM THEIR ORES. JACOB D. WOLF, London, England. Filed July 7, 1905. Serial No. 268,611.



1. The combination with a traveling belt, of means for coating one face of same with a metal selective substance, means for roughening said coating, said roughened coating adapted to receive wet ore pulp, and means for relieving said belt of said selective substance and adhering metals, substantially as described.

2. The combination with a traveling belt, of means for coating one face with a metal selective substance, means for roughening said coating, comprising a revoluble device adapted to engage said coating, said roughened coating adapted to receive wet ore pulp, and means for relieving said belt of said selective substance and adhering metals, substantially as described.

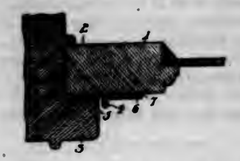
3. The combination with a traveling belt, of means for coating one face of same with a metal selective substance, means for roughening said coating, comprising an engaging revoluble member adjustably supported and extending transversely of said belt, said roughened coating adapted to receive wet ore pulp, and means for relieving said belt of said selective substance and adhering metals, substantially as described.

4. The combination with a frame provided at each end with a main roller, of an endless belt mounted on said main roller, a wabbling roller extending transversely between the upper and lower portions of said belt and adapted to engage the upper portion for imparting a wabbling motion thereto, idler rollers engaging the lower portion of said belt, a coating roller disposed adjacent said idler rollers and adjustably journaled to engage the lower face of said belt, said coating roller being adapted to receive and transfer to said belt a coating of metal selective substance, and a scraper on one side of said coating roller adapted to scrape off said substance after the belt has made a cycle in its operation, substantially as described.

5. In apparatus for the separation of metals from their ores of the character wherein the latter in the form of a wet pulp is caused to flow over an oiled endless traveling belt the arrangement and combination with such belt of adjustable means to scrape off the oil from said belt after the wet pulp has been subjected thereto, means adjacent to the point where the oil is applied to the belt to vary the thickness and character of surface to the layer of oil spread on the belt, devices for tapping the belt so as to move same vertically at one or more points where the wet pulp is flowing over said belt, wabbling rolls to raise and lower the belt alternately from side to side at the points where the wet pulp is flowing over same, and a water supply at one or more points on said belt where the latter supports the wet pulp, substantially as and for the purposes hereinbefore described.

[Claims 6 and 7 not printed in the Gazette.]

899,150. WEATHER-STRIP. FREDERICK A. YRAGER, Thornburg, Pa. Filed Dec. 21, 1907. Serial No. 407,496.

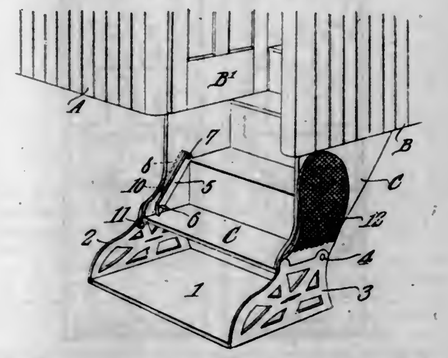


1. A weather-strip having a looped or folded portion and two flat members extending from the said portion in opposite directions, one member being offset with relation to the other member.

2. A weather-strip having a looped or folded portion, two flat members extending from said portion in opposite directions, and a piece of yielding material held by the looped or folded portion.

3. A weather-strip having a looped or folded portion and two flat members extending from said portion in opposite directions, one member being offset with relation to the other member, and a piece of yielding material held by the looped or folded portion.

899,151. EXTENSION-STEP. FRANK X. YUNG, Binghamton, N. Y. Filed Jan. 20, 1908. Serial No. 411,778.



1. The combination with a car vestibule including a door, a panel, and steps below the door and panel; of an extension step pivotally connected to the car steps, means operated independently of the panel for shifting the extension step into position in front of the car steps and in alinement with the door of the vestibule, said extension step when folded constituting a cover for all of the car steps.

2. The combination with a car vestibule including a door, a panel, and steps below the door and panel; of an extension step pivotally connected to the car steps, means operated independently of the panel for shifting the extension step into position in front of the car steps and in alinement with the door of the vestibule, said extension step when folded constituting a cover for all of the car steps, and means below the vestibule panel and above the car steps for shifting the extension step.

3. The combination with car steps; of a combined extension step and housing pivotally connected thereto, and means for raising the extension step, all portions of said raising means being movable in parallel planes and when shifted to a predetermined position constituting a gravity lock to hold the step raised, said means including an actuating lever having a fixed pivotal point.

4. The combination with car steps; of an extension step pivotally connected thereto and constituting a housing therefor, an actuating lever mounted above the car steps and disposed to be concealed between said steps and the folded extension step, and link connections between said

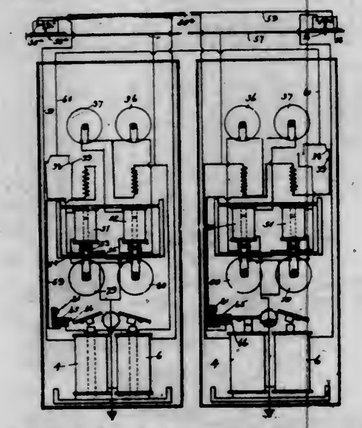
lever and the extension step, said lever and links being movable in parallel planes and arranged to constitute a gravity lock when shifted to a predetermined position.

5. The combination with car steps; of a counterbalanced extension step pivotally connected thereto, a pivot arm connected to the car steps, a link connection between the arm and extension step, and means for actuating the arm to fold the link thereon and raise and lock the extension step, said means having a fixed pivotal point.

899,152. PROCESS OF MAKING RED VAT-DYES. WILHELM BAUER, Vohwinkel, near Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed May 25, 1908. Serial No. 434,863.

The process for producing red dyestuffs, which process consists in first treating halogenated arylthioglycollic acids with chlorsulfonic acid which is practically free from sulfuryl chlorid and isolating the red dyestuffs, substantially as described.

899,153. BLOCK-SIGNAL APPARATUS. ALEXANDER BEVAN, Providence, R. I. Filed Dec. 3, 1906. Serial No. 346,001.



1. In a block signaling apparatus, the combination of a swinging target mounted upon an oscillatory shaft and retained in either the danger or safety position by gravity, said target being adapted to be moved from one side to the other of a vertical line through the point of support in moving from the danger to the safety position and vice versa, the center of gravity of said target being above its point of support, and electro-magnetic means for actuating said target through said shaft.

2. In a block signaling apparatus, the combination of a swinging target adapted to pass from one side to the other of a vertical line through the point of support in moving to and from its danger position, magnetically actuated means operated by the cars entering and leaving the block, and means whereby said actuated means is caused to move the target to the danger position when the first car enters the block and return the same when the last car leaves the block.

3. In a block signaling apparatus, the combination of a swinging target adapted to be moved from one side to the other of a vertical line through the point of support in moving from the danger to the safety position and vice versa, electro-magnets, a counting mechanism actuated by said magnets as a car enters or leaves the block, and means actuated by said counting mechanism to move the target when the first car enters and the last car leaves the block.

4. In a block signaling apparatus, the combination of a swinging target adapted to be moved from one side to the other of a vertical line through the point of support in moving from the danger to the safety position and vice versa, a shaft, a ratchet wheel mounted on said shaft, magnetically actuated means for oscillating said shaft, and means also mounted on said shaft for moving the target when the first and last cars enter and leave the block.

5. In a signaling apparatus, the combination of a target supported on a pivoted arm, and adapted to move each side of a vertical line through the point of support in passing to and from the danger position, a shaft, a ratchet wheel mounted on said shaft and magnetically actuated means for operating the ratchet wheel and a lever mounted on said shaft and adapted to act through said arm to move the target.

[Claims 6 to 30 not printed in the Gazette.]

899,154. SHIRT. LEWIS F. BOWEN, Jr., Baltimore, Md. Filed Jan. 9, 1908. Serial No. 409,906.



1. A shirt having a bosom with an overlapping and an underlapping section,—the overlapping bosom section having stud holes and a flexible flap attached to its inner side at a point between the stud holes and the vertical edge thereof and said flap being turned back beneath the section to which it is attached and being provided with buttons at one side, and the underlapping bosom section projecting over the attached edge of the flap and the edge of said underlapping section having a flexible portion with button holes therein to receive the buttons on the turned-back flap.

2. A shirt having a bosom comprising an overlapping and an underlapping section,—the overlapping section having stud holes adjacent its vertical edge and a flexible flap attached at its inner side between the stud holes and said edge,—said flap having buttons attached thereto adjacent its secured edge and the underlapping bosom section having a flexible fabric strip attached to its vertical edge and said strip having button holes for receiving the buttons on the flap of the other bosom section and means on the overlapping bosom section for detachably securing the movable end of the flap to said overlapping bosom section.

899,155. FERTILIZER. LEONARD R. COATES, Baltimore, Md., assignor to The American Bacterialzed Fertilizer Company, a Corporation of Maryland. Filed Dec. 7, 1905. Serial No. 290,837.

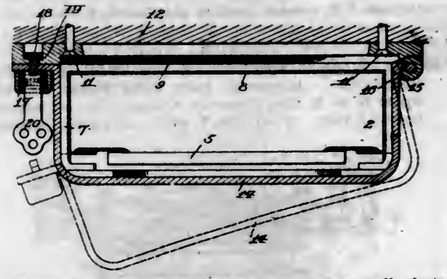
1. The combination with a dry non-hygroscopic artificial fertilizer, of ground vegetable or animal matter which has been inoculated with bacteria and dried, substantially as specified.

2. The combination with a dry non-hygroscopic fertilizer, of sterilized vegetable or animal matter which has been inoculated with micro-organisms which fix or gather atmospheric nitrogen, and dried, substantially as specified.

899,156. MAIL-CHUTE. JOSEPH W. CUTLER, Rochester, N. Y., assignor to Cutler Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 9, 1906. Serial No. 295,211.

1. A mail chute mounted in pivotal relation with a support.

2. The combination with a support, of a mail chute having a pivotal connection therewith.



3. The combination with a support, of a mail chute embodying two or more sections each having a pivotal connection with the support.

4. The combination with a support, of a mail chute embodying superposed, independently operable sections hinged to the support.

5. The combination with a support, of a mail chute embodying two or more sections detachably hinged to the support.

[Claims 6 to 19 not printed in the Gazette.]

899,157. MAIL-CHUTE. JOSEPH W. CUTLER, Rochester, N. Y., assignor to Cutler Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Sept. 24, 1906. Serial No. 336,069.



1. In a mail chute, the combination with a support, of two tubular sections pivotally supported at opposite ends and a locking means for securing the adjacent ends of said sections in alinement.

2. In a mail chute, the combination with a support, of two tubular chute sections pivoted at opposite ends in open bearings and means for securing the adjacent ends of said sections in alinement.

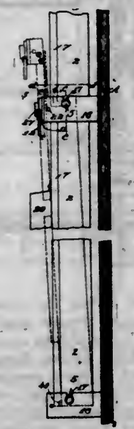
3. In a mail chute, the combination with a support, of a tubular chute section supported at its upper end in upwardly-opening bearings, stops for preventing the disengagement of the chute from its bearings when in vertical position, and locking means controlled by a key for securing the section in locked position.

4. In a mail chute, the combination with a support, of a tubular chute section supported at its upper end in upwardly-opening bearings and having locking studs at its lower end adapted to coöperate with corresponding recesses on a support when the section is in vertical position, and locking devices for securing the section with the studs engaged.

5. In a mail chute, the combination with a support, of a tubular chute section having the bearing studs at the sides of one end, and locking projections at the other, and bearings and recesses on the support with which said studs engage.

[Claims 6 to 21 not printed in the Gazette.]

899,158. MAIL-CHUTE. JOSEPH W. CUTLER, Rochester, N. Y., assignor to Cutler Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Sept. 24, 1906. Serial No. 336,070.



1. A mail chute open at one side and having ways at the edges of the opening, in combination with a covering panel held and guided to move on said ways and means for locking the panel in position.

2. A mail chute open at the front and having ways at the front edges in combination with a covering panel held and guided to move longitudinally on said ways and a key lock for securing said panel in position over the opening.

3. A mail chute open at the front and having ways thereon extending longitudinally of the chute, in combination with a covering panel held and guided upon said ways and having portions extending within the chute and in rear of the front edges of the sides thereof and means for locking said panel in position.

4. A mail chute embodying a channel having the flanges at the sides in combination with a longitudinally movable panel having the grooves with which the flanges coöperate to hold and guide the panel.

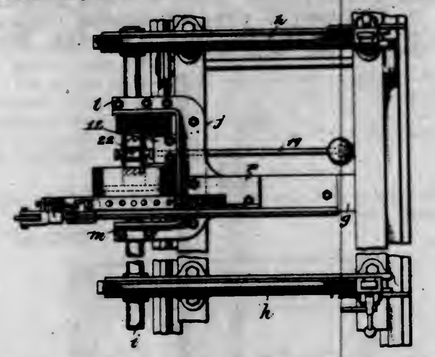
5. In a mail chute the combination with a plurality of tubular sections each having a movable panel held and guided to move vertically thereon for permitting access to the interior, said panels having portions extending within the section and in rear of the front edges thereof and means for securing said panels in position.

[Claims 6 to 37 not printed in the Gazette.]

899,159. SAWMILL SET-WORKS. ALONZO A. DE LOACH, Atlanta, Ga. Filed Jan. 6, 1906. Serial No. 294,932.

1. In saw mill set works, the combination with the carriage and set shaft, of a casting secured to said carriage and carrying the operative parts of said set works, a sliding clutch on said shaft, a casing provided with gear teeth and with a clutch face and also forming one member of a friction clutch, gearing connecting said gear teeth with a gear wheel running loose on said set shaft, said gear wheel being provided with a clutch face, a disk forming with said casing a friction clutch, and means for operating said disk, substantially as described.

2. In saw mill set works, the combination of the set shaft, a casing mounted loosely thereon, provided with a clutch face and with gear teeth on one side, said casing having a hollow cylindrical projection on the other side, a disk provided with inclined cut-away portions on its periphery coöperating with said casing, friction devices between said disk and casing, a gear wheel running loosely on the set shaft, and provided with a clutch face, gearing connecting said gear wheel with the gear teeth on said casing, a slidable clutch provided with teeth on each end keyed to said shaft, and means for operating said disk, substantially as described.



3. In saw mill set works, the combination of the set shaft, a casing mounted thereon provided with a central web, gear teeth and a clutch face on one side, with a hollow cylindrical projection on the other side thereof, a disk provided with inclined recesses located within said cylindrical portion, anti-friction rollers between said disk and said cylindrical portion, springs in contact with said anti-friction rollers, a gear wheel provided with a clutch face loosely mounted on said set shaft, gearing connecting said gear wheel with the gear teeth on said casing, a clutch keyed to said set shaft but slidably mounted thereon, said clutch being provided with clutch faces at each end, a pivoted lever for shifting said clutch, and means for operating said disk, substantially as described.

4. In saw mill set works, the combination of a set shaft, a casing loosely mounted thereon provided with internal gear teeth, with a clutch face on one side thereof, and with a projecting cylindrical portion on the other side thereof, means for locking said casing against reverse movement, a gear wheel loosely mounted on said shaft and provided with a clutch face, gearing connecting said gear wheel with the gear teeth in said casing, a clutch keyed to said set shaft but slidably mounted thereon, said clutch being provided with a clutch face at each end, a pivoted lever for shifting said clutch, a disk located within the cylindrical portion of said casing, and provided with inclined cut-away portions on its periphery, anti-friction rollers located in said cut-away portions, springs bearing against said rollers, and means for operating said disk, substantially as described.

5. In saw mill set works, the combination with the carriage and set shaft, of a casting secured to said carriage and carrying the operative parts of said set works, a casting, carrying a quadrant, secured to said first-named casting, a casing provided on one side with gear teeth and a clutch face, and the other side with a projecting cylindrical portion, said projecting portion being cut away on its outer face, anti-friction rollers in said cut away portion, a disk loosely mounted on said set shaft and provided with cut away portions in its periphery, anti-friction rollers in said cut away portions, a casing inclosing the projecting cylindrical portion of said first-named casing, an operating lever, links connecting said last-named casing and said disk with said operating lever, a double faced clutch slidably mounted on said set shaft and adapted to engage with the clutch face on said first-named casing, said clutch being keyed to said set shaft, a gear wheel, provided with a clutch face, mounted on said set shaft, and device for operating said gear wheel, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

899,160. RIBBON MECHANISM FOR TYPE-PRINTING MACHINES. ALBERT B. DICK, Lake Forest, Ill., assignor to A. B. Dick Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 1, 1907. Serial No. 360,085.



1. The combination of a movable carriage, a printing device supported thereby, spools mounted on said carriage and a ribbon carried thereby, feeding mechanism for said ribbon, reversing mechanism for the ribbon, a movable member held yieldingly in engagement with the ribbon on one of said spools, and means controlled by the position of said member for operating said reversing mechanism, substantially as set forth.

2. The combination of a movable carriage, a printing device supported thereby, spools mounted on said carriage and a ribbon carried thereby, said ribbon having a thickened portion thereon adjacent to one end, feeding mechanism for said ribbon, reversing mechanism for the ribbon, a movable member held yieldingly in engagement with the ribbon on one of said spools, and means controlled by the position of said member for operating said reversing mechanism, substantially as set forth.

3. The combination of a movable carriage, a printing device supported thereby, spools mounted on the carriage and a ribbon carried thereby, a clutch for each of said spools, a rock-shaft, connections between said shaft and said clutches to simultaneously throw one clutch to operative position and the other to inoperative position, a movable member held yieldingly in engagement with the ribbon on one of said spools, and means controlled by the position of said member for operating said rock-shaft, substantially as set forth.

4. The combination of a movable carriage, a printing device supported thereby, spools mounted on the carriage and a ribbon carried thereby, devices for feeding the ribbon in the direction of its length, a part movable in correspondence with the movement of the carriage, a member held yieldingly in engagement with the ribbon on one of said spools, and means controlled by the coaction of said part with said member for reversing the direction of feeding movement of said ribbon, substantially as set forth.

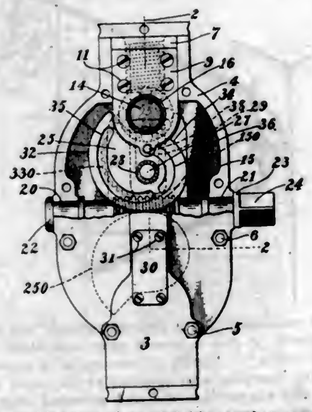
5. The combination of a movable carriage, a printing device supported thereby, spools mounted on the carriage and a ribbon carried thereby, ribbon-feeding mechanism, ribbon-reversing mechanism, a part movable in correspondence with the movement of the carriage, a member held yieldingly in engagement with the ribbon on one of said spools, and means dependent upon the position of said member for causing said part to actuate said ribbon-reversing mechanism, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

899,161. LIFTING-JACK. FRED E. FARNHAM, Rumford Falls, Me. Filed May 12, 1908. Serial No. 432,423.

1. The combination of a cam member having teeth in the cam face thereof, a screw member for engagement with the teeth of the cam member, means for maintaining those teeth in engagement with the screw member at a constant distance from the axis of the screw member and means for rotating the screw member.

2. The combination of a rotatable member, a portion of whose periphery is a cam, teeth formed in the cam face, that portion of the periphery axially opposite said cam face being concentric with the axis of said rotatable member, a toothed member for engagement with the teeth in the rotatable member, a slidable member for engagement with the concentric face of the rotatable member, means for guiding the axis of the rotatable member in the line of travel of the slidable member and means for rotating the toothed member.



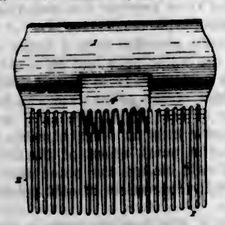
3. The combination of a rotatable member, a portion of whose periphery is a cam, teeth formed in the cam face, that portion of the periphery axially opposite said cam face being concentric with the axis of said rotatable member, a toothed member for engagement with the teeth in the rotatable member, a slidable member for engagement with the concentric face of the rotatable member, means for maintaining a constant relation between those teeth of the rotatable member in engagement with the toothed member and the toothed member and means for maintaining a constant relation between the slidable member and the axis of the rotatable member, means for guiding the axis of the rotatable member in the line of travel of the slidable member and means for rotating the toothed member.

4. The combination of a pair of oppositely disposed coacting cams, a peripheral groove in each cam face, teeth in said grooves, a screw member in common engagement with the teeth of both cams and a plunger actuated by each cam, and means for rotating the screw member.

5. The combination of a pair of oppositely disposed coacting cams, a peripheral groove in each cam face, teeth in said grooves, a screw member in common engagement with the teeth of both cams and a plunger actuated by each cam, means for maintaining each cam in coaction with the screw member, means for maintaining each plunger in coaction with its respective cam, and means for rotating the screw member.

[Claims 6 to 9 not printed in the Gazette.]

899,162. HAIR-RETAINING COMB. WILLIAM B. FISK, Upton, Mass. Filed Mar. 17, 1906. Serial No. 421,613.



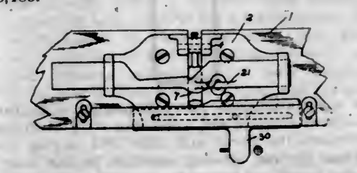
1. A hair-retaining comb having a resilient back or body member provided with a perforation, and a clamping member secured to the resilient body member and passed through said perforation and yieldingly engaging the teeth of the comb.

2. A hair-retaining comb having a resilient back or body member bent to form a loop or fold and provided with a perforation, and a clamping member secured to the resilient body member and passed through said perforation and yieldingly engaging the teeth of the comb.

3. A hair-retaining comb having a resilient back or body member and a toothed clamping member secured to the resilient body member and yieldingly engaging the teeth of the comb.

4. A hair-retaining comb having a resilient back or body member provided with a perforation, and a toothed clamping member secured to the resilient body member and passed through said perforation and yieldingly engaging the teeth of the comb.

899,163. KNOCK-OFF GUARD FOR STOP-MOTIONS. JOHN T. HACKING, Enfield, and CHARLES WILKINSON, Providence, R. I. Filed Sept. 18, 1907. Serial No. 393,485.



1. In a loom, a weft fork, a lay, means for automatically stopping the loom when its fork fails to find the weft thread, a cam actuated by the movement of said stopping means to position said fork whereby the loom is prevented from being stopped on the next forward stroke of the lay, and means for withdrawing said cam to restore said fork to its normal action.

2. In a loom, a stop mechanism including a weft fork, a lay, an automatically actuated transversely sliding cam plate adapted to be moved by said stopping mechanism to position said fork whereby said mechanism is prevented from being actuated to stop the loom on the next forward stroke of the lay, and means for automatically withdrawing said cam plate to again allow said fork its normal action.

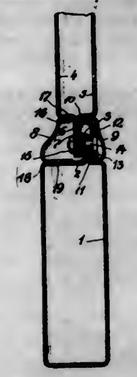
3. In a loom, a weft fork, a lay, a shipper lever, means including a shipper lever knock-off rod for automatically stopping the loom when its fork fails to find the weft thread, a transversely sliding cam, means operated by said knock-off rod to move said cam to hold up said fork whereby the loom is prevented from being stopped on the next forward stroke of the lay.

4. In a loom, a weft fork, a lay, a shipper lever, means including a shipper lever knock-off rod for automatically stopping the loom when its fork fails to find the weft thread, a transversely sliding cam, means operated by said knock-off rod to move said cam to hold up said fork whereby the loom is prevented from being stopped on the next forward stroke of the lay, and a yieldable finger adapted to engage said cam to remove the same to restore said fork to its normal action.

899,164. METALLIC DOOR. LEO I. HEINTZ, Philadelphia, Pa., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 21, 1907. Serial No. 407,583.

1. In a metallic door, the combination of a frame, a panel secured thereto, and a molding strip secured to the door and overlying the joint between the frame and panel, said strip having projections thereon entering openings in the door to secure the strip in position and the metal of the strip between adjacent projections lying in engagement with the metal of the door, substantially as described.

2. In a metallic door, the combination of a frame, a panel secured thereto, said frame and panel having parallel walls thereon lying substantially transverse to the plane of the door and openings in said walls, and a molding strip overlying the joint between the frame and panel and having projections thereon entering said openings to secure the strip in position, substantially as described.



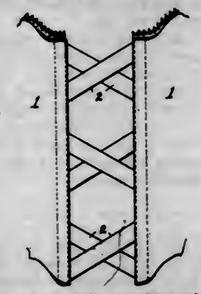
3. In a metallic door, the combination of a frame, a panel secured thereto, and a molding strip overlying the joint between the frame and panel and having integral projections thereon entering openings in the door, said strip being capable of flexure to permit inserting it in position with said projections coacting with said openings and being adapted to be held in that position under tension, substantially as described.

4. In a metallic door, the combination of a frame, a panel secured thereto, said frame and panel having parallel walls thereon lying substantially transverse to the plane of the door, a molding strip lying between said parallel walls, and means coacting with the interior surface of said strip for securing the strip in position upon the door, substantially as described.

5. In a metallic door, the combination of a frame, a panel, a molding strip overlying the joint between the frame and panel, a plurality of bolts for securing the frame, panel and molding strip together, and means for concealing said bolts, substantially as described.

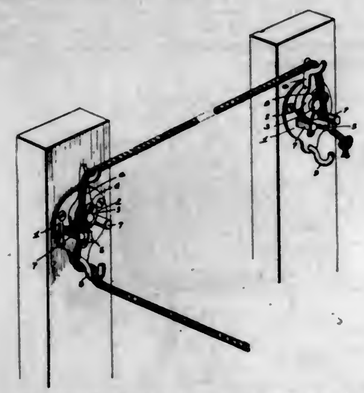
[Claims 6 to 12 not printed in the Gazette.]

899,165. CORSET. EMMA G. HINTZ, Reading, Pa. Filed Jan. 26, 1907. Serial No. 354,176.



A corset comprising side members elastically held together at the back by a plurality of pairs of elastic diagonal bands of uniform length and width, said bands being permanently secured at both ends to the back of the corset members, one band of each pair crossing the other loosely midway of its length, said bands being spaced apart at their points of attachment with the side members and being directly disconnected from each other along their entire lengths.

899,166. CLOTHES-LINE HOLDER. JOHN HUTH, Canton, Ohio, assignor of one-half to William A. Huth, Canton, Ohio. Filed Dec. 4, 1907. Serial No. 405,117.



1. The combination of a supporting base, and a stud secured thereto, a disk mounted upon said stud, said disk provided with a bar having grooves upon its opposite faces and a line carrying arm grooved at its outer end, bars fixed to the supporting base and provided with rounded inner surfaces, said bars spaced from each other and the grooved bar carried by the disk located between the fixed bars, substantially as and for the purpose specified.

2. The combination of a base provided with a pivoted disk, said disk provided with a grooved clamping bar and a line carrying arm grooved at its outer end, bars spaced from each other and secured to the supporting base, the clamping bar carried by the disk located intermediate the fixed bars and a line holding hook located below the fixed bars, substantially as and for the purpose specified.

899,167. COLLAR. SETH L. ISHAM, St. Paul, Minn.; Anna M. Isham administratrix of said Seth L. Isham, deceased. Filed July 23, 1907. Serial No. 385,211.



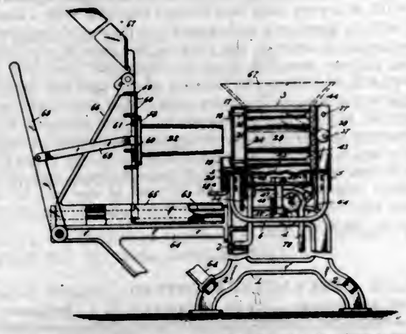
1. A horse collar provided at the outer seam of its large roll with a series of points projecting out of said seam and secured directly therein between the outer edge of the collar back and the outer edge of the collar face, said points projecting from between the fastenings constituting the seam, for the purposes specified.

2. A horse collar provided with a lining of suitable material between the collar back and collar face of the back roll, said lining projecting from within said back roll and between the edges of the collar face and collar back, the projecting edge of said lining having a series of points and a cord of raw hide or other suitable material whip sewed through the outer edges of the collar back and collar face and said lining, the outer laps of said cords passing between the interstices of said points, for the purposes specified.

3. In a collar of the class set forth, a seam formed between the front face and back face of one of its rolls, said seam constituting the outer edges of the faces of said roll, a series of points projecting from between said edges, and fastenings passing through said edges and the interstices between said points, for the purposes specified.

4. In a collar of the class set forth, a seam formed between the front and back faces of one of its rolls having fastenings passing through the outer edges of the laps of said seam, and a series of protecting points projecting out of said seam from between said fastenings, for the purposes specified.

899,168. MACHINE FOR MOLDING BLOCKS. JULIUS JAEGER, Rutherford, N. J. Filed May 21, 1907. Serial No. 374,893.



1. A machine for making molded blocks, having a mold box pivoted to swing in its entirety on an arc and provided with a mold board separate from any other part of the mold box, which mold board is mounted to move uniformly throughout its area into and out of the box, combined with means for so moving the mold board and a hinged back for the box, hinged ends for the box, and a wholly detachable front for the box, substantially as set forth.

2. A machine for making molded blocks having a mold box and a mold board in said box separate from any other part of the box which mold board is mounted to move uniformly throughout its area into and out of the box, combined with means for so moving the mold board, substantially as set forth.

3. A machine for making molded blocks having a mold box provided with a mold board separate from any other part of the box and movable into and out of the box and a rack and pinion gear for so moving the mold board, substantially as set forth.

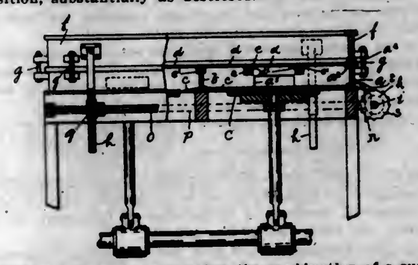
4. A machine for making molded blocks, having a mold box provided with a mold board separate from any other part of the box and movable into and out of the box, a rack and pinion gear for so moving the mold board, rollers on the mold board and rods on which the rollers run, substantially as set forth.

5. In a machine for making molded blocks, the combination with a supporting frame, of a mold box pivoted on the same and supports for the mold box on said frame, which supports are curved downward at the front, to permit of swinging down the mold box on a support substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

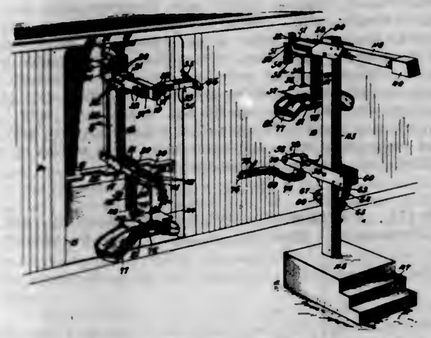
899,169. PAPER-PULP-SCREEN BOX. JOHN JANSON, Lawrence, Mass. Filed Feb. 25, 1907. Serial No. 359,155.

1. In a pulp screen apparatus, the combination of a supporting frame having a screen plate at its top, a single side-wall frame resting on said supporting frame to form a pulp-receiving chamber, a plurality of upright supports remotely disposed relative to each other at each side of said frames, and means engaging said supports for raising and lowering said side-wall frame with relation to said supporting frame, to provide unobstructed cleaning spaces for the screen plate between said supports at all sides of said frames when the side wall frame is in raised position, substantially as described.



2. In a pulp screen apparatus, the combination of a supporting frame having a screen plate at its top, a single side-wall frame resting on said supporting frame to form a pulp-receiving chamber, a plurality of upright supports connected to said side-wall frame and remotely disposed relatively to each other at opposite sides thereof, and means, engaging said supports for simultaneously moving them longitudinally to raise and lower said side-wall frame with relation to said supporting frame to provide unincloased cleaning spaces between said supports at all sides of said frames when the side wall frame is in raised position, substantially as described.

899,170. MAIL-SACK-EXCHANGE MECHANISM FOR RAILWAYS. RICHARD KERSEY, Lexington, Ky., assignor of one-half to James Thompson Bailey, McBrayer, Ky. Filed Nov. 16, 1907. Serial No. 402,508.



1. In mechanism of the character set forth, the combination with a downwardly movable mail sack holder, of a detent detachably engaging the holder to hold it in an elevated position, and means for disconnecting the holder and detent to permit the former to drop and release the sack.

2. In mechanism of the character set forth, the combination with track side and car carried exchange mechanisms, one of which includes a downwardly movable mail sack holder, of a detent detachably engaging the holder to maintain it in an elevated position, and means engaged by a portion of the other mechanism for moving the detent to disengage it from the holder and permit said holder to drop and release the sack.

3. In mechanism of the character set forth, the combination with track side and car carried exchange mechanisms, one of which includes a downwardly movable mail sack holder, of a detent detachably engaging the holder to maintain it in an elevated position, means carried by the other mechanism for engaging the sack to receive the same, and means engaged by a portion of said other mechanism for moving the detent to disengage it from the holder and permit said holder to drop and leave the sack so engaged.

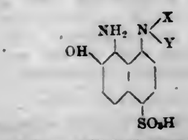
4. In mechanism of the character set forth, the combination with a supporting arm, of a downwardly swinging sack holding hook mounted thereon, and a swinging latch pivoted on the arm and detachably engaging the hook to hold it against downward movement.

5. In mechanism of the character set forth, the combination with a support, of a plurality of movable sack holders mounted thereon, and a detent common to said holders for maintaining either against movement.

[Claims 6 to 45 not printed in the Gazette.]

899,171. AZO DYE. WALTER KÖNIG, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed May 12, 1908. Serial No. 432,388.

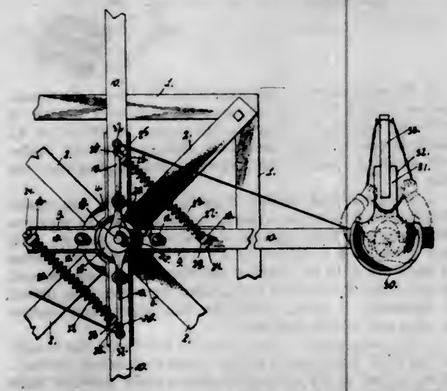
1. The herein-described new azo dyestuffs, obtainable by combining in alkaline solution naphthylamin compounds with 1-amino-7-naphthol-4-sulfonic acids having the above given formula, which dyestuffs are, after being dried and pulverized, in the shape of their alkaline salts dark powders soluble in water; yielding upon reduction with stannous chlorid and hydrochloric acid naphthylamin compounds and 1.8-diamino-7-naphthol-4-sulfonic acids having the formula.



and dyeing wool from acid baths generally from violet to black shades, substantially as described.

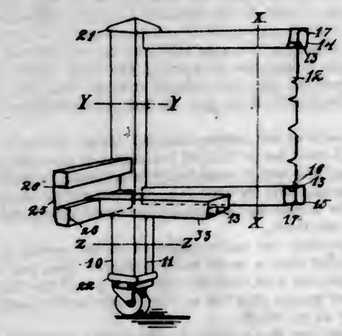
2. The herein-described new azodyestuff obtainable by combining in alkaline solution the diazocompound of 1-naphthylamin with 1-amino-7-naphthol-4-sulfonic acid, which dyestuff is, after being dried and pulverized, in the shape of its sodium salt a dark powder soluble in water with a red-violet color and soluble in concentrated sulfuric acid with a greenish-blue color; yielding upon reduction with stannous chlorid and hydrochloric acid 1-naphthylamin and 1.8-diamino-7-naphthol-4-sulfonic acid; and dyeing wool from acid baths violet-black shades of a reddish tint, substantially as described.

899,172. AMUSEMENT APPARATUS. JOHN Z. LEVY, Pittsburg, Pa. Filed May 14, 1907. Serial No. 373,553.



A merry-go-round comprising a base, a plurality of inclined supports connected at their lower ends to said base, a truncated cone-shaped cap mounted upon and secured to the upper ends of said supports, a hub rotatably-mounted on said cap, a spindle extending through the cap and hub, a supporting member engaging the hub and secured to the spindle, bearing balls interposed between the supporting member and hub, bearing balls interposed between the hub and the cap, a shiftable cross head having an enlarged intermediate portion mounted upon said spindle, said enlarged portion of the cross head provided with a cam slot, a vertically-extending pin mounted in said slot, and adapted in connection with the spindle and wall of the slot to limit the shifting movement of the cross head and for connecting the cross head to the spindle when its movement is arrested, radially extending angle-shaped arms formed integral with the lower portion of the hub, beams mounted upon said arms, a plurality of vertically-extending hold-fast devices for securing each beam to an arm, each of the outer hold-fast devices provided with an eye at its top, headed bars extending through said eyes, said bars further provided with a shoulder and an apertured end, means for pivotally connecting the apertured ends of the bars to the ends of the cross head, springs mounted upon the bars and interposed between said shoulders and the eyes of the hold-fast devices, seats mounted upon the outer ends of the beams and each provided with a forward extension, a foot-operated lever fulcrumed to each of said extensions and depending below the same, a foot rest secured to the lower end of each of the levers, pulleys depending from said seats, and cables passing over said pulleys and secured at one end to the lower ends of said levers and at their opposite ends to the ends of the cross head.

899,173. SHEET-METAL BEDSTEAD. CHARLES A. LINDEN and EBBERT J. LUND, Jamestown, N. Y., assignors of one-third to Charles G. Fredrickson, Jamestown, N. Y. Filed Dec. 9, 1907. Serial No. 405,727.



1. In a sheet metal bedstead, a corner post composed of a sheet of metal bent in tubular form and having adjacent inturned flanged edges, a head or footboard inserted between said flanged edges, and means on said headboard for engaging said flanged edges to hold the same.

2. In a sheet metal bedstead, a post composed of a sheet of metal in tubular form having inturned flanged edges, a sheet metal head or footboard inserted between said flanged edges, and lugs on said head or footboard engaging said flanged edges to hold the same.

3. In a sheet metal bedstead, a post composed of a sheet of metal in tubular form having inturned flanged edges, a sheet metal head or footboard inserted between said flanged edges, and lugs struck up from said head or footboard to engage said inturned edges and hold the same.

4. In a sheet metal bedstead, a post composed of a sheet of metal in tubular form having inturned flanged edges lengthwise thereof, the lower portion of said flanged edges attached to one another, a sheet metal head or footboard inserted between the upper portion of said flanged edges and locked on said attached portion, and lugs on said head or footboard engaging said flanged edges to hold the same.

5. In a sheet metal bedstead, a corner post composed of a sheet of metal in tubular form having inturned flanged edges, a sheet metal head or footboard inserted between said flanged edges, and pairs of lugs struck from said headboard or foot in opposite directions to hold said inturned flanged edges.

[Claims 6 to 17 not printed in the Gazette.]

899,174. RAILWAY-TIE. WILLIAM A. LOCKARD, Philadelphia, Pa. Filed Feb. 20, 1908. Serial No. 416,923.



A railway tie having a flat top wall and side pieces, the top wall being provided near each end of the tie with a socket having inwardly slanting end walls which extend between the side pieces of the tie, and a bottom wall of wedge-like formation provided with a central drain opening, the lowest points of the bottom walls of the sockets lying in a plane approximately flush with the bottom edges of the side pieces, cushion supports arranged in said sockets, and means for holding the supports in position.

899,175. SPECULUM. WILLIAM MEYER, Chicago, Ill. Filed Mar. 11, 1908. Serial No. 420,516.



1. In a speculum, a cylindrical, hollow body portion, a casing arranged longitudinally of and entirely within the body portion and a lamp and its connections snugly fitting in said casing and filling the same.

2. In a speculum, a hollow, cylindrical body portion, a casing arranged in the body portion and extending longitudinally thereof and terminating contiguous to the inner end of the body portion, the wall of the body portion being slotted longitudinally along the said casing, and light connections arranged in said casing and closing the slot.

3. In a speculum, a substantially cylindrical, hollow body portion, a casing extending therein and terminating contiguous to the inner end of the body portion, a lamp disposed at the inner end of the said casing, and a tubular connection for said light lying within said casing with the outermost points of its surface substantially in the transversely circular lines of the outer surface of the body portion.

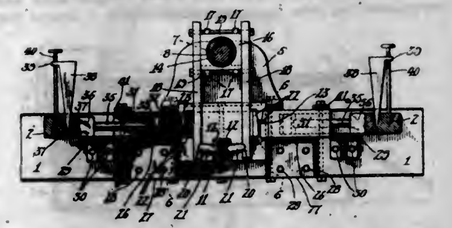
4. In a speculum, a substantially cylindrical, hollow body portion, and a casing extending longitudinally of and within the body portion and terminating contiguous to the inner end thereof, the said casing being adapted to receive connections for a light, and a light being adapted to be disposed substantially at the inner end of the casing, the material of the body portion being bent at its inner end across the longitudinal planes of the casing toward the longitudinal axis of the body portion.

5. In a speculum, a hollow, substantially cylindrical body portion, a casing extending longitudinally thereof, the walls of the body portion co-incident with the casing being slotted longitudinally of the casing, a lamp arranged at the inner end of the casing and disposed for having its rays projected into the body portion, connections for said light extending within the casing and substantially filling the same, and a cover or housing for the light closing the inner end of the slot.

[Claims 6 to 11 not printed in the Gazette.]

899,176. CRUSHING-MILL. WALDEMAR M. MUELLER, Los Angeles, Cal. Filed Mar. 13, 1907. Serial No. 362,237.

1. In a crushing mill, crushing shoes, means for producing a relative movement between the shoes, means for resisting the retraction of a shoe including a hollow safety block having a plurality of puncturable faces, and a resistance pin abutting against one of the puncturable faces.



2. In a crushing mill, a frame provided with a fulcrum bar and two tables upon each side thereof, a hollow shoe holder upon one of said tables, one end of which is open and the other end is provided with a crushing shoe, a safety block in said holder, a pin adjustably mounted on the other table at one end with its opposite end in engagement with said block, a cam shaft, a head block thereon, two arms secured at their upper ends to said block and having their lower ends, one upon each side of said fulcrum bar, each arm being provided with a crushing shoe opposite one of the shoes on said holders, and a link engaging with each bar and the fulcrum bar.

3. In a crushing mill, a shoe holder, a crushing shoe carried thereby, a movable crushing shoe, a hollow safety block in said shoe holder, a resistance pin abutting against said safety block, a head on the resistance pin, a stationary bar, and a wedge between said bar and head for adjusting said resistance pin and shoe holder.

4. In a crushing mill, a frame comprising a pair of metal armored beams, cross braces connecting said beams, each cross brace having a tongue projecting through the metal armor, a key passing through each tongue back of the armor, journal brackets bolted to said beams, a shaft mounted in the journal brackets, a cam keyed on said shaft, a plurality of heads mounted on the respective cams, each head being split and having lugs, a pair of operating arms for each head, bolts passing through the operating arms and lugs of each head, thus securing the arms and head together on the associated eccentric, the other ends of the arms having concave grooves, a fulcrum bar having concave grooves in opposite faces, fulcrum blocks having rounded ends interposed between the fulcrum bar and the operating arms and engaging in said concave grooves, crushing shoes carried by the operating arms, and stationary adjustable shoes for coöperating with the first named shoes.

5. In a crushing mill, a frame provided with a fulcrum bar and a recessed cross bar on each side thereof, supports between said bars and the fulcrum bar, oppositely located shoe holders on said supports, a removable shoe on the inner end of each holder, a pin for each holder having a recessed head to register with one of the recesses in said bars, a wedge for each pair of registering recesses, means for adjusting said wedge, a shaft above the fulcrum bar provided with a plurality of cams, one for each pair of oppositely located removable shoes, a pair of depending arms for each cam having their lower ends, one upon each side of the fulcrum bar, each arm being provided with a crushing shoe, and a link between each arm and the fulcrum bar.

899,177. BROODER. HENRY J. MULDER, Alton, Iowa. Filed Feb. 2, 1906. Serial No. 299,226.

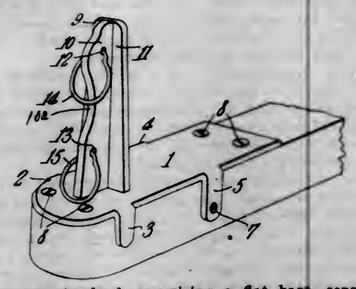
1. A poultry brooder including communicating upper compartments and communicating lower compartments, a removable partition between the upper compartments transparent removable covers for the upper compartments, a water reservoir arranged beneath the floor of one of the upper compartments, means for supplying heat to the reservoir, means for carrying off the surplus heat, said means including a thermostat.

2. A poultry brooder comprising upper communicating compartments and lower communicating compartments, a water reservoir arranged in one of the lower compartments, a flue leading from said lower compartment and communicating with an upper compartment, a second flue



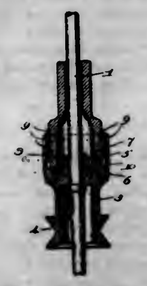
arranged in said upper compartment and opening into the atmosphere at one end and communicating with the first named flue, thermostatic means controlling the said second flue and means for heating the water in said reservoir.

899,178. WAGON-STANDARD. WINFIELD W. MULLEN, Bunker Hill, Ind. Filed Apr. 29, 1907. Serial No. 370,941.



A wagon standard comprising a flat base, separately bendable centering projections depending from opposite longitudinal edges of the base, separately bendable attaching projections depending from the longitudinal edges of the base, all of said projections being disposed to be bent inwardly upon opposite faces of a bolster, fastening means extending through and connecting the attaching projections, an upright integral with the base and T-shaped in cross section, and rings pivotally connected to the upright, said upright having a recess for the reception of one of the rings when in normal position, the base having apertures adjacent its ends for the reception of securing means.

899,179. BOBBIN-DRIVING MEANS FOR ROTATABLE SPINDLES. PETER E. MCCULLOUGH, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Feb. 21, 1908. Serial No. 416,981.

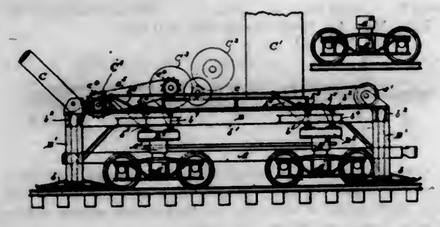


1. A rotatable spindle having an attached whirl, combined with a bobbin having a series of metallic rings encircling its head, and a series of upturned, segmental and straight resilient fingers rotating with and surrounding the spindle, said fingers receiving between them the bobbin head and driving the same by frictional and tangential engagement with the peripheries of the rings.

2. A rotatable spindle having an attached whirl and a circular bobbin rest above the whirl, combined with a bobbin having a series of rings on its head, and a resilient, expansible annular wall rising from the bobbin rest, to receive the bobbin head and frictionally and tangentially engage the rings thereon, to effect a driving connection between the bobbin and spindle, the end of the bobbin head engaging the bobbin rest.

3. The combination, with a rotatable spindle, of a deep, longitudinally slotted cup rotatable therewith and having a thin, straight and resilient wall, to frictionally and tangentially engage the rings on a bobbin head when inserted in the cup and thereby effect a driving connection between the bobbin and spindle.

899,180. LOG-LOADING MACHINE. JOHN R. MCGIFFERT, Duluth, Minn., assignor to Clyde Iron Works, Duluth, Minn., a Corporation of Minnesota. Filed Dec. 6, 1905. Serial No. 290,532.



1. In a loading device, the combination of a frame formed with a longitudinal opening to permit the passage of trucks therethrough, hoisting mechanism fixedly mounted in said frame, and depressible members mounted in said frame and adapted to be positively actuated to raise the latter upon a truck positioned therebeneath, such members being operatively connected with said hoisting mechanism.

2. In a log-loading machine, the combination of a car movable upon a track, a deck for carrying hoisting mechanism, supporting means rigidly attached to said deck and adapted to rest upon such track and permit cars to pass beneath said deck, and means attached to said deck and adapted to raise the same upon said car, such means comprising a depressible member, and means adapted to depress the same.

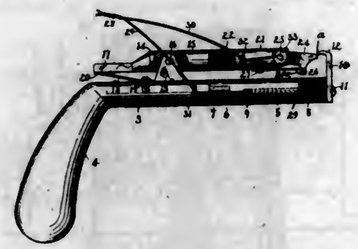
3. In a log-loading machine, the combination of a car movable upon a track, a frame adapted to straddle such track and permit said car to pass therealong, hoisting mechanism fixedly mounted in said frame, and means adapted to raise said frame upon said car, such means comprising depressible members adapted to be actuated by said hoisting mechanism.

4. In a log-loading machine, the combination of a deck for carrying hoisting mechanism, supporting means rigidly attached to said deck, said means being adapted to straddle a track and permit cars to pass beneath said deck, and means, borne by said deck, adapted to raise the same upon a car positioned beneath it.

5. In a log-loading machine, the combination of a truck movable upon a track, a frame for carrying hoisting mechanism, such frame being adapted to straddle such track and permit said truck to pass beneath it, and means adapted to raise said frame upon said truck, such means comprising a plurality of depressible members mounted on said frame, and adapted in one position to recede within said frame and in another position to contact with such truck, and means adapted to actuate said members.

[Claims 6 to 8 not printed in the Gazette.]

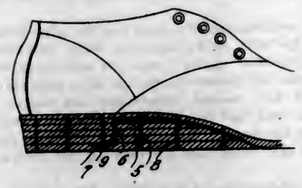
899,181. ELECTRIC GAS-LIGHTER. JAMES D. MCINTYRE, Newman, Ill. Filed Mar. 4, 1907. Serial No. 360,401.



1. An electric gas lighter, including a main lever provided with a handle, an auxiliary lever yieldingly pivoted to the main lever, means for manually operating said auxiliary lever, extensions formed of insulating material attached to said levers, a contact arm secured to the main lever extension, a contact piece yieldingly pivoted to the auxiliary leyer extension, said contact piece being adapted to engage the said contact arm in passing the same when the said auxiliary lever is operated, and electric conductors connected with said contact piece and said contact arm.

2. In an electric igniter, the combination of two contact members pivoted together intermediate of their ends, one of said members carrying a movable spring contact which contact projects in substantial alinement therewith and moves in a plane coincident with the plane of movement of said carrying member, the other of said contact members having a flattened end adapted to substantially guard the movable contact from outside influence and constituting a stationary contact, operating handles secured to the ends of the said contact members, circuit wires secured to the said contact members, and spring means normally tending to retain the movable contact within the stationary contact.

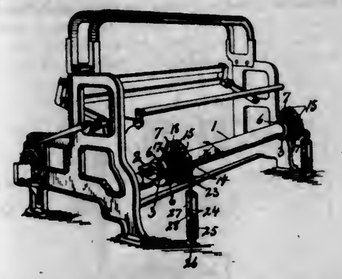
899,182. ARCH-SUPPORTER FOR SHOES. JOHN P. NAUGHTON, Lawrence, Mass. Filed Nov. 16, 1907. Serial No. 402,516.



1. A heel for boots or shoes provided with a forwardly extending arm to bear under the shank to support the arch of the foot, and a spring to reinforce and render said arm elastic, said spring comprising a forwardly extending downwardly curved arm embedded on the said arch supporting arm near the upper side thereof, a vertical downwardly extending offset portion at the rear end of said spring arm embedded in the heel and a rearwardly extending arm at the lower end of said offset portion and also embedded in the heel.

2. A heel for boots or shoes made up of layers of material and formed with a forwardly extending arch supporting arm and further provided with a reinforce spring having a forwardly extending downwardly curved longitudinal spring arm in said arch supporting arm and lying between certain of the layers of the arch supporting arm, a vertical downwardly extending offset portion disposed in the heel and passing through certain of the layers of material and a rearwardly extending arm at the lower end of said offset portion disposed between two of the layers of material.

899,183. LET-OFF MECHANISM FOR LOOMS. JOHN NAZARIAN, Syracuse, N. Y. Filed Sept. 18, 1907. Serial No. 393,548.



1. In a loom, a let-off reel having an annular bearing face, a frame movable circumferentially around and upon said bearing face, a radially movable plunger spring-pressed against the bearing face of the reel, the spring and means for adjusting the tension of the spring.

2. In a loom, a let-off reel having a circular friction face in combination with a frame mounted on the reel and movable circumferentially, a friction plunger mounted in the frame, a spring for pressing said plunger against the friction face of the reel whereby the frame tends to rotate with the reel, and means attached to the frame for indicating the uplifting power tending to rotate the frame with the reel.

3. In a loom, a let-off reel having a circular friction face, a frame mounted on the reel, a radially movable plunger guided in the frame and bearing on said friction face, a spring for forcing said plunger into engagement with said friction face, means for tensioning said spring, and additional means for indicating the degree of pressure exerted by the plunger upon the friction face of the reel.

4. In a loom, a let-off reel having a circular friction face, a frame movable circumferentially relatively to said friction face, a series of plungers mounted in the frame and bearing upon said friction face, separate springs for forcing said plungers into engagement with the friction face, separate means for adjusting the tension of said springs, and means for limiting the movement of said frame.

5. In a loom, a let-off reel having an annular bearing, a plunger spring pressed against the bearing, a supporting frame for the plunger movable circumferentially of and upon the bearing and tending to rotate with the reel by reason of the friction of the plungers, and yielding means for resisting such rotation.

[Claims 6 to 10 not printed in the Gazette.]

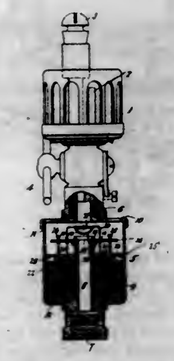
899,184. AUTOMATIC GAS CUT-OFF. HENRY NIEMANN, New York, N. Y. Filed Mar. 26, 1908. Serial No. 423,332.

1. In an automatic gas cut-off appliance adapted for use with a burner, a receptacle containing a congealing contractile substance normally maintained in molten condition by the heat from the burner, said substance melting at a temperature between 30° or 40° C. and 200° C., and a normally open valve closed by the contraction of such substance.

2. In combination with a burner having a constantly-ignited pilot flame, an automatic gas cut-off appliance having a congealing contractile substance, and means operated by the contraction of such substance for cutting off the gas from said burner.

3. In an automatic gas cut-off appliance, a receptacle containing a congealing contractile substance melting at a temperature between 30° or 40° C. and 200° C., a float supported thereby, and a valve connected to said float and operating to cut off the flow of gas when said substance contracts.

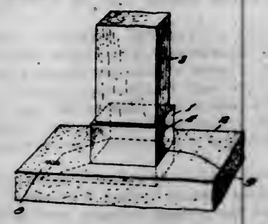
4. In combination with a valve, a receptacle containing a congealing contractile substance melting at a temperature between 30° or 40° C., and 200° C., a float supported on said substance, and a connection from said float to said valve.



5. In combination with a valve, stops for limiting the opening movement of the valve, a receptacle containing a congealing contractile substance melting at a temperature between 30° or 40° C. and 200° C., means displaced by the contraction thereof, and a connection between said means and said valve.

[Claims 6 to 10 not printed in the Gazette.]

899,185. SOCKET FOR USE IN CONCRETE WORK. ELMER A. PURDY, Amboy, Ill. Filed Jan. 22, 1908. Serial No. 412,220.



1. A socket for connecting a stud to a base of plastic material, the said socket comprising a tubular casing one end of which is designed to receive the stud while the opposite end is designed to be embedded in the plastic base and is provided with means for obtaining a firm bond therewith.

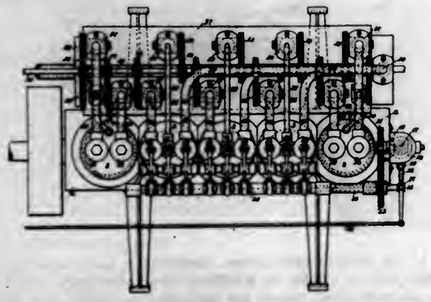
2. A socket for connecting a stud to a base of plastic material, the said socket comprising a tubular casing one end of which is designed to be embedded in the plastic base and is provided with a laterally projecting hollow shoe for obtaining a firm bond therewith.

3. A socket for connecting a stud to a base of plastic material, the said socket comprising a tubular casing one end of which is designed to receive the stud while the opposite end is designed to be embedded in the base of plastic material and is provided with a laterally projecting hollow shoe for obtaining a firm bond therewith, the hollow shoe being formed with spaced sides and an inclined top.

4. A socket of the character described comprising a tubular casing adapted to have one end thereof embedded in the base of plastic material, and a tie member connected to the said end of the tubular casing.

5. A socket of the character described comprising a tubular casing provided at one end with a laterally extending shoe and adapted to have the said end and shoe embedded in the base of plastic material, and a tie member connected to the shoe.

899,186. INTERNAL-COMBUSTION ENGINE. WILLIAM RABSILBER, New York, N. Y. Filed June 24, 1907. Serial No. 380,380.



1. The combination of a reservoir for compressed air; a reservoir for fuel; an internal combustion engine connected with both said reservoirs; an air-compressor connected with said reservoir for compressed air; means controlling the supply of compressed air and fuel from said reservoirs to said engine; and means for heating the entire contents of one of said reservoirs before admission to said engine, said reservoirs being separate and free from communication with each other.

2. The combination of a reservoir for compressed air; a reservoir for fuel; an internal combustion engine connected with both said reservoirs; an air-compressor connected with said reservoir for compressed air; means controlling the supply of compressed air and fuel from said reservoirs to said engine; and means for heating the entire contents of both of said reservoirs before admission to said engine, said reservoirs being separate and free from communication with each other.

3. The combination of a reservoir for compressed air; a reservoir for fuel, said reservoirs being separate; an internal combustion engine connected with both said reservoirs; an air-compressor connected with said reservoir for compressed air; means controlling the supply of compressed air and fuel from said reservoirs to said engine; and means for leading the exhaust gases from said engine to one of said reservoirs for heating the contents of the same.

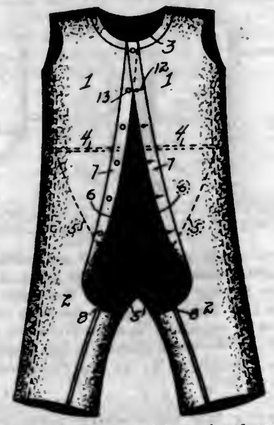
4. The combination of a reservoir for compressed air; a reservoir for fuel, said reservoirs being separate; an internal combustion engine connected with both said reservoirs; an air-compressor connected with said reservoir for compressed air; means controlling the supply of compressed air and fuel from said reservoirs to said engine; and means for leading the exhaust gases from said engine to both of said reservoirs for heating the contents of the same.

5. The combination of a reservoir for compressed air; a reservoir for fuel, said reservoirs being separate; an internal combustion engine connected with both said reservoirs; means controlling the supply of compressed air and fuel from said reservoirs to said engine; and means for heating the contents of one of said reservoirs.

[Claims 6 to 20 not printed in the Gazette.]

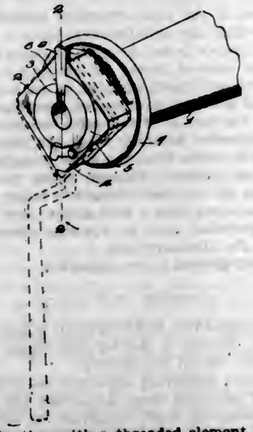
899,187. UNION SUIT. JAMES E. RICHARDS, Dayton, Ohio, assignor to Dayton Clothing Manufacturing Company. Filed June 1, 1908. Serial No. 435,950.

As a new article of manufacture, a union suit comprising pants and body portions constructed of woven fabric, and two crotch flaps united at their upper edges to the back portion of the garment by a transverse seam and to the body and leg portions of the garment by longitudinal seams, said flap portions overlapping each other and forming a pocket in the crotch of the garment, two straight front seam strips united to the front of the body and pants portions of the garment along the straight and curved edges of said body and pants portions, the portions of said straight seam strips which are united to the curved edges of the garment being extended to join the lower ends of the crotch flaps and adapted to coöperate with the crotch flaps in forming the crotch pocket, said



crotch pocket being maintained in a closed position owing to the straight seam strips being united at their lower ends to the curved edges of the pants portions of the garment, substantially as specified.

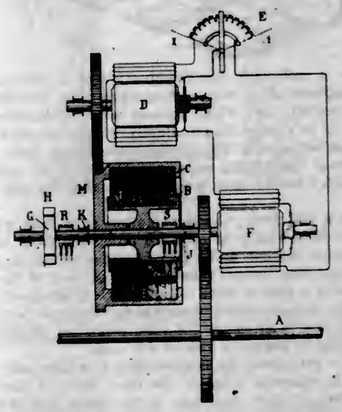
899,188. AXLE-NUT LOCK. ROBERT G. ROBERTS, North Yamhill, Oreg. Filed Mar. 31, 1908. Serial No. 424,410.



The combination with a threaded element formed in its end with a radially extending recess, of a nut adapted to be screwed on such element and formed in its face with a circumferential recess and with a radially extending groove that communicates with one end of the same, and a segmental spring keeper rigidly secured at one end of the recess in the nut and formed at its other or free end with an angularly disposed head that projects beyond the inner and outer walls of the nut and is arranged to ride upon the end of the threaded element and snap into the recess therein and into the groove, when the same are brought into alinement.

899,189. ELECTROMOTOR CONTROLLING AND OPERATING SYSTEM FOR ELECTRIC RAILWAYS AND POWER PLANTS. JOHANN SAHULKA, Vienna, Austria-Hungary. Filed June 1, 1907. Serial No. 376,859.

1. An electro motor controlling and operating system for electric railways and power plants, comprising in combination a two part motor actuated from a main electric current supply source, a driven shaft adapted to be actuated by one part of said motor, a dynamo driven by the other part of said motor, a second motor connected with the driven shaft, and means whereby the current generated by the dynamo is adapted to actuate said motor to actuate the driven shaft independently of the first named motor.



2. An electro motor controlling and operating system for electric railways and power plants comprising in combination a two part principal motor actuated from a main electric current supply source, a driven shaft adapted to be actuated by one part of said motor, a dynamo driven by the other part of said motor, a second motor, connections between the second motor and the dynamo whereby the current generated by the latter can actuate the second motor, and connections between the second motor and the driven shaft whereby the former is adapted to actuate the driven shaft independently of the principal motor.

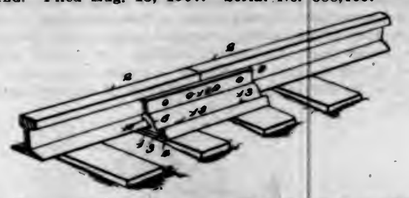
3. An electro motor controlling and operating system for electric railways and power plants comprising in combination a two part principal motor actuated from a main electric current supply source, a separate shaft for each part of said motor, a main driven shaft adapted to be actuated by one part of said motor, a dynamo driven by the other part of said motor, a second motor connected with the driven shaft, and means whereby the current generated by the dynamo is adapted to actuate said motor to actuate the driven shaft independently of the first named motor.

4. An electro-motor controlling and operating system for electric railways and power plants comprising in combination a two part principal motor actuated from a main electric current supply source, a separate shaft for each part of said motor, a main driven shaft adapted to be actuated by one part of said motor, a dynamo driven by the second part of the principal motor a second motor on the same shaft as that part of the principal motor actuated by the dynamo, and means whereby the current of the dynamo is adapted to actuate the said motor to actuate the driven shaft independently of the first named motor.

5. An electro motor controlling and operating system for electric railways and power plants comprising in combination a two part principal motor actuated from a main electric current supply source, a separate shaft for each part of said motor, a main driven shaft adapted to be actuated by one part of said motor, a dynamo driven by the second part of the principal motor gearing between said dynamo and said second part of the principal motor, a second motor connection between the latter and the dynamo for actuating said second motor, and means whereby the latter is adapted also to actuate the main driven shaft.

[Claims 6 to 10 not printed in the Gazette.]

899,190. RAIL-JOINT. HARRY C. SANDUSKY, Newcastle, Ind. Filed Aug. 13, 1907. Serial No. 388,409.

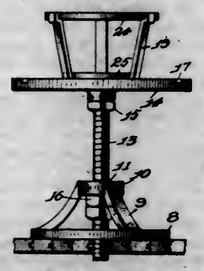


1. In a rail joint, the combination of a base provided upon opposite sides with sockets having the mouths thereof contracted, and wings formed with enlargements designed to be slipped longitudinally within the sockets but held against lateral displacement therefrom, each of the said wings comprising an arm designed to fit under the rails, and a second arm designed to engage the side of the same.

2. In a rail joint, the combination of a base which is inclined downwardly in opposite directions from the central portion thereof, and a pair of wings loosely connected to opposite longitudinal sides of the base, each of the wings comprising a pair of arms one of which is designed to rest upon the corresponding downwardly inclined portion of the base and to fit under the rails while the opposite arm is designed to engage a side of the rails.

3. In a rail joint, the combination of a base, and wings hinged to opposite sides of the base, each of the wings comprising an arm designed to fit under the rails and formed with a depression tending to cause the weight of the rails to bear against the extremities of the said arm, and a second arm designed to engage the sides of the rails.

899,191. ROTARY SETTING-UP KEG FORM AND TABLE. FRANK C. SCHULTE, St. Louis, Mo. Filed Mar. 24, 1908. Serial No. 423,070.

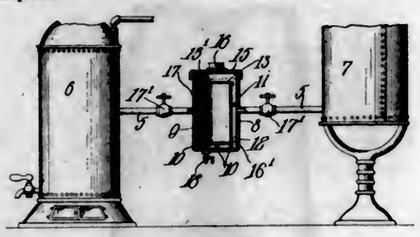


A device of the class described, comprising a base; a screw threaded stem adjustably mounted in said base; a table supported on said stem, said table provided with grooves and elongated slots; sliding supports mounted in said grooves and arranged to be supported in an adjusted position; a ring supported by said supports and a disk located on the table between the supports, substantially as specified.

899,192. BOILER ATTACHMENT. CORNELIUS J. SHEAHAN, Batavia, Ill. Filed Dec. 20, 1907. Serial No. 407,288.

1. A device of the class described comprising an outer receptacle having inlet and discharge ports, an inner perforated receptacle spaced from the outer receptacle and adapted to contain a cleaning compound, said inner receptacle being provided with a laterally extending flange disposed above the inlet and discharge ports and forming a partial barrier to the flow of liquid to the top of the inner receptacle.

2. A device of the class described comprising an outer receptacle having inlet and discharge ports, a cap forming a closure for the top of the outer receptacle, a perforated inner receptacle spaced from the outer receptacle and adapted to contain a cleaning compound, and a flange extending laterally from the inner receptacle and forming a partial barrier to the flow of liquid to the top of the inner receptacle.



3. A device of the class described comprising an outer receptacle having inlet and discharge ports, a cap forming a closure for the upper end of the outer receptacle, and a perforated inner receptacle provided with a continuous laterally extending flange adapted to engage the interior walls of the outer receptacle for spacing said receptacles, said flange having an aperture formed therein above the inlet port.

4. A device of the class described comprising an outer receptacle having inlet and discharge ports, a removable cap forming a closure for the outer receptacle, an inner receptacle spaced from the outer receptacle and provided with an intermediate laterally extending flange, said inner receptacle being adapted to contain a cleaning compound, there being an aperture formed in the flange above the inlet port, and a strip of foraminous material secured to the inner receptacle and forming a closure for the upper end thereof.

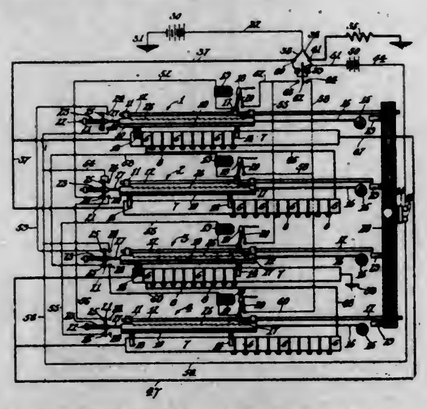
5. A device of the class described including an outer receptacle having inlet and discharge ports, a cap threaded on the outer receptacle and forming a closure for the same, a drain valve secured to the bottom of the outer receptacle, an inner receptacle adapted to contain a cleaning compound and provided with spaced depending feet adapted to engage the bottom of the outer receptacle, an annular flange extending laterally from the inner receptacle for spacing the latter from the outer receptacle and provided with an aperture disposed above the inlet port, the upper end of the inner receptacle being spaced from the cap and covered with a wire screen, said inner receptacle being provided with an aperture disposed beneath the flange at the discharge port.

[Claim 6 not printed in the Gazette.]

899,193. AUTOMATIC ELECTRICAL MEASURING APPARATUS. DANIEL J. SHINE, Las Vegas, Nev. Filed Mar. 4, 1907. Serial No. 360,584.

1. A resistance measuring apparatus comprising a set of resistances of relatively large magnitude and a set of resistances of relatively small magnitude, an electric circuit including said sets of resistances in series, said circuit having a connection for the resistance to be measured, a current responsive means responsive to the relative resistance condition of said circuit and of the resistance to be measured, operating circuits controlled by the current responsive means, and means operated by said operating circuits to control each set of resistances and to vary the resistance first by relatively large amounts, until the current responsive device is operated, and to then vary the resistance inversely by smaller amounts.

2. In a resistance measuring apparatus, the combination of a plurality of rheostatic devices each provided with a set of resistances the resistances being of different magnitude in the different devices, connections including said rheostatic devices in series, electromagnetically operated movable contact means for each of the rheostatic devices, circuit connections for connecting the rheostatic devices in series with the resistance to be measured, an electromagnetically operated circuit closer responsive to the total amount of the variable resistance included in circuit, and circuits controlled by said circuit closer for operating the movable contact means to progressively increase by definite amounts the amount of resistance included when the said responsive means indicates deficiency of resistance and to progressively decrease, by smaller amounts, the amount of resistance included when the current responsive means indicates excess resistance relatively to the amount required to balance the resistance to be measured.



3. In combination with a Wheatstone bridge and the galvanometer thereof, a set of resistances and movable contact means therefor adapted to progressively insert resistances in an arm of the bridge, a set of resistances and movable contact means therefor adapted to progressively cut out resistances from said arm of the bridge, such cut out resistances being fractional parts of said inserted resistances, electromagnetically controlled operating means for said movable contact means, and controlling circuits for said operating means controlled by the galvanometer of the bridge.

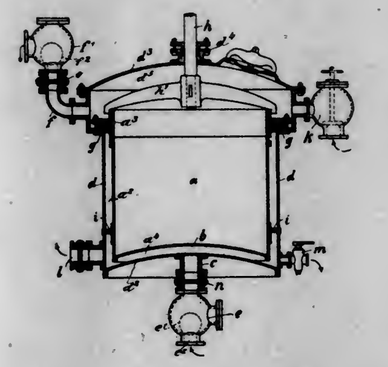
4. The combination with a series of contacts, a movable conductor adapted to make contact successively with said fixed contact, a carrier for said movable conductor, electromagnetic means for controlling the movement of the carrier, a series of resistances connected to said contacts to be successively cut in or out of circuit by the movement of the conductor, a galvanometer connected to the circuit of said resistances to respond to the resistance condition therein, means controlled by said galvanometer to operate said carrier step by step, said means comprising a circuit controlled by the galvanometer, a magnet in said circuit and an escapement controlled by the magnet, rack means on the carrier controlled by said escapement, and means for drawing the carrier in one direction.

5. A variable resistance for the purpose set forth comprising a plurality of rheostatic devices, each having a movable contact means working thereover to progressively vary the resistance in the said devices, movable carriers for said contact means, operating circuits, and means controlled thereby to operate said movable contact means, and circuit closer means controlled by the said carriers to close a connection for the operating circuit for one of the rheostatic devices by operation of the carrier of the preceding rheostatic devices.

[Claims 6 and 7 not printed in the Gazette.]

899,194. FILTER. FRITZ TIEMANN, Berlin, Germany. Filed Feb. 24, 1908. Serial No. 417,316.

A device of the character described, comprising a cylinder, an inclosed hollow perforated plunger, filtering material within the plunger, means for reciprocating the plunger, an upper water chamber and a lower water chamber between cylinder and plunger, a partition intermediate said chambers, a water inlet and a valve-controlled water outlet communicating with the upper chamber, and a



water outlet and a valve-controlled water inlet communicating with the lower chamber, substantially as specified.

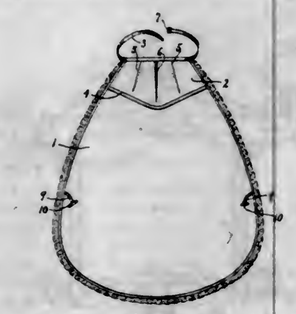
899,195. STORE-CABINET. THOMAS B. WESTON, Wenona, Ill. Filed Jan. 11, 1908. Serial No. 410,392.

A cabinet comprising parallel panels, links pivotally connected to the panels and arranged in pairs, a shelf pivotally connected to and supported by the links, one pair of links being connected to each side of the shelf, stop blocks coöperating with the links for supporting the shelf in position beyond the cabinet, a brace strip connecting the panels and constituting a stop to hold the shelf within the cabinet, and a retaining flange upon the shelf, said shelf having a beveled rear edge and a hand receiving portion.

899,196. SANITARY PROTECTOR. ALICE M. AIKEN, Cleveland, Ohio. Filed Feb. 11, 1908. Serial No. 415,447.

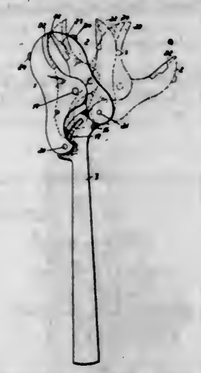
A protector, comprising a permeable yoke portion provided with a median seam aud having its upper portion contracted and folded into downwardly and laterally-extending tapering plaits or folds on each side of said median line, and an impermeable portion comprising a

single ply of material depending from said yoke portion, said yoke portion being provided about its upper edges



with a waistband and said shield portion being provided with attaching-tabs near the depending end thereof.

899,197. WRENCH. HARRY W. ALLISON, East Liverpool, Ohio, assignor to W. T. Roberts, East Liverpool, Ohio. Filed Dec. 20, 1906. Serial No. 348,803.

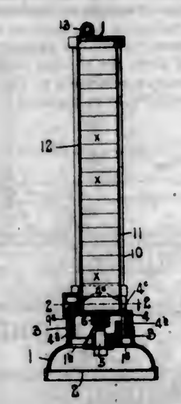


A wrench comprising a handle provided with an enlarged end and having a segmental slot formed therein, jaws pivotally connected together at their centers and freely movable, one of the jaws pivoted to the enlarged end of the handle and a pin passing through the other jaw and segmental slot whereby the jaw obtains a gripping action throughout the slot by the pin bearing against the wall of the slot.

899,198. COIN-CONTROLLED VENDING-MACHINE. JAMES E. ALLISON, St. Louis, Mo., assignor to The Laclede Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 29, 1905. Serial No. 293,789.

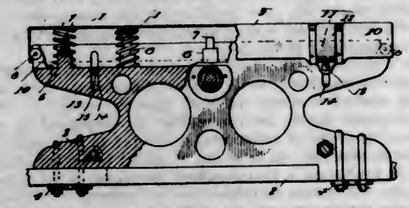
1. In a coin-controlled vending machine, the combination of a turn-table, provided with a depending flange constituting a pawl track, teeth on the inner face of said track, a stationarily-mounted restraining pawl riding upon said track and coöperating with said teeth to prevent movement of said turn-table in the absence of a coin, and means for supporting a coin in position in front of said teeth to prevent engagement of the pawl therewith; substantially as described.

2. In a coin-controlled vending machine, the combination of a turn-table having a delivery recess, a track on said turn-table, a pawl coöperating with said track, teeth in said track with which said pawl is adapted to engage to prevent complete movement of said turn-table, said table being provided with a coin-receiving slot, and means for supporting a coin in front of said teeth to prevent engagement of the pawl with the teeth; substantially as described.



3. In a coin-controlled vending machine, the combination with a turn-table having a delivery recess, a pawl track on said turn table, teeth in said pawl track, a pawl adapted to coöperate with said track and said teeth, said table being provided with a coin-receiving recess for delivering a coin opposite said teeth, a support for holding the coin in position opposite the teeth, and means whereby when the turn-table is rotated the coin will be dislodged from its position and the turn-table completes its movement; substantially as described.

899,199. RUNNING-GEAR. FREDERICK W. BLECKLEY, Hazleton, Pa. Filed May 29, 1907. Serial No. 376,340.



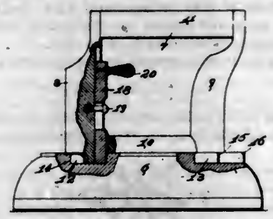
1. In combination, a bolster having the upper portion thereof channeled, guide rollers journaled within the channeled portion of the bolster at opposite ends thereof, a cap fitting loosely over the channeled portion of the bolster, the ends of the cap engaging the before mentioned guide rollers, and springs interposed between the bolster and cap and inclosed within the cap.

2. In combination, a bolster, a cap fitting loosely over the bolster and having openings in the sides thereof, yielding means interposed between the bolster and cap, and guide rollers mounted upon the exterior of the cap and operating through the openings in the sides thereof to engage the bolster.

3. In combination, a bolster, a cap fitting loosely over the bolster and having openings in the sides thereof, housings applied to the exterior of the cap, guide rollers journaled within the housings and operating through the openings in the sides of the cap to engage the bolster, and a yielding means interposed between the bolster and cap.

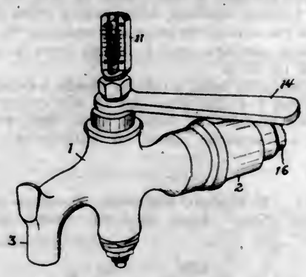
4. In combination, a bolster having vertical slots extended through opposite sides and having a depression in its upper side, and projections extended upward from the bottom of said depression, a cap embracing the ends and sides of the upper portion of the bolster, bumpers fitted in the upper ends of said projections, springs interposed between the cap and bolster and fitted to said projections, bolts passed through the vertical slots of the bolster and connecting opposite sides of the cap, sleeves mounted upon the said bolts, rollers mounted upon the terminal portions of the bolsters and adapted to engage with the ends of the cap, and springs fast at one end to the bolster and bearing against said rollers.

899,200. FLAT-IRON. FRANK A. BONROE, St. Louis, Mo. Filed Oct. 8, 1907. Serial No. 396,477.



In a flat iron, the combination of a base or body portion 6 having a plurality of openings 14 and 15, the rear portion of said openings being square in section, the front portions of said openings having their tops contracted; a handle 7 comprising vertical members 8 and 9, base section 10 and handle section 11; wedge-shaped portions 12 and 13 formed integral with said vertical members 8 and 9 respectively and adapted to engage the front portion of the openings 14 and 15; a latch 18 mounted upon the inner face of the vertical member 8 by means of the pin 19, and adapted to register with the rear portion of the opening 14 when the wedge-shaped member 12 is in normal position within the same, to lock the handle 7 securely on the body portion 6; and a finger-catch 20 secured to and projecting at right angles from said latch, whereby the same is raised to permit the removal of the handle from the base, substantially as described and for the purpose set forth.

899,201. BEER-FAUCET. GABY BRAYBROOK, Fort Wayne, Ind. Filed Mar. 23, 1906. Serial No. 307,568.



1. In a beer-faucet the combination of a valve casing; a valve rotatably mounted in the casing; a thermometer casing so mounted in the valve as to have its inner end at all times in contact with the liquid in the valve casing for the purpose described; and a thermometer mounted in the thermometer casing with its upper end exposed to view.

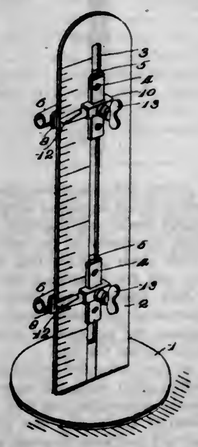
2. The combination in a beer faucet of a faucet casing having a valve chamber therein; a valve operatively mounted therein; a tubular casing mounted in the valve with its lower end in contact with the liquid contents of the faucet; and a thermometer mounted in the tubular casing with its outer end exposed to view.

3. A beer faucet having a controlling valve in which is fixed a thermometer with its inner end in such relation to the liquid in the faucet as to indicate the temperature thereof, for the purpose specified.

4. In a beer faucet, the combination with the casing thereof having a valve chamber therein, of a valve rotatably mounted in said casing and provided with a passage for the beer, said valve being also provided with a longitudinal bore the upper portion of which is screw-threaded, a casing arranged in said bore and engaged with the screw-threaded portion thereof, a thermometer casing carried by the first-mentioned casing, and a thermometer arranged in the thermometer casing and projecting into the first-mentioned casing to be held thereby in contact with the liquid to be dispensed.

5. In a beer faucet, the combination with the casing thereof having a valve chamber therein, of a valve rotatably mounted in said casing and provided with a passage for the beer, said valve being also provided with a longitudinal bore the upper portion of which is screw-threaded, a casing arranged in said bore and provided at its upper end with a head engaged with the screw-threaded portion of said bore, a thermometer casing carried by the first-mentioned casing, and a thermometer arranged in the thermometer casing and projecting into the first-mentioned casing to be held thereby in contact with the liquid to be dispensed.

899,202. STAND, GAGE, AND HOLDER FOR CRAYONS AND BLOWPIPES. MYRA J. BYRD and ELIZABETH M. ANDERSON, Chattanooga, Tenn. Filed Nov. 11, 1907. Serial No. 401,721.



1. In a device of the character described, the combination of a slotted standard, a slide mounted within the slot, a spring plate carried by the slide and frictionally engaging the standard to hold the slide in position, and a holder carried by the said spring plate.

2. In a device of the character described, the combination of a standard provided with a scale, a slide mounted upon the standard, a holder carried by the slide, an independent clamping block applied to the slide and coöperating therewith to lock the same against movement, and a pointer carried by the clamping block for coöperation with the scale.

3. In a device of the character described, the combination of a standard provided with a scale, a slide mounted upon the standard, a spring plate carried by the slide and frictionally engaging the standard, a holder carried by the spring plate, a clamping block applied to the slide and coöperating therewith to lock the slide in position, and a pointer upon the clamping block for coöperation with the scale.

4. In a device of the character described, the combination of a slotted standard, a slide mounted within the slot, a spring plate carried by the slide and frictionally engaging one side of the standard, a holder carried by the spring plate, and a clamping block applied to the slide and engaging the opposite side of the standard to hold the slide in position.

5. In a device of the character set forth, the combination of a stand having an upright provided with a vertical slot, a slide adjustable in said vertical slot and having opposite edges grooved to receive edge portions of the upright bordering upon the slot, a clamp consisting of a block having a notch to receive a projecting side portion of the slide, and means for setting said clamp to effect a binding of the upright to hold the slide in the adjusted position.

899,203. BIT EXTENSION. FREDERICK E. CARLSON, New Britain, Conn., assignor to The Stanley Rule & Level Company, New Britain, Conn., a Corporation of Connecticut. Filed Dec. 7, 1907. Serial No. 405,482.



1. In a device of the character described, the combination of a stem having a bit engaging socket in one end, a pair of jaws movably connected together at one end and slidable on the stem exteriorly at the socket end portion, the jaws having their other end portions inturned and arranged to move to and fro to engage the shank of a bit inserted in the stem socket, a member slidable on the stem to engage the jaws and hold them closed upon the bit shank, and means for preventing endwise movement of the jaws when closed on the bit.

2. In a device of the character described, the combination of a stem having a bit engaging socket in one end, a pair of jaws movably connected together at one end and slidable on the stem at the socket end portion, the jaws having their other end portions inturned and arranged to move to and fro to engage the shank of a bit inserted in the stem socket, a member slidable on the stem to engage the jaws and hold them closed upon the bit shank, locking means for preventing endwise movement of the jaws when closed on the bit in different longitudinal positions.

3. In a device of the character described, the combination of a stem having a bit engaging socket in one end, a pair of jaws movably connected together at one end and slidable on the stem at the socket end portion, the jaws having their other end portions inturned and arranged to move to and fro to engage the shank of a bit inserted in the stem socket, a member slidable on the stem to engage the jaws and hold them closed upon the bit shank, a resilient member for retaining said latter member engaging the jaws, and means for preventing endwise movement of the jaws when engaged by said retaining member.

4. In a device of the character described, the combination of a stem having a bit engaging socket in one end portion, a pair of jaws movably connected together at one end and slidable on the stem, the other ends of the jaws being inturned and movable to and fro to engage the shank of a bit inserted in the stem socket, the jaws having an external tapering portion converging toward the hinged end, a sleeve slidable on the jaw member to engage the conical portion and retain the jaws in engagement with the bit shank and means for preventing endwise movement of the jaws when closed on the bit.

5. In a device of the character described, the combination of a stem having a bit-engaging socket in one end portion, a pair of jaws movably connected together at one end and slidable on the stem, the other ends of the jaws being inturned and movable to and fro to engage the shank of a bit inserted in the stem socket, the jaws having an external tapering portion converging toward the hinged end, a sleeve slidable on the jaws to engage the conical portion and retain the jaws in engagement with the bit shank, a coil spring on the stem engaging said sleeve to force it into engagement with the conical portion of the jaws and means for preventing endwise movement of the jaws when closed on the bit.

[Claims 6 to 10 not printed in the Gazette.]

899,204. SPRINKLER-HEAD. JAMES A. CASE, Brooklyn, N. Y. Filed Dec. 24, 1907. Serial No. 407,925.



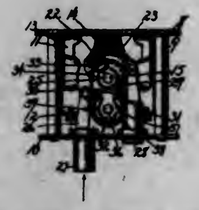
1. In a sprinkler head, a stopper, and means for holding said stopper in place including a strut consisting of L-shape sections arranged end to end, braces engaging the bases of the strut sections, a tie piece between the braces and strut section, and fusible material uniting the braces to the tie piece.

2. In a sprinkler head, a strut consisting of L-shape sections arranged end to end with their bases at the extreme end of the strut and provided with pointed bearings, a tie piece extending across the meeting ends of the L-shape sections and provided with a rib on its outer face, outwardly inclined braces arranged one above the other and having their meeting ends engaged with said rib and their opposite ends engaging the bases of the L-shape sections, and a fusible bond uniting the tie piece to the L-shape sections and to said brace plates.

3. In a sprinkler head, a strut consisting of L-shape sections arranged end to end with their bases at the extreme end of the strut and provided with pointed bearings, a tie piece extending across the meeting ends of said L-shape sections, a fusible bond between the tie piece and said L-shape sections, brace plates lying wholly at one side of the axis of the strut and engaging the bases of said L-shape sections, and a fusible bond between the braces and tie piece.

4. In a sprinkler head, a tubular nipple, a German silver disk covering the discharge end of the nipple, a brass disk resting against the German silver disk, and means including a tensioning screw for holding the disks in place.

899,205. ELECTRIC SWITCH. CHARLES A. CLARK, Hartford, Conn. Filed May 24, 1907. Serial No. 375,445.



1. A switch bar with its contacts and connections, a trip operatively connected therewith, means for moving the trip, a detent to engage the trip but arranged for disengagement therefrom, means for positively holding the detent against movement during initial movement of the actuator but permitting quick release and movement of the detent at final movement of the actuator, and an actuator for positively moving the detent from the path of movement of the trip.

2. A switch bar with its contacts and connections, a trip operatively connected with the bar, means for operating the trip, a pivoted operating lever having a holder with a holding surface formed on the arc of a circle struck from its pivot, a swinging detent plate operatively connected with the trip and having a recess formed to fit said holding surface, and means for operating said detent plate.

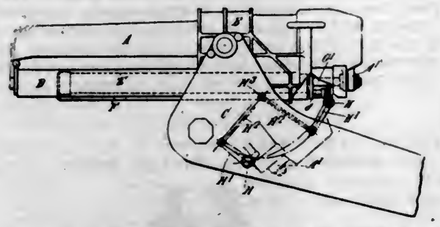
3. A switch bar with its contacts and connections, a trip plate operatively connected with the bar and bearing a trip, a spring for actuating the trip plate, means for tensioning the spring, detents located in the path of movement of said trip but arranged for disengagement therefrom, means for positively holding the detents against movement during initial movement of an actuator but permitting quick release and movement of the detent during final movement of said actuator, and the actuator for positively moving said detents out of the path of movement of the trip.

4. A base with a support extending therefrom, a switch bar, and a trip plate operatively connected therewith and mounted on one side of the support, contacts and connections for said switch bar, an operating lever and a detent plate pivoted to the support on the side opposite the trip plate said plate having detents projecting through the support to engage a trip on the trip plate, means for holding the detent plate against movement in an initial operation of the parts, and means for moving the detent plate to disengage the detents from said trip in a subsequent operation of the parts.

5. A base having a support extending therefrom, a switch bar and a switch plate operatively connected therewith and both mounted on one side of the support, connections and contacts for said switch bar, a spring arm extending from the trip plate through the support, a lever located on the opposite side of the support from the trip and having a spring engaging arm, means for operating the lever, a detent mounted on the same side of the support with said lever and having detents extending through the support to engage a trip on the trip plate, means for holding the detent plate against movement in an initial position of the device, and means for moving the detent plate to disengage the detents from the trip in a subsequent operation of the parts.

[Claims 6 to 8 not printed in the Gazette.]

899,206. BRAKE MECHANISM FOR RECOILING GUNS. ARTHUR T. DAWSON and GEORGE T. BUCKHAM, Westminster, London, England, assignors to Vickers Sons & Maxim Limited, London, England. Filed May 27, 1907. Serial No. 375,880.



1. Brake mechanism for recoiling guns, consisting in the combination of a brake cylinder having a single series of ports communicating with a common longitudinal channel provided with a passage leading to the brake cylinder, a non-return valve controlling the said passage, an adjustable valve situated within said longitudinal channel and having a single series of openings coöperating with the ports in the brake cylinder, and means for operating the said adjustable valve from the exterior.

2. Brake mechanism for recoiling guns, consisting in the combination of a brake cylinder having a single series of unequally spaced ports communicating with a common longitudinal channel provided with a passage leading to the front end of the brake cylinder, a non-return valve controlling the said passage, an angularly adjustable valve situated within said longitudinal channel and having a single series of lateral openings coöperating with the ports in the brake cylinder, and means for operating the said angularly adjustable valve from the exterior.

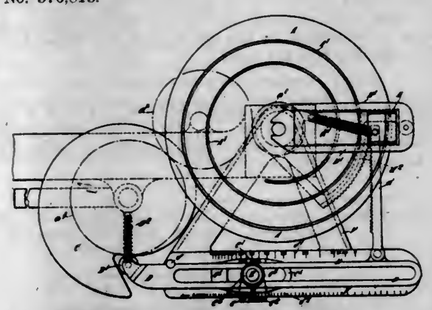
3. Brake mechanism for recoiling guns, consisting in the combination of a brake cylinder having a single series of unequally spaced ports communicating with a common longitudinal channel provided with a passage leading to the front end of the brake cylinder, a non-return valve controlling the said passage, an angularly adjustable valve situated within said longitudinal channel and having a single series of lateral openings coöperating with the ports in the brake cylinder, and means for operating the said angularly adjustable valve from the exterior.

4. Brake mechanism for recoiling guns, consisting in the combination of a brake cylinder having a series of ports communicating with a common longitudinal channel provided with a passage leading to the brake cylinder, a non-return valve controlling the said passage, an angularly adjustable valve situated within said longitudinal channel and having lateral openings of elongated and tapered shape coöperating with the ports in the brake cylinder, and means for operating the said angularly adjustable valve from the exterior.

5. Brake mechanism for recoiling guns, consisting in the combination of a brake cylinder having a series of unequally spaced ports communicating with a common longitudinal channel provided with a passage leading to the brake cylinder, a non-return valve controlling the said passage, an angularly adjustable valve situated within said longitudinal channel and having lateral openings of elongated and tapered shape coöperating with the ports in the brake cylinder, and means for operating the said angularly adjustable valve from the exterior.

[Claims 6 to 8 not printed in the Gazette.]

899,207. SIGHTING APPARATUS FOR GUNS. ARTHUR T. DAWSON and GEORGE T. BUCKHAM, Westminster, London, England, assignors to Vickers Sons & Maxim Limited, London, England. Filed June 1, 1907. Serial No. 376,813.



1. In gun sighting apparatus, the combination with the range dial and its pointer, of a cam operating in conjunction with the range dial, mechanism for transmitting angular motion to the pointer from the cam, and means for enabling said mechanism to be set to compensate for variations in shooting due to atmospheric influence and to changes in the muzzle velocity.

2. In gun sighting apparatus, the combination with the range dial and its pointer, of a cam operating in conjunction with the range dial, a lever for transmitting angular motion to the pointer from the cam, and means for varying the degree of movement transmitted by said lever from the cam to the pointer.

3. In a gun sighting apparatus, the combination with the range dial and its pointer, of a cam operating in conjunction with the range dial, a lever for transmitting angular motion to the pointer from the cam, and means for varying the amplitude of movement of said lever about its fulcrum.

4. In gun sighting apparatus, the combination with the range dial and its pointer, of a cam operating in conjunction with the range dial, a lever for transmitting angular motion to the pointer from the cam through suitable gearing, and means for enabling the fulcrum of the lever to be shifted toward or away from the said cam and set in relation to suitable scales.

899,208. DRILL-STEM CLAMP FOR ROTARY DRILLING MACHINES. HARRY R. DECKER, Houston, Tex. Filed Feb. 5, 1908. Serial No. 414,444.



1. In combination with a rotary drilling machine and a drill stem clamp mounted thereon having shafts secured thereto, sleeves mounted on said shafts and extending substantially the full length thereof, and clamping devices secured to said sleeves.

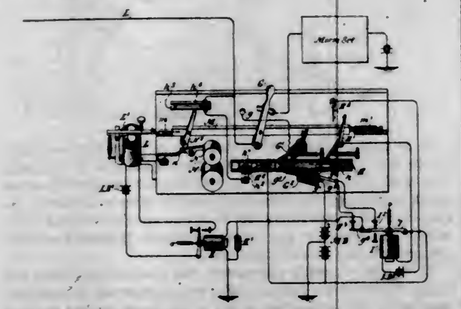
2. In combination with a rotary drilling machine and a drill stem clamp mounted thereon having shafts secured thereto, sleeves mounted on said shafts and extending substantially the full length thereof, and clamping rings secured to said sleeves.

3. In combination with a rotary drilling machine, and a drill stem clamp mounted thereon having shafts secured thereto, exteriorly threaded sleeves mounted on said shafts extending substantially the full length thereof, and threaded clamping devices mounted on said sleeves.

4. In combination with a rotary drilling machine, and a drill stem clamp mounted thereon having shafts secured thereto, exteriorly threaded sleeves mounted on said shafts extending substantially the full length thereof, and threaded rings mounted on said sleeves.

5. In combination with a rotary drilling machine, and a drill stem clamp mounted thereon having shafts secured thereto, exteriorly threaded sleeves mounted on said shafts extending substantially the full length thereof, each of said sleeves having a longitudinal key seat therein, threaded rings mounted on said sleeves and having key seats corresponding to the key seat in the sleeve, and a key engaging said key seats.

899,209. AUTOMATIC TELEGRAPHY. PATRICK B. DELANY, South Orange, N. J., assignor, by mesne assignments, to The Telepost Company of Maine. Filed Dec. 15, 1896. Serial No. 615,796.



1. In an automatic telegraph transmitter, the combination of signal transmitting devices adapted to send currents corresponding with perforations in the tape, line grounding devices, a circuit connection therefrom to earth through which the line is grounded correspondingly with other perforations in the tape immediately after each signaling impulse, an electro-magnet in said ground circuit connection, the electro-magnet being adjusted so as not to respond to the discharge current that normally passes to earth, but to be actuated by an augmentation in the strength of such current, a local circuit controlled by said electro-magnet, an electro-magnet included in said local circuit, and means for arresting the passage of the transmitting tape through the instrument when the last named magent is energized.

2. In an automatic telegraph transmitter, the combination of signal transmitting devices adapted to send currents corresponding with perforations in the tape, line grounding devices, a circuit connection therefrom to earth through which the line is grounded correspondingly with other perforations in the tape immediately after each signaling impulse, an electro-magnet in said ground circuit connection, the electro-magnet being adjusted so as not to respond to the discharge current that normally passes to earth, but to be actuated by an augmentation in the strength of such current, a local circuit controlled by said electro-magnet, an electro-magnet included in said local circuit, means for arresting the traverse of the transmitting tape through the instrument, disconnecting the transmitter from the line and completing the circuit of the line through Morse instruments when the last named magnet is energized.

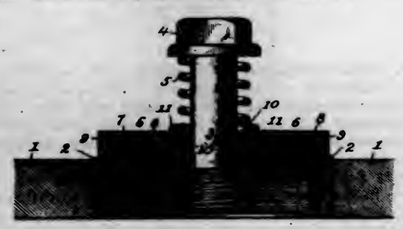
3. In an automatic telegraph system, a transmitter having grounding devices, a circuit connection to earth to ground the main line circuit at intervals, an electro-magnet in said ground connection adjusted so as not to respond to the normal current discharges to earth, but so as to respond to discharges to earth of increased strength, and electro-magnetic devices controlled by said magnet for automatically suspending the automatic transmission when a current discharge of increased strength actuates said electro-magnet.

4. In an automatic telegraph system, the combination of a main line, a perforated tape having three parallel rows of perforations, two brush or finger transmitting devices for transmitting signaling currents over the main line through two of said rows of perforations, brush or contact finger devices connecting the line to earth through the third row of perforations, an electro-magnet, its electrically divided armature lever, contacts against which the parts of the armature work, circuit connections whereby the circuit of one of the current transmitting fingers or brushes and the circuit of the grounding brush devices are completed through the electrically divided armature lever, a local circuit including said electro-magnet, and means for completing such local circuit when the perforated transmitting tape has completed its traverse through the transmitter, whereby said contact brush circuits are opened and short-circuiting prevented.

5. The combination of a chemical receiver, a tape automatic transmitter of currents of reverse polarity and a main line connecting them, electro-magnetic transmitter arresting devices and means located at the receiver whereby the receiving operator may at will actuate said electro-magnetic devices to arrest actuation of the transmitter.

[Claims 6 to 14 not printed in the Gazette.]

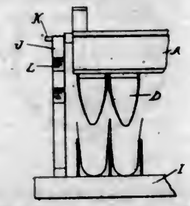
899,210. PUMP-VALVE. PATRICK J. DOYLE, Chicago, Ill. Filed Oct. 11, 1907. Serial No. 396,872.



1. An outlet valve head for steam pumps, comprising a body of Babbitt or like metal forming the entire seating face of the valve head, and a metal backing therefor formed with a peripheral flange and an inner annular flange forming the bearing for the valve head in its movement, said flanges having a less depth than the valve head, substantially as set forth.

2. An outlet valve head for steam pumps, comprising a body of Babbitt or like metal forming the entire seating face of the valve head, and a metal backing therefor formed with a peripheral flange, an inner annular flange forming the bearing for the valve head in its movements and an annular flange forming a socket recess for a closing spring, said peripheral and inner annular flanges having a less depth than the valve head, substantially as set forth.

899,211. DEVICE FOR DIVIDING POWDER AND FOR FILLING WRAPPERS WITH THE SAME. LOUIS K. EASTMAN, Detroit, Mich. Filed Mar. 26, 1907. Serial No. 364,721.



1. In a powder divider, the combination with a trough, and a series of spaced partitions for dividing the material within said trough, of an adjustable end gate for said trough comprising a block and a resilient facing for contacting with the sides of the trough, for the purpose described.

2. A powder divider, comprising a trough, a series of partitions for dividing said trough into separate compartments, and means for holding the wrappers for the divided powders in folded position with their edges spaced correspondingly to the spacing between said partitions.

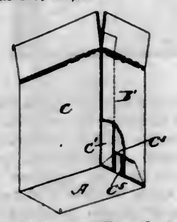
3. A powder divider, comprising a trough, a series of partitions for dividing said trough into separate compartments, and a powder-wrapper holder consisting of a member having a series of parallel partitions between which the folded wrapper may be placed, the spacing of said partitions corresponding with the spacing of the partitions in the trough.

4. A powder divider, comprising a trough, a series of partitions for dividing said trough into separate compartments, discharging chutes between adjacent pairs of partitions, and a powder-wrapper holder consisting of a base and a series of vertical-parallel partitions between which the folded wrappers may be placed, said partitions being spaced correspondingly to the partitions in the trough.

5. A powder divider comprising a trough, a series of spaced partitions for dividing the material in said trough, forming a series of discharge chutes adapted to concentrate the material in the center of the wrapper.

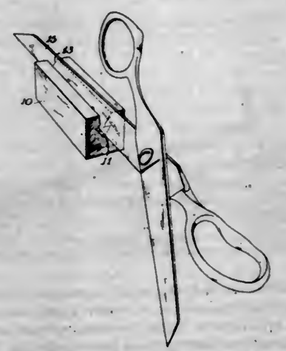
[Claims 6 to 14 not printed in the Gazette.]

899,212. BOX-BLANK. WILSON FISKE, Medford, Mass., assignor to American Type Founders Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 15, 1902. Serial No. 98,392.



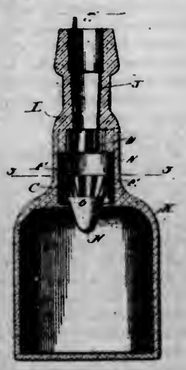
A box blank composed of cardboard or other suitable material, comprising a bottom section having attached thereto two side sections adapted to be bent at right angles to said bottom section so as to form the sides of said box, two end sections each integral with a side section and adapted to be bent at right angles to such side section to form the ends of the box, and two narrow gumming strips, each integral with a side section and adapted to engage an end section of the folded box, each of said gumming strips being prolonged integral with the bottom section to the opposing end section and integral therewith and being of substantially the same width throughout its entire length, whereby when the whole is folded to form a box, the said gumming strips will be folded so as to completely close the corners of the box and will form narrow strips in the interior across the ends of the box as well as along one edge of each of said ends, as described.

899,213. SCISSORS-SHARPENER. JOHN FITZGERALD, Newark, N. J. Filed Oct. 24, 1907. Serial No. 398,859.



A sharpener for shears comprising a block having a grinding bar longitudinally arranged therein, the block being recessed above the grinding bar, one wall of the recess being perpendicular and having a slightly undercut portion adjacent to the grinding bar, the other wall of the recess being inclined at an angle to the grinding bar and being approximately parallel with the undercut portion of the perpendicular wall, whereby a blade inserted in the sharpener is maintained at a proper angle to the grinding bar, and can only be withdrawn in a direction substantially parallel to the inclined wall.

899,214. BOTTLE. JOSEPH A. GAFNEY, Brooklyn, N. Y. Filed June 7, 1907. Serial No. 377,828.



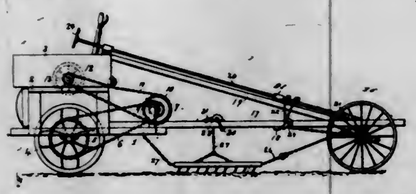
1. The combination, with the bottle-neck having an enlarged chamber N, with valve seat b, and a series of verti-

cal grooves D in the space above said chamber, of a conical valve A having a smooth lower portion and its upper portion provided with longitudinal side grooves and ribs and its top portion with radial grooves and ribs, substantially as described.

2. The combination with the bottle-neck having an enlarged chamber N with contracted valve seat below and a series of vertical grooves above, of a stopper formed of some easily frangible material, the upper portion of the stopper being grooved on the side and top, as shown and described.

3. The combination of a bottle-neck having an enlarged chamber with narrowed seat below, and a series of vertical grooves in the space above, of a conical stopper adapted to seat in the lower portion of said chamber and provided in its upper portion with side grooves and ribs, and in the top with grooves and intervening ribs, the latter being higher than the tops of the side ribs, as shown and described.

899,215. MEANS FOR TILLING FIELDS. BERTON J. GODLEY, Romulus, N. Y. Filed Jan. 14, 1908. Serial No. 410,821.

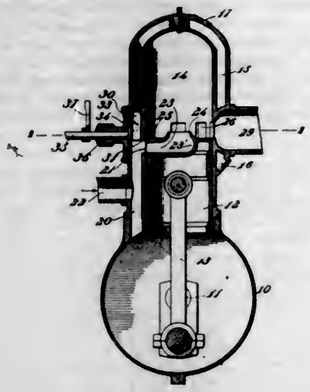


1. A machine of the character described, comprising a main supporting framework, a roller upon which the said framework is mounted, front traveling wheels and an axle therefor, a reach extending from the supporting framework to the front axle, hounds secured to said framework and reach, an agricultural implement mounted between the front traveling wheels and roller, draft chains connected to the implement and extending forwardly and upwardly and connected to the reach and hounds, a backing chain secured to the rear end of the implement and extending upwardly and rearwardly of the framework, hoisting chains connected to the implement, and a transversely extending hoisting shaft journaled in the hounds above the implement and provided at one end with a turning handle and pawl and ratchet device, the hoisting chains winding on said shaft.

2. A machine of the character described, comprising a main supporting framework, a roller upon which said framework is mounted, front traveling wheels and an axle therefor, a reach extending from the supporting framework to the front axle, hounds secured to said framework and to the reach, an agricultural implement mounted between the front traveling wheels and roller, underneath the hounds and reach, a transversely extending winding shaft journaled in the hounds above the said implement, suspension chains connected to the implement and adapted to wind on said shaft, and draft connections between the implement and the reach and hounds.

3. A machine of the character described, comprising a supporting framework, a roller on which said framework is mounted, means for driving said roller to propel the machine, a reach extending forwardly from the framework, a front axle, traveling wheels supporting the front end of said reach and journaled on said axle, hounds connected to said framework and to the reach, a rearwardly and upwardly extending brace 19 secured at its front end to the forward end of the reach and secured at its rear end to the supporting framework, and means for steering the machine, said means including a steering post secured at one end in a bearing in the forward end of the reach, and projecting rearwardly above the said brace to the supporting framework, said post being supported intermediate of its ends by said brace.

899,216. INTERNAL-COMBUSTION ENGINE. THOMAS W. HENDRY, San Francisco, Cal. Filed Nov. 6, 1906. Serial No. 342,247.



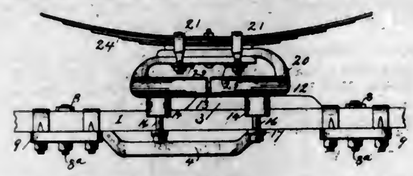
In an internal combustion engine, a cylinder having discharge ports, and an inlet port, a piston having a laterally extended straight wall passage arranged to communicate with the inlet port, the piston passage terminating in a short nozzle at the center of the piston head in the line of the axis of said piston, the wall of the said passage opposed to and distant from said port being provided with a curved pocket concaving or bulging away from said inlet port and providing for the impingement of the charge thereagainst and by which the force of the stream of incoming gas is broken and the stream is thence deflected through the nozzle in a straight line following the axis of the cylinder.

899,217. TICKET OR COIN HOLDER. JOHN HETHERINGTON, Benton Harbor, Mich. Filed June 3, 1907. Serial No. 376,965.



As a new article of manufacture; a coin or token holder comprising a strip of spring sheet metal bent to form two arms to engage a bottle, and a connecting portion for said arms having a tongue cut therefrom, said tongue having an outwardly-turned free end to assist in guiding a coin or token into the space between said tongue and the connecting portion, said tongue normally lying within the body portion, but adapted to stand out from the body portion when the arms are moved toward each other.

899,218. VEHICLE RUNNING-GEAR. MARTIN W. HEYENGA, Chicago, Ill., assignor of one-fourth to Martin Barkmeier and one-fourth to Hei Barkmeier, Chicago, Ill. Filed Dec. 3, 1907. Serial No. 404,894.



1. In a vehicle, a fifth wheel comprising a relatively movable element formed with downwardly extending standards, means for securing said standards to a vehicle axle, a relatively stationary element consisting of semicircular channeled rims embracing the outer edge of the relatively movable element, said rims being formed with inwardly extending overlapped arms, and means for securing said arms together and to the body of a vehicle.

2. In a vehicle, a fifth wheel comprising a relatively movable element, a relatively stationary element having a guiding connection with the movable element, and provided at opposite points with inwardly extending overlapping arms, the lowermost arm being formed on its lower side with nibs, and clips designed to secure said arms together and provided with glands adapted to abut against said nibs.

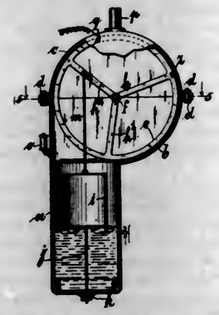
3. In a vehicle, a fifth wheel comprising a relatively stationary element, and a relatively movable element having a guiding connection therewith, the stationary element being formed at opposite points with inwardly extending overlapping arms, clips designed to secure said arms together, and a cross bar extending beyond said arms and secured thereto, said cross bar being designed for the support of side-bow springs.

899,219. METHOD OF DESULFURIZING ORES. KARL A. JOHANSSON, Sandviken, Sweden. Filed Oct. 17, 1907. Serial No. 397,948.

1. The herein described method of desulfurizing iron or manganese ores, consisting in mixing the said ores with a matter containing free silicic acid, pressing the mixtures to the form of briquets and burning the said briquets, substantially as and for the purpose set forth.

2. The herein described method of desulfurizing iron or manganese ores, consisting in mixing the said ores with a mineral containing free silicic acid, pressing the mixture to the form of briquets and burning the said briquets, substantially as and for the purpose set forth.

899,220. AUTOMATIC ELECTRIC SAFETY DEVICE FOR BOILERS, &c. CHARLES KAUSEN, New York, N. Y. Filed Mar. 13, 1908. Serial No. 420,920.

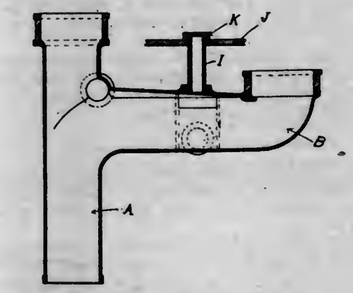


1. A water actuated automatic electric safety device for boilers comprising a vertical tubular receptacle with bottom pipe for connecting with the boiler formed on one side at the top into a curved extended portion, a semi-circular hollow top part secured to the top of the tubular receptacle and its extension both forming a housing, a wheel mounted within said housing, a cylindrical float within the tubular receptacle, a guiding rod rigidly connected to its bottom central portion extending into the bottom pipe, a second rod movably secured with its lower end to the top central portion of said float and with the upper end to one spoke of the wheel, two electric contacts in the top portion of the semi-circular part of the housing insulated therefrom, an insulated electric contact in said wheel, an electric battery and an alarm bell.

2. In a water actuated automatic electric safety device for boilers a vertical tubular receptacle with bottom pipe for connecting with the boiler formed on one side at the top into a curved extended portion, an air valve in the top portion of the tubular part, a semi-circular hollow top part secured to the top of the tubular receptacle and its extension both forming a housing, a wheel mounted within said housing, a cylindrical float within the tubular receptacle, a guiding rod rigidly connected to its bottom central portion extending into the bottom pipe, a second rod movably secured with its lower end to the top central portion of said float and with the upper end to one spoke of the wheel, two electric contacts in the top portion of the semi-circular part of the housing insulated therefrom and an insulated electric contact in said wheel.

3. In a water actuated automatic electric safety device for boilers a vertical tubular receptacle with bottom pipe for connecting with the boiler formed on one side at the top into a curved extended portion, an air valve in the top portion of said tubular receptacle, a semi-circular hollow part secured to said tubular receptacle and its extension both forming a housing, and a pipe at the top of said semi-circular part for connecting with the steam part of the boiler in combination with a wheel mounted in the housing, a float within the tubular receptacle and a metal rod movably secured with the bottom end to the central top portion of the float, and its top end to one spoke of the wheel.

899,221. PIPE-FITTING. FISEL KIMCHE, Detroit, Mich. Filed Sept. 21, 1907. Serial No. 393,897.



1. A pipe fitting comprising a laterally-extending conduit, an enlargement on the side of said conduit forming a chamber communicating with the interior of said conduit only at the top thereof, and a nipple at the lower end of said chamber for connecting the waste pipe therewith.

2. A pipe fitting comprising a laterally-extending conduit, an enlargement at the side of said conduit forming a chamber communicating with the interior of said conduit only at the top thereof, means for attaching the waste connection to the lower end of said enlargement, and means at the top of said conduit for providing access to said chamber.

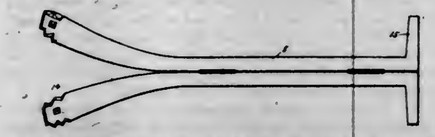
3. A pipe fitting comprising a laterally-extending conduit, an enlargement at the side thereof forming a chamber communicating with the interior of said conduit only

at the top thereof, and a capped vertically extending pipe rising from the top of said conduit and forming means of access to said chamber.

4. A pipe fitting comprising a laterally-extending conduit, enlargements upon opposite sides of said conduit forming chambers communicating with the interior of said conduit only at the top portion thereof, waste connections to the lower portions of the respective chambers, a vertical capped pipe engaging an aperture in the top of said conduit in the plane of said lateral enlargements, for the purpose described.

5. A pipe fitting comprising a laterally extending conduit, an enlargement at the side thereof forming a chamber communicating with the interior of said conduit only at the top thereof, a nipple in the top of said conduit, and a capped vertically extending pipe engaging said nipple and forming means of access to said chamber.

899,222. OBSTETRICAL FORCEPS. HENRY E. KOCH, Hartington, Nebr. Filed Jan. 27, 1908. Serial No. 412,821.



1. Forceps comprising two blades approximately straight in their jointed portions and curved in their operative portions, and hinges secured upon said blades and connecting together an adjacent edge of each of said blades as herein set forth.

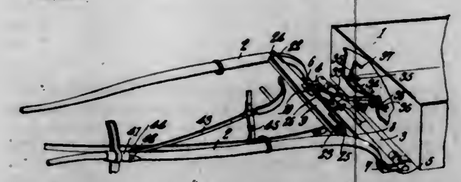
2. Forceps composed of two blades having curved operative portions, hinges connecting their approximately straight, adjacent edges, lever handles on the outer ends of said blades, and teeth on the inner surfaces of the operative ends of said blades, as herein set forth.

3. Forceps composed of two blades having curved operative portions, hinges connecting their approximately straight adjacent edges and adjustable lever handles on the outer ends of said blades as described.

4. Forceps comprising two main blades hinged together at an approximately straight adjacent edge of each blade and having a curved operative portion, and auxiliary blades adjustably attached to said main blades as herein set forth.

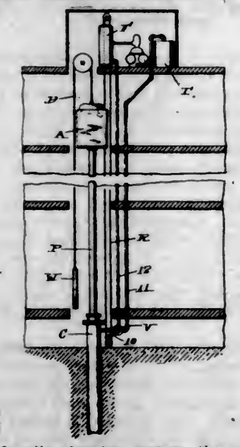
5. Forceps composed of two blades hinged together at an approximately straight adjacent edge of each blade and having a curved operative portion whose lower extremity is rounded off, as herein described.

899,223. HORSE-DETACHER. MOSES J. LA BRAKE, Bloomingdale, N. Y., assignor of one-half to Julius Q. King, Gabriels, N. Y. Filed May 6, 1907. Serial No. 372,155.



In a device of the character described, a swingletree provided with trace-fastening members normally projecting beyond the ends of the swingletree, said swingletree also having shoulders on opposite sides of its pivot, and an operating means for the trace-fastening members, comprising lazy tongs having members connected to the trace-fastening members and arranged to engage the shoulders on the swingletree when the said trace-fastening members are retracted, a link secured at one end to the lazy tongs, a bar connected at one end to the other end of the link, and a rock-shaft having a crank connected to the other end of the bar, said bar coöperating with the front of the vehicle body to prevent the shaft from dropping when the horse is detached.

899,224. HYDRAULIC ELEVATOR. THURE LARSSON, Worcester, Mass., assignor to himself, William E. D. Stokes, New York, N. Y., and Fred A. Jones, Worcester, Mass. Filed Jan. 27, 1903, Serial No. 140,722. Renewed Sept. 21, 1906. Serial No. 335,646.



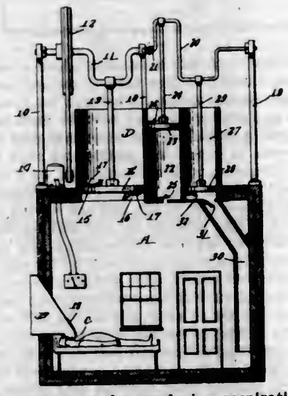
1. In a hydraulic elevator system, the combination of a vertical cylinder, a plunger running in said cylinder, a car on the upper end of the plunger, a counter-balance for the greater part of the weight of the car and plunger with the counter-weight cables acting to offset the buoyancy of the plunger, a to-and-from pipe opening into the upper end of the cylinder, a storage tank connected thereto and located far enough above the upper end of the cylinder so that its static pressure will substantially balance the preponderance in weight of plunger and car over their counter-balance, a pressure tank, and a pump intermediate the storage tank and pressure tank, said parts being arranged so that the static pressure of the storage tank will assist the operation of the pump in raising the elevator.

2. In an elevator system, the combination of a vertical cylinder, a plunger working therein, a car on the upper end of the plunger, a counter-balance for the greater part of the weight of the car and plunger with the counter-weight cables acting to offset the buoyancy of the plunger, a to-and-from pipe connected to the upper end of the cylinder, an elevated storage tank, an outlet pipe leading thereto, a pressure tank, a pump intermediate the pressure tank and storage tank, an inlet pipe from the pressure tank to the to-and-from pipe, and a valve controlled from the car for connecting the to-and-from pipe with the inlet pipe and the outlet pipe as required.

899,225. RESPIRATION APPARATUS. PETER LORD, Worcester, Mass.; Martha V. Lord administratrix of said Peter Lord, deceased. Filed July 10, 1905. Serial No. 268,998.

1. In an apparatus of the character described, the combination of a closed compartment, a motor mounted thereon, a crank-shaft supported by the compartment and operated by the motor, a cylinder opening into the compartment, a piston in the cylinder connected with said crank-shaft to be operated thereby, whereby the pressure in the compartment may be alternately increased and diminished, and means detachably connected with the crank-shaft for changing the air in the compartment without affecting the pressure therein.

2. In an apparatus for producing respiration the combination of a closed compartment, means for supplying fresh air to a patient placed therein, means for increasing and decreasing the air pressure therein, and means for withdrawing air from and forcing air into said compartment without affecting the rise and fall of the pressure therein.

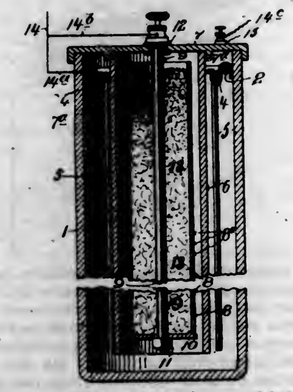


3. In an apparatus for producing respiration the combination of a closed compartment, a power-driven pump connected thereto to increase and diminish the pressure therein, a suction pump, and a forcing pump also connected therewith, said suction and forcing pumps being set to work in opposition.

4. An apparatus for producing respiration comprising a closed compartment, a large cylinder connected therewith, a piston arranged in said cylinder, a motor for reciprocating said piston, a suction pump and a forcing pump connected with said compartment and set to work in opposition, and connections for operating the suction and force pump in unison with the piston in the large cylinder.

5. An apparatus for producing respiration comprising a closed compartment, a pump connected therewith for increasing and diminishing the pressure therein, a suction and force pump also connected therewith and set to act in opposition, and an inlet pipe for the force pump extending down to the bottom of the compartment.

899,226. ELECTROPLATING APPARATUS. GEORGE A. LUTZ, Plainfield, N. J., assignor to American Circular Loom Company, Portland, Me., a Corporation of Maine. Filed June 6, 1908. Serial No. 437,115.



1. An electro plating apparatus comprising a tank for an electrolyte, an anode within the tank, a cathode plate to support a hollow article within the tank and adjacent the anode, and means to simultaneously support an anode from said cathode plate within the hollow article while in the tank.

2. An electro plating apparatus comprising a tank for an electrolyte, means to support one or more anodes therein, means to support a pipe or tube within said anodes, an anode adapted to be supported within the pipe or tube by the pipe support, and means to insulate said anode from the pipe or tube and its support.

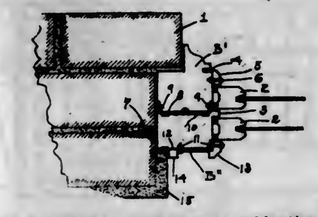
3. An electro plating apparatus comprising a tank for an electrolyte, one or more anodes supported therein, means to support a pipe or tube within said anodes, a cathode plate to support the pipe or tube, and an anode suspended from the cathode plate and insulated therefrom and located within the pipe or tube.

4. An electro plating anode comprising a perforated insulator, and particles of plating material supported therein and a rod passing through and supporting said insulator.

5. An electro plating anode comprising a perforated insulating tube, a closure at the lower end thereof, a support for the tube passing upwardly therein, and plating metal particles within said tube.

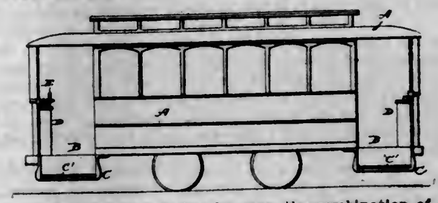
[Claims 6 to 11 not printed in the Gazette.]

899,227. FIREPROOF METAL WINDOW-FRAME. FRANK LYSTER, Philadelphia, Pa., assignor to Lyster Sheet Metal Company, Philadelphia, Pa., a Corporation of Delaware. Filed Feb. 17, 1908. Serial No. 416,214.



In window-frame structure, the combination of a top, a sill, and sides, each side comprising an outer section composed of spaced sides one of which is provided with an outwardly extending flange adapted to interlock with a wall, the other side being provided with sash guide means thereon, a detachable guide piece interlocking with the outer portion of the body section or outer section, sash mounted upon the frame between the sides, horizontal braces connecting the sides of the outer section a vertical partition applied to the braces of each outer section, other braces secured to the innermost portions of the outer sections of each side of the frame, the inner section of each side of the frame being attached to the last named braces and being provided with a guide coöperating with the inner sash.

899,228. SAFETY APPARATUS FOR CARS. THEODORE A. MAYER, Washington, D. C. Filed Mar. 17, 1908. Serial No. 421,671.



1. In a safety apparatus for cars, the combination of a movable handle or device for controlling the movement of the car, an automatically operated lock for said movable device or handle, and means on the car step for causing the operation of said lock when a person is on the step.

2. In a safety apparatus for cars, the combination of a motor controller having an operating handle or device, a locking means, and means on the car step for causing the operation of the locking means when a person is on the car step.

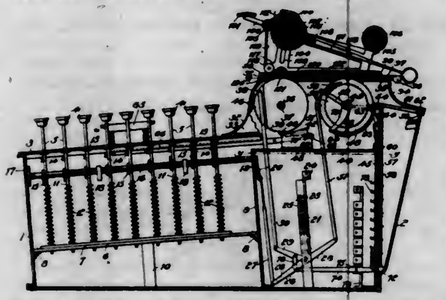
3. In a safety apparatus for cars, the combination of a motor controller having an operating handle or device, a locking means, and means for causing the operation of the locking means, including an electric circuit closer on the car step.

4. In a safety apparatus for cars, the combination of the handle or operating device of a motor controller, a latch or bolt to engage said handle, an electro-magnet carried by the handle, and means for energizing said magnet to attract said latch or bolt.

5. In a safety apparatus for cars, the combination of the movable handle or operating device of a motor controller, a latch or bolt to engage said handle, an electro-magnet carried by the handle, means for energizing said magnet to attract said latch or bolt, and means for opening and closing the circuit connected to the handle.

[Claims 6 to 10 not printed in the Gazette.]

899,229. LISTING-MACHINE. JAMES F. MAYS, Birmingham, Ala. Filed Dec. 5, 1905. Serial No. 290,359.



1. In a machine of the character described, a casing a plurality of independent key operated members, registering devices, and operating means for said devices comprising a plurality of rock shafts of different lengths which are operably connected to said key operated members, said rock shafts being disposed in different vertical planes with their corresponding ends stepped, as and for the purposes described.

2. In a machine of the character described, a set of independent key operated rock shafts disposed longitudinally of the machine, registering devices, a set of rock shafts for operating said devices which are disposed transversely of the machine, and means to connect each of said transverse rock shafts with a corresponding key operated rock shaft.

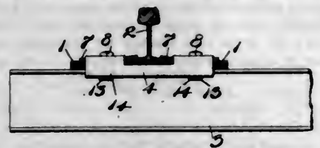
3. In a machine of the character described, a plurality of independent key operated members disposed logitudinally of the machine, a plurality of rock shafts of different lengths, each of which is connected to one of said longitudinal members and operated thereby, registering devices disposed at one side of the machine, and means to operate said devices from said rock shafts in the manner described.

4. In a machine of the character described, a plurality of key operated rock shafts disposed longitudinally of the machine, spring means to return said shafts to initial position, cranks connected to the ends of said shafts, a corresponding number of transversely disposed rock shafts connected at one end to said cranks, registering devices, and means moved by said transverse shafts for operating said devices in the manner described.

5. In a machine of the character described, a plurality of registering devices, a plurality of actuating members having their ends adjacent to said devices stepped, means for operating said devices connected to the stepped ends of said actuating members, and key operated means to move said actuating members, substantially as described.

[Claims 6 to 28 not printed in the Gazette.]

899,230. RAIL-FASTENING. HENRY K. MYERS, Swissvale, Pa. Filed May 2, 1908. Serial No. 430,436.



1. The combination with a tie and rail, of a saddle-plate engaging over the tie at each side of the rail and having depending side flanges extending beneath the rail and overlapping the tie, clips interposed between said saddle and tie and extending therefrom out upon each side of the rail base, and means to secure said saddle and clips to the tie.

2. The combination with a tie and rail, of a cushion on said tie beneath the rail base, a saddle-plate engaging over said cushion at each side of the rail and having depending side flanges extending beneath the rail and overlapping the tie, clips interposed between said cushion and saddle and extending therefrom out upon each side of the rail base, and means to secure said saddle, clips and cushion to the tie.

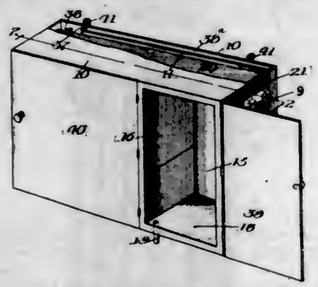
3. The combination with a tie and rail, of a saddle plate engaging over the tie at each side of the rail and having depending side flanges extending beneath the rail and overlapping the tie, clips interposed between said saddle and tie and extending therefrom out upon each side of the rail base, and bolts passing down through said saddle and clips securing the same to the tie.

4. The combination with a tie and rail, of a cushion on said tie beneath the rail base, a saddle-plate engaging over said cushion at each side of the rail and having depending side flanges extending beneath the rail and overlapping the tie, clips interposed between said cushion and saddle and extending therefrom out upon each side of the rail base, and bolts passing down through said saddle, clips and cushion securing the same to the tie.

5. The combination with a tie and rail, of a cushion on said tie beneath the rail base, a saddle-plate engaging over said cushion at each side of the rail and having depending side flanges, clips interposed between said cushion and saddle and extending therefrom out upon each side of the rail base, and bolts passing down through said saddle, clips and cushion securing the same to the tie, said cushion being formed in two parts the abutting ends meeting beneath the rail.

[Claim 6 not printed in the Gazette.]

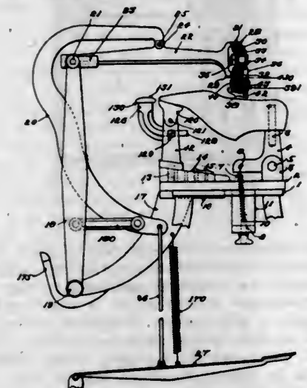
899,231. COOLING-BOX. FREDERICK A. NOPENZ, Chicago, Ill. Filed July 29, 1907. Serial No. 385,962.



1. In a cooling-box, the combination with a casing having communication with a supply of water and provided with an inner vertical wall spaced from its rear wall, of two transverse vertical partitions located in said space, near one corner of the box, one of said partitions having its lower end spaced from the floor of the box, and the other one having its upper end spaced from the top of the box, an outlet in the lower portion of the box between the last named partition and one of the end walls of the box, and one or more compartments located within the casing and spaced therefrom to permit of the circulation of water therebetween.

2. In a cooling-box, the combination with a casing having communication with a supply of water and provided with an inner vertical wall spaced from its rear wall, of two transverse vertical partitions located in said space near one corner of the box, one of said partitions having its lower end spaced from the floor of the box, and the other one having its upper end spaced from the top of the box, an outlet in the lower portion of the box between the last-named partition and one of the end walls of the box, and a series of compartments located within the casing and spaced apart as well as spaced from the casing to permit of the circulation of water between said compartments and around the same and between the casing and said compartments.

899,232. BEATING-OUT MACHINE. JAMES H. REED, Lynn, Mass., assignor to Essex Machine Company, Lynn, Mass., a Corporation of Maine. Filed Nov. 3, 1902. Serial No. 129,864.



1. In a beating-out machine, the combination of a work-support, a beating-out tool, a movable fulcrum, an arm connected at one end with the said movable fulcrum by a universal joint, a tool-holder connected by a universal joint to the other end of the said arm, said tool-holder being provided with bearings in which the beating-out tool may turn about its longitudinal axis, handles on the said tool enabling the operator to reciprocate the tool and its connected parts relative to the various parts of the work and to roll or rack the tool upon the work, and foot-operated depressing means whereby the tool is held in contact with the work with variable pressure.

2. In a beating-out machine, the combination of a work-support, a beating-out tool, a tool-holder for said beating-out tool connected by a universal joint to one end of an arm, said tool-holder being provided with bearings in which the beating-out tool may turn about its longitudinal axis, an arm connected at one end to the said tool-holder at the other end by another universal joint to a movable fulcrum, a movable fulcrum pivoted to the frame of the machine, a treadle and means to connect the treadle with the said tool carrying arm whereby the said arm and the beating-out tool are moved downward upon the depression of the treadle.

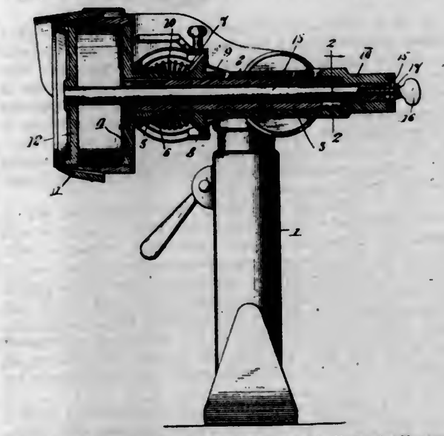
3. In a beating out machine, in combination, a beating out tool, an arm carrying said beating out tool, pivoted at one end to a movable fulcrum, a movable fulcrum pivoted at its lower end to the frame of the machine, a treadle, a link as 20 connected at one end with the said carrying arm, and at the other with the treadle, and a steadying link 180 connecting the said link 20 with the said movable fulcrum, substantially as and for the purposes described.

4. In a beating-out machine, the combination of a work-support, a beating-out tool, a holder for said tool provided with bearings in which the beating-out tool may turn about its longitudinal axis an arm carrying said holder, said arm being connected at one end by a universal joint to the said holder and at the other end by another universal joint to a swinging link a swinging link whose pivot is fixed with relation to the work-support, and whose other end serves as a fulcrum for the tool-carrying arm, and means connected with the tool-carrying arm and adapted to press the tool upon the work, substantially as described.

5. A beating-out machine comprising, essentially, a work-support, a beating-out tool, a holder therefor provided with bearings in which the said tool may turn about its longitudinal axis, an arm to which the said tool-holder is attached by a universal joint, a movable fulcrum for the said arm, the said arm and movable fulcrum being connected by a universal joint allowing motion in vertical and horizontal planes, a link engaging the tool arm and adapted to cause the same to swing about its fulcrum, and a treadle connected with the said link and acting therethrough to control the proximity of the tool with relation to the work, and affording a means whereby the tool may be pressed against the same, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

899,233. FLESHING-MACHINE. LAURENTE RUPP, Brooklyn, N. Y. Filed June 5, 1908. Serial No. 436,958.



1. In a fleshing machine, a bearing, a hollow shaft revolubly mounted therein, and a gage provided with a shaft mounted in said hollow shaft.

2. In a fleshing machine, a bearing, a hollow shaft revolubly mounted therein, and a gage provided with a shaft adjustably mounted in said hollow shaft.

3. In a fleshing machine, a bearing, a hollow shaft revolubly mounted therein, a gage provided with a shaft adjustably mounted in said hollow shaft, and means for adjusting said second named shaft.

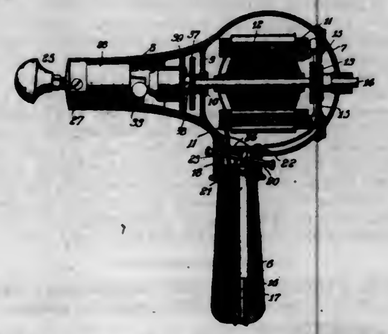
4. In a fleshing machine, a bearing, a hollow shaft revolubly mounted therein, a gage provided with a shaft adjustably mounted in said hollow shaft, means for adjusting said second named shaft, and means for holding said second named shaft in adjusted position.

5. In a fleshing machine, a bearing, a hollow shaft revolubly mounted therein, a gage provided with a shaft adjustably mounted in said hollow shaft, and means for adjusting said second named shaft, said means comprising a cap plate and a thumb-screw threaded through said cap plate and into the shaft of the gage and adapted to feed said shaft longitudinally, as desired.

899,234. MASSAGING INSTRUMENT. JULIUS B. WANTZ, Chicago, Ill., assignor to Victor Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 23, 1907. Serial No. 398,811.

1. In a massaging instrument, the combination with a casing provided with a handle, of an electric motor in said

casing, a massaging member operatively connected with the motor, and a switch comprising contact-fingers and a rod supported to extend across said handle and longitudinally movable in its bearings with its opposite ends accessible, respectively, to the thumb and a finger of the operator's hand grasping the handle, and carrying an abutment to engage one of said fingers, for the purpose set forth.



2. In a massaging instrument, the combination with a casing provided with a handle, of an electric motor in said casing, a massaging member operatively connected with the motor, and a switch comprising contact-fingers, one of which is provided with a cam-section, and a rod supported to extend across said handle and longitudinally movable in its bearings with its opposite ends accessible, respectively, to the thumb and a finger of the operator's hand grasping the handle, and carrying an abutment to engage said cam-section, for the purpose set forth.

3. In a massaging instrument, the combination with a casing provided with a handle, of an electric motor in said casing, a massaging member operatively connected with the motor, and a switch comprising contact-fingers, one of which is provided with a cam-section, and a knob-ended rod supported to extend inclinedly across said handle and longitudinally movable in its bearings with its opposite ends accessible, respectively, to the thumb and a finger of the operator's hand grasping the handle, and carrying an abutment to engage said cam-section, for the purpose set forth.

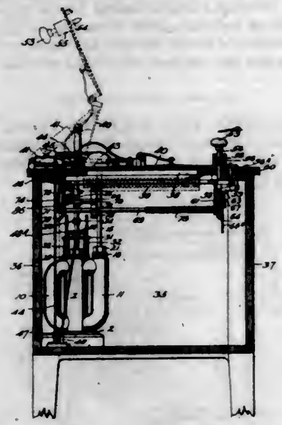
4. In a massaging instrument, the combination with a casing for the vibrator-actuating mechanism, said casing having a tubular extension provided with a slot in its outer end, of a fulcrum-pin extending in said end transversely thereof and provided with a tapering inner end extending across said slot, and a vibrator on a stem working in said slot and provided with an opening at which it is fulcrumed on the tapered end of said pin, for the purpose set forth.

5. In a massaging instrument, the combination with a casing, of an electric motor therein, a vibrator having a stem oscillatorily supported on the casing, an inner eccentric secured on the motor-shaft and provided with a recessed face, an outer barrel adjustably surrounding said inner eccentric, a spring-pressed bolt yieldingly interlocking said barrel with said recessed face, and an eccentric stud projecting from said outer barrel into engagement with the vibrator-stem, for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

899,235. AUTOMATIC FLUID-CONTROLLED VARIABLE-TIME-EXPOSURE VALVE MECHANISM FOR PHOTOPRINTING-MACHINES. JAMES F. WARE and THOMAS W. RUNDLE, Denver, Colo., assignors to The Automatic Photograph Printing Machine Company, a Corporation of Arizona. Filed Mar. 12, 1907. Serial No. 361,970.

1. In an automatic fluid controlled variable time exposure valve mechanism, for photo-printing machines, the combination with a suitable cabinet, provided with a swinging shutter, and a spring-controlled latch mechanism, of a valve comprising a vertically disposed cylinder provided with a port on each side, a piston reciprocally mounted in said cylinder, a valved inlet from one port into the bottom of said cylinder, and outlet valve leading from the top of the other port into the top of said cylinder, an index controlled valve stem attached to said outlet valve, means including a spring controlled latch for locking said shutter in a closed position on said cabinet, and means including a projecting arm on said piston arranged to release said shutter's latch at the end of the piston rod's downward stroke, as specified.



2. In an automatic fluid controlled variable time exposure valve mechanism for photo-printing machines, the combination of an oil valve, comprising a cylinder and its ports, provided with a body of oil, a piston and piston rod arranged to move on its downward stroke in said body of oil by their weight, and an oil outlet valve and valve stem, with a cabinet, a shutter hinged thereto, and arranged to be swingingly closed against said cabinet, means for latching said shutter against said cabinet, means connected with said oil valve for engaging said latch and releasing said shutter, resilient means on said valve for holding said shutter under a constant opening movement tension.

3. In an automatic fluid controlled variable time exposure valve mechanism for photo-printing machines, the combination with the cabinet, the swinging shutter hinged thereto, and means for latching said shutter closed against said cabinet, of a fluid controlled valve connected to said cabinet and comprising the cylinder provided with a body of oil, the piston and piston rod, and the manually operated valve, said piston being arranged to move in said body of oil on its downward stroke by its weight, resilient means connected to said cylinder for raising and holding said piston at the top of its upward stroke, means including a lever and a cord connected with said shutter, and said cabinet, for holding said shutter under a constant opening tension, and means connected with said piston rod for releasing said shutter's latch, and shutter, at the end of its downward stroke.

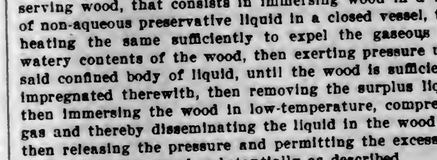
4. In an automatic fluid controlled variable time exposure valve mechanism for photo-printing machines, the combination of a vertically disposed cylinder having valve-controlled ports, and provided with a supply of liquid, a reciprocating piston and piston rod in said cylinder adapted to reciprocate in said fluid, and a manually controlled valve arranged to control the flow of fluid in said cylinder to permit different speed movements of said piston and piston rod on their down stroke in said cylinder, with a cabinet provided with a glass exposure plate, a shutter hinged to said cabinet and adapted to be closed against said exposure plate, means including a latching mechanism for locking said shutter closed to said exposure plate, a reciprocating lever secured at one end in said cabinet, a cord connected at one end adjacent to the hinged end of said hinged shutter and secured at its opposite end adjacent to the opposite end of said lever, a crosshead reciprocally mounted on said cylinder and piston rod, springs arranged to move said crosshead in one direction of its reciprocal movement, the closing weight of said shutter being arranged through the medium of said cord to hold the free end of said lever against said crosshead, and the said free end of said lever being moved by the closing movement of said shutter to force said cross-head down against its springs whereby said crosshead exerts a constant opening pressure on said shutter, means including a latching mechanism connected to said shutter and cabinet for locking said shutter closed against said exposure plate, a collar on said piston rod engaged by said crosshead, said piston rod being adapted to be raised to the top of its upward stroke by the upward springing movement of said crosshead when said shutter is unlatched from its closed position over said exposure plate, means connected with said piston for engaging said latch mechanism and releasing said shutter, and an index plate arranged on said cabinet and arranged to determine the manual opening movement of said valve to permit said piston rod to fall on its downward stroke in said fluid and release said shutter latching mechanism.

5. In an automatic fluid controlled variable time exposure valve mechanism for photo-printing machines, the combination of a cabinet provided with a glass exposure plate, a shutter hinged to said cabinet to swing down and be closed over said glass exposure plate, a hook depending from the free end of said shutter, a sliding knob spring controlled in one direction of its movement extending through said shutter, a latch mechanism attached to said cabinet comprising a hook, a toothed rack bar attached to said hook and arranged in the path of said sliding knob, and adapted to move said hook to engage and lock to the hook of said shutter, a gear segment in engagement with said rack bar provided with a projecting arm, a shaft journaled to said cabinet so as to be oscillated and provided with a projecting pin, a crank arm on one end of said shaft, a lever connected at one end to said gear segment's arm and at its opposite end to said shaft's crank arm, and a lever connected to said cabinet at one end and to said shutter adjacent to its opposite end, with a fluid valve comprising a cylinder having independent ports connecting its opposite ends, an automatically operating valve controlling the entrance of one of said ports into the bottom of said cylinder, a manually operated valve arranged to control the outlet of the other port into the top of said cylinder, a reciprocating piston and piston rod in said cylinder, a collar on said piston rod, guides on said cylinder, a crosshead slidably mounted on said guides and on said piston rod between said collar and said cylinder, expansive springs on said guides between said crosshead and said cylinder, said crosshead being arranged in engagement with and adapted to hold said shutter's opening lever and said shutter under a resilient opening pressure when said shutter is locked to said latch, a spring blade arranged to receive and hold the projecting pin of said latch's oscillating shaft when said shutter is closed, a projecting pin on said piston rod arranged to engage said spring and release said latch's oscillating shaft's pin, a projecting pin on said piston rod, a spring blade arranged to engage said piston rod's projecting pin, and hold said pistou rod at the top of its upward stroke, a pin projecting from the oscillating shaft of said latch and arranged to engage said spring and release said piston rod, and a valve opening movement index arranged adjacent to said manually operated valve stem, substantially as specified.

[Claims 6 to 16 not printed in the Gazette.]

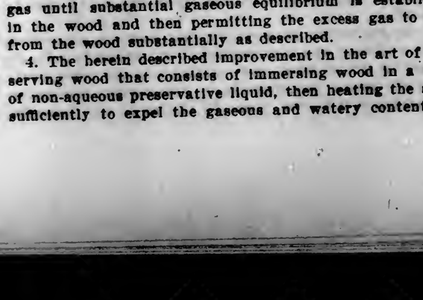
899,236. APPARATUS FOR SCOURING OR CLEANING THE INTERIORS OF PIPES OR TUBES. HEINRICH W. BÖTZ, Ludwigshafen-on-the-Rhine, Germany. Filed Jan. 7, 1908. Serial No. 409,647.

The herein described apparatus for scouring or cleaning the interior of pipes or tubes which consists of an endless chain or band provided at short distances with brushes in combination with a trough containing a scouring medium to which trough the pipe or tube to be scoured or



cleaned is connected so that the brushes pass through the trough and carry scouring medium into the pipe or tube substantially as and for the purpose set forth.

899,237. PRESERVING WOOD. WALTER BUEHLER, Minneapolis, Minn., assignor of one-half to George W. Bestor, Minneapolis, Minn. Continuation of application Serial No. 418,094, filed Feb. 27, 1908. This application filed July 27, 1908. Serial No. 445,639.



1. The herein described improvement in the art of preserving wood, that consists in immersing wood in a body of non-aqueous preservative liquid in a closed vessel, then heating the same sufficiently to expand the gaseous and watery contents of the wood and thus cause their expulsion therefrom, partially charging the wood with said preservative liquid, then draining off the surplus liquid, then immersing the wood in a body of low-temperature compressed gas until substantial gaseous equilibrium is established in the wood and then relieving the gaseous pressure, substantially as described.

2. The herein described improvement in the art of preserving wood, that consists in immersing wood in a body of non-aqueous preservative liquid in a closed vessel, then heating the same sufficiently to expel the gaseous and watery contents of the wood, then exerting pressure upon said confined body of liquid, until the wood is sufficiently impregnated therewith, then removing the surplus liquid, then immersing the wood in low-temperature, compressed gas and thereby disseminating the liquid in the wood and then releasing the pressure and permitting the excess gas to flow from the wood, substantially as described.

3. The herein described improvement in the art of preserving wood, that consists in immersing wood in a body of non-aqueous preservative liquid in a closed vessel, then heating the same sufficiently to expel the gaseous and watery contents of the wood, then withdrawing the watery accumulation from the surface of said body of liquid, then again confining the body of liquid and exerting pressure thereon until the wood is sufficiently charged with said liquid, then releasing and removing the surplus liquid, then immersing the wood in a low-temperature compressed gas until substantial gaseous equilibrium is established in the wood and then permitting the excess gas to flow from the wood substantially as described.

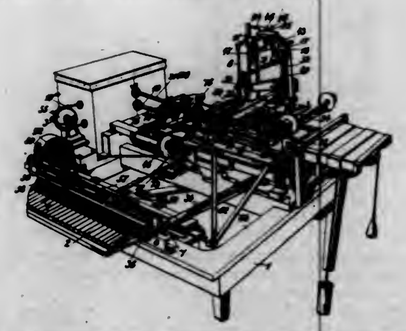
4. The herein described improvement in the art of preserving wood that consists of immersing wood in a body of non-aqueous preservative liquid, then heating the same sufficiently to expel the gaseous and watery contents of

the wood, then cooling the wood, then forcing a quantity of said liquid into the wood by exerting pressure upon said liquid, then draining the surplus liquid from the surface of the wood, then immersing the wood in low-temperature compressed gas until substantial gaseous equilibrium is established in the wood, and then permitting the excess of gas to flow from the wood, substantially as described.

5. The herein described improvement in the art of preserving wood, that consists in immersing wood in a body of non-aqueous preservative liquid in a closed vessel, then heating the same until the gaseous and watery contents of the wood are substantially expelled, then reducing the temperature of said liquid and wood and exerting pressure upon the liquid to force a quantity thereof into the wood, then relieving the pressure and removing the surplus liquid from the wood, then immersing the wood in low temperature compressed gas, thereby disseminating the charge of liquid throughout the wood and then permitting the excess gas to flow from the wood, substantially as described.

[Claim 6 not printed in the Gazette.]

899,238. APPARATUS FOR PUNCHING MUSIC-STRIPS. JULIUS C. BUNGE, Amsterdam, Netherlands. Filed Dec. 11, 1905. Serial No. 291,354.



1. An apparatus of the character described, comprising spring actuated rollers to hold a strip under tension, a frame on which said rollers are mounted movable to and fro, a lower frame likewise movable upon which the first named frame is movable the lower frame being movable forward through a certain distance only upon the completion of a bar of music for the purpose of starting a new bar of music.

2. An apparatus of the character described having a reciprocating frame upon which is carried the strip to be punched, means for moving said strip in accordance with the length of the note comprising a shaft 23, a treadle 22, screw spindle 21, ratchet mechanism to rotate said spindle, punch 32 operatively connected to the shaft 23, the ratchet mechanism being adjustable always somewhat in advance of the corresponding downward movement of the pawl 32; the apparatus being thus caused to work very slowly so as to avoid any risk of the tearing of the strip.

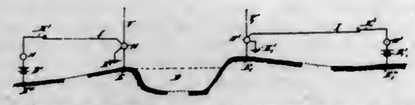
3. An apparatus of the character described comprising the upper reciprocating frame 16 upon which is carried the sheet to be punched, means for moving said frame, a screw spindle, a link mechanism by which the said spindle is rotated, a counting mechanism operatively connected to the means for moving the frame and which counting mechanism automatically returns to zero when a new note is to be punched and which is provided with a scale from which the displacement of the upper frame 16 can be read off.

4. An apparatus for punching music sheets, comprising paper punching and feeding mechanism, separate movable frames 15, 16 on which said mechanisms are respectively mounted, means including pawl, and ratchet mechanism for moving said frames, a nut 40 carried by the frame 16, a screw spindle 21 on which said nut is mounted, means for operating said spindle and means whereby the nut may be disengaged from the frame 16 and the latter returned to its initial position.

5. In an apparatus for punching sheets the combination with movable sheet supporting devices of a horizontally movable punch supporting arm, a punch carried by said arm, a lever pivotally mounted on said arm and connected to said punch, a vertically movable frame, a horizontal arm carried by said frame and adapted to contact with said lever and thereby actuate the punch.

[Claim 6 not printed in the Gazette.]

899,239. SIGNALING SYSTEM. SEWALL CABOT, Brookline, Mass., assignor to Stone Telegraph and Telephone Company, Boston, Mass. Filed Mar. 10, 1906. Serial No. 305,260.



1. In a signaling system, a wireless telegraph system and a wire telegraph system operatively associated therewith.

2. In a signaling system, a combined transmitting and receiving wireless telegraph system and a wire telegraph system operatively associated therewith.

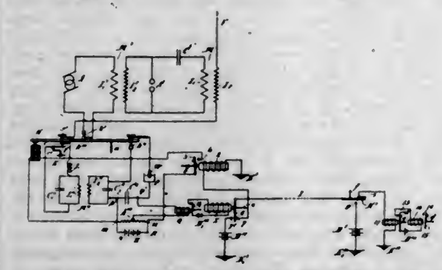
3. In a signaling system, a wireless telegraph receiving system, a wire telegraph system, and means so associating said systems that said wire telegraph system may be operated by said wireless telegraph receiving system.

4. In a signaling system, a combined transmitting and receiving wireless telegraph system, a wire telegraph system, and means so associating said systems that said wireless telegraph transmitting system may be operated by said wire telegraph system and said wire telegraph system may be operated by said wireless telegraph receiving system.

5. In a signaling system, a wireless telegraph receiving system, a wire telegraph system including a receiving apparatus, and means controlled by said wireless telegraph receiving system for operating said receiving apparatus.

[Claims 6 to 40 not printed in the Gazette.]

899,240. SIGNALING SYSTEM. SEWALL CABOT, Brookline, Mass., assignor to Stone Telegraph and Telephone Company, Boston, Mass. Filed Mar. 10, 1906. Serial No. 305,261.



1. In a signaling system, a wireless telegraph system and an open-circuit wire telegraph system operatively associated therewith.

2. In a signaling system, a wireless telegraph transmitting system, an open-circuit wire telegraph system, and means so associating said systems that said wireless telegraph transmitting system may be operated by said open-circuit wire telegraph system.

3. In a signaling system, a wireless telegraph receiving system, an open-circuit wire telegraph system and means so associating said systems that said open-circuit wire telegraph system may be operated by said wireless telegraph receiving system.

4. In a signaling system, a combined transmitting and receiving wireless telegraph system, an open-circuit wire telegraph system, and means so associating said systems that said wireless telegraph transmitting system may be operated by said open-circuit wire telegraph system and said wire telegraph system may be operated by said wireless telegraph receiving system.

5. In a signaling system, a combined transmitting and receiving wireless telegraph system including a sending device and an oscillation detector, an open-circuit wire telegraph system including a receiving apparatus, means controlled by said open-circuit wire telegraph system for operating said sending device, and means controlled by said oscillation detector for operating said receiving apparatus without operating said sending device.

[Claims 6 to 27 not printed in the Gazette.]

899,241. SIGNALING SYSTEM. SEWALL CABOT, Brookline, Mass., assignor to Stone Telegraph and Telephone Company, Boston, Mass. Filed Mar. 10, 1906. Serial No. 305,262.



1. In a signaling system, a station comprising a wireless telegraph transmitting system adapted to transmit electromagnetic waves of one frequency and a wireless telegraph receiving system attuned to a different frequency; a two-way wireless telegraph relaying system located at a distance from said station and comprising a wireless telegraph receiving system attuned to the frequency of the waves developed by said transmitting system, a wireless telegraph transmitting system adapted to develop electromagnetic waves of the frequency to which the first mentioned receiving system is attuned, and a wire telegraph system operatively associated with the wireless telegraph systems of said relaying system; and another station located at a distance from said relaying system and comprising a wireless telegraph transmitting system adapted to develop electromagnetic waves of the frequency to which the wireless telegraph receiving system of said relaying system is attuned and a wireless telegraph receiving system attuned to the frequency of the waves developed by the wireless telegraph transmitting system of said relaying system.

2. In a signaling system, two terminal stations, each comprising a combined transmitting and receiving wireless telegraph system, both transmitting systems being adapted to develop electromagnetic waves of one frequency and both receiving systems being attuned to waves of another frequency, and an intermediate relaying system comprising a wireless telegraph receiving system attuned to the frequency of the waves developed by said transmitting systems, a wireless telegraph transmitting system adapted to develop waves of the frequency to which the terminal station receiving systems are attuned and a wire telegraph system operatively associated with the transmitting and receiving systems of said relaying system.

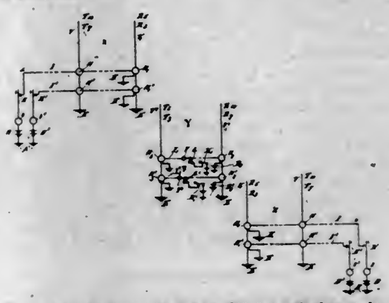
3. In a signaling system, two terminal stations, each station comprising a wireless telegraph transmitting system, both transmitting systems being adapted to develop electromagnetic waves of the same frequency, and each station comprising also a wireless telegraph receiving system, both receiving systems being attuned to the same frequency, being a frequency different from that of the waves developed by the aforesaid transmitting systems, in combination with an intermediate relaying system comprising a wireless telegraph receiving system attuned to the frequency of the waves developed by the transmitting systems at the terminal stations, a wireless telegraph transmitting system adapted to develop electromagnetic waves of the frequency to which the receiving systems at the terminal stations are attuned, and a wire telegraph system operatively associated with the wireless telegraph transmitting and receiving systems of said relaying system.

4. In a signaling system, two terminal wireless telegraph stations, an intermediate two-way wireless telegraph relaying system and a wire telegraph way station apparatus operatively connected with said relaying system.

5. In a signaling system, two terminal wireless telegraph stations; an intermediate two-way wireless telegraph relaying system comprising a wireless telegraph receiving system, a wireless telegraph transmitting system and a wire telegraph system operatively associated with said receiving and transmitting systems; and a wire telegraph transmitting and receiving apparatus associated with said wire telegraph systems.

[Claims 6 to 16 not printed in the Gazette.]

899,242. SIGNALING SYSTEM. SEWALL CABOT, Brookline, Mass., assignor to Stone Telegraph and Telephone Company, Boston, Mass. Filed Mar. 10, 1906. Serial No. 305,263.



1. In a signaling system, a multiplex wireless telegraph system and a multiplex wire telegraph system operatively associated therewith.

2. In a signaling system, a diplex wireless telegraph system and a diplex wire telegraph system operatively associated therewith.

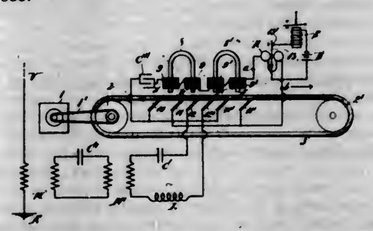
3. In a signaling system, a duplex wireless telegraph system and a duplex wire telegraph system operatively associated therewith.

4. In a signaling system, a duplex wireless telegraph system and two single-wire telegraph systems operatively associated therewith.

5. In a signaling system, a quadruplex wireless telegraph system and two duplex wire telegraph systems operatively associated therewith.

[Claims 6 to 19 not printed in the Gazette.]

899,243. SPACE TELEGRAPHY. SEWALL CABOT, Brookline, Mass., assignor to Stone Telegraph and Telephone Company, Boston, Mass. Filed Apr. 4, 1906. Serial No. 309,835.



1. In a detector for electrical oscillations, a closed electrical circuit, means for producing a magnetic field, means

for producing relative motion between said field and said circuit, means for varying the magnetic flux threading said circuit by the electrical oscillations to be detected, and means so relating the field-producing means and the closed circuit as to convert the energy of motion of said circuit into electrical energy.

2. In a detector for electrical oscillations, a closed electric circuit, means for producing a magnetic field, means for moving said circuit through said field, means for varying the magnetic flux threading said circuit by the electrical oscillations to be detected whereby current variations are produced in said closed circuit, and means so relating the field-producing means and the closed circuit as to convert the energy of motion of said circuit into electrical energy.

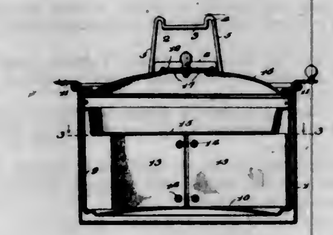
3. In a detector for electrical oscillations, an endless core of magnetic material, a closed electric circuit formed of a conductor spiraled around said core, means for producing a magnetic field threading a portion of said closed electric circuit, means for moving said core and said circuit through said magnetic field, and means for passing the electrical oscillations to be detected through a portion of said closed electric circuit.

4. In a detector for electrical oscillations, an endless core of magnetic material, a closed electric circuit formed of a conductor spiraled around said core, means for producing a magnetic field threading a portion of said closed electric circuit, means for moving said core and circuit through said magnetic field, means for passing the electrical oscillations to be detected through a portion of said closed circuit and means electrically connecting a portion of said closed circuit with the field-producing means.

5. In a detector for electrical oscillations, a solenoid consisting of an endless core of magnetic material and a closed electric circuit formed of insulated wire spiraled around said core and having a portion of its insulation removed throughout its entire extent in a direction substantially at right angles to the pitch of its spirals.

[Claims 6 and 7 not printed in the Gazette.]

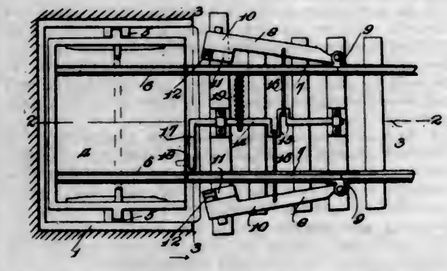
899,244. COMBINATION-COOKER. LEE L. CHASE, North Springfield, Vt. Filed Dec. 23, 1907. Serial No. 407,779.



1. A culinary apparatus of the character described, comprising a main vessel, supporting brackets secured to the rim portion of said vessel at opposite sides thereof and consisting of horizontally extending intermediate portions, supporting arms extending downwardly therefrom, upwardly extending fingers projecting from the lower ends of said arms, handles secured to the extremities of said fingers, and an inner vessel adapted to be inserted in the main vessel and provided with outstanding ears adapted to rest on the horizontally extending portion of said brackets.

2. A culinary apparatus of the character described, comprising a main vessel, brackets secured to the vessel at opposite sides thereof and projecting upwardly therefrom, said brackets embodying supporting arms, upwardly extending fingers terminating in planes below the planes of the upper ends of the brackets, handles secured to the ends of said fingers, and an inner vessel adapted to be inserted in the main vessel and provided with outstanding ears adapted to rest on the said brackets.

899,245. AUTOMATIC CAR-STOP. WILL E. DAWKINS, O'Fallon, Ill. Filed Apr. 27, 1908. Serial No. 429,545.

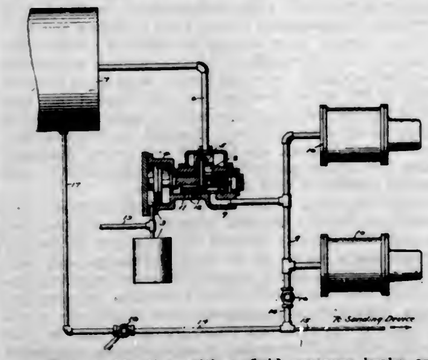


1. The combination with a shaft having an entrance way, a car movable in the shaft carrying rails, rails positioned in line with the car rails on the ground adjacent to the shaft entrance, fish plates formed with apertures, swinging members pivotally secured to the fish plates, each of said swinging members being formed with their ends arranged to project over a rail and engage the wheels of a car, a rock shaft positioned centrally of the rails and parallel therewith, links connected with the rock shaft and the swinging members intermediate of their ends, said rock shaft being formed with a cranked end and a pin for said end and arranged to project downwardly in said shaft and be moved by the platform of a car.

2. The combination with a railroad track, comprising ties and rails therefor, of a plurality of fish plates formed with apertures, swinging arms pivotally secured to the fish plates formed with raised ends arranged to ride the rails of the track, and means for moving said raised ends over the rails of said track arranged to be actuated by the vertical movement of a car in a shaft.

3. The combination with a railroad track comprising ties and rails therefor, of fish plates formed with apertures secured to outer sides of the rails, swinging members pivotally secured to the fish plates, each of said swinging members being formed with raised end portions arranged to be moved over the top of the rails and when so moved to act as buffers, means engaged by a vertically moving car for moving the raised ends of said swinging rails, and a spring for controlling said moving means.

899,246. AUTOMATIC SANDING APPARATUS FOR FLUID-PRESSURE BRAKES. EDWARD G. DESOE, West Springfield, Mass., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Feb. 6, 1907. Serial No. 356,030.



1. The combination with a fluid pressure brake apparatus having a brake cylinder, of a sanding device operated by the fluid supplied to the brake cylinder.

2. The combination with a fluid pressure brake apparatus having a brake cylinder, of a sanding device, and a pipe connection from the brake cylinder to said sanding device.

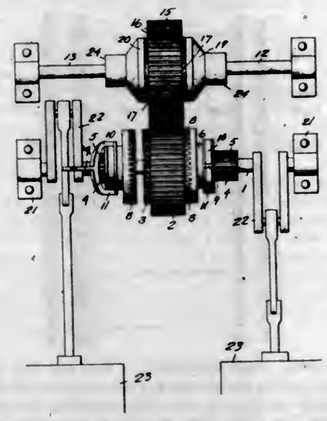
3. The combination with a fluid pressure brake apparatus having a brake cylinder, of a sanding device, and means whereby air from the brake cylinder is supplied to said sanding device.

4. The combination with a fluid pressure brake apparatus having a brake cylinder, of a sand blower device, and a pipe for establishing communication from the brake cylinder to the sand blower pipe.

5. The combination with a fluid pressure brake apparatus having a brake cylinder and means for maintaining the brake cylinder pressure, of a sanding device, and means for supplying air from the brake cylinder to said sanding device.

[Claims 6 to 9 not printed in the Gazette.]

899,247. ENGINE-GEAR. HARDY I. DRAKE, Ness City, Kans. Filed Apr. 13, 1907. Serial No. 368,012.



In a gearing of the class described, the combination with a main driving shaft, of a gear wheel loosely mounted thereon, and having crown teeth at opposite sides thereof, radially toothed pinions fixed to the shaft at opposite sides and adjacent the loose gear wheel, hubs having internal teeth engaging the teeth of the pinions and slidable upon the latter, crown teeth projecting from one side of each hub, and adapted to interfit the crown teeth of the loose gear wheel, and throw levers operating the hubs to move the same on said pinions to bring the crown teeth of the hubs into engagement with the crown teeth of the gear wheel whereby the latter will be locked to the main driving shaft.

899,248. BILGE-WATER EJECTOR. LOUIS EBBE, Blaine, Wash. Filed Jan. 9, 1908. Serial No. 410,053.



1. An attachment of the character described comprising an outlet tube, a tubular body extending beyond one end of said tube and having an outlet at one end and a reduced inlet opening at its other end and below the tube, said tube being disposed to be connected to the bilge of a boat, a valve, and a gravity operated member for holding the valve normally upon its seat to close the inlet of the tube, said gravity operated member being disposed within the body and between the reduced inlet and the outlet thereof.

2. An attachment of the character described comprising an outlet tube, a tubular body extending beyond one end of said tube and having an outlet at one end and a reduced inlet opening at its other end and below the tube, said tube being disposed to be connected to and to communicate with the interior of the hull of a boat, a valve for closing the inlets of said tube, a lever extending therefrom and fulcrumed within the tube, and a combined blade and weight at one end of the lever and extending into the body and between the reduced inlet and the outlet thereof.

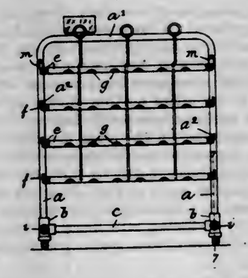
3. An attachment of the character described comprising an outlet tube, a tubular body at the discharge end of said tube, said body having a reduced inlet adjacent the discharge end of the tube and an outlet, a valve, and means operated by the passage of water through the body for opening the valve.

4. An attachment of the character described comprising an outlet tube, a body extending therebeyond and having an outlet at one end and a reduced inlet at the other end and adjacent the discharge end of the tube, a valve normally closing the inlet end of the tube, and means operated by the pressure of water passing through the body for opening the valve.

5. The combination with the hull of a boat; of an outlet tube extending rearwardly therefrom, a tubular body partly surrounding the discharge end of said tube and having an outlet at its rear end and a reduced inlet adjacent the discharge end of the tube, a valve normally seated in the inlet portion of the tube, and a combined weight and blade movable with the valve and disposed within the body, said blade being normally interposed between the inlet and outlet of the body.

[Claim 6 not printed in the Gazette.]

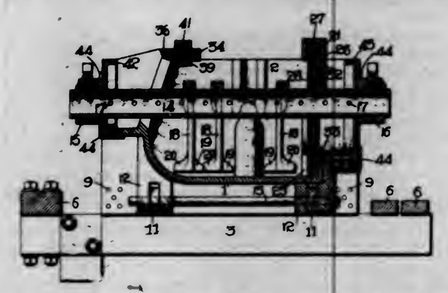
899,249. SHOE-RACK. GEORGE B. GARDNER and ALBERT H. HIGGINS, Haverhill, Mass. Filed Jan. 14, 1908. Serial No. 410,756.



1. A shoe rack comprising a pair of oppositely disposed end sections each having a corresponding series of pairs of sockets in the adjacent sides thereof, a series of trays each comprising a rectangular frame having a series of right-angular, sheet-metal plates, each plate extending about a corner of the frame and having one portion connected to a side and the other to an end thereof and provided at its middle portion with an integral tongue extending longitudinally of the tray beyond the end thereof in position to be received by a corresponding socket of said end sections, substantially as described.

2. A shoe rack comprising a pair of oppositely disposed end sections, a series of trays removably connected to said end sections and a series of vertical rods extending through the end portions of said trays and removably mounted therein, substantially as described.

899,250. APPARATUS FOR MAKING GREEN-SAND CORES. JAMES W. GIBNEY, Buffalo, N. Y., assignor to W. P. Taylor Company, Buffalo, N. Y., a Corporation of New York. Filed Oct. 5, 1907. Serial No. 396,097.



1. In an improved apparatus of the class described, a base shaped in contour to form a pattern for the lower portion of the core, sides hinged to the base and shaped in contour to form a pattern for the sides of the core and a transverse locking piece for positively securing the sides in closed position; said locking piece also constituting a pattern for the upper portion of the lid seat, whereby the lid seat is formed completely with the core, substantially as set forth.

2. In an improved apparatus of the class described, a base shaped in contour to form a pattern for the lower portion of the core, sides hinged to the base and shaped in contour to form a pattern for the sides of the core and a transverse locking piece for positively securing the sides in closed position; said locking piece having a beveled edge forming a pattern for the upper portion of the lid seat, substantially as set forth.

3. In an apparatus of the class described, a base and movable sides shaped to constitute a pattern for the bottom and sides of the core and to form the lower portion and sides of the lid seat and an upper element mounted on the sides and consisting of a narrow transverse bar shaped to form the upper portion of the lid seat, whereby the entire lid seat is formed complete with the core, substantially as set forth.

4. In an apparatus of the class described, a base and movable sides shaped to constitute a pattern for the bottom and sides of the core and to form the lower portion and sides of the lid seat and an upper element mounted on the sides and consisting of a narrow transverse bar shaped to form the upper portion of the lid seat and two depending end portions adapted to lock upon the sides.

5. In an apparatus of the class described, a base and movable sides shaped to constitute a pattern for the bottom and sides of the core and to form the lower portion and sides of the lid seat, and an arbor on the base consisting of a tubular body adapted to form the backbone of the core, loosely swinging ribs hung at intervals on the tubular body and metal end pieces adapted to constitute the core ends.

[Claims 6 to 14 not printed in the Gazette.]

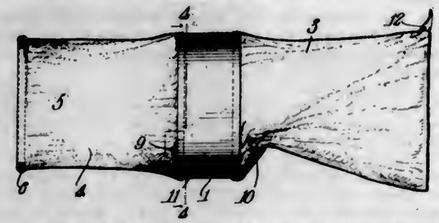
899,251. ANIMAL-BREEDER'S BAG. FRANK B. GRAHAM, Garnett, Kans. Filed Nov. 7, 1907. Serial No. 401,138.

1. A receptacle closed at its inner end adapted to be inserted within the vagina to receive and retain semen, and having means for holding it in place therein.

2. A receptacle closed at its inner end adapted to be inserted within the vagina to receive and retain semen and resilient means for holding said receptacle therein.

3. An elastic receptacle closed at its inner end adapted to be inserted within the vagina to receive and retain semen, and a resilient band for clamping said receptacle against the wall of the vagina.

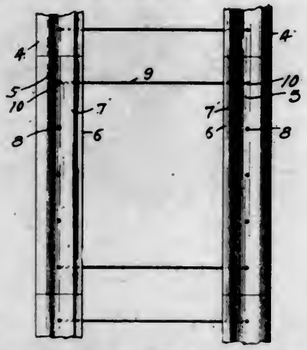
4. A bag-like receptacle made of thin elastic material adapted to be placed within the vagina for receiving and retaining semen, and a resilient band made of heavier material intermediate the ends of said receptacle for clamping it against the wall of the vagina.



5. A receptacle for receiving and retaining semen adapted to be folded for insertion into the vagina and unfolded and clamped therein.

[Claims 6 to 15 not printed in the Gazette.]

899,252. TRACK OR ROADWAY. LESLIE S. HACKNEY, St. Paul, Minn. Filed Aug. 9, 1907. Serial No. 387,770.



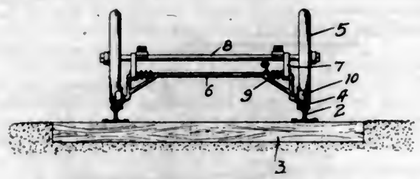
1. A vehicle track comprising a roadway and a wheel track laid therein and consisting of concrete rail sections, each section having an upwardly extending flange at its inner edge, the outer faces of said flanges being concave and the tread surfaces of said sections being also concave and merging into the curve of the corresponding surfaces of said flanges and forming therewith wheel treads which correspond substantially to the cross sectional curve of the wheel tires whereby the said tires will bear uniformly on the track and the wear thereon will be evenly distributed.

2. A vehicle track comprising a roadway and a wheel track laid therein and consisting of a series of rail sections placed end to end, said sections having upwardly extending flanges at their inner edges and the roadway being filled in between said flanges with its middle portion above the level of the tops of said flanges, and the outer edges of said sections being below the level of the roadway between said sections and above the roadway on each side of the wheel track, and said sections having concave wheel surfaces, substantially as described.

3. A vehicle track comprising a gravel roadway and a rubble foundation laid therein and a wheel track laid in said rubble foundations, said track being composed of sections placed end to end and having upwardly extending flanges on their inner edges, the roadway being filled in between and having a rounded upper surface projecting above said flanges and the wheel surfaces of said sections being concave and corresponding substantially to the cross sectional curve of the tire tread, substantially as described.

4. A vehicle track comprising a roadway and a wheel track laid thereon and consisting of concrete rail sections having upwardly extending flanges at their inner edges, said rail sections having holes therein at intervals and tie rods extending across the roadway and having upwardly turned ends fitting within said holes.

899,253. VEHICLE-GUIDING MEANS. LESLIE S. HACKNEY, St. Paul, Minn. Filed Aug. 9, 1907. Serial No. 387,771.

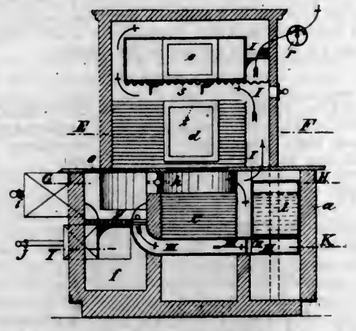


1. A vehicle track having an upper or tread surface to receive the vehicle or car wheels, a yoke mounted on the frame of the vehicle and having arms yieldingly held toward said track, wheels mounted on said arms and having flat treads adapted to rest and normally travel on the top of said track, said wheels having flanges on one side arranged to extend down beside the rails and contact with the inner faces thereof, whereby the vehicle wheels will be held on the track and said flanged wheels revolving in planes parallel substantially with the plane of the vehicle wheels, substantially as described.

2. The combination, with a frame having carrying wheels and hangers depending therefrom, of a yoke extending transversely of said frame and journaled near its ends in said hangers and provided with depending arms and flanged guiding wheels mounted on said arms and operating in vertical planes parallel substantially with the planes of said carrying wheels, and means for yieldingly holding said flanged wheels in a depressed position.

3. The combination, with a frame having carrying wheels, of a yoke journaled on said frame and extending from side to side thereof, and means for yieldingly holding said yoke in a depressed position, guiding wheels carried by said yoke and having flat tread surfaces and rails arranged to receive said flat surfaces and said wheels having depending flanges arranged to bear on the inner faces of said rails and said wheels operating in vertical planes, substantially as described.

899,254. COOKING-RANGE. KATHE LUGER-HEFEL, Dornbirn, Austria-Hungary. Filed Aug. 23, 1907. Serial No. 389,825.

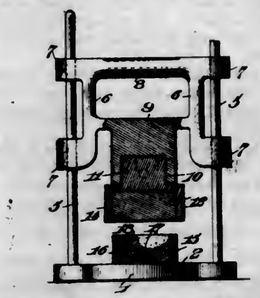


1. In a cooking range the combination of a grate having a rear outlet and two lateral outlets with an oven, the rear outlet communicating with a flue extending adjacent one end of the oven, one of said lateral outlets opening above the grate and communicating with a flue extending over the oven and the other lateral outlet opening at the level of the grate and communicating with a flue extending under the oven.

2. In a cooking range the combination of a grate having an outlet at its end and two lateral outlets with an oven one of said lateral outlets opening above the grate and communicating with a flue extending across the top of the oven and the other lateral outlet opening at the level of the grate and communicating with a flue extending across the bottom of the oven.

3. In a cooking range the combination of a grate having an outlet at its end and two lateral outlets with an upper oven and a lower oven, the outlet at the end of the grate communicating with a flue extending under the upper oven and adjacent the end of the lower oven, one of said lateral outlets communicating with a flue extending over the top of the lower oven and the other lateral outlet communicating with a flue extending under the bottom of the lower oven.

899,255. DENTAL CASTING-MACHINE. HARRY G. MAIZE, Philadelphia, Pa. Filed Feb. 19, 1908. Serial No. 416,679.



1. In a device of the character described, a mold, a support therefor, a plurality of concentric grooves in said support whereby said mold is centered and a receptacle adapted to embrace said mold to force material into said mold under pressure.

2. In a device of the character described, a flask, a mold in said flask, a support therefor, guides secured to said support, a frame adapted to slide on said guides, a receptacle on said frame adapted to inclose said flask and means in said receptacle to force material into said mold under pressure.

3. In a device of the character described, a flask, a mold in said flask, a support therefor, guides secured to said support, a frame adapted to slide on said guides, a head on said frame a receptacle detachably secured to said head and adapted to inclose said flask, and means in said receptacle to force material under pressure into said mold when said frame is lowered.

4. In a device of the character described, a base, concentric grooves in said base adapted to center different sized flasks, guide spindles secured to said base, a frame slidably mounted on said spindles, a receptacle secured to said frame adapted to inclose a flask, and means in said receptacle for forcing material into a mold formed in said flask.

5. In a device of the character described, a base having a plurality of concentric grooves for centering different sized flasks, guide spindles secured to said base, a frame slidably mounted on said guide spindles, a hand-grip for manual operation thereof, a receptacle secured to said frame adapted to inclose a flask, and means in said receptacle to force a material into a mold formed in said flask.

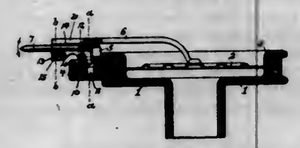
[Claims 6 to 8 not printed in the Gazette.]

899,256. SOUND-BOX FOR TALKING-MACHINES. EDWIN H. MOBLEY, Hillside, Pa. Filed Aug. 17, 1907. Serial No. 389,029.

1. A sound box having a diaphragm, a stylus lever, a bearing block therefor, upturned pins at the bottom of the stylus lever adapted to inverted bearings on the block, and a single central spring for retaining said pins in contact with said bearings.

2. A sound box stylus lever having a head with opposed elastic members, between which a stylus can be confined

by their frictional grip upon it, and means engaging one of said members and passing freely through the other for separating said opposed members of the lever to release the stylus from the grip of the same.



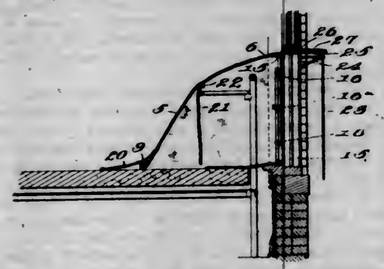
3. A sound box stylus lever having a head with opposed elastic members between which a stylus can be gripped, and pins, each carried by one of said members and projecting through and beyond the other member, one in one direction and the other in the opposite direction, whereby pressure upon the pins will effect the separation of said elastic members.

4. A sound box stylus lever comprising a stem and an enlarged head, the latter being folded on a longitudinal line disposed centrally between opposite symmetrical portions of the head.

5. A sound box stylus lever comprising a stem and an enlarged head, the latter being folded on a longitudinal line and having an incision, on the line of fold.

[Claims 6 to 14 not printed in the Gazette.]

899,257. VENTILATING-CANOPY FOR BEDS. JAMES N. MOODY, South Boston, Va. Filed June 16, 1908. Serial No. 438,800.



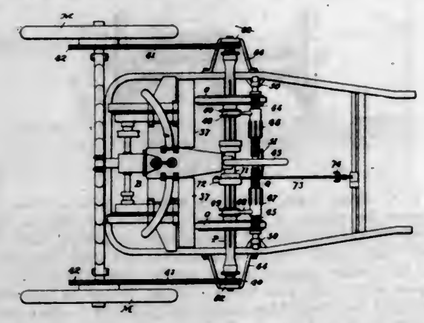
1. A ventilating canopy for beds provided with a supporting frame adapted to fit in a window, said frame having adjustable top and bottom bars which can be extended or contracted to fit in the window casing, and a clamping device attached to one bar and including a lever bearing against the other bar to hold the frame in extended position in the window casing.

2. A canopy for beds, having a supporting frame adapted to fit in a window casing, said frame being formed of extensible pieces, and having a cam lever pivoted to one piece and bearing against the end of the other piece to hold the frame in extended position.

3. The combination with a canopy for the head of a bed, and means to support the same at the inside of a window, of a curtain supported outside of the window and spaced from the window casing at the top and bottom, and a hood projecting from the window casing over the opening at the top of the curtain.

899,258. TRANSMISSION-GEAR FOR MOTOR-VEHICLES. EMIL A. NELSON, Detroit, Mich., assignor to William J. Newton and Charles J. Woodall, Detroit, Mich. Filed Jan. 24, 1906. Serial No. 297,626.

1. The combination with the independent drive wheels of a vehicle, of a motor and friction disks connected to be driven thereby, a friction wheel peripherally engaging each disk and each geared with one of the drive wheels, and means for shifting the friction wheels simultaneously inward and outward, said means supported to slide to a limited extent to carry both friction wheels simultaneously in the same direction, substantially as set forth.



2. The combination with the independent drive wheels of a vehicle, of a motor and friction disks connected to be driven thereby, a friction wheel peripherally engaging each disk and sprocket and chain gearing connecting each disk and one of the drive wheels, and means for shifting the friction wheels simultaneously inward and outward, said means supported to slide to a limited extent to carry both friction wheels simultaneously in the same direction, substantially as set forth.

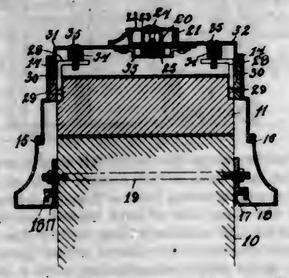
3. The combination with the drive wheels of a vehicle, of independent friction wheels each geared to one of the drive wheels, shifting devices whereby to carry the friction wheels simultaneously inward or outward, and a support for the shifting devices constructed to permit the same to move laterally with both friction wheels, substantially as set forth.

4. The combination with the driving wheels of a vehicle of a shaft consisting of two sections, a sprocket on each, a sprocket connected with each driving wheel, chains between the sprockets of the driving wheels and the shaft, a friction wheel upon each section of the shaft, and an engine a friction disk driven thereby with which the said friction wheel engages.

5. The combination with the two friction disks, of friction wheels peripherally engaging said disks, a shaft with reverse threads, threaded sleeves on said shaft, each connected with one of the wheels to move it laterally, and means for rotating said shaft to simultaneously carry the wheels inward or outward, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

899,259. SHEET-METAL-FRAME CONSTRUCTION. ENOCH OHNSTRAND, Jamestown, N. Y., assignor to Ohnstrand Metal Furniture Company, Jamestown, N. Y. Filed Jan. 25, 1907. Serial No. 353,968.



1. In sheet metal frame construction, a casing composed of two lengthwise interlapping parts, said parts slotted at the interlap, a suitable tie piece within said lap, and screw bolts in said parts and tie piece to adjustably hold the same.

2. In sheet metal frame construction, a casing composed of two parts interlapping on their inner edges along the jambs and lintel, inturned flanges on the outer edges of said parts, cleats on the wall to hold said inturned flanges, one of said interlapping edges having crosswise slots, a suitable tie strip within said lap, and bolts in said slotted interlapping parts to adjustably hold the same.

3. In sheet metal frame construction, a casing composed of two parts interlapping on their inner edges, the outer interlapping edge formed in a door or window stop, an inner channel piece to hold said stop, the inner of said lapping parts slotted crosswise at the lap, and screw bolts to adjustably hold said parts.

4. In sheet metal frame construction, a suitable casing for the jambs, a lintel casing consisting of side facings for the wall, an adjustable inner facing dependingly supported below said side facings, and springs within said inner facing to adjust the same to a door or window.

5. In a sheet metal frame construction, a lintel casing composed of two outer parts and means for attaching them to the wall, angle irons attached to said outer parts having a space between said angle irons and facings, a lintel under facing having flanges to enter said space between said angle irons and outer parts, screw bolts attaching said lintel under facing to said angle irons, and coil springs around said screw bolts.

[Claims 6 to 8 not printed in the Gazette.]

899,260. COLD KNOB FOR POT-COVERS. HARVEY C. PARKINSON, Berkeley, Cal. Filed Aug. 26, 1907. Serial No. 390,144.



1. A lifting device for pot covers, comprising a handle and normally open flat spring jaws depending therefrom, said jaws having means integral therewith for engaging and removably holding the reduced portion or neck of the knob of a pot cover.

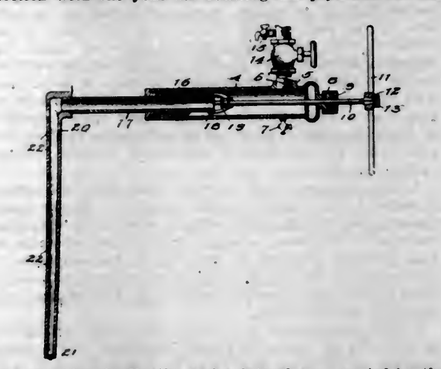
2. In a cold knob for pot covers, a non-conducting knob, a flat spring secured to the base thereof, and having a pair of oppositely curved arms depending therefrom, said arms having means integral therewith for engaging and removably holding the reduced portion or neck of a pot cover knob.

3. In a cold knob for pot covers, the combination of a knob of non-conducting material, a flat spring secured thereto and comprising a pair of arms depending therefrom, and a notch cut respectively in the end of each arm to embrace a pot cover knob.

899,261. BOILER-CLEANER. CHARLES H. PRESCOTT, East Liverpool, Ohio. Filed Mar. 12, 1908. Serial No. 420,724.

1. The combination of a boiler provided with flues and having a wall opposite one end thereof, a chest mounted in the wall, a pipe extending loosely through the inner end of the chest and communicating with the interior thereof, a steam pipe leading to the chest, a lateral arm carried by the pipe and having a triangular cross section, the end of the lateral arm being open, and one of the longitudinal edges of the said arm being formed with a series of jet openings, a removable plug for the open end of the arm, and means for rotating the pipe to swing the lateral arm across the end of the boiler, so that the steam jets issuing therefrom will pass through the flues.

2. The combination of a boiler provided with flues and having a wall opposite one end thereof, a rectangular steam chest mounted in the wall, a packing box at the outer end of the steam chest, a sleeve projecting within the steam chest at the inner end thereof, a pipe passing loosely through the sleeve, a collar applied to the pipe and coöperating with the sleeve to limit the sliding movement of the pipe, a yoke upon the collar, a rod extending through the packing box and having an operative connection with the yoke for rotating the pipe and moving



the same longitudinally, and a lateral arm carried by the pipe and adapted to be swung across the end of the boiler, the said lateral arm being formed with jet openings.

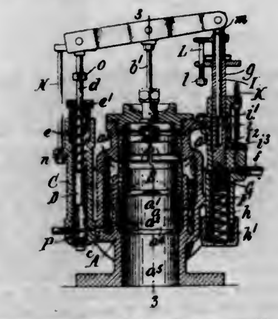
899,262. RAILWAY-TIE. JOHN C. REED, Akron, Ohio. Filed Apr. 3, 1908. Serial No. 424,982.



1. A metallic railway tie formed with a top and sides, the sides being cut away under the rails and the portions of the top under the rails being tempered.

2. A metallic railway tie formed with a top and sides, the sides being provided with longitudinal slots under the rails and located adjacent the top and the portions of the top under the rails and over the slots being tempered.

899,263. AUTOMATIC PRESSURE-GOVERNOR. GEORGE M. RICHARDS, Erie, Pa. Filed Oct. 26, 1906. Serial No. 340,640.



1. The combination of a valve controlling the supply of motive fluid to an engine, a devide operated by fluid pressure produced by said engine for gradually opening said valve wider as said pressure increases, and a normally inactive auxiliary device operated by the fluid pressure created by the engine to move said valve in opposition to said first mentioned device, substantially as set forth.

2. The combination of a valve controlling the supply of steam to an engine, a primary piston operated by fluid pressure produced by said engine for gradually opening said valve wider as said pressure increases, and a normally inactive auxiliary piston operated by said fluid pressure when a predetermined pressure is reached to

move said valve in opposition to said primary piston, substantially as set forth.

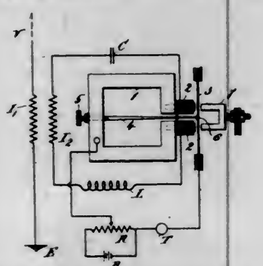
3. The combination of a valve controlling the supply of motive fluid to an engine, means controlled by the pressure of the motive fluid for shifting said valve in accordance with fluctuations in said pressure, means operated by fluid pressure produced by said engine and connected to said valve for shifting the same in accordance with variations in the fluid pressure produced by said engine, and a normally inactive auxiliary device operated by the fluid pressure produced by said engine to shift said valve when a predetermined pressure is reached, substantially as set forth.

4. The combination of a valve controlling the supply of steam to an engine, a piston controlled by the steam pressure for shifting said valve in accordance with fluctuations in the steam pressure, and a piston operated by fluid pressure produced by said engine and connected to said valve for shifting the same in accordance with variations in the fluid pressure produced by said engine, substantially as set forth.

5. The combination of a valve controlling the supply of steam to an engine, a piston controlled by the steam pressure for shifting said valve in accordance with fluctuations in the steam pressure, a piston operated by fluid pressure produced by said engine and connected to said valve for shifting the same, and a normally inactive piston operated by said fluid pressure when a predetermined pressure is reached for moving said valve to reduce the supply of steam to the engine, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

899,264. OSCILLATION-DETECTOR. CHARLES E. RUSSELL, Cambridge, Mass., assignor to Stone Telegraph and Telephone Company, Boston, Mass. Filed Sept. 4, 1906. Serial No. 333,041.

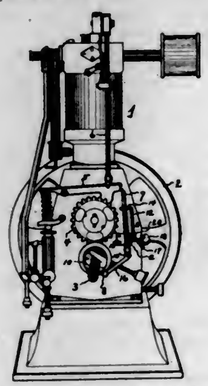


1. An oscillation detector comprising a magnetizable member forming part of a magnetic circuit, a source of constant unidirectional magnetomotive force associated with said magnetic circuit, means whereby the permeability of said magnetic circuit may be increased by the electrical oscillations to be determined, a movable member of magnetic material arranged so as to be actuated by the resulting increase in the magnetic flux in said magnetic circuit, an electric circuit including a signal-indicating device and a source of electromotive force, and means whereby current variations may be created in said electric circuit by the movement of said movable member.

2. An oscillation detector comprising a soft iron core, a coil surrounding said core and forming part of an oscillation circuit, a permanent magnet in fixed relation with respect to said core, a diaphragm actuated by the increase in the magnetic flux in said core resulting from the passage of the electrical oscillations to be detected through said coil, an electric circuit including a signal-indicating device and a source of electromotive force ,and means whereby current variations may be created in said electric circuit by the movement of said diaphragm.

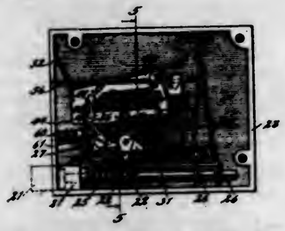
3. An oscillation detector comprising a soft iron core, a coil surrounding said core and forming part of an oscillation circuit, a permanent magnet in fixed relation with respect to said core, a balanced diaphragm actuated by the increase in the magnetic flux in said core resulting from the passage of the electrical oscillations to be detected through said coil, an electric circuit including a signal-indicating device and a source of electromotive force, and means whereby current variations may be created in said electric circuit by the movement of said diaphragm.

899,265. SPEED-REGULATOR FOR GAS-ENGINES. JOHN B. SCHMIDT, Scribner, Nebr., assignor of one-half to West Brothers, Wisner, Nebr., a Firm. Filed Jan. 24, 1908. Serial No. 412,422.



In a speed regulator for gasolene engines, the combination with a valve rod, a cam lever connected thereto, a detent lever pivoted intermediate its ends to the engine frame, a governor sleeve an anti-friction member mounted upon the lower end of the detent lever and engaging said governor sleeve, a fixed member secured to the engine frame, an arm pivoted to said fixed member the upper end of said arm being bent to form a member which extends around and engages the detent lever and a laterally movable adjusting member carried by the fixed member which engages the said arm below its pivoted point.

899,266. LOCK. SIMON H. SHANK, Chicago, Ill. Filed Apr. 3, 1908. Serial No. 424,854.



1. In a lock, the combination of a bolt, a key operated tumbler, connections between said bolt and said tumbler for engaging and releasing the latter, an adjustable ward adapted to interfit with said tumbler, means for holding said ward in set position and mountings whereby the tumbler is permitted to float in a plane parallel to the side of the lock for entering and leaving said ward.

2. In a lock, the combination of a bolt, a key operated tumbler, connections between said bolt and said tumbler for engaging and releasing the latter, an adjustable ward adapted to interfit with said tumbler, means for holding said ward in set position and mountings whereby the tumbler is permitted to float in a plane parallel to the side of the lock for entering and leaving said ward, and springs for acting upon said tumbler for holding it near the key hole where it may be acted on by the key.

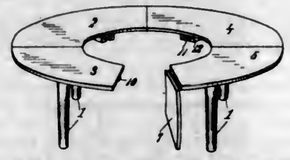
3. In a lock, the combination of a bolt, a frame wherein said bolt is slidingly mounted, said frame being slidable within the lock casing in a direction lengthwise of the bolt, a spring for holding said frame back, a catch for holding said frame forward, means for moving the frame forward into engagement with said catch, a key operated tumbler for disengaging said catch from said frame and means for preventing movement of the tumbler except in a predetermined path.

4. In a lock, the combination of a bolt, a frame wherein said bolt is slidably mounted, said frame being slidable within the lock casing in a direction lengthwise of the bolt, a spring for holding said frame back, a catch for holding said frame forward, means for moving the frame forward into engagement with said catch, a key operated tumbler for disengaging said catch from said frame, an adjustable ward for the tumbler and means for holding the ward in set position.

5. In a lock, the combination of a bolt, a frame wherein said bolt is slidingly mounted, said frame being slidable within the lock casing in a direction lengthwise of the bolt, a spring tending to hold said frame back, a catch for holding said frame forward, means for moving the frame forward into engagement with said catch, a key operated tumbler for disengaging said catch from said frame, an adjustable ward for the tumbler, and an eccentric operable from outside the lock for holding the ward in set position.

[Claims 6 to 11 not printed in the Gazette.]

899,267. TABLE. ROSE M. SHEEHAN, Sacramento, Cal. Filed May 4, 1908. Serial No. 430,858.



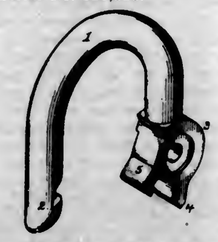
1. In a table, the combination of an annual sectional top, means to secure each section to its adjacent section, and an entrance section hinged to the annular top.

2. In a table, the combination of an annular sectional top supported by legs, means to secure each section to its adjacent section, a hinged entrance section, and a removable central section.

3. In a table, the combination of an annular sectional top supported by legs, means to secure each section to its adjacent section, a hinged entrance section, a central section adapted to fit the annulus, and slides carried by the annulus for supporting the central section.

4. In a table, the combination of an annular sectional top supported by legs, means to secure each section to its adjacent section, a hinged entrance section, a hinged two part central section adapted to fit the annulus, and slides carried by the annulus and adapted to support the central section.

899,268. PADLOCK-SHACKLE. FRANK SOLEY, Philadelphia, Pa., assignor to Miller Lock Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 12, 1906. Serial No. 325,828.



A padlock shackle having a bow of oblong cross section, tapering from the portion of greatest width to a curve at the inner side of the bow, which curve is of less diameter than the width of the bow.

899,269. CLINOMETER. ROLLIN M. STALEY, Centerville, Iowa, assignor of one-half to Will S. Bryant, Centerville, Iowa. Filed Mar. 28, 1908. Serial No. 423,922.

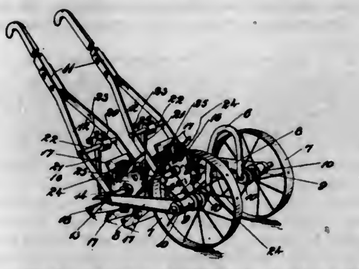


1. In a device of the kind described, a level beam of substantially I-shape in cross section provided with a rectangular pocket formed therein, and a clinometer arranged to fit in said pocket and provided with lips to extend over the web of said beam.

2. In a device of the kind described, a level beam of substantially I-shape in cross section provided with a rectangular pocket formed therein, a clinometer arranged to fit in said pocket and provided with lips to extend over the web of said beam, lugs formed upon said clinometer, and set screws held in said lugs to secure said clinometer to said beam.

3. In a device of the kind described, a level beam provided with a rectangular pocket therein, a clinometer comprising a casing having a semi-circular recess therein, a plumb bob supported in said recess, and scales around the arc of said semi-circle held in said pocket, and means to secure the same to said beam.

899,270. CULTIVATOR. WALLACE W. STAUFFER, Nappanee, Ind. Filed Nov. 22, 1907. Serial No. 403,366.



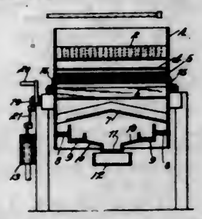
1. A cultivator having a wheeled axle, a rearwardly extending arm mounted on the axle, a bolt projecting laterally from the arm, a handle having branches pivotally connected to opposite ends of the bolt, a horizontal bar extending across between said branches, a blade having an upright shank, and a coupling between the bar and the shank.

2. A cultivator comprising an arched axle mounted on wheels, an arm connected to each end of the axle and extending rearwardly, a bolt projecting laterally from the rear end of each arm, a handle having branches connected to opposite ends of the bolt, a wheel provided with blades, on the bolt between said branches, and a blade carried by the handle and extending across behind said wheel.

899,271. GOLD-SAVING APPARATUS. RICHARD G. STEELE, Rutherford, Cal., assignor of one-half to Thomas B. Edington, Rutherford, Cal. Filed Apr. 22, 1908. Serial No. 428,654.

1. An apparatus for saving gold and mineral products, said apparatus consisting of a horizontally supported oscillating box having an inclined screen in the upper part, amalgamated copper plates, the uppermost of which is located beneath the screen to receive material therefrom, said plates being carried by the box and incling alternately in opposite directions, an inclined receiving chute into which the lowermost of the plates discharges, a series of mercury-containing receptacles, said receptacles being carried by the box and being arranged parallel with the sides thereof and underlying and extending in the

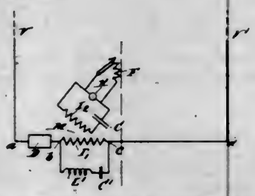
direction of the length of said plates, into the first of which receptacles the discharge material is received, and into the others of which it passes by overflow, a final sodium amalgam container, and an ultimate discharge chute for the waste material.



2. In an apparatus of the character described, a horizontally supported box, means by which said box is oscillated in the direction of its length, an inclined screen located in the upper part of the box, and upon which material to be treated is discharged with water, oppositely inclined amalgamated copper plates carried by said box and upon which the material is successively discharged from the screen and from each other, a double chute upon which the last of the amalgam plates discharges, said chute declining transversely and outwardly with relation to the plates, mercury-containing chambers carried by the box and arranged side by side therein in different horizontal planes, said chambers having their greatest length in the direction of the length of the plates and parallel with the long sides of the box into which chambers the outer ends of the chute discharge, a centrally located container of sodium amalgam, said container serving as the final receiver for saving platinum, and a waste overflow leading therefrom.

3. In an apparatus of the character described, a horizontally supported box carrying inclined screen amalgamated copper plates, diverting chute and mercury-containing receiving chambers, said chute and chambers being carried by the box and said chambers extending parallel with the long sides of said box and arranged side by side in different horizontal planes and adapted to deliver material from one to the other towards the center of the box, means for supplying water to the box, said means including a pump and oscillating lever through which power is applied to operate the pump, gears and pinions actuated in unison with the movements of the pump, and connecting rods or pitmen extending therefrom to the box whereby it is reciprocated in the direction of its length.

899,272. APPARATUS FOR DETERMINING THE DIRECTION OF SPACE-TELEGRAPH SIGNALS. JOHN S. STONE, Cambridge, Mass., assignor to William W. Swan, trustee, Brookline, Mass. Filed Aug. 17, 1906. Serial No. 330,964.



1. A system of space telegraphy comprising a system of ungrounded elevated conductors capable of receiving the energy of electromagnetic waves and also capable of having its position changed relatively to the direction of motion of the electromagnetic waves, a conductor connecting said elevated conductors, means connected with said conductor and dividing the same into two unequal parts, an oscillation detector associated with said means, means for rendering the two parts of said conductor electrically equivalent, and means whereby said oscillation detector may indicate a signal only when said system of electrical conductors has a predetermined position relative to the direction of motion of said electromagnetic waves.

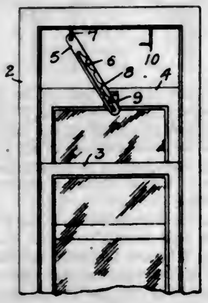
2. A system of space telegraphy comprising elevated receiving conductors, a conductor connecting said receiving conductors, means connected with said conductor and dividing the same into two unequal parts for associating an oscillation detector therewith, and an artificial line in one of said parts.

3. A system of space telegraphy comprising elevated receiving conductors, a conductor connecting said receiving conductors, means connected with said conductor and dividing the same into two unequal parts for associating an oscillation detector therewith, and means for rendering the two parts of said conductor electrically equivalent.

4. A system of spaced telegraphy comprising ungrounded elevated receiving conductors, a conductor connecting said receiving conductors, means connected with said conductor and dividing the same into two unequal parts for associating an oscillation detector therewith, and an artificial line in one of said parts.

5. A system of space telegraphy comprising ungrounded elevated receiving conductors, a conductor connecting said receiving conductors, means connected with said conductor and dividing the same into two unequal parts for associating an oscillation detector therewith, and means for rendering the two parts of said conductor electrically equivalent.

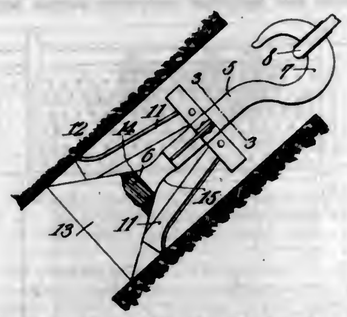
899,273. WINDOW-SASH SUPPORT. SPERRY B. STORMS, Minneapolis, Minn. Filed Dec. 19, 1907. Serial No. 407,123.



1. The combination, with a window frame, of an upper sash, a plate 5 pivoted at one end in the top of said frame, said plate having a longitudinal slot 6 therein and a series of recesses 8 in one edge communicating with said slot, a stud 9 secured to the top of said sash and having a hooked end adapted to slide in said slot and a shank to enter the recesses in said plate whereby said sash may be supported at different elevations, said plate being swung up under the top of said frame when the window is raised to its closed position, and a hook device mounted in said frame and adapted to swing in under the free end of said plate and lock it in its raised horizontal position and prevent the lowering of said sash, substantially as described.

2. The combination, with a window frame, of an upper sash, a plate pivoted at one end to the top of said frame and having a longitudinal slot therein and a series of diagonal recesses communicating with said slot, a stud secured to the top of said sash and having an end adapted to slide in said slot, and a shank to enter successively the recesses in said plate, whereby said sash may be supported at different elevations, said plate being adapted to swing up to the top of said frame in a horizontal position when the window is closed, and means for supporting said plate in such horizontal position, and a spring attached at one end to said plate and at its other end to said hook, whereby the sash will be supported when lowered, substantially as described.

899,274. GUY-ANCHOR. HOWELL M. THOMAS, Colorado Springs, Colo. Filed May 12, 1908. Serial No. 432,408.



1. A device of the class described including a stem having one end thereof provided with means for attachment to a guy wire, a frame slidably mounted on the stem, anchoring arms pivotally connected with the frame, and an expander carried by the opposite end of the stem for moving the arms to expanded position when a longitudinal pull is exerted on the guy wire, there being a circumferential groove formed in the stem to permit free lateral movement of the anchoring arms.

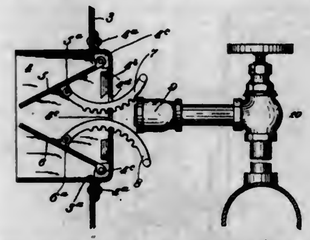
2. A device of the class described including a stem having one end thereof threaded and its opposite end bent to form a hook for engagement with a guy wire, a frame slidably mounted on the stem, anchoring arms pivotally mounted in the frame and provided with laterally extending spurs, and a cone engaging the threaded end of the stem and adapted to engage the anchoring arms for moving the same to expanded position when a longitudinal pull is exerted on the guy wire, there being a circumferential groove formed in the stem at the threaded end of the latter for registration with the sliding frame when the arms are moved to expanded position.

3. A device of the class described including a stem having one end thereof bent to form a hook for engagement with a guy wire and its opposite end provided with a threaded extension defining an annular stop shoulder, a frame slidably mounted on the stem, anchoring arms pivotally mounted in the frame and provided with laterally extending spurs, a cone bearing against the stop shoulder and having a threaded socket formed therein for engagement with the threaded end of the stem, said cone being adapted to expand the arms when a longitudinal pull is exerted on the guy wire, there being an annular groove formed in the stem at said shoulder to permit free lateral movement of the anchoring arms.

4. A device of the class described including a stem cylindrical in cross section and having one end thereof bent to form a hook for engagement with a guy wire and its opposite end provided with a threaded extension defining a stop shoulder, there being an annular groove formed in the walls of the stem at said stop shoulder, a frame slidably mounted on the stem between the stop shoulder and hooked portion thereof and having a plurality of sets of spaced arms, anchoring arms pivotally mounted between the arms of the frame and having their free ends extended laterally to form spurs, the free ends of the arms at said spurs being inclined or beveled; and a cone bearing against the shoulder and provided with a threaded socket for engagement with the threads on the shank, said cone being adapted to engage the inclined portions of the anchoring spurs for moving the latter to expanded position when a longitudinal pull is exerted on the guy wire.

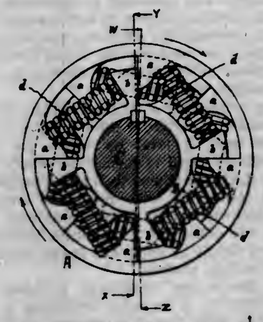
899,275. GAS-BURNING ATTACHMENT FOR FURNACES. GLEN G. WEINMAN, Columbus, Ohio. Filed Mar. 7, 1908. Serial No. 419,678.

1. A gas burning attachment for furnaces comprising, in combination, a thimble-like frame 4, open at its front and rear ends, and provided at its front end with an outwardly standing flange whereby it may be attached to a furnace doorway and an inwardly standing lip, deflecting plates hinged, each at one of its edges, to the upper and lower edges respectively of the front end of said frame and in rear of said inwardly standing lip, so that the latter shall obstruct the opening between the hinged edges of the deflecting plates and the frame, and arms 7 and 8 operatively engaging said deflecting plates respectively, said arms adapted to engage said frame to hold the plates in different positions to which they may be adjusted, substantially as described.



2. A gas burning attachment for furnaces comprising, in combination, a thimble-like frame 4 open at its front and rear ends and provided with means whereby it may be attached to a furnace door-way, and with an inwardly turned lip 4^b at its front or mouth end, deflecting plates 5 and 6 hinged respectively to the upper and lower edges of the front end of said frame, and arms 7 and 8 operatively engaging the ends of said deflector plates respectively, said arms adapted to engage said frame to hold said deflector plates in different positions to which they may be respectively adjusted, substantially as described.

899,276. SECTIONAL FEED-ROLL FOR PLANING AND OTHER MACHINES. LELAND B. WHIPPLE, Rochester, N. Y., assignor to American Wood Working Machinery Co., Rochester, N. Y., a Corporation of Pennsylvania. Filed Feb. 10, 1908. Serial No. 415,267.

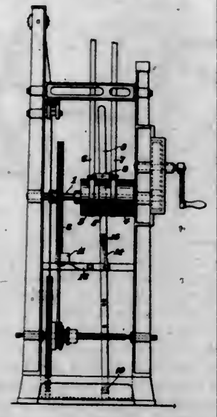


1. The combination in a sectional feed roll of an even number of compression springs arranged in two sets and operating tangentially, or nearly so, to the rotation of the roll, roll sections with internal lugs having suitable seats at opposite ends of alternate lugs to receive one end of said springs, a driving member having corresponding spring receiving lugs, whereby each set of springs acts alternately with reference to each other, but all act successively on the roll section as it rotates, substantially as set forth.

2. The combination in a sectional feed roll, of roll sections having an even number of internal lugs, alternate lugs being cut away at opposite ends to accommodate tangential springs, corresponding lugs on a driving member also cut away alternately, all said lugs being adapted to receive and retain the ends of said springs, for the purposes set forth.

3. The combination in a sectional feed roll, of roll sections having an even number of internal lugs, a driving sleeve secured to the roll shaft and provided with a corresponding number of driving lugs, each contiguous pair of lugs being cut away at one end only, to allow tangential springs to pass, whereby maximum contact surface is obtained for said driving and receiving lugs, substantially as set forth.

899,277. GEARING. CHARLES WIEBKE, New York, N. Y. Filed June 25, 1907. Serial No. 380,657.



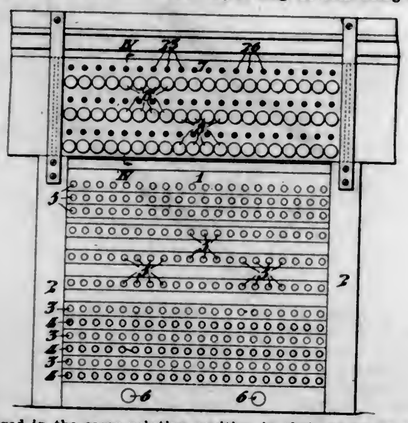
1. A gearing comprising a rotary member, means for rotating it in opposite directions, a reversing member connected with said means and operating, when in either of two extreme positions, to throw said means into operation, and, when in median position, to throw said means out of operation, a brake arranged to engage the rotary member, and connections between the brake and the reversing member, said connections being carried by the reversing member and constructed and operating to throw the brake into operation at the median position of said member, such connections having provision for adjusting the brake and independent provision for releasing the brake without changing the adjustment of the brake or moving the reversing member from median position.

2. A gearing comprising a rotary member, belts for rotating said member in opposite directions, a belt shipper controlling the belts, a lever on which the shipper is mounted, a brake arranged to engage the rotary member, a lever on which the brake is mounted, and a toggle link having adjustable connection with the brake lever and the shipper lever and coöperative with the shipper lever, the latter forming the other link of a toggle joint, acting in the manner of a toggle to apply the brake when the shipper lever is in median position.

3. A brake mechanism comprising a rotary member, means for rotating it in opposite directions, a reversing member operating when moved to reverse the direction of rotation of the rotary member, a brake arranged to engage the rotary member, and adjustable connections between the brake and reversing member carried by the reversing member and constructed and operating to apply the brake during movements of the reversing members and to release the brake when such movement is completed.

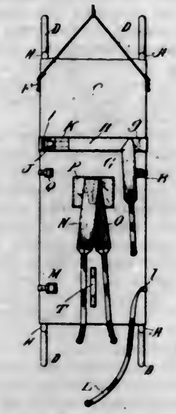
899,278. TELEPHONE-SWITCHBOARD. CHARLES E. WILSON, Philadelphia, Pa., assignor to Keystone Telephone Company of Philadelphia, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 10, 1904. Serial No. 223,949.

In a telephone switch board, the combination with a group of answering-jacks arranged in vertical and horizontal rows; a group of multiple-jacks above the answering jacks and correspondingly located; and a separate group of independent manually operated call registering devices arranged in similarly grouped rows above the multiple jacks, said individual registering devices being ar-



ranged in the same relative position in their group as are the corresponding answering-jacks and multiple-jacks in their group.

899,279. STRETCHER. HAROLD WILSON and ROBERT B. MACFARLAND, Conneaut, Ohio. Filed Apr. 23, 1908. Serial No. 428,714.

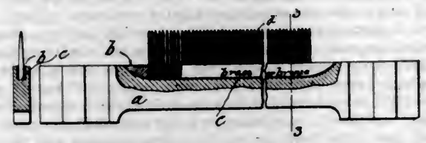


1. A stretcher comprising a frame having a covering with a re-inforced portion, means for connecting this reinforced portion with one end of the frame, means for attaching the upper and lower parts of a body to the stretcher and the loin-straps attached to the re-inforced part of the stretcher and adapted to pass around the upper parts of the legs of the body, substantially as described.

2. A stretcher comprising a rigid frame having a flexible covering, a re-inforcing piece applied to the middle portion of the frame, strips of suitable material connecting the re-inforcing piece with the frame at one end, means for attaching the upper and lower part of a body to the stretcher and the loin-straps attached to the re-inforced part of the covering and adapted to encircle the upper parts of the legs of the body.

3. A stretcher comprising a frame having a flexible covering, a breast-strap attached thereto, a lower strap attached to the frame, a buckle with which it coöperates, a loop through which the strap extends, loin-straps attached to the middle part of the covering adapted to pass out between the legs of the body and encircle them, and means for connecting the middle part of the covering where the loin-straps are attached to one end of the frame.

899,280. FALLER-BAR. ANTHONY YOUNG, Northampton, Mass., assignor of one-half to David H. Young, Holyoke, Mass. Filed Feb. 2, 1906. Serial No. 299,140.



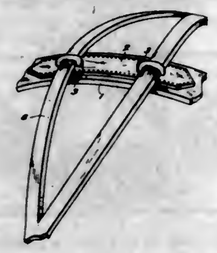
1. A faller-bar having a groove, and a comb-bar provided with gill pins and fitted wholly within the groove and protected thereby against all lateral strains.

2. A faller-bar having a longitudinal groove, and a comb-bar provided with gill pins and fitted wholly within the groove and protected thereby against all lateral strains, and means whereby said comb-bar may be removably fastened in said groove.

3. A faller-bar having a longitudinal groove, and a sectional comb-bar provided with gill pins and fitted wholly within the groove and protected thereby against all lateral strains.

4. A faller-bar having longitudinal grooves, and a comb-bar fitted wholly within each groove and protected thereby against all lateral strains, each comb-bar carrying gill pins.

899,281. OVERDRAW CHECK-LOOP FOR BRIDLES. MELANCTHON E. ZELLER, Gilboa, Ohio. Filed Oct. 23, 1907. Serial No. 398,786.



1. The combination, with the crown strap of a bridle, of a strip of leather fastened to the outer face of said strap and having a perforation therein, an overdraw check loop comprising a plate portion arranged between said crown strap and strip, a shank portion extending through the perforation in said strip, and a hooked portion bent down at its free end and normally resting upon said crown piece, said plate portion of said loop extending from said shank on the side away from said hook far enough to hold the loop in proper position without any direct connection between said plate portion and said strip or strap.

2. The combination, with the crown strap of a bridle, of a strip of leather, fastened to the outer face of said strap and having a perforation therein, an overdraw check loop comprising a plate portion arranged between said crown strap and strip, a shank portion extending though the perforation in said strip, and a hooked portion bent down at its free end and normally resting upon said crown piece, said plate portion of said loop extending partially below the hooked portion thereof and on the side away from said hook far enough to hold the loop in proper position without any direct connection between said plate portion and said strip or strap.

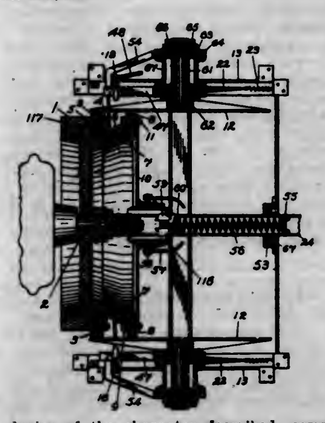
899,282. REIN-BUCKLE. MELANCTHON E. ZELLER, Gilboa, Ohio. Filed Jan. 24, 1908. Serial No. 412,462.

1. A buckle of the character described, having end cross bars and an intermediate cross bar, a stud carried by one of said end cross bars and pointing outwardly away from said other cross bars, and a stud carried by said intermediate cross bar and pointing in the opposite direction and away from the first mentioned stud.



2. A buckle of the character described having end cross bars and an intermediate cross bar, a stud on one of said end cross bars comprising a shank which is bent slightly outward and a bent or hook portion extending outwardly and slightly upward from said shank, and a hooked stud carried by said intermediate cross bar and extending away from the stud on said end cross bar.

899,283. POWER-TRANSMISSION DEVICE. STEAD A. ASQUITH, Waterloo, Iowa. Filed July 27, 1907. Serial No. 385,855.



1. A device of the character described, comprising in combination, a rotatable driving-shaft, a friction-wheel mounted thereon, a rotatable driven-shaft, a main friction-disk slidably but non-rotatably mounted thereon, side friction-disks rotatably mounted with their inner faces in juxtaposition to the circumferential bearing-edges of both said friction-wheel and main friction-disk, and means for causing said side friction-disks to bear equally upon the edges of said friction-wheel and main friction-disk.

2. A device of the character described, comprising in combination, a rotatable driving-shaft, a friction-wheel mounted thereon, a rotatable driven-shaft, a main friction-disk slidably but non-rotatably mounted thereon, side friction-disks rotatably mounted with their inner faces in juxtaposition to the circumferential bearing-edges of both said friction-wheel and main friction-disk, means for causing said side friction-disks to bear equally upon the edges of said friction-wheel and main friction-disk, and other means for retracting said side friction-disks from bearing-contact with said friction-wheel and main friction-disk when said compressing means are released therefrom.

3. A device of the character described, comprising in combination, a rotatable driving-shaft, a friction-wheel mounted thereon having engaging-means on its rear face, a rotatable driven-shaft, a main friction-disk slidably but non-rotatably mounted on said driven-shaft having on its front face engaging-means adapted to be placed in or separated from the engaging-means on the rear surface of said friction-wheel, side friction-disks rotatably mounted and adapted to have their inner faces shifted into or out of driving-contact with both the circumferential edges of said friction-wheel and main friction-disk simultaneously, and means for causing the said side friction-disks to bear with equal pressure upon the edges of said friction-wheel and said main friction-disk.

4. A device of the character described, comprising in combination, a rotatable driving-shaft, a friction-wheel mounted thereon having engaging-means on its rear face, a rotatable driven-shaft, a main friction-disk slidably but non-rotatably mounted on said driven-shaft and having on its front face engaging-means adapted to be placed in or separated from the engaging-means on the rear surface of said friction-wheel, side friction-disks rotatably mounted and adapted to have their inner faces shifted into or out of driving-contact with both the circumferential edges of said friction-wheel and main friction-disk simultaneously, means for causing the said side friction-disks to bear with equal pressure upon the edges of said friction-wheel and said main friction-disk, and other means for retracting said side-friction disks from bearing-contact with said friction-wheel and main friction-disk when said compressing-means are released therefrom.

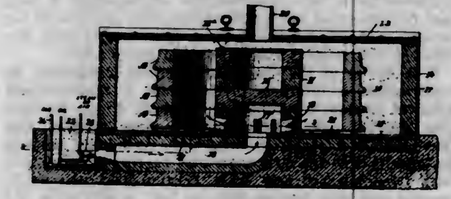
5. A device of the character described, comprising in combination, a rotatable driving-shaft, a friction-wheel mounted thereon having engaging-means on its rear face, a rotatable hollow oppositely slotted driven-shaft, resilient latches slidable therein and adapted to project through the slots to detachably lock the main friction-disk in its extreme forward position, a main friction-disk slidably but non-rotatably mounted on said hollow driven-shaft and means for engaging said latches in certain positions, said main-friction-disk having on its front face engaging-means adapted to be placed in or separated from the engaging-means on the rear face of said friction-wheel, and side friction-disks rotatably mounted and adapted to have their inner faces shifted into or out of driving-contact with both the circumferential edges of said friction-wheel and said main friction-disk.

[Claim 6 not printed in the Gazette.]

899,284. MANUFACTURE OF SULFURIC ACID AND SODIUM SULFATE. ULRICH F. BENKER, Clichy, France. Filed Mar. 4, 1907. Serial No. 360,460.

A process for making free sulfuric acid and neutral sulfate of soda by the decomposition of bi-sulfate of soda, consisting in heating a mixture of bi-sulfate of soda and of silica in substantially equal proportions, thus preventing the fusion of the bi-sulfate.

899,285. HEATING-FURNACE. WILLIAM N. BEST, New York, N. Y. Filed Oct. 22, 1907. Serial No. 398,621.



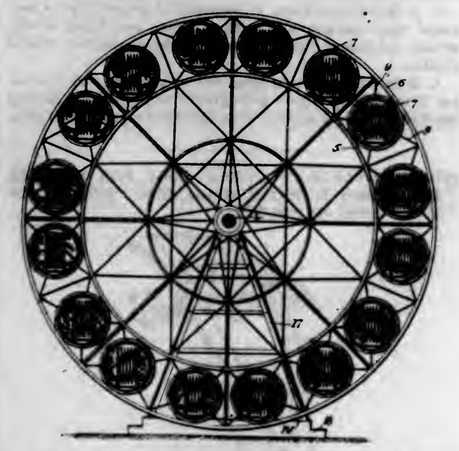
1. A heating furnace, comprising two concentric annular casings, the inner casing having a transverse wall, and means for delivering a heating medium to the interior of the inner casing, the walls of said inner casing being provided with a plurality of outlet passages the outer ends of which terminate substantially tangentially of said casing.

2. A heating furnace, comprising two concentric annular casings adapted to receive therebetween the articles to be heated, said articles encircling said inner casing, a removable cover for the outer casing, means for delivering a heating medium to the interior of the inner casing, a plurality of passages through the wall of said inner casing, whereby the heat is delivered against the inner surface of the articles, and an exhaust gas escape passage from the outer casing.

3. A tire-heating furnace, comprising two concentric annular casings adapted to receive the tires therebetween, said tires encircling said inner casing, said inner casing having a transverse wall above the bottom thereof, and means for delivering a heating medium to the interior of the inner casing, the walls of said inner casing being provided with a plurality of outlet passages for delivering the heat against the inner surface of said tires and a cover and an exhaust gas escape passage for said outer casing.

4. A heating furnace, comprising a casing having a floor and an annular imperforate wall, means for admitting the article to be heated through the top of the casing, a centrally-disposed chamber within said casing and having a plurality of passages through the wall thereof, a well disposed outside of the annular wall and extending down into said floor, a delivery passage extending beneath said floor from said well to the interior of said chamber, and a fluid fuel burner within said well and delivering to the outer end of said passage.

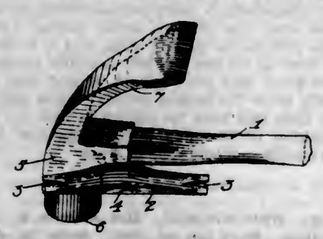
899,286. CAR FOR OBSERVATION-WHEELS. ACHILLE F. BIAVATI, Freeport, N. Y. Filed Apr. 13, 1908. Serial No. 426,775.



1. The combination of a wheel, a plurality of circular cages mounted thereupon and adapted to turn with said wheel, cars mounted within said cages, doors for said cars, and network carried by said cars and reaching therefrom to said doors, said network and said doors being held in normal position by the weight of said cars.

2. The combination of a wheel, a plurality of circular cages mounted thereupon and carried thereby, a car mounted within each cage and normally maintained in proper position by its own weight, a door mounted upon said car, said door being normally held in proper position by the weight of said car.

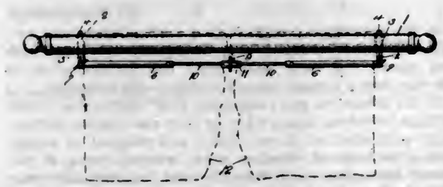
899,287. COMBINATION-TOOL. OSCAR BLAKELEY, Seattle, Wash. Filed Apr. 30, 1907. Serial No. 371,193.



1. A box opening tool comprising a member formed with claw-end portions, a lever secured to one side thereof and extending longitudinally thereof and beyond one end of the same, a guide portion projecting below the said member intermediate its ends, and each claw-end portion being adapted to serve as a fulcrum for the other claw-end.

2. In a compound tool, the combination with a driving-head provided with a right-angular handle, of a laterally extending member disposed at right-angles to said driving-head and extending rearwardly therebeyond and longitudinally with the handle, said member being provided with cleft ends, the upper face of the portion of the member intermediate tne ends thereof being gradually inclined upwardly toward the center thereof and toward the inner side, and the under face of said member being flat, said driving head projecting below said member.

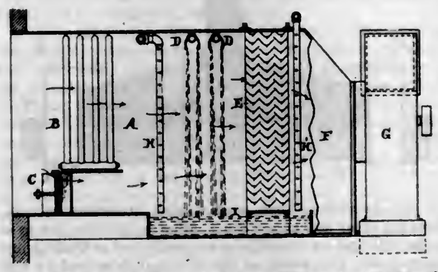
899,288. CURTAIN-POLE. VERNON BRADY, McKeesport, Pa. Filed Apr. 7, 1908. Serial No. 425,711.



1. In a curtain fixture, the combination with a curtain pole, of slotted hangers carried thereby, tubes adjustably connected to said hangers, a rod for connecting some of said tubes, a revoluble button carried by said rod, rods carried by the other of said tubes and having eyelet ends adapted to engage upon said button, substantially as and for the purpose described.

2. The combination of a curtain pole, of hangers carried thereby, tubes adjustably connected to said hangers, rods carried by said tubes, and means carried by one of said rods for holding the other of said rods in engagement therewith.

899,289. APPARATUS FOR PURIFYING AND HUMIDIFYING AIR. WILLIAM G. R. BRAEMER, Buffalo, N. Y., assignor to Warren Webster & Company, a Corporation of New Jersey. Filed Oct. 15, 1907. Serial No. 397,550.



1. In an air purifying and humidifying apparatus, the combination of means for producing a current of air, means for supplying a thin body of hot water of substantially constant temperature through which the air passes, an eliminator for removing the excess of water from the air, and means for supplying to the current of air a hot aqueous vapor to raise the humidity of the air to the absolute humidity required.

2. In an air purifying and humidifying apparatus, the combination of means for producing a current of air, means for supplying a thin body of hot water of substantially constant temperature through which the air passes, an eliminator for removing the excess of water from the air, means for supplying to the current of air a hot aqueous vapor to raise the humidity of the air to the absolute humidity required, and means automatically controlled by the condition of the air delivered from the apparatus to vary the amount of aqueous vapor supplied to the air, whereby the absolute humidity thereof may be maintained constant.

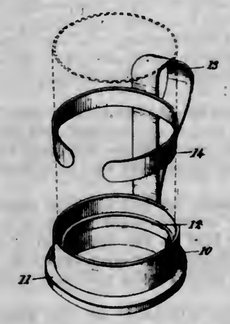
3. In an air purifying and humidifying apparatus, the combination of means for producing a current of air, means for supplying a thin body of hot water of substantially constant temperature through which the air passes, an eliminator for removing the excess of water from the air, means for supplying a hot aqueous vapor to the current of air before it is treated to the thin body of hot water to raise the humidity of the air to the absolute humidity required, and means to regulate the admission of the aqueous vapor to maintain the absolute humidity of the air practically constant.

4. In an air purifying and humidifying apparatus, the combination of means for producing a current of air, means for supplying a thin body of hot water of substantially constant temperature through which the air passes, an eliminator for removing the excess of water from the air, means for supplying a hot aqueous vapor to the current of air to raise the humidity of the air to the absolute humidity required, and means to impart preliminary heat to the air before being treated to the aqueous vapor and thin body of water.

5. In an air purifying and humidifying apparatus, the combination of means for producing a current of air, means for supplying a thin body of hot water of substantially constant temperature through which the air passes, an eliminator for removing the excess of water from the air, means for supplying a hot aqueous vapor to the current of air to raise the humidity of the air to the absolute humidity required, means to impart preliminary heat to the air before being treated to the aqueous vapor and thin body of water, and automatic devices for controlling the means for imparting preliminary heat to maintain the preliminary temperature of the air practically constant.

[Claims 6 to 10 not printed in the Gazette.]

899,290. GLASS-HOLDER. JOHN W. BRICKER, Wilmerding, Pa., assignor of one-half to George Beneventano, Wilmerding, Pa. Filed Aug. 31, 1907. Serial No. 390,912.



1. A glass holder comprising a ring-base of pressed steel having an integral flange exteriorly surrounding its bottom edge, and an internal rib arranged slightly below the top of the base to provide a seat for the glass, a handle attached to said base, composed of a strip of metal bent upon itself and tapering in thickness in a longitudinal direction with the thickest portion thereof arranged at the inside of the holder, and a split-ring tapering in thickness in the direction of its length from each side of its center, and secured intermediate its length to said handle above the said base and concentric thereto to provide spring-arms for embracing the glass.

2. A glass holder comprising a base, a handle attached to said base, composed of a strip of metal bent upon itself and tapering in thickness in the direction of its length with the thickened portion thereof arranged at the inside of the holder, and a split-ring attached to the handle,

having an outwardly-flaring bore and tapering in thickness in the direction of its length at each side of its center.

3. A glass holder comprising a ring base having an internal shoulder depressed below its top edge, on which the glass seats, and provided with an external flange surrounding its bottom edge, a strip of sheet metal bent upon itself with its free ends secured to the base, providing a handle therefor, and a split ring rigidly attached to the handle intermediate its length providing laterally-extending arms for embracing the body of the glass.

4. A glass holder comprising a ring base having an internal shoulder depressed below its top edge, on which the glass seats, a strip of sheet metal bent upon itself, with its free ends brought together and secured to the base, providing a handle therefor, and a split ring attached to the handle intermediate its length, providing laterally-extending arms for embracing the body of the glass.

899,291. VENT-PIPE ATTACHMENT. JOHN H. BROWN, Keene, N. H. Filed June 26, 1907. Serial No. 380,903.



1. The combination of a vent pipe extending through the roof of a building, a roof collar surrounding the projecting end of the vent pipe and having a base for attachment to the roof, the upper end of the roof collar being crimped into the upper end of the vent pipe, and a temporary overflow guard having a compressible hub fitting in the vent pipe, and means for compressing said hub.

2. A temporary attachment for vent pipes, comprising an overflow guard at the upper end of the vent pipe, and means for removably attaching the guard to the said vent pipe.

3. A temporary attachment for vent pipes, comprising a guard having a central opening and arranged on the upper end of the said vent pipe for deflecting the overflow of the water forced up the said vent pipe during the testing thereof.

4. An attachment for vent pipes on buildings, comprising an annular overflow guard having a central opening and removably held on the upper end of the vent pipe and curved outwardly and downwardly to carry off the overflow water forced up the vent pipe during the testing of the latter.

5. A temporary attachment for vent pipes of buildings, comprising an annular guard having a compressible hub fitting into the inside of the upper end of the vent pipe, and means for compressing the said hub to clampingly engage the hub with the inside of the vent pipe.

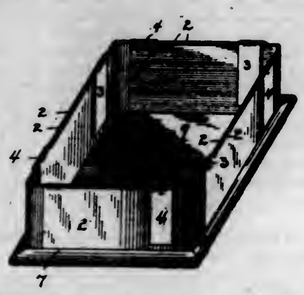
[Claims 6 and 7 not printed in the Gazette.]

899,292. EXTENSIBLE PAN. EMMA L. CARTER, Galesburg, Ill. Filed Apr. 21, 1908. Serial No. 428,373.

1. An extensible pan including a bottom of selective dimensions and four telescopically connected rectangular corner sections adapted for engagement therewith.

2. An extensible pan including a bottom of selective size, and corner-sections, each of said sections adapted for telescopic connection with two other sections thereof.

3. An extensible pan including a bottom of selective size, and four rectangular corner sections slidable horizontally with reference to each other, whereby a vessel of selective dimensions both laterally and longitudinally is had.

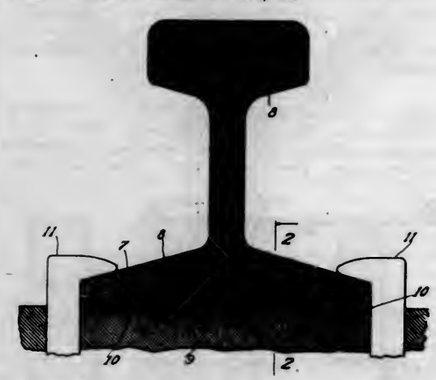


4. An extensible pan including four substantially rectangular corner sections, each adjustably connected with two others, and each constituting one corner-portion of the pan, and a bottom removably connected therewith.

5. An extensible pan comprising four rectangular corner sections including means whereby they are slidable horizontally with relation to each other and adapted to engage square bottoms of selective sizes, whereby pans of different dimensions both laterally and longitudinally may be formed.

[Claims 6 to 13 not printed in the Gazette.]

899,293. SOUND-DEADENING CONSTRUCTION FOR ELEVATED RAILWAYS. CHARLES H. CONOVER, Cambridge, and WILLIAM D. MURPHY, Newton, Mass. Filed Sept. 23, 1907. Serial No. 394,052.



1. In elevated railway construction, a continuous non-vibrating layer interposed longitudinally between the base of the rail and its immediate supports, and extending unbrokenly the full width of the rail and from end to end thereof, substantially as set forth.

2. In railway construction, the combination of the rails, a flat-bottomed, longitudinal metallic support beneath each rail, extending from end to end and edge to edge thereof, and a non-vibrating packing layer of corresponding dimensions interposed between said rail and support and in continuous contact with both, substantially as set forth.

3. In railway construction, the combination of the rails, a flat-bottomed, longitudinal, metallic, flanged support beneath each rail, extending from end to end and from edge to edge thereof, and a non-vibrating packing layer of corresponding dimensions interposed between said rail and support and in continuous contact with both, and lying between the flanges of said support, substantially as set forth.

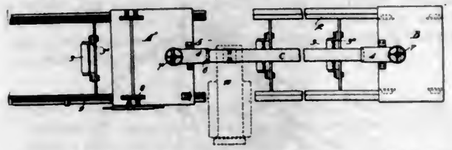
4. In elevated railway construction, the combination of the rail, a continuous longitudinal support beneath the rail,

serving to bridge over the spaces between successive ties, and a non-vibrating layer interposed between and in contact with said support and rail, the rail base and its support and said interposed layer having continuous, unbroken contacting surfaces from edge to edge, preventing metallic contact, substantially as set forth.

5. In elevated railway construction, longitudinal metallic troughs sunken in recesses in the ties, and non-vibrating packing layers filling said troughs and extending higher than the walls thereof, in combination with the rail adapted to rest by its base on said packing, and with suitable rail-fastenings, substantially as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

899,294. SPACING-MACHINE. GEORGE H. DYER, San Francisco, Cal. Filed Mar. 4, 1907. Serial No. 360,453.



1. In a spacing apparatus, a guide frame having projecting flanges upon opposite edges, a carriage and means to advance it upon said frame, parallel and vertically inclined slots formed in the sides of the frame, stop bars having hook members adapted to engage and slide upon the projecting flanges of the frame, said stop bars having vertical slots made in them, a bolt extending through an inclined slot, and the vertical slot of the stop bar, means for adjusting said bolt up and down whereby a vernier adjustment of said bar is effected.

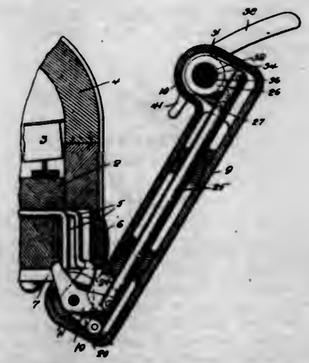
2. In a spacing apparatus of the character described, a horizontal guide frame having projecting flanges upon its outer edges, and parallel vertically inclined slots in its side, stop bars engaging and slidable upon the guide flanges, said stop bars having vertical slots made in them, bolts passing through the inclined slots of the frame, and the vertical slots of the stop bars whereby the stop bars may be accurately adjusted, a carriage movable upon the frame, said carriage having a spring-pressed transversely movable bolt normally projected so as to engage with the stop plate and means whereby the bolt may be retracted to allow the carriage to be advanced.

3. In a spacing apparatus of the character described, a horizontally disposed frame having lugs upon its upper and lower edges, parallel vertically inclined slots made in the sides, vertical stop bars adapted to engage the lugs of the frame and slidable thereon, said bars having vertically disposed slots crossing the line of the inclined slots of the frame, bolts passing through the inclined and vertical slots and movable to provide an accurate adjustment of the stops, a carriage, a track upon the frame, means for advancing the carriage thereon, a transversely movable stop bolt normally projecting to engage the stop, and means for retracting it to allow it to pass, clamps and supports upon the carriage for beams to be punched, said clamps consisting of horizontally fulcrumed tiltable plates having grips at one end adapted to clamp the beams, and screws at the opposite end for locking said grips.

4. In a spacing apparatus of the character described, a horizontal guide frame and tracks, said guide frame having vertically inclined slots and flanges projecting at top and bottom, carriages mounted to travel upon the tracks, vertically slotted stop-bars engaging and slidable upon said flanges, and bolts passing through said inclined and vertical slots whereby the stops may be adjusted either right or left, horizontally-fulcrumed tiltable clamping-jaws mounted upon each of the carriages, and means whereby said jaws are closed to grip beams and maintain the level of the surface to be punched, and a punching apparatus.

5. In a spacing apparatus of the character described, a horizontal guide frame and tracks, independent carriages movable thereon and intermediate vertically adjustable supports, a punching apparatus located between the carriages, said guide frame having vertically inclined slots and flanges projecting at top and bottom, vertically slotted stop bars engaging and slidable upon said flanges, bolts passing through both inclined and vertical slots, and adjustable up or down, said stops having supplemental adjusting screws, a transversely movable bolt upon the carriage normally projecting into the path of the stop, and means to retract it to allow the advance of the carriage and its load.

899,295. AUTOMATIC MUSICAL INSTRUMENT OR PLAYER. HENRY R. EDGECOMB, Braddock township, Allegheny county, Pa. Filed Nov. 20, 1907. Serial No. 403,057.



1. The combination with a piano, and the expression rods thereof, of bearings carried by said piano, a casing trunnioned in said bearings and having a lateral movement between said bearings, a spring for normally holding said casing in engagement with one of said bearings for locking the same in a fixed position, a shaft mounted in the trunnions of said casing, bell crank levers journaled upon said shaft, and engaging said expression rods, a shaft mounted in said casing, a plurality of sleeves revolubly mounted upon said shaft, bell crank levers carried by said sleeves, rods connecting said bell crank levers with the first mentioned bell crank levers, and actuating levers carried by said sleeves at the sides of said casing, some of said actuating levers projecting in an opposite direction to the remainder of said levers.

2. The combination with a piano, and the expression rods thereof, of bearings carried by said piano, a casing trunnioned in said bearings, and having a lateral movement therebetween, a shaft mounted in the trunnioned end of said casing, bell crank levers journaled upon said shaft and engaging said expression rods, a shaft mounted in the opposite end of said casing, a plurality of sleeves mounted upon said shaft, bell crank levers carried by said sleeves and connecting with the first mentioned bell crank levers, actuating levers carried by said sleeves, at the sides of said casing, and means arranged at the trunnioned end of said casing for locking the same in engagement with one of said bearings.

3. The combination with a piano and the expression rods thereof, of a movable casing arranged beneath said expression rods, a plurality of bell crank levers journaled in said casing for engaging said expression rods, journaled in said casing for engaging said expression rods, a shaft fixed in said casing, a plurality of bell crank levers movably mounted upon said shaft and connecting with the first mentioned bell crank levers, actuating levers arranged at the sides of said casing for moving the last mentioned bell crank levers, and means located at one end of said casing for locking the same in a fixed position with relation to said piano.

4. In combination with the expression rods of a piano, a movable casing, bell crank levers movably mounted in

said casing for engaging said expression rods, bell crank levers movably mounted in said casing and connecting with the first mentioned bell crank levers, means arranged at the sides of said casing for actuating the last mentioned bell crank levers, and means carried by said casing for locking the same in a fixed position with relation to said piano.

5. The combination of expression rods, movable bell crank levers for engaging said rods, bell crank levers for actuating the first mentioned bell crank levers, a movable casing for housing said bell crank levers, means arranged at the sides of said casing for actuating said bell crank levers, and means carried by said casing for retaining the same in a fixed position with relation to said piano.

[Claims 6 to 17 not printed in the Gazette.]

899,296. MOUNTING FOR PRECIOUS STONES. WILLIAM R. ELLIOT, New York, N. Y. Filed Dec. 9, 1907. Serial No. 405,802.



1. A mount for precious stones, consisting of separable members provided at one of their abutting portions with registering segmental channels having a threaded wall, a latch extending into one of said channels, and means for operating the latch from the exterior of the mount.

2. A mount for precious stones, consisting of separable members pivotally connected at one of their ends and provided with exteriorly located registering channels at their free ends, and a latch device carried by one section, entering the channel produced therein.

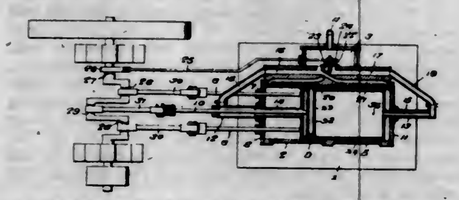
3. A mount for precious stones, consisting of separable members pivotally connected at one of their ends and provided at their free ends with registering segmental channels having correspondingly threaded walls, means for holding the sections against lateral displacement at their channel ends, and a latch carried by one of the sections.

4. The combination with a mount for precious stones, constructed in sections pivotally connected at one end and channeled at their free ends, of a setting for a stone or like material, adapted to said channels, and a latch device carried by one of the sections for engagement with the said setting.

5. The combination with a mount for precious stones, consisting of two sections pivotally connected at one of their ends and having registering channels exteriorly located at their free ends, of a setting for a stone or like device adapted to the said channels, the setting being provided with an inclined recess at its inner edge portion and an exteriorly operated latch carried by a section of the mount and adapted for engagement with the said setting and to enter the recess therein.

[Claim 6 not printed in the Gazette.]

899,297. ENGINE. JOHN ERICKSON, Fairdale, N. D. Filed Feb. 25, 1908. Serial No. 417,784.



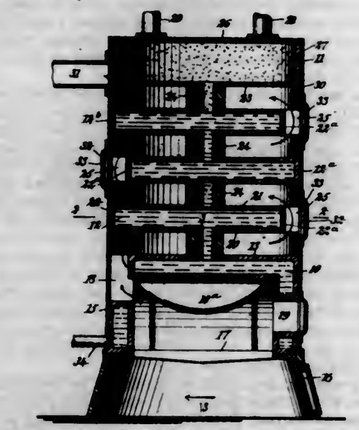
In an engine of the class described, the combination with a main cylinder and a steam chest on said cylinder; of an auxiliary cylinder slidably mounted in said main cylinder, a piston in said auxiliary cylinder, a tubular section secured to each end of the auxiliary cylinder, a pipe section extending from the main cylinder in which said tubular sections are adapted to slide, a pair of ports in the wall of the main cylinder, one end of each of which is adapted to communicate with the steam chest, tubular couplings connecting said ports with the pipe sections, whereby steam may be conveyed into opposite ends of the auxiliary cylinder, a port communicating with each end of the main cylinder and at their opposite ends with the first-mentioned ports, respectively, and a slide valve adapted to control the introduction of steam into said ports.

899,298. BRIDLE-BIT. JAMES W. GREENWOOD, Springfield, Ill. Filed Dec. 15, 1906. Serial No. 348,015.



An overcheck bit comprising compound curved side bars having enlarged portions to one side of their longitudinal center, bars projecting downwardly from said enlarged portions connected together at their lower ends by a cross-bar, forming a substantially U-shaped bit for holding the side bars above the mouth of the animal, the ends of said side bars being provided with eyes to which the ends of the nose strap and check lines are connected, said side bars being provided with slots in their enlarged portions to the rear of the bit proper, and an elastic chin strap having its ends secured in said slots.

899,299. BOILER. WILLIAM S. HAWLEY, Landing, N. J. Filed Jan. 7, 1908. Serial No. 409,639.

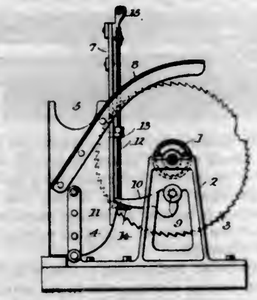


1. In combination, a series of communicating chambers arranged one above the other and adapted for the reception of the water to be heated, said chambers being so disposed as to leave a space between each pair of adjacent chambers, passages connecting said spaces to form a zig-zag conduit, the lowermost chamber having an upper wall, a substantially dome-shaped lower wall, and a vertical circumferential wall, and the space beneath said dome constituting a fire chamber, passages through said lowermost chamber to said fire chamber, and a casing inclosing said chambers.

2. In combination, a series of communicating chambers arranged one above the other and adapted for the reception of the water to be heated, said chambers each having a recess in one side thereof constituting a passage, whereby the spaces between said chambers communicate with each other, the recesses in adjacent chambers being formed in correspondingly opposite sides, a metal casing inclosing said chambers and having openings adjacent each chamber, whereby the spaces intermediate the chambers may be cleaned, and means for closing said openings.

3. In combination, a series of communicating chambers arranged one above the other and adapted for the reception of the water to be heated, said chambers each having a recess in one side thereof constituting a passage, whereby the spaces between said chambers communicate with each other, the recesses in adjacent chambers being formed in correspondingly opposite sides, a casing inclosing said chambers and having an opening adjacent each chamber, whereby the spaces intermediate the chambers may be cleaned, and means for closing said openings, said openings being disposed adjacent the recesses in said chambers and said casing being unattached to said chambers.

899,300. SAW-GUARD. JOHN HOLMWOOD, Duluth, Minn., assignor of one-half to Harry W. Lanners, West Duluth, Minn. Filed Feb. 4, 1908. Serial No. 414,184.



1. The combination with a saw-guard and a vibratory support therefor, of a locking-cam bearing against the side of said support to hold the guard over the saw, and a trip mounted on the support and arranged to disengage the cam therefrom whereby the guard will expose the saw.

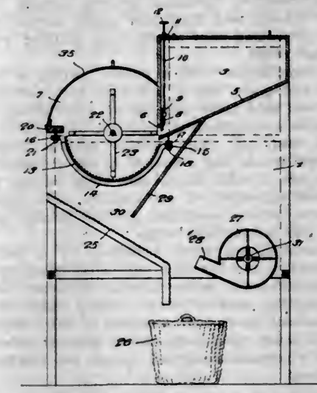
2. The combination with a saw-guard, and a vibratory support therefor, of a locking-cam mounted to bear against the rear side of said support, and a trip mounted on the support and provided with a spur engaging under the locking cam.

3. The combination with a saw-guard, and a vibratory support therefor, of a locking-cam mounted to bear against the rear side of the support, a trip mounted on the support and provided at its lower end with a spur projecting under the locking-cam, and a lever fulcrumed on the support and pivotally connected with the upper end of the trip.

4. The combination of a saw-guard, and a vibratory support therefor having a shoulder on its rear side, a locking cam bearing against the support and adapted to rest at its end on said shoulder, a trip mounted on the support and provided with a spur engaging under said locking cam, and means for operating said trip.

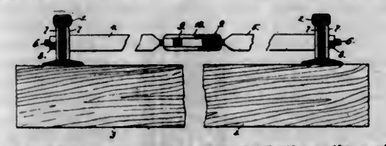
899,301. COMBINED HULLING AND CLEANING DEVICE. GEORGE A. HUBER, Waverly, Va. Filed Feb. 7, 1908. Serial No. 414,830.

In a huller of the class described, the combination with a hopper adapted to contain nuts, an inclined bottom for said hopper, said hopper having an opening at the lower end of said bottom, a slide adapted to control the flow of nuts through said opening, a rod secured to said slide and means at the upper end of said rod to adjust said slide vertically; of a hulling chamber, a shaft extending through said chamber, a beater mounted on said shaft, a plurality of separate bars arranged concentrically around the path of said beater, means to adjust said bars vertically with relation to the beater, said adjustment permitting one end of the bars to be moved independently of the other, a blast board in the rear of said bars, a screen



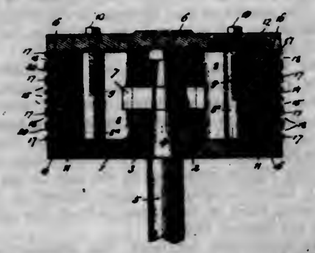
below said bars and spaced from the end of the blast board to form a passage, said screen being arranged on a downward incline and terminating in a vertical portion and means to direct a blast of air through said passage longitudinally of said screen.

899,302. RAIL-BRACE. WILLIAM H. HUFFMAN, Beaver Falls, Pa. Filed May 22, 1907. Serial No. 375,146.



In a rail brace, the combination with the rails, and the fish plates engaging the rails at their meeting ends, of a rail brace comprising two counterpart members, each member comprising a flat body portion having reduced cylindrical threaded ends, the said reduced threaded ends of both members being in the same plane, the outer end of each member projecting through the fish plates and the webs of the rails, nuts thereon to secure the said members in the fish plates and rails, said members and the nuts serving to bind the fish plates in position against the rails, and a turn-buckle connecting the adjacent inner ends of said members, said turn-buckle lying in the same plane as the members.

899,303. METALLIC PISTON-PACKING. EMMET R. HUMPHREY, Pittsburg, Pa., and WALTER B. MARTIN, Point Pleasant, W. Va. Filed Apr. 20, 1908. Serial No. 428,064.



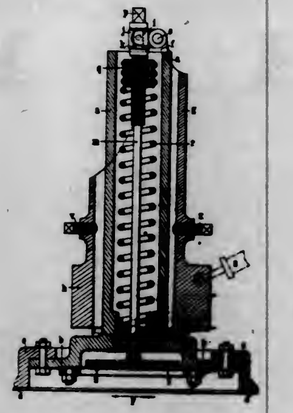
1. The combination with a piston, having a head, a detachable end plate, and a bull ring arranged between said

head and said plate and having a peripheral flange provided with circumferential grooves, of resilient bands surrounding said bull ring, metallic packing rings surrounding said bands and arranged in superimposed pairs upon each side of said flange, said rings having jointed ends disposed oppositely to one another, said rings having circumferentially arranged grooves formed therein, dowel pins joining said rings and means carried by said rings for preventing said bands from shifting with relation to said rings.

2. The combination with a piston, having a head, a detachable end plate, and a bull ring arranged between said head and said plate and having a peripheral flange provided with circumferential grooves, of resilient bands surounding said bull ring, metallic packing rings surrounding said bands and arranged in superimposed pairs upon each side of said flange, said rings having jointed ends disposed oppositely to one another, said rings having circumferentially arranged grooves formed therein, and dowel pins joining said rings.

3. The combination with a piston, of a bull ring mounted thereon, and having a peripheral flange provided on its circumference with annular grooves, resilient bands surrounding said bull-ring, packing rings surrounding said resilient bands and arranged in pairs upon each side of said flange, said rings having annular grooves on their outer circumferences, and means for locking said rings together.

899,304. IMMERSION-REGULATOR PARTICULARLY ADAPTED FOR TORPEDOES. ALBERT E. JONES, Fiume, Austria-Hungary, assignor to Whitehead & Company, Fiume, Austria-Hungary, a Corporation. Filed Nov. 1, 1907. Serial No. 400,196.



1. In an immersion regulator, the combination of a hollow column forming a support fixed to the sole plate of the apparatus, a tubular pendulum surrounding said colmun and pivoted to the upper part thereof, a rod connected to the pendulum and resting on the diaphragm, a spring controlling the action of the pendulum, and means for regulating the tension of said spring.

2. In an immersion regulator, the combination of a hydrostatic piston furnished with a diaphragm, a hollow column, a tubular pendulum pivotally mounted on the upper part of the support by means of a fork-shaped arm, a rod connected to the pendulum and resting on the diaphragm, said rod being screw-threaded at its upper part, a spring rigidly connected to the foot of the column, and a nut movable along the screw-thread of the rod, said nut being fixed to the upper part of the spring for regulating the tension thereof.

3. In an immersion regulator, the combination of a hydrostatic piston furnished with a diaphragm, a hollow support, a tubular pendulum pivoted to the upper part of the support and connected to a screw-threaded rod resting on the diaphragm, stops passing through the center of gravity of the pendulum, a spring attached to the foot of the column, and a nut movable on the screw-threaded portion of the rod and attached to the upper part of the spring for the adjustment of the apparatus for any depth of immersion.

4. In an immersion regulator for self-propelled torpedoes, the combination, with a hydrostatic piston, of a column forming the support of the apparatus, a tubular pendulum surrounding said column and pivoted to the upper part thereof, means for connecting the pendulum to the hydrostatic piston, and a spring controlling the action of the pendulum.

5. In an immersion regulator, the combination of a hollow column forming a support fixed to the sole plate of the apparatus,, a tubular pendulum surrounding said column and pivoted to the upper part thereof, a rod connected to the pendulum and resting on the diaphragm, a spring controlling the action of the pendulum, and means for regulating the tension of said spring.

[Claims 6 to 9 not printed in the Gazette.]

899,305. FOUNTAIN-BRUSH. HARRY KADUSHIN, New Rochelle, N. Y. Filed Dec. 24, 1907. Serial No. 407,877.



1. A fountain brush comprising a reservoir for containing a liquid, a brush secured to the underside of the reservoir, and a valve mechanism for controlling the flow of the liquid from the reservoir to the brush, the said valve mechanism having a hollow operating member extending to the outside of the reservoir, and also serving as a filling means for the reservoir.

2. A fountain brush comprising a reservoir for containing a liquid and having outlet ports in its bottom, a brush secured to the underside of the reservoir, and a manually-controlled slide valve for controlling the said outlet ports, the said valve having a hollow stem extending to the outside of the reservoir and forming a filling means for the reservoir.

3. A fountain brush comprising a reservoir for containing a cleansing liquid and having outlet ports in its bottom, a brush having its back secured to the underside of the said reservoir, and a spring-pressed manually-controlled slide valve for controlling the said outlet ports, the valve being normally in a closed position by the action of its spring, the said valve having a hollow stem extending through one end of the reservoir to the outside thereof.

4. A fountain brush comprising a reservoir for containing a cleansing liquid and having outlet ports in its bottom, a brush having its back secured to the underside of the said reservoir, a spring-pressed manually-controlled slide valve for controlling the said outlet ports, the valve being normally in a closed position by the action of its spring, the said valve having a hollow stem extending through one end of the reservoir to the outside thereof, and a finger-piece on the outer end of the said valve stem and serving as a cap for the hollow stem.

5. A fountain brush comprising a reservoir for containing a cleansing liquid and having outlet ports in its bottom, a brush having its back secured to the underside of the said reservoir, a spring-pressed manually-controlled slide valve for controlling the said outlet ports, the valve being normally in a closed position by the action of its spring, the said valve having an angular offset and a hollow stem extending from the said offset, a bearing in one end of the reservoir for the valve stem to slide in, and a finger-piece screwing on the outer end of the hollow valve stem.

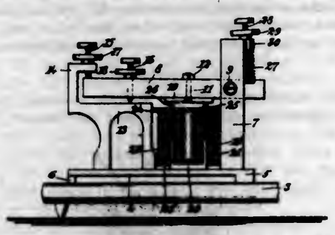
[Claims 6 to 9 not printed in the Gazette.]

899,306. METABOLISM OF SEED. JOHN VON DER KAMMER, Washington, D. C., assignor to Bertha von der Kammer, Washington, D. C. Filed June 12, 1908. Serial No. 438,130.

1. The metabolism of seed for the artificial development of plant-life therefrom without soil, produced by placing the seed in an anaërobic chamber and periodically moistening the seed with a liquid nutrient media.

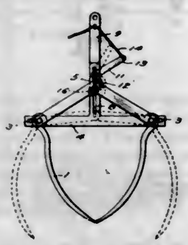
2. The metabolism of seed for the artificial development of plant-life therefrom without soil, produced by placing the seed in an anaërobic chamber containing an anaërobic gas and periodically moistening the seed with a liquid nutrient media.

899,307. TELEGRAPH-SOUNDER. LEE KIBLINGER, Jackson, La. Filed Nov. 18, 1907. Serial No. 402,625.



In a sounder, the combination of a longitudinal armature lever, an armature connected therewith, a pair of electromagnets disposed adjacent to said armature and provided with wide flat pole pieces extending directly across the general length of said longitudinal armature lever and disposed adjacent to said armature for the purpose of equalizing the density of the magnetic field between the armature and different parts of the pole pieces.

899,308. GRAPPLE-FORK. MICHAEL KIDNEY, Dover, N. H. Filed May 21, 1908. Serial No. 434,176.



1. In a grapple-fork, the combination, with opposing tines mounted on two rods, a supporting strip having slots near its ends in which said rods are loosely mounted, said strip having an upright extension provided with a vertical slot, arms rigidly secured to said rods at their outer ends, a pin around which the inner ends of said arms are pivoted and which extends through the slot in the extension of said supporting strip, a lifting bar having sliding connection with said upright extension of the supporting strip by means of the slot in the latter, a latch pivotally mounted on said lifting bar and adapted to engage the pin on which said arms are pivoted and means to release said latch from said pin when desired.

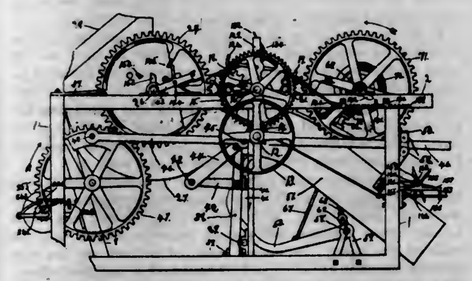
2. In a grapple-fork, the combination, with opposing tines mounted on two rods, a supporting strip having slots near its ends in which said rods are loosely mounted, said strip having an upright extension provided with a vertical slot, arms rigidly secured to said rods at their outer ends, a pin around which the inner ends of said arms are pivoted and which extends through the slot in the extension of said supporting strip, a lifting bar having sliding connection with said upright extension of the supporting strip by means of the slot in the latter, a latch pivotally mounted on said lifting bar and adapted to engage the pin on which said arms are pivoted and means to release said latch from said pin when desired.

3. In a grapple-fork, the combination, with opposing tines mounted on two rods, a supporting strip having slots near its ends in which said rods are loosely mounted, said strip having an upright extension provided with a vertical slot, rule-jointed braces connecting the ends of said rods, arms rigidly secured to said rods at their outer ends, a pin around which the inner ends of said arms are pivoted and which extends through the slot in the extension of said supporting strip, a lifting bar having sliding connection with said upright extension of the supporting strip by means of the slot in the latter, a latch pivotally mounted on said lifting bar and adapted to engage the pin on which said arms are pivoted, and means to release said latch from said pin when desired.

4. In a grapple-fork, the combination, with opposing tines mounted on two rods, a supporting strip having slots near its ends in which said rods are loosely mounted, said strip having an upright extension provided with a vertical slot, arms rigidly secured to said rods at their outer ends, a pin around which the inner ends of said arms are pivoted and which extends through the slot in the extension of said supporting strip, a lifting bar having sliding connection with said upright extension of the supporting strip by means of the slot in the latter, a hook-shaped latch pivotally mounted on said lifting bar and adapted to engage the pin on which said arms are pivoted, a roller on the end of said latch which engages said pin, and means to release said latch from said pin when desired.

5. In a grapple-fork, the combination, with opposing tines mounted on two rods, a supporting strip having slots near its ends in which said rods are loosely mounted, said strip having an upright extension provided with a vertical slot, arms rigidly secured to said rods at their outer ends, a pin around which the inner ends of said arms are pivoted and which extends through the slot in the extension of said supporting strip, a lifting bar having sliding connection with said upright extension of the supporting strip by means of the slot in the latter, a latch pivotally mounted on said lifting bar and having a hook to engage the pin on which said arms are pivoted, said latch also provided with an operating lever, and a cord secured to said lever and passed through an eye on the lifting bar for releasing said latch from said pin when desired.

899,309. BALING-MACHINE. ORLAN S. LEE and CRAWFORD F. LEE, Youngstown, Ind. Filed Apr. 14, 1906. Serial No. 311,781.



1. In a baling machine with a curved chute, the combination with a transverse feeder-shaft 26 and gear wheels for driving said shaft secured thereto, of a plurality of transverse shafts parallel to said transverse feeder shaft 26 and carried by said gear wheels, a plurality of feeder arms secured to each of said transverse shafts in alinement with slots in the chute, a crank arm secured to each of said transverse shafts, rollers for said crank arms and a stationary grooved guide for said rollers substantially as described.

2. In an automatic binding device for a baling machine, the combination with a plurality of rotatable wire twisting wheels with radial slots therein; of a plurality of cutter and retainer disks rotatably mounted on said twister wheels and two diametrically opposite slots in each of said cutter and retainer disks and means for stopping the rotation of said cutter and retainer disks for severing and retaining the wires substantially as described.

3. The combination in a pressing device for a baling machine of a plurality of press prongs having a cross bar secured thereto, with forwardly extending arms secured to said cross bar, wrist pins secured to said arm and pitmen mounted on said wrist pins for operating said pressing device substantially as described.

4. In a pressing device for a baling machine, the combination with a plurality of press prongs having a cross bar secured thereto, forwardly extending arms from said cross bar and wrist pins from said arms; of pitmen wheels having wrist pins thereon, pitmen mounted on said wrist pins from said pitmen wheels and said wristpins from said arms, stationary guides for the loose ends of said pitmen and anti-friction rollers for said guides whereby said press prongs are suspended on said pitmen and are given an oscillating and radial movement by the revolution of said pitmen wheels substantially as described.

5. In an automatic binding device for a baling machine, the combination with wire twister wheels with cutter and retainer disks rotatably mounted thereon having two diametrically opposite slots therein; of a transverse actuating shaft, arms secured to said shaft for engaging said slots and an arm carrying a roller secured to and actuating said shaft substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

899,310. HAND SCHOOL-LOOM. BEATRICE E. LINDBERG, Faribault, Minn. Filed Nov. 11, 1907. Serial No. 401,597.



1. A loom provided with a heddle in the form of a bar having spaced slots for the passage of the warp threads, the bottoms of successive slots being inclined in opposite directions.

2. A loom provided with a heddle in the form of a bar having spaced slots for the passage of the warp threads, alternate slots being inclined from the front top corner of the bar rearwardly, and the remaining slots being inclined from the rear top corner of the bar forwardly.

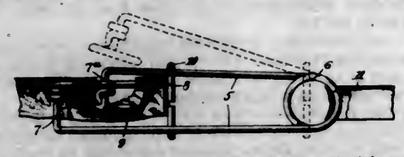
3. A loom having a frame provided with means for supporting the warp, and a heddle mounted to rock on the sides of the said frame and having spaced slots for engagement with the warp threads, successive slots having their bottoms inclined in opposite directions and extending approximately at right angles to each other, to raise alternate warp threads and to lower the remaining ones for forming open sheds for the passage of the weft.

4. A loom comprising a loom frame provided with means for supporting the warp, and a heddle bar having spaced slots for engagement with the warp threads, the slots having their bottoms inclined in opposite directions, the ends of the heddle bar being mounted to rock on the side bars of the said loom frame and having flat surfaces adapted to rest alternately on said side bars.

5. A loom comprising a loom frame provided with means for supporting the warp, and a heddle bar having spaced slots for engagement with the warp threads, the slots having their bottoms inclined in opposite directions, the ends of the heddle bar having bevels extending in opposite directions and approximately parallel with the bottoms of the said slots, the said bevels being adapted to rest alternately on the sides of the said loom frame.

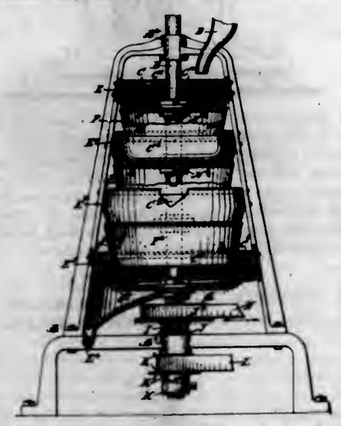
[Claims 6 to 10 not printed in the Gazette.]

899,311. HOLDER. ELIZABETH L. LLOYD, Utica, N. Y. Filed Oct. 2, 1907. Serial No. 395,494.



An article of the character described, comprising two arms connected together movable to and from each other, one of which is provided with a ring turned inwardly toward the connection between the arms and spaced from the arm by which it is carried, the said ring lying in a plane at substantially right-angles to a plane passing through the arms and a device carried by the other arm adapted to enter said ring when the arms are pressed together and cup a piece of material placed between them.

899,312. CONCENTRATOR. RAY H. MANLEY, Stockton, Cal. Filed Aug. 22, 1907. Serial No. 389,639.



1. A concentrator comprising a plurality of open-top centrifugal vessels located one above the other and rotating in unison, fixed annular aprons each surrounding a vessel and spaced therefrom, each apron having an inwardly extending flange at its top extending over the rim of the vessel, the aprons being each provided with a fabric extension secured to its lower edge and reaching into the next vessel below.

2. A concentrator comprising a plurality of centrifugal vessels adapted to receive the material to be concentrated, the vessels being arranged one above the other and rotating in unison, the said vessels increasing in size from the uppermost downward, fixed annular aprons each surrounding a vessel and spaced therefrom for receiving the material thrown out of the vessels, each apron being provided with a fabric extension secured to its lower edge and reaching into the next following vessel below, and means for receiving the lighter material thrown out by the lowermost vessel and conducting it to one side of the concentrator.

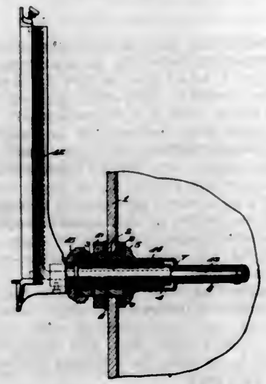
3. A concentrator, comprising a vertically disposed shaft, a plurality of open-top centrifugal vessels secured on the said shaft one above the other, fixed means surrounding the vessels for receiving the material thrown out of the vessel by centrifugal action, the means surrounding one vessel being arranged for conducting the thrown out material into the next vessel below, a pulley secured on the said shaft below the lower vessel, means for driving the pulley to rotate the shaft, a spring on the shaft below the pulley and interposed between the hub of said pulley and a bearing for the lower part of the shaft, a cam secured on the lower end of said shaft, a cam mounted to rotate loosely on the shaft and provided with a pulley abutting with its hub against the under side of said bearing to hold the pulley against sliding movement on the shaft, means for driving the said pulley to rotate the cam, the said driven cam having ratchet teeth engaging similar teeth on the fixed cam to impart a vibrating motion to the shaft in the direction of its axis.

4. A concentrator, comprising a vertically disposed shaft, a plurality of open-top centrifugal vessels secured to the said shaft one above the other, each vessel having a spiral riffle on its inner face and a fixed annular apron surrounding each vessel and spaced therefrom for receiving the material thrown out of the vessels, the apron surrounding one vessel having a canvas extension secured to its lower edge and reaching into the next vessel below.

5. A concentrator, comprising a vertically disposed shaft, a plurality of open-top centrifugal vessels secured to the said shaft one above the other, and located in different horizontal planes, each vessel having a spiral riffle on its inner face, a fixed annular apron surrounding each vessel and spaced therefrom for receiving the material thrown out of the vessels, each apron having an inwardly extending flange at its top extending over the rim of the vessel, and a canvas extension at the bottom of the apron reaching into the next vessel below and delivering the thrown out material to said last mentioned vessel, and means for rotating the said shaft and imparting a vibratory motion to the same.

[Claims 6 and 7 not printed in the Gazette.]

899,313. DEVICE FOR ATTACHING THERMOMETERS TO TANKS, VATS, OR THE LIKE. HENRY W. MAURER, Rochester, N. Y., assignor to The Taylor Instrument Companies, Rochester, N. Y., a Corporation of New York. Filed Mar. 18, 1908. Serial No. 421,943.

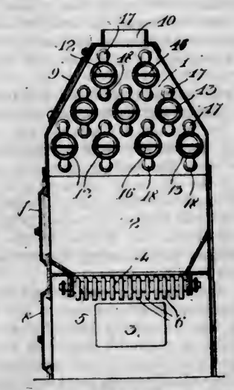


1. The combination with a tank wall having a perforation, of a socket piece having an externally threaded portion at its outer end lying in the perforation and an external shoulder arranged on the inner face of the wall, and a nut engaging the threaded portion of the socket on the outer face of the wall, the said threaded portion being extended beyond the nut.

2. The combination with a tank wall having a perforation, of a socket piece having an externally threaded portion at its outer end lying in the perforation and an external shoulder arranged on the inner face of the wall, and a nut engaging the threaded portion of the socket on the outer face of the wall, the said threaded portion being extended beyond the nut, and a thermometer having a portion fitted in said socket piece and an internally threaded nut journaled thereon and engaging the threaded portion of the socket piece projecting beyond the nut that secures the socket piece to the tank wall.

3. A thermometer socket piece for tanks comprising a hollow body portion having a hollow extension at one end formed with a tapering inner wall, an externally screw threaded portion at its other end, and a shoulder on the body portion at the inner end of the screw threaded portion.

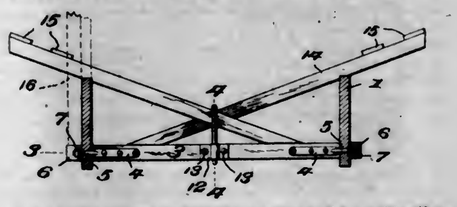
899,314. BOILER. CHARLES R. MERES, Lorain, Ohio, assignor of one-half to John Maitland and one-half to John F. Williams, Lorain, Ohio. Filed Jan. 4, 1906. Serial No. 294,674.



1. A boiler having arranged therein above the fire box a series of horizontal independent water-tubes, open at both ends, each having one end connected to a water supply pipe and its opposite end terminating in extended branches connected to return and discharge pipes, said branches having their meeting portions terminating in, and forming a partition subdividing said water-tube longitudinally and stopping at one end a short distance from the inlet end of said tube, said water-tubes also being reduced at their receiving ends and having transversely corrugated surfaces.

2. A boiler having arranged therein above the fire box a series of horizontal independent water chambers, a feed pipe connected to one end of each of the chambers, a pair of separated couplings secured respectively to the upper and lower sides of said chamber at its opposite end, a radiator supply pipe connected to the upper couplings, a radiator return pipe connected to the lower couplings, and a partition dividing the chamber into communicating compartments.

899,315. HAY AND CATTLE RACK. ADOLPH J. MILLER, Manawa, Wis. Filed Aug. 28, 1907. Serial No. 390,534.



In a device of the character described, the combination of side bars, connecting bars interposed therebetween, anchoring irons secured to the sides of the connecting bars at each end and projecting beyond said end, the projecting portions of the irons being screw threaded and passing through the side bars, sockets on the exterior surfaces of the side bars, the threaded portions of said irons passing through said sockets, means engaging the threaded portions of the irons for clamping the sockets to the side bars and a vertically adjustable clamp arranged centrally of each connecting bar.

899,316. GARMENT-SUPPORTER. CARRIE C. MORRIS, Philadelphia, Pa. Filed May 13, 1907. Serial No. 373,409.



1. A garment supporter comprising a safety pin, a clip rigidly secured to the lower bar thereof and extending laterally at right angles thereto and being formed with a square hinge barrel, and a U-shaped pin hinged in said barrel.

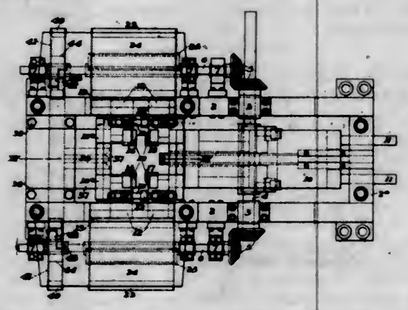
2. A garment supporter comprising a safety pin, a clip rigidly secured therto and formed on its outer end with a square hinge barrel, and a U-shaped pin hinged by its cross-bar in said barrel, the sides of the barrel exerting spring pressure upon the said cross-bar at the points of contact to retain the pin in its adjusted position.

3. A garment supporter comprising a safety pin, a clip rigidly secured to and extending laterally at right-angles thereto, and a U-shaped pin hinged to the outer end of said clip, and means for retaining the pin in the desired position to which it is moved.

4. A garment supporter comprising a safety pin, a sheet metal clip rigidly secured at one end to the lower bar of said safety pin and extending laterally at right-angles thereto and formed in its outer end with a square hinge barrel, a U-shaped pin hinged by its cross-bar in said barrel, the sides of the square barrel normally exerting spring pressure upon the said cross-bar at the points of contact to retain the pin in its adjusted position.

5. A garment supporter comprising a safety pin, a sheet metal clip rigidly secured at one end to the closed bar of the safety pin and extending laterally at right-angles thereto to form a straight portion, the outer end of said clip being formed with a square barrel, a U-shaped pin hinged by its cross-bar in said barrel, the sides of the barrel normally exerting spring pressure upon the said cross bar at the points of contact to retain the pin in its adjusted position, said straight portion of the clip serving to space said safety pin and said U-shaped pin when in parallel relation.

899,317. BARB-FORMING MACHINE. JAMES M. MURPHY, Pittsburg, Pa. Filed Nov. 29, 1907. Serial No. 404,220.



1. In a barb-forming machine, a plurality of movable dies, means for actuating said dies to grip the stock, and means for subsequently actuating the dies, relatively to each other in the direction of the length of the stock to first form the barb and to then move forwardly with and feed the stock, substantially as described.

2. In a barb-forming machine, two pairs of dies, and means for moving said dies relatively to each other both longitudinally and transversely, and also means for moving all four of the dies in closed positions simultaneously in a longitudinal direction, substantially as described.

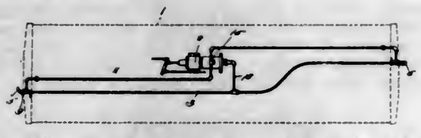
3. In a barb-forming machine, two pairs of dies, cam means for advancing and retracting said dies in a direction at right angles to the feed of the machine, and other cam mechanism for moving one pair of said dies longitudinally with reference to the other pair of dies, and for then moving all the dies as a whole in a longitudinal direction, substantially as described.

4. In a barb-forming machine, two pairs of dies, cam means for moving both pairs of dies towards and away from each other in a direction transverse to the line of feed of the machine, other cam mechanism for moving one pair of dies toward and away from the other pair in a direction parallel with the line of feed of the machine, and actuating mechanism for subsequently moving all four pairs longitudinally of the machine, substantially as described.

5. In a barb-forming machine, a longitudinally movable slide or main carrier, two sets of laterally movable die-carriers mounted on the main carrier to reciprocate therewith and also to reciprocate laterally thereon, one set of said dies also having a longitudinal movement relative to the other set, means for first actuating the laterally movable die-carriers to cause them to grip the stock, and means for then actuating one set of die-carriers longitudinally towards the other set; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

899,318. AIR-BRAKE. GEORGE W. MCMUNN and ALLAN C. HOWELL, Pittsburg, Pa. Filed June 25, 1908. Serial No. 440,316.

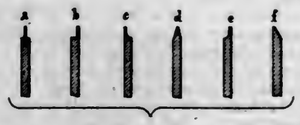


1. The combination with an air brake cylinder, and a train pipe connecting therewith, of angle cocks carried by said train pipe, a stand pipe carried by said brake cylinder, a valve carried by said stand pipe, extensions carried by said angle cocks and connecting with said stand pipe, and movable plugs arranged in said angle cocks for releasing said brake cylinder and closing said train pipe.

2. The combination with an air brake cylinder, and a train pipe connecting therewith, of angle cocks carried by said train pipe, a stand pipe carried by said brake cylinder, extensions carried by said angle cocks and connecting with said stand pipe, and movable plugs arranged in said angle cocks for releasing said brake cylinder and closing said train pipe.

3. The combination with an air brake cylinder and a train pipe connecting therewith, of angle cocks carried by said train pipe and communicating with said cylinder independent of said train pipe, and movable plugs arranged in said angle cocks for releasing said cylinder and closing said train pipe.

899,319. TURBINE. CHARLES A. PARSONS and GEORGE G. STONEY, Newcastle-upon-Tyne, England; said Stoney assignor to said Parsons. Filed Oct. 8, 1906. Serial No. 337,960.



1. A turbo-machine blade of decreasing cross section toward one end the reduction commencing a short distance from said end.

2. A turbo-machine blade thinned only at the end remote from the member which carries it.

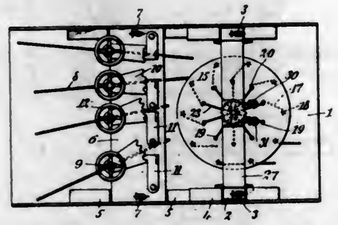
3. A turbo-machine blade thinned to an edge at the end only which comes opposite to the drum or casing.

4. A turbo-machine blade chamfered at the end remote from the member which carries the blade.

5. A turbo-machine blade chamfered on one side to form an edge at the end remote from the member which carries the blade.

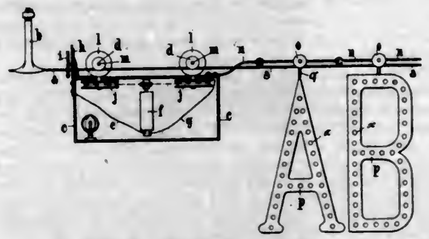
[Claims 6 to 10 not printed in the Gazette.]

899,320. WATER-CURRENT MOTOR. ASAHEL A. PORTER, Waterbury, Conn. Filed Oct. 2, 1907. Serial No. 395,477.



A water current motor having a shaft, a wheel with a pair of heads on said shaft, a plurality of wings pivotally mounted between said heads and having convexed inner edges, a plurality of stops having their ends mounted in one of said heads so as to permit a swinging movement of said stops radially with respect to the axis of said shaft, means for guiding said stops on the other head, links attached to said stops, and a sliding sleeve on said shaft attached to said links and affording means for drawing said stops inwardly to move them out of the path of said convexed edges.

899,321. ADVERTISING APPARATUS. JEAN REIX, Paris, France. Filed Nov. 25, 1905. Serial No. 289,040.



1. An advertising apparatus comprising an aerial track formed of electric current conducting wires, a small motor carriage mounted on said track, and a series of luminous letters connected to the carriage and individually suspended from the track to be drawn by the latter and to be lighted by the current passing through the track.

2. An advertising apparatus comprising an aerial track constituted by two electric current conducting wires, a small motor carriage, and a series of luminous letters connected to the carriage and suspended from the track, whereby they are lighted by the electric current passing through the track.

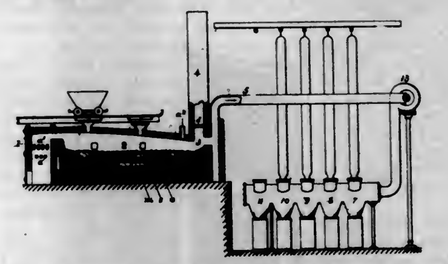
3. An advertising apparatus comprising an aerial track formed of electric current conducting wires, a small carriage mounted on said track, a motor carried by the carriage, means connected to each wire forming the track in order to carry electricity from said wire to the motor, and luminous letters forming the advertisement, the letters being individually suspended from the track and connected to the carriage to be drawn along the track by said carriage.

4. An advertising apparatus comprising an aerial track formed of electric current conducting wires, a small carriage mounted on said track, a motor on said carriage, means connected to each wire forming the track in order to carry the electricity from said wire to the motor, and a luminous sign connected to the carriage and adapted to be drawn along the track in contact therewith by said carriage, the sign having a pair of wheels mounted on the wires of the track and being lighted by electric current passing through the track.

5. An advertising apparatus comprising an aerial track formed of electric current conducting wires, a small carriage mounted on said track, a motor on said carriage, means connected to each wire forming the track in order to carry the electricity from said wires to the motor, luminous letters forming the advertisement and connected to the carriage and adapted to be drawn along the track by said carriage, and a switch comprising a flexible piece positioned for establishing a contact, and a buffer connected to said flexible piece for operating it to break the contact.

[Claim 6 not printed in the Gazette.]

899,322. PROCESS OF TREATING COMPLEX ORES CONTAINING ZINC AND OTHER VOLATILIZABLE METALS FOR THE PRODUCTION OF OXIDS. GEORGE M. RICE, Worcester, Mass. Filed July 25, 1907. Serial No. 385,435.



1. The process of producing zinc oxid from sulfid zinc ores, which consists in mixing with the crushed raw ore, finely divided particles or chips of metallic iron in quantity sufficient to overbalance the sulfur requirements, and also sufficient to form a slag with the silica contained in the ore, charging such mixed ore and iron particles into a melting furnace and subjecting the same to heat, thereby vaporizing the volatile metals and melting the matte and slag residuals, oxidizing the metallic vapors as they pass off from the charge, and then condensing and collecting the oxidized product.

2. The process of treating raw sulfid zinc ores, which consists in mixing with the crushed raw ore, chips of metallic-iron in quantity sufficient to overbalance the sulfur requirements, and also to form slag with the contained silica, charging such mixed ore and iron chips into a crucible, or furnace, and then subjecting the same to heat and thereby vaporizing the volatile metals and melting the matte and slag residuals, oxidizing the metallic vapors as they pass off from the charge, then condensing and collecting the oxidized product, and subsequently removing the slag and drawing out the matte, from the furnace or crucible, as separate products.

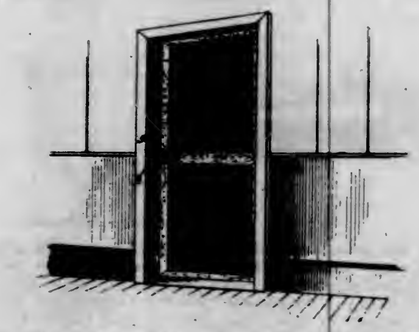
3. The improvement in treating complex zinc ores, which consists in adding to crushed raw zinc ore a quantity of finely divided metallic-iron chips, such quantity being in excess of the amount necessary to combine with and take up the sulfur in the volatilizable metals in forming FeS., subjecting the mixture to heat in a suitable retort or furnace at a degree sufficient to vaporize and drive off volatilizable metals and melt the residual material to matte and slag, admitting air to the vapors or fumes of the volatilized metals for oxidizing the same, and then condensing and collecting the zinc-oxid in suitable chambers.

4. The improvement in the art of producting zinc oxid and other products direct from raw complex, or mixed ores containing zinc, lead, etc., which consists in intimately mixing with the raw crushed ores a quantity of comminuted

metallic-iron in an amount that will chemically overbalance the sulfur liberated from the volatilizable metals in forming iron mono-sulfid (FeS.) and also an amount to form slag with the silica contained in the ore, placing the mass in a suitable furnace or retort and therein vaporizing the volatilizable metals and melting the non-volatilizable materials by the application of sufficient heat, and simultaneously admitting air to the vaporized metals for oxidizing the zinc and oxidizable metals, in vaporized condition, then condensing and collecting the vaporized products, and subsequently removing the slag and matte from the furnace or retort as separate products.

5. The process of treating mixed or complex sulfid ores, containing zinc and lead, to produce mixed oxid and sulfate; which consists in mixing with raw crushed ores of the class named, a quantity of metallic iron largely in excess of the amount required to combine with the sulfur liberated from the ore, to form iron mono-sulfid, (FeS.) heating and maintaining the ore and iron mixture at a temperature sufficient to volatilize the zinc and lead, and simultaneously oxidizing the zinc and sulfatizing the lead, while in a vaporized condition, as it is volatilized out of the mass.

899,323. DOOR-FASTENER. FREDERICK E. RICHARDSON, Manchester, Iowa. Filed Nov. 21, 1907. Serial No. 403,150.



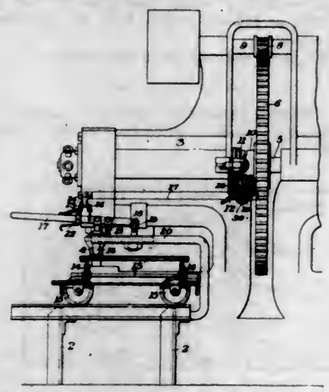
1. In a device of the class described, a member adjustably mounted upon a door and having at the edges sleeves, a resilient catch having the ends thereof arranged within said sleeves, and a retainer mounted upon a door frame and having an outer projection for engaging said catch, said catch being displaced to permit it to pass beyond said projection when said door is being closed.

2. In a device of the class described, a plate adjustably mounted upon a door, said plate having the edges thereof suitably bent to form sleeves, a resilient catch, said catch having the ends thereof secured within the sleeves of said plate, and a retainer mounted upon a door frame and presenting a portion bent outwardly for engaging said catch, said bent portion serving to displace said catch when the door is being closed.

899,324. PUNCHING-MACHINE. MORRIS J. RIGGS, Toledo, Ohio, assignor to American Bridge Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Feb. 10, 1908. Serial No. 415,023.

1. In a machine of the character described, the combination of a movable templet and work support, an index pin arranged to coöperate with the templet, a tool arranged to act on the work, a device for throwing the tool into and out of operation, lever means for actuating the index pin, and a supplemental lever device mounted on said lever for controlling the operation of the tool-controlling device; substantially as described.

2. In a machine of the character described, the combination of a movable templet and work support, an index pin arranged to coöperate with the templet, a lever for actuating said pin, a tool arranged to act on the work, a device for throwing the tool into and out of operation, a magnet for controlling said device, and means carried by the index operating lever for controlling the circuit of the magnet; substantially as described.



3. In a machine of the character described, the combination of a movable templet and work support, a lever, an index pin carried by said lever and arranged to coöperate with the templet, a tool for acting on the work, a device for effecting the starting and stopping of the tool, a magnet for controlling said device, contacts carried by the said lever for controlling the circuit of the magnet, and means for opening and closing said contacts; substantially as described.

4. In a machine of the character described, the combination of a movable templet and work support, an index pin arranged to coöperate with the templet, a tool for acting on the work, a device for controlling the operation of the tool, a magnet for controlling the operation of said device, and contact means carried by said lever for controlling the circuit of the magnet, a counterweighted armature lever actuated by the magnet for controlling the action of the tool-controlling device, and a spring arranged to act upon the said lever in opposition to the magnet; substantially as described.

5. In a machine of the character described, a tool actuating mechanism, including clutch members, one of said members being fixed to the tool-actuating shaft with respect to rotary movement, but having a sliding movement on said shaft, a spring for throwing said clutch in one direction, a pin or plunger normally held in engagement with a cam surface on the movable clutch member, an electro-magnet for retracting said pin from engagement with the cam surface, and a spring arranged to be compressed by retraction of the pin; substantially as described.

899,325. CLOTHES-RETAINER FOR INFANTS' BEDS. MARRIOTT RILEY, Braeburn, Pa., assignor of one-half to William M. Deemer, Braeburn, Pa. Filed Apr. 24, 1908. Serial No. 428,980.



1. In a bed clothes fastener, the combination with the posts or head and foot pieces of a bed, of vertical slotted guides detachably secured to said posts, T-shaped heads slidably mounted in said guides, longitudinal parallel rods connecting said heads and arranged one above the other, blocks detachably mounted in said heads, and a rod connecting said blocks for binding clothes against the first mentioned rods, substantially as described.

2. A bed clothes fastener comprising vertical guides, heads movably mounted in said guides, rods connecting said heads, blocks detachably connected to said heads, and a rod connecting said blocks, substantially as described.

3. A bed clothes fastener comprising guides, heads movably mounted in said guides, fixed rods connecting said heads, and a movable rod connecting said heads, substantially as described.

899,326. BLANKET-HOLDING ATTACHMENT. MAX ROCKSTROH, Klein-Sedlitz, near Pirna, Germany. Filed Mar. 11, 1908. Serial No. 420,514.



In combination, a platen body, a blanket holding frame therefor, comprising a cross bar and slotted arms carried at the ends of said cross bar, pivot pins carried by said body and engaged through the slots of the said arms, said body having a face formed with a transverse groove to receive said cross bar and springs projecting over said groove to confine said cross bar therein, said arms being pivotally and slidably movable with relation to said pins.

899,327. HARNESS-BUCKLE. LELAND L. ROUNDS, Orange, N. J., assignor to Elrene L. Rounds, New York, N. Y. Filed Apr. 17, 1908. Serial No. 427,677.

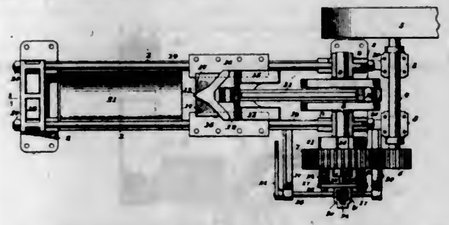


1. A harness buckle, comprising a back plate arranged for connection at one end with a harness strap, the other end having a slot and a cross bar, a spring-pressed lever fulcrumed and ranging lengthwise of the said back plate, the said lever having its free end extending into the said slot for clamping the free end of the harness strap against the said cross bar, and a hood on the said back plate and extending over the said lever to protect the same.

2. A harness buckle, comprising a back plate arranged for connection at one end with a harness strap, the other end having a slot and a cross bar, a spring-pressed lever fulcrumed and ranging lengthwise of the said back plate, the said lever having its free end extending into the said slot for clamping the free end of the harness strap against the said cross bar, and a hood on the said back plate and extending over the said lever to protect the same, the hood being open at the ends.

3. A harness buckle, comprising a back plate arranged for connection at one end with a harness strap, the other end having a slot and a cross bar, a spring-pressed lever fulcrumed and ranging lengthwise of the said back plate, the said lever having its free end extending into the said slot for clamping the free end of the harness strap against the said cross bar, a hood on the said back plate and extending over the said lever to protect the same, and a loop externally on the said hood for the passage of the terminal of the harness strap.

899,328. WOOD-SPLITTING MACHINE. HERMAN G. SAECKER, Appleton, Wis., assignor to Appleton Machine Company, Appleton, Wis. Filed Sept. 23, 1907. Serial No. 394,063.



1. A wood-splitting machine having a horizontally disposed frame comprising parallel angle-iron beams, a foot-block extending crosswise of the beam ends and secured thereto, alined bearing-blocks secured to the opposite ends of the beams, tie-rods connecting the foot-block and bearing-blocks, brackets provided with guide-rails secured to the beams, a splitter-head slidably mounted upon guide-rails, a crank-shaft mounted in the bearing-blocks, a pitman in connection with the crank-shaft and splitter-head, and a work-rest secured to said angle-iron beams intermediate of the brackets and foot-block.

2. A wood-splitting machine having a longitudinally disposed frame comprising parallel angle-iron beams, a foot-block extending crosswise of the beam ends and secured thereto, alined bearing-blocks secured to the opposite ends of the beams, tie-rods connecting the foot-block and bearing-blocks, brackets provided with guide-rails secured to the beams, a splitter-head slidably mounted upon the guide-rails, a work-rest secured to the beams intermediate of the brackets and foot-block, and means for imparting reciprocation to the splitter-head.

3. A wood-splitting machine having a horizontally disposed frame comprising parallel angle-iron beams, a foot-block extending crosswise of the beam ends and secured thereto, alined bearing-blocks secured to the opposite ends of the beams, tie-rods connecting the foot-block and bearing-blocks, brackets provided with guide-rails secured to the beams, a splitter-head slidably mounted upon the guide-rails, a crank-shaft mounted in the bearing-blocks, a pitman in connection with the crank-shaft and splitter-head, a drive-shaft mounted upon the angle-iron beams in gear-connection with the crank-shaft, a clutch-mechanism in connection with the gear, and a work-rest secured to said angle-iron beams intermediate of the brackets and foot-block.

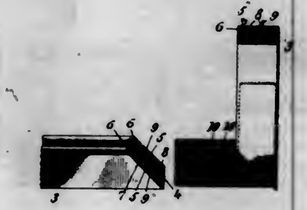
4. A wood-splitting machine having a longitudinally disposed frame comprising parallel angle-iron beams, a foot-block extending crosswise of the beam ends and secured thereto, alined bearing blocks secured to the opposite ends of the beams, tie-rods connecting the foot-block and bearing-blocks, brackets provided with guide-rails secured to the beams, a splitter-head slidably mounted upon the guide-rails, a concavo-convex work-rest secured to the beams intermediate of the brackets and foot-block, and means for imparting reciprocation to the splitter-head.

899,329. FRAME. LEONARD SBORIGI, New York, N. Y. Filed Mar. 25, 1908. Serial No. 423,216.

1. In a frame, the combination of a member of sheet metal bent upon itself so as to form side walls, and bent further upon itself so as to form inner walls parallel with said side walls, and separated therefrom by slots, a second member connected with said first-mentioned member, and corner pieces secured to said second-mentioned member and provided with portions projecting into said slots.

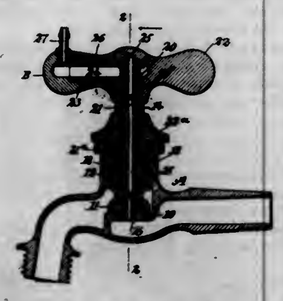
2. In a frame, the combination of a plurality of bars each made of sheet metal bent upon itself so as to form a central slot, said bars being secured together, and a pair of thinner bars connected with said first-mentioned bars and spaced apart so as to leave a slot therebetween.

3. As an article of manufacture, a member of sheet metal bent upon itself so as to form side walls, and further bent upon itself so as to form inner walls disposed adjacent to said side walls, the spacing of said inner walls



from said side walls being such as to leave a slot therebetween, and a corner piece provided with a portion extending into said slot.

899,330. FIRE-NOZZLE ATTACHMENT FOR VALVES. JOHN D. SCHIERLOH, Jersey City, N. J. Filed June 28, 1907. Serial No. 381,249.



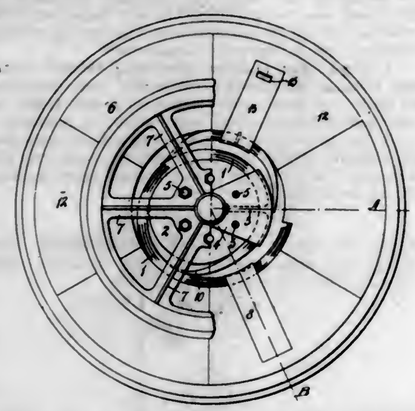
1. The combination with a valve casing, and a valve, of a handle for the valve, said valve and handle having a normally closed outlet therethrough, and means whereby the moving of the handle with respect to the valve will open and close the outlet.

2. The combination with the body of a valve, a tubular valve stem therefor, and a handle casing for the said valve stem, the said casing being capable of vertical movement, of a member revolubly mounted upon the said handle casing, a nozzle carried by said revoluble member, a communication between the body of the valve and the said nozzle, and means for opening such communication and for cutting off the same.

3. The combination with the body of a faucet, a valve, a tubular stem for the valve, a casing mounted to turn around the valve stem and to slide thereon, a chambered handle for the said casing, having a seat to receive the upper portion of the valve stem, and a locking connection between the valve stem and the casing, of a chambered member mounted to revolve around the chambered portion of the said handle, the two said chambers being capable of communication with the bore of the valve stem, a nozzle carried by the said chambered and revoluble member, and means for closing the communication between the chamber of the handle and the bore of the valve stem and for establishing said communication.

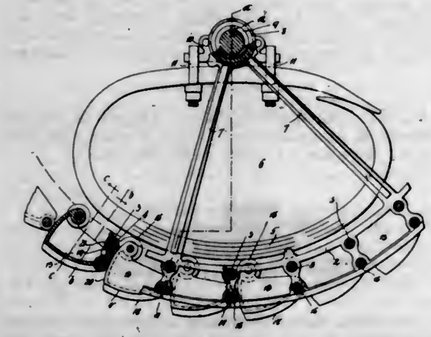
899,331. WHEEL FOR VEHICLES. WILLIAM H. SCRYMGOUR, London, England. Filed Aug. 12, 1907. Serial No. 388,208.

In vehicle wheels a coiled, or spiral springy metal piece, secured at, or near, one end, to the hub, and at, or near the other end, to the interior of the outer part or rim, and metal springs to give resiliency, and strength in the space between the hub and the interior of the outer part, or rim, and bearing on the said coiled or spiral



springy metal piece; substantially as hereinbefore described.

899,332. SPRING-WHEEL FOR VEHICLES. WILLIAM H. SCRYMGOUR, London, England. Filed Sept. 30, 1907. Serial No. 395,191.

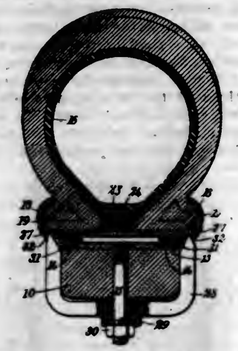


1. In a vehicle wheel comprising disks mounted free to rotate on an axle and bolted together, the combination therewith of blocks or shoes pivotally mounted in said disks near the periphery thereof, an elliptical spring fixedly carried by said axle to be engaged with by the wheels of said block on the minor axis of said spring to cause said blocks to have engagement with the road surface for a fractional space of time to support the load.

2. In a vehicle wheel comprising disks mounted free to rotate on an axle and bolted together, the combination therewith of blocks or shoes pivotally mounted in said disks near the periphery thereof, wheels carried by said blocks or shoes, an elliptical spring fixedly carried by said axle to be engaged with by said wheels on the minor axis of said spring to cause said blocks to have engagement with the road surface for a fractional space of time and means such as packing or panels to exclude dust while retaining oil or grease.

3. In wheels built up of disks bolted together and freely mounted on the axle, an elliptical spring fixedly mounted on said axle and between the disks, the minor axis of said spring making contact with blocks or shoes carried by the disks during the revolution of the wheel to support the load through each of the blocks or shoes in turn and always through one or more of them.

899,333. VEHICLE-WHEEL. ISAIAH C. SCUDDER, New York, N. Y. Filed Feb. 16, 1907. Serial No. 357,637.



1. In combination, a vehicle wheel having an outer metallic band, a detachable rim, oppositely-disposed locking rings adapted for locking said rim to said metallic band, and means for simultaneously forcing said locking rings into place, said means including a plurality of radially movable U-shaped clamps.

2. In combination, a vehicle wheel having an outer metallic band, a detachable rim, oppositely-disposed locking rings having beveled surfaces and adapted for locking said rim to said metallic band, and means for simultaneously forcing said locking rings into place, said means including a plurality of radially movable U-shaped clamps, the ends of said clamps being beveled and adapted for engagement with said beveled surfaces of said locking rings.

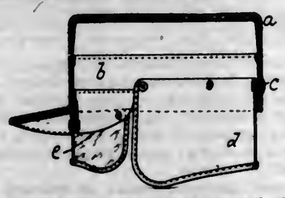
3. In combination with a shoe having outwardly-extending base flanges, of a detachable rim comprising oppositely-disposed clamping rings having portions adapted for engagement with said base flanges, locking keys for holding said clamping rings together, a locking ring adapted for insertion between the base flanges of the shoe, and means carried by the locking keys for engagement between said locking ring and said base flanges for holding said keys in position.

4. In combination with a tire having base flanges, a detachable rim having portions adapted for engagement with said base flanges, locking keys for engagement with said detachable rim, a locking ring between said base flanges, and outwardly extending spring clips carried by said locking keys and adapted to be held in place by said locking ring when said tire is inflated.

5. In combination, a vehicle wheel, having an outer metallic band, said band presenting two outwardly and laterally inclined surfaces, a detachable rim, oppositely disposed locking rings having beveled inner edges adapted for insertion between said rim and the respective inclined surfaces of the band for locking the rim to said band, and radially movable means for forcing said locking rings into position.

[Claims 6 to 8 not printed in the Gazette.]

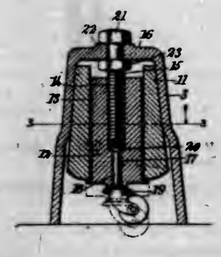
899,334. HAT OR CAP. ISSAK SEITZMAN, New York, N. Y. Filed Jan. 11, 1907. Serial No. 351,875.



1. A cap having the sweat band secured thereto and provided with attachments for detachably connecting an ear and neck protector and an eye protector.

2. A cap having the sweat band provided on its face with attachments for connecting an ear and neck protector and an eye protector, said attachments being at the upper part of the sweat band.

899,335. STOVE-BASE. JAMES SHARON, Canaseraga, N. Y. Filed Mar. 26, 1908. Serial No. 423,299.



1. A member having a projecting leg, an adjusting screw having an exposed head on the upper side of said leg and extending downwardly into the interior of said leg, a non-rotatable slide block engaged by said adjusting screw and adapted to be raised or lowered when said screw is turned, and a caster swiveled in the lower end of said block, said adjusting screw having a collar for imparting a thrust to the said leg.

2. A device having a projecting leg with substantially vertical guide tongues, a block sliding between said guide tongues, an adjusting screw having an exposed head seated on the upper side of said leg, the body whereof extends downwardly into said block, said screw affording means for raising or lowering said block, and a caster swiveled in the lower end of said block.

3. A stove base having sides, and corner posts connecting the same, caster blocks guided on said sides, adjusting means for raising or lowering said caster blocks, and casters carried by said blocks and adapted to support said stove base above the floor.

4. A stove base having sides, and corner posts connected to said sides, said sides having guide tongues projecting toward the interior of said corner posts, blocks slidably mounted on said guide tongues, and adjusting screws carried respectively by said corner posts and extending downwardly into the interior thereof, said adjusting screws engaging said blocks for adjusting the same downwardly or upwardly, and casters carried by said caster blocks, adapted to support the stove base above the floor.

5. A member having a hollow leg with longitudinal guide ribs therein, a block having grooves receiving said ribs and sliding vertically in said leg, said block having a vertical bore passing completely therethrough, an adjusting screw mounted in the upper end of said bore and in the upper end of said leg, and having a head exposed for turning the same, and a caster swiveled in the lower end of said bore.

[Claims 6 and 7 not printed in the Gazette.]

899,336. WRENCH. ALBERT L. SHAW, Corinne, Utah. Filed Dec. 3, 1907. Serial No. 404,937.

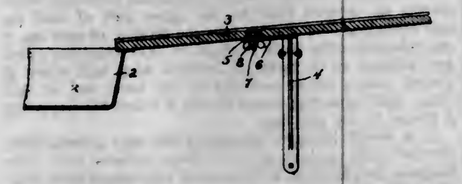
In a wrench of the character described, the combination with a shank having a jaw at one end, a second jaw movably mounted on the shank and adapted with the first jaw to engage a wheel hub, and means for moving the jaws relatively one to the other, of nut jaws mounted on the shank between the hub jaws to slide but not to turn thereon, and means for operating the nut jaws to cause

them to approach each other or to be separated, whereby the nut jaws may be arranged any distance apart and col-



lectively movable on the shank intermediate of the hub jaws.

899,337. DRAIN-BOARD BRACKET. ANDREW SHERET, Victoria, British Columbia, Canada. Filed Nov. 16, 1906. Serial No. 343,757.



1. A drain board bracket the upper surface of which is downwardly beveled to one side and is provided toward the middle of its upper beveled surface with a member laterally projecting therefrom and forming a continuation of the plane of the upper surface of the bracket, and an elongated aperture in such lateral projection the longer dimension of which is parallel to the edges thereof.

2. In a drain board bracket, a strip secured to the upper-side said strip being beveled toward one edge and having a lateral extension toward its mid-length, and an elongated aperture in such lateral extension.

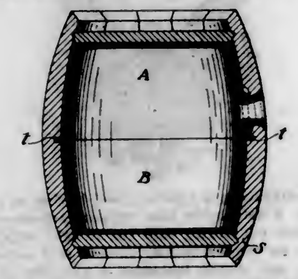
3. A bracket comprising two members projecting at right angles to one another, one of said members having its upper face beveled, the other member comprising an elongated portion projecting from said beveled member and having its upper surface lying in the same plane with the aforesaid mentioned bevel, all being arranged substantially as shown and described.

4. A bracket comprising two members projecting at right angles to one another, one of said members having its upper face beveled, the other member comprising an elongated portion projecting from said beveled member and having its upper surface lying in the same plane with the aforesaid mentioned bevel, and said elongated member having an elongated slot, substantially as shown and described.

899,338. RECEPTACLE. GEORGE SHIELDS, Brooklyn, N. Y., assignor to Empire Wolverine Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Nov. 28, 1906, Serial No. 345,481. Renewed Oct. 29, 1907. Serial No. 399,623.

1. A receptacle comprising two complemental cup-like portions provided with flanges, each portion being provided with a vitreous lining having short flange portions engaging a part only of the said flange portions, and a ring interposed between a part only of the flanges of the cup portions, the ring and said portions being secured together by soldering at the engaging portions.

2. A receptacle comprising two complemental cup-like portions provided with outwardly extending flanges, each portion being provided with a vitreous lining having flange portions engaging the inner portion only of the said flange portions, a ring interposed between the flanges of the cup portions at their outer ends, the ring and said portions being secured together by soldering at the outer engaging portions of the flanges, a wooden casing surrounding the cup portions and having the flange portions embedded therein, and a lining of an insulating material inserted between the cup portions and the casing.



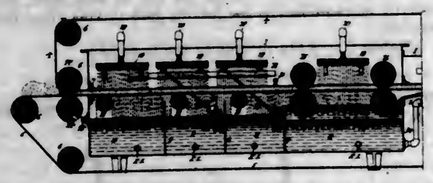
3. A receptacle comprising two complemental cup-like portions provided with outwardly projecting elongated flanges, each cup portion being provided with a vitreous lining, and soldering means whereby the flanges are connected adjacent their outer portions only.

4. A receptacle comprising two complemental cup-like portions provided with outwardly projecting elongated flanges, each cup portion being provided with a vitreous lining, soldering means whereby the flanges are connected adjacent their outer portions only, and a casing surrounding the cup members and having the flanges embedded therein.

5. A receptacle comprising two complemental cup-like portions each provided with an outwardly extending flange, each portion being provided with a glass lining having short flange portions engaging part only of the said flange portions, a flat ring interposed between the flanges of the cup portions at their outer ends, the ring and adjacent cup flanges being secured together by soldering at the outer portions of the flanges.

[Claims 6 to 9 not printed in the Gazette.]

899,339. EXTRACTING GREASE AND POTASH SALTS FROM WOOL. FRANK SHUMAN and CONSTANTINE SHUMAN, Philadelphia, Pa., assignors, by direct and mesne assignments, of one-third to said Frank Shuman, one-third to Walter Erben, and one-third to Charles H. Harding, Philadelphia, Pa. Filed Dec. 22, 1905. Serial No. 292,988.



1. The mode herein described of treating wool, said mode consisting in first subjecting the wool to the action of a solvent of the grease, washing the wool with a body of water of a relatively low temperature, and then with another and independent body of water, of a temperature sufficiently high to effect vaporization of solvent contained in the wool.

2. The mode herein described of treating wool, said mode consisting in carrying the wool forward through streams of solvent containing a less and less percentage of grease, then applying a stream of pure solvent to the wool, then subjecting the wool to pressure to express the surplus solvent therefrom, and then washing the wool with water that gradually increases in temperature until sufficiently high to effect vaporization of the solvent remaining in the wool.

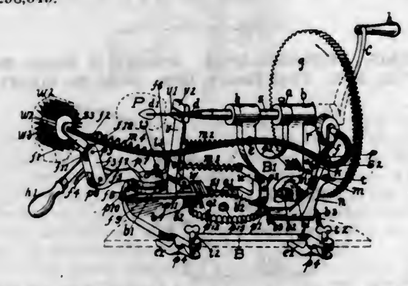
3. The mode herein described of treating wool, said mode consisting in first subjecting the wool to the action of a solvent of the grease, then expressing surplus solvent from the wool by pressure, and then washing the wool, first with water of a relatively low temperature, and then with water of a temperature sufficiently high to effect vaporization of solvent contained in the wool.

4. The mode herein described of treating wool, said mode consisting in carrying the mass of wool forwardly through flowing streams of solvent, and then through water first of a relatively low temperature and then of a temperature sufficiently high to effect vaporization of solvent contained in the wool.

5. The process herein described of extracting grease and potash salts from wool, said process consisting in feeding the wool continuously forward through flowing streams of solvent to remove the grease, then passing clear solvent through the wool, then removing the potash from the wool by water at such a temperature that it will not discolor the wool, and then raising the temperature of the water to a point sufficient to volatilize the solvent.

[Claims 6 to 10 not printed in the Gazette.]

899,340. PARING-MACHINE. LEON G. SIMPSON, Rochester, N. Y. Filed Jan. 29, 1906. Serial No. 298,349.



1. In a vegetable paring machine; a main operating element; a revoluble support for the vegetable and means connected with such main operating element for rotating such vegetable support; a brush revolubly supported in a frame and flexibly connected to a carrier; means connecting the brush and the carrier for yieldably holding such brush against the vegetable; such carrier being pivotally supported on the machine, and connections between such main operating element and such brush for rotating the same therefrom and between such main operating element and such carrier for causing the same to traverse successively a cycle in which brush traverses a path approximately half way around the vegetable.

2. In a vegetable paring machine; a main operating element; a revoluble support for the vegetable and means connected with such main operating element for rotating such vegetable support; a revoluble brush; a yieldable and elastic support for such brush; means, connected with such main operating element, for revolving such brush; means also connected with such main operating element for causing the brush to traverse successively a cycle including a path approximately half way around and in contact with a vegetable on such support therefor; a knife flexibly mounted upon the machine and means suitably mounted on the machine for bringing such knife into engagement with such vegetable at points adjacent to such support therefor at regular intervals bearing a definite relation to the periods of time during which such brush traverses such cycle.

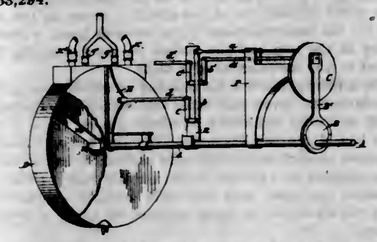
3. In a vegetable paring machine; a main operating element; a revoluble support for the vegetable and means connected with such main operating element for rotating such vegetable support; a revoluble brush; a frame carrying bearings for such brush; means suitably mounted on the machine and actuated by the main operating element for supporting and operating such frame whereby such brush is caused to traverse successively a cycle including a path approximately half way around and in elastic and yieldable contact with a vegetable on such support therefor and means for imparting rotary motion to such brush from such main operating element.

4. In a vegetable paring machine; a main operating element; a revoluble support for the vegetable and means connected with such main operating element for rotating such vegetable support; a revoluble brush; a frame carrying bearings for such brush; means suitably mounted on the machine and actuated by the main operating element for supporting and operating such frame whereby such brush is caused to traverse successively a cycle including a path approximately half way around and in elastic and yieldable contact with a vegetable on such support therefor and approximately in a horizontal plane passing through the axis of such revoluble support for the vegetable and means for imparting rotary motion to such brush from such main operating element.

5. In a vegetable paring machine; a main operating element; a revoluble support for the vegetable and means connected with such main operating element for rotating such vegetable support; a shaft revolubly supported in a frame, such frame flexibly connected with a carrier and such carrier mounted to swing on the machine; connections between such main operating element and such shaft for rotating the same therefrom; a brush operatively supported from such shaft; connections between such carrier and such main operating element for causing such carrier to traverse successively a cycle in which such brush traverses a path approximately half way around the vegetable and means for yieldably holding such brush against the vegetable.

[Claim 6 not printed in the Gazette.]

899,341. DRUM-CYLINDER MOTOR. JOHN E. SMITH, Kansas City, Kans. Filed Mar. 19, 1907. Serial No. 363,294.



1. A rotary motor having a supporting shaft, an eccentric conveniently attached thereto, the bar of said eccentric being vertically adapted to a rotating wheel bearings for the same; the said wheel having on its reverse face, concentric, with reference to the axis of its revolution, independent annular grooves, said grooves being incomplete in the same segment, concentrically arranged segments of grooves having a greater radii, being independently joined to the said incomplete annular grooves by equilinear diverging inclined plane grooves; the greater of the said grooved tracks, slidably engaging the head of a reciprocating bar, a pin and support for the same, a bar vertically connecting by simple hinge joint attachments, the lower arm of a bell crank, a pin and post for the same, to the free end of said reciprocating bar, the upright arm of said crank being suitably connected by a horizontally arranged bar to a slide, having an inclosed guide with suitable openings, adapted to the movements of the slide, the said slide having a concave bottom, the edges thereof having a limited flare conforming to the contour of a propeller hub.

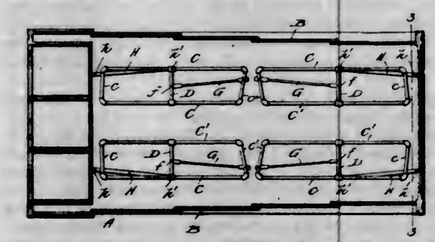
2. A rotary motor having a supporting shaft, an eccentric conveniently attached thereto, the bar of said eccentric being vertically adapted to a rotating wheel, bearings for the same, the said wheel having on its reverse face, concentric, with reference to the axis of its revolution, independent annular grooves, the said grooves being incomplete in the same segment, concentrically arranged segments of grooves, having a greater radii being independently joined to the said incomplete annular grooves, by equilinear diverging inclined plane grooves, the smaller of the said grooved tracks slidably engaging the head of a reciprocating bar, a pin and post for the same, a bar vertically connecting by hinge joint attachments the lower arm of a bell crank, a pin and support for the same, to the free end of said reciprocating bar, the upright arm of said crank having a suitable hinge joint attachment to a horizontally arranged bar, the other end of the said bar having diverging adjustable arms of equal length separately and suitably connected at convenient angles, right and left, to the ends of horizontal reciprocating bars, pins supporting the same, the remote ends of said bars being suitably connected to the sliding valves of steam ports.

3. In a rotary motor a supporting shaft having one or more feathers at the motor site, a rotary propeller comprising a hub divided on its axis into two equal segments, said segments being held firmly together by a mortise-tenon device, the eye of said hub having one or more grooves engaging the feathers on the supporting shaft a blade projected from one of the said segments at right angles to the faces thereof, the edges of the said blade having linear grooves, spring actuated strips set therein, the said blade and hub being adapted to revolve in a drum cylinder.

4. In a rotary motor a drum cylinder, supports for the same, a shaft carrying a propeller the heads of said drum being adapted for the shaft to rotate therein, the said cylinder having a vertical section with reference to the said shaft, designed to facilitate changing of cylinders, a rectangular area at the top of the said cylinder, vertical openings arranged as shown in the rectangular area said openings communicating internally with the cylinder and externally with pipes having valves suitably arranged, an opening in the bottom of the said cylinder, a valve adapted to the same, a groove at the top on the inner circumference in the plane of the axis of the shaft, a recess in the same plane on the inner surface of the reverse head, a vertical opening in the plane of the radius on the presenting head adapted to the movements of a slide.

5. In a rotary motor a bar one end of which is controlled by a convenient lever, the other end suitably connected to a stem centrally projected at right angles from a horizontal bar, a central pin supporting the same, a suitable connection at each end of the said horizontal bar to sliding valves adapted to exhaust pipes, on the body of the said horizontal bar near each end rods suitably connected to sliding valves fitted in pipes adapted to carry a pressure medium.

899,342. DISPLAY-RACK. OSCAR L. SMITH, Philadelphia, Pa. Filed Dec. 5, 1907. Serial No. 405,178.



1. In combination, a case or compartment, a framework for supporting garments and the like, an arm pivotally supporting said framework therein, and a guiding arm pivotally connecting said framework with the interior of the case or compartment, whereby said framework may be automatically guided and caused to revolve so as to present to view either the front or rear of said framework.

2. In combination, a case or compartment, a framework for supporting garments and the like, an arm pivotally connecting said framework with one portion of said case at one side, and a guiding arm pivotally secured to said case at a point near the opposite side of the framework and also to said framework at a predetermined point, substantially as described.

3. In a device of the character described, a framework, an upright, a pivotally mounted rod supporting said framework, means pivotally connecting said rod and upright, a guiding rod pivotally secured at a point opposite said supporting means, said last-mentioned rod also pivotally secured to the framework at a predetermined point thereon.

4. In a device of the character described, a framework having front and rear rods, a transverse rod thereon, a rod pivoted to and depending from said transverse rod, an upright, arms pivotally connecting said depending rod and upright, and an arm pivoted to the framework at a point near one end of said transverse rod and to a point outside said framework, substantially as described.

5. In a device of the character described, a framework, a rod pivoted to and depending from the same, arms having one end secured to said depending rod and the other end pivotally mounted outside said framework, and an arm pivoted at one end to said framework at a predetermined point and having its opposite end pivotally mounted outside said framework, substantially as described.

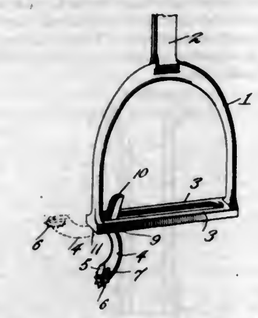
899,343. PERAMBULATOR. WILLIAM H. SMITH, Reed City, Mich. Filed Jan. 21, 1908. Serial No. 412,015.

1. In combination with the body and runners of a sleigh perambulator, bars pivotally secured at one end to the body, bars pivotally secured to the free end of said bars, an axletree secured to the free ends of the latter bars, hooks for supporting said axletree back of the body, wheels mounted on said axletree at each side of the body, means for raising and lowering said wheels, and an offset in the runners to hold the axletree to place when down.

2. In combination with the body and runners of a sleigh perambulator, an axletree, means for supporting said axletree back of the body, wheels mounted on the axletree each side of the body, bars pivotally secured to the body at one end and secured to the axletree at the other end with an intermediate pivotal joint in each pair of bars, posts on the body in the line of travel of said bars, the axletree removable from the back of the body, and offsets in the runners to secure the axletree to place with the wheels depending below the runners, substantially as shown and described.

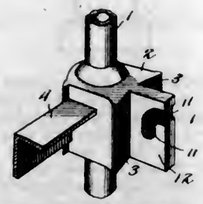
899,344. COMBINED STIRRUP AND SPUR. JAMES W. W. SMITHER and HENRY L. ELDER, Nicholasville, Ky. Filed Feb. 9, 1907. Serial No. 356,599.

A combined stirrup and spur comprising a stirrup having the usual arch or suspending member and a foot bar provided with a slot extending longitudinally thereof, and a spur consisting of a lever pivoted in said slot near one end thereof, said lever having a rounded inner end, a curved portion, and a spur wheel journaled in the outer end thereof, the lower end of one of the side bars of the arch



serving as a stop when the spur lever is thrown up in position for use.

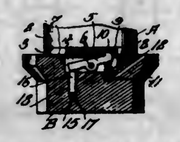
899,345. BEDSTEAD-FASTENING. LON B. SNYDER, Chattanooga, Tenn. Filed Apr. 28, 1908. Serial No. 429,742.



1. A bed stead fastening comprising in combination with a bed post and a detachable rail, a boss on the bed post provided with a jointing face, a tongue projecting from said jointing face and provided in opposite sides with crooked grooves open at one end, and a head on the rail formed with a jointing face and a recess to receive said tongue and provided with projections in the recess to engage the grooves in the tongue.

2. A bed stead comprising in combination with a bed post and a detachable rail, a boss on the bed post provided with a jointing face, a tongue projecting from said jointing face and provided with a crooked groove open at one end, and a head on the rail formed with a jointing face and a recess to receive said tongue and provided with a projection in the recess to engage the groove of the tongue, the relation between the separable parts of the fastening being such that the rail is rendered reversible.

899,346. HUB-ATTACHING DEVICE. CHARLES H. SOPER, Canton, Ill. Filed Mar. 13, 1908. Serial No. 420,839.



1. The combination of a threaded member having ratchet teeth, a nut on the member and provided with a chamber, a pawl pivoted in the chamber and arranged to engage the ratchet teeth, a spring for holding the pawl in locking position, and a releasing device on the nut having angularly-disposed members arranged one in engagement with the pawl and the other normally projecting from one side of the nut.

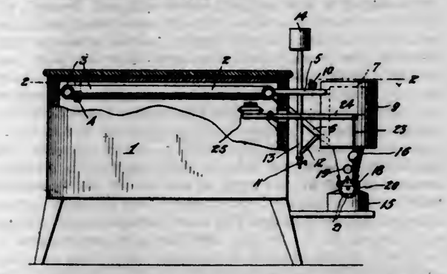
2. The combination of a threaded member having ratchet teeth, a nut on the member and provided with a chamber open at its rear, a cover plate having an aperture, a pawl pivoted in the chamber with its nose adapted to extend through the aperture to engage the ratchet teeth, and a releasing device having one end engaging the pawl and the other end projecting from one side of the nut.

3. The combination of a member having a reduced threaded extremity and provided with an annular shoulder, a ring shrunk over the threads of said extremity and bearing on the said shoulder and having ratchet teeth in its side face, a nut on the member and bearing on the ring, a spring-pressed pawl on the nut for engaging the ratchet teeth, and means for automatically releasing the pawl by the application of a wrench to the nut.

4. The combination of a threaded member provided with ratchet teeth, a nut on the member provided with a chamber open at its rear and with passages extending at an angle to each other from the chamber to one side of the nut, a pawl in the chamber for engaging the ratchet teeth, a releasing device composed of detachable members arranged in the passages and one engaging the pawl and the other projecting from one side of the nut, and a spring bearing on the pawl and serving to hold the latter in locking position.

5. A threaded member carrying ratchet teeth, a nut provided with lugs extending from oppositely-disposed sides, a pawl on the nut for engaging the ratchet teeth, a member for releasing the pawl and having one extremity projecting from one of the said sides of the nut, and means for holding the pawl in locking position.

899,347. INCUBATOR-HEATER. MILTON J. SPICER, Fairfield, Nebr. Filed May 28, 1906. Serial No. 319,180.

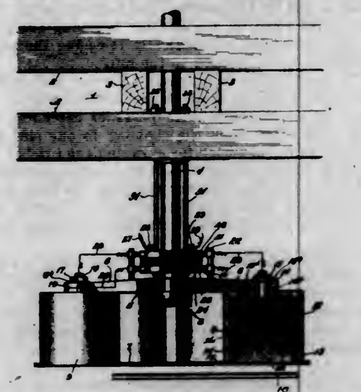


In an incubator, a casing having an aperture in the side wall thereof, an inwardly curved upstanding bracket arranged integrally of the casing adjacent said aperture, a thermostat mounted within the casing in line with the pivotal point of said bracket, a straight rod connected to said thermostat at one end and pivotally connected to the bracket adjacent the thermostat so as to have a multiplied movement at its outer end, said rod having its outer end projecting through the aperture in the casing, a depending link pivoted to the outer end of said rod at right angles thereto and having an engaging hook at its lower end, a supporting bracket projecting from the legs on the incubator exteriorly of the casing, a lamp thereon having a wick shaft, a disk on the wick shaft having a plurality of apertures adapted to be engaged by the hook end of said link, and an inertia weight mounted intermediate the length of said link for preventing too rapid action and to permit flexibility of movement.

899,348. MAGNETIC ORE-SEPARATOR. CHARLES E. STEBBINS, Iola, Kans. Filed Apr. 17, 1908. Serial No. 427,636.

1. In a magnetic ore separator, the combination of a main support, a shaft journaled therein and depending therefrom, supporting rods also depending from said main support and arranged about said shaft, a head fixed upon the lower end of the shaft to rotate therewith, a series of electro magnets carried by said head, brushes carried by the head and in electrical connection with the magnets, an

annular commutator inclosing the shaft above the head for coöperation with the brushes and provided with a gap adapted to be crossed by the brushes, said commutator having arcuate openings through which said supporting rods extend, whereby the commutator is adjustable circumferentially on the rods to vary the position of the gap, means for securing the commutator to the rods in adjusted position, and electrical conductors for connecting the commutator with a source of electrical energy.



2. In a magnetic ore separator, the combination of a vertical shaft, an armed spider fixed upon the lower end of the shaft, a non-magnetic plate disposed beneath the spider and having a series of openings corresponding in number to the arms of the spider, a series of electro-magnets disposed between the spider and plate, and each comprising a casing bearing at its upper end against the overhanging arm of the spider and fitting at its lower end in the underlying opening in the plate and a core within the casing exposed at its lower end therethrough and having a stem at its upper end projecting upwardly through said spider arm, means for securing said magnets in position, brushes carried by the arms of the spider and connected with the terminals of the windings of the magnets, a commutator supported about the shaft independently thereof and engaged by the brushes and having a gap adapted to be crossed by the brushes, said commutator being provided with conductors for connecting it with a source of electrical supply, and means connecting said commutator for circumferential adjustment on its support, whereby the position of the gap may be varied.

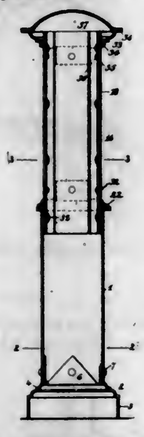
3. In a magnetic ore separator, the combination of an overhead support, a shaft journaled in said support and depending therefrom, a head mounted upon the lower end of the shaft to rotate therewith, a series of electro-magnets carried by said head, brushes carried by the head and connected with the magnets, an annular commutator surrounding the shaft and provided with arcuate openings extending vertically therethrough, a series of supporting rods depending from said overhead support and projecting through the openings in the commutator, said commutator being provided with a gap adapted to be crossed by the brushes and circumferentially adjustable on said rods to vary the position of the gap, means for securing the commutator in adjusted position upon the rods, and electrical conductors connected with said commutator.

899,349. BUILT-UP POST. CHARLES F. STEIBER, New York, N. Y. Filed July 16, 1908. Serial No. 443,817.

1. A built-up post having a base formed of sheet metal and having a seat for a post-section, said base having upwardly projecting integral ears at said seat, and a post-section received on said seat and attached to said ears.

2. A built-up post having side plates with channels formed therein, and a collar formed of sheet metal having integral ears received in said channels and attached thereto.

3. A built-up post having main side plates with centrally disposed channels formed in the faces thereof and having longitudinal flanges at the edges thereof, other side plates between said main side plates and attached to said flanges, and a collar formed of sheet metal having integral ears received in said channels and between said flanges and attached to said side plates.

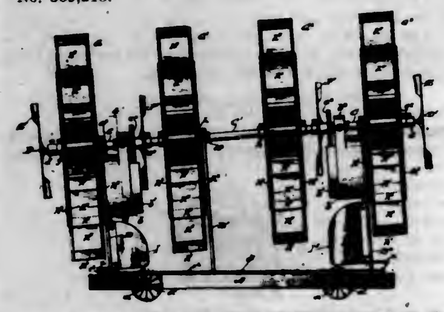


4. A built-up post having a base formed of sheet metal having a seat for a post-section and having integral upwardly projecting ears at said seat, a lower post-section resting on said seat and engaging said ears, an upper post-section received in the upper end of said lower post-section, and a collar formed of sheet metal having integral ears attached to said upper post-section and resting on the upper end of said lower post-section.

5. A built-up post comprising a lower section, an upper section received in the upper end thereof, said upper section having side plates with channels formed therein, and a collar formed of sheet metal, having ears attached in said channels and of substantially the same width as said channels.

[Claims 6 to 9 not printed in the Gazette.]

899,350. DIRIGIBLE FLYING-MACHINE. EWALD E. STEINHAUS, Chicago, Ill. Filed Apr. 20, 1907. Serial No. 369,215.



1. A car mounted on wheels, a shaft supported on the car so that its axis is inclined to the body of the car, propellers arranged on the shaft, and aeroplanes mounted to freely rotate on the shaft, each of said aeroplanes comprising a hub and bladea radially arranged relative to said hub and rigidly connected together.

2. A car mounted on wheels, a shaft supported on the car and inclined thereto, propellers arranged on the shaft, propellers journaled in the ends of the shaft and aeroplanes mounted to rotate on the shaft, each comprising a hub, and radially arranged blades rigidly connected together at their ends.

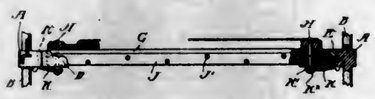
3. A car mounted on wheels, a hollow shaft supported with its axis inclined to the body of the car, propellers journaled on the shaft, a shaft extending from each end of said hollow shaft, a propeller secured on the outer end of each shaft, motors, each adapted to drive one of the propellers on the hollow shaft and one of the shafts journaled in said hollow shaft and aeroplanes mounted on the hollow shaft.

4. In a device of the class described the combination with a car of road wheels thereon, standards engaged on said car, a tubular non-rotative shaft carried thereby, a propeller journaled thereon, a shaft journaled in each end of said tubular shaft, a propeller rigidly engaged on each, motors acting to drive all said propellers, aeroplanes comprising radial blades journaled on said tubular shaft and means preventing longitudinal movement thereof.

5. A flying machine embracing in combination with a car adapted to travel on the ground of standards or uprights engaged thereto, adjustable bearings at the outer end of each, a non-rotatable shaft engaged in said bearings, one or more propellers journaled on said shaft, motors supported by the end standards, adapted to drive said propellers, means for controlling the direction of travel of said car and aeroplanes inclined relatively to the car and supported to swing on said non-rotatable shaft.

[Claims 6 to 13 not printed in the Gazette.]

899,351. COMBINATION BEDSTEAD AND MATTRESS. JOHN F. STEPHENSON, Glenferrie, Victoria, Australia. Filed Dec. 29, 1906. Serial No. 350,004.



The combination with the bedposts and the corner blocks integral therewith and each having a dove-tail socket, of boxes having dove-tail portions engaging said sockets, said boxes having bottom supporting members extending toward each other and parallel vertical flanges, wooden side members resting in the hollow portions of said boxes, vertical bolts passed through said side members and through said bottom supporting members of the blocks, and metal plates attached to the inner sides of said side members, and a clip plate secured upon each bolt and having one end bridging the joints between the corner blocks and boxes and engaging the under sides of the former.

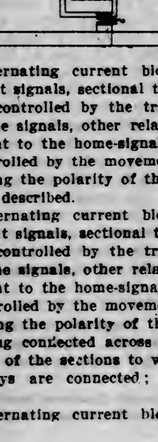
899,352. LUBRICATING-CUP. CHARLES STEWART, New York, N. Y. Filed Oct. 22, 1907. Serial No. 398,618.

1. An air-tight lubricating cup comprising a transparent body having heads, an outlet tube connecting said heads with the body and having an opening therein below the normal liquid level in the cup, for the discharge of the lubricant; a conical feeding member secured to the lower end of said tube, and means for controlling the admission of air into the cup through said opening carried at the upper end of said tube.

2. A lubricating cup having a discharge tube, and a conical feed receptacle surrounding the lower extremity of the tube having openings at its top for the discharge of the lubricant.

3. A lubricating cup having a discharge tube, and a conical feed receptacle surrounding the lower extremity of the tube having openings at its top for the discharge of the lubricant, and provided with a neck threaded on the tube.

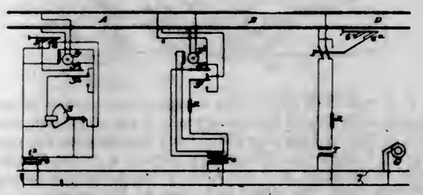
4. An air-tight lubricating cup having a valve for controlling the admission of air thereinto, comprising a member having an air entrance opening and provided with an open passage leading to the cup, a compressible body pervious to air, arranged over the entrance end of the passage, and a screw for cutting off said opening and pressing the body over the open passage.



5. A lubricator having a sealed cup with a lubricant outlet from the bottom thereof, a valve for opening and closing the outlet, a cup inclosing the lower end of the outlet to seal the same from the atmosphere but permit the flow of lubricant, an air supply tube passing from the top of the cup downward in the same and opening at a point near the bottom thereof, a compressible body pervious to air arranged in the inlet of the air pipe and means for compressing said body at will, whereby minutely to regulate the flow of air through it and consequently the amount of air supplied to the cup.

[Claim 6 not printed in the Gazette.]

899,353. ALTERNATING-CURRENT BLOCK-SIGNALING SYSTEM. JACOB B. STRUBLE, Swissvale, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Apr. 1, 1908. Serial No. 424,628.



1. In an alternating current block-signaling system, home and distant signals, sectional track circuits for said signals, relays controlled by the track circuits for controlling the home signals, other relays which control the supply of current to the home-signal controlling circuits, and means controlled by the movements of the home signals for reversing the polarity of the last named relays; substantially as described.

2. In an alternating current block-signaling system, home and distant signals, sectional track circuits for said signals, relays controlled by the track circuits for controlling the home signals, other relays which control the supply of current to the home-signal controlling circuits, and means controlled by the movements of the home signals for reversing the polarity of the last named relays, such relays being connected across track sections which are independent of the sections to which the home-signal controlling relays are connected; substantially as described.

3. In an alternating current block signaling system

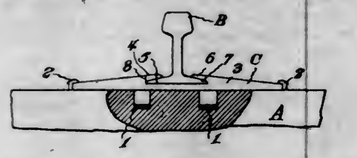
home signals, controlling circuits and actuating devices therefor controlled by the passage of trains into and out of the blocks, distant signals, controlling circuits therefor which are connected to different sections of the track than those to which the controlling circuits for the home signals are connected, reversing relays for controlling the current-supply to the track sections to which the circuits of the distant signals are connected, and pole-changing means operated by the home signals for effecting the reversals of the said relays; substantially as described.

4. In an alternating current block signaling system home signals, controlling circuits and actuating devices therefor controlled by the passage of trains into and out of the blocks, distant signals, controlling circuits therefor which are connected to different sections of the track than those to which the controlling circuits for the home signals are connected, reversing relays for controlling the current supply to the track sections to which the circuits of the distant signals are connected, and pole-changing means operated by the home signals for effecting the reversals of the said relays, together with means for preventing the opening of the home signal circuits while the said relays are reversing; substantially as described.

5. In an alternating current block signaling system, home signals, controlling circuits and actuating devices therefor controlled by the passage of trains into and out of the blocks, distant signals, controlling circuits therefor which are connected to different sections of the track than those to which the controlling circuits for the home signals are connected, reversing relays for controlling the current-supply to the track sections to which the circuits of the distant signals are connected, and pole-changing means operated by the home signals for effecting the reversals of the said relays, together with slow-motion relays in the home signal circuits for preventing the opening of such circuits while the said relays are reversing; substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

899,354. RAIL-CHAIR. GEORGE W. SUTHERLAND, Newport, Wash. Filed Apr. 10, 1908. Serial No. 426,378.



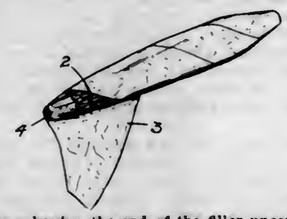
1. A rail chair comprising a supporting member of such length as to extend beyond opposite sides of the rail, integral fastening lugs depending from the member for penetrating a cross-tie, said member having a recess provided with an undercut wall and also having a chamber communicating with the recess and open at the bottom of the chair, and a locking member adapted to engage over the base of the rail and provided with a tail portion disposed in the said chamber, and extending through the opening of the chamber and under the supporting member.

2. A rail chair comprising a plate having a transversely-extending recess at its top and a longitudinally-extending chamber communicating with the recess and open at the bottom of the plate, the opposite walls of the chamber converging outwardly from the recess, a locking member disposed in the chamber and arranged to engage over the base of a rail at one side thereof, and means on the plate to engage the base of the rail at the opposite side.

899,355. CIGAR-TIP. JOSEPH O. THERIEN, Minneapolis, Minn. Filed June 8, 1908. Serial No. 437,332.

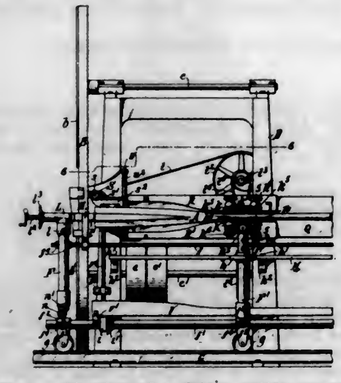
1. A cigar filler having a porous fabric tip for the purpose specified.

2. A cigar provided with a porous non-frangible tip intermediate of the filler and wrapper, said tip covering the sides and end of the head of the cigar, substantially as described.



3. A cigar having the end of the filler uncovered by the wrapper at the head of the cigar, and a porous cap of flexible material covering the end of the filler and extended between the filler and wrapper to form a yielding non-frangible covering to the filler, substantially as described.

899,356. MACHINE FOR SHAPING OAR-BLADES. WILLIAM W. TREVOR, Lockport, N. Y., assignor to Trevor Manufacturing Company, Lockport, N. Y. Filed Oct. 9, 1906. Serial No. 338,172.



1. The combination of a driven cutter arranged in a relatively fixed location, a carriage arranged to reciprocate in a straight line past the cutter, devices on the carriage which hold the blank obliquely to the direction of movement of the carriage and which are rotatable to turn the blank about its axis, one of said holding devices embracing the blank between the ends thereof, a pattern past which the carriage moves, and a guide device which is connected to the blank holding means and is held against said pattern to regulate the turning of the blank as the carriage is advanced, substantially as set forth.

2. The combination of a driven cutter arranged in a relatively fixed location, a carriage arranged to reciprocate in a plane parallel with the plane of the cutting edge of the cutter, devices on the carriage which hold the blank obliquely to the direction of movement of the carriage and which are rotatable to turn the blank axially and are adjustable to change the obliquity of the blank, one of said holding devices embracing the blank between the ends thereof, a relatively stationary pattern, and a guide device which is connected to the blank-holding means and is held against said pattern as the carriage advances to regulate the turning of the blank, substantially as set forth.

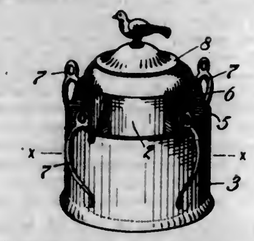
3. The combination of a saw arranged in a relatively fixed location, a carriage arranged to reciprocate in a plane parallel with the cutting plane of the saw, holding devices for the blank which are angularly adjustable on the carriage to regulate the obliquity of the blank to the direction of movement of the carriage and are freely rotatable to turn the blank about its axis, a pattern past which the carriage moves, an operating handle for the carriage secured to one of said holding devices, and a guide device which is connected to said holding device and is caused to bear against said pattern as the carriage advances by hand pressure on said handle, substantially as set forth.

4. The combination of a driven cutter, a carriage arranged to reciprocate past the cutter, means for holding the blank on the carriage and for turning the blank about its axis, two oppositely disposed patterns past which the carriage moves, and a guide device which is connected to the blank-holding means and is held against one of said patterns to regulate the turning of the blank in one direction and is held against the other pattern to regulate the turning of the blank in the opposite direction, substantially as set forth.

5. The combination of a driven cutter, a carriage arranged to reciprocate past the cutter, means for holding the blank on the carriage and for turning the blank about its axis to present different portions thereof to the cutter, a pattern past which the carriage moves, and two devices projecting from said blank-holding means, each of which devices serves as a handle for holding the other against said pattern to guide the blank, one device acting as the guide in one position of the blank and the other acting as the guide in another position of the blank, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

899,357. SPOON-HOLDING SUGAR-BOWL. WILHELMINE UTIGARD, Theilman, Minn. Filed June 26, 1908. Serial No. 440,474.



1. A bowl of the class described comprising an inner shell and an outer shell, the outer shell being spaced apart from the inner shell to form a receptacle for spoons, and a plurality of partitions bridged across the spoon receptacle so as to divide the same into sections.

2. A vessel of the class described comprising an inner shell, an outer shell surrounding the inner shell and spaced apart therefrom to form a receptacle for spoons, a common bottom for said shells, and a plurality of partitions arranged in the spoon receptacle to hold the spoons in upstanding position, the inner shell being higher than the outer shell for the purpose set forth.

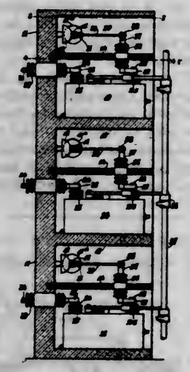
899,358. ARRANGEMENT OF PROTECTIVE APPARATUS. HERMON L. VAN VALKENBURG, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Sept. 29, 1906. Serial No. 336,660.

1. In combination, a multipole switch, a fire-proof inclosure therefor, each pole of said switch being located in a separate compartment, and a plurality of bus-bars passing through said inclosure, each bus-bar being located adjacent one pole of said switch.

2. In combination, a multipole switch comprising a plurality of single pole switches, and a plurality of bus-bars, said bus-bar compartments, and switches located in said switch compartments and connected to the bus-bars.

3. In combination, a fire-proof inclosure comprising a plurality of bus-bar and switch compartments alternately arranged in vertical alinement, bus-bars passing through said bus-bar compartments, and switches located in said switch compartments and connected to the bus-bars.

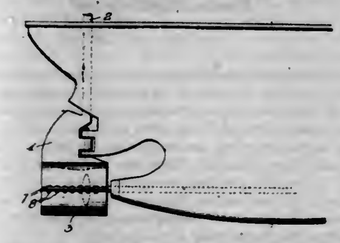
4. In combination, a fire-proof inclosure comprising a plurality of compartments, bus-bars and switches alternately arranged in vertical alinement in said compartments and disconnecting switches in said bus-bar compartments.



5. In combination, a fire-proof inclosure consisting of a plurality of adjacent sections, each section consisting of a plurality of bus-bar and switch compartments alternately arranged one vertically above the other, a plurality of horizontal bus-bars passing through the bus-bar compartments of all of said sections, and a plurality of multipole switches each consisting of a plurality of single pole switches arranged respectively in the switch compartments of one of said sections.

[Claims 6 to 9 not printed in the Gazette.]

899,359. MARINE PROPULSION. YASUZO WADAGAKI, Sasebo, Japan. Filed Jan. 20, 1908. Serial No. 411,663.



1. A propeller casing formed in longitudinal sections, the inner walls of which are formed to provide a short converging channel at the forward end of the casing, and a long gradually diverging channel in the rear portion of the casing wherein a screw propeller is arranged to operate at the point of maximum contraction of said convergent and divergent water channel, substantially as described.

2. A ship's rudder having formed on its lower edge a cylindrical casing, the inner wall of which is curved to form a short outwardly flaring passage at the inlet end of the casing, and a long gradually outwardly flaring or diverging rear portion opening at the rear or discharge end of the casing, substantially as described.

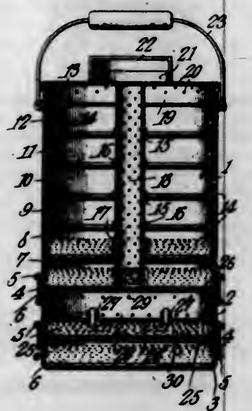
3. In combination with a ship's rudder, a casing formed in longitudinal sections, one of which is arranged on the lower edge of the rudder, laterally projecting flanges formed on the meeting edges of said sections, fastening bolts adapted to secure said sections together, an inwardly curved inner wall formed in said sections to provide a convergent and divergent water channel, and outer segmental covering plates adapted to be arranged around said inner wall to provide a cylindrical outer surface for said casing, substantially as described.

4. In a system of marine propulsion, a propeller casing having an inner wall formed to provide a short outwardly flaring passage at the inlet end of the casing, and a long

gradually tapered outwardly flaring or diverging passage at the discharge end of the casing, a propeller operatively arranged in said casing at the point of maximum contraction of said passage, and means whereby said casing is supported at an angle to the direction of the propeller shaft, thereby providing for a partial recovery of energy which would otherwise be lost by an excessive inclination of the propeller shaft.

5. In a system of marine propulsion, a rudder, a propeller casing adapted to form part of said rudder, an inner curved wall arranged in said casing to form a passage having a short convergent forward end and a long gradually diverging rear passage, and a propeller operatively arranged in said casing at the point of maximum contraction of said channel, substantially as described.

899,360. DINNER-PAIL. HENRY B. WALTRIP, Cleaton, Ky. Filed Mar. 8, 1907. Serial No. 361,379.



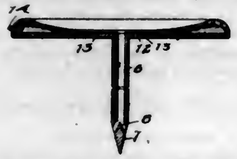
1. A dinner pail comprising a pail proper having an inwardly projecting horizontal bead near the bottom, a plurality of trays superposed one upon another the whole number upheld by said bead, each of said trays having an opening surrounded by an upturned flange, a removable perforated tube extending from the bottom to the top of the pail through said flanged openings, a cover for said pail having a perforated flange to permit the escape of steam when the cover is partly raised, and a lamp section attached to the under side of the pail.

2. A dinner pail comprising a pail proper having an inwardly projecting horizontal bead near the bottom below which bead water is to be placed, a plurality of trays superposed one upon another the whole number of trays upheld by said bead above the water section of the pail, each of said trays having a central opening surrounded by an upturned flange, the lower tray or trays for holding liquids having a higher flange, a removable perforated tube extending from the bottom to the top of said pail to permit steam from the water and liquids to pass into the trays containing solid food and heat them by direct contact and indirectly by heating the bottoms of the trays, and a lamp section removably connected to the bottom of the pail.

3. A dinner pail comprising a pail proper having an inwardly projecting horizontal bead near the bottom below which bead water is to be placed, a plurality of interchangeable food receptacles adapted to be nested and supported wholly upon said bead each receptacle having a central opening surrounded by an upturned flange, a perforated tube extending through said flanged openings from the bottom to the top of the pail, a closure for said pail having a downwardly extending flange to enter the top of the pail perforations being formed in said flange for the escape of steam and hot air when the closure is slightly raised, a lamp section having means for removably attaching it to the bottom of the pail for heating the water therein the steam and vapor from which rises in said perforated tube and passes into each receptacle through the perforations, and a section for carrying cold liquids having a removable cover, and means for temporarily connecting it to the lamp section.

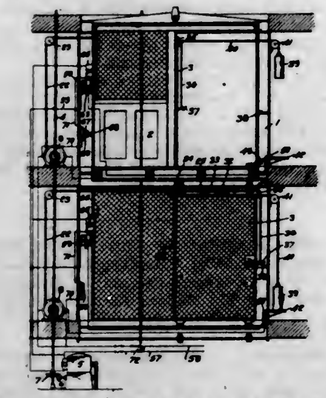
4. A dinner pail comprising a plurality of separable sections in axial alinement, means for connecting said sections one to another, a plurality of food receptacles in the uppermost section nested and supported on a horizontal bead, a perforated tube extending from the bottom to the top of said sections through flanged perforations in said receptacles and a flanged removable closure for said sections having perforations through said flange.

899,361. BED-PROTECTOR. JACOB J. WASSAM, Cabool, Mo. Filed Feb. 27, 1908. Serial No. 418,076.



A protector comprising a water-proof sheet having a circular opening formed therein, a second water-proof sheet of greater area than the first secured at its edge portions to the edge portions of the first named sheet and having a central opening therein, a hollow needle having a circular head located in the opening of the first named sheet, the hollow of the needle opening through the upper face of the head, said needle having openings at its lower end; fastening devices engaged in the head and in the second named sheet, said second named sheet having an opening therein communicating with the hollow of the needle, and an air inlet valve communicating with the space between the sheets.

899,362. SAFETY-ELEVATOR. HUGH WATSON, Washington, D. C. Filed Dec. 27, 1907. Serial No. 408,286.



1. In combination with an elevator shaft and its doors, a car, a winding drum for each door, a flexible connection between each drum and its door whereby the drum will move the door in one direction, and a means common to all the doors for rotating the drums.

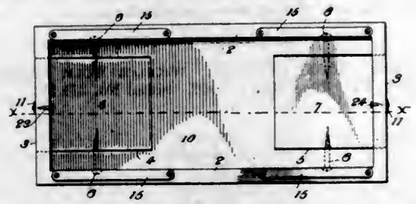
2. In combination with an elevator shaft and its doors, a car, a winding drum for each door, a flexible connection between each drum and its door whereby the drum will move the door in one direction, a means common to all the doors for rotating the drums, and means whereby the operating means is made inoperative when the door has been moved a predetermined distance.

3. In combination with the doors of an elevator shaft, a car, a winding drum for each door, a flexible connection between each drum and the door to be operated by the drum, means for transmitting power to the drums, and electrically controlled means for intermittently connecting the drums to the power transmitting means.

4. In combination with the doors of an elevator shaft, a car movable with relation to the doors, means for operating the doors, a motor independent of the car moving motor for actuating the door operating means, and electrically controlled devices for connecting the door operating means with the actuating means.

5. In combination with the doors of an elevator shaft, a car movable in the shaft, means for holding the doors normally closed, door opening means comprising an electrically controlled clutch stationed in operative relation to each door, a source of power for rotating one member of each clutch, and means for electrically connecting the parts of any one clutch independently of the other clutches, whereby one door opening means may be operated independently of the other door opening means.

899,363. PRINTING-FRAME. COLUMBUS A. WAYLAND, South Knoxville, Tenn. Filed Feb. 15, 1907. Serial No. 357,540.



1. A printing frame comprising a paper-carrying frame, means for clamping the paper therein, a negative-carrying frame longitudinally adjustably supported within the paper-carrying frame, plates carried by the sides of the paper carrying frame pivoted spring clamping members carried by the negative-carrying frame, and passing under the plates carried by the paper frame, a metal plate carried by the negative frame, a block for holding the negative in the frame, and pivoted spring clamping members carried by the block and passing under plates carried by the negative holder, and means for regulating the longitudinal movement of the negative holder within the paper holder.

2. A printing frame comprising a paper-carrying frame, means for clamping the paper therein, a negative-carrying frame longitudinally adjustably supported within the paper frame, plates carried by the sides of the paper-carrying frame pivoted spring clamping members carried by the negative frame, a metal plate carried by the negative frame, and having an opening therein to expose a portion of the negative, a block for holding the negative in the frame and pivoted spring clamping members carried by the block and passing under plates carried by the negative holder, and means for regulating the longitudinal movement of the negative holder within the paper frame.

3. A printing frame, comprising a paper frame having a solid central portion, pivoted end portions having their lower inner ends cut away to form shoulders which are adapted to engage and clamp the paper on the solid central portion, and a negative holder removably carried and longitudinally adjustable within the paper holder.

4. A printing frame, comprising a paper frame having a solid central portion, pivoted paper clamping end portions, plates carried by the paper frame and extending below the same, and having vertical slots therein, headed pins carried by the pivoted paper clamping end portions and passing through the slots in the plates for limiting the downward swing of the paper-carrying member, and a negative carrying member removably carried and longitudinally adjustable within the paper-carrying frame.

5. A printing frame, comprising an elongated paper frame having a solid central portion, pivoted paper-clamping end portions, means for limiting the downward movement of the paper clamping end portions, a negative-carrying member of a width to fit within the paper-carrying frame, and of a length less than the said paper-carrying member, pivoted spring arms carried by the negative-carrying member and engaging the paper carrying member, a sheet of thin metal carried by the negative member and having an opening therein, a block within the negative-carrying member and having an opening to correspond with the opening in the sheet metal, and pivoted spring members carried by the block and engaging plates carried by the negative-carrying member and holding the block therein.

[Claims 6 to 10 not printed in the Gazette.]

899,364. ELECTRIC SEPARATOR. HENRY A. WENTWORTH, Lynn, Mass., assignor to Huff Electrostatic Separator Company, Boston, Mass., a Corporation of Maine. Filed Feb. 3, 1908. Serial No. 413,999.



1. In an electrical separator, the combination of a pair of electrodes, a barrier of low conductive material between the electrodes, close to and partly surrounding one of the electrodes, means to supply material to the other electrode, means for supplying unidirectional charge to the shielded electrode, and means for separately collecting electrically separated components of the material.

2. In an electrical separator, the combination of a pair of electrodes, a barrier between the electrodes close to and extending partly around one of the electrodes and provided with rearwardly projecting wings, means to supply material to the other electrode, means for supplying unidirectional electric charge to the shielded electrode, and means for separately collecting electrically separated components of the material.

3. In an electrical separator, the combination of electrodes, means to supply electric charge thereto in intermittent unidirectional impulses, and a reservoir of electric charge in close proximity to one of the electrodes consisting of material of low conductivity.

4. In an electrical separator, the combination of electrodes, a barrier of low conductive material between the electrodes, and close to and partially surrounding one electrode, means to supply material to the other electrode, means for maintaining substantially persistent unidirectional electric charge on the shielded electrode, and means for separately collecting electrically separated components of the material.

5. In an electrical separator, the combination of a material-receiving electrode, an opposite electrode comprising a conductive member and a low conductive barrier partially surrounding the same, means to supply unidirectional intermittent electric charge to the said conductive member, and means for separately collecting electrically separated components of the material.

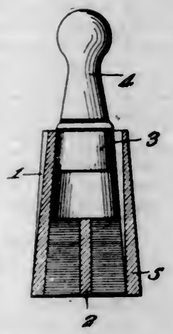
[Claim 6 not printed in the Gazette.]

899,365. KITCHEN UTENSIL. ALFRED B. WESTRUP, Habana, Cuba. Filed June 3, 1908. Serial No. 436,503.

1. A pot cleaner comprising a hollow resilient body portion, radiating ribs upon the perimeter of the body, a handle upon the upper portion of the body, and a reinforcement upon the lower portion of the body, said reinforcement comprising a pair of arms or walls connected at their center and extending at right angles toward the inner face of the body.

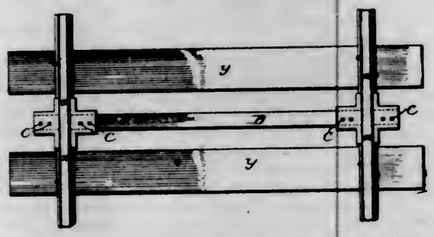
2. A pot cleaner comprising a hollow resilient body por-

tion, radiating ribs upon the perimeter of the body, a handle upon the upper portion of the body and a reinforcement upon the lower portion of the body.



3. A pot cleaner comprising a body of resilient material, being hollow in formation and having ribs upon its perimeter, a handle having an extension engaging the inner periphery of the hollow body, and a reinforcement engaging the inner periphery of the lower portion of the body.

899,366. MEANS FOR CONNECTING PARALLEL RAILROAD-RAILS. VERNON A. WHITE, Alliceville, Ala. Filed Dec. 24, 1907. Serial No. 407,878.



1. The combination, with parallel rails, of cuffs recessed in their inner faces to receive the bases and webs of said rails, and provided with alined transverse openings, a brace and tie bar passing through said openings and provided in the upper side with a recess to receive the bases of the rails, and vertical screw-bolts passing through cuffs and bar on each side of the rails for securing the cuffs to said bar detachably, substantially as described.

2. The combination, with alined rail ends, of cuffs applied thereto on opposite sides, a tie bar connecting the cuffs and having opposite recesses and an intervening rib which separates the bases of the rails as shown and described.

899,367. FOOT-ARCH. FREEMAN J. WINCHELL, Lynn, Mass. Filed Jan. 5, 1906. Serial No. 294,715.

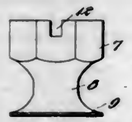


1. A foot arch comprising two parts transversely slidably connected together and means swiveled to one part and screwed to the other for adjusting and securing the parts.

2. A foot arch comprising a plate and brace, one provided with elongated slots and the other with projecting ends which enter the slots and means for sliding or adjusting said parts transversely with respect to each other.

3. A foot arch comprising a plate having elongated slots and a brace having projecting ends extending into the slots and a screw swiveled to one part and screwed to the other whereby to move the brace transversely in said slots.

899,368. NUT. JOHN R. WINTER and EDWIN C. WINTER, Detroit, Mich. Filed Dec. 5, 1907. Serial No. 405,269.



1. A nut made of sheet metal, having a hollow body the sides of which are contracted near the base, forming a neck, which is internally threaded.

2. A nut made of one piece of sheet metal, shaped to form a hollow body, and having upper and lower internally threaded tubes in line with each other.

3. A nut made of sheet metal, comprising a hollow body with a head having a threaded tube projecting inwardly therefrom, a contracted internally-threaded neck below said tube, and a flared base at the bottom.

899,369. HOOK AND EYE. WILLIAM WOLF, Philadelphia, Pa. Filed May 2, 1907. Serial No. 371,521.



1. In a garment fastening, an eye member comprising a loop formed at its rear end with laterally projecting arms having inwardly extending portions terminating in fastening pins, said pins projecting forwardly into the body of the loop through the open rear end thereof and being arranged in divergent relation and inclining gradually in a downwardly and forwardly direction below the plane of the loop.

2. In a garment fastening, an eye member comprising a loop having an open rear end, the terminals of the rear end of the loop being in-bent to provide clamping shoulders and having laterally projecting bearing arms extending laterally therefrom, the arms being formed with inwardly extending portions bent at their inner ends to provide fastening pins extending between said clamping shoulders into the body of the loop, said pins being divergently arranged and inclined at a downward and forward angle.

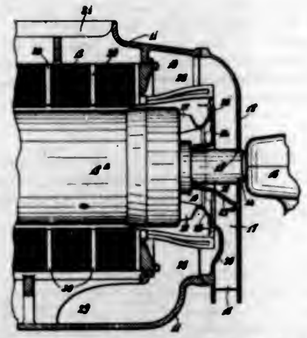
3. In a garment fastening, an eye member comprising a loop having at its rear end laterally projecting looped bearing arms, said arms terminating at their inner ends in pins projecting forwardly into the loop, the ends of the loop being bent inwardly to provide clamping jaws or shoulders to coöperate with said pins.

4. In a garment fastening, an eye member comprising a loop having an open rear end, and fastening pins formed by extensions from the loop projecting forwardly through said open rear end longitudinally into and toward the forward end of the loop, said pins being arranged to adapt the device to be engaged with and disengaged from the garment by a longitudinal sliding movement.

5. In a garment fastening, an eye member composed of a piece of material bent to form a loop open at its rear end, the material being bent outwardly from the loop and thence backwardly to form bearing arms, and finally bent forwardly into the body of the loop through the rear opening, said pins being arranged in divergent relation and inclined downwardly and forwardly, the rear ends of the loop at their points of juncture with the arms being bent to form clamping shoulders to coöperate with the pins.

[Claims 6 and 7 not printed in the Gazette.]

899,370. DYNAMO-ELECTRIC MACHINE OF THE INCLOSED TYPE. ALFRED H. WOUTERS, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Mar. 18, 1907. Serial No. 362,900.



1. In combination, a housing having an air receiving chamber and an air admission chamber, and a shaft passing through the end walls of the housing, said air receiving and air admission chambers having an annular communicating opening around the shaft, the portion of the admission chamber adjacent the shaft extending inward away from the end wall of the housing into the receiving chamber.

2. In combination, a housing having an air receiving chamber, and an air admission chamber at the end of the housing, and a shaft passing through the walls of said receiving chamber, said admission chamber extending upward from the bottom of the housing around the shaft, and projecting into the receiving chamber away from the end wall of the housing and from the shaft.

3. In combination, a housing having an air-receiving chamber, a shaft passing through the end wall thereof, a fan or blower within said housing adapted to be rotated by said shaft, an air admission chamber in the end of the housing and extending from the bottom thereof upwardly around the shaft, the inclosing walls of said admission chamber being independent of the shaft and forming an annular opening adjacent the fan or blower, and means for spacing inwardly from the shaft opening in the end wall of the housing that portion of the admission chamber which is provided with the annular opening.

4. In combination, a housing having an air-receiving chamber and an air-admission chamber, a shaft passing through the end walls of the housing, and walls for extending said admission chamber around the shaft and for spacing the extended portion from the end of the housing and from the shaft.

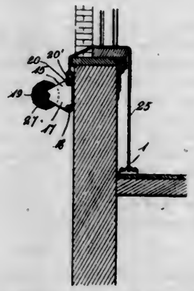
5. In combination, a housing having an air receiving chamber and an air admission chamber, and a shaft passing through the end walls of the housing, said admission chamber having an annular portion surrounding the shaft, and formed by walls which are independent of the shaft and end wall of the housing and are spaced inwardly from the end walls of the housing.

[Claim 6 not printed in the Gazette.]

899,371. SUPPORT FOR FLEXIBLE FIRE-ESCAPES. LOUIS ARDENGO, New York, N. Y., assignor to Hugo A. Thomsen, Madison, N. J. Filed Oct. 28, 1907. Serial No. 399,523.

1. In a flexible ladder support the combination of a ladder carrying member, an anchor member, a flexible element connecting said members and means carried by said anchor member for engaging and clamping the ends of said flexible member longitudinally and adjustably securing said ends for varying the length of said element and the space between said anchor and ladder carrying members.

2. In a flexible ladder support, the combination of a ladder carrying member, an anchor member, a flexible element connecting said members, means carried by said anchor member for adjustably securing the ends of said flexible element, for varying the length of said element and the space between said anchor and ladder carrying members, and means carried by said ladder carrying member for adjustably connecting said flexible element therewith.



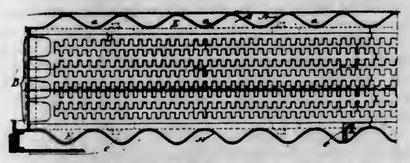
3. The combination of an anchor member having longitudinally spaced bores arranged in parallel planes and extending longitudinally of said member, a ladder carrying member, a flexible element connected with said last mentioned member and having its ends extended through the bores in said anchor and means for clamping said ends to said member.

4. The combination of an anchor member having longitudinally spaced bores arranged in parallel planes and extending longitudinally of said member, a ladder carrying member, a flexible element connected with said last mentioned member and having its ends extended through the bores in said anchor and a clamping member arranged between said bores, and provided with means for engaging said cable ends.

5. The combination of an anchor member having longitudinally spaced bores arranged in parallel planes and extending longitudinally of said member, a ladder carrying member, a flexible element connected with said last mentioned member and having its ends extended through the bores in said anchor and a clamping member arranged between said bores and provided with longitudinally extending parallel grooves to fit over said cable ends and means for securing said clamping member in position.

[Claims 6 to 13 not printed in the Gazette.]

899,372. GRATE. JAMES BARKER, Philadelphia, Pa. Filed Apr. 29, 1907. Serial No. 370,781.



1. The combination in a grate for a corrugated fire-box, of a body portion consisting of a series of bars and a side section at each side of the body portion, each side section having an undulated edge to conform to the corrugations of the fire-box, said side sections being arranged so that they can be moved longitudinally in respect to the body portion of the grate, and means for securing the side sections to the body portion after adjustment, substantially as described.

2. The combination in a grate bar, of a corrugated fire-box, a series of main grate bars arranged side by side, side sections at each side of the grate, each side section having an undulating edge fitting the corrugations of the fire-box casing and having depending lugs slotted longitudinally,

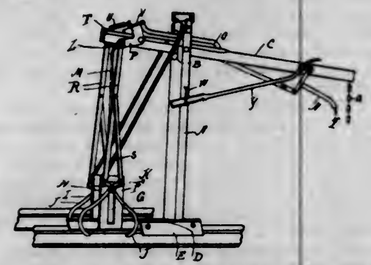
and bolts passing through the slots in the lugs and secured to the side bars of the grate, substantially as described.

3. As a new article of manufacture, a side section for a grate, said side section having a body portion, one edge of the section being straight and the other edge undulated corresponding to the corrugations of the fire-box casing and having lugs depending from the straight edge, said lugs being slotted longitudinally, substantially as described.

4. The combination of grate bars, side sections attached to the grate bars, washers placed between the side sections and the grate bars, and means for attaching the side sections to the grate bars, the whole being so constructed that the side sections can be set out to conform to the width of a fire-box, substantially as described.

5. As a new article of manufacture, a side section for a grate having a body portion straight on one edge and undulated on the opposite edge and having lugs depending from the straight edge opposite from the projecting portions of the undulated edge, said lugs being slotted longitudinally, substantially as described.

899,373. RAILROAD-CROSS-TIE LIFT. EDWARD L. BARTON, Bloomsburg, Pa. Filed May 1, 1908. Serial No. 430,314.

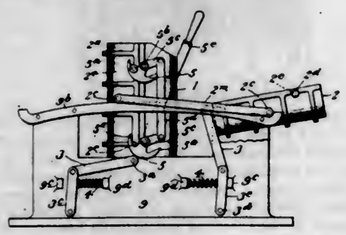


1. In combination, a base, a plate secured on the side thereof, an upright post having an opening cut in its upper end secured to said base, a handle adapted to pass through the opening in said upright post, movably secured thereto, a bell crank lever secured to one end of said handle, a T shaped lever secured to the opposite end thereof, a rod connecting said T shaped lever with the bell crank lever, a spring, one end of which is secured to the top of the bell crank lever, the opposite end being secured to the outer end of the handle so that the tension is always brought to bear upon the upper end of said bell crank lever, guides having slots cut therein attached to the base, a bolt adapted to move up and down in said guides, means for securing said bolt to the handle, a rod having threads cut upon either end thereof passing through said bolt and slot, tongs adjustably secured to the ends of said rods, a rod one end of which is secured to the top of one of the tong members the opposite end being secured to the bell crank lever, a second rod secured to the top of the other tong member its opposite end being secured to the other rod a considerable distance from the point where it is connected to the bell crank lever, a chain secured to the handle the links of which are adapted to engage with the handle of the T shaped lever, a catch secured to the side of the upright post of the lever having ratchet teeth formed thereon, which are adapted to engage with said catch, substantially, as described.

2. The herein described combination of a base, an upright post having an opening cut in the top thereof secured to said base, a handle adapted to pass through said opening and movably secured to the base, a bell crank lever secured to one end of said handle, means for operating said bell crank lever, guides secured to the base, tongs adjustably secured to the guides, rods the ends of which are secured to the bell crank lever and the tongs for the operation of said tongs and means for holding the handle in any desired position.

3. In a device of the character described a base, an upright post having an opening cut therein, secured thereto, a handle secured to said post, guides also secured to the base, a bolt adapted to move up and down in said guides, a rod one end of which is secured to said bolt the opposite end being secured to the handle, a bell crank lever also secured to the handle, tongs secured to the bolt, rods for securing the upper ends of the tongs to the bell crank lever, means for operating said tongs, a lever having ratchet teeth cut thereon, said ratchet teeth adapted to engage the catch on the side of the upright post, as and for the purpose set forth.

899,374. STEREOTYPE-PLATE-CASTING APPARATUS. HENRY F. BECHMAN, Battle Creek, Mich., assignor to Duplex Printing Press Company, Battle Creek, Mich. Filed Aug. 15, 1906. Serial No. 330,699.



1. The combination of a drag, a cope movable to and from the drag, links connected with the cope whereby it is caused to turn as it moves to and from the drag, a spring whereby the cope is arrested when brought to a position parallel to the drag, and locking devices adapted to engage and actuate the cope in its final closing movement, said spring causing the cope to move perpendicularly from the drag in the initial opening movement thereof.

2. The combination of a stationary drag, a tiltable cope, supports for said cope, means for tilting said cope on its supports as it is moved to and from the drag, locking devices adapted to engage the cope when the same is brought into closing position before the drag, means for arresting the cope when brought in its closing movement to a position parallel with the drag, said means being also adapted to separate the cope perpendicularly from the drag when it is released by the locking devices.

3. The combination of a stationary drag, a tiltable cope, supports for said cope, links and connections for tilting said cope on its supports as it is moved to and from the drag, locking devices adapted to engage the cope, springs for arresting the cope when brought to a position parallel with the drag in its closing movement, said springs being adapted to separate the cope perpendicularly from the drag when it is released by the locking devices.

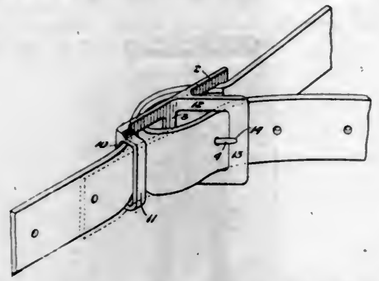
4. In a stereotype casting apparatus the combination of a drag having opposite casting faces, with a pair of copes on opposite sides of the drag, and connected means whereby when one cope is closed the other is opened.

5. In a stereotype casting apparatus the combination of a drag having opposite casting faces, with a pair of copes on opposite sides of the drag, and a link connection between said copes whereby when one is closed the other is opened and vice versa.

[Claims 6 to 23 not printed in the Gazette.]

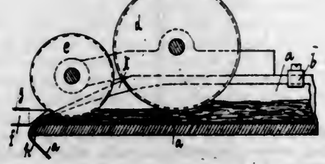
899,375. CROSS-LINE BUCKLE. REZIN B. BENFORD, Pittsburg, Pa., assignor of one-third to John T. Matthews, Pittsburg, Pa., and one-third to George W. Jones, Sewickley, Pa. Filed Mar. 17, 1908. Serial No. 421,681.

1. A cross line buckle consisting of a main rectangular frame having an open interior and provided with an integral retaining hasp at one end and a middle transversely arranged cross bar having oppositely extending pairs of integral hinge-bearing lugs connected by pivoting portions, an integral angularly arranged auxiliary frame diverging from the middle portion of the main frame, and tongues mounted on the pivoting portions between said pairs of lugs and arranged to bear against the end of the main frame and said auxiliary frame, substantially as set forth.



2. In a cross-line buckle, the combination of a single integral rectangular main frame having diverging portions at one end joined at the middle portion of the frame and an oppositely extending portion at the other end provided with an outwardly extending integral keeper, a continuous integral middle transverse tongue-bearing bar provided with bearing lugs extending toward each end of the buckle and connected by pivoting portions, and tongues pivoted on said portions extending oppositely towards the ends of the buckle and arranged to bear against the end of one of the diverging portions at one side of the buckle and against the end of the oppositely extending portion at the other side of the buckle respectively, substantially as set forth.

899,376. CIGARETTE-MACHINE. OTTO BERGSTRÄESSER, Dresden, Germany. Filed Sept. 3, 1907. Serial No. 391,131.



1. In a cigarette machine, a traveling band, means for forming said band into a U-shaped groove, a plurality of wheels adapted to engage a tobacco rope upon said band, means for flattening said band beneath the last of said wheels.

2. In a cigarette machine, a traveling band, a guide for forming said band into a U-shaped groove, a plurality of wheels adapted to engage a tobacco rope upon said band, a gradually widening and flattened portion beneath said wheels and continuing said guide and a convex discharge edge at the end of said portion.

3. In a cigarette machine, a traveling band, a guide for forming said band into a U-shaped groove, a plurality of wheels adapted to engage a tobacco rope upon said band, a gradually widening and flattened portion beneath said wheels and continuing said guide, a convex discharge edge at the end of said portion and a progressively shallowing groove upon said flattened portion and coöperating with said wheels and said band for shaping the tobacco rope as desired.

4. In a cigarette machine, a traveling band, a guide for forming said band into a U-shaped groove, a plurality of wheels adapted to engage a tobacco rope upon said band, a flattened convex portion beneath said wheels and continuing said guide, walls to said portion extending obliquely from said guide and a convex discharge edge at the end of said portion.

5. In a cigarette machine, a traveling band, a guide for forming said band into a U-shaped groove, a plurality of wheels adapted to engage a tobacco rope upon said band, a flattened convex portion beneath said wheels and continuing said guide, walls to said portion extending obliquely from said guide, a convex discharge edge at the end of said portion and a progressively shallowing groove upon said flattened portion and coöperating with said wheels and said band for shaping the tobacco rope as desired.

899,377. CARPET-FASTENER. CLARENCE E. BILLINGS, New Haven, Conn. Filed Mar. 31, 1908. Serial No. 424,366.



1. A stair carpet fastener, comprising an angled clamping plate with flanges approaching each other, and means for fastening said plate to a step, in combination with a locking bar adapted to be inserted beneath a flange of said plate over an inserted fold of carpet.

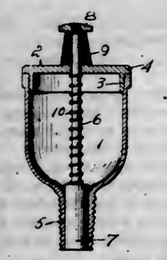
2. A stair carpet fastener, comprising a clamping plate with flanges approaching each other, and means for fastening said plate to a step, in combination with a filler rod adapted to be inserted within a fold of carpet introduced between said clamping edges, and a locking bar adapted to be inserted beneath one of said flanges and over said fold.

3. A stair carpet fastener, comprising a clamping plate with flanges approaching each other, and means for fastening said plate to a step, in combination with a filler rod adapted to be inserted within a fold of carpet introduced between said clamping edges and provided with an ornamental front extending in front of the latter, and a locking bar adapted to be inserted beneath one of said flanges to hold said fold in place.

4. A stair carpet fastener, comprising an angled clamping plate with flanges approaching each other, and means for fastening said plate to a step, in combination with a locking bar perforated to receive an operating lever and adapted to be inserted beneath a flange of said plate to secure an inserted fold of carpet.

5. A stair carpet fastener, comprising a reversible angled clamping plate having flanges of different widths approaching each other, and means in connection with either flange for securing the same in position, in combination with a locking bar adapted to be inserted beneath one of the flanges and over an inserted fold of carpet.

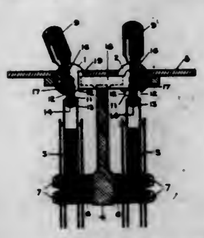
899,378. FORCE-FEED LUBRICATOR. GEORGE W. BIRD and HOYT AKINS, Statesboro, Ga. Filed Apr. 11, 1907. Serial No. 367,521.



The combination with an oil cup, of a perforated cap secured thereto, said cup having a hollow exteriorly

threaded stem, an operating stem extending through said cap perforation and provided below with a cylindrical plunger held within said hollow stem and extending to the bottom thereof, a nut secured to the upper end of said operating stem, a rubber sleeve surrounding said operating stem above said cap and forming a stop to said stem, and a coil spring surrounding said stem within said cap, all arranged substantially as and for the purpose set forth.

899,379. PARTY-LINE-INDICATING KEY. CLIFFORD C. BRADBURY, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 11, 1907. Serial No. 361,815.



1. In a self-indicating operator's key, a plurality of levers, switch springs actuated by the tilting of said levers, and means for causing the levers themselves to indicate the last set of switch springs actuated and released, substantially as described.

2. In a self-indicating operator's key, a plurality of cooperating levers, sets of switch springs individually actuated by the individual operation of said levers, and means for causing the lever last operated to itself indicate the lever is tilted to its actuating position, substantially as described.

3. In a self-indicating operator's key, the combination with a plurality of levers, switch springs actuated by the operation of said levers, said levers having a normal position, an actuating position and an intermediate indicating position, and means for restoring one of the levers from its indicating position to its normal position when another lever is tilted to its actuating position, substantially as described.

4. In a self-indicating operator's key, a plurality of levers, switch springs actuated by the tilting of such levers, means for indicating by the lever itself the last set of switch springs actuated and released, and means for removing such indication when another set of springs is actuated, substantially as described.

5. In a key, the combination with a support, of a pair of levers mounted in the support and having normal, indicating and actuating positions, switch contacts controlled by the levers, and means to return one lever to its normal position when the other is moved to its actuating position, substantially as described.

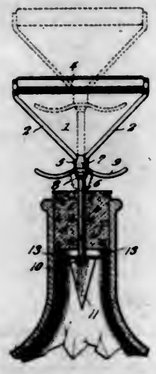
[Claims 6 to 14 not printed in the Gazette.]

899,380. CORK-EXTRACTOR. SARAH E. BRADDOCK, Brooklyn, N. Y., assignor of one half to Alexander Duncan Paul, Brooklyn, N. Y. Filed May 13, 1908. Serial No. 432,633.

1. A cork extractor comprising a stem, a cutting blade mounted upon the stem, hooked spring bearing members arranged for coöperation with the blade, and a handle applied to the upper end of the stem.

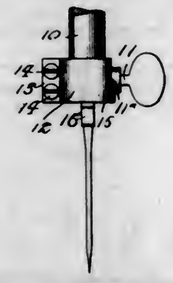
2. A cork extractor comprising a stem, a wedge-shaped cutting blade detachably mounted upon the lower end of the stem, a spring strip clamped between said blade and the stem and provided with outwardly yielding extracting fingers having hook-shaped ends, and a handle applied to the upper end of the stem.

3. An extractor comprising a stem, a cross bar removably mounted upon the upper end of the stem, a handle applied to the stem and securing said cross bar in position, a tapering cutting blade detachably mounted upon the lower end of the stem, and a spring strip clamped be-



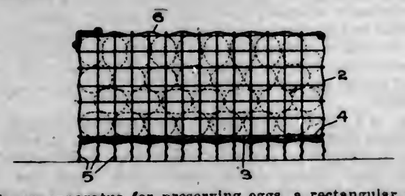
tween said blade and stem, said strip having its ends arranged to form yielding spring fingers provided with hook-shaped ends.

899,381. SEWING-MACHINE NEEDLE. ALICE G. BRADLEY, Edwardsville, Ill. Filed Feb. 19, 1908. Serial No. 416,738.



The combination with a needle bar having a socket, and a clamping screw projecting at right angles therefrom, a needle adapted to fit within said socket and to be clamped by said screw, said needle being provided with an eye and a shank split longitudinally to form a free portion and a passage leading to said eye, a split collar inclosing said socket and provided with a notch or recess opposite its split portion for the passage of the screw, said recess opening through the upper edge thereof, and a spring finger on said collar adapted to engage and hold said free portion of the needle closed against the fixed portion of the shank.

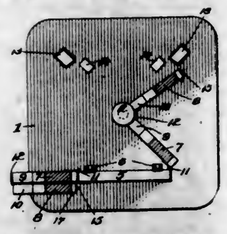
899,382. APPARATUS FOR PRESERVING EGGS. MYRON BRIGGS, St. Louis, Mo. Filed June 4, 1906. Serial No. 320,049.



In an apparatus for preserving eggs, a rectangular egg container constructed of wire screen, legs formed on the sides and ends of the bottom of the container, which legs

are constructed of the wires of which the container is formed, an elastic porous cushion of asbestos located in the bottom of the container, and a wire screen cover secured to the top of said container.

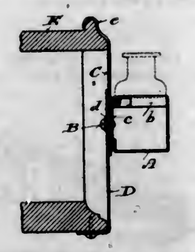
899,383. TABLE. LESTER E. CANNIFF, Lansing, Mich. Filed July 26, 1907. Serial No. 385,690.



1. In combination with a body of an article of furniture, a connecting element pivotally connected thereto and adapted to be folded against the same, a pair of supporting legs pivotally connected to the ends of the said connecting element to be extended therefrom in line therewith and to be turned angularly with respect thereto, said pair of legs when extended from said connecting element in line therewith being foldable with said connecting element against said body of said article of furniture, and a pair of supporting legs pivotally connected to the first mentioned pair of supporting legs to be folded upon said first mentioned pair of supporting legs when said first mentioned pair of supporting legs together with the said connecting element are folded against the said body.

2. In combination with the body of an article of furniture, a connecting element pivotally connected thereto and adapted to be folded against the same, a pair of supporting legs pivotally connected to the ends of the said connecting element to be extended therefrom in line therewith and to be turned angularly with respect thereto, said pair of legs when extended from said connecting element in line therewith being foldable with said connecting element against said body of said article of furniture and a pair of supporting legs pivotally connected to the first mentioned pair of supporting legs to be folded upon said first mentioned pair of supporting legs when said first mentioned pair of supporting legs together with the said connecting element are folded against the said body, and means to detachably secure the second mentioned pair of supporting legs to the said body when the said second mentioned pair of supporting legs are extended from the first mentioned pair of supporting legs.

899,384. BOTTLE-RACK. ROY B. COLTER, Marinette, Wis. Filed Apr. 13, 1908. Serial No. 426,660.

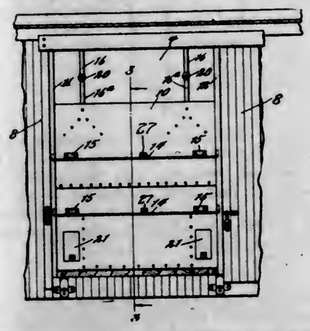


1. A dental-bracket bottle-rack comprising a compartment tray provided with rear hangers and standards, the hangers being for engagement with the upper molding-edge of the bracket, feet extending at right-angles to the standards, and fastening devices that extend through apertures in said feet into the underside of said bracket.

2. A dental-bracket bottle-rack comprising a compartment tray provided with rear set-screws, hangers and standards adjustable on the screws, the hangers being for engagement of the upper molding-edge of the bracket; and means for connecting the standards to the lower portion of said bracket.

3. A dental-bracket bottle-rack comprising a compartment-tray provided with rear set-screws, hangers and standards adjustable on the screws, the hangers being for engagement with the upper molding-edge of the bracket, feet extending at right-angles to the standard, and fastening devices that extend through apertures in said feet into the underside of said bracket.

899,385. CAR-DOOR. WILLIAM J. COOKE, Oak Park, Ill., assignor to McGuire-Cummings Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 10, 1906. Serial No. 342,878.



1. A car door having a girder adjustably secured thereto and extending longitudinally thereof, said girder being adapted to be turned about an axis parallel with its length so as to lie at an angle to the door or to be folded thereagainst, said girder when turned at an angle being arranged to present a greater width substantially perpendicular to the plane of the door than when in its folded position.

2. The combination of a car having door posts at opposite sides of the door opening, a door, the ends of which bear against said posts, and a longitudinal girder adjustably secured to the door, said girder being arranged to be turned about an axis parallel with its length so as to lie at an angle to the door or to be folded thereagainst, said girder when turned at an angle being arranged to present a greater width substantially perpendicular to the plane of the door than when in its folded position.

3. The combination of a car having door posts at opposite sides of the door opening, a door, the ends of which bear against said posts, and a longitudinal girder adjustably secured to the outer side of the door, said girder being arranged to be turned about an axis parallel with its length so as to lie at an angle to the door or to be folded thereagainst, said girder when turned at an angle being arranged to present a greater width substantially perpendicular to the plane of the door than when in its folded position, said posts having recesses to receive the ends of said girder.

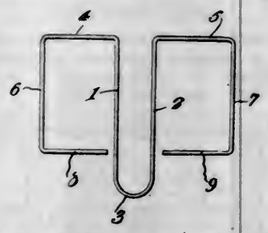
4. The combination of a car having door posts at opposite sides of the door opening, an endwise-movable door, the ends of which bear against said posts, a longitudinal girder adjustably secured to the door on the outer side thereof, said girder being arranged to be turned about an axis parallel with its length so as to lie at an angle to the door or to be folded thereagainst, said girder when turned at an angle being arranged to present a greater width substantially perpendicular to the plane of the door than when in its folded position, said posts having recesses to receive the ends of said girder.

5. A car door having a girder adjustably secured thereto and arranged longitudinally thereof, said girder being ar-

ranged to be turned about an axis parallel with its length so as to lie at an angle to the door or to be folded thereagainst, said girder when turned at an angle being arranged to present a greater width substantially perpendicular to the plane of the door than when in its folded position, and means for automatically moving said girder to its angular relation with the door.

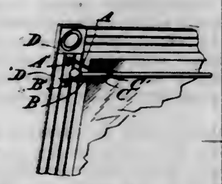
[Claim 6 not printed in the Gazette.]

899,386. PAPER-CLIP. ROYAL CORBIN, Champlain, N. Y. Filed Jan. 21, 1908. Serial No. 411,097.



A clip of the class described composed of single pieces of spring wire bent to form a central open loop with substantially parallel branches, and rectangular clasps at opposite sides of said loop comprising inbent terminals disposed at right angles to the loop, the closed end of the loop being extended to project outside of or beyond the plane of said terminals.

899,387. TOWEL AND CURTAIN-POLE HOLDER. THOMAS DESELMS, La Fayette, Ind. Filed Mar. 15, 1907. Serial No. 362,499.

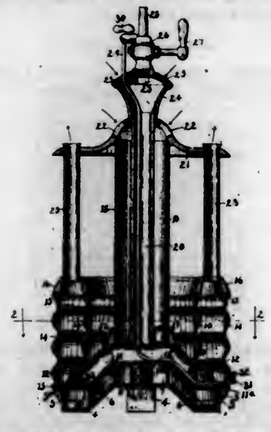


A device of the kind described comprising integral upper and lower members, the upper member being in substantially a horizontal plane and the lower member being substantially in the same vertical plane with the upper member, the upper member being bent to form a coil and the lower member being curved, said curved portion forming a reverse continuation of the coil, and the free ends of both members being angled as and for the purpose set forth.

899,388. WATER-HEATER. JOHN J. DIVEKEY and CHARLES M. GENTHNER, Aurora, Ill. Filed Nov. 16, 1906. Serial No. 343,670.

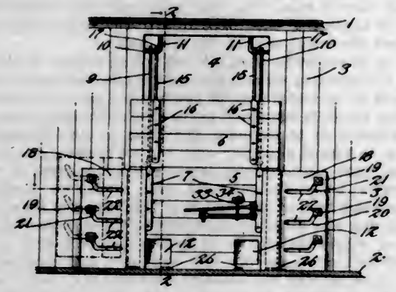
1. A water heater comprising a hollow base, an annular burner concentric with and spaced from said base, a gas and air mixing chamber, a fuel supply tube leading from said chamber, radial passageways leading from said tube to said burner, an annular cap, parallel walls connecting said cap and base, and forming a combustion chamber, flues secured in said cap and communicating with said chamber, and means for introducing gas to said mixing chamber.

2. A water heater comprising a base having an annular chamber and radial passages leading thereto, an air-supply pipe communicating with said passages, a burner having an annular chamber, and radial passages leading thereto, a fuel-supply tube communicating with said passages, means for supplying gas, and means for supplying air, to said tube, means for regulating the supply of gas to said tube, an annular combustion chamber communicating with said burner and with said base, flues leading from said



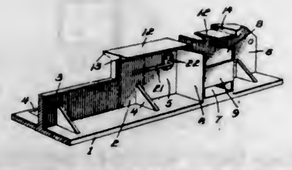
combustion chamber, and means for igniting the fuel at said burner.

899,389. CAR-DOOR. JOHN M. ETIMAN, Mapleton, N. D. Filed May 29, 1907. Serial No. 376,379.



A car door comprising upper and lower sections, supporting bars pivotally connected at opposite ends to said door sections and to brackets at the upper side of the door opening to permit said doors to swing upwardly on said ends and inwardly therewith, laterally sliding plates provided with slots extending horizontally outwardly and inclined upwardly, and bolts passing through said slots and through the wall of the car at the opposite sides of the door to permit said plates to move laterally away from the lower section and upwardly.

899,390. RAIL TIE AND FASTENER. JOHN M. FARRA, Lancaster, Ky. Filed Feb. 26, 1908. Serial No. 417,888.



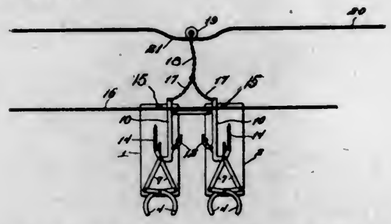
1. A rail tie comprising a base plate having a vertical web provided with separated portions at the ends thereof, and parts coöperating therewith and forming boxes or compartments and upper clamp supports on the inner and outer sides thereof, rail supporting blocks disposed in said compartments, clamping devices engaging said clamp supports, and means for retaining said clamping devices in operative position.

2. A rail tie comprising a base plate having a vertical web, said web having spaced portions at each end of the tie, parts coöperating with said spaced portions to form an intervening box or compartment for the receipt of a rail supporting member, clamp supporting portions upon the spaced portions of the web on the inner and outer sides of the box, and rail clamps adapted to engage said clamp supporting portions.

3. A rail tie comprising a base plate having a vertical web, the web having spaced portions at each end of the tie, said spaced portions being provided at their upper edges with lateral flanges forming retaining seats, the outer seat being provided with a stop shoulder, transverse plates arranged to form with said spaced portions of the web an intervening box or compartment for the reception of a rail supporting block, clamps adapted to slidably engage the flanges of said seats, and means associated with the inner clamp for retaining the same in position.

4. A rail tie comprising a base plate having a vertical flange provided with spaced portions at each end, each of said spaced portions being provided with laterally extending flanges forming a supporting head or seat, transverse plates formed upon the base plate and web and connected at their ends and providing a box or compartment for the reception of a rail supporting block, rail clamping members slidably engaging the flanges of the supporting heads, and means associated with the inner clamping member for adjustably securing the same in position.

899,391. HOG GRAPPLE AND CONVEYER. WARREN D. FARRELL, Ottumwa, Iowa. Filed May 15, 1908. Serial No. 433,059.



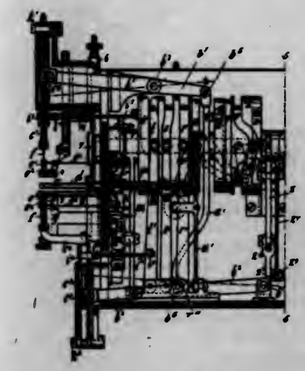
1. A hog grappling and suspending apparatus comprising a board, jaws pivotally mounted upon the lower end of the board and provided with arms, a pivot member slidably engaging the board, links connected with the arms of the jaws and said pivot member, a suspending bar slidably connected with the board through said pivot member, a spring connected with one of said parts and the board for normally holding the parts in jaw closing position, a lock device engaging the bar to normally hold the parts in jaw opening position, a suspending device connected with the upper end of the bar, and a supporting projection upon the upper end of the plate for supporting the grapple independent of said suspending device.

2. A hog grappling and suspending apparatus, comprising a pair of frame sections pivotally connected at their upper ends, pivoted grappling hooks upon the frame sections, suspending bars pivotally connected with the grappling hooks, springs upon the frame sections and connected with the parts thereon for automatically closing the hooks, latches adapted to be engaged with said bars to hold the hooks open, supporting lugs upon the frame sections, and a flexible suspension device connected with the upper ends of the bars and connected with a wheeled traveler adapted to run upon a supporting rail.

3. A hog grappling and suspending device comprising a pair of boards, a link pivotally connecting the upper ends of the boards, sets of jaws pivotally mounted upon the lower ends of the boards, controlling links connected with the jaws, suspending bars pivotally connected with the links of each set of jaws, and slidably connected with the boards, a spring acting upon the bars and links of each board for moving the parts to jaw closing position, a latch device upon each board to engage the bar and maintain the hooks in jaw opening position, a suspending device connected to the upper ends of both suspending bars, and lugs upon the upper ends of the bars for supporting the device independent of said suspending device.

4. In a hog grappling and suspending apparatus, the combination of a track rail provided with a depressed portion, a supporting rail disposed below said track rail, a grapple comprising a board or plate, grappling jaws pivotally mounted thereon, a suspending bar pivotally and slidably connected with said jaws, spring means for moving the parts to jaw closing position, a locking device for holding the parts in jaw opening position, a suspending device connected with the bar and having a roller to travel on the track rail and lugs upon the upper end of the board or plate adapted to rest upon the track rail and to be engaged with and disengaged therefrom by a relative lateral movement of the board.

899,392. SEWING-MACHINE FOR SEWING STRAW PLAIT. GUILLAUME FISCHER, Geneva, Switzerland. Filed Jan. 17, 1907. Serial No. 352,669.



1. In a straw plait sewing machine, the combination of a center table with a thread striker, a loop puller having a hook, a material feeder, and two needles, needle-operating mechanism constructed to vertically reciprocate said needles, the needles being arranged at opposite sides of the center table and provided with notches (f') for receiving the thread, and with shallow recesses (f^2) arranged between the notches (f') and the shank portions of said needles through which the hook of the loop puller can pass, and means for driving said thread striker, loop puller and material feeder, for the purpose of forming chain stitches with concealed loops of the thread between both the bands or plaits of the material.

2. In a straw plait sewing machine, the combination of a center table with two needles, needle-operating mechanism constructed to vertically reciprocate said needles arranged at opposite sides of the center table, a thread striker, a loop puller, a material feeder, means for horizontally moving the needles, and means for driving the thread striker, material feeder and loop puller to form chain stitches of loops of the thread between both the bands of the material.

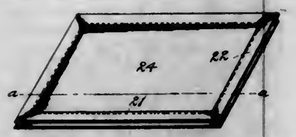
3. In a straw plait sewing machine, the combination of a center table with two needles arranged at opposite sides of the center table, a thread striker, a loop puller, a material feeder, means for horizontally moving the needles, means for vertically reciprocating the needles, two succeeding strokes of the needles being of different length, and means for driving the thread striker, material feeder and loop puller to form chain stitches with concealed loops of the thread between both the bands or plaits of the material.

4. In a straw plait sewing machine, the combination of a center table with two needles arranged at opposite sides of the center table, a thread striker, a loop puller, a material feeder, means for horizontally moving the needles, a cam (a) for vertically reciprocating the needles, arranged on the main shaft of the machine and provided with a groove (a^3), and means for driving the thread striker, material feeder and loop puller to form chain stitches with concealed loops of the thread between both the bands or plaits of the material.

5. In a straw plait sewing machine, the combination of a center table with two needles, needle-operating mechanism constructed to vertically reciprocate said needles, the needles being arranged at opposite sides of the center table, a thread striker, a loop puller, a material feeder, two needle carriers (c', c^2) pivotally secured to the machine frame, means for oscillating said needle carriers, means for regulating the amplitude of such oscillating movement, and means for driving the thread striker, the material feeder and loop puller for the purpose of forming chain stitches with concealed loops of the thread between both the bands or plaits of the material.

[Claims 6 to 19 not printed in the Gazette.]

899,393. FRAME OR PROTECTIVE CASING FOR PICTURES. DAVID W. FRATCHER, Detroit, Mich. Filed Oct. 7, 1907. Serial No. 396,199.



1. A protecting frame comprising a tabular portion against one face of which a picture is adapted to lie, having integral bent-over edge portions bent into a plurality of folds, and a band engaging within a fold and pressing the various edge portions toward the center of the tabular portion, substantially as described.

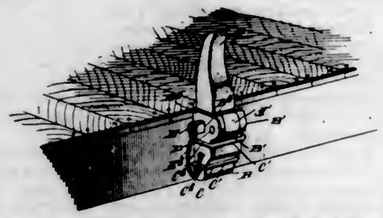
2. A protecting frame, having in combination a tabular portion, plaited side portions bent over one face of the tabular portion, and having their meeting ends adapted to interlock, and a band engaging thereabout and serving to press the meeting edges of the plaited portion between which it engages within the peripheral edge of the tabular portion, substantially as described.

3. A protecting frame, having in combination a tabular main portion provided with plaited side portions extending outwardly from one surface thereof, the meeting ends of said side portions being adapted to interlock, and an elastic band engaging within a fold of each plaited side portion and forcing the same into position over the adjacent portions of the tabular portion, substantially as described.

4. A protecting frame comprising a holding member having a plaited edge portion adapted to engage with one of the folds of each side about the peripheral edge of a tabular object, and an elastic band adapted to engage about the frame within the angle of another fold in each side to hold the frame tightly about said object, substantially as described.

899,394. CAR-STAKE. NAPOLEON E. GAGNON, Woodland, Wash. Filed Apr. 14, 1908. Serial No. 426,997.

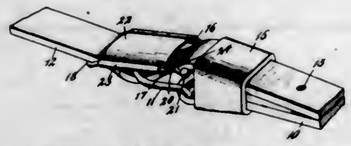
1. The improvement in stakes herein described, comprising a base provided at its upper end with outwardly projecting knuckles having an opening for the pintle and having side wings provided between said pintle opening and their inner edges with openings for the key, an upright fitting at its lower end between the said wings and the base, and having at such end an outwardly projecting knuckle having an opening alined with the pintle openings in the knuckle of the base, the said upright being also provided between its pintle and its inner edge with a key opening alined with those in the side wings of the base, the pintle and the key passed through their respective openings, and a retaining means for the key, substantially as set forth.



2. A car stake comprising a base having a knuckle provided with a pintle opening, and also having between said pintle opening and the inner edge of the base a key opening, an upright pivoted to the base and provided between its said pivot and its inner edge with an opening alined with the key opening in the base, and a key passed through the opening in the base and upright, substantially as set forth.

3. The combination in a car stake of a base having its outer face and sides grooved for reception of a clip fitting in the groove of the base, an upright pivoted adjacent to the outer edges of its lower end to the base, the said base and the upright being provided between the said pivot and their inner edges with alined openings, and a key passed through said openings for securing the upright stake in position for use, all substantially as and for the purposes set forth.

899,395. BUCKLE-SHIELD. JOHN GRAF, West Chicago, Ill. Filed July 1, 1907. Serial No. 381,711.



1. In a buckle shield the combination of a shield adapted to be placed over the tongue of a buckle, and means having a detachable engagement with the shield for locking the same to the strap.

2. In a buckle shield the combination of a shield adapted to be placed over the tongue of a buckle, and an elastic clip having a detachable engagement with the shield for locking the latter to the strap.

3. A detached buckle shield comprising a shield adapted to be placed over the tongue of a buckle, a clip having a flexible connection with the shield, and means for removably securing the shield and clip to the strap.

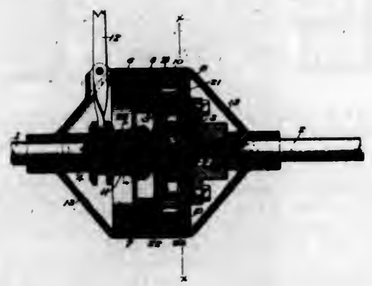
4. A detached buckle shield comprising a clip, a shield having a flexible connection with a portion of the clip, said shield being adapted to be placed over the tongue of the buckle and to be engaged by another portion of the clip to hold the shield in position, and means for removably securing the clip against displacement.

5. In a buckle shield, the combination of a clip, a shield having a flexible connection with a portion of the clip, said shield being adapted to be placed over the tongue of a buckle and adapted to be engaged by another portion of the clip, and means whereby the clip will be placed under tension to lock the shield and clip in position.

[Claims 6 to 12 not printed in the Gazette.]

899,396. REVERSING-CLUTCH MECHANISM. FRANK E. HARTHAN, Trenton, N. J., assignor to Louis C. Taylor, trustee, Trenton, N. J. Filed Jan. 8, 1908. Serial No. 409,777.

1. In a device of the character described, a driving shaft, a gear secured thereto, a disk having an annular flange loosely mounted on said shaft, pinions carried by said disk and meshing with said gear, a driven shaft, a disk secured thereon having an annular flange, a rack in said latter flange adapted to mesh with said pinions, and means between said annular flanges to lock said rack and pinions from independent movement.



2. In a device of the character described, a driving shaft, a gear secured thereto, a disk having an annular flange loosely mounted on said shaft, pinions carried by said disk and meshing with said gear, a driven shaft, a disk secured thereon having an annular flange, a rack in said latter flange adapted to mesh with said pinions, an expansible friction ring between said annular flanges and means to expand said ring.

3. In a device of the character described, a driving shaft a gear secured thereto, a disk having an annular flange loosely mounted on said shaft, pinions carried by said disk and meshing with said gear, a driven shaft, a disk secured thereon having an annular flange, a rack in said latter flange adapted to mesh with said pinions, an expansible friction ring between said annular flanges, means to expand said ring to effect rotation of said driven shaft in one direction and means independent thereof to effect rotation of said driven shaft in the reverse direction.

4. In a device of the character described, a driving shaft, a gear secured thereto, a disk having an annular flange loosely mounted on said shaft, pinions carried by said disk and meshing with said gear, a driven shaft a disk secured thereon having an annular flange, a rack in said latter flange adapted to mesh with said pinions an expansible friction ring between said flanges a second expansible friction ring suitably supported and means to independently expand said adjustable friction rings.

5. In a device of the character described, a driving shaft, an annular flanged disk mounted thereon, a driven shaft an annular flanged disk fixedly secured thereon inclosing said first mentioned disk, gears therebetween, expansible means to lock said disks together and means to lock one disk independent of the other.

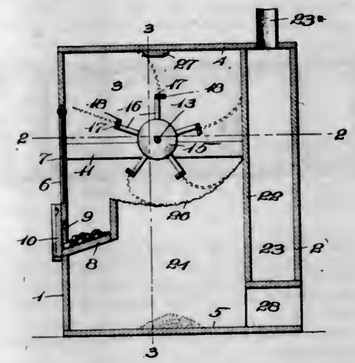
[Claims 6 and 7 not printed in the Gazette.]

899,397. BAG-CLEANING MACHINE. GEORGE M. HASEN, St. Louis, Mo. Filed Mar. 13, 1908. Serial No. 420,959.

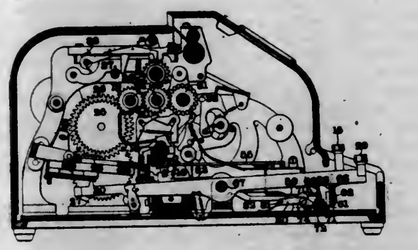
1. A bag cleaning machine comprising a housing, a rotary member arranged for operation therein, a series of bag clamps arranged on the rotary member, a screen arranged in the housing beneath the rotary member, and a hopper within the housing in front of the screen.

2. A bag cleaning machine comprising a housing, a rotary bag carrying member arranged for operation in the upper portion of the housing, a screen arranged adjacent the rotary member, there being communicating air chambers formed in the housing to accommodate the draft of air created by the rotary member, and one of the air chambers being provided with an outlet.

3. A bag cleaning machine, comprising a housing, a rotary bag carrying member arranged for operation within the housing, a reticulated member arranged within the housing against which the bags carried by the rotary member engage, and a hopper arranged beneath the reticulated meraber.



899,398. ADDING-MACHINE. GEORGE N. HINCHMAN, Webster Groves, Mo. Filed Oct. 24, 1907. Serial No. 399,018.



1. In an adding machine, the combination with adding wheels, of a wheel adapted to mesh therewith, said wheels differing both as to the width of their teeth and the spaces between the teeth, numeral keys, and means for controlling said second wheel from said numeral keys.

2. In an adding machine, the combination with an adding wheel, of a wheel adapted to mesh therewith, said wheels differing both as to the width of their teeth and the spaces betwen the teeth, and also differing as to the contour of their teeth, numeral keys, and means for controlling said second wheel from said numeral keys.

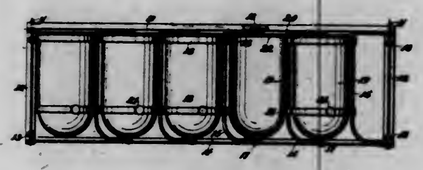
3. In an adding machine, the combination with an adding wheel, of a wheel adapted to mesh therewith but differing therefrom in the contour of its teeth, a third wheel engaging with said second wheel and differing in the contour of its teeth from both of said first named wheels, numeral keys, and means for controlling said third wheel from said numeral keys.

4. In an adding machine, the combination with a plurality of gears approximately of the same diameter but having different numbers of teeth, of a toothed member successively engaging directly with said gears, keys controlling the movement of said toothed member, and adding mechanism operated from said gears.

5. In an adding machine, the combination with a plurality of gears of approximately the same diameter but having different numbers of teeth, of a toothed member adapted to coöperate directly with said gears, said toothed member engaging with a part of said gears on its pitch line and with another part of said gears beyond its pitch line, numeral keys, and means for controlling said toothed member from said numeral keys.

[Claims 6 to 20 not printed in the Gazette.]

899,399. KITCHEN SUPPLY-CABINET. CHARLES A. HORNIG, Milwaukee, Wis. Filed May 25, 1908. Serial No. 434,797.



1. A supply cabinet, comprising a supporting frame with end pieces and top and bottom strips connecting the upper and lower ends of the end pieces, swinging frames pivotally connected to the top and bottom strips, and receptacles mounted on the swinging frames, each receptacle being located between the pivotal connections for the adjacent receptacle.

2. A supply cabinet, comprising a supporting frame with double end brackets and a top board connecting the upper ends of the end brackets and an angle iron strip connecting the lower ends of the double brackets, swinging frames pivotally connected to the top board and to the angle iron strip, and receptacles mounted on the swinging frames, each receptacle being located between the pivotal connections for the adjacent receptacle.

3. A supply cabinet, comprising a supporting frame with double end brackets and a top board connecting the upper ends of the double brackets and an angle iron strip connecting the lower ends of the double brackets, swinging frames pivotally connected to the top board and to the angle iron strip, a pair of metal rings mounted on each of the swinging frames by having their ends pass through slots of said swinging frames and turned over thereon, and receptacles fitting in the pairs of rings, each receptacle being normally located between the pivotal connections for the adjacent receptacle.

4. A supply cabinet, comprising a supporting frame with double end brackets and a top board connecting the upper ends of the double brackets and an angle iron strip connecting the lower ends of the double brackets, swinging frames pivotally connected to the top board and to the angle iron strip; a pair of metal rings mounted on each of the swinging frames by having their ends pass through slots of said swinging frames and turned over thereon, receptacles fitting in the pairs of rings, each receptacle being normally located between the pivotal connections for the adjacent receptacle, and knobs on one of the rings for each receptacle by which the receptacle may be swung forwardly and adapted to form a stop for limiting the swing of the adjacent receptacle.

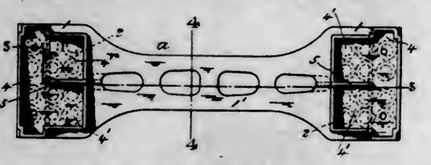
899,400. PROCESS OF PRESERVING WOOD. CHARLES HOWARD, New York, N. Y. Filed Mar. 18, 1908. Serial No. 421,806.

1. The herein described process of preserving wood, which consists in drying the wood, treating the dried wood with a cool aqueous solution of magnesium sulfate, expelling excess moisture from the wood, and treating the wood with a hot aqueous solution of barium chlorid.

2. The herein described process of preserving wood, which consists in subjecting the wood to heat, treating the heated wood with a cool aqueous solution of magnesium sulfate, heating the wood to expel excess moisture, and treating the heated wood with a hot aqueous solution of barium chlorid.

3. The herein described process of preserving wood, which consists in subjecting the wood to heat, treating the heated wood with a cool aqueous solution containing below 20% of magnesium sulfate, heating the wood to expel excess moisture, and treating the heated wood with a hot aqueous solution containing below 6% of barium chlorid.

899,401. CAR-TRUCK. CLARENCE H. HOWARD and HARRY M. PFLAGER, St. Louis, Mo., assignors to Double Body Bolster Company, St. Louis, Mo., a Corporation of New Jersey. Filed Feb. 27, 1908. Serial No. 418,074.



1. In a car truck, a metallic spring-plank adapted on its underside near each end thereof to form a seat for the swing-hanger bearing, substantially as described.

2. In a car truck, a metallic spring-plank having a slot in its underside adjacent to each end thereof adapted to confine and form a seat for the swing-hanger bearing, and having a dependent flange along and flush with one side of the said slot, substantially as described.

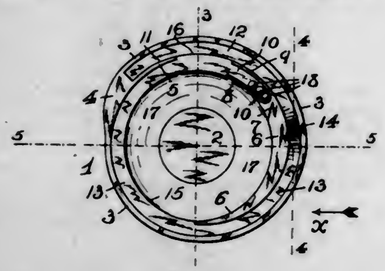
3. In a car truck, a metallic spring-plank having a slot in its underside adjacent to each end thereof and perforated vertically therethrough, substantially as described and for the purpose set forth.

4. In a car truck, a metallic spring-plank adapted on its underside adjacent to each end thereof to form a seat for the swing-hanger bearing, and having a dependent flange along each side of the said seat, substantially as described and for the purpose set forth.

5. In a car truck, a metallic spring-plank having suitable seats for the bolster-springs and swing-hanger bearings, and having on its underside adjacent to each swing-hanger bearing, a lifting purchase plate integral with the body, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

899,402. TOY OR PUZZLE. RALPH D. HOWELL, Newark, N. J. Filed Dec. 20, 1907. Serial No. 407,283.



1. A toy or puzzle consisting of a base and an upwardly extending outer wall, both forming a box-like structure of a circular configuration, a spirally formed race-way, said race-way being made with raised and depressed rolling surfaces, partitions bounding portions of the marginal edge-portions of the race-way, said partitions being made with an open space, so as to provide a gap between part of the raised and part of the depressed surfaces of the raceway, part of the raised portion of the raceway being exposed along its inner marginal edge, and the box-like structure being provided with inclined surface-portions open to a portion of the raceway and inclining toward the center of the structure.

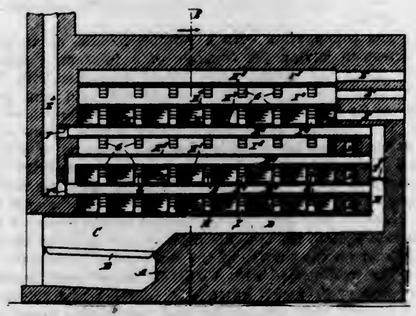
2. A toy or puzzle consisting of a base and an upwardly extending outer wall, both forming a box-like structure of a circular configuration, a spirally formed race-way, said race-way being made with raised and depressed rolling surfaces, partitions bounding portions of the marginal edge-portions of the race-way, said partitions being made with an open space, so as to provide a gap between part of the raised and part of the depressed surfaces of the race-way, part of the raised portion of the raceway being exposed along its inner marginal edge, and the box-like structure being provided with inclined surface-portions open to a portion of the raceway and inclining toward the center of the structure, and a receiving compartment at the end of the said raceway in which the spherical bodies are adapted to be received.

3. The herein described toy or puzzle comprising a base and an upwardly extending outer wall, both forming a box-like structure of a circular configuration, a spirally formed race-way, marginal walls 5 and 6 adjacent to said raceway, said wall 6 being provided with a widened part 7 and curved wall-portions 8 and 9 extending from said widened part 7, said portions 8 and 9 forming a ball-receiving compartment between them, substantially as and for the purposes set forth.

4. The herein described toy or puzzle comprising a base and an upwardly extending outer wall, both forming a box-like structure of a circular configuration, a spirally formed race-way, marginal walls 5 and 6 adjacent to said raceway, said wall 6 being provided with a widened part 7 and curved wall-portions 8 and 9 extending from said widened part 7, said portions 8 and 9 forming a ball-receiving compartment between them, the said raceway being made with raised and depressed rolling surfaces, and formed with an open space between the wall 5 and the wall-portion 9, so as to provide a gap between part of the raised and part of the depressed surfaces of the raceway, substantially as and for the purposes set forth.

5. The herein described toy or puzzle comprising a base and an upwardly extending outer wall, both forming a box-like structure of a circular configuration, a spirally formed race-way, marginal walls 5 and 6 adjacent to said raceway, said wall 6 being provided with a widened part 7 and curved wall-portions 8 and 9 extending from said widened part 7, said portions 8 and 9 forming a ball-receiving compartment between them, the said raceway being made with raised and depressed rolling surfaces, and formed with an open space between the wall 5 and the wall-portion 9, so as to provide a gap between part of the raised and part of the depressed surfaces of the raceway, and part of the raised portion of the raceway being exposed along its inner marginal edge, and the box-like structure being provided with inclined surface-portions open to a portion of the race-way inclining toward the center of the structure.

899,403. DESULFURIZING-FURNACE. ROBERT HÜBNER, New York, N. Y. Filed Dec. 18, 1906. Serial No. 348,453.



1. A desulfurizing furnace provided with a series of heat-conducting bottoms located at different levels, upper walls above said bottoms to form ore chambers, means for heating said chambers, and brackets, contained within said chambers, for supporting the upper walls.

2. A desulfurizing furnace provided with a series of heat-conducting bottoms located at different levels, upper walls above said bottoms to form ore chambers, means for heating said chambers, and brackets, contained within said chambers, for supporting the upper walls, said brackets having openings to prevent the trapping of gases.

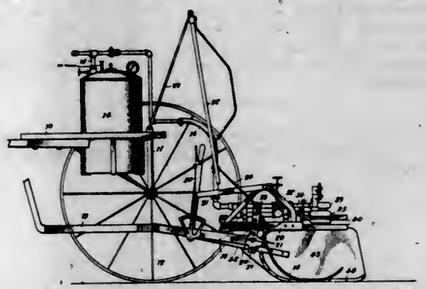
3. A desulfurizing furnace provided with a series of superposed ore chambers with openings or channels through which the material may pass from one chamber to the next chamber below, and additional openings leading from each chamber to the outside of the furnace, movable means each of which is arranged to close both kinds of openings, and means for heating the ore chambers.

4. A desulfurizing furnace provided with a series of superposed ore chambers with openings or channels through which the material may pass from one chamber to the next chamber below, and additional openings leading from each chamber to the outside of the furnace, the lowermost chamber having such additional openings in opposite walls, movable means each of which is arranged to close both kinds of openings, and means for heating the ore chambers.

5. A desulfurizing furnace provided with a series of ore chambers, movable devices for isolating any one of said chambers from its neighbors, and a separate exhaust channel leading from each chamber to the outside of the furnace.

[Claims 6 to 12 not printed in the Gazette.]

899,404. WEED-BURNER. AUGUST ITEN, Mountainview, Hawaii. Filed Dec. 9, 1907. Serial No. 405,797.



1. The combination of drag bars beside each other, a tilting frame mounted on and between the drag bars, burners carried by the frame and arranged to direct their flames downwardly, means to supply fluid fuel to the burners, and means to tilt the frame.

2. The combination of a front frame, drag bars pivotally connected thereto and arranged to trail on the ground behind the same, a burner frame mounted on the drag bars and carrying burners directed downwardly, and hoisting devices mounted on the front frame and connected to the drag bars, to lift the same.

3. The combination of the drag bars having vertical arms, a frame pivotally mounted at its sides between the arms and vertically adjustable thereon, downwardly directed burners carried by the frame, and a lever connected to the frame for tilting the same.

4. The combination of a front cross rod having draft means, drag bars pivotally connected to the rod, a frame supported on and between the bars, burners mounted on the frame and directed downwardly, and shields on opposite sides of the burners and pivotally connected to the cross rod.

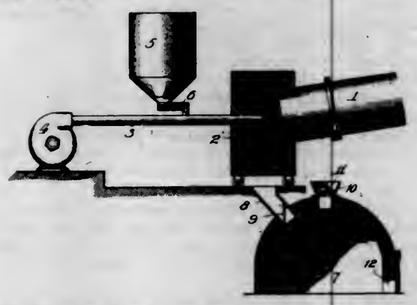
5. The combination of side bars adapted to travel over the ground, an outer frame located between the bars and supported thereby, an inner frame extending across the outer frame, fuel-supply pipes clamped upon the inner frame, and downwardly directed burners at the rear ends of the pipes.

[Claims 6 and 7 not printed in the Gazette.]

899,405. METHOD OF TREATING ORE. JOHN T. JONES, Iron Mountain, Mich., assignor of one-half to George A. St. Clair, Duluth, Minn. Filed Apr. 11, 1908. Serial No. 426,453.

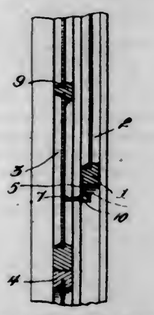
1. The method of reducing ore which consists in heating a mass thereof to a high temperature without melting it,

then subjecting the heated mass, under confinement, to contact with fresh hydro-carbon fuel, distilling the fuel by the heat of the ore and thereby generating a deoxidizing atmosphere to react upon the ore and reduce metallic oxids to metal.



2. The method of desulfurizing and reducing ore which consists in subjecting a mass thereof to a highly heated oxidizing atmosphere to burn off sulfur and heat the mass to a high temperature without melting it, then subjecting the heated masa, under confinement, to contact with fresh hydro-carbon fuel, distilling the fuel by the heat of the ore and thereby generating a deoxidizing atmosphere to react upon the ore and reduce metallic oxids to metal.

899,406. WINDOW-SASH ATTACHMENT. HERMAN JUNGE, Baltimore, Md. Filed Jan. 21, 1908. Serial No. 411,984.

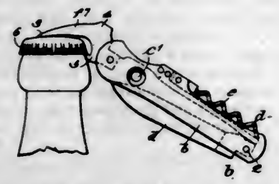


1. The combination with the relatively movable window sash of a window, of a closure carried by the rail of one sash and adapted to bridge the space between said rail and the window opening of the adjacent sash, said closure being mounted for free movement above or below its normal position, whereby the closure is adapted to pass the rails of the opposing sash in the upward or downward movement of the sash carrying the closure.

2. A closure for the space between window sash comprising a supporting plate to be secured to one rail of one sash, a bridging plate movably connected to the supporting plate, arms projecting from the side edges of the bridging plate and extending in rear of the supporting plate, and a spring member carried by the supporting plate and having its terminals loosely engaging the arms of the bridging plate.

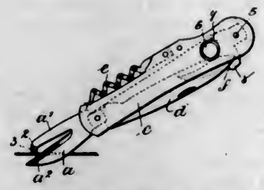
899,407. POCKET IMPLEMENT. OTTO KAMPFE, New York, N. Y. Filed May 28, 1907. Serial No. 376,104.

1. The combination with a pocket knife handle, of a pivoted extension adapted to be turned into the recess of said handle or to be opened outwardly and having a shoulder to limit the pivotal movement in one direction when the handle is used as a lever, said extension having a curved portion formed at one termination into lifting claws, the portion nearer the pivot having an engaging lip extending into the concavity of the curved portion at its other termination, the reverse side of the curved portion serving as a fulcrum for the claws when the handle is used as a lever, and the claws serving as a fulcrum when said handle is used as a lever to operate the engaging lip.



2. The combination with a pocket knife handle, of a part forming an extension from one end of the handle, said extension having a curved portion formed at one termination into lifting claws, the portion nearer the handle having an engaging lip extending into the concavity of the curved portion at its other termination, the reverse side of the curved portion serving as a fulcrum for the claws when the handle is used as a lever, and the claws serving as a fulcrum when the handle is used as a lever to operate the engaging lip.

899,408. COMBINATION IMPLEMENT. OTTO KAMPFE, New York, N. Y. Filed Dec. 16, 1907. Serial No. 406,608.



1. The combination with a suitable handle, of an arm or extension having the function of a fulcrum, and a juxtaposed blade and cutting edge set in opposition to said arm and coöperating therewith for penetrating and cutting sheet metal and said parts having a pivotal relation to the handle.

2. The combination with a suitable handle, of an arm or extension having the function of a fulcrum, a juxtaposed blade and cutting edge coöperating therewith for penetrating and cutting sheet metal and said arm provided at its free end with an axis and with rollers thereon.

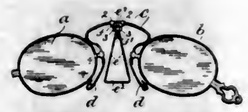
3. The combination with a suitable handle, of an arm or extension having the function of a fulcrum, a juxtaposed blade and cutting edge coöperating therewith for penetrating and cuting sheet metal, an axis extending through the free end of said arm and at right angles to the plane of said arm and corrugated rollers mounted on said axis against the opposite faces of said arm and adapted to bear on the surface of the sheet metal being cut.

4. The combination with a suitable pocket knife handle, of an arm or extension having the function of a fulcrum, a juxtaposed blade and cutting edge coöperating therewith for penetrating and cutting sheet metal and said parts pivotally connected to a pocket knife handle and adapted to be turned into a recess of said handle when not in use.

5. The combination with a suitable pocket knife handle, of an arm or extension having the function of a fulcrum, a juxtaposed blade and cutting edge coöperating therewith for penetrating and cutting sheet metal, said parts pivotally connected to a pocket knife handle and adapted to be turned into a recess of said handle when not in use and the free end of said arm provided with an axis extending therethrough and at right angles thereto, with rollers on the said axis at opposite sides of said arm adapted to bear as a fulcrum on the surface of the metal being cut.

[Claims 6 and 7 not printed in the Gazette.]

899,409. EYEGLASSES. OTTO KAMPFE, New York, N. Y. Filed Jan. 2, 1908. Serial No. 409,073.



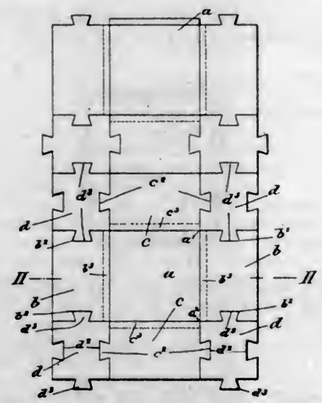
1. A device of the character described, as an attachment to eyeglasses, having a spring bow and the usual nose grips; the same comprising a removable spring clip to engage the spring bow of the eyeglasses, and a part connected thereto and extending therefrom and adapted at its free end to bear upon the bridge of the nose of the wearer.

2. The combination with eyeglasses having a spring bow and the usual nose grips, of a device comprising a clip member to engage the spring bow and a frame member movably mounted upon the clip member and extending therefrom to a bearing upon the bridge of the nose.

3. The combination with eyeglasses having a spring bow, of a device comprising a plate provided with clips adapted to embrace the spring bow of the eyeglasses, a wire frame and a pivotal connection between the wire frame and the said plate, the end of the wire frame adapted to rest upon the bridge of the nose and inflexible in the line of pressure.

4. The combination with eyeglasses having a spring bow, of a device comprising a plate having clip members at one edge and horizontal lugs at the other, a hinge pin passing through the hinge lugs, a wire frame of inverted V-form having a curved base adapted to rest over the bridge of the nose, the free ends of said wire frame passing through holes in the hinge pin and beyond the hinge pin so as to bear upon the upper surface of the plate and render the co-acting relation of the two parts inflexible in one direction which is the direction of pressure and use.

899,410. TILING. EDWARD M. KILBRIDE, Jersey City, N. J. Filed Nov. 18, 1905. Serial No. 287,953.



1. A group of tiling, comprising a central rectangular tile, two similar rectangular side tiles placed on opposite sides thereof, two other similar rectangular side tiles placed on the other opposite sides thereof, all of said side tiles being provided with parts which overlap corresponding parts of the central tile, and four similar rectangular corner tiles placed at the corners of the central tile and the transverse dimensions of which are equal to the width of the side tiles against which they abut, all of said corner and side tiles being locked together against lateral movement in the plane of the group.

2. A group of tiling, comprising a central square tile, two similar rectangular oblong side tiles placed on opposite sides of the central tile, two other similar rectangular oblong side tiles placed on the other opposite sides of the central tile, all of said side tiles being provided with parts which overlap corresponding parts of the central tile, and four similar rectangular corner tiles placed at the corners of the central tile and the transverse dimensions of which are equal to the width of the side tiles against which they abut, all of said corner and side tiles being locked together against lateral movement in the plane of the group.

899,411. PIN-BOX AND FASTENER. HENRY R. KIMBLER, Boerne, Tex. Filed Mar. 13, 1908. Serial No. 420,913.



1. In a device of the character described, a box adapted for containing pins inserted within the folds of a roll of tape, of a T-shaped securing device having its vertical member secured to the bottom of the box and its arms adapted to overlie the roll to prevent the roll being withdrawn as the pins are removed from the roll.

2. In a device of the character described, a circular box adapted for containing pins inserted within the folds of a roll of tape, of a T-shaped securing device having its vertical member provided with barbs or spurs and secured to the center of the bottom of the box, the arms of the securing device adapted to overlie the roll to prevent the roll being withdrawn as the pins are removed from the roll.

3. In a device of the character described, a box adapted for containing pins inserted within the folds of a roll of tape, of a securing device to prevent the withdrawal of the roll from the box, said securing device providing a vertical member having an eye and being provided with an extension having barbs or spurs and inserted within the bottom of the box engaging to prevent the withdrawal of the member therefrom, and a transverse member engaging the eye of the vertical member and adapted to overlie the roll containing the pins.

899,412. WOOD-BORING-MACHINE GUARD. EDGAR R. KING, Memphis, Tenn. Filed Feb. 10, 1908. Serial No. 415,161.

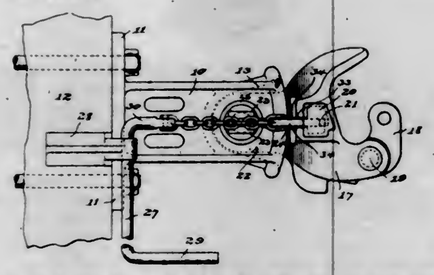


1. The combination, with a rotatable boring bit, the spindle socket in which said bit is clamped, and the fixed

bearing wherein the spindle rotates, of the bit-guard comprising a series of parallel bars and rings secured thereto and holding them spaced apart, the upper ends of the bars having eyes to receive the clamping screws of the bearing, whereby the guard is secured detachably and in pendent position and surrounding the bit, as shown and described.

2. The combination, with a rotatable bearing bit, the spindle socket in which said bit is clamped and the fixed bearing wherein the spindle rotates, the same being provided with clamp screws extended horizontally, of the bit-guard composed of a series of parallel bars and rings secured thereto, the upper ends of the bars having eyes which are elongated vertically and receive the clamping screws of the bearing, whereby the guard is adapted for vertical adjustment to accommodate it to bits of different lengths, substantially as described.

899,413. COUPLING. EDMUND P. KINNE, Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Nov. 1, 1906. Serial No. 341,616.



1. In a device of the character described, the combination of a support or draft member, a rotatable pivot pin on said support or draft member, a coupler mounted on said pivot pin and free to be shifted laterally, a locking pin for said coupler, a lifting lever pivotally mounted on said pivot pin and coöperating with said locking pin to raise the same, means to compel said pivot pin and lifting lever to turn with said coupler, and means to operate said lifting lever, substantially as described.

2. In a device of the character described, the combination of a support or draft member, a pivot pin on said support or draft member, a coupler mounted on said pivot pin and adapted to be shifted laterally, a locking pin for said coupler, a lifting lever pivotally mounted on said pivot pin and coöperating with said locking pin to raise the same, and means to actuate said lifting lever to raise said locking pin, substantially as described.

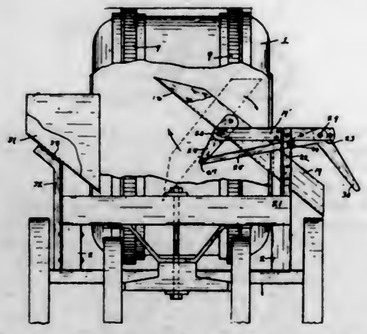
3. In a device of the character described, the combination of a support or draft member, a pivot pin on said support or draft member, a coupler mounted on said pivot pin and adapted to be shifted laterally, a locking pin for said coupler, a lifting lever pivotally mounted on said pivot pin and coöperating with said locking pin to raise the same, means to actuate said lifting lever to raise said locking pin, and means to compel said lifting lever to turn with said coupler, substantially as described.

4. In a device of the character described, the combination of a support or draft member, a pivot pin on said support or draft member, a coupler mounted on said pivot pin and adapted to be shifted laterally, a locking pin for said coupler, a lifting lever pivotally mounted on said pivot pin and coupler and coöperating with said locking pin to raise the same, and means to actuate said lifting lever to raise said locking pin, substantially as described.

5. In a device of the character described, the combination of a support or draft member recessed at one end, a pivot pin mounted on said support or draft member and passing through said recess, a coupler rotatably mounted on said pivot pin permitting the coupler to be shifted laterally, a slotted locking pin for said coupler, a lifting lever pivotally mounted on said pivot pin and extending into the slot of said locking pin whereby elevation of said lifting lever raises said locking pin, and means to actuate said lifting lever, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

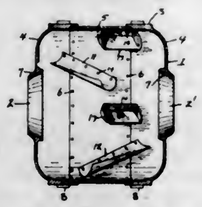
899,414. CONCRETE-MIXER. PHILIP A. KOEHRING, Milwaukee, Wis. Filed May 15, 1907. Serial No. 373,768.



1. In a concrete mixer, the combination of a revoluble drum having separate receiving and discharge openings at its respective ends, a stationary hopper having its discharge end within one of the openings of said drum, arms connected with the drum supporting frame and projecting into the drum at its discharge end, a reversely inclinable trough pivoted to the inner ends of said arms and means for manually changing the inclination of said trough upon its pivotal support.

2. In a concrete mixer, the combination of a revoluble drum having separate receiving and discharge openings at its respective ends, a stationary hopper, having its discharge end within one of the openings of said drum, a stationary trough supported from the exterior near the opposite end of said drum, arms connected with the drum supporting frame and projecting into the drum at its discharge end only, and a reversely inclinable trough pivoted to the inner ends of said arms and adapted to contact with said stationary trough.

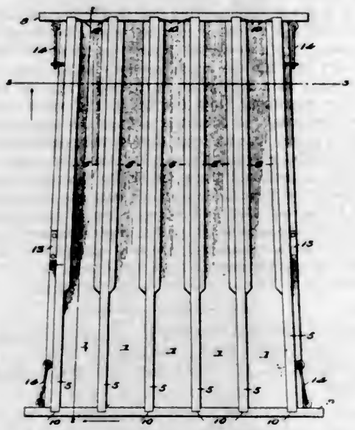
899,415. CONCRETE-MIXING DRUM. PHILIP A. KOEHRING, Milwaukee, Wis. Filed Mar. 16, 1908. Serial No. 421,512.



1. In a concrete mixing drum, the combination with a cylindrical central member of two heads each comprising a vertical end portion open at its center, an annular flange surrounding said opening, diverging inwardly from the exterior, a horizontal annular portion and an intermediate curved portion all formed integrally, means for connecting said integrally formed heads with said central cylindrical member, means for revolubly supporting said drum from its periphery and an annular series of mixing blades and buckets fixed to the inner wall of the drum.

2. In a concrete mixing drum, the combination of a cylindrical central member, two heads each comprising a vertical end portion open at its center, a horizontal annular portion and an intermediate curved portion formed integrally, means for rigidly connecting said central cylindrical member and heads together, two annular series of mixing blades secured to the inner walls of the drum, the blades of one series being inclined in the opposite direction to those of the other series, and at an angle to the longitudinal axis of the drum, an annular series of horizontally arranged buckets located between the respective blades of said series and means for rigidly securing said blades and buckets to the inner walls of said drum, the heads of said drum being adapted by their curved shape to cause the concrete therein to flow towards the center of said drum within the lines described by the circular movement of said blades, said blades and buckets being adapted as said drum is revolved to alternately throw the concrete forwardly and backwardly between said heads, all substantially as and for the purpose specified.

899,416. MULTIPLE MOLD FOR FENCE-POSTS. CHARLES KUBACH, Abilene, Kans. Filed Aug. 17, 1907. Serial No. 389,026.



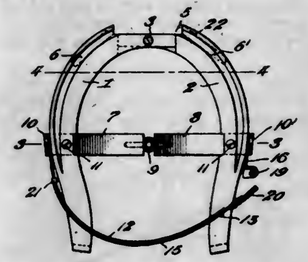
1. A multiple mold for fence posts, comprising base boards, abutment blocks on the outermost base boards, partition boards, end boards having extremities which overhang the base boards and engage with them, and means for securing the base boards, partition boards, and end boards in their respective positions.

2. A multiple mold for concrete fence posts, comprising base boards which are separated at their juxtaposed edges to compensate for swelling of said boards, abutment blocks on the outermost base boards, partition boards, end boards, engaging with said base-boards, and means for securing the base boards, partition boards, and end boards in their respective positions.

3. A multiple mold for fence posts, comprising base boards, abutment blocks on the outermost base boards, strips secured to the edges of said base boards, partition boards fitting between said strips and themselves provided with similar strips along their upper edges, an end board for the bases of the posts having extremities which overhang the base boards and engage them, an end board for the tops of the posts, and means for securing the base boards, end boards and partition boards in their respective positions.

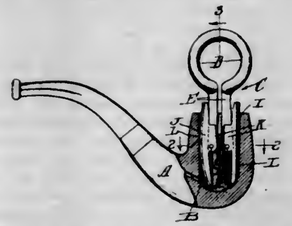
899,417. HORSESHOE. CHARLES W. LAIRD, Memphis, N. Y. Filed Jan. 3, 1908. Serial No. 409,190.

1. An attachment for horse shoes comprising a pair of members of shape corresponding with the horse shoe, the members being cut away at their point of connection for the reception of the calk of the horse shoe and being provided with channels near their outer ends adapted for the reception of the nails of the horse shoe, the members being provided with diametrically opposite cut away portions adapted for the reception of the reduced portions formed upon a pair of bars, a right and left handed screw connecting the inner ends of the bars, ears upon the outer ends of the bars, pivoted straps upon the ears, and means for adjusting the straps.



2. An attachment for horse shoes comprising a pair of members of a shape corresponding to that of the horse shoe, the members being pivoted together and being provided with a cut away portion at their point of connection for the reception of the calk of the horse shoe, the members being provided with the channels near their outer ends for the reception of the nails of the horse shoe, calks upon the members, a pair of alining bars connected to the members, the bars being provided with right and left handed threaded openings, a right and left handed screw for the openings, the bars being provided with upwardly extending ears at their outer ends, a strap connected with one of the ears, a stud upon the strap, a second strap provided with spaced openings and provided with a loop engaging the first strap, a threaded extension upon the second strap, an L-shaped bracket pivotally connected with the ear of the opposite bar, the horizontal member of the bracket being provided with an opening adapted for the reception of the threaded extension of the second strap, a securing element for the extension, and one of the openings of the second strap adapted to engage the stud of the first strap.

899,418. TOBACCO-PIPE CLEANER. DAGFINN LOSSIUS, Chicago, Ill. Filed July 6, 1908. Serial No. 442,113.



1. A device of the kind described consisting of a looped spring member having a pair of legs; and a pair of members pivotally supported on said legs, each of said members having vertically grooved faces, said members being adapted to be inserted in the bowl of a tobacco pipe and by rotation therein to scrape and thereby clean the interior thereof.

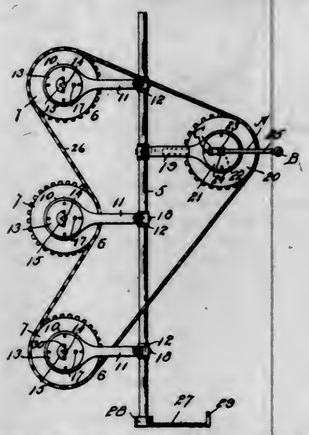
2. In a device of the kind described, the combination with a spring member having a loop and a pair of legs; of a pair of longitudinally grooved members pivotally secured to the end of said legs, said members when pivotally attached to said spring member, being insertible in the bowl of a tobacco pipe and by rotation therein are adapted to clean the interior thereof.

3. In a device of the kind described, the combination with a spring member; of a pair of longitudinally grooved members, said members being pivotally secured to opposite parts of said spring member and insertible in the bowl of

a tobacco pipe, the grooved parts of said members being in contact with and adapted when said device is rotated, to scrape and thereby clean said bowl.

4. In a device of the kind described, the combination with a spring member, of a pair of members pivotally secured to said spring member, each of said pair of members having a grooved face adapted when inserted in the bowl of a tobacco pipe and rotated to scrape and clean the interior thereof.

899,419. FENCE-MACHINE. CHARLIE E. MERCHEN, Bloomfield, Nebr. Filed July 20, 1907. Serial No. 384,752.

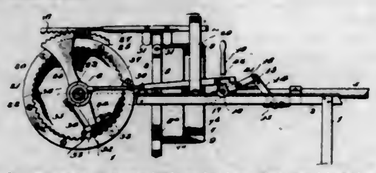


A machine of the class described, comprising a circular supporting rod, a plurality of brackets slidably engaged on the supporting rod, means for securing said brackets at any point in their movement, said brackets having enlarged outward end portions provided with circular openings laterally therethrough, said brackets having their inner ends bent laterally so that their enlarged portions lie in a common plane offset from the said supporting rod, sprocket disks having circular bosses revolubly engaged in the openings in the brackets, said sprocket disks having concentric openings and eccentric openings adjacent thereto within the area of the bosses, a circular plate secured to the face of each boss and having openings registering with those through the sprocket disks, said plates extending beyond the circumference of the bosses and over the enlarged portion of the bracket, means for reducing the size of the concentric openings, an extensible bracket slidably engaged on said supporting rod and extending oppositely from said first-named brackets and being offset to lie in the same vertical plane therewith, an operating sprocket engaged with the extensible bracket, means for rotating the operating sprocket, a laterally extending arm secured to the base of the supporting rod and arranged for the engagement thereon of the foot of the operator, and a chain engaged commonly with the operating sprocket and said first-named sprockets.

899,420. POWER-TRANSMISSION MECHANISM. JOSEPH O. MICHAUD, Fort Kent, Me. Filed Aug. 3, 1907. Serial No. 386,964.

1. In a power transmitting device, the combination of a sectional track, means for adjusting the angle between the sections of the track, means for moving the track, a driven member, and means actuated by the moving of the track for driving the driven member.

2. In a power transmitting device, the combination of a pair of shafts, a continuous track turned by one of the shafts, means for throwing portions of the track either into or out of alinement with each other, a clutch mechanism for operating the opposite shaft, and means whereby the clutch mechanism is actuated by the turning of the track when the sections thereof are out of alinement with each other.



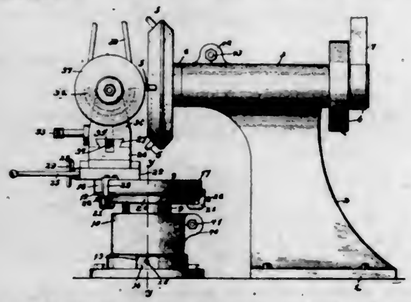
3. In a power transmitting device, the combination of a pair of shafts, a continuous track turned by one of the shafts, means for throwing portions of the track either into or out of alinement with each other, a clutch mechanism for turning the opposite shaft, and connecting rods for actuating the clutch mechanism, the said connecting rods receiving movement from the track when the portions of the same are out of alinement with each other.

4. In a power transmitting device, the combination of a pair of shafts, a revoluble member upon one of the shafts, a sectional track mounted upon the revoluble member, means for moving the track sections either into or out of alinement with each other, a reciprocating rod designed to receive movement from the track, and means whereby the reciprocating rod operates to turn the opposite shaft.

5. In a power transmitting device, the combination of a pair of shafts, a revoluble member mounted upon one of the shafts, a sectional track carried by the revoluble member, means for throwing the track sections either into or out of alinement with each other, a clutch mechanism for turning the opposite shaft, and a connecting rod for actuating the clutch mechanism, the said connecting rod being designed to receive motion from the track.

[Claims 6 to 14 not printed in the Gazette.]

899,421. GRINDING-MACHINE. CHARLES MILLS, Newton Upper Falls, Mass., assignor to Willis C. Swift, Fitzwilliam, N. H. Filed May 23, 1903. Serial No. 158,446.



1. In a device for grinding convex surfaces, the combination with a grinding element, of an article holding element, said grinding element being movable relative to the other in an arc having its center on the center of the arc to be ground, and adjustable radially and on a chord of the arc.

2. In a device for grinding convex surfaces, the combination with a revoluble grinding element, of a revoluble article holding element, said grinding element being movable relatively to the other in an arc having its center on the center of the arc to be ground, said movable member being also adjustable radially and on a chord of said arc.

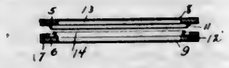
3. In a device for grinding convex surfaces, the combination with a supporting element, a grinding element, a suitable support for said supporting element, a post for supporting said grinding element, an adjustable turn-table for supporting said post and arranged to freely move the element carried thereby about the opposite element in an arc having its center on the center of the arc to be ground, during the operation of grinding.

4. In a device of the character described, the combination with a support for the article to be ground, of a grinding element for operating upon said article, a post for supporting said element, and a vertically adjustable turn table for supporting said post arranged to freely move said grinding element about the article in the arc of a circle centered upon the center of the arc to be ground, during the operation of grinding.

5. In a device for grinding convex surfaces, the combination with a suitable support for the article to be ground, of a grinding element for operating thereon, a turn table, and a transversely and laterally adjustable support for said grinding element mounted upon said table, said table being arranged to freely move said grinding element about the article to be ground in an arc having a center on the center of the arc to be ground, during the operation of grinding.

[Claims 6 to 10 not printed in the Gazette.]

899,422. METAL-COVERED DOOR. WORTHIE W. MOREY, Columbus, Ohio. Filed Sept. 20, 1907. Serial No. 393,786.



1. A closure of the character described made in sections and covered with sheet metal, said sections being secured face to face with each other, the edges of the sheet metal cover lying upon the inner face of each of said sections and interlocking members carried by the inner face of each of said sections and engaged with each other, said members being adapted to automatically engage with each other to lock the sections together when said sections are forced towards each other.

2. A closure made in sections, said sections being secured face to face with each other and interlocking members carried by the abutting faces of said sections and engaged with each other, said members being adapted to automatically engage with each other to lock said sections together when said sections are forced towards each other.

3. A closure made in sections said sections being secured face to face with each other and interlocking members carried by the abutting faces of said sections and engaged with each other, said members being adapted to automatically lock said sections together when said sections are forced towards each other, each of said sections being covered with sheet metal, the edge of which lies within the door when the said sections are locked together.

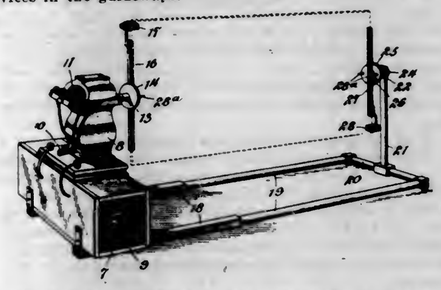
4. A closure of the character described made in two sections secured face to face with each other, each of said sections comprising a frame-work and a sheet metal covering for said frame-work and interlocking members carried by the inner faces of said sections and engaged with each other said members being adapted to be locked into engagement with each other when said sections are forced together.

5. A closure of the character described made in two sections, secured face to face with each other each of said sections comprising a frame-work and a sheet metal covering for said frame-work, interlocking members carried by the inner faces of said sections and engaged with each other when said sections are forced together, and means for spacing said sections slightly apart, said interlocking members lying within the space between said sections when the said members are brought together.

[Claims 6 to 8 not printed in the Gazette.]

899,423. WINDING-MACHINE. LOUIS M. MORROW and JAMES M. FOSTER, Wasco, Oreg. Filed June 6, 1907. Serial No. 377,581.

1. In a winding machine, the combination with a base comprising a casing, of a motor mounted on the base, spaced elongated guideways secured to the under side of the base transversely thereof and projecting beyond the same, constituting an extended support for said base, devices slidably mounted in the guideways and movable beneath the base, a support connecting and secured to the outer ends of the devices, and rotatable work-engaging elements carried by the support and motor and adjustable toward and from each other upon the movement of the devices in the guideways.



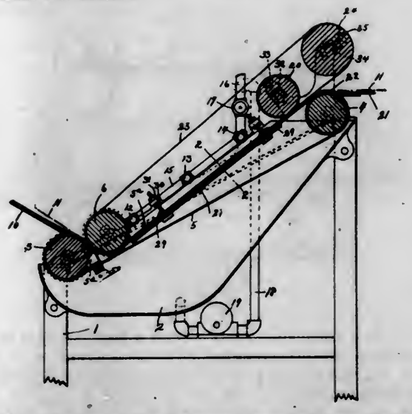
2. In a winding machine, the combination with a support, of a rotatable carrier journaled on the support and having a channel, a work-engaging device that detachably engages in the channel, and work engaging spurs projecting from the side of the carrier having the channel.

3. In a winding machine, the combination with supporting means, of opposing rotatable carriers journaled on the supporting means and having dovetailed channels in their opposing faces, said channels intersecting the axes of rotation of the carriers, and channeled work engaging devices detachably fitted in the channels and longitudinally removable therefrom.

4. In a winding machine, the combination with a support, of a rotatable carrier mounted thereon and having a channel, a work engaging device that detachably engages in the channel, a holding clip carried by one end of the device, and means for rotating the carrier.

5. In a winding machine, the combination with a base having spaced guideways, of rods slidably mounted in the guideways, a connection between the rods, a standard mounted on the connection, a motor mounted on the base, spaced opposing disks having coincident axes of rotation, one of the disks being operated by the motor, the other being journaled on the standard, said disk having oppositely projecting spurs and having transverse openings in their opposing faces, and channeled work engaging devices that are engaged in the channels.

899,424. MACHINE FOR WASHING SHEET MATERIAL. CHARLES E. MOSS, Boston, Mass. Filed July 1, 1907. Serial No. 381,598.



1. A machine of the character described, comprising a flexible conveyer adapted to support the sheet material over the greater part of the area of the latter, and means

for projecting washing fluid against the material while so supported, said conveyer consisting of a series of parallel sections separated from one another to permit escape of the washing fluid, whereby the conveyer is cleansed.

2. A machine of the character described, comprising a flexible conveyer adapted to support the sheet material over the greater part of the area of the latter, means for projecting washing fluid against the material while so supported, a rigid backing for sustaining the conveyer and sheet material against the force of the fluid, and a support or table upon which the material is delivered by the conveyer.

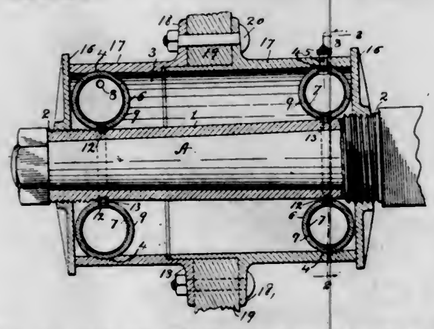
3. A machine of the character described, comprising a flexible conveyer adapted to support the sheet material over the greater part of the area of the latter, means for projecting washing fluid against the material while so supported, a rigid plate on the opposite side of the conveyer from the fluid-projecting means for sustaining that portion thereof against which the fluid is directed, and a support or table upon which the material is delivered by the conveyer.

4. A machine for washing sheet material, comprising a plurality of endless conveyers placed side by side and separated by narrow spaces, rolls over which said conveyers are passed, a feed roll coöperating with said conveyers to advance sheet material, pipes arranged to discharge fluid against said conveyers and the sheets supported thereby, a backing plate for holding the conveyers up against the force of the discharge and fillers contained within the spaces between the conveyers to provide therewith a continuous supporting surface for the sheets, and a delivery table having projections sunk into the spaces between the conveyers to remove the sheets therefrom.

5. A machine for washing sheet material, comprising a plurality of endless conveyers placed side by side and separated by narrow spaces, rolls over which said conveyers are passed, a feed roll coöperating with said conveyers to advance sheet material, pipes arranged to discharge fluid against said conveyers and the sheets supported thereby, a backing plate for holding the conveyers up against the force of the discharge and having ribs extending into the spaces between the conveyers and of a height substantially equal to the thickness of the latter, whereby to prevent the sheets from being pressed into such spaces by the force of the fluid discharge, and a delivery table having tongues extending into the spaces between the conveyers to remove the sheets therefrom.

[Claims 6 to 19 not printed in the Gazette.]

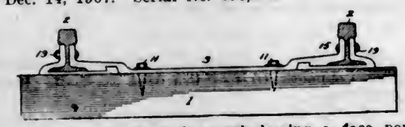
899,425. RESILIENT WHEEL. JAMES E. MCQUILKIN, Westmoreland county, Pa. Filed Feb. 4, 1908. Serial No. 414,230.



1. In a wheel, the combination of a boxing formed in its periphery with a plurality of sockets, a hub encircling the boxing and spaced therefrom, an annular cushion interposed between the hub and the boxing, a tie band carried by the cushion and formed with inwardly disposed lugs seated in the respective sockets of the boxing to prevent the cushion from rotating relative thereto, and means for rigidly securing the cushion to the hub.

2. A wheel, embodying a boxing formed in its periphery near each end with a plurality of sockets, a hub encircling the boxing and spaced therefrom, said hub being formed near each end with a plurality of openings extending therethrough, cushions interposed between the corresponding ends of the hub and boxing and constructed in inner and outer tubes, a plurality of shanks secured to the outer tubes and projecting through the openings in the hub with nuts mounted on their outer ends, tie-bands provided within the outer tubes and formed with lugs extending therethrough and received in the sockets in the boxing and means for securing together the ends of the tie-bands.

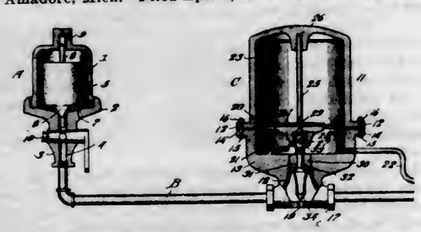
899,426. DEVICE FOR PREVENTING SPREADING OF RAILS. CHARLES L. MCVOY, Pensacola, Fla. Filed Dec. 14, 1907. Serial No. 406,464.



1. A pair of rail chairs, each having a face portion adapted to be positioned adjacent the outer webs of the rail and to engage the under surface of the head of the rail, an overlying bevel flange engaging portion and a body portion beneath the base flange of the rail provided with a head, and a tie bar having each end provided with a face portion adapted to be positioned adjacent the inner web of the rail and to engage the under face of the head of the rail and having its body provided with channels adapted to engage the heads of the chairs, and means for securing the tie bar, rails and rail chairs together.

2. The combination with the meeting ends of railway rails and a rail tie, of a rail chair having a vertical face engaging the outer web portion of the rails, and provided with a body portion adapted to underlie the base of the rail and having an inclined upwardly projecting head at its end, and a tie bar having enlarged ends providing rail engaging faces and having inclined channels adapted for engagement with the inclined projections upon the rail chairs, means for securing the rail chairs, rails and tie bar together, and means for securing the tie bar upon the rail tie.

899,427. AIR-BRAKE SYSTEM. JAMES D. NICHOL, Amadore, Mich. Filed Apr. 1, 1908. Serial No. 424,581.



1. An air brake system including a triple valve, a pressure retaining valve, a pipe connecting the retaining valve with the triple valve, said pipe being provided with a port, a cylinder, a member movably mounted within the cylinder and dividing the same into compartments, said member being provided with a port to establish communication between the compartments of the cylinder, a valve carried by said member and adapted to close the ports when the member is moved in one direction and open the ports when the member is moved in the reverse direction, and a pipe communicating with the train pipe and with the cylinder at a point below said member.

2. An air brake system including a triple valve, a pressure retaining valve, a pipe connecting the retaining valve with the triple valve, said pipe being provided with a port, a cylinder, a member movably mounted in the cylinder and dividing the same into compartments, said member being

provided with a port to establish communication between the compartments, a valve movably connected with said member, said valve being adapted to close the ports when the member is moved in one direction and open the ports when it is moved in the reverse direction, and a pipe communicating with the train pipe and with the cylinder at a point below the member.

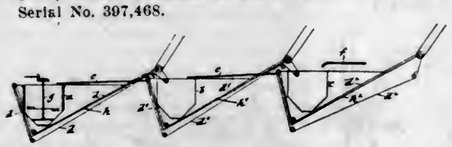
3. An air brake system including a triple valve, a pressure retaining valve, a pipe connecting the retaining valve with the triple valve, said pipe being provided with a port, a cylinder, a member movably mounted in the cylinder and dividing the same into compartments, said member being provided with a port to establish communication between the compartments, a valve adapted to close the ports and passage when the member is moved in one direction, a spring adapted to move the valve to uncover the port in said pipe when the member is moved in the reverse direction, and a pipe communicating with the train pipe and with the cylinder at a point below the said member.

4. An air brake system including a triple valve, a pressure retaining valve and a pipe connecting the retaining valve with the triple valve, said pipe being provided with a port, a cylinder communicating with the pipe, a member movably mounted within the cylinder and dividing the same in two compartments, said member being provided with a port to establish communication between the compartments of the cylinder, a valve adapted to close the ports when the member is moved in one direction and to open the ports when the member is moved in the reverse direction, and a pipe communicating with the train pipe and with one of the compartments of said cylinder.

5. An air brake system including a cylinder provided with a port, a member movably mounted in the cylinder and dividing the same into communicating compartments, a valve mounted in the cylinder and adapted to close the port when in one position, and a spring adapted to normally hold the valve in opened position, the member being adapted to move and hold the valve in port closing position.

[Claim 6 not printed in the Gazette.]

899,428. SLIMES-SEPARATOR. HORACE G. NICHOLS, Ymir, British Columbia, Canada. Filed Oct. 15, 1907. Serial No. 397,468.



1. In a slimes separator, the combination of a tank, a settler within same, and a conveyer belt within the tank upon which the slimes are deposited from said settler.

2. In a slimes separator, the combination of a tank for the cyanid solution, a settler within said tank, an endless conveyer belt within said tank upon which the slimes are deposited from said settler, said conveyer belt being movable in upward direction, and means for washing the slimes carried off by said belt.

3. In a slimes separator, the combination of a series of tanks, a settler within each said tank respectively, and a conveyer belt within each tank each of which belts carries the slimes out of its tank.

4. In a slimes separator, the combination of tanks for the cyanid solution, a settler within each tank and a conveyer belt within one of said tanks which receives the slimes deposited by the settler of said tank and discharges them into the next settler, and a conveyer belt in the last tank which discharges the slimes from said tank.

5. A separator for removing the slimes from cyanid solutions, comprising a pointed box or settler, a tank surrounding said settler, and an endless conveyer belt guided over the bottom of the tank inside to a point above the level of the solution in the tank and settler and guided exteriorly under the bottom of the tank and back to the inside.

[Claims 6 to 11 not printed in the Gazette.]

899,429. PAD FOR BOTTLE-CAPS. CLARENCE NOYES, Washington, D. C. Filed Dec. 4, 1907. Serial No. 405,084.



1. As a new article of manufacture, a pad for the purpose described comprising alternate layers of paper and fibrous material.

2. As a new article of manufacture, a pad for the purpose described comprising layers of paper and interposed layers of cotton.

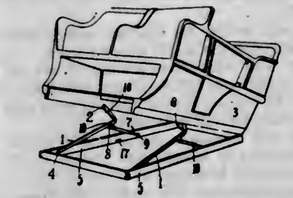
3. As a new article of manufacture, a pad for the purpose described comprising chemically treated paper and interposed layers of fibrous material.

4. As a new article of manufacture, a pad for the purpose specified comprising composite layers, certain of said layers being chemically treated.

5. As a new article of manufacture, a pad for the purpose specified comprising layers of paper and layers of fibrous material.

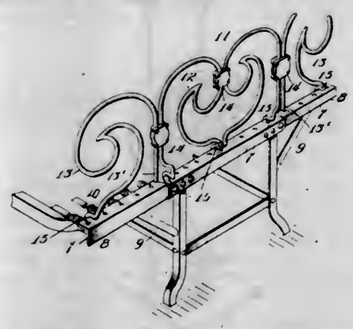
[Claims 6 to 17 not printed in the Gazette.]

899,430. MEANS FOR RAISING VEHICLE-BODIES. ARTHUR J. PACK, Brighton, England. Filed July 15, 1907. Serial No. 383,738.



In means for raising vehicle bodies, the combination of a chassis, a vehicle body hinged thereto, a jointed supporting leg pivoted to said chassis and said body, and adapted to be folded over upon itself when not in use, and a telescopic spring support pivoted to the chassis at one end, and to one of the members of the leg at the other end, one of the folded members of said leg being provided with means to prevent said members from striking against each other, substantially as described.

899,431. ATTACHMENT FOR COUCHES. JAMES A. PERRY, Chicago, Ill. Filed Dec. 14, 1907. Serial No. 406,425.

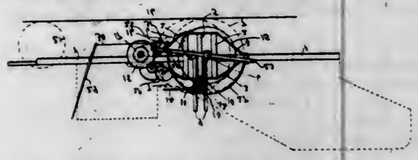


1. In a couch, an attachment comprising center members secured together and lateral members hinged to the center members, and means for detachable engagement with the body of the couch.

2. In a couch, an attachment comprising center members hinged together, a lateral member hinged to each

center member, each member having one or more spring clasps for removable engagement with one end of a couch, and a spring clip to engage and hold the lateral members in folded position.

899,432. TILTING SIDEHILL-HARVESTER. HENRY T. PREBLE and JOHN W. PAYNE, Stockton, Cal.; said Payne assignor to said Preble. Filed Dec. 17, 1906. Serial No. 348,337.



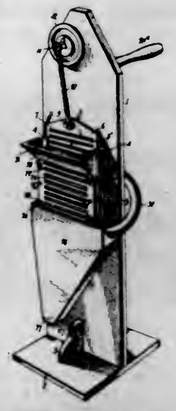
1. A vehicle having its traction wheels mounted upon axles set athwart the main frame thereof; vertical axle guides on both sides of said frame; rack bars fixed to said axles, a shaft extending across said main frame; pinions carried by said shaft and meshing with said rack bars, means for rotating said pinions, whereby said axles simultaneously move in opposite directions and maintain their parallelism with the said main frame; power transmitting mechanisms between said traction wheels and the power shaft.

2. A vehicle having its traction wheels mounted upon axles set athwart the main frame thereof; vertical axle guides upon both sides of said frame; rack bars fixed to said axles, a shaft extending across said main frame, pinions carried by said shaft and meshing with said rack bars and means for rotating said pinions.

3. A side hill harvester comprising a frame, axles extending transversely across said frame, traction wheels thereon, vertically arranged axle guides upon both sides of said frame engaging said axles, and means for simultaneously adjusting said axles in opposite directions in said guides.

4. A vehicle of the character described comprising a frame, axles extending transversely across said frame, traction wheels on said axles, and means for simultaneously effecting a vertical adjustment of said axles in opposite directions.

899,433. PEANUT-SHELLER. EMMETT M. RABY, Berkley, Va. Filed Sept. 25, 1907. Serial No. 394,506.



1. In a machine for shelling peanuts, the combination of a shelling member comprising a plate having a series of slots therein, means for reciprocating said member, a relatively stationary shelling member comprising an outwardly flared upper end and a plate provided with a series of transverse slots, a fan blower supported at one side of the shelling members, an air pipe connected to said fan blower, and the discharge end of said pipe being disposed within a chute, the latter having a discharge opening in the side thereof opposite the discharge end of the air pipe.

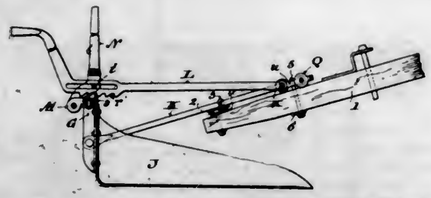
2. A peanut sheller comprising a shelling member provided with transverse slots, means for reciprocating said shelling member, a relatively stationary shelling member comprising an outwardly flaring upper end and a lower portion provided with transverse slots, means for adjusting said stationary member toward and from said reciprocating member, a blower supported at one side of the shelling members for discharging shells at one point, and means for discharging the kernels at another point.

899,434. OBSTETRICAL APPLIANCE. ANNIE M. REED, Washington, D. C. Filed Oct. 19, 1907. Serial No. 398,221.



An obstetrical apparatus comprising a strap having loops at the ends thereof, a strap extending laterally from the center of the looped strap and at right angles thereto, as shown and for the purpose set forth.

899,435. DRAFT-RIGGING FOR CARRIERS. EDMUND RING, Kingston, Wis. Filed May 23, 1908. Serial No. 434,474.

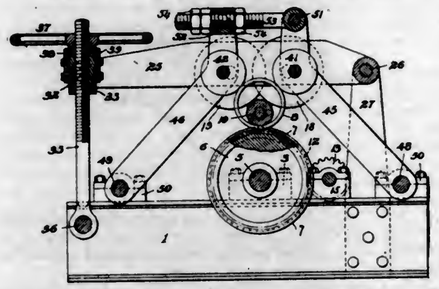


In a carrier having a bail in pivotal connection therewith, a locking rack-lever in link-connection with the bail-apex, a catch on the carrier for engagement with the rack-lever, and a releasing lever for said rack-lever in connection with the carrier; the combination of a draft-rigging having a cross-bar, means for securing the cross-bar ends to the bail, and other means for securing the draft-rigging to the bail-apex.

899,436. MACHINE FOR ROLLING METAL RINGS. ISAAC B. RITTER, Philadelphia, Pa., assignor to Edgar Ashman, Philadelphia, Pa. Filed June 29, 1907. Serial No. 381,452.

1. In a machine for rolling rings, the combination of a frame, a wheel mounted thereon, a mandrel, pressure rollers located at opposite sides of said wheel and adapted to press upon the mandrel, said pressure rollers revolubly mounted in lever members, which said lever members are pivotally mounted on the frame, and each of which has a free end, a shaft member connecting the free ends and means between the shaft member and the frame adapted to force said pressure rollers toward the said wheel.

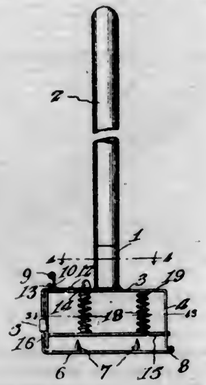
2. In a machine for rolling rings, the combination of a frame, a wheel mounted thereon, a mandrel, pressure rollers located at opposite sides of said wheel and adapted to press upon the mandrel, said pressure rollers arranged in pairs consisting of a single flanged roller and a double flanged roller, said pairs of pressures rollers mounted in lever members pivotally mounted on the said frame, and means for engaging the free ends of said lever members to force said pressure rollers towards the said wheel.



3. In a machine for rolling rings, the combination of a frame, a wheel mounted thereon, a mandrel, pressure rollers located at opposite sides of said wheel and adapted to press upon the mandrel, lever members in which said pressure rollers are revolubly mounted, said lever members being pivotally mounted in said frame, means for regulating the pressure of said pressure rollers against said mandrel, gage rollers, bearings in which said gage rollers are revolubly mounted, said bearings being pivotally mounted in the said frame, and means for adjusting the free ends of said bearings to regulate the position of said gage rollers in relation to said wheel.

4. In a machine for rolling rings, the combination of a frame, a wheel mounted thereon, a mandrel, pressure rollers located at opposite sides of said wheel and adapted to press upon the mandrel, lever members in which said pressure rollers are revolubly mounted, said lever members being pivotally mounted in said frame, means for regulating the pressure of said pressure rollers against said mandrel, gage rollers, bearings in which said gage rollers are revolubly mounted, said bearings being pivotally mounted in the said frame, a rod pivoted in the free end of one of said bearings, said rod adjustably mounted in the free end of the other one of said bearings whereby the position of said gage rollers may be regulated in relation to the said wheel.

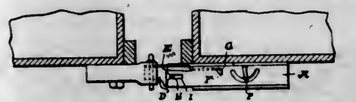
899,437. MOP-HEAD. FOREST A. RIVERS, Helena, Mont. Filed May 8, 1908. Serial No. 431,693.



1. A mop head having a mop clamp hinged thereto and provided with prongs to engage the mop cloth, a yielding cross bar mounted on the mop head, and means for holding said hinged member in place.

2. A mop head comprising a frame having down-turned slotted sides, a cross bar mounted to slide in said slots, springs interposed between said cross bar and frame, a mop clamp hinged to the frame and provided with prongs, and a latch for holding said mop clamp in closed position.

899,438. CAR-COUPLING. HARRY M. ROSENBERG, Atlanta, Ga. Filed Dec. 27, 1905. Serial No. 293,440.

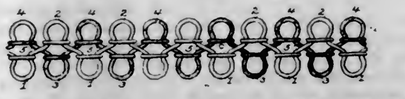


1. In combination with a car, a housing secured thereto having two compartments, a draw-head fitted to slide in one of said compartments, a shank formed with the draw-head, a hook formed upon the inner end of the shank, a cross-rod with which said hook is adapted to engage, a coil spring located in the other compartment of the housing, a rod passing through said spring, a pin secured in the outer end of the rod so as to bear against the spring, a crank-rod to which the first named rod is attached, a bar also attached to one of the cranks of the crank-rod, said bar having its outer end slotted to engage a pin carried by the draw head, as and for the purpose set forth.

2. A car coupler consisting of a housing, a draw-head fitted therein, a shank extending rearward from the draw-head, a hook formed upon the shank, a cross-rod secured in the housing with which said hook is adapted to engage and from which it will be disengaged should a car leave the track, as specified.

3. The herein described combination of a housing having two compartments therein, a draw-head fitted to slide in one of these compartments, a shank extending rearward from the draw-head, a hook formed upon the inner end of the shank, a cross-rod with which said hook is adapted to engage, a pin H secured in the draw-head and adapted to slide in suitable grooves formed in the housing, a bar having a slotted end adapted to engage with the pin H, a crank-rod having two cranks formed thereon to one of which cranks the bar is attached, a rod K attached to the opposite crank of the crank-rod, the said housing being formed with a partition a pin L secured to the outer end of the rod K and a coil spring confined between the pin L and the partition of the housing, as and for the purpose set forth.

899,439. RIBBED KNITTED WEB. ROBERT W. SCOTT, Leeds Point, N. J., assignor of one-half to Louis N. D. Williams, Ogontz, Pa. Filed July 7, 1908. Serial No. 442,414.



1. A knitted fabric comprising two ribbed webs with crossing sinker wales, each face of the fabric presenting first a rib of one web and then a rib of the other web.

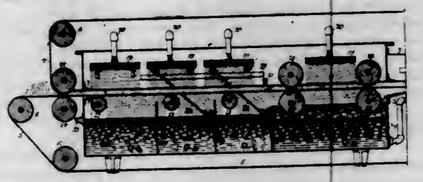
2. A knitted fabric comprising two ribbed webs with crossed sinker wales, the ribs of one web being disposed in the spaces between the ribs of the other web.

3. A knitted fabric comprising two interlocked ribbed webs, with crossed sinker wales and a welt composed of a plurality of successive plain courses.

4. The mode herein described of producing a knitted fabric, said mode consisting in feeding one yarn to one set of needles drawing stitches first in one direction and then in the opposite direction, to produce a ribbed web, and feeding another yarn to an alternating set of needles likewise drawing stitches first in one direction and then in the other direction, and between the stitches drawn by the needles of the first set.

5. The mode herein described of producing a knitted web, said mode consisting in feeding one yarn to one set of needles, drawing stitches first in one direction and then in the opposite direction, to produce a ribbed web, feeding another yarn to an alternating set of needles likewise drawing stitches first in one direction and then in the opposite direction, and between the stitches drawn by needles of the first set, arresting the operation of all of the needles which draw their stitches in one direction, and knitting a number of courses upon all of the needles which draw their stitches in the opposite direction.

899,440. APPARATUS FOR EXTRACTING GREASE AND POTASH SALTS FROM WOOL. FRANK SHUMAN and CONSTANTINE SHUMAN, Philadelphia, Pa., assignors, by direct and mesne assignments, of one-third to said Frank Shuman, one-third to Walter Erben, and one-third to Charles H. Harding, Philadelphia, Pa. Filed Dec. 29, 1905. Serial No. 293,799.



1. The combination, in a wool degreasing apparatus, of a pair of traveling aprons between which wool is held and continuously fed forward through flowing streams of solvent having a less and less percentage of grease, movable distributers for delivering said streams of solvent, means for continuously feeding such successively purer solvent in the opposite direction, and means for supplying pure solvent to said wool in its travel and after it passes said flowing streams.

2. The combination, in a wool degreasing apparatus, of a tank having a series of solvent compartments, movable solvent distributers located above each compartment and overlapping the next so as to discharge simultaneously into both compartments, and means for conveying the wool through streams of solvent flowing from each distributer into the compartments below.

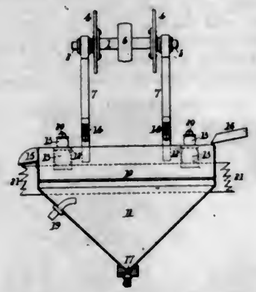
3. The combination, in a wool degreasing apparatus, of a tank having a series of solvent compartments, a solvent distributer located above adjoining compartments, means operated by the level of solvent in one compartment whereby a solvent distributer will be caused to direct a predetermined portion of its discharge into an adjoining compartment, and means for carrying the wool through the flowing streams of solvent.

4. The combination, in a wool degreasing apparatus, of a tank having a series of solvent compartments, a series of solvent distributers above the same, means for conveying the wool through the solvent flowing from the distributers into said compartments, means for mounting the distributers so as to permit of movement of the same above the compartments, and a float contained in a compartment and connected to a corresponding distributer and serving by its rise and fall to cause to-and-fro movement of said distributer.

5. The combination, in a wool degreasing apparatus, of a tank having one or more compartments each with a solvent distributer above the same, a pair of traveling aprons between which the wool is held and carried through streams of solvent containing a less and less percentage of grease flowing from the distributers to the compartments, a pipe for continuously discharging pure solvent onto and through the mass of wool after its passage through said streams, and means for automatically feeding the successively purer bodies of solvent in a direction opposite to the movement of wool.

[Claims 6 to 15 not printed in the Gazette.]

899,441. SUITABLE APPARATUS FOR CONCENTRATING AND WASHING MINERALS. ARTHUR TAYLOR, London, England. Filed Jan. 22, 1907. Serial No. 353,482.



1. In a washer for concentrating and washing materials, a rotary vibrator, a spindle on which said vibrator is mounted and a flexible member supporting said spindle on the part of the washer to be vibrated.

2. In apparatus for concentrating and washing minerals, a rotary vibrator supported on the part of the washer to be vibrated, a spindle carrying said vibrator and a flexible member supporting said spindle on the vibrated part.

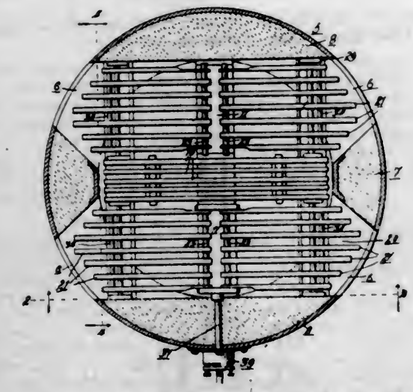
3. In apparatus for concentrating and washing minerals, a vibrated part of the washer, a resilient support for the same, a rotary vibrator, a spindle on which said vibrator is mounted and a flexible support for said spindle on said vibrated part.

4. In a washer for concentrating and washing materials, a vibrated part of the washer, a resilient support for the same, a rotary vibrator, a spindle on which said vibrator is mounted and a flexible standard carrying said spindle and mounted on the said vibrated part, substantially as described.

5. In a washer for concentrating and washing materials, a vibrator connected with a part to be actuated thereby, said vibrator comprising an eccentrically journaled shaft, an adjustable disk eccentrically mounted on said shaft, and means for rotating said shaft, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

899,442. FIRE-GRATE. JOHN WILLIAMSON, Chicago, Ill. Filed Nov. 11, 1907. Serial No. 401,697.



1. In a furnace grate, the combination of a plurality of grate bars, a hollow cross wall beneath the bars provided on opposite sides with blast openings arranged in staggered relation, each of the openings having adjacent thereto a baffle plate to prevent ingress of ashes and dirt, and a plurality of partition walls intermediate the staggered blast openings, substantially as described.

2. In a furnace grate, the combination of a plurality of grate bars, a hollow cross wall beneath the bars provided on opposite sides with blast openings arranged in staggered relation, each of the openings having adjacent thereto a baffle plate to prevent ingress of ashes and dirt, a plurality of partition walls intermediate the staggered blast openings, and a steam pipe entered through the partition walls and provided with openings arranged in staggered relation, said openings being in register with the blast openings, substantially as described.

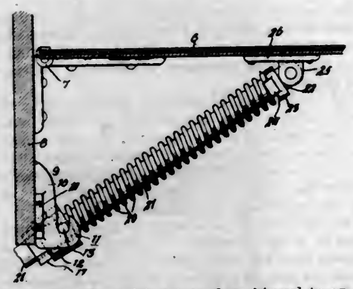
3. The combination of a furnace structure provided with four grate doors, a transversely extending hollow cross wall, intermediate the doors and provided with partition walls dividing the cross wall into a plurality of blast chambers, each of the chambers having a blast discharge opening, said openings being arranged in staggered relation on opposite sides of the cross wall, four movable grate sections, hinged to the cross wall and extending toward the respective doors, and means for supporting the free ends of the grate sections, substantially as described.

4. The combination of a furnace structure provided with four grate doors, a transversely extending hollow main cross wall, intermediate the doors and provided with partition walls dividing the cross wall into a plurality of blast chambers, each of the chambers having a blast discharge opening, said openings being arranged in staggered relation on opposite sides of the cross wall, inwardly diagonally extending baffle plates, one for each of the blast openings, four movable grate sections, hinged to the cross wall and extending toward the respective doors, and means for supporting the free ends of the grate sections, substantially as described.

5. The combination of a furnace structure provided with four grate doors, a transversely extending hollow cross wall, intermediate the doors and provided with partition walls dividing the cross wall into a plurality of blast chambers, each of the chambers having a blast discharge opening, said openings being arranged in staggered relation on opposite sides of the cross wall, four movable grate sections, hinged to the cross wall and extending toward the respective doors, means for supporting the free ends of the grate sections, and a pair of supplemental hollow cross walls, extending at right angles to the main cross wall and provided with similar partition walls and blast openings, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

899,443. TRAP-DOOR-OPERATING MECHANISM. LARS J. BERG, Chicago, Ill., assignor to Metallic Sheathing Company, a Corporation of Illinois. Filed Dec. 17, 1907. Serial No. 406,872.



1. In combination with a trap door hinged to an adjoining structure, a rod pivoted to the door, a bracket plate secured to the structure and provided with hooks, a collar provided with trunnions pivoted within the hooks, through which collar the rod is entered, and a coil spring encircling the rod intermediate the collar and the door, substantially as described.

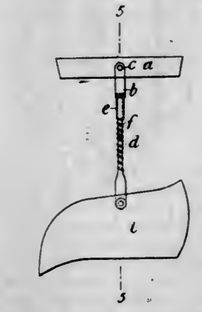
2. In combination with a trap door hinged to an adjoining structure, a rod pivoted to the door and mounted to extend diagonally from the door toward the adjoining structure when the door is in closed position, and adapted to extend in substantially parallel relation with both the door and the structure when the door is open, a bracket secured to the structure and provided with hooks, a collar provided with trunnions pivoted within the hooks and having a bore through which the rod is slidably entered, and adapted to move with the rod from a position in diagonal relation with the door when closed, to a position in substantially parallel relation with the door when open, and a coil spring encircling the rod intermediate the collar and the door, substantially as described.

3. In combination with a trap door hinged to an adjoining structure, a rod pivoted to the door, a bracket secured to the structure, a collar pivoted within the bracket, through which collar the rod is entered, a coil spring encircling the rod intermediate the collar and the door, and an adjustable nut within the collar against which the coil spring bears, substantially as described.

4. In combination with a trap door hinged to an adjacent structure, a rod pivoted at one end of the door, a bracket plate secured to the structure and provided with hooks, a collar provided with trunnions pivoted within the hooks, a nut screwed into the collar and provided with a smooth bore through which the rod is entered, and a coil spring encircling the rod and bearing against the nut within the collar, substantially as described.

5. In combination with a trap door hinged to an adjacent structure, a plate secured to the door and provided with ears, a rod provided with a tongue pivoted between the ears, and further provided with a flange adjacent to the tongue, a plate secured to the adjacent structure and provided with inwardly extending hooks, a collar provided with trunnions journaled within the hooks, a nut screwed into the collar and provided with a smooth bore through which the rod is slidably entered, and a coil spring encircling the rod and bearing at one end against the inner edge of the nut within the collar and adapted to be adjusted by movements of the nut, substantially as described.

899,444. STRETCHER OR FILLER FOR BOOTS, SHOES, LEGGINGS, &c. JAMES N. COCHRANE, Kettering, England. Filed Mar. 12, 1907, Serial No. 362,059. Renewed Aug. 12, 1908. Serial No. 448,191.



1. A device of the kind described, consisting of a supporting member provided at one end with a form fitting the interior of the leg portion of a boot, shoe or interior of a legging, pivoted to one end of said supporting member, the other end of said supporting member being provided with means for engaging another part of the article to which the device is applied, said supporting member being composed of two parts with a spring interposed between them, tending to force the same away from each other, whereby the form may be turned, to facilitate the insertion of the device in the article to which it is to be applied, substantially as described.

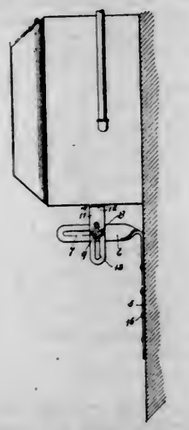
2. In a device of the kind described, the combination with an elastic form fitting the interior of the leg portion of a boot, shoe, or legging, of a supporting member therefor pivotally connected thereto, said form being movable longitudinally of said supporting member, and engaging the sides of the article by frictional contact, and a spring interposed between said form and said supporting member, whereby pressure is exerted longitudinally of the leg portion of the boot, shoe or legging equally at all points around the form, and the insertion of the form into the article is facilitated, substantially as described.

3. In a device of the kind described, the combination with a supporting member having an elastic form, adapted to closely fit a portion of the interior of the article to which it is to be applied, pivoted to one end thereof, of a pivoted elastic form adapted to engage the interior of the leg portion of the said article, connected to and movable longitudinally of the said supporting member and a spring tending to force the two forms away from each other, substantially as described.

4. In a device of the kind described, the combination with a split band adapted to engage the sides of the leg portion of a boot, shoe or legging, a U shaped support, pivotally connected to said band and provided with a bearing, a supporting member adapted to slide in said bearing and to engage at one end, another portion of the article to which the device is applied and a spring interposed between the supporting member and the U shaped support for the band exerting pressure against the said U shaped support, substantially as described.

5. In a device of the kind described, the combination with a split spring band adapted to engage the sides of a boot, shoe or legging a U shaped support of resilient material pivotally connected to said band and provided with a bearing, a supporting member adapted to slide in said bearing and to engage at one end another portion of the article to which the device is applied and a spring interposed between the supporting member and the U shaped support for the band, exerting pressure against the said U shaped support, substantially as described.

899,445. BRACKET. CHARLES L. DAY, Chicago, Ill. Filed May 5, 1908. Serial No. 431,038.

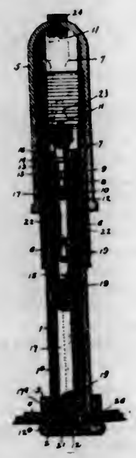


1. In a bracket, the combination of an L-shaped attaching member, comprising an attaching portion adapted to be secured to a suitable structure, and an outwardly projecting portion provided with an opening, a shelf portion comprising two angle bars, each provided with an opening, said angle bars being disposed on opposite sides of the projecting portion, and a bolt entered through the openings in the angle bars and in the projecting portion of the attaching member, substantially as described.

2. In a bracket, the combination of an L-shaped attaching member, comprising an attaching portion adapted to be secured to a suitable structure, and an outwardly projecting portion twisted with respect to the attaching portion and provided with an opening, a shelf portion comprising two angle bars, each provided with an opening, said angle bars being disposed on opposite sides of the projecting portion, and a bolt entered through the openings in the angle bars and in the projecting portion of the attaching member, substantially as described.

3. In a bracket, the combination of an attaching member formed from a single piece of strap metal and comprising an attaching portion and an outwardly projecting supporting portion bent at right angles with respect to the attaching portion and twisted with respect thereto to bring the major dimension of the projecting portion into a vertical position, the supporting portion being provided with an elongated horizontal slot, a shelf portion comprising two angle bars disposed on opposite sides of the projecting supporting portion, and each provided with a vertical slot, and a bolt entered through the slots for securing the shelf members to the supporting member and permitting longitudinal and vertical adjustment, substantially as described.

899,446. PRESSURE INDICATOR AND REGULATOR. ROBERT FARIES, Williamsport, Pa., assignor of one-half to John Luppert, South Williamsport, Pa. Filed Mar. 26, 1908. Serial No. 423,377.



1. The combination of movably mounted valve mechanism, comprising a valve and its seat, the valve being movable to and from its seat, and pressure-indicating means for showing varying pressures, operated by the movement of said mechanism.

2. The combination of movably mounted valve mechanism, comprising a valve and its seat, the valve being movable to and from its seat, means for placing said mechanism in communication with the pressure-containing structure, at all points in the movement of said mechanism, and indicating means for showing varying pressures, operated by the movement of said mechanism.

3. The combination of a stem or casing, adapted to be attached to a fluid-pressure receiving structure, a valve mechanism movably mounted in said casing, comprising a valve and its seat, to and from which the valve is movable, and indicating means for showing varying pressures within said structure, operated by the movement of said mechanism.

4. The combination of a stem or casing adapted to be attached to a fluid-pressure receiving structure, an inwardly opening valve mechanism movably mounted in said casing, an extensible and contractible connection between said valve mechanism and the interior of the pressure-receiving structure, and indicating means operated by said valve mechanism.

5. The combination of movably mounted valve mechanism, comprising a valve and its seat, the valve being movable to and from its seat, pressure-indicating means for showing varying pressures operated by the movement of said mechanism, and automatic means for relieving excess pressure.

[Claims 6 to 14 not printed in the Gazette.]

899,447. DYNAMO-ELECTRIC MACHINE. ALLAN B. FIELD, Norwood, Ohio, assignor to Allis Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Nov. 30, 1906. Serial No. 345,602.

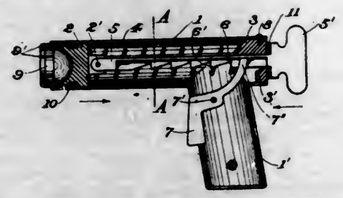


1. In a dynamo-electric machine, a field pole made up of laminæ and end plates, and a damping or anti-hunting device therefor, comprising a low resistance ring independent of said laminæ and end plates and surrounding the pole, and one or more separable bars or rods of low resistance embedded in said laminæ at right angles thereto and projecting into recesses in said end plates and engaging the ring.

2. In a dynamo-electric machine, a field magnet comprising a pole provided with lateral coil-retaining projecting portions at its outer end and a field coil surrounding said pole, and a damping or anti-hunting device therefor comprising a low resistance ring surrounding said pole and located between the coil and the coil-retaining projecting portions of the pole, a plurality of independent bars or rods of low resistance embedded in the pole face and having their ends extending into said coil-retaining projecting portions adjacent to the ring, and means for fastening the extending ends of said bars or rods to said ring at opposite sides of the pole.

3. In a dynamo-electric machine, a field magnet comprising a pole-piece and field coil, said pole-piece being made up of a plurality of laminations and end-plates, a plurality of bars of good conducting material embedded in the pole face and projecting beyond the laminations, the end-plates being at their outer ends provided with coil-retaining projecting portions recessed to receive the projecting ends of said bars, a ring of good conducting material surrounding said pole-piece between the coil and the projecting portions of the end-plates, and means for fastening the ring to the ends of said bars, the whole being so constructed that when the pole-piece and coil are assembled the bars are not visible from the exterior.

899,448. TOY. SIMON GROBL, Chicago, Ill. Filed Dec. 9, 1907. Serial No. 405,640.



1. In a spring gun, a gun barrel; a missile carrier comprising a frame and a missile retaining washer, said carrier being movable within the barrel of said gun, said missile retaining washer normally projecting from the barrel of the gun and yielding for insertion or ejection of a missile when projecting from the barrel of the gun and said washer being restrained by the barrel of the gun to retain the missile when the carrier and washer are wholly within the gun barrel, substantially as described.

2. In a spring gun, a missile carrier; a missile retaining washer on said missile carrier and projecting in front of said carrier and lying within the barrel of the gun when the carrier is retracted preparatory to discharge of the missile, the forwardly projecting lip of said washer being thickened, said washer being longitudinally slotted in its forward position and projecting its forward portion beyond the end of the gun barrel when the carrier is in its extreme forward extension, the thickened edge of said washer being confined by the gun barrel when the carrier is wholly within the barrel, and said thickened edge being adapted to retain the missile when so confined, substantially as described.

3. In a spring gun, a missile carrier having a missile retaining edge in advance of the missile, said edge being elastic and movable out of the way of the missile when projecting beyond the barrel of the gun and said missile retaining edge lying within the gun barrel and being restrained by the gun barrel to retain the missile when the carrier is drawn wholly into the barrel, substantially as described.

4. In a spring gun, a missile carrier having a missile retaining edge in advance of the missile, said edge being elastic and longitudinally slotted and movable out of the way of the missile when projecting beyond the barrel of the gun and said missile retaining edge lying within the gun barrel and being restrained by the gun barrel to retain the missile when the carrier is drawn wholly into the barrel, substantially as described.

5. In a spring gun, a missile carrier having a forward edge projecting beyond the missile, said forward edge being restrained by the gun barrel when the missile carrier is wholly within the gun barrel and presenting a clearance smaller than the missile, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

899,449. FERTILIZER-DISTRIBUTER. EDWARD L. HAHN, Muscatine, Iowa. Filed Feb. 6, 1908. Serial No. 414,604.



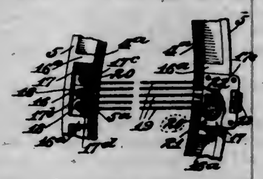
1. In combination with a wheeled cultivator, of a removable attachment therefor, comprising a bar detachably attached to the cultivator frame, a plate adjustably attached to said bar and having a plurality of feed openings, a hopper on said plate, a shaft parallel with the bar and journaled in bearings thereon and extending transversely of and through the hopper, paddles fixed on said shaft within the hopper, tubes attached to said plate below the feed openings, a slide valve for regulating the size of the feed openings, a lever for operating the said valve, and sprocket chain and gears for driving said shaft from the vehicle wheels.

2. In combination with a straddle-row cultivator, of a detachable attachment comprising a bar adjustably and removably attached to the cultivator frame, a plate adjustably attached to said bar and provided with a plurality of feed openings, a hopper detachably secured on said plate, a shaft mounted on the bar and parallel therewith and extending into the hopper, sprocket chain and gearing for rotating said shaft from the cultivator wheels, stirrers in

said hopper over the openings in the plate, and tubes connected with the openings in said plate for conducting material from the feed openings to the shovels.

3. In combination with a cultivator, a removable attachment therefor comprising a bar detachably attached to the cultivator frame, a perforated plate mounted on said bar and having a feed opening, a hopper mounted upon said plate, a shaft mounted on said bar and extending parallel with the bar through the hopper and above the feed opening in the said plate, agitating devices within the hopper operated by said shaft, a tube suspended from the plate below the feed opening for conducting the material from the feed opening to the shovel, a valve attached to the plate for regulating the size of the feed opening in the plate, and sprocket chain and gears for driving said shaft from the cultivator wheels.

899,450. SNARE FOR DRUMS OR OTHER MUSICAL INSTRUMENTS. THEODOR HEMBERGER, St. Louis, Mo. Filed Dec. 24, 1907. Serial No. 407,906.



1. The combination with a drum, of a snare, and snare-holders suitably mounted on said drum and to which the ends of said snare are attached, one or both of said snare-holders being rotatable, whereby the tension of said snare may be adjusted; substantially as described.

2. The combination with a drum, of a snare, snare-holders slidably mounted on said drum, and rotatable means in said snare-holders to which the ends of said snare are attached, whereby the rotation thereof regulates the tension of said snare.

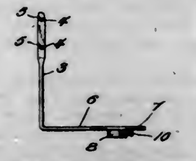
3. The combination with a drum, of a snare, and snare-holders slidably mounted on said drum for movably supporting said snare, said snare-holders being held in adjusted positions by the tension of said snare; substantially as described.

4. The combination with a drum, of a snare, snare-holders slidably mounted on said drum for movably supporting said snare, said snare-holders being held in their several positions by the tension of said snare, and means for regulating the tension of said snare; substantially as described.

5. The combination with a drum, of snare holders mounted thereon, a snare supported by said snare holders and extending alternately from one snare-holder to the other, whereby a continuous set of snares is provided, and means at the end of said snare for effecting an adjustment of the tension of said snare extending throughout its length; substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

899,451. THREAD AND SEWING-SILK REGULATOR FOR SEWING-MACHINES. MARY KNAPP, Dayton, N. Y. Filed Apr. 17, 1908. Serial No. 427,725.



A thread and sewing silk regulator for sewing machines comprising a disk, an arm extending outwardly therefrom, a vertical arm connected thereto and provided with a flattened upper end, thread eyes formed in the flattened portion and provided with inclined slots leading into said eyes, a sleeve under said disk, and a set screw extending through said sleeve to bear upon the spool post of a sewing machine.

899,452. PROCESS AND APPARATUS FOR ANNEALING AND TEMPERING METALS. HEINRICH KRAUTSCHNEIDER, Berlin, Germany. Filed July 7, 1904. Serial No. 215,568.

1. The herein described process of heating metals, which consists in inserting the objects to be heated in a fusible non-metallic bath heated by an electric current, and regulating said current to maintain the bath at the required temperature, the current passing through both the bath and the immersed portion of said objects.

2. The herein described process of heating metals, which consists in producing a molten non-metallic bath by means of an electric current, inserting the objects to be heated in said bath, and maintaining the required temperature of the bath by regulating the said heating current, the current passing through both the bath and the immersed portion of said objects.

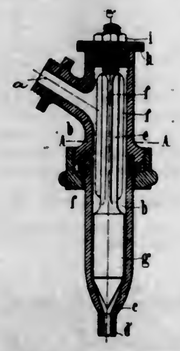
3. The herein described process of heating metals, which consists in inserting the objects to be heated into a fused bath formed of a conductor whose conductivity increases with the temperature, and passing an electric current through said bath, and thereby heating said objects to the desired temperature.

4. The herein described process of heating metals, which consists in inserting the objects to be heated into a fused non-metallic bath, and passing an electric current through said bath, whereby the temperature of the bath is maintained, and also passing the current through the objects themselves, whereby their resistance also serves as a heating means.

5. The herein described process which consists in introducing iron or steel articles into an electrically heated fusible non-metallic bath which yields carbon to the article.

[Claim 6 not printed in the Gazette.]

899,453. BLOWPIPE. ANDRÉ G. LE CHATELIER, Marseille, France, assignor to La Société l'Acétylène Dissous du Sud-Est, Marseille, France. Filed Feb. 15, 1907. Serial No. 357,564.



1. In a blowpipe for burning a mixture of oxygen and a combustible gas, a burner tube and a member within said tube the surface of which forms with the inner surface of the wall of said tube an annular capillary gas passage the proximity of said surfaces being such as to prevent backward propagation of flame in said burner tube.

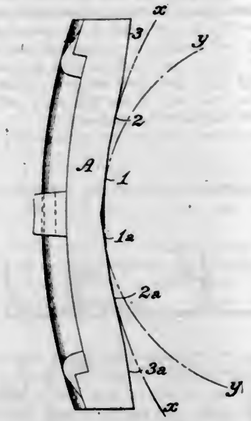
2. In a blowpipe for burning a mixture of oxygen and a combustible gas, a burner tube, a tubular gas supply member within said tube, the outer surface of said member forming with the inner surface of the wall of said tube an annular capillary gas passage, the proximity of said surfaces being such as to prevent backward propagation of flame in said burner tube.

3. In a blowpipe for burning a mixture of oxygen and a combustible gas, a burner tube having a frusto-conical discharge orifice, a tubular gas supply member within said tube and having a conical end terminating in said orifice, said member provided with centering means, the outer surface of said member forming with the inner surface of the wall of said tube an annular capillary gas passage, the proximity of said surfaces being such as to prevent backward propagation of flame in said burner tube.

4. In a blowpipe for using a mixture of oxygen and combustible gas, the combination of a burner tube provided with a supply duct for said gases and a frusto-conical discharge orifice, an adjustable tubular central member within said tube for supplying oxygen having centering means, and an enlarged portion having a frusto-conical extremity entering said orifice, said enlarged portion forming with the tube an annular gas supply passage, the proximity of the confining walls of which prevents the backward propagation of the flame.

5. In a blowpipe for using a mixture of oxygen and a combustible gas, the combination of a tapering burner tube, a supply duct for admission of said gases and a discharge orifice, and an adjustable tapering member within said tube forming with the latter an annular capillary gas supply passage, the proximity of the confining walls of which prevents the backward propagation of the flame.

899,454. BRAKE-SHOE. BURNS D. LOCKWOOD, Indianapolis, Ind., and FREDERIC M. WHYTE, Tarrytown, N. Y. Filed July 25, 1908. Serial No. 445,297.



1. A brake shoe having a plurality of relatively inclined flat or plane surfaces on its rubbing or wearing face.

2. A brake shoe having its rubbing or wearing face composed of a plurality of relatively inclined flat or plane surfaces.

3. A brake shoe having a tread wearing face composed of a plurality of relatively inclined flat or plane surfaces, and a flange wearing face composed of a plurality of relatively inclined surfaces.

4. A brake shoe having, on its rubbing or wearing face, a plurality of flat or plane surfaces, which are inclined in pairs, inwardly or towards the curvature of a wheel tread, at equal and progressively increasing angles in each pair.

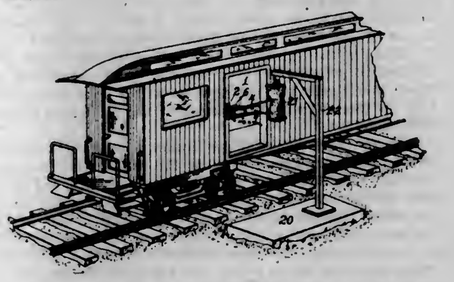
899,455. PICK-HEAD USABLE WITH REMOVABLE POINTS. JAMES MAZLIN, Herberton, Queensland, Australia. Filed Feb. 24, 1908. Serial No. 417,535.

1. A pick head comprising an eye adapted to receive a handle for the pick; a hammer head integral with said pick head and extending in the plane of the top of the eye; and an ear also integral with said pick head, provided with a socket adapted to receive a readily removable point of the pick, and said socket having a rear opening located in a plane beyond the top of said eye, suostantially as described.



2. A pick head comprising an eye adapted to receive a handle for the pick; a hammer head integral with said pick head; a strengthening lug in addition to said eye for supporting said handle and extending at right angles to said hammer; and an ear also integral with said pick head, provided with a socket adapted to receive a readily removable point of the pick, and said socket having a rear opening located in a plane beyond the top of said eye, substantially as described.

899,456. MAIL-SACK CATCHER. ROBERT H. MILLEN, Clay Center, Kans. Filed May 12, 1908. Serial No. 432,331.



1. In a mail bag catcher, a hook-shaped receiving arm, retaining means adapted to be operated by the impact of a body, for preventing the rebounding of said body, and a catch consisting of a spring attached to the outer surface of said arm and means for releasing said catch.

2. In a mail bag catcher, a hook-shaped receiving arm, pivoted means adapted to be operated by the impact of the bag, for preventing the rebounding of the bag and a catch, consisting of a spring attached to the outer surface of said arm and means for releasing said catch.

3. In a mail bag catcher, a hook shaped receiving arm, and pivoted retaining means adapted to be operated by the impact of the bag, for preventing the rebounding of the bag and consisting of a pivoted L shaped piece adapted to engage the sides of a converging slot.

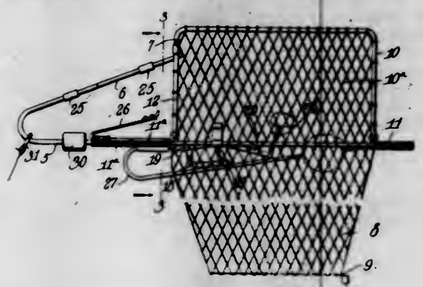
4. In a mail bag catcher, a receiving arm, means operated by the impact of a bag for preventing the rebounding of the bag, and a catch, consisting of a spring attached to the outer surface of said arm, for securing said means against reverse movement.

5. In a mail bag catcher, a hook-shaped receiving arm, retaining means adapted to be operated by the impact of a

bag, and a catch consisting of a spring attached to the outer surface of said arm, for securing the retaining means.

[Claims 6 and 7 not printed in the Gazette.]

899,457. FISH-TRAP. THOMAS MORGAN, Pensacola, Fla. Filed Apr. 21, 1908. Serial No. 428,333.



1. A fish trap comprising a reticulated receptacle, reticulated cover sections adapted to close the receptacle, means adapted to normally retain the cover sections closed, catches adapted to engage the cover sections to retain them open, a trigger, connection between the trigger and catches, and a bait lever, the bait lever being adapted to secure the trigger in position to hold the catches in locking position.

2. A fish trap comprising a frame, a receptacle secured to the frame, cover sections pivotally mounted upon the frame, means adapted to normally retain the cover sections closed, a spring adapted to be compressed by said means when the cover sections are opened, and retractile means adapted to retain the cover sections opened.

3. A fish trap comprising a frame, a receptacle secured to the frame, brackets secured to the frame, cover sections pivotally mounted upon the brackets, means adapted to normally retain the cover sections closed, an arm secured to one of the brackets, a trigger pivotally mounted upon the arm, catches pivotally mounted upon the frame and adapted to retain the cover sections open, connection between the trigger and the catches, and a lever adapted to hold the trigger in position to secure the catches in locking position.

4. A fish trap comprising a frame, a receptacle secured to the frame, brackets secured to the frame, cover sections pivotally mounted upon the brackets, a bar secured at its ends to the brackets, means adapted to normally retain the cover sections closed, a spring secured to one of the brackets, said spring being adapted to be compressed by said means when the cover sections are opened, a bait receptacle secured to the frame, and retractile means adapted to retain the cover sections opened.

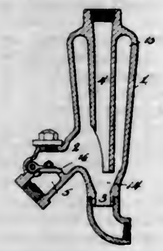
5. A fish trap comprising a frame, netting secured to the frame to provide a receptacle, a draw string adapted to close one end of the receptacle, frames pivotally mounted upon the first named frame, netting secured to said frames to provide cover sections adapted to close the other end of the receptacle, means adapted to normally retain the cover sections closed, and retractile means adapted to secure the cover sections opened.

[Claims 6 to 8 not printed in the Gazette.]

899,458. PUMPING APPARATUS. GEORGE J. MURDOCK, Newark, N. J. Filed Mar. 1, 1906. Serial No. 303,598.

1. In pumping apparatus such as described, an air chamber provided with an inlet and with an outlet, separate from said inlet, for the fluid to be pumped, in combination with a source of supply of pulsations of fluid under pressure, and means connecting the same to the interior of said chamber at a point below the top thereof.

2. In pumping apparatus such as described, an air chamber provided with an inlet and with an outlet, separate from said inlet, for the fluid to be pumped, the chamber being contracted between said inlet and outlet, in combination with a source of supply of pulsations of fluid under pressure, and means connecting the same to the interior of said chamber at a point below the top thereof.



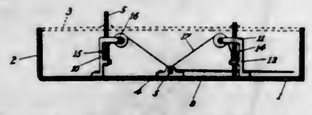
3. In pumping apparatus such as described, an air chamber provided with an inlet and with an outlet, separate from said inlet, for the fluid to be pumped, and provided further with a passage adapted for connection with a source of supply of fluid under pressure, said passage directed to deliver its contents past said inlet toward said outlet.

4. In pumping apparatus such as described, an air chamber provided with an inlet and with an outlet, separate from said inlet, for the fluid to be pumped, the chamber being contracted between said inlet and outlet, and provided further with a passage adapted for connection with a source of supply of fluid under pressure, said passage directed to deliver its contents through the contracted portion of said chamber past the said inlet to the said outlet.

5. In pumping apparatus such as described, an air chamber provided with an inlet and with an outlet, separate from said inlet, for the fluid to be pumped, and with a passage directed to deliver its contents past said inlet toward said outlet, said inlet arranged obliquely with respect to such direction of delivery, there being a closed air space above such inlet and point of delivery.

[Claims 6 to 17 not printed in the Gazette.]

899,459. SHEET-MUSIC TURNER. JOSEPH S. MYERS, Sacramento, Cal. Filed Jan. 25, 1908. Serial No. 412,616.

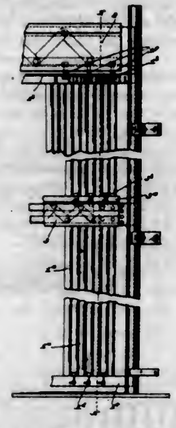


A sheet music leaf turner comprising the combination of a body member having a lower box member, a pair of journal boxes spaced apart in said box a vertical shaft journaled in said boxes and having flanges bearing against the inner edges thereof, projecting bifurcated spring retaining members on said shaft, arms projecting within said box transversely with respect to said shaft and spaced apart on each side thereof, projecting arms spaced apart on said first named arms, pins slidably disposed in said last named arm transversely with respect to said shaft, collars on said pins, springs bearing between said collars and one of said last named arms, pulleys held in one pair of said arms, and a cord secured to said collars and extending over said pulleys and wound around said shaft, as set forth.

899,460. FIRE-RESISTING CURTAIN. EDWARD H. MCCLOUD, Columbus, Ohio. Filed July 2, 1904. Serial No. 215,124. Renewed Nov. 16, 1905. Serial No. 287,677.

1. In a curtain for theaters and the like, the body thereof composed of slats extending vertically lengthwise, and means for connecting the slats to permit longitudinal expansion thereof independently of each other.

2. In a curtain for theaters and the like, the body thereof composed of slats extending vertically lengthwise, and means for connnecting the slats whereby they are held at their upper ends and free to expand independently of each other at their lower ends.



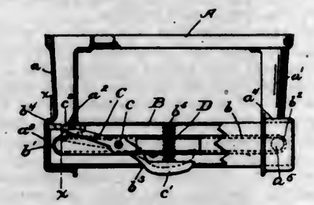
3. In a curtain for theaters and the like, the body thereof composed of lengthwise vertically extending slats connected by sliding joints.

4. In a curtain for theaters and the like, the combination with the body thereof composed of lengthwise vertically extending slats expansible independently of each other, of a transverse bracing strut, and means for connecting the strut and slats to permit the longitudinal expansion of the latter.

5. In a curtain for theaters and the like, the combination with the body thereof composed of lengthwise vertically extending slats expansible independently of each other, of a transverse bracing strut, and means for connecting the strut and slats to permit the expansion of the slats and also to permit the expansion of the strut.

[Claims 6 to 9 not printed in the Gazette.]

899,461. PAPER-ROLL HOLDER. JOHN MCNEIL, Cincinnati, Ohio, assignor to The John Douglas Company, Cincinnati, Ohio, a Corporation of Ohio. Filed July 20, 1908. Serial No. 444,466.

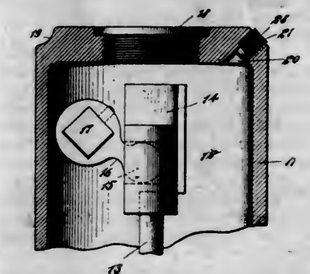


1. A paper roll holder, having two arms, one of which is perforated and the other recessed, a mandrel adapted to be supported in the arms, a locking lever pivoted upon the mandrel and having one of its ends adapted to lock itself within the recess and the other to bear against a roll of paper, which may be mounted upon the mandrel.

2. A paper roll holder, consisting of arms adapted to support a mandrel, the mandrel consisting of a hollow tube notched upon one side, and a lever pivoted within the tube, having one of its ends adapted to engage one of the arms and having the other end terminating in a thumb-piece, and a spring adapted to hold the thumb-piece outwardly beyond the notch in the mandrel.

3. In a paper roll holder the combination of two arms, one terminating in a bearing for the mandrel, and the other terminating in a ring through which the mandrel may slide, a groove upon one side of the mandrel, the groove being closed at the end, and a pin projecting through the ring into the groove to permit the reciprocation of the mandrel in the ring while retaining the mandrel against removal from the ring.

899,462. AIR-VALVE FOR HYDRAULIC JACKS. JAMES W. NELSON and WILLIAM H. MATHERS, New York, N. Y., assignors to William M. Dudgeon, executor of Richard Dudgeon, deceased. Filed May 23, 1907. Serial No. 375,245.



1. A vent-passage for the reservoir of a hydraulic jack or the like, the relative direction of which is inclined to both the top and side walls of said reservoir.

2. A vent-passage for the reservoir of a hydraulic jack or the like which includes a valve chamber which inclines downwardly from its outer to its inner end both when the device is in a vertical and when in an operably horizontal position.

3. A vent-passage for the reservoir of a hydraulic jack or the like, the relative direction of which is inclined to both the top and the side walls of said reservoir, said passage providing a valve-chamber with a seat at the outer end thereof only, and a ball in said chamber.

4. A vent-passage for the reservoir of a hydraulic jack or the like which includes a valve chamber inclining downwardly from its outer to its inner end both when the device is in a vertical and when in an operably horizontal position, said valve-chamber being provided with a seat at the outer end thereof only, and a ball in said chamber.

5. A reservoir for self-contained hydraulic jacks and the like having a bore through the wall thereof which is inclined in direction to the planes of both top and side walls of said reservoir, and a removable valve-plug in said bore.

[Claims 6 to 8 not printed in the Gazette.]

899,463. HYDRAULIC PUMP. JAMES W. NELSON, New York, N. Y. Filed Feb. 7, 1908. Serial No. 414,668.

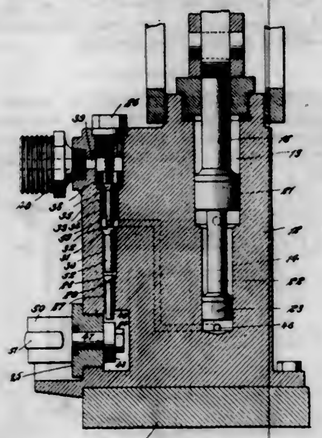
1. A hydraulic pressure generator comprising a plurality of pumps, a single passage valved to normally effect the flow from all pumps in an upward direction therethrough, and valve-controlling means for rendering one of said pumps inoperative.

2. A hydraulic pressure generator comprising a plurality of pumps, a single passage valved to normally effect the flow from all pumps in an upward direction therethrough, and valve-controlling means for rendering one or more of said pumps inoperative.

3. A hydraulic pressure generator comprising a plurality of pumps, a single passage valved to normally effect the flow from all pumps in an upward direction therethrough, and valve-controlling means for rendering one or all of said pumps inoperative.

4. A hydraulic pressure generator comprising a plurality of pumps, a single passage valved to normally effect the flow from all pumps in an upward direction therethrough, and valve-controlling means for rendering said pumps successively inoperative.

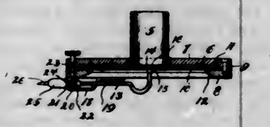
5. A hydraulic pressure generator comprising a plurality of pumps, a single passage valved to normally effect the flow from all pumps in an upward direction there-



through, and valve-controlling means for rendering one of said pumps inoperative, said means being further operable to render more than one of said pumps inoperative.

[Claims 6 to 35 not printed in the Gazette.]

899,464. GRAPHOPHONE SOUND-BOX. HARRY NIES, Baltimore, Md., assignor of one-half to James H. Corrigan, Baltimore, Md. Filed Mar. 24, 1908. Serial No. 422,902.



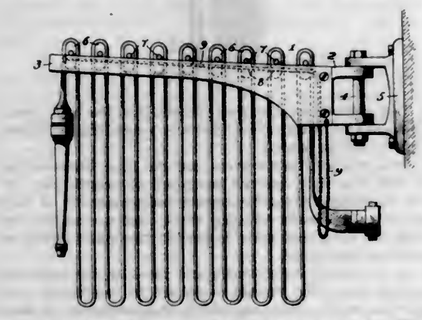
1. In a graphophone sound box the combination with a body portion of a diaphragm, means for clamping said diaphragm within said body portion, a stylus bar, means for connecting the inner end of the stylus bar to said diaphragm, a spring tongue secured to the body portion and having a free outer end which lies outside of the stylus bar, a member carried by said spring tongue and adapted to engage one side of an enlarged portion of said stylus bar and a set screw threaded into the body portion and adapted to engage the other side of said enlarged portion of the stylus bar.

2. In a graphophone sound box the combination with a body portion, of a diaphragm, means for clamping said diaphragm within said body portion, a stylus bar, means for securing the inner end of said stylus bar to said diaphragm, a spring tongue secured to said body portion having a free outer end which engages one side of the stylus bar and a laterally movable and manually operable member which engages the opposite side of said stylus bar to bind said stylus bar between itself and the free end of the spring tongue to thereby control the degree of vibration of said stylus bar.

3. In a graphophone sound box, the combination with a body portion, of a diaphragm, a clamping ring adapted to clamp said diaphragm within said body portion, a stylus bar, means for connecting the inner end of the stylus bar to said diaphragm, a spring member comprising a base portion which is secured to the outer face of the clamping ring, and an off-set tongue member having a resilient free end which lies outside of the stylus bar, a member carried by said resilient free end of the spring tongue and adapted to engage one side of an enlarged portion of said stylus bar, and a manually operable set screw working in said body portion and clamping ring and adapted to engage the other side of said enlarged portion of the stylus bar to bind said stylus bar between itself and the resilient free end of the spring tongue.

4. In a graphophone sound box, the combination with a body portion, of a diaphragm, a clamping ring adapted to clamp said diaphragm within said body portion, a stylus bar, means for connecting the inner end of the stylus bar to said diaphragm, a spring member comprising a base portion which is secured to the front vertical face of the clamping ring and an off-set tongue member having a resilient free end which lies outside of the stylus bar, a member carried by said resilient free end of the spring tongue adapted to engage one side of an enlarged portion of the stylus bar, and a manually operable set screw working in said body portion and clamping ring and adapted to engage the inner side of said enlarged portion of the stylus bar to bind said stylus bar between itself and the resilient free end of the spring tongue.

899,465. HOSE-RACK. CHARLES NUHRING, Cincinnati, Ohio. Filed July 26, 1906. Serial No. 327,919.



1. A hose rack, comprising a support, a plurality of supporting pins associated therewith, and a flexible strand connected to said pins, whereby the same are held in associated relation when displaced from the support in the removal of the hose, one end of said strand being fixed to maintain the pins in said relation.

2. A hose rack, comprising a support, a plurality of supporting pins associated therewith, and a flexible strand passing through said pins, whereby the latter are held in associated relation when displaced from the support in the removal of the hose, one end of said strand being fixed to maintain the pins in said relation.

3. A hose rack, comprising a support, a plurality of supporting pins associated therewith and separably related thereto, said pins having apertures, and a flexible strand passing through the apertures of said pins, whereby the pins are held in associated relation when displaced from the support in the removal of the hose, one end of said strand being fixed to maintain the pins in said relation.

4. A hose rack, comprising a support, a plurality of hose supporting members associated therewith, and a flexible strand upon which the supporting members become assembled when said members are displaced from the support.

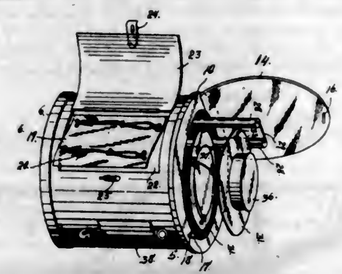
5. A hose rack, comprising a support, a plurality of hose supporting members associated therewith, and a flexible strand upon which the supporting members become assembled in regular succession as the members successively leave the support.

[Claim 6 not printed in the Gazette.]

899,466. TROUT FLY, HOOK, AND LEADER BOX. TIMOTHY O'LEARY, Gunnison, Colo. Filed Oct. 21, 1907. Serial No. 398,386.

1. A trout-fly-hook-and-leader box, comprising a casing, a cylinder rotatably mounted within the casing, leaving

a concentric chamber between the outer wall of the cylinder and the outer wall of the casing, the said outer wall of the cylinder being equipped to hold fisherman's accessories, the casing being provided with a hinged member adapted to be opened to gain access to the outer wall of the cylinder, and the cylinder being provided with a slidable device having hinged thereto leaves for the purpose set forth.



2. The combination of a casing provided with means for fastening the same to a garment of the user, a normally closed top lid, a cylinder rotatably mounted within the casing and provided with a number of leaves adapted to hold fisherman's accessories, the size of the leaves being such that they will pass through the opening in the casing when the lid is open, substantially as described.

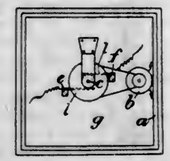
3. The combination with a relatively stationary casing, of a cylinder rotatably mounted therein leaving a concentric chamber between the cylinder and the casing, the outer wall of the cylinder being equipped with means for holding fisherman's accessories, and leaves or parts also attached to the outer wall of the cylinder for the same purpose, the casing being provided with an opening and a hinged lid normally closing the same, the said leaves attached to the outer wall of the cylinder being adapted to pass through the said opening, substantially as described.

4. The combination with a relatively stationary casing, of a cylinder rotatably mounted within the casing leaving a concentric chamber between the two devices, the outer wall of the cylinder being equipped to carry fishermen's accessories, the casing being open and normally closed by a suitable lid, the cylinder being provided with a flange at one extremity adapted to close the adjacent extremity of the said concentric chamber, substantially as described.

5. The combination of a relatively stationary casing, a cylinder rotatably mounted in the casing leaving a concentric chamber between the casing and the cylinder, one extremity of the cylinder having an outwardly bent flange adapted to close the adjacent extremity of the concentric chamber, a cover hinged to the flanged extremity of the rotatable cylinder, and means for fastening the cover in the closed position, substantially as described.

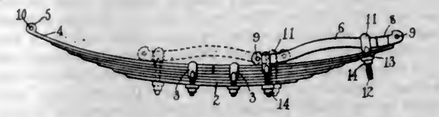
[Claims 6 to 9 not printed in the Gazette.]

899,467. ADVERTISING APPARATUS. CARL E. PETERSEN, Copenhagen, Denmark. Filed Mar. 21, 1907. Serial No. 363,765.



An advertising device comprising a box having a vertical revoluble spindle, a motor belted thereto, a magnetic bobbin surrounding such spindle and having a pair of collector rings, brushes engaging said rings, a glass cover for said box through which said spindle projects, and iron loops or devices of irregular shapes loosely received on said cover and engaged by said spindle.

899,468. SPRING-REPAIRER. WILLIAM R. PETZE, Brooklyn, N. Y. Original application filed Feb. 16, 1907, Serial No. 357,715. Divided and this application filed Sept. 5, 1907. Serial No. 391,478.



1. A device for repairing semi-elliptic vehicle springs, consisting of a tie-piece shorter than said spring and having its major portion spaced away from said spring and having means near one of its ends for attachment to a vehicle, and means for fastening said tie-piece to said spring at one side of a break in the spring.

2. A device for repairing semi-elliptic vehicle springs, consisting of a tie-piece shorter than said spring and having its major portion spaced away from said spring and having means near one of its ends for attachment to a vehicle, and means for fastening said tie-piece at a plurality of points to said spring adjacent to a break in the spring.

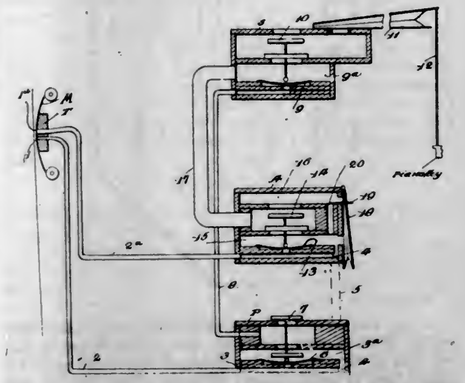
3. A device for repairing semi-elliptic vehicle springs, consisting of a tie-piece shorter than said spring and having its major portion spaced away from said spring and having means near both of its ends for attachment to a vehicle, and means for fastening said tie-piece at a plurality of points to said spring adjacent to a break in the spring.

4. A device for repairing semi-elliptic vehicle springs, consisting of a tie-piece shorter than said spring and having its major portion spaced away from said spring and having at one of its ends a transverse journal opening, and means for fastening said tie-piece to said spring at one side of a break in the spring.

5. A device for repairing semi-elliptic vehicle springs, consisting of a tie-piece shorter than said spring and having its major portion spaced away from said spring and having at each of its ends a transverse journal opening, and means for fastening said tie-piece to said spring at one side of a break in the spring.

[Claim 6 not printed in the Gazette.]

899,469. VALVE SYSTEM AND TRACKER-BOARD. HARRY PIERCE, Kansas City, Kans., assignor of one-half to Frank A. Briggs, Kansas City, Mo. Filed Sept. 6, 1907. Serial No. 391,658.



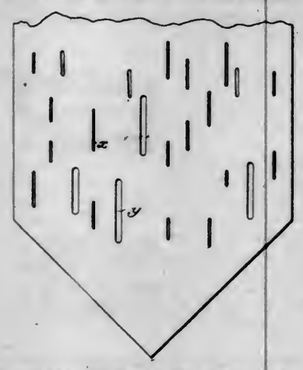
1. In combination, a tracker board formed with two sets of air passages, a primary valve chest connected to one set of passages, power pneumatics, a secondary valve chest operatively connected to said pneumatics and having connection with the primary valve chest, an auxiliary valve chest having air passage connection with the secondary

valve chest, means for exhausting air from the auxiliary valve chest and from the connection between the same and the secondary valve chest, tension regulators included in the air exhausting means, the auxiliary valve chest being provided with air passages leading directly from its connection with the secondary valve chest to the air exhausting means around the tension regulators, valves in said auxiliary valve chest, said valves normally closing said last named passages and opening the passage from the connection between said valve chest and the secondary valve chest to the tension regulators, and a connection between said auxiliary valve chest and the other set of passages in the tracker board, arranged upon the opening of any passage of said set to shift the valve so as to admit the air directly from the secondary valve chest to the air exhausting means.

2. The combination of a tracker formed with two air passages for each note, of power pneumatics, primary and secondary valve mechanisms connected to each other and the latter to the power pneumatics, the primary valve mechanism being connected to one set of said passages, an auxiliary valve chest connected to said other set of passages and to the secondary valve mechanism, means for normally exhausting the air from the secondary valve mechanism under regulated tension through the auxiliary valve chest, and means for exhausting the air from said secondary valve chest through the auxiliary valve chest unregulated and direct upon the opening of the passages of both sets simultaneously.

3. The combination with a tracker board formed with two sets of air passages, the passages of one set being elongated transversely to the travel of the sheet and the passages of the other set being elongated longitudinally of the travel of the sheet and in alinement with the ends of the corresponding passages of the first mentioned set, of power pneumatics, primary and secondary valve mechanism connected to the set of transversely elongated passages, an auxiliary valve chest connected to said other set of passages and to the secondary valve mechanism under regulated tension through the auxiliary valve chest, and means for exhausting air from said secondary valve chest through the auxiliary valve chest unregulated and direct upon the opening of the passages of both sets simultaneously.

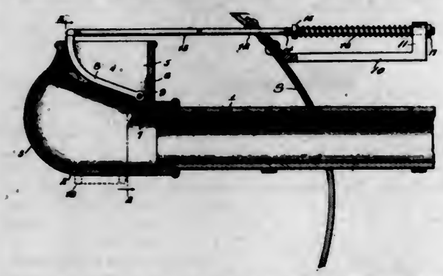
899,470. MUSIC-SHEET. HARRY PIERCE, Kansas City, Kans., assignor of one-half to Frank A. Briggs, Kansas City, Mo. Filed Sept. 6, 1907. Serial No. 391,659.



1. The combination with a perforated music sheet having two sets of openings therein, of a tracker board having two sets of air passages, the passages of one set being arranged back of corresponding passages in the other set and in transverse alinement with the ends thereof, each opening of one set of openings in the music sheet being of a length greater than the distance between corresponding passages of both sets whereby to simultaneously open corresponding passages of both sets of passages in the tracker board.

2. The combination with a perforated music sheet formed with two sets of openings, of a tracker board having two sets of air passages, one set being longitudinally elongated, and the other set being transversely elongated, and in transverse alinement with the ends of the longitudinally elongated passages, respectively, one set of the openings in the music sheet being in alinement with the longitudinally elongated passages only, and the other set of openings in the music sheet being in alinement with the other set of passages in the tracker board and of a width to simultaneously uncover only one of such passages, and an end portion of a longitudinally elongated passage.

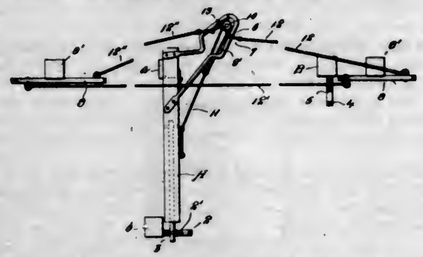
899,471. EXHAUST-REGULATOR. OLAVIS K. RAUK, Racine, Wis. Filed Sept. 13, 1907. Serial No. 392,755.



1. An exhaust nozzle, a valve pivoted therein, a longitudinally slidable operating rod, a supporting bracket constituting a bearing for the latter and having an upturned arm at its outer end, a nut adjustable upon the operating rod and adapted to abut against the upturned arm of the supporting bracket, a nut adjustable upon the operating rod, a spring coiled about the operating rod between the latter-named nut and the upturned bracket arm, and a link connecting the operating rod with the valve, the tension of the spring being exerted to move the valve to an obstructing position.

2. An exhaust nozzle, a valve pivoted therein, a longitudinally slidable operating rod, bearings for the latter, a nut adjustable upon the operating rod and adapted to abut upon one of the bearings, a nut adjustable upon the operating rod intermediate the bearings, a spring coiled upon the operating rod between the latter nut and one of the bearings, and a link connecting the operating rod with the valve; the tension of the spring being exerted to move the valve in an obstructing position.

899,472. SWINGING GATE. JOHN B. RAY, Flatcreek, Tenn. Filed June 12, 1908. Serial No. 438,107.



1. The combination with the swinging gate, of a pair of guides mounted thereon, slides movable on the guides, connections between the slides and the said gate, and means on one side of the gate, connected with the slides, for operating the gate, substantially as set forth.

2. The combination with the swinging gate, of a pair of guides mounted thereon so as to change their position by

the movement of the gate, slides movable on the guides, a pivoted latch and keeper, connections between the slides and latch, and means connected with the slides for operating the gate, substantially as set forth.

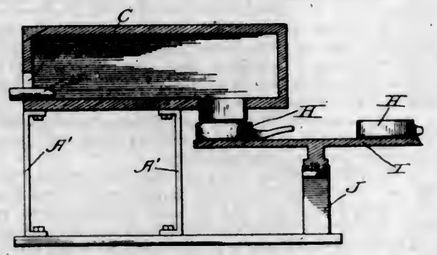
3. The combination with the swinging gate, of a pair of guides adapted to be moved by the movement of the gate, a slide movable on each guide, connections between the slides and the said gate, a lever, and connections between the lever and the slides for operating the gate, substantially as set forth.

4. The combination with a gate, of a pair of guides inclined relative to the gate frame and arranged to change their position by the movement of the gate, a slide for each guide, connections between the slides and the gate, a lever, and connections between the lever and the slides for operating the latter to open and close the gate, substantially as set forth.

5. The combination with a swinging gate, of guides extending rearward of the pivots upon which the gate swings and arranged to swing by the swinging movement of the gate, a pulley interposed between the slides, connections between the slides and the gate, the said connections passing around the said pulley, levers pivotally mounted on opposite sides of the gate, and connections between the levers and the slides, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

899,473. PROCESS OF AND APPARATUS FOR FIRE-POLISHING GLASS. SOLON O. RICHARDSON, Jr., Toledo, Ohio, assignor, by mesne assignments, to H. C. Fry Glass Company, Rochester, Pa., a Corporation of Pennsylvania. Filed May 3, 1906. Serial No. 314,994.



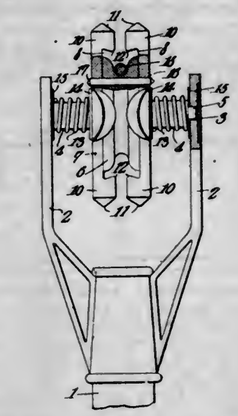
1. The process of fire polishing a glass blank, which comprises forming the blank in a mold, removing the blank from the mold, and then subjecting one surface of the blank to a polishing flame while the surface of the blank opposite the surface against which the polishing flame is directed is supported by means arranged so as to be exposed to the air and out of the polishing flame so as to prevent such opposite surface from becoming plastic.

2. The process of fire-polishing a glass blank, which comprises forming the blank in a mold, removing the blank from the mold and then subjecting one surface of the blank to a polishing flame which is confined to such surface while the surface of the blank opposite the surface against which the polishing flame is directed is supported by means exposed to the air outside the apparatus and arranged so that the flame is not directed against it.

3. In apparatus for fire polishing glass, the combination of a chamber closed on the top and sides, with means for causing the fuel elements to pass horizontally through said chamber, a support for the article to be polished below said chamber, and a nozzle extending downward from the bottom of said chamber toward said support.

4. In apparatus for fire polishing glass, the combination of a support to hold the article to be polished, with a nozzle extending downward toward said support, means for discharging the fuel element in substantially a horizontal direction toward said nozzle, and means for confining the same so as to cause the flames to pass down through said nozzle.

899,474. TROLLEY-WHEEL. JOSEPH W. SEIBERT, Washington, Pa., assignor of one-half to Elias Lewis, Washington, Pa. Filed Feb. 5, 1908. Serial No. 414,428.



1. An attachment for trolley poles embodying a harp and a shaft carried thereby, an independently rotatable and longitudinally movable grooved wheel on said shaft, guide members having opposed flat faces mounted on said shaft adapted for rotative and longitudinal movement independently of said shaft and wheel, said guide members having radial arms provided adjacent their outer ends and on their opposed inner faces with projecting flanges normally overhanging said grooved wheel.

2. An attachment for trolley poles embodying a harp and a shaft carried thereby, a wheel on said shaft having an eccentric opening, guide members on said shaft provided with openings adapted to register with the eccentric opening of said wheel, and a member adapted to enter said openings to lock the parts for rotary movement on said shaft.

3. An attachment for trolley poles embodying a harp and a shaft carried thereby, a grooved wheel on said shaft having an eccentric opening, guide members on said shaft provided with openings adapted to register with the eccentric opening of the wheel and having radial arms with flanges formed on the ends thereof adapted to overlie said wheel, and a member adapted to enter the openings of the wheel, and guide members of lock the parts for rotary movement on said shaft.

4. An attachment for trolley poles embodying a harp, and a shaft carried thereby, a wheel on said shaft having an eccentric opening, guide members on said shaft provided with openings adapted to register with the eccentric openings of the wheels, a locking pin adapted to enter said openings, and yielding positioning members encircling said shaft between the outer faces of said guide members and harp.

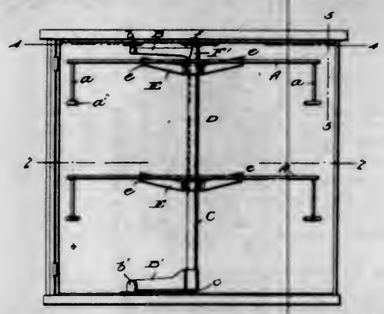
899,475. DISPLAY-RACK. OSCAR L. SMITH, Philadelphia, Pa. Filed May 5, 1908. Serial No. 430,978.

1. In combination with a case or compartment, a support for garments and the like, means pivotally sustaining said support in said compartment, and means for automatically revolving said support on its pivot as the support is drawn forward, substantially as described.

2. In combination with a case or compartment, a support for garments and the like, an arm or bracket extending from said support, means pivotally sustaining said support in said compartment, a guide groove in said case adapted to receive the free end of said arm or bracket.

3. In combination with a case or compartment, a support for garments and the like pivotally mounted therein, a guide groove in said case, means interposed between said support and guide groove, whereby said support may be

automatically caused to revolve on its pivot as the support is drawn forward.

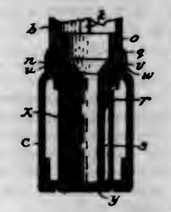


4. In combination with a case or compartment, a support for garments and the like pivotally mounted therein, and means on said case coöperating with said support, whereby said support may be automatically caused to revolve on its pivot as the support is drawn forward so as to present to view either the front or rear of said support.

5. In combination with a case or compartment, a support for garments and the like, means pivotally sustaining said support in said compartment, a guide groove in said case, and an arm or bracket secured to said support, having its free end operating in said guide groove, whereby said support may be automatically caused to revolve so as to present to view either the front or rear of said support.

[Claims 6 to 10 not printed in the Gazette.]

899,476. METAL WHEEL-SPOKE. JOHN R. WELCH, Alexandria, Ind., assignor, by mesne assignments, to The American Steel Wheel Company, Alexandria, Ind., a Corporation of Indiana. Filed Dec. 17, 1906. Serial No. 348,102.



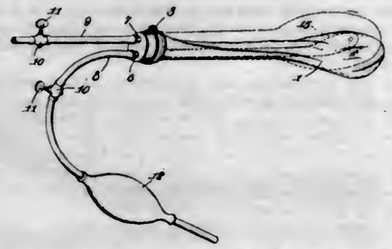
1. In a metal wheel spoke, the combination with a hollow body part, of a tenon part comprising a seat portion extending into the body part, and an annular integral collar extending about the exterior of the body part concentric to the portion that extends into the body part, said tenon part being secured to the body part.

2. In a metal wheel spoke, the combination with a hollow spoke body part, of a tenon part comprising a seat portion extending into the body part and secured thereto, and a tenon portion having an end part that is less in diameter than the base of the tenon portion, said end part being of uniform diameter and longer than the base of the tenon portion, said seat portion having an annular external shoulder beyond the end of said body part around the larger base part of said tenon portion.

3. In a metal wheel spoke, the combination with a hollow spoke body part, of a tenon part having a seat portion extending into the body part and secured thereto, an annular external shoulder beyond the body part and having an annular groove therein, and a tenon portion extending beyond said shoulder, the greater part of said tenon being less in diameter than the remaining part thereof, said smaller part being the end part of the tenon portion of the tenon part.

4. In a metal wheel spoke, the combination with a hollow spoke body part having a joint lock protruding on the inner side thereof, of a tenon-piece comprising two counterpart halves and two rivets securing the halves together, said tenon-piece having a tubular end part that is less in diameter externally than the remaining part thereof and having an external groove receiving the joint lock, said end part extending into the spoke body and secured thereto.

899,477. DILATOR AND APPLICATOR. WILLIAM E. WILLIAMS, Massillon, Ohio, assignor of one-half to William Bryant, Massillon, Ohio. Filed Oct. 26, 1907. Serial No. 399,321.



1. In a device of the character described, a casing having two longitudinal ducts, a nozzle connected with one of said ducts and having apertures near its outer terminal, a distensible bag attached to the casing surrounding the nozzle, and means for admitting liquid to said bag through one of the ducts and discharging it through the other duct, whereby said bag may be distended longitudinally and circumferentially while liquid is circulating within the same.

2. In a device of the character described, a casing having inlet and outlet ducts or passages connected with a liquid circulating system, a distensible bag having its mouth or aperture secured upon the casing, said bag being free to expand longitudinally and circumferentially, and a nozzle connected with one of the ducts and extending into the bag toward the free end of the latter, and having apertures near its outer extremity.

3. In a device of the character described, a casing having two longitudinal apertures, nipples fitted in the outer ends of said apertures and a nozzle connected with the inner end of one of the apertures, said nozzle being perforated at its outer end; a flexible distensible bag secured upon the casing and surrounding the nozzle; a source of water supply connected with one of the nipples; and means for controlling the inflow and outflow of water through the two nipples.

899,478. PROCESS FOR SEPARATING METALS FROM THEIR ORES. JACOB D. WOLF, London, England. Original application filed July 7, 1905, Serial No. 268,611. Divided and this application filed Oct. 4, 1906. Serial No. 337,445.



1. The herein described method of separating metals from their ores which consists in forming a pulp; passing said pulp containing the metals over an oily adhesive substance; and in abrading the surface of said substance by drawing apart the body of the same, and thereby causing some of the mineral particles to adhere thereto, substantially as described.

2. The herein described method of separating metals from their ores which consists in finely dividing the ore, then passing it in its finely divided condition under a water supply, whereby a wet pulp is formed, subjecting the said pulp to the action of a traveling oily adhesive substance, thereby causing some of the mineral particles to adhere thereto, then roughening the adhesive surface, imparting eddies or swirls to said traveling substance and therethrough to said pulp, and thereby interrupting the regular flow of the same and causing other particles to adhere to said oily substance while the said pulp is traveling along with the said substance, then collecting the said oily substance with the mineral particles that have adhered thereto, and then separating said mineral particles from said substance, substantially as described.

3. The herein described method of separating metals from their ores which consists in finely dividing the ore, then passing it in its finely divided condition under a water supply, whereby a wet pulp is formed, subjecting the said pulp to the action of a traveling oily adhesive substance, thereby causing some of the mineral particles to adhere thereto, then imparting eddies or swirls to said traveling substance and therethrough to said pulp, and thereby interrupting the regular flow of the same and causing other particles to adhere to said oily substance while the said pulp is traveling along with the said substance, then collecting the said oily substance with the mineral particles that have adhered thereto, then separating said mineral particles from said substance and finally resupplying said substance for contact with fresh ore, substantially as described.

4. The herein described method of separating metals from their ores, which consists in finely dividing said ore, then passing it in its finely divided condition into contact with a supply of water, whereby a wet pulp is formed, subjecting the said pulp to the action of a rough surfaced oily substance, causing the said surface and the said ore to travel along, and while so traveling imparting eddies or swirls to the said surface and pulp and thereby interrupting its regular flow, and causing additional particles of the same to come into contact with the said rough surfaced oily substance, then collecting the said substance along with any mineral particles that might adhere thereto, and finally resupplying the said substance for contact with fresh ore, substantially as described.

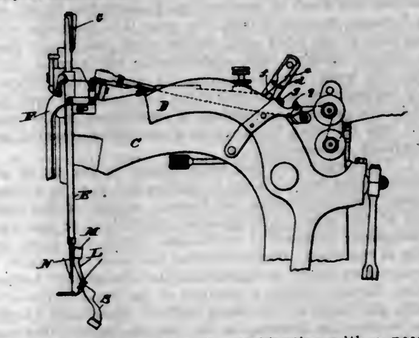
5. The herein described method of separating metals from their ores which consists in finely dividing said ore, then subjecting it in its finely divided condition to a source of water supply whereby a wet pulp is formed, then subjecting the said pulp to the action of a traveling roughened surfaced oily substance whereby the sticking of the mineral particles of the said ore to the said substance is facilitated, continually automatically roughening the surface of said oily surface, and subjecting the said pulp to the action of eddies or swirls whereby additional mineral particles are caught by said oily substance, substantially as described.

[Claim 6 not printed in the Gazette.]

899,479. DEVICE FOR CONTROLLING THE NEEDLE-LOOP ON OVERSEAMING SEWING-MACHINES. RUSSEL G. WOODWARD, Waukegan, Ill., assignor to Union Special Sewing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed July 23, 1902. Serial No. 116,623.

1. In a sewing machine, in combination with a needle adapted in its receding movement to throw out a loop, a loop taking device adapted to engage the needle loop, and adjustable means acting upon the needle thread during the receding movement of the needle for pulling the needle thread through the eye of the needle and regulating the size of the loop as it is thrown out thereby; substantially as described.

2. In an overseaming sewing machine, stitch-forming mechanism including a needle adapted in its receding movement to throw out a loop, a thread-carrying looper and a spreader adapted to engage the needle loop, and carry it into position to be entered by the looper, and adjustable means acting upon the needle thread during the receding movement of the needle for pulling the needle thread through the eye of the needle and regulating the size of the loop as it is thrown out by the needle; substantially as described.



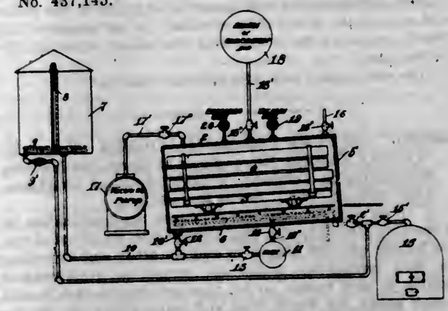
3. In a sewing machine, in combination with a needle adapted to throw out a loop, and a loop-taking device, means for regulating the size of the loop acting upon the needle thread before the loop-taking device engages the loop, said means for regulating the size of the loop being provided with an adjustable member; substantially as described.

4. In a sewing machine, in combination with a needle adapted to throw out a loop, and a loop-taking device, a movable member, an eyelet coöperating therewith, whereby said movable member in passing back of said eyelet takes up the slack in the needle thread, said eyelet being adjustable back and forth, whereby the relative distance of the movable arm from the eyelet is changed, and the size of the needle loop regulated; substantially as described.

5. In a machine of the character described, having stitch forming mechanism including a thread carrying needle, a looper, and a spreader adapted to engage the needle loop and carry it into position to be engaged by the looper, of means acting upon the needle thread for varying the size of the loop thrown out by said needle before the spreader engages the same; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

899,480. PRESERVING WOOD. WALTER BUEHLER, Minneapolis, Minn., assignor of one-half to George W. Bestor, Minneapolis, Minn. Filed June 6, 1908. Serial No. 437,145.



1. The herein described improvement in the art of preserving wood that consists in first exhausting the gaseous content of the wood, then immersing the wood in preservative liquid, then by pressure upon the liquid driving the requisite quantity thereof into the cells and pores of the wood, then removing the surplus liquid from the wood, then subjecting the partially impregnated wood to the action of compressed gas, thereby driving the charge of liquid further into the wood, and then removing the gas pressure, substantially as described.

2. The herein described improvement in the art of preserving wood, that consists in causing a vacuum in the load by exhausting the gaseous content thereof, then immersing the wood in non-aqueous preservative liquid, and by pressure thereon driving the same into the outer pores and cells of the wood until the requisite quantity of liquid is lodged therein; then withdrawing the surplus liquid from the wood; then subjecting the wood to the action of low temperature gas at relatively low pressure, until substantially gaseous equilibrium is established in the wood and then restoring the wood to atmospheric pressure, substantially as described.

3. The herein described improvement in the art of preserving wood that consists in placing the wood in a closed vessel; then exhausting the gaseous content of the vessel and of the wood until gaseous equilibrium at less than atmospheric pressure is established within the pores and cells of the wood; then subjecting the wood to pressure of preservative liquid at approximately atmospheric temperature, thereby lodging a quantity of the liquid in the outer pores and cells of the wood without materially heating the wood; then drawing off the surplus liquid; then subjecting the wood, still within the vessel, to the action of gaseous pressure until gaseous equilibrium at substantially such pressure is established throughout the wood; thereby disseminating the liquid in the cells and pores of the wood and then relieving the pressure of gas and removing the wood from the vessel, substantially as described.

4. The herein described improvement in the art of preserving seasoned wood that consists in creating a vacuum in and throughout the cells and pores of the wood, then immersing the wood in preservative liquid and by pressure upon the liquid driving the requisite quantity thereof into the outer cells and pores of the wood, then removing the surplus liquid, then subjecting the wood to the action of compressed gas, thereby disseminating the liquid throughout said cells and pores and then permitting the quiet restoration of atmospheric pressure within the wood, substantially as described.

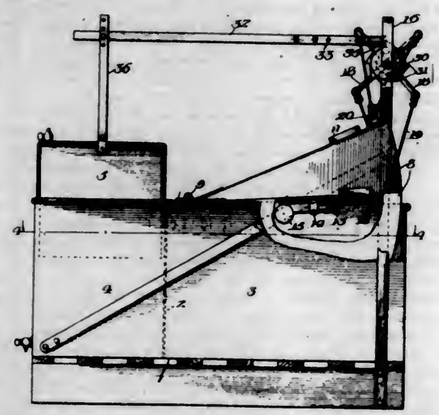
5. The herein described improvement in the art of preserving wood that consists in placing the wood to be treated in a closed vessel, then exhausting the air from said vessel and from the wood therein until a substantial vacuum is obtained throughout the cells and pores of the wood; then filling the vessel with warm, non-aqueous preservative liquid, then exerting pressure upon the liquid until the requisite quantity thereof is lodged in the wood; then drawing off the surplus liquid; then filling the vessel with air under given pressure and maintaining said pressure until equilibrium is establishel throughout the wood, thereby disseminating said quantity of liquid in the pores and cells of the wood, then relieving the air pressure and finally removing the wood from the vessel, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

899,481. AIR-PUMP FOR GAS-MACHINES. FRANK M. CAMPBELL, Chicago, Ill., assignor to Home Gas Machine Manufacturing Company, a Corporation of Oklahoma. Filed Nov. 25, 1907. Serial No. 403,684.

1. In an air pump for gas machines the combination of a movable air receiver, a liquid receptacle, an inverted vessel having one end hinged to and its other end extending in said receptacle, means for imparting reciprocating motion to said vessel, an air pipe having one end in said vessel above the water level and leading into the air receiver, and means connected with said receiver and engaging with said means for imparting reciprocatory movement to said vessel for controlling the action of said inverted vessel.

2. In an air pump for gas machines comprising a liquid receptacle, an inverted vessel hinged thereto and provided with an air inlet valve, an air pipe having one end in said vessel above the water level and leading outside the receptacle a rotating means arranged in operative relation with respect to said vessel, and means connected with said rotatable means for giving reciprocating motion to said vessel.



3. In a pump for gas machines comprising a liquid receptacle, an inverted vessel hinged at one end thereto and provided with an air inlet valve, an air pipe having one end in said vessel above the water level and leading outside the receptacle, a shaft provided with a crank and having the same connected to the inverted vessel to give reciprocating motion thereto, a toothed wheel carried by said shaft, an air receiver, and means operated from said air receiver and engaging with said wheel for controlling the movement of said vessel.

4. In a pump for gas machines, the combination of a pump tank, an air receiver tank, an inverted receiver therein, inverted vessels having one end secured in the pump tank by a pivotal connection, a tubular air connection between the interior of said receiver and said inverted vessels, a shaft provided with cranks uniformly spaced thereabout, pitman rods to connect the cranks to said inverted vessels at the other end thereof, a ratchet wheel connected with said shaft, a movable stop to engage the ratchet wheel, and means to connect said stop with the air receiver whereby the motion of the shaft is controlled.

5. In a pump for gas machines comprising a float tank, a vessel adapted for reciprocal motion therein, and an air inlet valve having a seat, a closure therefor and a lever attached at one end to said closure and pivoted inside the vessel so as to over-balance the weight of said closure, an air receiver, means whereby said vessel will be reciprocated, longitudinally extending conducting means arranged in the air receiver and the tank, and a pair of vertical pipes, said pipes disposed respectively in the tank and in the receiver.

[Claims 6 and 7 not printed in the Gazette.]

899,482. ADDING-MACHINE. MANSFIELD C. CRAWLEY, Orcutt, Cal. Filed Aug. 7, 1907. Serial No. 387,560.



1. In an adding machine, a longitudinally fixed, rotatable shaft, a series of shouldered count wheels thereon, yielding means connected with the shaft for engaging with said shoulders and normally locking the wheels upon the shaft so as to be reciprocally rotated therewith, means for restraining the movement of a count wheel to change its relative position upon the shaft, and means connected with the shaft for causing an adjoining count wheel to be automatically locked with a preceding count wheel when said preceding wheel counts ten points.

2. In an adding machine, a shouldered shaft, a series of count wheels on the shaft detachably engaging the shoulders of said shaft, carrying pins for locking each two adjoining count wheels, and radial cams carried by the shaft for actuating a carrying pin during one step in the revolution of the shaft.

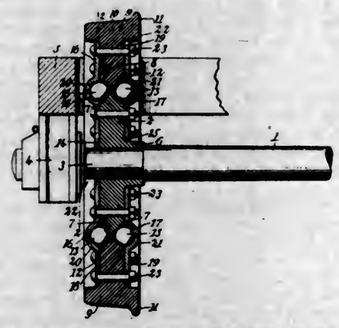
3. In an adding machine, a shaft, a series of count wheels detachably engaging the shaft and having notches, a carrying pin on a count wheel adapted to enter a notch of the adjacent wheel, means for preventing reverse movement of a count wheel, and a cam on the shaft for pressing the carrying pin into a notch during one step in the revolution of the shaft.

4. In an adding machine, a shaft, a series of count wheels thereon each having two sets of internal notches, spring fingers projecting from the shaft and detachably engaging one set of notches, a carrying pin on a count wheel adapted to enter a notch of the other set, and a cam on the shaft for pressing the carrying pin into a notch during one step is the revolution of the shaft.

5. In an adding machine, a shaft, a series of count wheels thereon each having two sets of internal notches, spring fingers projecting from the shaft and detachably engaging one set of notches, a carrying pin on a count wheel adapted to enter a notch of the other set, a cam on the shaft for pressing the carrying pin into a notch during one step in the revolution of the shaft, and means for preventing reverse movement of a count wheel.

[Claims 6 to 15 not printed in the Gazette.]

899,483. CAR-WHEEL. THOMAS M. CREPAR, Fargo, N. D., assignor of one-fourth to George John Hahn, Moorhead, Minn., and one-fourth to Sheldon F. Cornell, Fargo, N. D. Filed Feb. 14, 1908. Serial No. 415,820.



1. A car wheel, comprising a hub section, a rim section thereupon, said sections having registering grooves forming a raceway, a removable face plate upon each of said sections, said plates having outwardly curved flanges presenting registering grooves constituting a raceway extending over said first raceway, and bearing rollers between said raceways.

2. A car wheel comprising a hub section adapted to be rigidly mounted upon a revoluble axle, said hub section having an annular groove, a rim section upon said hub section and having an annular groove registering with said first groove and forming therewith a race-way, bearing rollers in said race-way, and face plates removably mounted upon said hub section and said rim section respectively, and extending over said raceway to hold said rollers in position therewithin.

3. A car wheel comprising a hub section adapted to be rigidly mounted upon an axle having a journal, said journal being adapted to be revolubly mounted in a journal-box, said hub section having an annular groove at an edge thereof, a rim section upon said hub section and having an annular groove registering with said first groove and forming therewith a race-way, bearing rollers in said race-way, and face plates removably mounted respectively, upon said sections, and having flanges extending over said race-way, and constituting together a second race-way engaging said rollers to hold the same in position.

4. A car wheel comprising a hub section adapted to be rigidly mounted upon an axle having a journal, said journal being adapted to be revolubly mounted in a journal box, said hub section having annular grooves at opposite peripheral edges, a rim section upon said hub section and having annular grooves at the inner edges thereof, said grooves of said rim section registering with said grooves of said hub section and forming therewith race-ways, bearing rollers in said race-ways, and face plates removably mounted upon said hub section and said rim section at the opposite sides thereof and having flanges, adjacent flanges of said face plates constituting race-ways serving to hold said rollers in position.

899,484. HOSE AND GARMENT SUPPORTER. EDWARD S. DORMAN, Newark, N. J., assignor of one-half to Patrick Peter Hastings, Newark, N. J. Filed Sept. 6, 1907. Serial No. 391,603.



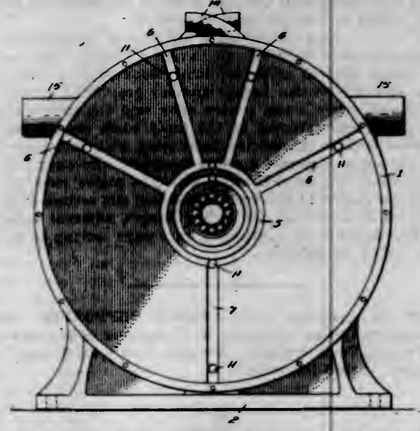
1. In a gripping or holding member for hose or garment supporters, and a plate or main body portion bent to form a pair of downwardly extending jaw-members, provided at their upper portions with a loop for suspending the same, one of said jaw-members being provided with an opening in its free end, the opposite jaw-member being provided with an arm on its free-end extending upwardly between the said jaw-members, and a roller upon said upwardly extending arm adapted to establish a frictional grip upon a hose or other garment, substantially as and for the purposes set forth.

2. In a gripping or holding member for hose or garment supporters, and a plate or main body portion bent to form a pair of downwardly extending jaw-members, provided at their upper portions with a loop for suspending the same, one of the said jaw-members being provided with an opening in its free-end the opposite jaw-member being provided with an upwardly extending arm on its free-end adapted to extend upwardly between the said jaw members, said upwardly extending arm being provided with cutaway portions near its end, adapted to form a shank, a roller or button of resilient material mounted on said shank, said resilient roller or button being adapted to establish a frictional grip upon a hose or other garment substantially as and for the purposes set forth.

3. In a gripping or holding member for hose or garment supporters, a metallic plate bent to form a pair of downwardly extending jaw-members and a loop for suspending the same, one of said jaw-members being provided with a hole or opening in its free-end, the other of said jaw-members being provided with an upwardly extending arm on its free-end, said arm being adapted to extend upwardly between the said jaw-members, a roller or button of resilient material mounted on said upwardly extending arm and adapted to partly extend into said hole or opening in the free-end of said opposite jaw-member, substantially as and for the purposes set forth.

4. In a gripping or holding member for hose or garment supporters, a plate bent to form a pair of downwardly extending flexible jaw-members and a loop at the upper portion thereof to suspend the same, one of said jaw-members being provided with an upwardly extending arm, a shank formed on said upwardly extending arm, a roller or button of resilient material mounted on said shank between the said jaw-members, substantially as and for the purposes set forth.

899,485. ROTARY ENGINE. EDWARD TOURNIER, Minneapolis, Minn. Filed Apr. 4, 1908. Serial No. 425,291.

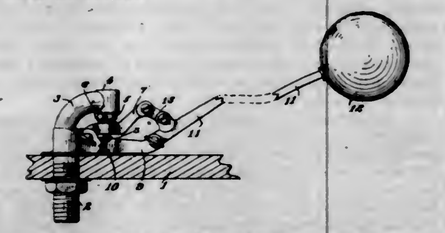


1. A rotary engine comprising a cylinder and a face plate therefor, the inner walls of said cylinder and face plate being recessed in the form of a central ring and radial branches, a packing spider provided with a ring and radial arms conforming to the contour of said recesses and fitted therein, said spider being pressed inwardly by means of springs, and a piston comprising a hub and radial blades or vanes.

2. In a rotary engine, a cylinder provided with a face plate, packing spiders fitted in recesses in said cylinder and face plate, a piston mounted on a shaft, said piston provided with radial blades or vanes, spring mounted packing strips, and inlet and exhaust ports formed in said cylinder.

3. A rotary engine comprising a cylinder having inlet and exhaust ports, a packing spider fitted into the walls of the cylinder, a face plate, and a packing spider fitted in the said face plate, said packing spider comprising a ring and radial arms, said arms extending to the exhaust ports and including the intake ports.

899,486. SUPPLY-VALVE FOR FLUSH-TANKS. OSCAR F. GLIDDEN, Grand Rapids, Mich. Filed Oct. 24, 1905. Serial No. 284,220.

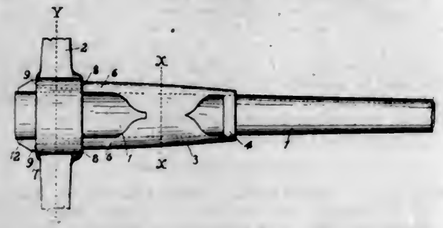


1. A supply-valve for flush tanks, comprising a tube adapted to be inserted in a tank, a head on the inner end of the tube having a downwardly open valve seat, a lever pivoted at one end and extending beneath the valve seat, a closure mounted on the lever intermediate its ends, a rigid arm beneath the lever, a toggle lever between the end of the rigid arm and the movable end of the pivoted lever, and a float attached to the toggle lever.

2. A supply valve for flush tanks comprising a tube adapted to be inserted through the bottom of the tank, an upward and curved extension to the tube a head on the tube and having a downwardly open valve seat, a pivoted lever beneath the valve seat, a closure adjustably mounted on the lever and engaging the seat, a rigid arm beneath the lever, a float lever pivoted to the arm, a connecting rod pivoted at its respective ends to the closure lever and the float lever, and a float attached to the float lever.

3. A supply valve for flushing tanks comprising a tube adapted to be inserted in the bottom of the tank, an upwardly projecting curved extension to the tube, a head on the end of the extension and having a downward opening, a detachable annular valve seat in said opening, a lever beneath the valve seat and pivoted to the base of the extension, a closure mounted on the lever and engaging the valve seat, an adjusting screw in the lever, a rigid arm having an annular portion opposite the screw and extending beneath the lever, a float lever pivoted to the arm, a float on said lever, a connecting rod pivoted at its respective ends to said levers and forming with the float lever, a toggle lever to operate the closure lever.

899,487. PICKAX-GUARD. THOMAS W. GORDON, Franklin, Me., assignor of one-eighth to Byron F. Abbott and one-eighth to Kenneth E. Abbott, New York, N. Y. Filed Sept. 13, 1907. Serial No. 392,717.



1. A self-locking and removable guard for tool handles having a rigid band portion and having yielding fingers extending from said band portion, and having shoulders at the base of the fingers and shoulders at the outer ends thereof, said inner and outer shoulders forming between them a notch to receive the tool in combination with the tool handle having its outer guard-engaging end portion gradually flaring toward the end and adapted to be driven through said guard with the gripping end first, until the flaring portion forces the shoulders of said fingers to engage the edges of the eye of the tool, substantially as described.

2. A self-locking guard for tool handles having a rigid band portion adapted to surround the handle and having means for positively locking the guard in engagement with the tool head consisting of yielding fingers longer than the height of the tool head and having at their free ends, shoulders at right angles to the length of the fingers having greater lateral projection than the width of the eye and adapted to be forced through the eye and to be pressed outwardly by the inserted tool handle to overlap the edge of the eye and positively lock the head and guard together, whereby the guard, tool and handle will be locked together solely by the pressure of the inclosed tool handle, said tool handle having a wedge form at the locking end whereby the pressure on the handle is obtained and whereby the handle may be readily removed by a blow on the opposite end substantially as described.

3. A guard for tool handles having a continuous metallic body and having a rigid band portion adapted to surround the tool handle and separated yielding fingers integral with said band portion, shoulders formed at the base of said fingers, other shoulders at the free ends of the fingers, said shoulders forming between them a socket substantially of the height of the tool eye, adapted to receive said eye, said fingers being pressed against said tool by the inclosed handle, and said handle having a flared guard-engaging portion whereby the shoulders overlap the tool and lock the same between them, substantially as described.

4. In combination with a tool head having an eye, and having squared recesses in said eye, a metallic handle guard having a rigid band-like body, and having separated, projecting, yielding fingers, shoulders at the upper and lower ends of each of said fingers forming notches between them, said shoulders of greater normal lateral projection than the width of the eye, the portions of said fingers between the shoulders adapted to engage said recesses in the eye, said shoulders adapted to extend beyond and overlap the edge of the tool eye, and a tool handle having its engaging end portion gradually expanding toward the end and adapted to be driven gripping-end first through said guard until the expanded portion forces the shoulders of said fingers to engage the edges of the eye, substantially as described.

899,488. MUSICAL DRUM. THEODOR HEMBERGER, St. Louis, Mo. Original application filed Dec. 24, 1907, Serial No. 407,906. Divided and this application filed Mar. 9, 1908. Serial No. 419,980.



1. A head for musical drums or similar musical instruments, the same consisting of a retaining-ring and a skin portion stretched over the area of said ring on the plane of the top edge thereof, the edge of said skin portion being brought around and inclosing said ring and then folded back upon the said skin portion within the circumference of said ring; substantially as described.

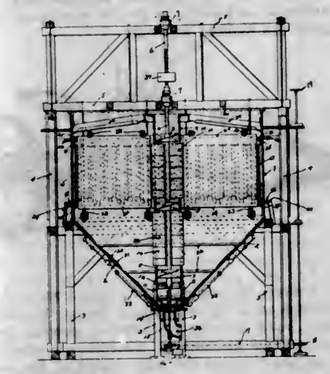
2. A head for musical drums or similar musical instruments, the same consisting of a metallic retaining-ring and a skin portion stretched over the area of said ring on the plane of the top edge thereof, the edge of said skin portion being brought under and around said ring and then folded back over said ring and upon the skin portion within the circumference of said ring; substantially as described.

3. In a musical drum, the combination with a cylindrical body portion, of a removable drum-head therefor, said drum-head consisting of a retaining-ring adapted to impinge and fit closely around the top of said body portion and a skin portion stretched across the area of said ring, the edge of said skin portion being brought around and over said ring and then folded back, in the form of a hem, to within the circumference of said body portion and upon said skin portion within the circumference of said ring, and means adapted to rest and bear upon said hem for removably securing said ring in position on said body portion; substantially as described.

4. In a musical drum, the combination with a cylindrical body portion, of a removable drum-head therefor, said drum-head consisting of a retaining-ring adapted to impinge and fit closely around the top of said body portion and a skin portion stretched across the area of said ring, the edge of said skin portion being brought around and over said ring and then folded back, in the form of a hem, to within the circumference of said body portion and upon said skin portion within the circumference of said ring, a clamping-ring adapted to rest on said retaining-ring and to impinge upon said hem, a laterally-extending flange around said body portion, and screws passing through said clamping-ring and into said flange for removably securing said drum-head in position and regulating the tension of the skin portion thereof; substantially as described.

5. In a musical drum, an aluminum cylindrical body portion, a removable drum-head therefor, said drum-head consisting of an aluminum ring fitting around the outer edge of said body portion and a skin portion stretched across said ring, the edge of said skin portion being brought around and over said ring in the form of a hem, a U-shaped clamping ring for removably holding said drum-head in place, the inner flange of said clamping ring bearing on the ring portion of said head over said hem, an aluminum ring of angle-iron shape secured to said body portion, and screws passing through said clamping ring and into the horizontal flange of said angle-iron ring for removably holding said clamping ring in position and regulating the tension of the skin portion of said head; substantially as described.

899,489. COMBINATION AGITATOR AND DECANTING FILTER. WILBUR A. HENDRYX, Denver, Colo. Filed Nov. 9, 1907. Serial No. 401,465.



1. Apparatus for treating ore pulp, comprising a tank, means for circulating and aerating material therein heating means for the circulating material, a plurality of filter cells in position to be submerged in the material in said tank, and means for withdrawing liquid from the tank through said cells.

2. Apparatus for treating ore-pulp comprising a tank, means for circulating and aerating material therein, a plurality of filter cells in position to be submerged in the material in said tank, means for withdrawing liquid from the tank through said cells, and means for distributing wash liquid in the lower portion of said tank.

3. Apparatus for treating ore-pulp, comprising a tank, means for circulating material therein, heating means for the circulating material, a plurality of filter cells in position to be submerged in the material in said tank, and means for withdrawing liquid from the tank through said cells.

4. Apparatus for treating ore-pulp, comprising a tank, filter cells vertically disposed therein heating means for the contents of said tank, and external connections to the upper and lower portions of said filter cells.

5. Apparatus for treating ore-pulp, comprising a tank having a converging bottom and having circulating means, filter cells in position to be submerged in the material in said tank and a filter disposed above and substantially parallel to the bottom of said tank.

[Claims 6 and 7 not printed in the Gazette.]

899,490. MOWER. FRED C. HORAK, Stuart, Nebr. Continuation of application Serial No. 348,999, filed Dec. 21, 1906. This application filed Mar. 20, 1908. Serial No. 422,286.

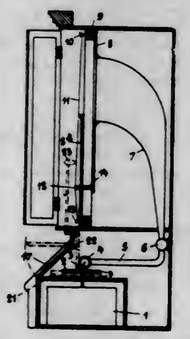
1. In a mower, the combination with an axle, of a main frame mounted on the axle and provided at the right hand side with a yoke, cutting mechanism, gearing for operating the cutting mechanism including a crank wheel mounted on the front of the main frame at the left hand side thereof, and a pitman extending from the crank wheel to the cutter bar of the cutting apparatus, a tongue pivotally connected with the main frame and passing through the said yoke, and means for adjustably connecting the main frame and the tongue, whereby the front end of the main frame is lowered to arrange the pitman in the same horizontal plane as the cutting apparatus and is raised to clear obstructions.

2. In a mower, the combination with an axle, of a main frame mounted on the axle and provided at the right hand side with a yoke, cutting mechanism, gearing for operating the cutting mechanism including a crank wheel mounted on the front of the main frame at the left hand side thereof, and a pitman extending from the crank wheel to the cutter bar of the cutting apparatus, a tongue pivotally connected with the main frame and passing through the said yoke, adjusting means connected with the tongue and with the yoke and including an operating lever, a toothed segment, and a dog or detent carried by the lever for engaging the toothed segment.



3. In a mower, the combination with an axle, of a main frame mounted on the axle and provided at the right hand side with a yoke, cutting mechanism, gearing for operating the cutting mechanism including a crank wheel mounted on the front of the main frame at the left hand side thereof, and a pitman extending from the crank wheel to the cutter bar of the cutting apparatus, a tongue pivotally connected with the main frame and passing through the said yoke, an adjusting lever fulcrumed on the tongue and having a short arm connected to the yoke, and means for locking the lever in its adjustment.

899,491. TALKING-MACHINE. HEINRICH KLENK, Hanau, Germany, assignor of one-half to Hermann Krebs, Hanau, Germany. Filed Feb. 28, 1907. Serial No. 359,791.



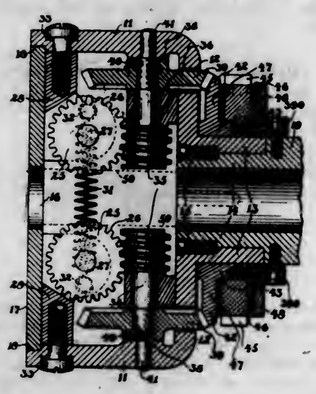
1. The herein described apparatus, comprising a casing, a talking machine inclosed therein and strings attached to said casing, said strings adapted to be vibrated by the sound waves produced by the talking machine.

2. The herein described apparatus, comprising a casing, a talking machine inclosed in said casing and having a trumpet, and resonance strings arranged in front of the trumpet, the trumpet and the front wall of the casing serving as a resonance board.

3. The herein described apparatus, comprising a casing, a talking machine inclosed in the casing and having a trumpet, a double resonance board arranged in front of the trumpet, of which board one member has a sound orifice opposite the mouth of the trumpet, and a bridge and strings and securing devices carried by the other member of the double resonance board.

4. The herein described apparatus, comprising, a casing, a talking machine inclosed in said casing, and strings attached to said casing, said strings being attuned to the talking machine.

899,492. ROLLER FEED MECHANISM. WILBUR A. LEONARD, New Haven, Conn., assignor to The Geometric Tool Company, New Haven, Conn., a Corporation of Connecticut. Filed Nov. 15, 1906. Serial No. 343,489.



1. In a roller feed, the combination with a pair of feed rollers provided with combined stock feeding and actuator engaging teeth, of a driver for each of said rollers, and said drivers having teeth for engaging the teeth on the respective rollers.

2. In a roller feed, the combination with a pair of feed rollers having teeth upon their stock engaging faces, of rotary drivers therefor having teeth in driving engagement with the teeth on said feed rollers, and means for drawing the stock engaging faces of said rollers toward each other, while in driving engagement with the teeth of said drivers, for engaging the stock.

3. In a roller feed, the combination with a pair of feed rollers in the form of worm-wheels having worm-teeth upon their stock engaging faces, of worms in driving engagement with said teeth.

4. In a roller feed mechanism, the combination with a head, of feed roller actuating means carried thereby, a removable end plate for the head, means carried by said end plate for supporting feed rollers for movement toward and from each other, and feed rollers mounted on said supporting means and constructed and adapted for removal with the said end plate while so mounted.

5. The combination with a rotary head, of feed roller actuating worms carried thereby and disposed with their working faces at substantially right angles to the axis of rotation of the head, a removable end plate for the head having means for supporting feed rollers for movement toward and from each other at substantially right angles to the said axis, feed rollers mounted in said supporting means and constructed and adapted for removal with the said end plate while so mounted and provided with worm teeth for engaging said worms, and means for elastically drawing said rollers toward the said axis.

[Claims 6 to 8 not printed in the Gazette.]

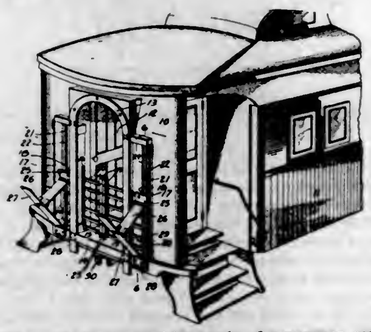
899,493. BOTTLE. JAMES MCGILL, Terre Haute, Ind. Filed Feb. 4, 1908. Serial No. 414,209.

1. The combination with a bottle having a circular groove internally of its neck, said bottle having a vertically extending groove located within its neck, of a stopper disposed within the neck and having a portion disposed in the vertically extending groove, and means carried by the stopper for locking engagement in the first named groove.

2. The combination with a bottle having a neck, said neck having a continuous groove externally and a continuous groove internally, of a stopper having a removable cap arranged for locking engagement in said last named groove.



899,494. SAFETY-GATE FOR RAILWAY-CARS. THOMAS F. TALBOT, Jr., Cheyenne, Wyo. Filed Nov. 26, 1907, Serial No. 403,969. Renewed Aug. 10, 1908. Serial No. 447,851.



1. The combination, with a pair of passenger cars and their couplings, of a movable gate located at the inner end of each car; and means connected with the gates for effecting their simultaneous opening when the cars are coupled.

2. The combination, with a pair of passenger cars and their couplings, of a movable gate located at the inner end of each car; means connected with the gates for effecting their simultaneous opening when the cars are coupled; and separate means for closing the gates when the cars are uncoupled.

3. The combination, with a pair of passenger cars and their couplings, of a movable gate located at the inner end of each car; means connected with the gates for automatically effecting their simultaneous opening when the cars are coupled; and separate means for automatically closing the gates when the cars are uncoupled.

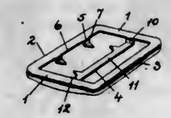
4. The combination, with a pair of passenger cars and their couplings, of a movable gate located at the inner end of each car, each gate comprising a pair of sections movable towards and from each other; devices connected with the sections of each gate for automatically moving the same away from each other when the cars are coupled; and separate devices for automatically moving the sections of each gate towards each other when the cars are uncoupled.

5. The combination, with a pair of passenger cars and their couplings, of a movable gate located at the inner end of each car; and a pusher connected with each gate, the pusher on the gate of one car being adapted to contact with that on the other car, when the cars are coupled together, to open the gates simultaneously.

[Claims 6 to 12 not printed in the Gazette.]

REISSUES.

12,855. BUCKLE. MIECZYSLAW BARABASZ, Baltimore, Md. Filed July 20, 1908. Serial No. 444,548. Original No. 877,035, dated Jan. 21, 1908, Serial No. 349,034.



1. A buckle of a single plate comprising two side bars, an end bar connecting the two side bars and said end bar having teeth that are bent inwardly therefrom so as to project beneath the inner surface thereof and said teeth then extending laterally and having pointed ends and another bar connecting the side bars and having position in front of the lateral portions of said teeth and lying in a plane between the plane of the lateral portions of the teeth and the plane of the side bars of the buckle plate.

2. A single piece buckle comprising side and end bars having inturned edges, a cross bar interposed between the end bars and having ends that are depressed,—said depressed portions of the cross-bar having position in a plane between the outer surface of the side bars and the said inturned edges, and teeth on one of the end bars.

3. A buckle of a single plate comprising two side bars, an end bar connecting the side bars and having teeth that project beyond the inner surface of the side bars, a cross-bar next to the end bar with the teeth and also having teeth at the edge adjacent the toothed end bar and the points of said teeth on the cross-bar lying within the plane of the side bars and projecting toward the teeth on the end bar.

4. A buckle of a single plate comprising two side bars, two end bars connecting the side bars and a flange projecting from the outer edges of said side bars,—one of the said end bars having teeth that project inwardly and then laterally; a toothed cross bar connecting the side bars and said toothed cross bar being depressed and the depressed portion having position in a plane between the plane of the lateral portion of the teeth on the end bar and the plane of the side bars and the teeth on the depressed cross bar projecting toward the teeth on the end bar.

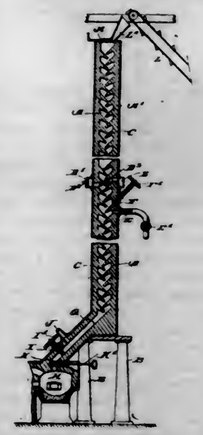
5. A buckle having two side bars and two end bars provided with inturned edges, a single bar interposed between the two end bars and having both longitudinal edges in the same plane and its outer surface parallel with the outer surface of the side bars and said bar having position between the outermost surface and the inturned edges of the side and end bars, and teeth on one end bar.

[Claim 6 not printed in the Gazette.]

12,856. PROCESS OF TREATING FERRUGINOUS ORE FOR THE MANUFACTURE OF IRON AND STEEL THEREFROM. MONTAGUE MOORE, Melbourne, and THOMAS J. HESKETT, Brunswick, Victoria, Australia. Filed June 7, 1907. Serial No. 377,840. Original No. 791,928, dated June 6, 1905, Serial No. 190,588.

1. A process of treating ore in a finely divided state for the manufacture of iron and steel, consisting in passing the ore through a heating chamber and during the passage thereof through said chamber subjecting it to such a temperature as will bring the ore to a red heat, then subjecting the heated ore in a finely divided state to the action of a reducing gas while said material is traveling and without the material coming in contact with an oxidizing atmosphere, thereby converting the material into metallic particles, and then causing the reduced material to pass without subjecting it to an oxidizing influence, beneath the surface of a molten bath which protects the metal against oxidation while separating from the slag-making constituents of the ore.

2. A process of treating finely-divided ore containing a metal readily oxidizable in the molten state, which consists in subjecting the ore to a preliminary heating atmosphere to bring the ore to a red heat, and then to a reducing atmosphere, and at the same time bringing the particles of ore into approximate physical contact, then causing the reduced metal to pass, without subjection to an oxidizing influence, beneath the surface of a molten bath which protects the metal against oxidation while separating from the slag-making constituents of the ore.



3. A process of treating finely-divided ore containing a metal readily oxidizable in the molten state, which consists in subjecting the ore while in a finely-divided state to a preliminary heating atmosphere to bring it to a red heat and then to a reducing atmosphere, then causing the reduced metal to pass, without subjection to an oxidizing influence, beneath the surface of a molten bath which protects the metal against oxidation while separating from the slag-making constituents of the ore.

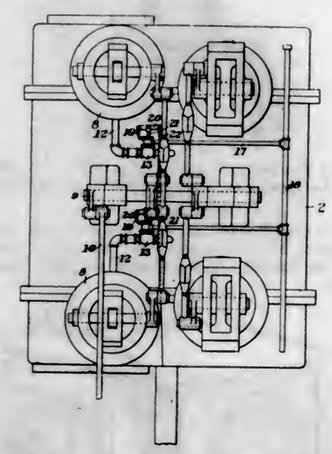
4. A process of treating ferruginous ore for the manufacture of iron and steel consisting in suitably concentrating and separating the material, then subjecting the concentrated and separated material in a finely-divided state while passing in a continuous stream to such temperature as to bring the material to a red heat, then subjecting the heated material in a finely-divided state while passing in a continuous stream to a suitable gas so as to convert the material into metallic particles without coming into contact with an oxidizing atmosphere, and then fusing and balling up the metallic particles without coming into contact with an oxidizing atmosphere.

5. A process of treating ferruginous ore in a fine state of division for the manufacture of iron and steel consisting in subjecting the ore while passing in a continuous stream to such a temperature as will bring the ore to a red heat, then subjecting the heated material in a finely-divided state to the action of a hydrocarbon gas while said heated material is passing in a continuous stream without coming into contact with an oxidizing atmosphere, thereby converting the material into metallic particles, and then suitably reducing the material to a molten condition without coming in contact with an oxidizing atmosphere.

[Claims 6 to 9 not printed in the Gazette.]

12,857. VALVE. WILLIAM H. KLINE, Dunbar, Pa., assignor to Walter Kennedy, Bellevue, Pa. Filed May 23, 1906. Serial No. 318,418. Original No. 821,507, dated May 22, 1906, Serial No. 216,410.

1. In a device of the character described, a storage reservoir, a fluid compressor provided with a port to admit fluid under pressure from the compressor to the reservoir, a port-closure adapted to control the flow of fluid through the port and from the compressor to the reservoir, a piston adapted to operate said port-closure, a cylinder in which said piston is mounted to reciprocate, a pipe disposed to admit a fluid under pressure from the compressor to the cylinder to operate the piston, a valve located in said pipe, and means for admitting a fluid from the reservoir to hold the said valve normally closed, the parts being so disposed that, when the tension of the fluid in the compressor exceeds the tension of the fluid in the reservoir, the valve is opened to admit fluid to the cylinder.



2. In a device of the character described, the combination of a reservoir for the storage of compressed fluid, a fluid compressor provided with a port to admit the compressed fluid from the compressor to the reservoir, a port closure, a cylinder, provided with a piston, connected with and adapted to operate said port-closure, a pipe to conduct the compresed fluid from the compressor to the cylinder, a reciprocating valve disposed in said pipe, and a pipe connected with the reservoir and adapted to admit fluid under reservoir pressure to the upper side of the reciprocating valve to hold said valve normally seated until the fluid in the compressor assumes a greater tension than the fluid in the reservoir.

3. A device of the character described, comprising in combination a reservoir for the storage of compressed fluid, a fluid compressor provided with a port-closure adapted to control the flow of said compressed fluid from the compressor to the reservoir, a cylinder, a piston mounted within said cylinder and secured to and adapted to operate said port-closure, a pipe to conduct the compressed fluid from the compressor to the cylinder, a reciprocating valve disposed in said pipe, a pipe connected with the reservoir and adapted to admit fluid under reservoir pressure to the upper side of the reciprocating valve to hold said valve normally seated until the fluid in the compressor assumes a greater tension than the fluid in the reservoir, and a by-pass provided with a check valve adapted to permit the return passage of the compressed fluid from the cylinder around the valve.

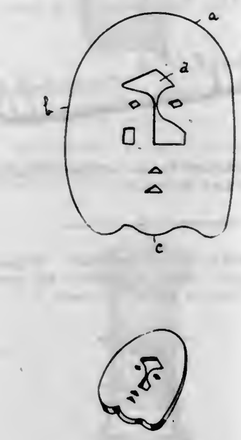
4. A device of the character described, comprising a chamber or receptacle, a fluid compressor provided with a port, communicating with the chamber or receptacle, a port-closure adapted to control the flow of compressed fluid through the port, a cylinder, a piston mounted within said cylinder and connected with and adapted to operate the port closure, a pipe to conduct compressed fluid from the compressor to the cylinder, a reciprocating valve disposed in said pipe, a pipe connected with the chamber or receptacle and arranged to admit fluid under pressure therefrom to the upper side of the reciprocating valve to hold said valve normally seated until the fluid in the compressor assumes a greater tension than the fluid in the chamber or receptacle, means connected with the pump starting mechanism whereby the stopping of the compressor holds the reciprocating valve seated and means to permit the return flow of the fluid from the cylinder around the valve.

5. A device of the character described, comprising in combination, a cylinder, a piston within the cylinder, a storage reservoir, a compressor provided with a port to permit the flow of a compressed fluid from the compressor to the reservoir, a port-closure connected to and operated by the piston, a pipe to conduct a fluid from the compressor to the cylinder to operate the piston and open the port-closure, a reciprocating valve disposed in said pipe, means for conducting a fluid under reservoir pressure from the reservoir to hold the reciprocating valve normally closed, but adapted to be opened by the fluid in the pipe when the tension thereof becomes greater than the tension of the fluid in the reservoir, means for mechanically returning the piston and means to permit the fluid in the valve-actuating cylinder to flow back in the compression cylinder and around the reciprocating valve upon the return of the piston.

[Claims 6 to 12 not printed in the Gazette.]

DESIGNS.

39,552. BADGE OR SIMILAR ARTICLE. LAWRENCE W. PENNINGTON, Reading, Pa. Filed June 18, 1908. Serial No. 439,256. Term of patent 7 years.



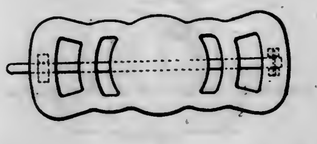
The ornamental design for a badge or similar article, as shown and described.

39,553. RING. WILLIAM E. EDWARDS, Brooklyn, N. Y. Filed July 6, 1908. Serial No. 442,260. Term of patent 14 years.



The ornamental design for a ring as shown.

39,554. BARRETTE OR HAIR-FASTENER. GEORGE R. FARRELL, Leominster, Mass., assignor to Harvard Novelty Company, Leominster, Mass., a Corporation of Massachusetts. Filed June 9, 1908. Serial No. 437,600. Term of patent 3½ years.



The ornamental design for a barrette, or hair fastener, as shown.

39,555. SPOON. ALBERT ATWOOD, Seattle, Wash. Filed July 21, 1908. Serial No. 444,679. Term of patent 7 years.



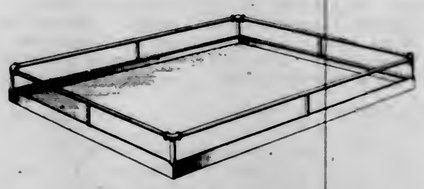
The ornamental design for a spoon, as shown.

39,556. CUP. WERNER F. ROTHERMUND, New York, N. Y. Filed May 20, 1908. Serial No. 433,957. Term of patent 7 years.



The ornamental design for a cup as shown and described.

39,557. GLASS-HOLDING TRAY. OTTO HERESTREIT, Colorado Springs, Colo. Filed June 6, 1908. Serial No. 437,202. Term of patent 14 years.



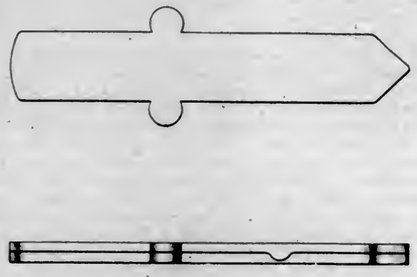
The ornamental design for a glass-holding tray, as shown.

39,558. PIPE-HOLDER. CHARLES ELKIN, New York, N. Y. Filed May 6, 1908. Serial No. 431,285. Term of patent 14 years.



An ornamental design for a pipe-holder comprising a base tapering upwardly on irregular curved lines and surmounted by a concave holder with a backwardly curved upper portion, as shown and described.

39,559. PENCIL-CASE. EUGENE PEARL, Passaic, N. J. Filed May 9, 1908. Serial No. 431,990. Term of patent 7 years.



The ornamental design for a pencil case as shown and described.

39,560. PROPELLING-PENCIL. HARRY HEYMANN, New York, N. Y., assignor to Eagle Pencil Company, New York, N. Y. Filed June 26, 1908. Serial No. 440,582. Term of patent 3½ years.



The ornamental design for a propelling pencil, as shown and described.

39,561. AUTOMATIC LEAD AND CRAYON HOLDER. CLAES W. BOMAN, New York, N. Y., assignor to Eagle Pencil Company, New York, N. Y. Filed July 17, 1908. Serial No. 444,148. Term of patent 3½ years.



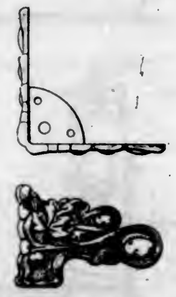
The ornamental design for an automatic lead and crayon holder, as shown and described.

39,562. PRINTER'S RULE-CORNER. WILLIAM C. F. PAPKE, Cincinnati, Ohio. Filed July 22, 1907. Serial No. 385,091. Term of patent 14 years.



The ornamental design for a printer's-rule corner, as shown.

39,563. FOOT FOR CLOCK-CASES. ROSS A. CULVER, Bristol, Conn., assignor to The E. Ingraham Co., Bristol, Conn., a Corporation. Filed June 29, 1908. Serial No. 441,032. Term of patent 3½ years.



The ornamental design for a foot for clock cases, as shown.

39,564. LAMP. EDWIN RALPH ESTEP, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of West Virginia. Filed July 29, 1908. Serial No. 446,022. Term of patent 7 years.



The ornamental design for a lamp, as shown.

39,565. ARC-LAMP. MAURICE J. WOHL and HARRY HERTZBERG, New York, N. Y. Filed June 16, 1908. Serial No. 438,868. Term of patent 14 years.



The ornamental design for an arc lamp as shown and described.

39,566. LAMP-PEDESTAL. FRANK S. VERBECK, Chicago, Ill. Filed Jan. 25, 1908. Serial No. 412,679. Term of patent 7 years.



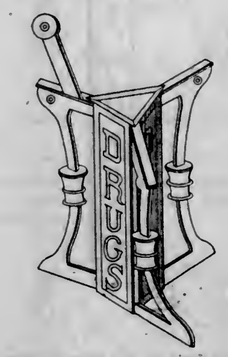
The ornamental design for a lamp pedestal, herein shown and described.

39,567. INVERTED GAS-BURNER. FRANK M. BROOKS, New York, N. Y. Filed July 7, 1908. Serial No. 442,438. Term of patent 7 years.



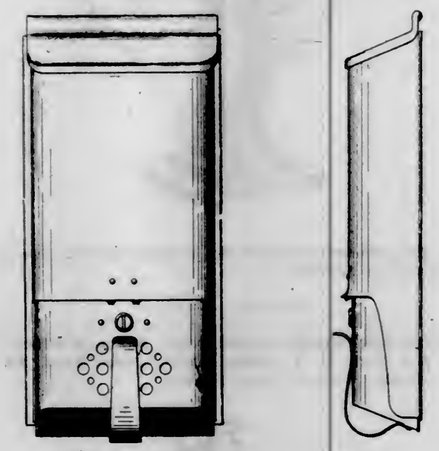
The ornamental design for an inverted gas burner as shown.

39,568. DRUGGIST'S SIGN. ROBERT ALBERT WALTER, New York, N. Y. Filed Aug. 20, 1907. Serial No. 389,415. Term of patent 3½ years.



The ornamental design for a druggist's sign as shown.

39,569. MAIL-BOX. CARLISLE H. BALDWIN, New Britain, Conn., assignor to Corbin Cabinet Lock Company, New Britain, Conn., a Corporation of Connecticut. Filed May 7, 1908. Serial No. 431,543. Term of patent 7 years.



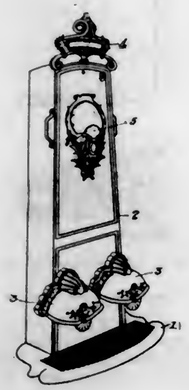
The ornamental design for mail box as shown and described.

39,570. FRONT MEMBER FOR RACKS OR DRAWERS. D'ARCY B. PLUNKETT, New York, N. Y. Filed July 18, 1908. Serial No. 444,295. Term of patent 7 years.



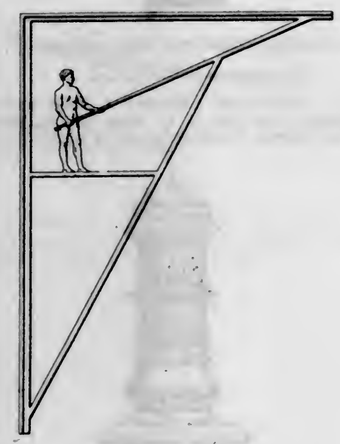
The ornamental design for a front member for racks or drawers, as shown.

39,571. CASING FOR SHOE-POLISHING MACHINES. EDMOND F. STRATTON, New York, N. Y. Filed May 18, 1908. Serial No. 433,618. Term of patent 7 years.



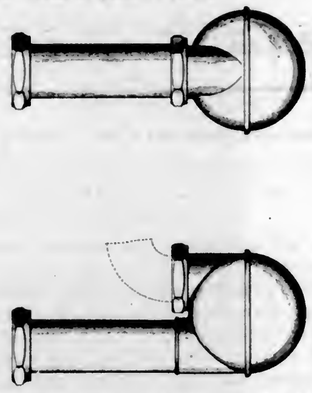
The ornamental design for a casing for a shoe polishing machine, as shown and described.

39,572. SUPPORTING-BRACKET. JOSEPH KAISER, Katalla, Alaska. Filed May 1, 1908. Serial No. 430,406. Term of patent 14 years.



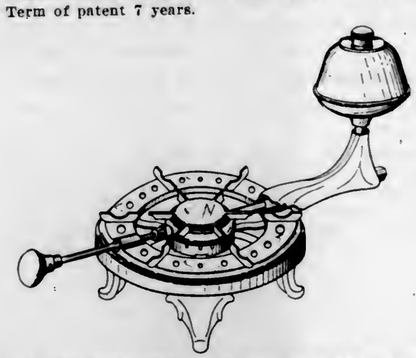
The ornamental design for a supporting bracket as shown.

39,573. TRAP FOR WASTE-WATER PIPES. WALTER J. FROST, Kenosha, Wis. Filed June 24, 1908. Serial No. 440,200. Term of patent 7 years.



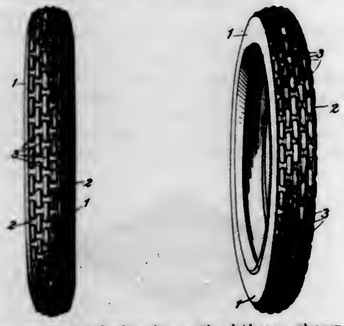
The ornamental design for a trap for waste water pipes, as shown and described.

39,574. VAPOR-STOVE. GEORGE E. SAVAGE and EDWARD A. GUTERMANN, Meriden, Conn., assignors to Manning, Bowman & Company, Meriden, Conn., a Corporation of Connecticut. Filed May 27, 1908. Serial No. 435,340. Term of patent 7 years.



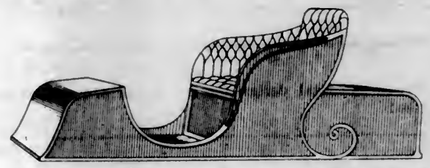
The ornamental design for a vapor stove as shown and described.

39,575. WHEEL-TIRE. TOD J. MELL, Youngstown, Ohio, assignor to The Republic Rubber Company, Youngstown, Ohio, a Corporation of Ohio. Filed May 25, 1908. Serial No. 435,006. Term of patent 14 years.



The ornamental design for a wheel-tire as shown and described.

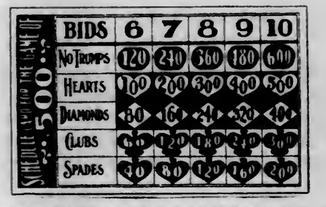
39,576. AUTOMOBILE-BODY. OLIVER P. FRITCHLE, Denver, Colo., assignor to Fritchle Automobile & Battery Company, Denver, Colo., a Corporation of Colorado. Filed June 30, 1908. Serial No. 441,266. Term of patent 14 years.



The ornamental design for an automobile body, as shown.

39,577. [WITHDRAWN.]

39,578. SCHEDULE-CARD FOR THE GAME OF FIVE HUNDRED. WILLIAM BULLITT CHAMPLIN, Dallas, Tex. Filed June 9, 1908. Serial No. 437,598. Term of patent 3½ years.



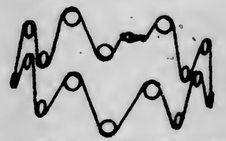
The ornamental design for a schedule card for the game of five hundred as shown.

39,579. PINCUSHION. EUGENE DAUCHER, New York, N. Y. Filed June 26, 1908. Serial No. 440,581. Term of patent 7 years.



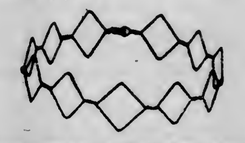
The ornamental design for a pincushion as shown.

39,580. LADY'S WIRE COLLAR. MARY V. MAAG, Chicago, Ill. Filed May 20, 1908. Serial No. 433,988. Term of patent 3½ years.



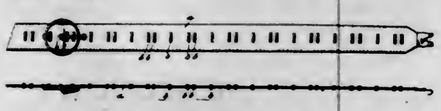
The ornamental design for ladies' wire-collar as shown and described.

39,581. LADY'S WIRE COLLAR. MARY V. MAAG, Chicago, Ill. Filed May 20, 1908. Serial No. 433,989. Term of patent 3½ years.



The ornamental design for ladies' wire collar as shown and described.

39,582. BELT. SAMUEL M. RIKER, Maplewood, N. J. Filed Mar. 12, 1908. Serial No. 420,753. Term of patent 7 years.



The ornamental design for a belt, as shown and described.

39,583. BELT. SAMUEL M. RIKER, Maplewood, N. J. Filed Mar. 12, 1908. Serial No. 420,754. Term of patent 7 years.



The ornamental design for a belt, as shown and described.

TRADE-MARKS

PUBLISHED SEPTEMBER 22, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 5,133. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. BOOTH AND COMPANY, Chicago, Ill.; Baltimore, Md.; St. Paul, Duluth, and Minneapolis, Minn.; St. Louis, Mo.; Louisville, Ky.; Omaha, Nebr.; Indianapolis, Ind., and Port Arthur, Canada. Filed May 11, 1905.



The central panel is red, the border-band blue, and the radiating rays yellow.

Particular description of goods.—Canned Oysters.

Ser. No. 5,134. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. BOOTH AND COMPANY, Chicago, Ill.; Baltimore, Md.; St. Paul, Duluth, and Minneapolis, Minn.; St. Louis, Mo.; Louisville, Ky.; Omaha, Nebr.; Indianapolis, Ind., and Port Arthur, Canada. Filed May 11, 1905.



Particular description of goods.—Canned Salmon.

Ser. No. 9,043. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) E. C. ATKINS & COMPANY, Indianapolis, Ind.; New York, N. Y.; Memphis, Tenn.; Atlanta, Ga.; Minneapolis, Minn.; Portland, Oreg.; Seattle, Wash.; San Francisco, Cal.; Chicago, Ill., and Toronto, Canada. Filed June 26, 1905.

COP

Particular description of goods.—Rubber and Fabric Machinery Beltings, Fluid-Conducting Hose, and Machinery Packings.

Ser. No. 9,044. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) E. C. ATKINS & COMPANY, Indianapolis, Ind.; New York, N. Y.; Memphis, Tenn.; Atlanta, Ga.; Minneapolis, Minn.; Portland, Oreg.; Seattle, Wash.; San Francisco, Cal.; Chicago, Ill., and Toronto, Canada. Filed June 26, 1905.

FOE

Particular description of goods.—Rubber and Fabric Machinery Beltings, Fluid-Conducting Hose, and Machinery Packings.

Ser. No. 9,831. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FRIEDRICH DICK, Esslingen, Württemberg, Germany. Filed July 6, 1905.

P. DICK

Particular description of goods.—Butchers' Knives and Steels.

Ser. No. 18,401. (CLASS 38. PUBLICATIONS.) HOME AND FARM PUBLISHING CO., Louisville, Ky. Filed Mar. 31, 1906. Used ten years.

HOME AND FARM

Particular description of goods.—Periodicals.

Ser. No. 22,667. (CLASS 30. CROCKERY, EARTHENWARE, AND PORCELAIN.) WÄCHTERSBACHER STEINGUTFABRIK, Schlierbach, near Wachtersbach, Germany. Filed Oct. 12, 1906.



Particular description of goods.—Articles Made Either of Earthenware, Porcelain, Majolica, or Clay, With or Without Metallic Parts—to wit, Vases, Flower-Pots, Flower-Vases, Pots, Jewel-Trays, Fruit-Trays, Baskets, Mugs, Cups and Saucers, Jugs, Plates, Platters, Egg-Stands, Egg-Cups, Sugar-Bowls, Salt-Cellars, Butter-Dishes, Cheese-Dishes, Mustard-Pots, Spoon-Holders, Knife-Rests, Spice Sets, Vinegar and Oil Cruets, Salt-Boxes, Flour-Boxes, Tureens, Dessert-Dishes, Salad-Bowls, Sauce-Dishes, Washstand Sets, Oatmeal-Dishes, Milk-Pots, Roasting, Cooking, and Baking Pans, Coffee-Pots, Teapots, Umbrella-Stands, Dishes for Serving Fish, Dishes for Serving Asparagus, Cereal-Jars, and Swill-Tubs.

Ser. No. 26,038. (CLASS 32. FURNITURE AND UPHOLSTERY.) EDWIN O. GROVER, Highland Park, Ill. Filed Mar. 18, 1907.

KINDERVILLA

Particular description of goods.—Certain Hinged Screen-Like Sections Decorated or Painted to Represent Architectural Constructions Adapted for Use in Temporarily Partitioning Off Portions of Rooms.

Ser. No. 28,446. (CLASS 48. MALT EXTRACTS AND LIQUORS.) WILHELM ALBRECHT, Boston, Mass. Filed June 28, 1907.



Particular description of goods.—Beer and Ale.

Ser. No. 31,178. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE EHRAT, Chicago, Ill. Filed Nov. 15, 1907.



Il Bersagliere.

Particular description of goods.—Olive-Oil.

Ser. No. 31,781. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RICHARDSON & ROBBINS CO., Dover, Del. Filed Dec. 17, 1907.



Particular description of goods.—Canned, Preserved, and Pickled Meats, Poultry, Game, Fruits, Vegetables, Curried Oysters, and Canned and Preserved Soups, Plum-Puddings, and Plum-Pudding Sauce.

Ser. No. 31,984. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ANNIE A. KEARNS, Honolulu, Hawaii. Filed Dec. 30, 1907.



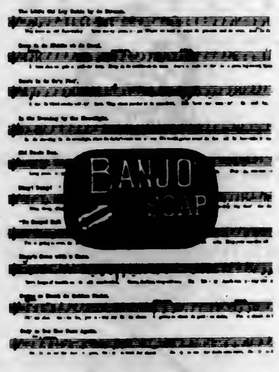
Particular description of goods.—Preserved Fruits.

Ser. No. 32,435. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE HAMPDEN WATCH CO., Canton, Ohio. Filed Jan. 25, 1908.

Hm C Huber

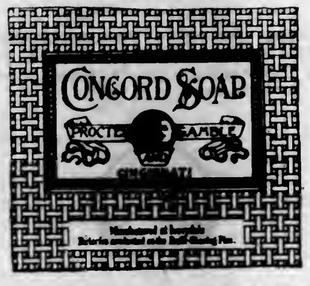
Particular description of goods.—Watch-Movements and Parts Thereof.

Ser. No. 32,669. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio. Filed Feb. 8, 1908. Used ten years.



Particular description of goods.—Soap for Laundry Use.

Ser. No. 32,825. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio. Filed Feb. 17, 1908.



Particular description of goods.—Soap for Laundry Use.

Ser. No. 32,828. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio. Filed Feb. 17, 1908. Used ten years.



Particular description of goods.—Soap for Laundry Use.

Ser. No. 32,829. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio. Filed Feb. 17, 1908. Used ten years.



Particular description of goods.—Soap for Laundry Use.

Ser. No. 32,830. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio. Filed Feb. 17, 1908. Used ten years.



Particular description of goods.—Soap for Laundry Use.

Ser. No. 33,043. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio. Filed Feb. 27, 1908. Used ten years.



Particular description of goods.—Soap for Laundry Use.

Ser. No. 33,047. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio. Filed Feb. 27, 1908. Used ten years.



Particular description of goods.—Soap for Laundry Use.

Ser. No. 33,049. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio. Filed Feb. 27, 1908. Used ten years.



Particular description of goods.—Soap for Laundry Use.

Ser. No. 33,050. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio. Filed Feb. 27, 1908. Used ten years.



Particular description of goods.—Soap for Laundry Use.

Ser. No. 33,186. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC COAST SYRUP CO., San Francisco, Cal. Filed Mar. 5, 1908.



Particular description of goods.—A Compound of Refiners' Syrup and Molasses.

Ser. No. 33,224. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MARSHALL-WELLS HARDWARE CO., Duluth, Minn. Filed Mar. 6, 1908. Used ten years.



Particular description of goods.—Scythe-Stones, Razor-Hones, Sandpaper, Emery-Paper, and Emery-Cloth.

Ser. No. 33,225. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) MARSHALL-WELLS HARDWARE Co., Duluth, Minn. Filed Mar. 6, 1908. Used ten years.



Particular description of goods.—Silver-Plated Knives and Forks and Silver-Plated Spoons.

Ser. No. 33,227. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) MARSHALL-WELLS HARDWARE Co., Duluth, Minn. Filed Mar. 6, 1908. Used ten years.



Particular description of goods.—Squares, Wing-Dividers, and Levels.

Ser. No. 33,228. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) MARSHALL-WELLS HARDWARE Co., Duluth, Minn. Filed Mar. 6, 1908. Used ten years.



Particular description of goods.—Horseshoe-Nails, Carpet-Tacks, Barbed Wire, and Enameled Kitchen Ware.

Ser. No. 33,229. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MARSHALL-WELLS HARDWARE Co., Duluth, Minn. Filed Mar. 6, 1908. Used ten years.



Particular description of goods.—Boys' Express-Wagons, Fishing-Rods, Fishing-Reels, Fish-Lines, Snelled Hooks, Trolling-Spoons, Casting-Spoons, Trout-Flies, Landing-Nets, Base-Ball Bats, Catchers' Mitts, Basemen's Mitts, Fielders' Mitts, Base-Balls, Shoe-Plates, Tennis-Rackets, Tennis-Balls, Tennis-Nets, Tennis Marking-Tapes, Striking-Bags, Boxing-Gloves, Indoor-Base-Ball Bats, Indoor Base-Balls, Foot-Balls, Foot-Ball Head-Gear.

Ser. No. 33,428. (CLASS 2. RECEPTACLES.) STEPHEN W. MILLIGAN, Newark, N. J. Filed Mar. 17, 1908.

"TIP-TOP"

Particular description of goods.—Sheet-Metal Pails.

Ser. No. 33,518. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KING CEREAL AND MANUFACTURING Co., Chicago, Ill. Filed Mar. 21, 1908.



Particular description of goods.—Sauces for Flavoring Foods.

Ser. No. 33,529. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio. Filed Mar. 21, 1908. Used ten years.



Particular description of goods.—Soap for Laundry Use.

Ser. No. 33,531. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio. Filed Mar. 21, 1908.



The ribbon being printed in blue.
Particular description of goods.—Soap for Laundry Use.

Ser. No. 33,535. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio. Filed Mar. 21, 1908. Used ten years.



Particular description of goods.—Soap for Laundry Use.

Ser. No. 33,538. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio. Filed Mar. 21, 1908. Used ten years.



Particular description of goods.—Soap for Laundry Use.

Ser. No. 33,661. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DR. BOB MEDICAL COMPANY, Erie, Pa. Filed Mar. 26, 1908.

DR. BOB'S

Particular description of goods.—Liver-Pills, Headache-Powders, Digestive Tablets, Kidney and Backache Pills, Cough-Syrup, Dysentery and Diarrhea Remedy, Eye-Water, Toothache-Drops, Hair-Tonic, Laxative Cold-Tablets, Neuralgia-Tablets, Compound Extract Smartweed, Rheumatic Remedy, Hay-Fever Remedy, Salt-Rheum Remedy, Blood Remedy, Antichafing and Foot Powder, Pile-Ointment, Tapeworm Remedy, Sanative Wash, Household Salve.

Ser. No. 33,685. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AROMA COFFEE COMPANY, Duluth, Minn. Filed Mar. 27, 1908.



Particular description of goods.—Blended Coffee.

Ser. No. 33,927. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE MOTHER SEIGEL'S SYRUP CO., New York, N. Y. Filed Apr. 7, 1908. Used ten years.

MOTHER SEIGEL

Particular description of goods.—Dyspepsia Remedies.

Ser. No. 33,929. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE MOTHER SEIGEL'S SYRUP CO., New York, N. Y. Filed Apr. 7, 1908. Used ten years.



Particular description of goods.—Laxative Pills.

Ser. No. 34,050. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) MEZCAL TEQUILA DISTILLERY COMPANY, INC., San Francisco, Cal. Filed Apr. 13, 1908.



Particular description of goods.—A Mexican Liquor Known as "Mezcal Tequila."

Ser. No. 34,175. (CLASS 39. CLOTHING.) WOODS MANUFACTURING COMPANY, Fort Smith, Ark. Filed Apr. 16, 1908.

WALKANDTALK"

Particular description of goods.—Men's and Boys' Suits and Men's and Boys' Pants and Overalls.

Ser. No. 34,217. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BURCKHARDT & COMPANY, Cincinnati, Ohio. Filed Apr. 18, 1908. Used ten years.

PREMIUM

Particular description of goods.—Lard.

Ser. No. 24,225. (CLASS 39. CLOTHING.) DAVIS HOSIERY MILLS, Chattanooga, Tenn. Filed Apr. 20, 1908.

U.S. Soldier Boy



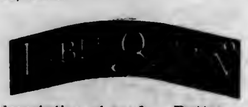
Particular description of goods.—Hosiery.

Ser. No. 34,395. (CLASS 39. CLOTHING.) KEITH BROTHERS & CO., Chicago, Ill. Filed Apr. 27, 1908.



Particular description of goods.—Hats and Caps of Cloth, Wool, Felt, Fur, and Straw.

Ser. No. 34,438. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WATSON & AVEN, Little Rock, Ark. Filed Apr. 28, 1908.



Particular description of goods.—Butter.

Ser. No. 34,785. (CLASS 17. TOBACCO PRODUCTS.) CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y., and Caguas, Porto Rico. Filed May 16, 1908.



Particular description of goods.—Cigars, Cheroots, and Cigarettes Made of Cigar-Tobacco.

Ser. No. 34,892. (CLASS 39. CLOTHING.) UNITED SHOE MACHINERY COMPANY, Paterson, N. J., and Boston, Mass. Filed May 22, 1908.

NOVO
WELT

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 34,893. (CLASS 39. CLOTHING.) UNITED SHOE MACHINERY COMPANY, Paterson, N. J., and Boston, Mass. Filed May 22, 1908.

NOVO

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 34,894. (CLASS 39. CLOTHING.) UNITED SHOE MACHINERY COMPANY, Paterson, N. J., and Boston, Mass. Filed May 22, 1908.



Particular description of goods.—Leather Boots and Shoes.

Ser. No. 34,915. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARENT BROS. MEDICAL CO., Rutland, Iowa. Filed May 23, 1908.

R
21000

Particular description of goods.—A Remedy for Diseases of the Generative Organs.

Ser. No. 34,942. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BICK. R. BONNEY, Lincoln, Nebr. Filed May 25, 1908.

BMB

Particular description of goods.—Medicated Salt for Feeding to Animals.

Ser. No. 34,980. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HILLS BROS., San Francisco, Cal. Filed May 27, 1908.



Particular description of goods.—Tea.

Ser. No. 34,983. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) GEORGE E. SOVEREIGN, Pottersville, N. J. Filed May 27, 1908.



CAMEL

Particular description of goods.—Babbitt Metal.

Ser. No. 34,987. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GEORGE H. JOHNSON, Worcester, Mass. Filed May 27, 1908.

STOVINK

Particular description of goods.—Preparations for Blacking or Dressing Stoves and other Iron Surfaces.

Ser. No. 35,018. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) BACH BROS. & KATZENSTEIN, New York, N. Y. Filed May 29, 1908.



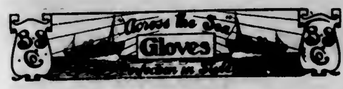
Particular description of goods.—Rag Dolls.

Ser. No. 35,020. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SIMONDS MANUFACTURING COMPANY, Fitchburg, Mass.; Chicago, Ill.; Portland, Oreg.; Seattle, Wash., and San Francisco, Cal. Filed May 29, 1908.

Simonds Steel

Particular description of goods.—Saws and Machine-Knives—That is, All Knives Used in Machines for Planing, Cutting, Splitting, Shearing, and Such as are Distinguished from Cutlery.

Ser. No. 35,028. (CLASS 39. CLOTHING.) BEN STRAUSS COMPANY, New York, N. Y. Filed May 29, 1908.



Particular description of goods.—Leather and Fabric Gloves.

Ser. No. 35,055. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD W. SHIELDS, Washington, D. C. Filed June 1, 1908.

NaZo

Particular description of goods.—A Remedy in Powdered Form for Colds in the Head, La Grippe, and Hay-Fever.

Ser. No. 35,067. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE ACME SHEAR COMPANY, Bridgeport, Conn. Filed June 1, 1908.

CLIPPER

Particular description of goods.—Shears and Scissors.

Ser. No. 35,134. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE AMERICAN COMMERCIAL COMPANY, LTD., Los Angeles, Cal. Filed June 4, 1908.

USE-IT

Particular description of goods.—Naphtha Washing-Powder for General Cleansing and Scouring.

Ser. No. 35,150. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ST. LOUIS CHEMICAL COMPANY, St. Louis, Mo. Filed June 4, 1908.



Particular description of goods.—Toilet Cream and Dental Bleach.

Ser. No. 35,157. (CLASS 39. CLOTHING.) BURSON KNITTING COMPANY, Rockford, Ill. Filed June 5, 1908. Used ten years.

BURSON

Particular description of goods.—Hosiery.

Ser. No. 35,158. (CLASS 39. CLOTHING.) BURSON KNITTING COMPANY, Rockford, Ill. Filed June 5, 1908.



Particular description of goods.—Hosiery.

Ser. No. 35,185. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WILLIAM SKINNER MANUFACTURING CO., Holyoke, Mass.; New York, N. Y.; Boston, Mass.; Chicago, Ill., and Philadelphia, Pa. Filed June 6, 1908.



The stripe on the fabric within the border and adjacent to the edge being red in color.

Particular description of goods.—Silk and Satin.

Ser. No. 35,274. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) R. E. DIETZ COMPANY, New York, N. Y. Filed June 11, 1908.

NEPTUNE

Particular description of goods.—Headlights Designed Particularly for Boats.

Ser. No. 35,276. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) R. E. DIETZ COMPANY, New York, N. Y. Filed June 11, 1908.

"PRESTO"

Particular description of goods.—Acetylene-Burners Designed for Use in Vehicle-Lamps.

Ser. No. 35,277. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) R. E. DIETZ COMPANY, New York, N. Y. Filed June 11, 1908.

SENTINEL

Particular description of goods.—Gas-Burning Vehicle-Lamps.

Ser. No. 35,279. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) R. E. DIETZ COMPANY, New York, N. Y. Filed June 11, 1908.

PARAGON

Particular description of goods.—Oil-Burning Lamps Designed Particularly for Boats.

Ser. No. 35,280. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) R. E. DIETZ COMPANY, New York, N. Y. Filed June 11, 1908.

EMPIRE

Particular description of goods.—Gas-Burning Vehicle-Lamps.

Ser. No. 35,306. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HARRY H. HAWKINS, Norfolk, Va. Filed June 12, 1908.

SWEET AIR

Particular description of goods.—Cantaloups.

Ser. No. 35,317. (CLASS 17. TOBACCO PRODUCTS.) PAVÓN ÁLVAREZ & CA., Cialea, Porto Rico. Filed June 13, 1908.



Particular description of goods.—Cigars.

Ser. No. 35,333. (CLASS 37. PAPER AND STATIONERY.) MABIE, TODD & CO., New York, N. Y. Filed June 13, 1908.

Swan

Particular description of goods.—Fountain-Pens.

Ser. No. 35,372. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) AMERICAN WINE & SPIRIT CO., Philadelphia, Pa. Filed June 15, 1908. Used ten years.

ROSELAWN

Particular description of goods.—Straight Rye Whisky.

Ser. No. 35,379. (CLASS 39. CLOTHING.) HALL, HARTWELL & COMPANY, Troy, N. Y. Filed June 15, 1908.

ORNATIS

Particular description of goods.—Turn-Down Collars Made of Cotton or Linen.

Ser. No. 35,380. (CLASS 39. CLOTHING.) HALL, HARTWELL & COMPANY, Troy, N. Y. Filed June 15, 1908.

COLIMAS

Particular description of goods.—Turn-Down Collars Made of Cotton or Linen.

Ser. No. 35,384. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MOHAWK CONDENSED MILK CO., Rochester, N. Y. Filed June 15, 1908. Used ten years.

RED CROSS

Particular description of goods.—Condensed Milk.

Ser. No. 35,412. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY SOLOMON WELLCOME, London, England. Filed June 16, 1908.

RYTOL

Particular description of goods.—Photographic Developers and Photographic Accelerators.

Ser. No. 35,607. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALPHEUS HUGH HIPPLE, Omaha, Nebr. Filed June 19, 1908.

PERSPIDONT

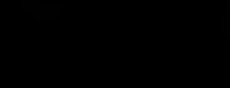
Particular description of goods.—A Perspiration-Absorbent.

Ser. No. 35,611. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) LUDWIG H. REUTER, Berkeley, Cal. Filed June 19, 1908.

RAYOLITH

Particular description of goods.—Surgical Splints and Bandages, and Plastic Compositions Which When Hardened Form a Part of the Splints or Bandages.

Ser. No. 35,616. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WM. H. CLARK, Cortland, N. Y. Filed June 19, 1908.



Particular description of goods.—Laxative Medicines.

Ser. No. 35,645. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PHENIX LUBRICATOR COMPANY, Chicago, Ill. Filed June 20, 1908.

PHENIX

Particular description of goods.—Lubricator-Pumps.

Ser. No. 35,669. (CLASS 39. CLOTHING.) NATIONAL SHOEMAKERS, Lewiston, Me. Filed June 22, 1908.

Passion

Particular description of goods.—Cloth, Rubber, and Leather Shoes.

Ser. No. 35,670. (CLASS 39. CLOTHING.) NATIONAL SHOEMAKERS, Lewiston, Me. Filed June 22, 1908.

NAVIGATOR

Particular description of goods.—Cloth, Rubber, and Leather Shoes.

Ser. No. 35,686. (CLASS 39. CLOTHING.) GUSTAVE GEORGE, New York, N. Y. Filed June 23, 1908.

MERRY WIDOW

Particular description of goods.—Straw Hats.

Ser. No. 35,693. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) NEUSS, HESSLEIN & Co., New York, N. Y. Filed June 23, 1908.



Particular description of goods.—Printed Cotton Piece Goods.

Ser. No. 35,694. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) NEUSS, HESSLEIN & Co., New York, N. Y. Filed June 23, 1908.



Particular description of goods.—Printed Cotton Piece Goods.

Ser. No. 35,731. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) R. W. SUNASACK COMPANY, Chicago, Ill. Filed June 24, 1908.



Particular description of goods.—Razor-Strops.

Ser. No. 35,733. (CLASS 12. MASONRY MATERIALS.) MAURICE O'MEARA COMPANY, New York, N. Y. Filed June 24, 1908.



The square being printed in red.

Particular description of goods.—Building-Papers for Heat and Cold Insulation, Tarred Felt, Roofing-Paper, and Roofing-Felt.

Ser. No. 35,757. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ROGERS & THOMPSON, New York, N. Y. Filed June 25, 1908.

R & T.

Particular description of goods.—Broad Silks and Cotton Dress Goods.

Ser. No. 35,798. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) COLGATE & Co., Jersey City, N. J., and New York, N. Y. Filed June 26, 1908.

RIBBON

Particular description of goods.—Dental Cream.

Ser. No. 35,816. (CLASS 2. RECEPTACLES.) EAGLE PAPER COMPANY, Richmond, Va. Filed June 27, 1908.



Particular description of goods.—Bags of Paper.

Ser. No. 35,868. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. K. FOOKS & Co., Laurel, Del. Filed June 30, 1908.

PRIDE OF LAUREL

Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 35,889. (CLASS 12. MASONRY MATERIALS.) THE SEINSHEIMER PAPER COMPANY, Cincinnati, Ohio. Filed July 1, 1908.



Particular description of goods.—Rubber Roofing.

Ser. No. 35,893. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) EUREKA FIRE HOSE MANUFACTURING COMPANY, Jersey City, N. J. Filed July 1, 1908.



Particular description of goods.—Fabric Hose.

Ser. No. 35,896. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) BELKNAP HARDWARE AND MANUFACTURING COMPANY, Louisville, Ky. Filed July 1, 1908.



Particular description of goods.—Axle-Grease.

Ser. No. 35,940. (CLASS 39. CLOTHING.) THE BELL HOSIERY COMPANY, Philadelphia, Pa. Filed July 3, 1908.

Particular description of goods.—Hosiery.

Ser. No. 35,942. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. W. ANTRIM & SONS, Richmond, Va. Filed July 3, 1908.



Particular description of goods.—Tea.

Ser. No. 36,008. (CLASS 39. CLOTHING.) SWEET, ORR & Co., New York, Newburgh, and Wappinger Falls, N. Y.; Joliet, Ill., and Brooklyn, N. Y. Filed July 8, 1908.

333

Particular description of goods.—Men's and Youths' Pants.

Ser. No. 36,011. (CLASS 39. CLOTHING.) THE FAY-GORMAN COMPANY, Bethel, Conn. Filed July 8, 1908.

Fay

Particular description of goods.—Felt Hats.

Ser. No. 36,016. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JOHN FRANCIS PERRY, New York, N. Y. Filed July 8, 1908.

SOLOPHONE

Particular description of goods.—Toy Whistles.

Ser. No. 36,034. (CLASS 2. RECEPTACLES.) PHOEBE A. SIMS, Cleveland, Ohio. Filed July 9, 1908.



Particular description of goods.—Folded Paper Boxes.

Ser. No. 36,039. (CLASS 39. CLOTHING.) A. B. ANDREWS COMPANY, New York, N. Y. Filed July 10, 1908.

PRINCE

Particular description of goods.—Hosiery.

Ser. No. 36,040. (CLASS 39. CLOTHING.) A. B. ANDREWS COMPANY, New York, N. Y. Filed July 10, 1908.

CINDERELLA

Particular description of goods.—Hosiery.

Ser. No. 36,041. (CLASS 39. CLOTHING.) A. B. ANDREWS COMPANY, New York, N. Y. Filed July 10, 1908.

Miss Muffet

Particular description of goods.—Hosiery.

Ser. No. 36,048. (CLASS 17. TOBACCO PRODUCTS.) MASPERO FRÈRES, LIMITED, London, England. Filed July 10, 1908.



Particular description of goods.—Cigarettes, Cigars, Smoking-Tobacco, and Chewing-Tobacco.

Ser. No. 36,058. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FAXON, WILLIAMS & FAXON, Buffalo, N. Y. Filed July 10, 1908.



Particular description of goods.—Cracker-Meal, Crackers and Cakes of Various Kinds, Coffee, Tea, Butter, Eggs, and Dried Beef in Packages.

Ser. No. 36,065. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MACKINTOSH'S TOFFEE COMPANY, Bradley Beach, N. J. Filed July 11, 1908.



Particular description of goods.—Toffee.

Ser. No. 36,069. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ELECTRIC RENOVATOR MANUFACTURING COMPANY, Pittsburg, Pa. Filed July 11, 1908.

Invincible

Particular description of goods.—Cleaning and Renovating Apparatus and Parts Thereof.

Ser. No. 36,091. (CLASS 39. CLOTHING.) BENHAM GARMENT CO., Des Moines, Iowa. Filed July 14, 1908.

MILADY

Particular description of goods.—Petticoats.

Ser. No. 36,099. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM MCMURRAY, St. Paul, Minn. Filed July 14, 1908.

PATRICIAN

Particular description of goods.—Teas and Coffees.

Ser. No. 36,103. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) JOHN ANGUS HUNT, London, England. Filed July 14, 1908.



Particular description of goods.—Safety-Matches.

Ser. No. 36,104. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) JOHN ANGUS HUNT, London, England. Filed July 14, 1908.



Particular description of goods.—Safety-Matches.

Ser. No. 36,116. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FLOYD BROS., Kirkland, Ga. Filed July 14, 1908.



Particular description of goods.—A Remedy for Venereal Diseases.

Ser. No. 36,123. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE LAFFARGUE CO., INC., New York, N. Y. Filed July 15, 1908.

MELOCHORD

Particular description of goods.—Piano-Players.

Ser. No. 36,151. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) H. W. BAKER LINEN COMPANY, New York, N. Y. Filed July 16, 1908.



The annular band is printed in gold.

Particular description of goods.—Sheets and Pillow-Cases.

Ser. No. 36,152. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) LOUIS MAYER, Mankato, Minn. Filed July 16, 1908.



Particular description of goods.—Trip-Hammers.

Ser. No. 36,216. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARCHIBALD O. FRALEY, McKeesport, Pa. Filed July 20, 1908.



Particular description of goods.—A Remedy for Rheumatism.

Ser. No. 36,268. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) EDWARD G. SOLTMANN, New York, N. Y. Filed July 22, 1908.

IN-KO-GRAF

Particular description of goods.—Lithographic Prints Produced by Exposure to Sun or Electric Light.

Ser. No. 36,274. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE J. MILTON HAGY WASTE WORKS, Philadelphia, Pa. Filed July 23, 1908.



Particular description of goods.—Waste.

Ser. No. 36,278. (CLASS 37. PAPER AND STATIONERY.) FREDERICK R. WELLS, Brooklyn, N. Y. Filed July 23, 1908.

FOUNCIL

Particular description of goods.—Combined Fountain-Pen and Pencil or Lead Holder.

Ser. No. 36,291. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) NEW JERSEY CAR SPRING & RUBBER CO., Jersey City, N. J. Filed July 23, 1908.

GLADIATOR

Particular description of goods.—Machinery Belting Made of Rubber and Canvas.

Ser. No. 36,301. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) E. A. ARMSTRONG, Chicago, Ill. Filed July 24, 1908.

IMPERVO

Particular description of goods.—Waterproof Sheets and Sheeting.

Ser. No. 36,328. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) H. MUELLER MANUFACTURING COMPANY, Decatur, Ill. Filed July 25, 1908.

PRIMO

Particular description of goods.—Handles for Self-Closing Bibs and Faucets.

Ser. No. 36,334. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) TOOTLE CAMPBELL DRY GOODS CO., St. Joseph, Mo. Filed July 25, 1908.

TOTEM

Particular description of goods.—Suspenders, Necktles, and Scarfs.

Ser. No. 36,348. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) WILLIAM H. FINFROCK, Chicago, Ill. Filed July 27, 1908.

WF

Particular description of goods.—Solder.

Ser. No. 36,396. (CLASS 39. CLOTHING.) FERN'Z VALDES & CO., Havana, Cuba. Filed July 30, 1908.

No. Uno.

Particular description of goods. — Men's, Women's, Misses', and Children's Leather Boots, High and Low Cut Shoes, and Slippers.

Ser. No. 36,439. (CLASS 39. CLOTHING.) LUTHER J. EVANS, Napa, Cal. Filed Aug. 3, 1908.

AL-KA-LI

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 36,460. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) INDIANAPOLIS BOLSTER SPRING CO., Indianapolis, Ind. Filed Aug. 4, 1908.

VICTOR

Particular description of goods.—Wagon and other Vehicle Springs.

Ser. No. 36,476. (CLASS 37. PAPER AND STATIONERY.) EBERHARD FABER, New York, N. Y. Filed Aug. 5, 1908.



The tip being blue and the band gilt.

Particular description of goods.—Lead and Colored Pencils.

Ser. No. 36,482. (CLASS 11. INKS AND INKING MATERIALS.) MITTAG & VOLGER, INCORPORATED, Park Ridge, N. J. Filed Aug. 5, 1908.



Particular description of goods.—Carbon-Paper and Type-Writer Ribbons.

Ser. No. 36,487. (CLASS 12. MASONRY MATERIALS.) THE A. WILHELM CO., Reading, Pa. Filed Aug. 5, 1908. Used ten years.

ALUMINIUM
ELASTIC-CEMENT

Particular description of goods.—Aluminium Pipe-Cement.

Ser. No. 36,488. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) THE A. WILHELM CO., Reading, Pa. Filed Aug. 5, 1908. Used ten years.

Prize Medal.

Particular description of goods.—Ready-Mixed Paints, Varnish, Enamels, Stains, Colors in Oil, and Colors in Japan.

Ser. No. 36,492. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) THE A. WILHELM CO., Reading, Pa. Filed Aug. 5, 1908.

Century

Particular description of goods.—Ready-Mixed Paints, Varnish, Enamels, Stains, Colors in Oil, and Colors in Japan.

Ser. No. 36,493. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) THE A. WILHELM CO., Reading, Pa. Filed Aug. 5, 1908.

THE PEOPLE'S

Particular description of goods.—Ready-Mixed Paints, Varnish, Stains, Enamels, Colors in Oil, and Colors in Japan.

Ser. No. 36,545. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) RUGBY DISTILLERY COMPANY, Louisville, Ky. Filed Aug. 7, 1908. Used ten years.



Particular description of goods.—Straight Bourbon Whisky.

Ser. No. 36,583. (CLASS 12. MASONRY MATERIALS.) HIBBARD, SPENCER, BARTLETT & COMPANY, Chicago, Ill. Filed Aug. 10, 1908.

H.S.B. & CO.
REV-O-NOC

Particular description of goods.—Rubber Roofing.

Ser. No. 36,585. (CLASS 25. LOCKS AND SAFES.) HIBBARD, SPENCER, BARTLETT & COMPANY, Chicago, Ill. Filed Aug. 10, 1908.

OUR VERY BEST
OVB

Particular description of goods.—Door-Locks and Padlocks.

Ser. No. 36,735. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) THE UNION METALLIC CARTRIDGE COMPANY, Bridgeport, Conn. Filed Aug. 14, 1908. Used ten years.

No. 104

Particular description of goods.—12-Gage Loaded Paper Shot-Shells.

Ser. No. 36,736. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) THE UNION METALLIC CARTRIDGE COMPANY, Bridgeport, Conn. Filed Aug. 14, 1908. Used ten years.

No. 108

Particular description of goods.—12-Gage Loaded Paper Shot-Shells.

Ser. No. 36,737. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) THE UNION METALLIC CARTRIDGE COMPANY, Bridgeport, Conn. Filed Aug. 14, 1908. Used ten years.

No. 124

Particular description of goods.—12-Gage Loaded Paper Shot-Shells.

Ser. No. 36,738. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) THE UNION METALLIC CARTRIDGE COMPANY, Bridgeport, Conn. Filed Aug. 14, 1908. Used ten years.

No. 128

Particular description of goods.—12-Gage Loaded Paper Shot-Shells.

TRADE-MARKS

REGISTERED SEPTEMBER 22, 1908.

70,635. REMEDIES FOR RELIEF OF PAIN, LAMENESS, AND SORENESS. JOSEPH A. BEGY, Rochester, N. Y., assignor to J. A. Begy Company, Rochester, N. Y.
Filed July 26, 1907. Serial No. 29,050. PUBLISHED SEPTEMBER 17, 1907.

70,636. TOILET PREPARATIONS FOR THE SKIN, HAIR, AND NAILS IN THE FORM OF CREAMS, PASTES, AND POWDERS. CASSEBEER PHARMACAL CO., New York, N. Y.
Filed April 25, 1908. Serial No. 34,369. PUBLISHED JUNE 23, 1908.

70,637. MEDICINAL OIL. HERMAN CLAUS, Brooklyn, N. Y.
Filed May 27, 1908. Serial No. 34,981. PUBLISHED JULY 21, 1908.

70,638. VARNISHES, JAPANS, LACQUERS, AND ENAMELS. THE CLEVELAND VARNISH COMPANY, Cleveland, Ohio.
Filed March 13, 1908. Serial No. 33,346. PUBLISHED JULY 21, 1908.

70,639. REMEDY FOR INTESTINAL INDIGESTION AND HEPATIC CONGESTION. HENRY K. WAMPOLE AND COMPANY, INCORPORATED, Philadelphia, Pa.
Filed June 4, 1908. Serial No. 35,141. PUBLISHED JULY 21, 1908.

70,640. PURGATIVES. KNOLL & Co., Ludwigshafen-on-the-Rhine, Germany.
Filed April 3, 1908. Serial No. 33,835. PUBLISHED JULY 21, 1908.

70,641. MEDICINAL OIL. NATIONAL REMEDY CO., New York, N. Y.
Filed May 9, 1908. Serial No. 34,667. PUBLISHED JULY 21, 1908.

70,642. MEDICINAL OIL. NATIONAL REMEDY CO., New York, N. Y.
Filed May 9, 1908. Serial No. 34,668. PUBLISHED JULY 21, 1908.

70,643. REMEDIES FOR THE AILMENTS OF LIVE STOCK. NEBRASKA LIVE STOCK REMEDY COMPANY, Fremont, Nebr.
Filed April 21, 1908. Serial No. 34,258. PUBLISHED JULY 21, 1908.

70,644. INSECTICIDES USED ESPECIALLY FOR DESTROYING ROACHES, WATER-BUGS, AND BEETLES. WILLIAM PETERMAN, New York, N. Y.
Filed May 7, 1908. Serial No. 34,639. PUBLISHED JULY 21, 1908.

70,645. SALVE FOR THE TREATMENT OF CERTAIN DISEASES. THOMAS M. SAYMAN, St. Louis, Mo.
Filed May 5, 1908. Serial No. 34,583. PUBLISHED JULY 21, 1908.

70,646. SOAPS. E. WERTHEIMER & CIE., Paris, France.
Filed March 20, 1908. Serial No. 33,494. PUBLISHED JULY 21, 1908.

70,647. SOAPS. E. WERTHEIMER & CIE., Paris, France.
Filed March 20, 1908. Serial No. 33,495. PUBLISHED JULY 21, 1908.

70,648. SOAPS. E. WERTHEIMER & CIE., Paris, France.
Filed March 20, 1908. Serial No. 33,496. PUBLISHED JULY 21, 1908.

70,649. CLOCKS. AMERICAN CUCKOO CLOCK COMPANY, Philadelphia, Pa.
Filed August 8, 1907. Serial No. 29,283. PUBLISHED APRIL 28, 1908.

70,650. OIL, PARAFFIN, OR TALLOW BURNING MINERS' LAMPS. GEO. ANTON, Monongahela, Pa.
Filed April 6, 1908. Serial No. 33,905. PUBLISHED JULY 21, 1908.

70,651. DEVICES FOR HOLDING THE TONGUE AND CHEEK OUT OF THE WAY IN FILLING AND TREATING TEETH. CALVIN MICHAUX BEAM, Charlotte, N. C.
Filed May 16, 1908. Serial No. 34,782. PUBLISHED JULY 21, 1908.

70,652. INSULATED ELECTRIC WIRES AND CABLES AND INSULATING-TAPE. WILLIAM R. BRIXEY, New York, N. Y.
Filed April 15, 1908. Serial No. 34,110. PUBLISHED JULY 21, 1908.

70,653. MAGAZINE PERIODICAL. THE BUSINESS MAGAZINE CO., Knoxville, Tenn.
Filed September 17, 1906. Serial No. 22,136. PUBLISHED APRIL 9, 1907.

70,654. CERTAIN FINGER-RINGS. ALFRED CONSTANTINE, Birmingham, England.
Filed April 11, 1908. Serial No. 34,028. PUBLISHED JULY 21, 1908.

70,655. ORGANS. ESTEY ORGAN COMPANY, Brattleboro, Vt.
Filed May 18, 1908. Serial No. 34,813. PUBLISHED JULY 21, 1908.

70,656. PIANOS. ESTEY PIANO COMPANY, New York, N. Y.
Filed May 18, 1908. Serial No. 34,812. PUBLISHED JULY 21, 1908.

70,657. CERTAIN FURNITURE. THE FORD & JOHNSON CO., Chicago, Ill.; Cincinnati, Ohio; Atlanta, Ga.; Frankfort, Ky.; New Haven and Hartford, Conn.; Helena, Ark., and High Point, N. C.
Filed April 10, 1908. Serial No. 33,991. PUBLISHED JULY 21, 1908.

70,658. INNER TUBES OF ELASTIC VEHICLE-TIRES. THE GOODYEAR TIRE AND RUBBER COMPANY, Akron, Ohio.
Filed June 6, 1908. Serial No. 35,186. PUBLISHED JULY 21, 1908.

70,659. MOTOR-CYCLES. THE HORNECKER MOTOR MFG. CO., Geneseo, Ill.
Filed April 27, 1908. Serial No. 34,430. PUBLISHED JULY 21, 1908.

70,660. LIME. M. J. GROVE LIME CO., Lime Kiln, Md.
Filed June 11, 1908. Serial No. 35,284. PUBLISHED JULY 21 1908.

70,661. AUTOMATIC LEAD-PENCILS. EDMUND MOSTER & Co., Zagreb, Austria-Hungary.
Filed May 14, 1908. Serial No. 34,751. PUBLISHED JULY 21, 1908.

70,662. HAND SEWING-NEEDLES, TOILET-PINS, AND SAFETY-PINS. O. MUSTAD & SÖN, Christiania, Norway.
Filed May 18, 1908. Serial No. 34,804. PUBLISHED JULY 21, 1908.

70,663. CLOTH, RUBBER, AND LEATHER SHOES. NATIONAL SHOEMAKERS, Lewiston, Me.
Filed May 7, 1908. Serial No. 34,622. PUBLISHED JULY 21, 1908.

70,664. STOP AND WASTE COCKS, BASIN-COCKS, BATH-COCKS, AND BIB-COCKS. THE OHIO BRASS AND IRON MANUFACTURING COMPANY, Cleveland, Ohio.
Filed June 8, 1908. Serial No. 35,216. PUBLISHED JULY 21, 1908.

70,665. MISCELLANEOUS CASTINGS. THE OHIO MALLEABLE IRON COMPANY, Columbus, Ohio.
Filed April 27, 1908. Serial No. 34,426. PUBLISHED JULY 21, 1908.

70,666. DYES. GEORGE PALMER, New York, N. Y.
Filed May 25, 1908. Serial No. 34,944. PUBLISHED JULY 21, 1908.

70,667. COTTON PIECE GOODS. RICE, STIX DRY GOODS COMPANY, St. Louis, Mo.
Filed February 2, 1907. Serial No. 25,092. PUBLISHED JULY 21, 1908.

70,668. LENSES, SPECTACLES, AND EYEGLASSES. DAVID B. RUBIN, Bridgeport, Conn.
Filed April 24, 1908. Serial No. 34,263. PUBLISHED JULY 21, 1908.

70,669. SMOKING-TOBACCO. THE RURAL TOBACCO CO., Pulaski, Tenn.
Filed April 30, 1908. Serial No. 34,473. PUBLISHED JULY 21, 1908.

70,670. GARMENT-HANGERS. AARON SCHLANG, New York, N. Y.
Filed May 20, 1908. Serial No. 34,849. PUBLISHED JULY 21, 1908.

70,671. GARMENT-HANGERS. AARON SCHLANG, New York, N. Y.
Filed May 21, 1908. Serial No. 34,862. PUBLISHED JULY 21, 1908.

70,672. GARMENT-HANGERS. AARON SCHLANG, New York, N. Y.
Filed May 22, 1908. Serial No. 34,884. PUBLISHED JULY 21, 1908.

70,673. GARMENT-HANGERS. AARON SCHLANG, New York, N. Y.
Filed May 23, 1908. Serial No. 34,916. PUBLISHED JULY 21, 1908.

70,674. SUPPORTERS FOR LADIES' COLLARS. SCHLOSS-SPEIER Co., New York, N. Y.
Filed May 27, 1908. Serial No. 34,971. PUBLISHED JULY 21, 1908.

70,675. ASPHALT PRODUCTS FOR ROAD-MAKING AND ROOFING. THE SICILIAN ASPHALT PAVING CO., New York, N. Y.
Filed February 11, 1908. Serial No. 32,714. PUBLISHED MAY 26, 1908.

70,676. KID GLOVES. STEINBERGER & KALISHER, San Francisco, Cal.
Filed November 23, 1907. Serial No. 31,317. PUBLISHED JULY 21, 1908.

70,677. LEAD-PENCILS. STYLES & CASH, New York, N. Y.
Filed May 2, 1908. Serial No. 34,535. PUBLISHED JULY 21, 1908.

70,678. LEAD-PENCILS. STYLES & CASH, New York, N. Y.
Filed May 15, 1908. Serial No. 34,765. PUBLISHED JULY 21, 1908.

70,679. INCANDESCENT ELECTRIC LAMPS. SUNBEAM INCANDESCENT LAMP COMPANY, Chicago, Ill.
Filed March 14, 1908. Serial No. 33,368. PUBLISHED JULY 21, 1908.

70,680. HAT-WIRE. BERNHARD TROSKY, New York, N. Y.
Filed April 18, 1908. Serial No. 34,218. PUBLISHED JULY 21, 1908.

70,681. MAGAZINE. THE VULCAN STEAM SHOVEL CO., Toledo, Ohio.
Filed May 25, 1908. Serial No. 34,950. PUBLISHED JULY 21, 1908.

70,682. BUFFING AND POLISHING BRUSHES. WILLIAM DIXON INCORPORATED, New York, N. Y.
Filed June 17, 1908. Serial No. 35,440. PUBLISHED JULY 21, 1908.

70,683. BLEND OF STRAIGHT RYE WHISKIES. A. M. JORDAN CO., New York, N. Y.
Filed April 22, 1908. Serial No. 34,271. PUBLISHED JUNE 30, 1908.

70,684. LEATHER SHOES. THE AINSWORTH SHOE CO., Toledo, Ohio.
Filed May 29, 1905. Serial No. 7,193. PUBLISHED JUNE 19, 1906.

70,685. CORNMEAL. AMERICAN HOMINY COMPANY, Indianapolis, Ind.
Filed May 28, 1908. Serial No. 35,015. PUBLISHED JULY 21, 1908.

70,686. CORNMEAL. AMERICAN HOMINY COMPANY, Indianapolis, Ind.
Filed May 28, 1908. Serial No. 35,016. PUBLISHED JULY 21, 1908.

70,687. CLARET WINES, SAUTERNES, AND BURGUNDY WINES. J. CALVET & CO., Bordeaux, France.
Filed August 27, 1907. Serial No. 29,614. PUBLISHED JUNE 9, 1908.

70,688. BREAD. CENTRAL BUTTER & EGG CO., Duluth, Minn.
Filed March 17, 1908. Serial No. 33,437. PUBLISHED JULY 21, 1908.

70,689. LIME-JUICE CORDIAL FREE FROM SPIRIT. EVANS SONS LESCHER & WEBB LIMITED, Liverpool, England.
Filed December 13, 1907. Serial No. 31,715. PUBLISHED JUNE 16, 1908.

70,690. CERTAIN FOOD COMPOUND. THE GENESEE PURE FOOD COMPANY, Le Roy, N. Y.
Filed May 21, 1908. Serial No. 34,875. PUBLISHED JULY 21, 1908.

70,691. OPENED, SHELL, AND SEED OYSTERS. J. AND J. W. ELSWORTH COMPANY, Bayonne, N. J., and New York, N. Y.
Filed April 30, 1908. Serial No. 34,488. PUBLISHED JULY 14, 1908.

70,692. CANNED TOMATOES, PEACHES, PEARS, APPLES, PUMPKIN, SQUASH, AND TOMATO-PULP. ISIDOR LEVIN, Philadelphia, Pa.
Filed May 18, 1907. Serial No. 27,488. PUBLISHED MAY 26, 1908.

70,693. ABSORBENT COTTON AND GAUZE, AND SILK AND CATGUT LIGATURES. LISTER SURGICAL COMPANY, New Brunswick, N. J.
Filed May 4, 1908. Serial No. 34,571. PUBLISHED JULY 21, 1908.

70,694. ITALIAN OLIVE-OIL. PARODI, ERMINIO & CO., New York, N. Y.
Filed May 1, 1908. Serial No. 34,527. PUBLISHED JUNE 16, 1908.

70,695. GIN COCKTAILS. GEORGES STIEGLER & CO., New York, N. Y.
Filed May 1, 1908. Serial No. 34,507. PUBLISHED JULY 21, 1908.

70,696. CAKES AND BISCUITS. REINH. VAN HAUEN, Copenhagen, Denmark.
Filed April 16, 1908. Serial No. 34,166. PUBLISHED JULY 21, 1908.

70,697. WHEAT-FLOUR. THE WATERLOO & CEDAR FALLS UNION MILL COMPANY, Waterloo, Iowa.
Filed April 28, 1908. Serial No. 34,433. PUBLISHED JULY 21, 1908.

TRADE-MARKS CANCELED.

60,612. FOUNTAIN PENS AND PENCILS. L. E. WATERMAN COMPANY, New York, N. Y.
Registered June 23, 1908. Canceled September 4, 1908.

59,814. PAINT AND VARNISH BRUSHES. RENNOUS KLEINLE & CO. OF BALTIMORE CITY, Baltimore, Md.
Registered January 15, 1907. Canceled September 16, 1908.

LABELS

REGISTERED SEPTEMBER 22, 1908.

14,359.—*Title:* "CONTRIVO." (For Cigars.) ALHAMBRA CIGAR CO., New York, N. Y. Filed August 22, 1908.

14,360.—*Title:* "TULIP A." (For Cigars.) AMERICAN LITHOGRAPHIC COMPANY, New York, N. Y. Filed July 30, 1908.

14,361.—*Title:* "TULIP B." (For Cigars.) AMERICAN LITHOGRAPHIC COMPANY, New York, N. Y. Filed July 30, 1908.

14,362.—*Title:* "UNIVERSO." (For Cigars.) SCHMIDT & CO., New York, N. Y. Filed July 11, 1908.

14,363.—*Title:* "PROXY." (For a Non-Intoxicating Beverage Made from Malt and Hops.) THE SCHWARZENBACH BREWING CO., Galeton, Pa. Filed July 30, 1908.

14,364.—*Title:* "ALL NATIONS' BRAND." (For Coffee.) THE GLOBE COFFEE & MOLASSES CO., INC., New Orleans, La. Filed December 5, 1907.

14,365.—*Title:* "CALENDAR." (For Tea.) GEO. LEWIS & CO., INCORPORATED, Chicago, Ill. Filed August 17, 1908.

14,366.—*Title:* "BUTTERCUP BRAND." (For Sterilized Unsweetened Condensed Milk.) WILLAMETTE VALLEY CONDENSED MILK CO., Portland and McMinnville, Oreg. Filed July 23, 1908.

14,367.—*Title:* "FRUTIL." (For Carbonated Apple-Juice.) KLAMMER BROS., West Berkeley, Cal. Filed June 27, 1908.

14,368.—*Title:* "APPLE JELLY." (For Apple-Jelly.) ATLAS PRESERVING CO., Baltimore, Md. Filed July 21, 1908.

14,369.—*Title:* "ANOTHER BISCUIT." (For Soda-Crackers.) AMERICAN PASTRY & M'F'G COMPANY, New York, N. Y. Filed June 25, 1908.

14,370.—*Title:* "ANOTHER BISCUIT." (For Soda-Crackers.) AMERICAN PASTRY & M'F'G COMPANY, New York, N. Y. Filed July 14, 1908.

14,371.—*Title:* "FIR BALSAM, PRODUCT OF MAINE. (For Fir-Balsam.) FRED S. HUNTLEY, Fitchburg, Mass. Filed July 1, 1908.

14,372.—*Title:* "CHINA-LAC." (For a Varnish-Stain.) PHOENIX COLOR WORKS, New York, N. Y. Filed June 2, 1908.

14,373.—*Title:* "SANITARY HAIRNET." (For Hair-Nets.) JACOB KALMBACH, Jr., New York, N. Y. Filed August 20, 1908.

PRINTS

REGISTERED SEPTEMBER 22, 1908.

2,346.—*Title:* "THE DAWSON TASTE." (For Straight Scotch Whisky.) THE GUNNING SYSTEM, Chicago, Ill. Filed June 18, 1908.

2,347.—*Title:* "THE LUCKY KEY." (For Bottled Beer.) FRANK J. COOPER, San Francisco, Cal. Filed August 3, 1908.

2,348.—*Title:* "IDEAL CORER." (For Corers.) FERDINAND C. ROBERTS, Detroit, Mich. Filed August 24, 1908.

2,349.—*Title:* "BABIHOOD CLOTHES." (For Infants' Apparel.) WINDSOR-KNITTING MILLS, New York, N. Y. Filed August 12, 1908.

2,350.—*Title:* "THE CLOTHES FOR FALL 1908." (For Men's Fall Apparel.) DAVID ADLER & SONS CLOTHING CO., Milwaukee, Wis. Filed August 6, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

SMITH *v.* FOLEY *v.* ANDERSON *v.* SMITH.

Decided November 1 1907.

PATENT INTERFERENCE.

1. INTERFERENCE—RIGHT TO MAKE CLAIMS—RULE 130.

Where a party to an interference does not bring a motion to dissolve on the ground that his opponents have no right to make the claims and no showing is made why such a motion was not brought, he is not entitled to urge the question under the provision of Rule 130; but the fact that such a motion was not brought does not prevent the tribunals of the Office from considering the question of their own motion, when it appears that one or more of the parties have no right to make certain of the claims.

2. SAME—TESTIMONY.

Where a witness, testifying as to disclosure of the invention, admits that he is testifying solely from memory as to a disclosure alleged to have been made many years previously and that he cannot recall the details of the invention nor remember any disclosure except this one, though many were called to his attention about the same time, his testimony is insufficient to establish that such disclosure was made.

APPEAL from Examiners-in-Chief.

ELEVATOR SAFETY DEVICE.

Messrs. Brown, Darby & Hopkins and *Mr. C. M. Nissen* for R. C. Smith.

Messrs. Duncan & Duncan for Foley. (*Mr. Alan M. Johnson* of counsel.)

Messrs. Duncan & Duncan for Anderson. (*Mr. Alan M. Johnson* of counsel.)

Messrs. Griffin & Bernhard for E. A. Smith.

MOORE, *Commissioner:*

This case comes before me on appeals by R. C. Smith, Anderson, and E. A. Smith from a decision of the Examiners-in-Chief reversing the decision of the Examiner of Interferences and awarding priority of invention to Foley as to counts 1, 2, 3, and 5 to 17, inclusive. The issue included seventeen counts, of which the following set forth the invention sufficiently for the purpose of this decision:

1. An elevator-car, a clamping device therefor, and a differential screw having a high-pitch thread and a low-pitch thread for actuating the clamping device.

2. An elevator-car, a clamping device therefor, a high-pitch screw and a low-pitch screw, said screws arranged to actuate the clamping device.

9. In a safety device for elevators the combination of a car, guides over which the car is adapted to run, a clamping device on the car, a high-pitch screw arranged to move the clamping device against the guides, a low-pitch screw arranged to tighten the clamping device on the guides, and means for actuating the screws by the motion of the car.

17. In an elevator safety device, the combination of a car, guides therefor, clamping devices adapted to engage the guides, right and left hand screws arranged to move the clamping devices quickly against the guides, right and left hand screws of low pitch arranged to tighten the clamping devices on the guides, and means for actuating the screws by the movement of the car.

The Examiner of Interferences awarded priority to Foley as to count 4, holding that E. A. Smith was not the original inventor of the invention set forth in that count, but derived his knowledge thereof from Foley, and that, as between Foley and R. C. Smith and Anderson, Foley was the prior inventor. He awarded priority of invention as to the remaining counts to E. A. Smith on the ground that neither R. C. Smith, Foley, nor Anderson disclosed a structure on which claims corresponding to these counts could be based. The Examiners-in-Chief considered count 4 to be unpatentable in view of the state of the art and made a recommendation to that effect. The case was remanded to the Primary Examiner, and no appeal having been taken from his decision rejecting the claim corresponding to this count the same became final, and this count is not before me for consideration. The Examiners-in-Chief reversed the decision of the Examiner of Interferences as to the right of R. C. Smith, Foley, and Anderson to make claims corresponding to the remaining counts, but affirmed his decision as to the question of priority and originality and rendered a decision in favor of Foley.

The subject-matter of the interference is a safety device for elevators, and while the devices of the respective parties are different each is designed to overcome certain defects alleged to exist in what was known as the "Ellithorpe safety." In this device there are mounted on the car clamping-jaws in position to grasp the guide-rails at either side of the elevator-shaft. These jaws are located on the outer ends of levers pivoted intermediate their length and provided on their inner ends with means adapted to engage actuating-cams. These cams are capable of movement in and out between said inner ends of the levers and by this movement swinging the levers to bring the jaws into engagement with the guide-rails. In order to effect this movement of the cams, they are mounted on the outer ends of shafts which are threaded on their inner ends. These threads, which are of reverse kind for the opposite sides of the car, work in corresponding threads in opposite sides of a drum capable of being turned by the governor-rope. This rope is attached to the drum and after a number of turns around it passes to the top of the shaft, over a pulley geared to the governor, and then to the bottom

of the shaft, around another pulley, and back to the car. This rope normally travels as the car does, and so the drum on the car is stationary; but if the car attains too high a velocity the governor acts to grasp the rope, holding it stationary, and thus unwinding it from the drum. This causes the drum to rotate, moves the screw-shaft and its attached cams longitudinally, and imparts movement to the jaws which grasp the rail, thereby stopping the movement of the car.

The invention of each of the parties to the interference is designed to move the jaws quickly until they come into contact with the rails and then move them more slowly, but more powerfully, to force them tightly against the rails, and thus bring the car to a stop.

Taking up, first, the question of the right to make the claims, it would appear that none of the devices includes a "differential screw," according to the technical definition of that term. E. A. Smith, however, in his specification defines what he means by the expression "differential screw," and the term seems to be loosely used to mean any combination of two screws of different pitch, as appears from the patent to Pridmore, No. 658,583, which is in evidence as "E. A. Smith's Exhibit No. 9," and from the patent to Pratt, No. 853,733, the application for which was originally involved in this interference.

E. A. Smith did not bring a motion to dissolve the interference on the ground that the other parties had no right to make the claims, and as no showing was made why such motion was not brought he is not entitled to urge this question under the provisions of Rule 130. The fact that no such motion has been made does not prevent the tribunals of the Office from considering the question of their own motion when it clearly appears that one or more of the parties have no right to make the claims corresponding to some or all of the counts of the issue. Where, however, no such motion was made and the parties have during the whole procedure of the case acquiesced in the position taken by the Primary Examiner in declaring the interference, a decision should be rendered that certain of the parties are not entitled to make the claims only in a clear case where there can be no doubt on the question. No such case exists here. R. C. Smith, Foley, and Anderson each shows a spiral cam which, as stated by the Examiners-in-Chief, is, in effect, a mutilated screw-thread.

As will hereinafter appear, each of the parties E. A. Smith, Foley, and Anderson has shown that he was in possession of the invention as early as February 1, 1905. As R. C. Smith does not claim to have conceived the invention until February 4, 1905, and as he alleges reduction to practice subsequent to the filing of the applications of the other parties, he can under no circumstances prevail, and the testimony offered on his behalf need not be considered.

Neither E. A. Smith, Foley, nor Anderson claims to have actually reduced the invention to practice. Anderson alleges conception in December, 1903; but as Foley, as will appear later, has established conception prior to that date and as their applications were filed on the same day, of these two Foley must prevail.

As between the remaining parties, E. A. Smith and Foley, the question of originality has been raised, each alleging that he disclosed the invention to the other. At the time of these alleged disclosures Foley was an inspector of elevators of the building department of New York city and E. A. Smith was an engineer representing the Otis Elevator Company at tests made by the building department of elevators installed by this company.

Foley states that he met Smith at two such tests, one on January 6, 1905, at the *Times* Building, and the other on January 24, 1905, at a building on the corner of Eighty-first street and Columbus avenue; that at the first of these tests a discussion arose as to a new regulation which had been promulgated by the building department requiring that all safeties should be arranged so as to bring the clamping-jaws in contact with the rail within a travel of the car of a foot and a half after the governor-rope had been stopped and to stop the car within a further travel of eight feet. During this discussion Foley says he told Smith that he had a device which would comply with the regulation and made sketches showing how it could be done, using a high-pitch screw and a low-pitch screw, and how the clamping-jaws could be worked by a hand-lever in the elevator-car. At the second test on January 24, 1905, Smith, according to Foley's story, asked him about the device and said that he did not understand how the change was to be made from the high-pitch to the low-pitch screw, and he (Foley) explained it to him, making a rough sketch of the device.

Smith admits meeting Foley at the two tests, but denies that any disclosure was made to him, and alleges that at the test of January 24, 1905, when the question of the new regulation came up, he told Foley that he had a device which would comply with the regulations and explained to him what this device was.

As there is no direct corroboration of either of these stories, it will be necessary to consider the testimony offered to show that the parties were in possession of the invention prior to the time of their alleged disclosures and the conduct of the parties and the surrounding circumstances.

Foley claims to have first devised a means for moving the clamp of an elevator-safety at two speeds in 1888, to have made a drawing at that time, and to have made various drawings showing different forms of the device subsequently to that time. He has placed in evidence six drawings, which are designated "May 1888 Drawing," "July 1893 Drawing," "November 1895 Drawing," "March 14, 1899, Drawing," "February 1903 Drawings," and "Working Drawings, Sheets 1, 2, 3, 4, and 5." The Examiner of Interferences has fully discussed the testimony of Foley and the witnesses to whom these drawings were shown and by whom they were signed, and it is not deemed necessary to repeat that discussion here. It is sufficient to say that the testimony clearly shows that Foley was in possession of the invention in issue as early as 1896. The hand-operated feature which appears in his application is first shown in the 1903 drawing. It is also shown in the working drawings, which are alleged to have been made in 1904. As to these dates there is no sufficient corroborating evidence. It is

stipulated, however, that the working drawings were taken to Munn & Co. by Foley on January 27, 1905, and his application prepared therefrom.

E. A. Smith claims to have conceived the invention in issue in 1897 and to have disclosed it at that time to Lindstrom and Mason, superintendent and chief draftsman, respectively, of the A. B. See Elevator Company, by whom he was employed, to have made a sketch of the invention in 1902, and to have at that time explained the invention to Miss Constance Wack and to Frank Zittel, and to have made another sketch on January 27, 1905, which he used in explaining on that day the invention to Marshall, his attorney, by whom his application was prepared.

Of the two persons to whom Smith claims to have disclosed his invention in 1897, only Mason is called as a witness. He testifies that in 1897, which date he fixes by reference to the time when he and E. A. Smith were employed by the A. B. See Elevator Company, the latter explained to him how he would use a high-pitch and a low-pitch screw to move the jaws of an Ellithorpe safety, first quickly and then more slowly, but more powerfully. Mason admits, however, that he is testifying solely from memory as to a disclosure alleged to have been made to him nine years previously. His account of what Smith disclosed to him is given in very general terms, for he states that he cannot recall the details of the invention. He also admits that, although many improvements in elevator-safeties were called to his attention while he was employed by the A. B. See Elevator Company, the only one that he can remember is this one of E. A. Smith. In view of these admissions his testimony is clearly insufficient to corroborate Smith's claim that he was in possession of the invention at this time.

Smith has introduced in evidence the sketch alleged to have been made in 1902. It bears the signatures "Edward A. Smith" and "Frank Zittel" and is dated September 29, 1902. The sketch is badly mutilated, a considerable portion of it having been torn away. The showing of the remaining part is only disgrammatic and utterly insufficient by itself to form a disclosure of the invention, though E. A. Smith points out the portion thereof which was intended to show two screws. The condition of the sketch renders it suspicious, and Smith's explanation that it was torn because some grease fell on it while he was comparing it with an Otis safety on an elevator-car is far from convincing, both because it is not apparent why Smith, who was thoroughly familiar with the construction of the Otis safety, should have wanted to compare the sketch with an actual safety and because the spots on the remaining parts appear to have been made by graphite or some other very heavy lubricant, and there is no indication of any tendency of this to spread. The testimony of Zittel, who signed the sketch, is not sufficient to corroborate Smith. Zittel admits that he cannot read mechanical drawings, and the sketch is useful to him only in recalling the verbal disclosure made to him by Smith. He is therefore testifying solely from memory as to the disclosure four years after it is alleged to have been made and after he had frequently discussed the matter with Smith. His statement, moreover, of what Smith disclosed to him does not include all the details of the device.

Marshall fully corroborates Smith as to the disclosure made to him on January 27, 1905, and this is the earliest date of possession of the invention that can be awarded to Smith.

While, as pointed out above, there is no direct testimony corroborating the testimony of either Foley or Smith as to his alleged disclosure to the other, there are several circumstances which tend to corroborate Foley's testimony.

In the first place E. A. Smith's testimony is discredited not only by reason of the 1902 sketch and his explanation with respect thereto, but by reason of two other exhibits. The first of these is Smith's note-book, in which appear two entries with respect to the present controversy. The first entry relates to Smith's alleged disclosure to Foley on January 24, 1905, and the second to the date when Smith says Foley told him that he had applied for patent. These entries, which are the only ones relating to the controversy or to Smith's alleged invention that appear in the book, are not placed where they would have been if they had been made on the dates in question. They appear neither in the space allotted to the days on which they are alleged to have occurred, nor directly below such space, where they naturally would be if the space was filled by other matter, but are entered one in a space left blank by Sunday and the other on the margin.

The other exhibit is a printed copy of the regulation above referred to, which bears in Smith's handwriting the following entry:

January 26, 1905.

1st information received from Mr. Boyhan as to the exact operation of the law.

E. A. SMITH.

Smith testifies positively that the entry was made on the date which it bears. In rebuttal Foley called certain of the officials of the building department and several of the employees of the Brown Company, by whom the regulation was printed, and their testimony shows that it was impossible for Smith to have obtained a printed copy of the regulation earlier than February 21, 1905.

Boyhan, who was chief elevator-inspector, testifies that Foley disclosed the invention in issue to him in the latter part of December, 1904, or early part of January, 1905, and that the day after the test at the *Times* Building on January 6, 1905, Foley told him that he (Foley) had explained the invention to E. A. Smith and that he told Foley he thought he was making a mistake in disclosing his invention to outsiders.

The conduct of Foley and E. A. Smith was in marked contrast. Foley made no special haste in filing his application after the promulgation of the building department order. Three days after Smith's alleged disclosure to him he took to his attorney several sheets of well-worked-out drawings. He told Smith of the fact that he filed his application and informed him of the progress of the prosecution thereof.

E. A. Smith, on the other hand, three days after his second interview with Foley went to Marshall with a crude sketch and after a hasty interview instructed him to file an application as soon as possible, since he

believed that Foley intended to steal his invention. The only reason he could give for that belief was that when he told Foley of his invention the latter seemed surprised and opened his eyes very wide. Smith said nothing to Foley about having filed an application, and it was not until the interference was declared that Foley learned that this application had been filed. Foley states that the first time he met Smith after receiving the notice of the interference was at a test at the store of Stern Brothers, and that he then told Smith in exceedingly plain language what he thought of him. Miller, the engineer at Stern Brothers, states that Foley and Smith had a heated interview on the day of the test, and while he was not near enough to them to hear what was said Foley told him about half an hour afterward that the loud conversation was due to the fact that Smith "had infringed on the elevator apparatus which he had invented."

In view of the testimony and the surrounding circumstances of the case and the conduct of the parties it is held that as to the common subject-matter of the two cases E. A. Smith was not an original inventor, but derived his knowledge thereof from Foley.

The decision of the Examiners-in-Chief awarding priority of invention to P. F. Foley is affirmed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

SMITH *v.* FOLEY. SMITH *v.* FOLEY. SMITH *v.* ANDERSON.

Decided June 2, 1908.

INTERFERENCE—PRIORITY.

The testimony considered and *Held* to afford no ground for disturbing the award of priority to Foley and Anderson.

Mr. C. M. Nissen and *Mr. F. T. Brown* for Smith.

Mr. Alan M. Johnson for Foley.

Mr. Alan M. Johnson for Anderson.

VAN ORSDEL, *J.*:

These are appeals from decisions of the Commissioner of Patents in interference proceedings. The cases were argued together, and will be so considered in this opinion. The subject-matter of the interference is a safety device for elevators. In No. 494, judgment was rendered by the Commissioner in favor of Foley as to all counts, excepting count 4, which was found to be covered by a former patent. From this decision, neither R. C. Smith nor Anderson has appealed. Foley has not appealed from the rejection of the claims embraced in count 4. Hence, the real parties in No. 494 are Foley and E. A. Smith. In No. 495, the Commissioner gave judgment in favor of Foley, except as to counts 6 and 7, on which judgment was rendered in favor of E. A. Smith. R. C. Smith has not perfected any appeal in this case. Neither has Foley appealed from the judgment rendered in favor of E. A. Smith as to counts 6 and 7. Hence, the issue in this case is narrowed to Foley and Smith as to all counts involved, excepting counts 6 and 7. In No. 496, the Commissioner gave judgment in favor of Anderson, and from this decision, E. A. Smith has appealed.

As to the parties involved in this controversy, E. A. Smith filed his application on February 6, 1905; J. N. Anderson's application was filed February 17, 1905, and P. F. Foley filed February 17, 1905.

Originally the issue in case No. 494 involved seventeen counts; in No. 495 ten counts; and in No. 496 two counts. The twenty-six counts covered in different phraseology the same matter, and the issue here involved is embraced in the following counts:

The issue in No. 494:

1. An elevator-car, a clamping device therefor, and a differential screw having a high-pitch thread and a low-pitch thread for actuating the clamping device.

2. An elevator-car, a clamping device therefor, a high-pitch screw and a low-pitch screw, said screws arranged to actuate the clamping device.

9. In a safety device for elevators, the combination of a car, guides over which said car is adapted to run, a clamping device on the car, a high-pitch screw arranged to move the clamping device against the guides, a low-pitch screw arranged to tighten the clamping device on the guides, and means for actuating the screws by the motion of the car.

11. The combination with an elevator-car, guides over which the car is adapted to move, a clamping device on the car, a high-pitch screw arranged to move the clamping device against the guides, a low-pitch screw arranged to tighten the clamping device on the guides, and a governor connected to be run by the car, and arranged to actuate the screws when the speed of the car reaches a predetermined limit.

17. In an elevator safety device, the combination of a car, guides therefor, clamping devices adapted to engage the guides, right and left hand screws arranged to move the clamping devices quickly against the guides, right and left hand screws of low pitch arranged to tighten the clamping devices on the guides, and means for actuating the screws by the movement of the car.

The issue in No. 495:

1. In an elevator safety device, the combination with hoistway-rails, of friction members adapted to engage said rails, a shaft having portions provided with threads of the same kind or direction but of different pitch, means connecting said threaded portions to said friction members, and means for automatically rotating the shaft.

10. In an elevator safety device, the combination of a car, guides therefor, clamping devices adapted to engage the guides, right and left hand screws, arranged to move the clamping devices quickly against the guides, right and left hand screws of low pitch arranged to tighten the clamping devices on the guides, a governor arranged to actuate the screws when the speed of the car reaches a predetermined limit, and means for actuating the screws by hand.

The issue in No. 496:

1. A safety device for elevators, comprising a drum, a safety-rope for turning the drum, brakes members connected with the drum, rods for operating the brakes, said rods being connected with the members to move endwise and means for first imparting a bodily endwise movement to the members and rods so as to apply the brakes quickly on rotating the drum, and, subsequently, rotating said members in unison with the drum to impart endwise movement to the rods for actuating the brakes slowly and more powerfully.

2. A safety device for elevators, comprising a drum, a safety-rope, the ends of which are secured to the drum, brake-levers, members on which the drum is journaled, rods having heads at their outer ends for operating the brake-levers, said rods being carried by the members and connected therewith to move endwise, and means for first imparting a bodily endwise movement to the members and rods to apply the brakes quickly on rotating the drum and subsequently rotating the said members in unison with the drum to impart endwise movement to the rods for actuating the brake-levers slowly and more powerfully.

The invention here in controversy is described in the opinion of the Commissioner of Patents as follows:

The subject-matter of the interference is a safety device for elevators and while the devices of the respective parties are different, each is designed to overcome certain defects alleged to exist in what was known as the Ellithorpe safety. In this device there are mounted on the car clamping-jaws in position to grasp the guide-rails at either side of the elevator-shaft. These jaws are located on the outer ends of levers pivoted intermediate their length and provided on their inner ends with means adapted to engage actuating-cams. These cams are capable of movement in and out between said inner ends of the levers and by this movement swinging the levers to bring the jaws into engagement with the guide-rails. In order to effect this movement of the cams, they are mounted on the outer ends of shafts, which are threaded on their inner ends. These threads, which are of reverse kind for the opposite sides of the car, work in corresponding threads in opposite sides of a drum capable of being turned by the governor-rope. This rope is attached to the drum and after a number of turns around it, passes to the top of the shaft, over a pulley geared to the governor, and then to the bottom of the shaft, around another pulley and back to the car. This rope normally travels as the car does, and so the drum on the car is stationary. But if the car attains too high a velocity, the governor acts to grasp the rope, holding it stationary and thus unwinding it from the drum. This causes the drum to rotate, moves the screw-shaft and its attached cams longitudinally and imparts movement to the jaws which grasp the rail, thereby stopping the movement of the car. The invention of each of the parties to the interference is designed to move the jaws quickly until they come into contact with the rails and then move them more slowly but more powerfully to force them tightly against the rails and thus bring the car to a stop.

The issue before us in Nos. 494 and 495 is practically narrowed to a controversy between the applicants Patrick F. Foley and E. A. Smith. A consideration of the respective claims of these two parties, with a later reference to the claims of Anderson, will be sufficient for the purposes of this inquiry. Foley is the junior applicant, and the burden rests upon him to overcome the presumption of priority that attaches to Smith from the fact of his earlier filing date. There is a decided conflict in the evidence. Foley testifies that he disclosed the invention to Smith, and that, on the strength of the information so derived, Smith, shortly after the alleged disclosure, filed his application in the Patent Office. Smith in turn testifies that he disclosed the invention to Foley which resulted in Foley's application. As to this evidence, neither of the parties is directly corroborated, and if we were confined to this evidence alone, Foley, being the junior applicant, would fail.

All three of the tribunals of the Patent Office have discredited Smith's testimony, and have found upon the facts in favor of Foley. The Examiner of Interferences found for Smith on the following ground:

In the view of the matter taken, it is held that Foley is the first and original inventor of count 4 of the issue; that he disclosed the invention covered by this count to E. A. Smith on January 6, 1905; that Foley has produced no evidence tending to show that prior to the filing of E. A. Smith's application he was in possession of the specific invention covered by the remaining counts of the issue, and that therefore his evidence is insufficient to prove that he could or did disclose this more specific form to E. A. Smith; that the applications of Foley, Anderson, and R. C. Smith disclose no mechanism on which claims corresponding to counts 1 to 3 and 5 to 17, inclusive, of the issue could be based, and therefore said applications do not constitute a constructive reduction to practice of said counts 1 to 3 and 5 to 17, inclusive.

The Examiners-in-Chief, in reversing the Examiner of Interferences on the technical ground above stated, said:

If E. A. Smith desired to raise this question of the lack of the other parties' right to make the claim, it should have been raised by motion to dissolve at the proper time. Had it been so raised the other parties to this interference would have been enabled to so amend their claims as to bring out the common patentable subject-matter in the applications and not be brought together only on one common issue, count 4, which, as will be stated later, is in our opinion not patentable.

In an able opinion, the Commissioner of Patents affirmed the decision of the Examiners-in-Chief. As to Smith's failure to file a motion to dissolve the interference, the Commissioner, in his opinion, said:

E. A. Smith did not bring a motion to dissolve the interference on the ground that the other parties had no right to make the claims, and, as no showing was made why such motion was not brought, he is not entitled to urge this question under the provisions of Rule 130. The fact that no such motion has been made does not prevent the tribunals of the Office from considering the question of their own motion when it clearly appears that one or more of the parties have no right to make the claims corresponding to some or all of the counts of the issue. Where, however, no such motion was made and the parties have during the whole procedure of the case acquiesced in the position taken by the Primary Examiner in declaring the interference, a decision should be rendered that certain of the parties are not entitled to make the claims only in a clear case where there can be no doubt on the question. No such case exists here. R. C. Smith, Foley and Anderson each shows a spiral cam which, as stated by the Examiners-in-Chief, is in effect a mutilated screw-thread.

After reviewing the facts relative to the alleged disclosure of the invention by Smith and Foley, each to the other, the Commissioner admirably reviews the evidence as follows:

As there is no direct corroboration of either of these stories, it will be necessary to consider the testimony offered to show that the parties were in possession of the invention prior to the time of their alleged disclosures and the conduct of the parties and the surrounding circumstances. Foley claims to have first devised a means for moving the clamp of an elevator safety at two speeds in 1888, to have made a drawing at that time, and to have made various drawings showing different forms of the device subsequently to that time. He has placed in evidence six drawings, which are designated "May 1888 Drawing," "July 1893 Drawing," "November 1895 Drawing," "March 14, 1899, Drawing," "February 1903 Drawing," and "Working Drawings, Sheets 1, 2, 3, 4 and 5." The Examiner of Interferences has fully discussed the testimony of Foley and the witnesses to whom these drawings were shown and by whom they were signed, and it is not deemed necessary to repeat that discussion here. It is sufficient to say that the testimony clearly shows that Foley was in possession of the invention in issue as early as 1896. The hand-operated feature which appears in his application is first shown in the 1903 drawing. It is also shown in the working drawings which are alleged to have been made in 1904. As to these dates there is no sufficient corroborating evidence. It is stipulated, however, that the working drawings were taken to Munn & Co. by Foley on January 27, 1905, and his application prepared therefrom. E. A. Smith claims to have conceived the invention in issue in 1897 and to have disclosed it at that time to Lindstrom and Mason, superintendent and chief draftsman, respectively, of the A. B. See Elevator Company, by whom he was employed, to have made a sketch of the invention in 1902 and to have at that time explained the invention to Miss Constance Wack and to Frank Zittel, and to have made another sketch on January 27, 1905, which he used in explaining on that day the invention to Marshall, his attorney by whom the application was prepared. Of the two persons to whom Smith claims to have disclosed his invention in 1897, only Mason is called as a witness. He testifies that in 1897, which date he fixes by reference to the time when he and E. A. Smith were employed by the A. B. See Elevator Company, the latter explained to him how he would use a high-pitch and a low-pitch screw to move the jaws of an Ellithorpe safety, first quickly and then more slowly but more powerfully. Mason admits, however, that he is testifying solely from memory as to a disclosure alleged to have been made to him nine years previously. His account of what Smith disclosed to him is given in very general terms, for he states that he cannot recall the details of the invention. He also admits that although many improvements in elevator-safeties were called to his attention while he was employed by the A. B. See Elevator Company, the only one that he can remember is this one of E. A. Smith. In view of these admissions his testimony is clearly insufficient to corroborate Smith's claim that he was in possession of the invention at this time. Smith has introduced in evidence the sketch alleged to have been made in 1902. It bears the signature Edward A. Smith and Frank Zittel, and is dated September 29, 1902. The sketch is badly mutilated, a considerable portion of it having been torn away. The showing of the remaining part is only diagrammatic and utterly insufficient by itself to form a disclosure of the invention, though E. A. Smith points out the portion thereof which was intended to show two screws. The condition of the sketch renders it suspicious and Smith's explanation that it was torn because some grease fell on it while he was comparing it with an Otis safety on an elevator-car is far from convincing, both because it is not apparent why Smith who was thoroughly familiar with the construction of the Otis safety should have wanted to compare the sketch with an actual safety, and because the spots on the remaining parts appear to have been made by graphite or some other very heavy lubricant and there is no indication of any tendency of this to spread. The testimony of Zittel who signed the sketch is not sufficient to corroborate Smith. Zittel admits that he cannot read mechanical drawings and the sketch is useful to him only in recalling the verbal disclosure made to him by Smith. He is therefore testifying solely from memory as to the disclosure four years after it is alleged to have been made and after he had frequently discussed the matter with Smith. His statement, moreover, of what Smith disclosed to him does not include all the details of the device. Marshall fully corroborates Smith as to the disclosure made to him on January 27, 1905, and this is the earliest date of possession of the invention that can be awarded to Smith. While, as pointed out above, there is no direct testimony corroborating the testimony of either Foley or Smith as to his alleged disclosure to the other, there are several circumstances which tend to corroborate Foley's testimony. In the first place E. A. Smith's testimony is discredited not only by reason of the 1902 sketch and his explanation with respect thereto, but by reason of two other exhibits. The first of these is Smith's note-book, in which appear two entries with respect to the present controversy. The first entry relates to Smith's alleged disclosure to Foley on January 24, 1905, and the second to the date when Smith says Foley told him that he had applied for patent. These entries, which are the only ones relating to the controversy or to Smith's alleged invention that appear in the book, are not placed where they would have been if they had been made on the dates in question. They appear neither in the space allotted to the days on which they are alleged to have occurred, nor directly below such space where they would be if the space was filled by other matter, but are entered, one in a space left blank by Sunday, and the other on the margin. The other exhibit is a printed copy of the regulation above referred to which bears in Smith's handwriting the following entry:

"*January 26, 1905.*

"1st information received from Mr. Boyhan as to the exact operation of the law.

"E. A. SMITH."

Smith testifies positively that the entry was made on the date which it bears. In rebuttal Foley called certain of the officials of the building department and several of the employees of the Brown Company by whom the regulation was printed, and their

testimony shows that it was impossible for Smith to have obtained a printed copy of the regulation earlier than February 21, 1905. Boyhan, who was chief elevator-inspector, testifies that Foley disclosed the invention in issue to him in the latter part of December, 1904, or early part of January, 1905, and that the day after the test at the *Times* Building on January 6, 1905, Foley told him that he (Foley) had explained the invention to E. A. Smith and that he told Foley he thought he was making a mistake in disclosing his invention to outsiders. The conduct of Foley and E. A. Smith was in marked contrast. Foley made no special haste in filing his application after the promulgation of the building department order. Three days after Smith's alleged disclosure to him he took to his attorney several sheets of well-worked-out drawings. He told Smith of the fact that he filed his application and informed him of the progress of the prosecution thereof. E. A. Smith, on the other hand, three days after his second interview with Foley, went to Marshall with a crude sketch and after a hasty interview instructed him to file an application as soon as possible, since he believed that Foley intended to steal his invention. The only reason he could give for that belief was that when he told Foley of his invention, the latter seemed surprised and opened his eyes very wide. Smith said nothing to Foley about having filed an application, and it was not until the interference was declared that Foley learned that this application had been filed. Foley states that the first time he met Smith after receiving the notice of the interference was at a test at the store of Stern Brothers, and that he then told Smith in exceedingly plain language what he thought of him. Miller, the engineer at Stern Brothers, states that Foley and Smith had a heated interview on the day of the test, and, while he was not near enough to them to hear what was said, Foley told him about half an hour afterward that the loud conversation was due to the fact that Smith "had infringed on the elevator apparatus which he had invented." In view of the testimony and the surrounding circumstances of the case and the conduct of the parties, it is held that as to the common subject-matter of the two cases E. A. Smith was not an original inventor but derived his knowledge thereof from Foley.

As to No. 496, E. A. Smith's earliest date having been fixed at January 27, 1905, there is no difficulty in disposing of this controversy. The record clearly discloses that Anderson, on January 30, 1905, took his drawings, which fully disclose the invention in issue, to Munn & Company, and that his application was prepared therefrom. Anderson is corroborated as to a disclosure of the invention as early as December, 1903, but discarding this evidence, it clearly appears that he was preparing the drawings which were taken to Munn & Company, and had them fully completed, prior to January 27, 1905, Smith's earliest date.

The record in this case is a voluminous one. We have examined the evidence called to our attention in the briefs of the respective parties with care, and can find no possible reason for disturbing the judgments of the Commissioner of Patents.

The decisions of the Commissioner in the respective cases are affirmed, and the clerk is directed to certify these proceedings, as by law required. Affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 5, 1908.

William M. Marcus, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the J. G. Haas Soap Company, of Prairie avenue and Benedict street, St. Louis, Mo., for registration of a trade-mark and a trade-mark registered to William M. Marcus, of Talladega, Ala., and the notice of said declaration sent by registered mail to the said William M. Marcus having been returned undelivered, notice is hereby given to the said William M. Marcus, his assigns or legal representatives, that if he or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 27, 1908.

George H. Taylor, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Frederick O. Hanson, of Springfield, Mass., and Holyoke, Mass., for registration of a trade-mark and a trade-mark registered to George H. Taylor, of 207 Monroe street, Chicago, Ill., and the notice of said declaration sent by the Patent Office by registered mail to the said George H. Taylor having been returned undelivered, notice is hereby given to the said George H. Taylor, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 25, 1908.

Douglas & Kingsland, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Geo. H. Baker, of 48–52 Edwards street, New Haven, Conn., for registration of a trade-mark and a trade-mark registered to Douglas & Kingsland, of Middletown, Conn., and the notice of said declaration sent by registered mail to the said Douglas & Kingsland having been returned undelivered, notice is hereby given to the said Douglas & Kingsland, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 6, 1908.

Mayer Brothers & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of B. Fischer & Company, of 371–375 Greenwich street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Mayer Brothers & Company, of New York, N. Y., and the notice of said declaration sent by registered mail to the said Mayer Brothers & Company having been returned undelivered, notice is hereby given to the said Mayer Brothers & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 6, 1908.

Iler and Burgweger, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Yonkers Brewery, of Yonkers, N. Y., for registration of a trade-mark and a trade-mark registered to Iler and Burgweger, of Kansas City, Mo., and the notice of said declaration sent by registered mail to the said Iler and Burgweger having been returned undelivered, notice is hereby given to the said Iler and Burgweger, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

THE OFFICIAL GAZETTE OF THE United States Patent Office.

[BY AUTHORITY OF CONGRESS.]

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Prints	4	No. 2,351 to No. 2,354, inclusive.
Reissues	2	No. 12,858 to No. 12,859, inclusive.
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TO CITIZENS OF THE UNITED STATES.

State.	Patents and Designs.	Trade-Marks, Labels, and Prints.	State.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	5	....	New Hampshire	1	....
Alaska, District of	....	....	New Jersey	30	6
Arizona Territory	....	....	New Mexico Ter't'y	....	....
Arkansas	2	....	New York	71	20
California	17	2	North Carolina	2	....
Colorado	8	4	North Dakota	....	....
Connecticut	25	2	Ohio	52	15
Delaware	....	....	Oklahoma	6	....
District of Columbia	2	....	Oregon	....	....
Florida	....	....	Panama	....	....
Georgia	3	1	Pennsylvania	58	9
Hawaii Territory	....	....	Philippine Islands	....	....
Idaho	3	....	Rhode Island	5	3
Illinois	57	4	South Carolina	1	....
Indiana	18	1	South Dakota	3	....
Iowa	19	1	Tennessee	....	1
Kansas	4	....	Texas	9	1
Kentucky	7	....	Utah	....	1
Louisiana	5	....	Vermont	2	....
Maine	1	1	Virginia	4	1
Maryland	10	3	Washington	1	2
Massachusetts	20	5	West Virginia	3	....
Michigan	16	1	Wisconsin	35	3
Minnesota	3	....	Wyoming	....	....
Mississippi	1	....	U. S. Army	....	....
Missouri	12	4	U. S. Navy	....	....
Montana	2	....	Total to citizens of the United States	527	91
Nebraska	4	....			
Nevada	....	....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Algeria	....	....	Netherlands	....	....
Austria-Hungary	7	1	Newfoundland	....	....
Belgium	1	....	New South Wales	....	....
Brazil	....	....	New Zealand	1	....
British West Indies	....	....	Norway	2	1
Canada	8	....	Queensland	2	....
Cape Colony	....	....	Russia	2	....
Chile	....	....	Scotland	....	....
China	....	....	South Australia	....	....
Cuba	....	....	Spain	....	....
Denmark	1	....	Sweden	1	1
Ecuador	....	....	Switzerland	4	....
England	13	2	Transvaal, South Africa	1	....
France	1	....	Western Australia	....	....
Germany	21	....			
Ireland	1	....	Total to citizens of foreign countries	67	5
Italy	1	....			
Mexico	....	....			

Amendment of Rules.

(ORDER No. 1,778.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., Sept. 23, 1908.

Acting under the provisions of section 483 of the Revised Statutes and with the approval of the Secretary of the Interior, Rule 47 of the Rules of Practice of the United States Patent Office is amended by canceling the words "a country foreign to" in lines 1 and 2 of the third paragraph thereof and inserting in their place the words *any country including* and by inserting after the word "ribbon" in lines 3 and 5 of the same paragraph the words *or tape*, so that the rule as amended shall read:

47. If the application be made by an executor or administrator of a deceased person or the guardian, conservator, or representative of an insane person, the form of the oath will be correspondingly changed.

The oath or affirmation may be made before any person within the United States authorized by law to administer oaths, or, when the applicant resides in a foreign country, before any minister, chargé d'affaires, consul, or commercial agent holding commission under the Government of the United States, or before any notary public, judge or magistrate having an official seal and authorized to administer oaths in the foreign country in which the applicant may be, whose authority shall be proved by a certificate of a diplomatic or consular officer of the United States, the oath being attested in all cases in this and other countries, by the proper official seal of the officer before whom the oath or affirmation is made, except that no acknowledgment may be taken by any attorney appearing in the case. When the person before whom the oath or affirmation is made is not provided with a seal, his official character shall be established by competent evidence, as by a certificate from a clerk of a court of record or other proper officer having a seal.

When the oath is taken before an officer in *any country including* the United States, all the application papers must be attached together and a ribbon *or tape* passed one or more times through all the sheets of the application, and the ends of said ribbon or *tape* brought together under the seal before the latter is affixed and impressed, or each sheet must be impressed with the official seal of the officer before whom the oath was taken, or, if he is not provided with a seal, then each sheet must be initialed by him.

This rule will become effective on December 1, 1908.

E. B. MOORE,
Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business September 22, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Sept. 8	Aug. 24	188
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Sept. 8	May 27	846
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Aug. 26	July 11	188
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Aug. 26	June 25	285
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Aug. 25	Aug. 3	284
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Aug. 24	June 1	461
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Aug. 13	Apr. 8	689
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Aug. 12	July 11	274
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Aug. 5	July 29	466
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Aug. 4	Apr. 13	581
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Aug. 3	July 6	697
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees; Plants, and Flowers.	Aug. 3	July 2	410
125	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Aug. 3	Mar. 21	736
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Aug. 1	June 12	482
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Aug. 1	May 11	545
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Aug. 1	Apr. 30	702
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	July 31	June 26	541
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	July 28	June 2	373
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	July 25	July 14	790
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	July 24	June 18	449
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	July 20	June 8	507

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Masonry and Concrete Structures; Tents, Canopies, Umbrellas, and Canes.	July 20	June 2	507
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	July 17	July 7	644
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	July 16	May 2	415
167	V. Bookbinding; Harvesters; Jewelry; Music.	July 16	Apr. 29	456
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	July 15	June 15	622
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	July 13	July 17	799
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	July 9	June 19	711
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	July 9	Apr. 24	543
332	X. Carriages and Wagons	July 2	June 17	643
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	July 2	May 26	701
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	July 1	July 1	558
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	June 30	May 15	599
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	June 25	May 22	712
321	XXXIX. Baths and Closets; Water Distribution.	June 20	Apr. 3	789
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	June 16	June 16	422
109	XVI. Telegraphy; Telephony	June 13	Apr. 22	518
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	June 6	Mar. 23	761
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	June 5	May 4	802
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	May 29	Mar. 6	518
238	XIX. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	May 2	May 23	497

Total number of applications awaiting action 22,711

161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks	Sept. 8	Aug. 14	739
	Designs	Sept. 17	July 30	133
	Labels and Prints	Sept. 19	Sept. 18	12

PATENTS

GRANTED SEPTEMBER 29, 1908.

899,495. DEVELOPING-BOX FOR PHOTOGRAPHIC-FILM CARTRIDGES. PHILLIPS ABBOTT, Oyster Bay, N. Y. Filed Feb. 14, 1907. Serial No. 357,321.



1. A photographic developing apparatus embodying a light tight and water tight casing, means within the casing to rotatably support a film cartridge, means to separate the opaque material from the film, means to lead the film from the cartridge through the interior of the casing substantially from end to end thereof, means supported by the casing near its ends to guide and change the direction of travel of the film and which support it at the points of change only, means whereby the photographic liquids may be poured into the casing and drawn therefrom.

2. A photographic developing apparatus embodying a light tight and water tight casing, a chamber connecting therewith, means to make said chamber light tight, means to introduce a film cartridge into said chamber, means to rotatably support the cartridge within said chamber, means to separate the opaque material from the film whereby it may be withdrawn from said chamber, means to lead the film from the cartridge through the interior of the casing substantially from end to end thereof, means supported by the casing near its ends to guide and change the direction of travel of the film and which support it at the points of change only, means whereby the photographic liquids may be poured into the casing and drawn therefrom.

3. A photographic developing apparatus embodying a light tight and water tight casing, means to rotatably support a film cartridge, means to retard the rotation of the film cartridge, means to separate the opaque material from the film, means to lead the entire film continuously from the cartridge through the interior of the casing, means supported by the casing near the ends thereof which guide and support the film, means whereby the photographic liquids may be poured into the casing and drawn therefrom.

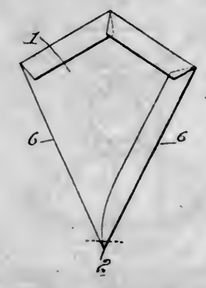
4. A photographic developing apparatus embodying a light tight casing, a chamber connecting therewith, means to support a film cartridge within the chamber, means to obstruct the passage of liquid from the casing into the chamber, means to introduce the photographic liquids into the casing and to draw the same therefrom.

5. A photographic developing apparatus embodying a light tight and water tight casing, means to rotatably support a film cartridge, means to retard the rotation of the film cartridge, means to lead the film under tension from the cartridge through the interior of the casing substantially from end to end thereof, means supported by the casing near its ends for the support of the film, means whereby the photographic liquids may be poured into the casing and drawn therefrom.

[Claims 6 to 21 not printed in the Gazette.]

899,496. BELLOWS PACKAGE FOR DISTRIBUTING POWDER. SOREN S. ADAMS, Plainfield, N. J. Filed Dec. 19, 1907. Serial No. 407,127.

1. A bellows package comprising a collapsible hermetically sealed package formed of flexible, dust-proof material and having a corner adapted to be cut off to provide an exit for the contents of the package, a collapsible expander device within the package formed of a frame of substantially the same shape as the package and adapted to hold it substantially flat, and a spring device carried by said frame and serving to press the sides of the package in opposite directions, whereby when the said sides are forced toward each other the spring device will be collapsed.



2. A bellows package comprising an angular flexible package tapered toward one end and hermetically sealed, the tapered end of the package being adapted to be cut off to form an outlet for the contents of the package, an expander device within the package and having an angular frame to hold the package in its angular shape, and a spring device carried by said angular frame and adapted to expand the package.

3. A bellows package comprising an angular flexible package tapered toward one end and hermetically sealed, the tapered end of the package being adapted to be cut off to form an outlet for the contents of the package, an expander device within the package and consisting of an angular frame, and a spring device within the frame, the spring and the frame being formed from a single piece of spring wire.

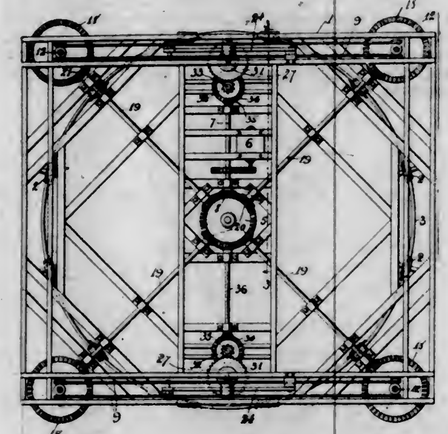
4. A bellows package comprising an angular, flexible, flat package formed from a single piece or blank of flexible material impervious to dust, said package being tapered toward one end and hermetically sealed, the tapered end of the package being adapted to be cut off to form an outlet for the contents of the package, an expander device within the package and consisting of an angular frame of substantially the same outline as the package and serving to hold the package in its flat condition, and a coil spring arranged in the middle of said frame and adapted to force the sides of the package from each other.

899,497. AMUSEMENT DEVICE. CHARLES ADELHELM, Chicago, Ill., assignor to himself and Patrick T. Harmon, Chicago, Ill. Filed Sept. 7, 1907. Serial No. 391,808.

1. A device of the kind specified comprising a frame revolubly supported on a circular track, a motor rotating the same, a walking beam pivotally supported on said frame, a cam actuated by said motor and operatively engaging said walking beam to rock the same, bearings supported upon the end portions of said walking beam, platforms disposed on vertical shafts supported by said bear-

ings and driving gear actuated by said motor and rotating said shafts.

2. A device of the kind specified comprising a frame revolubly supported on a circular track, a motor rotating the same, a walking beam pivotally supported on said frame, a cam actuated by said motor and operatively engaging said walking beam to rock the same, bearings pivotally supported upon the end portions of said walking beam, platforms disposed on vertical shafts passing through said bearings, collars on said shafts between their ends and bearing upon the upper faces of said bearings to support said platforms, and drive-gear disposed in operative relation to said shafts and said motor to transmit rotary movement to the former.

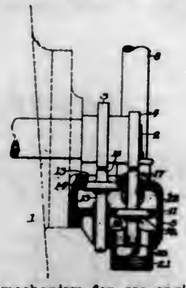


3. A device of the kind specified comprising a frame revolubly supported on a circular track, a motor rotating the same, a walking beam pivotally supported on said frame, a cam actuated by said motor and operatively engaging said walking beam to rock the same, parallel depending links pivotally secured to the ends of said walking beam, vertical sleeves pivotally secured between their ends to the lower ends of said links, revoluble platforms disposed on vertical shafts passing through said sleeves, collars disposed upon the said vertical shafts between their ends and engaging said sleeves to support said platforms, anti-friction devices interposed between said collars and said sleeves, and drive-gear disposed in operative relation to said vertical shafts and said motor to impart rotary movement to the former.

4. A device of the kind specified comprising a main rotating frame equipped at diametrically opposite points with walking beams, a motor actuating said platform, means actuated by said motor and rocking said walking beams, passenger carriers disposed on vertical shafts rotatably mounted upon the free ends of said walking beams and adapted to be vertically reciprocated by the latter, means maintaining said shafts vertical, and drive gear disposed in operative relation to said shafts and said motor to rotate the former.

5. A device of the kind specified comprising a main rotating frame equipped at diametrically opposite points with walking beams, a motor actuating said platform, means actuated by said motor and rocking said walking beams, passenger carriers disposed on vertical shafts rotatably mounted upon the free ends of said walking beams and adapted to be vertically reciprocated by the latter, means maintaining said shafts vertical, and drive gear disposed in operative relation to said shafts and said motor to rotate the former, said means actuating said walking beams being disposed to impart respectively opposite movement to the latter.

899,498. STARTING MECHANISM FOR GAS-ENGINES. WILLIAM K. ANDREW, Milwaukee, Wis., assignor to International Harvester Company, a Corporation of New Jersey. Filed Nov. 26, 1906. Serial No. 345,245.



1. A starting mechanism for gas engines, including, in combination, a supplemental valve casing having an annular chamber therein communicating with a supply of compressed air and the engine cylinder, an inlet valve controlling the admission of air to said chamber and opening against the pressure of air from the source of supply, a supplemental exhaust port communicating with said chamber and the engine cylinder, a valve controlling said exhaust port and opening against the pressure of air in said chamber, said valves being opened by a moving part of the engine and closed by the pressure of air.

2. A starting mechanism for gas engines, including, in combination, a cam-shaft, a supplemental valve casing mounted below said cam-shaft and having an annular chamber communicating with a supply of compressed air and the engine cylinder, an inlet valve controlling the admission of air to said chamber and opening against the pressure of air from the source of supply, a supplemental exhaust port communicating with said chamber and the engine cylinder, a valve controlling said exhaust port and opening against the pressure of air in said chamber, cams secured to said cam-shaft and operative to open said valves at regular intervals, said valves being closed by the air pressure.

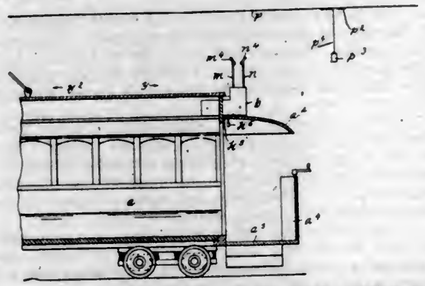
3. A starting mechanism for gas engines, including, in combination, a cam-shaft deriving motion from the engine shaft, a supplemental valve casing mounted below said cam-shaft and having an annular chamber communicating with a supply of compressed air and the engine cylinder, an inlet valve controlling the admission of air to said chamber, a supplemental exhaust port communicating with said chamber and the engine cylinder, a valve controlling said exhaust port, a cam secured to said cam-shaft and adapted to open said exhaust port valve once during each revolution of said cam-shaft, a cam secured to said cam-shaft and adapted to open said inlet valve twice during each revolution of said cam-shaft, said valves being closed by means of the pressure of air within said valve casing.

4. A starting mechanism for gas engines, including, in combination, a cam-shaft deriving motion from the engine shaft, a supplemental valve casing mounted below said cam-shaft and having an air chamber, an air conduit connecting said chamber with an engine cylinder, an air conduit connecting said chamber with a source of compressed air, a valve controlling the admission of air to said chamber, a cam secured to said cam-shaft and operative to open said valve at proper intervals, an exhaust valve controlling a supplemental exhaust port communicating with said chamber and the engine cylinder, and a cam secured to said cam-shaft and operative to open said exhaust valve at proper intervals, said valves being held in contact with said cams by means of the pressure of air within said casing.

899,499. STREET-SIGNAL FOR CARS. NEWELL G. AUGIR, Brooklyn, N. Y. Filed June 28, 1907. Serial No. 381,188.

1. In an apparatus of the class described, a casing, two rollers mounted therein, said rollers being composed of

central stationary parts, and drums mounted thereon, and between which are placed oppositely operating tension devices, said drums being adapted to rotate on the central stationary parts, ratchets and pins carried by said drums, a disk loosely mounted on an end extension of one of said stationary parts, said disk being geared in connection with the opposite drum, pawls operating in connection with said ratchets, said disk being also provided with spaced pins, and devices operating in connection with the pins on one of said drums and with the pins on said disk to rotate both of said rollers.



2. In an apparatus of the class described, a casing, rollers mounted therein, opposed ratchets and spaced pins carried by said rollers, a disk loosely mounted adjacent to one of said rollers and geared in connection with the other of said rollers, spaced pins carried by said disk, a flexible sheet mounted on said rollers, means co-acting with the pins of one drum to operate the sheet in one direction, means co-acting with the pins of the disk to operate the sheet in the opposite direction and a retarding device operating in connection with the pins of one of said rollers.

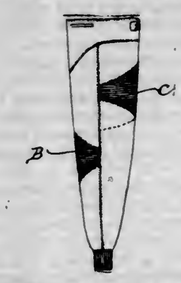
3. In a street signal apparatus for cars, a casing, parallel stationary shafts mounted in said casing, rollers mounted on said shafts, a flexible sheet wound on said rollers, a disk mounted on one of said shafts, pins carried by one of said rollers and by said disk, means operating in connection with the pins of said roller to give said roller a step by step rotation when the car is going in one direction and means operating in conpection with the pins of the disk to give said disk a step by step rotation when the car is going in the opposite direction, said disk being geared in connection with the opposite roller.

4. In a street signal apparatus for cars, a casing, parallel stationary shafts mounted in said casing, rollers mounted on said shafts, a flexible sheet wound on said rollers, a disk mounted on one of said shafts, pins carried by one of said rollers and by said disk, means operating in connection with the pins of said roller to give said roller a step by step rotation when the car is going in one direction and means operating in connection with the pins of the disk to give said disk a step by step rotation when the car is going in the opposite direction, said disk being geared in connection with the opposite roller, spaced pins on said opposite roller and a retarding device mounted adjacent to the last named roller and adapted to operate in connection with said pins.

5. In an apparatus of the class described, a casing, rollers mounted therein, opposed ratchets and spaced pins carried by said rollers, a disk loosely mounted adjacent to one of said rollers and geared in connection with the other of said rollers, spaced pins carried by said disk, a flexible sheet mounted on said rollers, means co-acting with the pins of one drum to move the sheet in one direction, and means co-acting with the pins of the disk to move the sheet in the opposite direction.

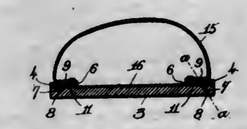
899,500. DRAWERS. ELI S. BARTRAM, Selma, Ala., assignor of one-half to J. M. Baker, Selma, Ala. Filed Sept. 26, 1905, Serial No. 280,219. Renewed Mar. 24, 1908. Serial No. 422,962.

A pair of drawers composed of non-elastic material, a diamond shaped piece of elastic fabric inserted in the knee portion of each leg having its horizontal points ending at the side seams and its vertical points ending centrally of the front portion of the drawers above and below the



knees, and a bifurcated diamond shaped piece of elastic fabric inserted in the seat having its horizontal points ending at the side seams, as set forth.

899,501. TURNED SHOE. FRANK A. BEAL, Haverhill, Mass., assignor to Frank A. Beal and Willis H. Hanscom, Haverhill, Mass., Copartners as Beal & Hanscom. Filed Apr. 9, 1908. Serial No. 426,058.

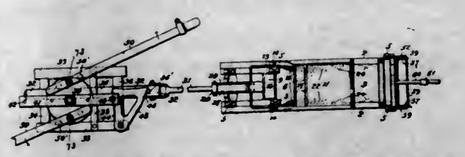


1. A turned shoe comprising a sole having a welt attached thereto by stitches that pass through both the welt and the sole, and an upper having its edges overlying the top of the inner edge of the welt and stitched thereto by stitches which enter the welt at or near the lower inner corner thereof and pass upwardly through the welt and upper in an inclined direction and emerge on the upper side of the upper at a point outside of the stitches that unite the welt to the sole.

2. A turned shoe comprising a sole and a welt sewed together by stitches which incline downwardly and outwardly from near the inner edge of the top of the welt to near the outer edge of the sole at the bottom, and an upper stitched to the welt by stitches that cross or interlock with the stitches that unite the welt to the sole.

3. A turned shoe comprising a sole having a welt sewed to the top thereof by stitches which extend through the welt and sole, a canvas lining for the sole, said lining overlying the inner edge of the welt, and an upper having its edges overlying the top of the inner edge of the welt and stitched thereto by stitches which enter the welt at or near the lower inner corner thereof and pass upwardly through the welt and upper in an inclined direction and emerge on the top of the upper at a point outside of the stitches that unite the welt to the sole, said two lines of stitches crossing each other at a point within the body of the welt.

899,502. BALING-PRESS. ABIJAH B. BENNETT, Opelika, Ala. Filed Mar. 6, 1907. Serial No. 360,996.



1. In a device of the class described, a baling chamber, a reciprocating plunger and plunger operating mechanism, in-

cluding a reciprocable shaft mounted to move only in the direction of its length, a cam member to engage the shaft, and a rotary driven member provided with tappets to actuate the cam member to move the shaft in one direction, and with tappets to engage and return the shaft.

2. In a device of the class described, a baling chamber, a reciprocating plunger and plunger operating mechanism including a reciprocable shaft mounted to move only in the direction of its length, a cam member to engage the shaft, and a rotary driven member provided with tappets to actuate the cam member to move the shaft in one direction and with tappets to engage and return the shaft, said tappets being so arranged with relation to each other that the shaft is given a continuous reciprocatory movement.

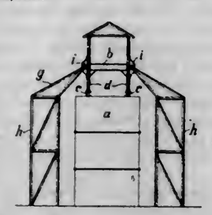
3. In a device of the class described, a baling chamber, a plunger having a continuous reciprocatory movement, and plunger operating mechanism including a reciprocable shaft, provided with a tappet arm and a tappet pin, a swinging cam member having two cam surfaces, one of said surfaces being to engage the tappet pin, and a rotary driven member provided with tappets to engage one cam surface of the swinging cam member to actuate the cam member to move the shaft in one direction, and with tappets to engage the tappet arm and return the shaft.

4. In a device of the class described, a baling chamber, a reciprocating plunger and plunger operating mechanism, including a reciprocable shaft, a cam member to slidably engage the shaft, and a rotary driven member provided with tappets to actuate the cam member to move the shaft in one direction and with tappets to engage and return the shaft, said cam member being mounted independently of the rotary driven member.

5. In a device of the class described, a baling chamber, a reciprocating plunger, a plunger rod, an anti-friction roller journaled in the plunger to support the same and plunger operating mechanism including a reciprocable bar, a rotary driven member to actuate said bar, a lever pivoted intermediate its ends, a pitman connecting the lever and the bar, and a link connection between the lever and the journal of the anti-friction roller.

[Claims 6 to 22 not printed in the Gazette.]

899,503. IRON STRUCTURE FOR OVEN-BUILDINGS. KARL BERNHARD, Berlin, Germany. Filed Mar. 20, 1907. Serial No. 363,336.



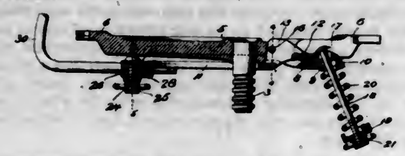
1. The combination with an oven, of a framework located above the oven, and rolling connections interposed between the oven and the framework.

2. The combination, with an oven and the building wherein such oven is contained, said building including a roof projecting above the oven, of a supporting framework having a loose connection with the top of the oven and arranged in guiding engagement with and between parts of the roof.

3. The combination, with the oven, of a supporting framework resting on the oven and having a loose connection therewith, and the building containing said oven and provided with a roof having members projecting towards each other and in sliding engagement with the said framework to guide the same vertically.

4. The combination, with the oven, of a supporting framework resting thereon loosely and comprising sections connected with each other loosely, so as to be capable of movement relatively to one another.

899,504. REVOLVING CHAIR. HARRY W. BOLENS, Port Washington, Wis. Filed Jan. 6, 1905. Serial No. 239,836.



1. The combination of a seat post, a spider frame mounted thereon and provided in advance thereof with a stirrup, a rocker frame pivoted in the spider frame and extending opposite the stirrup, a tension device connecting the stirrup and rocker frame and a back frame carried by the rocker frame.

2. The combination, of a swivel-post, a spider-frame mounted thereon and provided in advance thereof with a stirrup, a rocker-frame pivoted in the spider-frame and extending opposite the stirrup, a tension device connecting the stirrup and rocker-frame, and means for securing the back-standard to the rocker-frame.

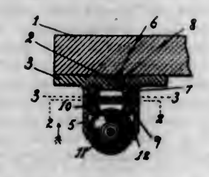
3. The combination, of a swivel-post, a spider-frame mounted thereon and provided in advance thereof with a stirrup, a rocker-frame pivoted in the spider-frame and having an extension overlapping the stirrup, a spring carrying tension-bolt passed through the stirrup and said extension, and provided with an adjusting means, and means for securing a back-standard to said rocker-frame.

4. The combination, of a swiveled post, a spider-frame mounted thereon, a lever like rocker-frame receiving the post and fulcrumed on the spider-frame in advance of the post, opposite grooves formed in the underside and at opposite sides of the lever like rocker-frame, a similarly grooved clamp-plate thereunder, a set-bolt connecting the two, and a tension-device for the lever like rocker-frame and arranged in advance of the post.

5. The combination, of a chair-spider having forwardly disposed arms, a transverse depending stirrup, a lever like rocker-frame intermediately fulcrumed in the spider-frame and at its front end overlapping said stirrup, a tension device connecting the stirrup and front end of the lever like rocker-frame, and means for securing the back-standard to the rocker-plate.

[Claims 6 and 7 not printed in the Gazette.]

899,505. CASTER. ANNIE F. W. BOWEN, San Francisco, Cal. Filed Aug. 21, 1905, Serial No. 274,979. Renewed Mar. 7, 1908. Serial No. 419,765.



1. A caster provided with a main ball adapted to roll upon the ground, a ring of balls around the top of said main ball, a plate supported upon said ring of balls, a second ring of balls supported upon said plate, and a body inclosing said main ball, plate, and rings of balls, and having a circular groove to confine the upper ring of balls in a circular path, the plate being free to rotate between the two rings of balls, substantially as described.

2. A caster having a sleeve, a main ball fitting snugly within the sleeve, a ring of balls in the upper portion of the sleeve, a second ring of balls upon the main ball, and a plate freely movable between the two rings, said plate and sleeve being conformed to confine the upper ring of balls in a circular path, and said plate, sleeve, and main ball being conformed to confine the lower ring of balls in a circular path substantially as described.

899,506. BOX-MACHINE. LUTHER P. BROWN, Chicago, Ill. Filed Oct. 27, 1904. Serial No. 230,212.



1. A paper box folding machine comprising an endless conveying apron, and an endless fly having one edge hinged longitudinally to said apron which folds over the outer surface of the apron and then returns again to its original position during a portion of the cycle described thereby, means for folding said fly and means for returning the same to its original position.

2. A paper box folding machine comprising a conveying apron having the half portion on one side of its center of width adapted to be folded over onto the other half of its outer surface during a portion of the cycle described thereby, a former engaged by said apron near the point where the apron makes its fold, means for automatically folding said belt, and means for returning said belt to its original position.

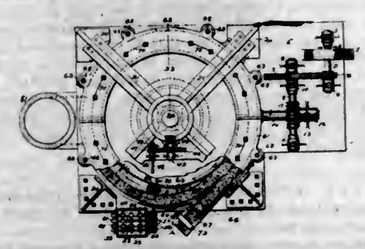
3. A paper box folding machine comprising an endless conveying apron one side edge of which is adapted to be folded transversely over onto the outer surface during a portion of the cycle described thereby, and a former engaged by said apron near the point where the apron commences its fold, and means for folding said belt.

4. A paper box folding machine comprising an endless conveying apron, and an endless fly having one edge hinged longitudinally to said apron which folds over the outer circumference of the apron and then returns again to its original position during a portion of the cycle described thereby, and a former engaged by said apron, near the point where said apron commences its fold, means for folding said fly, and means for returning the same to its original position.

5. A paper box folding machine comprising a conveying apron having the half portion on one side of its center of width adapted to be folded over onto the other half of its surface during a portion of the cycle described thereby, a former engaged by said apron near the point where the apron makes its fold, a friction wheel journaled to the side of said former opposite the side engaged by the folding portion of the apron, and means for folding said belt.

[Claims 6 to 13 not printed in the Gazette.]

899,507. APPARATUS FOR ROASTING AND BRIQUETING ORES. CARL F. BUCK, New York, N. Y., assignor of one-half to August Heckscher, Huntington, N. Y. Filed Sept. 21, 1907. Serial No. 393,930.



1. In an ore roasting apparatus the combination with a rotating table and a grate carried thereby, of means for depositing the raw ore on the table between the grate bars and the partly roasted ore.

2. In an ore roasting apparatus the combination with a rotating table and a grate thereon, of means for moving the partly roasted ore away from the grate and means for depositing the raw ore onto the rotary table between the partly roasted ore and the grate.

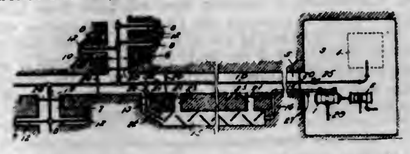
3. In an ore roasting apparatus the combination with a rotary table, a central air drum and means for depositing raw ore on the table, of means for deflecting the partly roasted ore outwardly on the table so as to permit the raw ore to be deposited on the table intermediate the center of the air drum and the partly roasted ore.

4. In an ore roasting apparatus, the combination with a table a central air drum, and means for depositing raw ore on said table, of means for deflecting the partly roasted ore outwardly on the table, so as to permit the raw ore to be deposited on the table between the center of air drum and the partly roasted ore, and means for discharging the roasted ore.

5. In an ore roasting apparatus, the combination with a rotary air drum having spaced flanges the lower one of which forms a table for the ore, of means for depositing the ore on said table within the belt or stream of partly roasted ore, means for deflecting the partly roasted ore outwardly and means for ejecting the roasted ore.

[Claims 6 to 23 not printed in the Gazette.]

899,508. MEANS FOR VENTILATING MINES AND REMOVING DUST AND GASES THEREFROM. FRANK T. BYERS, Mount Pleasant, Pa. Filed Mar. 16, 1908. Serial No. 421,328.



1. Apparatus for the ventilation of mines and the removal of dust and gases therefrom, comprising means for closing the entrance of the mine, means for reducing the atmospheric pressure therein, means for introducing air at a higher pressure into the inner ends of the chambers or rooms, thereby causing drafts from the rooms into the headings of the mine, and means for conducting the dust and gases from the headings into dust settling and collecting chambers.

2. Apparatus for the ventilation of mines and the removal of dust and gases therefrom, comprising means for drawing the dust and gases in the inner ends of the rooms or passages into dust channels, means for settling and collecting the dust, and means for expelling the gases from said settling chamber.

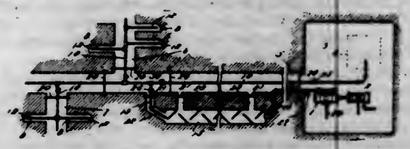
3. In a system for the ventilation of mines and the removal of dust and gases therefrom, the combination with a system of conduits or channels opening into the inner ends of the several rooms or chambers of the mine, of a settling and collecting chamber connected with said conduits, and an exhaust pump connected with said chamber and adapted to withdraw the dust and gases from the rooms into the settling chamber and to exhaust the gases therefrom.

4. In a system for the ventilation of mines and the removal of dust and gases therefrom, the combination with doors adapted to seal the entrances of the mine headings, of a system of conduits or channels opening into the inner ends of the several rooms or chambers of the mine, a settling and collecting chamber connected with said conduits, an exhaust pump connected with said chamber and adapted to withdraw the dust and gases from the rooms into the settling chamber and to exhaust the gases therefrom, and means whereby said conduits may be placed in communication with the mine shaft or with the exhaust pump.

899,509. METHOD OF REMOVING DUST AND GASES FROM MINES. FRANK T. BYERS, Mount Pleasant, Pa. Filed July 7, 1908. Serial No. 442,317.

1. The method of removing dust and gases from mines, which consists in reducing the atmospheric pressure within the mine, introducing blasts of air at a plurality of points within the mine, thereby causing strong drafts to

traverse and drive out the dust and gases from the passages of the mine, and for removing said dust and gases.

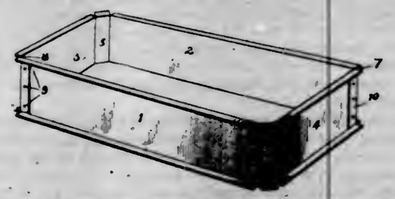


2. The method of removing dust and gases from mines, which consists in reducing the atmospheric pressure within the mine, introducing air at a higher pressure into the mine in the vicinity of the inner ends of the rooms or passages of the mine, thereby creating strong drafts from the rooms into the headings, and causing the dust and gases to pass into exhaust channels.

3. The method of removing dust and gases from mines, which consists in sealing the mine, withdrawing the air and gases and reducing the atmospheric pressure therein, introducing air at a higher pressure than said reduced pressure at a plurality of points within the mine, thereby causing strong drafts to traverse and drive out the dust and gases from the passages of the mine into exhaust channels.

4. The method of removing dust and gases from mines, which consists in reducing the atmospheric pressure within the mine, introducing air at a higher pressure into the mine in the vicinity of the inner ends of the rooms or passages of the mine, thereby causing strong drafts from the rooms into the headings, and causing the dust and gases to pass into dust settling and collecting chambers.

899,510. SLIP-BOX. LEANDER CAIN, Richmond, Ind. Filed Sept. 6, 1907. Serial No. 391,590.

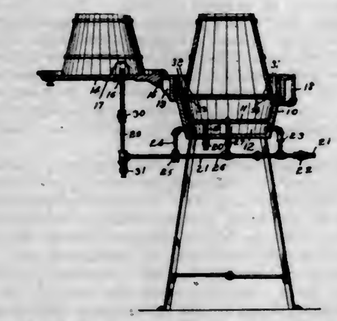


A sheet-metal slip-box for forming sand-molds, the combination of the sides and ends formed integral with each other with two of the oppositely disposed corners formed angular, the single piece of material of which said parts are formed being overlapped at one of the right angular corners and riveted, a reinforcing angular strip riveted on the outside around the other right angular corner, flanges projecting out at right angles from both edges of the box and extending entirely therearound and formed integral therewith, and means for reinforcing each of said flanges, each comprising a rod extending entirely around the box and inclosed by the respective flanges, all substantially as shown and described and for the purposes set forth.

899,511. DEVICE FOR PARAFFINING VESSELS. EDWARD C. CAPPER, Alpha, Iowa. Filed Mar. 13, 1908. Serial No. 420,939.

1. In a device of the class described, the combination of an open topped receptacle, a partition spaced apart from the bottom of the receptacle, said vessel above the partition being designed to contain melted paraffin or the like, means for introducing a heating medium into the space between the partition and the bottom of the receptacle, means for supporting an inverted vessel at the top of the receptacle and above that portion of the receptacle designed to contain the paraffin, and a pipe extending upwardly through the partition to a point a slight distance above it, a valve in said pipe, and means for supplying a heating medium under pressure to the pipe.

2. In a device of the class described, the combination of an open topped receptacle, a partition in the receptacle spaced apart from the bottom, the receptacle above the partition being designed to contain paraffin or the like, a pipe designed to carry a heating medium under pressure, a branch pipe connected therewith and communicating with the space between the partition and the bottom of the receptacle, a second pipe communicating with the space between the partition and the bottom of the receptacle and leading to a point of discharge, a valve therein, means for supporting an inverted vessel at the top of the receptacle above the space for the paraffin, a branch pipe communicating with the first mentioned pipe and extended upwardly through the partition, a valve therein, and a branch pipe communicating with the space above the partition and leading to a point of discharge, and a valve therein.



3. In a device of the class described, the combination of an open topped receptacle, a cover hinged to the receptacle, means for supporting the cover in a substantially horizontal position at one side of the receptacle, said cover being provided with an opening and a pipe for supplying the heating medium, said pipe being so positioned that when the cover is in its open position, the pipe will project through the opening.

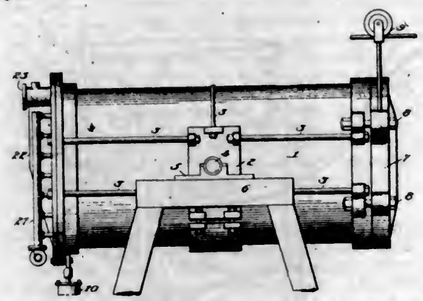
4. In a device of the class described, the combination of an open topped receptacle, a partition arranged above the bottom of the receptacle to form a steam chamber between the partition and the bottom of the receptacle, a steam pipe, a valve therein, a branch connected with the steam pipe to discharge into the said steam chamber, an exhaust pipe leading from the steam chamber, a valve therein, a branch pipe connected with the steam pipe and extended upwardly through the bottom of the receptacle, and through the partition, a valve therein, a pipe extending through the partition and through the bottom of the receptacle, a valve at its lower end, a branch pipe connected with the steam pipe and extended upwardly at one side of the receptacle, a valve therein, a pet-cock at the lower end of said branch pipe for drawing off water of condensation, a cover hinged to one side of the vessel and having an opening therein, said cover in one position being extended over the receptacle, and in its other position being extended horizontally outward with the last mentioned branch pipe projected upwardly through the opening in the cover, and a cap pivoted to the cover adjacent to the opening therein.

899,512. EXTRACTION APPARATUS. CLARENCE M. CHAMBERLAIN, Pueblo, Colo. Filed July 13, 1907. Serial No. 383,643.

1. An extraction apparatus comprising a vessel having a body and separable heads, superposed filter-beds in said vessel dividing the same into compartments, and a common distributing chamber for said compartments integral with one of said heads.

2. An extraction apparatus comprising a vessel, superposed filter-beds therein dividing the same into compartments, a common distributing chamber for said compartments, and inlet seals between the distributing chamber and said compartments.

3. An extraction apparatus comprising a vessel having a body and separable heads, superposed filter-beds in said vessel dividing the same into compartments, a common distributing chamber for said compartments integral with one of said heads, and separate outlets for the filtered liquid.

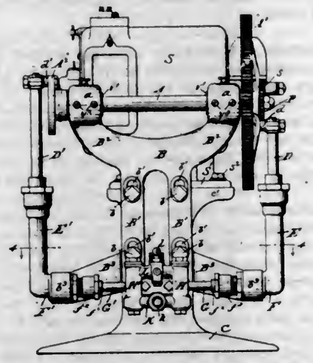


4. An extraction apparatus comprising a substantially liquid-tight vessel having a body and separable heads, means for inclining the same, superposed filter-beds dividing said vessel into compartments, and a common distributing chamber for said compartments integral with one of said heads.

5. An extraction apparatus comprising a substantially liquid-tight vessel, means for inclining the same, superposed filter-beds dividing said vessel into compartments, a common distributing chamber for said compartments and inlet seals between the distributing chamber and said compartments.

[Claims 6 and 7 not printed in the Gazette.]

899,513. PUMP. JOSEPH H. CHAMP, Cleveland, Ohio. Filed Sept. 25, 1905. Serial No. 279,917.

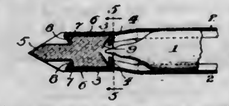


1. In a pump, the combination of a suitable base, pumping mechanism vertically adjustable on one face of said base, such mechanism including a driving shaft and a gear mounted thereon; and a motor transversely adjustable upon the top of said base and bearing a pinion adapted to mesh with said pump gear.

2. In a pump, the combination of a suitable base, a bracket vertically adjustable on one face of said base; pumping mechanism wholly supported by said bracket, such mechanism including a driving shaft and a gear mounted on said shaft; and a motor transversely adjustable on the top of said base, said motor having its armature shaft alined with said driving shaft and provided with a pinion adapted to mesh with said gear.

3. In a pump, the combination of a suitable base, a bracket vertically adjustable on one face of said base; two valve chambers mounted on said bracket, said chambers having their corresponding extremities respectively connected with an inlet and an outlet passage and being provided with horizontally extending lateral connections intermediate of such extremities; plunger cylinders having horizontally extending portions respectively rotatively secured to said lateral connections, said valve chambers having valve seats respectively to opposite sides of said connections; valves respectively adapted to such valve seats; a driving shaft mounted in said bracket; a gear mounted on said driving shaft; plungers in said cylinders eccentrically connected with said shaft so as to be reciprocated thereby; an idle gear mounted on said bracket and meshing with said driving-gear; and a motor transversely adjustable on the top of said base, said motor having its armature shaft alined with said driving shaft and provided with a pinion adapted to mesh with said idle gear.

899,514. SWITCH-BOARD SIGNAL-LAMP. EDWARD B. CRAFT, Wilmette, Ill., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 1, 1907. Serial No. 355,184.



1. In an incandescent electric lamp, the combination with a base of insulating material, said base having channels in its lateral surface, of a bulb and terminal plates secured to said bulb and base, said plates being provided with tongues lying in channels approximately flush with the tops thereof and with inturned portions engaging said base at each end of the channels to prevent the displacement of said tongues.

2. In an incandescent electric lamp, the combination with a base of insulating material, said base having rectangular channels in its lateral surface, of a bulb and terminal plates secured to said bulb and base, said plates being provided with narrowed tongues lying in said channels, approximately flush with the tops thereof, said plates also having inturned portions upon each side of the tongues, and said tongues having inturned lips at their rear ends, for engaging said base at each end of the channels to securely hold said parts in their assembled position.

3. In an incandescent electric lamp, the combination with a base of insulating material, said base having channels in its lateral surface, the bottom wall of each channel being undercut at each end, of a bulb, and terminal plates carried by said bulb, said plates being provided with a narrowed tongue lying in said channel, lips being provided at each end of said tongue extending in said undercut ends.

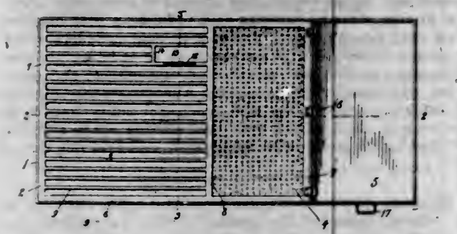
4. In an incandescent electric lamp, the combination with a base of insulating material, said base having a conical socket in its front end and channels in its lateral surface, the bottom wall of each channel being undercut at its rear end, of a bulb and terminal plates carried by said bulb, said plates being provided with narrowed tongues lying in said channels, the rear end of said tongues having inwardly turned lips lying in said undercut ends of the base and said plates having inturned shoulders lying in said conical socket.

899,515. SHOE-CLEANER. LAWSON L. DE LAPP, Brookings, S. D. Filed Jan. 20, 1908. Serial No. 411,717.

1. A device of the character described comprising a pan, a removable frame or body in the same having at one end an open grate consisting of longitudinally-extending cleaning bars, one of the latter being enlarged to provide a shoe shank cleaner, a brush mat arranged at the other end of the frame or body, a cover hinged to one end of the body and adapted to swing over the mat, and a foot piece projecting from said cover.

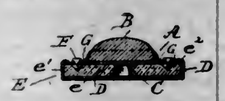
2. A device of the character described comprising a rectangular pan, cushioning feet upon the bottom of the lat-

ter, a frame or body removably arranged in the pan and consisting of side, end, and intermediate bars of T-shape in cross-section, longitudinally-extending cleaner bars formed integral with the intermediate T-bar and one of the end T-bars, one of said bars being enlarged to provide the shoe shank cleaner and the bar immediately in front of



the latter being shortened, a brush mat arranged in one end of the frame or body and having a flange around its bottom to project under the flanges of the T-bars of said frame or body, a flanged cover for the mat hinged to one end of the body, and a foot piece or loop projecting from the cover, substantially as described.

899,516. MOUNTING. GEORGE W. DOVER, Cranston, R. I. Filed Feb. 5, 1908. Serial No. 414,352.



1. In a mounting for jewelry, the combination with a setting, of a mounting body of softer material than the setting, means upon the base of the setting for uniting the body with the setting, and a box in which the body is mounted.

2. In a mounting for jewelry, the combination with a setting, of a body of greater softness than the setting and provided with an opening, a tubular projection on the base of the setting extending into the opening of the body and held in engagement therein by an expanded portion of the projection, and a box inclosing the bottom and side of the body.

3. In a mounting for jewelry, the combination with a cup setting, of a mounting body provided with an angular opening, and a pyramidal shaped tubular projection upon the base of the setting extending within the opening and engaging the body.

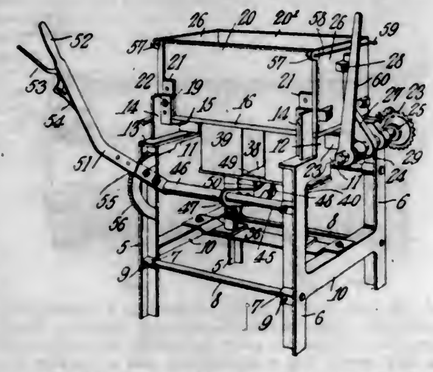
4. In a mounting for jewelry, the combination with a setting, of a body of greater softness and of greater area than the setting provided with a series of marginal cavities, means upon the setting for engaging the setting with the upper face of the body, and a box inclosing the bottom and sides of the body.

5. In a mounting for jewelry, the combination with a metallic cup setting, of a body of greater softness than the setting and provided with an opening, a tubular projection upon the base of the setting extending into the opening of the body and held in engagement therein by an expanded portion of the projection, and a box inclosing the bottom and side of the body provided with an inturned flange for engaging the face of the body.

[Claims 6 to 8 not printed in the Gazette.]

899,517. BLOCK-MOLDING MACHINE. ELMORE N. EDWARDS, Alva, Okla. Filed Apr. 22, 1907. Serial No. 369,643.

1. A block molding machine including a supporting frame, a mold box supported on the frame and having stationary and movable walls, a bed plate, adjustable longitudinal and transverse brackets slidably mounted on the bed plate beneath the mold, operating shafts journaled in said brackets and disposed parallel with the walls of the mold, said shafts being provided with intermeshing beveled gears, arms connecting the shafts and movable walls, a lever operatively connected with one of the shafts for opening and closing the movable walls of the mold, and means for locking the brackets in adjusted position.



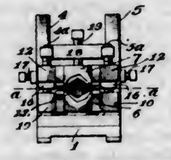
2. A block molding machine including a frame, a mold box supported on the frame and provided with stationary and movable walls, a bed plate, longitudinal and transverse brackets adjustably secured to the bed plate and having elongated slots formed therein, operating shafts journaled in the brackets and provided with intermeshing beveled gears, arms carried by the shafts and adjustably connected with the adjacent walls of the mold, an operating lever for rotating one of the shafts thereby to open and close the movable walls, fastening devices extending through the slots in the brackets, and engaging the bed plate for locking the brackets in adjusted position, and a locking bail pivotally mounted on the stationary wall and engaging the movable walls for locking said walls in assembled position.

3. A block molding machine including a frame, a bed plate having core receiving openings formed therein, a mold supported on the frame above the plate and having stationary and movable walls, a plurality of operating shafts having interengaging beveled gears, adjustable longitudinal and transverse brackets slidably mounted on the bed plate and having elongated slots formed therein, said brackets forming bearings for the shafts, a lever for rotating one of the shafts thereby to open and close the movable walls of the mold, fastening devices extending through the slots in the brackets for locking said brackets in adjusted position, a bail pivotally mounted on the stationary wall of the mold and adapted to engage the movable walls for locking said walls in assembled position, finger pieces formed on the bail, core members slidably mounted on the frame and movable through the openings in the bed plate to operative position within the mold, and means for locking the core members in operative position.

4. A block molding machine including a frame provided with vertical extensions and having laterally projecting flanges, a bed plate, end plates slidably mounted on the flanges of the frame and adjustably connected with the bed plate, a mold box supported by the frame above the bed plate and having stationary and movable walls, a pallet forming the bottom of the mold box and resting on the vertical extensions of the frame, longitudinal and transverse brackets having slotted connections with the bed plate and provided with terminal bearings, a shaft journaled in said bearings and provided with intermeshing beveled gears, arms secured to the shafts and operatively connected with the adjacent walls of the mold, a lever for operating one of the shafts thereby to open and close the movable walls of the mold, core members movable through the bed plate to operative position within the mold box, means for raising and lowering the core members, and means for locking the walls of the mold in assembled position.

3. A block molding machine including a supporting frame comprising spaced side members having their upper ends bent inwardly to form laterally extending flanges, a bed plate having core receiving openings formed therein, transverse and longitudinal brackets secured to the bed plate and having a pin and slot connection therewith and provided with terminal bearings, shafts journaled in said bearings and provided with intermeshing beveled gears, one of said shafts being formed of telescopic sections, a mold mounted on the bed plate and operatively connected with the brackets, one of the walls of the mold being stationary and the remaining walls movable laterally to open position, core members movable through the openings in the bed plate to operative position within the mold, and end pieces slidably mounted on the flanges of the frame and having their terminal portions bent upwardly and rigidly secured to the stationary wall of the mold.

899,518. TWIST-DELIVERY GUIDE FOR ROLLING-MILLS. VICTOR E. EDWARDS, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed Dec. 15, 1902. Serial No. 135,244.



1. A delivery guide for rolling mills, comprising a pair of guide plates adapted to receive a bar between them with the opposing surfaces of said guide plates warped or twisted and arranged to bear with varying degrees of pressure against the opposite edges of the bar, thereby imparting a torsional movement to the bar as it passes between said plates, and means for adjustably regulating the amount of clearance between said plates, whereby the difference in the degree of pressure imparted to the different sides of the bar may be varied.

2. A delivery guide for a rolling mill, comprising a pair of guide plates adapted to receive a moving bar and bear against the opposite edges and opposite sides thereof and impart a torsional movement to said bar as it passes between said guide plates, adjusting screws carried by one of said plates and bearing against the other of said plates, nuts held on said screws by which the space between said plates is adjusted and means for clamping the plates, substantially as described.

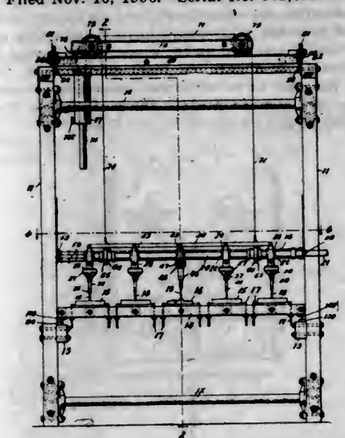
3. A delivery guide for a rolling mill consisting of a pair of guide plates having warped opposing surfaces adapted to bear against the opposite sides of a bar passing between them and impart a torsional movement thereto, and means for laterally adjusting one end of one of said plates relatively to the other of said plates, whereby the position of the warped surface of one of said plates is varied relatively to the warped surface of the other of said plates.

4. In a delivery guide for rolling mills, the combination of a base plate having a pair of vertical sides, a pair of guide plates held between said sides and having opposing faces adapted to engage a bar and impart a torsional movement thereto as it passes between them, means for holding one of said plates in a stationary position on said base plate, means held by said base plate for laterally adjusting one end of the other of said guide plates, and means for adjustably varying the distance between said plates, substantially as described.

5. In a delivery guide for rolling mills, the base, a stationary guide plate supported thereon, and provided with seats of adjusting screws, an adjustable guide plate, screws held thereby and bearing on said seats, adjusting nuts on said screws and bearing against said adjustable plate, and a clamping screw bearing against said adjustable plate to hold it in contact with said adjusting nuts, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

899,519. WOOD-CARVING MACHINE. WILLIAM J. EGAN, Chicago, Ill., assignor to Edward P. Hatch, La Grange, Ill. Filed Nov. 10, 1906. Serial No. 342,792.



1. The wood carving machine, embodying carving tools each of which is provided with a turbine motor adapted to be operated by pneumatic power, a movable header supplying compressed air to said motors, and a rigid tracer for controlling the movements of said header.

2. The wood carving machine, embodying carving tools each of which is provided with a turbine motor adapted to be operated by pneumatic power, said motors being mounted axially on the tools, a movable header supplying compressed air to said motors, and a rigid tracer for controlling the movements of the header.

3. The wood carving machine, embodying carving tools each of which is provided with a turbine motor adapted to be operated by pneumatic power, a movable header supplying compressed air to said motors, supports for said header permitting changes of position by the tools, and a rigid tracer for guiding the header in such changes of position.

4. The combination in a wood carving machine, of a movable header tube supplying air under pressure, a series of rotating carving tools supported by said tube and projecting at right angles therefrom, a series of turbine wheels, one for each tool, each mounted on one of said tools and operated by air from the tube, a rigid tracer for controlling the movements of the tube and means for supporting said tube.

5. The combination in a wood carving machine, of a movable header tube supplying air under pressure, a series of rotating carving tools and a tracer supported by said tube and projecting at right angles therefrom, a series of turbine wheels, one for each tool, each mounted on one of said tools and operated by air from the tube, and means for supporting said tube.

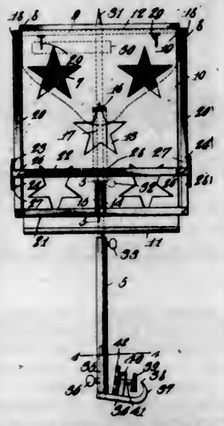
[Claims 6 to 24 not printed in the Gazette.]

899,520. COPY-HOLDER. MELVINA L. FLYNN, Dallas, Tex. Filed Jan. 8, 1908. Serial No. 409,840.

1. A copy holder including a standard, a support secured to the standard, a plate pivotally mounted for swinging movement on the support, means for adjusting the copy holder at an angle with respect to the standard, and a line indicating device slidably mounted on the copy holder, one end of the standard being extended vertically above the swinging plate and provided with a terminal piercing point.

2. A copy holder including a standard, a rod adjustable vertically of the standard, a supporting member secured to the rod, a plate pivotally mounted for swinging movement on the supporting member, means for adjusting the plate at an angle with respect to the rod, a pivoted frame, a line indicating bar slidably mounted on the frame and provided with terminal guide shoes, and springs interposed between the shoes and the frame.

3. A copy holder including a standard, a support secured to the standard, a plate pivotally mounted for swinging movement on the support and having an elongated slot formed therein, the opposite walls of which are bent laterally and provided with spaced teeth constituting racks, a prop pivotally mounted on the support and having its free end arranged to engage the teeth on the racks for supporting the plate at an angle with respect to the standard, a frame pivotally mounted on the plate, and a line indicating bar slidably mounted on the frame.



4. A copy holder including a tubular standard, a rod slidably mounted in the standard and having its free end provided with a terminal piercing point, a supporting member secured to the rod beneath the piercing point and provided with oppositely disposed ears, a shaft journaled in said ears and having its opposite ends extended laterally beyond the same, a plate carried by the shaft and mounted for swinging movement on said shaft, said plate being provided with a longitudinal slot the opposite walls of which are bent laterally and provided with spaced teeth constituting racks, a prop pivotally mounted on the supporting member and adapted to engage the teeth, a frame pivotally mounted on the extensions of the shaft, and a line indicating bar slidably mounted on the pivoted frame.

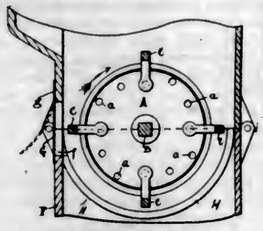
5. A copy holder including a tubular standard, a rod slidably mounted for vertical movement in the standard, a supporting member rigidly secured to the rod and provided with laterally extending ears, a shaft journaled in said ears and having its opposite ends extended laterally beyond said ears, a plate pivotally mounted for swinging movement on the shaft, a rack carried by the plate, a prop pivotally mounted on the supporting member and adapted to engage the teeth on the rack for supporting the plate at an inclination with respect to the rod, a frame pivotally mounted on the extensions of the shaft, a line indicating bar slidably mounted on the frame, guide shoes secured to the opposite ends of the bar and provided with angular extensions having their free ends bifurcated for the reception of the adjacent side bars of the frame, springs interposed between the shoes and side bars of the frame, and means for locking the rod in adjusted position.

[Claims 6 to 10 not printed in the Gazette.]

899,521. DISINTEGRATING APPARATUS. ALBERT D. FURSE, London, England. Filed July 15, 1907. Serial No. 383,760½.

1. In disintegrating apparatus two pierced disks separated by a clear space, horizontal beater bars having bent and perforated ends placed between the two disks and separate pins for each end of the bars, passing through the holes in the bars and disks and secured to each end to form pivots and leave the space within the bent beater bars and disks clear, substantially as herein described.

2. Beater bars for disintegrating apparatus consisting of a cross bar and two end arms pierced at their extremities for securing to the beater and hinges connecting the arms to the cross bar, leaving the latter free to turn at the arms, substantially as herein described.

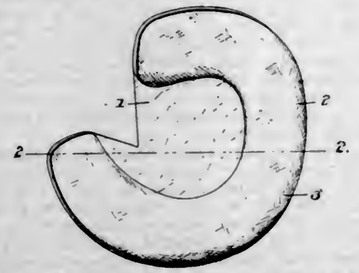


3. In disintegrating apparatus, bent beater bars having pierced ends, supporting disks having radial slots, sliding blocks in the said slots, adjusting means for securing the sliding blocks and supporting pins for the beater bars passing through their extremities and through the sliding blocks, substantially as herein described.

4. In disintegrating apparatus, horizontal rotating beaters, and a casing containing the beaters having a discharge screen and an aperture for the discharge of refractory materials placed above and following the screen in such a position that the materials disintegrated are driven through the screen before they can reach the aperture, while the refractory materials are ejected by the beaters.

5. In disintegrating apparatus, horizontal rotating beaters, a casing containing the beaters, having a discharge screen and an aperture for the discharge of refractory materials placed above and following the screen, and a flexibly mounted door covering the said aperture and arranged to open only when a heavy object is thrown by the beaters against it, substantially as herein described.

899,522. BASE-BALL MITT. JOHN GAMBLE, Philadelphia, Pa., assignor to George A. Reach, Philadelphia, Pa. Filed Dec. 27, 1907. Serial No. 408,303.



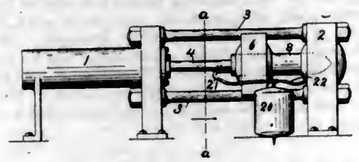
1. A pad for base-ball mitts comprising a body portion, and a ring of padding material tightly incased in a separate cover and separably carried on the face of the body portion, substantially as described.

2. A pad for base-ball mitts, comprising a body portion, and a ring of padding material tightly incased in a separate cover, and conforming to the contour of the outer edge of the body portion, and detachably secured to said body portion, substantially as described.

899,523. PROJECTILE-LOADING. GEORGE W. GENTIEU, Peoria, Ill. Filed Apr. 9, 1906. Serial No. 310,622.

1. The method of loading projectiles, mines, etc. by compressing wet explosive in the explosive chamber thereof and exhausting the liquid from said chamber as it is pressed out of the explosive.

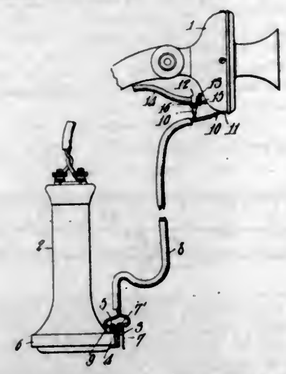
2. The method of loading projectiles, mines, etc. which consists in forming wet explosive into blocks in a preliminary press or mold, then taking the said blocks of explosive while thoroughly wet from the preliminary press and before they have time to dry, compressing them in the explosive chamber of the projectile, mine, etc.



3. The method of loading projectiles, mines, etc. with an explosive which detonates from shock or pressure, which consists in coating the walls of the explosive chamber with a lubricant non-soluble in water, and having no chemical action on the explosive, then introducing thoroughly wet blocks of the explosive of less than the required density into the explosive chamber, compressing the said blocks of explosive in said explosive chamber to the required density and drawing off the water from said chamber as it is pressed out of the explosive.

4. The method of loading projectiles, mines, etc. which consists in forming wet explosive into blocks of less than the required density, in a preliminary press or mold, and constructing passageways through the said blocks of explosive, then introducing the said blocks of explosive while thoroughly wet into the explosive chamber of the projectile, mine, etc. and compressing the same therein to the required degree of density.

899,524. TELEPHONE CUT-OFF. HENRY S. GILBERT and WILLIAM F. DRAKE, Pueblo, Colo. Filed Oct. 26, 1907. Serial No. 399,378.

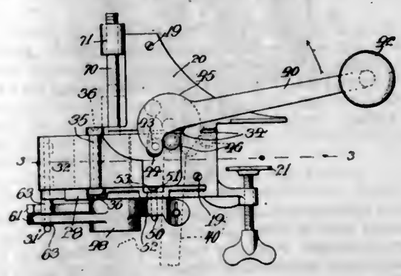


1. A telephone attachment comprising a switch, means for attaching the same to the hearing end of a telephone receiver, a pair of conductors connected at one end to the switch terminals, and means at the other ends of said conductors for attaching them to the terminals of the microphone element of the transmitter.

2. A telephone attachment comprising a clip adapted to embrace the bead at the hearing end of a telephone receiver, an insulating block carried by said clip, a spring plate carried by said insulating block and movable into and out of electrical contact with the clip, a pair of conductors connected at one end to the clip and plate respectively and at the other end being adapted to be connected to the terminals of the microphone element of the transmitter.

3. A telephone attachment comprising a clip adapted to embrace the bead at the hearing end of a telephone receiver, an insulating block carried by said clip, a spring plate carried by said insulating block and movable into and out of electrical contact with the clip, a pair of conductors connected at one end to the clip and plate respectively, a terminal plate at the end of one of the conductors adapted to be engaged by a screw electrically connected to one terminal of the microphone element, and a plate and clip at the end of the other conductor adapted to engage a part in electrical connection with the other terminal of the microphonic element.

899,525. CORKING-MACHINE. RAYMOND B. GILCHRIST, Newark, N. J. Filed Mar. 3, 1905, Serial No. 248,218. Renewed July 28, 1908. Serial No. 445,744.



1. In a corking machine, the combination of a frame, cork-driving means, a movable compressor, a bottle-holder supported by the frame comprising a pair of laterally movable jaws for engaging the neck of a bottle, means applied to constantly press said jaws together and adapted to hold the jaws in position to secure the bottle during the cork-driving operation, a hand lever pivotally supported by the frame, connected to and for operating the compressor, and means operated by the lever for spreading the jaws.

2. In a corking machine, the combination of a frame, cork-driving means, a movable cork-compressor, a bottle-holder supported by the frame and comprising a pair of laterally movable jaws adapted to grasp the neck of a bottle, means for holding said jaws against the bottle to secure it during the cork-driving operation, a pivoted hand lever, and operating means between said lever, the driving means, the compressor and the bottle-holder whereby all of said parts will be operated.

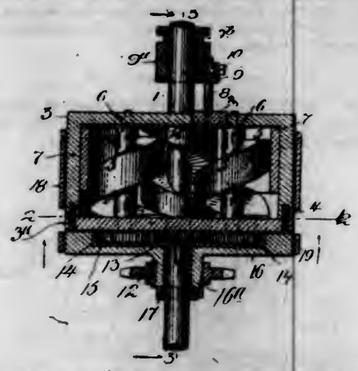
3. In a corking-machine, the combination of a frame, cork-driving means, a movable cork-compressor, a bottle-holder mounted on the frame comprising a pair of laterally movable jaws adapted to constantly force said jaws and whereby said jaws will be held to hold the bottle in position to secure it during the cork-driving operation, a pivoted hand-lever, connections between the lever and the cork-driving means and the compressor whereby said parts will be operated, and means operated by said lever whereby said jaws will be spread to force the bottle-holder into open position.

4. In a corking-machine, the combination of a frame, cork-driving means, a movable cork-compressor, a bottle-holder supported by the frame and comprising a pair of laterally movable jaws for grasping the neck of a bottle, a spring applied to said jaws so it will constantly force them in position to secure a bottle during the cork-driving operation and for operating said jaws from open to closed position, a hand-lever operatively connected to the compressor, and a spreader for controlling closure of the jaws by said spring and secured to move positively with the compressor.

5. In a corking-machine, the combination of cork-driving means, a movable compressor, an operating lever, a bottle-holder, having jaws constantly spring-pressed in one direction, and means whereby the bottle-holder will be shifted when the compressor is shifted, said bottle-holder being provided with means which will cause the holder to force the compressor in one direction and will also yieldingly hold the compressor in one of its positions.

[Claims 6 to 45 not printed in the Gazette.]

899,526. TRANSMISSION MECHANISM. ADAM F. GLASER, Jersey City, and JOHN OLSEN, Whippany, N. J., assignors of one-third to George W. Crane, Rahway, N. J. Filed July 20, 1907. Serial No. 384,824.



1. A transmission mechanism comprising a driving shaft provided with a worm, a casing inclosing said worm, a worm connected with said casing, a valve member surrounding said worms, and means for adjusting said valve member with respect to said worms to cause a fluid like substance operated by said worms to cause rotation of said casing.

2. A transmission mechanism comprising a driving shaft provided with a worm, a casing surrounding said shaft and provided with a worm formed reverse to the first named worm and meshing therewith, a valve member within said casing surrounding said worms, and means to adjust said valve member at will.

3. A transmission mechanism comprising a driving shaft provided with a worm, a casing surrounding the same, a worm carried by said casing and meshing with the first named worm, a valve member surrounding said worms and of less width than the length of said worms adapted to be adjusted along the worms within the casing to more or less open or close the delivery ends of said worms, and means for adjusting said valve member.

4. A transmission mechanism comprising a shaft provided with a worm, a casing surrounding said shaft and mounted to rotate freely thereon, a worm carried by said casing and formed reverse to the first named worm and in mesh therewith, a valve member surrounding said worms and having its opposite ends open and of less width than the length of said worms, adapted to be adjusted along said worms within the casing, said valve member having its inner surfaces curved substantially corresponding to the peripheries of said worms, and means to adjust said valve member within said casing.

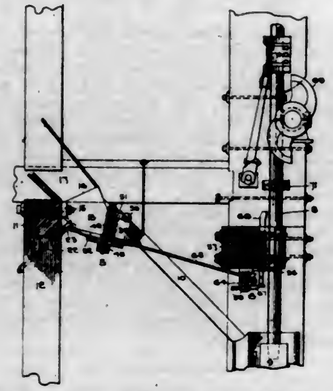
5. The combination of a shaft provided with a worm, a casing mounted freely upon said shaft, worms journaled on said casing on opposite sides of the first named worm and formed reversely thereto and in mesh therewith, a valve member surrounding said worms and arranged to be adjusted to permit more or less fluid-like substance within said casing to be forced by the worms through the casing, and means to operate said valve like member.

[Claims 6 and 7 not printed in the Gazette.]

899,527. ORE-FEEDER. SAMUEL T. GRAHAM, Los Angeles, Cal. Filed Apr. 11, 1907. Serial No. 367,701.

1. An ore feeder comprising a stationary hopper, a shaft passing through the center of said hopper, a disk on the shaft below the hopper and covering the lower end thereof, said disk having a concentric friction edge, an arm pivoted on the shaft below the disk and extending beyond the disk, a friction block in engagement with the friction edge in advance of the arm, a rigid member pivotally connecting said block with the arm, and means for oscillating the arm.

2. An ore feeder comprising a stationary hopper, a shaft passing therethrough, a disk mounted on said shaft below the hopper, said disk having a concentric friction edge, an arm mounted on the shaft below the disk and having its free end extending beyond the edge of the disk, a friction block in engagement with the friction edge of the disk, a rigid member pivotally connecting the block to the arm, a lever pivoted at its upper end to the hopper and having its lower end in engagement with the free end of the arm, means adjustably connected to the lower end of said lever for oscillating the same, and a weight connected to the upper end of said lever.



3. In an ore feeder the combination with a revoluble feed disk and means to impart an intermittent movement thereto, of a rocker shaft having angularly arranged arms, a suitable connection between one of the said arms and the said means, a reciprocating agent arranged to depress the other arm, a rotatable cam arranged to engage the latter, a toothed wheel adapted to rotate in conjunction with the cam, and an adjustable pawl engaging the said wheel.

899,528. BUTTON. ALBERT HALL, Jersey City, N. J. Filed Dec. 27, 1906. Serial No. 349,612.

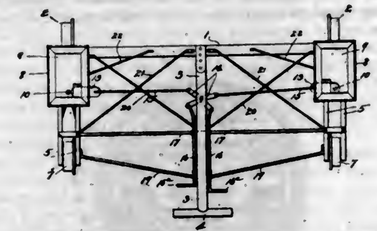


1. A button struck up from sheet metal having an integral head, a hollow shank extending downward from said head and having an aperture in its closed bottom, a tongue made integral with the above mentioned parts and bent substantially V shaped and a clenching spur on the free end of said tongue, substantially as set forth.

2. The combination with a garment, of a button made of a single continuous piece of sheet metal and having a head, a hollow shank extending downward from said head and having an aperture in its closed bottom, said button being provided with a substantially V shaped tongue which tongue extends from the said parts over the outer surface of the garment over the edge of the garment and along the inner side of the garment, the clenching spur being passed through the fabric of the garment and through the hole in the bottom of the shank and the free end of said spur being clenched above the bottom of said shank, substantially as set forth.

3. A button struck up from sheet metal and having a head, a hollow shank extending downward from said head and made integral therewith and having an aperture in its closed bottom, a tongue made integral with said parts and bent substantially V shaped, a disk on the free end of said tongue and a clenching spur on said disk, substantially as set forth.

899,529. TRACK-SANDING MACHINE. THOMAS L. HAMER, Newark, N. Y. Filed Dec. 28, 1907. Serial No. 408,393.

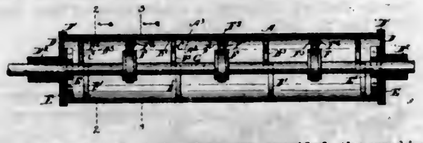


1. A sanding machine comprising an axle, wheels journaled on said axle, a handle secured to said axle, a box supported above each wheel and having a delivery spout connected therewith, a valve in each box, and means secured to the handle for operating the valves, substantially as shown and described.

2. A sanding machine comprising an axle, wheels journaled on said axle, a handle secured to the axle, a box supported above each wheel and having a delivery spout connected therewith, a valve in each box, bell crank levers journaled on the handle, a rod connecting one arm of each lever with a valve, and operating rods secured to the free arms of said levers, substantially as shown and described.

3. A sanding machine comprising an axle, wheels journaled on said axle, a handle secured to said axle, slanting beams supported at each end by said axle and having wheels journaled thereon, boxes having slanting bottoms secured to said beams, a delivery spout secured to each box to deliver the sand therefrom, a valve in each box to control the passage of the sand to said spout, bell-crank levers journaled on said handle, a rod connecting one arm of each lever with the valve, and operating rods slidably mounted on the handle and secured to the free arms of said levers, substantially as shown and described.

899,530. COLLAPSIBLE MANDREL. THORVALD HANSEN, Everett, Mass., assignor, by mesne assignments, to Standard Fibre Company, Incorporated, Somerville, Mass. Filed Oct. 25, 1905. Serial No. 284,344.



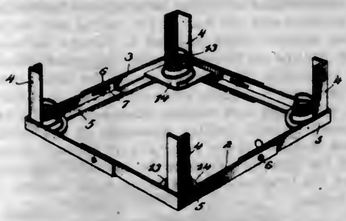
1. In a mandrel of the character specified, the combination of a collapsible cylinder, a removable head to said cylinder having a flange projecting over the end thereof, said head forming in part one of the bearings for said cylinder, and means for collapsing the cylinder whereupon said head may be removed.

2. In a mandrel of the character specified, the combination of a collapsible cylinder, bearings therefor, a shaft mounted in said bearings, and means connecting with the uncollapsible portion of said cylinder and providing an auxiliary support for said shaft for retaining the same in proper position upon the removal of its said mounting.

3. In a mandrel of the character specified, the combination with a collapsible cylinder of bearings therefor, a shaft mounted in said bearings, eccentrics rigidly mounted upon said shafts, and eccentric straps connecting with the collapsible portion of the cylinder.

4. In a mandrel of the kind described, a collapsible cylinder comprising two pivotally mounted inwardly swinging segments, a shaft concentrically located in said cylinder having eccentrics provided with eccentric straps, said straps being pivotally connected to one of said segments, and means connecting the two segments to swing them inwardly simultaneously.

899,531. EGG-CASE CARRIER. JOHN E. HARKER, Spirit Lake, Iowa. Filed Nov. 4, 1907. Serial No. 400,686.

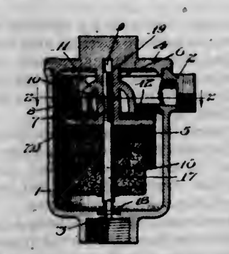


1. A carrier for egg cases and the like comprising a suitable frame, guide pieces arranged in each corner of said frame, a harness for the case, said harness comprising angle corner posts adapted to be secured to the corners of the case, and means adapted to pass under the bottom of the case for connecting the said corner posts together, suitable springs arranged on said frame to receive said harness, substantially as described.

2. A carrier for egg cases and the like comprising a suitable frame and guide pieces arranged in each corner of said frame, means for adjusting said frame, a harness for the case, said harness comprising corner posts adapted to be secured to the corners of the case, means adapted to be passed under the case to connect the said corner posts together, means for adjusting said corner posts connecting means, and suitable springs disposed on said frame to resiliently hold the same, substantially as described.

3. A carrier for egg cases and the like comprising an angle frame made up of sections, means for adjusting said frame, angle guide pieces disposed in the corners of said frame, a harness for the case, said harness comprising an angle corner post adapted to be secured to the corners of the case, and diagonal straps for connecting the said corner posts together under the case, means for adjusting said diagonal straps, a series of springs disposed on said frame under said diagonal straps, and means on said diagonal straps to receive said springs, substantially as described.

899,532. AUTOMATIC RELIEF-VALVE. AMOS HARRISON, Chicago, Ill. Filed Mar. 5, 1906. Serial No. 304,231.

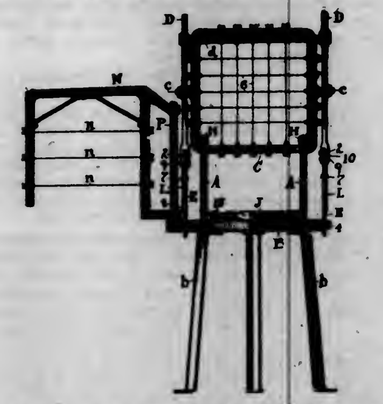


1. In a device of the character described the combination with a casing having an inlet and an outlet, of a removable cap for said casing, an imperforate member horizontally disposed between said inlet and said outlet and provided with a valve guiding extension, a perforated member secured to the outer periphery of said horizontally disposed member and extending between said horizontally disposed member and the wall of the casing said horizontally disposed member being adapted to receive sediment, and being bodily removable through the top of the casing when said cap is removed, a valve controlling said outlet and a float for lifting said valve said valve being slidably guided by said guiding extension of the horizontally disposed member.

2. In a device of the character described the combination with a casing having an inlet and an outlet, of a removable cap for said casing, an imperforate member horizontally disposed between said inlet and said outlet and

provided with a valve guiding extension, a perforated member secured to the outer periphery of said horizontally disposed member and extending between said horizontally disposed member and the wall of the casing said horizontally disposed member being adapted to receive sediment, said member and the perforated member connected thereto being bodily removable through the top of the casing when said cap is removed, a tubular valve controlling said outlet, and a float for lifting said tubular valve said tubular valve being guided by said guiding extension of the horizontally disposed member, there being a port formed through the wall of the guiding extension to establish communication between the interior of the tubular valve and the interior of the casing.

899,533. MACHINE FOR CUTTING BUTTER, CHEESE, AND THE LIKE. FREDERIC G. HODELL, Cleveland, Ohio. Filed June 24, 1907. Serial No. 380,377.



1. A butter cutter comprising a suitable base, a cutter frame and a combined slide and fulcrum support at the rear thereof adapted to guide said frame vertically and tilt the same rearwardly, and means connected with said frame and base to raise and lower and tilt said frame on said support.

2. A butter cutter comprising a suitable base, a cutter frame and a jointed support therefor adapted to guide the same for vertical and tilting movements, and means to operate said frame in connection with said jointed support to cut the butter vertically and to reat said frame in raised position at the rear of said support.

3. A butter cutter having a suitable base and jointed standards on the rear thereof, a cutter frame slidably and tiltably mounted on said standards and operating levers having slidable link connection with said base and pivotally engaged with the sides of said frame.

4. A butter cutter machine comprising a base and rigid standards on the rear thereof, a cutter frame slidably engaged on said standards, levers pivoted on the sides of said frame and links engaging the ends of said levers with said base and pivotally secured to the base outside said standards.

5. A butter cutter machine comprising a suitable base, a cutter frame having sleeves fixed in its rear corners and standards on the rear of said base on which said sleeves are slidably engaged, an operating lever on each side of said cutter frame and extensible links connecting the rear ends of said levers with said base.

[Claims 6 to 15 not printed in the Gazette.]

899,534. UNIVERSAL JOINT. ERNST G. HOFFMANN, New Rochelle, N. Y. Filed June 19, 1907. Serial No. 379,683.

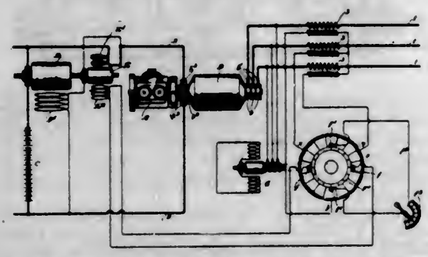
1. A universal joint comprising an inner terminal member provided with pivot bearings, an intermediate member embracing the inner member and provided with internal bosses to receive the pivot bearings of the inner member and with external pivot bearings, and a ring-like outer terminal member having internal bosses with slotted walls to receive pivot bearings of the intermediate member and bearing rings to retain the pivot bearings in the slotted bosses.



2. A universal joint comprising an inner member provided with pivot bearings, an intermediate member embracing the inner member and provided with bosses to receive the pivot bearings of the inner member, bearing rings to retain the pivot bearings and caps to close the open outer ends of the bosses and retain the bearing rings, and also provided externally with bearing pivots, and an outer terminal member provided with internal bosses to receive the pivot bearings of the intermediate member, bearing rings to retain the pivot bearings and caps to close the outer open ends of the bosses and retain the bearing rings.

3. A universal joint comprising an outer member, an inner member having pivot bearings, and an intermediate member having pivot bearings, the outer member having inwardly projecting bearing bosses provided with slots adapted to permit the insertion of the pivot bearings of the intermediate member, and the intermediate member having inwardly projecting bearing bosses embracing the pivot bearings of the inner member and cut away to permit the insertion of said pivot bearings.

899,535. ELECTRICAL SYSTEM OF DISTRIBUTION. ALBERT S. HUBBARD, Belleville, N. J., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Jan. 29, 1908. Serial No. 413,211.



1. The combination of a generator, two independent circuits supplied thereby, a battery connected to one only of said circuits, a booster in series with the battery and adapted to control the charge and discharge thereof, and means for regulating the booster responsively to current changes in both of said circuits.

2. The combination of a generator, two independent circuits supplied thereby, a battery connected to one only of said circuits, a booster in series with the battery and adapted to control the charge and discharge thereof, a coil in each of said circuits and regulating apparatus for said booster affected by the current in each of said coils.

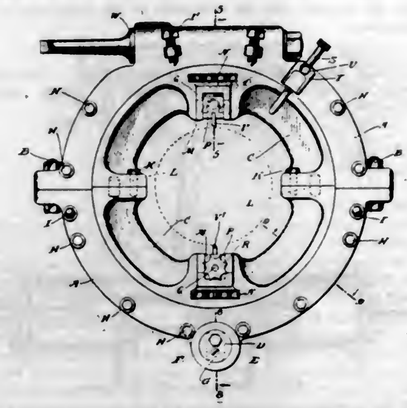
3. The combination of a generator, two independent circuits supplied thereby, a battery connected to one only of said circuits, a booster in series with the battery and adapted to control the charge and discharge thereof, and means for governing said booster for maintaining an approximately constant load on the generator.

4. The combination of a generator, two independent circuits supplied thereby, a battery connected to one only of said circuits, a booster in series with the battery and adapted to control the charge and discharge thereof, a generator in series with the field of the booster, and means for varying the field strength of said generator in accordance with variations of the total load of the two independent circuits.

5. The combination of an alternating-direct current generator, alternating and direct current circuits therefor, a battery and a booster connected to the direct current circuit, a generator in series with the booster field part of the field of said generator being responsive to changes in the direct current and part responsive to changes in the load on the alternating current circuit.

[Claims 6 to 10 not printed in the Gazette.]

899,536. MACHINE FOR TURNING CRANKED AXLES. HENRY W. JACOBS, Topeka, Kans. Filed May 25, 1907. Serial No. 375,681.



1. In a machine for turning cranked axles, the combination of a frame, a tool carrier rotatably mounted in said frame, a radially movable tool holder, an axially movable tool slide mounted on said holder, and automatic means adjustable to feed either said holder or said slide, as may be desired.

2. In a machine for turning cranked axles, the combination of a frame, a tool carrier rotatably mounted in said frame, and axially movable set screws mounted on opposite sides of said frame, and adapted to engage the cheeks of a cranked axle.

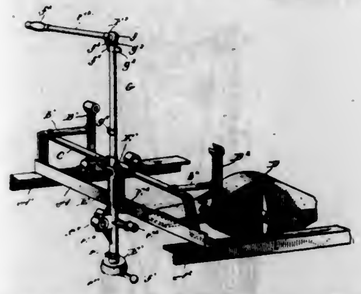
3. In a machine for turning cranked axles, the combination of a frame, a tool carrier rotatably mounted in said frame, and axially movable set screws mounted on opposite sides of said frame, and adapted to engage the cheeks of a cranked axle, some of said screws having round noses and others of them being pointed.

4. In a machine for turning cranked axles, the combination of a frame, a tool carrier rotatably mounted in said frame, axially movable set screws mounted on said frame, and adapted to engage the cheeks of a cranked axle, and radially adjustable set screws mounted in said frame.

5. In a machine for turning cranked axles, the combination of a frame, a tool carrier rotatably mounted in said frame, blocks reversibly mounted in said frame outside the path of rotation of the tools, and pointed set screws mounted eccentrically in said blocks and projecting substantially parallel with the axis of rotation, whereby the machine can be adapted for cranks of different radii.

[Claims 6 to 10 not printed in the Gazette.]

899,537. AUTOMOBILE. THOMAS B. JEFFERY, Kenosha, Wis. Filed Aug. 25, 1902. Serial No. 120,924.



1. In an automobile, the combination with the frame for supporting the engine comprising side beams, a cross beam supported at its ends by the side beams and a brace extending above the cross beam and also supported at its ends by the side beams, a socket secured to the cross beam and brace of said frame, a steering rod supported within said socket whereby the body of the vehicle may be removed without detaching the steering rod support.

2. In an automobile, the combination with the engine supporting frame comprising side beams, a cross beam supported at its ends by the side beams and a brace extending above the cross beam and also supported at its ends by the side beams, of a vertical socket for the steering rod secured at its lower end to said cross beam and at its upper end to said brace whereby the socket and steering rod are braced against lateral movement.

3. In an automobile, the combination with a steering rod, of a relatively fixed socket in which said rod is rotatably and longitudinally movably supported, a two-part friction clutch the members of which are secured respectively to said socket and rod, a steering lever pivotally secured to said rod, and a fulcrum for said lever whereby pressure applied to said lever moves said rod longitudinally within said socket thereby forcing the members of said clutch into frictional engagement.

4. In an automobile, the combination with a steering rod, of a relatively fixed socket in which said rod is rotatably and longitudinally movably supported, a two-part friction clutch the members of which are secured respectively to said socket and rod, a steering lever pivotally secured to said rod, and a fulcrum for said lever, and a hand lever fixed to and depending from the said steering lever whereby when pressure is applied to said hand lever said rod is longitudinally moved within said socket thereby forcing the members of said clutch into frictional engagement.

5. In an automobile, the combination with the engine supporting frame, of a socket rigidly secured to said frame, a steering rod supported within said socket, and a sleeve for operating the motive fluid controller surrounding said rod and supported upon said socket.

[Claims 6 and 7 not printed in the Gazette.]

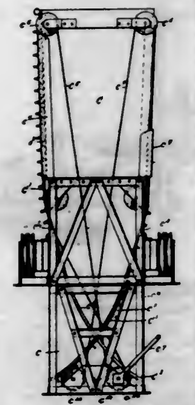
899,538. LOAD-TRIMMER. JOHN T. JOHNSON, Akron, and WILLIAM M. RAY, Cleveland, Ohio. Filed Jan. 9, 1908. Serial No. 409,937.

1. In a device of the character described, the combination with a chute having an open discharge end and two opposite wall portions of such discharge end being prolonged, of a deflecting plate bodily movable between such prolonged portions.

2. In a device of the character described, the combination with a chute having two opposite wall portions of its discharge end prolonged, of a flexible deflecting plate bodily movable between such prolonged portions.

3. In a device of the character described, the combination with a chute having an open discharge end and two opposite wall portions of such discharge end being pro-

longed, of a deflecting plate secured laterally of said chute above such prolonged portions but adapted to be inserted between the same.

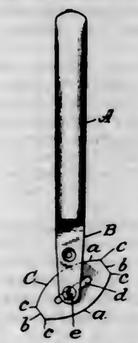


4. In a device of the character described, the combination with a chute having an open discharge end and two opposite wall portions of such discharge end being prolonged, of a deflecting plate secured laterally of said chute and adapted to be slidably inserted between such prolonged portions.

5. In a device of the character described, the combination with a chute having two opposite wall portions of its discharge end prolonged, of a flexible deflecting plate secured laterally of said chute and adapted to be slidably inserted between such prolonged portions.

[Claims 6 to 22 not printed in the Gazette.]

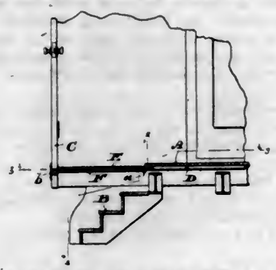
899,539. INK-ERASER. OSCAR W. JOHNSON, Allendale, N. J., and EDWIN A. SCOTT, New York, N. Y. Filed Sept. 26, 1907. Serial No. 394,654.



An improved ink eraser which consists of a handle having a forked end, a slotted blade, removably and reversibly set in said fork and fastening devices set in said forked end and adapted to pass through said slotted blade whereby the removal of one of which permits the reversal of the blade, while the removal of both permits the entire removal of the blade for resharpening.

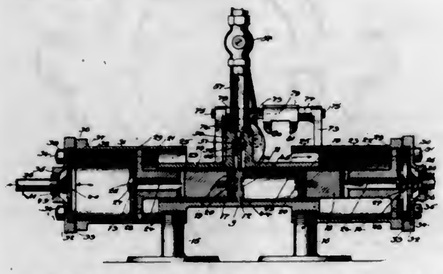
899,540. STEP-COVER FOR RAILWAY-COACH VESTIBULES. THOMAS H. KANE and ALFRED J. URTUBEES, Milwaukee, Wis. Filed Dec. 11, 1905. Serial No. 291,277.

1. In a railway-coach having a vestibule and provided with guides extending under the vestibule-platform, the combination of a sliding step-cover supported by the guides, a swinging vestibule-door, and a link in pivotal connection with the underside of the step-cover at a fixed point and likewise connected to the door, the link being diagonally of said step-cover when said door is closed but alined therewith and the door when the latter is open.



2. In a railway-coach having a vestibule and provided with guides extending under the vestibule-platform, a sliding step-cover supported by the guides, a swinging vestibule-door, a bracket mortised in the swinging edge of the vestibule-door, and a link in pivotal connection at its ends with the bracket and the underside of the step-cover at a fixed point.

899,541. DOUBLE-ACTING POWER-PUMP. WILLIAM KIRKWOOD, Chicago, Ill. Filed Sept. 17, 1906. Serial No. 334,891.



1. In a pump the combination of two pump cylinders, an intermediate duplex power cylinder separating and isolating said pump cylinders from each other, all of said cylinders being alined end to end about a common axis, pistons for each of said cylinders, piston rods connecting in pairs the pistons of adjacent pump and power cylinders, a rod or rods connecting said pairs of pistons and a single valve controlling the motive fluid to power cylinders, substantially as described.

2. A pump comprising in combination two pump cylinders both of which are open at one end, an intermediate power cylinder separating and isolating said pump cylinders from each other, all of said several cylinders being alined end to end about a common axis, pistons for each of said cylinders, piston rods connecting in pairs the pistons for adjacent pump and power cylinders, a rod or rods connecting said pairs of pistons, and means controlling the motive fluid to both power cylinders, substantially as described.

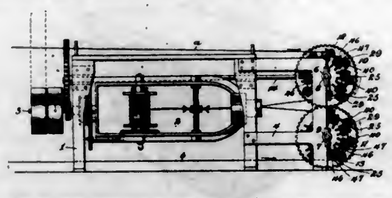
3. A pump comprising in combination two pump cylinders, an intermediate open-end duplex power cylinder between and separating said pump cylinders from each other, all of said cylinders being alined end to end about a common axis, pistons for each of said cylinders, piston rods connecting in pairs the pistons for adjacent pump and power cylinders, a rod connecting said pairs of pistons, and means controlling the motive fluid to both power cylinders, substantially as described.

4. A pump comprising in combination two pump cylinders, intermediate duplex power cylinders between and isolating said pump cylinders from each other, the opposing ends of said cylinders being open and all of said cylinders being alined end to end about a common axis, pistons for each of said cylinders, piston rods connecting in pairs pistons for adjacent power and pump cylinders, a rod or rods connecting said pairs of pistons, and means controlling the motive fluid to both cylinders, substantially as described.

5. A pump comprising in combination two pump cylinders, two open end pump cylinders, an intermediate open end duplex power cylinder between and isolating said pump cylinders from each other, said several cylinders being formed integrally with each other, adjacent pump and power cylinders opening into each other and arranged end to end about an axis common to all, pistons for each of said cylinders, piston rods connecting in pairs the pistons for adjacent power and pump cylinders, a rod or rods connecting said pairs of pistons, and a single valve controlling the motive fluid to both power cylinders, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

899,542. BARB-WIRE-MAKING MACHINE. ALVA L. KITSELMAN, Muncie, Ind. Filed June 11, 1904. Serial No. 212,197. Renewed Feb. 21, 1908. Serial No. 417,083.



1. In a wire barbing machine, the combination with a stationary shaft, of a rotary drum comprising a pair of spaced heads each journaled on the shaft and a series of separate supports forming the periphery of the drum and each extending between and serving to connect the outer edges of the heads, and several groups of mechanism exposed upon the periphery of the drum, each group being carried by one of the supports and including means for guiding a strand wire, means for feeding a barb-forming wire across the strand wire, means for twisting the barb-forming wire around the strand wire, and means for severing the barb from the barb-forming wire after the barb has been affixed to the strand wire.

2. In a wire barbing machine, the combination with a stationary support, a rotary drum mounted on and revolving around the same and means for rotating the drum, of several groups of barb forming, applying, and cutting mechanisms mounted on the drum, and means housed within the drum for effecting the operation of said groups of mechanisms in proper order as the drum rotates.

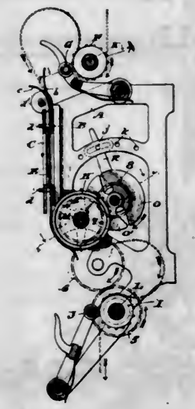
3. In a wire barbing machine, the combination with a rotary drum, and means for rotating the same, of several groups of barb feeding, applying, and cutting mechanisms distributed about the periphery of the drum, and stationary operating mechanism located in the drum to operate the several groups of mechanisms as the drum rotates.

4. In a wire barbing machine, the combination with a stationary shaft, of a drum rotatable thereon and comprising heads and an intermediate series of removable supporting blocks, and barb forming and applying mechanism carried by each block.

5. In a wire barbing machine, the combination with a stationary shaft, of a rotary drum thereon, comprising a pair of spaced heads and intermediate supports, barbing mechanism mounted on the supports and including a series of twisters, and twister operating mechanism including a series of short shafts extended from one of the heads of the drum, planet gears mounted on said shafts and geared to the twisters, and a mutilated sun gear fixed to the stationary drum supporting shaft between the heads of the drum and disposed to mesh with the planet gears.

[Claims 6 to 52 not printed in the Gazette.]

899,543. KINETOSCOPE. GEORGE A. KNAAK, Oshkosh, Wis. Filed Dec. 13, 1907. Serial No. 406,282.



1. In a kinetoscope, a film-feed mechanism comprising a sprocket-drum, a driven-shaft parallel to the drum, a pair of oppositely disposed semi-circular shoes secured to the shaft and offset with relation to each other, and a tappet-wheel for each shoe carried by the sprocket-drum, the teeth of one tappet-wheel being staggered with relation to the teeth of the other tappet-wheel and the working-faces of the teeth of both wheels shaped to conform to and engage with the semi-circular portions of the shoes.

2. In a kinetoscope, a film-feed mechanism comprising a sprocket-drum, a driven-shaft parallel to the drum, a pair of oppositely disposed semi-circular shoes secured to the driven shaft and offset with relation to each other, a tappet-wheel for each shoe carried by the sprocket-drum, the teeth of one tappet-wheel being staggered with relation to the teeth of the other tappet-wheel and the working-faces of the teeth of both wheels shaped to conform to and engage with the semicircular portions of the shoes, and means in connection with the driven-shaft for adjusting said shoes with relation to said tappet-wheels.

3. In a kinetoscope film-feed, a film-tension mechanism, constantly driven film-feed sprockets above and below the tension mechanism, and a fixed arbor intermediate of the lower film-feed sprocket and said tension device, a sprocket-drum loosely mounted upon the arbor tappet-wheels carried by the drum, a drive-shaft disposed parallel to the fixed arbor, and actuating-shoes for the tappet-wheels carried by the drive-shaft.

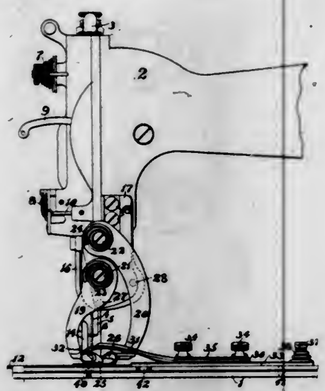
4. In a kinetoscope film-feed, a film-tension mechanism, film-driving sprockets above and below the tension-mechanism, and a film-feed sprocket-drum located intermediate of said tension-mechanism and lower film-driving sprocket, tappet-wheels carried by the film-feed sprocket-drum, a drive-shaft disposed parallel to the sprocket-drum axis, actuating shoes for the tappet-wheels carried by the drive-shaft, and a crank in gear-train connection with the drive-shaft and sprockets above and below the aforesaid tension-mechanism.

899,544. HEMMER FOR SEWING-MACHINES. ALEXANDER LAUBSCHER, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed July 3, 1907. Serial No. 382,060.

1. In a sewing machine hemmer, the combination of an edge-folding scroll, a hem-folding scroll and a retaining scroll section, each mounted independently of its coacting members, said edge-folding scroll being pivotally mounted and capable of adjustment transverse to the line of feed.

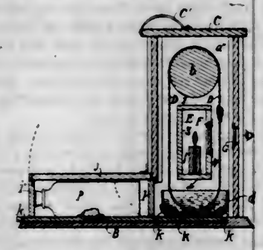
2. In a sewing machine hemmer, the combination of an edge-folding scroll, a hem-folding scroll and a retaining scroll section, each mounted independently of its coacting

members, said edge-folding scroll and scroll section being pivotally mounted and capable of adjustment in directions transverse to each other.



3. In a sewing machine hemmer, the combination of an edge-folding scroll, a hem-folding scroll and a retaining scroll section, each mounted independently of its coacting members, said edge-folding scroll and hem-folding scroll being pivotally mounted and capable of adjustment transverse to the line of feed.

899,545. DAYLIGHT FILM-DEVELOPING APPARATUS. JOSEPH LE COMPTE, Oklahoma, Okla., assignor, by direct and mesne assignments, of one-fourth to A. D. Marble and one-fourth to Susan C. Taylor, Oklahoma, Okla. Filed May 9, 1907. Serial No. 372,726.



1. In a daylight film developing apparatus; a rectangular upright cabinet body; a rectangular elongated base having a groove in its upper surface and one of its ends forming a support for said cabinet or body; a slidable tray-bar fitted in said groove and having a tray-pan secured to its inner end being normally within said cabinet for the support and removal of a developing tray, a carrying handle secured to the top of the said cabinet for carrying the developing apparatus, substantially as described.

2. In a daylight-film developing apparatus; a rectangular upright cabinet; a base supporting and in one direction extending beyond said cabinet body and having a slidable tray-bar fitted in its upper surface; a bottle-case having its roof hinged to said cabinet above said base, said base constituting its floor for the purpose of carrying the liquids used in developing the films, as set forth.

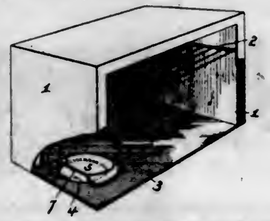
3. In a daylight film developing apparatus; a rectangular upright cabinet secured to a base and having an opening in one of its walls; a light-box within and secured to one of the side walls of the cabinet the said opening being the mouth of the light box; a ruby glass set in one of the side walls of said light box to aid in observing the development of the film, substantially as described.

4. In a daylight film developing apparatus; a rectangular upright cabinet having a base extending in one direction with a tray removing bar in its upper portion; a light-box within said cabinet secured to one of its walls said wall having an opening cut there-through as a mouth of said box to admit light therein, and having a ruby glass in one of its walls; a film actuating roller within said cabinet and having one of its journals extending through one of the walls of the cabinet above said light-box and having a crank attached to said journal for rotating the roller and the film which it carries, as described.

5. In a daylight film developing apparatus; a rectangular upright cabinet having a bottle-case with a floor having a slidable tray-removing-bar fitted therein; a light-box within said cabinet secured to one of its sides with a light admitting opening therein; a ruby glass set in one of the walls of said light-box to afford and control the light during the process of the film developing; a ruby glass set in one of the walls of the said cabinet adjacent the ruby glass in the wall of said light-box; a film carrying and actuating roller secured within said cabinet with means for rotating the same, for the purposes specified.

[Claims 6 to 9 not printed in the Gazette.]

899,546. HEATER. ALEXANDER L. LEONARD, Columbus, Ga. Filed Oct. 1, 1907. Serial No. 395,401.



1. The combination with a chamber to be heated, said chamber having a hole in its bottom, at one side of its center, of a hood or deflector projecting over said opening and provided with diametrically opposite openings varying in size and both communicating with the interior of said chamber.

2. The combination with a chamber to be heated, said chamber having a hole in its bottom at one side of its center, of a hood or deflector projecting partially over said hole and provided with diametrically opposite openings varying in size and both communicating with the interior of said chamber.

3. The combination with a chamber to be heated, said chamber having a hole in its bottom at one side of its center, of a hood higher at one end than at the other and having an opening at each end, the opening at the higher end being larger than the opening at the opposite end of the hood, said higher end of the hood terminating over the hole in the bottom of the heating chamber.

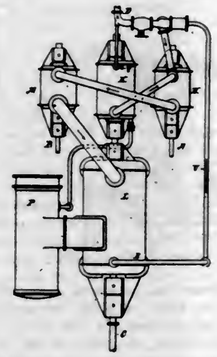
4. The combination with a chamber to be heated, said chamber provided with a hole in its bottom near one wall of the same, of a hood disposed partially over said hole, said hood having an opening adjacent to said wall of the chamber and also having a smaller opening diametrically opposite the first mentioned opening both of said openings communicating with the interior of said chamber.

5. The combination with a chamber to be heated, said chamber having a hole in its bottom near one wall thereof, of a hood disposed partially over said hole and having greater height at one end than at the other, said hood having a comparatively large opening at the higher end thereof and a small opening at the opposite end, and having an inclined top.

[Claims 6 and 7 not printed in the Gazette.]

899,547. MARINE TURBINE. TORE G. E. LINDMARK, Stockholm, Sweden. Filed Dec. 3, 1907. Serial No. 404,919.

1. In a turbine propelling mechanism, three propeller shafts, a high pressure turbine on the middle shaft, an intermediate pressure turbine on each of the side shafts; the said turbines being arranged for rapid motion and for the utilization of a small part of the total amount of power, and a low pressure turbine mounted on the middle shaft and arranged for slow motion and for the utilization of a large part of the total amount of power.



2. In a turbine propelling mechanism, three parallel propeller shafts, a turbine on each shaft and connections whereby motor fluid is led successively to the turbines on the outer shafts and then to the turbine on the middle shaft; the turbines on the outer shaft being constructed for rapid motion and utilization of a minor proportion of the total power expended and the turbine on the middle shaft being constructed for slow motion and the utilization of a major proportion of said power.

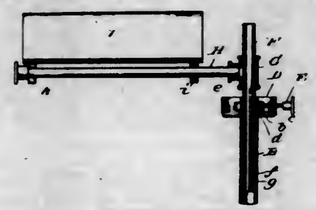
3. In a turbine propelling mechanism, a propeller shaft, a condenser, two turbines on said shaft, one of said turbines being of larger dimensions than the other, and connections for leading motor fluid directly from either turbine to said condenser, and a connection for leading the exhaust of the smaller turbine to the inlet of the larger turbine.

4. In a turbine propelling mechanism, a propeller shaft, and on said shaft a high pressure turbine and two turbines both of larger dimensions than said high pressure turbine, one of said two turbines being a reversing turbine, and independent connections for leading motor fluid from said high pressure turbine to said direct acting low pressure turbine and directly to said reversing turbine, a condenser, an independent connection for leading exhaust from said low pressure and reversing turbines to said condenser, and from said high pressure turbine to said condenser.

5. In a turbine propelling mechanism, three parallel propeller shafts, three turbines E, K, L, on the inner shaft, the turbine E being a reversing turbine, and one turbine H, M, on each of the outer shafts, connections for leading motor fluid successively to turbines H, M, L in the order named and a connection for leading motor fluid independently to turbine E; the said turbines L and E being of larger dimensions than the other turbines.

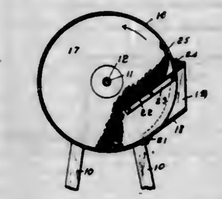
899,548. ADJUSTABLE TABLE. AMBROSE MARRERO and FRANK HELWIG, New Orleans, La. Filed Mar. 23, 1908. Serial No. 422,782.

In an adjustable table, the combination of a base, a tubular upright fixed to and rising from the base, a cup-shaped body fixed on the said upright and surrounding the same, a radially movable plunger guided in the side wall of the said body and in the wall of the upright and having a collar for engaging the inner side of the side wall of the body, a spring disposed in and connected to the body and curved about the upright and also connected to the plunger and arranged to move the plunger inward, an upper upright telescoped in the lower upright and having a vertical groove in its outer side and also having sockets at intervals in the length of the bottom of said groove



adapted to receive the inner end of the plunger, and a platform connected to and movable with the upper upright.

899,549. CONCRETE-MIXER. NORMAN E. MARSH, Des Moines, Iowa. Filed Mar. 20, 1908. Serial No. 422,269.



1. In a device of the class described, the combination of a body portion comprising a cylindrical central portion, and tapered ends, a frame in which said body portion is rotatably mounted, means for rotating the body portion, an open ended chute having its outer wall substantially tangential to the cylindrical body portion, and its inner wall substantially parallel with the outer wall, and projected into the interior of the body portion, a curved shield fixed to the said inner wall and to the interior of the cylindrical body portion, and a gearing-device for manually rotating the body portion.

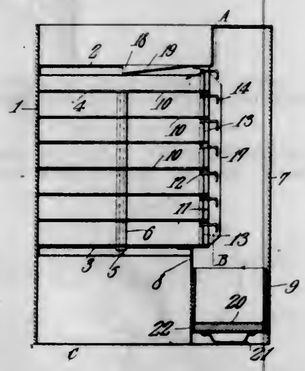
2. In a device of the class described, the combination of a cylindrical body portion having an opening therein, cone shaped ends fixed thereto, a chute formed of two parts, one part comprising bottom and sides, the bottom being fixed in position tangential to the cylinder, and adjacent to one of the edges of the opening therein, and the sides being curved and secured to the cone shaped ends adjacent to the sides of said opening, and a top member for the chute arranged substantially parallel with the bottom member, and having its side edges inclined outwardly and secured to the interior of the body portion against the cone shaped ends thereof.

3. In a device of the class described, the combination of a cylindrical sheet metal body portion having an opening therein, cone shaped sheet metal ends fixed to the cylindrical body portion, a chute formed of two parts, one part comprising a sheet metal bottom and sides, said sheet metal bottom being arranged tangential to the cylinder with one edge thereof flush with one edge of the opening in the cylinder, the sides of said chute being provided with curved outwardly inclined flanges, and rivets for connecting said flanges with the cone shaped ends adjacent to the sides of the opening, the other chute member comprising a flat plate having its side edges inclined outwardly and provided with flanges, said plate being supported parallel with the bottom plate, and said flanges being riveted to the interior of the cone shaped ends, and an angle bar riveted to the said top piece and to the exterior of the cylindrical body portion, for the purposes stated.

899,550. COIN-SEPARATOR. ANDREW R. MOORE, Charlotte, Mich. Filed Apr. 13, 1908. Serial No. 426,819.

1. A coin separator containing a suitable opening, a graded series of spaced screens arranged in regular order and separating the casing into a number of compartments

corresponding to the number of denominations into which the coins are to be separated, a common compartment into which each coin receiving compartment directly opens, a gate for each coin compartment normally closing the opening to the common compartment, and when open giving free passage for all the coins from the respective compartments to the common compartment at one operation, and means for the removal of all the coins of each group of coins of the same denomination at one time from the common compartment.



2. A coin separator comprising a suitable casing formed with a top partition depressed below the upper end of the casing to form a receptacle for a mass of mixed coins, said partition being provided with a passage for the coins to the interior of the casing, a graded series of spaced screens arranged in regular order and separating the casing into a number of compartments corresponding to the number of denominations into which the coins are to be separated, a common compartment into which each coin receiving compartment directly leads, a gate for each coin compartment between the same and the common compartment, normally closing the separate compartments from the common compartment and when open giving free passage for all the coins from the respective compartments to the common compartment at one operation, and means for the reception and removal of a group of coins of the same denomination separately from the common compartment.

3. A coin separator having a spaced series of screens to form a compartment and another compartment common to all the coin receiving compartments and into which the first named compartment directly opens, and a normally closed gate between the separate and common compartments, and means permitting the operation of the gate individually to give free passage for all the coins in any one coin compartment into the common compartment at one operation.

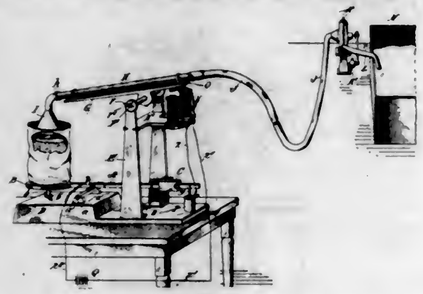
4. A coin separator having a graded series of screens forming compartments, another compartment common to all the coin-receiving compartments, gates between the separate and common compartments normally closed and inactive to the coins, means for the manual operation of the gates at will, and a removable receptacle adapted to be inserted into the common compartment to receive the coins.

5. A coin separator having fixed means for separating the coins into groups each of one denomination, means for permitting the escape of all the coins of an individual group of separated coins at one operation to a common point of discharge, and means for separately removing the groups of coins at the common point of discharge.

[Claims 6 to 8 not printed in the Gazette.]

899,551. WEIGHING APPARATUS. HENRY B. MORRIS, Grand Rapids, Mich. Filed Mar. 16, 1908. Serial No. 421,335.

1. An apparatus for obtaining accurate weight, comprising scales on which a filled receptacle is supported, means adapted to be inserted into and withdrawn from the upper part of the receptacle while on the scales to withdraw surplus material from the upper surface thereof, and devices for arresting the withdrawing action when the desired accurate weight has been obtained.



2. An apparatus for obtaining accurate weight, comprising scales on which a filled receptacle is supported, means adapted to be inserted into and withdrawn from the upper part of the receptacle while on the scales to withdraw surplus material from the upper surface thereof, and devices for automatically arresting the withdrawing action when the desired accurate weight has been obtained.

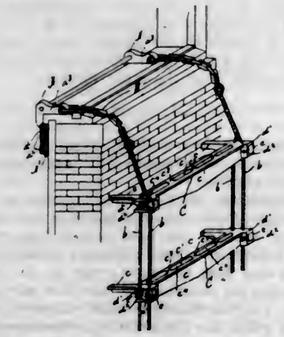
3. An apparatus for obtaining accurate weight, comprising scales on which a filled receptacle is supported, a pneumatic conveyer adapted to connect with the open mouth at the top of the receptacle for withdrawing surplus material therefrom and devices for arresting the withdrawing action when the desired accurate weight has been obtained.

4. An apparatus for obtaining accurate weight, comprising scales on which a filled receptacle is supported, a pneumatic conveyer adapted to connect with the open mouth at the top of said receptacle for withdrawing surplus material from the top thereof, and devices for automatically arresting the withdrawing action when the desired weight has been obtained.

5. An apparatus for obtaining accurate weight, comprising scales on which a filled receptacle is supported, a receiver adapted to enter the mouth at the top of said receptacle, a conveyer connecting the receiver with a place for storage, and means for stopping the withdrawal of surplus material from the receptacle when the desired accurate weight has been obtained.

[Claims 6 to 11 not printed in the Gazette.]

899,552. FIRE-ESCAPE LADDER. MARY J. MCARTHUR, Cleveland, Ohio. Filed May 31, 1907. Serial No. 376,658.



1. A fire-escape of the type set forth having a securing means at the upper ends of the respective cables, said means comprising a member adapted to be secured in position, said member being provided with one or more downwardly inclined lugs, a hook member provided with one or more orifices for the reception of said lugs, and another member at an angle to the former member to which the upper end of the respective cables are attached.

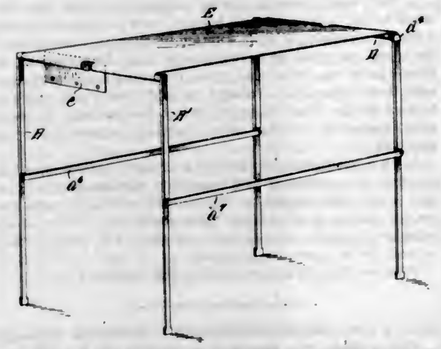
2. A fire-escape comprising steps supported at their respective ends by two cables spread apart, said cables being crossed at the ends of the steps with means clamping said crossed portion of the cables to the ends of the steps.

3. A coupling for fire-escapes comprising two members, one of said members being provided with an opening intermediate the ends thereof, and with two open loops at its ends, the other member being provided with a hook at one end, and also provided intermediate of its end with oppositely disposed hooks for engaging the loops at the end of its co-acting member, both of said members being provided with means for attachment to the suspending members of the escape.

4. A fire-escape of the type set forth comprising two steps, two spaced cables engaging the ends of said steps, said cables passing through upper and lower flanges at the ends of the steps and crossed upon each other in combination with said flanges, and means clamping the crossed portion of the cables to the ends of the steps.

5. An attaching device for fire-escapes comprising an angular hook-shaped member, one arm of which is adapted to be secured to the upper end of the suspended cable, the other arm being provided with inclined orifices adapted to engage the lugs of the plate, in combination with said lugs and plate.

899,553. CANE-STOOL. MARGARET H. MCNAMARA, Baltimore, Md. Filed Sept. 18, 1907. Serial No. 393,545.



1. In a device of the kind described, the combination with two L-shaped members having their horizontal portions pivotally connected and their vertical portions divided into two separated parts, of a rigid brace bar connecting said separate parts of the vertical portions and pivoted thereto between their ends, an auxiliary horizontal bar for connecting the ends of the lower parts of the vertical portions of said L-shaped members and a seat portion adapted to be connected to said auxiliary bar and to the horizontal portions of said L-shaped members, substantially as described.

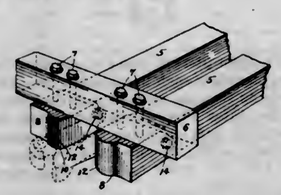
2. In a device of the kind described, the combination with two L-shaped members having their horizontal portions pivotally connected and their vertical portions divided into two separate parts, said vertical portions being recessed at a portion of their length, of a rigid brace bar connecting said separate parts of the vertical portions, pivoted thereto between their ends and adapted when folded to lay within the recess, an auxiliary horizontal bar for connecting the ends of the lower parts of the vertical portions of said L-shaped members, a seat portion and means for securing the seat portion to the horizontal portions of said L-shaped members and to said auxiliary bar, substantially as described.

3. In a device of the kind described, the combination with two L-shaped members having their horizontal portions pivotally connected and their vertical portions divided into two separate parts, provided with recesses at a portion of their length on their inner faces, of a rigid brace bar connecting said separate parts of the vertical portions and pivoted within the recesses provided in said portions, an auxiliary horizontal bar for connecting the ends of the lower parts of the vertical portions of the L-shaped members, a seat portion and means for securing the seat portion to the horizontal portions of said L-shaped members and to said auxiliary bar, substantially as described.

4. In a device of the kind described, the combination with two L-shaped members having their horizontal portions pivotally connected and their vertical portions divided into two separate parts, said parts being enlarged at their meeting ends, and being provided each with a recess, of a rigid brace bar connecting said separate parts of the vertical portions, and being pivoted within the recesses provided in said portions, a retaining ring for engaging the enlarged portions when folded, an auxiliary horizontal bar for connecting the ends of the lower parts of the vertical portions of the L-shaped members, a seat portion and means for securing the seat portion to the horizontal portions of said L-shaped members and to said auxiliary bar, substantially as described.

5. In a device of the kind described, the combination with two L-shaped members having their horizontal portions pivotally connected together, and provided with recesses, and their vertical portions divided into two separate parts, of a rigid brace bar connecting said separate parts of the vertical portions and pivoted thereto between their ends, the lower separate parts being reduced at their lower ends, an auxiliary horizontal bar provided with sockets at its ends adapted to engage the reduced end portions of the vertical portions, a seat secured in the recesses of the horizontal portions of the L-shaped members, means for securing said seat to the horizontal auxiliary bar, a ferrule and a retaining ring, substantially as described.

899,554. PROTECTOR FOR DRAFT-TIMBERS. ANDREW P. NORDEEN, Missouri Valley, Iowa. Filed Jan. 8, 1908. Serial No. 409,875.



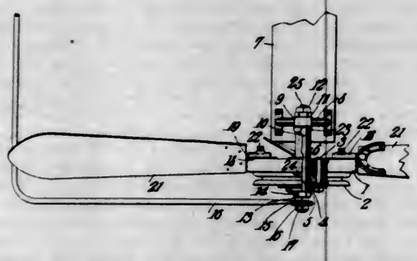
1. As an improved article of manufacture, a protector for draft timbers consisting of a box-like body having its rear end and bottom open and provided at its front end with a vertically disposed enlargement located at one of the corners of the body.

2. As an improved article of manufacture, a protector for draft timbers consisting of a box-like body having its rear end and bottom open and provided at its front end with a vertically disposed enlargement located at one of the corners of the body, the cavity of the body being formed with obtuse angles near the said enlargement.

899,555. FAN. LEE OWEN, Bloomington, Ill. Filed Jan. 13, 1908. Serial No. 410,623.

1. A fan comprising a hub, fan blades thereon, connections between the fan blades and the hub about which the fan blades may be adjusted on a longitudinal axis, a pulley on the under side of the hub, a bearing plate on the underside of the pulley, fastening means for securing the bearing plate, the pulley and the hub together, a bearing sleeve cast on the bearing plate and extending through the pulley

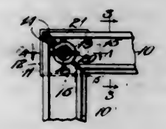
and hub, a spindle receiving the bearing sleeve, and fastening means on the spindle at each end of the sleeve to hold the latter on said spindle.



2. A fan comprising a hub, fan blades thereon, a pulley, a bearing plate on the under side of the pulley, bolts extending through the hub the pulley and the bearing plate and securing the parts together, a bearing sleeve cast with the bearing plate, and a vertical spindle supported at both ends and receiving the sleeve at an intermediate point.

3. A fan comprising a hub, fan blades fast thereon but adjustable on a longitudinal axis, a pulley, means for securing the pulley to the hub, an annular plate exterior to the pulley and secured to the hub by the same fastening means that secure the pulley to the hub, a sleeve passing through the pulley, hub and plate and formed with ball races near its ends, a vertical spindle receiving the sleeve between its ends, and means for supporting the spindle at both ends.

899,556. KNOCKDOWN PICTURE-FRAME. FRED PARKER, Chicago, Ill. Filed Feb. 24, 1908. Serial No. 417,333.



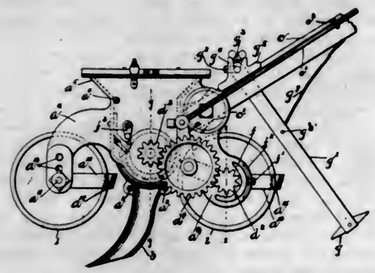
1. A knock-down picture frame comprising framing sections, corner members each providing a face plate to overlie the adjoining framing sections and rear walls arranged to receive the outer edges of the adjoining framing sections, a clamping part overlying the rear surfaces of the adjoining frame sections, connected between said frame sections to the face plate to clamp the frame sections against the face plate.

2. In a knock-down picture frame, framing sections, and corner structures, each corner structure comprising a plate overlying the adjoining ends of the framing members, rear walls receiving the outer sides of the frame members in contact therewith, a post projecting rearwardly from the plate between the adjoining ends of the framing members, and an adjustable clamping part on said post.

3. In a, knock-down picture frame, framing sections, having their ends cut at angles to leave between adjoining sections open spaces, and for each frame joint a corner structure comprising a face plate overlying the front faces of the framing ends, corner walls receiving the outer edges of the framing sections, a threaded part projecting from the face plate between the ends of the framing sections, and an adjustable nut on the threaded post.

4. In a knock-down picture frame, framing sections, a corner piece comprising a face plate, integral rear corner walls, 14, walls 15, fashioned for conformity with the decorative face of the framing sections, a screw threaded member projecting rearwardly through the face plate, a washer surrounding said threaded member and overlying the ends of the adjoining framing sections, and a nut on the threaded member.

899,557. PLANTING-MACHINE. CHARLES E. PATRIC, Springfield, Ohio. Filed Apr. 24, 1908. Serial No. 428,091.



1. In a seed planting device, a hopper or casing, a revolving seed feeding wheel, a series of pockets about the periphery thereof, an opening between said hopper and wheel, and a pivoted downwardly yieldable gate normally closing said opening, substantially as specified.

2. In a seed planting device, a hopper, a revolving seed feeding wheel therein, said wheel having a concave periphery and a series of pockets located about the same, an opening between said hopper and wheel adjacent to which said pockets pass, and a downwardly yieldable gate normally closing said opening, substantially as specified.

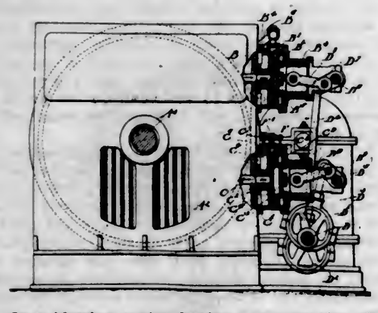
3. In a seed planter, a hopper, a revolving seed feeding wheel located therein, an opening between said hopper and wheel, inclined faces on said hopper leading to said opening, and a downwardly yielding gate normally closing said opening, substantially as specified.

4. In a seed planting device, a hopper, a feed wheel located in the bottom of said hopper, said feed wheel having a concave periphery with a series of pockets located about the same, an opening between said hopper and wheel, inclined faces on either side of said opening leading thereto, said faces being also extended to said feed wheel and conformed to the shape thereof, and a downwardly yieldable gate normally closing said opening, substantially as specified.

5. In a seed planting device, a hopper, a feed wheel located in the bottom of said hopper, a passage-way between said wheel and hopper, a downwardly yieldable gate normally closing said passage, and stationary walls at the sides of the path of movement of said gate, substantially as and for the purpose specified.

[Claims 6 to 20 not printed in the Gazette.]

899,558. BLOWING-ENGINE. GUSTAV B. PETSCHE, Philadelphia, Pa., assignor to Southwark Foundry and Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 17, 1907. Serial No. 397,818.



1. In a blowing engine having a compression chamber and an inlet and an outlet valve therefor, means for moving the inlet valve arranged to positively open the valve, if closed, at the beginning of each suction stroke in the

compression chamber and tending to close the inlet valve throughout the following compression stroke, and means independent of the valve moving means for releasably holding the inlet valve in the open position.

2. In a blowing engine having a compression chamber and an inlet and an outlet valve therefor, means for moving the inlet valve arranged to positively open the valve, if closed, at the beginning of each suction stroke in the compression chamber, and tending to close the inlet valve throughout the following compression stroke, and means responsive to the pressure of the fluid compressed and independent of the valve moving means for releasably holding the inlet valve in the open position.

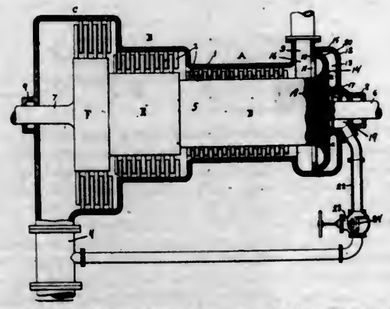
3. In a blowing engine having a compression chamber, an inlet and outlet valve therefor, a shaft rotating in definite relation to the speed of the engine and connections therefrom for moving the inlet valve, arranged to positively open the inlet valve, if closed, at the beginning of each suction stroke in the compression chamber and tending to close the inlet valve throughout the following compression stroke, valve controlled means for holding the inlet valve in the open position, a controlling valve for said means, and a connection from said shaft for opening and closing said controlling valve.

4. In a blowing engine having a compression chamber, an inlet and outlet valve therefor, a shaft rotating in definite relation to the speed of the engine and connections therefrom for moving the inlet valve, arranged to positively open the inlet valve, if closed, at the beginning of each suction stroke in the compression chamber and tending to close the inlet valve throughout the following compression stroke, valve controlled means for holding the inlet valve in the open position, a controlling valve for said means, a connection from said shaft for opening and closing said controlling valve, and means for adjusting the last mentioned means to regulate the time of closing the inlet valve.

5. In a blowing engine having a compression chamber and outlet and inlet valves for said chamber, operating means for the inlet valve comprising a pair of members, one movable with the inlet valve and the other independently thereof, means for giving said other member a to and fro movement in definite relation to the engine movement, a yielding connection between said members tending to close the inlet valve during the compression stroke in the compression chamber, said connection comprising a piston carried by one of said members which enters the open end of a piston chamber formed in the other member and open at one end only, and means releasably holding the inlet valve in the open position.

[Claims 6 to 10 not printed in the Gazette.]

899,559. TURBINE. ARNOLD PFAU, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Mar. 27, 1907. Serial No. 364,789.



1. The combination with a casing, of a spindle rotatable therein, said spindle being provided with a piston, said casing being provided with a second casing and an abutment whereby a chamber is formed, said second casing being provided with a projection on the interior thereof with which said spindle is adapted to coact to enlarge or diminish a passageway existing therebetween, said piston being located in said chamber and said spindle and piston being adapted to approach said abutment while receding from said projection, or to approach said projection while receding from said abutment, whereby passageways existing between said abutment and said piston, and between said projection and said spindle, are increased and diminished respectively by the movements of said spindle.

2. The combination with a casing, of a spindle rotatable therein, said spindle being provided with a piston, said casing being provided with a second casing and an abutment whereby a chamber is formed, said second casing being provided with a projection on the interior thereof with which said spindle is adapted to coact to enlarge or diminish a passageway existing therebetween, said piston being located in said chamber and said spindle and piston being adapted to approach said abutment while receding from said projection, or to approach said projection while receding from said abutment, whereby passageways existing between said abutment and said piston, and between said projection and said spindle, are increased and diminished respectively by the movements of said spindle, a conduit adapted to receive the fluid exhausted from said chamber, and a valve for controlling the thoroughfare through said conduit.

3. The combination with a casing, of a spindle rotatable therein, said spindle being provided with a piston, said casing being provided with a second casing and an abutment whereby a chamber is formed, said piston being located in said chamber and provided with a projection adapted to coact with said second casing to enlarge or diminish a passageway existing therebetween, said piston being adapted to approach said abutment while the projection thereof recedes from said second casing, whereby passageways existing between said abutment and said piston and between said second casing and the projection on said spindle, are increased and diminished respectively by movements of said spindle.

4. The combination with a casing, of a spindle rotatable therein, said spindle being provided with shaft extensions and with a piston, said casing being provided with a second casing and an abutment whereby a chamber is formed, said piston being located in said chamber and adapted to approach or recede from said abutment, whereby a passageway existing between said piston and said abutment may be diminished or enlarged, a second passageway being provided between the spindle and said second casing at a point between the exterior surface of said spindle and said shaft extensions, said second passageway being adapted to be diminished by a movement of said spindle which enlarges said first mentioned passageway, and to be enlarged by a movement of said spindle which diminishes said first mentioned passageway.

5. The combination with a casing, of a spindle rotatable therein, said spindle being provided with a piston, said casing being provided with a second casing and an abutment whereby a chamber is formed, said piston being located in said chamber and movable to approach or recede from said abutment to permit the steam to act upon one side thereof to force the spindle in one direction or to act upon both sides thereof to equalize the pressures exerted upon both sides of said piston, said spindle being provided with an end surface that may be exposed to steam under pressure when the pressures of the steam on opposite sides of said piston are equalized.

[Claim 6 not printed in the Gazette.]

899,560. HORSE-COLLAR. LEONARD J. POWERS, Waterloo, Iowa, assignor to The Powers Manufacturing Company, Waterloo, Iowa. Original application filed Feb. 28, 1907, Serial No. 359,830. Divided and this application filed Dec. 24, 1907. Serial No. 407,948.

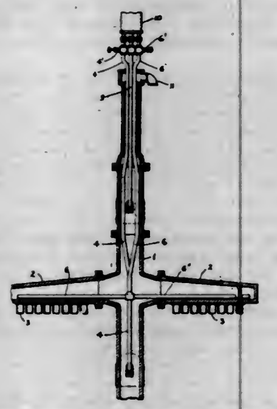
A horse-collar, consisting of the combination of communicating pad-covers adapted to be stuffed continuously throughout and secured together at their middle or neck portion, with water-proof pieces adapted to cover when

secured together at their abutting ends only the upper outside portion of said collar only, the seams of the lower ends



of each piece being concealed under the reversed portion of such piece.

899,561. ROASTING-FURNACE. WILLIAM A. RANKIN, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Dec. 16, 1905. Serial No. 291,993.



1. The combination with a vertically disposed shaft of hollow rabble arms extended therefrom and closed at their extremities remote from the shaft, each of said rabble arms being provided with a conduit adapted to convey a liquid to the extremity of said arm and discharge it into said arm, means for controlling the flow of liquid to some of said arms independently of the flow of liquid to others of said arms, a common outlet from said arms being provided adapted to discharge the liquid at a point elevated above said arms.

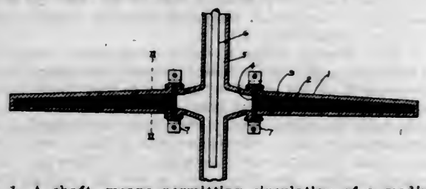
2. The combination with a vertically disposed hollow shaft, of hollow rabble arms radiating therefrom and in open communication with the interior thereof, said rabble arms being arranged in series, each arm of a series lying substantially in the same horizontal plane, pipes adapted to convey a fluid to the extremities of and discharge said fluid into said hollow arms, means to control separately the flow of fluid to the arms of each of said series, said shaft providing a common outlet for the fluid from each of said arms and being provided with an overflow disposed vertically above the uppermost series of arms.

3. The combination with a vertically disposed hollow shaft, of hollow rabble arms radiating therefrom and in open communication with the interior thereof, said rabble arms being arranged in series, each arm of a series lying substantially in the same horizontal plane, pipes adapted to convey a fluid to the extremities of and discharge said fluid into said hollow arms, a receptacle concentrically disposed with respect to said shaft and divided into a number of concentrically arranged compartments, a pipe which discharges into one of the series of arms being connected with one of said concentric compartments, means adapted to convey a liquid into each of said concentric compartments and means to control the supply of liquid to each of said concentric compartments, said shaft providing a common outlet for the liquid from each of said arms and being provided with an overflow disposed vertically above the uppermost series of arms.

4. The combination in a furnace, of superposed hearths, a vertical shaft extending through the hearths and provided with a series of arms in each hearth, separate inlet pipes for each series providing for circulation of a fluid to the arms, and means for separately controlling the flow of fluid to each separate inlet pipe.

5. The combination in a furnace, of a shaft having stirring arms, separate pipes at the upper end of the shaft for supplying a fluid to the arms, and manually operated stationary means for controlling the flow of fluid to the separate pipes.

899,562. ROASTING-FURNACE. WILLIAM A. RANKIN, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Jan. 12, 1906. Serial No. 295,720.



1. A shaft, means permitting circulation of a medium therein, a hollow arm, a heat conductor lining, and a gasket for the arm.

2. A shaft, a heat conductor lined arm, and a heat conductor gasket between the shaft and arm.

3. A hollow shaft having lateral openings, heat conductor lined arms, and heat conductor gaskets between the arms and shaft.

4. The combination with a self-supporting member subjected to high temperatures and strains and rendered flexible upon an excess of heat reaching it, of a heat conductor secured closely adjacent thereto to receive excess heat therefrom and transfer the heat away from said member to some point where the heat can be conveniently dissipated.

5. The combination with a self-supporting hollow member subjected to high temperatures and strains and rendered flexible upon an excess of heat reaching it, of a heat conductor secured within said member and adjacent the interior surface thereof, said heat conductor being extended out of said member to convey heat from said member to a point where it may be conveniently dissipated.

[Claims 6 to 9 not printed in the Gazette.]

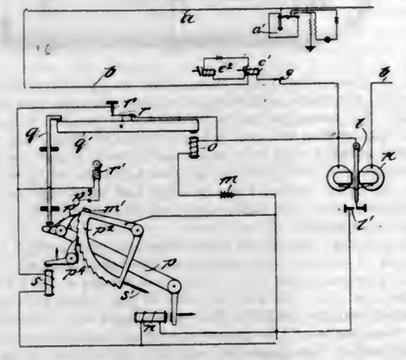
899,563. BALL-BEARING FOR VERTICAL SHAFTS. AUGUST RIEBE, Berlin, Germany. Filed Jan. 20, 1906. Serial No. 296,960.



1. A ball bearing for vertical shafts, said bearing having a double-grooved course or ball path, in combination with a cage for separating the balls, said cage consisting of two perforated elastic rings each of thin sheet metal lying in a single plane throughout its width so as to yield readily, and connected together at a few separated points only, so as to present a minimum obstacle to the elastic yielding of the rings and to thereby permit a slight movement of the balls relatively to the cage, the perforations of said rings being elongated radially to permit a substantial radial displacement of the balls relatively to the cage, and said perforations having a width substantially equal to that of the balls at the point where the latter pass through the perforations.

2. A ball bearing for vertical shafts, having a double-grooved course or ball path, in combination with a cage for separating the balls, said cage comprising two perforated rings *d* and *e* each of thin sheet-metal lying in a single plane throughout its width so as to be elastic and to yield readily, and rivets *g* at a few separated points only, near the inner edges of the rings, so as to hold said rings in their proper relative position without substantial interference with the elasticity of the cage, whereby said rings are adapted to yield and thereby permit a slight movement of the balls relatively to the cage, the perforations *f* of said rings being elongated radially to permit a substantial radial displacement of the balls relatively to the cage, and the width of said perforations being substantially equal to that of the balls at the point where the latter pass through the perforations.

899,564. SELECTIVE SIGNALING SYSTEM. HARRY O. RUGH, Sandwich, Ill. Filed Dec. 9, 1907. Serial No. 405,659.



1. A circuit selective appliance including electro-magnetic step-by-step operating mechanism, a sluggishly moving circuit controlling element including an unbalanced lever, and a restraining element in the form of a weight normally imposed upon the lighter end of said lever to overcome the action of the heavier end of said lever, thereby normally preventing the operation of said circuit controlling element and removable from influence thereupon by said electro-magnetic mechanism.

2. A circuit selective appliance including a step-by-step actuated switching mechanism, electro-magnetic mechanism for operating the switching mechanism step-by-step, a sluggishly moving circuit controlling element including an unbalanced lever, and a restraining element in the form of a weight normally imposed upon the lighter end of said lever to overcome the action of the heavier end of said lever, thereby normally preventing the operation of said circuit controlling element and removable from influence thereupon by said electro-magnetic mechanism each time said electro-magnetic mechanism is operated to step the switching mechanism.

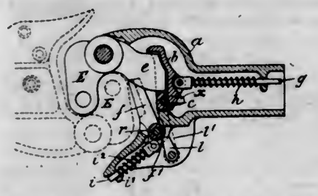
3. A circuit selective appliance including a step-by-step actuated switching mechanism, electro-magnetic mechanism for operating the switching mechanism step-by-step, a sluggishly moving circuit controlling element including an unbalanced lever, and a restraining element in the form of a weight normally imposed upon the lighter end of said lever to overcome the action of the heavier end of said lever, thereby permitted by the electro-magnetic mechanism normally to prevent the operation of said circuit controlling element and adapted to be removed from restraining influence upon said circuit controlling element by the operation of the electro-magnetic mechanism.

4. A circuit selective appliance including electro-magnetic step-by-step operating mechanism, a sluggishly moving circuit controlling element, a restraining element normally preventing the operation of said circuit controlling element and removable from influence thereupon by said electro-magnetic mechanism, holding mechanism for maintaining the switching mechanism in the position to which it is stepped, and electro-magnetic mechanism for releasing the holding mechanism and having its circuit governed by the aforesaid circuit controlling element.

5. A circuit selective appliance including a step-by-step actuated switching mechanism, electro-magnetic mechanism for operating the switching mechanism step-by-step, a sluggishly moving circuit controlling element, a restraining element normally preventing the operation of said circuit controlling element and removable from influence thereupon by said electro-magnetic mechanism each time said electro-magnetic mechanism is operated to step the switching mechanism, holding mechanism for maintaining the switching mechanism in the position to which it is stepped, and electro-magnetic mechanism for releasing the holding mechanism and having its circuit governed by the aforesaid circuit controlling element.

[Claims 6 to 22 not printed in the Gazette.]

899,565. CENTRAL-BUFFER CLAW-COUPLING. LUDWIG SCHEIB, Sr., and LUDWIG SCHEIB, Jr., Kaiserslautern, Germany. Filed Nov. 14, 1907. Serial No. 402,192.

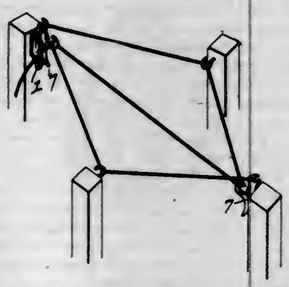


1. In a central buffer claw coupling such as herein referred to, the combination with a hollow coupling head, a claw hook having a tail, a pivoted locking cap for engaging said tail and a spring whose extension forces said locking cap forwards, of a spring controlled lever held pressed inwards against the stress of its spring by the co-acting claw hook of the coupled vehicle, and means placing said lever in operative connection with the pivoting end of the locking cap aforesaid, whereby when one claw hook has been released by hand, the forward movement of the spring controlled lever, automatically effected by its spring on the separation of the vehicles, forces back the locking cap to release the other claw hook and throw it out of its operative position in the known manner, substantially as set forth.

2. In a central buffer claw coupling such as herein referred to, the combination with a hollow coupling head, a claw hook, a pivoted locking cap for engaging the tail of the latter and a spring whose extension forces said locking cap forwards, of a spring controlled pivoted two-armed lever whereof one arm is engaged and held pressed inwards to compress the spring by the co-acting coupled claw hook, and a second pivoted lever engaging the releasing pin of the locking cap aforesaid and operated by the other arm of the spring controlled lever, when the latter is moved forwards by its spring on the separation of the wagons, to cause said second lever to draw backwards the releasing pin and thereby cause the locking cap to release the claw hook and throw the latter out of its locking position in the usual manner, substantially as described.

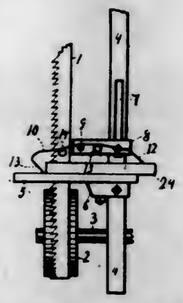
3. In a central buffer claw coupling such as herein referred to, the combination with a coupling head, of a claw hook pivoted thereto, a spring controlled pivoted locking cap adapted under suitable conditions to engage the claw hook, a double armed lever *f*, *f'*, adapted to operate the claw hook, a push rod *i* adapted to act upon one arm of said lever, a spring i^2 encircling said push rod, and a second double armed lever *l*, *l'*, one arm of which is designed to be engaged by one arm of the lever *f*, *f'* and the other arm of which is designed to withdraw the locking cap from the claw hook, substantially as described.

899,566. CLOTHES-LINE FASTENER. JOHN G. SCHLENTER, Toledo, Ohio. Filed Nov. 25, 1907. Serial No. 403,676.



In a clothes-line fastener, a body plate having a slot extending into the margin thereof and provided with indentations in its rear face on opposite sides of the slot, and a lever provided at a central point with oppositely extending lateral lugs adapted to seat in said indentations, the upper arm of said lever being adapted to guide a line and the lower arm to clamp the line against the body plate, and a hook upon the lever extending directly outward from the lugs thereon, substantially as described.

899,567. SAFETY DEVICE OR SAW-GUARD. GEORGE SCHUBERT, Fort Worth, Tex. Filed Nov. 16, 1907. Serial No. 402,390.



1. In a saw guard, a support extending over the saw, a spring pivoted on the support and having an end projecting behind the blade of the saw and having a forward end bent downward.

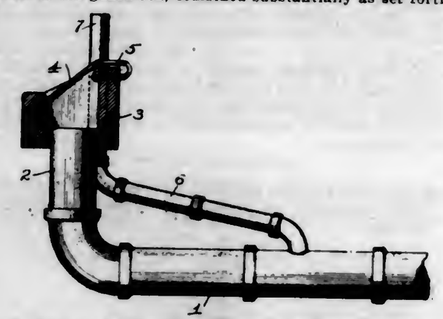
2. In a saw guard, a support extending over the saw, a spring pivoted on the support and having an end projecting in front of the saw and bent downward and said spring having a heavier end projecting behind the blade of the saw to partly raise the forward end of the spring.

3. In a saw guard, a support extending over the saw, a spring pivoted on the support and having an end projecting in front of the saw and bent downward and said spring having an end projecting rearward and engaged by the material to be sawed to increase the tension or pressure of the spring.

899,568. DRAIN-INLET GUARD. ANDREW J. SHEPARD, College Corner, Ohio, assignor of one-third to Henry Shepard, Hamilton, Ohio. Filed July 20, 1908. Serial No. 444,332.

1. A drain inlet guard comprising, an open-topped box formed of concrete and adapted to have the inlet end of a drain pipe connected with its base, and a series of guard-bars arranged parallel with each other and forming the roof to the box, the series of guard-bars forming an inclined surface from one end to the other of the bars, combined substantially as set forth.

2. A drain inlet guard comprising, an open-topped box formed of concrete and adapted to have the inlet end of a drain pipe connected with its base, and a series of guard-bars arranged parallel with each other and forming the roof to the box, the series of guard-bars forming an inclined surface from one end to the other of the bars, the higher ends of the guard-bars passing over and beyond the wall of the guard-box, combined substantially as set forth.

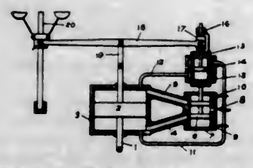


3. A drain inlet guard comprising, an open-topped box formed of concrete and adapted to have the inlet end of a drain pipe connected with its base and having a front wall higher than the rear wall, a series of guard-bars arranged parallel with each other and arranged upon an inclination, the lower ends of the guard-bars being socketed into the lower wall of the guard-box and their upper ends projecting over the higher wall of the guard-box, combined substantially as set forth.

4. A drain inlet guard comprising, an open-topped box formed of concrete and adapted to have the inlet end of a drain pipe connected with its base and having a front wall higher than the rear wall, a series of guard-bars arranged parallel with each other and arranged upon an inclination, the lower ends of the guard-bars being socketed into the lower wall of the guard-box and their upper ends projecting over the higher wall of the guard-box, the forward higher ends of the guard-bars being turned downwardly in front of the guard-box and thence passed rearwardly through that wall, combined substantially as set forth.

5. A drain inlet guard comprising, a drain pipe having an upturned inlet end, an open-topped guard-box connected with the inlet end of the drain pipe, a series of guard-bars disposed parallel with each other and forming a guarded roof for the guard-box, an air-pipe connected with the drain pipe at a point a distance from the guard-box, and an upturned inlet end for said air-pipe connected with the guard-box, combined substantially as set forth.

899,569. GOVERNOR. RUDOLPH SIEGMUND, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Jan. 22, 1906. Serial No. 297,200.



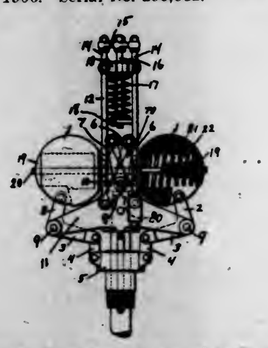
1. The combination in a governor, of a fluid actuated driven member, a chamber provided with a port to which a fluid is adapted to be admitted to actuate said driven member, a valve for controlling the flow of fluid through said port, a floating lever having connection to said governor, said valve, and said driven member, a fluid actuated expansible member forming a part of said connections, and means whereby any pressure existing in said chamber automatically has a corresponding pressure developed to actuate said expansible member.

2. The combination with a governor, of a driven member adapted to be actuated by a fluid, a chamber provided with a port to which a fluid is adapted to be admitted to operate said driven member, a valve adapted to control the flow of a fluid through said port, a floating lever connected to said governor, said valve, and said driven member in such a manner as to include a mutually slidable shell and piston therein, and a duct connecting the chamber and shell.

3. The combination with a governor, of a driven member provided with a piston, a chamber inclosing said piston and provided with ports on opposite sides of said piston, through which ports fluid is adapted to be introduced within said chamber to operate said driven member, a valve controlling said ports, a shell connected to said valve, a piston in said shell, said shell being provided with ports on opposite sides of said piston, ducts adapted to place said ports in said shell in communication with the interior of said chamber, and a floating lever to which said piston, said driven member and said governor are each connected.

4. The combination with a governor, of a driven member provided with a piston, a chamber inclosing said piston, said chamber being provided with ports on opposite sides of said piston adapted to admit a fluid thereto, a valve adapted to admit the flow of a fluid to, or the exhaust of a fluid from, said chamber, a shell secured to said valve, a piston inclosed by said shell, said shell being provided with ports on opposite sides of said piston, ducts adapted to form a communication between said ports and said chamber on opposite sides of said piston, a floating lever, said valve, driven member and governor each being connected with said floating lever in such a manner that movements of the governor are transmitted to said piston, thereby causing said valve to move and admit fluid to said chamber on that side of said piston which is in communication with the port in said shell away from which said piston tended to be moved by said governor.

899,570. CENTRIFUGAL GOVERNOR. RUDOLPH SIEGMUND, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Feb. 7, 1906. Serial No. 299,882.



1. The combination in a governor, of a fly weight, a plurality of links engaged with said weight to support the same, and a spring to oppose outward movement of said fly weight under the influence of centrifugal force.

2. The combination in a governor, of a plurality of fly weights, a plurality of links engaged with each of said fly weights and supporting the same, springs adapted to oppose outward movement of said fly weights under the influence of centrifugal force, and means connecting said springs.

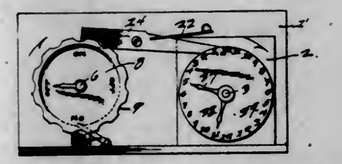
3. The combination in a governor, of a plurality of fly weights, a plurality of links engaged with each of said fly weights and supporting the same, springs adapted to oppose outward movement of said fly weights under the influence of centrifugal force, means connecting said springs, and an additional spring also adapted to oppose outward movement of the weights under the influence of centrifugal force.

4. The combination in a governor, of a plurality of fly weights, a plurality of links engaged to each of said fly weights and supporting the same, springs adapted to oppose outward movement of said fly weights under the influence of centrifugal force, means connecting said springs, an additional spring also adapted to oppose outward movement of the weights under the influence of centrifugal force, and driven means connected to the weights.

5. The combination in a governor, of a fly weight, bell crank levers supporting and positioning said weight, and a spring to oppose the outward movement of said weight under the influence of centrifugal force.

[Claims 6 to 12 not printed in the Gazette.]

899,571. TIME-ACTUATED MECHANISM. HARRY B. SNELL, Toledo, Ohio. Filed Apr. 24, 1908. Serial No. 428,896.



1. In a mechanism of the class described, the combination with a pair of releasing levers, of a pair of rotatable timing disks provided with notches in their peripheries and also having a portion of their peripheries continuous, and means for shifting the position of the disks axially to cause the ends of the levers to ride in contact with either the notched portions or the continuous portions of the peripheries of the timing disks, substantially as described.

2. In a mechanism of the class described, the combination with a pair of releasing levers, a clock-driven arbor, a pair of timing disks having notches in their peripheries and also having a portion of their peripheries continuous, means upon the arbor to hold the notched peripheries of the timing disks in the paths of the lever ends, and spring means for moving the timing disks along the arbor when said holding means is released to cause the continuous portions of the timing disk peripheries to travel in the paths of the lever ends, substantially as described.

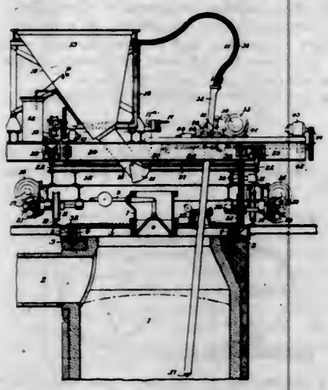
3. In a mechanism of the class described, the combination with a pair of releasing levers, of a rotatable arbor, a friction disk fast upon the arbor, a pair of timing disks each having a periphery one portion of which is provided with a notch, the other portion being continuous, hubs for the timing disks which are concentric with the arbor, setting hands upon the hubs, a nut screwed upon the outer end of the arbor to force the timing disks into contact with each other and the inner timing disk into contact with the friction disk upon the arbor, and a coiled compression spring to move the timing disks axially, substantially as described.

899,572. CHARGER AND STIRRER FOR GAS-PRODUCERS. HORACE E. SMYTHE, Oakmont, and EDMUND W. SHINN, Pittsburg, Pa., assignors to The S. R. Smythe Company, Pittsburg, Pa., a Corporation of West Virginia. Filed May 13, 1908. Serial No. 432,625.

1. The combination of a gas producer, a rotatable top therefor, a poke-hole on said top, a poker, a rotatable carrier for said poker, means for rotating said top and carrier at the same speed and in the same direction, and means for moving the poker transversely of its rotary movement with said top and carrier.

2. The combination of a gas producer, a rotatable top therefor, a poke-hole on said top, a poker, a rotatable carrier for said poker, means for rotating said top and carrier at the same speed and in the same direction, means for moving the poker transversely of its rotary movement with said top and carrier, and means for moving the poker vertically.

3. The combination of a gas producer, a rotatable top therefor, a poke-hole on said top, a poker, a rotatable carrier for said poker, means for rotating said top and carrier at the same speed and in the same direction, means for producing relative rotary movement of said top and carrier, and means for moving the poker transversely of its rotary movement with said top and carrier.

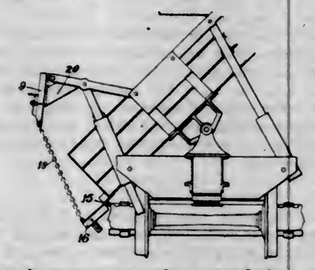


4. The combination of a battery of gas producers, a car movable over the same, and a poker carried on said car and arranged to be introduced into any of said producers to agitate the charge therein and means for causing the poker to travel circularly within the producer.

5. The combination of a battery of gas-producers, a car movable over the same, a rotary trolley on said car, a rotatable top on each gas producer, a poke-hole on each top, a poker, adapted to pass through each poke-hole, means for causing the rotation of said trolley and each of said tops at the same speed and in the same direction, and means for moving the poker transversely of its rotary movement.

[Claims 6 to 12 not printed in the Gazette.]

899,573. DUMP-CAR. THOMAS H. STAGG, Columbus, Ohio, assignor to The Kilbourne and Jacobs Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Feb. 3, 1908. Serial No. 413,976.

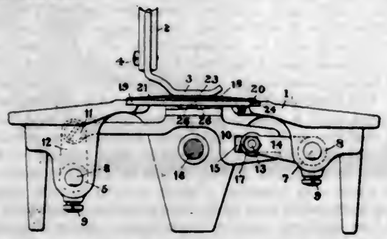


1. In a dump car, a member secured thereon to swing freely, a door adapted to be opened when the car is dumped, a flexible connection between said door and said swinging member whereby when said car is dumped said member is drawn into a position practically in the plane of the floor of said car for the purpose of deflecting the material dumped to a point remote from the car.

2. The combination of a gas producer, a rotatable top of the same adjacent to the outer edge thereof, a door adapted to be opened and held in elevated position when said car is dumped, and a flexible connection between said member and said door, whereby, when the car is in its dumped position, said swinging member is brought practically into the plane of the car floor to deflect the dumped material outwardly away from the car.

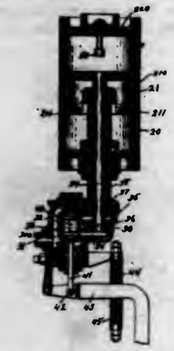
3. In a dump car, a car box, a door thereon adapted to be held aloft in open position as the car box is dumped, a member hinged along the edge of the bottom of said car box to move therewith, a flexible member secured to said door and to said hinged member whereby the latter is raised to form an extension of the bottom of said car box during the dumping operation.

899,574. SEWING-MACHINE THROAT-PLATE. CHARLES H. TOWERS, Baltimore, Md., assignor, by mesne assignments, to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Feb. 1, 1906. Serial No. 298,969.



In a sewing machine the combination with a presser-foot, a throat-plate provided with the usual opening for the feed dog, a spring plate having a corresponding feed opening mounted on said throat-plate, and adapted to raise the material operated upon above the surface of the feed-dog, as specified.

899,575. BAND-SAW MILL. WILLIAM H. TROUT, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Feb. 8, 1907. Serial No. 356,446.



1. The combination with the upper saw guide of a band saw mill of an arm to which it is secured, a support, a cylinder slidable with respect to said support, said cylinder and arm being secured together, a piston within said cylinder, said piston being immovably fixed with respect to said support and means for admitting a fluid under pressure to and exhausting it from either end of the cylinder on opposite sides of the piston through the piston rod.

2. The combination with the upper saw guide of a band saw mill of an arm to which it is secured, a support, a cylinder slidable with respect to said support, said cylinder and arm being secured together, a piston within said cylinder, said piston being immovably fixed with respect to said support, means for admitting a fluid under pressure to and exhausting it from either end of the cylinder on opposite sides of the piston through the piston rod, and means for forming a fluid cushion between said piston and one end of said cylinder.

3. The combination with the upper saw guide of a band saw mill of a support, a cylinder provided with heads slidably engaged with said support and supporting said guide, a piston within said cylinder immovably fixed with respect to said support, two pipes connected with said piston, each of said pipes affording communication with the interior of said cylinder on only one side of said piston, means for supplying a fluid under pressure to either of said pipes or to permit it to exhaust therefrom, one of said pipes opening through a face of the piston, and a bolt secured to the adjacent head of the cylinder and adapted to restrict the aperture through said pipe.

899,576. CRUPPER-FASTENER FOR HARNESS. JAMES E. VARNUM, Eldon, Iowa. Filed June 1, 1908. Serial No. 435,928.



A device of the class described, comprising a flat strap formed of an upper and lower layer of leather, said strap being divided into two parts at its rear end, and one of said parts being severed transversely, a loop connecting the rear ends of said parts, the severed part having the upper layer of leather arranged with its ends capable of engaging each other, and the lower layer of leather being cut away to form a space between the ends, a flat metal plate sewed between the layers of one part and provided with a slot at one end, the upper layer above said slot being disconnected from the plate, so that it may be easily bent upwardly away from the plate, and a flat plate sewed between the layers of the other end and projected into the space between the ends of the lower layer of leather, and a hook formed on said projecting end and designed to enter the slot for connecting said parts, said hook being so shaped that when the two ends of the strap are in line it cannot become detached, but may be readily detached when the ends of the strap are arranged at acute angles relative to each other.

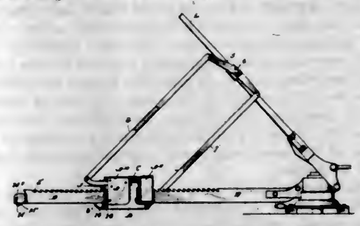
899,577. ART OF PRODUCING GELATINIZED NITRO-CELLULOSE EXPLOSIVES. GEORGE H. WADSWORTH, Lyndhurst, England. Filed Aug. 9, 1907. Serial No. 387,821.

1. In the art of producing gelatinized nitro-cellulose explosives the process of treatment which consists in taking a quantity of the nitro-cellulose in the consistency of a jelly and a quantity of finely ground barium nitrate, kneading the two together into a pasty mass, forming said mass into grains, drying said grains, and then treating said grains with water to dissolve out the bulk of the barium nitrate, whereby the grains are given a bone-like porous structure, and the small residue of the nitrate will assist as an additional oxidizer in producing an explosive which is not hygroscopic and is practically smokeless.

2. In the art of producing gelatinized nitro-cellulose explosives the process of treatment which consists in taking a quantity of the nitro-cellulose in the consistency of a jelly and not less than twice that quantity of barium nitrate so finely ground that its particles will pass through a sieve of about one to two hundredths of an inch, thoroughly kneading the two together into a pasty mass, forming such mass into homogeneous grains, drying said grains, and then treating said grains with water to dissolve out the bulk of the barium nitrate, whereby the grains are given a bone-like porous structure, substantially as hereinbefore specified.

899,578. TROLLEY-POLE CATCHER. JOHN H. WALKER, Lexington, Ky. Filed Dec. 26, 1907. Serial No. 407,996.

1. The combination substantially as herein described, of a trolley pole, a track, a carrier body movable along the track, a rocker pivoted to the said body, a catch or dog carried by the said body for engagement with the track, means whereby the rocker may release the dog from engagement with the track, a spacing device, a movable support therefor, a lever pivoted between its ends to the trolley pole, a rod connecting one end of said lever with the movable support for the spacing device, and a rod connecting the other end of said lever with the rocker.



2. The combination of a trolley pole, a track, a carrier movable along the track and comprising a body portion and operating parts movable relatively to the body portion and independent connecting rods between said operating parts and the trolley pole.

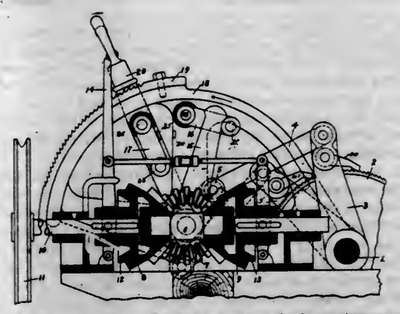
3. The combination of a track, a carrier body movable along the track, a dog for engagement with the track, means for releasing the dog for engagement with the track, a spacing device having means below the track for engagement therewith, a rod extending thence upwardly above the track, and a lever connected between its ends with said rod and pivoted at one end to the carrier body, and means for operating said lever.

4. The combination of a track notched in its upper edge and provided in its lower edge with a series of spacing sockets, a carrier body movable along the track and having a dog for engagement with the upper notched edge thereof, a spacing stud adapted to enter the spacing sockets in the lower edge of the track, a support above the carrier body and movable relatively thereto and connections between said movable support and the spacing stud, and means for operating said movable support.

5. The combination with a track, of a spacing device having a stud, a rod supporting the stud and slotted longitudinally for the reception of the track and extending at its upper end above the track, a carrier body and a support to which said slotted rod is secured at its upper end, said support being movable relatively to the carrier body, and means for operating said movable support.

[Claims 6 to 11 not printed in the Gazette.]

899,579. STOP MECHANISM FOR SAWMILL SET-WORKS. JOHN WALTON, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Mar. 5, 1904. Serial No. 196,700.



1. In a saw mill set works, a rocker-shaft, a stop arm on the rocker shaft, actuating means for the rocker shaft, and stop means independent of the actuating means and comprising a movable member and a support, so arranged that the line of pressure on the stop from the stop arm and a

line of resistance to such pressure through the member and the support are first at an angle to each other but in the course of movement of such member become parallel or in line thus acting to offer gradually increasing resistance to the motion of the rocker shaft near the limits of its motion and to positively limit its extent of motion.

2. In a saw mill set works, a set shaft, operating means for the set shaft, a stop for the operating means comprising a spring subjected member movable angularly to the line of pressure on the stop, and a support for the member, the action being such as to diminish to zero the angularity of the line of pressure on the stop to a line of resistance to such pressure through the member and the support, thus acting to offer gradually increasing resistance to the motion of the operating means and to positively limit its extent of motion.

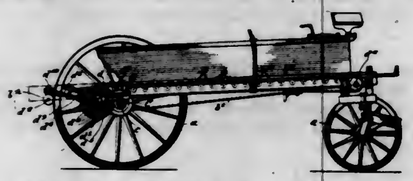
3. In a saw mill set works, a set shaft, operating means for the set shaft, a swinging arm co-acting with the operating means, and a stop for the arm comprising a movable member and a support for the member, the action being such that the arm is engaged by the stop at a point increasing in radial distance from the axis of the arm as the operation proceeds.

4. In a saw mill set works, a rocker-shaft, means for alternately actuating the rocker-shaft, a set-shaft, connections between the rocker-shaft and the set-shaft for operating the latter in a constant direction, a stop arm on the rocker-shaft, a stop on each side of the stop arm, each stop including a pivotally mounted arm and a friction roller mounted on the free end of the arm, the stop arm contacting with the friction roller near the limits of its motion.

5. In a saw mill set works, a rocker-shaft, a stop arm on the rocker-shaft, a stop co-acting with the stop arm and pivotally mounted on the frame, a stop lever loosely mounted on the rocker-shaft and a second stop co-acting with the stop arm and pivotally mounted on the stop lever, the stops being pivotally mounted within the limits of motion of the stop arm.

[Claims 6 to 14 not printed in the Gazette.]

899,580. FERTILIZER-DISTRIBUTER. WARREN E. WARNER, Syracuse, N. Y., assignor to Kemp & Burpee Manufacturing Company, Syracuse, N. Y., a Corporation of New York. Filed Sept. 19, 1902. Serial No. 124,033.



1. In a fertilizer distributer, a movable bottom, actuating mechanism for said bottom driven from the axle of the distributer, said mechanism including a driving element having differential drive surfaces, and transmitting mechanism having an element co-acting with said surfaces, and means for changing the relative position of the latter element in relation to the driving element in two directions, said means including a single controlling lever.

2. In a fertilizer distributer, a movable bottom, actuating mechanism for said bottom driven from the axle of the distributer, said mechanism including a driving element having differential drive surfaces, and transmitting means including a gear coacting with said surfaces, and means for shifting said gear relative to the driving element in two directions at right angles to each other, said shifting means including a single lever, operated from the operator's seat, for controlling both movements.

3. In a fertilizer distributer, a movable bottom, actuating mechanism for said bottom driven from the axle of the distributer, said mechanism including a driving element having differential drive surfaces, and transmitting means including a gear element coacting with said surfaces, one of said elements being shiftable in two directions relative to the other to bring the gear element into and out of the plane of operation of the driving element and out of register with one of the drive surfaces and into register with another of said surfaces and means for effecting the movements in two directions of the relatively shiftable element, including a lever.

4. In a fertilizer-distributer, a movable bottom, actuating mechanism for said bottom driven from the axle of the distributer, said mechanism including a rotating driving element having a plurality of differential drive surfaces arranged concentric to the axis of rotation of the driving element, transmitting means including an element having lateral and radial adjustment in relation to said drive surfaces, and a single operating lever for effecting both the lateral and the radial adjustments, substantially as and for the purpose specified.

5. In a fertilizer distributer, a movable bottom, actuating mechanism for said bottom driven from the axle of the distributer, said mechanism including a driving element having differential drive surfaces, and transmitting means including a laterally-shiftable shaft and a gear mounted thereon for driving the same, said gear being shiftable axially of the shaft, means for shifting said gear axially and means for shifting the shaft to carry the gear into and out of the operative plane of the driving element the two means having an operating lever in common.

[Claims 6 to 11 not printed in the Gazette.]

899,581. METHOD OF PRODUCING SOLID HARD PIECES FROM PULVERULENT MATERIAL OF ANY ORIGIN. LUDWIG WEISS, Budapest, Austria-Hungary. Filed Oct. 21, 1905. Serial No. 283,784.

1. The herein described method of producing solid, hard pieces from pulverulent material consisting in mixing the dry material with lime water and pressing the same in form pieces and subjecting the pieces during the pressing action in the closed press mold to carbonic acid, compressed in a suitable manner.

2. The herein described method of producing solid piece, consisting in mixing the dry material with lime-water and pressing the same in form-pieces, and, subjecting the pieces during the pressing action in the closed press mold to carbonic acid, compressed in a suitable manner to upwards of 8 atmospheres.

3. The herein described method of producing solid pieces, consisting in mixing damp pulverized material with slaked lime, pressing the same in form-pieces and subjecting these pieces during the pressing action in the closed press mold to carbonic acid under pressure.

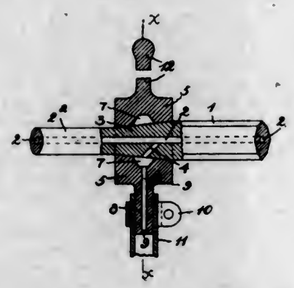
4. The herein described method of producing solid pieces, consisting in mixing damp pulverized material with slaked lime, pressing the same in form-pieces and subjecting these pieces during the pressing action in the closed press-mold to carbonic acid under pressure of upwards of 8 atmospheres.

5. The herein described method of producing solid pieces, consisting in mixing dry pulverulent material with lime water and pressing the same into form-pieces, placing these pieces in a closed receptacle and filling the receptacle with carbonic acid under pressure.

[Claim 6 not printed in the Gazette.]

899,582. WATER-SUPPLYING DEVICE FOR ROCK-DRILLING MACHINES. EUSTACE M. WESTON, Brakpan, Transvaal. Filed Feb. 18, 1908. Serial No. 416,596.

1. In a device such as described, in combination, a drill steel or bit the shank of which has a tapered portion and provided with a longitudinal hole and a transverse hole communicating with said longitudinal hole and communicating with the surface of said tapered portion, and a sleeve having a tapered bore corresponding to the tapered portion of the steel or bit shank, the said tapered portion of the shank fitting in the said tapered bore of the sleeve, said shank and sleeve forming a recess between them in communication with the transverse hole, and means non-rotatably attached to the sleeve for conveying water to said recess.



2. In a device such as described, in combination, a drill steel or bit, the shank of which has a tapered portion and provided with a longitudinal hole and a transverse hole communicating with said longitudinal hole and terminating at the surface of said tapered portion, and a sleeve having a tapered bore corresponding to the tapered portion of the steel or bit shank, said tapered portion of the shank fitting in said tapered bore of the sleeve and a portion of said sleeve bore being enlarged to form a water space surrounding the tapered portion of the bit shank and in communication with the transverse hole, and means movable with the sleeve for conveying water to said water space.

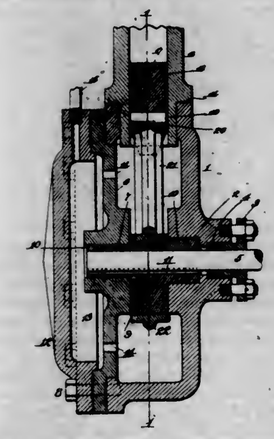
3. In a device such as described, in combination, a drill steel or bit, the shank of which has a tapered portion and provided with a longitudinal hole and a transverse hole communicating with said longitudinal hole and terminating at the surface of said tapered portion, and a sleeve having a tapered bore corresponding to the tapered portion of the steel or bit shank, said tapered portion of the shank fitting in said tapered bore of the sleeve and a portion of said sleeve bore being enlarged to form a water space surrounding the tapered portion of the bit shank and in communication with the transverse hole, and means for conducting water to the water space comprising a projection formed on the sleeve, said projection having a hole in communication with the water space, a flexible pipe in communication with said hole and means for securing said flexible pipe to said projection.

4. In a device such as described, in combination, a drill steel or bit the shank of which has a tapered portion and provided with a longitudinal hole and a transverse hole communicating with said longitudinal hole and communicating with the surface of said tapered portion, and a sleeve having a tapered bore corresponding to the tapered portion of the steel or bit shank, the said tapered portion of the shank fitting in the said tapered bore of the sleeve, said shank and sleeve having a recess between them in communication with the transverse hole, means non-rotatably attached to the sleeve for conveying water to said recess, and means whereby the sleeve may be rocked to oscillate the drill steel or bit, as set forth.

5. In a device such as described, in combination, a drill steel or bit, the shank of which has a tapered portion and provided with a longitudinal hole and a transverse hole communicating with said longitudinal hole and terminating at the surface of said tapered portion, and a sleeve having a tapered bore corresponding to the tapered portion of the steel or bit shank, said tapered portion of the shank fitting in said tapered bore of the sleeve and a portion of said sleeve bore being enlarged to form a water space surrounding the tapered portion of the bit shank and in communication with the transverse hole, means movable with the sleeve for conveying water to said water space, and means whereby the sleeve may be rocked to oscillate the drill steel or bit, as set forth.

[Claims 6 to 8 not printed in the Gazette.]

899,583. GAS-PUMP. RICHARD WHITAKER, New Brunswick, N. J., assignor, by direct and mesne assignments, to Brunswick Refrigerating Company, a Corporation of New Jersey. Original application filed Jan. 11, 1904, Serial No. 188,612. Divided and this application filed Jan. 5, 1905. Serial No. 239,725.



1. In a gas pump, the base casing constituting an oil-tight receptacle to contain lubricating oil, an actuating shaft extending transversely into said receptacle, an eccentric keyed on said shaft within said receptacle and having at its opposite sides integral bearing portions, the eccentric strap on said eccentric, and a connecting rod rigid with said strap and having on its upper end an integral cylindrical transverse head, combined with a cylinder removably secured upon the upper end of said casing, a piston within said cylinder having formed within its lower portion a transverse cylindrical bearing extending through it and adapted to receive said head, said head and bearing being substantially co-extensive in length with each other and the diameter of said cylinder, and said casing having bearings in its opposite sides to receive the integral bearing portions of said eccentric; substantially as set forth.

2. In a gas pump, the base casing constituting an oil-tight receptacle to contain lubricating oil, an actuating shaft extending transversely into said receptacle, an eccentric keyed on said shaft within said receptacle and having a transverse bearing in said casing, an eccentric strap on said eccentric, and a connecting rod integral with said strap and having on the end of its upwardly extending portion an integral cylindrical transverse head, combined with a cylinder removably secured upon the upper end of said casing, a piston within said cylinder having formed within its lower portion a transverse cylindrical bearing extending through it and adapted to receive said head, said head and bearing being substantially co-extensive in length with each other and with the diameter of said cylinder; substantially as set forth.

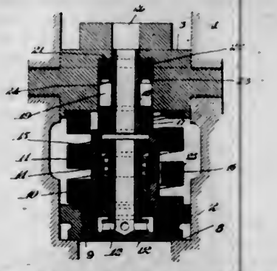
899,584. VALVE FOR GAS-PUMPS. RICHARD WHITAKER, New Brunswick, N. J., assignor to The Brunswick Refrigerating Company, a Corporation of New Jersey. Filed Nov. 5, 1906. Serial No. 342,055.

1. In a duplex valve, the combination with a casing having an equilibrium chamber, an outlet valve and an inlet valve carried thereby, the outlet valve spindle only extending outside of the equilibrium chamber.

2. A valve for gas pumps comprising a casing having an equilibrium chamber, an outlet valve having an inner and an outer spindle, the outer spindle having a reduced portion which extends outside of the equilibrium chamber, and an inlet valve carried by the outlet valve.

3. A duplex valve for gas pumps comprising a casing having an equilibrium chamber, a gas inlet chamber separated by a wall from said equilibrium chamber, an outlet

valve whose spindle extends through an opening in said wall, a soft rubber washer surrounding said spindle to prevent leakage around the same out of said equilibrium chamber, and an inlet valve carried by said outlet valve.

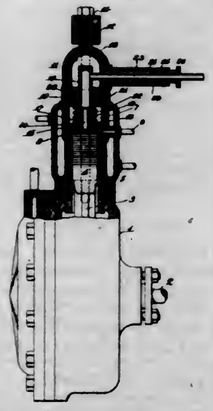


4. A duplex valve for gas pumps comprising a casing having an equilibrium chamber, a gas inlet chamber separated by a wall from said equilibrium chamber, an outlet valve whose spindle extends through an opening in said wall, a soft rubber washer surrounding said spindle to prevent leakage around the same out of said equilibrium chamber, and an inlet valve carried by said outlet valve, said spindle of the outlet valve being of reduced diameter where it passes through said opening and said packing being compressed in place and expanded over the spindle.

5. A duplex valve for gas pumps comprising a casing having an equilibrium chamber, a gas inlet chamber separated by a wall from said equilibrium chamber, an outlet valve whose spindle extends through an opening in said wall, a soft rubber washer surrounding said spindle to prevent leakage around the same out of said equilibrium chamber, and an inlet valve carried by said outlet valve, said spindle of the outlet valve being of reduced diameter where it passes through said opening and said packing being compressed in place and expanded over the spindle and having annular lips engaging the spindle and the wall of the equilibrium chamber.

[Claims 6 and 7 not printed in the Gazette.]

899,585. GAS-PUMP. RICHARD WHITAKER, New Brunswick, N. J., assignor to The Brunswick Refrigerating Company, a Corporation of New Jersey. Filed Mar. 7, 1907. Serial No. 361,025.

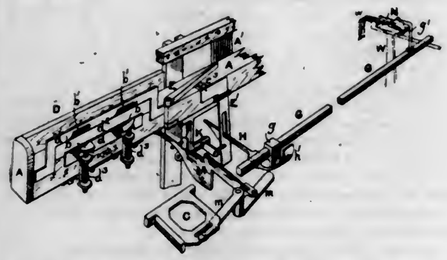


1. A gas pump having at the end of its compression cylinder a valve seat, an equilibrium chamber, a plate across the outer end of said chamber and an outer chamber beyond said plate communicating with said equilibrium chamber, combined with an outlet valve adapted to said seat and having a hollow spindle extended through said plate, an inlet pipe connected with said hollow spindle within said outer chamber and thence extending through the wall of said chamber for connection with a source of gas supply, and an inlet valve carried by said outlet valve, said inlet pipe being capable of being flexed as the outlet valve opens.

2. A gas pump having at the end of its compression cylinder a valve seat, an equilibrium chamber, a plate across the outer end of said chamber and an outer chamber beyond said plate communicating with said equilibrium chamber, combined with an outlet valve adapted to said seat and having a hollow spindle extended through said plate and having a closed outer end, an inlet pipe connected with the side of said hollow spindle within said outer chamber and thence extending through the wall of said chamber for connection with a source of gas supply, and an inlet valve carried by said outlet valve, said inlet pipe being capable of being flexed as the outlet valve opens.

3. A gas pump having at the end of its compression cylinder a valve seat, an equilibrium chamber, a plate across the outer end of said chamber and an outer chamber beyond said plate communicating with said equilibrium chamber, combined with an outlet valve adapted to said seat and having a hollow spindle extended through said plate, an inlet pipe connected with said hollow spindle within said outer chamber and thence extending through the wall thereof for connection with a source of gas supply, a pipe extending from said wall and inclosing said inlet pipe for a suitable extent and provided with means for packing the joint between its outer portion and said inlet pipe, and an inlet valve carried by said outlet valve, said inlet pipe being capable of being flexed as the outlet valve opens.

899,586. WEFT-REPLENISHING MECHANISM FOR LOOMS. WILLIAM WILLIAMSON and JOHN COLLINSON, Manchester, England. Filed May 7, 1904. Serial No. 206,958.



1. In weft replenishing mechanism for looms, the combination with the loom slay A, the reed A′, the breast beam A^2, a shuttle magazine C′ mounted on the breast beam, and shuttle box D, of a pusher C sliding upon guides to propel the shuttle, a shuttle box front in two parts d d' provided with a space d^2 between them through which the shuttle is injected, means for positioning the shuttle pusher C to be operated by the slay and means for ejecting the spent shuttle.

2. In weft replenishing mechanism for looms, the combination with the breast beam A^2 a shuttle magazine C′ mounted thereon a pusher C and mechanism for positioning the shuttle pusher C to be operated by the slay of the shuttle box D, the front plate d' fitted thereto, the front plate d mounted on brackets with a space d^2 between the said plates and capable of sliding up and down, the springs d^3 to retain the plate in normal position.

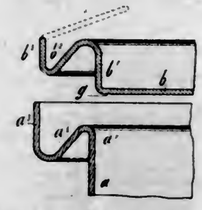
3. In weft replenishing mechanism for looms, the combination with the loom slay A, the reed A′, the breast beam A^2, a shuttle magazine C′ mounted on the breast beam, and shuttle box D, of a pusher C sliding upon guides to propel the shuttle, a shuttle box front in two parts d d' provided with a space d^2 between them through which the shuttle is injected, means for positioning the shuttle pusher C to be operated by the slay and a switch lever E placed diagonally across the slay A in front of the shuttle box to move horizontally to deflect the spent shuttle and eject it from the loom.

4. In weft replenishing mechanism for looms, the combination with the loom slay A, the reed A′, the breast beam A^2, a shuttle magazine C′ mounted on the breast beam, and shuttle box D, of a pusher C sliding upon guides to propel the shuttle, a shuttle box front in two parts d d' provided with a space d^2 between them through which the shuttle is injected, means for positioning the shuttle pusher C to be operated by the slay, a diagonal switch lever on a vertical pivot, on the slay to deflect and eject the spent shuttle, means by which the oscillating movement of the slay operates the pusher and deflector, and means for throwing such mechanism into operation on the failure of the weft thread.

5. In weft replenishing mechanism the combination with the shuttle magazine C′ pusher C, and deflecting lever E, of a pivoted lever m connected to the pusher, and operating lever M connected with the pusher lever m an operating lever E′ connected with the deflecting lever E to move it into the path of the shuttle, a hooked lever H engaging with the operating lever E′, a connecting lever K to connect the lever E′ with the lever M to raise the latter into the path of the slay, a longitudinal shaft G, a finger g on one end to engage the hooked lever H, and a finger g^2 on the opposite end to engage the weft stop motion.

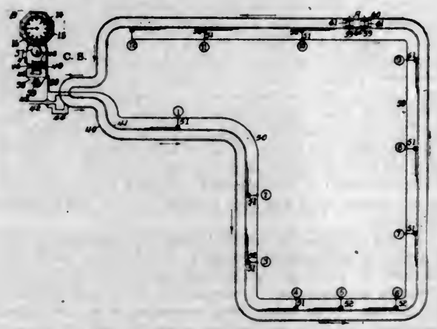
[Claims 6 to 8 not printed in the Gazette.]

899,587. JOINT FOR SHEET-METAL VESSELS. HENRIK M. BACHE, Stavanger, Norway, assignor to The Firm of Aktieselskabet Stav. Bliktrykkeri og Maskinvaerksted, Stavanger, Norway. Filed Oct. 2, 1907. Serial No. 395,621.



A can body bent outwards and downwards, and then outwards and upwards to form an upwardly extending doubled flange and a surrounding upwardly opening groove, combined with a lid bent upwards, outwards and downwards, and then outwards and upwards to form a downwardly opening groove adapted to receive the double body-flange, and a surrounding downwardly extending doubled flange adapted to be received by the body-groove, substantially as specified.

899,588. TRANSPORTATION SYSTEM. WILLIAM C. CARR, Buffalo, N. Y. Filed Sept. 25, 1906. Serial No. 336,146.



1. In a transportation system, a loop track, one at least of the rails of which is electrically energized, a central station located at a suitable point along the track, a plurality of branch stations at intervals around the loop track, a car on the loop track and means at the central station for indicating the approximate position of the car adapted to be operated electrically from the energized rail.

2. In a transportation system, a loop track, one at least of the rails of which is electrically energized, a plurality of branch stations at intervals around the loop track, a car on the loop track and electrical means at the central station for indicating the approximate position of the car adapted to be operated from the rail.

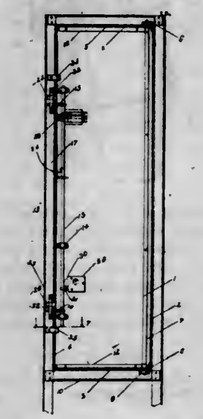
3. In a transportation system, a loop track having an electrically energized rail, a central station located at a suitable point along the track, a plurality of branch stations at intervals around the loop, a car on the loop track, an indicator at the central station and means operated from the electrically energized rail controlling the indicator.

4. In a transportation system, a loop track having an electrically energized rail, a central station located at a suitable point along the track, a plurality of branch stations at intervals around the loop track, a car on the loop track, an indicator at the central station and mechanism partially on the car and partially attached to the electrically energized rail of the track for operating the indicator.

5. In a transportation system, a loop track having an electrically energized rail, a central station located at a suitable point along the track, a plurality of branch stations at intervals around the loop track, a car on the loop track, an indicator at the central station having a dial provided with numerals equal in number to the branch stations and an indicating hand, and electric means automatically operated by the car controlling the indicating hand.

[Claims 6 to 8 not printed in the Gazette.]

899,589. DOOR FOR LOCKERS. DURAND CHURCHILL, Chicago, Ill. Filed May 1, 1905. Serial No. 258,340.



1. In a locker door the combination with the doorframe, of a sheet metal door proper having flanges at its edges turned at an angle to the face of the door, means securing the ends of said flanges together at the corners of the door, a rod secured to one edge of the door and extending from top to bottom thereof and having its ends passing through the said flanges at the top and bottom of the door, and means for journaling the ends of said rod on the door frame.

2. In a locker door the combination with the door frame, and the door proper hinged therein, of a flange arranged on the edge of the free side of the door, and a hook or catch secured to the inner side of the frame for embracing said flange.

3. In a locker door the combination with the door frame and the door proper, of a hinge supporting the door within

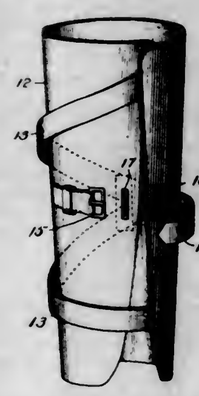
the frame and having its axis arranged inwardly from the outer face of the door frame and laterally from the edge of the door frame contiguous to the hinge, and a stop situated on the outer side of the door frame and projecting laterally into the door-way or opening.

4. In a locker door the combination with the door frame and the door proper, of a hinge supporting the door within the frame and having its axis situated inwardly from the plane of the outer face of the frame and laterally from the edge of the frame contiguous to the hinge, the hinged edge of the door being projected towards the frame beyond the axis of the hinge whereby when the door is opened a space will be left between the face of the door and the frame, and a door stop projecting across the said space and acting between the door and frame for limiting the opening movement of the door.

5. In a locker door, the combination with the door frame and the door proper hinged thereto, of a flange on the edge of the free side of the door projecting inwardly, and a hook secured to the inner side of the frame and extending around the edge and sides of said flange for holding the flange against movement transversely of the door-way.

[Claims 6 to 13 not printed in the Gazette.]

899,590. LEGGING. GABRIEL CIOCIOLA, Fort Leavenworth, Kans. Filed June 26, 1908. Serial No. 440,467.



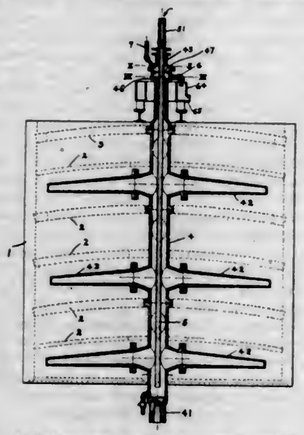
A legging consisting of a body portion having near one edge a longitudinally disposed slit and provided near its other edge with a fastening device and also with a longitudinally disposed rigid loop or staple adapted to pass through said slit, combined with a forked strap arranged to pass circumferentially around the legging and the ends of the forked part of which strap are attached to one edge of said body portion at or near the top and bottom thereof, and the single or free part of which strap is to pass through said loop or staple and is to be connected with said body by said fastening device.

899,591. ROASTING-FURNACE. GEORGE F. DE WEIN, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Jan. 4, 1907. Serial No. 350,754.

1. The combination of a hollow stirrer, inlet means thereto for a liquid cooling medium, outlet means therefrom for liquid discharge and separate outlet means for gas discharge communicating with the stirrer at a higher level than the communication therewith of the liquid outlet means.

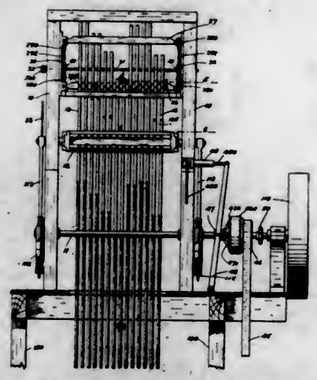
2. The combination of a hollow stirrer, inlet means thereto for a liquid cooling medium, downwardly extending discharge means for the liquid and separate upper upwardly discharging means for gas.

3. The combination of a hollow stirrer, inlet means thereto for a liquid cooling medium, outlet means therefrom for liquid discharge, separate outlet means for gas



discharge, and a screen in the stirrer between the liquid and gas outlets.

899,592. CARTRIDGE-LOADING MACHINE. WILLIAM I. DONALDSON, Paulsboro, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed Dec. 1, 1906. Serial No. 345,908.



1. In a machine for loading shells, the combination with a series of independent plungers, of actuating mechanism therefor in yielding engagement therewith whereby the reciprocating plungers are operated in consonance with said actuating mechanism except when they encounter a predetermined resistance, locking mechanism adapted to lock each plunger when it is retracted to a definite extent and hold it out of action, means to disengage said locking mechanism from the plungers thereby unlocking them, leveling mechanism normally out of the path of travel of the plungers, and means to move said leveling mechanism into the path of travel of the plungers, thereby, in the upward movement of the unlocked plungers, depressing them to a common level and into position for the next loading operation.

2. In a machine for loading shells, the combination with a series of independent plungers, of actuating mechanism therefor in yielding engagement therewith whereby the plungers are operated in consonance with said actuating mechanism except when they encounter a predetermined resistance, leveling mechanism, normally out of the path of travel of the plungers, means, arranged to be operating while the plungers are in their forward position, to move said leveling mechanism laterally with respect to the direction of extension of the plungers and into their path of travel, thereby depressing them on their upward movement to a common level and into position for the next loading operation, and means to thereafter restore the leveling mechanism to its normal position.

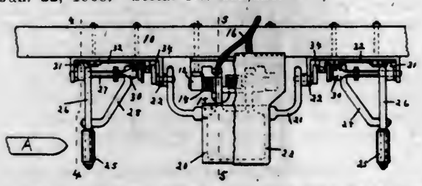
3. In a machine for loading shells, the combination with a series of independent plungers, of a cross-head yieldingly engaging the same whereby the plungers are operated in consonance with the cross-head except when said plungers encounter a predetermined resistance, locking mechanism adapted to independently lock each plunger from operation when it is retracted to a definite extent, means to move the locking mechanism into operative position, and a device moving with the actuating cross-head adapted to actuate said means.

4. In a machine for loading shells, the combination with a series of independent plungers, of actuating mechanism therefor including means enabling each plunger to move relatively to said actuating mechanism when encountering a predetermined resistance, a locking device for each plunger to hold it out of action when its shell has been filled, means to withdraw said locking devices and permit said mechanism to again actuate the plunger back and forth, leveling means to stop the back movement of the plungers before the back movement of their actuating mechanism is completed, and means controlled by said actuating mechanism to move the leveling means out of operative position.

5. In a machine for loading shells, the combination with a series of independent plungers, of a cross-head yieldingly engaging the same whereby the plungers are operated in consonance with the cross-head except when said plungers encounter a predetermined resistance, locking mechanism adapted when in operative position to independently lock each plunger from operation when it is retracted to a definite extent, leveling mechanism adapted when in operative position to engage said plungers and move them to a common level, means to move the locking mechanism into operative position and the leveling mechanism into inoperative position, and devices moving with the actuating cross-head adapted to actuate said means.

[Claims 6 to 64 not printed in the Gazette.]

899,593. AUTOMATIC THIRD-RAIL CONTACT-SHOE GUARD. WILLIAM E. HAYES, Frankfort, N. Y. Filed Jan. 22, 1908. Serial No. 412,120.



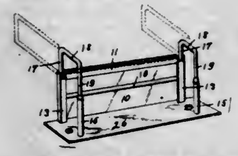
1. The combination with the contact shoe for a third rail of a movable guard therefor, and a guard operating mechanism having a traveler arranged in advance of the shoe and adapted to engage with and be operated by the third rail, substantially as shown and set forth in the foregoing specification.

2. The combination with a contact shoe for third rails of a movable guard for the shoe, means for removing the guard from its protecting position, and a traveler arranged in advance of the shoe to engage on and be operated by the third rail, and connected through said means to the guard, substantially as set forth.

3. The combination with a contact shoe for third rails of a movable protecting insulator for said shoe, and means arranged in advance of the shoe and acting on the third rail to move the insulator aside as the rail is approached, substantially as set forth.

899,594. LOOSE-LEAF BOOK. JOHN C. HEDGES, Des Moines, Iowa. Filed Sept. 14, 1907. Serial No. 392,901.

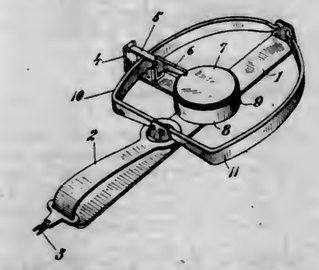
1. In a device of the class described, a back having its top and end margins bent at right angles to the back, and then toward the center of the back to form spaced guideways, two open ended tubes supported in the rear of and adjacent to the back and spaced apart from the back, and a movable member formed of a single piece of wire rod and comprising a straight central portion arranged adjacent to the rear surface of the back with its end portions arranged within the said spaced guide-ways, upright members at said end portions slidingly mounted in said guideways, each end being extended first rearwardly and then downwardly to enter the open ended tubes, said parts being so arranged that when the central portion of said wire rod is elevated to position where it enters the top guideway, it may freely rotate therein to permit the tubes to swing forwardly and outwardly.



2. In a device of the class described, the combination of a sheet metal back having its upper, lower and end guide-ways bent at right angles and then toward the center of the back to form guide-ways, a wire rod mounted in the lower guideway with its ends extended rearwardly, two open ended tubes mounted on said ends of the rod and extended rearwardly and then upwardly parallel with the back, and a movable member formed of a single piece of wire rod with its central portion adjacent to the rear of the back and with upright end portions mounted in the end guide-ways, each end of said rod being extended rearwardly and then downwardly to enter the open ended tubes, said parts being so arranged that when the straight portion of said rod enters the upper guide-way of the back, it may swing forwardly and outwardly.

3. In a device of the class described, the combination of a sheet metal back having its upper, lower and end margins bent at right angles and then toward the center of the back to form guideways, a wire rod mounted in the lower guide way with its ends extended rearwardly, two open ended tubes mounted on said ends of the rod and extended rearwardly and then upwardly parallel with the back, and a movable member formed of a single piece of wire rod with its central portion adjacent to the rear of the back, and with upright end portions mounted in the end guide ways, each end of said rod being extended rearwardly and then downwardly to enter the open ended tubes, said parts being so arranged that when the straight portion of said rod enters the upper guide-way of the back, it may swing forwardly and outwardly, and a locking device comprising a flat plate pivoted to the central portions of said upper and lower guide-ways and having forwardly projecting teeth on its free edge to engage the straight rod of the movable member, and also having lugs at its upper and lower ends to project beyond the said back.

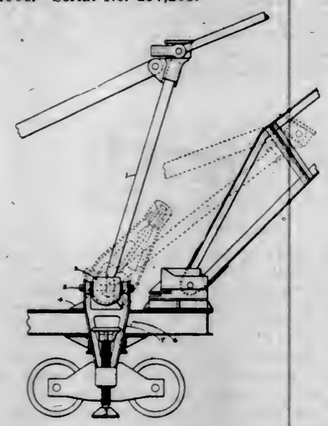
899,595. GOPHER-TRAP. ARTHUR HERRMANN and ISAAC N. GOLLODAY, Colma, Cal. Filed Jan. 31, 1908. Serial No. 413,531.



In a gopher trap, the combination of a pair of spring pressed jaws, means for holding the jaws open and includ-

ing means for springing them, a pan through which the springing means moves, and a setting pin attached to the springing means and passing through the side of the pan.

899,596. FRAME-MOUNTING. OLAF HETLESAETER, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Jan. 22, 1906. Serial No. 297,205.



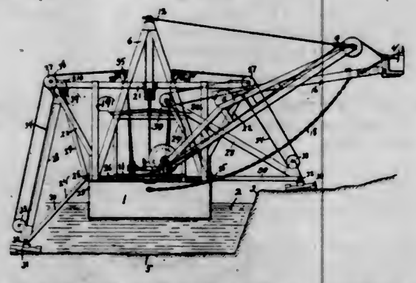
1. A frame, a rockable mounting therefor, and an arm on the mounting.

2. A frame, a rockable mounting therefor, and an arm pivoted on the mounting.

3. A frame, an arm, a mounting, and a pin for connecting the frame, arm and mounting.

4. The combination with a car, of an A-frame provided with two downwardly diverging legs, a mounting, two steadying arms, and two pins, one pin uniting an end of one steadying arm with one end of the mounting and one leg of the A-frame, the other pin uniting an end of the other steadying arm with the other end of the mounting and the other leg of the A-frame, and means for uniting said steadying arms.

899,597. EXCAVATING-MACHINE. OLAF HETLESAETER, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Feb. 4, 1907. Serial No. 353,607.



1. The combination with a carrier for excavating machinery or the like, of a bolt secured thereto, a spud pivotally mounted on said bolt and composed of members disposed at an angle with respect to each other, pulleys located in the angular space between said members, and flexible means secured to said members and passed over said pulleys for operating said spud.

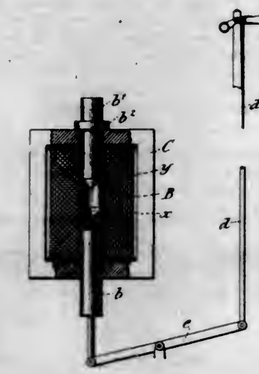
2. The combination with a carrier for excavating machinery or the like, of a bolt secured thereto, a spud pivotally mounted on said bolt and composed of members disposed at an angle with respect to each other, pulleys located in the angular space between said members, a winch, and a flexible operating device secured to one of said members, passed over one of said pulleys, around said winch, over another of said pulleys and then secured to another of said spud members.

3. The combination with a carrier for excavating machinery or the like, of two bolts secured thereto, spuds pivotally mounted on said bolts, one spud on each bolt, each of said spuds being composed of members disposed at an angle with respect to each other, pulleys located in the angular space between the members composing said spuds, two winches, and two flexible operating devices, each of said devices being secured to one member of its respective spud, passed over a pulley, around a winch, over another pulley and then secured to another of its spud members.

4. The combination with a scow, of a metal strap bent to fit the cross section outline of the scow, a tie-bolt to secure said strap to said scow, and a spud secured to said strap.

5. The combination with a carrier for excavating machinery or the like, of a spud pivotally secured thereto, said spud being composed of arms disposed at an angle with respect to each other, flexible means secured to one of said arms for raising said spud, and flexible means secured to the other of said arms for forcing said spud down.

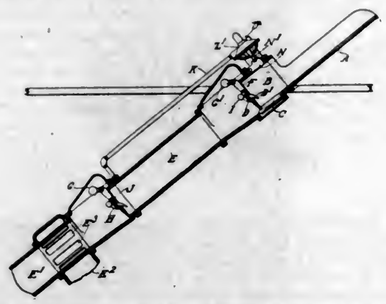
899,598. SOLENOID-MOTOR. LEMUEL F. HOWARD, Edgewood Park, Pa., assignor to The Union Switch and Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Oct. 23, 1906. Serial No. 340,136.



1. A solenoid motor having a core comprising two sections normally tending to move inwardly in opposite directions, one of said sections having a conical inner end and the other a conical recess in its inner end to receive said conical end, and one of said sections being free and unobstructed to move outwardly when engaged by the other section on its inward movement but provided with means for limiting its inward movement under the influence of magnetic forces of the coils.

2. A solenoid motor having a core comprising two sections normally separated when the coils of the solenoid are deënergized, and normally tending to move inwardly in opposite directions when said coils are energized, means for limiting the inward movement of one section under the influence of magnetic forces, and said last named section being centrally bored, a pin extending through said bore into the space normally existing between said sections, and means for limiting the inward movement of said pin under the influence of magnetic forces, and both the pin and the section through which it extends being movable outwardly when engaged by the other section on its inward movement.

899,599. SENDING MECHANISM FOR PNEUMATIC-DESPATCH SYSTEMS. CHESTER S. JENNINGS, Boston, Mass., assignor to United Store Service and Tube Company, Boston, Mass., a Corporation of Maine. Filed Oct. 23, 1907. Serial No. 398,710.



1. In a pneumatic despatch system, a sending chamber, outer and inner gates for normally closing the chamber, means actuated by the insertion of a carrier for equalizing the pressure on opposite sides of the outer gate, and means actuated by the insertion of the carrier for equalizing the pressure on opposite sides of the inner gate after the outer gate is closed, substantially as described.

2. In a pneumatic despatch system, a transmission tube, a sending chamber, outer and inner gates for closing said chamber, means actuated by the insertion of a carrier for connecting the sending chamber with the atmosphere to equalize the pressure on opposite sides of the outer gate, and means actuated by the introduction of the carrier into the sending chamber for connecting the sending chamber with a chamber having the pressure of the transmission tube to equalize the pressure on opposite sides of the inner gate, substantially as described.

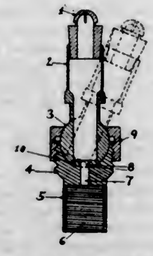
3. In a pneumatic despatch system, a transmission tube, a sending chamber, outer and inner gates for closing said chamber, and a normally closed equalizing valve mounted in the outer gate and arranged to be opened by the carrier, substantially as described.

4. In a pneumatic despatch system, a transmission tube, a sending chamber, outer and inner gates for closing said chamber, and a normally closed equalizing valve mounted in the inner gate and arranged to be operated by the carrier, substantially as described.

5. In a pneumatic despatch system, a transmission tube, a sending chamber normally in communication with the atmosphere, outer and inner gates for closing the chamber, and a normally closed equalizing valve in the inner gate arranged to be operated by the carrier, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

899,600. GAS-BURNER. FRANK KRABAL, Chicago, Ill. Filed Apr. 24, 1907. Serial No. 370,041.



1. In a device of the class described, a base portion having a hemispherical socket in its upper end, in combination with a burner tube having a spherical lower end resting in said socket and normally held therein by gravity, said burner tube and said base portion having ports adapted to register when the burner tube is in vertical position and to close when the same is in inclined position, and means to prevent separation of said base and said burner tube, said means normally exerting no pressure upon the ball and socket members, substantially as described.

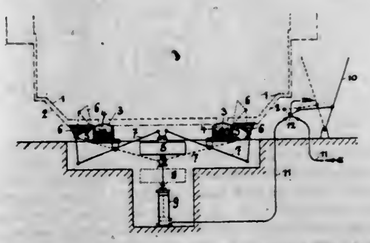
2. In a device of the class described, a base portion having a hemispherical socket in its upper end, in combination with a burner tube having a spherical lower end resting in said socket and normally held therein by gravity, said burner tube and said base portion having ports adapted to register when the burner tube is in vertical position and to close when the same is in inclined position, a collar threaded on said base portion and having an inturned flange surrounding the upper portion of said spherical end and adapted to prevent displacement of the ball from its socket, said flange normally exerting no pressure upon the ball and socket members, substantially as described.

899,601. UPHOLSTERER'S BUTTON. HENRY L. E. KRUEGER, Chicago, Ill., assignor to Tufting Machine Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 15, 1907. Serial No. 368,145.



As a new article of manufacture, a unitary upholsterer's button comprising a hollow shank having a flange, a cap-seat on the shank and contacting with the flange, a cap adapted to overlie the flange and to interlock with the cap-seat, the latter and cap having each a perforation registering with the opening through the shank, flexible prongs integral with the shank at its lower end and adapted to pass through the cover and backing of pads or cushions and to be spread apart.

899,602. TRAIN-ARRESTER. FRANZ C. KÜHNE, Charlottenburg, Germany. Filed Feb. 17, 1908. Serial No. 416,288.



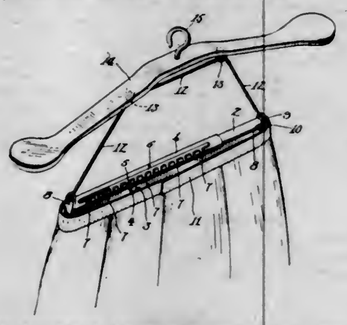
1. A train arrester comprising in combination a railroad track, sand receptacles hinged adjacent to said track and means for tilting said receptacles towards the rails for discharging sand thereon.

2. A train arrester comprising in combination a railroad track, troughs containing the rails of said track, sand receptacles hinged adjacent to said track and means for tilting said receptacles towards the rails for discharging sand thereon.

3. A train arrester comprising in combination a railroad track, sand receptacles hinged adjacent to said track and

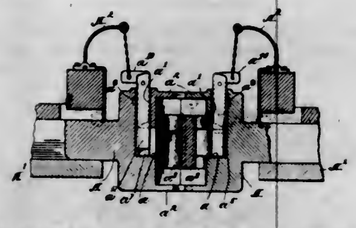
means for tilting said receptacles towards the rails for discharging sand thereon comprising a weight, a cylinder, a piston in said cylinder for upholding said weight, and means for releasing the fluid pressure from said cylinder.

899,603. COMBINATION COAT AND ADJUSTABLE SKIRT HANGER. FRANCES LEVY, Los Angeles, Cal., assignor of one-half to Louis F. Vetter, Los Angeles, Cal. Filed Oct. 11, 1906. Serial No. 338,516.



In an adjustable garment supporter, two cylindrical members rotatably telescoping one within the other, each member being provided at its outer end with an upwardly extending perforated lug and a downwardly extending hook, said lug and hook being rigidly secured to the member so as to project diametrically opposite each other, the outer member being slotted longitudinally and provided upon one side with notches and the inner end of the inner member being provided with a knob which is adapted to be seated in one of said notches when the lugs and hooks of said members stand in the same vertical plane, a reversible coat hanger having its ends and opposite edges substantial duplicates respectively, and a flexible supporter secured at its ends in the perforations of said lugs and having its intermediate portion secured to the under side of the coat hanger along the longitudinal center thereof.

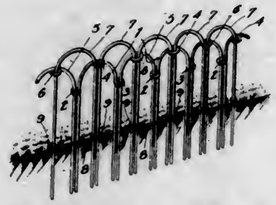
899,604. AUTOMATIC CAR-COUPLING. VIKTOR MÁRTON, Cleveland, Ohio. Filed Jan. 27, 1908. Serial No. 412,688.



In a car-coupler, the combination of a draw-head, a knuckle pivotally mounted therein, the rear end of said knuckle being formed with an incline, a pin adapted to engage such rear end of said knuckle to lock the latter against movement, and a latch carried by said pin and adapted to retain the same in position to be engaged by such incline, further movement of said pin, upon such engagement, being adapted to release said latch.

899,605. WICKET FENCE OR GUARD. ABRAHAM L. J. MILLER, Newburgh, N. Y. Filed May 28, 1908. Serial No. 435,454.

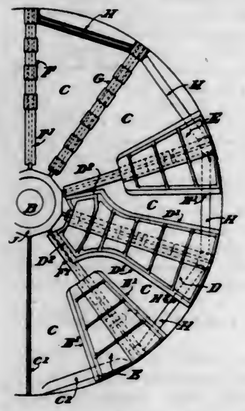
1. An inclosing structure composed of a plurality of wicket members each having eyes formed at opposite sides thereof, and a loop or eye arranged intermediately of said side eyes, a plurality of wickets arranged between said eye-carrying members with the legs thereof engaging the side eyes of the first mentioned wickets and having central eyes, and a plurality of plain wickets with the legs thereof extending through the central eyes of the adjacent wickets.



2. An inclosing structure composed of a plurality of wicket members each having eyes formed at opposite sides thereof, and an eye arranged intermediately of said side eyes, a plurality of wickets arranged between said eye-carrying members with the legs thereof engaging the side eyes of the first mentioned wickets and having central eyes, and a plurality of plain wickets with the legs thereof extending through the central eyes of the adjacent wickets, and a gage member having longitudinally spaced means for engagement with the legs of a plurality of said wickets.

3. An inclosing structure comprising a plurality of wickets arranged in longitudinal alinement and each provided with a centrally disposed eye, and a plurality of plain wickets with the legs of two adjacent plain wickets passing through the eye of one of the adjacent eye carrying wickets.

899,606. ROTARY SNOW-PLOW. JOHN F. MURPHY, Paterson, N. J. Filed July 11, 1908. Serial No. 443,109.



1. In a rotary snow plow wheel, the combination with a back plate, of scoops secured thereto, each of said scoops being formed with radial sides bent at right angles to said back plate, the bottom of said scoop being flanged for attachment to the back plate and inclined from the circumference toward the center of the wheel, substantially as described.

2. In a rotary snow plow wheel, the combination with a back plate, of scoops secured thereto, each of said scoops being made of a single plate having its sides radial with the center of the wheel and bent at right angles to said back plate, the bottom of said scoop being inclined from the circumference toward the center of the wheel, and its outer end flanged for attachment to said back plate, substantially as described.

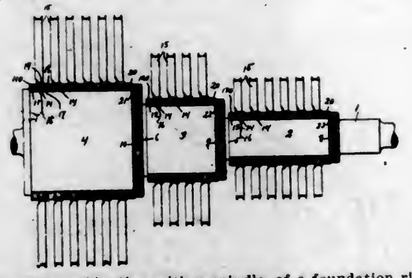
3. In a rotary snow plow wheel, the combination with a back plate, of scoops secured thereto, the sides of each of which are radial to the center of the wheel and bent at right angles to the back plate, hinges embracing the edges of the contacting sides of said scoops, and knives secured to said hinges, substantially as described.

4. In a rotary snow plow wheel, the combination with a back plate, of scoops secured thereto, hinges secured to said scoops and alternating long and short knives secured to said hinges, substantially as described.

5. In a rotary snow plow wheel, the combination with a back plate, of radial scoops secured to said plate, the sides of said scoops being bent at right angles to said plate, the hinges fitting over the edges of the contacting sides of said scoops to render the joint water-tight, knives secured to said hinges, the alternating knives being longer than the intermediate knives, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

899,607. BLADE-FASTENING. ROBERT A. MCKEE, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Feb. 13, 1907. Serial No. 357,113.



1. The combination with a spindle, of a foundation ring seated thereon, blades locked to said foundation ring to deny relative radial release, by relative axial motion, an annular abutment on the spindle, and a holding ring seated on the spindle and clamping said foundation ring against said abutment.

2. The combination with a spindle of a foundation ring seated thereon, said foundation ring being provided with blades and with projections on opposite faces thereof, and two holding rings also seated upon said spindle, one on either side of said foundation ring, said holding rings being provided with recesses within which the projections upon said foundation ring are disposed.

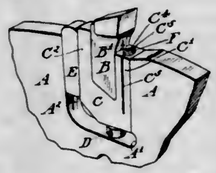
3. The combination with a spindle, of a foundation ring seated thereon, blades locked to said foundation ring to deny relative radial release, by relative axial motion, an annular abutment on the spindle, and a holding ring seated on the spindle and coacting with said abutment to lie adjacent to and to deny radial release of said foundation ring without relative axial displacement between said foundation ring and one of said adjacent restraining elements.

4. The combination with a spindle, of a row of blades provided with a foundation ring, and two restricting elements comprising an annular abutment on said spindle adjacent said foundation ring of the row of blades and a holding ring seated on the spindle adjacent the foundation ring of the row of blades and, by relative axial motion between said foundation ring of the row of blades and one of said adjacent elements, locking the said foundation ring of the row of blades to said abutment to deny radial release of the row of blades from the spindle.

899,608. METAL-CUTTING TOOL. SIDNEY NEWBOLD, Philadelphia, Pa. Filed Dec. 4, 1907. Serial No. 405,027.

1. The combination with a cutter holder having a cavity and a removable cutter of means for clamping the cutter or tooth in place in said cavity, including a two part thrust block and a soft metal filling between the two parts of the thrust block.

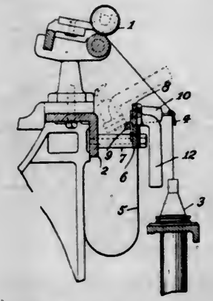
2. The combination with a cutter holder having a cavity and a removable cutter, of means for clamping the cutter in place in said cavity, including a thrust block divided into two parts by a hole extending into it from its outer end and diametrically opposed thin kerfs extending from the hole to the side faces of the block, and a soft metal filling tamped in place in said hole.



3. The combination with a rotary cutter holder having a cavity and a removable cutter, of a U shaped supplemental holder between the legs of which the cutter is received, a wedge for clamping said auxiliary cutter holder with the inserted cutter in place in said cavity, the outer end of one leg of the auxiliary holder being divided into two parts by a slit extending lengthwise of and between the front and rear edges of said leg, and a soft metal filling inserted in said slit.

4. The combination with a rotary cutter holder having a cavity and a removable cutter, of a U shaped supplemental holder between the legs of which the cutter is received, a wedge for clamping said auxiliary cutter holder with the inserted cutter in place in said cavity, the outer end of one leg of the auxiliary holder being divided into two parts by a slit extending lengthwise of and between the front and rear edges of said leg, and a soft metal filling inserted in said slit, the meeting edges of said cavity in the main cutter holder, the wedge, the legs of the auxiliary cutter holder, and the cutter being provided with interlocking tongues and grooves.

899,609. THREAD-BOARD FOR SPINNING-MACHINES. OSCAR L. OWEN, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Mar. 30, 1908. Serial No. 424,006.



1. In a spinning frame, a horizontal beam, a thread board rail normally disposed above and in the same vertical plane therewith and provided with a hinge whereby it may be turned downwardly toward the space behind said beam, in combination with a series of finger-heads pivotally mounted on said rail to project laterally from the front vertical face thereof.

2. In a spinning frame, a horizontal beam, a thread board rail normally disposed above and in the same vertical plane therewith and provided with hinge connections to said beam whereby it may be turned downwardly and rearwardly thereon, in combination with a series of finger-heads pivotally supported along said rail and means for maintaining said rail in its working position above the beam.

3. In a spinning machine, a horizontal beam forming a support for the thread guiding mechanism and a rail disposed above said beam with its forward face substantially flush with the forward face of said beam, in combination with a hinge for said rail whereby it may be turned rearwardly from such position and a series of finger-heads hinged to and normally projecting laterally from the face of said rail.

4. In a spinning machine, means for supporting the thread guides comprising a flat beam supported with its narrow edge uppermost, in combination with a flat rail normally disposed in the same vertical plane with said beam and hinged thereto to turn rearwardly, and a plurality of finger-heads hinged to said rail and projecting laterally therefrom.

5. In a spinning machine, the combination of a fixed horizontal beam supported at a distance from the roller beam and providing a yarn-receiving space therebetween, a thread board rail having its working position above said beam and hinged to swing rearwardly toward said space and a series of finger-heads pivotally carried by said thread board rail.

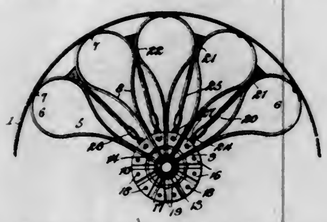
[Claims 6 to 8 not printed in the Gazette.]

899,610. IRON-FRAME WINDOW. ARTHUR PACKSCHER, Berlin, Germany, assignor to The Firm of Dr. Hirsch, Lichtenberg, near Berlin, Germany. Filed May 18, 1908. Serial No. 433,565.



An iron framed window having I-section longitudinal frame irons with flanges of different sizes, the largest flange being provided with notches, cross frame irons passing through the web of said longitudinal frame irons and having depressions taking into said notches on the flange of said longitudinal frame irons, glazing inserted in the frame so formed from the side at which the smaller flange on the longitudinal frame irons is arranged, putty inserted between the glass and the smaller flange, substantially as and for the purpose described.

899,611. WHEEL. WILLIAM H. PARHAM, Paducah, Ky. Filed May 15, 1907. Serial No. 373,796.



1. In a wheel of the class described, the combination of a rim, a hub, spokes secured to the hub and to the rim and including resilient loops, and tension devices movable radially of the wheel between the rim and the hub and connected to one of the said parts and engaging the loops of the spokes, to vary the tension of the latter.

2. In a wheel of the class described, the combination of a rim, a hub, spokes secured to the hub and to the rim and including resilient loops, and tension devices connected with the hub of the wheel and fitted between and engaging the loops of the spokes and movable radially of the wheel to vary the tension of the said spokes.

3. In a wheel of the class described, the combination with a hub, and spokes having resilient loops, of a tension device provided with a tapered portion fitted between and engaging the loops and adjustable inwardly and outwardly to vary the tension of the same.

4. In a wheel of the class described, the combination with a hub, and spokes having resilient loops, of a tension device provided with a tapered portion fitted between and engaging the loops and adjustable inwardly and outwardly to vary the tension of the same, said tapered portion being provided with opposite lugs spaced apart to receive the loops.

5. In a wheel of the class described, the combination with a hub, and spokes provided with resilient loops, of a tension device composed of a tapered portion fitted between and engaging the loops, and means for adjustably connecting the tapered portion with the hub for moving the tapered portion inwardly and outwardly.

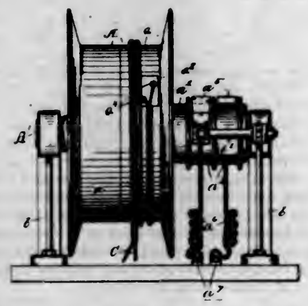
[Claims 6 and 7 not printed in the Gazette.]

899,612. SACK OR BAG FASTENER. LYDIA J. PHILLIPS, Choteau, Okla. Filed Aug. 16, 1907. Serial No. 388,893.



A sack or bag fastener comprising two fastening members, one of which is formed with a series of apertures and the other with teeth to extend into said apertures, a connecting ring for hingedly connecting adjacent ends of the members whereby either of said members is permitted to swing in a circle to bring the outer faces thereof in contiguous relation to render the device more compact and means for detachably connecting the free ends of the members.

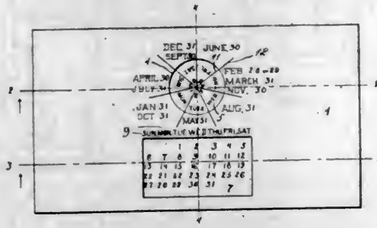
899,613. CABLE-DRUM. ALVIN A. PIPER, Cleveland, Ohio, assignor to Cleveland Armature Works, Cleveland, Ohio, a Partnership. Filed Mar. 6, 1908. Serial No. 419,520.



1. In a device of the character described, the combination of a fixed shaft; a drum mounted thereon and provided with a laterally extending hub; two insulated rings of conducting material mounted upon the hub of said drum; two brushes connected with a source of current and respectively bearing upon said two rings; a coil spring within said drum, said spring being attached to the same and to said shaft so as to tend to rotate the former and retain it in normal position about the latter; two conductors wound upon said drum and adapted to form part of an electric circuit; and conductors, parallel with said shaft, connected with said rings respectively and extending within said drum, the inner ends of said conductors being connected with said conductors, respectively.

2. In a device of the character described, the combination of a fixed shaft; a drum mounted thereon and provided with a laterally extending hub; two insulated rings of conducting material mounted upon the hub of said drum; two brushes connected with a source of current and respectively bearing on said two rings; a coil-spring within said drum, said spring being attached to the same and to said shaft so as to tend to rotate the former and retain it in normal position about the latter; two conductors wound upon said drum and adapted to form part of an electric circuit; an insulated block inserted in the periphery of said drum; binding posts in said block for the inner ends of said conductors; and other conductors, parallel with said shaft, connected with said rings, respectively, and extending within said drum, the inner ends of said last named conductors being connected with said binding posts, respectively.

899,614. CALENDAR. ERIC K. PLOUGH, Chambersburg, Pa. Filed Oct. 23, 1907. Serial No. 398,823.



A calendar comprising in combination, an indicator having a single series of the names of the days of the week thereon, identifying characters carried by said indicator, an indicator having the names of the months of the year thereon, said first named indicator being movable with reference to the second named indicator and the names of the days of the week and the names of the months of the year being so arranged that by manipulating the movable indicator the days of the week on which each month of the year begins can be ascertained.

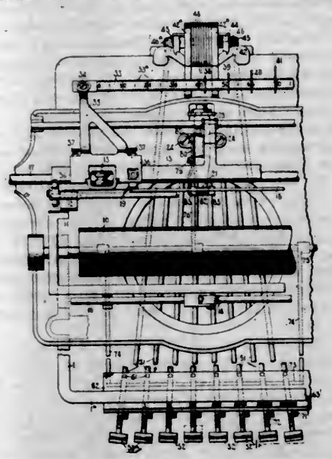
899,615. TYPE-WRITING MACHINE. MORRIS W. POOL, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 16, 1905. Serial No. 283,015.

1. In a typewriting machine and in tabulating mechanism, the combination of a carriage, column determining stops, key operated denominational positioning devices coöperating with said column determining stops, and means for variably operating said denominational positioning devices to select a column.

2. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a set of column stops having contact surfaces out of line with one another, denominational positioning mechanism, and means for variably operating said denominational positioning mechanism to move a part of said denominational positioning mechanism into line with any selected one of said contact surfaces.

3. In a typewriting machine, the combination with a carriage, of a series of column stops, and denominational stop mechanism for coöperation with said column stops to arrest the carriage in selected denominational positions, said mechanism including a denominational stop and means for moving said denominational stop to any one of a plurality of predetermined operative positions to select the column.

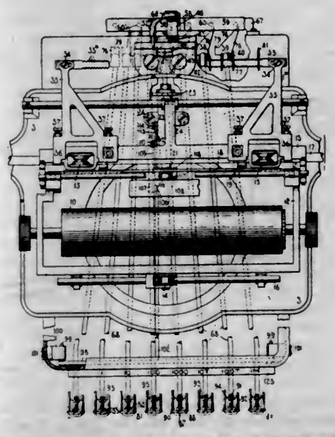
4. In a typewriting machine, the combination with a carriage, of a series of column stops, denominational stop mechanism for coöperation with said column stops to arrest the carriage in selected denominational positions, said mechanism including a denominational stop, and key controlled means for moving said denominational stop to any one of a plurality of predetermined operative positions to select the column and for releasing the carriage.



5. In a typewriting machine, the combination with a carriage, of tabulating mechanism comprising a set of stops having contact surfaces out of line with one another, a second set of separately operable stops, and means for moving any one of said separately operable stops to different operative positions for coöperation with any one of said contact surfaces.

[Claims 6 to 37 not printed in the Gazette.]

899,616. TYPE-WRITING MACHINE. MORRIS W. POOL, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 16, 1905. Serial No. 283,016.



1. In a typewriting machine and tabulating mechanism, the combination with a carriage, of a series of column stops, a single coöperating stop, and means for automatically releasing said carriage and for effecting variable relative adjustments between said stops to select denominational positions and for effecting other variable relative
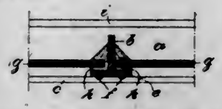
3. In a spinning machine, a horizontal beam forming a support for the thread guiding mechanism and a rail disposed above said beam with its forward face substantially flush with the forward face of said beam, in combination with a hinge for said rail whereby it may be turned rearwardly from such position and a series of finger-heads hinged to and normally projecting laterally from the face of said rail.

4. In a spinning machine, means for supporting the thread guides comprising a flat beam supported with its narrow edge uppermost, in combination with a flat rail normally disposed in the same vertical plane with said beam and hinged thereto to turn rearwardly, and a plurality of finger-heads hinged to said rail and projecting laterally therefrom.

5. In a spinning machine, the combination of a fixed horizontal beam supported at a distance from the roller beam and providing a yarn-receiving space therebetween, a thread board rail having its working position above said beam and hinged to swing rearwardly toward said space and a series of finger-heads pivotally carried by said thread board rail.

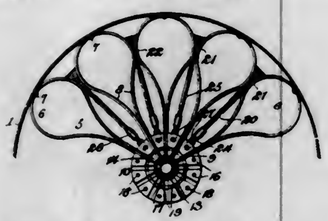
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1. In a wheel of the class described, the combination of a rim, a hub, spokes secured to the hub and to the rim and including resilient loops, and tension devices movable radially of the wheel between the rim and the hub and connected to one of the said parts and engaging the loops of the spokes to vary the tension of the latter.

2. In a wheel of the class described, the combination of a rim, a hub, spokes secured to the hub and to the rim and including resilient loops, and tension devices connected with the hub of the wheel and fitted between and engaging the loops of the spokes and movable radially of the wheel to vary the tension of the said spokes.

3. In a wheel of the class described, the combination with a hub, and spokes having resilient loops, of a tension device provided with a tapered portion fitted between and engaging the loops and adjustable inwardly and outwardly to vary the tension of the same.

4. In a wheel of the class described, the combination with a hub, and spokes having resilient loops, of a tension device provided with a tapered portion fitted between and engaging the loops and adjustable inwardly and outwardly to vary the tension of the same, said tapered portion being provided with opposite lugs spaced apart to receive the loops.

5. In a wheel of the class described, the combination with a hub, and spokes provided with resilient loops, of a tension device composed of a tapered portion fitted between and engaging the loops, and means for adjustably connecting the tapered portion with the hub for moving the tapered portion inwardly and outwardly.

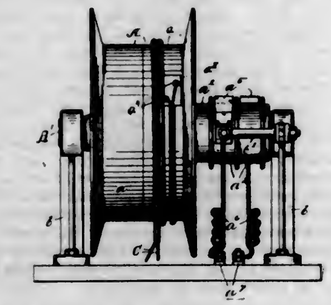
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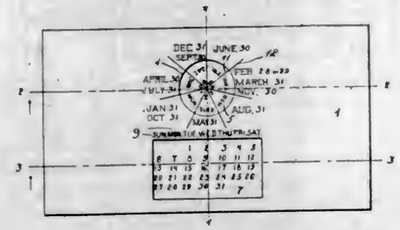
899,613. CABLE-DRUM. ALVIN A. PIFER, Cleveland, Ohio, assignor to Cleveland Armature Works, Cleveland, Ohio, a Partnership. Filed Mar. 6, 1908. Serial No. 419,520.



1. In a device of the character described, the combination of a fixed shaft; a drum mounted thereon and provided with a laterally extending hub; two insulated rings of conducting material mounted upon the hub of said drum; two brushes connected with a source of current and respectively bearing upon said two rings; a coil spring within said drum, said spring being attached to the same and to said shaft so as to tend to rotate the former and retain it in normal position about the latter; two conductors wound upon said drum and adapted to form part of an electric circuit; and conductors, parallel with said shaft, connected with said rings respectively and extending within said drum, the inner ends of said conductors being connected with said conductors, respectively.

2. In a device of the character described, the combination of a fixed shaft; a drum mounted thereon and provided with a laterally extending hub; two insulated rings of conducting material mounted upon the hub of said drum; two brushes connected with a source of current and respectively bearing on said two rings; a coil-spring within said drum, said spring being attached to the same and to said shaft so as to tend to rotate the former and retain it in normal position about the latter; two conductors wound upon said drum and adapted to form part of an electric circuit; an insulated block inserted in the periphery of said drum; binding posts in said block for the inner ends of said conductors; and other conductors, parallel with said shaft, connected with said rings, respectively, and extending within said drum, the inner ends of said last named conductors being connected with said binding posts, respectively.

899,614. CALENDAR. ERIC K. PLOUGH, Chambersburg, Pa. Filed Oct. 23, 1907. Serial No. 398,823.



A calendar comprising in combination, an indicator having a single series of the names of the days of the week thereon, identifying characters carried by said indicator, an indicator having the names of the months of the year thereon, said first named indicator being movable with reference to the second named indicator and the names of the days of the week and the names of the months of the year being so arranged that by manipulating the movable indicator the days of the week on which each month of the year begins can be ascertained.

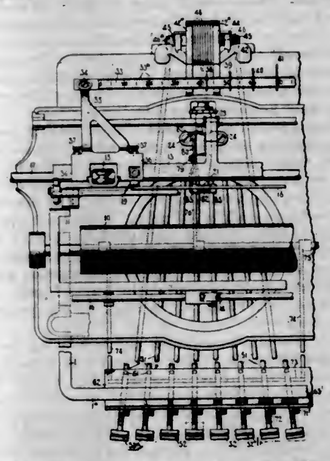
899,615. TYPE-WRITING MACHINE. MORRIS W. POOL, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 16, 1905. Serial No. 283,015.

1. In a typewriting machine and in tabulating mechanism, the combination of a carriage, column determining stops, key operated denominational positioning devices coöperating with said column determining stops, and means for variably operating said denominational positioning devices to select a column.

2. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a set of column stops having contact surfaces out of line with one another, denominational positioning mechanism, and means for variably operating said denominational positioning mechanism to move a part of said denominational positioning mechanism into line with any selected one of said contact surfaces.

3. In a typewriting machine, the combination with a carriage, of a series of column stops, and denominational stop mechanism for coöperation with said column stops to arrest the carriage in selected denominational positions, said mechanism including a denominational stop and means for moving said denominational stop to any one of a plurality of predetermined operative positions to select the column.

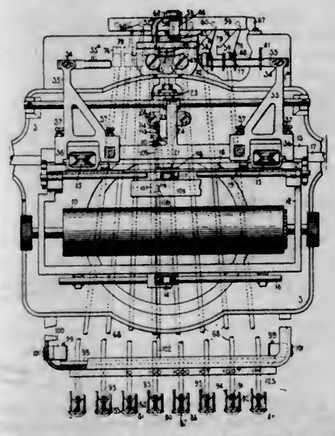
4. In a typewriting machine, the combination with a carriage, of a series of column stops, denominational stop mechanism for coöperation with said column stops to arrest the carriage in selected denominational positions, said mechanism including a denominational stop, and key controlled means for moving said denominational stop to any one of a plurality of predetermined operative positions to select the column and for releasing the carriage.



5. In a typewriting machine, the combination with a carriage, of tabulating mechanism comprising a set of stops having contact surfaces out of line with one another, a second set of separately operable stops, and means for moving any one of said separately operable stops to different operative positions for coöperation with any one of said contact surfaces.

[Claims 6 to 37 not printed in the Gazette.]

899,616. TYPE-WRITING MACHINE. MORRIS W. POOL, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 16, 1905. Serial No. 283,016.



1. In a typewriting machine and tabulating mechanism, the combination with a carriage, of a series of column stops, a single coöperating stop, and means for automatically releasing said carriage and for effecting variable relative adjustments between said stops to select denominational positions and for effecting other variable relative

adjustments to select columns to bring said stops into co-operation to arrest the carriage at any desired denominational position within any desired columnar field by a single operation.

2. In a typewriting machine and tabulating mechanism, the combination of a carriage, a series of column stops, a single stop coöperating therewith, a series of keys, means operated by said keys for effecting variable relative adjustments between said stops to select denominational positions and for effecting other variable relative adjustments to select columns to bring the stops into coöperation to arrest the carriage at any desired denominational position within any desired column without first arresting the carriage at a preceding column, and means operated by said keys for releasing the carriage.

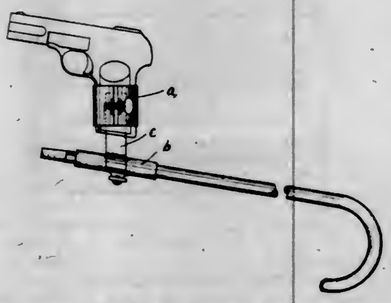
3. In a typewriting machine and tabulating mechanism, the combination of a carriage, a series of column stops, a single stop coöperating therewith, and key actuated means for effecting a relative adjustment of said stops in the direction of the run of the carriage to determine the denominational position of arrest of the carriage and for effecting another relative adjustment of said stops to bring said single stop and any desired column stop into co-operation, so that the carriage can be stopped at any desired denominational position in any desired columnar field without arresting the carriage at the preceding columnar fields.

4. In a typewriting machine and tabulating mechanism, the combination of a carriage, a series of column stops, a single stop coöperating therewith, key actuated means for effecting a relative adjustment of said stops in the direction of the run of the carriage to determine the denominational position of arrest of the carriage and for effecting another relative adjustment of said stops to bring said single stop and any desired column stop into coöperation, so that the carriage can be stopped at any desired denominational position in any desired columnar field without arresting the carriage at the preceding columnar fields, and means controlled by said key actuated means for automatically releasing the carriage.

5. In a typewriting machine and tabulating mechanism, the combination of a carriage, column stops therefor, and a stop that is moved in the direction of the travel of the carriage to different extents to determine the denominational position of arrest and which is moved to different extents at substantially right angles to the travel of the carriage to determine the columnar position of arrest.

[Claims 6 to 42 not printed in the Gazette.]

899,617. CLASP FOR FASTENING FIREARMS TO SUPPORTS. HERMAN RENFORS and ROBERT LINDGREN, Kajana, Russia. Filed Nov. 30, 1906. Serial No. 345,647.



1. A support for firearms comprising a split sleeve adapted to receive and hold the stock of a firearm, a split tube adapted to grasp a walking stick or the like, and an arm connecting said split sleeve and split tube.

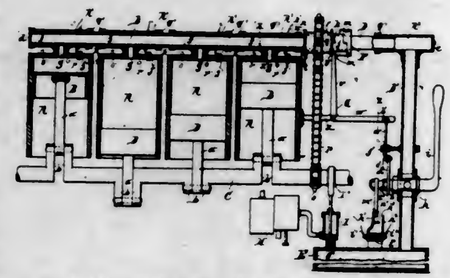
2. A support for firearms comprising a split tube adapted to grasp a walking stick or the like, an arm extending from said split tube, and means for attaching said arm to the stock of a firearm.

3. A support for firearms comprising an adjustable split sleeve adapted to receive and hold the stock of a firearm, means for adjusting said split sleeve, an adjustable split tube adapted to grasp a walking stick or the like, means for adjusting said split tube, and an arm connecting said sleeve and split tube.

4. A support for firearms comprising a split tube *b* adapted to grasp a walking stick or the like, an arm *c* extending from said split tube, and means for attaching said arm to the stock of a firearm.

5. A support for firearms comprising an adjustable split sleeve *a* adapted to receive and hold the stock of a firearm, means for adjusting said split sleeve, an adjustable split tube *b* adapted to grasp a walking stock or the like, means for adjusting said split tube, and an arm *c* connecting said sleeve and split tube.

899,618. STARTING DEVICE FOR GASOLENE-ENGINES. FRANK REYNOLDS, Syracuse, N. Y. Filed Feb. 17, 1904. Serial No. 194,000.



1. In a gasolene-engine, the combination with the explosion-cylinder, electric spark-plug therein, and exhaust-means, of a starting-device comprising a tank for storing explosive-mixture under compression, a passage leading from the tank to said cylinder, a valve controlling the supply of compressed-mixture to the passage, a valve controlling the admission of mixture from the passage into the cylinder, electric contacts, an electric circuit-maker and breaker adjacent to said contacts, and a manually operated means for actuating said valves and circuit-maker and breaker.

2. In a gasolene-engine, the combination with the explosion-cylinder, electric spark-plug therein, and exhaust-means, of a starting-device comprising a tank for storing explosive-mixture under compression, a carbureter independent of the engine, an automatically operated pump drawing the mixture from the carbureter and compressing the same into the said tank, a passage leading from the tank to the cylinder, a valve controlling the supply of compressed-mixture from the tank to the passage, a valve controlling the admission of the mixture from the passage into the cylinder, a pair of normally open electric-contacts, a circuit-maker and breaker adjacent to said contacts, and a manually operated lever simultaneously actuating said valve and circuit-maker and breaker as set forth.

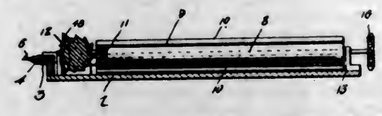
3. In a gasolene-engine, the combination with the explosion-cylinder, electric-igniter, and exhaust-means, of a starting-device comprising a tank for storing explosive-mixture under compression, a pipe communicating with the tank and cylinder, a valve controlling the supply of mixture from said tank to the pipe, an admission-port in the pipe at the cylinder, an electric-circuit-maker and breaker controlling the igniter, a manually operated lever for actuating the circuit-maker and breaker and supply-valve, and means actuated by said lever for opening and closing said port as set forth.

4. In a gasolene-engine, the combination with the explosion-cylinder, electric-igniter, and exhaust-means, of a starting-device comprising a tank for storing explosive-mixture under compression, a stationary pipe extending from said tank, a movable pipe leading from the stationary pipe to the cylinder and provided with an admission-port affording communication with said cylinder, a valve in the stationary pipe controlling the supply of compressed-mixture from the tank, a manually operated lever for actuating said valve, mechanism actuated by the lever for operating the movable pipe to open and close the port thereof, and an electric-circuit-maker and breaker actuated by said lever for the purpose set forth.

5. In a gasolene-engine, the combination with a plurality of cylinders, their reciprocating pistons, suitable igniters in said cylinders, and exhaust-means therefor, of a starting-device comprising a tank for storing the explosive-mixture under compression, a longitudinally shiftable pipe disposed adjacent to the cylinders and communicating with said tank, means controlling the supply of mixture to said pipe, discharge-ports in said pipe and arranged to successively afford communication between the pipe and respective cylinders and regulated by the movement of the pipe, means for shifting said pipe, and means controlling the aforesaid igniters as set forth.

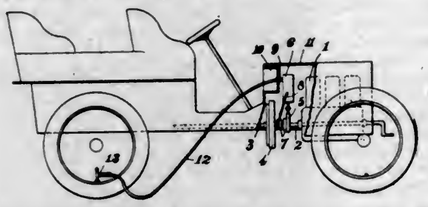
[Claims 6 to 22 not printed in the Gazette.]

899,619. ATTACHMENT FOR GRAIN-BINDERS. ERNEST D. RODEMEYER, Latimer, Iowa. Filed Mar. 24, 1908. Serial No. 422,923.



In a harvester, a binding means, a platform, a cutting mechanism on the forward end of said platform, an outer roller and a drive roller rotatably mounted on said platform, means to rotate said drive roller, a grooved relief roller extending longitudinally of said cutting mechanism immediately to the rear thereof, angled brackets supporting the adjacent ends of said outer and drive rollers and said grooved roller, bevel gear connection between said drive roller and said grooved roller, whereby said grooved roller is caused to rotate faster than said drive roller, a canvas supported and moved by said drive roller and outer roller, a bar fastened to said angled brackets and lying immediately to the rear of said grooved roller, the forward edge of said canvas lying on said bar and immediately to the rear of said roller.

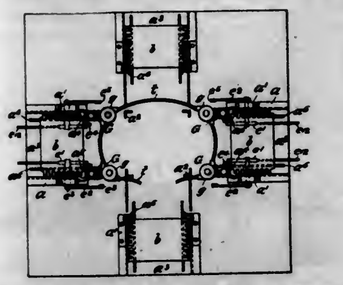
899,620. TIRE-INFLATER FOR AUTOMOBILES. PETER J. ROSS, Trevor, Wis.; Donald C. Ross, Rydner, N. D., administrator of said Peter J. Ross, deceased. Filed Jan. 2, 1908. Serial No. 408,957.



1. An automobile tire inflater comprising an air pump adapted to be coupled to the engine shaft when desired, in combination with a flexible hose of suitable length extending from said air pump and a coupling member on the free end of said hose for attaching the same to the tire plug, said coupling member comprising a tubular handle portion attached to said hose and a transverse tubular portion arranged at the opposite end thereof forming a T shaped member, a coupling nipple arranged at one end of said transverse portion a safety valve arranged at the opposite end thereof, the first said tubular portion having a discharge opening, a valve for closing said opening and mounted upon a suitable lever, said lever being arranged substantially parallel with said handle portion and adapted to be simultaneously grasped therewith to manually depress the valve to close said discharge opening substantially as described.

2. An automobile tire inflater comprising an air pump adapted to be coupled to the engine shaft in combination with a flexible hose and a coupling member from the free end of said hose for attaching the same to a tire plug, said coupling member comprising a tubular handle portion attached to the hose and a transverse tubular portion arranged at the opposite end thereof forming a T shaped member, a coupling nipple arranged at one end of said transverse portion, a plug threaded in the opposite end of said portion, a threaded stem extending through said plug, a valve upon the inner end of said stem and fitting snugly within said transverse portion a spring interposed between said plug and said valve and a nut threaded upon the outer end of said stem, and said tubular portion being perforated and said perforations being normally closed by said valve, substantially as described.

899,621. AUTOMATIC GLUE FEEDER AND SPREADER FOR BOX-MACHINES. EUGENE ROTHONG, Philadelphia, Pa., assignor to Jordan Machine Company, Philadelphia, Pa. Filed Oct. 22, 1907. Serial No. 398,678.



1. A glue-feeder and spreader, comprising a steam-jacketed glue receptacle, a steam jacketed glue conductor pipe, a stop valve on said pipe, a cylinder joined to said pipe, a plunger operating in said cylinder, an orifice in the bottom of the cylinder and a steam-jet at an angle to said orifice, substantially as and for the purposes set forth.

2. A glue-feeder and spreader comprising a glue-supply pipe, a valve therein, a cylinder communicating with said pipe, an orifice in said cylinder and a steam-jet communicating with said orifice, substantially as and for the purposes set forth.

3. A glue-feeder and spreader, comprising a glue-supply pipe, a cylinder communicating therewith, an orifice in said cylinder, a steam-jet joining said orifice, means for automatically stopping and starting the flow of glue and means for automatically regulating the steam-jet in conjunction with the flow of the glue, substantially as and for the purposes set forth.

4. A glue-feeder and spreader comprising a glue-supply pipe, a cylinder communicating with said pipe, orifices in said cylinder, means for stopping and starting the flow of glue through said orifices, pins registering with said orifices and attached to said means, for the purpose of cleaning the said orifices, a steam-jet and means for regulating the steam-jet in conjunction with the flow of the glue, substantially as and for the purposes set forth.

5. In a box-machine in combination with a board-feed, a glue-feeder and spreader comprising a glue-supply pipe, a cylinder communicating with said pipe, an orifice in said cylinder, means for stopping and starting the flow of glue through the orifice, a steam-jet, means for regulating the steam-jet in conjunction with the flow of glue and devices between the board-feed and the glue-feeder and spreader for effecting the automatic regulation of the flow of glue and steam-jet, substantially as and for the purposes set forth.

[Claims 6 to 8 not printed in the Gazette.]

adjustments to select columns to bring said stops into cooperation to arrest the carriage at any desired denominational position within any desired columnar field by a single operation.

2. In a typewriting machine and tabulating mechanism, the combination of a carriage, a series of column stops, a single stop coöperating therewith, a series of keys, means operated by said keys for effecting variable relative adjustments between said stops to select denominational positions and for effecting other variable relative adjustments to select columns to bring the stops into coöperation to arrest the carriage at any desired denominational position within any desired column without first arresting the carriage at a preceding column, and means operated by said keys for releasing the carriage.

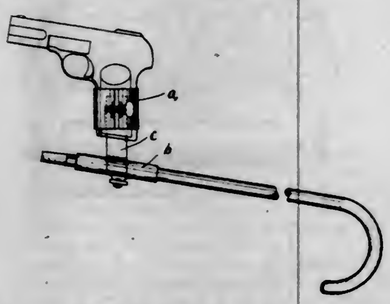
3. In a typewriting machine and tabulating mechanism, the combination of a carriage, a series of column stops, a single stop coöperating therewith, and key actuated means for effecting a relative adjustment of said stops in the direction of the run of the carriage to determine the denominational position of arrest of the carriage and for effecting another relative adjustment of said stops to bring said single stop and any desired column stop into cooperation, so that the carriage can be stopped at any desired denominational position in any desired columnar field without arresting the carriage at the preceding columnar fields.

4. In a typewriting machine and tabulating mechanism, the combination of a carriage, a series of column stops, a single stop coöperating therewith, key actuated means for effecting a relative adjustment of said stops in the direction of the run of the carriage to determine the denominational position of arrest of the carriage and for effecting another relative adjustment of said stops to bring said single stop and any desired column stop into coöperation, so that the carriage can be stopped at any desired denominational position in any desired columnar field without arresting the carriage at the preceding columnar fields, and means controlled by said key actuated means for automatically releasing the carriage.

5. In a typewriting machine and tabulating mechanism, the combination of a carriage, column stops therefor, and a stop that is moved in the direction of the travel of the carriage to different extents to determine the denominational position of arrest and which is moved to different extents at substantially right angles to the travel of the carriage to determine the columnar position of arrest.

[Claims 6 to 42 not printed in the Gazette.]

899,617. CLASP FOR FASTENING FIREARMS TO SUPPORTS. HERMAN RENFORS and ROBERT LINDGREN, Kajana, Russia. Filed Nov. 30, 1906. Serial No. 345,647.



1. A support for firearms comprising a split sleeve adapted to receive and hold the stock of a firearm, a split tube adapted to grasp a walking stick or the like, and an arm connecting said split sleeve and split tube.

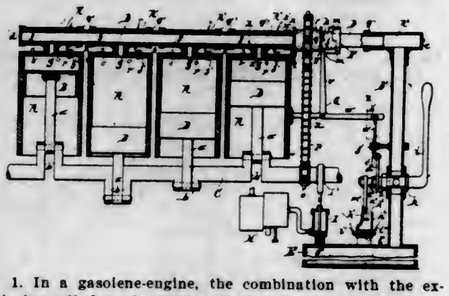
2. A support for firearms comprising a split tube adapted to grasp a walking stick or the like, an arm extending from said split tube, and means for attaching said arm to the stock of a firearm.

3. A support for firearms comprising an adjustable split sleeve adapted to receive and hold the stock of a firearm, means for adjusting said split sleeve, an adjustable split tube adapted to grasp a walking stick or the like, means for adjusting said split tube, and an arm connecting said sleeve and split tube.

4. A support for firearms comprising a split tube *b* adapted to grasp a walking stick or the like, an arm *c* extending from said split tube, and means for attaching said arm to the stock of a firearm.

5. A support for firearms comprising an adjustable split sleeve *a* adapted to receive and hold the stock of a firearm, means for adjusting said split sleeve, an adjustable split tube *b* adapted to grasp a walking stock or the like, means for adjusting said split tube, and an arm *c* connecting said sleeve and split tube.

899,618. STARTING DEVICE FOR GASOLENE-ENGINES. FRANK REYNOLDS, Syracuse, N. Y. Filed Feb. 17, 1904. Serial No. 194,000.



1. In a gasolene-engine, the combination with the explosion-cylinder, electric spark-plug therein, and exhaust-means, of a starting-device comprising a tank for storing explosive-mixture under compression, a passage leading from the tank to said cylinder, a valve controlling the supply of compressed-mixture to the passage, a valve controlling the admission of mixture from the passage into the cylinder, electric contacts, an electric circuit-maker and breaker adjacent to said contacts, and a manually operated means for actuating said valves and circuit-maker and breaker.

2. In a gasolene-engine, the combination with the explosion-cylinder, electric spark-plug therein, and exhaust-means, of a starting-device comprising a tank for storing explosive-mixture under compression, a carbureter independent of the engine, an automatically operated pump drawing the mixture from the carbureter and compressing the same into the said tank, a passage leading from the tank to the cylinder, a valve controlling the supply of compressed-mixture from the tank to the passage, a valve controlling the admission of the mixture from the passage into the cylinder, a pair of normally open electric-contacts, a circuit-maker and breaker adjacent to said contacts, and a manually operated lever simultaneously actuating said valve and circuit-maker and breaker as set forth.

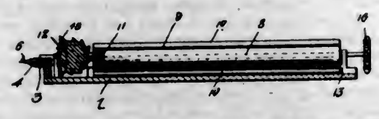
3. In a gasolene-engine, the combination with the explosion-cylinder, electric-igniter, and exhaust-means, of a starting-device comprising a tank for storing explosive-mixture under compression, a pipe communicating with the tank and cylinder, a valve controlling the supply of mixture from said tank to the pipe, an admission-port in the pipe at the cylinder, an electric-circuit-maker and breaker controlling the igniter, a manually operated lever for actuating the circuit-maker and breaker and supply-valve, and means actuated by said lever for opening and closing said port as set forth.

4. In a gasolene-engine, the combination with the explosion-cylinder, electric-igniter, and exhaust-means, of a starting-device comprising a tank for storing explosive-mixture under compression, a stationary pipe extending from said tank, a movable pipe leading from the stationary pipe to the cylinder and provided with an admission-port affording communication with said cylinder, a valve in the stationary pipe controlling the supply of compressed-mixture from the tank, a manually operated lever for actuating said valve, mechanism actuated by the lever for operating the movable pipe to open and close the port thereof, and an electric-circuit-maker and breaker actuated by said lever for the purpose set forth.

5. In a gasolene-engine, the combination with a plurality of cylinders, their reciprocating pistons, suitable igniters in said cylinders, and exhaust-means therefor, of a starting-device comprising a tank for storing the explosive-mixture under compression, a longitudinally shiftable pipe disposed adjacent to the cylinders and communicating with said tank, means controlling the supply of mixture to said pipe, discharge-ports in said pipe and arranged to successively afford communication between the pipe and respective cylinders and regulated by the movement of the pipe, means for shifting said pipe, and means controlling the aforesaid igniters as set forth.

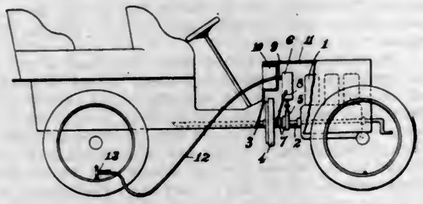
[Claims 6 to 22 not printed in the Gazette.]

899,619. ATTACHMENT FOR GRAIN-BINDERS. ERNEST D. RODEMEYER, Latimer, Iowa. Filed Mar. 24, 1908. Serial No. 422,923.



In a harvester, a binding means, a platform, a cutting mechanism on the forward end of said platform, an outer roller and a drive roller rotatably mounted on said platform, means to rotate said drive roller, a grooved relief roller extending longitudinally of said cutting mechanism immediately to the rear thereof, angled brackets supporting the adjacent ends of said outer and drive rollers and said grooved roller, bevel gear connection between said drive roller and said grooved roller, whereby said grooved roller is caused to rotate faster than said drive roller, a canvas supported and moved by said drive roller and outer roller, a bar fastened to said angled brackets and lying immediately to the rear of said grooved roller, the forward edge of said canvas lying on said bar and immediately to the rear of said roller.

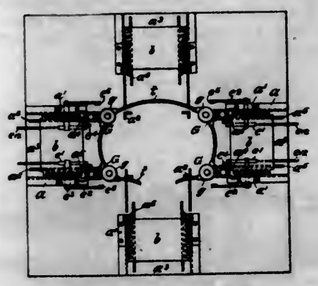
899,620. TIRE-INFLATER FOR AUTOMOBILES. PETER J. ROSS, Trevor, Wis.; Donald C. Ross, Rydner, N. D., administrator of said Peter J. Ross, deceased. Filed Jan. 2, 1908. Serial No. 408,957.



1. An automobile tire inflater comprising an air pump adapted to be coupled to the engine shaft when desired, in combination with a flexible hose of suitable length extending from said air pump and a coupling member on the free end of said hose for attaching the same to the tire plug, said coupling member comprising a tubular handle portion attached to said hose and a transverse tubular portion arranged at the opposite end thereof forming a T shaped member, a coupling nipple arranged at one end of said transverse portion a safety valve arranged at the opposite end thereof, the first said tubular portion having a discharge opening, a valve for closing said opening and mounted upon a suitable lever, said lever being arranged substantially parallel with said handle portion and adapted to be simultaneously grasped therewith to manually depress the valve to close said discharge opening substantially as described.

2. An automobile tire inflater comprising an air pump adapted to be coupled to the engine shaft in combination with a flexible hose and a coupling member from the free end of said hose for attaching the same to a tire plug, said coupling member comprising a tubular handle portion attached to the hose and a transverse tubular portion arranged at the opposite end thereof forming a T shaped member, a coupling nipple arranged at one end of said transverse portion, a plug threaded in the opposite end of said portion, a threaded stem extending through said plug, a valve upon the inner end of said stem and fitting snugly within said transverse portion a spring interposed between said plug and said valve and a nut threaded upon the outer end of said stem, and said tubular portion being perforated and said perforations being normally closed by said valve, substantially as described.

899,621. AUTOMATIC GLUE FEEDER AND SPREADER FOR BOX-MACHINES. EUGENE ROTHONG, Philadelphia, Pa., assignor to Jordan Machine Company, Philadelphia, Pa. Filed Oct. 22, 1907. Serial No. 398,678.



1. A glue-feeder and spreader, comprising a steam-jacketed glue receptacle, a steam jacketed glue conductor pipe, a stop valve on said pipe, a cylinder joined to said pipe, a plunger operating in said cylinder, an orifice in the bottom of the cylinder and a steam-jet at an angle to said orifice, substantially as and for the purposes set forth.

2. A glue-feeder and spreader comprising a glue-supply pipe, a valve therein, a cylinder communicating with said pipe, an orifice in said cylinder and a steam-jet communicating with said orifice, substantially as and for the purposes set forth.

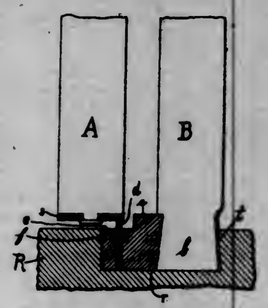
3. A glue-feeder and spreader, comprising a glue-supply pipe, a cylinder communicating therewith, an orifice in said cylinder, a steam-jet joining said orifice, means for automatically stopping and starting the flow of glue and means for automatically regulating the steam-jet in conjunction with the flow of the glue, substantially as and for the purposes set forth.

4. A glue-feeder and spreader comprising a glue-supply pipe, a cylinder communicating with said pipe, orifices in said cylinder, means for stopping and starting the flow of glue through said orifices, pins registering with said orifices and attached to said means, for the purpose of cleaning the said orifices, a steam-jet and means for regulating the steam-jet in conjunction with the flow of the glue, substantially as and for the purposes set forth.

5. In a box-machine in combination with a board-feed, a glue-feeder and spreader comprising a glue-supply pipe, a cylinder communicating with said pipe, an orifice in said cylinder, means for stopping and starting the flow of glue through the orifice, a steam-jet, means for regulating the steam-jet in conjunction with the flow of glue and devices between the board-feed and the glue-feeder and spreader for effecting the automatic regulation of the flow of glue and steam-jet, substantially as and for the purposes set forth.

[Claims 6 to 8 not printed in the Gazette.]

899,622. BLADE-FASTENING. MAX ROTTER, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Oct. 10, 1906. Serial No. 338,223.



The combination with a blade-holding member R provided with a recess *r*, a blade B seated in said recess, and the securing members *c*, *d* and *e* also seated in said recess, the member *d* projecting from the blade-holding member R and adapted to serve as a baffle member for an adjacent blade A, said adjacent blade A, one of said blades being movable with respect to the other.

899,623. FLEXIBLE PIPE. GEORGE F. ROYER, Wilkes-Barre, Pa. Filed Sept. 27, 1907. Serial No. 394,884.



1. A flexible tube comprising a plurality of flexible rings abutting end to end, a plurality of separated rings within the flexible rings and arranged alternately therewith, and a plurality of separated rings surrounding the flexible rings and arranged alternately therewith.

2. A flexible tube comprising a plurality of inner rings, a plurality of flexible rings abutting end to end and surrounding said inner rings, a plurality of outer rings surrounding the flexible rings, and means for preventing the outer rings from moving apart axially.

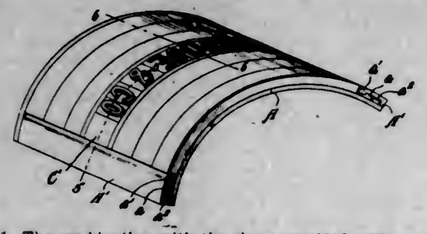
3. A flexible tube comprising a plurality of inner rings each having an annular rib on its outer surface, a plurality of outer rings each having an annular rib on its inner surface, a plurality of intermediate flexible rings arranged alternately with the inner and outer rings and having their ends abutting against said ribs and against each other, and means limiting the separation of the outer rings, the adjacent inner and outer rings being normally separated to permit of flexure of the tube.

4. A flexible tube comprising a series of inner rings, a series of surrounding flexible rings arranged alternately with the inner rings, a series of outer rings surrounding the flexible rings and arranged alternately therewith, the said outer rings having outwardly extending flanges at their ends, and means for engaging the said flange to prevent abnormal separation of the outer rings.

5. A flexible tube comprising a series of inner rings, a series of surrounding flexible rings arranged alternately with the inner rings, a series of outer rings surrounding the flexible rings and arranged alternately therewith, the said outer rings having outwardly extending flanges at their ends, and rings having inwardly extending flanges for engaging the flanges of said outer rings.

[Claims 6 and 7 not printed in the Gazette.]

899,624. PRINTING DEVICE. JOSEPH J. SAYRE, Cincinnati, Ohio. Filed Apr. 22, 1908. Serial No. 428,603.



1. The combination with the chase provided with oppositely disposed parallel retaining flanges overhanging the face of the chase, of a type holding bar provided with a longitudinal type receiving channel open at at least one of its ends, having lateral overhanging edges, and end portions constructed to engage the retaining flanges to simultaneously secure the type holding bar in the chase and close the open portion of said channel to secure the type in the type holding bar, substantially as described.

2. The combination with the chase provided with oppositely disposed parallel retaining flanges overhanging the face of the chase, of a type holding bar provided with a longitudinal type receiving channel open at both ends having lateral overhanging edges, and having its end portions beyond said lateral overhanging edges constructed to engage the underside of said overhanging portions of the retaining flanges, spacing bars having end portions constructed to engage the overhanging portions of the retaining flanges, and type blocks having portions constructed to engage the channel of the type bar, the retaining flanges closing the open ends of said type channel of the type holding bar when the parts are assembled, substantially as described.

3. The combination with a chase having parallel retaining flanges, a type holding bar having a longitudinal type holding channel open at at least one of its ends, and end portions beyond the channeled portions constructed to interlock with the said retaining flanges, said retaining flanges having portions closing the open end or ends of the type holding channel, when the type holding bar is placed in engagement therewith, substantially as described.

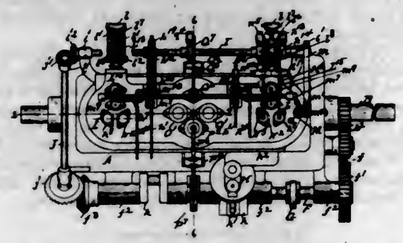
4. The combination with a chase having parallel retaining flanges, a type holding bar having a longitudinal type holding channel open at at least one end, and end portions beyond said channel constructed to interlock with the said retaining flanges, type blocks constructed to interlock with lateral portions of said type holding channel, said retaining flanges having portions closing the open end or ends of said channel, when the type holding bar is placed in engagement therewith, and a spacing bar having its ends constructed to interlock with said retaining flanges, substantially as described.

5. The combination with a chase comprising a curved plate provided with opposite retaining flanges extending over the convex surface of said plate, of a curved type holding bar, having a longitudinal type holding channel open at its ends, and provided with overhanging lateral portions terminating at a distance from the ends of said bar, and having its end portions beyond said overhanging lateral portions constructed to pass under the said retaining flanges, said retaining flanges closing the said type holding channel at each end when the type holding bar is placed in engagement therewith, curved spacing bars having their end portions constructed to engage said retaining flanges, and type blocks having oppositely disposed projecting portions to engage the channel of said type holding bar, substantially as described.

[Claim 6 not printed in the Gazette.]

899,625. ENGINE. FRITZ SCHNEIDER and GEORGE B. CONRATH, Erie, Pa. Filed May 18, 1906. Serial No. 317,434.

1. In an engine the combination of a generating chamber; power transmitting means actuated by the pressure generated in said chamber; devices for introducing combustible mixture into said chamber with certain strokes of the engine; mechanism timed in connection with said devices for injecting a liquid in quantities to vaporize under the influence of the burning mixture; and appliances acting on the liquid for automatically controlling the speed of the engine.



2. In an engine the combination of a generating chamber; power transmitting means actuated by the pressure generated in said chamber; devices for introducing combustible mixture into said chamber with certain strokes of the engine; mechanism timed in connection with said devices for injecting a liquid in quantities to vaporize under the influence of the burning mixture; and appliances acting on the mixture and liquid for automatically controlling the speed of the engine.

3. In an engine the combination of a generating chamber; means for compressing air therein with certain strokes of the engine to a pressure, which, with the heat incident to compression retained, will cause ignition of the combustible fluid; power transmitting means actuated by the pressure generated in the chamber; devices for injecting combustible fluid into the compressed air in said chamber; mechanism timed with relation to said device for injecting a different fluid into the burning mixture formed by the air and combustible fluid; and appliances for automatically controlling the speed of the engine.

4. In an engine the combination of a generating chamber; means for compressing air therein with certain strokes of the engine to a pressure, which, with the heat incident to compression retained, will cause ignition of the combustible fluid; power transmitting means actuated by the pressure generated in the chamber; devices for injecting combustible fluid into the compressed air in said chamber; mechanism timed with relation to said devices for injecting a different fluid into the burning mixture formed by the air and combustible fluid; and appliances acting on the combustible fluid for automatically controlling the speed of the engine.

5. In an engine the combination of a generating chamber; means for compressing air therein with certain strokes of the engine to a pressure, which, with the heat incident to compression retained, will cause ignition of the combustible fluid; power transmitting means actuated by the pressure generated in the chamber; devices for injecting combustible fluid into the compressed air in said chamber; mechanism timed with relation to said devices for injecting a liquid into the burning mixture formed by the air and combustible fluid in quantities to be vaporized by the burning mixture; and appliances acting automatically for controlling the speed of the engine.

[Claims 6 to 73 not printed in the Gazette.]

899,626. TOOTH-CLEANING DEVICE. CHARLES P. SCHULTZ, Munich, Germany. Filed Feb. 28, 1908. Serial No. 418,252.

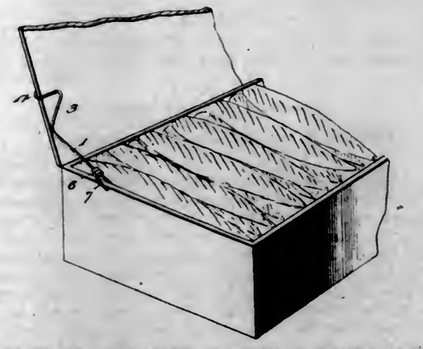
1. In a tooth-cleaning device, the combination of a round body (*a*) of soft rubber, provided with grooves (*b*) running round its circumference, and a shaft (*c*) for suitably connecting said body (*a*) to a machine, substantially as herein described.

2. In a tooth-cleaning device, the combination of a round body (*a*) of soft rubber, provided with grooves (*b*) running round its circumference, a front-surface (*d*) provided with circular grooves, and a shaft (*c*) for suitably



connecting said body (*a*) to a machine, substantially as herein described.

899,627. LID-HOLDER. GUSTAV A. SCHWANKE, Brunswick, Nebr. Filed Mar. 14, 1908. Serial No. 421,117.



1. A device of the character described, comprising a supporting rod bent at its upper end to form inwardly facing spaced members adapted to embrace one end of a box lid, the rod being formed at its lower end with an outwardly disposed tooth arranged to be embedded in the adjacent end of the box, and a slide mounted for longitudinal movement on the rod between the spaced members and the tooth, and carrying an edentate clamping arm spaced from the rod, as and for the purpose specified.

2. A device of the character described, comprising a supporting rod bent at its upper end to form inwardly facing spaced members adapted to embrace one end of a box lid, the rod being formed at its lower end with an outwardly disposed tooth arranged to be embedded in the adjacent end of the box, and a slide mounted for longitudinal movement on the rod between the spaced members and the tooth, and constructed of an integral strip of wire, one end of which is loosely coiled about the rod, and the other end of which is angularly disposed in spaced relation to the rod and constitutes an edentate clamping arm, as and for the purpose specified.

899,628. APPARATUS FOR REMOVING SOLID AND LIQUID PARTICLES FROM GASES. FRANÇOIS SEPULCHRE, Liege, Belgium. Filed Sept. 24, 1907.. Serial No. 394,400.

1. The hereindescribed apparatus for freeing gas from liquid or solid particles contained therein, comprising a liquid receptacle, a tube providing an unobstructed gas passage and having its lower end extending into the receptacle and terminating above the level of the liquid therein, means for forcing gas to be treated through the tube at a high speed, and means at the lower end of the tube for causing the gas to pass therefrom over the liquid in the form of a thin sheet.

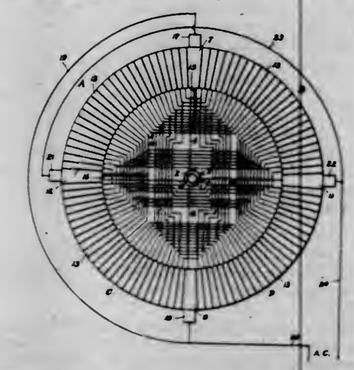
2. The herein described apparatus for freeing gas from liquid or solid particles contained therein, comprising a liquid receptacle, a tube having its lower end extending into the receptacle and terminating above the level of liquid therein, means for forcing the gas to be treated through the tube at a high speed, and a cone-shaped body arranged within the lower end of the tube and providing therewith

a narrow annular passage, whereby the gas will be discharged from the lower end of the tube in the form of a thin sheet.



3. The herein described apparatus for freeing gas from liquid or solid particles contained therein, comprising a liquid receptacle, a tube having its lower end extending into the receptacle and terminating above the level of liquid therein, means for forcing the gas to be treated through the tube at a high speed, a cone-shaped body arranged within the lower end of the tube and providing therewith a narrow annular passage, whereby the gas will be discharged from the lower end of the tube in the form of a thin sheet, and a casing surrounding the lower portion of the tube to receive the gas passing therefrom and having an outlet for the purified gas.

899,629. CONVERTER. HARRY SHOEMAKER, Jersey City, N. J., assignor to International Telegraph Construction Company, a Corporation of New York. Filed Dec. 20, 1906. Serial No. 348,715.



1. The combination with a converter, of a plurality of commutator segments, resistances in varying amounts connected between said commutator segments, brushes bearing upon said segments, and means for supplying direct current to said segments at symmetrical points.

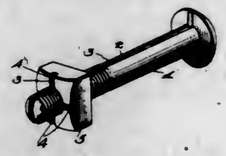
2. A converter comprising a plurality of commutator segments, resistances in varying amounts connected between said segments, slip rings in communication with a direct current source, and connections from said slip rings to symmetrically located segments.

3. In a converter, a plurality of rotating commutator segments, resistances in varying amounts connected between said segments and rotating with said segments, brushes bearing upon said segments, slip rings communicating with a direct current supply, and connections from said slip rings to said symmetrically located segments.

4. The combination with a plurality of segments, of resistances in varying amounts connected between said segments, brushes bearing upon said segments, means for supplying direct current to symmetrically located segments, and means for rotating said segments and resistances at desired speed.

5. In combination, a converter comprising a plurality of commutator segments, resistances in varying amounts connected between said commutator segments, brushes bearing upon said segments, means for supplying direct current to said segments at symmetrical points, means for rotating said commutator, a direct current motor connected with a direct current supply, and an alternating current synchronizing motor associated with said direct current motor and deriving alternating current from said converter.

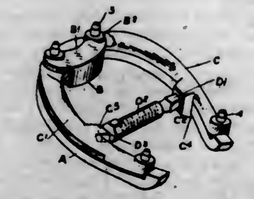
899,630. NUT-LOCK. WILLIAM A. SMITH, Union, S. C., assignor of one-half to Samuel Jackson Harris, Union, S. C. Filed Feb. 6, 1908. Serial No. 414,640.



1. In a nut lock the combination with a bolt having a groove extending longitudinally thereof and transversely across the end of the screw-threaded portion; a nut having a groove extending transversely across one face thereof and a wire disposed in said longitudinal groove and normally lying in said grooved end and adapted to be bent to lie in the groove of said nut to lock said nut against turning.

2. The combination of a member screw threaded at one end and having a groove extending longitudinally thereof and continuing across its screw threaded end, a wire arranged in said longitudinal groove and in said grooved end and a member operable on said grooved member and having a groove in one face for engagement by said wire.

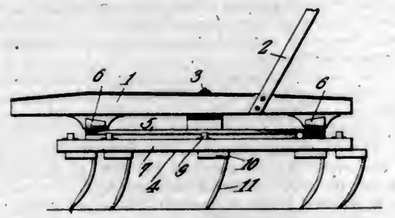
899,631. HORSESHOE. WESLEY E. SPAFFORD, Toronto, Ontario, Canada. Filed Apr. 10, 1908. Serial No. 426,390.



1. In a horse shoe, the combination with the toe piece having the arc-shaped upper portion and lower projections and intermediate connection adapted to fit the inside of the toe portion of the shoe, of the side pieces adapted to fit on to the sides of the shoe and having the ends extending underneath the ends of the toe clip and the toe calks extending through holes in such ends and abutting the shoe, and the heel calks extending through the heel ends of the pieces and abutting the shoe and means for fastening the toe clip and side pieces in position as and for the purpose specified.

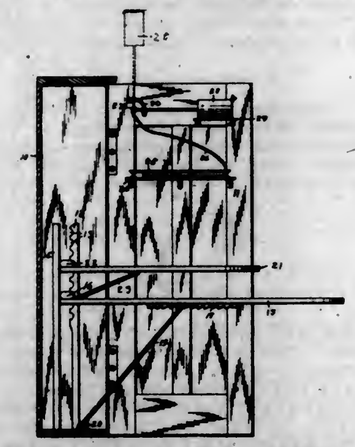
2. In a horse shoe, the combination with the toe piece having the arc-shaped upper portion and lower projections and intermediate connection attached to fit the inside of the toe portion of the shoe, of the side pieces adapted to fit on to the sides of the shoe and having the ends extending underneath the ends of the toe clip and the toe calks extending through holes in such ends and abutting the shoe, and the heel calks extending through the heel ends of the pieces and abutting the shoe, projections formed on the side pieces and extending above the shoe, a square tapered socket formed on one projection, a round tapered socket formed on the opposite projection, a square tapered headed bolt extending into the square socket, an internally threaded socket designed to fit on to the bolt and provided with a round tapered head as and for the purpose specified.

899,632. ROTARY CULTIVATOR OR HARROW. BENJAMIN F. STEWART, Andalusia, Ala. Filed May 25, 1908. Serial No. 434,929.



An implement as described comprising a draft beam, a wheel journaled for rotation with relation to the beam and adapted to rotate in a substantially horizontal plane, earth engaging members journaled to the peripheral portion of said wheel and consisting of shanks journaled to the wheel, and shoulder portions located below the wheel and teeth portions depending from the rear ends of the shoulder portions and having their lower ends in vertical alinement with the axis of the said shanks.

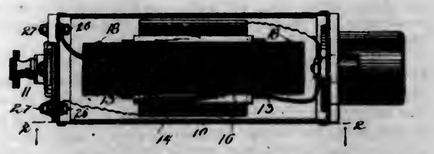
899,633. IRONING-CABINET. BERT A. STOCKING, Audubon, Iowa. Filed Mar. 18, 1907. Serial No. 362,949.



1. An improved ironing cabinet, comprising a cabinet body, a hinged door, two uprights on each side of the cabinet, the rear one being spaced apart from the rear of the cabinet and the forward one being spaced apart from the rear one and provided with notches, a main ironing board and a sleeve ironing board, each being provided with a cross piece at its rear end, said cross pieces being designed, when the ironing boards are in substantially horizontal positions, to enter notches in the notched bars and engage the rear bars and when in substantially vertical positions to freely slide between the bars, and means for supporting both boards in substantially horizontal positions.

2. An improved ironing board, comprising a cabinet body, a hinged door, two uprights on each side of the cabinet, the rear one being spaced apart from the rear of the cabinet and the forward one being spaced apart from the rear one and provided with notches, a main ironing board and a sleeve ironing board, each being provided with a cross piece at its rear end, said cross pieces being designed when the ironing boards are in substantially horizontal positions, to enter notches in the notched bars, and engage the rear bars and when in substantially vertical positions to freely slide between the bars, a notched bar on the main ironing board, a spring actuated hinge connected with the base of the cabinet and a brace fixed to the spring actuated hinge to engage said notched bar, said brace being so arranged as to hold the main ironing board in an upright position when folded in a cabinet.

899,634. HIGH-POTENTIAL SPARK-COIL. CHESTER H. THORDARSON, Chicago, Ill. Filed Dec. 23, 1907. Serial No. 407,808.



1. A high potential spark coil having an air gap formed transversely through the magnetic circuit thereof, an inclosing casing for said coil, and an armature arranged outside the casing and adapted to be operated by the magnetic field generated within the casing.

2. In a high potential spark coil an inclosing casing, means arranged within the casing for generating a magnetic field, and a movable armature arranged outside the case and adapted to be operated by the influence of said magnetic field.

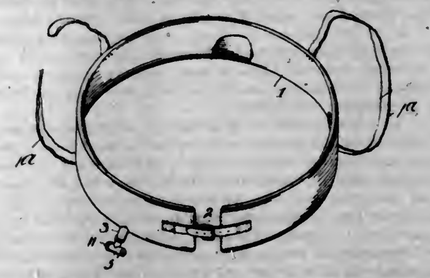
3. A high potential spark coil having an air gap formed transversely through the magnetic circuit thereof, an inclosing casing for the coil and a movable armature arranged outside the casing and adjacent the air gap.

4. A high potential spark coil having a primary and a secondary winding, a core therefor, said core having an air gap in the magnetic circuit thereof, and a movable armature arranged adjacent the air gap.

5. A high potential spark coil having a primary and a secondary winding and a core therefor, said core having an air gap in its magnetic circuit, a casing for wholly inclosing said windings and core, and a movable armature arranged outside the casing and at a point adjacent said air gap.

[Claims 6 to 12 not printed in the Gazette.]

899,635. LIFE-PRESERVER. HENRY P. THORN, New York, N. Y. Filed Nov. 16, 1907. Serial No. 402,368.



1. A life preserver having an inflatable body, means which will form a gas in said body when acted upon by water, and a valve, a spring in said valve adapted to close the valve and means for resisting the action of the spring,

which spring resisting means is adapted to be weakened by water, said gas forming means being located and retained within said spring resisting means and normally protected thereby, whereby when water enters the valve the spring resisting means will be over come and the valve closed.

2. In a life preserver, an inflatable body, means for forming a gas in said body when acted upon by water, a valve body having a plurality of ports, a valve for closing said ports, a spring for closing the valve, and means for normally compressing said spring to retain the valve open, said valve resisting means being an absorbent material and adapted to be weakened by water, said gas forming means being located within and normally protected by said spring resisting means whereby the entrance of water into the valve body will weaken the valve resisting means and allow the spring to seat the valve.

3. In a life preserver, an inflatable body, a valve body having a port, a cartridge for said valve body comprising a casing of material adapted to be weakened by water, a substance contained in said cartridge casing adapted to form a gas when acted upon by water, and a spring held compressed by the cartridge casing and adapted to overcome the latter and close said port.

4. In a life preserver an inflatable body, a valve body having a plurality of alining ports and a removable cap, a cartridge for said valve body comprising a casing of material adapted to be weakened by water, a substance contained in said cartridge adapted to form a gas, means on said cartridge alining with and adapted to close said ports, and a spring in the cartridge normally compressed, and projecting apertured flanges on the cartridge for guiding the latter in the valve body

5. In a life preserver, an inflatable body, a valve body communicating therewith and provided with a port, a coiled spring, caps at the ends of the spring, a blotting paper hollow casing adjacent the spring and secured to said caps, and a substance within said casing adapted to produce gas when in contact with water.

[Claims 6 to 8 not printed in the Gazette.]

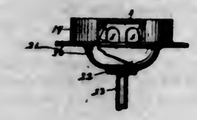
899,636. GROUNDING-CLAMP FOR ELECTRIC WIRES. WHEELER H. VIBBER, New London, Conn., assignor to The Gillette-Vibber Co., New London, Conn., a Corporation. Filed Apr. 20, 1907. Serial No. 369,279.



1. In a ground clamp for electric wires, the combination with a metal strap made in one piece and bent to form a substantially circular body and two arms one of which is made longer than the other and bent inward at an acute angle toward the inner face of the other arm to form a yielding stop-finger for the clamp; of a binding-screw passing through the said arms, whereby they are drawn together for clamping the said body upon the pipe or cable to which it is applied; and means for connecting the wires to be grounded, to the clamp.

2. As a new article of manufacture, a grounding-clamp for electric wires consisting in the combination with a one-piece metal strap bent to form a substantially circular body and two perforated arms one of which is made longer than the other and bent inward at an acute angle toward the inner face of the other arm to form a yielding stop-finger for the clamp; of a binding screw passing through the perforations of the said arms and furnished at its threaded end with a nut and provided at its opposite end with a head bearing upon the outer face of one of the said arms and formed with an outwardly opening longitudinal chamber for the reception and attachment of the wires to be grounded.

899,637. ELECTRIC-INSTALLATION MOLDING-BOX. WHEELER H. VIBBER, New London, Conn., assignor to The Gillette-Vibber Co., New London, Conn., a Corporation. Filed June 11, 1907. Serial No. 378,349.



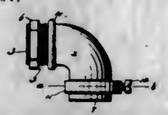
1. An electric installation molding-box body formed in its periphery with one or more shallow, rectangular molding-end recesses open on the side closed by the cover of the box and each separated from the interior of the body by a wall containing one or more U-shaped ports open on the side closed by the cover of the box, in combination with a box-cover adapted to close the said recesses and ports as described.

2. An electric installation molding-box body formed in its periphery with one or more shallow, rectangular molding-end recesses open on the side closed by the cover of the box and each separated from the interior of the body by a wall containing one or more U-shaped ports open on the side closed by the cover of the box; in combination with one or more insulating bushings located at the bottom of the said recess or recesses and in the said port or ports and a cover adapted to close the said recesses and ports as described.

3. An electric installation molding-box body formed in its periphery with one or more shallow, rectangular molding-end recesses open on the side closed by the cover of the box, in combination with a cover provided with a series of positioning lugs arranged to enter the said recesses and engage with the end walls thereof, and the said lugs being beveled to fit the bevels of the molding.

4. The combination with a circular electric installation molding-box body formed in its periphery with one or more shallow, rectangular molding-end recesses open on the side closed by the cover of the box; of a circular box cover adapted to have a lamp-fixture attached directly to it and formed with a wide circular flange to act as a bearing for canopies varying in diameter, the said flange being larger in diameter than the diameter of the box-body.

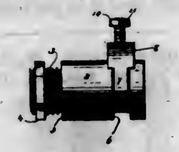
899,638. COMBINED BUSHING AND COUPLING FOR ELECTRIC INSTALLATION. WHEELER H. VIBBER, New London, Conn., assignor to The Gillette-Vibber Co., New London, Conn., a Corporation. Filed Jan. 30, 1908. Serial No. 413,367.



As a new article of manufacture, a combined bushing and conduit for use in electric installation, consisting in the combination with an elbow having a bushing-end formed with an external shoulder and external threads and provided with a nut and thus adapted to be applied to an outlet box or cabinet, and having its conduit-end formed with a transverse slot, of a clamping ring adapted to be applied over the conduit-end of the said elbow and entering the said slot and furnished with a clamping screw.

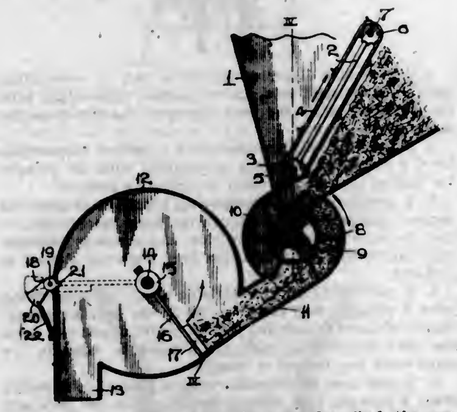
899,639. BOX-CONNECTOR FOR ELECTRIC INSTALLATION. WHEELER H. VIBBER, New London, Conn., assignor of one-half to The Gillette-Vibber Co., New London, Conn., a Corporation. Filed June 4, 1908. Serial No. 436,610.

1. In a box-connector for use in electric installation, the combination with a bushing formed with a transverse slot, of a yielding binding-strap entering the said slot and furnished with a binding-screw which engages with a bushing to function the strap.



2. In a box-connector for use in electric installation, the combination with a bushing provided with a threaded stem furnished with a nut and formed with a transverse slot, a yielding binding-strap entered into the said slot and having perforated ends wider than the body of the strap, and a binding-screw passing through the perforated ends of the strap and carrying a nut which is interposed between the said bushing and the perforated ends of the strap.

899,640. SAND-MOLD-CHARGING APPARATUS. WALTER H. WANGELIN, Belleville, Ill. Filed July 20, 1907. Serial No. 384,719.



1. In an apparatus of the character described, the combination of a charging barrel having an inlet and an outlet, said outlet being substantially off center, and a sweep rotatably mounted in said barrel; said barrel being entirely closed aside from its inlet and outlet to provide for material being forcibly driven from the barrel through its outlet when said sweep is rotated, substantially as set forth.

2. In an apparatus of the character described, the combination of a charging barrel having an outlet, means for delivering the material into said barrel, a sweep rotatably mounted in said barrel, and means for rotating said sweep, against the feed, and throwing it through the outlet; substantially as set forth.

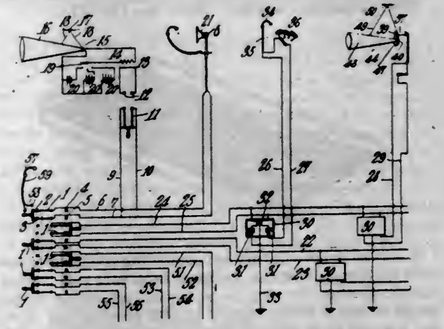
3. In an apparatus of the character described, the combination of a charging barrel having an outlet, means for delivering material into said barrel, a shaft rotatably mounted in said barrel, and a sweep carried by said shaft in the opposite direction to the feed; said sweep gathering the material and throwing it through the outlet, substantially as set forth.

4. In an apparatus of the character described, the combination of a charging barrel having an outlet, a chute leading to said barrel, means for feeding material through said chute to said barrel and a revoluble sweep operable in said barrel and which is adapted to gather the material as it enters said barrel against the feed and discharge it through said outlet, substantially as set forth.

5. In an apparatus of the character described, the combination of a hopper, a receiver having communication with said hopper, a feeder in said hopper a feeder in said receiver, a chute leading from said receiver, a barrel with which said chute communicates and which is provided with an outlet spout, and a sweep revolubly mounted in said barrel to operate in the opposite direction to the feed; said sweep gathering the material and throwing it through the outlet, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

899,641. PLEASUREPHONE. CHARLES A. WARDNER. Brushton, N. Y. Filed Apr. 19, 1907. Serial No. 369,159.



1. A pleasurephone system comprising a central station, a main line of conductors leading therefrom, telephonic receivers connected in multiple-arc to said main line conductors at outlying stations, telephonic transmitters exterior to said central station and at said central station, and means at the central station for connecting the transmitters in multiple-arc to the main line conductors for coactive effect of said transmitters upon all the receivers.

2. A pleasurephone system comprising a central station switch-board including double-throw, two-pole switches, sets of contacts therefor with the like contacts connected up in series, circuits leading to said switch-board and each including a microphonic transmitter and one of the aforesaid switches, other circuits leading to distant points and each including one of the aforesaid switches, and telephonic receivers included in multiple-arc branches of said circuits leading to distant points.

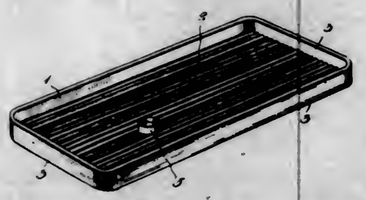
3. A pleasurephone system comprising a central station switch-board including double-throw, two-pole switches, sets of contacts therefor with the like contacts of each set connected up in series, transmission circuits including microphonic transmitters and leading to the central station and there connected each to one of the aforesaid switches, a transmission circuit leading from said central station and connected to one of the aforesaid switches, and telephonic receivers connected up in multiple-arc to the outgoing transmission circuit, whereby the transmission circuits leading to the central station may be connected up in multiple-arc to the transmission circuit leading from said central station.

4. A pleasurephone system comprising a central station, a single pair of main line conductors leading therefrom, a number of receivers at outlying stations connected in multiple-arc to said main line conductors, a number of telephone sets including transmitters and receivers at points exterior to the central station, and means at the central station for coupling the telephone sets to each other and to the main line conductors for coactive effect upon each other and upon the distant receivers.

5. A pleasurephone system comprising a central station, main line conductors leading therefrom, subscribers stations provided with receivers only, means at the subscribers stations for modifying the intensity of the received impulses, a transmitter at the central station, means connected therewith for modifying the intensity of the impulses sent to line by said transmitter, telephone sets including both receivers and transmitters exterior to the

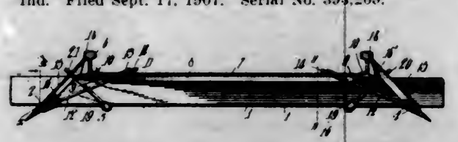
central station, lines of conductors leading from said telephone sets to the central station, and means at the central station for coupling up the telephone sets to the outgoing main line conductors in multiple-arc to the said conductors and for coupling up the transmitter at the central station to said main line conductors whereby the combined effect of a predetermined number of the several transmitters may be thrown upon the main line and transmitted to the subscribers stations for coactive effect on the transmitters thereat.

899,642. SALVER. JAMES L. WAREHAM, Atlantic City, N. J. Filed Feb. 6, 1908. Serial No. 414,651.



A salver or tray having an upstanding peripheral flange, with rib like members on its upper face, said tray having a thumb opening therein, an upwardly projecting circular flange or sleeve fitting tightly in said opening and extending above said rib-like members to perform the double function of a thumb protector and drip preventer.

899,643. RAILWAY-TIE. MAURICE C. WILLIAMS, Gary, Ind. Filed Sept. 17, 1907. Serial No. 393,269.



1. A metallic railway tie comprising a longitudinally channeled body having upstanding walls constituting rail rests, rail fastening means secured to the body, and channeled combined rail fastening and spacing means disposed to be interposed between and supported by rails upon the walls, said spacing means constituting a closure for that portion of the body between the rails.

2. A metallic railway tie comprising a longitudinally channeled body having upstanding walls constituting rail rests, rail fastening means secured to the body, and channeled combined rail fastening and spacing means located between the walls and disposed to be interposed between and supported by rails upon the walls, said spacing means constituting a closure for that portion of the body between the rails.

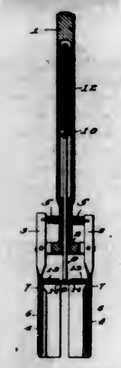
3. A metallic railway tie comprising a body having upstanding walls constituting rail rests, a combined rail fastening and spacing member between the walls, said members being disposed to be supported by rails engaged thereby, and obliquely disposed fastening devices connecting the body and spacing member, said devices being disposed to extend beneath the rails.

4. A metallic railway tie comprising a body having upstanding walls constituting rail rests, combined rail securing and spacing means within the body and disposed to be supported by rails engaged thereby, rail brading and securing devices extending through the body and supported thereby, and crossed obliquely disposed fastening means connecting the body with the braces and spacing means respectively.

5. A metallic railway tie comprising a body having upstanding walls constituting rail rests, combined fastening and spacing means secured upon the body, a combined rail brace and fastener extending through the body and supported thereby, and obliquely disposed means for securing the brace within the body and upon a rail.

[Claims 6 to 9 not printed in the Gazette.]

899,644. POST-HOLE DIGGER. WALTER WININGER, Alfordsville, Ind. Filed Mar. 28, 1908. Serial No. 423,920.



1. A post hole digger comprising a pair of coöperating jaws provided with ribs, and a plunger coöperating with the ribs to separate the jaws and eject the dirt from the same.

2. A post hole digger comprising a pair of coöperating jaws, a plunger, and means coöperating with the plunger for locking the jaws normally in operative position.

3. A post hole digger comprising a pair of coöperating jaws, a plunger, means coöperating with the plunger to lock the jaws in operative position, and means coöperating with the plunger to separate the jaws when the plunger is operated.

4. A post hole digger comprising a pair of coöperating jaws, a plunger, stop arms carried by the jaws for engaging the plunger to lock the jaws in position, and ribs upon the jaws coöperating with the plunger to separate the same when the plunger is operated.

5. A post hole digger comprising a pair of coöperating jaws, a plunger, stop arms projecting from the jaws and carrying projections adapted to coöperate with the plunger to lock the jaws normally in operative position, and a rib carried by each of the jaws and formed with a beveled end for coöperation with the plunger to separate the jaws.

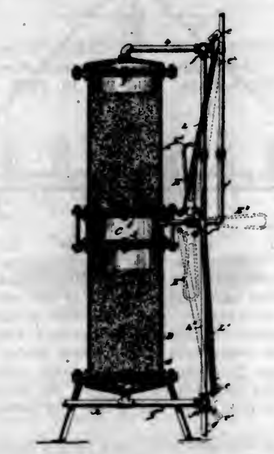
[Claims 6 and 7 not printed in the Gazette.]

899,645. FILTER. CHARLES W. WRIGHT, Baltimore, Md. Filed Nov. 7, 1907. Serial No. 401,188.

1. In a compound filter, the combination of primary and secondary filters in one column, a chamber between said filters, pipes leading to said filter and a supply pipe leading therefrom, a wash out pipe, a valve for the primary filter, a valve for the secondary filter and a valve for said chamber, and a single lever controlling all of said valves, whereby by the movement of said lever the water may pass through both filters to the supply pipe, or the water may be reversed and wash out the filters, substantially as described.

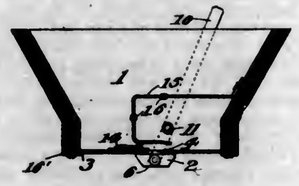
2. In a compound filter, the combination of primary and secondary filters in one column, a chamber between said filters, pipes leading to said filter and a supply pipe leading therefrom, a wash out pipe, a valve for the primary filter, a valve for the secondary filter and a valve for said chamber, and a single lever controlling all of said valves, whereby by the movement of said lever the water may pass through both filters to the supply pipe, and the water may be reversed passing through one filter to the intermediate chamber to the wash out or through both filters to the wash out, substantially as described.

3. In a compound filter, the combination of primary and secondary filters, a chamber between said filters, pipes leading to said filter, a three-way valve for each filter and a two-way valve for the intermediate chamber, and a single



lever controlling said valves whereby the water may be filtered through both filters or the water may be reversed and wash out one filter or wash out both filters, substantially as described.

899,646. FERTILIZER-DISTRIBUTER. GILBERT E. ALPHIN, Mount Olive, N. C. Filed June 8, 1908. Serial No. 437,404.



1. A fertilizer distributer provided with a valve arranged for controlling the dropping of the fertilizer, said valve having a pivot bolt extending through depending portions of said valve, said valve being adapted to rock on said pivot bolt during the operation of the valve.

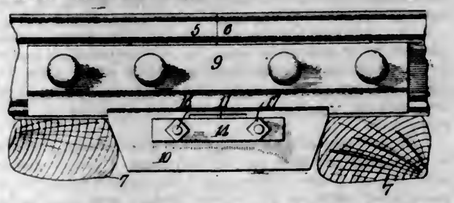
2. A fertilizer distributer having its hopper provided with a fertilizer dropping opening, and a valve for controlling the dropping of the fertilizer from said opening comprising a plate, a pivot bolt, and a lever attached to said pivot bolt, said plate or valve preferably being loosely arranged upon said pivot bolt.

3. A fertilizer distributer having a valve for controlling the dropping of the fertilizer from its hopper, comprising a plate, a pivot bolt, and a lever connected to said pivot bolt, said plate being loosely mounted upon said pivot bolt.

4. A fertilizer distributer having a dropping opening a valve for controlling the dropping of its contents, comprising a plate arranged opposite said dropping opening, a pivot bolt, and a lever having connection with one end of said pivot bolt, said plate being loosely mounted upon said pivot bolt.

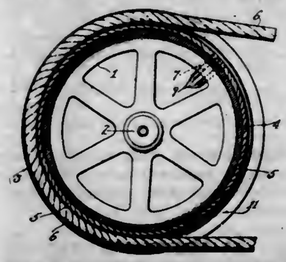
5. A fertilizer distributer having its hopper provided with an opening through its bottom, and a regulator pivoted to the upper surface of the bottom of said hopper and adapted to vary the relative size of said opening and adjustable means operable on the lower face of said bottom for regulating the dropping of said fertilizer through said opening.

899,647. RAIL-JOINT. DANIEL C. ARMSTRONG and WILLIAM P. FITZGERALD, Princess Anne, Md. Filed Jan. 22, 1908. Serial No. 412,206.



In combination with meeting rails, a rail joint comprising opposed fish plates having perforated portions which depend below the bases of the rails, bolts located at the outer sides of the said depending portions at the opposite ends of the perforations therein, upper and lower wedges passing transversely through the perforations in the depending portions of said plates, the upper wedge bearing directly against the bases of the rails and the lower wedge bearing directly against the lower sides of the perforations in the depending portions of the plates, each wedge having a perforated bar portion for engagement with the bolts and nut screws threaded upon the said bolts.

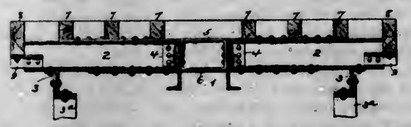
899,648. ROPE-SHEAVE. MILO A. BAKER, Los Angeles, Cal. Filed Feb. 27, 1908. Serial No. 418,161.



1. A pulley having its periphery provided with a circumferential groove and a substantially U-shaped groove at the bottom thereof, the walls of the U-shaped groove at the point where they join the outer groove being at a distance apart, equal to or greater than the diameter of the groove at any other point toward the bottom thereof and a packing removably secured in the U shaped groove so as to entirely surround the pulley.

2. A pulley having its periphery substantially V-shape in cross section and provided with a circumferential groove at the bottom of the V, the walls of said pulley being provided with a plurality of perforations at a point between the mouth and the bottom of the U shaped groove, a yielding packing seated in said groove with its ends abutting against each other between said perforations, and clamps passed through said perforations in position for engaging with said abutting ends to hold the packing against circumferential movement.

899,649. UNDERFRAME FOR CARS. ANTON BECKER, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio. Filed Jan. 14, 1908. Serial No. 410,792.



1. A car underframe comprising angle-beams adapted to be supported upon the car pedestals, a center girder,

cross-beams supporting the center girder upon the side angle-beams, and brackets projecting from the ends of the cross-beams below the upper face of the latter for supporting side-beams.

2. A car underframe comprising side angle-beams adapted to be supported upon the car pedestals, a center girder, cross-beams supporting the center girder upon the side angle-beams, and depressed seats projecting from the ends of the cross-beams for the reception of side-sills.

3. A car underframe comprising angle-beams adapted to be supported upon the car pedestals, a center girder between said angle-beams, cross-beam members secured at their inner ends to the center girder, said cross-beam members resting upon and projecting laterally beyond the angle-beams, and angle-irons secured to the outer ends of the cross-beam members below the upper faces of the latter, said angle-irons projecting outwardly beyond the ends of the cross-beam members and constituting seats for the side-sills of the car.

4. The combination with a center sill adapted at its ends to support car platforms and provided with notches and depressed seats adjacent to said platforms, of end sills resting upon said depressed seats and passing through said notches, cross-beams secured to the center girder, depressed seats at the ends of said cross-beams, and side-sills resting upon said last mentioned depressed seats.

5. The combination with a center girder provided near it ends with notches and integral laterally projecting seats at the bases of said notches, of end sills resting upon said seats, cross-beams secured to the center girder, depressed seats projecting outwardly from the ends of the cross-beams, side-sills mounted upon said depressed seats, and means for supporting the transverse beams upon the car pedestals.

[Claim 6 not printed in the Gazette.]

899,650. UNDERFRAME FOR CARS. ANTON BECKER, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio. Filed Jan. 14, 1908. Serial No. 410,793.



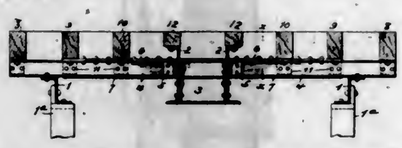
1. A car underframe comprising angle-beams adapted to be supported upon the pedestals of a car, and a center girder, cross-beams, each comprising two members consisting of pressed steel diaphragms having flanged edges secured at their inner ends to the center girder and supported inwardly of their outer ends upon the angle-beams over the pedestals.

2. A car underframe comprising angle-beams adapted to be supported upon the car pedestals, and a center girder, cross-beams, each comprising two members secured to the center girder, each of said members having a recessed outer portion partially embracing the angle-beams and secured to the web and top flange of the latter.

3. A car underframe comprising angle-beams adapted to be supported upon the car pedestals, and a center girder, cross-beams supporting the center girder upon said angle-beams, each of said cross-beams recessed near its outer ends and partially embracing the angle-beams and secured to the web and top flange of the latter, and each of said cross-beams having at its outer ends beyond its supports upon the angle-beams, seats for side-sills.

4. A car underframe comprising angle-beams adapted to be supported upon the car pedestals, and a center girder, cross-beams, each comprising two members and each member consisting of a pressed steel diaphragm provided with flanged edges, the flange at the inner end of each cross-beam member secured to the center girder, and lower flanges of each cross-beam member secured to the adjacent angle-beam, each cross-sill member projecting laterally beyond said angle-beam and provided at its free end with a depressed seat for a side sill.

899,651. UNDERFRAME FOR CARS. ANTON BECKER, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio. Filed Jan. 14, 1908. Serial No. 410,794.



1. A car underframe comprising flanged beams adapted to be supported upon the pedestals of the car, a center girder, and cross-beams, each cross-beam comprising two channel members of comparatively narrow width and secured at their inner ends to the center girder an appreciable distance from the upper and lower edges thereof, said cross-beam members resting upon the flanged beams, projecting laterally from the latter and affording seats for side sills.

2. A car underframe comprising flanged beams adapted to be supported upon the pedestals of the car, a center girder, cross-beam members of comparatively narrow depth secured at their inner ends to the center girder an appreciable distance from the upper and lower edges of the latter, said cross-beam members resting upon the flanged beams and projecting laterally therefrom, compression plates passing through the center girder and secured upon the cross-beam members, and tension plates also passing through the center girder and secured to the lower edges of the cross-beam members.

3. The combination with flanged beams adapted to be supported upon the pedestals of a car, and a center girder, of a cross-beam comprising two channeled members each secured at its inner end to the center girder an appreciable distance from the top and bottom thereof, compression and tension plates passing through the center girder and secured to the upper and lower edges of the respective cross-beam members, said cross-beam members resting upon the flanged beams and projecting laterally therefrom, side sills disposed upon the projecting ends of the cross-beam members, furring strips located on the cross-beam members between the side sills and the center girder, and furring strips secured upon the center girder.

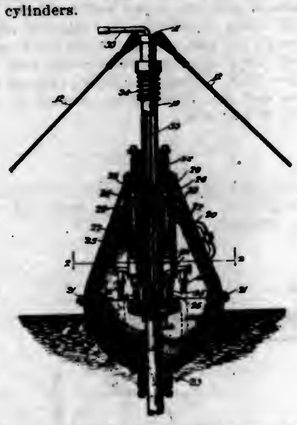
4. The combination with flanged beams adapted to be supported upon the car pedestals, and a center girder, of cross-beams, each comprising two channel members secured at their inner ends to the center girder, said cross-beam members resting upon the flanged beams and projecting laterally beyond the same, furring strips located upon the cross-beam members, and angle-irons secured to the cross-beam members and to the furring strips.

899,652. WAVE MOTOR. WILLIAM G. J. BENTLEY and EMIL C. C. KROUGH, Los Angeles, Cal.; said Krough assignor to said Bentley. Filed July 22, 1907. Serial No. 385,010.

1. In a wave motor a vertically disposed column, anchored at its lower end to the sea bottom and guyed at its upper end, a hollow float slidably mounted on said column, and pump mechanism mounted inside of said float and secured to said float and to said column and adapted to be operated by the movements of said float on said column.

2. In a wave motor a vertically disposed column suitably anchored and guyed to the sea bottom, a hollow buoyant float slidably mounted on said column and having water tight bearing surfaces thereon, a plurality of pump cylinders secured to said float on the inside thereof, a plurality

of pump pistons secured to said column, means to admit fluid to said cylinders, and means to exhaust the fluid from said cylinders.



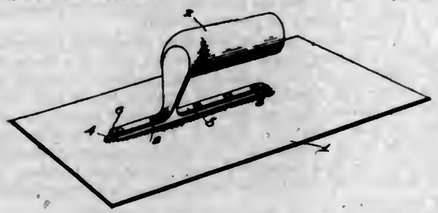
3. In a wave motor an anchor plate provided with anchoring lugs on its under surface, a vertically guyed column mounted on said anchor plate, said column being hollow at its upper end, a hollow float slidably mounted on said column, resilient means to limit the vertical movement of said float on said column, a plurality of pump cylinders and valves therefor mounted on the inside of said float, a plurality of pistons mounted on said column and adapted to work in said cylinders, and an exhaust pipe for said cylinders leading up through the hollow portion of said column.

4. In a wave motor an anchor plate, a vertical column pivotally secured to said anchor plate, and a float slidably mounted on said column.

5. In a wave motor an anchor plate, a vertical column pivotally secured to said anchor plate, flexible guys for the upper end of said column, and a float slidably mounted on said column.

[Claims 6 and 7 not printed in the Gazette.]

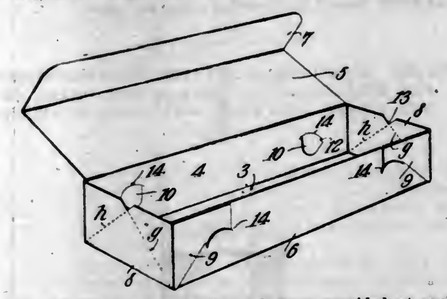
899,653. PLASTERER'S TROWEL OR FLOAT. GEORGE H. BISHOP, Lawrenceburg, Ind. Filed Mar. 19, 1908. Serial No. 422,092.



1. In combination with a trowel blade formed in its under surface with a central longitudinally extending depression and with a longitudinally spaced series of slightly elongated apertures in said depressed portion, of a handle and fastening rivets for attaching the handle to the blade, the shank or body portions of the rivets extending through said apertures, and the inner headed portions of the same being countersunk in the depressed portion of the blade, the apertures in the depressed portions of the blade permitting expansion and contraction in the portions thereof lying between the rivets without warping the blade.

2. In combination with a trowel blade having a portion of its under face depressed, producing a corresponding rib upon its other face, and having a longitudinal series of slightly elongated apertures in its depressed portion, of a handle having a longitudinally extending base plate formed in its under face with a central longitudinal recess to receive said rib, and fastening rivets for attaching the base plate of the handle to the blade, the body or shank portions of the rivets extending through said apertures and the inner headed portions of the blade.

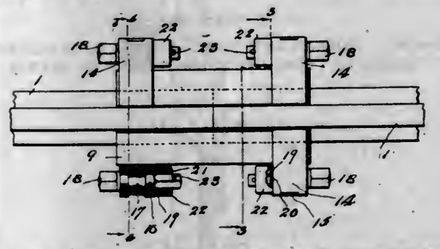
899,654. FOLDING BOX. CHARLES T. BLOOMER, Newark, N. Y. Filed Jan. 21, 1908. Serial No. 411,917.



1. A folding carton having a bottom provided at each end with a lateral extension, the terminals of each extenson being provided with a rounded nose, with an angular edge and with a locking notch at the intersection of the nose and the edge, the intermediate portion of each extension being provided with score lines that extend from the outer edge of the bottom and cross each other within the inner edge of the extension, the material of the extension between the intersecting score lines being removed to form V-shaped notches.

2. A folding carton having a bottom provided at each end with a lateral extension, the terminal of each of which is provided with a rounded nose projecting toward the bottom, with an angular edge, and with a locking notch at intersection of the nose and edge and forming a continuation of the latter, the intermediate portion of each extension being provided with score lines that extend from the outer edge of the bottom and cross each other within the inner edge of the extension, the material of the extensions between the intersecting score lines being removed to form V-shaped notches.

899,655. RAIL-JOINT. COMMODORE P. BROWN, Ronceverte, W. Va. Filed Sept. 12, 1907. Serial No. 392,592.



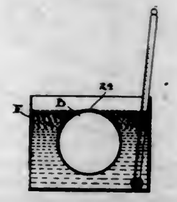
1. In a rail joint the combination with the adjoining rails of fish plates having wedge shaped slots in their bases engaging the rail bases, clamping yokes arranged in pairs, a link for each pair of yokes and pins one for each yoke passing through holes in the yokes and links, each pin having an eccentric portion engaging the link.

2. In a rail joint the combination with the adjoining rails of fish plates having wedge-shaped slots in their bases engaging the rail bases, clamping yokes arranged in pairs, a link for each pair of yokes, pins one for each yoke passing through holes in the yokes and links, each pin having an eccentric portion engaging the link, ratchet plates connected to turn with the pins, a ratchet tooth on each yoke

engaging the ratchet plate, springs serving to urge the plates against the teeth, and caps covering and protecting the ratchet mechanism.

3. In a rail joint the combination of the adjoining rails, fish plates one on each side of the rails, clamping yokes arranged opposite each other and engaging the fish plates, a link for each pair of yokes passing under the fish plates through slots in the lower arms of the yokes and pins passing through the yokes and links and having eccentric portions engaging the links and serving when rotated to draw the yokes toward the rails and clamp all parts.

899,656. MODE OF MANUFACTURING AIR CHAMBERS FOR RELIEF-VALVES. HUGH BURNET, Ottawa, Ontario, Canada. Filed July 7, 1908. Serial No. 442,427.

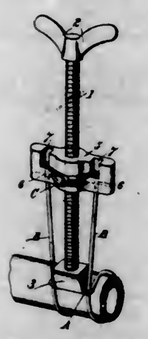


1. The mode of manufacturing air chambers for relief valves, which consists of bringing the air in said chamber to a predetermined temperature below that of the normal temperature of the room, the temperature of which is to be governed, while said chamber is open to the atmosphere and then sealing said chamber.

2. The mode of filling the air chambers of automatic radiator valves which consists in establishing communication between the interior of said chamber and the surrounding atmosphere until the air within said chamber reaches a certain predetermined temperature below the desired temperature of the room in which the valve is designed to operate, and then sealing said chamber.

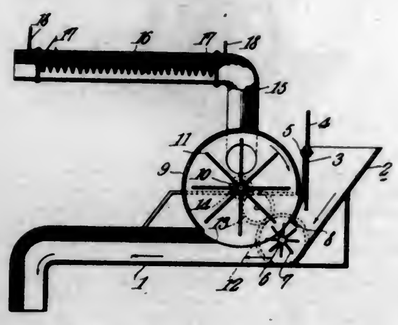
3. The mode of filling the air chambers of automatic radiator valves which consists in establishing communication between the interior of said chamber and the surrounding atmosphere immersing said chamber in a temperature changing medium, said medium being of a predetermined temperature below that desired of the room in which the valve is designed to operate, and finally sealing said chamber when the air therein has reached said predetermined temperature.

899,657. HOSE-CLAMP TOOL. GEORGE E. BUETSCHER, Chicago, Ill. Filed Dec. 2, 1907. Serial No. 404,878.



In a device of the class described, a screw having a grooved wedge shaped block swiveled to one end thereof in combination with a block threaded on said screw said block having a pair of wire receiving holes extending therethrough parallel with the screw and one upon each side thereof, said holes terminating in enlarged recesses extending through the side and top of the block, said wedge shaped block being adapted to engage the loop of a wire clamp the free ends of which are passed through said holes and recesses and twisted upon the outside of the block, substantially as described.

899,658. PNEUMATIC DRIER AND CONVEYER. WILLIAM F. CARLTON, Advance, Mo. Filed Oct. 31, 1907. Serial No. 400,090.



1. A pneumatic conveyer comprising a suitable conduit, a feed hopper at one end thereof, feeding blades adjacent to the hopper and located within the conduit, a blower adjacent to the hopper and feeding blades and directing air into the conduit in a direction away from the hopper, an air inlet pipe for the blower, and an electric conductor housed in said air pipe and adapted to be connected to a suitable source of electric current.

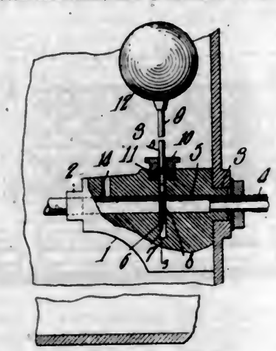
2. A pneumatic conveyer comprising a tubular conduit a hopper leading into one end thereof, a rotary feeder within the conduit adjacent to the delivery end of the hopper, a blower having fan blades entering the conveyer, a casing for the blower constituting a continuation of the conveyer walls, an air inlet pipe for the blower, and an electric conductor housed in said air pipe and adapted to be connected to a suitable source of electric current.

3. A pneumatic conveyer and drier comprising a suitable conduit, a hopper connected to one end thereof, a feeder in the conduit adjacent to the hopper, a blower adjacent to the feeder and opening into the conduit, an air inlet pipe for the blower, and an electric conductor housed in but out of direct electrical contact with said air pipe and adapted to be connected to a suitable source of electric current, the said conductor constituting one terminal of the circuit, and the air pipe constituting the other terminal of the circuit.

899,659. VALVE. LEE L. CRADDOCK and JOHN MCCLEARY, Sonora, Tex. Filed May 20, 1907. Serial No. 374,646.

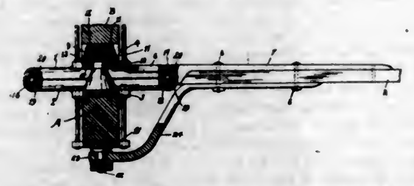
The combination with a tank having an opening therein, of a valve casing comprising a block formed in a single piece of material and having an integral boss projecting into and engaging the wall of the opening to support said casing in the tank, there being a passage extending through the boss and the block and having a leak aperture opening therein and into the tank, said block also having an angular recess extending thereinto from its upper face and transversely of and below the passage, said recess being permanently closed except at its upper end, a slide valve mounted to reciprocate within the recess and having an opening designed, when the valve is lowered, to register with and open the passage, a stem extending from

the slide valve and rigid therewith, a float secured to and rigid with the stem, and packing arranged about the



stem and adjacent the open end of the recess to prevent leakage past the stem from the recess.

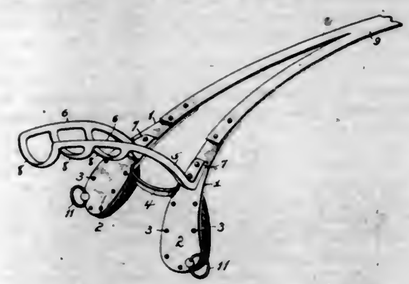
899,660. FIFTH-WHEEL. WILLIAM H. DIVERS, Aurora, Mo., assignor of one-half to W. Robert Owen, Springfield, Mo. Filed Jan. 28, 1908. Serial No. 413,036.



1. In a fifth wheel, the combination of upper and lower annular members reinforced by cross pieces and formed in their opposing faces with annular raceways, one member being formed with an annular rib to project into an annular groove in the other, a king bolt carried by the cross piece of the lower member and projecting through the cross piece of the upper member, the last mentioned cross piece being formed in its top with an annular raceway, a nut or head upon the upper end of the bolt formed in its bottom with an annular raceway to oppose that in the cross piece, annular rows of bearing balls in the raceways in said nut and said cross piece, an annular series of bearing balls in the raceways in said members, integral lugs formed upon said members to engage the bolster and the axle, reach bar attaching arms projecting from the upper member, a stud-plate adapted to be secured to the bottom of the axle and carrying a pivot stud disposed concentric with the king bolt, and a bracket brace having a bearing to receive said pivot stud and reach bar attaching arms, substantially as described.

2. In a fifth wheel, the combination of upper and lower annular members reinforced by cross pieces and formed in their opposing faces with centrally arranged annular raceways, the upper member being formed in its lower face with annular grooves on opposite sides of its raceway and the lower member being formed in its upper face with annular ribs adapted to project into the grooves in the upper member, the cross bar of the upper member being formed with a concentric opening and in its upper face with an annular raceway concentric with said opening, a king bolt carried by the cross bar of the lower member and projecting through the opening in the cross bar of the upper member, a nut upon the threaded upper end of the king bolt and formed in its bottom face with a concentric annular raceway, bearing balls in the raceways of said nut and the cross bar of the upper member and bearing balls in the raceways in the opposing faces of the annular portions of said members, substantially as described.

899,661. CRUPPER. LEWIS S. ELLIS, Lexington, Ky. Filed May 9, 1908. Serial No. 431,922.



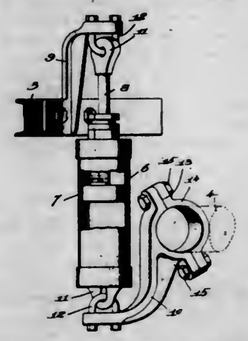
1. A crupper comprising two heel plates adaptable to the buttocks of an animal, a curved cross-bar connecting said heel plates, and a brace or support permanently secured to said heel plates and disposed approximately perpendicular thereto.

2. A crupper comprising two heel plates adaptable to the buttocks of an animal, a curved cross-bar connecting said heel plates, a brace projecting upwardly from the heel plates and provided with a series of cross-bars which coöperate with the first mentioned cross-bar to support the tail of a horse, said brace permanently secured to said heel plate.

3. A crupper comprising two castings, one of said castings consisting of two heel plates adaptable to the buttocks of a horse and connected by an integral cross-bar and the other casting consisting of two standards secured directly to said heel plates and a series of curved integral cross bars.

4. The combination with downwardly projecting heel plates adaptable to the buttocks of an animal and a brace secured thereto and projecting upwardly from said heel plates, of straps connected with the lower portions of the downwardly projecting heel plates and adapted to be connected with the harness to prevent lateral displacement of the crupper.

899,662. SHOCK-ABSORBER. ERNST FLENTJE, Cambridge, Mass. Filed Apr. 6, 1908. Serial No. 425,352.

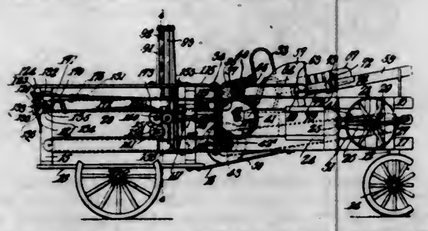


1. In a shock absorber, the combination with a cylinder to contain liquid, of a piston therein, said piston having a plurality of large ports and a plurality of small ports, a valve situated above the piston and arranged to close the large ports while leaving the small ports open, and a U-shaped retaining device secured to the valve or plate and extending through two of the ports for limiting the upward movement of the valve.

2. In a shock absorber, the combination with a cylinder to contain liquid, of a pistor therein, said piston having a plurality of large ports and a plurality of small ports, a plate situated above the piston and arranged to close the

large ports while leaving the small ports open, and a U-shaped retaining device secured to the valve or plate and extending through two of the ports for limiting the upward movement of the valve, the piston being hollowed out on its under side to receive said retaining device.

899,663. BALING-PRESS. JOHN W. GALBREATH, Auxvasse, Mo. Filed Dec. 21, 1907. Serial No. 407,532.



1. In a baling press, a baling chamber, movable belts forming opposing walls of the baling chamber, and division strips carried transversely of said belts for severing the compressed bales.

2. In a baling press, a baling chamber, movable belts forming opposing walls of the baling chamber, division strips carried by the belts transversely thereon for severing the compressed bales, and connecting gearing for positively driving the belts at uniform speed.

3. In a baling press, a baling chamber, a plunger mechanism for compressing the material within the chamber, a pair of feeding fingers mounted for oscillation on a fixed pivot, a hood having slots for the passage of the fingers, and an endless conveyer for delivering the material within the hood.

4. The combination with a baling press, of a baling chamber, a compression plunger, fingers for feeding the material into position to be acted upon by the plunger, an endless conveyer for delivering the material to the fingers, and a pair of feeding strips extending over each conveyer and disposed at an angle thereto, said strips being provided with a plurality of shoulders for engagement with the material.

5. In a baling press, the combination with a baling chamber, of a compression plunger, feeding fingers for delivering the material to a position in advance of the plungers, and a conveyer, a pair of angularly related feeding strips disposed above the discharge end of the conveyer, rock shafts journaled at the sides of the conveyer, cranks carried by the rock shafts and engaging said strips, crank arms on the rock shafts, a connecting bar between the crank arms, and an operating member connected to one of said crank arms.

[Claims 6 to 22 not printed in the Gazette.]

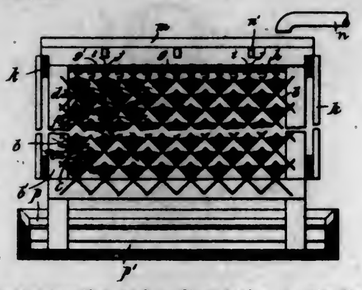
899,664. MOUNT FOR HOOKS AND EYES. HARRY C. GOODRICH, New Haven, Conn. Filed June 22, 1908. Serial No. 439,829.



1. A mount for hooks and eyes consisting of a strip of thin metal having an inturned and indented flange on the edge, furnishing an interlocking groove for retaining hooks and eyes, substantially as described.

2. A mount for hooks and eyes consisting of a strip of thin metal having an inturned and indented flange on the edge furnishing an open retaining groove in combination with hooks and eyes held and retained on the mount by the flange, substantially as described.

899,665. WATER-COOLING TOWER. OVID M. GOULD, Montreal, Quebec, Canada. Filed May 11, 1906. Serial No. 316,394.



1. In an aerating and cooling device, a retarding bar having a central upwardly extending projection upon its top, the base of the said projection being of less width than the top of the said bar for the purpose of presenting a substantially horizontal surface at each side of the projection, and a pair of separated downwardly extending projections upon the bottom of the bar.

2. In an aerating and cooling device, a retarding bar having a central upwardly extending projection upon its top, the base of the said projection being of less width than the top of the said bar for the purpose of presenting a substantially horizontal surface at each side of the projection, a pair of separated downwardly extending projections upon the bottom of the bar, and a pair of angular aerating and cooling surfaces leading from opposite sides of the said top to the said lower projections.

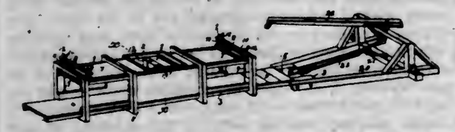
3. In an aerating and cooling device, a retarding bar having a central upwardly extending projection upon its top, the latter exceeding in width the said projection, and a pair of separated downwardly extending projections upon the bottom of the bar, and each located inward from the side edges of such bar, and a pair of angular aerating and cooling surfaces leading from the said side edges to the said lower projections.

4. In an aerating and cooling device, a retarding bar presenting converging sides terminating in a bottom and having a member of triangular cross-section secured along the middle of the top thereof the base of such triangular member being of less width than the said top to present a pair of retarding surfaces one on each side of the middle triangular member, and a pair of members of triangular cross-section secured a short distance apart along the said bottom and forming a continuation of the said converging sides.

5. In a water cooling tower the combination with a plurality of aerating and cooling bars each presenting an angular apex extending throughout its length for dividing a stream falling upon such apex, and means maintaining such division during the fall of the water throughout the tower, of a water distributing platform made up of a series of separated boards with the spaces therebetween located over the apices of the bars, and means dividing the water falling through such spaces and causing the same to fall upon opposite sides of the said apices.

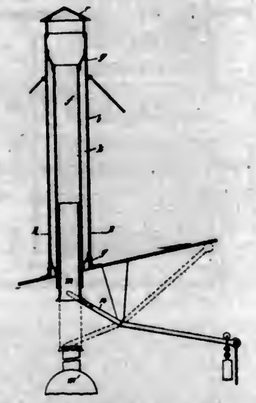
[Claims 6 to 8 not printed in the Gazette.]

899,666. BALING-PRESS. THEODULE GUIDRY, Church Point, La. Filed Feb. 21, 1908. Serial No. 417,101.



In a press, the combination of a double ended baling chamber having a centrally disposed feed opening, platforms at opposite ends of the baling chamber and about in the plane of the bottom thereof, movable portions at the extremities of the bale compartments, transverse bars secured to the outer end portions of said movable portions and having their outer ends off-set, rods passed through the off-set ends of said bars, other bars mounted upon the upper ends of the rods, springs mounted upon the rods and confined between the outer ends of the said bars, set nuts fitted to the upper ends of the said rods, a plunger arranged within the baling chamber and adapted to reciprocate across the feed opening thereof, a slide arranged below the baling chamber and the said platforms and having connection with the lower end of the said plunger, and means for imparting a reciprocating movement to the said slide.

899,667. SMOKE-JACK. RICHARD HARCOURT, Toronto, Ontario, Canada, assignor of one-half to Henry Hagin Vaughan, Montreal, Canada. Filed Oct. 12, 1905. Serial No. 282,519.



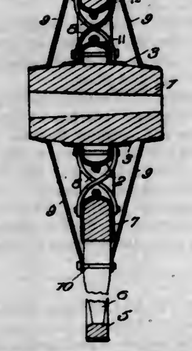
1. The combination with the roof of an engine house of a smoke jack comprising a main jack or outer shell extending from the roof upward, open at the top and also freely opening in to the engine house at the roof level so that hot gases beneath the roof may freely enter the shell at the level of such roof, and an inner conductor of less diameter than the main jack and located within same to receive the heated gases from a locomotive stack beneath such inner conductor whereby the smoke and steam which accumulates under the roof is forcibly sucked through the outer shell by means of a draft induced by the heated gases issuing from the top of the inner conductor and passing upward through the main jack substantially as described.

2. The combination with the roof of an engine house, of a smoke jack comprising a main jack or outer shell extending from the roof upward, open at the top and also freely opening in to the engine house at the roof level so that hot gases beneath the roof may freely enter the shell at the level of such roof, and an inner conductor of less diameter than the main jack and located within same so that it shall extend above the roof of the engine house to a point near the top of the main jack but being of less height than the main jack and adapted to receive the heated gases from a locomotive stack beneath such inner conductor, whereby the smoke and steam which accumulates under the roof is forcibly sucked through the outer shell by means of a draft induced by the heated gases issuing from the top of the inner conductor and passing upward through the main jack substantially as described.

3. The combination with the roof of an engine house of a smoke jack comprising a main jack or outer shell extending from the roof upward, open at the top and also freely opening into the engine house at the roof level so that hot gases beneath the roof may freely enter the shell at the level of such roof, an immovable inner conductor of less diameter than the main jack and located within same so that it shall extend in part above the roof of the engine house and in part below it, the part above the roof being of less height than the main jack and the part below extending downwardly to a point which will be close to a locomotive smoke stack to receive the heated gases from such stack, whereby the smoke and steam which accumulates under the roof is forcibly sucked through the outer shell by means of a draft induced by the heated gases issuing from the top of the inner conductor and passing upward through the main jack, and spacing supports or braces securing the top of the inner conductor to the upper portion of the main jack and the lower end of such inner conductor to the lower end of the main jack.

4. The combination with the roof of an engine house, of a smoke jack comprising a main jack or outer shell extending from the roof upward, open at the top and also freely opening into the engine house at the roof level so that hot gases beneath the roof may freely enter the shell at the level of such roof, an immovable inner conductor of less diameter than the main jack and located within same so that it shall extend in part above the roof of the engine house and in part below it, the part above the roof being of less height than the main jack and the part below extending downwardly to a point which will be close to a locomotive smoke stack to receive the heated gases from such stack, whereby the smoke and steam which accumulates under the roof is forcibly sucked through the outer shell by means of a draft induced by the heated gases issuing from the top of the inner conductor and passing upward through the main jack, spacing supports or braces between the main jack and the inner conductor, and a drop jack *m* with operating gear *n*, substantially as described.

899,638. SPRING-WHEEL. HENRY E. HEATON, Oroville, Cal. Filed May 7, 1907. Serial No. 372,351.

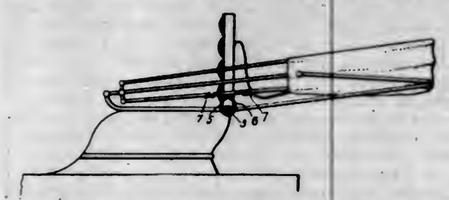


In a spring wheel, the combination of a hub, a hollow annular rib upon the hub and formed of sheet material having the edges thereof extended outwardly to form flanges which are secured to the hub, a body portion comprising an inner rim, a reinforcing casing of U cross section applied to the inner rim, and spring strips connecting the inner rim of the body portion of the wheel to the annular rib of the hub, alternate strips being arranged in a reverse manner and each of the spring strips having one of their ends secured to the rim upon one side of the wheel while the opposite end is secured to the rib on the other side of the wheel, the end portions of the spring lying in approximately parallel planes while the intermediate portion is reversely curved.

899,669. VEHICLE-TOP SUPPORT. WILLIAM N. HURT, Shawnee, Okla. Filed Oct. 31, 1907. Serial No. 400,050.

In a vehicle top support, an attaching sleeve, a loop-shaped bow supporting spring secured at its inner ends

to said sleeve and projecting laterally therefrom, and a loop-shaped bow supporting spring also secured at its inner end to said sleeve and projecting in an opposite di-



rection from and through said first mentioned spring, said springs having their side bars engaging, thereby strengthening and bracing each other, substantially as described.

899,670. SNAP-FASTENING SLIDE-BUCKLE. THEOPHILUS R. HYDE, Jr., Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Dec. 22, 1906. Serial No. 349,062.



1. A snap-fastening slide buckle, having a rim and a metal plate secured thereto, there being opposite slots between the rim and plate whose opposite edges are formed by the rim and plate.

2. A reinforced snap-fastening slide buckle, composed of a rim and a metal plate attached to said rim, there being opposite slots between the rim and plate whose opposite edges are formed by the rim and plate, said slots serving to receive the article to which the buckle is applied and permit the sliding adjustment of the buckle thereon, and prongs on the plate to engage the article to which the buckle is applied.

3. A reinforced snap-fastening slide buckle, having a rim, and a metal plate having portions underlying the rim and fixed thereto, opposite belt-receiving slots being provided between the rim and plate.

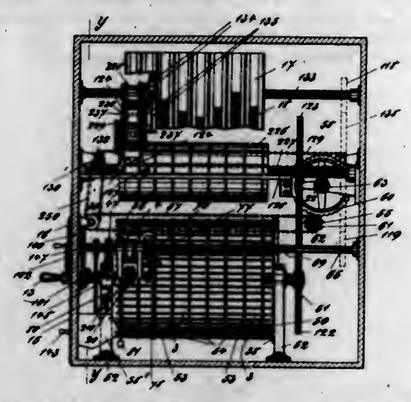
4. A snap-fastening slide buckle, having a rim, a metal plate having a peripheral portion complemental to and underlying the rim and secured thereto, opposite belt-receiving slots being provided between the rim and plate, and a guide plate arranged beneath the first-named plate.

5. A snap-fastening buckle, having a rim, and a metal plate having a peripheral portion continuous with and underlying the rim and riveted thereto, opposite belt-receiving openings being provided between the rim and plate.

899,671. TICKET PRINTING AND REGISTERING APPARATUS. MARTIN LEBEIS, Kalk, near Cologne, Germany, assignor to Regina Maschinenfabrik, G. M. B. H., Kalk, near Cologne, Germany. Filed Dec. 27, 1906. Serial No. 405,115.

1. In a ticket printing apparatus, the combination with a rotatable drum comprising a plurality of compartments, of a plurality of type plates movable in the compartments of said rotatable drum, one type plate in each compartment, a printing device, a reservoir for ticket blanks, means for adjusting said rotatable drum, means for shifting a type plate from said rotatable drum to said printing device and back, means for ejecting a ticket blank from said reservoir to said printing device, and means for actuating said printing device.

2. In a ticket printing apparatus, the combination with a rotatable drum comprising a plurality of compartments, of a plurality of type plates movable in the compartments of said rotatable drum, one type plate in each compartment, a printing device, a reservoir for ticket blanks, means for adjusting said rotatable drum, means for simultaneously shifting a type plate from said rotatable drum and a ticket blank from said reservoir to said printing device and for returning the type plate to the drum after the impression, and means for simultaneously actuating said printing device and said registering mechanism.



4. In a ticket printing apparatus, the combination with a rotatable drum divided in the longitudinal direction into several sections and each section comprising along its periphery a plurality of compartments, of a plurality of type plates movable in the compartments of said rotatable drum, one type plate in each compartment, a printing device, a reservoir comprising several channels for ticket blanks in the central planes of the sections of said rotatable drum, means for adjusting said rotatable drum, means for adjusting said printing device along said rotatable drum and said reservoir, means for simultaneously shifting a type plate from said rotatable drum and a ticket blank from said reservoir to said printing device and for returning the type plate to the drum after the impression, and means for actuating said printing device.

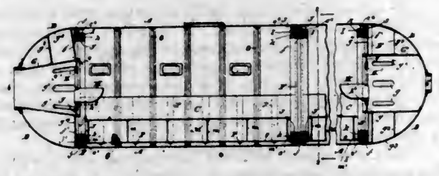
5. In a ticket printing and registering apparatus, the combination with a rotatable drum divided in the longitudinal direction into several sections and each section comprising along its periphery a plurality of compartments, of a plurality of type plates movable in the compartments of said rotatable drum, one type plate in each compartment, a printing device, a reservoir comprising several channels for ticket blanks in the central planes of the sections of said rotatable drum, a registering mechanism, means for adjusting said rotatable drum, means for adjusting said printing device along said rotatable drum and said reservoir, means for simultaneously shifting a type plate from said rotatable drum and a ticket blank from said reservoir to said printing device and for returning the type plate to the drum after the impression, and means for simultaneously actuating said printing device and said registering mechanism.

[Claims 6 to 9 not printed in the Gazette.]

899,672. LIFE-BOAT. ROBERT D. MAYO, Toledo, Ohio. Filed Nov. 28, 1904. Serial No. 234,443.

1. In a life boat, the combination of a cylindrical outer shell composed of sheet material and divided into separable lengths or sections with inturned annular flanges at the abutting ends of the sections and U shaped annular rings

which embrace each pair of flanges and means for securing the flanges and U shaped rings together to form water tight joints, substantially as described.



2. In a life boat, the combination of a cylindrical outer shell composed of sheet material and divided into separable longitudinal sections, with out-turned flanges at the abutting edges of the sections and U shaped wale strips embracing each pair of flanges, substantially as described.

3. In a life boat, the combination of a cylindrical outer shell composed of sheet material and divided into separable longitudinal sections with out-turned flanges at their abutting edges and U shaped wale strips embracing each pair of flanges and having flanged feet which bear against the shell at each side of the flanges, substantially as described.

4. In a life boat, the combination of a cylindrical outer shell composed of sheet material and divided into separable longitudinal sections with out-turned flanges at their abutting edges, tee iron bars having their bases inside the shell and their webs projecting outwardly and lying between the flanges of adjacent sheets, with means for securing the flanges and tee irons together, substantially as described.

5. In a life boat, the combination of a cylindrical outer shell composed of sheet material and divided into separable longitudinal sections with out-turned flanges at their abutting edges, tee iron bars having their bases inside the shell and their webs projecting outwardly and lying between the flanges of adjacent sheets, with U shaped wale strips embracing the flanges and intervening web of the tee iron and having flanged feet which bear upon the outer surface of the shell, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

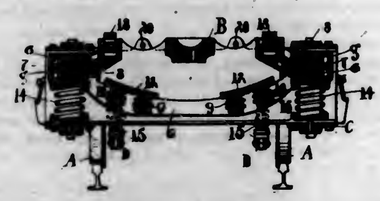
899,673. SOLDERING COMPOUND. EDMOND M. MERRELL and ARCHIBALD MERRELL, Soda Springs, Idaho. Filed June 8, 1908. Serial No. 437,325.

1. A soldering compound composed of sal ammoniac, powdered rosin, powdered borax, bi-carbonate of soda and blue vitriol.

2. A soldering compound composed of eleven parts of sal ammoniac, three parts of powdered rosin, one part of powdered borax, one-half part of bi-carbonate of soda, and one-half part of blue vitriol.

3. A soldering compound composed of sal ammoniac, powdered rosin, powdered borax, bi-carbonate of soda and blue vitriol thoroughly mixed, and mixed in the proportion of one part of said compound in three parts of water.

899,674. CAR-TRUCK. WILLIAM H. MILLER, Cleveland, Ohio. Filed Jan. 20, 1908. Serial No. 411,762.



1. In car trucks, a truck frame having a transom box across its center, a top bolster and a base bolster confined in said box, and spring supports for said bolsters resting upon the car axle inside the wheels thereon.

2. In car trucks, a truck frame having a transom box across its middle, two bolster members vertically movable together in said box and spring supports therefor independent of said truck frame and engaged with the car axles.
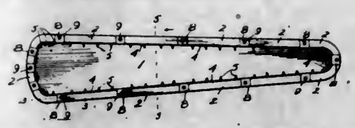
3. In car trucks, a truck frame and car axles mounted therein, top and bottom bolsters supported in said frame one over the other, and bars carrying said bolsters having spring supports at their ends on said axles independently of said truck frame.

4. In car trucks, a truck frame, a base bolster having a spring support in said frame, and toothed rollers mounted therein, and a top bolster having a rack resting on said rollers and springs bearing against the ends of said top bolster.

5. A car truck having a transverse transom box, a base bolster therein having toothed rollers and a top bolster having a rocker shaped bottom provided with teeth resting on said rollers.

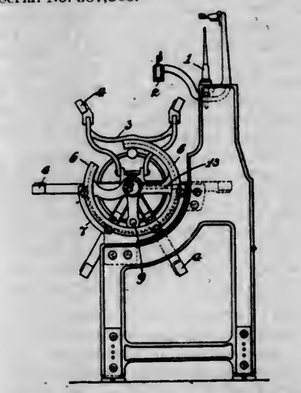
[Claims 6 to 14 not printed in the Gazette.]

899,675. CLOTH ATTACHMENT FOR IRONING-BOARDS. JOSEPH MICHAEL, Pottsville, Pa. Filed Mar. 27, 1908. Serial No. 423,760.



An attachment for ironing-boards comprising a series of blocks adapted to be secured to the margin of the under side of the board, each block having a row of laterally projecting pins along its inner side, combined with collars to engage the meeting ends of the blocks, and means for securing the collars to the board.

899,676. REEL. OSCAR L. OWEN, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Aug. 9, 1907. Serial No. 387,808.



1. In a reel, a reel shaft and a movable doffing member providing a journal seat therefor, and inclosing means for the ends of said journal seat adapted to hold oil escaping therefrom out of contact with the yarn, said member being provided with an oil duct leading to said journal seat and having its oil receiving orifice in the peripheral part of said member.

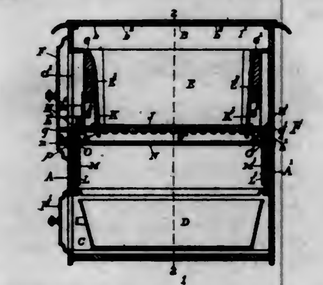
2. In a reel, a reel shaft, a rim-supported doffing wheel providing a journal-seat for said shaft in its hub, and means for confining the oil of said seat out of contact with the yarn, said wheel being provided with an oil duct leading to the journal seat and having its oil-receiving orifice in the rim face of said wheel.

3. In a reel, a reel shaft, a doffing wheel, a hub for said wheel in which said shaft is journaled, said hub being formed with an integral wall closing one end thereof, and an oil-duct formed in said wheel extending from the interior of said hub to the peripheral portion of the wheel.

4. In a reel, a reel shaft, a doffing wheel, a hub therefor providing a journal seat for said shaft, closed at one end, and provided at its other end with a long boss adapted to hold the yarn, said hub and wheel being formed with an oil-duct extending from said journal seat to the rim of the wheel.

5. In a reel, a reel shaft, a doffing wheel, an integral hub therefor providing a journal seat for said shaft and provided with an oil-duct leading from said journal seat to the rim of the wheel, in combination with an integral closure for one end of said hub, and a boss on the other end formed as a lubricant-receiving chamber.

899,677. VERTICALLY-ADJUSTABLE GRATE. JOSEPH W. PIPER, Lowell, Mass., assignor of one-half to James Piper, Brooklyn, N. Y. Filed Oct. 12, 1907. Serial No. 397,056.



1. The combination in a stove, of a fire-box having vertical slots, grate-bars having pivots which extend through said slots, lifters, for raising and lowering said grate-bars and cover-plates arranged in said fire-box and extending over said slots and movable with said bars, to prevent material from entering said slots from said fire-box.

2. The combination in a stove, of a fire-box having vertical slots, and having guide recesses, grate-bars having pivots which extend through said slots, lifters, for raising and lowering said grate-bars, and cover-plates arranged in said fire-box and extending over said slots and movable with said bars, in said recesses, to prevent material from entering said slots from said fire-box.

3. The combination in a stove, of a fire-box having vertical slots, and having guide recesses, grate-bars having pivots which extend through said slots, lifters, for raising and lowering said grate-bars, and cover-plates arranged in said fire-box over said slots and having outwardly flaring holes, through which said pivots extend to allow said plates to incline outwardly against said fire-box, to prevent material from entering said slots from said fire-box.

899,678. POCKET COIN-BANK. WILSON E. PORTER, New Haven, Conn., assignor to New Haven Clock Co., New Haven, Conn., a Corporation. Filed Nov. 11, 1907. Serial No. 401,698.



1. In a pocket coin-bank, the combination with a watch-like case having a coin-slot, of a rotary coin-receiver mounted in the said case adjacent to the said coin-slot, a lever operated by the coin as the same is forced out of the coin-receiver by the rotation thereof, a ratchet-wheel operated step-by-step by the said lever, and a dial operated by the said wheel.

2. In a pocket coin bank, the combination with a watch-like case having a coin-slot, of a rotary coin-receiver mounted within the case adjacent to the said slot through which it projects beyond the periphery of the said case, a lever operated by the coin when the same is forced out of the coin-receiver by the rotation thereof, a ratchet-wheel operated step-by-step by the said lever, and a dial operated by the said ratchet-wheel.

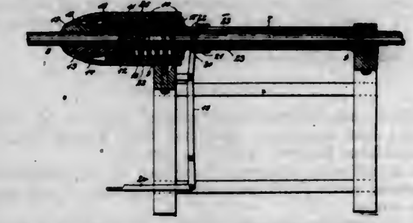
3. In a pocket coin bank, the combination with a watch-like case having a coin-slot, of a coin-receiver mounted in the said case adjacent to the said slot and comprising two disks, and a crescent-shaped coin-ejector located between the same, and means operated by the coins inserted into the said coin-receiver for registering the rotary movement thereof.

4. In a pocket coin-bank, the combination with a watch-like case having a coin-slot, of a rotary coin-receiver mounted in the said case adjacent to the said slot, a safety cam rotating with the said coin-receiver, and means operated by the coins inserted into and rotated by the receiver for registering the rotations thereof.

5. In a pocket coin-bank, the combination with a watch-like case having a coin-slot, of a rotary coin-receiver mounted in the said case adjacent to the said slot, a coin-ejector rotating with the said coin-receiver, a fixed coin-ejecting pin extending into the said coin-ejector, a lever operated by the coin as the same is ejected into the said case, and registering mechanism operated by the said lever.

[Claims 6 to 9 not printed in the Gazette.]

899,679. CHUCK USED IN BROOM-MAKING. EDWARD J. POWERS, Chicago, Ill. Filed Feb. 10, 1908. Serial No. 415,205.



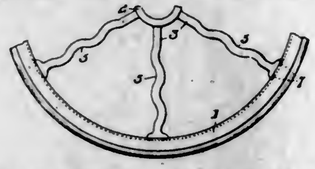
1. A work holder for broom handles or the like, comprising a tubular spindle enlarged at one end, a shell on said end of the spindle, beveled internally, a beveled closing ring slidable lengthwise in said end of the spindle, jaws located in said shell between the beveled part thereof and the ring, means to advance the ring to close the jaws, and means to retract the ring.

2. A work holder for broom handles or the like, comprising a tubular spindle having pins projecting laterally near one end thereof, a shell fitting over said end of the spindle and tapered at its front end having bayonet slots at its rear end to receive the pins, jaws in the shell, and means to press the jaws against the tapered end of the shell to close the same.

3. A work holder for broom handles or the like, comprising a tubular spindle enlarged at the front end, jaws carried at the front end of the spindle, a bevel-closing ring slidable lengthwise within the said end and bearing upon the jaws to close the same, a coiled spring in the spindle behind the ring and tending to advance the same, and a shifting lever adjacent the spindle and connected to the ring, to retract the same.

899,680. CAR-WHEEL. OSWALD S. PULLIAM, Pittsburg, Pa. Filed Oct. 11, 1907. Serial No. 396,878.

1. A steel-tired car-wheel having a cast-metal wheel-center comprising a hub-portion and a plurality of radially extending segmental members formed integral with the hub-portion, each of said members formed with a waved or corrugated portion and a tire-contracting-member.



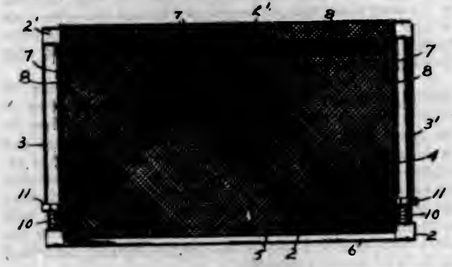
2. A car-wheel having a metallic tire, and a separate wheel-center comprising a hub-portion and a plurality of radially extending segmental members formed integral with the hub-portion, each of said members formed with a waved or corrugated portion.

3. A car-wheel having a metallic tire, and a separate wheel-center comprising a hub-portion and a plurality of radially extending segmental members formed integral with the hub portion, each of said members formed with a waved or corrugated portion and a tire-contacting-member.

4. The method of making car-wheels which consists in casting a wheel-center with waved or corrugated radially extending members within a steel-tire, and then after the contraction of the wheel-center subjecting the corrugated portions to sufficient pressure to cause the periphery of the wheel-center to come into contact with the tire.

5. The method of making car-wheels which consists in casting a wheel-center with waved or corrugated radially extending members within a chill, placing the wheel-center within a metallic-tire and then subjecting the corrugated portions of the wheel-center to sufficient pressure to cause the periphery of the wheel-center to come into contact with the tire.

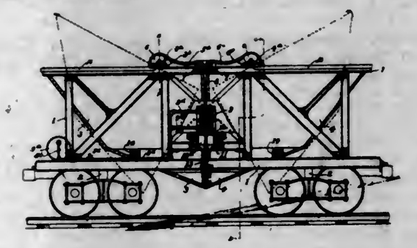
899,681. WIRE BED-BOTTOM AND FRAME. JOSHUA N. RABEDEW and ELMER A. VERNAL, Minturn, Colo. Filed Feb. 14, 1908. Serial No. 415,927.



An adjustable bed portion, comprising the combination of the following instrumentalities: two similar tubular end rails each having one closed end provided with a projecting square tenon, a side rail rectangular in cross-section having at each end a square mortise to receive said tenons, a second side rail having a square mortise in each end, a wire mattress secured along one edge to said last mentioned side rail and looping over said first mentioned rectangular side rail, two screws having square ends to fit into the mortises of said last mentioned rail, said screws being held within said tubular end rails, nuts upon said screws and working against said tubular ends, and a plurality of hooks secured to the looped end of said mattress and adjustably engaging said mattress intermediate of its sides, all arranged as disclosed.

899,682. DUMPING DEVICE. GUSTAV A. RAKOWSKY, Duluth, Minn., assignor of one-third to Victor Rakowsky and one-third to Charles S. Olson, Duluth, Minn. Filed Aug. 5, 1907. Serial No. 387,074.

1. In a dumping device, the combination with suitable frame, of two buckets supported thereon and adapted to tilt in a vertical plane, each of said buckets being entirely open at its inner end, means for supporting the inner ends of said buckets in non tilted position, means for releasing the latter said supporting means, said buckets being adapted when empty to be returned by gravity to non-tilted position, the floors of said buckets being adapted to contact with each other when said buckets are in non-tilted position, and means for tilting the inner ends of said buckets downwardly.



2. In a dumping device, the combination with a suitable frame, of a bucket mounted thereon and adapted to tilt in a vertical plane, said bucket being closed at one end and open at the opposite end, said bucket being provided at its closed end with means adapted to overhang and engage said frame and depend downwardly at the outside thereof when said bucket is in non-tilted position and to disengage from said frame when said bucket is tilting.

3. In a dumping device, the combination of a suitable frame, a bucket pivotally mounted on said frame and adapted to tilt downwardly at one end and upwardly at its opposite end, said downwardly tilting end being open, said upwardly tilting end being provided with an outwardly and downwardly extending flange extending along its sides for a part of the length of said bucket, said flange being adapted to overhang and receive in the concave of its angle a portion of said frame and to engage the same when said bucket is in normal non-tilted position, and to disengage therefrom when the upwardly tilting end of said bucket is tilting upwardly.

4. In a load dumping receptacle, the combination with a suitable supporting frame, of two oppositely disposed buckets pivotally mounted thereon and adapted to closely approach each other at their inner ends in closed position and adapted at their inner ends to swing downwardly in divergent arcs to open position, means for tilting said buckets, and means for locking said buckets in closed position said latter means including fingers pivotally secured to the sides of the buckets near the inner ends of said buckets, said fingers above the axis of rotation of their pivots being adapted in operation to bear against the sides of the buckets respectively and being adapted below the axis of rotation of their pivots to diverge from the sides of said buckets, dogs pivotally mounted on said frame and in operative position adapted at their noses to engage the lower ends of said fingers, and means adapted to hold said dogs in operative position, said holding means being adapted to be retracted to disengage said dogs from operative position so as to permit said buckets to swing downward at their inner ends.

5. In a load dumping receptacle, the combination of a suitable frame, two oppositely disposed buckets pivotally supported thereon and adapted to closely approach each other at their inner ends and adapted to tilt from closed position downwardly at their inner ends through divergent arcs, means for tilting said buckets, means for locking said buckets in closed position, said latter means including fingers extending at a downward incline from said buckets and cylindrically recessed in their lower ends, dogs pivotally mounted on said frame and each provided with a convex nose opposed to one of said fingers and struck on a radius approximately equal in length to the radius of the recess in the lower end of the opposing said finger, said dogs being adapted in operative position to engage said fingers, said dogs having vertically inclined

slotted apertures at their heels, a pin extending through said apertures and through a vertically slotted lug carried by a piston rod or its equivalent, means for operating said piston-rod to force down the heels of said dogs so as to disengage them from said fingers and permit the inner ends of the buckets to swing downward into open or load-discharging position.

[Claim 6 not printed in the Gazette.]

899,683. JAR-OPENER. MATTI SARVALLA and WALTER W. SMITH, De Kalb, Ill. Filed Dec. 19, 1907. Serial No. 407,228.



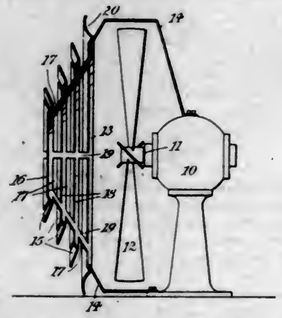
1. An implement of the class described comprising a stationary body having a longitudinal guide rib and with branching arms at one end terminating in downwardly directed jaws and with an aperture near the other end, a movable body having a longitudinal slot slidaby engaging said guide rib and with a jaw element at one end and a bearing at the other end, a screw mounted for rotation in said bearing, a nut engaged by said screw and provided with a threaded stud passing through the aperture of said stationary body, and a clamp nut engaging said threaded stud.

2. An implement of the class described comprising a stationary body having a longitudinal guide rib and with a clamp jaw at one end, a movable body having an opposing jaw at one end and a longitudinal slot slidably engaging said guide rib, a screw mounted for rotation upon said movable body, a nut through which said screw operates and provided with a threaded stud extending through said stationary body, and a clamp nut engaging said stud and bearing upon said stationary body.

3. An implement of the class described comprising a stationary body having a longitudinal guide rib and with a clamp jaw at one end, a movable body having a longitudinal slot slidably engaging said guide rib and with offsets at the ends, one of said offsets having a half bearing and the other of said offsets having a whole bearing, a screw mounted for rotation in said whole bearing and with its terminal reduced and engaging said half bearing, a holding member bearing upon said screw within the half bearing, and a nut connected to said stationary body and through which said screw operates.

899,684. FAN. OTTO SELG, New York, N. Y. Filed Apr. 22, 1908. Serial No. 428,498.

A fan provided with a coned deflector composed of a series of flaring rings set back of each other and increasing in diameter from front to rear, a series of integral converging ribs, and blades that extend outwardly and



forwardly from the rings intermediate the ribs, substantially as specified.

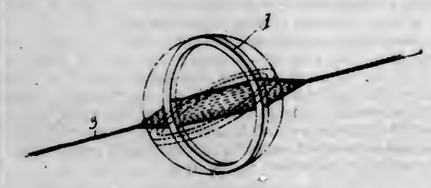
899,685. HAT-FASTENER. EUGENE SEYFRIED, Philadelphia, Pa. Filed Oct. 7, 1907. Serial No. 396,149.



1. A hat fastener comprising a pin embodying spaced spring prongs normally adapted to spring outwardly, a base plate for attachment to a hat and having an end thereof bent at about a right angle thereto, said bent end being provided with oppositely extended catches, spaced pins carried by said base plate and bent to form a spring loop and spaced ends, the free ends thereof being adapted to engage the catch aforesaid, the opposite edge portions of the base being bent to receive and engage the other ends of the pins, and a pin supporting and connecting plate movably mounted upon the base plate and provided with openings through which the prongs of the pin pass.

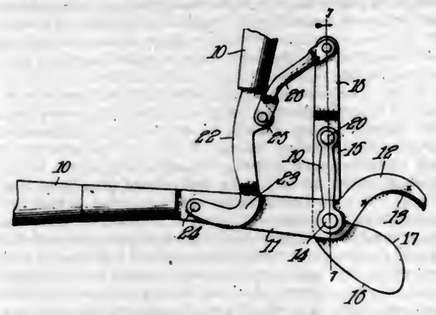
2. A hat fastener comprising a base plate having its side edges folded inwardly, its front end turned down at right angles to the top and formed with two recesses on its upper edge, a pair of spring wire pins contained one in each side fold of the said plate member, said pins extending rearwardly to coils formed in them and finally brought to the front in such manner that a portion near the points can rest in the recesses at the front end of said plate member, a vertical member revolubly secured in the plate member and a double pointed pin slidably contained in the said vertical member.

899,686. WHIRLIGIG. PERCIVAL E. SMITH, McKeesport, Pa. Filed June 10, 1908. Serial No. 437,787.



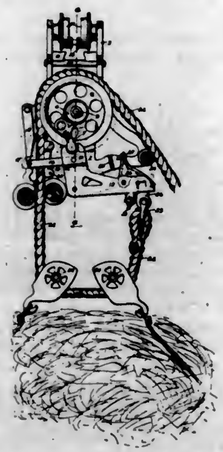
A whirligig comprising an annulus having its two opposite sides provided with alined orifices, and an actuating cord threaded through the orifices and forming on each side of the annulus a long twisting loop the sides of which are disconnected and free for twisting and untwisting for the entire lengths of the loops.

899,687. PRUNING IMPLEMENT. BENJAMIN F. TALLEY, Wakita, Okla., assignor of one-half to M. B. Rutherford, Wakita, Okla. Filed Mar. 27, 1908. Serial No. 423,625.



A pruning implement comprising a hook member, an arm pivoted to one side of the hook member and formed with a blade portion coöperating with the concave edge of the hook, the arm being offset to the other side of its pivot from the blade portion, a link pivoted at one end to the hook member by the pivot which connects the arm and the hook member, the link being fixed at its other end to the arm at the offset therein, and means whereby the arm may be swung upon its pivot.

899,688. HAY-CARRIER. MATHIAS THURSTON, Stryker, Ohio, assignor to The Ney Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Mar. 4, 1908. Serial No. 419,138.



1. In a hay carrier of the class described, a carrier frame adapted to move upon a track or way, said frame provided with pivoted levers, a main pulley mounted upon an axle and the axle carried by the pivoted levers, a lever pivoted to the carrier frame below the main pulley and below the levers carrying said main pulley, a pivoted catch secured to said last mentioned lever, an elevating rope secured to said catch, said elevating rope located over the main pulley and means for actuating the lever provided with the pivoted catch and means for gripping the elevating rope, substantially as and for the purpose specified.

2. In a hay carrier of the class described, a carrier frame adapted to move upon a track or way, rocking levers pivoted to said frame, a main pulley carried by said rocking levers and adapted to rock with said rocking levers, a lever pivoted to said frame, an elevating rope operatively connected at one of its ends to said last mentioned lever, said elevating rope located over the main pulley and adapted to rock the pulley and actuate the lever, substantially as and for the purpose specified.

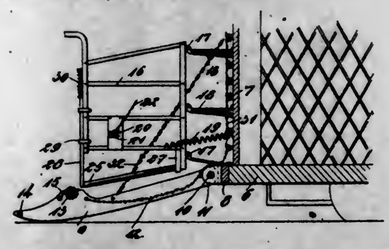
3. In a hay carrier of the class described, a frame, a pulley carried by said frame, rocking levers upon which said pulley is mounted, a lever located below the rocking levers carrying the main pulley, an elevating rope extended from the free end of the last mentioned lever and over the pulley carried by the rocking levers and means, for actuating the lever located below the rocking levers carrying the main pulley by the pull of the elevating rope, substantially as and for the purpose specified.

4. In a hay carrier of the class described, a frame adapted to move upon a track or way, rocking members pivoted to said frame, a lever located below the rocking members, said rocking members and lever operatively connected together, a pivoted catch carried by the lever, an elevating rope attached at one of its ends to said pivoted catch, a main pulley carried by the rocking members, and adapted to rock with said members and the elevating rope located over and upon said main pulley, a movable rope clamp and a fixed rope clamp and means for actuating the movable rope clamp, substantially as and for the purpose specified.

5. In a hay carrier of the class described, a frame adapted to travel upon a track or way, a main pulley mounted upon an axle parallel with the track or way, rock levers pivotally attached to the frame and the main pulley carried by said rock lever, a lever located below the rock levers and the main pulley, said lever pivotally connected to the frame, a pivoted catch carried by said last mentioned lever, an elevating rope connected to said pivoted catch and extended downward and thence upward and over the main pulley, a stationary rope grip and a movable rope grip and means for moving the rope grip connected to the lever located below the levers carrying the main pulley, substantially as and for the purpose specified.

[Claims 6 to 10 not printed in the Gazette.]

899,689. CAR-FENDER. GEORGE F. WALKER, Ambridge, Pa., assignor to David Ambrose, Ambridge, Pa. Filed Feb. 1, 1908. Serial No. 413,723.



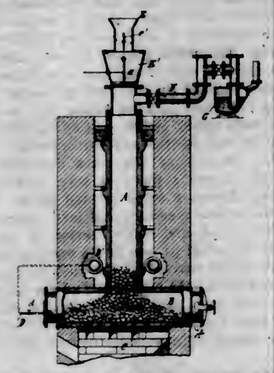
1. The combination with a car-fender, of a pair of doors located above the same and adapted to inclose an object falling on the fender, said doors having at its lower ends a vertically yielding roller.

2. The combination with a car-fender, of a pair of doors located above the same, a prop between the doors for holding them open, spring-fingers on the doors engageable by the ends of the props, and means for closing the doors when the prop is removed.

3. A fender comprising a pair of arms connected at one end to the car-body and carrying at the other end a cross-bar, a net carried by the arms, a roller mounted on the arms between the net and the cross-bar, a pair of doors located above the net, a prop between the doors for holding them open, and means for closing the doors when the prop is removed.

4. The combination with a car, of a pair of doors hinged at the end thereof, and a fender under the doors pivoted to the car and foldable against the side of the doors when they are closed.

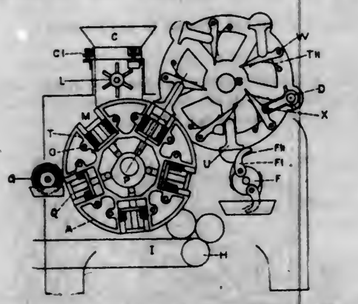
899,690. PROCESS OF MANUFACTURING GAS. HENRY W. BENNER, Chambersburg, Pa., assignor to International Gas Development Company, a Corporation of New York. Filed Feb. 2, 1907. Serial No. 355,387.



1. The process of manufacturing gas consisting of forming water gas, passing the water gas through powdered coal falling through a distilling chamber, and collecting the products.

2. The process of manufacturing gas consisting of passing steam through a bed of hot coke to form water gas, passing the water gas up through powdered coal falling through a distilling chamber, and collecting the products.

899,691. ROTARY PRESS. ISAAC BROOME, Trenton, N. J. Filed June 25, 1907. Serial No. 380,746.



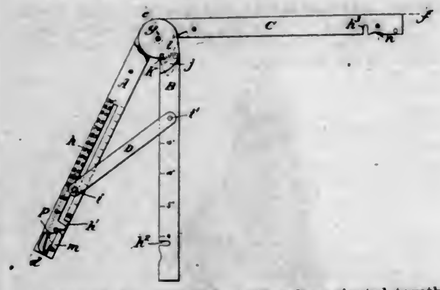
1. In a continuous rotary mold, of the character described, the combination of a drum having a plurality of radial mold chambers formed therein, movable mold cores mounted within said chambers and forming the sides thereof, expressing plungers mounted within said chambers and forming the base thereof and having rigid extensions in the rear of said cores, spring connections between said plunger extensions and said cores, a cam mounted to move said plungers forwardly to deliver the mounted material, and means to limit the outward movement of said mold cores, substantially as described.

2. In a continuous rotary press of the character described, the combination of a rotatable drum having a plurality of radial mold chambers formed therein, a plurality of compressing plungers mounted adjacent said drum to travel in a circular path about a central axis and against said mold chamber, a cleaning and lubricating device arranged adjacent the path of movement of said compressing plungers, and means for moving said plungers to an angular position to receive said device thereagainst, substantially as described.

3. In a continuous rotary press of the character described, the combination of a rotatable drum having a plurality of radial mold chambers formed therein, a plurality of compressing plungers mounted adjacent said drum to travel in a circular path about a central axis and against said mold chamber, a cleaning and lubricating device arranged adjacent the path of movement of said compressing plungers, and means for moving said plungers to an angular position to receive said device thereagainst, said means being adapted to subsequently return said plungers to their normal positions, substantially as described.

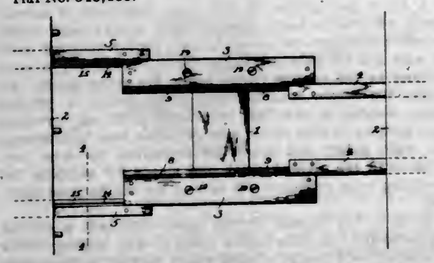
4. In a continuous rotary press of the character described, the combination of a rotatable drum comprising side plates having a plurality of radial mold chambers mounted therebetween, movable mold cores mounted within said chambers and forming the sides thereof, a second drum mounted adjacent said first named drum and comprising side plates overlapping the side plates of said first named drum to a selected degree, a plurality of compressing plungers mounted between said side plates of said last named drum to enter said mold chambers and bear against said cores, and means to maintain direct parallel engagement of said plungers with said mold cores for a distance upon each side of a line drawn through the axes of rotation of said mold and compressing drums, comprising elements carried by said compressing drum for loose engagement with said plungers to hold the same at an angle for initial direct parallel engagement with said mold cores, and elements carried by said mold drum for subsequent engagement with said plungers to maintain said direct parallel engagement, substantially as described.

899,692. ANGLE-FINDER. WALTER CLARK, New Rochelle, N. Y. Filed July 17, 1907. Serial No. 384,229.



An angle-finder composed of three legs pivoted together at one end, a scale for small angles on one leg, a scale for large angles on another leg, and a moving arm adapted to indicate the amount of angle which corresponds with the separation of said legs; two of said legs being adapted to lie in unison as a single leg when acute angles are to be measured and to be separated to form a rigid swinging right angle when obtuse angles are to be measured.

899,693. EXTENSION-TABLE SLIDE. ORRIN G. FRANKS, Chicago, Ill., assignor to The Seng Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 28, 1906. Serial No. 345,433.



1. An extension table slide comprising a horizontal center section having loops along its longitudinal edges disposed perpendicular to the section, end sections having similarly disposed loops nesting with the loops of the center section, and a short lateral retaining flange on a member of one of each pair of nested loops engaging an edge of its companion loop to restrict the sections to a longitudinal sliding movement upon each other.

2. An extension table slide, comprising a horizontal center section having loops along its longitudinal edges disposed perpendicular to the section, and end sections having similarly disposed loops nesting with the loops of the center section, the larger loop of each pair of nested loops having a short inwardly projecting retaining flange on one of its members overlying the adjoining edge of its companion loop, to restrict the sections or loop to a longitudinal sliding movement upon each other.

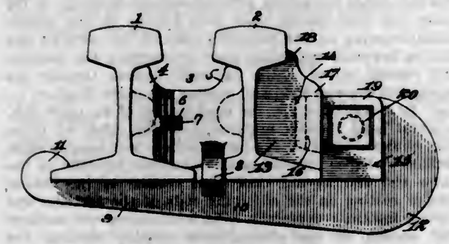
3. An extension table slide, comprising a section having a loop along its longitudinal edge disposed perpendicular to the section, and a companion section having a similarly disposed loop nesting with the loop of the first section, the outer or free member of one of the nesting loops having a retaining flange engaging the other loop, substantially as shown and described.

4. An extension table slide comprising a section having a loop along its longitudinal edge the outer or free member of which loop is turned inward at its end forming a retaining flange, and a companion section having a loop nesting within the loop of the first section and having the end of its free member engaged by the retaining flange, substantially as shown and for the purpose set forth.

5. An extension table slide, comprising sections having U-shaped loops nesting one within the other and disposed perpendicular to the sections, a member of one of the nesting loops having an inturned flange overlapping the companion loop, substantially as shown and for the purpose set forth.

[Claims 6 to 10 not printed in the Gazette.]

899,694. GUARD-RAIL CLAMP. GEORGE L. HALL, New York, N. Y. Filed Aug. 22, 1907. Serial No. 389,676.



1. A rail clamp comprising a clamp bar provided at one end with means for engaging the base of a rail and at its other end with an upwardly extending yoke, a wedge formed with a track-engaging side and with an inclined side adapted to engage the clamp bar, and a bolt connected to the rear end of the wedge and to the clamp bar, said bolt being arranged outside of the vertical plane of the wedge.

2. A guard rail clamp comprising a clamp bar, a wedge formed with a rail engaging part and an inclined wedge part and a horizontal outwardly-extending base part said base part being adapted to engage the clamp, and to extend beyond the wedge part to engage a tie, and means adjustably connecting the wedge to the clamp bar, said means being connected to the rear end of the wedge and extending toward the point thereof and being shorter than the wedge, whereby said means will not project beyond the ends of the wedge.

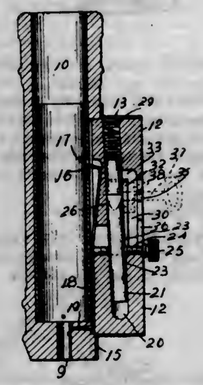
3. The combination of a track rail, and a guard rail, a clamp bar provided with means at one end to engage a rail and at its other end with upwardly extending means to engage a wedge, a wedge adapted to engage the upward extending end of the clamp bar and the adjoining side of one of the rails, a bolt connecting the rear end of the wedge to the clamp bar to hold said wedge in position said bolt being of less length than the wedge and extending toward the point thereof, whereby it will not project beyond the ends of the wedge in any position of the wedge, and a filler block between the two rails.

4. A rail clamp comprising a clamp bar provided with means at one end to engage a rail and at its other end with a wedge-engaging part, a wedge adapted to engage the rail and one end of the clamp bar, an outwardly extending lug formed on the rear or larger end of the wedge, a bolt connected to said lug and extending toward the point of the wedge, said bolt being of less length than the wedge and adjustably connected to the clamp bar, whereby the bolt will be outside of the vertical plane of the wedge and will not extend beyond the ends thereof.

5. A guard rail clamp comprising a clamp bar, a wedge adapted to fit between the clamp and the rail, an adjustable means connecting the rear end of the wedge to the clamp bar, the connection between said adjustable means and the clamp bar being arranged at a point between the ends of the wedge and outside of the vertical plane of the wedge, whereby a strain on said adjustable means would tend to force the end of the wedge inwardly to the rail, substantially as described and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

899,695. WHIP-LOCK. WILLIAM H. HEILIGER, Brazil, Ind. Filed Mar. 27, 1908. Serial No. 423,726.



A slotted whip socket having in combination, a yieldingly held arm having an obliquely held portion and a whip engaging lip extending through said slot, said arm being secured to said socket, a housing provided with a plunger channel and a key and pin slot, a perforated and seat-provided spring pressed plunger within said channel, spring jaws within said housing adapted to engage within said plunger seats, an operating stem projecting through said slot and removably held within one of said perforations, said stem riding upon said oblique arm portion, and a key for engagement with said spring jaws all arranged as set forth.

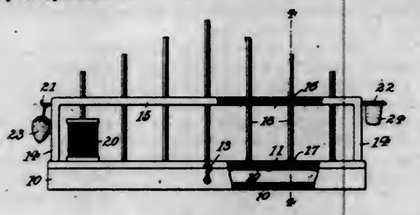
899,696. SEWING-STAND. VICTOR R. HOCHSTAETTER, New York, N. Y. Filed July 1, 1908. Serial No. 441,386.

1. A sewing stand comprising a box, a perforated cover hinged thereto, a perforated rail extending over the cover, and pins removably engaging the cover and rail-perforations, substantially as specified.

2. A sewing stand comprising a box having a cover, a perforated rail carried by the cover, and a series of pins removably engaging the rail, the pins being of different lengths and projecting above the rail at different elevations, substantially as specified.

3. A sewing stand comprising a box having a cover, a perforated rail carried by the cover, and a series of pins

removably engaging the rail, the pins decreasing in length from the center towards the ends of the cover, substantially as specified.



4. A sewing stand comprising a box having a cover, posts projecting upwardly therefrom, a perforated rail connecting the posts, a hook and a ring projecting from the posts, and a series of pins removably engaging the rail, the pins decreasing in length from the center towards the ends of the cover, substantially as specified.

899,697. RAIL CONNECTION. AUGUST S. LIND, McKeesport, Pa. Filed May 6, 1908. Serial No. 431,118.



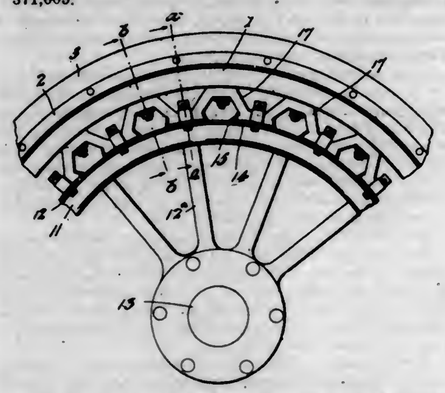
The herein described railway rail connection, comprising the splice bars, having pins formed on their inner face, longitudinal shoulders and outwardly extending and downwardly inclined base flanges formed on each of said bars, in combination with a link adapted to engage with said shoulders and pass beneath the tread of the rails and the means comprising spikes for holding the parts together, as described.

899,698. SAFETY-REFLECTOR FOR VEHICLES. ROBERT K. MCLEAN and WILLIAM K. GIBSON, Belfast, Ireland. Filed May 22, 1908. Serial No. 434,394.



The combination, with a vehicle-body, of a bearing-bar secured to the said body and provided with a trough in its upper side, a reflector slidable longitudinally in the said trough and provided with a frame having a rounded lower edge which rests in the said trough, and adjustable fastening-devices connecting the upper part of the said reflector with the said body and permitting the said reflector to be adjusted.

899,699. WHEEL FOR VEHICLES. WILLIAM D. MCNAULL, Toledo, Ohio. Filed Apr. 29, 1907. Serial No. 371,005.



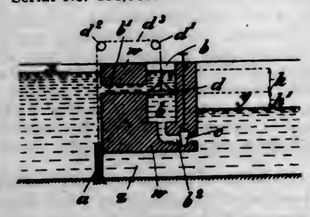
1. A cushion wheel for vehicles comprising an inner and an outer felly, a plurality of chairs on one of the fellies and a plurality of substantially V-shaped flexible sections, each having it ends secured in adjoining chairs together with the ends of the adjoining sections, and having its middle portion secured to the opposite felly.

2. In a cushion wheel the combination of an inner and an outer felly, a plurality of chairs on one of the fellies, a plurality of V-shaped flexible cushion sections connected centrally to one of the fellies and each having its ends secured in adjacent chairs, and clamping devices securing the adjacent ends of each pair of the sections in their chair.

3. In a cushion wheel the combination of an inner rim, a metal band thereon protruding at the sides, an outer rim, chairs resting on the band having hook-shaped ends, flexible V-shaped cushion sections secured centrally to the outer rim and having their ends resting in the chairs, clamps resting on the adjoining ends of the sections and having inwardly extending ends overlapping the sections and resting on the chairs, and bolts passing through the clamps, chairs and band and holding the parts in place.

4. In a cushion wheel the combination of an inner rim, a metal band thereon protruding at the sides, an outer rim, chairs resting on the band having hook-shaped ends, flexible V-shaped cushion sections secured centrally to the outer rim and having their ends resting in the chairs, clamps resting on the adjoining ends of the sections and having inwardly extending ends overlapping the sections and resting on the chairs, bolts passing through the clamps, chairs and band and holding the parts in place, and buffers carried by the clamps extending toward the outer rim.

899,700. HYDRAULIC DEVICE FOR MOVABLE CLOSING ORGANS IN WATERWAYS WITH FALLS. JOHANNES C. NYHOLM, Bremen, Germany. Filed May 25, 1908. Serial No. 434,981.



1. In a hydraulic moving device for operating organs in water-ways, the combination with a connecting channel between two levels and an organ controlling and closing the same; of a shaft communicating with the higher level and having a discharge at a lower level a valve to control the discharge a piston loosely fitting the shaft and means to operatively connect the organ and piston, whereby upon opening said valve the water contained in said shaft by the combined pressure of the water on the piston and the suction beneath the same will move the piston to open the organ.

2. In a hydraulic moving device for operating organs of water ways, the combination with a connecting channel between two levels and an element to control and close the same; of a shaft communicating with the higher level and having a discharge at lower level, a valve to control the discharge, a submerged piston loosely fitting the shaft and means to operatively connect the organ and piston.

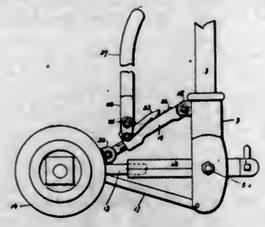
3. The combination with a connecting channel between two water-ways of different level and an element to open and close the same; of a shaft having a communication above its bottom with the upper level and a discharge at the lower waterway beneath the surface of the water thereof, a valve controlling said discharge, a piston loosely fitting the shaft and operatively connected to said element to open the same when the valve is opened.

4. The combination with a connecting channel between different water levels and an element to open and close the same; of a shaft having a communication with the upper water level and a discharge beneath the surface of the water of the lower level, a water passage between the discharge end of the shaft and its upper end, and a valve controlling the discharge to divert the water in the shaft to the lower level or to connect the discharge end and water passage.

5. The combination with a connecting channel between different water levels and a plurality of water gates, one of said gates controlling said channel; of a plurality of shafts each communicating at its upper end with the water at the higher level and at its lower end beneath the normal water surface at the lower level, a piston loosely fitting in each shaft, said pistons operatively connected to the gates, and a single valve controlling the discharge of all of the shafts to operate their pistons.

[Claim 6 not printed in the Gazette.]

899,701. SPOKE-EXTRACTOR. LOUIS P. PARENT, Waterbury, Conn., assignor of one-half to Peter R. Larocque, Waterbury, Conn. Filed Aug. 1, 1908. Serial No. 446,460.



1. The herein described spoke extractor comprising a head, jaws carried thereby, a fulcrum brace pivoted to the lower end of said head, a frame pivotally connected with the upper end of the head, a rack sliding in said frame, a pawl mounted in the frame and adapted to engage with said rack, a yoke pivoted to the frame and carrying a moving pawl also adapted to engage with said rack, substantially as described.

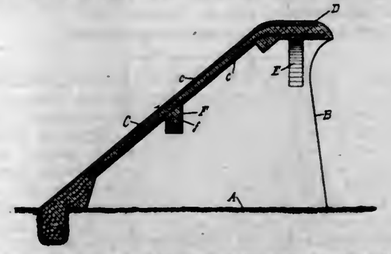
2. The herein described spoke extractor comprising a head, sliding jaws mounted therein, a fulcrum brace pivoted to the lower end of said head, a frame pivotally connected to the upper end of said head, said frame slotted, a rack longitudinally movable in said frame, a pawl mounted in said frame and adapted to engage with said rack, a yoke pivotally connected to said frame and having downwardly projecting arms, a sliding pawl having its ends pivoted to said arms and adapted to engage with the teeth of said rack, and a shoe carried by the end of said rack, substantially as described.

899,702. FOOD-CHOPPER. JOHN H. SHAW, New Haven, Conn., assignor to Sargent and Company, New Haven, Conn., a Corporation of Connecticut. Filed Aug. 19, 1901. Serial No. 72,566.



In a food chopper or kindred instrumentality, the combination with the case, having an opening at its rear; a cutting plate rigidly secured against movement in its forward end; a forcing screw adapted to be inserted at the rear opening of said case, having a bearing in said case at the rear and axial shafts at both ends, the forward shaft projecting through and journaled in the rigid cutting plate; a rotary cutter adjustably mounted on the forward shaft outside of said rigid cutting plate; an adjustable plate mounted on said rear shaft and bearing on said casing; and devices on said axial shafts coacting with said rotary cutter and adjustable plate to adjust said forcing screw longitudinally within said casing, substantially as described.

899,703. DAM. WILLIAM M. RANSOM, Warren, R. I., assignor of one-half to Fred M. Hoadley, Providence, R. I. Filed May 11, 1908. Serial No. 432,026.



1. A hollow gravity dam embodying buttresses arranged at an angle to the flow of the stream.

2. A hollow gravity dam embodying buttresses arranged at an angle to the flow of the stream and having the downstream ends of the converging buttresses united together.

3. A hollow gravity dam embodying buttresses arranged at an angle to the flow of the stream and a flooring connecting said buttresses.

4. A hollow gravity dam embodying buttresses and arches located between and connecting adjacent buttresses.

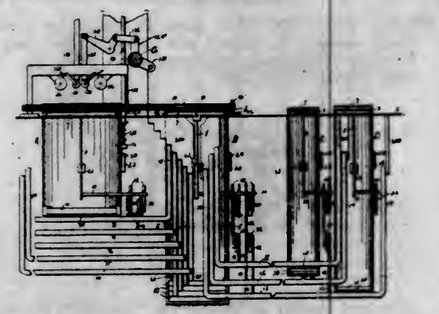
5. A hollow gravity dam embodying buttresses, arches located between and connecting adjacent buttresses, and a flooring connecting said buttresses and arches.

[Claims 6 to 12 not printed in the Gazette.]

899,704. AUTOMATIC CHANGE-MAKER. WILLIAM W. ROBLYER, Clearwater, Kans. Filed Oct. 3, 1906. Serial No. 337,210.

1. In change-makers, the combination of the frame; the carrier tube therein; a carrier therefor; a carrier operated locking and unlocking device; delivery devices; a carrier-marking device; and a series of keys and key-levers and suitable connecting mechanism whereby each key is adapted to operate a selective group of delivering devices.

2. In change-makers, the combination of the frame; the carrier receptacle therein; the carrier; the carrier-and-hand-operated locking and unlocking device; and the carrier-marking device for marking the carrier after said carrier has been inserted in the machine.



3. In change-makers, the combination of the frame; the carrier receptacle; the carrier; the carrier-operated locking and unlocking device; the carrier-marking device, and the hand-key-operated lock for unlocking said carrier-operated locking and unlocking device only after said carrier shall have been marked by the carrier-marking device.

4. In change-makers, the combination of the frame; the carrier receptacle; the carrier; the carrier-operated locking and unlocking device, and a trip device therefor; a marking device; and a lock and hand-key for operating the trip and marking device, and so adjusted that the trip cannot be freed from the carrier-operated locking and unlocking device until after the carrier has been marked.

5. In change-makers, the combination of the frame; a carrier receptacle therein, a carrier; a carrier-operated locking and unlocking device; a trip device for said locking and unlocking device; a series of individual carrier-marking devices within the frame, and a series of individual locks and hand-keys therefor respectively.

[Claims 6 to 13 not printed in the Gazette.]

899,705. METHOD OF PRODUCTION OF NITRITES. CLAUS N. RIIBER, Christiania, Norway, assignor to Aktieselskabet det Norske Kvaelstofkompagni, Christiania, Norway. Filed Jan. 6, 1905. Serial No. 239,921.

1. In the manufacture of nitrites, the process which consists in treating air in an electric arc, thereby forming a mixture of nitric oxid with an excess of air, and causing said gases, before nitric oxid is changed to a higher oxid, to act upon an alkaline solution to form an alkaline nitrite, substantially as and for the purpose set forth.

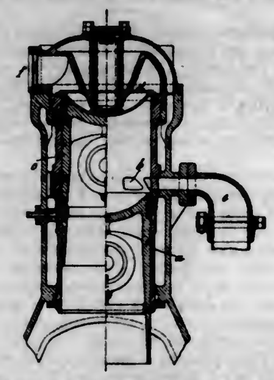
2. In the manufacture of pure nitrites, the process which consists in blowing air through an electric arc in a suitable furnace and leading the gas mixture so formed directly into compounds of alkalies or alkaline earths contained in a chamber separate from the furnace.

3. In the manufacture of nitrites, the process which consists in treating air in an electric arc, thereby forming a mixture of nitric oxid with an excess of air, then cooling the gases and causing them to act upon an alkaline solution before nitric oxid is changed to higher oxid of nitrogen to form a substantially pure alkaline nitrite.

899,706. METHOD OF INCREASING THE VOLUMETRIC EFFICIENCY OF CYLINDER AND PISTON MACHINES. ADOLF VOGT, London, England. Filed Jan. 21, 1907. Serial No. 353,340.

1. A method of increasing the volumetric efficiency of cylinder and piston machines drawing in charges of elastic fluid, which consists in causing the suction to occur through a pipe of such length that the pressure at the inlet port at the moment of closing is greater than the normal pressure of the fluid at said port.

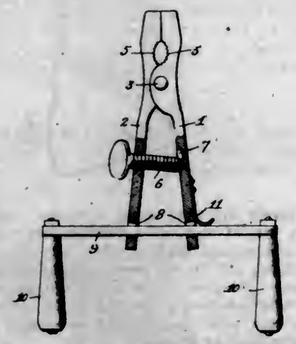
2. A method of increasing the volumetric efficiency of cylinder and piston machines drawing in charges of elastic fluid, consisting in causing the suction to occur through a pipe of such dimensions that the oscillations set up in the column of elastic fluid therein are so timed that when the suction port is closed, the pressure toward the suction port of the elastic fluid due to the effect of the inertia of the column is at or near its maximum, substantially as described.



3. A method of increasing the volumetric efficiency of cylinder and piston machines drawing in charges of elastic fluid, consisting in causing the suction to occur through a pipe of such dimensions that the oscillations set up in the column of elastic fluid therein are so timed that when the suction port is closed, the pressure toward the suction port of the elastic fluid due to the effect of the inertia of the column is at or near its maximum and introducing such an excess of cooling water into the machine that part of the water evaporates in the cylinder during the suction stroke and is subsequently condensed, substantially as described.

4. A method of increasing the volumetric efficiency of cylinder and piston machines drawing in charges of elastic fluid, which comprises causing the elastic fluid to move in a column toward the inlet port and giving said column a substantially maximum pressure node at the moment of closing of the inlet port, thereby producing a pressure within the cylinder at the time of closure of the port greater than the normal pressure of the elastic fluid.

899,707. WRENCH. ISAAC H. ALFREY, Mount Sterling, Ky. Filed Dec. 20, 1907. Serial No. 407,300.

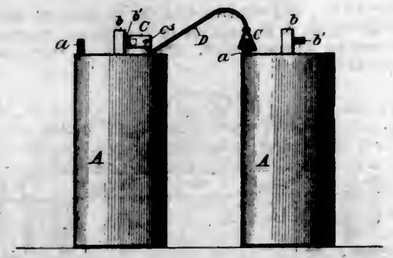


1. A wrench, embodying arms pivoted intermediate their length and shaped at one end to engage the parts to be manipulated, and power applying means engaging the opposite ends of said arms and shiftable transversely with respect to both of said arms.

2. A wrench, embodying arms pivoted intermediate their length and shaped at one end to engage the parts to be manipulated, power applying means engaging the opposite ends of said arms and shiftable transversely with respect to both of said arms, and means for retaining said power applying means in any adjusted position against any but a positive shaft.

3. A wrench, embodying arms pivoted intermediate their length and shaped at one end to engage the parts to be manipulated, a transverse bar engaging both said arms at their opposite ends and adjustable transversely with respect to said arms, handles on the ends of said bar for manipulating the same, and a spring on one of said arms in frictional engagement with said bar to retain the latter against any but a positive adjustment.

899,708. CONNECTION FOR ELECTRIC CONDUCTORS. FRANK H. BALL, North Plainfield, N. J. Filed Aug. 6, 1906. Serial No. 329,357.



1. A connection for electric conductors comprising an electric conductor; a spring clamp having jaws actuated by the clamp to detachably engage the conductor with a spring pressed contact; and a second conductor clamped and permanently held by the jaws of the clamp in position to receive greater pressure from the jaws as the clamp is placed in engagement with the first conductor.

2. A connection for electric conductors, comprising a spring loop; devices at the ends of the loop for detachably engaging an electric conductor with spring pressure exerted by the loop; and a second electric conductor arranged in the loop and clamped by the walls thereof.

3. A connection for electric conductors comprising a spring loop; devices at the ends of the loop for detachably engaging an electric conductor; and a second electric conductor arranged in the loop and clamped by the walls thereof, the walls of the loop closing on the conductor therein as the clamp is brought to position to engage the conductor at the ends of the loop.

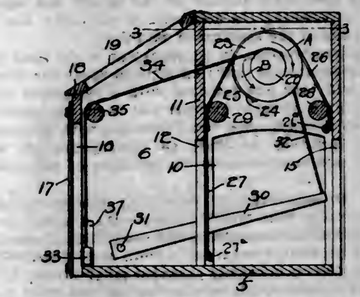
4. A connection for electric conductors comprising a spring loop formed of the turn c and sides c^2 having contact plates c^3 arranged transversely of the sides of the loop and having contact surfaces along the edges thereof that are forced into engagement by the action of the loop; and an electric conductor arranged within the loop and clamped by the walls thereof.

5. A connection for electric conductors comprising a spring clamp in the form of a loop and having overlapping plates extending inwardly from the loop, said plates being provided with perforations adapted to be brought into register by the compression of the loop; and a conductor arranged within the walls of the loop and clamped by the walls thereof.

[Claims 6 to 8 not printed in the Gazette.]

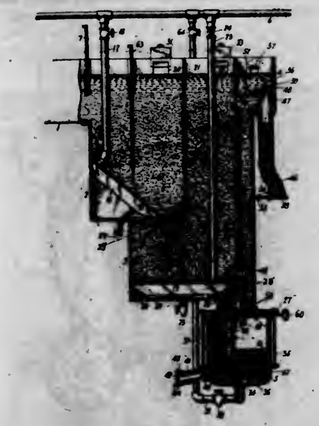
899,709. AUTOMATIC TRAP-NEST. FRANCIS S. BARZEE, Everett, Wash. Filed Sept. 19, 1907. Serial No. 393,698.

A nest of the type set forth, comprising a housing including side and end walls and divided by a transverse wall into a nest compartment and an entrance compartment, the said wall having an opening affording communication between the said compartments, a wall arranged in the entrance compartment at right angles to said first named wall and having a door opening, the said last named wall dividing the entrance compartment into two chambers, the side walls of the housing being provided with door openings communicating with the respective chambers of the entrance compartment, automatic doors for closing said door opening in said last named dividing wall and for closing the door opening in one of said side walls, means for holding one of said doors open and the other of said doors closed, means adjacent to said first named door



opening and designed to be operated by the weight of a hen stepping thereupon for actuating the doors to close the opening in said last named side wall and to open the opening in said last named dividing wall and means arranged adjacent to the opening in the remaining side wall and adapted to be operated by the weight of a hen stepping thereon for reversing the relation of said doors obtained by said first named means.

899,710. APPARATUS FOR RECOVERING MINERAL VALUES. JAMES W. BOARDMAN, Josephine, Mont., assignor of one-fourth to Lucy E. Phillips and one-fourth to Melissa French, Harlem, Mont. Filed Oct. 24, 1907. Serial No. 399,041.



1. The combination, in an apparatus, for recovering mineral values, of a plurality of superposed separating tanks communicating with one another; means for discharging comminuted particles into the uppermost tank; an exteriorly-located bowl disposed beneath the lowermost tank and communicating with the same; means located within each tank and within the bowl, for effecting an upward agitation of the contents thereof; means for discharging the heavier constitutents of the contents of the bowl; a discharge tank located above said bowl; an outlet pipe connecting said discharge pipe with said bowl, to permit the lighter constituents of the contents of the bowl to pass into the last-mentioned tank; a discharge chute com-

municating with said last-mentioned tank; and means for periodically effecting an automatic discharge of the contents of the chute.

2. The combination, in an apparatus, for recovering mineral values, of a plurality of communicating separating tanks; means for feeding water and comminuted particles into one of said tanks; a spray-box located at the bottom of each tank for agitating the contents thereof; a separate bowl located exteriorly of the tanks; a feed pipe connecting said bowl with another of the tanks; and separate means for effecting the discharge of the heavy and light constituents of the contents of said bowl.

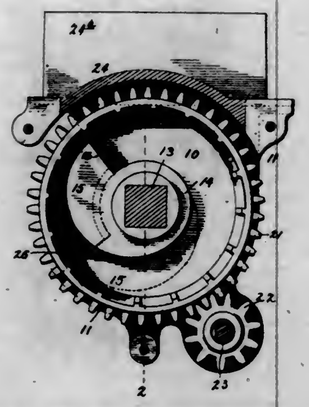
3. The combination, in an apparatus of the class specified, of a separating tank; an inclined spray-box disposed within said tank and provided with a perforated top; a vertical plate movable towards and from the spray-box; and a water-supply pipe communicating with the interior of said spray-box to effect an upward flow of water through said receptacle and an agitation of the contents thereof.

4. In an apparatus for recovering mineral values, in combination, a concentrating receptacle; a spray-box disposed within said receptacle and comprising a metal box having a perforated metal top, a cloth cover disposed upon said top, and an internally threaded collar carried by said top; and a water-supply pipe having one end fitted in said collar, to direct a current of water into the interior of the spray-box.

5. In an apparatus for recovering mineral values, the combination, with a flume, of a spray-box provided with a perforated metal top, a cloth cover mounted upon said top, metal straps for retaining said cover in place, a series of riffles mounted upon said cover, an internally-threaded collar carried by said top, and a water-supply pipe having one end fitted in said collar, to introduce a current of water into the interior of the spray-box and to effect an upward flow thereof between the riffles.

[Claims 6 to 10 not printed in the Gazette.]

899,711. GRAIN-DISTRIBUTER. HARRISON B. BOZARD, Lincoln, Nebr. Filed July 24, 1908. Serial No. 445,240.



1. A grain distributer having a rotatably adjustable feed regulator with a feed regulating surface that is eccentric to the axis of adjustment and having a central portion or hub from the periphery of which the eccentric surface starts.

2. A grain distributer having a rotatably adjustable feed regulator with a feed regulating surface that is eccentric to the center of adjustment and having a central portion or hub from the periphery of which the eccentric surface starts, and a feed wheel concentric with said center.

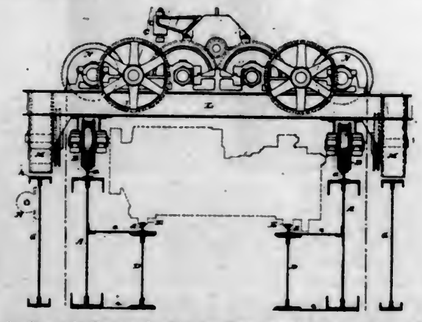
3. A grain distributer having a rotatably adjustable feed regulator with a feed regulating surface that is eccentric to the axis of adjustment and having a central portion or hub from the periphery of which the eccentric surface starts, in combination with a seed directing surface concentric with said axis.

4. In a grain distributer, the combination of a suitable casing, a feed wheel journaled therein having a chamber in its side forming a seed-engaging rim, and a rotatably adjustable feed regulator concentric with the feed wheel provided with a hub or central portion with a rounded surface, and having an eccentric seed-engaging surface that starts from said rounded surface on the hub.

5. In a grain distributer the combination of a suitable casing, a feed wheel, having chambers in opposite sides to form seed-engaging rims, a feed regulator in each of said chambers and an adjusting shaft common to both feed regulators.

[Claims 6 to 9 not printed in the Gazette.]

899,712. TRAVELING CRANE. ALBERT W. BRIGHT, Washington, D. C., assignor to The Morgan Engineering Company, Alliance, Ohio. Filed Feb. 4, 1908. Serial No. 414,207.



1. In a ladle or double trolley crane, the combination with the main girders, and a safety girder located outside the main girder, of the main trolley frame constructed to travel in close proximity to the safety girder, and having its main hoisting ropes extending downward outside the main girders the entire weight of the load being normally carried by the main girders, substantially as set forth.

2. In a ladle or double trolley crane, the combination with main and auxiliary girders for supporting the main and auxiliary trolleys, and safety girders located outside the main girders, of main trolley, the opposite sides of the main trolley or parts carried thereby being arranged to project over the safety girders the weight of the load on the main trolley being normally carried by the main girders, substantially as set forth.

3. In a ladle or double trolley crane, the combination with the main and auxiliary girders, and safety girders located outside the main girders, of the main trolley or portions connected therewith, constructed to project over the safety girders, and having its hoisting ropes arranged to extend down between the main and safety girders the weight of the load on the main trolley being normally carried by the main girders, substantially as set forth.

4. In a ladle or double trolley crane, the combination with main and auxiliary girders, safety girders located outside the main girders, of the main trolley or portion connected therewith constructed to project outwardly in the same vertical plane as the safety girders and an auxiliary trolley mounted on rails intermediate the main girders the weight of the load on the main trolley being normally carried by the main girders.

5. In a ladle or double trolley crane, the combination with main and auxiliary girders, a safety girder located outside the main girder, of the main trolley constructed to overhang the safety girder the weight of the main trolley and its load, being normally carried by the main girders, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

899,713. HEAT TREATMENT AND QUENCHING OF ALLOYED STEELS. JAMES CHURCHWARD, New York, N. Y. Filed Sept. 18, 1907. Serial No. 393,489.



1. The herein described method of heat-treating and hardening alloyed steels, which consists in subjecting the mass of metal to a series of heats or heat waves of successively decreasing maximum temperature, designed to affect the alloying metals in order of their respective segregating points, the first heat or heat-wave being carried to a temperature a little below the segregating point of the alloying metal having the highest segregating point, and each successive heat or heat-wave to a temperature a little below the segregating point of the corresponding alloying metal and quenching the mass after each successive heat or heat-wave.

2. The herein described method of heat-treating and hardening alloyed steels, which consists in subjecting the mass of metal to a series of heats or heat-waves of successively decreasing maximum temperature, designed to affect the alloying metals in order of their respective retardation points, the first heat or heat-wave being carried to a temperature a little below the retardation point of the alloying metal having the highest retardation point, and each successive heat or heat-wave to a temperature a little below the retardation point of the corresponding alloying metal and quenching the mass after each successive heat or heat-wave.

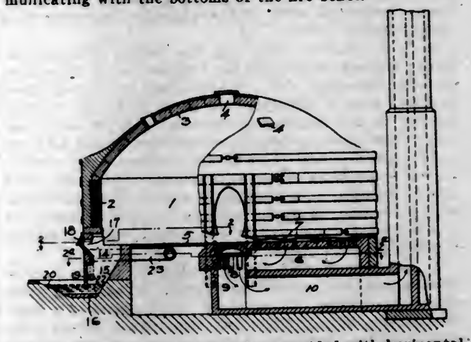
3. The herein described method of heat-treating and hardening alloyed steels, which consists in subjecting the mass of metal to a series of heats or heat-waves of successively decreasing maximum temperature, designed to affect the alloying metals in order of their respective retardation points, the first heat or heat-wave being carried to a temperature within 100° F. of the retardation point of the alloying metal having the highest retardation point, and each successive heat or heat-wave to a temperature within 100° F. of the retardation point of the corresponding alloying metal, and quenching the mass after each successive heat or heat-wave.

899,714. KILN. HARRY W. CROFT, Pittsburg, and OTTO M. REIF, Allegheny, Pa. Filed Apr. 30, 1907. Serial No. 371,056.

1. A kiln comprising a chamber provided with a smoke outlet, fire boxes connected to said chamber and provided with sealed feed openings, said fire boxes having fuel supporting walls and floor, horizontal smoke flues underneath the floor of said chamber, and air supply pipes located adjacent to said smoke flues and connected to the fire boxes.

2. A kiln comprising a chamber provided underneath its floor with horizontal smoke flues, fire boxes connected to said chamber and arranged to support the fuel directly on their walls and bottom, said fire boxes being provided with sealed feed openings and ash removing openings, and air supply pipes arranged underneath the floor adjacent to the smoke flues and leading to the fire boxes.

3. A kiln comprising a circular chamber provided underneath its floor with radially arranged smoke flues communicating with the chamber, fire boxes connected to said chamber and communicating therewith and supporting the fuel directly on their walls and bottoms and having sealed feed openings, and air supply pipes located underneath the floor of the chamber adjacent to the smoke flues and communicating with the bottoms of the fire boxes.

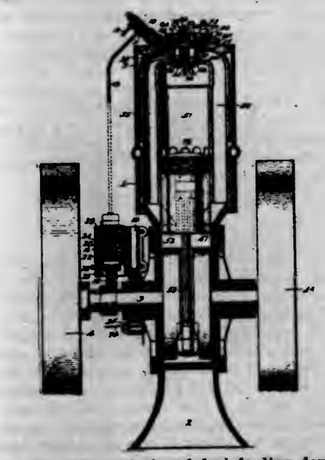


4. A kiln comprising a chamber provided with horizontal smoke flues underneath its floor, fire boxes connected to said chamber and provided with sealed feed openings and ash removing openings, said fire boxes being constructed to support the fuel directly on their walls and bottoms, air supply flues under the floor of the chamber adjacent to the smoke flues and communicating with the bottoms of the fire boxes, and an injector for producing a blast in said air flues.

5. A kiln comprising a circular chamber provided underneath its floor with radially arranged smoke flues which communicate with the chamber, fire boxes communicating with the chamber, and air supply means for said fire boxes comprising flues extending inwardly underneath the floor adjacent to one smoke flue and then turning and extending outwardly adjacent to another smoke flue and communicating with a fire box, and means for producing a blast in said air flues.

[Claim 6 not printed in the Gazette.]

899,715. CONTROL AND FUEL-FEEDING DEVICE FOR INTERNAL-COMBUSTION ENGINES. JAMES T. DICKSON, Denver, Colo., assignor of one-half to E. A. Colburn, Denver, Colo. Filed Sept. 28, 1907. Serial No. 394,982.



1. An automatic control and fuel feeding device for internal combustion engines, the combination of the engine,

the crank shaft, the flywheel, the governor, the atomizer, with an air cylinder mounted on said engine, an air inlet valve in said cylinder controlled by said governor, an air exhaust valve in said cylinder connected to said atomizer, a balanced reciprocal piston in said cylinder spring-controlled in its air receiving direction of its reciprocal movement, a supplementary piston arranged to move said balanced piston on its air compressing stroke, and means connected with said engine for operating said supplementary piston.

2. An automatic control and fuel feeding device for internal combustion engines, the combination of the engine cylinder, the crank shaft, the atomizer, and the flywheel, provided with a centrifugal governor, of an air cylinder secured to said engine and provided with an open end, an air inlet valve arranged to be controlled by said governor and with a discharge valve to said atomizer, a main piston to said cylinder, a spring between said piston and head of said cylinder, a supplementary piston within said main piston extending below the open end of said cylinder, and a cam on said crank shaft in engagement with said supplementary piston.

3. An automatic fuel feeding device for internal combustion engines, the combination with the cylinder, the crank shaft, the flywheel, the governor, the atomizer of a gasolene engine, of a cylinder provided with a spring actuated vacuum controlled reciprocating air compressing piston, a supplementary piston depending from said cylinder, a cam on said crank shaft in engagement with supplementary piston, an air inlet valve in said cylinder, a rock arm arranged in engagement with said air valve and said governor adapted to contral said air valve, and a pipe connecting said air discharge valve with said atomizer.

4. In an automatic fuel feeding device for internal combustion engines, the combination of the engine cylinder, the crank shaft, the flywheel, the centrifugal governor, and the atomizer, with the air compressing cylinder with an air delivery pipe attached to said atomizer, an air inlet valve in said air cylinder, a spring arranged to hold said valve normally closed, a rock arm in engagement with said valve at one end and arranged in the rotative path of and adapted to be engaged and operated by the variable speed positions of said governor to admit air to said air cylinder, and means including a cam on said crank shaft for compressing air in said cylinder and forcing it into said atomizer.

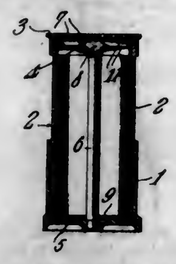
5. In an automatic control and fuel feeding device for internal combustion engines, the combination of the atomizer, the crank shaft and the flywheel, of an operative internal combustion engine, said flywheel being provided with a centrifugal governor, with an air cylinder secured to said engine, the pistons reciprocally mounted in said cylinder, means including cam on said shaft for operating said piston, the air inlet and discharge valves, the air pipe extending from said cylinder to said atomizer, a rock arm pivotally supported by said air cylinder intermediate of its ends, having one end in engagement with said air inlet valve, a roller in the opposite end of said rock arm, and a lever on said governor arranged to stand with varying eccentricity to flywheel's axial center and varying its contact with rock arm's roller by the centrifugal movements of the governor arm.

[Claims 6 to 10 not printed in the Gazette.]

899,716. SALT-CELLAR. FRANK A. DINSMORE, Fredonia, N. Y. Filed Aug. 14, 1907. Serial No. 388,531.

1. A salt cellar comprising a base, a salt holder having a cylindrical interior surface longitudinally and rotatably mounted in said base and having a flat removable perforated cap, and a salt grinder within the salt holder having a plurality of radial arms extending to the inner cylindrical surface of said salt holder, said grinder fixed to the upper end of a stem rising from the base in the axis of said holder, said grinder adapted to be moved from the cap to the bottom of the salt holder and scrape adhering salt from the inner surface thereof.

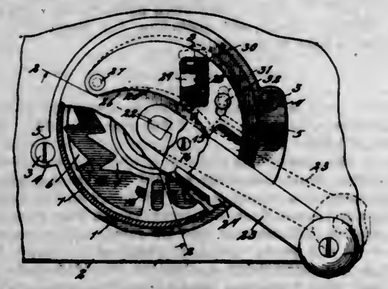
2. A salt cellar comprising a cup like cylindrical base, a cylindrical salt holder rotatably and longitudinally mounted in said base and having a cylindrical inner surface throughout its length, the bottom of said salt holder having a central opening, a flat cap provided with a plurality of perforations for the escape of salt, a salt grinder within said holder having a plurality of arms extending to the inner surface of said salt holder each of which arms is adapted to contact with the under surface of said cap to remove adhering salt, a stem fastened to said base extending through the central opening in the bottom of the salt holder for supporting the salt grinder, the latter being movable from end to end of the salt holder.



3. A salt cellar comprising a cup-like base, a cylindrical salt holder rotatably and longitudinally mounted in said base, a flat perforated cap screwed onto the top of said salt holder, a stem attached to said base extending upwardly in the axis of said salt holder, and a salt grinder fastened to the upper end of said stem and formed with a plurality of equally spaced radial arms, each arm being diamond shaped in cross section with its upper faces lying in inclined planes and its under faces of concave formation.

4. A salt cellar comprising a cup-like base, a cylindrical salt holder rotatably and longitudinally mounted in said base, a flat perforated cap screwed onto the top of said salt holder, a stem attached to said base extending upwardly in the axis of said salt holder, and a salt grinder fastened to the upper end of said stem and formed with a plurality of horizontal equally disposed radial arms each having a length equal to the radius of the vessel within which it operates and of diamond shape in cross section, the longer axis of which lies in a horizontal plane, the upper faces of each arm lying in inclined planes to form a radial edge, the under faces of each of said arms having a concaved formation and the side edges adapted to cut salt within the salt-cellar.

899,717. CONTROLLER-REGULATOR. CYRUS P. EBERSOLE, Keokuk, Iowa, assignor, by mesne assignments, to American Automotoneer Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 16, 1907. Serial No. 406,711.



1. In a controller regulator, the combination with a stationary base of a hood rotatably mounted thereon, cooperating means on said base and hood to regulate the movement of the hood in one direction, and a pair of lugs on said hood for receiving the controller handle there-between, one of said lugs being yieldably mounted, whereby the hood and the controller handle are firmly clamped together, while permitting of ready separation.

2. In a controller regulator, the combination with a stationary base, provided with cams and stops, of a hood rotatably mounted on said base, a pawl carried by said hood for coöperation with said cams and stops to compel intermittent movement of the hood in one direction, without interfering with the free rotation of the hood in the opposite direction, and a pair of lugs on said hood for receiving the controller handle there-between, one of said lugs being yieldably mounted, whereby the hood and the controller handle are firmly clamped together, while permitting of ready separation.

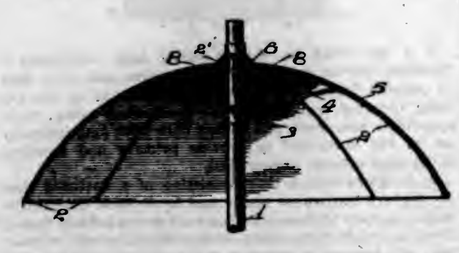
3. In a controller regulator, the combination with a stationary base of a hood rotatably mounted thereon, cooperating means on said base and hood to regulate the movement of the hood in one direction, and a pair of lugs on said hood for receiving the controller handle there-between, one of said lugs being yieldably pivoted, whereby the hood and the controller handle are firmly clamped together, while permitting of ready separation.

4. In a controller regulator, the combination with a stationary base, provided with cams and stops, of a hood rotatably mounted on said base, a pawl carried by said hood for coöperation with said cams and stops to compel intermittent movement of the hood in one direction, without interfering with the free rotation of the hood in the opposite direction, and a pair of lugs on said hood for receiving the controller handle there-between, one of said lugs being yieldably pivoted, whereby the hood and the controller handle are firmly clamped together, while permitting of ready separation.

5. In a controller regulator, the combination with a stationary base of a hood rotatably mounted thereon, cooperating means on said base and hood to regulate the movement of the hood in one direction, a pair of lugs on said hood for receiving the controller handle there-between, one of said lugs being yieldably pivoted, whereby the hood and the controller handle are firmly clamped together while permitting of ready separation, and means for limiting the pivotal movement of said yieldable lug.

[Claims 6 to 10 not printed in the Gazette.]

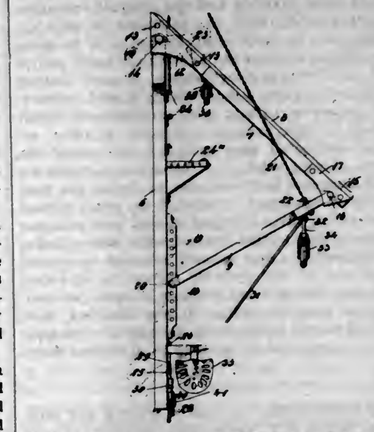
899,718. UMBRELLA. JOHN A. EBERLE, St. Louis, Mo., assignor to The Perfection Manufacturing Company, St. Louis, Mo., a Corporation. Filed Sept. 30, 1907. Serial No. 395,066.



1. An umbrella comprising a ring formed with an annular socket extending radially and inwardly from the edge of the ring and then at right angles thereto in the plane of the ring and with a spur, and a rod extending radially of the ring and having an angular hook extending at right angles to the ring so as to provide a hinge in connection with the spur.

2. An umbrella comprising a ring formed with a U shaped socket extending radially and inwardly from the edge of the ring, then at right angles thereto in the plane of the ring and then in a direction parallel to the socket outwardly to the edge of the ring and with a spur, and a rod extending radially of the ring and having a U shaped hook so as to provide a hinge in connection with the spur.

899,719. SCRAPER. HARM U. EDZARDS, Paris, Tex. Filed Feb. 15, 1908. Serial No. 416,048.



1. A scraper having a land-side and a mold-board pivotally connected together at their front ends, the mold-board having a curved recess in the rear side thereof at the front end and the land-side having a rounded front end which fits against the wall of said recess at the various angles.

2. A scraper having a mold-board and land-side with a pivotal connection at their front ends, said connection comprising top and bottom plates fixed to the upper and lower edges of the mold-board, and a bolt connecting said plates and extending through the front end of the land-side.

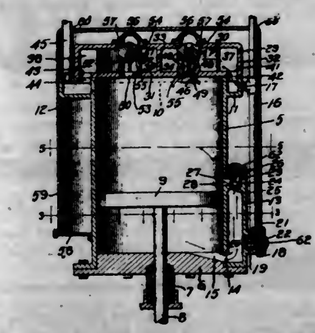
3. A scraper comprising a mold-board, land-side and rear cross brace pivotally connected together, the mold-board abutting against the front end of the land-side and the outer end of the crossbrace, and having curved sockets receiving said ends.

4. A scraper having a land-side, mold-board, and rear cross brace, and a draft chain connected at one end to the cross brace and extending over and bearing down upon the mold-board.

5. A scraper having a land-side and a slotted mold-board, and a draft chain extending through said slot and connected at the end to the land-side.

[Claims 6 to 9 not printed in the Gazette.]

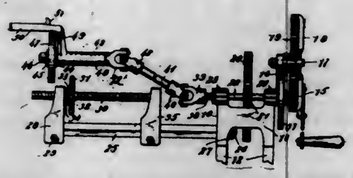
899,720. AIR AND GAS COMPRESSOR. FRED ELDER, Vincennes, Ind. Filed Dec. 2, 1907. Serial No. 404,787.



An air or gas compressing pump comprising a cylinder having a head formed with independent inlet and exhaust chambers communicating with said cylinder and with an extension for each chamber, said cylinder being formed at

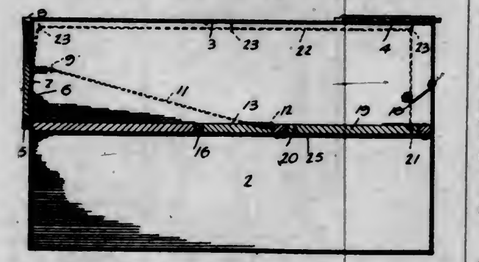
opposite sides thereof with inlet and exhaust extensions, the inlet extension being in communication with the extension of said inlet chamber and the exhaust extension being in communication with the extension of said exhaust chamber, said cylinder being formed with an elongated inlet extension communicating with the lower end of said cylinder and with said cylinder at a point distant from its lower end, a piston head working in said cylinder, an inlet pipe connected to said inlet extension, an outlet pipe connected to said exhaust extension, a valve arranged in said elongated inlet extension to control the communication of said inlet pipe therewith, a valve arranged in said elongated inlet extension to control the communication thereof with said cylinder at the point distant from its lower end, a valve arranged in said inlet chamber to control the communication thereof with said cylinder and a valve arranged in said exhaust chamber to control the communication of said cylinder therewith, said first and fourth named valves being operable to open position, when the piston head is moving in one direction, said second and third named valves being operable to open position when the piston head is movable in a reverse direction.

899,721. CALK-GRINDER. D FLOYD ENSIGN and MERTON HAZARD, Willet, N. Y., assignors of one-third to John Forshee, Willet, N. Y. Filed Sept. 13, 1906. Serial No. 334,514.



In a device of the class described, a shaft, means applied to one end of said shaft for operating the same, an emery wheel connected to said shaft at the other end and partaking of its motion, a sleeve mounted upon said shaft between the emery wheel and the operating means, a projection extending from said shaft adjacent to the emery wheel and in parallel relations to the adjacent side face of the same, and a guard extending from said projection and at right angles thereto, and of a width substantially equal to the diameter of the emery wheel and projecting beyond the outer side face thereof, the sleeve serving as a grip for the hand of the operator, and the guard acting as a support for the work and also to assist the hand of the operator while actuating the device.

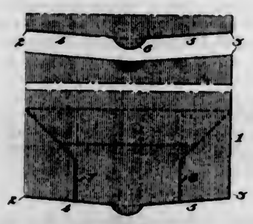
899,722. ANIMAL-TRAP. WILLIAM FAGAN, Englewood, S. D. Filed June 22, 1907. Serial No. 380,287.



1. The combination, in an animal trap having an entrance opening formed in its front wall, of a pair of transversely-disposed tiltable platforms located in the bottom wall of the trap, and arranged one in advance of the other; a door disposed against the front wall of the trap and movable vertically to cover and uncover the opening therein; spring-actuated supporting means secured to the outer face of one of the sides of the trap and adapted to project beneath the lower edge of the door, when the latter is raised, to hold it in such position; a flexible member disposed against said side face and connected at one end to the forward platform and at the other end to said supporting means, to retract the latter when said forward platform is tilted, to permit said door to fall; a second flexible member disposed against said side face of the trap, and connected at one end to the door and at the other end to the adjacent side edge of the rear platform, to raise the door, when said platform is tilted, into position to permit engagement of said supporting means therewith; and a shield secured to the trap at its upper and lower edges and having its body-portion spaced away from the side face of the trap against which said flexible members are disposed, to prevent interference therewith.

2. The combination, in an animal trap having an entrance opening formed in its front wall, of a pair of transversely-disposed tiltable platforms located in the bottom wall of the trap and arranged one in advance of the other, each platform having a laterally-projecting pin on each of its side edges; a bolt casing secured to each of the outer side faces of the trap at the forward end thereof; a spring-pressed bolt located in each casing and adapted to project beneath the lower edge of the door, when the latter is raised, to hold it in such position; a flexible element connected at one end with each pin of the forward platform, and at the other end with the adjacent bolt, to retract the latter when said platform is operated, to permit the door to fall; and a second flexible element connected at one end to each pin of the rear platform and at the other end to the adjacent side edges of the door, to raise the latter, when the last-mentioned platform is tilted, to permit the engagement of said bolts therewith.

899,723. BAG AND BLANK THEREFOR. PHILIP A. FRYE, Cleveland, Ohio. Filed Feb. 27, 1906. Serial No. 303,292.



1. A bag blank for satchel-bottom bags comprising a flattened tube cut transversely at its upper and lower ends on parallel broken and curved lines, the line at the top being incurved and the line at the bottom being correspondingly outcurved, and having both plies longitudinally cut at the lower end to provide primary and finishing folds, substantially as described.

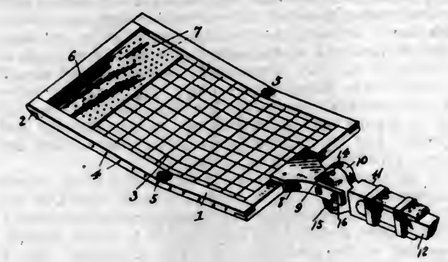
2. A satchel-bottom bag consisting of a flattened tube cut transversely at its upper and lower ends on parallel broken or curved lines, the bag-bottom comprising pasted primary and finishing folds constituting a satchel bottom, said bag having its greatest depth at two diametrically opposite points above the apices of the primary folds, substantially as described.

899,724. SKIMMER. JACOB S. GOLDEN, Sylvester, Ga. Filed Dec. 2, 1907. Serial No. 404,650.

1. A skimmer having sieve openings therein of different mesh and having plane skimming surfaces disposed angularly with respect to each other.

2. A skimmer having sieve openings therein and provided with an adjustable handle, the handle being so connected to the skimmer as to permit of its being adjusted to change the angle of the handle with respect to the skimmer.

3. A skimmer having different grades of sieve openings therein and provided with an adjustable handle, the skimmer having plane angularly disposed skimming surfaces.



4. A skimmer comprising a frame, wire mesh engaged therein of comparatively large size, and having smaller sized openings at one end of the frame.

5. The combination with a skimmer for turpentine stills having sieve openings therein of different grades, of a handle to the skimmer adapted to be adjusted to different inclinations with respect to the skimming surface of the skimmer, the body of the skimmer being divided into two angularly disposed skimming surfaces.

[Claim 6 not printed in the Gazette.]

899,725. FLOOR-CLEANING MACHINE. GEORGE W. GOODIER, Utica, N. Y., assignor to Hygienic Floor Machine Company, Utica, N. Y. Filed Feb. 28, 1900. Serial No. 6,808.



1. In a cleaning machine, a frame, rollers removably journaled therein, cloth removably attached to the rollers and passing between them, ratchet wheels on the rollers, a pawl adapted to engage one of the wheels, toothed levers engaging the ratchet wheels and adapted to limit the revolution of the rollers, means for holding the teeth in contact with the ratchet wheels and means for actuating the pawl, in combination, substantially as set forth.

2. In a cleaning machine, a frame, a handle attached thereto, rollers journaled in the frame, cleaning material wound between the rollers, a ratchet wheel on the end of one of the rollers, a pawl arranged to operate therewith, means for limiting the revolution of the rollers, and a lever attached to the handle connected with the pawl and adapted to operate the same, in combination, substantially as set forth.

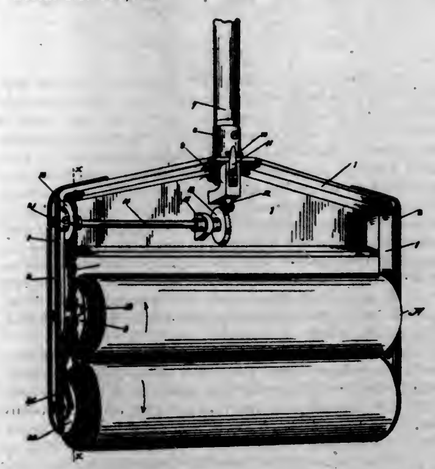
3. In a cleaning machine, a handle, a frame, rollers journaled therein, a cleaning material attached at its ends to the rollers adapted to be wound from one roller to the other, ratchet wheels on the corresponding ends of the rollers, a pawl in engagement with the ratchet wheel of one roller, means for actuating the pawl by a lever provided at the handle of the apparatus, a toothed lever engaging at the ends with the teeth on the ratchet wheels, a spring adapted to hold the teeth in contact with the rollers, and a detent adapted to retard the rollers, in combination, substantially as set forth.

4. In a cleaning machine, a frame, rollers journaled therein, cleaning material removably attached to the rollers, a handle, a lever provided on the handle in operative connection with and adapted to control the actuating mechanism of the rollers, said mechanism comprising a pawl engaging one of the rollers and connected with the handle and a pivoted arm toothed at its ends, engaging means on the rollers adapted to engage the teeth of the pawl and the arm, a spring adapted to press the teeth to their respective engagements, in combination, substantially as set forth.

5. In a cleaning machine, a handle, a frame, an actuating ratchet-bearing roller journaled therein, a pawl adapted to engage therewith, means to operate the pawl from the handle of the machine, a second roller journaled in the frame, cleaning material removably wound upon said second roller and adapted to be unwound therefrom and onto the actuating roller, and means for retarding the unwinding of the cleaning material to the speed of the actuating roller, in combination, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

899,726. FLOOR DUSTER AND POLISHER. GEORGE W. GOODIER, Utica, N. Y., assignor to Hygienic Floor Machine Company, Utica, N. Y. Filed Sept. 10, 1906. Serial No. 333,920.



1. A cleaning machine comprising a frame, a handle attached thereto, rollers journaled in the frame, a cloth attached to the rollers, means mounted between the handle and the rollers for actuating the rollers by rotating the handle whereby the cloth is wound from one roller onto another, in combination substantially as set forth.

2. In a cleaning apparatus, a handle, a frame mounted on the end thereof, rollers journaled therein, the front roller comprising a wooden core and a pliable covering extending at one end beyond the core to conceal the bearing of said roller within the end of said covering, a cleaning material removably attached to and adapted to be wound between the rollers, and means for actuating and controlling the rollers simultaneously by turning the handle, in combination substantially as set forth.

3. In a cleaning apparatus, a frame, a handle, rollers journaled in the frame, cloth removably attached to the rollers and adapted to pass from one to the other, means

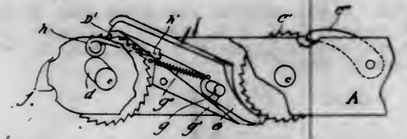
for turning the rollers by rotation of the handle, one of them having a friction engagement with said means whereby the speed of said roller may be conformed to the rate of revolution of the other roller, in combination, substantially as set forth.

4. In a cleaning machine, a frame, rollers removably journaled therein, a handle, a cleaning fabric wound on the rollers, operative connections between the rollers and the handle for turning the rollers by rotation of the handle, the said connections comprising means whereby, in the winding of the cloth, the speed of one roller is graduated to the speed of the other roller, in combination, substantially as set forth.

5. In a device of the character described, a plurality of rollers, one of the same being constructed with a wooden core shorter than the other roller and having a covering of pliable material extending at one end beyond the wooden core and making the rollers of equal outside length, a frame supporting the said cores and a cleaning material removably attached to the rollers and adapted to be wound from one roller to another, and means for actuating the rollers and controlling their rate of revolution to wind the cloth from one to another, substantially as shown.

[Claims 6 to 13 not printed in the Gazette.]

899,727. FLOOR DUSTER AND POLISHER. GEORGE W. GOODIER, Utica, N. Y., assignor to Hygienic Floor Machine Company, Utica, N. Y. Filed Dec. 26, 1906. Serial No. 349,418.



1. In a device of the character described, a frame provided with a handle and having forwardly extending side bars, rollers pivotally mounted between the said bars, a ratchet-wheel on each of said rollers and on corresponding ends thereof, one of said rollers being supported at each end in a slot in each side bar, a double pawl mounted with a slotted bearing on the side bar adjacent to the ratchets, the tooth at one end of said pawl being in contact with the ratchet of the innermost roller, the slotted bearing of said former roller having a direction to bring the ratchet on the said roller into contact with the adjacent end of the double pawl whereby the turning of the said roller operates the pawl and turns the other roller, and a detent pawl in engagement with the ratchet on the latter roller, substantially as described.

2. In a device of the character described, a frame with a handle mounted thereon, the frame being formed with oppositely disposed projecting side bars, one of said side bars having an inner offset at its forward end, rollers pivotally mounted in the said bars, the outermost roller being shortened corresponding to the degree of the said offset and being provided with a soft covering extending beyond said end of the roller to the line of the end of the other roller, the said side bars being notched, and a feeding means being supported in such notches of the frame, substantially as described.

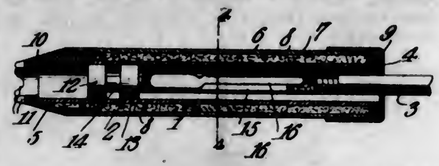
3. In a device of the character described, a frame with a handle mounted thereon, the frame being formed with oppositely disposed projecting side bars, one of said side bars having an inner offset at its forward end, rollers pivotally mounted in the said bars, the outermost roller being shortened corresponding to the degree of the said offset and being provided with a soft covering extending beyond said end of the roller to the line of the end of the other roller, the said side bars being also notched, and a feeding means being supported in such notches of the frame, the said frame being provided with a cover member mounted thereon, substantially as described.

4. In a floor cleaning device, the combination of a frame, a handle and rollers mounted in the frame, the said rollers having means for the engagement of a member whereby the rotation of one roller is operative to turn the other, the said rollers being adapted to support a cleaning member and wind the same from one to the other, one of said rollers being mounted in slotted bearings, a member adapted to transmit motion from one roller to the other and mounted in a bearing slotted in a line at an angle to the line of the slots of the roller bearing, one end of said member being normally in contact with the other roller whereby the first mentioned roller when brought to one end of its bearing slots is brought into contact with the said member and its rotation becomes operative to turn the latter roller, substantially as described.

5. In a device of the character described, a frame, rollers mounted thereon, a cloth cleaning member wound on the rollers, and a handle, having in combination therewith a double pawl mounted on the frame in a slotted bearing, one end of the pawl being normally in contact with a ratchet-wheel provided on one of the rollers, the other roller being also provided with a ratchet-wheel and being mounted in a slotted bearing having such direction that the said roller may be brought into and out of contact with the adjacent end of the pawl whereby in the former position the turning of said roller is operative through the medium of the pawl to turn the other roller, and means limiting the turning of the latter roller, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

899,728. IMPREGNATOR. FRANK B. GRAHAM, Garnett, Kans. Filed Jan. 2, 1908. Serial No. 408,951.



1. An impregnator comprising a syringe adapted to be placed wholly within the vagina of an animal there to be heated, and a rod attached to the piston rod of the syringe for inserting and withdrawing the syringe and operating the piston thereof.

2. An impregnator comprising a syringe adapted to be placed wholly within the vagina of an animal there to be heated, and a rod removably attached to the piston rod of the syringe for inserting and withdrawing the syringe and operating the piston thereof.

3. An impregnator comprising a syringe having a heat insulated bore adapted to be placed wholly within the vagina of an animal there to be heated, and a removable inserting rod attached to the piston rod of the syringe for operating said syringe.

4. An impregnator comprising a syringe, a heat insulating cover therefor, a soft resilient nozzle on one end of said syringe, two spaced pistons with a dead air space between, and a piston rod.

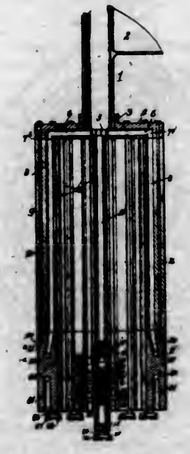
5. An impregnator comprising a syringe having a heat insulated cylinder, a soft rubber nozzle on one end and a cap of similar material on the opposite end, a piston, a piston rod having a groove on one side adapted to carry a thermometer, and an inserting rod.

[Claims 6 to 12 not printed in the Gazette.]

899,729. PNEUMATIC DRILL. MARTIN HARDSOCG, Ottumwa, Iowa. Filed Apr. 18, 1907. Serial No. 368,885.

1. In a pneumatic drill, a frame having formed therein a plurality of fluid induction passages in communication with a circumferential passage, and a plurality of fluid eduction passages in communication with a circumferential passage, for supplying fluid to and discharging fluid from a plurality of pneumatic hammers carried by the frame, substantially as described.

2. In a pneumatic drill, a frame having formed therein a plurality of fluid induction passages in communication with a circumferential passage, a plurality of fluid eduction passages in communication with a circumferential passage, for supplying fluid to and discharging fluid from a plurality of pneumatic hammers carried by the frame, and a plurality of longitudinal passages on the exterior of the frame, substantially as described.



3. In a pneumatic drill, a frame having formed therein a plurality of fluid induction passages in communication with a circumferential passage, a plurality of fluid eduction passages in communication with a circumferential passage, for supplying fluid to and discharging fluid from a plurality of pneumatic hammers carried by the frame, and a plurality of longitudinal passages on the interior of the frame for the escape of the dust and fine particles from within the frame, substantially as described.

4. In a pneumatic drill, a frame having formed therein a plurality of fluid induction passages in communication with a circumferential passage, a plurality of fluid eduction passages in communication with a circumferential passage, for supplying fluid to and discharging fluid from a plurality of pneumatic hammers carried by the frame, a plurality of longitudinal passages on the exterior of the frame for the withdrawal of the cuttings, dust and fine particles from in front of the tool, and a plurality of longitudinal passages on the interior of the frame for the escape of the dust and fine particles from within the frame, substantially as described.

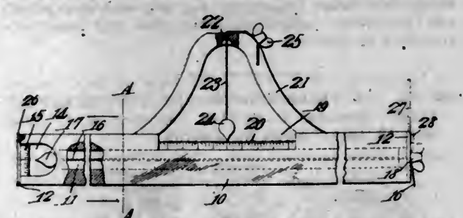
5. In a pneumatic drill, the combination of a frame having formed therein a plurality of fluid induction passages in communication with a circumferential passage, a plurality of fluid eduction passages in communication with a circumferential passage for supplying fluid to and discharging fluid from a plurality of barrels, and a plurality of barrels in communication with said passages and entered into the front end of the frame, each barrel adapted to receive and retain a driving hammer and a driven stem in operating the drill, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

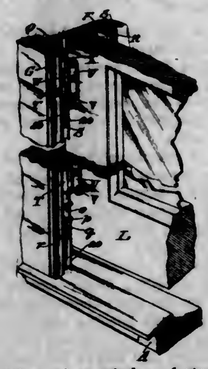
899,730. PLUMB RULE AND LEVEL. EDWARD M. HAUNTY, Milton, Pa. Filed June 9, 1908. Serial No. 437,573.

1. A plumb rule and level comprising a body provided with a longitudinal opening therethrough, a scale at one end of the body, a plumb bob supported in the body, a bow carried on the body, a second plumb bob carried on said bow, a second scale held on said body below said second plumb bob, a thumb nut to hold said plumb bob in adjustment, and means on the body to vary the angular relation thereof with the surface to which it is applied.

2. A plumb rule and level comprising a body provided with a longitudinal opening therethrough, a scale at one end of the body, a plumb bob supported in the body, a bow carried on the body, a second plumb bob carried on said bow, a second scale held on said body below said second plumb bob, a thumb nut to hold said plumb bob in adjustment, and means on the body to vary the angular relation thereof with the surface to which it is applied, comprising a scale arranged to be slidably held at either end of the body, and lock nut for said scale.

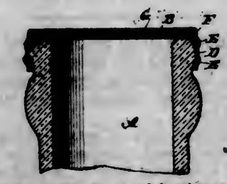


899,731. SLIDABLE AND SWINGING WINDOW-SASH. BERNARD HAUSMANN, San Francisco, Cal., assignor to Hausmann Sash Carrier Co., a Corporation of California. Filed Jan. 28, 1907. Serial No. 354,566.



The combination of a window frame having a sash guideway, a sash movable vertically therein, a shallow metallic guideway provided with hook-like flanges at its opposite edges and detachably secured to said window frame wholly at one side of and adjacent to said sash guideway, slides movable vertically in said shallow guideway and severally consisting of a metallic plate engaging at its opposite edges the flanges of said shallow guideway, said plate having a face bulging outward between said flanges and provided with a pintle barrel disposed close to said bulging face, and plates secured to the face of said window sash and hinged to said pintle barrels.

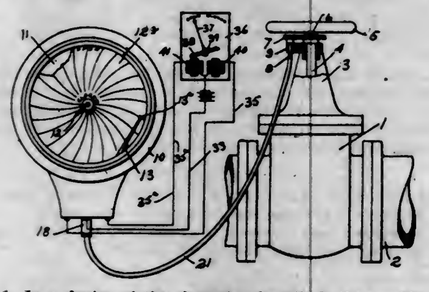
899,732. MEANS FOR SEALING VESSELS. JAMES M. HICKS, Summit, N. J., assignor to Auto-Stopper Company, New York, N. Y. Filed June 17, 1907. Serial No. 379,502.



The combination with a vessel having a circumferential enlargement near the top of its neck, of a sealing cap

having top surface, a flange pendent from said top surface, said pendent flange being contracted inwardly from its extreme diameter, said inward contraction being of smaller diameter than the said enlargement upon the vessel neck, whereby when said enlargement is entered within said flange, said flange will expand and grip said enlargement and thus secure the said cap firmly upon said vessel, substantially as specified.

899,733. VALVE RECORDING AND INDICATING DEVICE. HARRISON C. HOWARD, Conimicut, R. I. Filed Mar. 13, 1908. Serial No. 420,762.



1. In a device of the character described, the combination of a valve, said valve being adapted to be manually operated, a recording device located at a distance from the valve, and means operatively connecting said valve with said recorder whereby the opening and closing of the valve will operate the recorder to indicate the extent of opening through said valve.

2. In a device of the character described, the combination of a valve, a recording device located at a distance from the valve and a flexible shaft connecting said valve with said recorder whereby the opening and closing of the latter will operate the former to indicate the extent of opening through the valve.

3. In a device of the character described, the combination of a valve, a recording device located at a distance from the valve, a flexible shaft connecting said valve with said recorder whereby the opening and closing of the latter will operate the former to indicate the extent of opening through the valve, and means for taking up the lost motion of said shaft.

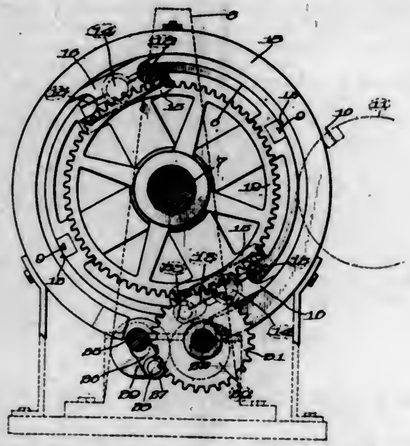
4. In a device of the character described, the combination of a valve, a recording device located at a distance from the valve and a flexible shaft connecting said valve with said recorder whereby the opening and closing of the latter will operate the former to indicate the extent of opening through the valve, and an annunciator controlled in its action by the operation of said recording device.

5. In a device of the character described, the combination of a valve, a recording device located at a distance from the valve means connecting said valve with said recorder whereby the opening and closing of the latter will operate the former to indicate the extent of opening through the valve, and means controlled by the operation of the recording device to indicate closed if the motion transmitting connection to the valve should be broken.

[Claims 6 to 10 not printed in the Gazette.]

899,734. ROTARY FOLDING MECHANISM FOR PRINTING-PRESSES. HANS P. HUSBY, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 30, 1908. Serial No. 424,250.

1. The combination with a rotary carrier, a folding blade carried thereby, and a recessed cross head on said folding blade, of a rotating member, a stud on said rotating member adapted to engage the recess in the lead end of said cross head in normal position from one side of said cross head and while traveling in the same direction with said cross head to move it into folding position, a second rotating member, and a stud carried by said second rotating member and adapted to engage the recess on the lead end of said cross head from the other side thereof while the same is in folding position and while traveling in the same direction therewith to move said cross head and folding blade out of folding position into normal position.



2. The combination with a rotary carrier, a folding blade carried thereby, and a cross head on said folding blade recessed at each end, of a rotating member adapted to rotate in the opposite direction to that of said carrier, a stud on said rotating member adapted to engage the recess in the lead end of said cross head in normal position from one side of said cross head and, while traveling in the same direction with said cross head, to move it into folding position, a second rotating member adapted to rotate in the same direction as that of said first mentioned rotating member, a stud carried by said second rotating member and adapted to engage the recess on the lead end of said cross head from the other side thereof while the same is in folding position and, while traveling in the same direction therewith, to move said cross head and folding blade out of folding position into normal position, and a guide adapted to bear upon said cross head and retain it in normal position while the folding blade is not being operated.

3. The combination with a rotary carrier, a folding blade carried thereby, and a cross head on said folding blade recessed at each end, of a rotating member adapted to rotate in the opposite direction to that of said carrier, a stud on said rotating member adapted to engage the recess in the lead end of said cross head in normal position from one side of said cross head, and, while traveling in the same direction with said cross head, to move it into folding position, a shaft, means for driving said shaft in the same direction and at the same speed with said rotating member, a crank arm on the inner end of said shaft, an engaging stud on said crank arm adapted to engage the recess on the lead end of said cross head from the other side thereof while the same is in folding position, and, while traveling in the same direction therewith, to move said cross head and folding blade out of folding position into normal position, and a guide adapted to bear upon said cross head and retain it in normal position while the folding blade is not being operated.

899,735. TUNNEL AND SUBWAY. GEORGE W. JACKSON, Chicago, Ill. Filed July 6, 1908. Serial No. 442,032.

1. In combination, a bridge spanning a waterway, its foundation piers, and a tunnel extending beneath said waterway, the bore of which extends through the foundation of the bridge, the walls of the tunnel and the bridge piers comprising an integral structure.



2. In combination, a bridge spanning a waterway and connecting a roadway or street on the two sides of the waterway, its masonry foundation piers, and a tunnel beneath the roadway and extending transversely beneath the waterway, the bore of which extends through the foundation piers, the walls of said tunnel and foundation piers comprising an integral structure.

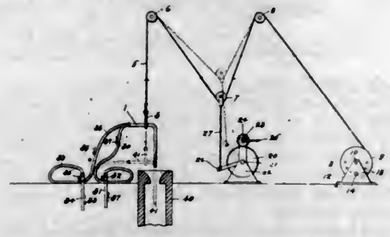
3. In combination, a bridge spanning a waterway, its foundation piers, and a tunnel extending beneath said waterway, and the bore of which extends through the piers of the bridge, the walls of the tunnel and bridge piers comprising an integral structure, and metal posts and girders embedded in the masonry piers to reinforce the same and the walls of the tunnel.

4. In combination, a roadway or street and a tunnel or subway beneath the same, said tunnel or subway terminating in two separate lateral branches, and inclined approaches connected with said branches and located at the side of the axis of the bore of the tunnel or subway.

5. In combination, a roadway or street, a tunnel or subway beneath the same, separate lateral branches extending in opposite directions from the tunnel or subway and inclined approaches at the sides of the axis of the bore of the tunnel or subway connected with the ends of said branches.

[Claim 6 not printed in the Gazette.]

899,736. METHOD OF COOLING CASTINGS. LUKE KAVANAUGH, Waterford, N. Y. Filed Aug. 17, 1907. Serial No. 388,943.



1. That improvement in the art of cooling metal castings which consists in introducing into the mold-inclosed mass of molten metal a non-fusing substance and maintaining therein a comparatively low temperature while the molten mass remains in a fluid condition and withdrawing such substance before the molten mass solidifies.

2. That improvement in the art of cooling metal castings which consists in cooling and at the same time agitating the inner portions of the mold-inclosed mass of molten metal by the movements of a non-fusing substance inserted and reciprocated therein, maintaining the inserted substance at a comparatively low temperature while contained in the molten mass, and withdrawing such substance before the molten mass solidifies.

899,737. BOTTLE-STOPPER. GEORG KIRKEGAARD, New York, N. Y., assignor to Imperial Stopper Company, a Corporation of Maine. Filed Apr. 1, 1908. Serial No. 424,516.

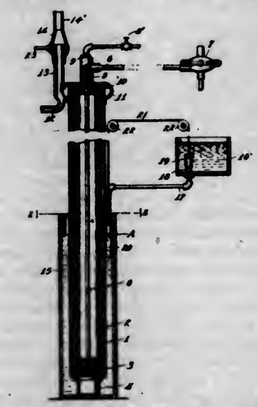
1. A bottle stopper comprising a metallic cap having an annular concentric groove in its upper surface forming an internal rib, in combination with a packing disk seated within said rib, substantially as described.

2. A bottle stopper comprising a metallic cap, in combination with a packing disk contained therein, said packing disk being of less diameter than the internal diameter of



the cap, and the cap being provided with an internal circular rib within which said disk is seated.

899,738. EVAPORATOR. WILLIAM KIRKWOOD, Chicago, Ill. Filed May 6, 1907. Serial No. 372,087.

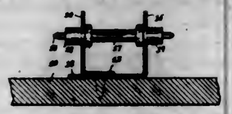


1. In an evaporator, a centrally disposed closed metallic tubular heating chamber arranged in upright position, a series of evaporating tubes metallically united with the exterior of said heating chamber and extending throughout substantially the full length of the latter, a steam pipe communicating with the upper end of said heating chamber, an eduction pipe communicating with the lower end of said heating chamber and leading to an elevated point of discharge, a receptacle within which the lower end of said heating chamber and associated evaporating tubes are submerged, the lower ends of said evaporating tubes being in communication with the interior of said tank, a collecting chamber surrounding the upper end portion of the group of evaporating tubes and in communication with each of the latter, said collecting chamber being provided with a vapor outlet, and a drawing-off pipe communicating with said collecting chamber.

2. In an evaporator, a steam chamber consisting of a tube having its lower end closed, a plug closing the upper end of the tube and providing an inlet passageway for steam, a discharge tube for condensation, said discharge tube passing through said plug and having its inlet end near the lower closed end of the steam chamber, a series of evaporating tubes surrounding the steam chamber and arranged to receive heat therefrom, said tubes having their lower ends open and their upper ends communicating with a discharge chamber, a discharge chamber surrounding the upper ends of said tubes, and a receptacle for liquid within which the lower ends of said tubes and steam chamber are immersed.

3. In an evaporator, the combination of a receptacle for liquid to be evaporated, a steam fed tube rising in and beyond said receptacle and having a closed lower end with a discharge tube for condensation extending through its upper end, a plurality of relatively narrow evaporating tubes extending lengthwise of said tube and about the exterior of the same and metallically united with the outer wall surface thereof and with each other, the inner ends of said tubes being open within said receptacle, and a receiving chamber for the products of condensation, communicating with the discharge ends of said evaporating tubes.

899,739. PEDAL-MOUNTING. CARL F. KOESTER, Hoboken, N. J. Filed May 4, 1908. Serial No. 430,634.

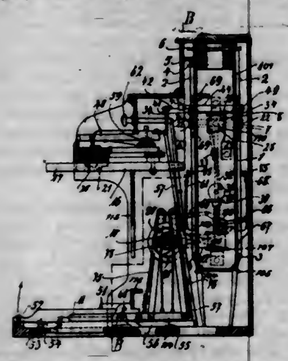


1. A mounting for piano pedals and the like consisting of a securing member provided with an offset; a bearing plate integral therewith and extending substantially perpendicularly therefrom; and a second bearing plate adjustable with respect to said first bearing plate and parallel thereto and having a substantially perpendicular extension integral therewith and extending under said offset.

2. The combination with a base board or the like, of a pedal mounting adapted to be attached thereto and comprising: a securing member provided with an offset; a bearing plate integral therewith and extending substantially perpendicularly therefrom; a second bearing plate parallel to said first bearing plate and having a substantially perpendicular extension integral therewith and extending under the said offset; and means to secure said securing member to said base board, whereby the said extension of the second bearing plate becomes securely held between the said offset and base board.

3. The combination with a base board or the like, of a pedal mounting adapted to be attached thereto and comprising: a securing member provided with an offset; a bearing plate integral therewith and extending substantially perpendicularly therefrom; a second bearing plate parallel to said first bearing plate and having a substantially perpendicular extension integral therewith and extending under the said offset; means to secure said securing member to said base board, whereby the said extension of the second bearing plate becomes securely held between the said offset and base board; and a pedal or the like between said bearing plate and pivotally attached thereto.

899,740. PIANO-VIOLIN. OSCAR KURTZ, Vienna, Austria-Hungary. Filed May 27, 1907. Serial No. 375,908.



1. In a piano violin, a sounding-box, a set of strings of gradually decreasing length arranged on each side of said sounding-box, the sides of said sounding-box having in planes at right angles to said strings a gradually decreasing radius of curvature in the direction of the increase in length of said strings and an endless band for bowing the strings.

2. In a piano violin, a sounding-box, a set of strings arranged on each side of said sounding-box, an endless band surrounding said sounding-box and passing over said strings, fixed and movable means for supporting and driving said band, said movable means arranged to permit of the increase or decrease of the tension of said band.

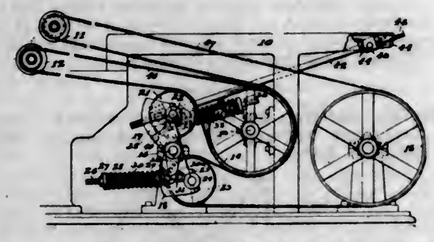
3. In a piano violin, a sounding-box, a set of strings arranged on each side of said sounding-box, an endless band movably surrounding said sounding-box and passing over the strings thereof, fixed bridges and bridges having a movable member, said movable member engaging said strings and adapted, when actuated, to bring the same into engagement with said band.

4. In a piano violin, a sounding-box having sides, a set of strings arranged on each of the sides thereof, an endless band movably surrounding said sounding-box and passing over said strings, fixed bridges and bridges having a movable member carried by the respective sides of said box, said movable member engaging a string of said set of strings and arranged, when actuated, to bring the string into engagement with said band, and means connected with the stationary portion of said bridges and extending through the side of said box carrying the same and contacting with the side opposite the carrying side.

5. In a piano violin, a sounding-box having curved sides the radius of curvature gradually decreasing towards one end thereof, a set of strings carried by each of the sides of said sounding-box, an endless band movably surrounding said sounding-box and passing over the strings thereof, guides for holding said band out of engagement with said strings and means for bringing said strings into and out of engagement with said band.

[Claims 6 to 24 not printed in the Gazette.]

899,741. BELT-TIGHTENER. FRANKLIN L. LANE and BURT D. STEVENS, Beloit, Wis., assignors to The Berlin Machine Works, Beloit, Wis., a Corporation of Wisconsin. Filed June 24, 1908. Serial No. 440,147.



1. In a mechanism of the character described, the combination of a pair of driven pulleys, a driving pulley, a belt passed around one of said driven pulleys and said driving pulley, a second belt passed around the other driven pulley and said driving pulley on top of the first belt, a belt tightener for each of said belts, and means to simultaneously adjust both of said belt tighteners to vary their action on the belts.

2. In a mechanism of the character described, the combination of a pair of driven pulleys, a driving pulley, a belt passed around one of said driven pulleys and said driving pulley, a second belt passed around the other driven pulley and said driving pulley on top of the first belt, an independently spring actuated belt-tightener for each of said belts, and means to simultaneously adjust both of said belt tighteners to vary their action on the belts.

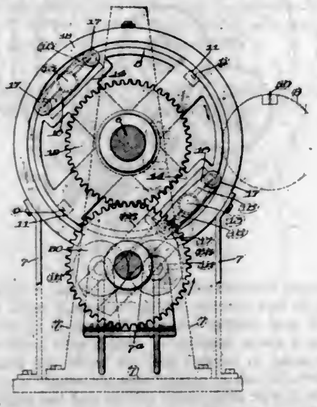
3. In a mechanism of the character described, the combination of a pair of driven pulleys, a driving pulley, a belt passed around one of said driven pulleys and said driving pulley, a second belt passed around the other driven pulley and said driving pulley on top of the first belt, a swinging independently spring actuated belt-tightening pulley for each of said belts, and means to simultaneously adjust both of said belt-tightening pulleys to vary their action on the belts.

4. In a mechanism of the character described, the combination of a pair of driven pulleys, a driving pulley, a belt passed around one of said driven pulleys and said driving pulley, a second belt passed around the other driven pulley and said driving pulley on top of said first belt, a shaft, a belt-tightening pulley for each of said belts swingingly and independently mounted on said shaft, a spring connection between each of said belt-tightening pulleys and said shaft, and means to turn said shaft to simultaneously vary the action of both of said belt-tightening pulleys on their respective belts.

5. In a mechanism of the character described, the combination of a pair of driven pulleys, a driving pulley, a belt passed around one of said driven pulleys and said driving pulley, a second belt passed around the other driven pulley and said driving pulley on top of the first belt, a shaft, a pair of bearing members swingingly mounted on said shaft, a belt-tightening pulley rotatable on each of said bearing members, a pair of arms keyed to said shaft, a spring connection between each of said arms and said bearing members, and an operating shaft connected to said first shaft and adapted to turn the same to simultaneously adjust the positions of said belt-tightening pulleys to vary their action on their respective belts.

[Claim 6 not printed in the Gazette.]

899,742. ROTARY FOLDING MECHANISM FOR PRINTING-PRESSES. HUBERT LANG, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 13, 1908. Serial No. 426,808.



1. In combination, a rotary carrier, a folding blade carried thereby, a tumbling-lever on said folding blade, a guide-ring for said tumbling-lever, fold-laying devices, a rotary member, whose axis lies in the plane which is tangent to said fold-laying devices and passes through the axis of the folding cylinder and a single radial guide thereon adapted to receive said tumbling-lever from said guide-ring in normal position, and, by its rotation, to move said folding blade into and out of folding position and deliver said tumbling-lever to said guide-ring in normal position.

2. In combination, a rotary carrier, a folding blade carried thereby, a tumbling-lever on said folding blade, a guide-ring for said tumbling-lever, fold-laying devices, a rotary member, and a radial guide thereon adapted to receive said tumbling-lever from said guide-ring in normal position while substantially in line with said tumbling-lever, and, by its rotation, to move said folding blade into and out of folding position and deliver said tumbling-lever to said guide-ring in normal position when said radial guide and said tumbling-lever are substantially in line with each other.

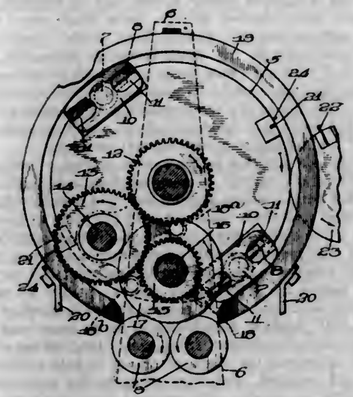
3. In combination, a carrier, a folding blade, a tumbling-lever connected to said folding blade, engaging studs on said tumbling-lever, a guide-ring, folding rollers, a rotary member, and a radial guide thereon adapted to engage the stud on the lead end of said tumbling-lever when said tumbling-lever is in normal position and said guide is substantially in line therewith, and, by its rotation, to move said folding blade into and out of folding position and deliver said tumbling-lever to said guide-ring in normal position when said radial guide and said tumbling-lever are again substantially in line with each other.

4. The combination with a rotary carrier, a folding blade carried thereby, a tumbling-lever connected with said folding blade, a guide-ring for said tumbling-lever, and folding rollers, of a rotary member, and a radial guide thereon adapted to engage said tumbling-lever when said radial guide is substantially tangent to the curve of travel of said folding blade, and, by its rotation, to move said folding blade from normal into folding position and from folding into normal position and deliver said tumbling-lever to said guide-ring when said radial guide is substantially tangent to the curve of travel of said folding blade.

5. The combination with a carrier, a folding blade carried thereby, a tumbling-lever connected with said folding blade, a guide-ring for said tumbling-lever, and fold-laying devices, of a rotary member whose axis lies in the plane which is tangent to said fold-laying devices and passes through the axis of the folding cylinder, a single radial groove on said rotary member adapted to receive the lead end of the tumbling-lever from said guide-ring with said tumbling-lever in normal position and to move said folding blade into and out of folding position and to deliver said tumbling-lever to said guide-ring with said tumbling-lever in normal position.

[Claims 6 to 10 not printed in the Gazette.]

899,743. ROTARY FOLDING MECHANISM. HUBERT LANG, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed May 9, 1908. Serial No. 431,782.



1. The combination with a rotary carrier, a folding blade carried thereby, a cross head connected with said folding blade and provided with a recess at each end, and fold-completing mechanism, of a rotary member placed with its axis of rotation between the axis of rotation of said rotary carrier and the line of travel of said folding blade and rotating in the same direction as said rotary carrier, and an engaging stud on said rotary member adapted, while traveling in the same direction therewith, to engage said recessed cross head while said cross head is in normal position, and, by its said engagement therewith and while traveling in the same direction, to operate said cross head and move said folding blade into folding position and out of folding position into normal position.

2. The combination with a rotary carrier, a folding blade carried thereby, a cross head connected with said folding blade and provided with a recess at each end, fold-completing mechanism, and a guide adapted to bear upon said cross head and hold the same in normal position when not being operated to fold the paper, of a rotary member placed with its axis of rotation between the axis of rotation of said rotary carrier and the line of travel of said folding blade and rotating in the same direction as said rotary carrier, and an engaging stud on said rotary member adapted, while traveling in the same direction therewith, to engage

said recessed cross head while said cross head is in normal position, and, by its said engagement therewith and while traveling in the same direction, to operate said cross head and move said folding blade into folding position and out of folding position into normal position.

3. The combination with a rotary carrier, a folding blade carried thereby, a cross head connected with said folding blade and provided with a recess at each end, fold-completing mechanism, and a guide adapted to bear upon said cross head and hold the same in normal position when not being operated to fold the paper, of a rotary member placed with its axis of rotation between the axis of rotation of said rotary carrier and the line of travel of said folding blade and rotating in the same direction as said rotary carrier, and an engaging stud on said rotary member whose circle of travel intersects the circle of travel of said folding blade axis and adapted, while traveling in the same direction therewith, to engage said recessed cross head while said cross head is in normal position, and, by its said engagement therewith and while traveling in the same direction, to operate said cross head and move said folding blade into folding position and out of folding position into normal position.

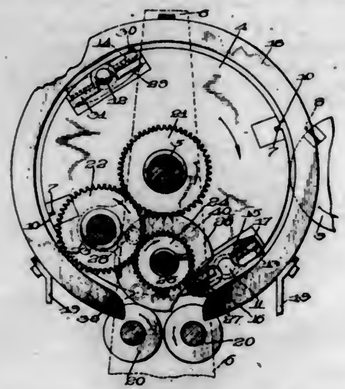
4. The combination with a rotary carrier, a folding blade on said rotary carrier, a cross head on said folding blade provided with a recess at each end, and a guide adapted to bear upon said cross head and hold the same in normal position while said folding blade is not being operated, of a rotary member whose axis of rotation is between the axis of said rotary carrier and the line of travel of said cross head, means for driving said rotary member in the same direction with said rotary carrier and at a speed of four to three with relation thereto, three studs upon said rotary member equally distant from each other adapted, while traveling in the same direction therewith, to engage said recessed cross head while said cross head is in normal position, and, by its said engagement therewith and while traveling in the same direction, to operate said cross head and move said folding blade into folding position and out of folding position into normal position.

5. The combination with a rotary carrier, a folding blade on said rotary carrier, a cross head on said folding blade provided with a recess at each end, and a guide adapted to bear upon said cross head and hold the same in normal position while said folding blade is not being operated, of a rotary member whose axis of rotation is between the axis of said rotary carrier and the line of travel of said cross head, means for driving said rotary member in the same direction with said rotary carrier and at a speed of four to three with relation thereto, three studs upon said rotary member equally distant from each other whose circle of travel intersects the circle of travel of said folding blade axis and adapted, while traveling in the same direction therewith, to engage said recessed cross head while said cross head is in normal position, and, by its said engagement therewith and while traveling in the same direction, to operate said cross head and move said folding blade into folding position and out of folding position into normal position.

899,744. ROTARY FOLDING MECHANISM. HUBERT LANG, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed May 9, 1908. Serial No. 431,783.

1. The combination with a rotary carrier, a folding blade mounted in said carrier, folding rollers, and a cross head connected to said folding blade and recessed at its opposite ends, of a rotary member whose axis is located between the axis of said rotary carrier and the circular path of travel of said folding blade, and a pair of studs on said rotary member adapted respectively at alternate revolutions of the carrier to successively engage the one the recess at one end, the other the recess at the other end of said cross head while said cross head is in normal position, and, while moving in the same direction therewith, to move said folding blade out of normal position into folding position and out of folding position into normal position.

2. The combination with a rotary carrier, a folding blade mounted in said carrier, folding rollers, a cross head connected to said folding blade and recessed at its opposite ends, and a guide adapted to engage said cross head and hold the same in normal position while the blade is not being operated, of a rotary member, a pair of studs carried on said rotary member diametrically opposite each other, and means for driving said rotary member at a speed of three to two with relation to said rotary carrier, whereby said studs respectively will successively engage, one the recess at one end of the cross head and the other at the next revolution of the carrier the recess in the opposite end of said cross head, while said cross head is in normal position, and, while moving in the same direction therewith, will move said folding blade out of normal position into folding position and out of folding position and deliver the folding blade to said guide in normal position.

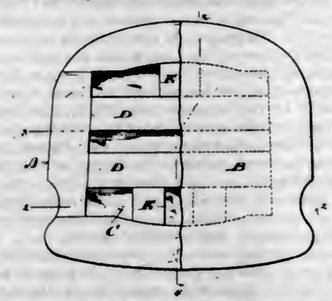


3. The combination with a rotary carrier, a folding blade mounted in said carrier, folding rollers, a cross head connected to said folding blade and recessed at its opposite ends, and a guide adapted to engage said cross head and hold the same in normal position while the blade is not being operated, of a rotary member whose axis lies between the axis of said rotary carrier and the path of travel of the axis of said folding blade, a pair of studs carried on said rotary member diametrically opposite each other, and means for driving said rotary member at a speed of three to two with relation to said rotary carrier, whereby said studs respectively will successively engage, one the recess at one end of the cross head and the other at the next revolution of the carrier the recess in the opposite end of said cross head, while said cross head is in normal position, and, while moving in the same direction therewith, will move said folding blade out of normal position into folding position and out of folding position and deliver the folding blade to said guide in normal position.

4. The combination with a rotary carrier, a folding blade mounted in said carrier, folding rollers, a cross head connected to said folding blade and recessed at its opposite ends, and a guide adapted to engage said cross head and hold the same in normal position while the blade is not being operated, of a rotary member whose axis lies between the axis of said rotary carrier and the path of travel of the axis of said folding blade, a pair of studs carried on said rotary member diametrically opposite each other, whose circle of travel intersects the circle of travel of said folding blade axis, and means for driving said rotary member at a speed of three to two with relation to said rotary carrier, whereby said studs respectively will successively engage, one the recess at one end of the cross head and the other at the next revolution of the carrier the recess in the opposite end of said cross head, while said cross head is in normal position, and, while moving in the same direction therewith, will move said folding blade out of normal position into folding position and out of folding position and deliver the folding blade to said guide in normal position.

5. The combination with a rotary carrier, a pair of folding blades mounted in said carrier diametrically opposite one another, folding rollers, and a cross head recessed at each end connected with each of said folding blades, one exterior to said carrier at one end thereof and the other exterior to said carrier at the other end thereof, of a rotary member exterior to one end of said carrier mounted on an axis lying between the axis of said carrier and the path of travel of said folding blades, a pair of studs on said rotary member whose circle of travel will intersect the circle of travel of said folding blades and adapted to successively engage the lead end of the cross head on one of said blades in normal position, and, while traveling in the same direction therewith, to move said folding blade out of normal position into folding position and out of folding position into normal position, a second rotary member exterior to said rotary carrier at the opposite end from said first-mentioned rotary member and mounted on an axis lying between the axis of said carrier and the path of travel of said folding blades, a pair of studs on said second rotary member whose circle of travel will intersect the circle of travel of said folding blades and adapted to successively engage the lead end of the cross head on the other of said blades in normal position, and, while traveling in the same direction therewith, to move said folding blade out of normal position into folding position and out of folding position into normal position.

899,745. CHAIR-SEAT. CHARLES H. LENHART, Plymouth, Wis. Filed May 23, 1908. Serial No. 434,454.

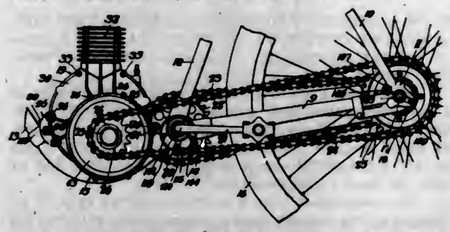


1. A chair-seat frame provided with cross-braces and other braces between those aforesaid and its front and rear, and a top secured on said frame in contact with said braces.

2. A chair-seat frame provided with cross-braces and other braces between those aforesaid and its front and rear, and a top secured on the frame in adhesive contact with the braces.

3. A chair-seat frame provided with cross-braces and other braces between those aforesaid and its front and rear, a top secured on the frame in contact with the braces, and a bottom underlying said frame and braces.

899,746. DRIVING-GEAR FOR MOTOR-CYCLES. AXEL LEVEDAHL, Aurora, Ill., assignor to Aurora Automatic Machinery Company, Aurora, Ill., a Corporation of Illinois. Filed Jan. 17, 1908. Serial No. 411,252.



1. A driving gear mechanism for motor cycles comprising, in combination with the motor, its crank-shaft and its casing wall provided with a bearing for the crank-shaft, a gear pinion on the crank-shaft exterior to the crank-shaft bearing, a bearing stud extending outwardly from said casing wall, a gear wheel meshing with said gear pinion having central bearing engagement with said bearing stud and peripheral engagement with said casing wall, and a driving gear affixed centrally to the outer face of said gear wheel.

2. A driving gear mechanism for motor cycles comprising, in combination with the motor, its crank-shaft and its casing wall provided with a bearing for the crank-shaft, a gear pinion on the crank-shaft exterior to the crank-shaft bearing, a bearing stud extending outwardly from said casing wall, an internally toothed gear wheel meshing with said pinion having central bearing engagement with the bearing stud and peripheral bearing engagement with the said casing wall, and a driving gear affixed centrally to said gear wheel.

3. A driving gear mechanism for motor cycles comprising, in combination with the motor, its crank-shaft and its casing wall provided with a bearing for the crank-shaft, a pinion on the crank-shaft exterior to the shaft bearing, a bearing stud extending outwardly from the casing wall, an annular flange extending from said casing wall concentrically with the stud to form a gear chamber, an internally toothed gear wheel located within said gear chamber and meshing with said pinion, said gear wheel having central bearing engagement with the said bearing stud and peripheral bearing engagement with the casing wall inside of said annular flange, said gear wheel being arranged to close the laterally outer side of the gear chamber, and a driving gear affixed centrally to the outer face of said gear wheel.

4. A driving gear mechanism for motor cycles comprising, in combination with the motor, its crank-shaft and its casing wall provided with a bearing for the crank-shaft, a pinion on the crank-shaft exterior to the shaft bearing, a bearing stud extending outwardly from the casing wall, an internally toothed gear wheel meshing with said gear pinion, an antifriction ball bearing between the said gear wheel and the bearing stud, an antifriction ball bearing between the periphery of the said gear wheel and the casing wall, and a driving gear affixed centrally to said gear wheel.

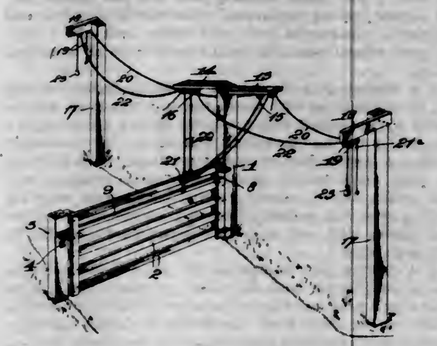
5. A driving gear mechanism for motor cycles comprising, in combination with the motor, its crank-shaft and its casing wall provided with a bearing for the crank-shaft, a pinion on the crank-shaft exterior to the shaft bearing, a bearing stud extending outwardly from the casing wall, an internally toothed gear wheel meshing with said pinion and provided with a hub which surrounds said bearing stud, an antifriction bearing between said stud and the gear wheel hub, comprising a conical bearing member applied to said stud, and a plurality of antifriction balls interposed between said conical bearing member and an opposed annular bearing surface of the hub, an annular antifriction bearing between the periphery of said gear wheel and said casing wall, and a driving gear affixed to the hub.

[Claims 6 to 11 not printed in the Gazette.]

899,747. FARM-GATE. LOUIS LIESMANN, Dixon, Mo. Filed Aug. 6, 1907. Serial No. 387,348.

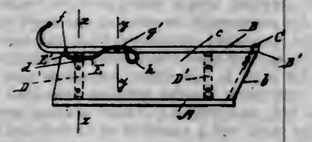
1. The combination with a pair of posts rigidly fixed in the ground on opposite sides of a roadway, of a gate hinged to one of the posts and adapted to close against the opposite post, a latch arranged on the gate, a keeper on the post against which the free end of the gate swings for engaging the latch, a pair of posts arranged on opposite sides of the post to which the gate is hinged, arms fixed to the upper ends of the last mentioned pair of posts and projecting laterally therefrom, swiveled pulleys depending from the under sides of said arms, a pair of diagonally disposed arms rigidly fixed on top of the post to which the gate is hinged, and which arms extend in opposite directions, swiveled pulleys depending from the under sides of the diagonally disposed arms, and operating cables fixed to the gate latch and to the gate and passing

over the pulleys on the diagonally disposed arms, and which cables extend from thence to and around the pulleys on the laterally projecting arms.



2. The combination with a pair of posts rigidly positioned in the ground on opposite sides of a roadway, a gate hinged to one of the posts and adapted to close against the opposite post, a latch arranged on the gate, a keeper on the post against which the free end of the gate swings for engaging the latch, a pair of posts arranged on opposite sides of the post to which the gate is hinged, a pair of diagonally disposed arms rigidly fixed on top of the post to which the gate is hinged, one of which arms projects over the roadway, and the other arm projecting in the opposite direction, pulleys arranged on said diagonally disposed arms, and operating cables fixed to the gate latch and to the gate and passing over the pulleys on the diagonally disposed arms, and said pulleys being extended to the pair of posts on opposite sides of the post to which the gate is hinged.

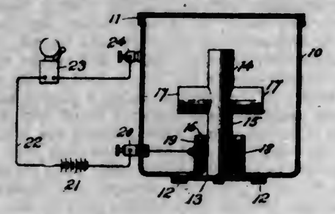
899,748. VEHICLE-SEAT. HERBERT C. MARTELL, Flint, Mich., assignor to The Cleveland Hardware Company, Cleveland, Ohio. Filed Feb. 24, 1908. Serial No. 417,432.



1. The combination, with a vehicle seat, and a bracket secured to the seat and provided with a laterally projecting lug having a hole in it, of a shifting rail supported by the said seat and provided with a pin which projects downwardly through the said hole, a locking-catch formed of a single piece of spring metal, said catch being pivoted to the said rail at one end and engaging with the said lug and the end portion of the said pin below the said lug, and a projection on the said rail for the free end portion of the said locking-catch to engage with.

2. The combination, with a vehicle seat, and a bracket secured to one of the side portions of the seat and provided with a lug which projects laterally of the said side portion and which has a hole in it, of a shifting rail supported by the said seat and provided with a pin which projects downwardly through the said hole, a locking-catch formed of a single piece of spring metal, said catch being pivoted at one end to the said rail and having a downwardly curved portion which extends under the said lug between the side portion of the seat and the projecting portion of the pin, said locking-catch having also an upwardly curved portion near its free end, and a projection on the said rail for the said upwardly curved portion to engage with.

899,749. FIRE-ALARM. BERNARD B. MEARS, Baltimore, Md. Filed Nov. 16, 1907. Serial No. 402,462.



1. A device of the character described, comprising a casing having a sleeve formed integral therewith and having tongues projecting from a part thereof, a celluloid diaphragm supported by the tongues immediately adjacent to the sleeve, a substantially cross-shaped circuit-closer having its stem guided in the sleeve and supported by the celluloid diaphragm, a sleeve insulated from the first-mentioned sleeve of the casing and concentric therewith, a battery, an alarm, and electric connections between the battery, alarm, casing, and insulated sleeve whereby the circuit through the alarm may be completed when said diaphragm is destroyed.

2. A device of the character described, comprising a casing having a sleeve and provided with tongues projecting from a part thereof, a combustible diaphragm supported by the tongues immediately adjacent to the sleeve, a circuit-closer having a stem guided in the sleeve and supported by the diaphragm, a sleeve insulated from the first-mentioned sleeve of the casing and concentric therewith, a battery, an alarm, and electric connections between the battery, alarm, casing, and insulated sleeve.

3. A device of the character described, comprising a casing having a sleeve, a destructible diaphragm supported on the casing, a substantially cross-shaped circuit-closer having its stem guided in the casing and supported by said diaphragm, a sleeve insulated from the first-mentioned sleeve of the casing and concentric therewith, a battery, an alarm, and electric connections between the battery, alarm, casing, and insulated sleeve.

4. A device of the character described, comprising a casing having a sleeve, tongues projecting from a part thereof, a celluloid diaphragm supported by the tongues, a circuit-closer having its stem guided in the sleeve and supported by said celluloid diaphragm, a sleeve insulated from the first-mentioned sleeve of the casing and concentric therewith, an alarm, and electric connections whereby the circuit through the alarm may be completed when the celluloid diaphragm is destroyed.

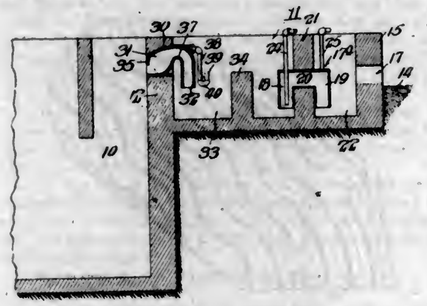
5. A device of the character described, comprising a casing having a sleeve formed integral therewith, a second sleeve insulated therefrom and concentric therewith, a substantially cross-shaped circuit-closer guided in the sleeve of the casing, a celluloid diaphragm supporting the circuit-closer, an alarm, electric connections between the sleeves and alarm, and a spring normally forcing the circuit-closer against the diaphragm for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

899,750. APPARATUS FOR DISCHARGING THE CONTENTS OF SEPTIC OR SETTLING TANKS. SAMUEL F. MILLER, Chicago, Ill. Filed Apr. 25, 1908. Serial No. 429,254.

1. The combination with a septic or settling tank, of an overhead siphon feed device for intermittently withdrawing surface liquid from a body of liquid in said tank, and a well or sump containing a maintained body of liquid into which the outlet end of said feed device dips and by which the feed device is sealed.

2. The combination with a septic or settling tank, of an overhead siphon feed device for intermittently withdrawing surface liquid from a body of liquid in said tank, a well or sump containing a maintained body of liquid into which the outlet end of said feed device dips and by which the feed device is sealed, and an automatic venting device controlled by the liquid head in said tank for venting said feed device.



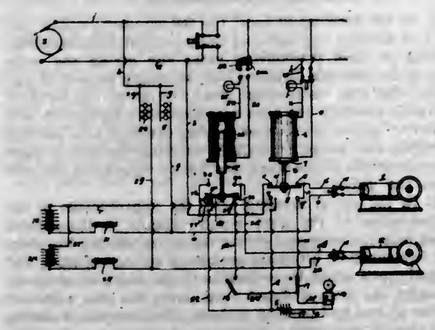
3. The combination with a septic or settling tank, of an overhead siphon feed device for intermittently withdrawing surface liquid from a body of liquid in said tank, a well or sump containing a maintained body of liquid into which the outlet end of said feed device dips and by which the feed device is sealed, and a trapped vent pipe communicating with the interor of the feed device and having a less depth of seal than that of the feed device, for controlling the operation of the latter.

4. The combination with a septic or settling tank and a distributing chamber having means for controlling the discharge of liquid therefrom, of an overhead siphon feed device for intermittently withdrawing surface liquid from a body of liquid in said tank, a well or sump containing a maintained body of liquid which overflows into said distributing chamber, said feed device discharging through said sump and being sealed at its outer end by the liquid therein, and an automatic venting device controlled by the liquid head in said tank for venting said feed device, said vent device being operated by a less head than required to force the seal of the feed device.

5. In a sewage purifying system, the combination with a septic or settling tank and a distributing chamber provided with means for controlling the discharge of the contents thereof upon a contact or filter bed, of a feed device for intermittently feeding the liquid sewage from said tank to said distributing chamber, provided with an outlet end which is submerged in a maintained body of liquid contained in a sump or well in said distributing chamber.

[Claims 6 to 10 not printed in the Gazette.]

899,751. IGNITION-CONTROLLING APPARATUS. CHARLES MITCHELL, Jr., Milwaukee, Wis. Filed Oct. 21, 1907. Serial No. 398,324.

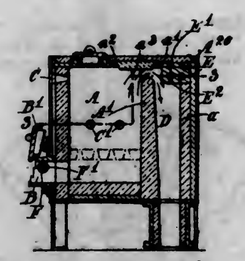


1. In apparatus of the described class, the combination with a plurality of electrical circuits each having a set of terminals, and independent sources of electrical energy, of a solenoid electrically connected with one of the sources of energy, an igniter included in said circuits, and a switch located between the sets of terminals controlled by the solenoid and adapted to make or break either of said circuits through the igniter; said solenoid being provided with a longitudinally movable core bar, and said switch being directly connected and arranged to move bodily with the core bar from one set of terminals to the other.

2. In apparatus of the described class, the combination with a plurality of electrical circuits each having a set of terminals, and independent sources of electrical energy, of a solenoid electrically connected with one of the sources of energy, an igniter included in said circuits, and a switch located between the sets of terminals controlled by the solenoid and adapted to make or break either of said circuits through the igniter, said switch being arranged to be moved in one direction by the solenoid and in the other direction by gravity; one terminal of each set being independently connected with the corresponding source of electrical energy and the other terminal being connected with a conductor common to both sources of electrical energy, the terminals for the respective circuits being located on opposite sides of the switch, and said switch being arranged to move bodily from one set of terminals to the other.

3. In apparatus of the described class, the combination with a plurality of electrical circuits and independent sources of electrical energy, an igniter connected in common with both circuits, a solenoid connected to receive electrical energy from one of said circuits, a vertically movable solenoid core bar, and a switch connected therewith, one of said igniter circuits having terminals above and the other having terminals below said switch, whereby, when the solenoid is energized, the switch is lifted to contact with the upper terminals, and permitted to drop by gravity to the lower terminals when the solenoid is deënergized.

899,752. STOVE FOR DRYING MOLDS. CHARLES MOREHEAD, Rugby, England. Filed Nov. 14, 1907. Serial No. 402,072.



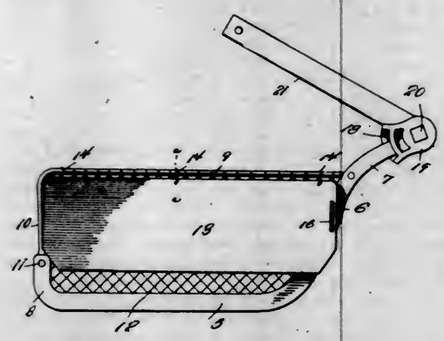
1. In a drying stove the combination with the stove body of a bridge, and an air heating conduit and injector situated within the stove above the outlet between the top of the bridge and the stove wall and in the angle between the top inner face of the rear wall and the lower face of the upper wall.

2. In a drying stove the combination with the stove body of a bridge, and an air heating conduit and injector formed in a block of refractory material situated within the stove above the outlet between the top of the bridge and the stove wall and in the angle between the top inner face of the rear wall and the lower face of the upper wall.

3. In a drying stove the combination with the stove body of a bridge, and an air heating conduit situated within the stove above the outlet between the top of the bridge and the stove wall and in the angle between the top inner face of the rear wall and the lower face of the upper wall.

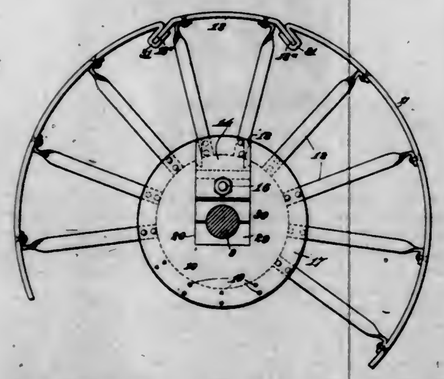
4. In a drying stove the combination with the stove body of a bridge, and an air injector situated within the stove above the outlet between the top of the bridge and the stove wall and in the angle between the top inner face of the rear wall and the lower face of the upper wall.

899,753. CULTIVATOR-FENDER. ERNEST G. MUNSON, Garrettsville, Ohio. Filed Apr. 19, 1906. Serial No. 312,682.



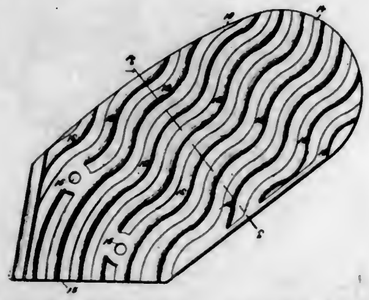
A cultivator fender comprising a frame including a substantially U-shaped bar forming upturned extensions, one of the latter of greater length than the other and being curved laterally, a rod bent on itself at right angles thereto, the free ends of the same connected to the upturned extensions of said bar, and a screen mounted on the U-shaped bar and rod, a shield plate provided with a slot flexibly connected to the rod, a curved rack bar pivoted to one of the extensions and engaging the wall of the slot to adjust the shield plate at an angle to said frame and means for connecting the lateral portion of the extension to a cultivator.

899,754. PULLEY. CHARLES F. MURRAY, Chicago, Ill., assignor to C. W. Kelley and C. N. Kelley, Madison, Wis. Filed Apr. 10, 1908. Serial No. 426,206.



In a built-up pulley, a hub, rim and spokes, said rim having a removable segment in combination with a block provided with dove-tailed lugs and having its end portion shouldered and depending downward, and a wedge and bolt, said bolt being adapted to pass through said depending portion and said wedge, and adapted to lock the parts together, substantially as described.

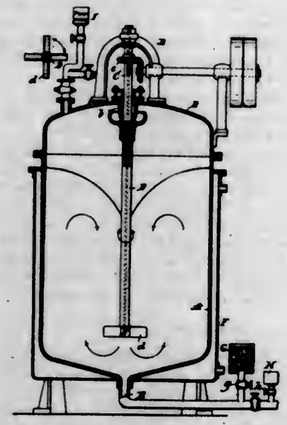
899,755. PLOW-MOLDBOARD. CALVERT R. MCGAHEY, Lynchburg, Va., assignor to Lynchburg Foundry Company, Lynchburg, Va., a Corporation of Virginia. Filed Aug. 5, 1908. Serial No. 447,060.



1. A moldboard having upon its back a series of ribs extending undulatingly across the longitudinal line of strain upon said board.

2. A mold board having upon its back compound curved ribs extending from the point engaging end of the board diagonally to the opposite end thereof.

899,756. PROCESS OF BREWING BEER. LEOPOLD NATHAN, Zurich, Switzerland, and HANS BOLZE, Mannheim, Germany; said Bolze assignor to said Nathan. Filed June 1, 1901. Serial No. 62,732.



1. In the brewing of beer, the improvement which consists in stirring and aerating the wort and simultaneously cooling it, then introducing yeast and giving the wort, during the ensuing fermentation, alternate periods of agitation and rest, until about three-fourths of the intended alcoholic strength has been produced, then giving the beer a further period of rest and passing carbonic acid through it during such period, moderately stirring the beer to cause a precipitation of the yeast, and finally separating the beer from the yeast.

2. In the art of brewing beer, the improvement in the fermentation of the wort which consists in introducing yeast into the wort and giving the latter, during the ensuing fermentation, alternate periods of strong agitation and of rest, until about three-fourths of the intended alcoholic strength has been produced, then giving the beer a further period of rest and passing carbonic acid through it during such period, moderately stirring the beer to cause a precipitation of the yeast, and finally separating the beer from the yeast.

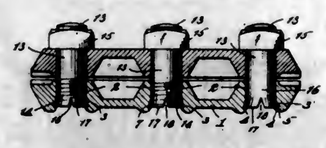
3. In the art of brewing beer, the improvement in the fermentation of the wort which consists in introducing yeast into the wort and giving the latter, during the ensuing fermentation, alternate periods of agitation and rest, and terminating this procedure before the beer has attained the desired final alcoholic strength, then giving the beer a further period of rest and passing carbonic acid through it during such period, moderately stirring the beer to cause a precipitation of the yeast, and finally separating the beer from the yeast.

4. In the art of brewing beer, the improvement in the fermentation of the wort which consists in passing carbonic acid through the wort after the main fermentation, and then separating the yeast from the beer.

5. In the art of brewing beer, the improvement in the fermentation of the wort which consists in subjecting the wort first to violent and then to relatively slow fermentation and passing carbonic acid through the wort during the slow fermentation.

[Claims 6 to 9 not printed in the Gazette.]

899,757. CABLE-CLAMP. HENRY B. NEWHALL, Plainfield, N. J. Filed Apr. 5, 1907. Serial No. 366,633.



1. In a clamp, a back having a series of flaring apertures, securing members fastened to the back within the aperture and having their lower ends screw-threaded and spread into said flaring apertures to coöperate with said flared portions of the apertures, a cover and means for securing the back to the cover.

2. In a clamp, a back having a series of flaring apertures and rigid shoulders, securing members fastened in the apertures and spread to coöperate with the flaring portion of the apertures and the shoulders, a cover and means for securing the cover to the back.

3. In a clamp, a back having one or more screw-threaded flaring apertures, one or more studs screw-threaded at both ends, to coöperate with the screw threads in the back, the lower portion of the studs being forced laterally into the flaring portion of the apertures, a back, and nuts to coöperate with the screw threads upon the other end of the studs to fasten the back to the cover.

4. In a clamp, a back having screw-threaded apertures flaring at their lower ends, rigid shoulders beneath the screw-threaded portion of the apertures, studs screw-threaded at both ends the lower screw-threaded end to coöperate with the screws in the apertures, the lower portion of the stud being pressed laterally to coöperate with the flaring portion of the aperture, a cover and nuts to cooperate with the other screw-threaded ends to secure the cover upon the back.

5. In a clamp, a back having screw-threaded apertures terminating in rigid shoulders, screw-threaded stud cooperating with the screw threads in the apertures, the lower portion of the studs being pressed outwardly to cooperate with the shoulders, a cover, and nuts to coöperate with the screw threads upon the other ends of the studs to hold the back to the cover so as to clamp the cable.

[Claims 6 and 7 not printed in the Gazette.]

899,758. DERRICK. FRED R. PATCH, Rutland, Vt. Filed July 22, 1908. Serial No. 444,838.

1. A derrick comprising a mast and boom, a hoist line extending from the outer end of said boom to the base of said mast, a hoisting power, a carriage connected with said line and mounted to travel between the mast base and power, and a tackle extending between said carriage and power.

2. A derrick comprising a mast and a boom, a hoist line extending from the outer end of said boom to the base of said mast, a hoisting power, a carriage connected with said line and mounted to travel between said mast base and power, and a tackle extending from said carriage over a fixed block and thence over a sheave upon said carriage to said power.



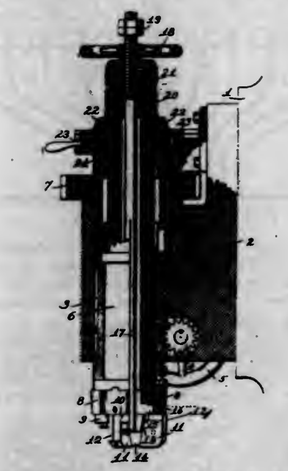
3. A derrick comprising a mast and a boom, a hoist line extending from the outer end of said boom to the base of said mast, a hoisting power, a carriage connected with said line and mounted to travel between the mast base and power, a tackle extending between said carriage and power, track rails for said carriage, and bearing rollers intermediate of said rails.

4. A derrick comprising a mast, a boom pivoted thereon and having a guide sheave at each end, a hoist line extending over said sheaves to the base of the mast, a hoisting power, a carriage connected to said line and mounted to travel between the mast base and power, and a connection between said carriage and power.

5. A derrick comprising a mast, a boom pivoted thereon and having a guide sheave at each end, a hoist line extending over said sheaves to the base of the mast, a hoisting power, a carriage connected to said line and mounted to travel between the mast base and power, tackle sheaves mounted upon said carriage, and a tackle extended between said carriage and power.

[Claims 6 to 15 not printed in the Gazette.]

899,759. REAMER-TAP. GEORGE T. REISS, Hamilton, Ohio, assignor to Niles-Bement-Pond Company, Jersey City, N. J. Filed Feb. 5, 1908. Serial No. 414,319.



1. A reamer tap comprising, a shank, a tap rigidly carried by one end thereof, a collapsible reamer carried by the end of the tap, and means for expanding and contracting the reamer, combined substantially as set forth.

2. A reamer tap comprising, a shank, a tap rigidly carried by one end thereof, a collapsible reamer carried by the end of the tap, adjusting mechanism at the other end of the shank, and a stem extending axially through the shank and tap and connecting the adjusting mechanism with the reamer and serving to expand and contract the reamer, combined substantially as set forth.

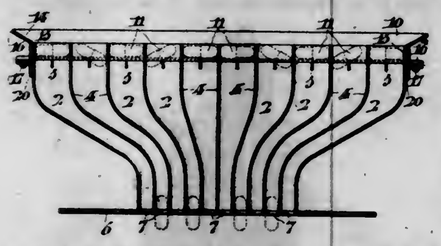
3. A reamer tap comprising, a shank, a tap rigidly carried by one end thereof, radial guideways carried by the end of the tap, blade-carrying jaws sliding in said guideways and having converging inner faces, a vertically movable head engaging the inner faces of said jaws, means for vertically adjusting said head, radial stop-screws carried by the tap, and lugs carried by said jaws and adapted to engage the inner ends of the stop-screws, combined substantially as set forth.

4. A reamer tap comprising, a shank, a tap rigidly carried by one end thereof, radial guideways carried by the end of the tap, blade-carrying jaws sliding in said guideways and having converging inner faces, a vertically movable head engaging the inner faces of said jaws, a stem connected with said head and passing axially through the tap and shank, a hand-nut screwed on the end of the stem opposite said head, and means for preventing movement of said hand-nut axially with reference to the shank, combined substantially as set forth.

5. A reamer tap comprising, a shank, a tap rigidly carried by one end thereof, radial guideways carried by the end of the tap, blade-carrying jaws sliding in said guideways and having converging inner faces, a vertically moving head engaging the inner faces of said jaws, a stem connected with said head and passing axially through the tap and shank, a hand-nut screwed on the end of the stem opposite said head, means for preventing movement of said hand-nut axially with reference to the shank, and an adjustable device to positively limit the movement of said stem axially with reference to said shank, combined substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

899,760. CAPSULE-PLACING DEVICE. JOSEPH P. REMINGTON, Philadelphia, Pa., assignor to Remington Manufacturing Company, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 7, 1908. Serial No. 414,705.



1. In a capsule placing device the combination with means for receiving a plurality of capsules; of means for causing all of said capsules to assume a predetermined position with respect to a given end when discharged from said receiving means.

2. In a capsule placing device the combination with means for receiving a plurality of capsules; of means whereby the superior weight of the cap end of the capsules is utilized to cause all the capsules to assume a predetermined position when discharged.

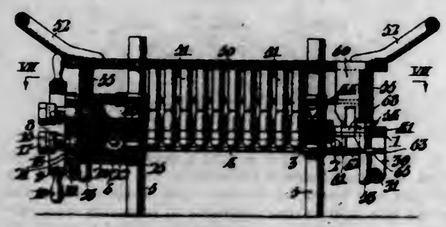
3. In a capsule placing device, the combination of a tray having a plurality of compartments and a removable bottom; a funnel having a corresponding number of compartments or chutes adapted to register with the compartments of the tray; and means located below the bottom of said tray for causing capsules coming in contact therewith to assume a predetermined position.

4. In a capsule placing device, the combination of a tray having a plurality of oblong compartments; a removable bottom for said tray; a funnel body having a corresponding number of compartments or chutes having their upper ends corresponding in size and location to the compartments in said tray, said chutes narrowing to a substantially square cross section at their lower ends; and means extending across said chutes for causing capsules coming in contact therewith to assume a predetermined position in said funnel body.

5. In a capsule placing device, the combination of a tray having a plurality of oblong compartments; a removable bottom for said tray; a funnel body having a corresponding number of compartments or chutes having their upper ends corresponding in size and location to the compartments in said tray, said chutes narrowing to a substantially square cross section at their lower ends; means extending across said chutes for causing capsules coming in contact therewith to assume a predetermined position in said funnel body; and a plate on the bottom of said funnel body having apertures concentric with the lower ends of said chutes and adapted to receive the cap end of a capsule.

[Claims 6 to 9 not printed in the Gazette.]

899,761. CAPSULE-FILLING MECHANISM. JOSEPH P. REMINGTON, Philadelphia, Pa., assignor to Remington Manufacturing Company, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 7, 1908. Serial No. 414,706.



1. In a capsule filling apparatus, the combination of a plurality of parallel and similarly perforated plates, the apertures of which are adapted to register, one of said plates normally having its apertures out of registry with those of said other plates and acting as a support for one end of the capsules; and means for moving said plate to aline its apertures with those of said other plates.

2. In a capsule filling apparatus, the combination of a plurality of parallel and similarly perforated plates with apertures adapted to receive capsule members; means for moving one of said plates out of alinement to grip the capsule members resting within the apertures; another similarly perforated plate normally having its apertures out of alinement with those of said plurality of plates and so placed in parallel relation thereto as to act as a support for one end of the capsules; and means for moving said supporting plate to aline its apertures with those of said other plates.

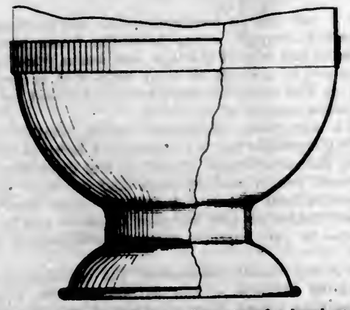
3. In a capsule filling apparatus, the combination of a perforated plate with apertures adapted to receive capsule members; another similarly perforated plate normally having its apertures out of alinement with the first mentioned plate and so placed in parallel relation to it, that capsule members resting within the apertures of the first plate rest with their bottoms on the second mentioned plate, while their edges are flush with the surface of the first mentioned plate; and means for moving the second mentioned plate so that its apertures are in alinement with those of the first mentioned plate, whereby the capsule members in the one may pass through the perforations of the other, substantially as described.

4. In a capsule filling apparatus, the combination of a perforated plate with apertures adapted to receive capsule members; another similarly perforated plate normally having its apertures out of alinement with the first mentioned plate and so placed in parallel relation to it, that capsule members resting within the apertures of the first plate rest with their bottoms on the second mentioned plate, while their edges are flush with the surface of the first mentioned plate; means for moving the second mentioned plate so that its apertures are in alinement with those of the first mentioned plate, whereby the capsule members in the one may pass through the perforations of the other; an ejector with plungers corresponding to each one of the apertures of the plates; and means whereby as said plungers are passed through the apertures of the plates both plates are automatically maintained in alinement so that capsules or plungers may pass through the apertures of both.

5. In a capsule filling apparatus, the combination of two tables each fitted with a plurality of parallel and similarly perforated plates, the apertures of which register and are adapted each to receive a capsule member; means for sliding one plate in each table sufficiently out of alinement to grip the capsule members resting within the apertures; and means for supporting the ends of the capsule members when the grip on said members has been released.

[Claims 6 to 20 not printed in the Gazette.]

899,762. MILK-CAN. FRANCIS H. RICHARDS, Hartford, Conn. Filed Oct. 30, 1901. Serial No. 80,488.



1. A receptacle comprising a breast and a bowl or mouth, each flaring outwardly but in opposite directions to each other and connected by an integral condensed metal neck of increased thickness in cross section as compared with the major part of the bowl or breast.

2. A milk can comprising a bowl and a breast flaring outwardly in opposite directions and connected by a condensed metal one piece neck of increased thickness in cross section as compared with the metal of such bowl and breast.

3. A milk can comprising a bowl or mouth and a breast integrally connected by a condensed metal one-piece neck, the metal of which is of uniformly greater thickness than the metal of such breast and bowl.

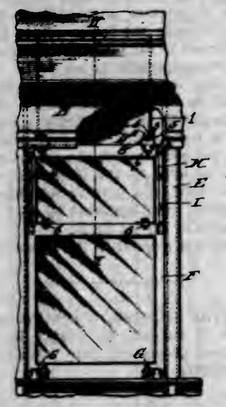
4. A milk can comprising a breast and a bowl, each flaring outwardly in a direction opposite to the other and connected by a condensed metal neck integral with such breast and bowl, the metal of said breast or bowl, or both, increasing in thickness toward the juncture point thereof with the neck, and said neck having increased thickness in cross section as compared with the major part of the metal of said bowl or breast.

5. A milk can comprising a bowl and a breast, each flaring outwardly in a direction opposite to the other and connected by an integral condensed metal neck, the metal of which neck and of the bowl and breast adjacent to their juncture points with such neck having increased thickness in cross section as compared with the thickness of the remainder of such structure.

[Claims 6 and 7 not printed in the Gazette.]

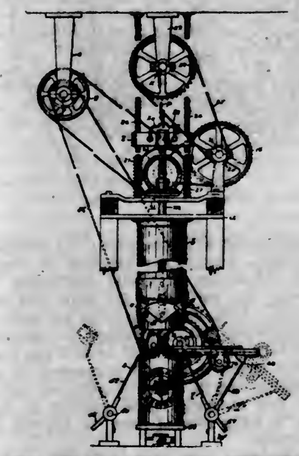
899,763. RAILWAY-CAR. EDWARD T. ROBINSON, St. Louis, Mo., assignor to St. Louis Car Company, St. Louis, Mo., a Corporation. Filed Feb. 11, 1908. Serial No. 415,353.

The combination, with a car body having sash runways, a deck sash receiving compartment, a guide rod in the compartment, an upper sash and a lower sash; of a traveler plate formed with upwardly extending arms, and a forwardly projecting lip at one side of the traveler plate, and secured to the upper sash, a roller mounted in the arms, and traveling upon the guide rod, a dog pivoted to the other side of the traveler plate, and a pocket plate,



secured to the lower sash, and with which the dog is adapted to engage.

899,764. BAG FILLING AND TYING MACHINE. JOHN ROGERS, Cleveland, Ohio, assignor of one-half to George D. Adams and Gustav E. Kappler, Cleveland, Ohio. Filed June 20, 1907. Serial No. 379,868.



1. In a bag filling machine, the combination of an upright filling tube, inner wings and overlapping outer wings hinged to the lower end of said tube, and means connected with said outer wings for folding said wings over the orifice of said tube, substantially as set forth.

2. In a bag filling machine, the combination of a fixed upright filling tube, a tubular packer casing adapted to reciprocate therein, overlapping wings hinged to the lower end of said filling tube, and means operated by said packer whereby said wings are folded over the orifice of said filling tube when said packer is drawn within said filling tube, substantially as set forth.

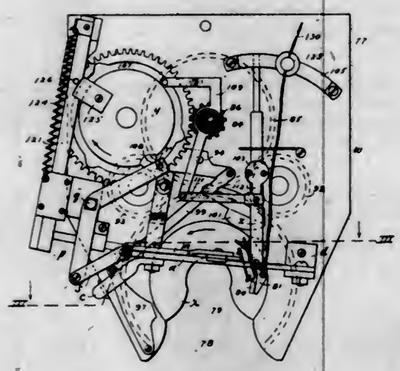
3. In a bag filling machine, the combination of a fixed upright filling tube, a tubular packer casing adapted to reciprocate therein, a rotatable auger in the lower part of said packer, overlapping wings hinged to the lower end of said filling tube, and means whereby said packer upon being drawn into the filling tube operates to fold said wings over the orifice of said filling tube, substantially as set forth.

4. In a bag filling machine, the combination with a filling tube secured in an upright position, of a rotatable shaft axially mounted to reciprocate within said tube, a tube adapted to reciprocate with said shaft within said filling tube and through the lower orifice thereof, and a packing auger secured to the lower end of said shaft within said inner tube, substantially as set forth.

5. In a bag filling machine, the combination with a filling tube secured in an upright position, of a rotatable shaft axially supported to reciprocate within said tube, a tube adapted to reciprocate with said shaft within said filling tube and project through the lower orifice thereof, a packing auger secured to the lower end of said shaft within said inner tube, and a valve for closing the lower orifice of said filling tube operated by said reciprocating elements, substantially as set forth.

[Claims 6 to 32 not printed in the Gazette.]

899,765. BAG-TIER SHEARS. JOHN ROGERS, Cleveland, Ohio, assignor of one-half to Gustav E. Kappler and George D. Adams, Cleveland, Ohio. Filed Nov. 2, 1907. Serial No. 400,337.



1. The combination with mechanism for wrapping and tying a cord into a knot upon a bag-neck, of shear blades operative in conjunction with said mechanism and arranged to sever said cord after the latter has been tied and drawn into a knot, substantially as set forth.

2. The combination with mechanism for wrapping and tying a knot in a continuous cord upon a bag-neck, of a shearing device operative by said mechanism for severing said cord from the bag tie after the latter has been drawn into a knot, and clamping means adapted to hold said cord while it is being severed from the bag tie, substantially as set forth.

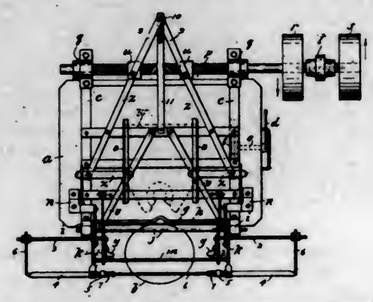
3. The combination with mechanism for tying a bag, of a slidably mounted shear blade, means operative by said mechanism for reciprocating said blade, a corresponding shear blade fulcrumed to said slidable blade, and means for swinging said fulcrumed blade, substantially as set forth.

4. The combination with mechanism for tying a bag, of a shear blade slidably mounted thereon, means operative by said mechanism for reciprocating said blade, a shear blade fulcrumed to said slidable blade having a lateral projection, and means adapted to engage said lateral projection to swing said fulcrumed blade, substantially as set forth.

5. The combination of a rotary shuttle having a recess adapted to receive the neck of a bag and means for wrapping a cord thereabout, means operative in connection with said shuttle for tying said cord, and a pair of shears operative in conjunction with said shuttle for severing said cord, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

899,766. BAG-CLOSING MECHANISM. JOHN ROGERS, Cleveland, Ohio, assignor of one-half to Gustav E. Kappler and George D. Adams, Cleveland, Ohio. Filed Nov. 2, 1907. Serial No. 400,338.



1. In a bag closing mechanism, the combination of a reciprocating carriage, a bag flattening frame hinged to the forward end of said carriage, and means whereby said frame is swung towards or away from said carriage according as the latter is respectively advanced or withdrawn, substantially as set forth.

2. In a bag closing mechanism, the combination with a supporting structure and a reciprocating carriage thereon, of a bag flattening frame hinged to and depending from the forward end of said carriage, and operative connection between said frame and said structure adapted to lower said frame as said carriage advances and to raise said frame as said carriage recedes, substantially as set forth.

3. In a bag closing mechanism, the combination of a reciprocating carriage, a bag flattening frame arranged to approach or recede from the forward end of said carriage according to the movements of the latter, a pair of gathering grips oppositely disposed upon said frame, and means for intercepting and operating said grips while said carriage and frame are closed together, substantially as set forth.

4. In a bag closing mechanism, the combination with a reciprocating carriage having a bag flattening frame operative in conjunction therewith, of a pair of gathering fingers hinged to said carriage, and a pair of gathering grips upon said frame operative in connection with said fingers, substantially as set forth.

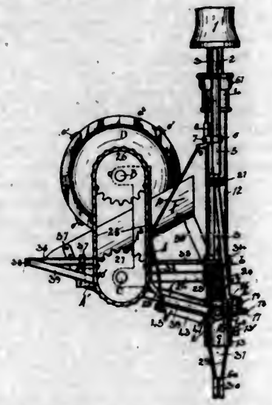
5. In a bag closing mechanism, the combination with a reciprocating carriage having a bag flattening frame arranged to open from and close towards its forward end, of a pair of gathering fingers hinged to said carriage, a pair of gathering grips slidably mounted upon said frame, and means whereby said fingers and said grips are operatively connected upon the closing of said flattening frame, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

899,767. NAILING-MACHINE. FERDINAND H. SCHULTZ, Treynor, Iowa. Filed Apr. 21, 1903. Serial No. 153,695.

1. In a nailing machine, the combination of a slotted supporting tube, a slotted terminal collar located at the lower end thereof, a plurality of sets of spring fingers secured to said collar, one set of said fingers being provided with channeled lips, a slotted rock collar located above said terminal collar and provided with a lip normally closing the slot in said tube, a nail magazine, a hammer located in said tube and provided with a weighted handle, and means controlled by said handle for operating said magazine.

2. The combination in a nailing machine, of a feed mechanism, comprising a hollow supporting stem, a rock collar secured to said supporting stem, a pivoted crank suitably supported, and secured to said rock-collar, a bar normally forced in one direction, extending from said crank, a magazine, a chute communicating with said magazine and leading to said rock collar and a handle to strike said bar secured to said rock-collar.



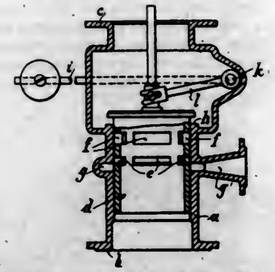
3. In a nailing machine, the combination with a suitably supported drum having a feed opening and a circumferential slot, said slot being provided with enlargements, and ribs positioned adjacent said circumferential slot.

4. In a nailing machine, the combination with a rotatable drum having a feed opening and a circumferential slot, said slot being provided with spaced apart enlargements, and wires secured adjacent the edges of said slots to strengthen said edges.

5. In a nailing machine, the combination with a rotatable drum provided with a peripheral enlargement having a slot therein, said slot being provided with spaced apart enlargements, and means for reinforcing the edges of said slots.

[Claims 6 to 8 not printed in the Gazette.]

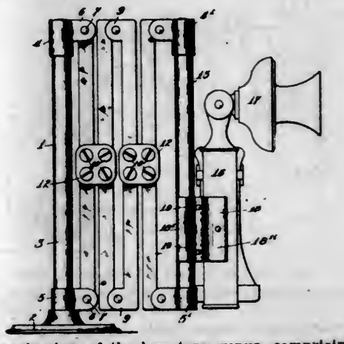
899,768. AUTOMATIC VALVE. ANTON B. SZPERKOWSKY, Berlin, Germany. Filed June 3, 1907. Serial No. 377,096.



1. An automatic pressure regulating valve comprising a casing adapted to be mounted on and communicating with a pressure conduit, said casing having one end open to the atmosphere and provided with an annular conduit communicating with a second source of pressure, a weighted piston valve in said casing having an end open to said pressure conduit and the other end closed, said valve being provided with relatively long and narrow circumferential ports to cause a small longitudinal movement of the valve to open or close communication with the annular conduit or with the atmosphere respectively.

2. An automatic pressure regulating valve comprising a casing adapted to be mounted on and communicating with a pressure conduit, said casing having one end open to the atmosphere and provided with an annular conduit communicating with a second source of pressure, a weighted piston valve in said casing having an end open to said pressure conduit and the other end closed, said valve being provided with two sets of relatively narrow circumferential ports coöperating with the annular conduit and the upper edge of the casing to open or close communication with said conduit or with the atmosphere respectively under a small longitudinal movement of the valve.

899,769. MECHANISM OF THE LAZY-TONG GENUS. HENRY TIDEMAN, Menominee, Mich. Filed Mar. 9, 1908. Serial No. 420,011.



1. A mechanism of the lazy-tong genus, comprising one or more sets of interconnected lever tongs each set comprising four arms, four gear segments intermeshing with each other and each rigid with a corresponding arm, and a mounting upon which said gear segments are journaled.

2. A mechanism of the lazy-tong genus comprising one or more sets of interconnected lever arms, each set comprising four arms arranged in alined pairs, and each arm terminating in a gear segment, the several gear segments of the set being arranged to intermesh, a slide support at each end of the lever system, a slide mounted upon each slide support, and suitable connections between the end arms of the lever system and the slide and slide support at the respective ends.

3. In a folding structure, four lever arms arranged radially and pivoted on separate pivots adjacent to their inner ends, each said arm being provided with a segmental gear meshing with the gears of the two adjacent arms.

4. In a folding structure, two or more sets of arms connected in series, each set consisting of four arms pivoted on separate pivots adjacent their inner ends, each arm being provided with a segmental gear concentric with the pivot of the arm, and the several gears arranged to mesh with each other.

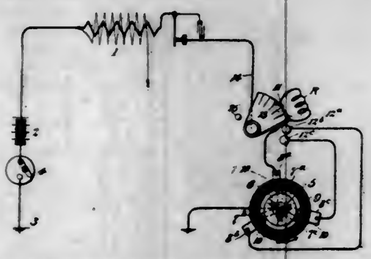
5. A mechanism of the lazy-tong genus comprising one or more sets of interconnected lever arms, each set comprising four arms, four gear segments of like radius arranged to intermesh each rigid with its arm, cheek plates between which said gears are mounted, and spring pressed friction means bearing yieldably against the several lever arms adjacent to their pivots.

[Claims 6 to 8 not printed in the Gazette.]

899,770. IGNITION SYSTEM FOR EXPLOSION-ENGINES. RICHARD VARLEY, Englewood, N. J., assignor to Varley Duplex Magnet Company, a Corporation of New Jersey. Filed Nov. 8, 1907. Serial No. 401,191.

1. In an ignition system having a primary circuit, a circuit controller having a plurality of contacts of different angular extent and located in different transverse planes, a continuously rotating shaft having metallic plungers in different planes corresponding to said contacts and equi-angularly spaced apart, said plungers being spring-pressed radially outward and all grounded on said shaft, and a switch for putting one or any number of said contacts simultaneously into said circuit, the initial engagement of said contacts and said plungers occurring simultaneously when more than one is in the circuit.

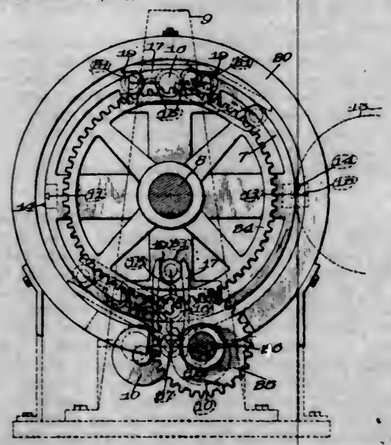
2. In an ignition system having a primary circuit, a circuit controller having a pair of contacts of different angular extent and located in different transverse planes, a continuously rotating shaft having metallic plungers in different planes corresponding to said contacts and diametrically opposite one another, said plungers being spring-pressed radially outward and grounded on said shaft, and a switch for putting one or both of said contacts simultaneously into said circuit, the initial engagement of said contacts and said plungers occurring simultaneously when both are in circuit.



3. In an ignition system having a primary circuit, a circuit controller having a plurality of contacts of different angular extent located in different transverse planes, a continuously rotating shaft having metallic plungers in different planes corresponding to said contacts, said plungers being spring-pressed radially outward and all grounded on said shaft, and a switch for putting one or any number of said contacts simultaneously into said circuit, the initial engagement of said contacts and said plungers occurring simultaneously when more than one is in the circuit.

4. In an ignition system for explosion engines, a rotatable member having a plurality of contact arms in different planes of rotation, a plurality of contacts all of different angular extent from one another and all located in different planes corresponding to said contact arms, an induction coil having a primary circuit, and means for including one or any number of said contacts in multiple, in said primary circuit.

899,771. ROTARY FOLDING MECHANISM FOR PRINTING-PRESSES. JOSEPH J. WALSER, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 30, 1908. Serial No. 424,176.

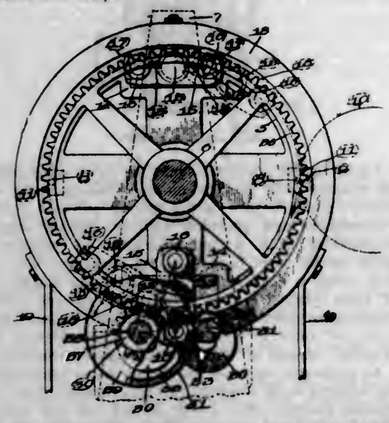


1. The combination with a rotary carrier, a shaft journaled therein, a folding-blade on said shaft, a tumbling-lever at one end of said shaft, recessed at its ends, and a tumbling-lever on the other end of said shaft provided with engaging studs, of a rotary member provided with a stud adapted to engage said recessed tumbling-lever, a rotary member provided with a groove adapted to engage one of the studs on the other tumbling-lever, and means for rotating said rotary members, whereby said rotary members may successively engage said tumbling-levers while traveling in the same direction therewith and, while traveling in the same direction therewith, successively move said tumbling-levers from normal into folding position and from folding position into normal position.

2. The combination with a rotary carrier, a folding-blade shaft journaled therein, a folding-blade on said shaft, a tumbling-lever at one end of said shaft, recessed at its ends, and a tumbling-lever on the other end of said shaft provided with engaging studs, of a rotary member provided with a stud adapted to engage said recessed tumbling-lever, a rotary member provided with a curved groove adapted to engage one of the studs on the other tumbling-lever, means for rotating said rotary members, whereby said rotary members may successively engage said tumbling-levers while traveling in the same direction therewith and, while traveling in the same direction therewith, successively move said tumbling-levers from normal into folding position and from folding position into normal position, and circular guides adapted to engage said tumbling-levers and maintain the same in normal inoperative position while said folding-blade is not being operated.

3. The combination with a rotary carrier, a shaft journaled in said rotary carrier and a folding blade secured to said shaft, of a tumbling-lever secured to one end of said shaft and recessed at its ends, a rotary member provided with a stud adapted to engage the recess in the lead end of said tumbling-lever while in normal position and, while traveling in the same direction therewith while engaged with said recess, to move said folding-blade into folding position, a tumbling-lever at the opposite end of said folding-blade shaft provided with studs at its ends, a rotating member provided with a curved groove adapted to engage the stud on the lead end of said second tumbling-lever when in folding position and, while traveling in the same direction therewith while engaged with said stud, to move said tumbling-lever out of folding position and into normal position.

899,772. ROTARY FOLDING MECHANISM FOR PRINTING-PRESSES. JOSEPH J. WALSER, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 30, 1908. Serial No. 424,177.



1. The combination with a rotary carrier, and a folding blade carried thereby, of a tumbling-lever on said folding blade provided upon one side thereof with a recess at each end and upon the other side thereof with a stud at each end, and moving means adapted to engage the recessed end of said tumbling-lever and one of the studs thereon and move the same from normal position into folding position and from folding position into normal position.

2. The combination with a rotary carrier, and a folding blade carried thereby, of a tumbling-lever on said folding blade provided with a recess at each end on one side thereof and a stud near each end on the other side thereof, and rotary members adapted to engage the recessed end of said tumbling-lever and one of said studs, respectively, and move the same out of normal position into folding position and out of folding position into normal position.

3. The combination with a rotary carrier, a folding blade shaft journaled therein, and a folding blade on said shaft, of a tumbling-lever on said shaft provided with a recess at each end upon one side thereof and a stud near each end upon the other side thereof, and a pair of moving members adapted the one to engage the recess upon the lead end of the tumbling-lever and the other to engage the stud on the lead end of said tumbling-lever and successively move said folding blade from normal position into folding position and from folding position into normal position.

4. The combination with a rotary carrier and a folding blade carried thereby, of a tumbling-lever at one end of said folding blade and having engaging studs upon one side one at each end and recesses upon the other side one at each end, a rotating member provided with a stud adapted to engage the recess on the end of said tumbling-lever, a rotating member provided with a curved groove adapted to engage the stud upon the end of said tumbling-lever upon its other side, and means for rotating said rotary members whereby said rotating members will successively engage said tumbling-lever, and, while traveling in the same direction therewith, will successively receive said folding blade in normal position and move it into folding position and move said folding blade out of folding position into normal position.

5. The combination with a rotary carrier, and a folding blade carried thereby, of a tumbling-lever at one end of said folding-blade having engaging studs upon one side one at each end and recesses upon the other side one at each end, a shaft, a crank on the inner end of said shaft provided with a stud adapted to engage the recessed end of said tumbling-lever, a disk provided with a groove adapted to engage the stud upon the lead end of said tumbling-lever, and means for rotating said crank and said disk whereby the stud on said crank and the groove on said disk may successively engage said tumbling-lever while moving in the same direction, and, while moving in the same direction therewith, successively move said folding blade from normal position into folding position and from folding position into normal position.

[Claim 6 not printed in the Gazette.]

899,773. TROLLEY-SWITCH. BENJAMIN G. WATKINS, Nehawka, Nebr., assignor of one-third to Julian A. Pollard, Jr., and one-third to Julian A. Pollard, Nehawka, Nebr. Filed Jan. 21, 1907. Serial No. 353,242.

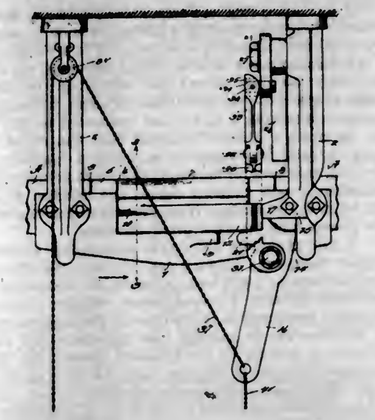
1. A switch of the type set forth comprising a movable switch member, movable tripping means therefor, and a stop designed to overlie the adjacent tracks and operated upon movement of said tripping means.

2. A switch of the type set forth comprising a movable switch member, tripping means therefor, a stop designed to overlie the adjacent tracks and operated upon the actuation of said switch member and operative connections between said tripping means and said stop.

3. A switch of the type set forth comprising a movable switch member, tripping means therefor, a pivoted stop designed to overlie the adjacent tracks upon the respective movements of said switch member and operative connections between said tripping means and said stop.

4. A switch of the type set forth, comprising a movable switch member, a pivoted casting for tripping the same, a pivoted stop adapted to overlie the adjacent tracks and connection between said casting and said stop.

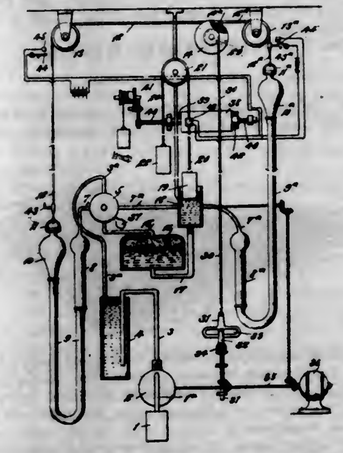
5. A switch of the type set forth comprising a movable switch member, a pivoted casting for tripping the same, a pivoted stop having movement in a plane at an angle to



said casting and a gimbal joint connection btween said casting and said stop.

[Claims 6 to 16 not printed in the Gazette.]

899,774. APPARATUS FOR ANALYZING GASES. HENRY J. WESTOVER, New York, N. Y. Filed Nov. 16, 1907. Serial No. 402,366.



1. A gas analysing apparatus comprising a measuring chamber, an absorption chamber, means for drawing gas into the measuring chamber and for forcing it therefrom into the absorption chamber, a displacement chamber containing a liquid and connected to the absorption chamber, marking devices varied in position by the variation of the liquid level in the displacement chamber, and means adapted to operate the marking means when the gas from the measuring chamber has been forced into the absorption chamber.

2. A gas analysing apparatus comprising a measuring chamber, an absorption chamber, means for drawing gas into the measuring chamber and for forcing it therefrom into the absorption chamber, a displacement chamber containing a liquid and connected to the absorption chamber, a marking means varied in position by the variation of the liquid level in the displacement chamber, and means adapted to instantaneously operate the marking means to

indicate the position of said marking means when the gas from the measuring chamber has been forced into the absorption chamber.

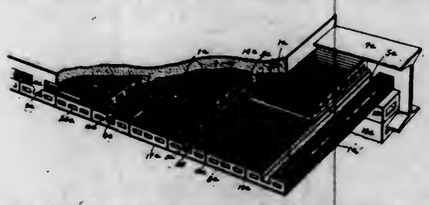
3. A gas analyzing apparatus comprising a measuring chamber, means for forming a partial vacuum in said chamber, means for connecting said chamber to a furnace whereby the furnace gases will be drawn into said chamber, an absorption chamber, means for delivering the measured charge of gas into said absorption chamber, a displacement chamber containing a liquid and connected to the absorption chamber, a counter-balanced float controlled by the liquid in said displacement chamber, a marking device moved by said counter-balanced float, and actuating means connected to said marking device and adapted to operate only when all of the gas from the measuring chamber has been forced into the absorption chamber.

4. A gas analyzing apparatus comprising a measuring chamber, means for drawing gas into said chamber, an absorption chamber containing a liquid and connected to the measuring chamber, a displacement chamber containing a liquid and connected to the bottom of the absorption chamber whereby gas in passing into the absorption chamber will force a portion of the contents thereof into the displacement chamber to thereby vary the level of the liquid in the displacement chamber, a marking device varied in position by the variations in the level of the liquid in the displacement chamber, and means adapted to operate the marking device when the gas from the measuring chamber has been forced into the absorption chamber.

5. A gas analyzing apparatus comprising a measuring chamber having a single gas connection at its upper end, means connected to the lower end of said chamber to draw gas therein, an absorption chamber, means to disconnect the measuring chamber from its furnace connection and to connect it to the absorption chamber, a displacement chamber connected to the absorption chamber, and means to record the variations in the level of the liquid in the displacement chamber.

[Claims 6 to 27 not printed in the Gazette.]

899,775. FLOOR CONSTRUCTION. JOHN J. WHITACRE, Canton, Ohio. Filed Dec. 23, 1907. Serial No. 407,733.



1. A floor structure including a series of rows of blocks having longitudinal cavities therein, the blocks of each row being located side by side with channels between the ends of the blocks of adjacent rows, an underlying layer of blocks transversely located and having open cavities in their upper sides registering with the channels, and concrete beams in the channels and in the open cavities of the lower blocks and having lugs extending into the cavities of the upper blocks.

2. A floor structure including a series of rows of blocks having longitudinal cavities therein, the blocks of each row being located side by side with channels between the ends of the blocks of adjacent rows, an underlying layer of blocks transversely located and having open cavities in their upper sides registering with the channels, concrete beams in the channels and in the open cavities of the lower blocks and having lugs extending into the cavities of the upper blocks, and a monolithic concrete layer on the upper blocks and metallic reinforcements binding the beams and concrete layer together.

3. A floor structure including a series of rows of blocks having longitudinal cavities therein, the blocks of each row being located side by side with channels between the ends of the blocks of adjacent rows, an underlying layer of blocks transversely located and having open cavities in their upper sides registering with the channels, concrete beams in the channels and in the open cavities of the lower blocks and having lugs extending into the cavities of the upper blocks, a monolithic concrete layer on the upper blocks and metallic reinforcements binding the beams and concrete layer together.

4. A floor structure including a series of rows of blocks having longitudinal cavities therein, the blocks of each row being located side by side with channels between the ends of the blocks of adjacent rows, an underlying layer of blocks transversely located and having open cavities in their upper sides registering with the channels, concrete beams in the channels and in the open cavities of the lower blocks and having lugs extending into the cavities of the upper blocks, a monolithic concrete layer on the upper blocks and metallic reinforcements binding the beams and concrete layer together.

899,776. FLOOR CONSTRUCTION. JOHN J. WHITACRE, Canton, Ohio. Filed Feb. 20, 1908. Serial No. 416,839.



1. A floor structure including a series of rows of blocks with longitudinal cavities therein and having the ends of the lower walls extending longitudinally beyond the ends of the upper portions of the blocks, the blocks of each row being located side by side and the extended ends of the lower walls of the blocks of adjacent rows being butted together to form a channel between the ends of the upper portions thereof, and concrete beams in the channels and having lugs projecting into the ends of the block cavities.

2. A floor structure including a series of rows of blocks with longitudinal cavities therein and having the ends of the lower walls extending longitudinally beyond the ends of the upper portions of the blocks, the blocks of each row being located side by side and the extended ends of the lower walls of the blocks of adjacent rows being butted together to form a channel between the ends of the upper portions thereof, concrete beams in the channels and having lugs projecting into the ends of the block cavities, and metallic reinforcements in the beams.

3. A floor structure including a series of rows of blocks with longitudinal cavities therein and having the ends of the lower walls extending longitudinally beyond the ends of the upper portions of the blocks, the blocks of each row being located side by side and the extended ends of the lower walls of the blocks of adjacent rows being butted together to form a channel between the ends of the upper portions thereof, terra cotta plates spanning the joints between the ends of the lower walls, and concrete beams in the channels and having lugs projecting into the ends of the block cavities.

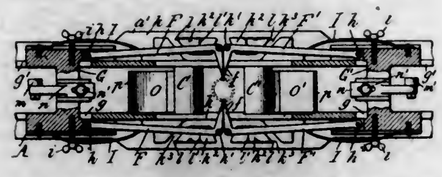
4. A floor structure including a series of rows of blocks with longitudinal cavities therein and having the ends of the lower walls extending longitudinally beyond the ends of the upper portions of the blocks, the blocks of each row being located side by side and the extended ends of the lower walls of the blocks of adjacent rows being butted together to form a channel between the ends of the upper portions thereof, terra cotta plates spanning the joints between the ends of the lower walls, and concrete beams in the channels and having lugs projecting into the ends of the block cavities, and metallic reinforcements in the beams.

5. A floor structure including a series of rows of blocks with longitudinal cavities therein and having the ends of the lower walls extending longitudinally beyond the ends of the upper portions of the blocks, the blocks of each row being located side by side and the extended ends of the lower walls of the blocks of adjacent rows being butted together to form a channel between the ends of the upper portions thereof, transverse partitions in the longitudinal cavities at an interval within the ends of the upper and

the vertical walls thereof, and concrete beams in the channels and having separate projecting lugs formed thereon in the ends of each block cavity and abutting the partitions.

[Claims 6 to 9 not printed in the Gazette.]

899,777. CORN-HUSKING MACHINE. JOHN F. WHITE, Mount Morris, N. Y. Filed Sept. 8, 1906. Serial No. 333,790.



1. In a corn husking machine, the combination of husking rolls arranged in pairs with a space between the pairs of rolls to receive the ear of corn, means for drawing the husks into the bite of the rolls of each pair, and means for driving the pairs of rolls in opposite directions whereby they strip the husks in opposite directions away from the ear and move the ear forwardly endwise in the space between the pairs of rolls, substantially as set forth.

2. In a corn husking machine, the combination of husking rolls arranged in pairs with a space between the pairs of rolls for the passage of the ear of corn, means for drawing the husks into the bite of the rolls of each pair, means for driving the pairs of rolls whereby they strip the husks in opposite directions from the ear and move the ear forwardly endwise in said space between the pairs of rolls, and means for directing the ear of corn endwise into the space between the pairs of rolls, substantially as set forth.

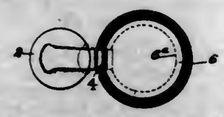
3. In a corn husking machine, the combination of a holder in which the ear of corn is movable endwise, husking rolls arranged in pairs at opposite sides of the axial line of said holder and with their axes transversely with respect to said axial line, means for drawing the husks into the bite of the rolls of each pair, and means for driving the pairs of rolls in opposite directions whereby they strip the husks in opposite directions from the ear and move the ear forwardly endwise through said holder, substantially as set forth.

4. In a corn husking machine, the combination of a holder in which the ear of corn is movable endwise, means for dividing and pulling the ends of the husks in opposite directions from the ear and into the bite of the rolls, and driven husking rolls which grasp the ends of the husks and strip the husks in opposite directions away from the ear and move the ear forwardly endwise through said holder, substantially as set forth.

5. In a corn husking machine, the combination of a holder in which the ear of corn is movable endwise, driven husking rolls arranged to the side of the path of travel of the ear, means movable transversely of the direction of movement of the ear for drawing the ends of the husks into the bite of said rolls, and means for driving said rolls to grasp and strip the husks sidewise away from the ear and move the ear endwise past said rolls, substantially as set forth.

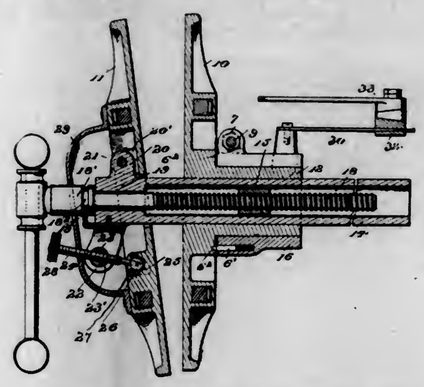
[Claims 6 to 15 not printed in the Gazette.]

899,778. JEWELER'S TAG. CHARLES T. WITTSTEIN, Newark, N. J. Filed Mar. 2, 1907. Serial No. 360,128.



A jeweler's tag comprising a piece of flexible material having lobes with a weakened connection which predetermines a line of folding and an attaching strip projecting from one of said lobes independent of the said connection and adapted to be bent around a body to which the tag is to be applied and folded over upon the lobe to which it is attached, said lobes being adapted to be brought flatwise together by folding and form a display tab, and a layer of adhesive matter on one of said lobes at one side surface of the tag, the attaching strip being devoid of such adhesive matter, as and for the purposes set forth.

899,779. VISE. GILMORE M. YOST, Mechanicsburg, Pa. Filed Aug. 19, 1907. Serial No. 389,198.



1. In a vise, a supporting bar, a jaw pivoted thereto, a block rotatably mounted in one of said parts, and a pin screw threaded through said block and having a ball and socket connection with the other part.

2. In a vise, a supporting bar, a jaw pivoted thereto, a block rotatably mounted in said bar, and a pin screw-threaded through said block and having a ball and socket connection with the jaw.

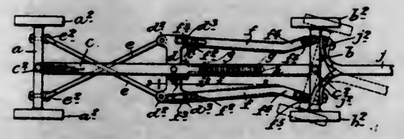
3. In a vise, a supporting bar, a jaw pivoted thereto, a block rotatably mounted in said bar, and a pin screw-threaded through said block and having at its end a ball and socket connection with the jaw.

4. In a vise, a supporting bar, a jaw pivoted thereto, a socket in said jaw, a block rotatably mounted in said bar, a pin screw-threaded through said block, and a ball on the end of said pin working in said socket.

5. In a vise, a supporting bar, a jaw pivoted thereto, a pin rotatably supported at its ends in said bar, and a pin at right angles to said first pin screw-threaded therethrough intermediate its ends and having at its inner end a bearing in the jaw.

[Claims 6 to 13 not printed in the Gazette.]

899,780. RUNNING-GEAR FOR VEHICLES. VICTOR ZDZIARSKI, New York, N. Y. Filed July 3, 1908. Serial No. 441,752.

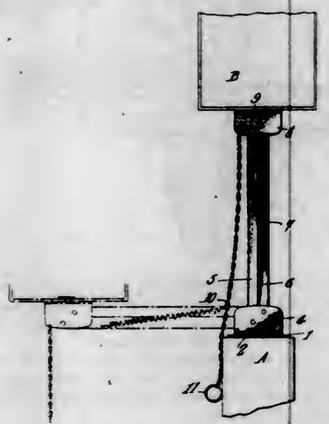


1. A running gear for vehicles comprising front and rear axles, a coupling bar pivotally connected with said axles, a cross head pivoted to the central bottom portion of the coupling bar, link bars pivoted to the opposite end portions of said cross head and crossed beneath said coupling bar and pivoted to the opposite end portions of the rear axle, other bars pivoted to the opposite end portions of the front

axle and the rear end portions of which are provided with slots, and pivot pins passed through the opposite end portions of said cross head and through said slots.

2. A running gear for vehicles comprising front and rear axles, a coupling bar pivotally connected with said axles, a cross head pivoted to the central bottom portion of the coupling bar, link bars pivoted to the opposite end portions of said cross head and crossed beneath said coupling bar and pivoted to the opposite end portions of the rear axle, other bars pivoted to the opposite end portions of the front axle and the rear end portions of which are provided with slots, and pivot pins passed through the opposite end portions of said cross head and through said slots, the coupling bar being also provided in front of said cross head with a spring operated slide bar having a transverse head adapted to bear on said cross head.

899,781. MAIL-BOX. THOMAS W. ANDERSON, Seale, Ala. Filed May 13, 1908. Serial No. 432,677.



1. A support for mail boxes comprising revolubly supported base brackets, box-engaging brackets, normally vertical parallel arms pivotally connected at their ends to the base and box-engaging brackets, and an elastic connection between the arms for holding said arms normally in contact and in vertical position.

2. A support for mail boxes comprising bottom brackets mounted to rotate in a complete circle, box engaging brackets, parallel arms pivotally connected to the brackets, said arms and brackets being so connected as to maintain the box-engaging brackets at a predetermined angle to the horizontal irrespective of the movement of the arms, and an elastic connection between the arms for maintaining said arms normally vertical and in contact.

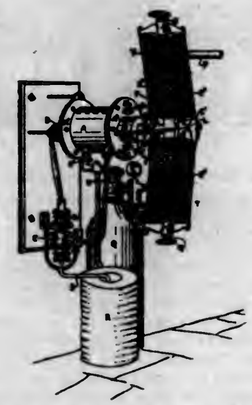
3. A support for mail boxes comprising a disk mounted to completely rotate, brackets upstanding therefrom, box-engaging brackets, parallel arms pivotally connected to the brackets and disposed to maintain the box-engaging brackets at a predetermined angle to the horizontal irrespective of its elevation and the movement of the arms, and elastic means for connecting the arms for maintaining them normally vertical and in contact and means connected to and extending from one of the brackets whereby the support may be actuated.

4. A mail box support comprising upper and lower brackets mounted to completely rotate, parallel arms pivotally connected to the brackets and mounted to swing vertically, said arms and brackets being so disposed as to maintain the upper bracket in a predetermined relation to the horizontal irrespective of the movement of the arms and of the elevation of the upper brackets, and means for maintaining the arms normally vertical and in contact.

5. A mail box support comprising a base, a disk mounted to completely rotate thereon, a bracket upstanding from the disk, parallel arms pivotally connected to the bracket, yieldable means for holding the arms normally vertical and in contact, and means pivotally connected to the arms for engaging a box.

[Claims 6 to 8 not printed in the Gazette.]

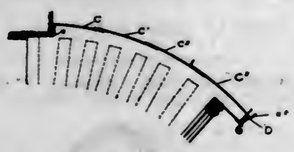
899,782. APPARATUS FOR CARBONATING AND BOTTLING LIQUIDS. ARTHUR J. BILLOWS, Brisbane, Queensland, Australia. Filed Nov. 14, 1906. Serial No. 343,442.



1. A machine for carbonating and bottling liquids comprising a stationary mixing chamber, a hollow shaft rotating within the chamber and having one end projecting therethrough, a bottle rack secured to the end of said shaft, means for delivering liquid to the stationary chamber, a gas inlet in said chamber, a valve controlling the same, a valve in the hollow shaft controlling the communication to the bottle rack, means on the shaft for opening the gas valve inlet once during each revolution of the shaft, and means for opening the valve in the hollow shaft during each revolution of said shaft.

2. A machine for carbonating and bottling liquids, comprising a stationary mixing chamber, a rotating hollow shaft in said chamber and projecting therefrom, a bottle rack mounted on said shaft, vanes on said shaft within the chamber, cams on the shaft, a gas admission valve adapted to be operated by said cams, a valve for controlling the admission of the liquid to the bottles, a cross head connected to said valve, rollers on said cross head, a cam track in the mixing chamber on which the rollers travel, a snifting valve for controlling the exhaust from the bottles, a cam for controlling the same, and a double acting pump operated by the hollow shaft, substantially as described.

899,783. SASH-ADJUSTER. JOHN W. BISHOP, Jr., Worcester, Mass., assignor to J. W. Bishop Company, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 11, 1907. Serial No. 361,774.



1. A sash adjuster comprising a plurality of telescoping slides and a catch adapted to engage with any one of said slides, one of said slides being provided with means whereby it may be attached to a window frame and said catch being adapted to be attached to the sash as described.

2. In a sash adjuster, in combination with a catch adapted to be attached to a sash, a plurality of slides one of which is adapted to be attached to a window frame, each slide having a slotted connection with the slide adjacent to it and having means of engagement with said catch as described.

3. In a sash adjuster, in combination with a catch and its bracket, an extensible rod comprising a plurality of slides, one of said slides being attachable to a window frame and forming one end of said rod, the slide forming the other end of said rod when extended having a stop at each end, each adapted to engage said catch bracket, the one when said sash is wholly or partially closed and the other when the sash is fully open as set forth.

4. In a sash adjuster, an extensible rod comprising a plurality of slides, and a catch mechanism, the one being adapted to be attached to the window frame and the other to the sash, said catch mechanism carrying means whereby the length of said extensible rod is controlled and said extensible rod carrying means whereby the opening movement of the sash is restrained as described.

5. In a sash adjuster, an extensible rod comprising a plurality of parts slidably connected and a catch mechanism adapted to engage with and lock said slides in any given position.

899,784. PUMP. SIDNEY R. BLANCHARD, Ottawa, Ill., assignor to The Ottawa Banking & Trust Company, Ottawa, Ill., a Corporation of Illinois. Filed Dec. 11, 1906. Serial No. 347,340.



1. In a lift pump, the combination with the pump barrel provided at its lower end with a valve, a tubing rising from said barrel, and a lift piston reciprocating in the barrel, of means operating in unison with the reciprocation of the piston for creating a space within the tubing during the up-stroke of the piston to effect a displacement of the liquid column within the tubing resting on said piston in addition to that effected by the lifting action of the piston, which space is isolated from the liquid space within the tubing and barrel during such up-stroke of the piston, whereby the flow of liquid from the pump is increased during such up-stroke of the piston beyond that due to the lifting stroke of the piston.

2. In a lift pump, the combination with the pump barrel provided at its lower end with a valve, a tubing rising from said barrel, and a lift piston reciprocating in the barrel, of means operating in unison with the reciprocation of the piston for creating a space within the tubing during the up-stroke of the piston to effect a displacement of the liquid column within the tubing resting on said piston in addition to that effected by the lifting action of the piston, which space is isolated from the liquid space within the tubing and barrel during such up-stroke of the piston, whereby the flow of liquid from the pump is increased during such up-stroke of the piston beyond that due to the lifting stroke of the piston, means for introducing liquid into the space thus created, and means for transferring said liquid to the liquid space in said tubing during the downstroke of the piston.

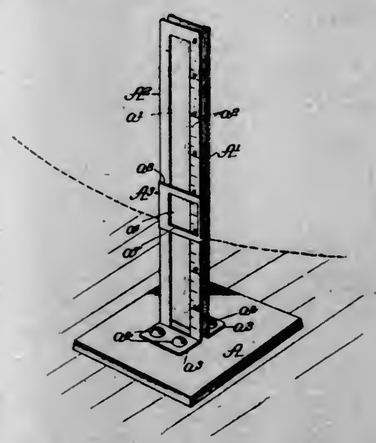
3. In a lift pump, the combination with the pump barrel provided at its lower end with a valve, a tubing rising from the barrel and a lift piston reciprocating in the barrel, of means operating in unison with the reciprocation of the piston for creating a space within the tubing during the lifting or up-stroke of the piston, which space is isolated from the liquid space within the tubing and barrel, comprising a cylinder in the tubing reciprocating with the piston, and a stationary piston in said reciprocating cylinder.

4. In a lift pump, the combination with the pump barrel provided at its lower end with a valve, a tubing rising from said barrel, and a lift piston reciprocating in said barrel, of means in said tubing connected with, operating during the upstroke of, the piston for increasing the liquid displacement of the pump beyond that due to the stroke of the piston, comprising a cylinder in the tubing connected to and reciprocating with said piston and closed at its upper end by a valve and communicating at its lower end with said tubing, and a stationary piston in said cylinder.

5. A pump comprising a barrel and its connected tubing, said barrel being provided at its lower end with a valve, a valved piston reciprocating in said barrel, a cylinder, smaller than the interior diameter of the tubing, reciprocating in said tubing, said cylinder communicating at its lower end with the interior of the barrel and tubing and provided at its upper end with a valve, a rigid connection between the reciprocating piston and cylinder, and a stationary piston within said reciprocating cylinder.

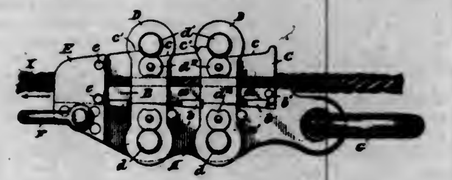
[Claims 6 to 15 not printed in the Gazette.]

899,785. GARMENT-MEASURING DEVICE. INA M. R. CAMPBELL, Chicago, Ill. Filed Sept. 20, 1907. Serial No. 393,777.



In a device of the character set forth, the combination with a base, of a pair of standards spaced apart, each of said standards being provided with a foot at right-angles thereto by which the standards are attached to the base, one of said standards being provided with a longitudinal vertical slot and a scale adjacent to said slot, and a slide provided with a recess coincident with said slot and having flanges at opposite sides adapted to embrace the edges of said standard, for the purpose set forth.

899,786. RELIEF-GRIP FOR CABLES. JOHN H. COLBY, Luffenholtz, Cal. Filed Nov. 1, 1907. Serial No. 400,312.



1. In a gripping device, a body portion, coöperating grip blocks formed to engage a cable therebetween, and parallel tilting links each pivoted to said body portion and exerting pressure to bring said grip blocks into gripping action, substantially as described.

2. In a gripping device, a body portion, coöperating grip blocks formed to engage a cable therebetween, and parallel tilting links each embracing said grip blocks and pivoted to said body portion, said link mechanism exerting pressure to bring said grip blocks into gripping action automatically when the cable starts, substantially as described.

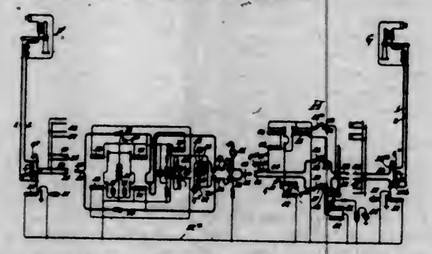
3. In a gripping device, a body, portion, coöperating grip blocks formed to engage a cable therebetween, parallel tilting links embracing said grip blocks and pivoted to said body portion, and stops to limit the movement of said links in one direction, substantially as described.

4. In a gripping device, a body portion, coöperating grip blocks formed to engage a cable therebetween, and parallel acting pressure means comprising links pivoted to said body portion and engaging a grip block at points the same distance apart as said pivots to bring said blocks into gripping action when tilted, substantially as described.

5. In a gripping device, a body portion, a grip block upon said body portion, a second grip block capable of longitudinal movement and having an abutment, and link mechanism pivoted to said body portion and resting against said abutment, said link mechanism being tilted upon forward movement of said second grip block and exerting pressure thereon, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

899,787. TELEPHONE SYSTEM. ALFRED H. DYSON, Chicago, Ill., assignor to Milo G. Kellogg, Chicago, Ill. Filed Feb. 5, 1906. Serial No. 299,558.



1. A telephone system comprising subscribers' telephone lines extending from substations to an exchange, signals for said lines controlled from the substations, operators' answering means adapted for connection with said lines, other telephone lines, multiple terminals for said other lines, selective switches adapted to be employed for making connection therewith, operators' switching means to enable the operators to transmit directive currents to said selective switches to cause them to connect said answering means with terminals of particular ones of said other telephone lines whereby connections between subscribers are completed, and a central source of current and branches to supply current therefrom for conversation.

2. A telephone exchange system including telephone lines having answering terminals at the exchange, signals at the exchange adapted to be controlled by currents over said lines, operators' connective means adapted to be connected with said answering terminals, multiple terminals of said lines at the exchange, selective switches adapted for operation to complete connections from said answering terminals to said multiple terminals, operators' switching means for controlling the operation of said switches to select terminals of particular lines, means for changing the electrical character of its terminals to render them busy when connection is made with a line, automatic test means for said switches sensitive to the electrical character of said terminals to render connections ineffective when said terminals are busy, a central source of current and branches for energize subscribers' transmitters therefrom for conversation, and means for releasing said selective switches when disconnection is required.

3. A multiple switchboard telephone exchange system including telephone lines, signals for said lines at the exchange, answering jacks for said lines, operators' cord circuits provided with plugs for connecting with said spring jacks, multiple calling terminals of said lines divided into groups, a plurality of connector switches adapted to make connections with the lines of each of said groups, means controlled by the operators for completing connections from said cord circuits to said connector switches, calling devices controlled by the operators for transmitting directive switching currents to said switches to cause them to select particular called lines of their groups, means for changing the electrical character of its terminals to render them busy when connection is made with a line, test means for said switches whereby a connection made with a busy line is ineffective, and a central source of current and apparatus for supplying current therefrom to subscribers' lines for conversation.

4. A multiple switchboard telephone exchange system including telephone lines, signals for said lines at the exchange, answering spring jacks for said lines, operators' cord circuits provided with plugs for connecting with said spring jacks, multiple calling terminals of said lines divided into groups, a plurality of connector switches adapted to make connections with the lines of each of said groups, manually manipulated operators' switches for connecting said cord circuits with said switches, calling devices controlled by the operators for transmitting directive switching currents to said switches to cause them to select particular called lines of their groups, means for changing the electrical character of its terminals to render them busy when connection is made with a line, test means for said switches whereby a connection made with a busy line is ineffective, and a central source of current and apparatus for supplying current therefrom to subscribers' lines for conversation.

5. A multiple switchboard telephone exchange system including subscribers' lines, signals for said lines adapted for operation from the substations, answering spring jacks for said lines, multiple calling terminals of said lines divided into groups, a plurality of connector switches adapted to make connection with the lines of each of said groups, link-circuits extending to said switches for controlling their operation, spring jack terminals of said circuits, operators' cord circuits having answering plugs for connecting with said answering spring jacks and calling plugs for connecting with said spring jack terminals, calling devices controlled by the operators for transmitting directive switching currents to said switches to cause them to select particular lines of their groups, automatic test means for said connector switches to cause them to avoid busy lines, and a central source of current and branches therefrom to supply current for conversation.

[Claims 6 to 20 not printed in the Gazette.]

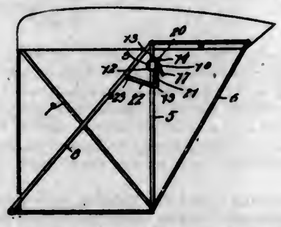
899,788. MANUFACTURE OF SHOES. JOHN ESSIG, Syracuse, N. Y. Filed Apr. 6, 1908. Serial No. 425,334.

The within described method of lasting a shoe, consisting in applying to the vamp-lining a reinforcing lining enlarged to project with its edges over the edges of the vamp-lining and uniting said linings with the vamp by rows of stitches, then drawing said parts jointly over the last by draft applied to the marginal portion of the reinforcing lining, then sewing the vamp and aforesaid two



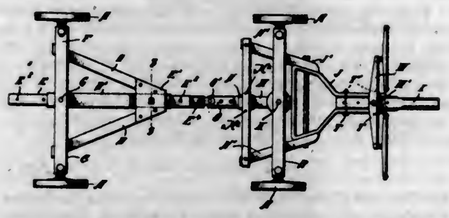
linings to the insole, and then cutting away the aforesaid projecting margin of the reinforcing lining substantially as set forth.

899,789. BUGGY-TOP ATTACHMENT. ELIJAH GANOE, Sloan, Iowa. Filed Aug. 11, 1906, Serial No. 330,170. Renewed Dec. 23, 1907. Serial No. 407,715.



The combination, with a buggy top including a bow and a breakable brace rod, of a yoke attached to the bow and provided with a pair of spaced bearing eyes; a rod having its ends bent laterally in opposite directions, one of said ends being pivoted in said eyes; a hand lever having its head fitted in the space between said eyes and secured to the first-mentioned end of the arm, to rock said arm and move its other end into engagement with the brace, to break the same; and means carried by said yoke and arranged in the path of movement of the lever, for limiting such movement.

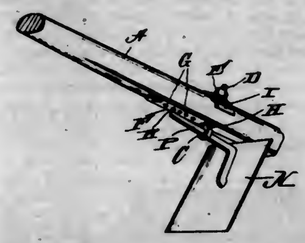
899,790. RUNNING-GEAR FOR VEHICLES. ABRAHAM L. HAMILTON, Sugartown, La. Filed July 30, 1907. Serial No. 386,230.



In combination with the rear axle of the running gear of a vehicle, a hound connected to said axle, plates fastened to the opposite faces of the forward ends of said hound, an open ended shell interposed between said plates and the inner ends of the diagonal pieces of the hound, a reach section mounted within said shell, a bolt passing through registering apertures in said plates, shell and reach section, a forward axle and hound, a forward reach section pivotally connected to the forward axle, an open ended shell fastened to the forward hound and through which said forward reach section passes, a space intervening between said reach sections, and links pivotally connecting the reach sections, as set forth.

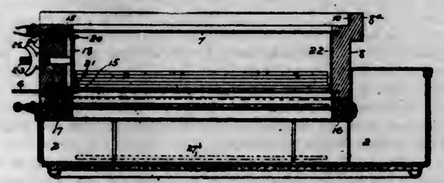
899,791. ADJUSTABLE HOE. WESLEY T. HAMMETT, Ringgold, La. Filed Sept. 30, 1907. Serial No. 395,263.

An adjustable hoe comprising a handle with a transverse aperture therein, said handle having a convexed surface and flattened upon its under edge, an apertured plate fastened to the flattened surface of the handle and provided with a series of apertures, an eye bolt passing through registering apertures in said handle and plate, a concaved clamping plate adapted to engage the convexed surface of the handle, a nut upon the threaded end of the bolt adapted to engage said concaved clamping plate, a hoe having a



shank fixed thereto, said shank adapted to have a longitudinal movement through the eye of said bolt with its free end engaging a perforation in said plate, the heel of the hoe being adapted to be held by said eye bolt in different positions with the hoe and at the same angle to the hoe, as set forth.

899,792. PHOTOGRAPHIC APPARATUS. JESSE B. LOW, FREDERICK C. BRADBURN, and JOHN H. TYLER, Rochester, N. Y. Filed Feb. 23, 1907. Serial No. 358,884.



1. In a device of the character described, the combination with a carrier or container adapted for the reception of a series of plates and open at its top and bottom, and movable shutters for closing the top and bottom of the container, of a clamping device operating to clamp a plate above the bottom shutter, and sustain all the plates above the clamped plate and means for operating said clamping device to drop the bottom plate upon the shutter, clamp the plate above it and sustain the remaining plates.

2. In a device of the character described, the combination with a carrier or container, adapted to contain a number of plates and having an open bottom, and a movable shutter for closing said bottom, of a clamping device within the container and above the shutter, to engage one edge of a plate and press the other edge against the opposite wall of the container and clamp said plate within the container, and means for operating said clamping device to drop one plate upon the shutter, and then clamp the next plate to sustain the same and the remaining plates above the shutter.

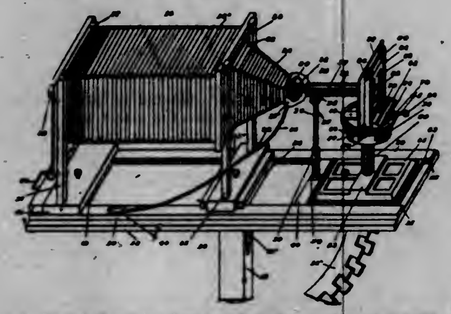
3. In a device of the character described, the combination with a carrier or container having open top and bottom, shutters normally closing the top and bottom of the device, and a plate clamping device within the carrier, said clamping device operative to clamp a plate next to the plate which may rest on either shutter, and drop the plates one at a time upon a shutter either for exit through the top or bottom of the carrier, said clamping device operating to sustain all the plates except the one which may rest upon one shutter or the other.

4. In a device of the character described, the combination with a carrier having open top and bottom and shutters normally closing the top and bottom of the carrier, of a spring in the carrier, having a lip at each edge, said lips being disposed a short distance from the respective shutters, and means for operating said spring to release the plates one at a time.

5. In a device of the character described, the combination with a carrier or container adapted to contain a number of plates and having an open bottom, and a movable shutter to close said open bottom, of a spring actuated lip located within the container above the shutter to engage one edge of a plate and press the other edge against the opposite wall of the container, said lip being disposed a short distance from the shutter, whereby said lip will engage a plate immediately above a plate resting on the shutter.

[Claims 6 and 7 not printed in the Gazette.]

899,793. PHOTOMICROGRAPHICAL APPARATUS. FRANK N. MERWIN, Kansas City, Mo. Filed Sept. 9, 1907. Serial No. 391,994.



1. In microscopic photography, the combination with a photographic apparatus and a microscope, of means for obtaining stereoscopic negatives from objective magnifications of the object or specimens consisting of a stage having an axis of rotation and devices supporting the specimens movable at an angle to the miscroscope and from the axis of rotation of the stage.

2. In microscopic photography the combination with a rotary supporting apparatus, of a holder for the specimens thereon, a photographic camera, means between the posing apparatus and camera acting to transmit magnifications of the specimens, and means acting to pose the holder to and from the axis of rotation of the support for the specimen holder.

3. In microscopic photography, the combination with a rotary supporting apparatus and a pivot post at the axis of rotation, a specimen holder, a photographic camera and means between the supporting apparatus and camera, acting to transmit magnifications of the specimens to the camera, of means acting adjustably to pose the specimen holder near the line of the vertical axis of the pivot post and means for adjusting the specimen holder at opposite angles horizontally to the axial line of the pivot post.

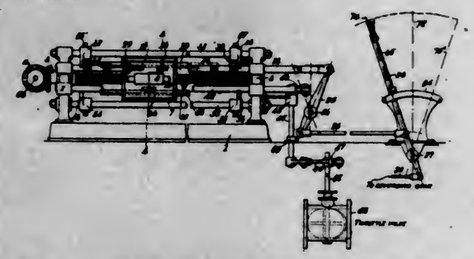
4. A posing apparatus for microscopic photography, consisting of a rotary stage, means for adjusting the position of the stage rotatively and a sliding specimen holder mounted upon said stage movable to and from the axis of rotation.

5. A posing apparatus for microscopic photography, consisting of a rotary stage, a pivot post therefor, means for adjusting the position of the stage rotatively, a vertical specimen holding frame and sliding supports therefor on said stage and adjusting means for adjusting the position of the specimen holder toward and away from the vertical axis of the pivot post.

[Claims 6 to 9 not printed in the Gazette.]

899,794. CONTROLLING DEVICE FOR HOISTING APPARATUS. CARL NOTBOHM, Caternberg, and HEINRICH EICKMANN, Essen-on-the-Ruhr, Germany. Filed Apr. 8, 1907. Serial No. 367,059.

1. A controlling device for hoisting apparatus comprising in combination, a master screw driven from the hoisting engine, a master nut operated by said screw, a reversing gear controller for said engine, a movable controller rod connected with said controller and provided with adjustable stops, movable switch bars carried by said nut and adapted for engagement with said stops, a controller switch carried by said nut for throwing said bars into engagement with said stops, and stationary stops for operating said switch.



2. A controlling device for hoisting apparatus comprising in combination, a master screw driven from the hoisting engine, a master nut operated by said screw, a reversing gear controller for said engine, movable switch bars carried by said nut, a controller switch carried by said nut for operating said bars, means for operating said switch, and means whereby said switch bars operate said controller.

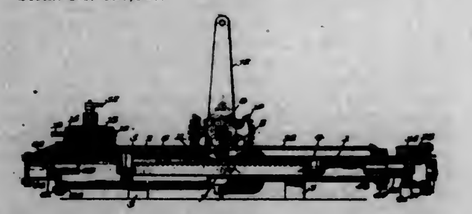
3. A controlling device for hoisting apparatus comprising in combination, a master operating member driven from the hoisting engine, a master element operated by said member, a controller for the reversing gear of said engine, and mechanism carried by said element for returning said controller from an operating to a non-operating position leaving said controller free, said mechanism serving subsequently to return and lock said controller in a non-operating position.

4. A controlling device for hoisting apparatus comprising in combination, a master screw, a master nut operated thereby, a throttle for the hoisting engine, oppositely movable articulated throttle rods provided with stops and connected with said throttle, a throttle switch carried by said nut, stationary stops adapted to throw said switch, and a switch member carried by said element and operated by said switch to engage said rod stops whereby said throttle may be operated.

5. A controlling device for hoisting apparatus comprising in combination, a master operating member driven from the hoisting engine, a master element operated by said member, a controller for the reversing gear of the engine, a throttle for the engine, switch mechanism carried by said element for operating said controller, and switch mechanism carried by said element for operating said throttle.

[Claims 6 to 15 not printed in the Gazette.]

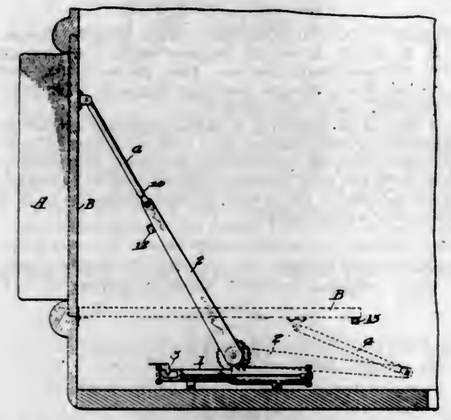
899,795. FLUID-PRESSURE MOTOR. JOHN E. OSMER, Chicago, Ill., assignor to Elevator Supply & Repair Company, Chicago, Ill., a Corporation. Filed Oct. 8, 1906. Serial No. 337,847.



1. In a fluid pressure motor, in combination, a high-pressure cylinder and a low-pressure cylinder arranged in tandem; a piston in each of said cylinders, said pistons being arranged to move together; a source of fluid pressure; means for placing said high-pressure cylinder in connection with said source of fluid pressure, for connecting said cylinders together, and for connecting said low-pressure cylinder with the exhaust; a retarding cylinder connected at all times with said source of pressure fluid; a retarding cylinder connected at all times with said high-pressure cylinder; and pistons in said retarding cylinders arranged to be moved by the pistons in said high and low-pressure cylinders.

2. A fluid pressure motor comprising a high pressure cylinder, a low pressure cylinder, pistons for said cylinders, a retarding cylinder, a valve chest provided with a valve for controlling the passage of motor fluid to said first-mentioned cylinders, channels connecting said valve chest with said high and low pressure cylinders, and a channel connecting said retarding cylinder to said valve chest, whereby said valve chest is retained in constant communication with said retarding cylinder, said retarding cylinder being provided with a piston having an extension passing through the end of the adjacent cylinder and into the path of the piston moving therein.

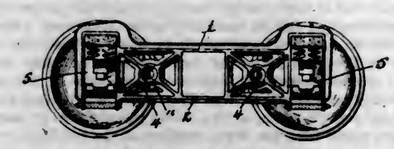
899,796. DOOR-OPERATING MECHANISM. JOHN E. OSMER, Chicago, Ill., assignor to Elevator Supply & Repair Company, Chicago, Ill., a Corporation. Filed Oct. 15, 1906. Serial No. 338,900.



1. In a door-operating mechanism, in combination, a motor, a lever actuated by said motor, a link for connecting said lever with the door, and a cushioning device in said link.

2. In a door-operating mechanism, in combination, a motor; a lever adapted to be moved by said motor; and a link for connecting said lever with the door, said lever comprising two telescoping sections, a spring interposed between said sections, one of said link-sections having a slot therein, and a pin fixed to said other link-section and extending within said slot.

899,797. TRUCK. RICHARD W. OSWALD, Pittsburg, Pa. Filed Aug. 16, 1906. Serial No. 330,912.



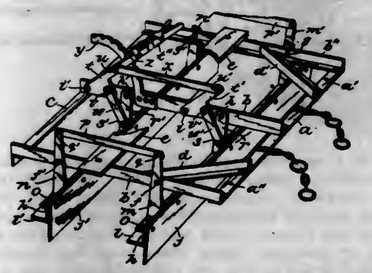
1. A truck side frame comprising a compression member and a tension member spaced from and opposing each other, the space between said members being connected by parallel vertically-extending bars formed integral with said members, a bolster opening being formed between the inner bars, the adjacent openings having two reversely-disposed diagonally extending braces formed integral with each other and having their planes crossing each other at an angle at a point intermediate the ends of the braces to form a shock-distributing point, each of said braces having a reinforcing web extending on opposite sides thereof, said braces and webs being formed integral with said members and said bars, said frame having pedestal openings at its ends.

2. A truck side frame comprising a compression member and a tension member spaced from and opposing each other, the space between said members being connected by parallel vertically-extending bars formed integral with said members, a bolster opening being formed between the inner bars, the adjacent openings having two reversely-disposed diagonally extending braces formed integral with each other and having their planes crossing each other at an angle at a point intermediate the ends of the braces to form a shock-distributing point, each of said braces having a reinforcing web extending on opposite sides thereof, said braces and webs being formed integral with said members and said bars, said frame having pedestal openings at its ends.

3. A truck side frame comprising a compression member and a tension member spaced from and opposing each other, the space between said members being connected by parallel vertically-extending bars formed integral with said members, a bolster opening being formed between the inner bars, the adjacent openings having two reversely-disposed diagonally extending braces formed integral with each other and having their planes crossing each other at an angle at a point intermediate the ends of the braces to form a shock-distributing point, said point being in the form of an annular member, each of said braces having a reinforcing web extending on opposite sides thereof, said braces and webs being formed integral with said members and said bars, said frame having pedestal openings at its ends.

4. A truck side frame comprising a compression member and a tension member spaced from and opposing each other, the space between said members being connected by parallel vertically-extending bars formed integral with said members, a bolster opening being formed between the inner bars, the adjacent openings having two reversely-disposed diagonally extending braces formed integral with each other and having their planes crossing each other at an angle at a point intermediate the ends of the braces to form a shock-distributing point, said point being in the form of an annular member, said member having its periphery curved and formed integral with the bars, the latter radiating from said annular member, each of said braces and the annular member having a reinforcing web extending on opposite sides thereof, said braces and their webs being formed integral with said members and said bars, the webs on the outer face of the annular member being formed integral with the webs of the braces, said frame having pedestal openings at its ends.

899,798. ROAD-DRAG. FRANK E. OTT, Indianapolis, Ind. Filed Apr. 20, 1908. Serial No. 428,090.



1. A road drag including a frame comprising a plurality of frame beams, a plurality of blades each connected with the beams and movable to different angles thereto, a lever for moving the blades to different angles, means acting when the blades are being moved to acute angles to the beams in one direction to augment the power of the lever to move the blades, said means acting to decrease the power of the lever when the blades are being moved to acute angles to the beams in the opposite direction, and means for locking the lever when at rest.

2. A road drag including a plurality of blades, angle flanges attached to the blades, connecting arms attached to the flanges and having stiff links pivoted thereto near to the flanges, a frame comprising a plurality of beams that are pivoted to the arms, one of the beams having a plurality of cam-levers pivoted thereto that are pivoted to the links, and connections between the plurality of blades.

3. A road drag including a frame comprising a plurality

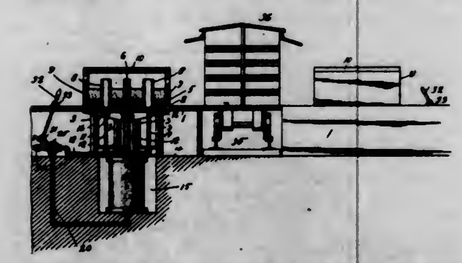
of frame beams, one of the beams having a plurality of cam-levers pivoted thereto, a plurality of blades each adjustably connected with the frame beams, a plurality of stiff links of which one link is pivoted to one of the cam-levers and operatively connected with one of the blades and another link is pivoted to another one of the cam-levers and operatively connected with another one of the blades, and means for operating the plurality of cam-levers simultaneously.

4. A road drag including a plurality of frame beams, a plurality of bars attached to opposite ends of the beams, a plurality of angle-braces attached to one of the bars and also to two of the beams, a plurality of cam-levers and also a plurality of arms pivoted to one of the beams, said beam having a latch-bar attached thereto, each cam-lever having two pivots thereon, one of the pivots being connected by a rod that is connected to one of the pivots of another one of the cam-levers a latch on one of the cam-levers to engage the latch-bar, a plurality of blades attached to the arms, a plurality of stiff links each pivoted to one of the arms and also to the remaining one of the pivots of one of the cam-levers, and other arms attached to the blades and pivoted to other ones of the beams, the other arms of the plurality of blades being connected together.

5. In a road drag, the combination of a frame, a plurality of blades having each an arm pivoted at its end to the frame and having a stiff link pivoted thereto, each blade having also a plurality of other arms that are pivoted also to the frame, a plurality of cam devices mounted movably on the frame and connected to the links of the plurality of arms for the movement and control thereof, and means for latching the plurality of devices.

[Claim 6 not printed in the Gazette.]

899,799. APPARATUS FOR FORMING BUILDING-BLOCKS AND ARTIFICIAL STONE FROM PLASTIC MATERIAL. ALBERT A. PAULY, Youngstown, Ohio. Filed Dec. 10, 1907. Serial No. 405,841.



1. In a concrete block forming apparatus, a platform, a plurality of molding frames movable vertically through said platform, pallets arranged within said molding frames, supports underneath the platform upon which said pallets are mounted, said pallets provided with a plurality of openings, hollow cores projecting through the openings in the pallets into said molding frames, a cross head on which said hollow cores and the molding frames are mounted, a steam cylinder, a piston therein having its rod connected to said cross head, a steam supply line communicating with said cylinder, branch lines tapped into said steam supply line and communicating with said hollow cores for supplying steam to the interior of the molding frames, a triple valve in said steam supply line, and an operating lever extending through the platform whereby said triple valve and the operation of the molding frames may be controlled from above the platform.

2. Concrete block forming means, comprising a platform, a molding frame movable vertically through said platform, a cross head beneath the platform on which said molding frame is mounted, supports beneath the platform and extending into the molding frame, a pallet mounted on said supports and provided with openings, hollow cores carried by said cross head and extending through the openings in said pallet, a steam cylinder beneath the platform, a piston therein to the rod of which said cross head is connected, a steam supply line communicating with said cylinder, branch steam lines leading from said supply line to the hollow cores for supplying steam to the molding frame, and a triple valve in said steam supply line controlling both the admission of steam to the cylinder and the admission of steam to the molding frame.

3. Concrete block forming means, comprising a platform, a molding frame movable vertically through said platform, a cross head beneath the platform on which said molding frame is mounted, supports beneath the platform and extending into the molding frame, a pallet mounted on said supports and provided with openings, hollow cores carried by said cross head and extending through the openings in said pallet, a steam cylinder beneath the platform, a piston therein to the rod of which said cross head is connected, a steam supply line communicating with said cylinder, branch steam lines leading from said supply line to the hollow cores for supplying steam to the molding frame, a triple valve in said steam supply line controlling both the admission of steam to the cylinder and the admission of steam to the molding frame, and a lever connected with said triple valve and extending through the platform whereby the valve and the movement of the molding frame can be controlled from the platform.

899,800. TANNING EXTRACT FROM PEAT. ERNEST E. M. PAYNE, Aylesbury, England, assignor of one-half to William Henry Staynes, John Hardy Smith, and Walter Henry Sturges, Leicester, England. Filed Sept. 26, 1904. Serial No. 226,024.

A process of preparing a leather-producing extract by comminuting peat, macerating it with a solution of caustic alkali, filtering and treating the liquid with sulfuric acid until the solid leather-producing extract is precipitated, separating the precipitate and dissolving it in a solution of sodium acetate.

899,801. KEY-GUARD. NORMAN PELLOW, Grand Rapids, Mich. Filed Dec. 14, 1907. Serial No. 406,582.



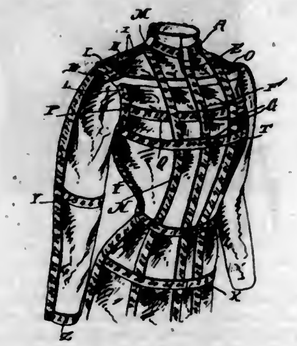
1. In combination with a door stile and a lock plate secured thereto and having a key hole through it, a key guard having a hole through one end and a slot in the other end and curved to throw the ends away from the lock plate, a screw passed through the hole in the key guard and screwed into the door stile, and a second screw secured in the door stile in position to engage the slot in key guard and hold the key guard to place by outward pressure against the head of the screw.

2. In combination with a door stile and a lock plate secured thereto and having a key hole and screw holes through it, a key guard, having a slotted screw hole through one end and an open slot in the other end, a screw passing through the slotted screw hole and one of the holes in the lock plate and screwed into the door stile, and a screw passed through the other hole in the lock plate and screwed into the door stile in position to be made to engage the open slot in the key guard to secure the key guard over the lower portion of the key hole.

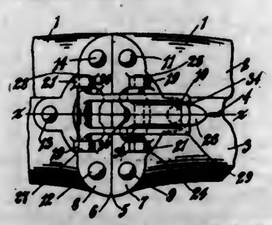
899,802. MEASURING DEVICE FOR DRESSMAKERS AND THE LIKE. JENNY POHLE, Lansdale, Pa. Filed Oct. 27, 1906. Serial No. 340,809.

A measuring device for dressmakers and the like consisting of a tape to be passed around the neck, securing

means at its ends, a tape to extend down the center of the back suspended from said securing means, a vertical tape having its top end looped and receiving said neck tape to be supported thereby extending down the front of the body, said front tape having a series of buttonholes therein, a single pair of spaced front cross tapes having buttons secured to said vertical front tape, shoulder eye tapes, shoulder tapes slidingly connected to said neck tape and buttoned to said shoulder eye tapes, said two front cross tapes at their ends being buttoned to said shoulder eye tapes, a single pair of rear cross tapes buttoned to said vertical rear tape and at their ends to said shoulder eye tapes, a second vertical front tape secured to one of said shoulder tapes at its point of attachment with said neck tape, a connecting strap loosely attached to said shoulder eye tapes and secured to said vertical front straps at points below the neck and above the uppermost of the pair of cross front tapes, side length tapes slidingly connected to the shoulder eye tapes, a waist tape buttoned to all of said vertical tapes, said shoulder tapes being extended to form full arm tapes, and cross wrist and elbow straps connected to said arm tapes.



899,803. COMBINATION COLLAR CAP AND FASTENER. JOHN J. POLI, Cincinnati, Ohio. Filed Feb. 24, 1908. Serial No. 417,238.

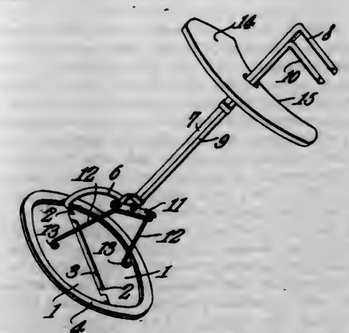


1. In a combination collar cap and fastener, a rigid metal plate permanently secured by rivets and extending the full length of each end of the collar, said plates having their meeting edges formed straight and flush with the meeting edges or ends of the leather part of the collar and having their rear edges formed of an irregular shape with central extensions flaring downwardly and adapted to take and fit into the crease of the collar and be riveted thereto, a hasp connected to one plate and a lever connected to the other plate, and lugs upon each plate integral therewith, adapted to form pivot bearings for the hasp and lever, respectively, said plates being each provided at its center, between said lugs, respectively, with an opening to permit the rib on the adjacent leather part of the collar to extend partially therein and to permit the end of the lever to extend therein and allow free play thereof, as well as to limit engagement thereof with the leather, to bring the hasp and lever into compact relation with the collar when closed, and said hasp and lever being mounted in said bearings, respectively, and adapted to cooperate with said plates, substantially as and for the purposes set forth.

2. In a combination collar cap and fastener, a rigid metal plate secured by rivets to each end of a leather collar and extending the full length of each end of the collar, said plates being provided with meeting edges adapted to engage each other throughout their length, and having extensions flaring downwardly and adapted to conform to the shape of the collar and be riveted thereto, a hasp connected to one plate and a lever connected to the other plate, and bearing lugs formed integral with each plate to form pivot bearings for the hasp and lever, respectively, said plates each being provided with an opening between said lugs and between the meeting edges and extensions to permit free play of the pivoted end of the hasp and lever, respectively, and to allow the pivoted end of the lever to extend therein, to bring the hasp and lever nearer to the collar when closed and permit a more compact assembling of the parts when closed, and said hasp and lever, each being pivotally mounted in said bearing lugs and adapted to engage each other to hold said plates in engagement and said collar in closed position, substantially as shown and for the purposes set forth.

3. In a combination collar cap and fastener, a rigid metal plate secured to each end of the collar, and formed flush therewith to reinforce and close the end, bearings on one of the plates formed integral therewith, and a lever pivotally mounted in said bearings, bearings on the other plate, and a hasp pivotally mounted in said latter bearings to constitute a fastening device to hold the ends of the collar together, all of said bearings being formed by lugs between which pivots of the lever and hasp respectively are disposed, and one of the lugs being bent over the pivot of the lever or hasp in each bearing, whereby the joint of closure of the bearing is disposed opposite to the direction of the strain when the fastening device holds the ends of the collar together, substantially as and for the purposes specified.

899,804. CREAM-SEPARATING DEVICE. JOHN H. REED, Lancaster, Wis. Filed July 10, 1908. Serial No. 442,940.



1. A device of the class described comprising a transverse axle; wings pivotally mounted upon the axle; a guide-rod terminally connected with the axle; means for rocking the wings, mounted upon the guide-rod.

2. A device of the class described comprising a transverse axle; wings, having a resilient outer edge, pivotally mounted upon the axle; a guide-rod terminally connected with the axle; means for rocking the wings, mounted upon the guide-rod.

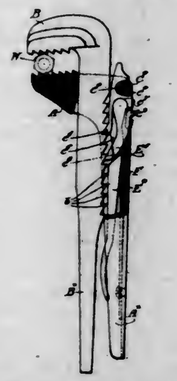
3. A device of the class described comprising a transverse axle; wings pivotally mounted upon the axle; a resilient ring projecting laterally from the outer edge of the wings; a guide-rod terminally connected with the axle; means for rocking the wings, mounted upon the guide-rod.

4. A device of the class described comprising a transverse axle having one of its ends bent inward upon itself and flexed into a straight vertical arm; wings pivotally mounted upon the axle; means for rocking the wings.

5. In a device of the class described, a transverse axle; a guide-rod terminally connected with the transverse axle; wings pivotally mounted upon the axle; an operating-rod mounted upon the guide-rod, adapted to rock the wings.

[Claims 6 to 8 not printed in the Gazette.]

899,805. WRENCH. JOSEPH REIF, Jr., Hebron, Ind. Filed June 8, 1908. Serial No. 437,267.



1. A wrench of the character described, comprising a stationary jaw having a handle provided with a chamber adjacent said jaw, a movable jaw provided with a handle extending through said chamber, a pivot pin carried by said stationary jaw and a latch bar having an open seat or socket and interposed between said pivot pin and the handle of said movable jaw, said latch bar being provided with means for adjustably holding the handle of the movable jaw.

2. A wrench of the character described, comprising a stationary jaw having a handle that is chambered adjacent said stationary jaw and provided with a pivot pin at the back of said chambered portion, a movable jaw provided with a handle extending through the chamber of said stationary jaw handle, a latch bar provided upon one side with means for engaging the movable jaw handle and provided upon its opposite side with a socket having an inclined portion to engage the pivot pin and a spring for normally holding said latch bar in engagement with the movable jaw handle.

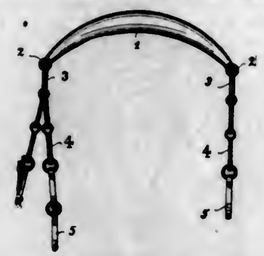
3. A wrench of the character described, comprising a stationary jaw having a handle that is chambered adjacent said stationary jaw and is provided with a pivot pin at the back of said chambered portion, a movable jaw provided with a handle passing through said chamber of the stationary jaw handle and having teeth upon its rear edge, and a latch bar provided upon one side with teeth to engage the movable jaw handle and provided upon its opposite side with an open socket to receive the pivot pin on the stationary jaw handle, said latch bar having a raised, inclined portion at one side of said pivot pin to engage said pin as the jaws are closed.

4. A wrench of the character described comprising two jaws pivoted and adjustable with respect to each other, one of said jaws having an extension or handle provided with teeth, and a latch bar provided with a plurality of teeth to engage the teeth on said jaw extension, one of the teeth of the latch bar being yielding whereby the latch bar may be adjusted along said jaw extension or handle at points less than the distance between its teeth.

5. A wrench of the character described comprising two jaws pivoted and adjustable with respect to each other, one of said jaws having a handle or extension provided with teeth upon its rear edge, and a latch bar provided with a plurality of teeth to engage the teeth on the rear edge of said jaw extension, one of the teeth of said latch bar being pivoted with respect to the other whereby the latch bar may be adjusted along said jaw extension or handle at points less than the distance of its teeth.

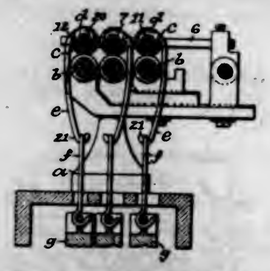
[Claims 6 to 8 not printed in the Gazette.]

899,806. PARCEL-CARRIER. LUDWIG RIEDER, Nuremberg, Germany. Filed Apr. 23, 1908. Serial No. 428,832.



A parcel carrier comprising in combination, a non-metallic flexible handle provided at each end with an eye or loop, a ring for each eye or loop, one or more chains secured to said rings and each composed of detachable links whereby they may be lengthened or shortened, and snap hooks secured to said chain.

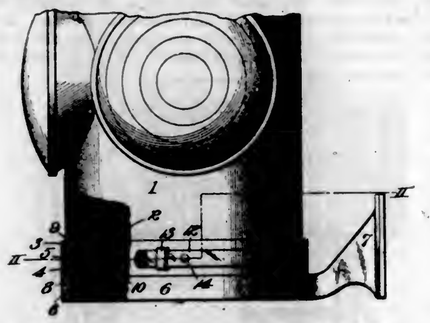
899,807. TOP ROLL FOR SPEEDERS OR SPINNING-MACHINES. CHARLES E. RILEY, Newton, Mass., assignor to Howard & Bullough American Machine Company, Limited, Pawtucket, R. I. Filed Nov. 30, 1906. Serial No. 345,802.



1. In top rolls for spinning machines, in combination, a non-rotatable arbor, supporting nebs therefor, a shell rotatably surrounding the arbor, said arbor being constructed with an enlarged boss having upstanding spaced side walls, a semi-cylindrical convex bearing face therebetween and shoulders between said walls at the ends of said bearing face, a depending weight hook having its upper end bent to conformably lie upon said bearing face and said shoulders and a weight suspended from the lower end of said hook.

2. In top rolls for spinning machines, in combination, an arbor, supporting nebs therefor, means for holding the arbor against rotation, said arbor having a reduced end portion affording a shoulder, said arbor also having a further reduced trunnion at the extremity of said end portion and engaged in one of the nebs, said reduced end portion being formed with a spiral groove extending throughout its length and through the length of said trunnion and a shell rotatably surrounding said reduced end portion and having its bore wholly in contact therewith, said shell having at its outer end an enlarged cavity alined with the bore and surrounding the trunnion, in spaced relation, said shell bearing against said shoulder.

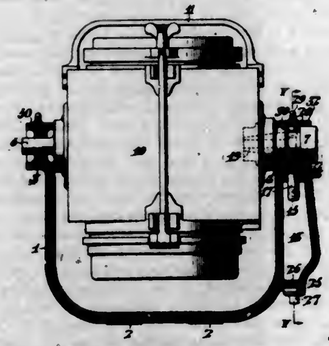
899,808. COMBINED BASE-RING AND BRACKET FOR SIGNAL-LAMPS. GEORGE H. ROLFES, St. Louis, Mo., assignor to Handlan-Buck Manufacturing Company, St. Louis, Mo., a Corporation. Filed Apr. 13, 1908. Serial No. 426,740.



1. The combination with a lamp of the character described having a shell provided with a bottom and an extension projecting downwardly from said bottom, of a base ring having a thickened lower portion located beneath said extension, and an upper annular neck member fitted within said shell extension, substantially as set forth.

2. The combination with a lamp of the character described having a bottom and an extension projecting downwardly from said bottom, of a stiffener band secured to said extension, and a base ring having a thickened lower portion located beneath said extension and stiffener band, and an upper annular neck member fitted within said extension, substantially as set forth.

899,809. ACETYLENE-GAS GENERATOR. EDWIN M. ROSENBLUTH, Philadelphia, Pa. Filed Jan. 24, 1907. Serial No. 353,805.



1. An acetylene gas generator bracket, comprising a condenser in unitary relation therewith, detachably connected in rotatable relation with the generator, having a separate inlet and outlet for the gas and a drip outlet for the condensate, substantially as set forth.

2. An acetylene gas generator bracket comprising a condenser integral therewith, having a separate inlet and outlet, and a socket local to said inlet, substantially as set forth.

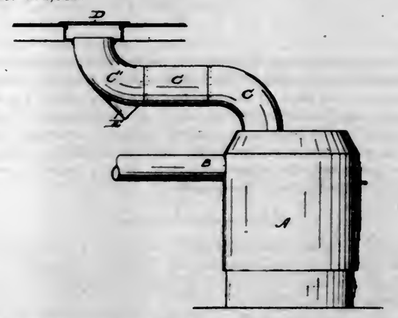
3. The combination with an acetylene gas generator bracket, comprising a condenser integral therewith, having a separate inlet and outlet; of a gas generator supported by said bracket, and comprising a gas passageway arranged to register with said inlet, substantially as set forth.

4. The combination with an acetylene gas generator bracket comprising a condenser integral therewith, having a separate inlet and outlet; of a gas generator supported by said bracket and comprising a gas passageway, having a nozzle arranged to extend into said inlet, substantially as set forth.

5. The combination with an acetylene gas generator bracket comprising a condenser integral therewith, having a separate inlet and outlet; of a gas generator supported by said bracket and comprising a gas passageway, having a nozzle arranged to extend into said inlet, in gas tight relation therewith, substantially as set forth.

[Claims 6 to 28 not printed in the Gazette.]

899,810. DUST-TRAP FOR HOT-AIR FURNACES. JOHN M. SAGER, Burtlake, Mich. Filed Nov. 9, 1907. Serial No. 401,389.



1. The combination with a hot air pipe for furnaces provided with an opening, of a dust receptacle, the sides and one end of the receptacle having flanges for projection into the pipe to engage the corresponding sides and end of said opening to support the receptacle.

2. The combination with a hot air pipe for furnaces provided with an opening of a dust collector having flanges for projection into the pipe to support the receptacle upon an incline over the opening.

3. The combination with a hot air pipe for furnaces provided with an opening, of a dust collector having flanges for projection into the pipe to support the receptacle over the opening, and a bail connected to the receptacle.

4. In an appliance for the purpose specified, a furnace pipe having an opening in its lower wall, and a removable dust receptacle set in said opening having projecting flanges designed to rest upon the wall of the pipe, whereby the dust receptacle is supported in said pipe opening.

5. In an appliance for the purpose specified, an elbow pipe for hot air furnaces having an opening in its lower wall, and a removable dust receptacle set in said opening having flanges designed to rest upon the wall of the pipe whereby it is supported in said opening, the lower wall of said dust receptacle being on a tangent to the arc formed by the elbow when the parts are in position whereby the dust upon gravitating into said receptacle is entrapped and supported out of the path of the ascending hot air.

[Claims 6 to 8 not printed in the Gazette.]

899,811. CUP AND SAUCER. DAVID A. STEWART, Roslyn, New Zealand, assignor of one-half to John Cameron, Dunedin, New Zealand. Filed Oct. 5, 1907. Serial No. 396,085.

1. In combination a saucer, a series of buttons integral therewith surrounding the inside bottom thereof, a cup, a flange on the base of the cup and means whereby the said flange engages said buttons so as to disengageably fasten the cup to the saucer substantially as described.

2. In combination a saucer, a series of buttons having beveled inner faces integral with and surrounding the inside bottom of the saucer, a cup and beveled lugs round the base of the cup coöperating with said buttons whereby the cup may be disengageably fastened to the saucer substantially as described.

3. In combination a saucer, a series of buttons integral therewith surrounding the inside bottom thereof a cup, a flange on the base of the cup and means whereby the said flange engages said buttons so as to disengageably fasten the cup to the saucer, the cup having a hollowed under surface whereby it may be placed on the saucer without being fastened thereto substantially as described.



4. In combination a saucer, a series of buttons integral therewith surrounding the inside bottom thereof a cup, a flange on the base of the cup and means whereby the said flange engages said buttons so as to disengageably fasten the cup to the saucer, the saucer having a circular flange of large diameter on its under surface whereby a number of saucers may be superimposed to occupy small space in packing substantially as described.

899,812. SOAP-DISPENSER. FREDERICK M. STEVENS, Waterbury, Conn., assignor to Veroform Hygienic Company, a Corporation of New York. Filed Feb. 21, 1908. Serial No. 417,040.



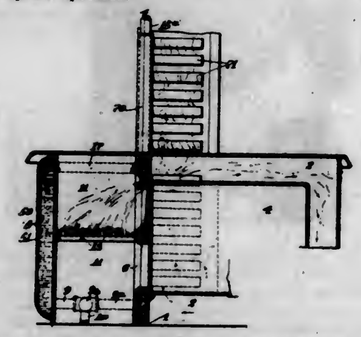
1. In a soap dispenser, a receptacle, a cover having a depending circumferential flange fitting over said receptacle and having a central integral guiding sleeve with an interior lug, a cup or cylinder within said receptacle and having notches on its upper edge, and a hollow plunger cooperating with said cup and having a vertical recess of limited vertical extent engaging said lug, whereby the vertical movement of the plunger is limited to a predetermined throw.

2. In a soap dispenser, a receptacle, a cover having a guiding sleeve with an interior lug, a cup or cylinder within said receptacle, and a plunger having a cup shaped knob with a vertical groove embossed integrally inward on one side and communicating with a lateral and a vertical recess in said knob and adapted to engage over said lug, whereby the plunger is made removable without weakening the structure of said knob.

899,813. RANGE. SAMUEL R. STINE, McVeytown, Pa. Filed Aug. 17, 1907. Serial No. 389,079.

1. In a cooking range; a fire box comprising closed ends, a hollow outer wall, an inner wall formed of a rectangular hollow frame comprising hollow bottom and top members connected by hollow vertical members, pipe connections that join the inner and outer walls, a feed pipe that joins with one of said pipe connections, and a distributing pipe connected with the hollow rectangular frame for the purposes specified.

2. In a cooking range of the character described; a fire-box whose outer wall is a hollow water-back and whose inner wall is a rectangular hollow frame comprising hollow bottom and top horizontal members connected by hollow vertical members, a water feed pipe that joins with the two walls, the inner wall having an upwardly extended circulating chamber, and a distributing pipe leading therefrom, said extended circulating chamber being located within the range off-take or combustion flue, for the purposes specified.



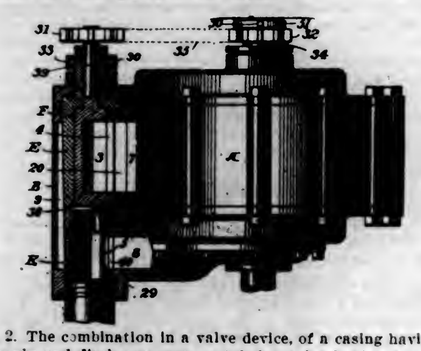
3. In a cooking range of the character specified; a fire-box whose outer wall is a hollow water back, and whose inner wall is a rectangular hollow frame, comprising hollow bottom and top horizontal members connected by hollow vertical members, a water feed pipe that joins the two hollow walls the inner wall having an upwardly extended circulating chamber, a distributing pipe leading therefrom, the said extended circulating chamber being located within the off-take or combustion flue of the range, and supplemental circulating pipes detachably connected with the said upwardly extended chamber, said pipes being also located within the combustion flue of the range for the purposes specified.

4. In cooking ranges of the character specified; a fire-box whose outer wall is a hollow water back, and whose inner wall is a rectangular hollow frame comprising hollow bottom and top horizontal members connected by hollow vertical members, the rear end of said hollow frame being extended into the combustion flue of the range, and having an upwardly extended supplemental circulating chamber, a series of circulating pipes connected with the rear end of the hollow frame located within the combustion flue of the range, a feed pipe that connects with the hollow frame and the hollow water back, and a distributing pipe that connects with the inner or rectangular hollow frame, substantially as shown and described.

5. In a cooking range; the combination with the oven portion and the combustion flue or off-take; of a fire-box composed of an outer hollow wall and an inner wall formed of a hollow rectangular frame, comprising hollow bottom and top horizontal members, connected by hollow vertical members, tubes that connect the rear ends of the two hollow walls, the said walls having means for sustaining a grate, a feed pipe connected with one of the tubes that joins the two walls, the inner wall having an extension at the rear end that projects into the combustion flue, and extended upwardly above the stove top within said flue, a series of circulating tubes substantially secured to the extension to project into the combustion flue, and a distributing pipe for leading off the water from the inner hollow wall for the purposes described.

899,814. CONTROL-VALVE FOR ROTARY ENGINES. EDWIN TAYLOR, New York, N. Y., assignor to Taylor Herrick Rotary Engine Company, a Corporation of New York. Filed Mar. 20, 1906. Serial No. 307,104.

1. The combination in a valve device, of a casing having a seat for a tubular valve, an inlet port and ports arranged to communicate with the inlet and exhaust ports of an engine, and a valve rotatable within said casing and provided with a cut-off plug, the valve having a port with a contracted inner mouth controlled by the cut-off plug, and a wider outer mouth adapted to coincide simultaneously with the inlet port of the casing and with the port through which the steam passes to the engine.



2. The combination in a valve device, of a casing having supply and discharge ports, a tubular valve having a port 2 adapted to connect the supply and discharge ports of the casing and extending through the valve, and a cut-off plug adapted to cut off the flow between said port 2 and the engine.

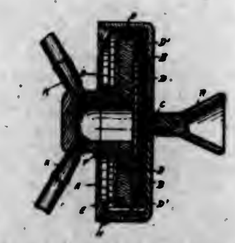
3. The combination with a valve casing having its separated supply and discharge ports, of a tubular valve having a port 2 widened at the periphery of the valve so as to connect the supply and discharge ports, and contracted towards the inner face of the valve, and a cut-off plug constructed to close communication between the said port 2 and the interior of the valve.

4. The combination with a valve casing having its separated supply and discharge ports, of a tubular valve having a port 2 widened at the periphery of the valve so as to connect the supply and discharge ports and contracted towards the inner face of the valve, a cut-off plug constructed to close communication between the said port 2 and the interior of the valve, and means whereby to impart rotation to the cut-off plug.

5. The combination with the engine having supply and discharge ports, of a valve casing having a supply port, and a discharge port communicating with the supply port of the engine, and provided with a tubular valve having ports and channels, and an interior channeled cut-off plug extending through the tubular valve, means for rotating the said plug in unison with the movements of the piston of the engine, and means for setting the tubular valve to different positions.

[Claims 6 to 17 not printed in the Gazette.]

899,815. AUSCULTA-PHONE. LOUIS A. TOWNSEND, Fort Dodge, Iowa. Filed May 13, 1907. Serial No. 373,459.



1. In a device of the class described, the combination of a casing, a back piece within the casing having a central opening forming an air space, the body of said back piece being spaced apart from the adjacent side of the casing, ear tubes communicating with the said air space, a diaphragm connected to the back piece and spaced apart from the body portion thereof and a receiver connected to the diaphragm and projecting out through the casing.

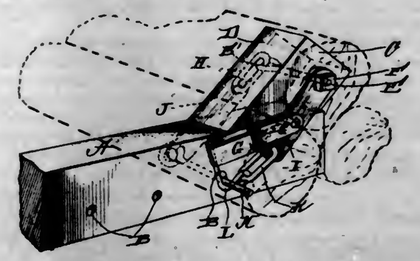
2. In a device of the class described, the combination of a casing, a back piece within the casing having a central opening forming an air space, the body of said back piece being spaced apart from the adjacent side of the casing, ear tubes communicating with the said air space, a diaphragm connected to the back piece and spaced apart from the body portion thereof and a receiver connected to the diaphragm and projecting out through the casing, said receiver being detachable from the diaphragm.

3. In a device of the class described, the combination of a casing, a back piece within the casing formed with a central opening and also formed with a rim surrounding said opening, which rim is engaged by the adjacent side of the casing, said back piece being spaced apart from the casing at all points except at said rim, a diaphragm fixed to the side of the back piece opposite from said rim and spaced apart from it, a receiver connected with the diaphragm and projecting through the casing and ear tubes communicating with the opening at the central portion of the back piece.

4. In a device of the class described, the combination of a casing, a back piece having a central air space, means for holding the back piece in position in the casing, ear tubes connected with the casing and communicating with the central opening, said back piece having on the opposite side a rim near the periphery thereof, a diaphragm resting against said rim with an air space between the diaphragm and the body of the back piece, a flexible rubber band passed around the periphery of both the back piece and the diaphragm and a receiver connected with the diaphragm and extending through the side of the casing opposite the ear tubes.

5. In a device of the class described, the combination of a thin metal casing member, a second casing member comprising a disk shaped portion with a flange thereon to engage one side of the first mentioned casing portion, screws passed through the periphery of said flange and into the first mentioned casing portion, a back piece comprising a disk shaped body having a central opening and an annular rim on one side surrounding said central opening, screws passed through the first mentioned casing portion and into said rim, said back piece having a rim opposite the first annular rim and near its periphery, a diaphragm resting against said annular rim, means for sealing it to the annular rim and a receiver detachably connected with the diaphragm and projecting outwardly through the casing, said parts so arranged that an air tight chamber is formed on the side of the diaphragm adjacent to the back piece, which chamber communicates with the air tubes, and another air chamber is formed on the opposite side of the back piece, which extends all around the back piece and diaphragm except where the back piece is attached to the casing, said latter chamber being so arranged that it does not communicate at any point with the first mentioned chamber.

899,816. DETACHABLE LOG-RETAINING DEVICE FOR CARS. OMER W. WADE, Atlanta, La. Filed Mar. 27, 1908. Serial No. 423,615.



1. A detachable device for holding logs upon cars comprising, in combination with the apertured beam of a car, a block, a bolt fastened to said block, a pin secured to

said bolt and passing through an aperture in the beam of the car, detachable means carried by the block and adapted to engage the end of a pin which projects through the aperture of the beam, and means for releasing said retaining means, as set forth.

2. A detachable device for holding logs upon cars comprising, in combination with the apertured beam of a car, a log retaining block, an eye bolt fixed to said block, a pin connected to said eye bolt and designed to be passed through an aperture in the beam of a car, a link connected to said bolt, an angled pin fastened to said link and adapted to engage over the end of the pin which projects through the aperture of said beam, and releasing means engaging said angled pin, as set forth.

3. A detachable device for holding logs upon cars comprising, in combination with the apertured beams of a car, a log retaining block, an eye bolt fixed to said block, a pin connected to said eye bolt and designed to be passed through an aperture in the beam of a car, a link connected to said bolt, an angled pin fastened to said link and adapted to engage over the end of the pin which projects through the aperture of said beam, and a loop pivotally connected to said link and adapted to engage the free end of the angled pin, as set forth.

4. In combination with an apertured beam of a car, a block designed to rest upon said beam, an eye bolt carried by said block, a pin connected to the eye of said bolt and designed to be passed through an aperture in said beam, a link pivotally mounted upon the bolt, an angled pin having an eye connected to said link, said pin designed to engage over the projecting end of the pin which extends through said aperture, a loop or staple pivotally connected to said link and adapted to receive the free end of the angled pin, and means carried by the loop for limiting its throw, as set forth.

899,817. CAR-ROOF. MORRIS E. WARD, Chicago, Ill. Filed Feb. 19, 1908. Serial No. 416,656.



1. A cornice for corrugated car-roofs comprising a horizontal body having corrugations providing a clearance between the body and roof, and a vertical skirt or curtain forming a facia.

2. In a car-roof, a series of corrugated roof-sections, and a cornice comprising a depending skirt or curtain and a horizontal body overlying the ends of the roof sections and having corrugations corresponding with and unobstructing the channels of the corrugations of the sections.

3. In a car-roof, a series of corrugated roof-plates or panels, and a cornice providing a combined facia and lock therefor and comprising a horizontal corrugated body and a vertical skirt, the corrugations of the body being of less depth than those of the panels.

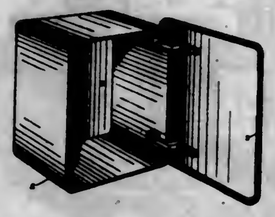
4. In a car-roof, a series of corrugated roof-plates or panels, an angular cornice forming a facia and lock therefor, the cornice being corrugated to less depth than the panels, and means securing the cornice at an interval from the car-body.

5. In a car-roof, a series of corrugated roof-plates or panels, an angular cornice forming a facia and lock therefor and comprising a horizontal body and vertical wing or curtain, the body having corrugations corresponding with but of less depth than the corrugations of the panels, bolts passing through the wings and car-body, and washers on the bolts intermediate the wings and car-body.

[Claim 6 not printed in the Gazette.]

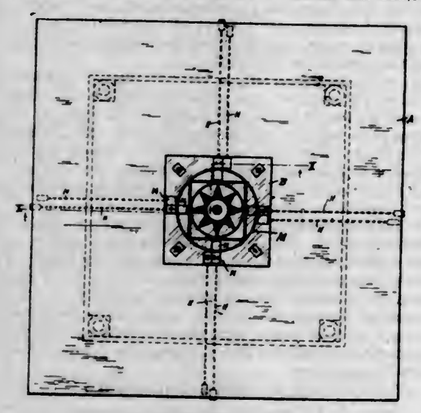
899,818. HINGE FOR BOXES. ALFRED H. WEISS, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 27, 1904. Serial No. 238,296.

The combination with a box and its lid, of a hinge comprising in its construction a member provided with an outwardly projecting perforated lip secured on the inside of the box a short distance from the open edge thereof and a movable member pivoted to the member secured in the box and having two parallel portions with an offset between them, one of said portions being secured to the inside surface of the lid, the distance of the pivot below the open edge of the box being equal to the length of the offset, whereby the lid will be brought



into exact connection with the open edge of the box when swung into a plane at right angles with the sides of the box, and the length of the offset being sufficient for the lid to be moved into a plane parallel with the side of the box without coming into contact with the exterior of the box, and a pin pivotally connecting said hinge members, substantially as described.

899,819. SCORE-KEEPER. CHARLES O. WELLNITZ, Milwaukee, Wis. Filed June 1, 1908. Serial No. 435,877.



1. A table provided with an opening having a transparent covering, a movable carrier underneath said covering, provided with tape supporting members, a tape mounted on said supports, a tape actuating rod, and a signal, operatively connected with the rod, said tape being provided with indicating characters, adapted to be exposed underneath said transparent covering.

2. A table provided with an opening having a transparent covering, a movable carrier underneath said covering, provided with tape supporting members, a tape mounted on said supports, a tape actuating rod, and a signal, operatively connected with the rod, said tape being provided with indicating characters, adapted to be exposed underneath said transparent covering and said transparent covering being subdivided into an inner and outer portion, both within the range of the carrier adjustment.

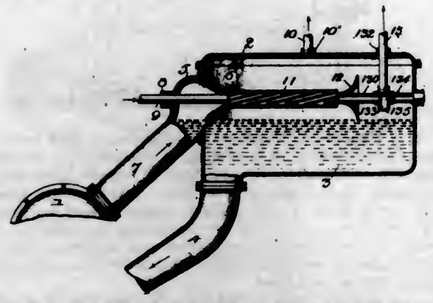
3. A table provided with an opening having a transparent covering, a movable carrier underneath said covering, provided with tape supporting members, a tape mounted on said supports, a tape actuating rod, and a signal, operatively connected with the rod, said tape being provided with indicating characters, adapted to be exposed underneath said transparent covering and said transparent covering being subdivided into an inner and outer portion, both within the range of the carrier adjustment, together with means, connected with the table for yieldingly resisting tape movement in either direction, and a signal connected with said resisting means.

4. A table provided with an inwardly and outwardly movable tape supporting carrier suspended beneath its top and having the top provided with openings covered by transparent material exposing the winding spools journaled in said carrier, a tape operatively mounted on said spools and provided with indicating characters, an operating rod for actuating one spool, a rewinding spring for actuating the other spool, a member on said rod provided with projections, a lever adapted to be actuated by the projections when the rod is rotated and to hold the same normally against the tension of the rewinding spring and a signal in operative relation to said lever.

5. A table provided with an opening, a glass plate mounted in the opening and provided with a dividing line, a tape carrier movably mounted below the glass plate, tapes adjustably supported on the carrier, means for adjusting the carrier to expose the tapes either within or beyond said dividing line, and signaling devices for indicating the tape movement.

[Claims 6 and 7 not printed in the Gazette.]

899,820. APPARATUS FOR PUMPING AIR AND GASES. WILLIAM G. ABBOTT, Jr., Philadelphia, Pa. Filed Nov. 28, 1905. Serial No. 289,403.



1. In a pumping apparatus, the combination with an injector provided with a nozzle, of a liquid, and means connected with both ends of said nozzle for circulating said liquid therethrough, means for admitting a gaseous fluid to said injector, and flaring means for separating from said liquid the gaseous fluid delivered from said nozzle.

2. In a pumping apparatus, the combination of an injector, means for circulating a fixed quantity of liquid through said injector, means for imparting a whirling motion to the liquid as it passes through said injector, means for supplying a gaseous fluid to said injector and means for carrying away the gaseous fluid delivered from said injector.

3. In a pumping apparatus, the combination of a storage tank, an injector adjacent said tank, a nozzle extending into said tank and provided with spirally arranged ribs, a liquid and means for drawing said liquid from said tank, and returning the same thereto through said injector.

4. In a pumping apparatus, the combination with a storage tank, an injector provided with a nozzle adjacent said tank, a liquid, means for drawing the liquid from said tank and returning the same thereto through said injector and means for imparting to the liquid a whirling motion as it traverses said pumping chamber.

5. In a pumping apparatus, the combination with a tank, of an injector chamber adjacent said tank, a nozzle extending into said tank, a liquid, means for drawing said liquid from said tank and returning the same thereto through said injector and means for imparting to the liquid in the pumping chamber a motion of rotation.

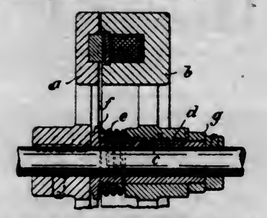
[Claims 6 to 19 not printed in the Gazette.]

899,821. MANUFACTURE OF OIL-CLOTH. MAX ABRAHAMS, New York, N. Y. Filed Jan. 3, 1907. Serial No. 350,643.

1. An article of manufacture consisting of a fabric made of a compressed sheet of paper soaked in linseed oil, and covered on both sides by a heavy oil paint body, and having an external varnish coat on both sides.

2. An article of manufacture consisting of a fabric made of a sheet of heavy compressed paper reinforced with a thin textile fabric glued thereto, a linseed oil filling of said paper, a heavy coat of oil paint on each side of said combined sheets of paper and textile fabric, and an outer covering of elastic varnish on both sides thereof.

899,822. CLUTCH. HEINRICH AST, Vienna, Austria-Hungary, assignor to The Firm of Vulkan Maschinenfabriks-Actien-Gesellschaft, Vienna, Austria-Hungary. Filed June 15, 1906. Serial No. 321,868.



1. In electro-magnetic clutches: a shaft; a clutch member fixed thereon; a loose clutch member; a running sleeve free to turn upon said shaft and of greater length than said loose clutch member, and connected thereto in such a manner as to allow the latter only longitudinal motion with respect to the former; a collar on said running sleeve; and means exerting a yielding pressure between said collar and said loose clutch member.

2. In electro-magnetic clutches: a shaft; a clutch member fixed thereon; a loose clutch member; a running sleeve free to turn upon said shaft and of greater length than said loose clutch member, and connected thereto in such a manner as to allow the latter only longitudinal motion with respect to the former; a collar on said running sleeve; means exerting a yielding pressure between said collar and said loose clutch member; and a second collar on said running sleeve against which said loose clutch member abuts in its terminal position.

3. In electro-magnetic clutches: a shaft; a clutch member fixed thereon; a loose clutch member; a running sleeve free to turn upon said shaft and of greater length than said loose clutch member, and connected thereto in such a manner as to allow the latter only longitudinal motion with respect to the former; a collar on said running sleeve; and a pressure spring or springs between said collar and the hub of said loose clutch member.

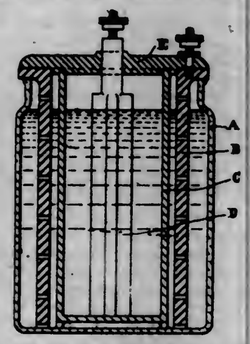
4. In electro-magnetic clutches: a shaft; a clutch member fixed thereon; a loose clutch member; a running sleeve free to turn upon said shaft and of greater length than said loose clutch member, and connected thereto in such a manner as to allow the latter only longitudinal motion with respect to the former; a collar on said running sleeve; and a pressure spring arranged concentrically about the running sleeve between the said collar and the hub of said loose clutch member.

899,823. PRIMARY BATTERY. WILHELM A. F. BLEECK, Brisbane, Queensland, Australia. Filed Mar. 20, 1908. Serial No. 422,824.

1. In primary batteries of the double fluid type the combination of sodium hydroxid as excitant with a depolarizer consisting of chromic acid dissolved in a solution of hydrogen peroxid with the addition of hydrochloric acid as described.

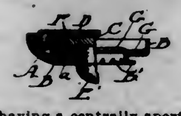
2. A double fluid primary battery consisting essentially of zinc as the positive element in a solution of sodium hydroxid as the excitant and of carbon as the negative ele-

ment in a depolarizer consisting of chromic acid dissolved in a solution of hydrogen peroxid with the addition of



hydrochloric acid, the depolarizer being separated from the excitant by a porous partition substantially as described.

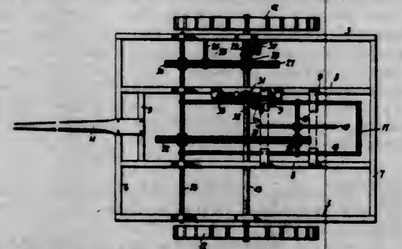
899,824. BUTTON. JULIUS G. BREITENSTEIN, Chicago, Ill., assignor to Independent Button & Machine Company, Chicago, Ill., a Corporation. Filed Mar. 16, 1908. Serial No. 421,528.



1. In a button having a centrally apertured back shell, a collet folded at its inner circumference to form means extending through the aperture of the shell for engaging the same, in combination with a tuft disk having its central portion forming the tuft extending through the central aperture of the collet, and an annular tuft-retaining disk lodged between the tuft disk and the collet having its inner circumference about its central aperture burred on the side toward the tuft disk.

2. In a button having a centrally apertured back shell, a collet folded at its inner circumference to form means extending through the aperture of the shell for engaging the same, in combination with a tuft disk having its central portion forming the tuft extending through the central aperture of the collet, and an annular tuft-retaining disk lodged between the tuft disk and the collet having a sharply cut edge at its inner circumference on the side toward the tuft disk.

899,825. ICE-CUTTING MACHINE. HENRY K. BURNETT, Hyde Park, and GOTTLIEB H. BAHRET, Poughkeepsie, N. Y. Filed Oct. 19, 1907. Serial No. 398,282.



1. In a machine of the class described, the combination with a main frame, and an axle carried thereby, of a shaft mounted for rotation upon said frame and disposed parallel with the axle, driving connections between said shaft and axle; a longitudinally-disposed swinging frame pivotally connected at its front end with the main frame; a transversely-disposed shaft carried by the swinging frame adjacent the rear end thereof; a saw carried by the last-mentioned shaft; driving connections between said first and last-mentioned shafts; an operating lever pivoted to the axle and provided at its lower end with an angular extension; and a connecting device between said extension and the swinging frame, for raising or lowering the latter when said lever is moved in one direction or the other.

2. In a machine of the class described, the combination with a main frame including longitudinal side sills and a pair of intermediate sills arranged in spaced relation to and parallel with the side sills and with each other, of an axle mounted for rotation upon said frame; ground wheels carried by the axle; a shaft mounted for rotation upon said frame and disposed parallel with and in advance of the axle; driving connections between said shaft and axle; a swinging longitudinal frame disposed between the intermediate sills and having its front ends pivotally connected therewith; a transversely disposed shaft carried by the swinging frame adjacent the rear end thereof; a saw carried by the last-mentioned shaft; driving connections between said first and last mentioned shafts; an operating lever pivoted to the axle and provided at its lower end with an angular extension; and a connecting device between said extension and the swinging frame, for raising or lowering the latter when said lever is moved in one direction or the other.

899,826. TORPEDO-PLACER. MARK COE and ROBERT GLASS, Senecaville, Ohio. Filed Sept. 24, 1907. Serial No. 394,341.



1. A torpedo placer embodying a bearing, a head revolubly mounted upon said bearing, a plurality of radially disposed arms carried by said head, a torpedo detachably connected to each arm, ratchet teeth carried by the upper and lower faces of said head, a weighted pawl engaging one set of teeth, a toothed lever engaging the other set of teeth, a casing housing said head and torpedoes, and a lever actuated rod connecting with said lever for intermittently moving said head.

2. A torpedo placer embodying a bearing, a head revolubly mounted upon said bearing, a plurality of radially disposed arms carried by said head, a torpedo detachably connected to each arm, ratchet teeth carried by the upper and lower faces of said head, a weighted pawl engaging one set of teeth, a toothed lever engaging the other set of teeth, and a casing housing said head and torpedoes.

3. A torpedo placer embodying a bearing, a head revolubly mounted upon said bearing, a plurality of radially disposed arms carried by said head, a torpedo detachably connected to each arm, ratchet teeth carried by the upper and lower faces of said head, and a weighted pawl engaging one set of teeth.

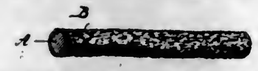
4. A torpedo placer comprising a revoluble head, radially disposed arms carried by said head, a torpedo carried by each arm, means arranged above said head for intermittently moving the same, and means arranged beneath said head for preventing the rearward rotation of said head.

5. A torpedo placer comprising a revoluble head, a plurality of torpedoes carried thereby, means arranged above said head for imparting an intermittent movement of the same, and means beneath said head for preventing the rearward rotation thereof.

899,827. PROCESS OF MAKING INGOTS. FRANK CUTTER, Providence, R. I. Filed Apr. 23, 1908. Serial No. 428,763.

1. The improved process of making cylindrical ingots adapted to be reduced to seamless wire, consisting in depositing upon a metallic rod by electrolysis a film of another metal, and impacting simultaneously all parts of the metal after it is so deposited upon the rod.

2. The improved process of making cylindrical ingots adapted to be reduced to seamless wire, consisting in depositing upon a rod of inferior metal by electrolysis a film of precious metal and impacting simultaneously all parts of the metal after it is so deposited upon the rod.



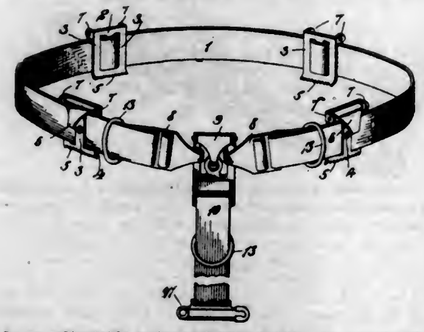
3. The improved process of making cylindrical ingots adapted to be reduced to seamless wire, consisting in depositing upon a metallic rod by electrolysis a film of another metal, and beating simultaneously all parts of the coated rod.

4. The improved process of making cylindrical ingots adapted to be reduced to seamless wire, consisting in depositing upon a metallic rod by electrolysis a film of another metal, and precipitating metal objects by impact against the coated rod.

5. The improved process of making cylindrical ingots adapted to be reduced to seamless wire, consisting in depositing upon a metallic rod by electrolysis a film of another metal, and precipitating metal objects and soap by impact against the coated rod.

[Claim 6 not printed in the Gazette.]

899,828. ADJUSTABLE WAIST AND SKIRT HOLDER. ERNESTINE CZARNKOWSKY, Brooklyn, N. Y. Filed Oct. 1, 1907. Serial No. 395,433.



In an adjustable waist and skirt holder, the combination with a waist band, of clasps through which the waist band is threaded and which said clasps serve to retain the material of the waist band when the latter has been adjusted as to length, a ring at each end of said waist band, a plurality of buckles movable upon said waistband, each said buckle having inwardly inclined teeth and a hasp for retaining the buckle in position upon the waist band, a buckle engaged by each said clasp, a depending lengthwise adjustable band having a ring at its end, carried by said last mentioned buckle, and a safety pin fastening means held by the said band.

899,829. COMBINED CATTLE STALL AND MANGER. WILLIAM D. JAMES, Wales, Wis. Filed Sept. 19, 1906. Serial No. 335,164.



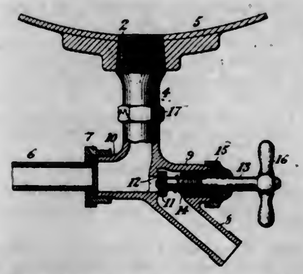
1. In a device of the described class the combination of a plurality of vertical posts, a manger, a plurality of manger supporting links, means for pivotally connecting said links at one end to said manger and additional means for pivotally connecting said links at their opposite ends to said posts, means for raising said manger from its normal position, and means for securing said manger in its raised position the pivotal connections of said mangers with said links being adapted to permit the mouth of said mangers to be brought to the vertical in close contact with the vertical supporting posts.

2. In a device of the described class the combination of a stanchion supporting frame, a plurality of stanchions supported in said frame, a manger located in front of said stanchions, a plurality of manger supporting links, means for pivotally connecting said links at one of their ends to said frame and additional means for connecting said links at their opposite ends to said manger, means for raising said manger, and means for securing said manger in its raised position with its mouth against the vertical side of said frame.

3. In a device of the described class the combination of a stanchion supporting frame, a manger subdivided by a plurality of vertical partitions into a plurality of separate compartments open at their lower and rear sides, adapted when raised to deposit its remaining contents upon the floor, a plurality of manger supporting links, pivotal bolts connecting said links at one end to said manger and their opposite ends to said frame, means for simultaneously inverting and raising all of said compartments from their normal to their elevated position and means for securing the same when raised in such elevated position.

4. In a device of the described class the combination of a stanchion supporting frame comprising a plurality of vertical posts and horizontal bars, a plurality of stanchions pivotally connected at their upper and lower ends to the upper and lower bars of said frame, a plurality of stall partition frames connected at one end to one side of said vertical posts and at their opposite ends with the post supporting floor, said frames being adapted to serve the two-fold purpose of partitions between the respective stanchions and of braces for the stanchion supporting frame, a manger open at the bottom and one side a plurality of manger supporting links pivotally connected at one end to said manger and at their opposite ends to said posts upon the opposite side from said partition frame, a winding shaft extending longitudinally of said frame and revolubly connected therewith, flexible connections communicating directly between said winding shaft and the upper edge of said manger, and adapted to be wound upon said shaft, a crank for revolving said winding shaft and means for retaining said manger when raised in its elevated position, all substantially as and for the purpose specified.

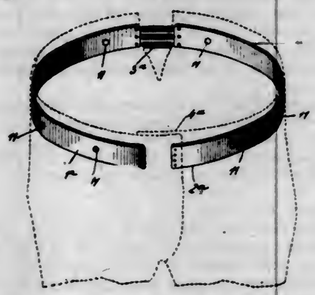
899,830. BLOW-OFF DEVICE FOR DOMESTIC BOILERS. JACOB MANNESCHMIDT, Jr., Brooklyn, N. Y. Filed Mar. 8, 1907. Serial No. 361,353.



A blow-off device for domestic boilers comprising an integral casing provided with means at its upper end for connection with the bottom of a boiler and provided with means for lateral connection with a water-back supply pipe, the casing having a passage therein from the boiler connection to the lateral water-back supply pipe connection and having a drain outlet in the wall of the passage opposite the lateral connection and having a valve cham-

ber opposite to and substantially in line with the lateral connection and connected with the passage by the drain outlet, and the casing also having a downward drain extension connected to the passage by the drain outlet, and a valve located in the valve chamber and arranged to close the drain outlet and being bodily removable from the casing, substantially as set forth.

899,831. BELT AND BELT-FASTENER. KARL MASTELE, Pittsburg, Pa. Filed Feb. 26, 1908. Serial No. 417,934.



In a belt, the combination with a pair of trousers, of resiliently connected metallic straps, and fasteners for detachably securing said straps to said trousers.

899,832. INGOT-MANIPULATOR. DAVID L. MEKEEL, Sewickley, Pa. Filed Mar. 16, 1908. Serial No. 421,488.



1. The combination with a feed table, of a head or abutment, means for moving said head transversely of the table, vertically movable turning arms carried by the head, a rock shaft mounted on the head above the plane of the rollers and connected to the turning arms, and means for shifting the rock shaft.

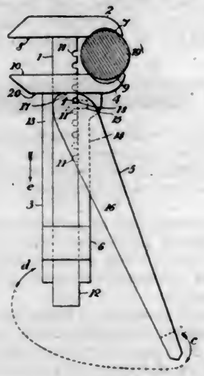
2. The combination of a feed table, of a head or abutment, means for shifting said head or abutment transversely of the table, slides mounted in said head and provided with lugs or fingers projecting beyond the face of the head, a rock shaft mounted on the head above the plane of the rollers of the feed table and provided with arms connected to the slides above the lugs or fingers, and means for oscillating the rock shaft.

3. The combination of a feed table, of a head or abutment, means for shifting the head or abutment, transversely of the table, slides mounted in said head or abutment and provided with fingers or lugs projecting beyond the face of the head, a rock shaft provided with arms engaging slots in the slides, bearings on the abutment for the rock shaft and provided with removable caps and means for oscillating the rock shaft detachably connected thereto.

899,833. SPANNER OR WRENCH. HENRY L. MINTER, London, England. Filed July 17, 1907. Serial No. 384,213.

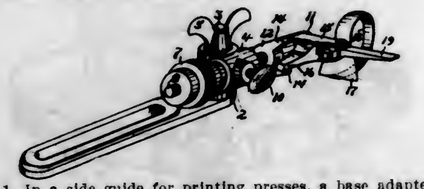
1. A wrench comprising a slidable jaw member notched on one side, an embracing yoke member having a cutaway portion contiguous with said notched side, and a lever having its pivotal point normally resting in said cutaway portion, said pivotal point adapted to automatically shift to the notched member upon application of pressure to the handle.

2. A wrench comprising a slidable jaw member notched along one of its sides, a stationary jaw member embracing said slidable member having a cutaway portion on its side contiguous with the notched side of the slidable member, and a cam lever having its fulcrum normally resting in



said cutaway portion but bearing when in operative position against the notched side of said slidable member.

899,834. SIDE GUIDE FOR PRINTING-PRESSES. CHARLES J. MCARTHUR, Newark, N. J. Filed Apr. 28, 1906. Serial No. 314,252.



1. In a side guide for printing presses, a base adapted to be adjustably secured to the feed board of the press; a pivoted block in connection with the base, the block having an externally threaded sleeve; a supporting bar extending through the block and sleeve; an adjusting nut having screw-threaded relations with both the sleeve and bar, and thereby being adapted to move said bar relative to the block when turned; a guide plate normally resting upon the feed-board and having supported relation with said bar; and suitable mechanism in connection with the press to automatically actuate the guide plate.

2. In a side guide for printing presses a base attached to the feed board and a supporting bar in adjustable relation with the base; a lever arm supported by said bar and having pivotal relation therewith; a guide in connection with the lever arm adapted to rest normally upon the feed-board; and an operating arm in connection with the lever arm to actuate the latter.

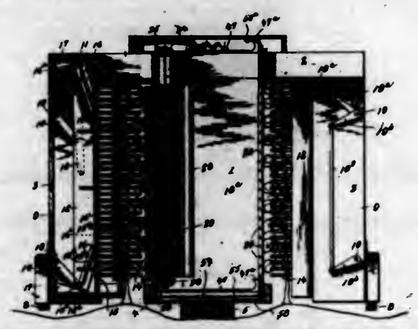
3. In a side guide for printing presses, a base having a supporting block in adjustable relation therewith; a supporting bar in adjustable relation with the block, and having an oscillating lever arm in connection therewith; a guide connected with the lever arm and adapted to normally rest upon the feed-board; and means to actuate the lever arm.

899,835. COTTON-PICKER. JAMES T. MCDONALD, Little Rock, Ark. Filed May 15, 1907. Serial No. 373,739.

1. In a machine for picking cotton from plants, the combination with a picking mechanism, of means movable toward and from said mechanism for engaging the fiber bearing portions of the plants to retain the same in coöperative position for the action of the picking mechanism.

2. In a machine for picking cotton from plants, the combination with picking mechanism, of means reciprocating relative to said mechanism for pressing the fiber bearing portions of the plants toward said picking mechanism substantially as described.

3. In a movable machine for picking cotton from plants, the combination with picking mechanism, of means reciprocating relative to said mechanism for pressing the fiber bearing portions of the plants toward said picking mechanism and means for guiding said portions of the plants between said picking and pressing mechanisms, substantially as described.



4. In a movable machine for picking cotton from plants, the combination with picking mechanism, of devices located on opposite sides of said picking mechanism for pressing the fiber bearing portions of the plants toward the same and means for guiding adjacent rows of plants between said picking mechanism and said pressing devices, substantially as described.

5. In a machine for picking cotton from plants, the combination with a picking chamber of mechanism for pressing portions of the plants toward said chamber and picking mechanism within said chamber for picking the cotton fiber and delivering the same into said chamber, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

899,836. BAROMETER. JACOB NELSON, Chicago, Ill., assignor to Edward P. Martin Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 5, 1906. Serial No. 341,978.

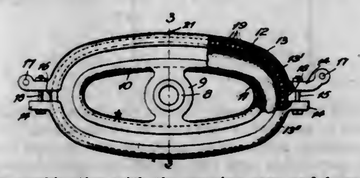


1. In a barometer, in combination, a barometer cistern; two contact pins arranged to extend into said cistern, the lower ends of said pins indicating the zero line; means for adjusting the position of said cistern to move the mercury therein into contact with said pins; a signaling device; and an electric circuit including said contact pins and said signaling device.

2. In a barometer, in combination, a barometer cistern; a base upon which said cistern is mounted; two contact pins arranged to extend into said cistern, the lower ends of said pins indicating the zero line; an insulating support for said pins movable to carry said pins into and out of operative position; means for accurately positioning said pins in operative position; means for securing said pins in operative position; a signaling device; and an electric circuit including said contact pins and said signaling device.

3. In a barometer, in combination, a barometer cistern; a base upon which said cistern is mounted; means for adjusting the position of said cistern; an insulating block having an elongated opening therein; a clamping screw extending through said opening into said base for securing said block to said base; two contact pins attached to said block and arranged to extend into said cistern for indicating the zero line, said block and said base having openings formed therein arranged to register when said pins are in zero-indicating position; a tapered positioning pin adapted to lie in said openings for positioning said contact pins; a signaling device; and an electric circuit including said contact pins and said signaling device.

899,837. VEHICLE-SPRING. JAMES G. NOLEN and JOHN SHEPHERD, Chicago, Ill.; said Nolen assignor to John E. Shepherd, Chicago, Ill. Filed Dec. 20, 1906. Serial No. 348,685.



1. In combination with the running gear and frame of a vehicle, a supporting member connected with the running gear, an air cushion bearing upon said supporting member, an overlying member connected with the frame, and balls interposed between one of said members and the cushion bearing directly on the cushion, to sink therein when under excess of pressure.

2. In combination with the running gear and frame of a vehicle, a supporting structure connected with the running gear, an opposing structure connected with the body, and an elastic cushion interposed between said structures and connecting with one thereof at separated points only.

3. In combination with the running gear and frame of a vehicle, similar concentric members one connected with the frame and the other with the running gear, an air cushion between said members, and balls interposed between one of said members and the cushion and bearing directly on the cushion to sink therein to an extent when under excess of pressure.

4. A cushioning device of the character described comprising a central member, an encircling pneumatic cushion, a separable, elliptic band encircling the cushion, and a series of balls interposed between said cushion and said band.

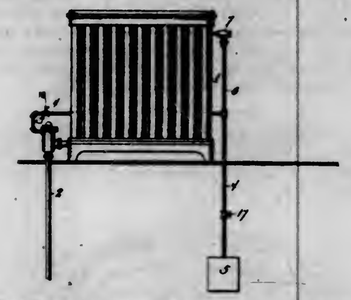
5. In a vehicle, the combination with a running gear and a frame of a cushioning device comprising bearing parts associated respectively with the running gear and frame, an interposed air cushion and balls interposed between and bearing upon one of said bearing parts and the cushion.

[Claim 6 not printed in the Gazette.]

899,838. HEATING SYSTEM. ANDREW G. PAUL, Boston, Mass. Filed May 15, 1900. Serial No. 16,809.

1. In a heating system, the combination of a supply pipe, a heater or radiator, a valve device on the supply pipe having a suitable valve casing, a supply port in said casing, a motor controlling said supply port, the valve device being provided with fluid pressure chambers on opposite sides of said motor, one being in free communication with the interior of the radiator, and the valve device being provided with an equalizing passage connecting the two chambers, and a fluid containing device connected with the other fluid pressure chamber and means for varying the pressure of the fluid in said containing device, substantially as set forth.

2. In a heating system, the combination of a supply pipe, a heater or radiator, a valve device on the supply pipe having a suitable valve casing, a supply port in said casing, a motor controlling said supply port, the valve device being provided with fluid pressure chambers on opposite sides of said motor, one being in free communication with the interior of the radiator, and the valve device being provided with an equalizing passage within the valve casing connecting the two chambers, and an exhausting device connected with the other fluid pressure chamber, substantially as set forth.



3. In a heating system, the combination of a supply pipe, a heater or radiator, a valve device on the supply pipe having a suitable valve casing, a supply port in said casing, a piston controlling said supply port, the valve device being provided with fluid pressure chambers on opposite sides of said piston, one being in free communication with the interior of the radiator, and the valve device being provided with an equalizing passage between the piston and the wall of the casing connecting the chambers on opposite sides of the piston, and a fluid containing device connected with the other fluid pressure chamber and means for varying the pressure in said containing device, substantially as set forth.

4. In a heating system, the combination of a supply pipe, a heater or radiator, a valve on the supply pipe having a suitable valve casing, a supply port in said casing, a piston controlling said supply port, the valve device being provided with fluid pressure chambers on opposite sides of said piston, one being in free communication with the interior of the radiator, and the other being connected with an exhausting device, the valve device being provided with an equalizing passage connecting the chambers on opposite sides of the piston, and a spring adapted to move the piston in the opposite direction from the exhausting device, substantially as set forth.

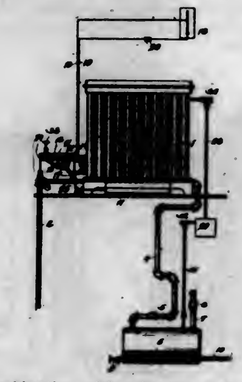
5. In a heating system, the combination of a supply pipe, a heater or radiator, a valve device on the supply pipe having a suitable valve casing, a supply port in said casing, a piston controlling said supply port, the valve device being provided with fluid pressure chambers on opposite sides of said piston, one being in free communication with the interior of the radiator, and the other being connected with an exhausting device, the valve device being provided with an equalizing passage connecting the chambers on opposite sides of the piston, and a spring adapted to move the piston in the opposite direction from the exhausting device, and means for adjusting the tension of the spring, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

899,839. HEATING SYSTEM. ANDREW G. PAUL, Boston, Mass. Filed May 15, 1900. Serial No. 16,815.

1. The combination with a heating system, of a supply pipe, a supply valve and an air duct, a valve in the air duct, a motor controlling both of said valves and connected with the heater or radiator so as to be operated by the pressure within, substantially as set forth.

2. The combination with a heating system, of a supply pipe, a supply valve, an air duct, a valve in the air duct, a motor controlling both of said valves, a casing provided with a fluid pressure chamber on one side of said motor, and a pipe connecting the fluid pressure chamber with the heater or radiator, substantially as set forth.



3. The combination with a heating system, of a supply pipe, a supply valve, an air duct, a valve in the air duct, a motor controlling both of said valves and connected with the heater or radiator so as to be operated by the pressure therein, a discharge pipe, a discharge valve, a casing, a motor controlling said discharge valve, the casing being provided with a fluid pressure chamber on one side of said motor, and with a passage connecting the fluid pressure chamber with the chamber on the other side of said motor, a pipe connecting said fluid pressure chamber with the discharge pipe, and an exhauster connected with the exhaust pipe, substantially as set forth.

4. The combination of a heating system, a supply pipe, a supply valve, an air duct, a valve in the air duct, a motor controlling both of said valves, a casing provided with a fluid pressure chamber on one side of said motor and a pipe connecting the fluid pressure chamber with the heater or radiator, a discharge pipe, a discharge valve, a piston controlling said discharge valve, a casing provided with a fluid pressure chamber on one side of said piston, and with an air passage connecting the fluid pressure chamber with the chamber on the other side of said piston, a pipe connecting said fluid pressure chamber with the discharge pipe, and an exhauster connected with the discharge pipe, substantially as set forth.

5. The combination with a heating system of a supply pipe, a supply valve, an air duct, a valve in the air duct, a motor controlling both of said valves, a casing provided with a fluid pressure chamber on one side of said motor, and a pipe connecting the fluid pressure chamber with the heater or radiator, and a thermostat controlling said passage, substantially as set forth.

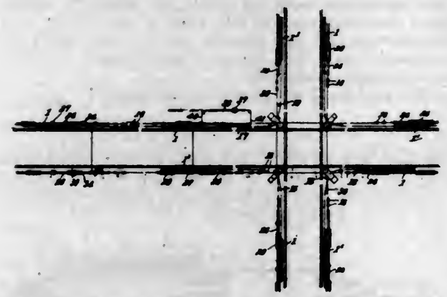
[Claim 6 not printed in the Gazette.]

899,840. RAILWAY SIGNAL DEVICE. STANISLAUS PIZICZIK, Baltimore, Md., assignor of one-half to John Roesser, Baltimore, Md. Filed Mar. 3, 1908. Serial No. 418,087.

1. A railway signal-system, comprising a series of train-actuated levers; and train-signal operating means, each comprising a sliding bar, and pivoted fingers directly engaged by said bar, to move the former into and out of operative position; and operative connections between the levers and the bars for effecting movement of the latter and consequently of the fingers.

2. A railway signal-system, comprising a series of train-actuated levers; and train-signal operating means, each comprising a sliding bar movable on anti-friction rollers, and pivoted fingers directly engaged by said bar, to move the former into and out of operative position; and operative connections between the levers and the bars for effecting movement of the latter and consequently of the fingers.

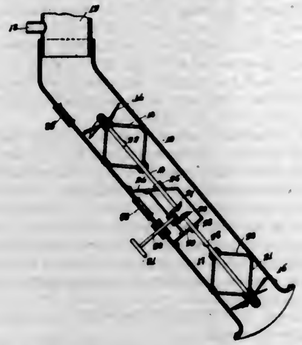
3. A railway signal-system, comprising a series of train-actuated levers; and train-signal operating means, each comprising a sliding bar, and pivoted fingers directly engaged by said bar, to move the former into and out of operative position; and operative connections between the levers and the bars for effecting movement of the latter and consequently of the fingers, and comprising connecting strands with intervening chain sections and direction-changing pulleys co-acting with the chains.



4. A railway signal-system, comprising a series of train-actuated levers; and train-signal operating means on main and intersecting tracks, each comprising a sliding bar, and pivoted fingers directly engaged by said bar, to move the former into and out of operative position; and operative connections between the levers and said bars on both the main and intersecting tracks within a predetermined danger zone, for effecting movement of said bars and the fingers engaged thereby, on both the main and intersecting tracks within said predetermined danger zone.

5. A railway signal-system, comprising a series of train-actuated levers; and train-signal operating means, each comprising a sliding bar, and pivoted fingers directly engaged by said bar, to move the former into and out of operative position; a roadside danger-indicating means; and operative connections between the levers and the bars and between the bars and said roadside danger-indicating means for effecting movement of the bars and, consequently, simultaneous movement of said fingers and said roadside danger-indicating means.

899,841. FORE-MASHER. ISIDOR RATHGEBER, Rock Island, Ill. Filed May 15, 1908. Serial No. 432,964.



1. In a foremasher, the combination of a source of malt, a source of liquid, a cylindrical spout common to said sources leading to a mash tub, and a pair of turbines revolving in opposite directions in said spout upon an axis coinciding or parallel with the axis of said spout and adapted to mix said liquid and malt during their passage through said spout, substantially as described.

2. In a foremasher, the combination of a source of malt, a source of liquid, a spout common to said sources leading to a mash tub, and a pair of turbines in said spout adapted to revolve in opposite directions by the passage of said liquid and said malt through said spout and the second turbine being driven from the first, substantially as described.

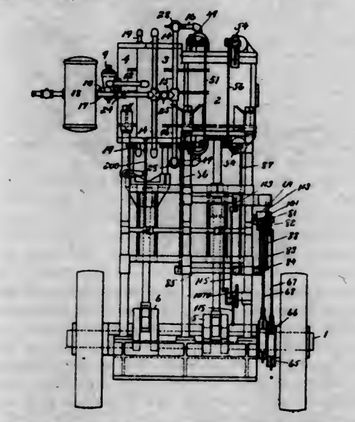
3. In a foremasher, the combination of a source of malt, a source of liquid, a spout common to said sources leading to a mash tub, and a pair of turbines in said spout geared together, substantially as described.

4. In a foremasher, the combination of a source of malt, a source of liquid, a spout common to said sources leading to a mash tub, a pair of turbines in said spout geared together, and an indicating wheel revolved with said turbines, substantially as described.

5. In a foremasher, the combination of a source of malt, a source of liquid, a spout common to said sources leading to a mash tub, a pair of turbines in said spout adapted to be revolved by the passage of said liquid and said malt through said spout, one of the turbines being corrugated, substantially as described.

[Claim 6 not printed in the Gazette.]

899,842. INTERNAL-COMBUSTION ENGINE. SIDNEY A. REEVE, Worcester, Mass., assignor to Charles F. Brown, trustee, Reading, Mass. Filed Aug. 11, 1905. Serial No. 273,710.



1. An internal-combustion engine comprising a charge-compressor, a combustion-cylinder adapted to have its charge admitted during the early part of the working-stroke, an igniter, an automatic cut-off valve whose closure is timed by the explosion, a combined cushioning and locking device for said valve adapted to absorb the shock of closing movement of said valve and hold the valve locked in closed position, and means operated by the motor for unlocking said valve.

2. An internal-combustion motor including a combustion-cylinder to which is admitted a charge during the early part of the working-stroke, an automatic valve operated by the explosion for cutting off the charge, and a pivoted arresting-link for said valve forced into a position of greatest mechanical advantage over the valve by the closing movement of the valve.

3. An internal-combustion engine comprising an explosion-motor, a charge-compressor operated thereby, an automatic cut-off valve closed by the explosion, a locking device for holding said valve closed, a charge-admission valve located anterior to said cut-off valve and operated by the motor, and means whereby the opening movement of said admission-valve unlocks the cut-off valve.

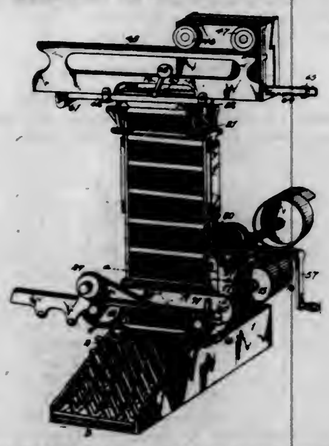
4. An internal-combustion engine comprising a motor-cylinder having an inlet-port, an automatic check-valve

controlling said port, a lever actuated by the valve, a valve cushioning and locking trip-link operated by the lever, a charge-admission valve anterior to the check-valve and operated by the motor, and means whereby the opening movement of said admission-valve actuates the trip-link to unlock the lever.

5. An internal-combustion engine comprising a motor-cylinder, air and fuel admission passages for said cylinder terminating in concentric entrance-ports, connected admission-valves controlling said passages and operated by the motor, and a single cut-off valve structure adapted to be closed by the explosion and comprising connected concentric air and fuel valves controlling said entrance-ports.

[Claims 6 to 8 not printed in the Gazette.]

899,843. TYPE-SETTING AND DISTRIBUTING MACHINE. LUDD ROBERTS, Jackson, Mich. Filed July 11, 1907. Serial No. 383,169.



1. The combination of a type magazine provided with vertical channels for type, a type carrying carriage having vertically arranged channels adapted to register with the channels of said magazine, means for producing an intermitting travel of said carriage, means for preventing the type from obstructing the travel of said carriage and means for automatically reversing the travel of said carriage, substantially as described.

2. In a type setting machine, in combination with a type magazine, a lever adapted to expel a single type from said magazine, a table across which said expelled type travels, a belt adjacent to said table and movable at an angle with respect to the travel of the type across said table, a pin adapted to engage the rear of said type and remain in engagement therewith after the forward end has engaged the belt, a pressure plate held from close contact with said belt by said pin, said pin and plate coacting with said belt to turn said type to bring its axis parallel with the line of travel of said belt and prevent it from rolling on its axis, substantially as described.

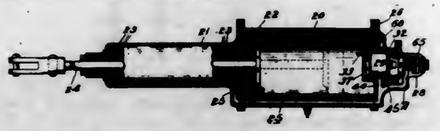
3. In a type setting machine, in combination with a type magazine, means for expelling type from said magazine, a table over which the type travels after leaving said magazine, a belt adapted to receive and carry forward said type, a pin located in front of said magazine, a hanger located over said belt and extending with an inclined face over said pin whereby the said type is adapted to pass under the inclined part of said hanger and on to said belt under said hanger, substantially as described.

4. In a type setting machine, in combination with a traveling belt, a plurality of hangers each of which is provided with a pressure member and a suspension member, the pressure member being adapted to be lifted slightly by a type traveling thereunder and when lifted being adapted to engage with the suspension member of an adjacent hanger whereby the under surface of the several pressure members present no obstruction to the pressure of the type other than the weight of the hanger in immediate engagement with the type, substantially as described.

5. In a type setting machine, in combination with a traveling belt, and means for directing a type onto said belt, a passage in continuation of the upper run of said belt, a friction wheel adapted to engage and advance the type leaving the upper run of said belt, means for producing a peripheral speed of said wheel of less velocity than the speed of said belt, whereby the said wheel while advancing the said type acts to reduce its speed of travel, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

899,844. AIR-BRAKE. AUGUSTUS A. ST. CLAIR, Indianapolis, Ind., assignor to St. Clair Air Brake Company, Indianapolis, Ind., a Corporation of Indiana. Filed Nov. 26, 1907. Serial No. 403,958.



1. In an air-brake mechanism, the combination, with a double-ended cylinder, a brake-controlled piston mounted therein to form primary and secondary pressure chambers, a spring tending to drive the piston to brake-setting position, a train-line-exhaust pocket, and a transfer passage forming a communication between the two pressure chambers; of a valve mechanism for controlling the brake-operating piston, said valve mechanism comprising the following parts, a valve cylinder communicating with the train-line at one end and at the other end with the primary pressure chamber, said valve cylinder having a port communicating with the transfer passage, a port communicating with atmosphere, a supply port communicating with the train line end of the cylinder and a port leading to the train-line-exhaust pocket; a piston valve mounted in said valve cylinder and comprising a head member and a ring member, said ring member having a limited axial play in the head member and said ring member having a passage forming a communication between its outer end and its circumference in position to be brought into register with the transfer passage port, a pocket in the circumference of said ring member and adapted to be brought into register with the transfer passage port and the atmosphere port, also a passage extending through the ring member to communicate with its interior and at the circumference of the ring adapted to register with the train-line port, and also a pocket adapted to connect the train-line-exhaust pocket with atmosphere, and also a passage adapted to connect the said pocket with the train-line.

2. In an air-brake, a double-ended brake cylinder having a transfer passage between its ends, a brake-operating piston mounted in said cylinder, a spring yieldingly urging said piston to brake-setting position, and a train-line, of a valve subject to train-line pressure and pressure in the initial end of the brake cylinder, said valve controlling communication between train-line and the initial end of the cylinder, between the initial end of the cylinder and the transfer passage, and between atmosphere and both the transfer passage and the initial end of the cylinder, and yielding means for yieldingly resisting movement of said valve in one direction.

3. In an air brake, a double-ended brake cylinder having a transfer passage between its ends, a brake-operating piston mounted in said cylinder, a spring yieldingly urging said piston to brake-setting position, and a train-line, of a valve subject to train-line pressure and pressure in the initial end of the brake-cylinder, said valve controlling communication between train-line and the initial end of the cylinder, between the initial end of the cylinder and the transfer passage, and between atmosphere and both the transfer passage and the initial end of the cylinder, and a pair of spring pressed plungers projected from opposite ends of said valve and adapted to engage the casing at the opposite ends of the travel of said valve to yieldingly resist further movement thereof in the corresponding direction.

4. An air brake, comprising a cylinder and piston, a spring for driving the piston in one direction, and a train-line for supplying pressure to the initial end of said cylinder in opposition to the spring, a valve arranged between the train-line and initial end of the cylinder, said valve carrying a port-controlling member, and a spring plunger for normally yieldingly urging the valve from full open position toward closed position, whereby a graduated introduction of pressure from train-line to the initial end of the cylinder is insured.

5. An air brake comprising a cylinder and piston, a spring for driving the piston in one direction, and a train-line for supplying pressure to the initial end of said cylinder in opposition to the spring, a valve arranged between the train-line and initial end of the cylinder, said valve carrying a port-controlling member, and a spring plunger carried by the valve for normally yieldingly urging the valve from full open position toward closed position, whereby a graduated introduction of pressure from train-line to the initial end of the cylinder is insured.

[Claims 6 to 29 not printed in the Gazette.]

899,845. ORANGE TO ORANGE-YELLOW VAT DYE AND PROCESS OF MAKING SAME. ALFRED SCHAARSCHMIDT, Basel, Switzerland, assignor to The Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Filed Apr. 22, 1908. Serial No. 428,688.

1. The described process for the manufacture of orange to orange-yellow vat-dyes of the anthraquinone-series, which consists in heating 2-methylanthraquinone with sulfur to a high temperature and then treating the resulting raw-products with a hypochlorite.

2. The described process for the manufacture of orange to orange-yellow vat-dyes by heating 2-methylhalogen-anthraquinones with sulfur to a high temperature and then treating the resulting raw-products with a hypochlorite.

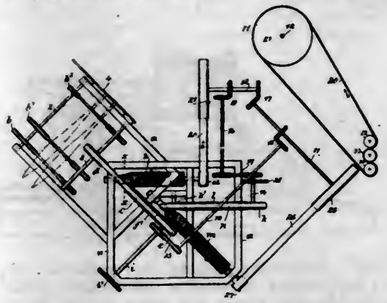
3. The described process for the manufacture of orange to orange-yellow vat-dyes by heating 2-methyl-3-chloro-anthraquinone with sulfur to a high temperature and then treating the resulting raw-products with a hypochlorite.

4. As new products the vat-dyes, obtainable by heating 2-methyl-anthraquinone with sulfur to a high temperature and then treating the resulting raw-products with a hypochlorite, constituting in dry state orange to orange-yellow powders soluble in concentrated sulfuric acid to dirty claret-colored to reddish-violet solutions and in fuming sulfuric acid of 24 per cent. anhydrid to dark green solutions and yielding with alkaline reducing agents vats dyeing cotton orange to orange-yellow tints fast to washing, light and chlorin.

5. As new products the vat-dyes, obtainable by heating 2-methyl-3-chloranthraquinone with sulfur to a high temperature and then treating the resulting raw-products with a hypochlorite, constituting in dry state orange to brownish-yellow powders soluble in concentrated sulfuric acid with a violet to violet-blue color, dissolving in fuming sulfuric acid of 24 per cent. anhydrid to green solutions and yielding with alkaline reducing agents vats dyeing cotton orange-yellow shades fast to washing, light and chlorin.

899,846. MACHINE FOR PREPARING VEGETABLE FIBERS. FREDERICK SCHEER, Roosevelt, N. Y., and FRANK DARKIN, Passaic, N. J. Filed Oct. 26, 1905. Serial No. 284,440.

1. In a machine for preparing vegetable fibers and in combination, co-acting devices set at an angle to one another, the one for engaging the leaves at a suitable point and the other for removing the pulp thereof from a part of each leaf and a second like series of co-acting devices also set at an angle to one another, the one for engaging the fibers and the other for removing the pulp from the balance of the leaves, the respective series of devices being set at a suitable angle to one another.



2. In a machine for preparing vegetable fibers, the combination with a conveyer device, of co-acting devices set at an angle to one another the one for engaging the leaves at a suitable point and the other for removing the pulp thereof from a part of each of said leaves, and a second like series of co-acting devices also set at an angle to one another and to the first set of devices for engaging the fibers and removing the pulp from the balance of the leaves.

3. In a machine for preparing vegetable fibers, the combination with a series of belts and pulleys forming a conveyer device, of a pair of endless grip feed chains in line with the same and receiving and holding the leaves to be scraped, a pair of scraping cylinders having conical forward ends and set at an angle to the line of travel of the endless grip feed chains and adapted to receive and scrape said leaves from the point held in the grip feed chains to one end, and a series of similar co-acting devices for engaging the fibers and scraping the other half of the leaves.

4. In a machine for preparing vegetable fibers, the combination with a series of belts and pulleys forming a conveyer device, of a pair of endless grip feed chains in line with the same and receiving and holding the leaves to be scraped, a fixed guide in which the lower of the endless grip feed chains moves during the scraping operation, and a yielding guide above the fixed guide and co-acting therewith, a pair of scraping cylinders having conical forward ends and set at an angle to the line of travel of the endless grip feed chains and adapted to receive and scrape said leaves from the point held in the grip chains to one end, and series of similar co-acting devices for engaging the fibers and scraping the other half of the leaves.

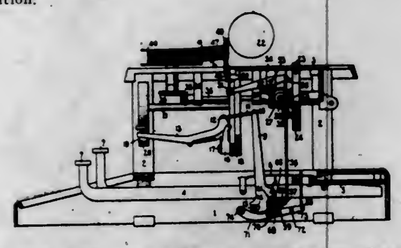
5. In a machine for preparing vegetable fibers, the combination with a series of belts and pulleys forming a conveyer device, of a pair of endless grip feed chains in line with the same and receiving and holding the leaves to be scraped, a pair of scraping cylinders having conical forward ends and set at an angle to the line of travel of the endless grip feed chains and adapted to receive and scrape said leaves from the point held in the grip feed chains to one end, a second pair of endless grip feed chains and a second pair of scraping cylinders agreeing in all essential details with the first pair of endless grip feed chains and the first pair of scraping cylinders, the respective pairs of grip feed chains and scraping cylinders being set at suitable angles to one another so as to first scrape one half of the leaf and then engage the fibers and scrape the second half.

[Claim 6 not printed in the Gazette.]

899,847. TYPE-WRITING MACHINE. CHARLES E. SMITH, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 6, 1906. Serial No. 337,739.

1. In a typewriting machine, the combination of a ribbon having a plurality of fields of different characteristics,

a key actuated universal bar, connections between said universal bar and ribbon, and means carried by and movable relatively to the universal bar for shifting said connections relatively to the universal bar to determine which field of the ribbon shall be presented to operative position.



2. In a typewriting machine, the combination of a ribbon, a key actuated universal bar, connections between said universal bar and ribbon, and means carried by the universal bar for shifting said connections relatively to the universal bar to render the movement of the universal bar inoperative to move the ribbon to operative position.

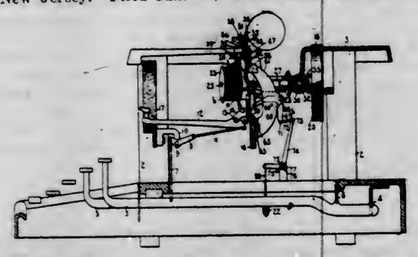
3. In a typewriting machine, the combination of a ribbon having fields of different characteristics, a universal bar, a device carried by said universal bar and adapted to be set and maintained in different positions relatively thereto, and connections between said device and the ribbon, the construction and arrangement of the parts being such that a change in the disposition of said device determines which field of the ribbon shall be presented to operative position or whether or not the ribbon shall be moved to operative position.

4. In a typewriting machine, the combination of a ribbon vibrator, a universal bar, a rigidly supported arm carried by and adjustable on said universal bar, connections between said adjustable arm and said vibrator, and means extending to the outside of the machine for adjusting said arm.

5. In a typewriting machine, the combination of a ribbon having fields of different characteristics, a ribbon vibrator, a universal bar, permanently maintained connections between the vibrator and universal bar, said connections including an actuating lever, and adjustable means between said lever and universal bar for changing the normal position of the vibrator without changing the universal bar and thereby changing the throw of the vibrator without changing its extent of movement in order to determine which field of the ribbon shall be presented to operative position.

[Claims 6 to 17 not printed in the Gazette.]

899,848. TYPE-WRITING MACHINE. ANDREW W. STEIGER, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Jan. 29, 1906. Serial No. 298,469.



1. In a typewriting machine, the combination of a platen; printing instrumentalities; means for feeding the ribbon longitudinally; a ribbon carrier; means for adjusting the ribbon carrier to enable different portions of the width of the ribbon to coöperate with the printing instrumentalities without altering the normal distance between the ribbon and the printing line on the planten; and means independent of the adjusting means for invariably giving the ribbon carrier a uniform movement at printing operations.

2. In a visible writing machine, the combination of a platen; printing instrumentalities; means for feeding the ribbon longitudinally; a ribbon vibrator having a fixed normal position in which the ribbon is always normally maintained at an unvarying distance away from the printing point; means for moving said ribbon vibrator to and from the platen at printing operation, the movement or "throw" given to the vibrator by said moving means being uniform; and means for adjusting said vibrator to enable different portions of the width of the ribbon to coöperate with the printing instrumentalities.

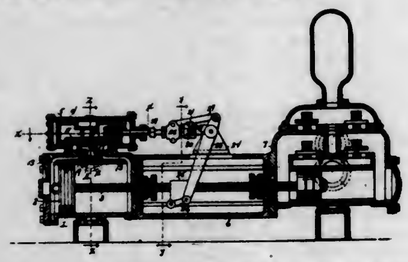
3. In a typewriting machine, the combination of a ribbon carrier that is reversible to present either side or face of the ribbon to the paper; and means for invariably giving the ribbon carrier a uniform movement at printing operations.

4. In a typewriting machine, the combination of a ribbon carrier; and means for adjusting the ribbon carrier to change its normal position and enable either side or face of the ribbon to be written upon at will.

5. In a typewriting machine, the combination of ribbon spools; means for rotating said spools to feed the ribbon longitudinally; a ribbon carrier; and means for adjusting said ribbon carrier to change its normal position and enable either side or face of the ribbon to be written upon at will without transposing or reversing said spools.

[Claims 6 to 32 not printed in the Gazette.]

899,849. STEAM-ACTUATED VALVE FOR ENGINES. ALFRED G. STOKES, Beloit, Wis., assignor to Fairbanks, Morse & Co., Chicago, Ill., a Corporation of Illinois. Filed Feb. 25, 1907. Serial No. 359,143.



1. In a steam engine, the combination with a cylinder and a piston therein, of a steam chest, a chest piston therein, a valve connected to said chest piston and arranged to be longitudinally reciprocated thereby to control said cylinder piston and means operable by said cylinder piston for rocking said chest piston to transversely reciprocate said valve and for reciprocating said chest piston to longitudinally reciprocate said valve, said transverse and longitudinal reciprocation controlling said chest piston.

2. In a steam engine, the combination with a cylinder, a piston therein, a steam chest, a piston therein, a valve adapted to be longitudinally reciprocated by said chest piston in a horizontal plane to control the movement of said cylinder piston, and means operable by said cylinder piston for shifting said valve transversely in a horizontal plane and for reciprocating said chest piston.

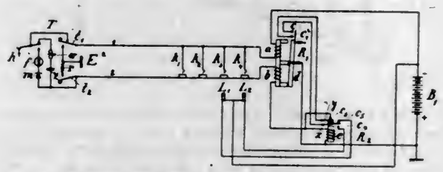
3. In a steam engine, the combination with a cylinder having passages communicating with its opposite ends and a piston in said cylinder, of a steam chest having passages communicating with its opposite ends, a chest piston in said chest, a valve connected to said chest piston and controlling said cylinder and steam chest passages, and means for transversely and longitudinally reciprocating said valve in a horizontal plane near the end of each stroke of said cylinder piston for opening and closing said steam chest passages and for partially closing said cylinder passages, for the purpose described.

4. In a steam engine, the combination with a cylinder and a piston therein, of a steam chest, a chest piston therein, a valve arranged to be transversely and longitudinally reciprocated by said chest piston in a horizontal plane for controlling said cylinder piston, a piston rod for said cylinder piston, a stem on said chest piston, and connections between said rod and stem for rocking and reciprocating said stem, for the purpose described.

5. In a steam engine, the combination with a cylinder and a piston therein, of a steam chest and a piston therein, of a valve, means controlled by said cylinder piston for imparting an oscillating and longitudinally reciprocating movement to said chest piston, and connections between said chest piston and valve whereby said oscillating and longitudinally reciprocating movement of said chest piston imparts to said valve a transverse and longitudinal reciprocation in a horizontal plane.

[Claims 6 to 10 not printed in the Gazette.]

899,850. TELEPHONE-EXCHANGE APPARATUS. EMIL TANKE, Berlin Germany, assignor to Siemens & Halske A. G., Berlin, Germany, a Corporation. Filed June 17, 1905. Serial No. 265,746.



1. In a telephone system, the combination with a plurality of calling groups and their respective annunciators; of a subscriber's station, a relay having two coils, and a single coil relay, a circuit leading from said subscriber's station through one coil of said two coiled relay to control one annunciator, and another circuit leading through the other coil of said two coiled relay, and through the single coiled relay to control another annunciator.

2. In a telephone system, the combination with a plurality of calling groups and their respective annunciators; of a subscriber's station, a relay having two coils, and a single coiled relay connected in series with one coil of the other relay, a circuit leading from said subscriber's station through the other coil of said two coiled relay to control one annunciator, and another circuit leading through the single coiled relay and that coil of the two coiled relay which is in series with it, to control another annunciator.

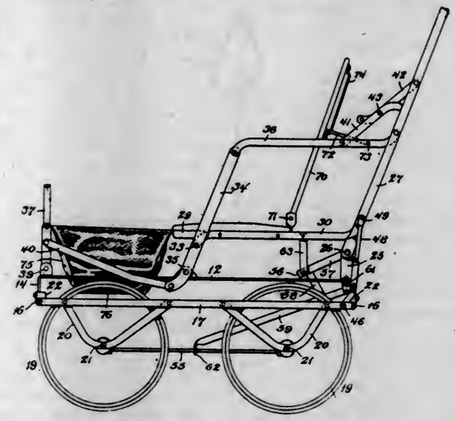
3. In a telephone system, the combination of a plurality of calling groups and their annunciators, of a subscriber's station, a two coiled relay, a single coiled relay, means for operating one annunciator from the subscriber's station through one coil of said two coiled relay, and means for operating another annunciator from the subscriber's station through said single coiled relay and energizing both coils of said two coiled relay.

4. In a telephone system, the combination with a plurality of calling groups and their respective annunciators; of a subscriber's station, a two coiled relay, a single coiled relay in series with one coil of the two coiled relay, means for operating one annunciator from the subscriber's station through one coil of the two coiled relay, and short circuiting the single coiled relay, and means for operating another annunciator from the subscriber's station through said single coiled relay and energizing both coils of said two coiled relay.

5. In a telephone system, the combination of a central station having a plurality of calling groups and their respective annunciators, a subscriber's station, a two-branched conductor connecting the stations, keys at the subscribers' stations for selectively calling corresponding groups at the central station, a relay for controlling the group circuits having a pivoted armature, coils on the relay one in each branch of the conductor, each coil with the armature of the relay forming a separate magnetic circuit whereby when both coils of the relay are energized the previous position of the armature is not changed.

[Claim 6 not printed in the Gazette.]

899,851. FOLDING CARRIAGE. ORA N. TURNER, Templeton, Mass., assignor to Bay State Metal Wheel Company, East Templeton, Mass., a Corporation of Massachusetts. Filed Dec. 19, 1907. Serial No. 407,104.



1. In a folding carriage, the combination of a seat frame, laterally-swinging wheel-carrying frames pivoted thereto, folding mechanism for swinging said frames to retract and project the wheels, a jointed locking device extending across the space between the wheel carrying frames for locking and releasing the same, the folding mechanism being separate from the locking device, and connections between the folding mechanism and locking device whereby the latter is made alternately operative and inoperative through the operation of the folding mechanism.

2. In a folding carriage, the combination of a seat frame, laterally-swinging wheel-carrying frames pivoted thereto, folding mechanism for swinging said frames to retract and project the wheels, a strut connecting the wheel frames and adapted to be lengthened and shortened to lock and release the wheel frames, the strut being separate from the folding mechanism, and connections between said folding mechanism and strut whereby the latter is automatically shortened and lengthened by the operation of the folding mechanism.

3. In a folding carriage, the combination of a seat frame, laterally-swinging wheel-carrying frames pivoted thereto, folding mechanism for swinging said frames to retract and project the wheels, a toggle strut connecting the wheel frames, the strut being separate from the folding mechanism, and connections between said toggle and the folding mechanism, whereby the toggle is alternately broken and extended by the operation of the folding mechanism.

4. In a folding carriage, the combination of a seat frame, laterally-swinging wheel-carrying frames pivoted thereto, folding mechanism for swinging said frames to retract and project the wheels, a toggle strut connecting the wheel frames, and comprising a central link and two end links jointed to the central link and to the wheel frames, and connections between the central link and the folding mechanism adapted to raise and depress the central link to break and extend the toggle when the folding mechanism is operated to retract and project the wheel frames.

5. In a folding carriage, the combination of a seat frame, laterally-swinging wheel-carrying frames pivoted thereto,

folding mechanism for swinging said frames to retract and project the wheels, a plurality of locking devices extending across the space between the wheel frames, and adapted to lock and release the latter, the locking devices being separate from the folding mechanism, and connections between the folding mechanism and the locking devices, whereby the latter are simultaneously actuated through the operation of the folding mechanism.

[Claims 6 to 20 not printed in the Gazette.]

899,852. ARTIFICIAL FLOWER. WILLIAM A. WARNER, Bridgeport, Conn. Filed Feb. 28, 1907. Serial No. 359,877.

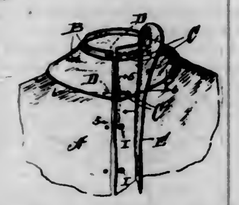


1. An artificial flower comprising an electrically deposited metal shell in the form of a flower and having a reduced calyx portion, a cap to engage the said calyx portion of the shell, a stem attached to the cap, and a metal plating covering the shell cap and pin.

2. An artificial flower comprising a metal shell representing a flower and having a reduced calyx portion with a hole therethrough, a stem inserted through said hole to engage the shell, and a metal cap covering the connection of stem and reduced calyx portion to strengthen the parts.

3. An artificial flower comprising a metal shell having a wire attached to its base by a flared cup, and a metal plating for said shell and cup.

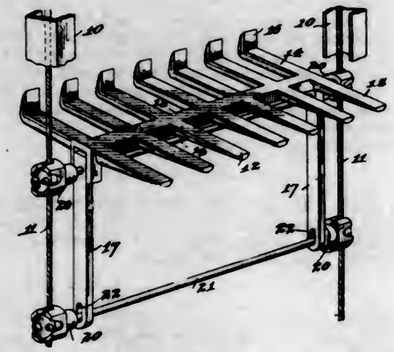
899,853. COVERING FOR BARBERS' CHAIRS. OTTO H. WILLARD, Chicago, Ill. Filed May 5, 1908. Serial No. 430,929.



1. A chair covering for barbers' use having an integral collar of a flexible material adapted to surround the neck of a person, rings near one end of the collar, a hook fastened to the other end designed to engage one or another of said rings, a flap fastened along one of its longitudinal edges to said cover near the edge thereof and having its end projecting beyond the edge of the collar and adapted to fold over the top of the latter, as set forth.

2. A covering for chairs for barbers' use having a right angled extension adapted to fit over the arms of the chair, an integral, flexible, adjustable collar, a flap fixed along one of its longitudinal edges to the cover and adapted to fit over the meeting edges thereof and projecting at one end beyond the edge of the collar over which it is adapted to be folded, as set forth.

899,854. FREIGHT-CONVEYER. GEORGE W. YOUNKMAN, Denver, Colo. Filed Feb. 10, 1908. Serial No. 415,120.



1. In a conveyer or transporter, the combination of a pair of cables, a platform having a pair of downwardly-projecting arms, an upper shaft below said platform extended through apertures in said arms and clamped to said cables, and a lower shaft extended through elongated slots at the lower ends of said arms and also clamped to said cables, substantially as described.

2. In a conveyer or transporter, the combination of a pair of cables, a platform having a pair of arms projecting therefrom at substantially right angles thereto, a shaft extended through apertures in said arms and clamped to said cables, and a second shaft extended through elongated slots in said arms and also clamped to said cables, substantially as described.

3. In a conveyer or transporter, the combination of a pair of cables, a platform having a pair of arms projecting therefrom at substantially right angles thereto, a shaft extended through apertures in said arms, a second shaft extended through elongated slots in said arms, and clamps securing the ends of each of said shafts to said cables, each of said clamps comprising a pair of members grooved on their proximate faces to accommodate the cable and means to cause the two members to grip the cable between them, substantially as described.

4. In a conveyer or transporter, the combination of a pair of cables, a platform having a pair of arms projecting therefrom at substantially right angles thereto, a shaft extended through apertures in said arms, a second shaft extended through elongated slots in said arms, and clamps securing the ends of each of said shafts to said cables, each clamp comprising a member having a hollow hub receiving the end of the shaft and pinned thereto and a second clamping member and means to cause the two members to grip the cable between them, substantially as described.

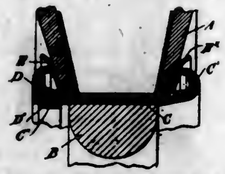
5. In a conveyer or transporter, the combination of a pair of cables, a platform having a pair of arms projecting therefrom at substantially right angles thereto, a shaft extended through apertures in said arms, a second shaft extended through elongated slots in said arms, and clamps at the ends of said shafts securing the same to said cables, each clamp having its external faces longitudinally of the cable flat and parallel and joined by curved or convex surfaces, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

899,855. SMOKELESS EXPLOSIVE. MODESTO ABELLI, Turin, Italy, assignor to Dinamite Nobel Societe Anonyme. Filed Nov. 1, 1905. Serial No. 285,461.

A smokeless powder composed of nitroglycerin, nitrocellulose, and nitroguanidin, in substantially the proportions specified.

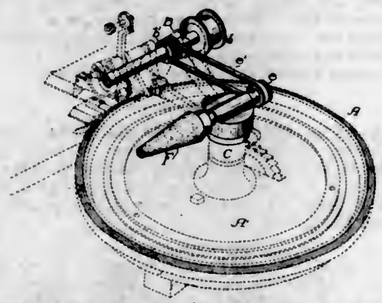
899,856. CONVERTIBLE PNEUMATIC-TIRE RIM. ERLE K. BAKER, Chicago, Ill., assignor of one-half to Charles Gilbert Hawley, Chicago, Ill. Filed July 27, 1906. Serial No. 328,052.



1. A clencher rim having a removable flange and a filler ring adapted to fill the space in one of said flanges and extending above or beyond the edge thereof to protect a non-clencher tire from said edge, substantially as described.

2. A clencher rim having a removable flange, in combination with a ring occupying the groove in one of the flanges of the rim and extending over and around the edge of the flange to form a curved seat for a tire when compressed or deflated, substantially as described.

899,857. WINDING ATTACHMENT FOR LOOPING-MACHINES. JOHN P. BARGER, Bloomsburg, Pa., assignor of one-third to Charles C. Barger, Bloomsburg, Pa., and one-third to Edward Bains, Philadelphia, Pa. Filed Jan. 7, 1908. Serial No. 409,606.



1. The combination of a looping machine, a winding head, and means for driving the said head so that the waste threads can be wound upon the head, substantially as described.

2. The combination of a looping machine, a conical winding head mounted above the looper, and means for driving said head, substantially as described.

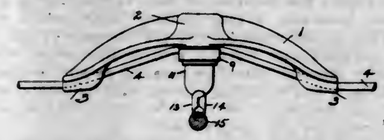
3. The combination of a looping machine having a center bearing, a cap applied to the center bearing, a shaft mounted in said cap, a head on said shaft, and means for driving the head, substantially as described.

4. The combination of a looping machine having a center bearing, a cap mounted on the center bearing, a horizontal shaft mounted in the cap, a pulley mounted on one end of the shaft, a head mounted on the other end of the shaft, and a belt passing around the pulley and around the driving shaft of the looping machine, substantially as described.

5. The combination of a looping machine, a shaft mounted above the looper, means for driving said shaft from one of the shafts of the looping machine, and a conical head mounted on the driven shaft, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

899,858. TROLLEY-WIRE HANGER. JAMES BRYAN, Pittsburg, and HARRY ETHERIDGE, McKeesport, Pa. Filed Mar. 20, 1907. Serial No. 363,389.



1. The combination of a span-wire having an arch formed thereon, a member spanning the arch of and engaging said span-wire, a trolley-wire connecting member deflectably connected to said spanning member, a clamping member between said connecting members to clamp the arch portion of said wire, and means to place tension on the trolley-wire member.

2. The combination of a span-wire having an arch formed thereon, an arched member spanning the arch portion of and engaging said wire, a trolley-wire connecting member threadably connected to said spanning member, and a clamping member arranged on the threaded connection of said members and having a groove therein to engage the arch portion of said span wire.

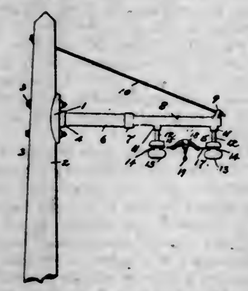
3. The combination of a span-wire having an arch formed thereon, an arched member spanning the arch of and engaging said wire, a trolley-wire connecting member threadably connected to said spanning member, a clamping member arranged upon the threaded connection of said members and having a groove therein to engage the arch portion of said wire, and a tension member arranged between the clamp and spanning member.

4. The combination of a span-wire having an arch formed thereon, an arched member spanning the arched portion of and engaging said wire at the base of the arch, a trolley-wire connecting member threadably attached to and supported by said spanning member, a clamping member interposed between said members to clamp the arched portion of said wire, and a tension member arranged between the spanning member and clamp member, said tension member engaging the clamp member on the opposite side of the wire clamped thereby.

5. The combination of a span-wire having an arch formed thereon, an arched member provided with grooved extremities and spanning the arched portion of said wire and engaging the same at the grooved extremities, a trolley-wire connecting member, a threaded connection between said members, a clamp member interposed between said members and provided at one side with a groove for the wire clamped thereby, and a tension member engaging the clamp member on the opposite side of the wire clamped thereby.

[Claims 6 and 7 not printed in the Gazette.]

899,859. AERIAL-TROLLEY SUPPORT. JAMES BRYAN, Pittsburg, HARRY ETHERIDGE, McKeesport, and EDGAR M. BALSINGER, Pittsburg, Pa. Filed Apr. 18, 1907. Serial No. 368,835.



1. The combination with a vertically disposed pole, of a plate secured thereto and provided with a threaded socket,

a horizontally disposed tubular arm secured in said socket and provided upon its under side with spaced threaded sockets, downwardly disposed insulator pins secured in said sockets the free ends of each terminating in a bell shape, insulators having openings therethrough corresponding to and engaging over the free ends of said pins and provided with external grooves thereabout, a horizontally disposed span-wire engaging about the grooved portions of and extending between said insulators, and a brace rod extending from the outer end of the arm to and connecting the pole above the arm.

2. The combination with a vertically disposed pole, of a plate secured thereto and provided with a threaded socket, a horizontally disposed tubular arm secured in said plate socket and comprising two sections threadably connected to one another, the outer section having spaced and threaded sockets upon its under side, downwardly disposed insulator pins secured in said sockets the free ends of each terminating in a bell shaped mouth, insulators having openings therethrough corresponding to and engaging over the free ends of said pins and provided with external grooves thereabout, a horizontally disposed span-wire engaging about the grooved portions of and extending between said insulators, and an angularly disposed brace rod extending down from the pole and connecting the outer end of the arm.

3. The combination with a vertically disposed pole, of a plate secured thereto and provided with a threaded socket, a horizontally disposed tubular arm secured in said plate socket and comprising two sections threadably connected to one another, the outer section having a lug at its extreme end and a pair of spaced threaded sockets upon its under side, downwardly disposed hollow insulator pins secured in said sockets the free ends of each terminating in a bell shaped mouth, insulators having openings therethrough corresponding to and engaging over the free ends of said pins each of which is provided with an annular groove thereabout with an overhanging petticoat, a horizontally disposed span-wire engaging about the grooved portions of and extending between said insulators, and an angularly disposed brace rod extending down from the pole and connecting the lug on the end of the arm.

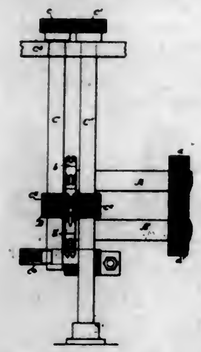
4. The combination with a vertically disposed pole, of a plate secured thereto and provided with a threaded socket, a horizontally disposed tubular arm secured in said plate socket and formed in sections threadably secured to one another the outer section having spaced and threaded sockets upon its under side, downwardly disposed insulator pins secured in said sockets the ends of which are flared outwardly, insulators surrounding the flared ends of said pins and projecting there below each of which insulators is provided with an annular groove thereabout with an overhanging petticoat, a horizontally disposed span-wire engaging about the grooved portions of and extending between said insulators, a trolley hanger secured upon said span-wire, and an angularly disposed brace rod extending down from the pole and connecting the outer end of the arm.

899,860. CUTTING-MACHINE. ROBERT F. COLEMAN, Philadelphia, Pa., assignor to J. W. Ringrose Net Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 10, 1907. Serial No. 372,914.

1. A machine for operating upon a strip of leather having two cutters co-acting to define a passage of predetermined form, and feeding mechanism for retarding the passage of a strip of material through said cutters, substantially as described.

2. A machine for operating upon a strip of leather having a pair of cutters together defining a passage of predetermined form and driven at a relatively high speed, with a pair of feed wheels turning at a speed less than that of the cutters for retarding the passage of the strip of material through said cutters, substantially as described.

3. The combination in a machine for operating upon a strip of leather, of a pair of cutters co-acting to define a passage of predetermined form, feed mechanism for retarding the movement of the strip of material under the action of the cutters, said feed mechanism including two shafts, each having a milled wheel, one of said shafts being mounted so as to be movable toward and from the other, substantially as described.

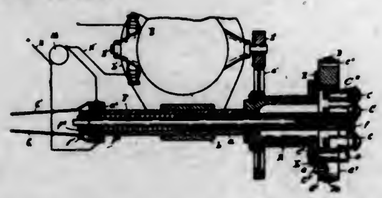


4. The combination in a machine for operating upon a strip of leather, of a pair of cutters having intermeshing teeth defining a passage of predetermined form, feed mechanism for regulating the passage of material through said cutters, the same including two substantially parallel shafts, each having a feed wheel, and means for regulating the movement of said shafts to cause the feed wheels to retard the passage of a strip of material between the cutters one of said shafts being yieldingly pressed toward the other, substantially as described.

5. A machine having mechanism for controlling the feeding of a strip of material, and two coacting cutters placed to operate upon the material supplied by said mechanism, said cutters having intermeshing teeth and substantially flat surfaces alternating therewith, said surfaces of one cutter being arranged to be opposite the ends of the teeth of the other cutter.

[Claims 6 and 7 not printed in the Gazette.]

899,861. BOTTLE-CAPPING MACHINE. WILLIAM COOPER, Cincinnati, Ohio, assignor, by mesne assignments, to The Bottle Capping Machine Company, New York, N. Y., a Corporation of New York. Filed Mar. 2, 1903, Serial No. 145,664. Renewed June 23, 1904. Serial No. 213,819.



1. In a capping machine, the combination with a rotating carrier, of a cap applier mounted thereon and caused to move into operative relation with the article to be capped by the centrifugal force developed by the rotation of the carrier, and a regulating means operating to oppose the movement of the cap applier with respect to the article to be capped, substantially as described.

2. In a capping machine, the combination with a rotating carrier, of a cap applier mounted thereon, said cap applier comprising a plurality of applying devices and being caused to move into operative relation with the article to be capped by the centrifugal force developed by the rotation of the carrier, and a regulating means operating to oppose the movement of the cap applier with respect to the article to be capped, substantially as described.

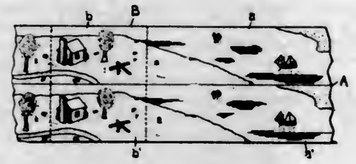
3. In a capping machine, the combination with a rotating carrier, of a cap applier mounted thereon and caused to move into operative relation with the article to be capped by the centrifugal force developed by the rotation of the carrier, and a yielding regulating means operating to oppose the movement of the cap applier with respect to the article to be capped, substantially as described.

4. In a capping machine, the combination with a rotating carrier, of a cap applier mounted thereon, said cap applier comprising a plurality of applying devices and being caused to move into operative relation with the article to be capped by the centrifugal force developed by the rotation of the carrier, and a yielding regulating means operating to oppose the movement of the cap applier with respect to the article to be capped, substantially as described.

5. In a capping machine, the combination with a rotating carrier, of a plurality of levers pivoted thereon, cap applying devices carried by the levers, weights carried by the levers whereby the centrifugal force developed by the rotation of the carrier causes the weights to move away from the applying devices toward the article to be capped, and a regulating means operating to oppose the movement of the applying devices with respect to the article to be capped, substantially as described.

[Claims 6 to 27 not printed in the Gazette.]

899,862. PICTURE FOR STEREOSCOPES AND SIMILAR DEVICES. EDWIN P. CROCKER, Rochester, N. Y., and A B PAYNE, Webster Groves, Mo.; said Crocker assignor to said Payne. Filed Jan. 8, 1908. Serial No. 409,779.



1. A picture adapted to be used in a stereoscope or similar device, and comprising substantially identical picture units arranged in different horizontal planes and in the same vertical plane, said picture units being wider than the distance between the centers of the lenses of the stereoscope; substantially as described.

2. A picture adapted to be used in a stereoscope or similar device, and comprising a pair of picture units arranged in different horizontal planes and having portions thereof lying in the same vertical plane; substantially as described.

3. A picture adapted to be used in a stereoscope or similar device, and comprising a strip which is provided with a continuous view or picture that is made up of two series of units arranged in different horizontal planes, the picture units of each series being located close together with no blank spaces between them; substantially as described.

4. A picture adapted to be used in a stereoscope or similar device, and which comprises a strip provided with a series of views or pictures, each of which is made up of two picture units that are arranged in different horizontal planes, the upper and lower picture units of said views being arranged close together with no blank spaces between them; substantially as described.

5. A picture adapted to be used in a stereoscope or similar device, and comprising a strip that is provided with individual pictures and panoramic views arranged adjacent each other and each of which consists of two picture units located in different horizontal planes, the upper and lower units of said pictures and views being arranged close together so that no blank spaces are between them; substantially as described.

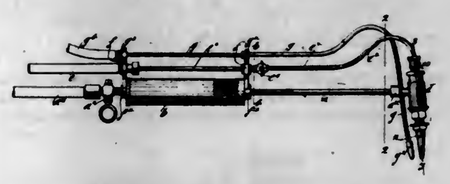
899,863. TRICHLORINDIGO AND PROCESS OF MAKING SAME. GADIENT ENGI and HERMAN KRAFT, Basel, Switzerland, assignors to The Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Filed Apr. 20, 1908. Serial No, 428,243.

1. The herein described process for the manufacture of trichlorinated indigo, which consists in treating indigo suspended in an aromatic nitrohydrocarbon with chlorin in presence of a suitable agent capable of transmitting a halogen.

2. The herein described process for the manufacture of trichlorinated indigo, which consists in treating indigo suspended in nitrobenzene with chlorin in presence of an antimony chlorid.

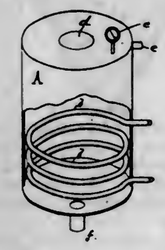
3. As a new product, the described trichlorindigo, which constitutes, in a dry state, a violet powder of a bronze luster, insoluble in water, difficultly soluble in chloroform and benzene, more easily in hot nitrobenzene with a reddish blue color, dissolving in concentrated sulfuric acid with a greenish blue coloration and yielding by its treatment with suitable reducing agents yellowish vats dyeing unmordanted cotton in vivid blue shades, fast to washing, light and chlorin.

899,864. WELDING-TOOL. AARON FUTTERMAN, New York, N. Y. Filed Apr. 29, 1908. Serial No. 429,858.



The combination of a tubular receiver having hubs at its ends, an acetylene-tube leading from one end of said receiver, standards applied to said hubs, one of said standards having a forked free end, an oxygen-tube passing through said standards and supported thereby, and an auxiliary oxygen-tube also supported by said standards and adjustably clamped in said forked end.

899,865. MANUFACTURE OF CONCENTRATED TOBACCO EXTRACT. CHRISTIAN F. GLOYSTEIN, Henderson, Ky. Filed Jan. 10, 1908. Serial No. 410,210.

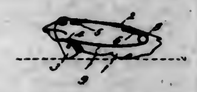


1. The process of treating tobacco extract which consists in subjecting the same to a temperature above 100° C. under pressure to transform the albumens present into peptones.

2. The process of treating tobacco extract which consists in heating the same to a temperature of approximately 160° C. under a pressure of approximately 100 pounds to the square inch for about one hour, to transform the albumens present into peptones.

3. As a new product, a tobacco extract having its normal albumens peptonized to prevent sediment.

899,866. TOY. CHARLES G. HELLSTROM, Hartford, Conn. Filed Apr. 10, 1908. Serial No. 426,271.

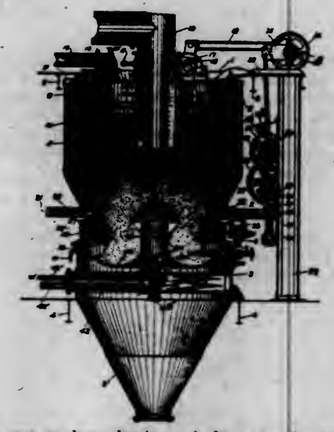


1. A toy having a body, a throwing spring attached to the underside of the body at one end, a loop connected with and adapted to be thrown by the spring, an adjustable finger attached to the underside of and projecting downward from the body at the other end, and an elastic catch cushion attached to the free end of the finger and adapted to be engaged by and to temporarily hold the loop, substantially as specified.

2. A toy having a shell-like body, a strip attached to the underside of the body, one end of the strip being bent to form a spring catch, an elastic cushion held by the catch, a spiral spring held by the other end of the strip and a loop extending from the spring backwardly and adapted to be bent forwardly and engaged with the elastic cushion held by the spring catch, substantially as specified.

3. A toy having a shell-like body, a strip secured to the underside of the body, the front end of the strip being shaped to form a pocket, a rubber cushion inserted into the pocket, and a coil spring secured by the other end of the strip, a portion of the spring being extended to form a rearwardly projecting loop, said loop having a cross-bar which when bent forwardly is designed to be engaged with the rubber cushion, substantially as specified.

899,867. GAS-PRODUCER. WILLIAM B. HUGHES, Cleveland, Ohio, assignor to The Wellman-Seaver-Morgan Company, Cleveland, Ohio. Filed Feb. 19, 1908. Serial No. 416,795.



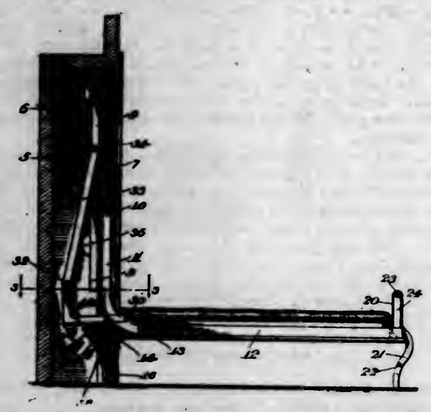
1. A gas producer having a body, a top for said body, means whereby one of said parts is revoluble with relation to the other, a gas tube having an inlet below the general level of fuel in said body, and a poker journaled in said top and extending into said body so as to slice the fuel surrounding said tube.

2. A gas producer having a revoluble body, a stationary top for said body, a gas tube extending through said top with an inlet below the general level of fuel in said body, and a poker journaled in said top so as to slice the fuel in said body.

3. A gas producer comprising a body, a top for said body, a gas tube having an inlet below the general level of fuel in said body, a poker journaled in said top and extending into said body, and means for introducing oxygen into the top of said body.

4. A gas producer comprising a revoluble body, a stationary top for said body, a stationary base for said body, blowing mechanism extending by way of said base into said body, an air conduit having a passage through said top into said body, a vapor conduit extending into said air conduit, a gas tube extending through said top to an inlet below the general level of fuel in said body, and a poker journaled in said top.

899,868. RECESS-BED. WALTER E. INGRAM and CHARLES W. HINTON, Los Angeles, Cal. Filed Aug. 21, 1907. Serial No. 389,461.



1. A recess bed, comprising supporting walls, supporting rods pivoted at their upper ends to said walls, a bed frame pivoted near its head to the lower end of said supporting rods, guides to restrict the movement of the head of said bed to a vertical plane, levers pivoted to said supporting rods at points intermediate their ends, said levers resting on said bed frame and having a sliding motion thereon, and a weight connected to the other ends of said levers.

2. A recess bed, comprising supporting walls, a bed frame, supporting bars pivoted to said walls and to said bed frame, a counter weight, and levers pivotally connected to said counter weight, pivotally connected to said supporting bars, and resting upon said bed frame.

3. A recess bed, comprising supporting walls, a bed frame, supporting bars pivoted at one end to said walls and at the other to said bed frame, a counter weight, and levers pivotally connected at one end to said counter weight, pivotally connected at the other end to said supporting bars at points intermediate their ends, and resting on said bed frame at points intermediate the ends of said levers.
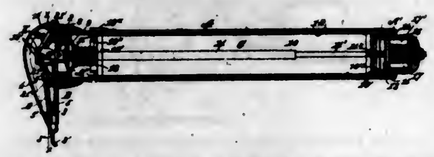
4. A recess bed, comprising supporting walls, a bed frame, supporting bars pivoted to said walls and to said bed frame, means to restrict the head of the bed frame to a vertical plane, levers pivotally connected to said supporting bars and resting on said bed frame, and a counter-weight connected to said levers.

899,869. NUT-LOCK. HARRY JEFFREY, Louisville, Ky. Filed Mar. 31, 1908. Serial No. 424,394.



In a nut lock, a bolt provided with a flat face and a nut screwing on said bolt, combined with a thin strip of soft metal of a width materially less than the width of the flat surface on said bolt and the edges of that portion of the strip which engages the flat face of the bolt lying wholly within the diameter confines of the bolt whereby the nut in screwing on the bolt makes its first engagement with the strip at the inner end of the flat face of said bolt.

899,870. AUTOMATIC RAZOR. JOHN K. JOICE, Chicago, Ill. Filed Mar. 5, 1906. Serial No. 304,244.



1. In an automatic razor, a suitable "safety" guard, in combination with a razor blade, mounted for reciprocation in said guard, a suitable motor connected to said blade and means for varying the stroke of said blade, substantially as described.

2. In an automatic razor, a suitable safety guard, in combination with a razor blade, mounted therein a motor connected with said blade and means for varying the stroke of said motor, substantially as described.

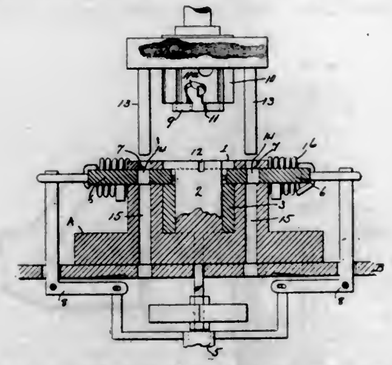
3. In an automatic razor, a suitable "safety" guard, in combination with a motor casing therefrom, a motor arranged in said casing, an elastic diaphragm, interposed between said guard and said casing, and a razor blade arranged in said guard and connected to said motor, substantially as described.

4. In an automatic razor, a suitable "safety" guard or hood, in combination with a reciprocating motor, a toggle lever mechanism connected to said motor and a razor blade arranged in said guard, for actuation by said mechanism, substantially as described.

5. In an automatic razor, a suitable handle, in combination with a guard plate thereon, angularly positioned guides on said plate, a blade carrier mounted in said guides, a motor mechanism connected with said carrier and a razor blade, on said plate, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

899,871. MANTLE-RING MOLD. BENJAMIN D. KENNEY, East Liverpool, Ohio, assignor to The R. Thomas and Sons Company, East Liverpool, Ohio, a Corporation of Ohio. Filed Jan. 9, 1908. Serial No. 409,942.



1. In a mold of the character described, a die having a fixed body portion provided with guide slots, spring actuated side members working in said slots and adapted to form sides of the die during the molding operation, in combination with means to remove the molded article from the mold and means in connection therewith to move said side members against the tension of said actuating springs, said side members being adapted to be withdrawn from the die after the molding is complete and before the molded article is removed.

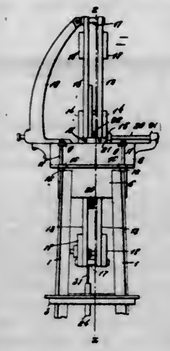
2. In a mold of the character described, a die having a fixed body portion provided with guide slots, side members working in said slots and adapted to form sides of the die during the molding operation, in combination with means in connection with the plunger die to lock said side members in position during said molding operation and means to withdraw said side members from the die after the molding is complete and before the molded article is removed.

3. In a mold of the character described, a die having a fixed body portion provided with guide slots, spring actuated side members working in said slots and adapted to form sides of the die during the molding operation and a bottom part adapted to serve as a lifting member as well as a base for the mold, in combination with means to lift said base and means in connection therewith to withdraw said side members before the base is actuated.

4. In a mold of the character described, a die having a fixed body portion provided with guide slots, side members working in said slots and adapted to form sides of the die during the molding operation, in combination with means carried by the coöperating die to lock said side members in position during said molding operation and means to withdraw said side members from the die after the molding is complete and before the molded article is removed.

5. In a mold of the character described, a die having a fixed body portion and spring actuated side members laterally movable with relation thereto adapted to be brought into position during the molding operation and withdrawn therefrom after the molding operation in combination with means for removing the article from the mold and means in connection therewith for previously withdrawing said side members from their position during the molding operation.

899,872. WINDMILL-GEARING. MILTON KEYS, Fort Worth, Tex. Filed Jan. 18, 1908. Serial No. 411,435.



1. A windmill provided with a suitable tower, an annular rest attached to said tower and having an annular flange, a turntable mounted on said rest and having radiating lugs, a coupling ring engaging said flange, bolts attaching said ring to said lugs, said turntable having upwardly extending flanges and standards, a guide frame extending vertically through said turntable and attached to said standards and braced by said standards and flanges, a driving shaft journaled on said turntable and provided with a cog wheel, a vertically reciprocating endless rack actuated by said cog-wheel and provided with a guide integral therewith, said rack ascending on one side of said cog wheel and descending on the other side thereof, said guide in its vertical motion being guided by said guiding frame and holding said rack in operative relation with said cog wheel, means for holding said rack in operative relation to said cog wheel while said rack is passing over and under said cog wheel from one side thereof to the other, and a pump rod operatively connected with said rack.

2. A windmill having a suitable tower, an annular rest mounted on said tower, a turntable operatively coupled to said rest, said turntable having an opening through the central part thereof and guiding flanges and standards projecting upwardly from the edges of said opening, a guiding frame extending vertically through said turntable and attached to said standards and braced thereby and by said flanges, a driving shaft journaled on said turntable and projecting within said guiding frame, a cog wheel mounted on said shaft, a vertically reciprocating endless rack engaging said cog wheel and provided with a guide, said rack and said guide ascending on one side of said rack and descending on the other side thereof, said guide being guided by said guiding frame to hold said rack in engagement with said cog wheel in the vertical motion of said guide and rack, and means for holding said rack in engagement with said cog wheel while said rack is passing under and over said cog wheel, said means consisting of antifriction rollers carried by said guide and tracks attached to said guiding frame to be engaged by said rollers.

3. A windmill having a suitable tower, a rest attached to said tower, a rotatable turntable mounted on said rest and provided with a central perforation, standards projecting from the edges of said perforation upwardly, a guiding frame projecting through said turntable and attached to and braced by said standards, a driving shaft journaled on said turntable and provided with a cog wheel, a vertically reciprocating exterior endless rack actuated by said cog wheel, a guide for said rack guided by one side of said frame when said rack is ascending and by the other side of said frame when said rack is descending and holding said rack in engagement with said cog wheel, means for holding said rack in engagement with said cog-wheel when said rack is passing under said cog wheel and over said cog wheel consisting of roller carried by said guide and tracks formed on said standards and tracks attached to said guiding frame, and a pump rod operatively connected with said rack.

899,873. PHOSPHORESCENT SIGN. BASIL G. KODJBANOFF, New York, N. Y. Filed June 29, 1907. Serial No. 381,560.



1. A phosphorescent sign, comprising letters formed of phosphorescent composition, and a glass inclosure for such letters, said glass being welded to seal such composition therein.

2. A phosphorescent sign, consisting of phosphorescent characters, a glass inclosure for said characters and a back, said glass inclosures being sealed to hermetically inclose said characters, and being secured to said back.

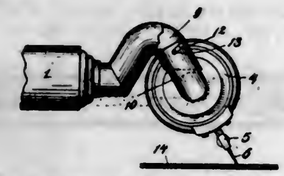
3. A phosphorescent sign, comprising a base, a coating of enamel on said base, a coating of glass covering the said enamel and welded thereto, said glass and enamel being separated at points removed from their edges to form character-shaped spaces, and characters formed of phosphorescent composition inclosed in said spaces.

4. A phosphorescent sign, comprising a base having character-shaped depressions formed therein, a coating of enamel on said base, characters of phosphorescent composition occupying said depressions, and a coating of glass covering said characters and welded to said enamel.

890,874. TALKING-MACHINE. THOMAS KRAEMER, Philadelphia, Pa., assignor to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 7, 1908. Serial No. 419,658.

1. In a talking machine, a sound-box having a diaphragm and a tubular connection thereto for carrying sound, said connection having a joint therein permitting movement of the sound-box to either of two operative positions, a single stylus being adapted to vibrate the diaphragm in either of said positions and said stylus projecting in substantially the same direction from the sound-box in both of said positions, substantially as set forth.

2. In a talking-machine, a sound-conveying tube, and a sound-box pivotally mounted thereon and provided with a single stylus, said box being movable about the pivotal axis through ninety degrees to carry it to either of two operative positions in both of which said stylus projects in substantially the same direction from the sound-box, substantially as set forth.



3. In a talking-machine, a sound-conveying tube and a sound-box having a diaphragm mounted on said tube and movable from a position in which the diaphragm is parallel to the axis of the tube to a position in which the diaphragm extends across said axis, substantially as set forth.

4. In a talking-machine, a sound-conveying tube, a sound-box having a single stylus, and two telescoping tubular pieces, one on said tube and the other on said box, permitting movement of the sound-box relatively to the tube to either of two operative positions in both of which said stylus projects in substantially the same direction from the sound-box, substantially as set forth.

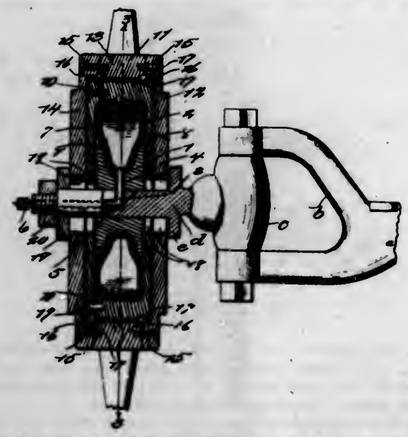
5. In a talking-machine, a sound-conveying tube, a sound-box having a single stylus, two telescoping tubular pieces, one on said tube and the other on said box, permitting movement of the sound-box relatively to the tube to either of two operative positions in both of which said stylus projects in substantially the same direction from the sound box, and a pin on one of said pieces entering a slot in the other, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

899,875. PROCESS OF PEPTISATING COLLOIDAL ELEMENTS. HANS KUZEL, Baden, near Vienna, Austria-Hungary. Filed Mar. 20, 1907. Serial No. 364,734.

A process for peptisating coagulated colloids of refractory elements free from carbon, consisting in treating such colloids with solutions of alkaline reaction and stopping such treatment before pectinizing begins, substantially as described.

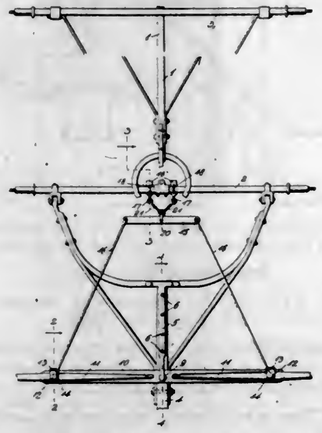
899,876. AUTOMOBILE-WHEEL. JOSEPH LAUS, Jr., Oshkosh, Wis. Filed Mar. 11, 1908. Serial No. 420,308.



In a device as forth, a hub, an axle stub or spindle therefor, an interior spool shaped hub member positioned

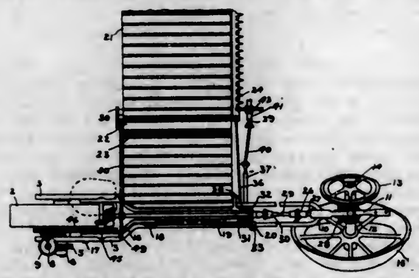
rotatably immovable adjacent to and upon said spindle, a pneumatic cushion extending about said hub member, casings therefor, means to allow the cushion to be inflated through the said spindle, said casings having bores to allow sufficient movement therefor to relieve the jar upon a vehicle, said interior casing having inwardly projecting portions to engage said cushion to hold the cushion and interior casing against a lateral or rotary movement.

899,877. VEHICLE RUNNING-GEAR. JOSEPH S. LEWIS, Villisca, Iowa. Filed Oct. 7, 1907. Serial No. 396,282.



In a device of the class described, the combination with a front axle, of a draft device secured thereto, a double-tree upon said draft device, swingle-tree bolts carried at the end of the double-tree, converging links connected to the swingle-tree bolts, a draft lever connected to the inner ends of the converging links, a central eye connected to the draft lever, a pair of diverging links connected to the eye and extending rearwardly toward the axle, and clips having hooks to engage the links, said clips being adjustably mounted toward and away from each other upon the axle so as to shorten or lengthen the connection between the draft bar and the axle.

899,878. REAPER. TRUED E. LIND, Moose Jaw, Saskatchewan, Canada. Filed Feb. 5, 1907. Serial No. 355,777.



1. In a reaper, the combination, with a frame, of a traction wheel having a beveled periphery and inclined outwardly with respect to the machine, whereby it will resist the inward movement of the machine toward the work, substantially as described.

2. In a reaper, the combination, with a frame, of a forward traction wheel, having a beveled periphery and outwardly inclined, an upwardly inclined shaft whereon said wheel is mounted, a gear mounted on the inner end of said shaft, a driving shaft operatively connected with said gear, and a reaping mechanism geared to said driving shaft.

3. In a reaper, the combination, with a frame, of a forward traction wheel having a beveled periphery, and outwardly inclined, a shaft whereon said wheel is mounted, a gear mounted on said shaft, a driving shaft operatively connected with said gear, and said driving shaft and gear being located directly above the middle portion of the tread of said wheel, whereby the load will be equally distributed thereon.

899,879. COMPOSITION FOR DECOLORING OILS, FATS, &c., AND PROCESS OF MAKING THE SAME. TOMASZ MACHERSKI and EDWARD KOPERSKI, Brest-Litovsk, Russia. Filed Nov. 21, 1905. Serial No. 288,376.

1. A composition for decoloring oils and other liquids, consisting of previously purified bone black mixed with finely powdered zinc.

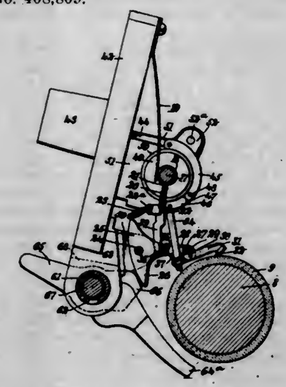
2. A composition for decoloring oils and other liquids, consisting of an intimate mixture of previously purified bone black, finely powdered zinc and graphite.

3. A composition for decoloring oils and other liquids, consisting of an intimate mixture of previously purified bone black, finely powdered zinc, graphite and dry carbonate of soda.

4. A composition for decoloring oils and other liquids, consisting of an intimate mixture of previously purified and neutral bone-black mixed with finely powdered zinc.

5. The process of making a composition for decoloring oils and other liquids, consisting in mixing bone black with hydrochloric acid, filtering the mixture, neutralizing the remaining solid material and mixing graphite and finely powdered zinc with the neutral body aforesaid.

899,880. ATTACHMENT FOR TALKING-MACHINES. CHARLES MARTELOCK, Oroville, Cal. Filed Dec. 31, 1907. Serial No. 408,809.



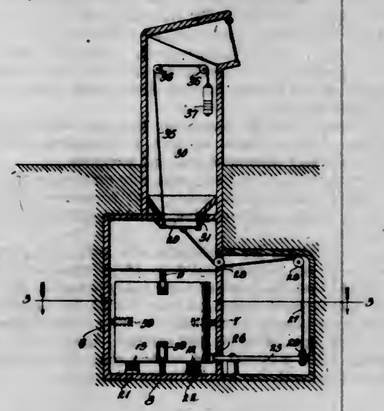
The combination of a revoluble shaft, a friction member mounted thereupon, a collar mounted loosely upon said revoluble shaft, a leaf spring engaging said collar, a lever disposed adjacent to said collar, a spring extending from said lever to said collar, another spring connected with said lever, a rocking member connected with said last-mentioned spring, a stylus lever pivotally mounted upon said rocking member and adapted to be moved by a sound record, a drag shoe engaging said friction member, and a connection from said stylus lever to said drag shoe.

899,881. MAIL AND PACKAGE COLLECTOR. PASQUALE MARTOCCI, New York, N. Y. Filed Feb. 18, 1908. Serial No. 416,477.

1. In a mail and package collector, the combination with supporting and guide rails of cars adapted to run on the

rails and having a motor, motor driven wheels operating at different speed, and members alternately engaging the motor driven wheels to effect a variation of the speed of the cars at predetermined points.

2. In a mail and package collector, the combination with supporting and guide rails of cars with a motor adapted to run on the rails, motor driven wheels operating at different speeds, delivery doors arranged at intervals, and means for alternate engagement with the differently speeded motor driven wheels for varying the speed of the cars at points where the delivery doors are located.



3. In a mail and package collector, the combination with rack bars, of supporting rails, a motor car, gear wheels adapted to move at different speeds for engaging the rack bars and means on the motor car for driving the gear wheels.

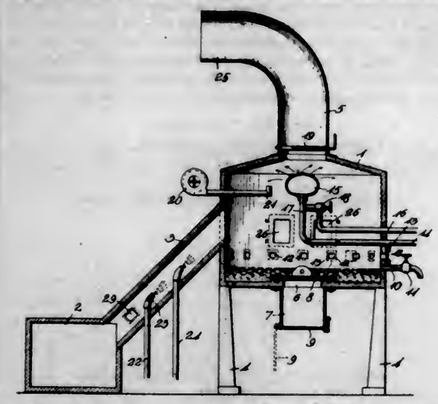
4. In a mail and package collector, the combination with guide and supporting rails, of collecting boxes with bottom doors, rack bars at one side of the supporting rails and between the boxes, rack bars at the other side of the rails between the interval of the opposite rails, a motor car, differently speeded gears for the two rack bars, motive means for the gears, a collecting car, and means operated by the collecting car for opening the door of the collecting boxes.

5. In a mail and package collector, the combination with guide and supporting rails, of staggered rack rails on each side of the supporting rail, gear wheels engaging one or the other of the staggered rails, a motor driving the gear wheels, means connected with the motor for driving the gear wheels at different rates of speed, collecting boxes, downwardly opening doors from the boxes, levers controlling the doors and projecting towards the tracks, collecting cars made in sections and having collapsible sides, and means on the cars for operating the levers to open the doors.

899,882. SMOKE-CLEANING DEVICE. JOHN L. MATTHEWS, Baltimore, Md. Filed Aug. 19, 1907. Serial No. 389,240.

1. In a smoke cleaning device, a chamber having a body of water in its lower portion and provided with air holes located in the wall of said chamber above the body of water, means for adjustably controlling said air holes, said chamber having a smoke intake opening in the walls thereof above the air holes, water atomizing means located above the smoke intake, and a smoke outlet pipe above said atomizer, substantially as described.

2. A smoke cleaning device comprising a chamber provided with intake and outlet smoke flues, a water supply pipe communicating with said chamber, a steam pipe communicating with said water pipe near the open end thereof, a damper controlling the outlet smoke flues, said chamber having a plurality of adjustable air inlets adjacent to the bottom thereof, a source of air supply with means for feeding it to the chamber to increase the draft therethrough,



steam injectors in the smoke inlet flue and means for discharging the precipitated matter from the chamber.

899,883. RAIL-JOINT. EUSTACE MAY, Shryock, W. Va. Filed Feb. 4, 1908. Serial No. 414,233.



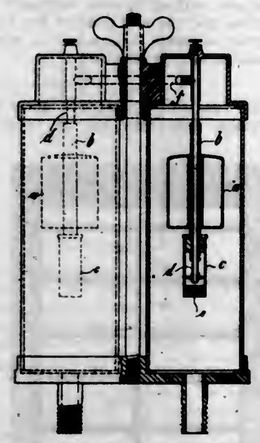
1. A rail joint comprising a tie bar having a passage provided with centrally arranged longitudinally extending pockets, and the meeting ends of a pair of rails having fingers upon their webs adapted for engagement with the passage and the openings of the tie bar.

2. A rail joint comprising a tie bar having a centrally arranged longitudinal passage provided with a series of pockets arranged between the top wall of the passage and the top of the tie bar, flanges upon the tie bar extending outwardly from the walls of the passage, and the meeting ends of a pair of rails having a portion of their heads cut away and their webs provided with fingers, the webs adapted for engagement with the passage of the tie bar and the fingers adapted for engagement with the pockets of the tie bar, the flanges of the tie bar adapted for engagement with the flanges of the rails, and retaining elements adapted to contact the flanges of the tie bar to retain the tie bar and rail ends in engagement with each other.

3. A rail joint comprising a tie bar having a central longitudinal passage and a series of openings within the top wall of the passage and flanges extending from the walls of the passage, lips projecting beyond the ends of the tie bar, and the meeting ends of a pair of rails having their heads cut away a suitable distance and their webs provided with fingers, the heads also provided with a horizontal cut away portion having a vertical wall, the webs adapted to engage the recess of the splice bar, the fingers of the webs adapted to engage the openings in the splice bar, the projecting lips of the splice bar adapted to engage the cut away portions of the heads of the rails, and the flanges of the splice bar adapted to engage the flanges of the rails and to be held in secure position thereon by suitable retaining elements.

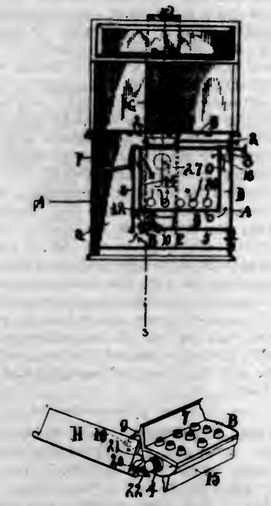
899,884. FLOAT-CONTROLLED DEVICE FOR MEASURING VESSELS, &c. JOSEF MEYER, Cologne, Germany. Filed June 21, 1907. Serial No. 380,111.

1. Float controlled device for measuring vessels composed of a hollow spindle *d* rigidly suspended from the top of the measuring vessel being open at the bottom and being in communication with the atmosphere, of a tube *b* sliding on the spindle *d*, of a hollow float *a* secured on the tube *b*, of a cylinder *c* secured to the float below the same, of an elastic cushion *e* secured to the bottom end of the cylinder *c*, substantially as described.



2. Float controlled device for measuring vessels composed of a hollow spindle *d* rigidly suspended from the top of the measuring vessel being open at the bottom and being in communication with the atmosphere, of a tube *b* sliding on the spindle *d*, of a hollow float *a* frictionally secured on the tube *b*, of a cylinder *c* secured to the float below the same, of an elastic cushion *e* secured at the bottom end of the cylinder *c* substantially as described.

899,885. COMBINED COAL AND GAS RANGE. CHARLES H. MILLER, Cleveland, Ohio. Filed Dec. 9, 1907. Serial No. 405,674.



1. A kitchen range having an oven and an angular heat passage about the same, and a combined fluid burner and damper located in an angle of said passage.

2. A kitchen range having an oven provided with a heat passage beneath the same and a rotatable and combined fluid burner and damper in said passage.

3. A kitchen range having a fire pot and a baking oven and a heat passage beneath the oven, in combination with a rotatable burner in said passage and constructed to open and close the same.

4. A kitchen range having a baking oven and a heat passage beneath the same provided with an air intake to supply combustion, and a rotatable fluid burner in said passage and constructed to close said intake.

5. A kitchen range having a baking oven with a heat passage beneath and at the side thereof, an air inlet from beneath in the angle of said heat passage, in combination with a rotatable burner in said angle constructed to open and close both said draft passage and said air inlet.

[Claims 6 to 14 not printed in the Gazette.]

899,886. COKE-OVEN. THOMAS J. MITCHELL, Connellsville, Pa. Filed Nov. 27, 1906. Serial No. 345,306.



1. A coke oven having a substantially level floor and parallel side walls higher in the middle than at the ends, said oven being open at both ends from wall to wall to provide an unobstructed, free passage from end to end, and a crown sloping upward from the ends toward a point about midway of the length of the oven and there provided with a charging opening.

2. A coke oven having a substantially level floor, end retaining walls each with an opening of the same size as the opening in the other wall, a crown sloping continuously upward from the end retaining walls to an approximately central point and there provided with a charging opening, said crown being arched in a direction at right angles to the length of the oven, and parallel side walls extending through and from one opening to and through the other opening and approximately to the top of the crown adjacent to the charging opening therein.

3. A coke oven having a central trunnel hole in its roof, the length of the oven chamber and the height of the roof being so proportioned that, when the top of a charge of coal deposited by gravity through the trunnel hole reaches said trunnel hole, the charge when leveled off will fill the oven substantially to the level of the draft openings.

4. A coke oven having a substantially level floor and provided with parallel side walls, higher at the middle than at the ends, said oven being open at both ends from wall to wall to provide an unobstructed, free passage from end to end, and a crown rising from the ends and provided about midway of its length with a trunnel hole.

899,887. MANUFACTURE OF ONE-PIECE FELT HATS. FRANK J. MUHLFELD, New York, N. Y. Filed Apr. 4, 1908. Serial No. 425,090.



1. The process of manufacturing a one-piece felt hat with a brim and having a head-opening smaller than that portion of the crown adjacent to the brim, which consists in first blocking the body including the felt intended for the brim into a general cylindrical shape and of the size desired for the finished crown, second, supporting the upper part of such body in the shape desired for the entire

crown, and clamping the edge of the body, and third, contracting the felt close to the bottom of the crown to the size desired for the head-band and expanding the felt below such contracted portion into the form desired for the brim.

2. The process of manufacturing a one-piece felt hat with a brim and having a head-opening smaller than that portion of the crown adjacent to the brim, which consists in first blocking the body including the felt intended for the brim into a general cylindrical shape and of the size desired for the finished crown, second, supporting the upper part of such body in the shape desired for the entire crown, clamping the edge of the body, and contracting the portion between the bottom of said crown and such edge into a band of the size desired for the head-opening, and third, working such contracted portion or head-band up to the bottom of the crown and expanding the edge of the body into the form desired for the brim.

3. The process of manufacturing a one-piece felt hat with a brim and having a head-opening smaller than that portion of the crown adjacent to the brim, which consists in first blocking the body including the felt intended for the brim into a general cylindrical shape and of the size desired for the finished crown, second, supporting the upper part of such body in the shape desired for the entire crown, and clamping the edge of the body, and third, working the felt adjacent to the bottom of the crown into a flat narrow groove to form the contracted head-opening, and simultaneously expanding the felt below such groove to form a brim adjacent to the lower side of such groove.

4. The process of manufacturing a one-piece felt hat with a brim and having a head-opening smaller than that portion of the crown adjacent to the brim, which consists in first blocking the body including the felt intended for the brim into a general cylindrical shape and of the size desired for the finished crown, supporting the upper part of such body by means adapted to shape the entire crown, clamping the edge of the body and gradually contracting into a band of the size desired for the head-opening the felt between the bottom of said crown and such edge, and simultaneously lowering the support for the crown to the level of the said edge and expanding the felt below such contracted band into the form desired for the brim, and producing a narrow flat groove between the brim and the bottom of the crown.

5. As a new article of manufacture, a one-piece felt hat having a crown and brim with head-opening smaller than that portion of the crown adjacent to the brim, with a narrow flat channel between the brim and bottom of the crown at their junction such channel having parallel sides.

[Claim 6 not printed in the Gazette.]

899,888. FASTENING FOR LACINGS. WILLIAM W. MUNSELL, Chicago, Ill. Filed Nov. 20, 1905. Serial No. 288,161.



1. A fastening for lacings comprising in combination a fixed jaw provided with a cored-out portion forming a passage for lacings, and a movable jaw compressing and confining said lacing within said cored-out portion, said movable jaw being provided with a cap of a diameter greater than and concealing the fixed jaw beneath it, substantially as described.

2. A fastening for lacings comprising in combination a fixed jaw provided with a cored-out portion forming a passage for lacings and a movable jaw for clamping said lacings to the fixed jaw, said movable jaw being provided with a cap having a recess receiving the fixed jaw substantially as described.

3. A fastening for lacings comprising in combination a fixed jaw provided with a cored-out portion forming a passage for lacings and a movable jaw for clamping said lacings to the fixed jaw, said movable jaw being provided with a concavo-convex cap into which the under side of fixed jaw projects substantially as described.

4. A fastening for lacings comprising in combination a fixed jaw provided with a cored-out portion, a hook laterally projecting from said jaw, and a rotatable jaw whereby the lacings are confined against movement within said cored-out portion and the free ends of the lacing may be held together and separate lacings may be connected with each other, substantially as described.

899,889. SHUTTER ATTACHMENT. JOHN L. MCCALEB. Carrizo Springs, Tex. Filed May 20, 1908. Serial No. 433,808.



1. The combination, with a shutter having slats, and a rod controlling said slats, of an attachment consisting of a member adapted to be removably arranged between said slats and said rod and frictionally engaging said rod at the ends of said member, and frictionally engaging said slats intermediate its ends, whereby said member serves to adjustably hold said slats in a plurality of positions.

2. The combination, with a shutter having slats, and a rod controlling said slats, of a member removably positioned between said slats and said rod and frictionally engaging said rod and a plurality of slats, whereby said slats can be adjustably held in a plurality of positions said member being offset intermediate its ends.

3. The combination, with a shutter having slats, and a rod controlling said slats, of an elongated resilient member removably positioned between said slats and said rod and frictionally engaging the same, whereby said slats can be adjustably held in a plurality of positions, said member being offset in opposite directions, and having laterally disposed ends formed to receive said rod.

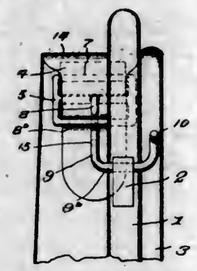
4. An attachment for a shutter, comprising an elongated body having laterally disposed ends and adapted to be arranged between the slats and the rod of the shutter, whereby it frictionally engages the rod at said laterally disposed ends and the slats intermediate said ends.

5. An attachment for a shutter, comprising an elongated body offset in opposite directions and outwardly curved at the ends, said member being adapted to be arranged between the slats and the rod of the shutter and having at the extremities, laterally disposed concave portions formed to receive the rod, said member engaging the slats intermediate its ends.

899,890. HAME-FASTENER. PAUL W. NAPIERALA, Detroit, Minn. Filed Jan. 7, 1907. Serial No. 351,149.

1. In a device of the class described, the combination with a hame having an eye on one face thereof; of a collar, buckles secured to said collar, said buckles each having a hook at the lower end thereof adapted to engage the eye on the hame and a strap having openings therein adapted to be engaged by tongues on said buckles, whereby said parts will be secured together.

2. In a hame fastener, the combination with a collar having buckles secured thereto, said buckles having tongues thereon and hooks at the lower ends thereof; of hames having eyes thereon adapted to be engaged by said hooks and a strap adapted to be passed over said collar, said strap having openings therein adapted to be engaged by the tongues on said buckles, whereby said parts will be secured together.



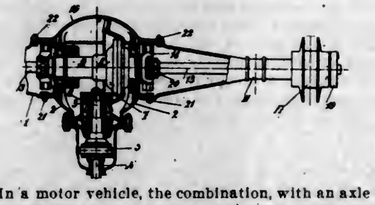
3. In a hame fastener, the combination with a collar having buckles secured thereto, said buckles having downwardly curved tongues midway of the body and upwardly curved hooks at the lower ends thereof; of a hame having means thereon adapted to be engaged by said hooks and a strap adapted to pass over the collar, said strap having openings therein adapted to be engaged by the tongues on the buckles, whereby said hame will be securely fastened.

4. In a hame attachment, the combination with a collar, of buckles hingedly secured thereto, curved tongues on said buckles, means extending between said buckles adapted to engage said tongues and secure the ends of the collar together, hames for said collar and means extending from the buckles adapted to engage said hames and hold the same in position on the collar.

5. The combination with a collar; of buckles pivotally mounted on said collar, curved tongues on the buckles, a strap extended between the buckles, said strap having openings therein to engage said tongues and hold the collar in its closed position, hames for said collar and means to removably attach the hames to the buckles.

[Claims 6 and 7 not printed in the Gazette.]

899,891. AXLE FOR MOTOR ROAD-VEHICLES. JULES NICLAUSSE and ALBERT NICLAUSSE, Paris, France. Filed Apr. 18, 1906. Serial No. 312,483.



1. In a motor vehicle, the combination, with an axle comprising a tubular body with an enlarged middle portion having oppositely disposed lateral openings, power transmission gear mounted on a suitable support, the gear support arranged to be passed together with the transmission gear through one of the openings and secured on the inner opposite side of the tube to close the other opening, and a cap arranged to close the first opening, of a drive shaft extending longitudinally within the axle with one end connected with the transmission gear and the other with the drive wheel of the vehicle.

2. In a motor vehicle, the combination, with an axle comprising a tubular body with an enlarged middle portion, having oppositely disposed lateral openings of dissimilar size, power transmission gear mounted on a suitable support, the gear support arranged to be passed together with the transmission gear through the larger of the openings and secured on the inner opposite side of the tube to close the smaller opening, and a cap arranged to close the larger opening, of drive shafts extending longitudinally within the axle with their inner ends connected with the transmission gear and their outer ends with the drive wheels of the vehicle.

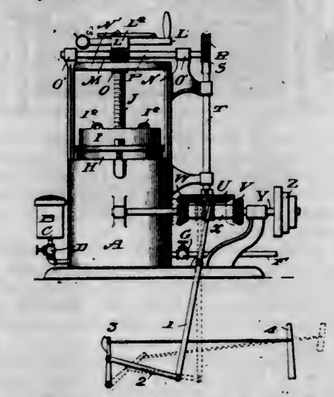
3. In a motor vehicle, the combination, with an axle comprising a tubular body with an enlarged middle portion having oppositely disposed lateral openings, power transmission gear mounted on a suitable support, the gear support arranged to be passed together with the transmission gear through one of the openings and secured on the opposite side of the tube to close the other opening, and a cap arranged to close the first opening, of drive shafts extending longitudinally within the axle with their inner ends connected with the transmission gear, a pinion on the outer end of each drive shaft, and teeth carried by the drive wheels and meshing with the pinion.

4. In a motor vehicle, the combination, with an axle comprising a tubular body with an enlarged middle portion having oppositely disposed lateral openings, power transmission gear mounted on a suitable support, the gear support arranged to be passed together with the transmission gear through one of the openings and secured on the opposite side of the tube to close the other opening, and a cap arranged to close the first opening, of drive shafts extending longitudinally within the axle, an axially disengageable coupling between the inner ends of the drive shafts and the transmission gear, a pinion on the outer end of each drive shaft, teeth carried by the drive wheels and meshing with the pinion, and a plate closing the outer ends of the tubular axle.

5. In a motor vehicle, the combination, with an axle comprising a tubular body with an enlarged middle portion having oppositely disposed lateral openings of dissimilar size, power transmission gear mounted on a suitable support, the gear support arranged to be passed together with the transmission gear through the larger of the openings and secured on the inner opposite side of the tube to close the smaller opening, and a cap arranged to close the larger opening, of drive shafts extending longitudinally within the axle at an angle to each other, a universal connection between the inner ends of the shafts and the transmission gear, and a connection between the outer ends of the shafts and the drive wheels of the vehicle.

[Claims 6 and 7 not printed in the Gazette.]

899,892. LUBRICATOR. JOSEPH NOETHE, Elkton, S. D. Filed July 22, 1907. Serial No. 384,972.



1. A force feed lubricator comprising a reservoir open at one end, a stuffing box at such end, a piston operating through the stuffing box, a screw-shaft threaded in said piston, a worm wheel on the shaft, framing projecting from the reservoir and supporting said worm wheel, a transverse shaft having a worm meshing with the worm wheel of the disk, said shaft being also provided with a worm wheel, an upright shaft having a worm meshing with the worm wheel of the transverse shaft and provided also with a bevel gear, a drive shaft, a sleeve keyed and slidable

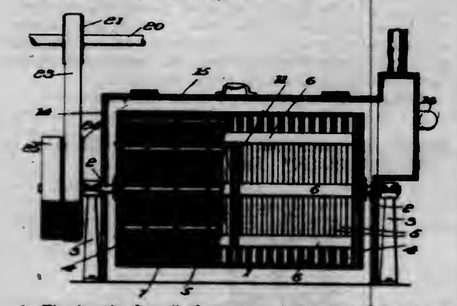
thereon and having pinions on opposite sides of the bevel gear and movable into and out of mesh therewith, means for shifting said sleeve, an engine reversing device, means connecting the reversing device with the means for shifting the sleeve, and means for driving the drive shaft, substantially as set forth.

2. The combination with a reservoir, an oil cup having a valved connection therewith, a piston operating in the reservoir, and a screw-shaft for operating the piston, of a worm wheel for turning the screw shaft, a transverse shaft having a worm meshing with said worm wheel, the said shaft being also provided with a worm wheel, a shaft having a worm meshing with the worm wheel of the transverse shaft and also provided with a bevel gear, a drive shaft and bevel pinions thereon movable into and out of mesh with the bevel gear, substantially as set forth.

3. A lubricator comprising a reservoir, a piston operating therein, a drive shaft having bevel pinions, a connecting shaft having a bevel gear in position to be meshed by the pinions of the drive shaft, intermediate mechanism whereby the connecting shaft may operate the piston, a feed pipe connected with the reservoir and a pipe leading therefrom, substantially as set forth.

4. The combination in a force feed lubricator with the reservoir and the piston operating therein, of a threaded shaft for operating the piston, a worm wheel loose on the shaft, gearing whereby to turn said worm wheel, a lever fixed to the screw shaft whereby it may be operated to turn the same for releasing the piston, and devices carried by the lever for connection with the worm wheel whereby to key the lever to the screw shaft, substantially as set forth.

899,893. CHINA-CLEANING PROCESS. JAMES PASS, Geddes, N. Y., assignor to Onondaga Pottery Company, Syracuse, N. Y., a Corporation of New York. Filed Aug. 21, 1905. Serial No. 275,104.



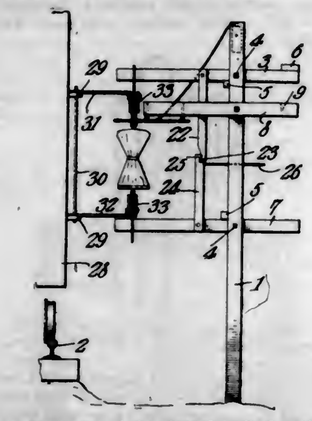
1. The herein described process of cleaning china ware, consisting in depositing a quantity of the articles to be cleaned in a suitable case so as partly to fill the case, but leaving the articles a limited range of movement, depositing a quantity of hard granular material in the case and then rotating the case.

2. The herein described process of cleaning china ware of various shapes and sizes, which consists in first baking the ware then depositing a quantity of the articles, so baked and unglazed, in a suitable case, depositing a quantity of broken bisque in granular form in the case and then rotating the case.

3. The herein described process of cleaning china plates after baking and before glazing, which consists in packing the plates on edge in a suitable rotatable case but loosely so that they will remain substantially on the edge, and yet with suitable spaces between the respective plates and between the edges of the plates and the case, placing a quantity of hard granular material in the case and then rotating the case.

4. The herein described process of cleaning china ware after the first baking and before glazing, which consists in packing the ware loosely in a suitable case, containing a granular earthenware material, rotating the case and exhausting the dust by an air draft during the rotation.

899,894. MEANS FOR DELIVERING MAIL-BAGS FROM MOVING TRAINS. ELIAS J. PATTON, Three Oaks, Mich. Filed Sept. 4, 1907. Serial No. 391,295.



1. In an apparatus of the class described, mail-bag supports carried upon a car, fixed members in the path of said supports for disengaging them from the mail-bag, an engaging member adjacent to the fixed members, a carrier attached to said engaging member, and a track for the carrier, engaging member and mail-bag when caught by said engaging member.

2. In an apparatus of the class described, a post located alongside of a railroad track, pivoted arms carried thereby and movable to horizontal position at right angles to the length of the track, means for holding said arms in horizontal positions, a detachable catcher for a mail-bag, a track extending from the post along the line of railroad, a carrier on said track, connections between the carrier and the mail-bag catcher, a support for the mail-bag on the car, and detachable connections between the mail-bag and said support arranged to be engaged by the arms on the post when in operative position.

3. In an apparatus of the class described, supports projecting from a mail-car, pivoted hooks carried thereby and having extensions projecting from the pivots of the hooks in a direction opposite that of the hooks, means on the mail-bag for engaging said hooks to hold the extensions in operative position, fixed engaging members along the line of way in the path of the hook extensions, a mail-bag catching member detachably mounted adjacent to the engaging members, a carrier capable of traveling away from said engaging members, and connections between said carrier and the catching members.

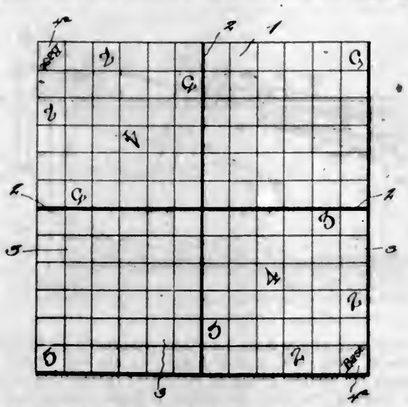
4. In a device of the class described, a car structure for carrying a mail-bag, comprising arms projecting from the car and terminating in members extending one toward the other with parallel spaced legs, and hooks pivotally supported between the spaced legs and having extensions projecting beyond said legs.

5. In a device of the class described, a car structure for carrying a mail-bag, comprising arms projecting from the car and terminating in members extending one toward the other with parallel spaced legs, hooks pivotally supported between the spaced legs and having extensions projecting beyond said legs, and link carriers adapted to be engaged by the hooks and extending from a mail-bag.

[Claims 6 to 12 not printed in the Gazette.]

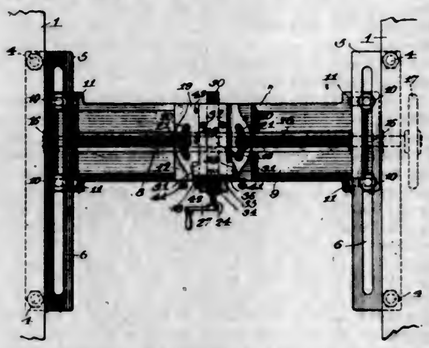
899,895. GAME APPARATUS. JAMES G. PATRICK, St. Charles, Iowa. Filed Aug. 24, 1907. Serial No. 390,022.

A game-apparatus, comprising a board member having represented thereon lines in checkered fashion, also additional lines more pronounced than the aforesaid lines and dividing the general board-surface into quarters; the extreme diagonally opposed corner-spaces each having represented thereon a "base" allotted to opposing players or "forces," and certain of the other spaces, arranged in the diagonally opposed quarters being designated by indicia or



numerals suggestive of "forts" of certain values, and members having also certain indicia thereon movable into said spaces as set forth.

899,896. DEVICE FOR GRINDING BAND-WHEELS. CHARLES E. PAYNE, Laquin, Pa. Filed Dec. 18, 1907. Serial No. 407,071.



1. The combination with the brackets and the vertically adjustable bed supported thereon, of the reciprocating carriage mounted upon the bed, means for moving the carriage lengthwise of the bed, a tool holder carrying a grinding tool and adjustable transversely to the travel of the carriage, and a revoluble support for the tool holder, said tool holder and revoluble support being sustained from one side of said bed, substantially as described.

2. The combination of the bed, the carriage mounted upon the bed, means for moving the carriage lengthwise of the bed, a tool holder adjustable transversely to the travel of the carriage, a grinding tool carried by said holder, and means bearing against the rear of the tool for projecting said tool beyond its holder, substantially as described.

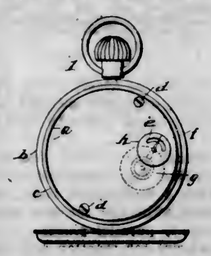
3. The combination of the bed formed with a tongue and a longitudinally extending slot, a carriage formed with a groove to receive the tongue of the bed and having on one side an internally threaded nut fitting in the groove of the bed and on the opposite side a projecting stud, a feed screw passing through the nut, of the carriage, a grinding tool-holder mounted upon the stud projecting from the opposite side of the carriage, and means for adjusting the tool holder transversely to the travel of the carriage, substantially as described.

4. The combination of the traveling carriage, the block invertible and revoluble thereon, a grinding tool holder, a tongue and groove connection between the block and tool holder, and means for vertically adjusting the tool holder transversely to the travel of the carriage, substantially as described.

5. The combination with the traveling carriage, of a block revolubly mounted thereon, means for locking the block in various angularly disposed adjustments, a tool holder mounted upon said block to slide vertically thereon transversely to the travel of the carriage, and means for sliding the tool holder to adjust it on the carriage, substantially as described.

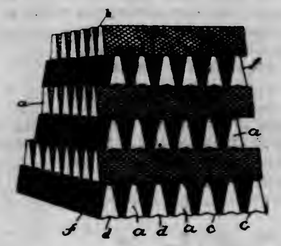
[Claims 6 to 8 not printed in the Gazette.]

899,897. WATCH. JAMES T. PENDLEBURY, Manchester, England. Filed May 29, 1908. Serial No. 435,716.



The combination, with a watch-case and movement, of a dome dust-cover *a* secured at its edges to the band of the case, the said cover having the arc-shaped slot *e* located over the regulator, and a disk-shutter *h* pivoted to the cover adjacent to said slot and having an arc slot *j* arranged concentrically with the pivot of the disk and adapted, when the shutter is rotated, to register with the slot in the cover, as shown and described.

899,898. FILLING FOR REACTION-CHAMBERS, &c. HUGO PETERSEN, Wilmersdorf, near Berlin, Germany. Filed June 25, 1907. Serial No. 380,831.



1. A filling or packing body for reaction and absorption chambers, gas washers, purifiers and the like, and comprising a brick or bar of substantially trapezoidal cross section and having axially extending surface grooves.

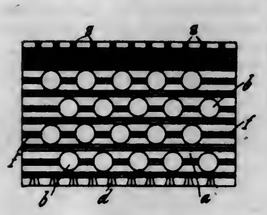
2. A filling body for reaction chambers and for other purposes, having a wedge like shape substantially trapezoidal cross section with incurved base.

3. A filling body for filling reaction chambers and for other purposes, comprising a brick or bar of substantially wedge like cross section and incurved base, the inclined sides being provided with inclined, intercrossing, grooves or flutings at a distance from each other.

4. A filling or packing body for reaction spaces and for other purposes, comprising a bar of substantially trapezoidal cross section and longitudinally grooved base, the inclined sides being divided up into any number of diamond shaped sections of sufficient size to insure the covering of the surfaces of said sections with liquid.

5. Filling or packing for reaction spaces and for other purposes and comprising a plurality of superimposed rows or layers of brick like or bar like bodies of substantially wedge shaped cross section and incurved base.

899,899. FILLING MATERIAL FOR REACTION-CHAMBERS. HUGO PETERSEN, Wilmersdorf, near Berlin, Germany. Filed Sept. 26, 1907. Serial No. 394,714.



1. Packing material for reaction and absorption chambers, etc., comprising oppositely-inclined perforated plates which meet at their upper edges to form a substantially horizontal ridge.

2. Packing material for reaction and absorption chambers, etc., comprising two oppositely-inclined perforated side walls forming a roof-shaped body, the ridge at the intersection of said walls and the base edges of the walls being in substantially parallel planes.

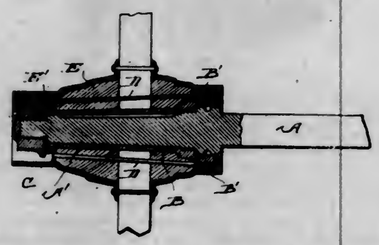
3. Packing material for reaction and absorption chambers, etc., comprising two oppositely-inclined perforated side walls forming a roof-shaped body, the ridge at the intersection of said walls and the base ends of the walls being in substantially parallel planes, the outer surfaces of the walls having downwardly directed notches.

4. Packing material for reaction and absorption chambers, etc., comprising two oppositely-inclined perforated side walls forming a roof-shaped body, the ridge at the intersection of said walls and the base edges of the walls being in substantially parallel planes, the outer surfaces of said walls being fluted.

5. Packing material for reaction and absorption chambers, etc., comprising oppositely-inclined perforated plates which meet at their upper edges to form a substantially horizontal ridge, the perforations and bases of the plates being horizontal whereby they meet the inclined faces of the plates at other than right angles.

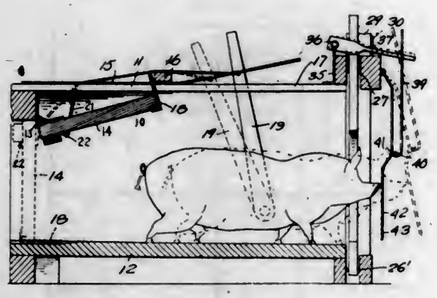
[Claim 6 not printed in the Gazette.]

899,900. BOX FOR BUGGY-HUBS. JAMES L. PORTER, Columbus, Mont. Filed Jan. 5, 1907. Serial No. 350,951.



The combination with an axle spindle, of an inner sleeve outwardly extending, oppositely arranged lugs formed at the inner end of the sleeve, a hub fitting upon said sleeve, a collar fitting upon the outer end of the sleeve and bearing against the hub, the inner end of the hub bearing against the lugs and bolts passing longitudinally through the hub, through the collar and threaded into said lugs, the bolt heads resting in counter-sunk openings provided in the collar.

899,901. HOG-TRAP. RALPH W. PURCELL and BERT W. PURCELL, Dawn, Mo. Filed May 21, 1907. Serial No. 374,813.

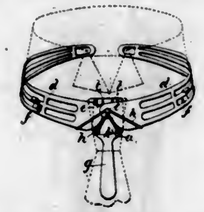


1. A trap of the class described comprising an inclosure open at both ends, a door hinged at one end of the inclosure for vertical swinging movement therewithin, means for holding the door in raised position, means for releasing the door to permit the same to drop and close the said end of the inclosure, a member pivotally arranged at the opposite end of the inclosure and adapted to swing in the direction of one side thereof, a spring exerting a tendency to so swing the said member, a pin carried by the member, a pivoted latch arm resting by gravity upon the pin and provided with a notch into which the pin is adapted to seat when the member is at the limit of its movement against the tension of the spring, a trip frame hinged at the said end of the inclosure and extending in advance of the same, a pivoted arm extending beneath the latch arm, and connection between the trip frame and the last mentioned arm.

2. A trap of the class described comprising an inclosure open at both ends, a door hinged at one end of the inclosure for vertical swinging movement therewithin, means for holding the door in raised position, means for releasing the door to permit the same to drop and close the said end of the inclosure, a member pivotally arranged at the opposite end of the inclosure and adapted to swing in the direction of one side thereof, a spring exerting a tendency to so swing the said member, a pin carried by the member, a pivoted latch arm resting by gravity upon the pin and provided with a notch into which the pin is adapted to seat when the member is at the limit of its movement against the tension of the spring, a trip frame hinged at the said end of the inclosure and extending in advance of the same, a pivoted arm extending beneath the latch arm, and a bar pivoted to the frame and provided with a plurality of openings into which the free end of the pivoted arm may be interchangeably engaged.

3. A trap of the class described comprising an inclosure open at both ends, a door hinged at one end of the inclosure for vertical swinging movement therewithin, means for holding the door in raised position, means for releasing the door to permit the same to drop and close the said end of the inclosure, a member pivotally arranged at the opposite end of the inclosure and adapted to swing in the direction of one side thereof, a spring exerting a tendency to so swing the said member, a pin carried by the member, a pivoted latch arm resting by gravity upon the pin and provided with a notch into which the pin is adapted to seat when the member is at the limit of its movement against the tension of the spring, a trip frame hinged at the said end of the inclosure and extending in advance of the same, a pivoted arm extending beneath the latch arm, a bar pivoted to the frame and provided with a plurality of openings into which the free end of the pivoted arm may be interchangeably engaged, rack bars between which the pivoted member moves, and a pawl carried by the member and engageable with the rack bars to prevent movement of the member against the tension of the spring at times.

899,902. SUPPORTING-FRAME FOR NECKTIES. FREDERIC W. RAUPACH, London, England. Filed Dec. 3, 1906. Serial No. 346,127.



1. A skeleton frame for neckties comprising a central portion having two arms hinged thereto, with means for attaching said central portion to the collar stud or button, suitable stops for limiting the upward movement of said arms, and a handle for holding said central portion substantially as described.

2. A skeleton frame for neckties comprising a central portion having two arms hinged thereto, with means consisting of a bent wire for attaching said central portion to the collar stud or button, suitable stops for limiting the upward movement of said arms, and a handle for holding said central portion substantially as described.

3. A skeleton frame for neckties comprising a central portion having two arms hinged thereto, with means consisting of a bent wire, having a loop wide at the opening and contracting inwards for the easy insertion of the stud for attaching said central portion to the collar stud or button, suitable stops for limiting the upward movement of said arms and a handle for holding said central portion substantially as described.

4. A skeleton frame for neckties comprising a central portion having two arms hinged thereto with means consisting of a bent wire having a loop wide at the opening and contracting inwards for the easy insertion of the stud, for attaching said central portion to the collar stud or button, suitable stops for limiting the upward movement of said arms, and a handle for holding said central portion substantially as described.

5. A skeleton frame for neckties comprising a central portion having two arms hinged thereto, with means consisting of a bent wire, provided with a loop having a wide opening and contracting inwards, for attaching said central portion to the stud, suitable stops, composed of wire for limiting the upward movement of said arms, and a handle composed of bent wire for holding said central portion substantially as described.

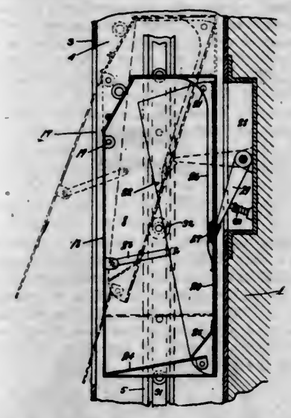
[Claim 6 not printed in the Gazette.]

899,903. MAIL-DELIVERY APPARATUS. CHARLES E. REID and JOHN HEISSENBERGER, New York, N. Y. Filed Dec. 27, 1906. Serial No. 349,660.

1. A carrier system comprising carriers, a guide-way therefor, closures to the guide-way, power mechanism for the carriers, means for manually controlling the power mechanism to operate the carriers, means operated by one of the closures for starting the carriers, means for reversing the travel of the carriers and for stopping the same in their original position, and means for restoring the controlling means to the original position.

2. In a carrier system, the combination with carriers and a passage-way therefor, closures to the passage-way, electric motive power for the carriers, electrical connections including a manually operated switch and a reversing switch, bridging contacts operated by the movement of one of the closures for starting the carriers, means for operating the reversing switch when the carriers have reached one limit of travel, and means for restoring the reversing switch to the original position when the carriers have returned to their original position.

3. The combination with carriers having pivoted front, rear and bottom walls, a chute in which the carriers are adapted to travel, of selective means in the chute to engage the rear wall of certain of the carriers and cause outward, opening movement of the pivoted walls thereof.



4. The combination with a chute, of carriers therein having pivoted walls, selective means in the chute for causing discharge of the carriers, an electric motor and connections for elevating the carriers, a manually-operated controlling switch and automatically-operated reversing switch in circuit with the motor, a door to the chute, and contacts on the door to complete the circuit and cause travel of the carriers.

5. The combination with a guideway, of carriers therein, means for causing discharge of the contents of the carriers, closures to the guideway, power mechanism for the carriers, means for manually controlling the power mechanism, means operated by one of the closures for controlling the power mechanism, means for reversing the power mechanism to stop the carriers in their original position, and means for restoring the controlling means to the original position.

[Claims 6 to 9 not printed in the Gazette.]

899,904. PRESERVED WOOD. PETER C. REILLY, Indianapolis, Ind. Filed Aug. 31, 1905. Serial No. 276,622. (Specimens.)

As an article of manufacture, wood impregnated with the hereinbefore described tar obtained in the manufacture of oil and water gas, said tar having a specific gravity greater than water, beginning to distil at about 150° C., being fluid at normal temperature and substantially non-volatile, practically free of matter in suspension and antiseptic to the organisms which attack wood.

899,905. PRESERVED WOOD. PETER C. REILLY, Indianapolis, Ind. Filed Jan. 4, 1906. Serial No. 294,604. (Specimens.)

As an article of manufacture, wood impregnated with a mixture of creosote oil and the hereinbefore described tar obtained from the manufacture of oil and water gas, said tar having a specific gravity greater than water, beginning to distil at about 150° C., fluid at normal temperatures, substantially non-volatile, and practically free of suspended matter.

899,906. COMBINED LOCK-NUT AND BUSHING FOR CONNECTION-BOXES. JOSEPH S. RITTER, Allentown, Pa., assignor of one-half to George F. Hummel, Allentown, Pa. Filed Apr. 16, 1908. Serial No. 427,352.

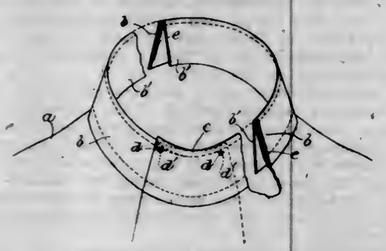
1. In combination, a connection box, a pipe, and means for securing said pipe to a wall of said box, comprising

a body having a threaded opening to receive the threaded end of the pipe, a non-circular portion to permit of the rotation of said body, a shoulder adapted to engage with the outer surface of a side wall of said box, an expansible annular flange extending through the wall, and a ring encircling said flange adjacent the inner surface of the wall and held in place by said flange upon the expansion thereof.



2. A connecting means for securing a pipe to a plate, comprising a body threaded into engagement with the pipe, and adapted to extend a limited distance through an opening in the plate, the portion extending through said plate comprising a thin annular flange having an expanded inner portion, and a ring encircling said flange and held in engagement with the side of the plate by the expanded inner end of the flange.

899,907. NECK-PROTECTING GARMENT. MARTIN ROSENBAUM and ALONZO HALL, Melrose, Mass. Filed June 22, 1908. Serial No. 439,658.



1. An outer garment having a shirt and collar protector, composed of a relatively stiff neck band attached to the body portion of the garment, and adapted to bear on the outer side of a shirt collar, the end portions of said band being adapted to overlap at the front of the wearer's neck, and provided with fastening members, and a flexible flap attached to the outer edge of the neck band, and adapted to be turned inwardly over the shirt collar and tucked as a packing between the collar and the wearer's neck.

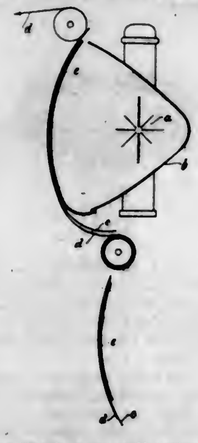
2. An outer garment having a shirt and collar protector, composed of a relatively stiff neck band attached to the body portion of the garment, and adapted to bear on the outer side of a shirt collar, the end portions of said band being adapted to overlap at the front of the wearer's neck, and provided with fastening members, and a flexible packing flap attached to the outer edge of the neck band, the attached edges of the neck band and flap being curved upwardly at the end portions of the protector to form a depression at the front portion of the adjusted protector.

899,908. EXPOSURE-PLATE FOR COPYING APPARATUS. JAKOB RÖTTGEN, Klettenberg, near Cologne, and JULIUS FREY, Sülz, near Cologne, Germany. Filed Jan. 22, 1908. Serial No. 412,128.

1. An exposure plate for copying apparatus composed of metal having holes in rows parallel in one direction, but in a sinuous or zig-zag line in a cross-direction.

2. An exposure plate for copying apparatus composed of metal having elongated holes in rows parallel in one direction but in a sinuous or zig-zag line in a cross-direction.

3. An exposure plate for copying apparatus composed of metal having holes wider in the rear of the plate and tapering to the front in rows parallel in one direction but in a



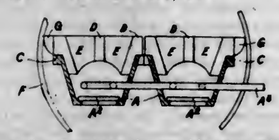
sinuous or zig-zag line in a cross-direction substantially as described and for the purpose set forth.

899,909. CAR-DOOR CONSTRUCTION. JAMES M. RUSH, Neosho, Mo. Filed July 19, 1907. Serial No. 384,590.



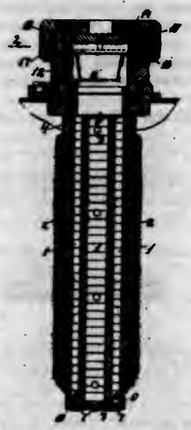
In combination with a car having a door way; a door formed in two sections movable in opposite directions, means for imparting movement to the sections, plates carried by one of the sections to overlap the second section when the sections are in closed position, said plates having alining openings, the second section having an opening to register with the alining openings when the sections are in a closed position, a bracing arm pivoted to the car above the doors and terminating in an eye, said arm being of such length as to bring the eye in register with the openings of the plates and section, and a pin insertible through the eye and openings.

899,910. GRATE FOR THE FURNACES OF STEAM-BOILERS. HENRY SCHOFIELD, Sheffield, England. Filed Nov. 23, 1907. Serial No. 403,466.



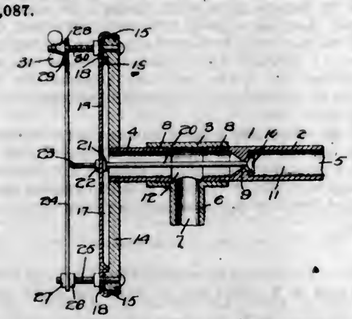
In steam boiler furnaces the combination with longitudinally extending trough shaped air conduits having downwardly converging walls and having their upper edges flanged outwardly, of transversely arranged fire bars having converging depending portions conforming to and fitting closely within the conduits, and having end projections which rest on said conduit flanges, said fire bars being formed with vertical and inclined spacing abutments producing vertical tapering air passages substantially as described.

899,911. SAFETY DEVICE FOR THE MOUTHS OF VESSELS CONTAINING VOLATILE COMBUSTIBLE LIQUIDS. LUDWIG SCHÖN, Vienna, Austria-Hungary. Filed Jan. 23, 1907. Serial No. 353,750.



In a safety device for vessels to contain inflammable liquids, the combination of a bushing adapted to be secured in an opening in the vessel, and a tubular member attached to the lower end of said bushing, said tubular member consisting of a piece of wire gauze fabric in which the weft in part consists of sheet metal strips, said piece of fabric being so folded as to form a tubular part with walls composed of the metal strips and folds of wire-gauze between such metal strips, there being narrow slots between such metal strips forming passage-ways from said tubular part into said folds.

899,912. PRESSURE-REGULATOR. ANDREW SCHUM, Mariah Hill, Ind. Filed Apr. 4, 1908. Serial No. 425,087.



1. In a regulator, a casing having a pressure chamber, a disk threaded thereto, an inlet and outlet therefor, a valve having a rod for the inlet, a diaphragm having a circumferential bulged flange secured to the disk, means for securing the flange to the circumference of said disk, said diaphragm being centrally apertured, said rod extending through the aperture, and means threaded to the rod and engaging opposite faces of the diaphragm, movable means designed for coaction with the said rod, threaded means projecting laterally from the disk and extending through the same near its periphery and to which the movable means is adjustably secured and means threaded upon said lateral projecting threaded means for adjusting the movable means.

2. In a regulator, a casing, a disk having an annular bead or raised portion threaded to the casing, an inlet and outlet therefor, a valve and rod for the inlet, a diaphragm having a circumferential bulged flange secured to the disk, means for securing the flange to the circumference of said disk, said diaphragm being bent circumferentially upon itself so as to form an annular portion designed to engage the said bead or raised portion and to allow for expansion and vibration of the diaphragm, said diaphragm being centrally apertured, said rod extending through the aperture, and means threaded to the rod and engaging opposite faces of the diaphragm, a leaf spring disposed across the diameter of the diaphragm and spaced apart therefrom, threaded means projecting laterally from the disk and extending through the same near its periphery and to which the said leaf spring is adjustably secured, nuts threaded upon one of said lateral projecting threaded means, one upon each side of the leaf spring, for adjusting that end of the spring, and a wing nut threaded to the other lateral projecting threaded means for adjusting the tension of the spring.

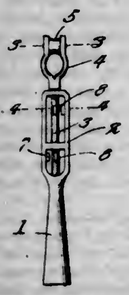
899,913. POWER-TRANSMISSION UNIVERSAL JOINT. HUGH R. SHAW, Rosseau, Ontario, Canada. Filed Dec. 13, 1907. Serial No. 406,294.



1. A power transmission joint or coupling comprising a ball member, a segment of a ring secured on the ball member and extending over more than one-half of the circumference of the same, and a socket member having the interior thereof in excess of a hemisphere and provided with an arc-shaped groove located on a plane through the axis of rotation and extending from edge to edge of said socket member so as to form a continuous bearing surface for the segment on the ball from end to end as it adjusts itself in the groove during rotation as specified.

2. A power transmission joint or coupling comprising a ball member, a segment of a ring pivoted on the ball member and extending over more than one-half of the circumference of the same, and a socket member having the interior thereof in excess of a hemisphere and provided with an arc-shaped groove located on a plane through the axis of rotation and extending from edge to edge of said socket member so as to form a continuous bearing surface for the segment on the ball from end to end as it adjusts itself in the groove during rotation as specified.

899,914. FISHING-ROD TIP. FREDERICK A. SMITH, Hartford, Conn. Filed May 19, 1908. Serial No. 433,754.

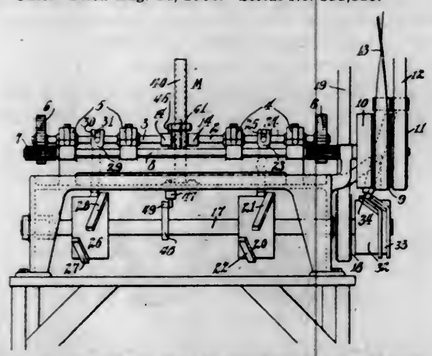


1. A fishing pole tip comprising a hollow body portion, a bracket, a pulley holder carried by the bracket, and means carried by the pulley holder and bracket to allow only partial rotation of the holder.

2. A fishing pole tip comprising a hollow body portion, a bracket, a pulley holder carried by the bracket, and lugs carried by the pulley holder and bracket to allow only partial rotation of the holder.

3. A fishing pole tip comprising a hollow body portion, a bracket arranged thereon, a pulley holder carried by the bracket, jaws fixed to the pulley holder, a pulley secured to the jaws, and means carried by the pulley holder and bracket to allow only partial rotation of the holder.

899,915. NUT-TAPPING MACHINE. OSCAR A. SMITH, Cleveland, Ohio, assignor to Edwin C. Henn, Cleveland, Ohio. Filed Aug. 24, 1906. Serial No. 331,825.



1. In combination with a double-ended tool effective to cut the same from either end, of a pair of opposed tool holding means for engaging the tool at its opposite ends alternately and at each side of a blank, and means for rotating and advancing each of said tool holding means thereby to cut successive blanks first from one side and then from the other.

2. In a nut-tapping machine, the combination with a reversible double end tap, of a work-holder for holding the article in a certain predetermined position, means for alternately engaging the tap by its opposite ends to pass the tap entirely through the articles successively in opposite directions, and means for alternately advancing said means and thereby the tap in opposite directions and for rotating it during such advance.

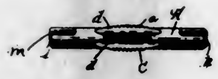
3. In a nut-tapping machine, the combination with a double end reversible tap, of a pair of alining spindles having tap-engaging portions at their opposing ends organized to engage and rotate the tap, means for causing endwise movement of the spindles and timed so that said tap will be released and one spindle withdrawn from said tap at a predetermined period, means for rotating the spindles in the several positions of endwise movement, and means for reversing the rotation of the spindles.

4. In a nut-tapping machine, the combination with a double end reversible tap, of a pair of alining spindles provided with socket portions on their opposing ends for engagement with the tap ends to rotate the same, the spindles being supported for rotation and also for endwise movement, a shaft, means for rotating the spindles in their several positions of endwise movement from the shaft, means for driving the shaft alternately in opposite directions, means for causing endwise movement of the spindles during rotation and timed so that said tap will be released and one spindle withdrawn from said tap at a predetermined period.

5. In a nut-tapping machine, the combination with a double end reversible tap, of a pair of spindles rotatably supported in alinement, the spindles being provided with socket portions on their opposing ends formed to fit the tap ends to rotate the same, a driving shaft adjacent the spindles and provided with elongated pinions at each end, a gear on each of the spindles engaging one of said pinions, whereby the spindles are rotated in their several positions of endwise adjustment, a second shaft provided with a pair of drums carrying cam-straps, each of the spindles being provided with a disk portion, levers pivoted on the machine and having forked portions engaging said disks respectively, each lever being engaged by said cam-straps on one drum, whereby the levers are oscillated to shift the spindles endwise, said cam straps being so positioned that the tap will be released and one spindle withdrawn from said tap at a predetermined period, and means operated from the second shaft for reversing the movement of the driving shaft.

[Claims 6 to 16 not printed in the Gazette.]

899,916. TAP. OSCAR A. SMITH, Cleveland, Ohio, assignor to Edwin C. Henn, Cleveland, Ohio. Filed Aug. 16, 1906, Serial No. 330,894. Renewed Mar. 11, 1908. Serial No. 420,450.



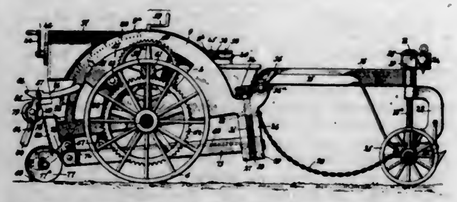
1. A tap comprising an integral double ended shank having the rigid cutter portion formed at the intermediate part of the shank, the diameter of the spiral threads decreasing from the middle of the cutter portion toward each end of such portion, the separate cutters or teeth at one end of each of the longitudinal cutter members having a circumferential rake, the separate cutters or teeth at the opposite end of the cutter portion being given a circumferential rake extending in a rotative direction the opposite to that at the other end.

2. A tap comprising an integral double ended shank having the rigid separate cutters or teeth at one end of each of the longitudinal cutter members of the tap given a circumferential rake, the separate cutters or teeth at the opposite end of the cutter portion being given a circumferential rake extending in a rotative direction the opposite to that at the other end, the cutters or teeth at the middle part of the longitudinal cutting members, being of substantially uniform height or outside diameter throughout their peripheral length.

3. A tap comprising a shank having a plurality of sets of cutters, each set tapered from the middle part thereof toward the end of the cutters, the teeth at one end of each set having a different rake or inclination from the teeth at the opposite end of the same set, whereby said tap is operative to cut the same thread starting from either end of said tap.

4. A tap comprising a shank having a set of cutters, the teeth at one end of each set having a different rake or inclination from the teeth at the opposite end thereof and said teeth constructed to enter a blank, whereby said tap is operative to cut the same starting from either end of said tap.

899,917. CULTIVATING-MACHINE. CHARLES SOLTÉSZ, New York, N. Y. Filed Jan. 13, 1908. Serial No. 410,589.

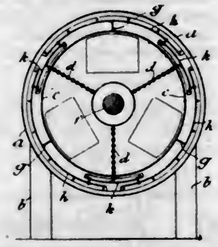


1. In a cultivating machine, the combination of a body portion mounted upon wheels, disk cutters connected with said body portion and movable in relation thereto, said disk cutters being arranged in pairs, a lever disposed intermediate the cutters of each pair, a hoe mounted upon said lever, and mechanism controllable by the motion of the machine for actuating said hoe.

2. In a cultivating machine, the combination of a body portion mounted upon wheels, guide bars mounted upon said body portion, a slide connecting said guide bars together, means for adjusting said slide, levers disposed intermediate said guide bars, hoes connected with said levers, and means controllable by the motions of the machine for actuating said hoes.

3. The combination of a body member mounted upon wheels, links connected with said body member, cutter disks mounted upon said links and revoluble relatively to the earth when dragged thereover, means for raising said links for the purpose of controlling the height of said cutter disks relatively to the ground, levers supported by said body member, hoes mounted upon said levers, and mechanism controllable by the motions of said wheels for actuating said hoes.

899,918. WASHING-MACHINE. THOMAS C. SÖRENSEN, Copenhagen, Denmark. Filed Aug. 9, 1907. Serial No. 387,793.



1. A washing machine comprising a casing and a rotatable drum within the casing for containing the material to be washed, spaced radial ribs arranged longitudinally of the drum on the periphery thereof, plates curved concentrically with the drum and connected by their centers to the ribs, radial partitions within the drum, said partitions being arranged between adjacent ends of the curved plates, plates curved concentrically with the drum the ends of said last named plates overlapping the ends of the first named plates and secured in spaced relation to the drum, and means connecting the ends of said plates with the ends of the first-named plates in spaced relation.

2. A washing machine comprising a casing and a rotatable drum within the casing for containing the materials to be washed, spaced radial ribs arranged longitudinally of the drum on the periphery thereof, plates curved concentrically with the drum and connected by their centers to the ribs, the edges of said plates being spaced apart from each other, and plates curved concentrically with the drum and having their edges secured in spaced relation to the edges of the first-named plates the ends of the last named plates overlapping the ends of the first named plates.

899,919. BRAKE-RELEASE. AUGUSTUS A. ST. CLAIR, Indianapolis, Ind., assignor to St. Clair Air Brake Company, Indianapolis, Ind., a Corporation of Indiana. Filed Nov. 26, 1907. Serial No. 403,957.



1. The combination of a piston rod, a brake rod, an intermediate extensible normally retained connection between said rods, and means dependent upon the bringing together of the rods for automatically restoring the connection to normal.

2. The combination of a piston rod, a brake rod, an intermediate extensible normally retained connection between said rods, means dependent upon the bringing together of the rods for automatically restoring the connection to normal, and means for normally holding the connection in normal relationship.

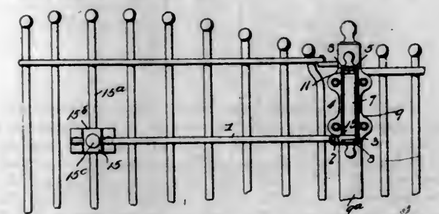
3. The combination of a brake rod, a piston rod, a pivoted member carried by one of said rods, a sliding connection between said member and the other rod, and means carried by said other rod for engaging the pivoted member to restore the pivoted member to normal by bringing the two rods together.

4. The combination of a brake rod, a piston rod, a pivoted member carried by one of said rods, a sliding connection between said member and the other rod, means carried by said other rod for engaging the pivoted member to restore the pivoted member to normal by bringing the two rods together, and means for normally holding the pivoted member in normal position.

5. The combination of a brake-rod, a piston rod, a bell-crank lever with one arm pivoted to one of said rods, a sliding connection between the other arm of said lever and the other rod, and means for forcing the lever down by bringing the rods together.

[Claims 6 to 17 not printed in the Gazette.]

899,920. DEVICE FOR CLOSING GATES AND DOORS. BALTHASAR STEINMAN, Scranton, Pa. Filed Mar. 10, 1908. Serial No. 420,196.



1. The combination, with a spring member adapted to be mounted on a fence post or door jamb, and a roller adapted to be fastened on a gate or door, of an arm operatively connected to the spring mounted in said member and adapted to engage said roller, said arm having a V-shaped lateral extension adapted to pass over said roller as the gate is being shut by said arm.

2. The combination, with a spring member adapted to be mounted on a fence post or door jamb, and a roller adapted to be fastened on a gate or door, of an arm operatively connected to the spring mounted in said member and adapted to engage said roller, said arm having a V-shaped lateral extension adapted to pass over said roller as the gate is being shut by said arm, and means to retain said arm in engagement with said roller.

3. The combination, with a spring member adapted to be mounted on a fence post or door jamb and a roller carrying bracket adapted to be fastened on a gate or door, of an arm operatively connected to the spring mounted in said member and adapted to engage the roller, said arm having a V-shaped lateral extension adapted to pass over said roller as the gate is being shut by said arm, said bracket provided with a cross piece which confines said arm between it and said roller.

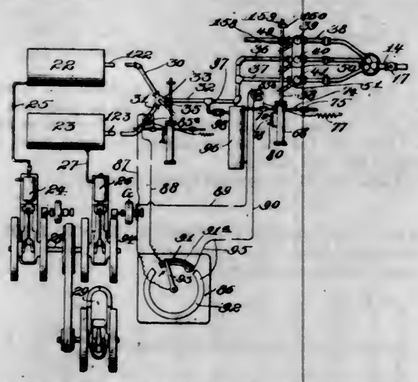
4. The combination, with a spring member adapted to be mounted on a fence post or door jamb and a roller carrying bracket adapted to be fastened on a gate or door, of an arm operatively connected to the spring mounted in said member and adapted to engage said roller, said arm having a V-shaped lateral extension adapted to pass over said roller as the grate is being shut by said arm and means mounted on said bracket to clamp said arm whereby the gate or door may be held open at any desired angle.

5. The combination, with a spring member adapted to be mounted on a fence post or door jamb and a roller carrying bracket adapted to be fastened on a gate or door, of an arm operatively connected to the spring mounted in said member and adapted to engage the roller, said arm having a V-shaped lateral extension adapted to pass

over said roller as the gate is being shut by said arm, said bracket provided with a cross piece which confines said arm between it and said roller, and a set screw mounted on said cross piece and adapted to grip said arm whereby the gate or door may be held open at any desired angle.

[Claim 6 not printed in the Gazette.]

899,921. WELL-PUMPING APPARATUS. WILLIAM M. STEPHENSON, Batson, Tex. Filed Nov. 20, 1907. Serial No. 403,029.



1. In a well pumping apparatus, the combination with air supplying and exhausting means, of a substantially closed receptacle connected to the air supplying and exhausting means, a device for controlling communication between the latter and the receptacle and means for venting said receptacle to the atmosphere between the periods the air supplying and exhausting means are in communication with said receptacle.

2. In a pumping apparatus of the character described, the combination with pressure and vacuum tanks, a line pipe connected thereto, pneumatic discharging means for elevating the liquid from the well, and means for controlling communication between the respective tanks and the line pipe and for automatically venting said receptacle to the atmosphere between the periods the pressure and vacuum tanks are in communication with the receptacle.

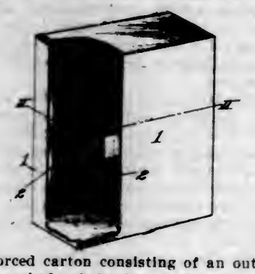
3. In a pumping apparatus of the character described, the combination with a substantially closed receptacle having a valve inlet, of air supplying and exhausting means connected thereto, a valve for alternately connecting the air supplying and exhausting means to the receptacle for discharging and refilling the same, and means for venting said receptacle to the atmosphere between the periods the air supplying and exhausting means are in communication with said receptacle.

4. In a pumping apparatus of the character described, the combination with pressure and vacuum tanks, a receptacle, and controlling means for alternately connecting the vacuum and pressure tanks to the receptacle for filling and emptying the same, of a device for establishing communication between the receptacle and the atmosphere between the periods during which the receptacle is being filled and emptied.

5. In a well pumping apparatus, the combination with a substantially closed receptacle adapted to be arranged at the bottom of a well and provided with a valve controlled inlet, of pressure and vacuum tanks connected to the receptacle, a valve for alternately connecting the vacuum tank to the receptacle for filling the latter, and connecting the pressure tank thereto for discharging the contents thereof, and electro-pneumatically operated devices for effecting the operation of the valve to alternately connect the pressure and vacuum tanks to said receptacle, and a commutator for timing the operation of said devices.

[Claims 6 to 20 not printed in the Gazette.]

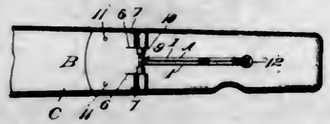
899,922. CARTON. GEORGE W. TEASDALE, St. Louis, Mo. Filed May 14, 1908. Serial No. 432,769.



1. A reinforced carton consisting of an outer shell and an inwardly arched reinforcing or trussing lining sheet, attached to said shell and having cut-outs at the corners of the carton, substantially as described.

2. A reinforced carton consisting of an outer shell and an inwardly arched reinforcing or trussing lining sheet, attached to said shell and having concave cut-outs at the corners of the carton, substantially as described.

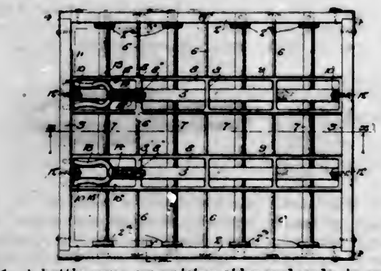
899,923. WHIFFLETREE ATTACHMENT. JOHN UNGER, Louisville, Colo. Filed Mar. 26, 1907. Serial No. 364,690. Renewed Feb. 28, 1908. Serial No. 418,290.



1. A whiffletree attachment comprising a hook member and a bearing plate, said hook member having a doubled portion constituting a hook and a shank and laterally extended arms formed with terminal shoulders or offsets, and said bearing plate being provided with longitudinal incisions, an intermediate notch, bent portions forming spring tongues at the edges of said plate and intermediate eyes wherein the arms of the hook member are pivoted.

2. An article of the class described comprising a bearing plate having spaced eyes and resilient tongues adjacent to said eyes and provided with recesses or pockets in their undersides, in combination with a hook member having a shank composed of side members formed with laterally extending arms pivotally engaging the eyes of the bearing plate and having terminal shoulders or offsets engaging the pockets or recesses in the undersides of the resilient tongues.

899,924. BOTTLE-CASE. THEODORE L. VALERIUS, Fort Atkinson, Wis., assignor to The Creamery Package Mfg. Company, Chicago, Ill., a Corporation of Illinois. Filed May 13, 1905. Serial No. 260,195.



1. A bottle case, comprising sides and ends, in combination with parts dividing the lower part of the inclosure thus formed into a plurality of compartments, a rockable bottle locking bar trunnioned in said case above said compartments, parallel with a row thereof and adapted in one position to lock the bottles in said case, and a bar latch for securing the bar in locked position, substantially as described.

2. A bottle case, containing a plurality of bottle compartments, in combination with an oblong bottle holding bar having convex edges and pivoted upon its longitudinal axis, and a latch for securing said bar in locked position, substantially as described.

3. A bottle locking device for bottle cases, comprising an elongated metal bottle holding bar or frame, having cross portions, in combination with a slidable latch having one end held in the end of said bar or frame, and malleable portions upon one of said cross portions for holding the other end of said latch, substantially as described.

4. A bottle case, comprising sides and ends, in combination with low partitions extending between said ends, bottom rods extending through said sides and said partitions, and tie-rods also extending through said sides and ends and with said partitions, dividing the space within said sides and ends into a plurality of compartments for bottles, and longitudinal rockable bottle-holding bars above said partitions, substantially as described.

5. A bottle case, comprising suitable sides, ends and bottoms, with partitions, in combination with flat springs upon said sides to engage the bottles of the outer rows in said case, and rotary locking bars arranged in said case to engage the necks of bottles of adjacent rows, substantially as described.

[Claim 6 not printed in the Gazette.]

899,925. ICE-CREAM FREEZER. THEODORE L. VALERIUS, Fort Atkinson, Wis., assignor to The Creamery Package Mfg. Company, Chicago, Ill., a Corporation of Illinois. Filed July 28, 1906. Serial No. 328,224.

1. In an ice cream freezer, a freezing vessel provided with liquid inlet and outlet at its top, in combination with a substantially horizontal freezing cylinder adapted for rotation within said vessel and suitable scraping means coacting with said cylinder, to remove the frozen liquid therefrom and return it to the vessel, said scraping means being adapted to direct the liquid toward the outlet opening of the vessel, substantially as described.

2. In an ice cream freezer, a freezing vessel, having an inclined bottom, in combination with means at the one end of said vessel for supplying liquid thereto, and at the other end for discharging frozen liquid therefrom, an axially inclined rotary cylinder provided in said vessel, means for circulating freezing fluid through said cylinder, and a suitable scraper coöperating with said cylinder, to agitate the freezing liquid in said vessel by freeing the semi-frozen liquid from said cylinder and returning it to the vessel substantially as described.

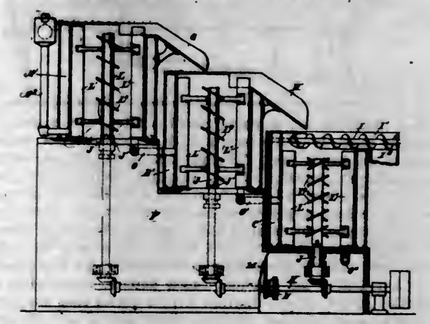
3. In an ice cream freezer, a trough-like freezing vessel, having an inclined bottom, in combination with an internally cooled rotary freezing cylinder correspondingly inclined within said vessel, cylinder scraping means coacting with the cylinder in the freezing operation, means for supplying liquid to one end of said vessel, and means at the other end, near the top thereof, for removing the semi-frozen liquid from the surface of the liquid in the vessel and for discharging the same from said vessel, substantially as described.

4. In an ice cream freezer, a freezing vessel open at the top and means for supplying liquid thereto, in combination with an internally cooled rotary cylinder occupying the lower part of said vessel, scraping means arranged about said cylinder to remove the semi-frozen liquid therefrom and return it to the vessel, a partition also arranged above the cylinder and substantially parallel with the axis thereof and suitably rotated frozen-liquid discharging means arranged above the cylinder, adjacent to said partition, in position to be partly submerged in the liquid in the vessel, substantially as described.

5. In an ice cream freezer, a freezing vessel, means for supplying liquid thereto, in combination with an internally cooled rotary cylinder in said vessel, adjustable cylinder scrapers coöperating with said cylinder in the freezing operation, and means at the top of the vessel for discharging the semi-frozen liquid from the end of the vessel, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

899,926. ICE-CREAM FREEZER. THEODORE L. VALERIUS, Fort Atkinson, Wis., assignor to The Creamery Package Mfg. Company, Chicago, Ill., a Corporation of Illinois. Filed July 28, 1906. Serial No. 328,225.



1. In an ice cream freezer, an upright externally cooled stationary freezing can open at the top and having a discharge opening in its upper edge, in combination with means for supplying liquid to said can, a dasher within said can and means for rotating said dasher, substantially as described.

2. In an ice cream freezer, an externally cooled upright cylindrical can to contain the liquid to be frozen and open at the top for the discharge of frozen liquid, in combination with means for continuously supplying liquid thereto, a dasher having a suitable scraper and revoluble in said can, and means at the top of the can for carrying off the semi frozen liquid, substantially as described.

3. In an ice cream freezer, an externally cooled upright freezing can, having a spout extending from its upper edge for the discharge of frozen liquid, in combination with means for supplying liquid to said can, and a suitable dasher revoluble in said can, substantially as described.

4. In an ice cream freezer, an upright non-rotative cylindrical can, in combination with a discharge spout leading from the upper edge of the can, means for refrigerating and agitating the contents of said can, and a liquid supply spout, substantially as described.

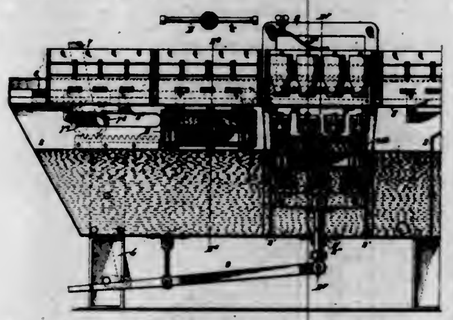
5. In an ice cream freezer, an upright non-rotative cylindrical can, open at the top, in combination with means for chilling the walls of said can, a rotary dasher provided in said can, means for continuously supplying liquid to be frozen, and driven mechanism for continuously removing the frozen liquid from the top of said can, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

899,927. CASED-BOTTLE-WASHING MACHINE. THEODORE L. VALERIUS, Fort Atkinson, Wis., assignor to The Creamery Package Mfg. Company, Chicago, Ill., a Corporation of Illinois. Filed July 28, 1906. Serial No. 328,227.

1. A machine for washing cased bottles, comprising a suitable tank, in combination with a plurality of inde-

pendent jet heads upon different horizontal planes, each containing a plurality of jet openings corresponding in number and position to the bottles in a bottle case, a support above said heads whereon inverted bottle cases are movable, means for moving bottle cases thereon, means for raising and lowering the bottle cases in relation to certain of said heads and means for controlling the flow of liquid in accordance with the movements of said cases, substantially as described.



2. A machine for washing cased bottles, comprising a suitable tank, in combination with a plurality of independent jet heads upon different horizontal planes, each containing a plurality of jet openings corresponding in number and position to the bottles in a bottle case, a support above said heads whereon inverted bottle cases are movable, means for raising and lowering the bottle cases in relation to certain of said heads and a step by step bottle case moving mechanism, substantially as described.

3. A machine for washing cased bottles, comprising a suitable trough, in combination with a bottle case support or track, a plurality of jet heads arranged in said trough and upon different horizontal planes, means for engaging each case of bottles with the lowermost of said heads, during its movement along said track and means for shutting off the flow of liquid through said head when bottles are engaged therewith, substantially as described.

4. A machine for washing cased bottles, comprising a suitable trough, in combination with a bottle case track, a plurality of jet heads or members within the trough and upon different horizontal planes, means for engaging each case of bottles with the lowermost of said heads during movement upon said track, a step by step mechanism for advancing the cases on said track and means actuated thereby to prevent the flow of liquid from said head, except when engaged with bottles, substantially as described.

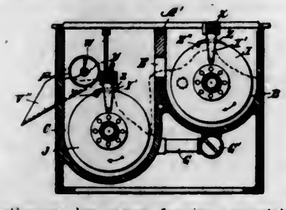
5. A machine for washing cased bottles, comprising a suitable tank, in combination with a support whereon inverted bottle cases are movable and a plurality of invertible jet heads arranged beneath said support, each said head being provided with two sets of jet openings corresponding in number and position to the bottles in different bottle cases, substantially as described.

[Claims 6 to 46 not printed in the Gazette.]

899,928. ICE-CREAM FREEZER. THEODORE L. VALERIUS, Fort Atkinson, Wis., assignor to The Creamery Package Mfg. Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 20, 1906. Serial No. 331,316.

1. A continuous ice cream freezer comprising a vessel to contain the custard and which is open at the top to expose the custard to view and to admit air thereto, in combination with means for continuously supplying custard thereto, means for therein mixing, refrigerating and aerating the custard and means for continuously discharging the finished product from the top of the vessel, substantially as described.

2. A continuous ice cream freezer comprising a vessel to contain the custard and which is open at the top to expose the custard to view and to admit air thereto, in combination with means for directing a stream of custard into said vessel, means for therein mixing, refrigerating and aerating the custard and mechanism in the upper part of said vessel for discharging the frozen product therefrom, substantially as described.



3. A continuous ice cream freezer comprising a vessel to contain the custard and which is open at the top to expose the custard to view and to admit air thereto, in combination with means for feeding custard thereto, means for therein mixing, refrigerating and aerating the custard and causing the finished product to rise and accumulate in the upper part of the vessel and said vessel being constructed to discharge the finished product from its said upper part, substantially as described.

4. A continuous ice cream freezer comprising a horizontally elongated vessel to contain the custard and which is open at the top to admit air and expose the custard to view, means for supplying custard to one end of said vessel, means for therein mixing, refrigerating and aerating the custard, and for driving the finished product toward the other end of the vessel, and means at said other end of the vessel for discharging the finished product thus delivered thereto, substantially as described.

5. A continuous ice cream freezer comprising a vessel to contain the custard and which is open at the top to expose the custard to view and to admit air thereto, in combination with means for continuously maintaining a body of liquid custard in said vessel, said vessel having a discharge opening above the normal custard level, for discharging the finished product and mechanism in said vessel co-acting to mix, refrigerate and aerate the custard and to deliver the finished product at said opening, substantially as described.

[Claims 6 to 78 not printed in the Gazette.]

899,929. GARMENT-HANGER. FREDERICK W. VAN NORTWICK, Cleveland, Ohio, assignor, by direct and mesne assignments, to The V. & W. Up-Hang Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 30, 1907. Serial No. 408,468.

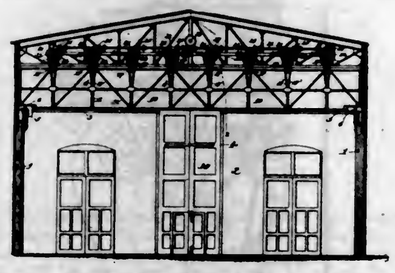


1. As a new article of manufacture and sale, a garment hanger formed out of a single piece of wire and provided with a circular spring loop at its center and a pair of hooks in the same plane as said loop and oppositely disposed beneath the loop, said hooks having parallel overlapping pin portions with sharpened extremities, and the shanks of said hooks running into the said loop from opposite sides, whereby the said loop affords the necessary spring for opening the said hooks and for closing the same when affixed to the garment.

2. As a new article of manufacture and sale, a hanger for garments and other articles made of spring wire formed with a loop having parallel pin portions in the same plane therewith and extending from opposite sides thereof to meeting points centrally of the hanger, said loop being circular and of a diameter approximately equal to the length of said pin portions, whereby free spring play is afforded in attaching the said hanger to the garment and in locking the same thereon.

3. As a new article of manufacture and sale, a hanger for garments and the like formed of spring wire with a relatively large loop of circular outline and having hook portions with relatively small bends and pin portions extending therefrom toward each other and having overlapping points, said hanger being adapted to lie substantially flush at all points upon a flat surface.

899,930. CRANE-DOOR. JAMES T. WALLIS, Philadelphia, Pa. Filed Feb. 13, 1907. Serial No. 357,185.



1. In combination, a building having a doorway formed in the upper portion of one of its vertical walls, said doorway being of a width substantially equal to that of the wall in which it is formed, a second doorway formed below the first mentioned doorway and communicating therewith, an overhead traveling crane, the body of which is movable through the first mentioned doorway and having a cage movable through said second doorway, a door for the first doorway hinged at the upper edge thereof, and a door or doors hinged at the sides of the second doorway.

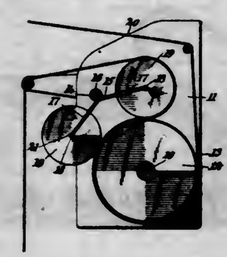
2. In combination a crane door, hinge arms connected to the upper edge thereof and pivotally supported to turn about a horizontal axis, each of said hinge arms having a gear segment formed on it, a shaft, gears carried by the shaft and meshing with the gear segments on the hinge arms, a motor and gearing connecting said motor and said shaft including a worm and pinion.

3. In combination, a building having a doorway formed in the upper portion of one of the vertical walls, said doorway being of a width substantially equal to that of the wall in which it is formed, a second doorway formed below the first mentioned doorway and communicating therewith, an overhead traveling crane, the body of which is movable through the first mentioned doorway and having a cage movable through said doorway, a door or doors hinged at the sides of said second doorway, a door for the first mentioned doorway, hinged arms connected to the upper edge thereof and pivotally supported from the building to turn about a horizontal axis, each of said hinged arms having a gear segment formed on it, braces from the lower edge of the door to the hinged arm adjacent the gear teeth formed thereon, a shaft, gears carried by the shaft meshing with the segmental gears on the hinge arms, a motor and gearing connecting said motor and said shaft including a worm and pinion.

4. In combination, a building having a crane doorway formed in one of its vertical walls, a door for closing said opening, a plurality of hinge members connected to the upper edge of the door, pivotal supports for said hinge members carried within and by the building, a gear segment carried by each hinge member, gears meshing with said segments and means for simultaneously rotating said gears to turn all the hinges in the direction to move the door from the closed position in which it lies in a horizontal plane within the building.

5. In a building having the usual double inclined roof, a wall extending transversely to the ridge of said roof and having a wide doorway formed in its upper portion, the combination of a door for said doorway hinged at its upper horizontal edge to said building, a shaft extending parallel and adjacent to the upper edge of the door, gear connections at intervals along said shaft between it and the door and an electric motor for operating said shaft, arranged substantially beneath the ridge of said roof.

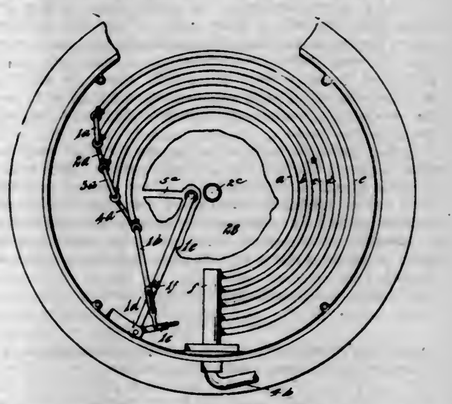
899,931. TAKE-UP FOR LOOMS. BENJAMIN WEHRLEN and FLOYD C. MATTHEWS, Pompton Lakes, N. J. Filed Feb. 10, 1908. Serial No. 415,097.



1. A take-up, comprising a drum for drawing the fabric from a loom, spring yokes pivoted at points adjacent to said drum and each having arms extending in opposite directions, and rollers pivoted between the corresponding arms of said yokes and, held against said drum thereby, whereby said rollers control each other.

2. A take-up, comprising a drum for drawing the fabric from a loom, a shaft, spring yokes each having oppositely extending arms and coils between said arms, said coils serving pivotally to mount said yokes upon said shafts, and rollers carried by said yokes between corresponding arms, said yokes resiliently holding said rollers in engagement with said drums.

899,932. PRESSURE-GAGE. EBEN S. WHEELER, Detroit, Mich. Filed Jan. 8, 1906. Serial No. 295,017.

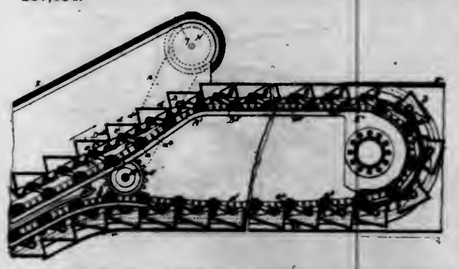


1. In a pressure gage, in combination with a manifold, a plurality of coaxially arranged Bourdon tubes communicating therewith, a rock shaft, links connecting the free ends of the Bourdon tubes to the rock shaft whereby the united action of the tubes is communicated to the shaft, and means actuated by the shaft for recording the movement thereof and thereby of said Bourdon tubes, substantially as described.

2. In a pressure gage, the combination of a manifold, a plurality of Bourdon tubes having their open ends communicating therewith, a rock shaft, a recording instrument actuated by said rock shaft, and adjustable connecting links between said rock shaft and Bourdon tubes, whereby compensation is made for initial irregularities of movement in said tubes, substantially as described.

3. In a pressure gage, in combination with a manifold, a plurality of Bourdon spring tubes communicating therewith, a rock shaft, and links whereby the individual movement of each tube is communicated in proper proportion and degree to said shaft, substantially as described.

899,933. MOVING STAIRWAY. GEORGE A. WHEELER, New York, N. Y. Filed Nov. 13, 1905. Serial No. 287,054.



1. The combination in a moving stairway, of a series of step sections arranged to travel in a given path, a chain arranged to drive said step sections, said step sections being free to lag at the points where they change direction of movement on the carrying run, substantially as described.

2. The combination in a moving stairway, of step sections, guides therefor, an endless drive chain, guides for said chain, the guides for the steps being at more of an acute angle than the guide for the chain at the point where the direction of movement is changed, substantially as described.

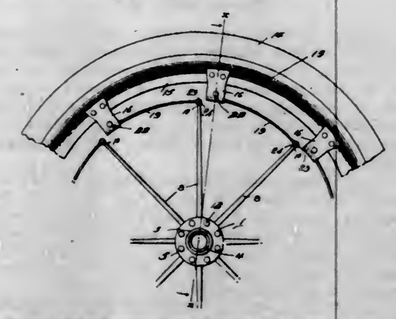
3. The combination in a moving stairway, of step sections, guides therefor, an endless drive chain for the step sections, guides for the chain, the guides for the step sections at the points where the horizontal portions of the stairway join the inclined portions being at an angle and the guides for the drive chain being on a curve, substantially as described.

4. In a moving stairway, the combination of step sections, guides therefor, a drive chain for said step sections, guides for the drive chain, the two guides being so formed that the step sections will travel in a relatively longer path than the drive chain at the point where the direction of movement of the step section is changed, so as to keep the several step sections in contact at this point, substantially as described.

5. The combination in a moving stairway, of step sections, links connecting the sections, a drive chain having portions engaging said sections, guides for the step sections and guides for the drive chain, the guides for the step sections being at an angle at the point where the change of direction of movement occurs, and the guides for the chain being on a curve at this point, substantially as described.

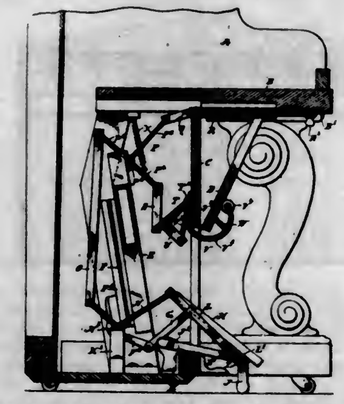
[Claims 6 to 30 not printed in the Gazette.]

899,934. WHEEL. GEORGE WOLKE, Jacksonville, Ill. Filed Feb. 17, 1908. Serial No. 416,401.



A vehicle wheel comprising a hub and a felly, a plurality of flat springs spokes carried by the hub, a plurality of pairs of clamping plates secured to the felly and projecting inwardly therefrom, opposing flanges on the clamping plates adapted to form a channel-way, and flat springs secured in the channel-ways formed by the clamping plates and having pivotal connection with the flat spring spokes adjacent the next preceding clamping plate.

899,935. FOLDING BELLOWS-PEDAL. CHARLES S. WAIGHT, Grand Haven, Mich. Filed Mar. 7, 1908. Serial No. 419,679.



1. An automatic player piano, provided with a casing having its front below the keyboard provided with a door hinged at its upper end, folding bellows pedals, and a mechanism for swinging the said door into an open or closed position, and for moving the said bellows pedals into an extended active position or into a folded inactive position, the said mechanism including a lever having members connected respectively with the door and the bellows pedals, and a manually controlled actuating member connected with the said lever.

2. An automatic player piano, provided with a casing having a fixed front below the keyboard, a door hinged at its upper end to the lower end of the said fixed front, folding bellows pedals, a manually controlled slide, and mechanism actuated by the slide for swinging the door into an open or closed position and for moving the said bellows pedals into an extended active position within the door opening at the time the door is open, or into an inactive folded position behind the door and at the time the latter is closed.

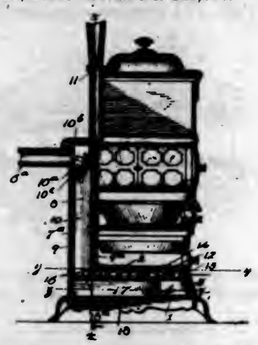
3. An automatic player piano provided with a key board, a guideway on the under side of the key board, a fixed front below the key board, a door mounted to swing on the lower end of the said fixed front, a manually-controlled slide in the said guideway, folding bellows pedals, and a mechanism controlled by the said slide and connected with the said bellows pedals and the said door, to swing the latter open and to extend the bellows pedals in the door opening and to swing the door shut and fold the bellows pedals into the space in the rear of the door.

4. An automatic player piano provided with a key board, a guideway on the under side of the key board, a fixed front below the key board, a door mounted to swing on the lower end of the said fixed front, a manually-controlled slide in the said guideway, folding bellows pedals, and a three-armed lever connected with the said slide, the said folding bellows pedals and the said door.

5. An automatic player piano provided with a key board, a guideway on the under side of the key board and extending at right angles to the front thereof, a fixed front below the key board, a door mounted to swing on the lower end of the said fixed front, a manually-controlled slide in the said guideway, folding bellows pedals having a swing frame in which the pedals are pivoted, and a three-armed lever connected with the said slide, the said pedal frame and the said door.

[Claims 6 to 16 not printed in the Gazette.]

899,936. STOVE. WILLIAM R. YENDALL, Jr., Aurora, Ill. Filed Oct. 29, 1906. Serial No. 341,067.



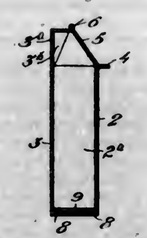
1. A heating stove provided with a base-flue, descending and ascending flues, a horizontal air circulating flue and a vertical air-circulating flue formed entirely by interior plates of the stove, said vertical air-circulating flue communicating with said horizontal air-circulating flue, said air-circulating flues covering all interior smoke-flue surfaces.

2. A heating stove provided with a base-flue, descending and ascending flues communicating with said base-flue, continuous air-circulating flues covering all interior surfaces of said flues and the interior radiating surfaces comprising the ash-pit, fire-pot and combustion chamber, a hollow flue-strip arranged in said base-flue and extending to the extreme back of the stove, said flue-strip being open to the space below the base of the stove and having communication with said air-circulating flues, the casing of the stove between the base-flue and the bottom of the ash-pit being provided with openings therein having communication with said air-circulating flues.

3. A heating stove provided with a base-flue, descending and ascending flues, a horizontal air-circulating flue arranged between the said base-flue and the ash-pit, a vertical air-circulating flue arranged between the interior plates of said descending and ascending flues and the rear plates of the ash-pit, fire-pot and combustion chamber, said vertical air-circulating flue having communication with the said horizontal air-circulating flue, a hollow flue-strip communicating with said vertical air-flue formed in said base-flue, the casing of the stove being provided with openings therein communicating with said horizontal air-flue for the purpose specified.

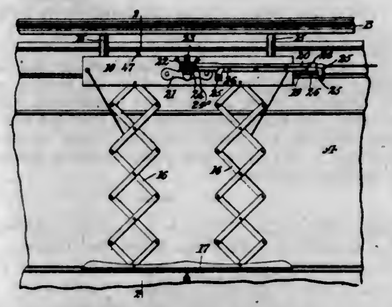
4. A heating stove provided with a wall forming the rear surface of the ash-pit, fire-pot and combustion chamber, and flue-strips forming the interior plates of a descending and an ascending smoke-flue, said flue-strips extending from their juncture at the center of the main back to the side casing where said wall meets said side casing.

809,937. DUST-RECEPTACLE. EDWIN G. ADAMS, near Plain City, Ohio. Filed June 9, 1906. Serial No. 321,052.



A device of this character described comprising a receptacle open at top and bottom and provided at its upper end around its front and sides with outwardly extending supporting flanges and at its lower end with inwardly extending front and rear flanges, a hood partially overhanging the open top of the receptacle and embodying a top wall, a back wall integral with the rear wall of the receptacle body and triangular side walls having their front edges inclining downwardly and rearwardly from the forward edge of said top wall, an inclined cover plate pivoted at its upper edge to the top of the hood and adapted to rest at its lower edge upon the front supporting flange, said cover being provided with triangular end walls to rest upon the side supporting flanges and against the inclined edges of the end walls of the hood, a handle applied to one of the end walls of the cover and extending laterally therefrom, and a sliding closure supported by the flanges at the lower end of the receptacle body for withdrawal at one side of said body.

899,938. MUSIC-LEAF TURNER. JEREMIAH W. ALBIN, Babylon, N. Y., assignor of one-fourth to David Carrs Ricketts, Babylon, N. Y. Filed Apr. 2, 1908. Serial No. 424,784.



1. A music-leaf turner, comprising a plurality of leaf-turning arms, a slide operatively connected to each of said arms and movable longitudinally to swing the same, an auxiliary slide, connections whereby it serves upon its longitudinal movement to return all of the first-mentioned slides and arms to their original position, and a single operating member for all of said slides.

2. A music-leaf turner, comprising a plurality of leaf-turning arms, slides operatively connected thereto for swinging said arms, an operating member having a finger adapted to engage with the slides to move said arms in succession in one direction, and means for locking said slides together, whereby the arms will be moved simultaneously in one direction.

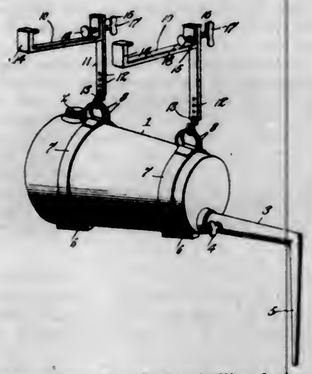
3. A music-leaf turner, comprising a leaf-turning arm having a hub, a slide in operative engagement with said hub for swinging said arm, a second slide, a pinion intermediate said slides and in engagement with both, an operating member and means whereby it is adapted to engage with said slides in succession for moving them longitudinally to swing said arm back and forth.

4. A music-leaf turner, comprising a plurality of leaf-turning arms, a slide operatively connected to each of said arms for swinging them in one direction, a reversing slide operatively connected to one of the first-mentioned slides for swinging said arms in the reverse direction, and means for locking together the first-mentioned slides while they move in one direction and permitting their independent movement in the reverse direction.

5. A music-leaf turner, comprising a plurality of leaf-turning arms, a plurality of slides operatively connected to said arms, each of said slides having a stop and a cam block, an operating member substantially parallel to said slides, and a finger carried by said operating member and adapted to engage with said stops for moving said slides longitudinally, said finger being moved transversely of said slides by means of said blocks.

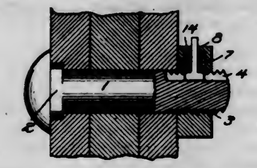
[Claims 6 to 8 not printed in the Gazette.]

899,939. HOT-BOX COOLER AND OILER. NED E. BARNES, Willis, Tex. Filed Sept. 26, 1907. Serial No. 394,770.



A railway car journal cooling and oiling device comprising a vessel to contain a cooling liquid and having a discharge spout comprising a portion disposed parallel with the axis of such vessel, and projecting from one end thereof and a vertically downwardly extending portion, such spout having a valve, brackets for engagement with a truck frame and having depending arms provided with adjusting openings and means including hooks to connect such vessel to such arms, such hooks engaging certain of such adjusting openings.

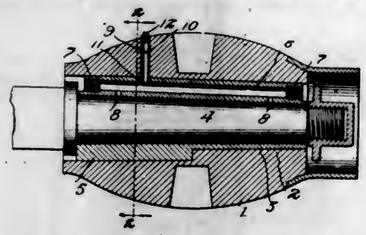
899,940. NUT-LOCK. WILLIAM F. BARRON, Jacksonburg, W. Va. Filed Jan. 28, 1908. Serial No. 413,084.



The combination with a bolt having a longitudinal groove, of a nut having a central bore and a non-circular chamber within the nut and communicating with the bore, the nut having an aperture communicating with the chamber and one of its faces, and a locking element comprising a body portion adapted to be positioned within the chamber and a projecting portion having a bifurcated end adapted to extend through the aperture beyond the face of the nut, and to be bent away from each other over the face of the nut to retain the body of the locking element out of contact with the teeth of the bolt, and springs within the chamber acting upon the body of the locking element and adapted to force the said body of the locking element into engagement with the channel of the bolt when the bifurcated fingers are straightened to their normal position, the said fingers being of a length so as to project beyond the face of the nut when the nut and bolt are locked together.

899,941. SELF-OILING AXLE-BOX. GEORGE C. BENJAMIN, Barre, Vt. Filed Dec. 19, 1907. Serial No. 407,176.

The combination with an axle hub having a central bore running longitudinally of the hub and having a passage communicating with the bore and a depression also communicating with the bore, and being provided with a vertical opening communicating with the bore, of an axle boxing having a chamber formed thereon and an enlargement upon its face directly opposite the chamber, the axle boxing adapted to be received within the bore of the hub, the chamber being positioned within the passage of the hub and the enlargement occupying the depression of the hub, closures for each end of the chamber, the lower wall of the chamber provided with openings communicating with the



hub, a cylinder within the vertical opening of the hub and communicating with the chamber, and a closure for the cylinder.

899,942. APPLIANCE FOR RELEASING BOATS. CHARLES L. BEVINS, Jamestown, R. I. Filed Nov. 22, 1907. Serial No. 403,257.



1. In a boat-releasing appliance, two opposed pivoted hook members having extended slotted arms, means engaging the slots of said arms for limiting the pivotal movement of said members, and means independent of the slots in the arms and their engaging means for swinging said members on their pivots.

2. In a boat-releasing appliance, a tongue having concave opposite edges and provided with V-shaped projections extending from the bottom thereof, and opposed pivoted hook members arranged at the opposite sides of the tongue, having notches adapted to engage with the projections of the tongue, said members conforming to the concave opposite edges of the tongue when said projections are engaged.

3. A boat having opposed hook members arranged at the opposite ends thereof, a fulcrumed operating-lever carried by the boat, and tongues movable between said members for forcing them apart and locking them together, and having means connecting them with the operating lever at the opposite sides of its fulcrum.

4. In a device of the character described, two opposed pivoted hook members, and a tongue movable between said members having means rigid therewith for locking the members together and forcing them apart.

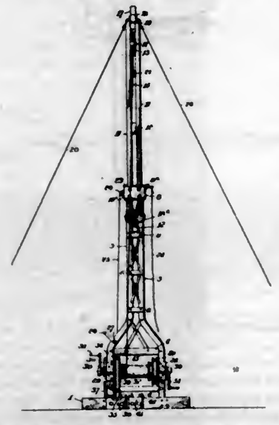
5. In a device of the character described, a tongue having V-shaped projections extending from the bottom thereof, and opposed pivoted hook members arranged at the opposite sides of the tongue having notches adapted to engage with the projections of the tongue.

[Claims 6 and 7 not printed in the Gazette.]

899,943. PULLING-MACHINE. HARMON BICKEL, Franklin, Pa. Filed June 25, 1908. Serial No. 440,294.

1. In a pulling machine, a lower mast section comprising sill-pieces, angle-bars secured thereon in upright position with their walls disposed to form a structure rectangular in cross-section, and means as plates connecting the angle bars; together with an extensible mast section slidable between the angle-bars, and means for supporting the extensible mast section in raised position.

2. In a pulling machine, a lower mast section comprising sill-pieces, angle-bars secured thereon in upright position and having their walls disposed to form a structure rectangular in cross-section, and plates connecting the angle-bars; together with an extensible mast section composed of channel-bars connected together and adapted to slide within the lower mast section, and means for supporting the extensible mast section in raised position.



3. In a pulling machine, a lower mast section comprising sill-pieces and connected angle-bars secured thereon in upright position with their walls disposed to form a structure rectangular in cross-section, an extensible mast section slidable within the lower mast section and composed of channel-bars connected together with their edge flanges projecting outwardly, and means for supporting the extensible mast in raised position.

4. In a pulling machine, a lower mast section comprising angle-beams forming sill-pieces, angle-bars secured in upright position upon the angle-beams and having their walls disposed to form a structure rectangular in cross-section, plates connecting the angle-bars together, an extensible mast section slidable within the lower mast section and composed of channel-bars connected together with their edge flanges projecting outwardly, and means for supporting the extensible mast section in raised position.

5. In a pulling machine, a lower mast section comprising angle-beams forming sill-pieces, angle-bars secured thereon in upright position with their walls disposed to form a structure rectangular in cross-section, said angle-bars being spread apart at their lower ends to form a frame wider than the body of the mast, an extensible mast section slidable in the upper part of the lower mast section, a sheave in the upper part of the extensible mast section, and a drum mounted in the lower part of the lower mast section, substantially as shown and for the purpose set forth.

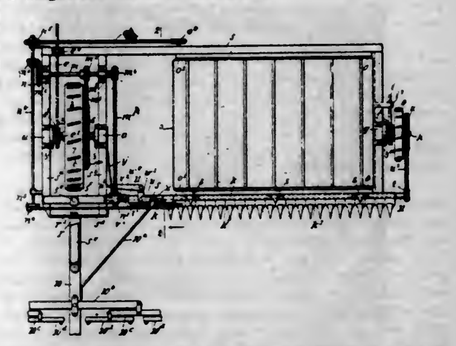
[Claims 6 to 12 not printed in the Gazette.]

899,944. HARVESTER. CHARLES F. BLAKESLEE, Rapatee, Ill. Filed Nov. 12, 1907. Serial No. 401,796.

1. In a harvester, a frame, a traction wheel at one end of the frame, a ground wheel at the other end of the frame, mechanism including a clutch for operating the ground wheel from the traction wheel, a tongue pivoted to the frame to swing laterally, a clutch operating means, and means connecting the tongue with the clutch operating means, said means being connected with the tongue in front of its pivotal connection with the frame.

2. In a harvester, a frame, a traction wheel at one end of the frame, a ground wheel at the other end of the frame, mechanism including a clutch for operating the ground wheel from the traction wheel, a lever mechanism for operating the clutch, a tongue pivoted to swing laterally, and a connection between the tongue and the lever mechanism.

3. In a harvester, a frame, a traction wheel at one end of the frame, a ground wheel at the other end of the frame, mechanism including a clutch for operating the ground wheel from the traction wheel, a spring arm engaging one member of the clutch and normally holding the members of the clutch in engagement, a lever mechanism connected with the spring arm, a pivoted tongue, and a connection between the tongue and the lever mechanism.

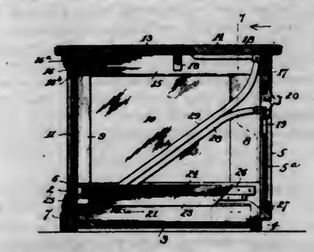


4. In a harvester, a frame, a traction wheel at one end of the frame, a ground wheel at the other end of the frame, mechanism including a clutch for operating the ground wheel from the traction wheel, a spring arm engaging one member of the clutch and normally holding the members of the clutch in engagement, a pivoted elbow lever, a link pivoted to the short member of the elbow lever and engaging the spring arm, a pivoted tongue, and a bar having one end secured to the tongue and its other end pivoted to the long member of the elbow lever.

5. The combination with an elongated frame, a traction wheel rotatable on the frame near one end thereof, a ground wheel rotatable at the opposite end of said frame, and a rotatably supported shaft extending along the front side of the frame between the planes of said wheels, of clutching means actuated by the rotation of the traction wheel adapted for transmitting rotary motion to the shaft when the traction wheel is moved forward, a swiveled tongue, and clutch releasing means operatively connected with the tongue, whereby the motion of the shaft will be arrested when the tongue moves laterally in direction of the ground wheel.

[Claims 6 and 7 not printed in the Gazette.]

899,945. CHEESE CABINET. CHARLES C. BROWN, Chambersburg, Pa. Filed Feb. 27, 1907. Serial No. 359,638.



1. In a knockdown cheese-cabinet, the combination, of a bottom section having post sockets at the corners thereof and open-end recesses at the forward end of said bottom section, corner posts removably engaging the sockets and having grooves at their edges, side and end panels removably engaging the grooves in the corner-posts, a top section having sockets to receive the corner posts, a door for the front of the cabinet, a sill-piece hinged to the door and at its ends adapted to removably engage the open-end recesses in the bottom section, and screws connecting the top and bottom sections to the front corner-posts, the lower screws passing into the sill-piece, substantially as shown and for the purpose set forth.

2. In a knockdown cheese cabinet, the combination, of a bottom section having post-sockets at its corners and open-end recesses at the front end thereof, corner-posts tenoned to removably engage the sockets and having grooves at their edges, side and end panels removably engaging the grooves in the corner-posts, a top section having sockets to receive the upper tenoned ends of the corner-posts, a door for the front of the cabinet, a sill-piece hinged to the door and at its ends adapted to removably engage the open-end recesses in the bottom section, and means for securing the front posts to the top and bottom sections and to the sill-piece; together with a table or supporting board slidably mounted on the bottom of the cabinet, and rods connecting said supporting-board to the hinged door, substantially as shown and described.

3. In a knockdown cheese cabinet, the combination, of a bottom section having post sockets at its corners and open-end recesses at the front end thereof, corner-posts tenoned to removably engage the sockets and having grooves at their edges, side and end panels removably engaging the grooves in the corner-posts, a top comprising a stationary section and a swinging section hinged thereto, the stationary section having post-sockets to receive the upper tenoned ends of the corner-posts, a door for the front of the cabinet, a sill-piece hinged to the door and at its ends adapted to removably engage the open-end recesses in the bottom section, and means for securing the front posts to the top and bottom sections and to the sill-piece; together with a table or supporting-board slidably mounted on the bottom of the cabinet, and rods connecting said board to the swinging door and hinged top section.

4. In a knockdown cheese-cabinet, the combination, of a bottom section comprising a bottom board, sides and an end, the side and end pieces being rabbeted at their ends and having molding strips which overlie the rabbets and form sockets, a top comprising side and end pieces rabbeted at their ends and having molding strips overlying the rabbets to provide sockets, corner-posts the ends of which are tenoned to removably engage the sockets in the top and bottom sections, panels located between the corner-posts and removably engaging the same, and a door hinged to the front of the cabinet, substantially as shown and described.

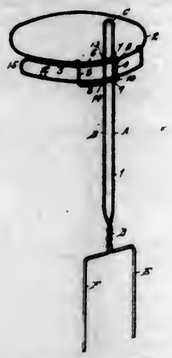
5. In a knockdown cheese-cabinet, the combination, of a bottom section comprising a bottom board, sides and a rear end, the side and end pieces being rabbeted at their ends and having molding strips which overlie the rabbets to form sockets and the side pieces provided with open-end recesses at their forward ends, a top comprising side and end pieces rabbeted at their ends and having molding strips overlying the rabbets to provide sockets, corner-posts the ends of which are tenoned to engage the sockets in the top and bottom sections, said posts being grooved at the edges, and panels removably engaging the grooves in the corner-posts; together with a door for the front of the cabinet, a sill-piece hinged to the door and adapted to engage the aforesaid open-end recesses in the bottom-section, and means for securing the corner posts to the top and bottom sections and to the sill-piece.

[Claim 6 not printed in the Gazette.]

899,946. FLOWER-SUPPORT. GEORGE E. BROWNE, Greenfield, Mich. Filed Dec. 13, 1907. Serial No. 406,256.

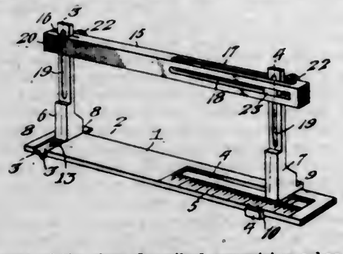
1. A plant support, having in combination a standard, and a hoop provided with parallel membered loops overlapping one another at each end and originally out of interlocking position the one with the other, that part of each loop adjacent to the standard being forced out of its normal vertical plane toward the plane of the other loop by the interposition of the standard, whereby they and thereby the hoop are resiliently locked in position therealong, substantially as described.

2. A plant support, having in combination a standard, an open hoop, each of whose ends is bent upon itself to constitute parallel branches of a terminal loop, said looped portions being adapted to overlap and to be locked in position with respect to one another and to said standard by the engagement of the same between the portions of the overlapping ends, each looped portion being forced thereby toward the other against the resilient pressure of such other, substantially as described.



3. A plant support, having in combination with a standard, a hoop, a portion of whose peripheral extent is quadrupled by the looping of each end of the wire constituting the hoop and the overlapping of said looped portions, said standard being adapted to be inserted therebetween and to thereby interlock therewith, each looped portion being bent toward the other against the opposing resilient pressure thereof, substantially as described.

899,947. HINGE-SEAT GAGE. HENRY C. BUNTING, Dunbar, Pa. Filed July 20, 1907. Serial No. 384,702.

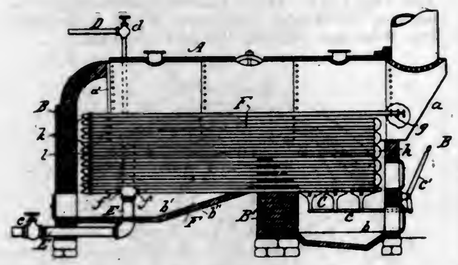


1. A gage of the class described comprising a base plate having a longitudinally-extending slot at one end and a transversely-extending slot at the opposite end, a pair of arms projecting perpendicularly from the top of the plate and each provided with a longitudinally-extending slot, clamping means for the arms and including screws passing through the slots of the base plate for transverse adjustment of one arm and transverse and longitudinal adjustment of the other arm, a gage bar slotted at its ends for receiving the slotted extremities of the arms, and clamping devices including screws passing through the slots of the gage bar and arms for adjustably securing the gage bar in position.

2. A gage of the type described comprising a base plate, a pair of gage arms projecting perpendicularly from the plate and provided at their inner ends with cross heads extended transversely of the plate, said arms being adjustable in a direction transversely of the plate for projecting the cross heads beyond one edge of the latter, and one of the arms being movable longitudinally of the plate toward and from the other, means for fixing the arms in adjusted position, a gage bar adjustably mounted on the arms for movement toward and from the base plate, and means for fixing the bar in adjusted positions.

3. A gage of the class described comprising a base plate, an arm secured thereto for lateral adjustment, a second arm, means for securing the second arm to the base plate and providing for adjustment of the arm both longitudinally of and transversely to the base plate, a gage bar, means for connecting the bar with the first-mentioned arm for adjustment toward or away from the base plate, and means connecting the bar with the second arm to permit of relative adjustment.

899,948. WATER-TUBE-CIRCULATING STEAM-BOILER. PERCY W. BURKE, Chicago, Ill. Filed July 6, 1908. Serial No. 442,074.



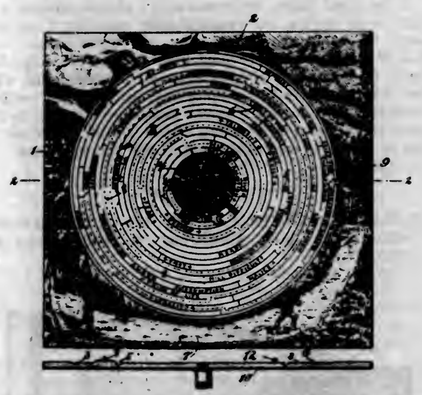
1. The combination with a fire-tube steam-boiler, of a blow-off pipe connecting with the bottom at the rear end of the same and extending down through the smoke chamber back of the bridge wall and having a valve, a flat horizontal coil or serpentine at the grate level and extending approximately the width and length of the fire-box and smoke chamber and having connection by two pipes with said blow-off pipe for feeding water to the coils, a vertical coil or serpentine lining the wall on each side of the fire-box and smoke chamber and connecting with said flat coil, and, on opposite sides, with one end of the fire-tube boiler, and a shaking grate having the bars thereof placed between the water-tubes of the horizontal coil, substantially as described.

2. The combination with a furnace having a bridge wall, a fire-box in front thereof and a smoke chamber to the rear end of the furnace, of a fire-tube steam boiler set in the top of the furnace, a blow-off pipe connecting with the bottom at the rear end of the boiler and extending down through the smoke chamber, a flat horizontal coil at or near the grate level, extending through the area of the fire-box and smoke chamber and connecting by two pipes with said blow-off pipe for receiving feed water therefrom, a vertical coil or serpentine covering each side wall to the fire line and connecting with the front end of the tubular boiler below the water line, the pipes of said coil or serpentine being connected in pairs at one end by return-bends and in pairs at the opposite end by union tee coupling devices, whereby any pair may be removed and replaced readily, for preparing the coil, the construction being such that the fire and hot products are boxed in on four sides by means of water circulating devices for economizing heat, substantially as described.

3. A water circulating and heat economizing boiler composed of water circulating coils on the bottom and opposite sides and a tubular boiler at the top of the furnace for boxing in the fire and products on all sides and protecting the brick walls of the furnace, in combination with means for feeding water directly to the tubular boiler, a blow-off pipe connecting with, and extending down from, the bottom thereof, a connection from the bottom coil to said pipe and connections for discharging water from the side coils into the tubular boiler, substantially as described.

899,949. PUZZLE. COLIN C. BURR, Jersey City, N. J. Filed May 23, 1906. Serial No. 318,368.

1. In combination with a tiltable base having a starting point thereon for a ball, a pathway leading from said starting point, a series of circularly arranged channels or runways having designations thereon and having a passage leading from the pathway into the outer of said channels or runways, depressions upon the base in the path of the ball upon the runways, and a handle attached to the base for tilting the same, substantially as specified.



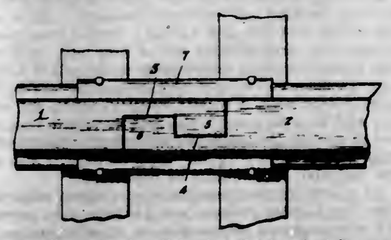
2. In combination with a tiltable base having a starting point thereon for a ball, a pathway leading from said starting point, a series of circularly arranged channels or runways having designations thereon and having a passage leading from the pathway into the outer of said channels or runways, depressions and protuberances upon the base in the path of the ball upon the runways, and a handle attached to the base for tilting the same, substantially as specified.

899,950. IGNITER. ELWIN E. BUTTLES, Blackcreek, Wis. Filed Jan. 8, 1908. Serial No. 409,881.



An igniter of the class described comprising a body having a roughened surface and a bow pin secured to said body, one of the bars of the pin being secured approximately centrally of the under surface of the body, the second bar of the pin being movable in a plane approximately parallel with the plane of the body the edge portions of the body being bent to form a bead, the edge of the bead projecting beyond the outer surface of the bow pin.

899,951. RAIL-JOINT. JOHN CAPUTO, Frostburg, Pa., assignor of one-half to Ralph Cardone, Frostburg, Pa. Filed Jan. 28, 1908. Serial No. 412,959.

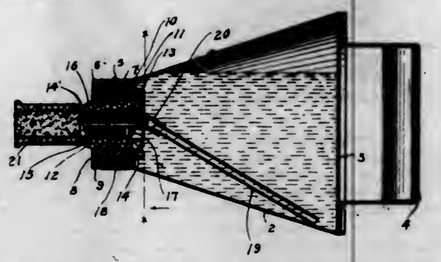


1. A railway track rail having the tread at its opposite ends extended beyond the web and base thereof, the extension at one end being longer than that of the other and provided with a laterally extending recess arranged therein beyond the terminal of its web and base, and the tread

at the other end of the rail having a similar recess formed in the side opposite to that in which the recess is formed at the other end of the rail.

2. In a rail joint, the combination of two meeting rail ends, each having the tread thereof extended longitudinally, the tread extension of one rail being longer than that of the other and provided with a recess extending laterally from one side thereof adjacent its connection with the body of the rail, the other rail end provided with a tread extension having a recess extending laterally in the tread thereof and terminating at the base of its extension and of a size to receive the end of the tread extension of the other end.

899,952. FIRE-EXTINGUISHER. HENRY L. CARPENTER, Minneapolis, Minn. Filed June 25, 1906. Serial No. 323,282.



1. As a new article of manufacture, a receptacle having a neck provided with a weakened area, means closing said neck above and below said area, a tube extending through said inner closing means, a second tube within said receptacle and a flexible joint connecting said tubes and permitting said last named tube to lie upon the wall of said receptacle with its upper open end submerged in the contents thereof and means at the inner end of said first named tube for locking it and said inner closing means in said neck, substantially as described.

2. As a new article of manufacture, a receptacle having a neck provided with a weakened area, a stopper closing the inner end of said neck below said area and a spider device provided at the inner end of said stopper for locking it in said neck, and means for closing said neck between its outer end and said area, substantially as described.

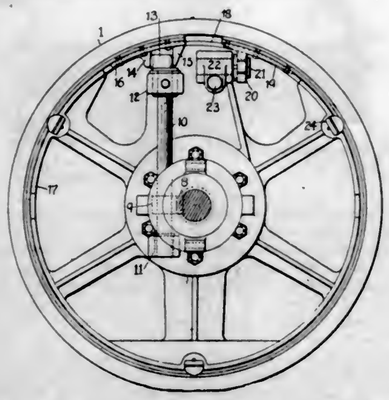
3. As a new article of manufacture a bottle having a glass neck adapted to be broken off between the end of the neck and shoulder of the bottle, means such as molten glass adapted to be filled into the outer end of the neck to close the same, and a stopper device arranged within said neck between the said plastic material and the interior of the bottle and adapted to prevent said molten glass from flowing into the bottle or bits of glass from entering therein when the neck is broken off, substantially as described.

4. As a new article of manufacture, a vessel adapted to contain liquid under pressure and having an open upper end, a bushing fitting within said open end, a plug fitting within said bushing and interiorly threaded, a glass neck fitting within said plug and having a flanged inner end to bear upon the corresponding end of said plug, said neck having a weakened area intermediate to its ends, a stopper closing the inner end of said neck, means for locking said stopper in said neck, a plastic material filling the outer end of said neck between it and said weakened area, and a tube projecting into said receptacle and communicating through said stopper with the space between it and said plastic material, substantially as described.

5. As a new article of manufacture, a vessel adapted to contain liquid under pressure and having a neck provided with a weakened area intermediate to its ends, and an annular recess near its inner end, a stopper fitting within the inner end of said neck, a tube extending through said stopper and having a flanged outer end, means mounted on the inner end of said tube and projecting into said recess to lock said stopper and tube against accidental discharge, a second tube having a flexible connection with the inner end of said first named tube, and a plastic material arranged to fill said neck between said weakened area and its outer end and to harden or set and prevent access to said stopper, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

899,953. CLUTCH MECHANISM FOR AUTOMOBILES AND THE LIKE. LEE S. CHADWICK, Philadelphia, Pa., assignor to Chadwick Engineering Works, Philadelphia, Pa. Filed Apr. 21, 1908. Serial No. 428,352.



1. A clutch comprising a main clutch member, a split clutch band, means for operating said band, and means independent of the operating means for connecting the end of the band to the main clutch member and for adjusting it circumferentially thereon, said band being removable and replaceable in respect to the main clutch member and the adjusting means, which latter maintains its adjusted position in readiness to receive the band, when replaced, under the same adjustment as before its removal.

2. A clutch comprising a main clutch member, a clutch band, operating means therefor, and adjusting means independent of the operating means to adjust the band circumferentially, said band being removable from said operating means and adjusting means by an axial movement, said adjusting means connecting the end of the clutch band with the main clutch member, substantially as described.

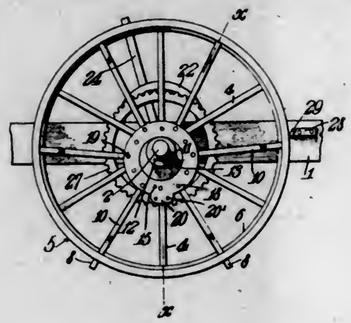
3. In combination, a main clutch member, a split clutch band, operating means, having a slip joint connection with one end of said band, an adjusting screw forming an adjustable connection between the other end of said split band and the main clutch member, and serving to adjust the band circumferentially, and a slip joint connection between said screw and the band whereby said band is freely removable from both its operating and adjusting means and without disturbing the adjustment of the screw, substantially as described.

4. In combination with a main clutch member, a split band, a boss on the main member, a screw or bolt adjustable in the boss, and a hook shaped slip joint connection between the band and said screw bolt to permit the removal of the band, said screw bolt serving to adjust the split band to spread it or contract it circumferentially, substantially as described.

5. In combination with a main clutch member, a split clutch band, an adjustable screw or bolt connecting one end of the band with said main clutch member to adjust the band circumferentially, and a slip joint connection between said band and screw bolt to permit the band to be removed axially of the clutch and be restored without changing the adjustment of said screw bolt, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

899,954. TRACTION-WHEEL. HENRY C. CLOYD, Union City, Ind. Filed Jan. 8, 1908. Serial No. 409,839.



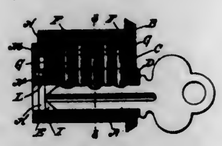
1. A traction wheel having matched slots through its rim on opposite sides of the center line thereof, and radially-movable tractors having bifurcated heads, the legs of which are disposed laterally with relation to the wheel rim and are movable through the slots in said rim.

2. A traction wheel provided with a rim having an inwardly-projecting annular rib formed in one piece with the rim, said rim having matched slots extending through it in annular series, one on each side of the rib, tractors having bifurcated heads arranged laterally with reference to the wheel rim and adapted to move through the slots in said rim, and means for causing the progressive projection and retraction of the tractors as the wheel revolves.

3. A traction wheel provided with a rim, spokes and hub in fixed relation one to the other, tractors movable progressively through the rim and an eccentrically mounted carrier for the inner ends of the tractors, and means for holding the eccentric mounting of the tractors to a spoke of the traction wheel for rotation therewith but permitting longitudinal movement of the tractor holder with relation to said spoke.

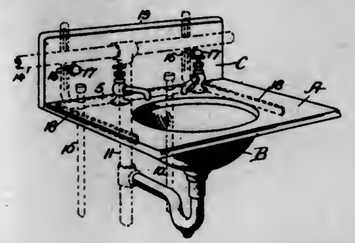
4. A traction wheel provided with a rim, spokes and hub in fixed relation one to the other, tractors movable progressively through the rim and an eccentrically mounted carrier for the inner ends of the tractors, and means for holding the eccentric mounting of the tractors to a spoke of the traction wheel for rotation therewith but permitting longitudinal movement of the tractor holder with relation to said spoke comprising rollers on each side of the spoke and having their journals on and projecting from the tractor carrier.

899,955. LOCK. HERBERT G. COLLINS, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Apr. 11, 1907. Serial No. 367,480.



In a lock the combination with a casing of a rotary key barrel or hub, a sleeve loosely mounted in said casing to rotate therein, and having an eccentric bore for said barrel or hub, a bolt operating dog having a direct transverse sliding connection with the barrel or hub, and an independent rotary connection with the sleeve and tumbler mechanism for locking said sleeve and barrel or hub to rotate together or permitting said barrel or hub to rotate independently, substantially as described.

899,956. SUPPORT FOR LAVATORIES. ALFRED COONS and GEORGE COONS, New York, N. Y. Filed May 9, 1906. Serial No. 315,908.



1. In a lavatory support, the combination with the horizontal and vertical slabs and a pipe of a lavatory, of a member adapted to be secured to the pipe and provided with an arm adapted to support the horizontal slab, another arm secured to said member, and means adapted to secure the vertical slab to said other arm.

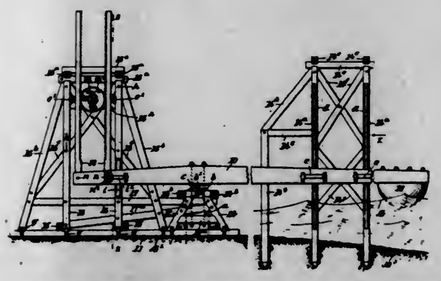
2. In a lavatory support, the combination with the horizontal and vertical slabs and a pipe of a lavatory, of a member adapted to be secured to the pipe and provided with an arm adapted to support the horizontal slab, another arm secured to said member and provided with a slot, and means passing through the slot and the vertical slab to secure the slab to the arm.

3. In a lavatory support, the combination with a slab and a pipe of a lavatory, of a member provided with an arm adapted to support the slab, a clamping strip, and means engaging the member and clamping strip, said clamping strip and means being adapted to secure the member to the pipe.

4. In a lavatory support, the combination with the horizontal and vertical slabs and a pipe of a lavatory, of a member provided with an arm adapted to support the horizontal slab, a clamping strip, means engaging the clamping strip, said clamping strip and means being adapted to secure the member to the pipe, another arm secured to said member, and means adapted to secure the vertical slab to said other arm.

5. In a lavatory support, the combination with the horizontal and vertical slabs and a pipe of a lavatory, means secured to the pipe to support the horizontal slab, and means adapted to secure the vertical slab to said first named means.

899,957. WAVE-MOTOR. RAS CRAIG, Los Angeles, Cal. Filed Apr. 29, 1908. Serial No. 429,827.



1. A wave motor, comprising a guide frame, provided with guides, a tower frame provided with guides, a fulcrum supporting frame intermediate the guide frame and the tower frame and connected with the tower frame, a power lever hinged on the fulcrum supporting frame, and loosely engaging the guides on the guide frame, and the guides on the tower frame, a float on the outer end of the power lever, a shaft journaled on the tower frame, and a

connection between the inner end of the power lever and the shaft for rotating the shaft in one direction when the lever is oscillated.

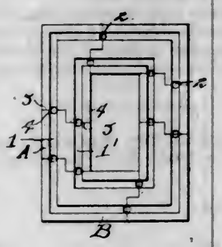
2. A wave motor comprising a guide frame provided with guides, a tower frame provided with guides, a fulcrum supporting frame intermediate the guide frame and the tower frame, a power lever hinged on the fulcrum supporting frame, and loosely engaging the guides on the guide frame, and the guides on the tower frame, a float on the outer end of the power lever, a shaft journaled on the tower frame, and a connection between the inner end of the power lever and the shaft for rotating the shaft in one direction when the lever is oscillated.

3. A wave motor, embodying a guide frame erected on the shore of a body of water, a fulcrum supporting frame near the guide frame, a tower frame connected with the fulcrum supporting frame, an elongated power lever hinged on the fulcrum supporting frame and loosely engaging the guides on the guide frame and also on the tower frame, a float on the outer end of the power lever, a rotatable supported shaft on the tower frame, means mounted on the inner end of the lever, and co-acting means on the tower frame and shaft, adapted for the rotation of the shaft in accord with the oscillations of the power lever.

4. In a wave motor, an elongated lever, a support for the lever near one end thereof, a hinged connection between the lever and said support, a hemispherical float on the longer end of the lever, lateral guides for the lever, a rotatably supported shaft, and mechanism connecting the shorter end of the lever with the shaft which converts the oscillations of the lever into rotary motion of the shaft.

5. In a wave motor, a lever, a support for the lever near one end thereof, a hinged connection between the lever and the support, a float on the longer end of the lever, lateral guides for the lever, a rotatably supported shaft, and mechanism connecting the shorter end of the lever with the shaft which converts the oscillations of the lever into rotary motion of the shaft.

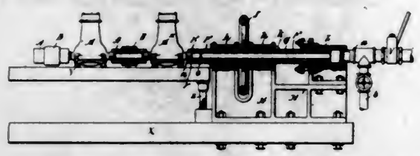
899,958. BUILDING BLOCK OR BRICK. WILLIAM H. DANIELS, Chicago, Ill. Filed July 2, 1907. Serial No. 381,825.



1. A building block having the shape substantially of a rectangular parallelopipedon and having the vertical portions which are intended to abut against the vertical portions of other blocks formed with vertical projections of the same thickness as the block but of less width than the same, said block being provided with a pair of endless grooves, each of said grooves extending in a vertical direction over said vertical portions and parallel to the edges of the block on its upper and lower faces, the two transverse faces of said vertical portions being each provided with one of said grooves.

2. A corner block having the shape substantially of a rectangular parallelopipedon and having one end provided with a vertical projection of the same thickness as said block but of less width than the same, whereby a rabbeted end is formed, said block having the end portion of one side at the opposite end of the block provided with a vertical projection of the same thickness as the block but of less width than the same, the said block being provided with a pair of endless grooves, each of said grooves extending in a vertical direction over said end portion and said rabbeted end and parallel to the edges of the block on its upper and lower faces, the two transverse faces of said end portion and said rabbeted end being each provided with one of said grooves.

899,959. APPARATUS FOR TESTING FLUID-METERS. THOMAS B. DORNIN, Norfolk, Va., assignor of one-half to Jacob M. Umstadter, Norfolk, Va. Filed Mar. 5, 1908. Serial No. 419,299.



1. An apparatus for testing meters, comprising a series of longitudinally slidable sleeves, means for holding the same in coaxial alinement and means for clamping the inlet and outlet orifices of the meters against the coaxially alined sleeves, said means consisting of a stationary abutment at one end and a longitudinally adjustable sleeve at the other end arranged coaxially to the other sleeves and having external screw threads and an interiorly screw threaded nut engaging the threads of the sleeve and means for restraining the nut against longitudinal movement with the threaded sleeve.

2. An apparatus for testing meters, comprising a series of longitudinally slidable sleeves, means for holding the same in coaxial alinement and means for clamping the inlet and outlet orifices of the meters against the coaxially alined sleeves, said means consisting of a stationary abutment bearing at one end, an externally screw threaded and longitudinally adjustable sleeve at the other end, an interiorly screw threaded hand wheel nut and a frame with restraining collars on opposite sides of said hand-wheel nut.

3. An apparatus for testing meters, comprising a series of longitudinally slidable sleeves, a shaft, a series of laterally extending arms on said shaft for holding said sleeves in coaxial alinement, means for clamping the inlet and outlet connections of the meters against the coaxially alined sleeves, said means consisting of a stationary abutting bearing at one end, and a longitudinally adjustable sleeve at the other end having a passageway for the water through it, said sleeve having external screw threads, an interiorly screw threaded nut arranged to engage the threads on said sleeve, said nut being provided with a hand wheel for operating the same, and a collar on each side of said nut for supporting said adjustable sleeve.

899,960. APPARATUS FOR TESTING FLUID-METERS. THOMAS B. DORNIN, Norfolk, Va., assignor of one-half to Jacob M. Umstadter, Norfolk, Va. Filed May 15, 1908. Serial No. 432,974.



1. An apparatus for testing meters, comprising a series of longitudinally slidable sleeves, means for independently holding the same in coaxial alinement with spaces for the meters between, and means for clamping the inlet and outlet connections of a plurality of meters against the coaxially alined sleeves in alternating relation with the same.

2. An apparatus for testing meters, comprising a series of longitudinally slidable sleeves, means for holding the same in coaxial alinement and means for clamping the inlet and outlet connections of the meters against the coaxially alined sleeves, said means consisting of a stationary abutting bearing at one end and a longitudinally adjustable bearing at the other end having a passageway for the water through it and means for holding it to its longitudinal adjustment.

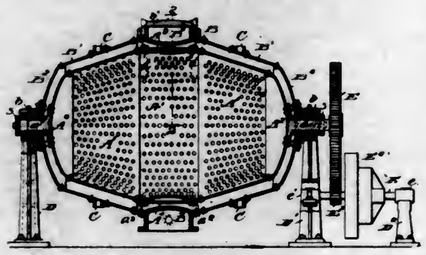
3. An apparatus for testing meters, comprising a series of longitudinally slidable sleeves, means for holding the same in coaxial alinement and means for clamping the inlet and outlet connections of the meters against the coaxially alined sleeves, said means consisting of a stationary abutment at one end and a longitudinally adjustable bearing at the other end arranged coaxially to the other sleeves and having a through passageway, and a rack and pinion for moving said adjustable bearing.

4. An apparatus for testing meters, comprising a series of longitudinally slidable sleeves, means for holding the same in coaxial alinement and means for clamping the inlet and outlet connections of the meters against the coaxially alined sleeves, said means consisting of a stationary abutment-bearing at one end, formed as a shouldered sleeve, a shouldered sleeve at the other end and means for bringing them together.

5. An apparatus for testing meters, comprising a rod having right angularly projecting arms bearing openings in their ends containing coaxially arranged and longitudinally slidable sleeves and means for clamping the inlet and outlet connections of the meters against the coaxially arranged sleeves.

[Claims 6 and 7 not printed in the Gazette.]

899,961. DIGESTER. CHARLES EDGERTON, Philadelphia, Pa. Filed Jan. 9, 1908. Serial No. 409,922.



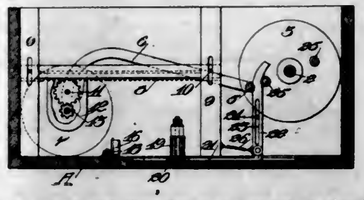
1. A digester comprising an outer stationary shell and an inner perforated and revolving receiver, both being formed with a cylindrical middle section and tapered end sections decreasing in diameter from the middle and having one or more doors midway between the ends, and the outer container being formed at opposite points with inlet and outlet openings in alinement with the doors of the inner rotary receiver and elevated end supports for both vessels, the outlet of the outer container having a stationary pendent coupling adapted to make a sealed connection.

2. A digester comprising an outer containing shell and an inner receiver, both being formed alike with a relatively narrow middle cylindrical portion having inlet and outlet openings, opposite frusto-conical sections and dished end sections, the end sections being provided on their outer sides with coaxial trunnions elevated end supports for the same and means for rotating the inner container.

3. A digester comprising an outer container of double frusto-conical shape with diametrical openings in the middle and an inner receiver constructed of double frusto-conical shape, the middle portion of which is formed with one or more outlets provided with curved and transverse guideways and curved sliding doors for the same.

4. A digester comprising an outer shell having a middle cylindrical portion and double frusto-conical ends, an inner receiver also formed with a middle cylindrical portion and double frusto-conical ends, both being coaxially mounted on trunnions and provided with registering doors arranged midway between the ends and elevated end supports for both vessels.

899,962. BREAD-SLICER. AXEL ENGLUND, Mountain View, Cal. Filed Apr. 29, 1907. Serial No. 370,823.



1. In a bread and like slicing apparatus, a simultaneously revoluble and reciprocating cutting disk, a support for the bread in the path of travel of the disk, said support including an elastic back, a toothed roller engaging the opposite side of the loaf, and means for intermittently revolving said roller.

2. In an apparatus for slicing bread and the like, a revoluble cutting disk, a toothed rack bar fixed parallel with the line of travel of the disk, a pinion fixed to the disk shaft, a slidable support for the disk and pinion, a guide for said support, a gear wheel mounted upon said support between the pinion and rack bar and engaging the teeth of both, and engaging the teeth of the rack bar from below whereby the disk is guided in a horizontal direction, means for reciprocating the slidable support, and a loaf-supporting device located in the path of reciprocation of the disk.

3. In an apparatus for slicing bread and the like, a toothed rack bar, a frame slidable parallel with the rack bar, a guide in which said frame is movable, a cutting disk journaled in said frame having a pinion upon its shaft, a similarly journaled gear-wheel below the rack-bar, the teeth of which engage those of the pinion and the rack-bar, a revoluble crank disk, a connecting rod or pitman between the slidable frame and the crank disk, whereby the disk is simultaneously reciprocated and rotated, and a support whereby the loaf is held in the path of travel of the cutter.

4. In an apparatus of the character described, a circular cutting disk, means for simultaneously reciprocating and revolving said disk, an elastic support against which the loaf is held in the path of travel of the cutter, a locking device by which said support may be held at any angle with the line of travel of the cutter, a toothed feed roller engaging the opposite side of the loaf, means by which said roller is revolved to advance the loaf after each cut.

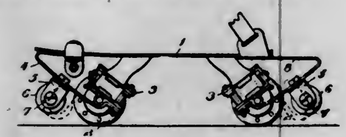
5. In an apparatus of the character described, a circular cutter, means for simultaneously reciprocating and revolving the cutter, an adjustable support against which one side of the loaf is supported, a toothed roller engaging the opposite side, a pinion fixed to the roller shaft, a rack bar engaging the pinion and mechanism acting intermittently of the movement of the cutter, whereby the feed roller is rotated and the loaf advanced.

[Claims 6 to 9 not printed in the Gazette.]

899,963. ROLLER-SKATE. THOMAS M. FERGUSON, Hattiesburg, Miss. Filed Nov. 4, 1907. Serial No. 400,627.

1. A safety device for roller skates comprising a metallic strap extending from the forward or toe portion of the skate downwardly and rearwardly to the running gear of the front wheels in such manner that said metallic strap lies obliquely or slantingly from the toe portion, a like metallic strap extending from the heel or after portion of the skate downwardly and forwardly to the running gear of the rear or after wheels in such manner that said last

mentioned metallic strap lies obliquely or slantingly from the said heel or after portion of the skate, a yoke on each of said metallic straps and a brake piece of suitable material carried in each of said yokes, each of said yokes being adjustable on its strap in such manner that each of said yokes can be moved to increase or diminish the distance between the skate wheels and the brake piece carried by the yokes, which movement or adjustment of the yokes raises or lowers the said brake piece relatively to the bottom of the wheels, substantially as described.



2. A safety device for roller skates comprising a metallic strap extending from the forward or toe portion of the skate downwardly and rearwardly to the running gear of the front wheels, a yoke on said metallic strap, brake piece carried on said yoke, said yoke being adjustable on said strap in an oblique or slanting direction from the front wheels of the skate in such manner that the distance between the front wheels and the brake piece carried in the said yoke can be increased or diminished and the said brake piece raised or lowered relatively to the bottom of the front wheels, substantially as described.

3. A safety device for roller skates comprising a metallic strap extending from the heel or after portion of the skate downwardly and forwardly to the running gear of the rear or after wheels in such manner that said strap lies obliquely or slantingly from the said heel or after portion of the skate, a yoke carried on said strap, a brake piece of suitable material carried in said yoke, said yoke being adjustable on said strap to increase or diminish the distance between the rear wheels and the said brake piece of suitable material and raised or lowered relatively to the bottom of the rear wheel, substantially as described.

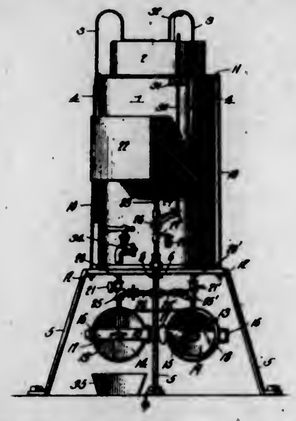
4. A safety device for roller skates comprising a metallic strap extending from the forward or toe portion of the skate downwardly and rearwardly to the running gear of the front wheels and secured thereto in such manner that said metallic strap lies obliquely or slantingly from the toe portion of the skate, a similar strap extending from the heel or after portion of the skate downwardly and rearwardly to the running gear of the rear or after wheels and secured to said running gear in such manner that said metallic strap lies obliquely or slantingly from the heel or after portion of the skate, a brake piece of suitable material carried on the oblique or slanting strap at the forward portion of the skate and a similar brake piece of suitable material carried on the oblique or slanting strap at the rear or heel portion of the skate, substantially as described.

5. A safety device for roller skates comprising a brake piece of suitable material mounted at each end of the skate and beyond the forward and after wheels thereof, and a strap or brace passing from the forward or toe portion of the skate adapted to be fastened to the knee of the skater, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

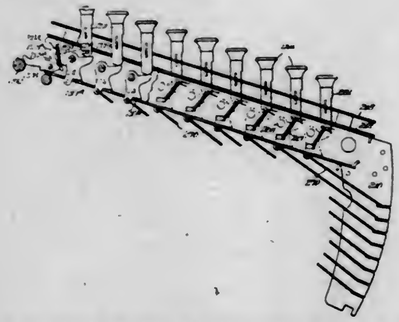
899,964. ACETYLENE-GAS GENERATOR. GUSTAVE W. FIEDLER and THEODOR BISCHOF, Bevier, Mo. Filed Feb. 28, 1908. Serial No. 418,376.

In an acetylene gas generator, the combination of a holder, a water receptacle secured thereto, generating means located beneath the said holder, a water pipe leading from said receptacle downwardly to said generating means, a rotary valve in said water pipe, a U-shaped spring to normally maintain said valve in one position, a stop arm secured to said holder, one end of said spring being secured thereto, said valve including an operating handle to which the other end of said spring is attached, a gas bell within handle whereby the valve is moved into its other position said holder, and devices between the bell and said valve



against the tension of the spring, such latter movement being limited by the aforesaid stop arm.

899,965. ADDING-MACHINE. HARVEY L. FISHER, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed June 30, 1905. Serial No. 267,811.



1. In an adding machine, the combination of a series of value keys, and means for detaining an operated key of such series in operated condition and simultaneously interposing an obstruction to the full operation of the remainder of the keys, independent movement of a key operating said detaining means to release any detained key and remove the obstruction to the operation of other keys.

2. In an adding machine, the combination of a row of value keys, and means for detaining an operated key of such row in operated condition and simultaneously interposing an obstruction to the full operation of the remaining keys of the row, independent movement of a key operating said detaining means to release any detained key and remove the obstruction to the operation of other keys of the row.

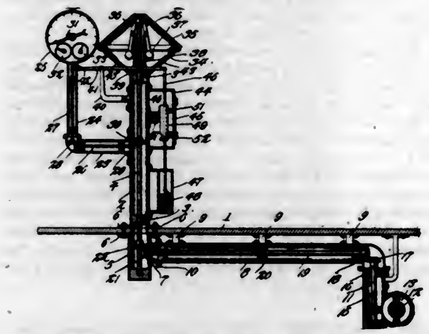
3. In an adding machine, the combination of a row of value keys representing the digits 1 to 9, and means normally operating to detain an operated key of such row and to interpose an obstruction to the full operation of the remainder of the keys, independent movement of the 9 key operating said detaining means to release any detained key and remove the obstruction to operation of other keys of the row.

4. In an adding machine, the combination with a series of value keys, of mechanism for detaining a key in operated condition and under the control of a single one only of said keys.

5. In an adding machine, the combination, with a row of value keys, of mechanism for detaining a key in operated condition and under the control of a single one only of the keys of said row of keys.

[Claims 6 to 23 not printed in the Gazette.]

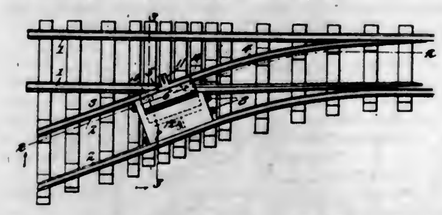
899,966. INDICATOR. NEWNAN C. FORBUS, Hartford, Ark. Filed June 30, 1908. Serial No. 441,072.



1. An indicator including a governor, a lever actuated by the governor, a speed indicator actuated by the lever, a braking pressure controlling valve, and an operating block movable with the lever and adapted to engage the valve, said block being formed with a recess to permit free movement of the valve in a certain position of the block.

2. An indicator comprising a governor shaft, means for operating said shaft from a moving part of the vehicle, a dial, mileage dials carried by the main dial, a shaft driven from the governor shaft and adapted to operate the mileage dial mechanisms, a speed indicating pointer carried by the main dial, a lever, a connection between one end of said lever and the speed indicating pointer, a governor carried by the governor shaft, a connection between said governor and the lever, a rod connected to one end of the lever, an operating block adjustably mounted on the rod and formed with a recess, and a fluid pressure brake controlling valve having a stem disposed in contact with the block, whereby in the operation of the lever said block will be elevated to permit the stem to enter the recess in the block.

899,967. SWITCH. ANDREW T. FOSTER, Fillmore, Ind., assignor of one-half to Forrest G. Hurst, Fillmore, Ind. Filed Mar. 3, 1908. Serial No. 419,015.



1. The combination with main rails, of switch rails elevated at their centers above the main rails, one of said switch rails being constructed in sections upon both sides of one of the main rails, a base plate between the switch rails, spaced ears upon the base plate, an element provided with spaced ears adapted to pivotally engage the spaced ears of the base plate, and the element being provided with a rail section adapted to fit the space between the switch rail sections.

2. The combination with main rails, of switch rails elevated above the main rails at their centers, one of the switch rails being constructed in sections upon both sides of one of the main rails, a base between the switch rails adjacent one of the main rails, offsets upon the base engaging beneath the heads and base flanges of the rails, the base being provided with pockets, a hinged element upon the base, a staple upon the base, the hinged element being provided with a rail section, a slotted tongue upon the rail section of the hinged element, and fingers upon the hinged element adapted for engaging the pockets of the base.

899,968. JOINT FOR ROOFING MATERIALS. SOLOMON H. GOLDBERG, Waukegan, Ill. Filed July 11, 1907. Serial No. 383,344.



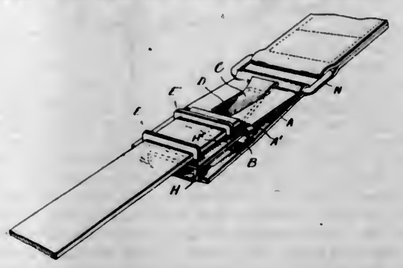
1. A fastener for roofing material comprising a pointed flat body or driving portion; an elongated flat holding portion joined to said body portion by a bend adapted to receive the strokes of a hammer; and a head, said head joined to said holding portion by a bend adapted to permit the said head to be readily mashed down into a holding position, substantially as described.

2. A fastener for roofing material comprising a flat pointed body or driving portion; an elongated flattened holding portion joined to said body portion by a bend adapted to receive the strokes of a hammer; and a square shaped head, said head joined to said holding portion by a bend adapted to permit the said head to be readily mashed down into a holding position, substantially as described.

3. A fastening, comprising a flattened point; a flattened body or driving portion; a flattened holding portion; and a square shaped head joined to the flat holding portion by a flattened bend in the metal, substantially as described.

4. A fastening made from a single piece of bent wire and comprising a flattened point; a flattened body or driving portion; a flattened inclined holding portion; and a square-shaped head having an opening therein joined to the flat holding portion by a flattened bend in the metal, substantially as described.

899,969. BUCKLE. FRANK A. GOODYKOONTZ, Sapulpa, Okla. Filed Mar. 24, 1908. Serial No. 422,919.

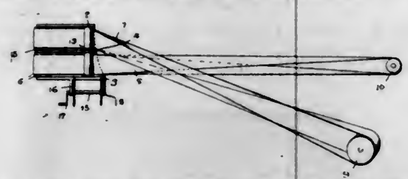


1. A buckle comprising a plate of metal bent upon itself to form two resilient jaws, loops struck up from one of said jaws, the opposite jaw having slots to receive said loops, and means for holding a strap passed through said loops against the outer face of one of the jaws, as set forth.

2. A buckle comprising a plate of metal bent upon itself to form two resilient jaws, loops struck up from one of said jaws, the opposite jaw having slots to receive said loops, an angled lever pivoted upon one of said jaws and adapted to bear against the other to move the jaws from each other, as set forth.

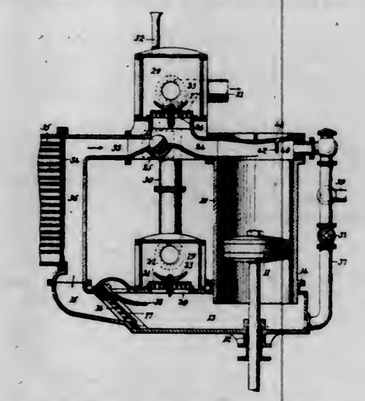
3. A buckle comprising a plate of metal bent upon itself to form two resilient jaws, loops struck up from one of said jaws, the other of said jaws having opposite said loops elongated slots therein, ears projecting from the slotted jaw, an angled lever pivoted in said ears and having a handle extending through said slot, as set forth.

899,970. BELT-GUIDE. NELSON A. GROAT, Monte Vista, Colo. Filed Mar. 17, 1908. Serial No. 421,666.



In a belt guide, the combination with a frame having plates at the upper and lower edges thereof and a similar plate midway between the first mentioned plates, said plates extending in horizontal planes; of a pair of pulleys at one end of said plates, one of said pulleys being between the middle plate and upper plate and the other between the middle plate and lower plate, guide rollers arranged in pairs at the opposite ends of said plates and having flanges at the lower ends thereof adapted to engage the lower edges of belts passing between said guide rollers.

899,971. AIR-PUMP. CHARLES A. HAGUE, New York, N. Y. Filed Mar. 28, 1908. Serial No. 423,836.



1. In combination, a condenser and a pump for creating a vacuum therein, one end of said pump being connected to the lower portion of said condenser and having an inlet and an outlet valve and serving to withdraw water from said condenser, and the opposite end of said pump being connected to the upper end of said condenser and having an inlet valve and an outlet valve and serving to withdraw air from the upper portion of the condenser, and a by-pass connecting the opposite ends of the pump, whereby upon the air suction stroke of the pump, a portion of the water in the water end of the pump is transferred to the air end of the pump to insure the complete expulsion of the air upon the return stroke.

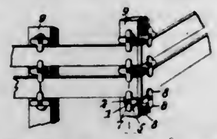
2. In combination, a vacuum chamber, a double-acting pump, one end of said pump serving to withdraw liquid from the lower end of said chamber, the other end of said pump adapted to withdraw air from the upper end of said chamber, and means for transferring a portion of the liquid withdrawn from the lower end of the chamber to the opposite end of the pump.

3. In combination, a double-acting pump, including a cylinder, a piston, separate passages communicating with the opposite ends of said cylinder, inlet and outlet valves in said passages, and a by-pass connecting the opposite ends of said cylinder and serving for the delivery of liquid from one end thereof to the opposite end thereof by the action of said piston.

4. An air pump, including a cylinder, a piston mounted therein, a passage communicating with said cylinder, a mechanically operated inlet valve controlling said passage, an automatically-operating check valve controlling the outlet from said passage, and at a higher elevation than said mechanically-operated valve and means for delivering liquid to said cylinder to completely fill said cylinder and passage to said valves, and to completely expel the air or gas upon the delivery stroke of the piston.

5. In combination, a condenser and a pump for creating a vacuum therein, said pump including a cylinder, a piston and a piston rod, one end of said cylinder being connected to the lower end of the condenser and having an inlet and an outlet valve serving to withdraw water from the condenser, and the opposite end of said pump being connected to the upper end of the condenser and having an inlet and an outlet valve serving to withdraw air from the upper portion of the condenser, the piston rod extending from the cylinder at the first mentioned end thereof whereby the water seals the piston rod, and means for introducing water into the second-mentioned end of the pump to insure the complete expulsion of air upon the air discharge stroke.

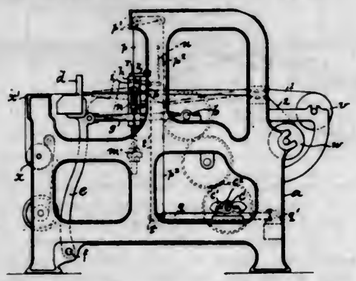
899,972. FASTENER. LOUIS F. HAMMER, Omaha, Nebr. Filed Mar. 27, 1908. Serial No. 423,567.



1. A fastener, comprising a shank having an opening therethrough, means in said opening for rotatably mounting said fastener, a flange integral with said shank, a keeper integral with said shank, and a head integral with said keeper, said head being adapted to be grasped by a wrench, said keeper being cut away at one side of said shank.

2. A fastener comprising a shank, a flange integral with the shank, a keeper integral with the shank and spaced apart from the flange, said keeper being cut away at one side of the shank, and being provided with an integral head whereby to turn the keeper, said fastener being provided with means whereby it may be secured to a support.

899,973. GAUZE-LOOM. ALECK HANNAH, Warrenpoint, N. J. Filed July 25, 1907. Serial No. 385,593.



1. In a loom, the combination with the oscillatory batten, of harness for operating one set of warp threads, needles for operating another set of warp threads, and means positioned between said needles for crossing the warp threads of one set over those of the other set.

2. In a loom, the combination with the oscillatory batten, of means for carrying one set of warp threads, movably mounted needles for carrying another set of warp threads, and means interposed between adjacent needles for crossing a warp thread of one set over a thread of another set.

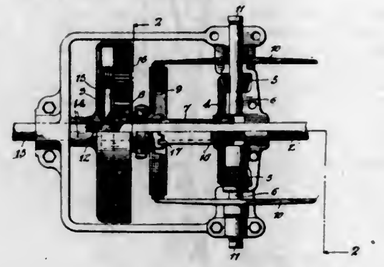
3. In a loom having the warp threads arranged in a plurality of sets, the combination of needles for carrying the warp threads of one set, and means interposed between said needles adapted alternately to cross the warp threads of one of said sets over the threads of the set carried by the needles.

4. In a loom wherein the warp threads are arranged in a plurality of sets, the combination of vertically reciprocating needles adapted to carry the warp threads of one set, and means positioned between said needles adapted to move the warp threads of another of said sets to such positions that during successive upward movements of the needles the warp threads carried thereby will be carried alternately to either side of the warp threads and said second mentioned set.

5. In a loom wherein the warp threads are arranged in a plurality of sets, the combination of a plurality of needles for carrying one set of warp threads, and substantially U-shaped guide members located between said needles adapted to cross another set of warp threads over the warp threads carried by the needles.

[Claims 6 to 22 not printed in the Gazette.]

899,974. VARIABLE-SPEED AND REVERSING MECHANISM. NOAH S. HARTER, Waukegan, Ill. Filed Dec. 2, 1907. Serial No. 404,689.

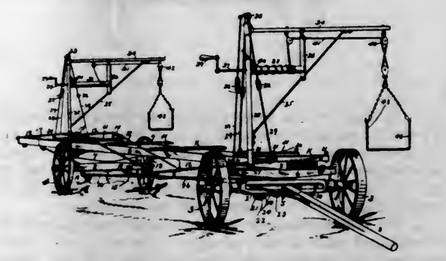


1. In a variable speed and reversing mechanism, the combination of a driving member, a driven member concentric therewith and provided with a geared portion, planetary gearing carried by said driving member and engaging said geared portion of said driven member, shafts mounted adjacent and at right angles to said driving member, friction disks mounted upon said shafts, gearing connecting said driving member and said shafts, a sleeve loosely mounted upon said driving member between said shafts and said driven member, and provided with a geared portion engaging with said planetary gearing of said driving member, and a friction wheel splined upon said sleeve in engagement with said friction disks, substantially as described.

2. In a variable speed and reversing mechanism, the combination of a driving member, a driven member concentric therewith and provided with a geared portion, a plurality of gears mounted in a circular series about, and concentric with, said driving member, and engaging said geared portion of said driven member, connections between said driving member and said circular series of gears, shafts mounted adjacent and at right angles to said driving member, friction disks mounted upon said shafts, gearing connecting said driving member and said shafts, a sleeve loosely mounted upon said driving member between said shafts and said driven member, and provided with a geared portion to engage said circular series of gears, and a friction wheel splined upon said sleeve in engagement with said friction disks, substantially as described.

3. In a variable speed and reversing mechanism, the combination of a driving member, a driven member concentric therewith and provided with a geared portion, a plurality of gears mounted in a circular series about, and concentric with, said driving member, and engaging said geared portion of said driven member, connections between said driving member and said circular series of gears, shafts mounted adjacent and at right angles to said driving member, friction disks mounted upon said shafts, gearing connecting said driving member and said shafts, a sleeve loosely mounted upon said driving member between said shafts and said driven member, and provided with a geared portion to engage said circular series of gears, and a friction wheel splined upon said sleeve in engagement with said friction disks, said friction wheel having a notched portion adapted for engagement with a notched member of said gearing connecting said driving member and said transverse shafts, substantially as described.

899,975. RUNNING-GEAR FOR LOADING APPARATUS. FRED J. HASSLER, Halltown, Ill. Filed July 30, 1907. Serial No. 386,275.



1. In a loading apparatus of the class described, a running gear including front and rear axles and bolsters pivoted thereon, a sill supported upon the bolsters and having a plurality of cross bars, a pair of truss rods connected terminally with the front and rear cross bars of the sill, a strut member spacing the truss rods from the under side of the forward portion of the sill, and yokes mounted upon one of the cross bars and spacing the truss rods from the upper side of the rearward portion of the sill.

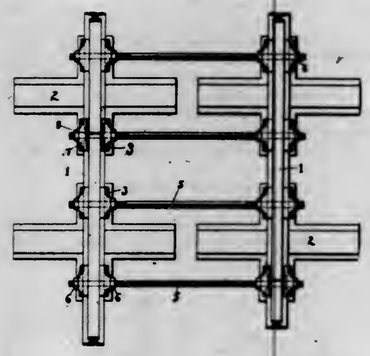
2. In a loading apparatus of the class described, a running gear including front and rear axles and bolsters supported thereon, a sill supported upon the bolsters and having a plurality of cross bars, a pair of truss rods connected terminally with the front and rear cross bars of the sill, strut members spacing the truss rods from the under side of the forward portion and from the upper side of the rearward portion of the sill and an auxiliary truss rod disposed in the vertical plane of the longitudinal center of the sill and connected terminally with the rear end of the sill and with the portion of the sill intermediate the front and rear axles, said auxiliary truss rods being spaced from the sill by the rear axle and bolster.

3. In an apparatus of the character described, the combination with front and rear axles, a sill and crossed connections extending from one axle to the other, and means carried by one of the axles comprising a shaft having levers thereon and links extending from said levers to the connections for simultaneously adjusting the connections apart or towards each other.

4. In an apparatus of the class described, a running gear including front and rear axles and bolsters pivoted thereon, a sill supported upon the bolsters, crossed connecting rods connected flexibly with one of the axles, keepers connected with the other axle, slides movable upon

said keepers and connected with the connecting rods, a suitably supported lever, links connecting said lever with the slides, and means for effecting adjustment of the lever and retention thereof at various adjustments.

899,976. RAILWAY-TIE. JOHN D. HAZLET and GEORGE W. HAIGHT, Franklin, Pa. Filed Dec. 6, 1907. Serial No. 405,344.



1. In combination, the supporting members for the rails, a pair of clamps for each rail to hold the same to the supporting members, said supporting members having notches opening upwardly, and means for holding the clamps together, said means passing through the notches in the supporting members, substantially as described.

2. In combination, the flanged supporting members for the flanged rails, a pair of clamps for each rail to hold the same to the supporting members, each of said clamps engaging a flange on the supporting member and a flange on the rail, said supporting members being notched, means for holding the clamps together, said means passing through the notches in the supporting members, and consisting of the tie rods extending from the pair of clamps at one rail to the pair of clamps at the other rail, substantially as described.

3. In combination with the tie members of substantially cross form, of I-form in cross section, clamps for holding the rail to each longitudinal arm of the cross shaped members, and tie rods extending between the rails for holding the clamps to the said longitudinal arms and to the rails, substantially as described.

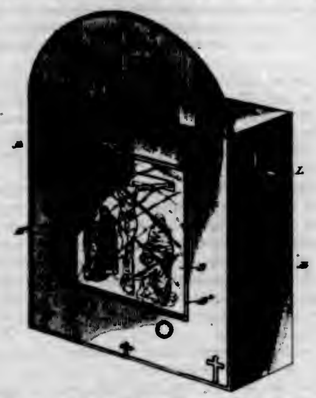
4. In combination with the tie a tie bolt, a clamp held to the tie against movement longitudinally of the rail, said clamp having a projecting portion engaging a shoulder on the rail, substantially as described.

5. In combination with the tie having a notch therein, a clamp having a portion to act as a stop against longitudinal movement of the rail, and a holding bolt engaging the clamp to hold the rail to the tie, the said bolt passing through the notch to prevent longitudinal movement of the clamp, substantially as described.

[Claim 6 not printed in the Gazette.]

899,977. CHAPLET AND SHRINE OF THE HOLY ROSARY. WILLIAM HENDRICK, New Haven, Conn., assignor to Charles Gay, New Haven, Conn. Filed Aug. 1, 1906. Serial No. 328,720.

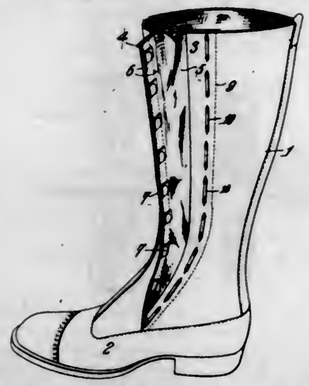
An apparatus of the class described, comprising a casing having a display opening, an endless web arranged within the casing and having a portion extending behind the display opening, feed rollers at the upper end of the display opening between which the web passes, guides fixed in the casing at the lower end of the display opening, and over which said web passes, a retarding device comprising a crossbar within the casing adjacent to the guides for



supporting the web and guides for the edges of the web adjacent to said first named guides.

[Claim 6 not printed in the Gazette.]

899,978. SHOE. JULIUS HESSLER, Sheboygan, Wis. Filed Aug. 31, 1907. Serial No. 390,977.



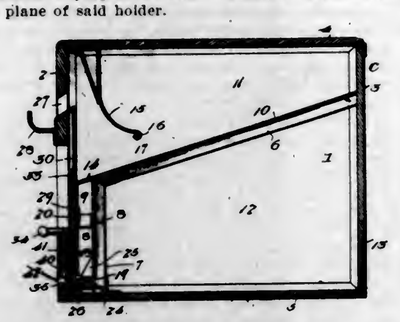
A shoe having its flies connected by a tongue having one edge secured to the inner side of one of the flies and its other edge secured to the inner side of the other fly at a distance from the edge thereof to provide a flap that may be turned back, hooks secured to the inner face of the first-named edge portion of the tongue, and eyes secured to the exterior of the flap, whereby when the flies are secured together, the fastening means will be invisible.

899,979. COIN-CONTROLLED VENDING-MACHINE. RAYMOND I. HILL, Elyria, Ohio. Filed Dec. 20, 1906. Serial No. 348,801. Renewed June 3, 1908. Serial No. 436,469.

1. In a machine of the class described, the case, a reciprocating plunger having a slide and provided at its bottom with a coin deflecting tray, and a reciprocating operating plunger having a coin holder lying above said tray and adapted to carry and hold the coin against a fixed part of the plunger.

2. In a machine of the class described, the case, a vertically reciprocating discharging plunger provided at the bottom with a coin deflecting tray, and a vertically reciprocating operating plunger having a coin holder adapted to be coupled with the discharging plunger by the coin.

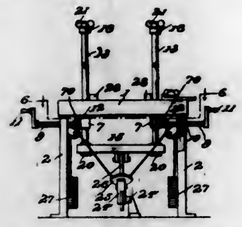
3. In a machine of the class described, the case, a reciprocating discharging plunger provided at one end with a coin deflecting tray and above the plane of the latter with an abutment lug, and an operating slide having a coin holder lying above said coin tray and a coin slot in the plane of said holder.



4. In a machine of the class described, the case, a reciprocating discharging plunger provided at its lower end with an abutment lug and below the plane of the latter with a coin deflecting tray having a centrally located upstanding coin rest, a reciprocating coin slide having a pull knob and provided with a coin slot and in the plane of the latter with a coin holder consisting of a pair of spaced supporting arms, a shiftable guard plate also having a coin slot and supported for limited vertical play at one side of the operating slide, and a reciprocating spring connection between the guard plate and a fixed part of the operating slide.

5. In a machine of the class described, the machine case, a vertically reciprocating discharging plunger provided at its lower end with an abutment and a coin deflecting tray, a reciprocating operating slide having a coin slot and a coin holder, and a fixedly positioned ejecting spring arranged in the path of the coin and carried by the coin holder.

899,980. BRICK, BLOCK, OR TILE CUTTER OR SHAPER. WILLIAM H. HILL, Kushequa, Pa. Filed Jan. 15, 1908. Serial No. 410,966.



1. In combination, a table, a platen to receive the work, a vertically reciprocating frame provided with a cutter arranged horizontally above said platen and adapted to be moved by said frame toward said platen to cut the work thereon, means for reciprocating said frame, and means for adjusting said frame to horizontally vary the position or angle of the cutter with respect to the platen.

2. In combination, a platen to receive the work, cutting means provided with a cutter movable to and from said platen, and mechanism for adjusting said means for varying the position or angle of the cutter with respect to the platen and in a plane parallel with the plane of the platen, substantially as described.

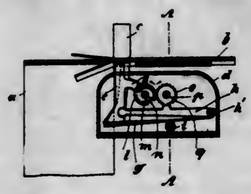
3. In combination, a table having a removable platform inserted in its top and forming a platen, slide rods movable through said platform and provided with a cutter above the platen and between said rods, means for independently adjusting the positions of said rods, and means for reciprocating said rods.

4. In combination, a support provided with a platen, a pair of slide rods provided with a cutting wire stretched between the same above the platen, means for reciprocating said rods to carry the wire to and from the platen, and independent means for separately adjusting said rods laterally with respect to the direction of reciprocation thereof.

5. In combination, a support provided with a platen, two pairs of slide rods, each pair provided with a cutter confined to and extending between the rods thereof, means adjustably connecting all of said rods for reciprocating the same, and independent means for separately adjusting each rod laterally with respect to the direction of reciprocation thereof, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

899,981. FEED MECHANISM. CARL A. HIRTH, Cannstatt, Germany. Filed May 8, 1908. Serial No. 431,715.



1. In a feed mechanism the combination of a plurality of grippers adapted to engage with the work, levers pivotally connected to said grippers so that an oscillating movement of said levers moves said grippers successively into and out of engagement with the work, means for successively oscillating said levers, means for successively moving the grippers forward when in engagement with the work, and means for successively moving said grippers backward when out of engagement with the work.

2. In a feed mechanism the combination of a plurality of sets of grippers adapted to engage with the work, levers pivotally connected to said sets of grippers so that an oscillative movement of said levers successively move said sets of grippers into and out engagement with the work, means for simultaneously oscillating the levers common to one set of grippers in one direction, and those common to the other set in the opposite direction whereby said sets of grippers are brought successively into engagement with the work, means for successively moving said sets of grippers forward when in engagement with the work, and means for successively moving said sets of grippers backward when out of engagement with the work.

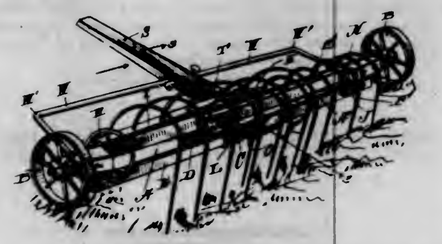
3. In feed mechanism the combination of a frame, levers pivoted upon said frame, a plurality of sets of grippers each of which is pivotally mounted upon one of the levers, means acting upon the levers for moving the grippers successively into and out of engagement with the work, means acting upon the grippers to move same forward and backward successively, and means for insuring that the forward movement of each set of grippers shall take place when it is in engagement with the work and that the backward movement of same shall take place when it is out of engagement with the work.

4. In feed mechanism the combination of a frame, levers pivoted upon said frame, a plurality of sets of grippers each gripper being pivotally mounted upon one of the levers, cams acting upon the levers to move the grippers successively out of engagement with the work, cams acting upon the grippers to move same forward, and means acting simultaneously upon the grippers and the levers to move the said grippers backward and after the levers are released by their cams to move the grippers into engagement with the work.

5. In feed mechanism the combination of a frame, levers pivoted upon said frame, two sets of grippers, each gripper being pivotally mounted upon one of the levers, cams acting upon the levers to move the grippers out of engagement with the work, cams acting upon the grippers

to move same forward, and springs each acting simultaneously upon a gripper and its lever to move the former backward and out of engagement with the work upon the cams releasing the grippers and their levers.

899,982. ADJUSTABLE RAKE. JULIUS J. HOLLEY, Holmen, Wis. Filed Apr. 23, 1908. Serial No. 428,820.



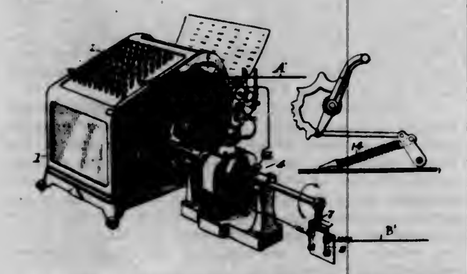
1. An adjustable rake made up of two sliding axle sections, a bar fixed to each section and having rake teeth thereon, stops at the inner ends of said sections against which said bars are adapted to contact, and adjustable bars fastened to said axle sections, as set forth.

2. An adjustable rake comprising two axle sections, a strap for holding the same together, the inner end of each section forming a stop, a bar fixed to each section and having rake teeth thereon, and adjustable draw bars connected to said sections, as set forth.

3. An adjustable rake comprising two axle sections, a strap for holding the same together, the inner end of each section forming a stop, a bar fixed to each section and having rake teeth thereon, each of said axle sections having a thill coupling thereon, draw bars adjustable longitudinally and each connected to said coupling, and a shaft fastened to said draw bars, as set forth.

4. An adjustable rake comprising two axle sections, a strap for holding the same together, the inner end of each section forming a stop, a bar fixed to each section and having rake teeth thereon, each of said axle sections having a thill coupling thereon, draw bars adjustable longitudinally and each connected to said coupling, a shaft fastened to said draw bars, a rod fastened to each of said draw bars, bent at an angle and passing through said shaft, as set forth.

899,983. ADDING-MACHINE. WILLIAM S. HOBBY, Niagara Falls, N. Y., assignor, by mesne assignments, to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 26, 1903. Serial No. 174,779.



1. In electric operating means for adding machines and the like, a motor circuit, a motor in said circuit for operating the machine, manually operated means for closing the circuit to energize the motor, and means for automatically opening the circuit at the end of the operating movement of the machine, and closing it to render it responsive to said manually operated means at the end of the return movement of the machine; substantially as described.

2. In electric operating means for adding machines and the like, a motor circuit, a motor in said circuit for operating the machine, manually operated means for closing the circuit to energize the motor, means operated by the motor for opening the circuit at another point at the end of the operating movement of the machine, and means for automatically closing the circuit at the end of the return movement; substantially as described.

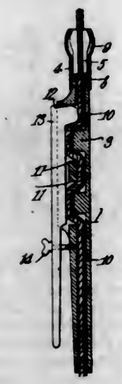
3. In electric operating means for adding machines and the like, a motor circuit, a motor in said circuit for operating the machine, manually operated means for closing the circuit to energize the motor, means operated by the motor for opening the circuit at the end of the operating movement of the machine, and spring operated means for automatically rendering said circuit responsive to said manually operated means at the end of the return movement of the machine; substantially as described.

4. In electric operating means for adding machines and the like, a motor circuit, a motor in said circuit for operating the machine, manually operated means for closing the circuit to energize the motor, and means operated by the armature of the motor for automatically opening the circuit at the end of the operating movement of the machine, and closing it to render it responsive to said manually operated means at the end of the return movement of the machine; substantially as described.

5. In electric operating means for adding machines and the like, a motor circuit, a motor in said circuit for operating the machine, manually operated means for closing the circuit at one point, and means for automatically opening and closing the circuit at another point, said opening and closing means operating to open the circuit at the end of the operating movement of the machine, and to close the circuit, to render it responsive to said manually operated means, at the end of the return movement of the machine; substantially as described.

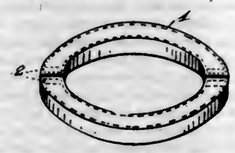
[Claims 6 to 66 not printed in the Gazette.]

899,984. FIRE-ESCAPE. WILLIAM P. HUFFMAN and DANIEL L. FRY, Hickory, N. C. Filed June 28, 1907. Serial No. 381,317.



A fire escape comprising a handle piece having a tortuous channel therethrough, a cable slidably located in said channel, a lever pivoted to the handle piece and adapted to engage the cable at the distorted portions of said channel, clamping jaws mounted upon the end of the handle piece at opposite sides of the cable and a ferrule screw threaded upon the end of the handle piece and surrounding the clamping jaws and adapted to force the jaws into frictional contact with the said cable whereby the movement of the same therethrough may be governed.

899,985. HOLLOW PACKING-RING FOR STUFFING-BOXES. GUSTAV HUHN, Berlin, Germany. Filed Sept. 7, 1906. Serial No. 333,671.



1. A packing ring for stuffing boxes and the like comprising a hollow split ring composed of soft metal and having the ends thereof flattened on their upper and lower faces and provided with soft metal plug like closures.

2. A packing ring for stuffing boxes comprising a hollow soft metal split ring having the ends thereof flattened at their upper and lower surfaces and provided with soft metal closures conforming in shape to the end openings.

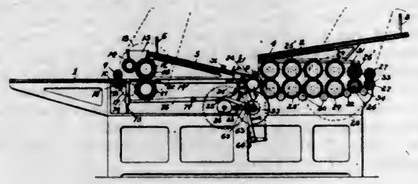
3. A packing ring for stuffing boxes comprising a hollow split ring composed of soft metal and filled with a compressible substance and having the ends thereof flattened on their upper and lower faces and provided with soft metal plug like closures.

4. In a packing ring for stuffing boxes, the combination of a hollow split ring composed of soft metal and filled with a movable substance, the upper and bottom surfaces of the ring being flattened and plug like soft metal stoppers arranged in the ends of said flattened hollow metal ring.

5. In a packing ring for stuffing boxes, the combination of a hollow sectional ring filled with a movable substance and having the upper and lower surfaces thereof flattened, said flattened hollow sections being composed of soft metal, metal stoppers arranged in the ends of said sections, some of the sections composing the ring being made solid and the others hollow and filled with a movable material and closed at the ends by metal stoppers.

[Claim 6 not printed in the Gazette.]

899,986. COMPOUNDING-MACHINE FOR MANUFACTURING PAPER OR PASTEBOARD. HENRY C. HUNTER, Jersey City, N. J.; Agnes Hunter administratrix of said Henry C. Hunter, deceased. Filed Sept. 29, 1902. Serial No. 125,254.



1. In combination in a compounding machine for making composite material, an adhesive applying mechanism comprising the roller for grinding the adhesive into the fibrous structure of the board and the roller acting in conjunction with the grinding roller and with a reservoir, said roller serving to grind the paste into a finely divided condition, substantially as described.

2. In combination in a compounding machine, an adhesive applying roll and a grinding roll for the adhesive acting in conjunction with the adhesive roll and arranged at an angle in respect thereto, substantially as described.

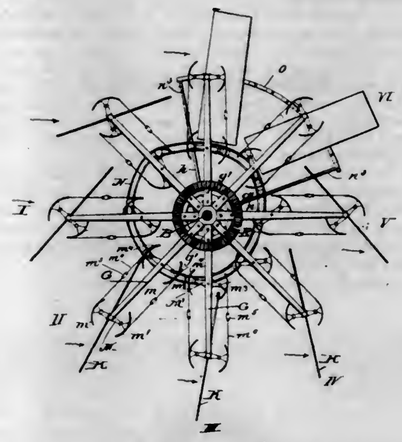
3. In combination, the converging tables for the board and label, the adhesive applying means and means at the converging ends of the tables to unite the label with the board, substantially as described.

4. In combination, the converging tables for the fibrous board and label sheets, registering means at the converging ends of said tables and rolls for uniting the label sheet with the fibrous board, substantially as described.

5. In combination in a compounding machine, the rolls between which the boards and labels pass, means for gaging the position of the boards consisting of the register pins, said pins acting alternately to obstruct and clear the passage between the rolls, substantially as described.

[Claims 6 to 32 not printed in the Gazette.]

899,987. CURRENT-MOTOR. JOHN R. JEFFREY, Fairview, British Columbia, Canada. Filed Sept. 26, 1905, Serial No. 280,128. Renewed July 15, 1908. Serial No. 443,687.



1. A current wheel comprising a vertical shaft, means for supporting the shaft, a disk secured to the lower end of the shaft and provided with a groove in its upper face, a cap loosely mounted on the shaft, and provided with a groove in its lower face registering with the groove of the disk to form a ball race, balls in the grooves, clutch teeth on the upper end of the cap, a hub loosely mounted on the shaft, and provided on its lower edge with clutch teeth engaging with the teeth of the cap, radial ribs on the upper face of the hub, radially projecting lugs on the upper face of the hub, a gear wheel loosely mounted on the shaft above the hub and provided with radially projecting lugs corresponding to the lugs on the hub, bolts engaging perforations in the lugs of the gear wheel and hub for securing them together, a yoke having a body portion provided with a bearing for engaging the vertical shaft, and with arms provided with bearings, a set-screw for retaining the yoke in place, shafts in the bearings of the yoke arms, bevel gears on the ends of the shafts and meshing with the gear wheel, angle arms secured to the radial ribs of the hub, yokes on the ends of the arms, bearings on the arms of the yokes, stud shafts journaled in the bearings, cross-shafts secured to the lower end of the stud shaft, vanes hinged to the cross-shafts, rock arms secured to the stud shafts, segments on the ends of the arms, and provided with grooves on their peripheries, chains connecting the vanes to adjacent segments, rock arms pivoted to the angle arms, segments having grooved peripheral portions secured to the ends of the rock arms, a friction-roller on one of the segments, chains connecting the remote ends of the corresponding segments on the two arms, a turn-buckle for adjusting the chains, supports secured to the disk on the main shaft, a cam track secured to the ends of the supports for engaging the friction rollers on the segments, extensions on the supports at one side of the wheel, and an outer cam track supported by the extensions, and adapted to elevate the vanes.

2. In a current wheel, the combination of a shaft, means for supporting the shaft, a hub journaled on the shaft, radial arms on the hub, vanes secured to the arms and normally depending vertically therefrom, means on one side

of the wheel for varying the angle of the vanes with respect to the arms, and means on the opposite side of the wheel for swinging the vanes into a horizontal position.

3. In a current wheel, the combination of a shaft, means for supporting the shaft, means for elevating and depressing the shaft, means for varying the inclination of the shaft, with respect to the supporting means, a hub journaled in the shaft, radial arms on the hub, vanes secured to the arms and normally depending vertically therefrom, means on one side of the wheel for varying the inclination of the vanes with respect to the arms, and means on the opposite side of the wheel for swinging the vanes into a horizontal position.

4. In current wheels adapted to be rotated by a current of water, the combination of a shaft, means for supporting the shaft, means for elevating and depressing the shaft, means for varying the inclination of the shaft with respect to the supporting means, a hub on the shaft, radial arms on the hub, vanes on the arms, means for varying the angle of inclination of the vanes with respect to the current, and means for swinging the vanes into a plane parallel with the direction of motion of the current.

5. In a current wheel, the combination of a shaft, means for supporting the shaft, a hub journaled on the shaft, a plurality of radial arms secured to the hub, vertical vanes pivoted to the outer ends of the arms, means for rotating the vanes on a vertical axis, and means for swinging the blades into a horizontal plane.

[Claims 6 to 9 not printed in the Gazette.]

899,988. CYLINDER FOR WASHING-MACHINES. CHRISTIAN JENSEN, Palmyra, N. J. Filed Mar. 6, 1908. Serial No. 419,549.



1. A washing machine consisting of a pair of heads, a series of ribs connecting said heads and spaced apart, a series of staves connected to said ribs, and likewise spaced apart, said staves being dove-tailed in cross section, intermediate bars of substantially like form in cross section to the staves, interposed between said staves and spaced therefrom to form water passages between the bars and staves, said staves having their surface of greatest area at the outside of the cylinder, and said bars having their surface of greatest area on the inside of the cylinder, substantially as shown and described.

2. A washing machine consisting of a pair of heads, a series of ribs connecting said heads and spaced apart, a series of staves connected to said ribs, said staves being dove tailed in cross section, intermediate bars of substantially like form in cross section to the staves, interposed between said staves and spaced therefrom to form water passages between the bars and staves, said staves having their surface of greatest area at the outside of the cylinder, and said bars having their surface of greatest area on the inside of the cylinder, and wire screens secured between said bars and staves to form screen closures for the water passages.

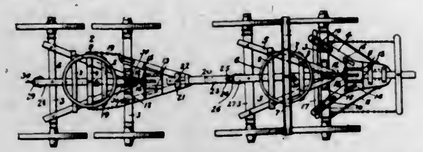
3. A washing machine cylinder comprising end heads, a series of staves mounted between said heads and parallel with the axis of the cylinder, said staves being spaced apart, and of substantially dove-tailed form in cross section and intermediate bars of like form to the staves mounted between said cylinder heads but parallel with said staves, said bars being spaced from adjacent staves to leave water passages therebetween and wire screens mounted in said water passages.

4. A washing machine cylinder comprising end heads, a series of staves mounted between said heads and parallel with the axis of the cylinder, said staves being spaced apart, and of substantially dove-tailed form in cross section and intermediate bars of like form to the staves mounted between said cylinder heads but parallel with said staves, said bars being spaced from adjacent staves to leave water passages therebetween, wire screens mounted in said water passages, said bars being arranged with their surface of least area at the outside of the cylinder to form in connection with adjacent staves water passages, that on one side of each bar being directed in a direction opposite to that on the other side of the respective bar, substantially as shown and described.

5. In a washing machine cylinder, the end heads and the connecting ribs therebetween, said ribs being spaced apart combined with staves secured to alternate ribs and provided with bevels on each of their longitudinal edges diverging from the ribs, bars secured to alternate ribs and provided with bevels on each of their longitudinal edges converging from the ribs to form in connection with the staves water passages between adjacent bars and staves, said water passages alternating in direction and a wire screen held between the ribs and the staves and the bars.

[Claim 6 not printed in the Gazette.]

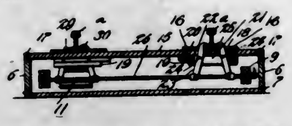
899,989. VEHICLE. CAMDEN R. JESSE and RICHARD T. WARE, Owensboro, Ky., assignors to Owensboro Wagon Co. Inc., Owensboro, Ky. Filed Aug. 27, 1907. Serial No. 390,272.



1. A device as described, employing a truck or running gear comprising a forward hounds and a rear hounds, and connecting means between said hounds embracing a rock-shaft journaled in the rear part of said forward hounds and a staple-like loop or clip fixed to the forward end of said rear hounds and loosely connected to an integral loop of said rock-shaft.

2. A device as described, employing two trucks each embracing a forward hounds and a rear hounds pivotally connected together to have vertical and lateral movement, said forward truck having the rear portion of its forward hounds connected together by a cross bar, and said rear hounds having the forward end thereof overlying said cross-bar, and means pivotally connecting said forward end of said rear hounds to an intermediate part of said forward hounds, and a reach coupling together said trucks and adapted to allow of a vertical and lateral independent movement between said trucks.

899,990. METALLIC RAIL-TIE. ALEXANDER S. KAZIMER, Fishkill-on-the-Hudson, N. Y. Filed Oct. 12, 1907. Serial No. 397,144.

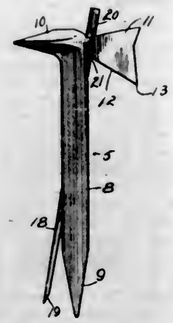


1. A hollow railway tie having openings in its upper side, openings in its sides, and openings in its ends, closures for said side openings, means on the inner side of the tie to secure said side closures, and closures for said end openings, pivotally mounted rail-securing arms having their lower and major portions disposed in said hollow tie and their upper ends extended through the openings in the upper side of said tie and provided with means to engage the base flanges of a rail and means located within the hollow tie to adjust and secure said rail-securing arms, the openings in the sides of the tie enabling access to be obtained to such adjusting and securing means and the closures in the ends of the tie enabling access to be obtained to the means for securing the closures for the side openings.

2. A railway tie having a cover portion, a base plate on such cover portion, such cover portion and such base plate having openings, rail securing arms pivotally connected to such cover portion and having hooks at their upper ends to engage the base flanges of a rail, such rail securing arms extending through the openings in the cover portion and base plate, and means to secure such arms in engaged position.

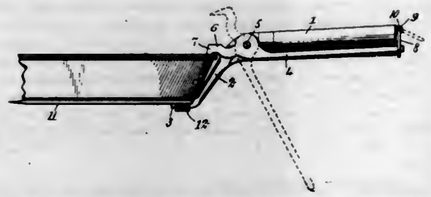
3. A hollow railway tie having openings in its upper side, pivotally mounted rail securing arms having their lower and major portions disposed in said hollow tie and their upper ends extended through said openings and provided with means to engage the base flanges of a rail, and means located within the hollow tie to adjust and secure such rail securing arms.

899,991. RAILROAD-SPIKE. SIDNIE S. KEEN, Cottondale, Ala. Filed Nov. 13, 1907. Serial No. 402,001.



A spike of the type set forth, comprising a spike body having at its upper end a driving head and a head rearwardly of said driving head and said body, the said spike body being formed with a hole oblique to the axis of the spike between its front and rear faces, said second head having a groove in alinement with said hole, and an auxiliary pin for insertion through said groove and said hole, said second head being adapted to be bent downwardly, so as to engage the lower edge portion of its groove with said pin, as and for the purpose set forth.

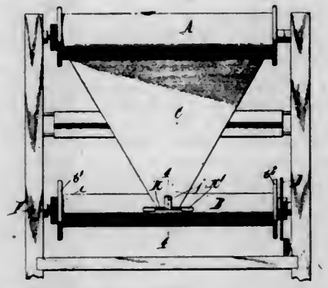
899,992. PAN-HOLDER AND STOVE-LID LIFTER. BENJAMIN KESSLER, Cabinet, Idaho. Filed June 10, 1907, Serial No. 378,189. Renewed Aug. 5, 1908. Serial No. 447,140.



1. A combination lid lifter and pan holder comprising a handle having a shank with a projecting toe adapted to be used as a lid lifter, a member removably attached to said toe and adapted to be thrust under a pan, said member having laterally projecting extensions preventing the pan from tipping to one side, and means movably carried by said handle for engaging the edge of a pan.

2. A combination lid lifter and pan holder comprising a handle having a projecting toe for lid-lifting, a removable fork having a socket receiving said toe and adapted to be thrust under a pan to support the same, a lever pivotally attached to said handle and having a spur adapted to engage the upper edge of the pan, and a keeper attached to said handle and adapted to secure the lever thereto.

899,993. ADJUSTABLE SPOOL FOR MUSIC-SHEETS. EUGENE DE KLEIST and FRANK L. MCCORMICK, North Tonawanda, N. Y.; said McCormick assignor to said de Kleist. Filed Jan. 31, 1908. Serial No. 413,505.



1. A roll for a music sheet comprising a body provided at its end with a stop-member adjustable lengthwise of the roll, a movable flange arranged at the end of the roll on the inner side of said stop-member, and a spring interposed between said flange and the end of the roll, substantially as set forth.

2. A roll for a music sheet comprising a body provided at its end with a screw-threaded stud, a flange slidably mounted on said stud, an adjusting nut applied to said stud on the outer side of the flange, and a spring interposed between the end of the roll and said flange, substantially as set forth.

3. A roll for a music sheet comprising a body provided at its end with a screw-threaded stud, a flange slidably mounted on said stud, an adjusting nut applied to said stud on the outer side of the flange, a spring interposed between the end of the roll and said flange, and means for preventing rotation of the flange on the roll, substantially as set forth.

4. A roll for a music sheet provided at its end with a screw-threaded stud and in the same end with a socket, a flange slidably mounted on said stud, an adjusting nut applied to the stud on the outer side of the flange, and a spring seated in said socket and bearing against the inner side of the flange, substantially as set forth.

5. A roll for a music sheet comprising a body provided at its end with a screw-threaded axial stud and a stop-pin, a flange slidably mounted on said stud and having a hole which receives said stop-pin, an adjusting nut applied to said stud on the outer side of the flange, and a spring interposed between the flange and the end of the roll, substantially as set forth.

[Claim 6 not printed in the Gazette.]

899,994. VIOLET VAT DYE AND PROCESS OF MAKING SAME. HERMANN KRAFT and GADIENT ENGI, Basel, Switzerland, assignors to The Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Filed Apr. 22, 1908. Serial No. 428,690.

1. The herein described process for the manufacture of violet vat-dyestuffs, which consists in condensing first an indoxyl-compound with an alpha-arylid of a 2:3-dyketo-dihydro-thionaphthene-compound and treating then the so obtained condensation product with halogenating agents.

2. The herein described process for the manufacture of violet vat-dyestuffs, which consists in treating the products

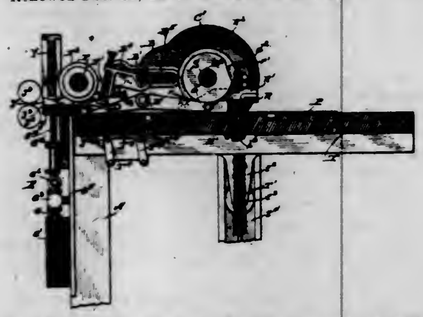
obtainable by the condensation of indoxyl-compounds with 2:3-diketodihydro-1-thionaphthenearylids, with halogenating agents.

3. The herein described process for the manufacture of a violet vat-dyestuff, which consists in first condensing indoxyl with the alpha-anilid of 2:3-diketodihydro-1-thionaphthene and treating then the so obtained product with bromin.

4. As new products, the halogenated vat-dyestuffs obtainable by treating the condensation products of indoxyl-compounds and 2:3-diketodihydrothionaphthene-arylids with halogenating agents, constituting in dry state violet powders, dissolving in concentrated sulfuric acid with a blue to greenish blue coloration, soluble in hot nitrobenzene with a violet coloration and yielding, when treated with alkaline reducing agents, a brownish yellow vat dyeing cotton violet to violet-blue tints fast to washing, light and chlorin.

5. As a new product, the halogenated vat-dyestuff, obtainable by treating the condensation product of indoxyl and 2:3-diketodihydro-1-thionaphthene-alphanilid with bromin, constituting in dry state a dark violet powder of copper luster, dissolving in concentrated sulfuric acid with a pure blue color, difficultly soluble in hot alcohol with a bluish-violet coloration, more easily soluble in hot nitrobenzene with a red-violet coloration and yielding, when treated with alkaline reducing agents, a brownish-yellow vat dyeing cotton violet-blue tints fast to washing, light and chlorin.

899,995. SHEET-FEEDING MACHINE. HOMER C. LA BATT, Chicago, Ill., assignor to William J. Herrick, Chicago, Ill. Filed Sept. 10, 1901, Serial No. 74,877. Renewed Feb. 10, 1908. Serial No. 415,227.



1. In a sheet-feeding machine, the combination with a paper-table, of a reciprocating buckler-shaft, guides for the shaft having integral horizontal and inclined portions, rock-arms on the shaft slidable in the horizontal portions and adapted to enter the inclined portions, and bucklers on the shaft.

2. In a sheet-feeding machine, the combination with a paper-table, of a reciprocating buckler-shaft, guides therefor having horizontal body-portions and upwardly inclined front end-portions, front rock-arms in the shaft having lateral projections slidable in the said body portions and adapted to enter the end-portions, and bucklers on the shaft.

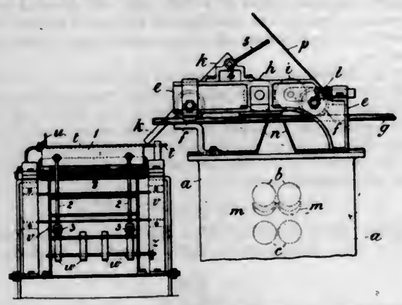
3. In a sheet-feeding machine, the combination with a paper-table, of a buckler-shaft, guides therefor having horizontal body-portions and upwardly inclined portions at their front ends, rock-arms on the shaft having lateral projections to co-act with the inclines of the guides, rearwardly extending arms on the shaft, cam-links connected to the arms, and cams to operate the links.

4. In a sheet-feeding machine, the combination with a paper-table, of a buckler-shaft, horizontal guides therefor having front inclines, rock-arms on the shaft to co-act with the inclines, arms on the shaft, links adjustably connected to the arms, and cams to rock the links.

5. In a sheet-feeding machine, the combination with a paper-table, of a main-shaft, cam-disks on the shaft, of a buckler-shaft having rock-arms, horizontal guides therefor having upwardly inclined front-ends, and links connected to the buckler-shaft and operated by the disks.

[Claims 6 to 26 not printed in the Gazette.]

899,996. COMBINED TINNING AND CLEANING MACHINE. JOB LEWIS, Lydney, England, assignor to Richard Thomas & Co., Limited, Llanelly, England. Filed July 2, 1907. Serial No. 381,876.



1. In a machine for tinning and cleaning metal plates, the combination with cleaning devices and a grease pot of a metal coating bath, of a frame movable in opposite directions over the grease pot and fully removable from the latter, movable devices carried by the frame for engaging the plates and for transferring said plates from the metal coating bath to the cleaning devices, and means over the grease pot for movably supporting said frame, said means being in a position to permit free access to the grease pot when the frame is withdrawn.

2. In a machine for tinning and cleaning metal plates, the combination with cleaning devices and a grease pot of a metal coating bath, of a frame movably and removably supported over the grease pot, rollers carried by the said frame for receiving the plates between them and continuing the upward movement of the latter, and guides between the said grease pot rolls and the rollers carried by the frame, the guides being held in the top portion of the grease pot and the frame longitudinally movable over said pot.

3. In a combined tinning and cleaning machine for cooperating with metal plates, the combination with a grease pot of a metal coating bath, of a frame longitudinally movable over and removable in relation to the grease pot, rollers carried by the frame to receive the plates between them and continue the upward motion of said plates, chutes carried by the said frame, and guides between the rollers of the frame and the chutes and between the grease pot rolls and the rollers of the frame, the chutes being pivotally supported by the frame and movable to horizontal and inclined positions.

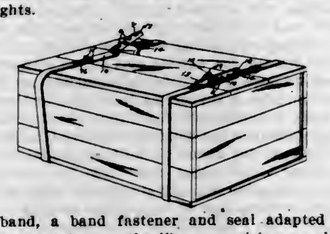
4. In a combined tinning and cleaning or other machine, the combination with the grease pot of a metal coating bath, of a frame, rollers, guides, inclined chutes, and rails on the grease pot, the frame being movable on the rails.

5. The combination with the traveling band or conveyer of a combined tinning and cleaning or other like machine, of chute means pivotally mounted to assume horizontal and inclined positions and operating to deliver the plates or sheets to the traveling band, arms in line with the said chute means and situated over and crossing the traveling band, and a stop means at the outer terminals of the said arms.

[Claims 6 to 9 not printed in the Gazette.]

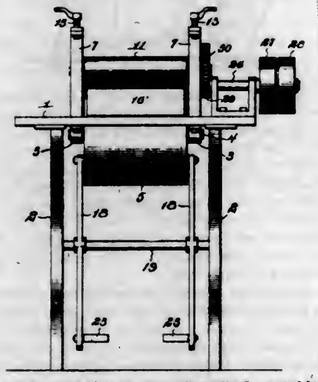
899,997. BAND, BAND-FASTENER, AND SEAL COMBINED. JOHN S. MARK, Adel, Iowa. Filed Oct. 28, 1907. Serial No. 399,617.

1. In a band and fastener and seal combined a straight flat plate having parallel uprights at one end provided with perforations, a lever pivoted to the other end of said flat plate to fold between said uprights and provided with a plurality of notches in one of its edges and a perforation in its free end to coincide with the perforations in the uprights.



2. A band, a band fastener and seal adapted for securely closing a box or the like, comprising an elongated straight flat plate adapted to rest flat on a box and provided with uprights having perforations, a lever having notches in one edge pivoted to the end of the plate and provided with a perforation in its free end, a band fastened to the end of the flat plate, a link on the free end of the band and a seal to connect with said uprights and the lever, arranged and combined to operate as set forth.

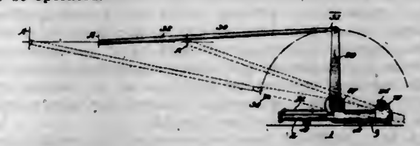
899,998. MACHINE FOR ROLLING CIGAR-WRAPPERS. HENRY NAGELEISEN, Arlon, Ohio. Filed Apr. 6, 1907. Serial No. 366,795.



In a device of the character described, a table having an aperture in its top, a shaft supported in bearings upon the underside of the table, a leaf-supporting roller carried by the shaft and projecting through said aperture, a guide apron secured upon the table in front of the leaf-supporting roller and having a free edge resting upon said roller, a receiving apron secured upon the table in rear of the leaf-supporting roller and having a free front edge resting upon said roller, a pressure roller engaging the leaf-supporting roller between the free edges of the guide and receiving apron, springs for normally forcing the pressure roller in the direction of the leaf-supporting roller, and means for imparting motion to one of the rollers, said means comprising levers pivoted upon a cross bar and provided with foot treadles, the upper ends of said levers carrying spring pawls and the ends of said supporting roller being provided with ratchet teeth engaged by said pawls.

899,999. DOOR-OPERATING MECHANISM. JOHN E. OSMER, Chicago, Ill., assignor to Elevator Supply & Repair Company, Chicago, Ill., a Corporation. Filed July 28, 1906. Serial No. 328,254.

1. In a mechanism for operating a door or other device, in combination, a high pressure cylinder and a low pressure cylinder; a valve mechanism for placing said high pressure cylinder in connection with a source of pressure fluid, for connecting said cylinders together, and for connecting said low pressure cylinder with the exhaust; pistons for said cylinders; a rack bar connecting said pistons; a pinion adapted to mesh with said rack bar; and an operative connection between said pinion and the device to be operated.



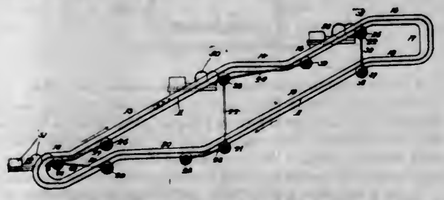
2. In a mechanism for operating a door or other device, in combination a high pressure cylinder and a low pressure cylinder; a valve mechanism for said cylinders; pistons for said cylinders; a rack bar connecting said pistons; bearing lugs fixed with relation to said cylinders; a shaft supported in said bearing lugs; a pinion fixed to said shaft and meshing with said rack bar; and a lever fixed to said shaft and operatively connected with the device to be moved.

3. In a mechanism for operating a door or other device, in combination, a high-pressure and a low-pressure cylinder; a valve mechanism for said cylinders adapted to place them in communication at intervals; pistons for said cylinders; a rack bar connecting said pistons; a pinion adapted to mesh with said rack bar; and an operative connection between said pinion and the device to be operated.

4. In a mechanism for operating a door or other device, in combination, a high-pressure cylinder and a low-pressure cylinder; a valve mechanism for said cylinders; pistons for said cylinders; a rack bar connecting said pistons; an opening being formed in the adjacent ends of said cylinders; bearing lugs on said cylinders at opposite sides of said opening; a shaft supported in said bearing lugs; a pinion fixed to said shaft extending through said opening into engagement with said rack bar; and a lever fixed to said shaft and operatively connected with the device to be moved.

5. In a mechanism for operating a door or other device, the combination of the high pressure cylinder and the low pressure cylinder arranged in tandem, the opposing ends of said cylinders being open to the atmosphere, an operating rod extending between the opposing ends of said cylinders and provided at its opposite ends with pistons for said cylinders, suitable means for the admission and escape of motor fluid to and from said cylinders, valve mechanism for controlling the flow of motor fluid to and from said cylinders, and means united to said connecting rod between said pistons for shifting the door or other device.

900,000. CONVEYER. CHARLES D. SEEBERGER, Yonkers, N. Y. Filed Nov. 24, 1902. Serial No. 132,513. Renewed Dec. 7, 1904. Serial No. 235,882.



1. In conveying apparatus, a series of supports, guiding and driving means for said supports forming a plurality of transporting runs having inclined portions, said guiding means maintaining one face of each of said supports in substantially parallel position throughout said inclined portions, and reversers to transfer said supports between said runs.

2. In conveying apparatus, a series of supports, guiding and driving means for said supports forming a plurality of

transporting runs having horizontal and connecting inclined portions, said guiding means maintaining corresponding faces of said supports in substantially parallel position throughout said inclined and horizontal portions, and reversers to transfer said supports between said runs.

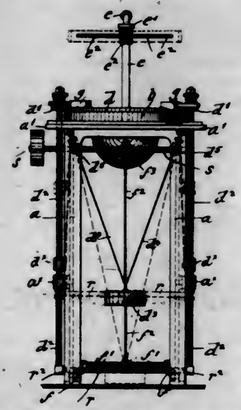
3. In a conveying apparatus, the combination with the ways extending to different levels and having portions thereof extending in different angular directions, of an endless conveyer coöperating with said ways, mechanism for driving said conveyer, and means connecting portions of said conveyer adjacent the angles so as to transmit the driving strain past said angles removing the tension from the conveyer as it passes said angles.

4. In a device of the class described, the combination with the ways extending in different angular directions, of an endless conveyer coöperating with said ways and composed of a series of steps connected by a chain, means for driving the conveyer, spur gears meshing with said chain adjacent the angles, and connections between the spur gears on the two sides of the angles so as to transmit the driving strain past said angles removing the tension from the chain as it passes them.

5. In a conveying apparatus, the combination with the ways extending to different levels and portions thereof extending in different angular directions, of an endless conveyer coöperating with said ways and composed of a series of steps connected by a chain, means for driving the conveyer, spur gears meshing with said chain on both sides of an angle therein, and a countershaft extending past the angle having bevel gear connections with said spur gears on each side of the angle so as to transmit the driving strain past the angle thereby removing the tension from the chain between the gears.

[Claims 6 to 42 not printed in the Gazette.]

900,001. MACHINE FOR WELTING AND ROUNDING HAT-BRIMS. GUSTAV SEGSCHNEIDER, Yonkers, N. Y. Filed Mar. 28, 1908. Serial No. 423,805.



1. In a machine for welting and rounding hat-brims, the combination, with a table having a templet-opening, and a templet, of a stationary oval ring on said table, a welting ring fitted within the same, means for raising and lowering said welting ring, a heating device for the welting ring, and means for swinging said heating device over the table.

2. In a machine for welting and rounding hat-brims, the combination, with a table having a templet-opening, and a templet, of a stationary ring extending around said templet, a welting ring fitted into said stationary ring, and means for imparting a quick reciprocating motion to the welting ring.

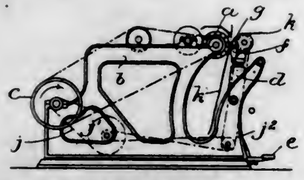
3. In a machine for welting and rounding hat-brims, the combination, with a table having a templet-opening, and a templet, of a stationary oval ring surrounding said opening and templet, a welting ring fitted into the stationary ring, and means for imparting a short reciprocating motion to the welting ring for exerting a yielding pressure on the welt of the hat-brim.

4. In a machine for welting and rounding hat-brims, the combination, with a table having a templet-opening, and a templet, of a stationary oval ring surrounding said opening, a welting ring fitting into the stationary ring, and means for locking the welting ring to the stationary ring.

5. In a machine for welting and rounding hat-brims, the combination, with a supporting table, of a stationary ring on the same, a welting ring fitted into said stationary ring, means for raising or lowering said welting ring, an angular arm swiveled to one corner of the table, radial gas-heating pipes applied to the upper end of the swiveled arm, and means for supplying gas and air to said heating pipes for heating the welting ring when in raised position.

[Claims 6 and 7 not printed in the Gazette.]

900,002. SHAVING-MACHINE. ALFRED SEYMOUR-JONES, Pendower, Wrexham, England, assignor to The Turner Tanning Machinery Company, Peabody, Mass., a Corporation of Maine. Filed Apr. 15, 1908. Serial No. 427,120.



1. In shaving or similar machines for leather and the like, the combination with a knife roll and a movable support for the material, of a bed roll having a small diameter in comparison with the knife roll, said bed roll being located between the support and knife roll, the space above the support and bed roll being open to permit hand-control of the material, means for rotating the knife roll in a direction to draw the material over the bed roll and means for actuating said support to cause its surface to travel in a direction to feed the material, under hand-control, between the bed roll and knife roll.

2. In shaving or similar machines for leather and the like, the combination with a knife roll, of a swinging frame having a bed roll and a support comprising a large-diameter roller and belts connecting it with the bed roll, the bed roll having a small diameter in comparison with the knife roll and located between the support roller and the knife roll, the space above the support and bed roll being open to permit hand-control of the material, means for rotating the knife roll in a direction to draw the material over the bed roll and means for actuating said support to cause its surface to travel in a direction to feed the material, under hand-control between the bed roll and knife roll.

900,003. COAL-MINING MACHINE. LESLIE W. VEITCH, Des Moines, Iowa. Filed Nov. 18, 1907. Serial No. 403,060.



1. A coal-mining machine, comprising a feed bar, a sleeve mounted loosely thereon, arms pivoted to said sleeve, lateral wedges formed on said arms and having cutting edges outside the surface of the arms, and a wedge threaded to said feed bar and adapted to enter between the lateral wedges.

2. A coal-mining machine, comprising a feed bar, means for rotating said feed bar, a sleeve loosely mounted on said feed bar, arms pivoted on said sleeve, lateral wedges on said arms, a wedge threaded to said feed bar and adapted to enter between the lateral wedges, and a box removably mounted on the feed bar adjacent said sleeve.

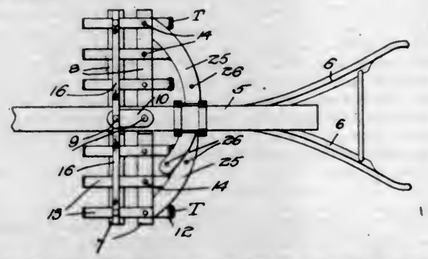
3. A coal-mining machine, comprising a feed bar formed with a head on one end, means for rotating said feed bar, a box removably mounted on the feed bar adjacent to its head, a sleeve loosely mounted on the feed bar adjacent the box, arms pivoted on said sleeve, lateral wedges on said arms and a wedge threaded to said feed bar and adapted to enter between the lateral wedges.

4. A coal-mining machine, comprising a feed bar, a sleeve loosely mounted on said feed bar, arms on said sleeve and adapted for lateral oscillation, lateral wedges on said arms, a wedge threaded to said feed bar and adapted to enter between the lateral wedges and a step block journaled on said feed bar adjacent the threaded wedge.

5. A coal-mining machine, comprising a feed bar formed with a head on one end and a step block journaled on the other end, a lever handle mounted in the head of the feed bar, a sleeve mounted loosely on the feed bar, arms pivoted on said sleeve, lateral wedges formed on said arms, a wedge threaded to said feed bar and adapted to enter between the lateral wedges, and a box formed of two members hinged together and adapted to be latched on said feed bar between the head and sleeve.

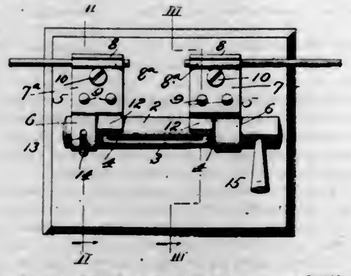
[Claim 6 not printed in the Gazette.]

900,004. CULTIVATING IMPLEMENT. FLEMING H. WEAVER, Griffin, Ga. Filed Aug. 10, 1908. Serial No. 447,790.



In a cultivating implement, a beam, oppositely extending pairs of parallel bars pivoted upon the underside of the beam, cultivator teeth having return bends pivoted upon the pairs of parallel bars, arcuate braces pivoted upon the under sides of the rear parallel bars adjacent to the outer extremities of said bars, said braces being provided with apertures formed at intervals therein, a clip plate secured upon the beam and having a downward extending screw-threaded pin adapted to be engaged by the arcuate brace bars, and a wing nut upon the screw-threaded pin.

900,005. ELECTRIC SWITCH. CHARLES W. WACHTEL, Jamaica, N. Y. Filed Nov. 23, 1907. Serial No. 403,439.



1. An electric switch comprising a non-conducting support, two bearings thereon, a rotary oscillating switch bar mounted in said bearings, a contact strip carried by said switch bar, a contact lip carried by each of said bearings and adapted to be engaged by the contact strip on the switch bar, wire clamping means formed integral with the bearings, and means for closing the wire clamping means, said means also serving to secure the switch bar in place.

2. An electric switch comprising a rotary oscillating switch bar of non-conducting material, a contact strip carried thereby and extending longitudinally thereof, a pair of bearings for said bar, each of said bearings being formed of a strip of metal bent upon itself to form bearing loops to receive the switch bar, the two ends of said strip being brought together to form a wire clamp, and a contact lip formed integral with said strip and partly embracing the switch bar and adapted to be engaged by the contact strip of said bar.

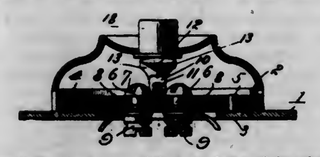
3. An electric switch comprising a rotary oscillating contact bar of non-conducting material, a contact strip secured thereto and extending longitudinally thereof, means for supporting said switch bar, said means consisting of two supporting devices each of which consists of a strip of sheet metal bent upon itself to form a bearing loop, one end of said strip constituting a base piece and forming one member of a wire clamp, the other end of said strip lying flat against the base piece and having its extreme end bent to form the other member of the wire clamp, and a contact lip formed integral with one of said ends and partially embracing the switch bar in such position as to be adapted to be engaged by the contact piece on said bar.

4. An electric switch comprising a rotary oscillating contact bar of non-conducting material, a contact strip secured thereto and extending longitudinally thereof, means for supporting said switch bar, said means consisting of two supporting devices each of which consists of a strip of sheet metal bent upon itself to form a bearing loop, one end of said strip constituting a base piece and forming one member of a wire clamp, the other end of said strip lying flat against the base piece and having its extreme end bent to form the other member of the wire clamp, a contact lip formed integral with one of said ends and partially embracing the switch bar in such position as to be adapted to be engaged by the contact piece on said bar, and means for limiting the oscillation of the switch bar.

5. An electric switch comprising a rotary oscillating contact bar of non-conducting material, a contact strip secured thereto and extending longitudinally thereof, means for supporting said switch bar, said means consisting of two supporting devices each of which consists of a strip of sheet metal bent upon itself to form a bearing loop, one end of said strip constituting a base piece and forming one member of a wire clamp, the other end of said strip lying flat against the base piece and having its extreme end bent to form the other member of the wire clamp, a contact lip formed integral with one of said ends and partially embracing the switch bar in such position as to be adapted to be engaged by the contact piece on said bar, a supporting block, and means for securing the bearings and wire clamp on said block.

[Claim 6 not printed in the Gazette.]

900,006. PUSH-BUTTON. CHARLES W. WACHTEL, Jamaica, N. Y. Filed Nov. 23, 1907. Serial No. 403,440.



1. A push button comprising a plate of insulating material, two contact points arranged thereon, means for connecting circuit wires to said points, and a contact lever pivoted on said plate and provided with an angular

portion adapted to engage the contact points carried by the plate, said contact lever being normally held away from the contact points.

2. A push button comprising an insulating plate a pair of screws threaded through said plate, binding nuts threaded on said screws and serving to connect the circuit wires thereto, the heads of said screws forming contact points, a pivoted contact lever formed with a contact head adapted to strike between the two contact points and to engage them, and means for normally holding the contact lever away from said contact points.

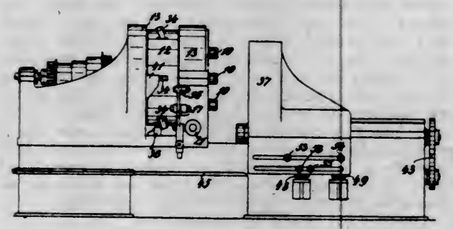
3. A push button comprising a plate of insulation, a pair of screws connected thereto, the heads of said screws forming contact points, means for connecting the circuit wires to said screws, a contact lever pivoted on said plate, and provided with an angular head adapted to strike between the heads of the screws, and to engage the same, and means for normally holding said lever away from the screw heads.

4. A push button comprising an insulating plate, a pair of screws threaded through said plate and provided with heads forming contact points, binding nuts threaded on said screws, a pivoted contact lever carried by said plate and formed with a transverse contact head at its free end, said head being V-shaped in cross-section, the lever being so arranged that the contact head will strike between the two screw heads and engage the same, and a spring for normally holding the contact head away from the screw heads.

5. A push button comprising a base plate having an upstanding flange, a plate of insulation inclosed within said flange, a pair of screws carried by said plate of insulation, the heads of the screws forming contact points, a pivoted lever carried by the plate of insulation and provided with a transverse V-shaped contact head adapted to strike between the screw heads and to engage the same, means for normally holding the lever away from the screw heads, an inclosing cap provided with slots, one wall of said slot being cam-shaped and diametrically opposite pins extending radially from the upstanding flange of the base plate and adapted to fit in the slots of the cap, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

900,007. SEMI-AUTOMATIC REVOLVING LATHE WITH SEVERAL MANDRELS. MARTIN H. BLANCKE, Merseburg, Germany. Filed Oct. 29, 1907. Serial No. 399,767.

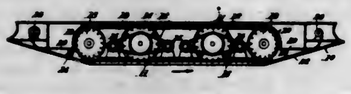


1. In a semi-automatic revolving lathe, the combination with the frame, the slidably mounted tool head, the revolving head and the spindles rotatably mounted in the revolving head, of a driving shaft common to all of the spindles, a pair of loose gear wheels on each spindle, mounted within the revolving head and having connection with the driving shaft whereby they are rotated in opposite directions by the shaft, a coupling on each spindle for coupling either of said gear wheels to its spindle, a spring normally holding the coupling in a position in which it couples one of the gear wheels to the spindle, a shifting lever for each coupling extending outside of the revolving head, an inclined guide fixed on the frame exterior to the revolving head and adapted to engage said shifting levers to cause the shifting levers to shift the couplings into engagement with the other of said gear wheels, said guide having its end movable out of the path of movement of the shifting levers, and means connected to the tool head to move therewith and adapted to shift the movable end of the guide to permit the spring to return the coupling to its normal position.

2. In a semi-automatic revolving lathe, the combination with the frame, the slidably mounted tool head, the revolving head and the spindles rotatably mounted in the revolving head, of a driving shaft common to all of the spindles, a pair of loose gear wheels on each spindle, mounted within the revolving head and having connection with the driving shaft whereby they are rotated in opposite directions by the shaft, a coupling on each spindle for coupling either of said gear wheels to its spindle, a spring normally holding the coupling in a position in which it couples one of the gear wheels to the spindle, a shifting lever for each coupling extending outside of the revolving head, an inclined guide fixed on the frame exterior to the revolving head and adapted to engage said shifting levers to cause the shifting levers to shift the couplings into engagement with the other of said gear wheels, a vertically movable slide normally forming the end of said guide, a spring for holding the slide in its normal position, and a track connected to the tool head to move therewith and adapted to shift said slide out of the path of movement of the shifting levers to permit said first-named spring to return the coupling to its normal position.

3. In a semi-automatic revolving lathe, the combination with the frame, the slidably mounted tool head, the revolving head and the spindles rotatably mounted in the revolving head, of a driving shaft, a driving member for the revolving head, means for coupling the driving member to the driving shaft, a locking device for the revolving head, a connection between said locking device and the coupling means whereby the coupling means is held in its inactive position when the locking device is in its locking position, a lever swingingly mounted in the frame and normally engaging the locking device to hold the locking device in locking position, and a member connected to the tool head to move therewith and adapted to shift said lever to permit release of the locking device.

900,008. GUARD FOR CHANNELED MARINE VESSELS. LÉON DION, Wilkes-Barre, Pa. Filed Oct. 20, 1905, Serial No. 283,676. Renewed Feb. 20, 1908. Serial No. 416,925.



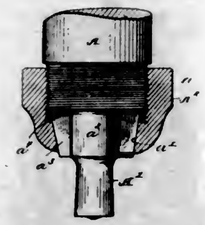
1. A navigable vessel having a channel in its bottom, an endless series of paddles movable along said channel, and an inclined guard or shield at the bow extending to a point under the front end of said channel to prevent the entrance of water to the extreme front end of the channel when the vessel is moving forward.

2. A navigable vessel having a channel in its bottom, an endless series of paddles movable along said channel, and an inclined guard or shield at the bow extending to a point under the front end of said channel to prevent the entrance of water to the extreme front end of the channel when the vessel is moving forward, said guard or shield being adjustable.

3. A navigable vessel having a channel in its bottom and formed with a chamber at each end in line with said channel, an endless series of paddles movable along said channel, and inclined guards or shields movable to and from position across the bottom of said chambers.

4. A double-end navigable vessel having a channel in its bottom and formed with a chamber at each end in line with said channel, an endless series of paddles movable along said channel, inclined guides along the bottoms of said chambers, and guards or shields mounted to slide along said guides to close or open the bottoms of said chambers.

900,009. PUNCH. JOHN F. DOOLITTLE, Cleveland, Ohio, assignor to The Cleveland Steel Tool Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 26, 1908. Serial No. 417,832.



1. In a device of the character described, the combination of a shank, a coupling adapted to be secured to the end of said shank, the lower portion of the bore in such coupling being tapered, a tool, and an annular clamping member fitted to the lower portion of said coupling bore and adapted to receive said tool, said clamping member being alternately slitted from opposite ends.

2. In a device of the character described, the combination of a shank, a coupling nut adapted to be threaded onto the end of said shank, the lower portion of the bore in such coupling nut being tapered, a tool, and an annular clamping member fitted to the lower portion of the bore in said coupling nut and adapted to receive said tool, said tool having its upper end formed with a shoulder and the upper end of the bore in said clamping member being beveled to receive such shoulder, such shoulder lying below the end of the tool and the latter having its bearing surface reduced, whereby the strain is brought within the body of the punch when the device is in operation, substantially as described.

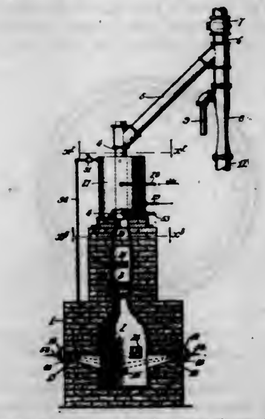
3. In a device of the character described, the combination of a shank, a coupling nut adapted to be threaded onto the end of said shank, the lower portion of the bore in such coupling nut being tapered, a tool, and a clamping member comprising an annular sleeve fitted to the lower portion of the bore in said coupling nut and adapted to receive said tool, said tool having its upper end rolled down to form a slight shoulder, and said clamping member being alternately slitted from opposite ends and having the upper end of its bore reamed out to receive such shoulder.

4. In a device of the character described, the combination of a shank, a coupling nut adapted to be threaded onto the end of said shank, the lower portion of the bore in such coupling nut being tapered, a tool, and an annular clamping member fitted to the lower portion of the bore in such coupling nut and adapted to receive said tool, the upper edge of the body of said tool being rolled down to form a slight shoulder, and the upper end of the bore in said clamping member being reamed out to receive the shoulder thus formed, the upper end of such punch body having its bearing surface reduced, whereby the strain is brought within the body of the punch when the device is in operation, substantially as described.

5. In a device of the character described, the combination of a shank, a coupling nut adapted to be threaded onto the end of said shank, the lower portion of the bore in such coupling nut being tapered, a tool, and a clamping member comprising an annular sleeve fitted to the lower portion of the bore in said coupling nut and adapted to receive said tool, the upper edge of the body of said tool being rolled down to form a slight laterally projecting shoulder, said clamping member being alternately slitted from opposite ends and having the upper end of its bore reamed out to receive such shoulder, the upper end of such punch body being left rounded, whereby the strain is brought within the body of the punch when the device is in operation, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

900,010. APPARATUS FOR PRODUCING GAS. JOSHUA J. NIX and WARREN H. FROST, Los Angeles, Cal.; said Nix assignor to said Frost. Filed Feb. 18, 1907. Serial No. 358,152.



1. An apparatus for producing gas from liquid hydrocarbons, comprising a vertical chamber open to communication with the outer air, burner means adjacent to the bottom of the chamber to heat the same internally, means for admitting hydrocarbon to the chamber between the bottom of the chamber and the heating burners and suction means connected to the upper part of the chamber to withdraw gas therefrom.

2. An apparatus for producing gas from liquid hydrocarbons, comprising a chamber open to communication with the outer air, near the bottom of the chamber, provided with means for projecting a flame downward to thereby heat the chamber internally, means for admitting hydrocarbon to the chamber between the bottom of the chamber and the jet from the burner means, and means for continual suction of gas from the chamber, above the jet from the burner means.

3. An apparatus for producing gas from liquid hydrocarbons, comprising a chamber, burner means communicating with the chamber to heat the same internally, inwardly converging air inlets surrounding said burner means and communicating with the outer air, means for injecting hydrocarbon with an elastic compressed fluid to the chamber below the jet from the burner means, and means for continual suction of gas from the chamber, above the jet from the burner means.

4. An apparatus for producing gas from liquid hydrocarbons, comprising a chamber open to communication with the outer air, burners extending oppositely to direct into said chamber, downwardly extending jets which impinge on one another adjacent to the bottom, means for admitting hydrocarbon to the chamber between said bottom and the said jets, and means for continuously drawing off gas from the chamber above the said jets.

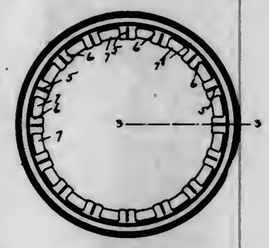
5. An apparatus for producing gas from liquid hydrocarbons, comprising a chamber open to communication with the outer air, burner means communicating with the chamber, the interior of the chamber being clear of solid obstructions in the path of the jets from said burner means, means for opposing an elastic fluid jet, to the jet from the burner means, means for supplying hydrocarbon, with an elastic fluid, to the chamber, below the said jets, and suction means connected to the chamber above the said jets, to draw off the gases from the upper part of the chamber.

[Claims 6 to 18 not printed in the Gazette.]

900,011. FIRE-POT OR LINING. EDWARD G. GERMER, Erie, Pa. Filed Jan. 31, 1908. Serial No. 413,504.

1. A fire pot or lining having vertical cells arranged in its wall and continuous openings from the cells to the

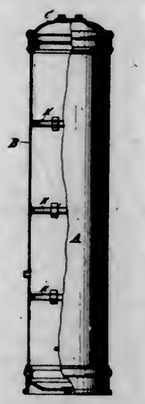
part of the fire pot or lining normally occupied by fuel, said openings extending approximately from the top to the bottom of the fire pot or lining, the inner walls of the cells projecting into the fire pot or lining beyond the intervening portions of the wall and the intervening portions of the wall being free from obstructions preventing the fuel from filling the space between the projecting walls.



2. A fire pot or lining having vertical cells arranged in its wall, and continuous openings from the cells to the part of the fire pot or lining normally occupied by fuel, said openings extending approximately from top to bottom of the pot or lining, and the inner and outer walls of the cells projecting from the intervening portions of the wall.

3. A fire pot or lining having vertical cells arranged in its wall and continuous openings from the cells to the part of the fire pot or lining normally occupied by fuel, said openings extending approximately from top to bottom of the pot or lining, the inner and outer walls of the cells projecting from the intervening portions of the wall, and the intervening portions of the wall being free from the obstructions preventing the fuel from filling the space between the projecting walls.

900,012. RANGE-BOILER. MAURICE GERSTEIN, Chelsea, Mass., assignor of one-third to Heinan Gerstein, Chelsea, Mass., and one-third to Abraham Cooper, South Boston, Mass. Filed Feb. 11, 1908. Serial No. 415,417.



A boiler consisting of a hollow cylinder closed at each end, the closure of one end consisting of a head provided with a cylindrical extension the outer diameter of which is substantially equal to the internal diameter of the hollow cylinder, the cylindrical extension and the end of the hollow cylinder being provided with annular depressions mutually engaging each other, the end of the hollow cylinder being also provided with an inwardly turned flange engaging the head, a band provided with an inturned flange fitted tightly over the end of the hollow cylinder, the inturned flange of the band being in contact with the inturned flange of the hollow cylinder.

900,013. ROTARY ENGINE. SAMUEL HAUDENSHIELD, Carnegie, Pa. Filed Apr. 18, 1907. Serial No. 369,023.



1. In a rotary engine, the combination of a casing having a grooved bore formed therein, a base supporting said casing and having exhaust ports formed therein communicating with said bore, valves movably mounted in said exhaust ports, an enlargement carried by said casing and having inlet ports formed therein, a steam chest carried by said enlargement, slide valves mounted in said chest for controlling said inlet ports, plates carried by said casing, annular tapering blocks adjustably mounted upon the inner side of said plates, a shaft journaled in said plates and blocks, a head carried by said shaft within said casing and arranged eccentrically with relation to the bore thereof, radially disposed pistons movably mounted in said head, piston actuating arms connecting with said pistons and engaging said tapering blocks, packing carried by said pistons, and packing arranged in said enlargement and adapted to engage said head.

2. In a rotary engine, the combination of a casing, a base supporting said casing and having exhaust ports formed therein, valves controlling said ports, said casing having inlet ports formed therein, a steam chest carried by said casing and communicating with said inlet ports, valves located in said chest for controlling said inlet ports, plates carried by the sides of said casing, a shaft journaled in said plates, a head mounted upon said shaft within said casing, radially disposed pistons arranged in said head, piston actuating arms connecting with said pistons upon the sides of said head, packing carried by said pistons, and means carried by the inner sides of said plates for guiding said piston actuating arms and normally maintaining said pistons in engagement with the inner sides of said casing.

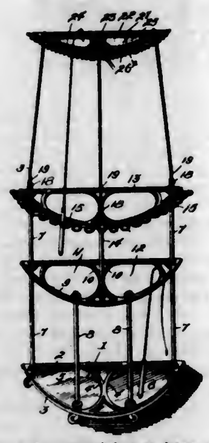
3. In a rotary engine, the combination of a casing, having a bore formed therein, a base supporting said casing and having exhaust ports formed therein, an enlargement carried by said casing and having inlet ports formed therein, plates carried by the sides of said casing, a shaft journaled in said plates, a head mounted upon said shaft within said casing, a piston movably mounted in said head, piston actuating arms arranged upon the sides of said head, packing carried by said pistons, means carried by the inner sides of said plates for guiding said piston actuating arms, and means arranged at one side of said engine for controlling the inlet and exhaust ports thereof.

4. In a rotary engine, the combination of a casing having a bore formed therein, a base supporting said casing and having exhaust ports formed therein, an enlargement carried by said casing and having inlet ports formed therein, plates carried by the sides of said casing, a shaft journaled in said plates, a head mounted upon said shaft, pistons movably mounted in said head, piston actuating arms arranged upon the sides of said head, means arranged upon the inner sides of said plates and engaging said arms for normally holding said pistons in engagement with the inner sides of said casing, and valves for controlling said ports, and reversing said engine.

5. In a rotary engine, the combination of a casing having a bore formed therein, a base supporting said casing and having exhaust ports formed therein, an enlargement carried by said casing and having inlet ports formed therein, plates carried by the sides of said casing, a head eccentrically journaled in said casing, pistons movably mounted in said head, piston actuating arms arranged upon the sides of said head, means carried by the inner sides of said plates for guiding and adjusting said arms, and valves operable from the side of said engine for controlling said ports.

[Claims 6 to 15 not printed in the Gazette.]

900,014. DISPLAY-RACK. FRIEDRICH HENNERMANN, Van Wert, Ohio. Filed Apr. 10, 1908. Serial No. 426,322.



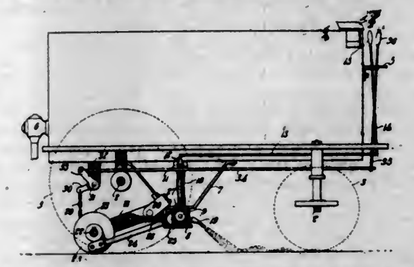
1. A display rack comprising a base section having a straight edge and a curved edge, standards rising from the base section, a holding section supported on said standards and corresponding in size and shape to the base section, said base section being formed with recesses, a holding section formed with openings to aline with said recesses, an engaging section corresponding in size and shape to the holding section and supported in part by the standards rising from the base section, and a strip carried by the engaging section and formed to provide a series of clamps.

2. A display rack comprising a base section having a straight edge and a curved edge, standards rising from the base section, a holding section supported on said standards and corresponding in size and shape to the base section, said base section being formed with recesses, a holding section formed with openings to aline with said recesses, an engaging section corresponding in size and shape to the holding section and supported in part by the standards rising from the base section, a strip carried by the engaging section and formed to provide a series of clamps, supporting rods adjustably connected to the standards rising from the base, and an adjustable section carried by said rods, said adjustable section being formed with a series of radiating fingers to coöperate with the clamps for supporting the article to be displayed.

900,015. STREET-FLUSHING APPARATUS. JOSEPH HILL, Williamsport, Pa., assignor of one-third to Robert L. Signor, Wilkinsburg, Pa. Filed Apr. 12, 1907. Serial No. 367,789.

1. A street flushing apparatus comprising a suitable vehicle, a water tank carried thereby, a nozzle below the tank and adapted to direct a stream of water downwardly at an angle against the street surface, a carrier for the nozzle depending from said vehicle and adapted for oscillation about a vertical axis, and means for causing the oscillation of the nozzle to direct the stream of water to each side of the central line of travel of the nozzle along the street by the progressive travel of the vehicle along the street.

2. A street flushing apparatus comprising a suitable vehicle, a water tank carried thereby, a carrier depending from the vehicle in its longitudinal median plane and adapted for oscillation about a vertical axis, nozzles mounted on said carrier on opposite sides of its axis and arranged to direct each a stream of water downwardly at an angle against the street surface, and means for oscillating the carrier and the nozzles mounted thereon to direct streams of water alternately to each side of the line of travel by the progressive movement of the vehicle.



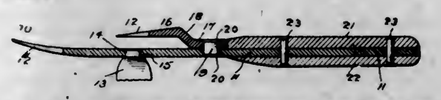
3. A street flushing apparatus comprising a suitable vehicle, a tank mounted thereon, an oscillating carrier, spraying heads carried thereby, connections between the tank and the carrier at the axis of oscillation of the latter, a frame pivotally supported at one end from the tank, a wheel or roller at the other end of the frame arranged for engagement with the roadway surface, and a pitman connecting said wheel or roller with the oscillating carrier at one side of its axis of oscillation.

4. A street flushing apparatus comprising a suitable vehicle, a tank mounted thereon, spraying heads, a carrier therefor mounted on the vehicle for oscillation on a vertical axis and carrying said spraying heads so as to direct the streams issuing therefrom in a downwardly inclined direction against the roadbed, a drive wheel and connections for oscillating the spraying head carrier, mounted on said vehicle, a spring for urging said drive wheel against the roadway, and means for lifting said drive wheel away from the roadway against the action of the spring.

5. In a street flushing apparatus, a suitable vehicle, a water tank carried thereby, nozzles shaped to direct a wide, thin stream of water at an angle toward the street surface, and means for oscillating said nozzles to direct the streams issuing therefrom alternately to either side of the median line of travel of the vehicle by the progressive movement of said vehicle along the street.

[Claims 6 to 9 not printed in the Gazette.]

900,016. NAIL-PULLER. WILLIS F. HOBBS, Bridgeport, Conn., assignor to The Bridgeport Hardware Manufacturing Corporation, Bridgeport, Conn., a Corporation of Connecticut. Filed Jan. 25, 1908. Serial No. 412,597.



1. A nail puller comprising an outer claw formed at the end of a substantially straight bar and an inner claw projected forward in the same direction as the outer claw and having an offset shank separate from but secured to the bar, the tip of the outer claw being deflected to substantially the plane of the inner claw, the outer claw being formed to operatively engage a nail when the inner claw is uppermost and the inner claw being formed to operatively engage a nail when the tip of the outer claw acts as a fulcrum on the surface of the article from which the inner claw is to pull the nail.

2. A nail puller comprising an outer claw formed at the end of a substantially straight bar and an inner claw projected forward in the same direction as the outer claw

and having an offset shank separate from but secured to the bar, the tip of the outer claw being deflected to substantially the plane of the inner claw, the outer claw being formed to operatively engage a nail when the inner claw is uppermost and the inner claw being formed to operatively engage a nail when the tip of the outer claw acts as a fulcrum on the surface of the article from which the inner claw is to pull the nail, and a fulcrum projection secured to said bar at a distance from its claw end substantially equal to the distance between the two claws, said fulcrum projecting from the face of the bar opposite that to which the inner claw is attached.

3. A nail puller comprising an outer claw formed at the end of a substantially straight bar and an inner claw projecting forward in the same direction as the outer claw and having an offset shank separate from but secured to the bar, the tip of the outer claw being deflected to substantially the plane of the inner claw, the outer claw being formed to operatively engage a nail when the inner claw is uppermost and the inner claw being formed to operatively engage a nail when the tip of the outer claw acts as a fulcrum on the surface of the article from which the inner claw is to pull the nail, the handle end of the bar being flat, and strips of wood on opposite faces of the handle end of the bar and riveted thereto, one of said strips abutting against the shank of the inner claw.

900,017. PROCESS OF VULCANIZING WOOD. CHARLES HOWARD, New York, N. Y., assignor to National Wood-Vulcanizing Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 7, 1907. Serial No. 387,403. Renewed Aug. 7, 1908. Serial No. 447,480.

1. The herein described process of vulcanizing wood, which consists in subjecting the unheated wood to a vacuum, treating the wood with moist heat, subjecting the wood to the combined action of dry heat and a vacuum, and gradually cooling the wood while maintaining said vacuum.

2. The herein described process of vulcanizing wood, which consists in subjecting the unheated wood to a vacuum, treating the wood with moist heat at a pressure above that of the atmosphere, subjecting the wood to the combined action of dry heat at an increased temperature and a vacuum, and gradually cooling the wood while maintaining said vacuum.

3. The herein described process of vulcanizing wood, which consists in subjecting the unheated wood to a vacuum, treating the wood with saturated steam at approximately 230° F., subjecting the steamed wood to the combined action of dry heat at an increased temperature and a vacuum, and gradually cooling the wood while maintaining said vacuum.

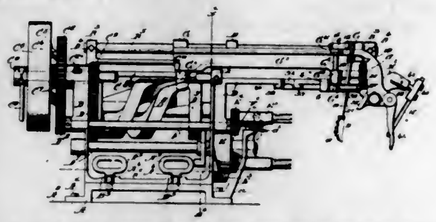
4. The herein described process of vulcanizing wood, which consists in subjecting the unheated wood to a vacuum, treating the wood with saturated steam at a pressure above that of the atmosphere, subjecting the steamed wood to the combined action of a dry heat below 400° F. and a vacuum, and gradually cooling the wood while maintaining said vacuum.

5. The herein described process of vulcanizing wood, which consists in subjecting the unheated wood to a vacuum, treating the wood with saturated steam at a pressure above that of the atmosphere, subjecting the steamed wood to the combined action of a dry heat of approximately 380° F. and a vacuum, and gradually cooling the wood below the boiling temperature of water while maintaining said vacuum.

900,018. FRUIT-PARER. DAVID F. HUNT, Antrim, N. H., assignor to Hunt Manufacturing Company, a Corporation of Massachusetts. Filed Sept. 19, 1904. Serial No. 225,029.

1. In a fruit parer, a base adapted to be permanently secured to a suitable support, a framework having a foot provided with two open ended slots situated at unequal distances from the ends of the foot, paring mechanism carried by said framework, and clamping screws screw-threaded to the base and entering said slots.

2. In a fruit parer, a base adapted to be permanently secured to a suitable support, a framework carrying paring mechanism, said framework having a foot provided with slots the upper surface of the foot being higher on one side of each slot than on the other, and a clamping screw extending through each slot and into the base, each screw having a shoulder to engage the high side of the corresponding slot.



3. In a fruit parer, a suitably supported skeleton drum having projecting ribs presenting between them an endless spiral slot extending once around the drum and from one end to the other thereof, a driving gear connected to and concentric with said drum, a knife-carriage having fixed thereto a projection which enters the slot in the drum, a paring knife on said carriage, a fork-carrying reel, a plurality of forks carried thereby, and means connected with the drum to intermittingly move said reel.

4. In a fruit parer, a fork-carrying reel having a plurality of hollow sleeves, a fork rotatably mounted in each sleeve, each fork comprising a hollow shank presenting at one end tines and screw-threaded at the opposite end, a pinion screw-threaded to the latter end of each shank, each pinion engaging the corresponding sleeve, and a ring-shaped track against which the outer face of each pinion travels, said track preventing longitudinal movement of the fork.

5. In a fruit parer, a fork having at one end thereof tines, the front or leading edge of each tine being substantially parallel with the longitudinal axis of the fork and situated in a substantially radial plane, and the other edges being inclined to the front or leading edges.

[Claims 6 to 13 not printed in the Gazette.]

900,019. METAL LATHING. WILLIAM G. HERLBERT, Niles, Ohio, assignor to The Bostwick Steel Lath Company, Niles, Ohio, a Corporation of Ohio. Filed May 28, 1908. Serial No. 435,538.

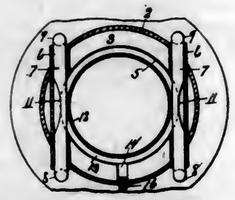


1. A metal lath consisting of a sheet of metal having a series of loops projecting therefrom, each loop being arched and having its sides bent toward each other.

2. A metal lath consisting of a sheet of metal having a series of loops projecting therefrom, each loop having its sides bent substantially parallel with each other at the center of the loop.

900,020. LAMP-FOUNT-ATTACHING DEVICE. WILLIAM T. JONES, Detroit, Mich., assignor to The Edmunds & Jones Mfg. Co., Detroit, Mich., a Corporation of Michigan. Filed July 27, 1907. Serial No. 385,793.

1. The combination of a lamp body having a depending collar with a central opening therethrough, rotary locking bolts crossing the opening of the collar between the extremities of opposed arcs of said opening, the end portions of said bolts passing through and supported in the wall of said collar, the terminals of said bolts exterior to said wall being bent at an angle to the axis and the central portion of said bolts having milled faces concentric with the collar opening, a lamp font having in the wall thereof near its upper end a circumferential recess, the upper end of said font entering the opening of the collar and the locking bolts being adapted by a rotation thereof to engage in said recess in the wall of the font.



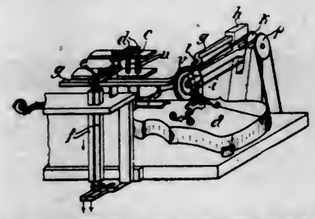
2. In a lamp, the combination of a lamp body having a depending annular collar provided at its lower edge with an inwardly projecting horizontal shoulder, a rotary locking bolt within said collar crossing between opposite portions of the annular wall thereof and journaled at its ends in said opposite portions of said wall, that portion of the locking bolt intermediate its ends lying upon and supported by said shoulder, and having a milled face concentric with the collar opening, a lamp font having a reduced upper portion adapted to enter the opening of the collar, the wall of said font having a circumferential recess in which said locking bolt is adapted to engage, and means for rotating said bolt.

3. In a lamp, the combination of a lamp body having a depending annular collar with a central opening therethrough, a tube within said collar crossing between opposite portions of the annular wall thereof and rigidly supported at its ends in said opposite portions of said wall, said tube having an opening in its inner side concentric with the central opening through the collar, a locking bolt passing through said tube and rotatable therein, that portion of the locking bolt intermediate its ends having a milled face concentric with the collar opening and registering with the opening in said tube, a lamp font having a reduced upper portion adapted to enter the opening of the collar, the wall of said font having a circumferential recess in which said locking bolt is adapted to engage when turned to present its straight side thereto, and means for rotating said bolt.

4. In a lamp, the combination with a lamp body having a depending collar with a central opening therethrough, of locking bolts crossing the interior of said collar and at their ends passing through apertures in the wall thereof, the end portions of said bolts exterior to said wall being bent at an angle to the axis thereof to facilitate their rotation and prevent their withdrawal from said apertures in the wall of the collar, each of said bolts having a milled face concentric with the collar opening, a lamp font adapted to be inserted in the opening of the collar, having a shoulder adapted to be engaged by said bolts when turned to present their straight sides to said shoulder.

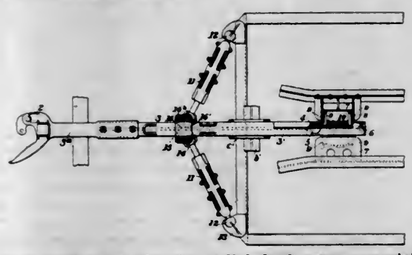
5. In a lamp, the combination of a lamp body having a depending annular collar with a central opening therethrough, a tube within said collar crossing between opposite portions of the annular wall thereof and rigidly supported at its ends in said opposite portions of said wall, said tube having an opening in its inner side concentric with the central opening through the collar, a locking bolt passing through said tube and rotatable therein, that portion of the locking bolt intermediate its ends having a milled face concentric with the collar opening and registering with the opening in said tube, the terminals of said bolt projecting beyond the ends of said tube and bent at an angle to the axis thereof to facilitate the rotation of said bolt and prevent its withdrawal from said tube, a lamp font having a reduced upper portion adapted to enter the opening of the collar, the wall of said font having a circumferential recess in which said locking bolt is adapted to engage when turned to present its straight side thereto.

900,021. PIANO-VIOLIN. WILHELM KLINK, Hamburg, Germany, assignor to Hermann Hegeler, Oldenburg, Germany. Filed May 17, 1907. Serial No. 374,190.



In a stringed instrument the combination of a stand, a violin having one string arranged on this stand, a finger-board arranged on said stand, a plurality of fingering rods (*c*) arranged over the string and the finger-board, springs (*u*) normally raising the fingering rods, guides which guide the rods over the string, a plurality of pivoted levers (*d*) to operate the fingering rods respectively, a plurality of levers (*e*) to operate the levers (*d*) respectively, a plurality of bars (*f*) movably connected with the levers (*c*), a plurality of keys movably connected with the bars (*f*), a device having a driving roller (*p*), rollers operatively arranged in the said device, a band passing around the rollers and normally held slightly away from the string, a pivoted and counterweighted yoke, connections between the levers and the yoke and means for holding rosin on the band.

900,022. RADIAL DRAFT-GEAR. HARRY T. KRAKAU, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed May 11, 1906, Serial No. 316,296. Divided and this application filed Aug. 18, 1906. Serial No. 331,203.



1. A truck-connection for radial draft-gears comprising a rod having at its end a member of a ball-and-socket joint.

2. A truck-connection for radial draft-gears comprising telescopically interfitted rods having at the outer end of each a member of a ball-and-socket joint.

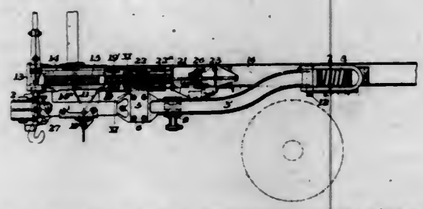
3. A center member of a truck-connection for radial draft-gears, said center member adapted to be secured to the draft-member and having on one side a member of a ball-and-socket joint.

900,023. DRAFT-GEAR AND BUFFING MECHANISM. HARRY T. KRAKAU, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 17, 1907. Serial No. 379,376.

1. A laterally swinging draft member mounted for longitudinal movement in buffing and draft, and a laterally swinging buffer mounted above the draft member on an independent support, and engaged with the draft member by a sliding connection which engages the sides of the buffing mechanism, substantially as described.

2. A laterally swinging draft member mounted for longitudinal movement in buffing and draft, and a laterally swinging buffer mounted above the draft member on an independent support and engaged with the draft member

by a sliding connection which engages the sides of the buffing mechanism and is fixed to the sides of the draft member, substantially as described.



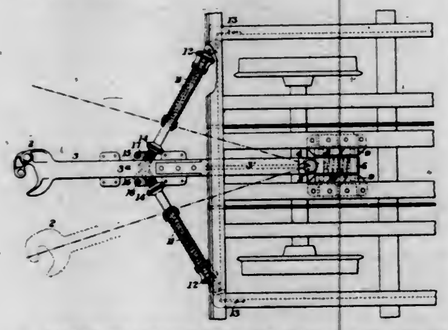
3. A laterally swinging draft-member mounted for longitudinal movement in buffing and draft, and a laterally swinging buffer mounted above the draft-member and engaged therewith by a connection which engages the sides of the buffing mechanism, said connection having a rear bearing against the buffer and being free to move independently on its forward side; substantially as described.

4. A laterally swinging T-shaped buffer having its transverse member rigid with the shank and adapted to engage a corresponding member on the buffer of another car to hold the buffers in alinement, in connection with a carry-iron on which it can move laterally and longitudinally, said buffer having arms extending above and below the carry-iron and connected at the rear to spring mechanism; substantially as described.

5. A laterally swinging buffer having at its rear an open socket, a curved segment against which the open socket fits, and means forward of said segment to hold the buffer in operative relation thereto, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

900,024. DRAFT-GEAR. HARRY T. KRAKAU, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed Nov. 17, 1905, Serial No. 287,864. Divided and this application filed Mar. 17, 1906, Serial No. 306,615. Renewed Sept. 9, 1907. Serial No. 392,044.



1. A draft gear having its spring rigging carried by the car-frame, and its draw-bar guided by the car-truck and pivotally connected to the spring rigging at a point back of the front end of the truck frame; substantially as described.

2. A draft gear having its spring rigging carried by the car-frame, and its draw-bar connected with the car-truck at a point on the draw-bar forward of the truck frame and pivoted to the spring rigging at a point back of the front end of the truck-frame; substantially as described.

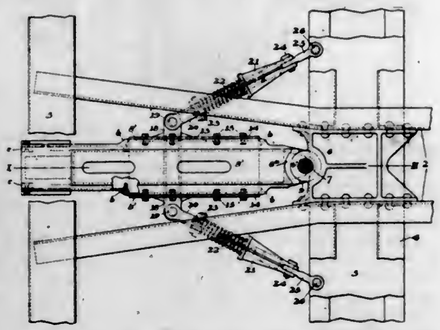
3. A laterally-swinging draft-gear having guiding connections with the truck composed of members with ball-and-socket joints.

4. A laterally-swinging draft-gear having guiding connections with the truck composed of members with universal joints.

5. A laterally-swinging draft-gear having guiding connections with the truck composed of members with an intermediate elbow-lever pivoted on the draft-gear.

[Claim 6 not printed in the Gazette.]

900,025. RADIAL DRAFT-GEAR. HARRY T. KRAKAU, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 13, 1905, Serial No. 260,264. Renewed Sept. 17, 1907. Serial No. 393,324.



1. A radially movable draft-gear having a frame adapted to carry longitudinal parts of the draft rigging, said frame pivoted with a socket connection at its rear end to the car-frame, and having an end bearing at the socket, and a pivot pin holding the frame at the socket and fitted in a hole of somewhat larger diameter than the pin; substantially as described.

2. A draft-gear having a radially movable frame adapted to contain the longitudinally-movable parts of the draft-rigging, and an attached bottom support for the frame, having lateral bolting flanges and a middle guiding portion for the drawbar yoke; substantially as described.

3. A draft-gear having a radially movable frame adapted to contain the longitudinally movable parts of the draft-rigging, and an attached bottom support formed to receive a guiding truck-connection; substantially as described.

4. A draft-gear having a radially movable frame adapted to contain the longitudinally movable parts of the draft-rigging, and an attached bottom support having lugs to receive a guiding truck-connection; substantially as described.

5. A draft-gear having a radially movable frame adapted to contain the longitudinally movable parts of the draft-rigging, and an attached bottom support having depending lugs to receive a guiding truck-connection; substantially as described.

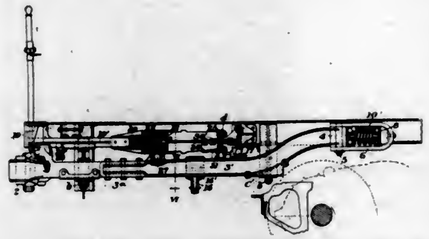
[Claims 6 to 22 not printed in the Gazette.]

900,026. RADIAL DRAFT-GEAR. HARRY T. KRAKAU, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 11, 1906, Serial No. 316,296. Renewed Oct. 14, 1907. Serial No. 397,355.

1. A laterally swinging buffer in combination with a curved segment against which a part of the buffer bears and a bracket secured to the frame of the car and supporting the segment, substantially as described.

2. A curved guiding segment in combination with the shank having a flange adapted to fit one surface of the segment, and a removable piece securing the shank detachably to the other face of the segment; substantially as described.

3. A radially-swinging draft-gear and a floating buffer, said draft-gear having an engagement with the buffer at the front and rear portions and at an intermediate portion permitting relative longitudinal motion of these parts; substantially as described.

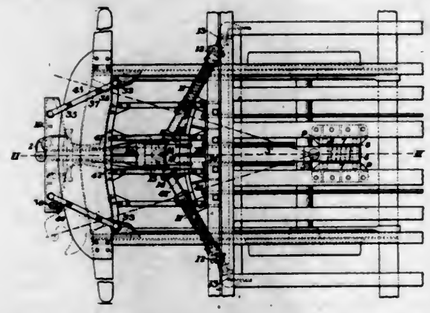


4. A radially swinging draft gear and floating buffer, said draft gear having a coupling-head engaged with the buffer by engagement permitting relative motion of these parts in the direction of the length of the car, substantially as described.

5. A laterally-swinging draft-gear and floating buffer connected for simultaneous lateral movements, said draft-gear being arranged below the buffer and being curved upwardly back of the buffer, to the pivotal connection on which it swings laterally; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

900,027. DRAFT-GEAR. HARRY T. KRAKAU, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 24, 1908. Serial No. 422,889.



1. A laterally-swinging draft-member mounted on the car-body, and a floating-buffer having a rear bearing against an extended buffing surface and engaged with the draft-member with which it is moved laterally along said surface; substantially as described.

2. A laterally-swinging draft-member mounted on the car-body, and a floating-buffer having a rear bearing against an extended curved buffing surface and engaged with the draft-member with which it is moved laterally along said surface; substantially as described.

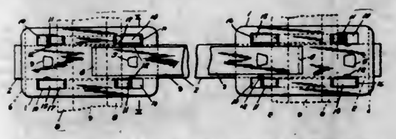
3. A laterally-swinging draft-member mounted on the car-body, and a floating-buffer having a rear bearing against an extended buffing surface and engaged with the draft-member with which it is moved laterally along said surface, said buffer being engaged with the draft-member at points near the buffing surface and forward thereof; substantially as described.

4. A laterally swinging draft member mounted on the car body and having a draft spring, a laterally swinging buffer, an extended buffing surface, the buffer having a rear bearing against the extended buffing surface, and a buffer spring, said buffer being engaged with the draft member by engaging devices permitting independent rear movement of the buffer and transmitting rear movement of the draft member to the buffer spring, substantially as described.

5. A laterally swinging draft member and buffer and a rear sliding buffing bearing for the buffer on the car frame back of the front end of the car platform.

[Claims 6 to 21 not printed in the Gazette.]

900,028. RAIL TIE AND FASTENING. JAMES H. LEWIS, Detroit, Mich. Filed Oct. 14, 1907. Serial No. 397,251.



1. A rail chair provided at each end with clamps adapted to embrace the base of an adjacent track rail, each clamp having a pair of arms extended upwardly through slots in the chair which they closely fit laterally and inturned above the plate, said clamp being adapted to be inserted from the upper side of the chair and turned to place, and one of said arms being adapted to fill its slots longitudinally and bear against its outer end when the clamp is in place.

2. A rail chair provided at each end with clamps adapted to embrace the base of an adjacent track rail, each clamp being rectangular in section and having a pair of arms extended upwardly through substantially rectangular slots in the chair which they closely fit laterally and inturned above the plate, said clamp being adapted to be inserted from the upper side of the chair and turned to place, and one of said arms being adapted to fill its slots longitudinally and bear against its outer end when the clamp is in place.

3. A rail chair provided at each end with clamps adapted to embrace the base of an adjacent track rail, each clamp having arms extending upwardly through slots in the chair, one of said arms having an inturned end adapted to bear at its lower corner on a rail flange when the clamp is being swung upwardly into horizontal position and an upper outer corner by which it may be rocked to place and a shank completely filling the chair slot when in place, and the other end being adapted to ride up on the upper face of a rail when forced inwardly toward the rail.

4. The combination with a track tie and track rails of a track chair consisting of plates each interposed between a rail and the tie and detachably connected to a spacing bar bridging the tie between the plates, and clamps each having inbent arms extending upwardly through slots in the plate beside the tie which hook over the rail base.

5. The combination with a track tie and track rails of a track chair consisting of plates each interposed between a rail and the tie, a spacing bar bridging the tie whose ends rest in longitudinal gains in the plate beneath the rails and hook into transverse slots in the plates, the upper faces of the plates and bar being flush, and clamps each having inbent arms which extend upwardly through slots in the plates beside the tie and hook over the rail base.

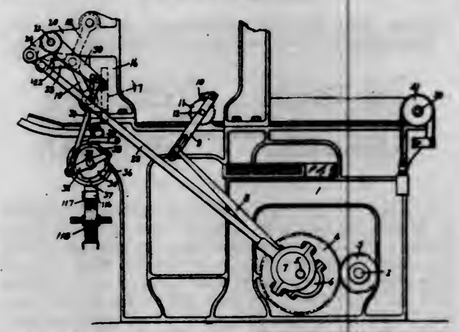
[Claims 6 to 8 not printed in the Gazette.]

900,029. MATCH-MAKING MACHINE. GEORGE P. LOOMIS, Schenectady, N. Y. Filed May 6, 1907. Serial No. 371,973.

1. In a machine of the character described, the combination of a frame having parallel sides and means for uniting them, a cutting head which extends diagonally between the sides of the frame, knives mounted on the head, a work-holder also arranged diagonally of the frame, a means causing the knives to cut the stock into splints, and holders which receive and convey the splints from the knives and move on the side portions of the frame and extend perpendicularly between them.

2. In a machine of the character described, the combination of a frame having parallel sides and means for uniting them, a cutting head which extends diagonally between the sides of the frame, knives on the head arranged diago-

nally with respect to said sides, a means for reciprocating the head and the knives, a work-holder also arranged diagonally of the frame, and holders that receive and convey the splints from the knives and which extend perpendicular to the sides of the frame.



3. In a machine of the character described, the combination of a frame having parallel sides and means for uniting them, a reciprocating head mounted on the frame and extending diagonally between the sides, guides directing the movements of the head, a crank for reciprocating the head, knives mounted on the head, the cutting surfaces of which occupy a plane diagonal to that of the sides of the frame, a work-holder also arranged diagonally of the sides of the frame, and holders which receive and convey the splints from the knives, the said holders extending perpendicularly to the sides of the frame.

4. In a machine of the character described, the combination of a frame having parallel sides and means for uniting them, a reciprocating head mounted on the frame and arranged diagonally with respect to the sides, knives carried by the head, the plane of the cutting surfaces being diagonal with respect to the sides, means for retracting and advancing the knives on the head with respect to their cutting positions, a work-holder also arranged diagonally with respect to the sides of the frame, and holders extending perpendicularly to the sides of the frame that receive and convey the splints from the knives after the said means has retracted them.

5. In a machine of the character described, the combination of a frame having parallel sides and means for uniting the sides, a reciprocating head mounted on the frame and extending diagonally across it with respect to the sides, knives carried by the head, and arranged in sets, a means for simultaneously retracting and advancing the corresponding knives of each set, the knives of one set having a greater travel than those of other sets, a work-holder, and holders which receive and convey the splints from the sets of knives after they have been retracted.

[Claims 6 to 25 not printed in the Gazette.]

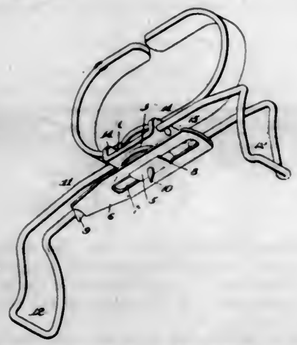
900,030. CAN-OPENER. JOSEPH H. LYNCH, Red Bank, N. J. Filed Dec. 12, 1907. Serial No. 406,154.

1. A can opener having a spindle, a centering point thereon and a tool-carrying arm, and means for engaging the point and tool with the can, the said means including a bridge which may be clamped against the can.

2. A can opener having a spindle with a handle attached thereto, and a centering point, a tool-carrying arm on the spindle, a tool on the arm, and means for adjusting the distance between the tool and point, a saddle, a bearing on the saddle for the spindle, an adjustable bridge on the saddle, and means on the bridge for engaging it with the can.

3. A can opener having a spindle, a handle for rotating the spindle and a bearing for the spindle, the said spindle carrying a cutting tool and the bearing engaging with a bridge, the said bridge having finger pieces, by means of which it may be held in place upon the can.

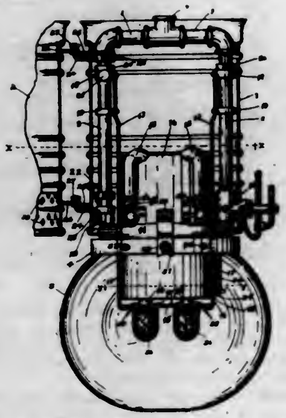
4. A can opener which has in combination a spindle, a handle for rotating the spindle, a tool-carrying arm adjustably mounted on the spindle, a tool on the arm, and a flexible bridge for supporting the bearing of the spindle in position upon the can.



5. A can opener having a tool and means for causing the tool to traverse an arc of a circle, the said means turning about a center, and a bridge for supporting the tool and having finger pieces by means of which it may be held clamped in position upon the can.

[Claim 6 not printed in the Gazette.]

900,031. GAS-LIGHT FIXTURE. JOSEPH MAAS, Kalamazoo, Mich., assignor to American Gas Light Company, Kalamazoo, Mich., a Corporation. Filed May 21, 1908. Serial No. 434,047.



1. In a gas light fixture, the combination of a gas supply pipe, a regulating valve interposed therein, a gas ring connected with said supply pipe, a chimney, a plurality of Bunsen tubes communicating with the gas ring and passing over the wall of the chimney and down the inside thereof, burner tips upon the lower ends thereof, and mantles supported below such burner tips.

2. In a gas light fixture the combination of a gas supply pipe, a regulating valve interposed therein, a gas ring connected with said supply pipe, a chimney, a plurality of Bunsen tubes communicating with the gas ring and passing over the wall of the chimney and down the inside thereof, burner tips upon the lower end thereof, and mantles supported below such burner tips, such burner tubes being removable from connection with the gas supply therefor.

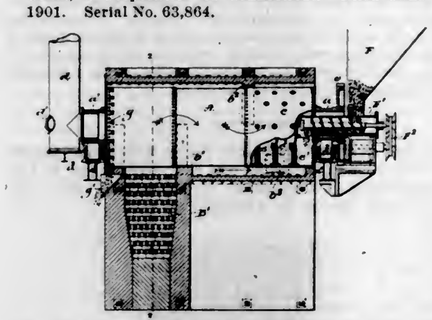
3. In a gas light fixture, the combination of a gas supply pipe, a regulating valve interposed therein, a gas ring connected with said supply pipe, a chimney, a plurality of Bunsen tubes communicating with the gas ring and passing over the wall of the chimney and down the inside thereof, burner tips upon the lower ends thereof, mantles supported below such burner tips, the chimney being provided upon its upper edge with means for vertically alining with the mantles the burner tubes passing over the chimney top.

4. In a gas light fixture the combination of a gas supply pipe, a regulating valve interposed therein, a gas ring connected with said supply pipe, a chimney, a plurality of Bunsen tubes communicating with the gas ring and passing over the wall of the chimney and down the inside thereof, burner tips upon the lower ends thereof, mantles supported below such burner tips, and means for vertically alining with the mantles the burner tubes passing over the chimney top.

5. In a gas light fixture, the combination of a gas supply pipe, a regulating valve interposed therein, a gas ring connected with said supply pipe, a chimney, a plurality of Bunsen tubes communicating with the gas ring and passing over the wall of the chimney and down the inside thereof, burner tips upon the lower end thereof, a mantle-carrying frame below such burner tips, mantles carried by such frame and means for vertically adjusting the mantle-carrying frame.

[Claims 6 to 9 not printed in the Gazette.]

900,032. DRYING AND HEATING APPARATUS FOR STONE. LOUIS N. MCCARTER, Norristown, Pa., assignor to The International Pavement Company, Hartford, Conn., a Corporation of Connecticut. Filed June 10, 1901. Serial No. 63,864.



1. In a drying apparatus a revolving drier, means to cause travel of the material to be dried from the inlet end of said drier to the delivery end thereof, an exterior combustion chamber adjacent the delivery end of said drier, and means to cause the products of combustion therefrom to flow exteriorly of said drier towards the inlet end thereof and admission openings for said products of combustion located only near the inlet end of said drier.

2. In a drying apparatus a revolving drier, means to cause travel of the material to be dried from the inlet end of said drier to the delivery end thereof, an exterior combustion chamber adjacent the delivery end of said drier, and means to cause the products of combustion therefrom to flow exteriorly of said drier and by a tortuous path towards the inlet end thereof and to return within the said drier.

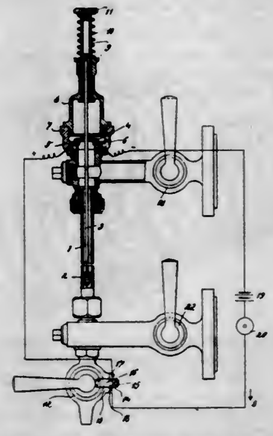
3. In a drying apparatus a revolving drier containing a spiral feed device, a combustion chamber adjacent the delivery end of said drier, and means to cause the products of combustion therefrom to flow exteriorly towards the opposite inlet end thereof and to return within said drier.

4. In an apparatus of the class described a revolving drier containing a spiral feed device, an inclosing setting for said drier containing a combustion chamber and means to cause the products of combustion therefrom to flow exteriorly of said drier toward the opposite inlet end thereof and to return within the said drier, and alternately arranged arches and inverted arches to cause said products of combustion to pursue exteriorly a tortuous path in traversing the length of said drier.

5. An apparatus of the class described containing a revolving drier, constructed to receive the material to be heated at one portion, and deliver said material at the opposite portion, and means to produce a tortuous conduit for the products of combustion through the interior of said drier in the same direction as that of the travel of the material to be heated.

[Claims 6 to 28 not printed in the Gazette.]

900,033. WATER-GAGE. SIEGFRIED NEUTRA, Vienna, Austria-Hungary, assignor to Wilhelm Kaufmann, Vienna, Austria-Hungary. Filed Mar. 24, 1908. Serial No. 422,947.



1. In a water gage, the combination with a source of electric current; of a signal device connected with said source; a casing having a part thereof acting as a testing device and provided with a pair of contacts connected with said source of electric current and separated from each other electrically by a gap; and a buoyant make-and-break device mounted within said casing; said testing device being accessible from without said casing and manually operable to force said make-and-break device into electrical connection with said contacts to bridge electrically the gap therebetween.

2. In a water gage, the combination with a source of electric current; of a signal device connected with said source; a casing provided with a pair of contacts connected with said source of electric current and separated from each other electrically by a gap; and a buoyant spindle mounted within said casing and provided with a disk adapted to bridge electrically the gap between said contacts, said spindle being accessible for manual control to force said disk against said contacts.

3. In a water gage, the combination with a source of electric current; of a signal device connected with said source; a casing having a part thereof acting as a testing device and provided with a pair of contacts connected with said source and separated from each other electrically by a gap; and a buoyant spindle provided with a conductor adapted to bridge electrically the gap between said contacts; said testing device being manually operable to be pressed upon said spindle and thereby to force said conductor into electrical connection with said contacts to bridge electrically the gap between the latter.

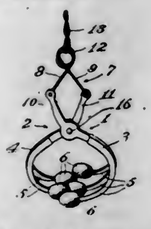
4. In a water gage, the combination with a source of electric current; of a signal device connected with said source; a casing having a part thereof acting as a tubular testing device and provided with a pair of contacts, the latter being connected with said source and being separated from each other electrically by a gap; and a buoyant spindle provided with a conductor adapted to bridge electrically the gap between said contacts and extending into said tubular testing device; the latter being arranged to guide

said spindle and manually operable to press the same downwardly and thereby to force said conductor into electrical connection with said contacts.

5. In a water gage, the combination with a source of electric current; of a signal device connected with said source; a casing provided with a cock having a movable plug member and with a pair of contacts connected with said source and separated electrically from each other by a gap; a make-and-break device mounted within said casing and adapted to bridge electrically the gap between said contacts; and a switch controlled by said plug member for interrupting the flow of current from said source when the cock is open and for restoring the flow of current from said source when the cock is closed.

[Claim 6 not printed in the Gazette.]

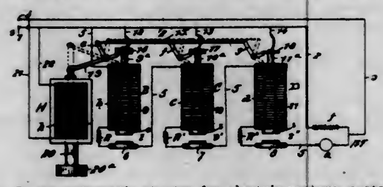
900,034. CLASP. JOHN V. NEWTON, Los Angeles, Cal. Filed June 12, 1905. Serial No. 264,918. Renewed Feb. 14, 1908. Serial No. 415,967.



1. A clasp comprising tongs having crossed arms, said arms being provided with gripping terminals at one end and at the other end with resilient closing means, said means consisting solely of a spring having a coil at the middle thereof and crossed ends, one of which is pivotally attached to each arm of the tongs.

2. A clasp comprising tongs having crossed arms, said arms being provided with gripping terminals at one end and at the other end with resilient closing means, said means consisting solely of a substantially V-shaped spring, each end of which is pivotally attached to an arm of the tongs.

900,035. ELECTRIC-MOTOR STARTER. WILLIAM C. O'BRIEN, Baltimore, Md., assignor to Monitor Manufacturing Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Original application filed Oct. 23, 1905. Serial No. 284,105. Divided and this application filed Sept. 10, 1906. Serial No. 333,987.



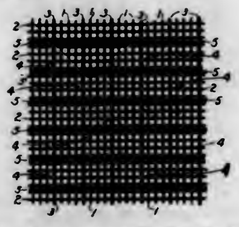
1. In an automatic starter for electric motors, a starting resistance for the armature circuit, a regulating device having windings in said circuit and having a core or armature, a switch for cutting out said resistance, said switch being normally open and movable by said core or armature to closed position, electro-magnetic holding means having a core or armature, and connections between said cores or armatures whereby the core or armature of the holding means serves as a means for normally overbalancing the core or armature of the regulating device to permit the switch to remain open, said holding means being arranged to retract its core or armature when current is turned on.

2. In an automatic starter for electric motors, a starting resistance for the armature circuit, and a series of regulating devices each having windings in said circuit and each having a core or armature, switches for cutting out said resistance and windings, said switches being normally open and movable by said cores or armatures to closed position, an electromagnetic holding device having a core or armature, and connections between said cores whereby the core or armature of the holding device serves as a means for normally overbalancing the cores or armatures of the several regulating devices to permit the switches to remain open, said holding device being arranged to retract its core or armature when current is turned on.

3. In an automatic starter for electric motors, a starting resistance in the armature circuit, a regulating solenoid having windings in said circuit, a switch for short-circuiting said resistance and windings, said switch being connected to the core of said solenoid and movable therewith by gravity to closed position, a lever movable independently of said core and adapted to move said core to open the switch, and a holding solenoid having a core connected to said lever and adapted to overbalance the core of the regulating solenoid and hold said latter core with the switch in open position, said holding solenoid being adapted to move the lever so as to release the core of the regulating solenoid when the current is turned on.

4. In an automatic starter for electric motors, a starting resistance in the armature circuit, a plurality of regulating solenoids having windings in said circuit, switches for short-circuiting said resistance and windings, said switches being connected to the cores of said solenoids, and movable therewith by gravity to closed position, a lever movable independently of said cores and means connected with the lever for moving said cores to open the switches, and a holding solenoid having a core connected to said lever and adapted to overbalance the cores of the regulating solenoids and hold said latter cores with the switches in open positions, said holding solenoid being adapted to move the lever so as to release the cores of the regulating solenoids when current is turned on.

900,036. WOVEN FABRIC. ISAAC E. PALMER, Middletown, Conn., assignor to The I. E. Palmer Co., Middletown, Conn., a Corporation of Connecticut. Filed Feb. 17, 1908. Serial No. 416,202.



1. A woven fabric composed of body warp and weft threads, spaced floating warp threads and spaced floating weft threads forming intersecting sets, said sets of floating threads being bound at intervals, and the said binding of one of said sets of floating threads being effected by body threads, the spacing of said floating threads being such that the face of the fabric has intersecting protruding ridges forming bounding walls of superficial pockets.

2. A woven fabric composed of body warp and weft threads, spaced floating warp threads bound at intervals by the body weft threads, and spaced floating weft threads passing over and under floating warp threads the fabric thus presenting a face having intersecting ridges forming bounding walls of superficial pockets.

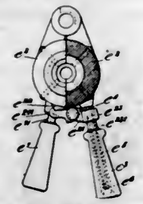
3. A woven fabric composed of body warp and weft threads, floating warp threads bound at intervals by the body weft threads, and floating weft threads passing over and under floating warp threads, but passing above the body warp threads.

4. A woven fabric composed of body warp and weft threads, spaced floating warp threads bound at intervals by the body weft threads, and spaced weft threads passing over and under floating warp threads, but passing above the body warp threads, the fabric thus presenting a face having intersecting ridges forming bounding walls of superficial pockets.

5. A woven fabric composed of body warp and weft threads, both faces of said fabric having sets of floating supplemental warp and weft threads bound to the body at intervals only, the threads of said sets being spaced so that both faces have intersecting ridges forming bounding walls of superficial pockets.

[Claims 6 to 13 not printed in the Gazette.]

900,037. MACHINE FOR THE MANUFACTURE OF GLASS BOTTLES AND OTHER VESSELS. FRANK H. PIERPONT, Horley, England, assignor, by mesne assignments, to United Bottle Machinery Co., a Corporation of New York. Original application filed Jan. 26, 1903, Serial No. 140,667. Divided and this application filed July 3, 1905. Serial No. 268,211.



1. The combination with the parison and neck molds of bottle making machines, of a pawl pivoted to one of said parts, a projection on the other mold part with which the pawl coöperates to lock the parts when brought together, a spring for holding the pawl in locked position, a handle carried by the pawl whereby the initial movement of the handle in a direction to open the parts releases the pawl and unlocks the parts, the continued movement of the handle in the same direction opening the mold.

2 The combination with the parison and neck molds of bottle making machines, of a pawl pivoted on one of said parts, a projection on the other part with which the pawl coöperates to lock the parts when brought together, a hollow handle carried by said pawl, the spring pressed pin within said handle, a stop on the mold part against which the pin is forced and the pawl held in locked position, whereby the initial movement of the handle in a direction to open the parts releases the pawl and unlocks the parts, the continued movement of the handle in the same direction opening the mold.

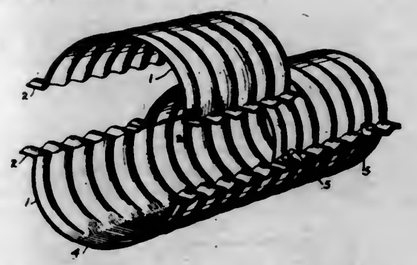
900,038. PROCESS OF TREATING EXTRACTS OF QUEBRACHO. LEOPOLD POLLAK, Wilsdorf, near Bodenbach, Austria-Hungary, assignor of one-half to Albert Redlich, Wilsdorf, near Bodenbach, Austria-Hungary. Filed Dec. 20, 1907. Serial No. 407,341.

1. The herein described process of clarifying liquid extracts of quebracho wood and for rendering them soluble in cold water, which consists in separating the mud from the liquid which stands above the same after extraction, adding a small quantity of alkali and water to the mud after such separation and applying heat, and adding a quantity of the solution thus obtained to the liquid previously separated from the mud to form flakes.

2. The herein described process of clarifying extracts of quebracho wood and for rendering the same easily soluble in cold water which consists in a hot extraction to form a mud and liquid after cooling, saponifying and rendering soluble said mud by the addition thereto of a small quantity of alkali and water and heating the resultant solution, and adding to said solution a quantity of the liquid previously drawn off from the mud to form flakes, the deposit of which leaves a liquid extract which may be drawn off in a clear condition.

3. The herein described process of clarifying extracts of quebracho wood and for rendering the tanning principles soluble in cold water which consists in adding a small quantity of alkali and water to the mud which is obtained after cooling of the liquid obtained by hot extraction after such mud has been separated from the liquid which stands above the same, and applying heat to such solution, adding a sufficient quantity of the solution thus obtained to the liquid previously drawn off from the mud to form flakes from which the liquid extract is drawn off in a clear condition after the deposit of the flakes, and rendering the phobaphenes contained in the remaining parts of the mud soluble in cold water by mixing with the solution obtained from the mud a quantity of alkali, and heating the latter mixture with tanning extracts or liquids of higher acidity.

900,039. CULVERT. JULIUS H. SCHLAFLY, Canton, Ohio, assignor to The Canton Culvert Company, Canton, Ohio, a Corporation of Ohio. Filed July 22, 1908. Serial No. 444,724.



1. A pipe section provided with a plain bottom and corrugated integral portions, substantially as and for the purpose specified.

2. As an improved article of manufacture, a pipe section having a plain portion intermediate its edges and provided with corrugations, said corrugations terminating at their inner ends adjacent the plain portion, substantially as and for the purpose specified.

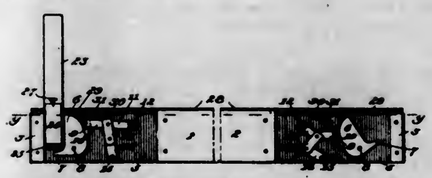
3. In a pipe of the class described, the combination of pipe sections having smooth bottoms and integral corrugated portions, substantially as and for the purpose specified.

4. A series of pipe sections or parts, said sections or parts provided with corrugated and non-corrugated surfaces, said non-corrugated surfaces located at the bottoms of the corrugations, substantially as and for the purpose specified.

5. As an improved article of manufacture, a culvert or pipe section or member constructed of metal and provided with flanges and corrugations, the inner ends of said corrugations spaced from each other, substantially as and for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

900,040. TRIP-STAKE AND BOLSTER FOR LOGGING-CARS. FRANZ J. SCHMITTNER, Germania, Pa. Filed June 13, 1908. Serial No. 438,438.



1. In a bolster for logging cars, the combination with trip-stakes, of means operated from the opposite side of the car for releasing and ejecting said stakes, substantially as described.

2. In a bolster for logging cars, the combination with a trip-stake, of an oscillatory ejector, and a trip-rod op-

erated from the opposite side of the car for actuating said ejector to cast out said stake, substantially as described.

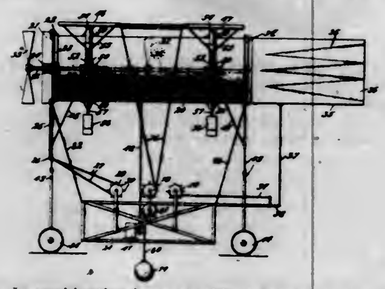
3. In a bolster for logging cars, the combination with a trip-stake, of an oscillatory ejector, a trip-lever, suitable connections between said ejector and lever, and a trip-rod operated from the opposite side of said car for actuating said trip-lever to cast out said stake, substantially as described.

4. In a bolster for logging cars, the combination with trip-stakes on opposite ends thereof, of means for ejecting either of said stakes from the side of the car opposite that occupied by said stake, said means comprising oppositely disposed trip rods, trip-levers connected with said rods, and suitably connected ejectors combined and arranged to cast out their respective stakes, substantially as described.

5. In a bolster for logging cars, the combination with trip-stakes, of an oscillatory ejector adjacent to each of said stakes, a toggle-lever normally resisting movement of said ejectors, a trip-lever for actuating each of said toggles to oscillate their respective ejectors, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

900,041. AIR-SHIP. ANTHONY R. SILVERSTON, Milwaukee, Wis., assignor of one-half to William Woods Plankinton, Milwaukee, Wis. Filed Oct. 4, 1907. Serial No. 395,869.



1. In combination in an air ship, a tubular body portion, and a bodily adjustable transverse aeroplane supported by and extending longitudinally of the tubular body.

2. In combination in an air ship, a tubular body portion, and an adjustable transverse aeroplane supported by and movable about the body as an axis.

3. In combination in an air ship, a tubular body portion, and a transverse aeroplane supported by and movable about the body as an axis.

4. In combination in an air ship, a tubular body portion, a transverse aeroplane supported by and movable about the body as an axis, and means for preventing displacement of the aeroplane with relation to the body.

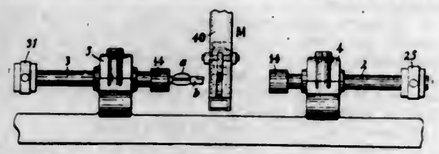
5. In combination in an air ship, a tubular body portion, an aeroplane arranged transversely of the body, and a support for the aeroplane, said support being mounted upon and rotatable about the body as an axis.

[Claims 6 to 47 not printed in the Gazette.]

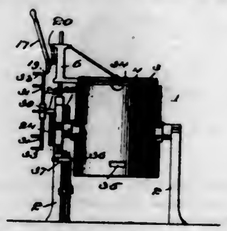
900,042. PROCESS OF TAPPING NUT-BLANKS. OSCAR A. SMITH, Cleveland, Ohio, assignor to Edwin C. Henn, Cleveland, Ohio. Original applications filed Aug. 16, 1906, Serial No. 330,894, and Aug. 24, 1906, Serial No. 331,825. Divided and this application filed Dec. 26, 1907. Serial No. 408,164.

1. The method of cutting blanks which consists in passing a double-ended tool so constructed as to cut, when moved endwise, in both directions, through a blank one end foremost, and then passing it in a reverse direction through a blank with its other end foremost.

2. The method of tapping nuts, which consists in holding a double ended tap by one end and screwing its other end foremost into a perforated nut blank, taking hold of the advancing end and screwing it entirely through the blank, releasing its opposite end, then reversing its rotation and screwing it back through another nut blank opposite end foremost.

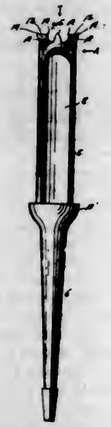


900,043. FURNACE-TILTING MECHANISM. DAVID R. STEELE, Baltimore, Md., assignor of one-half to Harry D. Harvey, Baltimore, Md. Original application filed Oct. 12, 1905, Serial No. 282,452. Divided and this application filed Mar. 1, 1906. Serial No. 303,725.



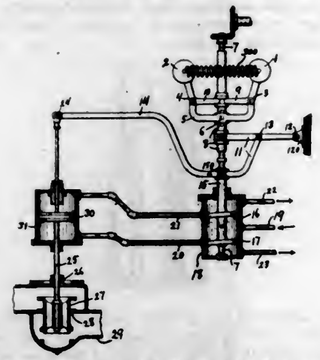
The combination of a furnace body, trunnions thereon, standards supporting said trunnions, a train of gearing connected with one of the trunnions, the wheels of said gearing mounted on the trunnion last mentioned and on an adjoining standard, means for operating the gearing, a furnace cover, an upright carried by said last-mentioned trunnion, and a cover-operating device carried by the upright.

900,044. HOLLOW AUGER. NILS E. SWANSON, Denver, Colo., assignor of one-half to Robert F. Ohlin, Denver, Colo. Filed June 10, 1907. Serial No. 378,100.



An auger having a hollow body, and an opening in one side thereof, cutters having sharp end edges and longitudinal side edges, pairs of teeth located between the said cutters, said cutters and teeth being located at one extremity of the body surrounding a central opening communicating with the hollow body, and being arranged to form an annular groove around a central plug or core which enters the hollow body as the boring operation proceeds, substantially as described.

900,045. GOVERNOR. WILLIE O. THOMAS, Riverside, Ill. Filed Apr. 17, 1907. Serial No. 368,642.



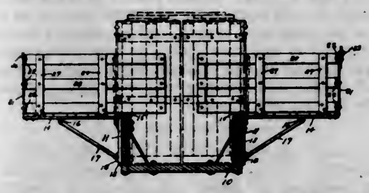
1. The combination with a valve of a pistol connected to said valve, a cylinder for said piston, means for introducing a fluid under pressure into said cylinder and for permitting its exhaust therefrom, a governor, a primary valve adapted to be moved by said governor to admit fluid to said cylinder and to permit said fluid to exhaust therefrom, said primary valve being connected with said piston to compel it to move in unison with said piston, said primary valve being adapted to be moved independently of the movements imparted thereto by either said governor or said piston to alternately admit fluid to said cylinder and permit its exhaust therefrom, and means for effecting such independent movements of said primary valve.

2. The combination with a valve of a piston connected to said valve, the cylinder for said piston, a pipe for introducing fluid under pressure into said cylinder and for permitting its exhaust therefrom, a primary valve cylinder with the interior of which said pipe communicates and with the interior of which a pipe for supplying fluid under pressure and an exhaust pipe also communicate, a rotatable valve disk contained within said cylinder, said valve disk being disposed between said fluid admission and said exhaust pipes and inclined with respect to the axis of said cylinder and being adapted to control the flow of fluid from said primary valve cylinder into said first mentioned cylinder or the exhaust of fluid from said first mentioned cylinder into said primary valve cylinder, a governor, a lever provided with an immovable fulcrum and also connected with said governor, a second lever connected with said first mentioned lever and said piston, said primary valve disk being connected with said second mentioned lever.

3. The combination with a valve of a piston connected to said valve, a cylinder for said piston, pipes for introducing fluid under pressure into said cylinder and for permitting its exhaust therefrom, a primary valve cylinder with the interior of which said pipes communicate and with the interior of which a pipe for supplying fluid under pressure and exhaust pipes also communicate, two rotatable valve disks contained within said cylinder, each of said valve disks being disposed between said fluid admission and an exhaust pipe and inclined with respect to the axis of said cylinder and being adapted to control the flow of fluid from said primary valve cylinder into said first mentioned cylinder or the exhaust of fluid from said first mentioned cylinder into said primary valve cylinder, a governor, a lever provided with an immovable fulcrum and also connected with said governor, a second lever connected with said first mentioned lever and said piston, said primary valve disks being connected with said second mentioned lever, and means to rotate said valve disks.

900,046. COMBINED STOCK AND HAY RACK FOR WAGONS. HENRY G. TILLE, Dysart, Iowa. Filed Oct. 25, 1907. Serial No. 399,116.

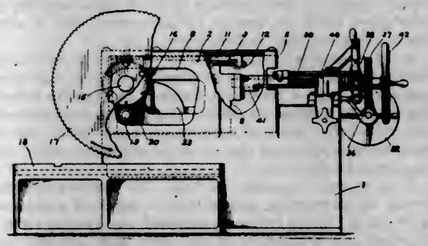
1. In a device of the class described, the combination with a wagon bed, of bars fixed to the outer surfaces of the wagon bed sides, and containing grooves narrowest at their outer portions, blocks slidingly fitted in said grooves, bracket arms hinged to the wagon bed above said grooved bars, braces pivoted to the bracket arms and to said blocks, means for limiting the downward movement of said blocks, extension sides fixed to said bracket arms, extension frames fixed to the outer ends of the bracket arms at right angles thereto, said extension frames on the opposite sides being designed to stand close together when the extension sides are in vertical positions and latch devices for holding said extension frames together when in adjacent positions and extension end pieces fixed to the extension sides, and so shaped that their inner ends project inwardly beyond the sides of the wagon bed when the extension sides are horizontal, and said ends also extend to the bottom of the bed when the extension sides are vertical.



2. In a device of the class described, the combination with a wagon bed, of bars fixed to the outer surfaces of the wagon bed sides, and containing grooves narrowest at their outer portions, blocks slidingly fitted in said grooves, bracket arms hinged to the wagon bed above said grooved bars, braces pivoted to the bracket arms and to said blocks, means for limiting the downward movement of said blocks, extension sides fixed to said bracket arms, extension frames fixed to the outer ends of the bracket arms at right angles thereto, said extension frames on the opposite sides being designed to stand close together when the extension sides are in vertical positions, latch devices for holding said extension frames together when in adjacent positions, said latch devices each comprising a plate hinged to one of the frames and provided with a slot, a slide bolt connected with said plate and a loop fixed to the adjacent frame and designed to pass through said slot, and to receive said slide bolt.

3. In a device of the class described, the combination with a wagon bed, of a front frame fixed in an upright position at the front of the wagon bed, and having at each upper corner a plate provided with a rear extension, a ladder hinged to said rear extension and capable of swinging from a horizontal rearwardly inclined position to a vertical position, in engagement with said plates, and a bolt passed through each of the hinged ends of the ladder and designed to extend through the plates when the ladder is in a vertical position, and thumb nuts on said bolts for supporting the ladder in its vertical position.

900,047. METAL-SAWING MECHANISM. ADAM TINDEL, Philadelphia, Pa., assignor to The High Duty Saw and Tool Company, a Corporation of Pennsylvania. Filed Oct. 28, 1905. Serial No. 284,782.



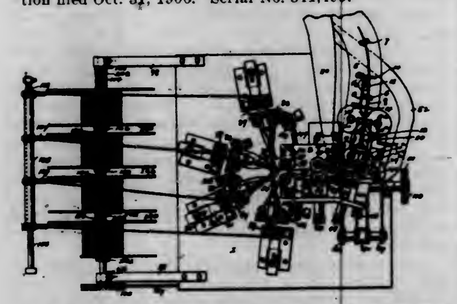
1. A metal sawing mechanism comprising a table, a housing having ways substantially parallel to said table, a carriage reciprocating along and between said ways, a

saw blade and a spur gear fixed directly thereto, means for connecting said blade and gear in revoluble relation to said carriage, a pinion engaging said gear at a point between its axis and said table, means for connecting said pinion in revoluble relation to said carriage, and means for driving said pinion.

2. A metal sawing mechanism comprising a work support, a saw blade, a gear wheel fixed directly to said blade, said blade and wheel having a common axis of revolution, a driving gear wheel engaging said first named gear wheel between said axis of revolution and said work support so that power is applied to said first named wheel in proximity to and in front of work carried by said support and the blade pulled through such work.

3. A metal sawing mechanism comprising a reciprocating carriage, a frame inclosing said carriage, an arbor journaled in said carriage, a spur gear fixed to an end of said arbor projecting beyond said carriage, a saw blade fixed directly to said spur gear, a spindle journaled in said carriage parallel to and beneath said arbor, a pinion fixed to said spindle and engaging said spur gear, and mechanism for driving said spindle.

900,048. MACHINE FOR TREATING QUILL SUBSTANCES. WILLIAM WEBSTER, London, Ontario, Canada, assignor, by mesne assignments, to The Warren Featherbone Company of Michigan, Three Oaks, Mich., a Corporation of Michigan. Original application filed Nov. 14, 1904, Serial No. 232,757. Divided and this application filed Oct. 31, 1906. Serial No. 341,499.



1. In a quill-treating machine, the combination with means for supporting and guiding a stack of quills, of means for withdrawing the quills from the stack successively and advancing them to the action of the quill-treating mechanism, substantially as described.

2. In a quill-treating machine, the combination with means for supporting and guiding a stack of superposed quills, of means for successively withdrawing the lowermost quill of the stack and advancing it to the action of the quill-treating mechanism, substantially as described.

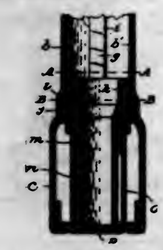
3. In a quill-treating machine, the combination with means for supporting and guiding a stack of superposed quills, of means for successively withdrawing the lowermost quill of the stack and advancing it to the action of the quill-treating mechanism, and means for depressing the superposed quills as fast as the lowermost quill is withdrawn, substantially as described.

4. In a quill treating machine, the combination with means for supporting and guiding a stack of superposed quills, of a pair of feed-rolls disposed on opposite sides of the stack in a plane transverse thereto, the peripheries of said rolls being provided with means for gripping and advancing between them the quills in successive order, substantially as described.

5. In a quill-treating machine, the combination with means for supporting and guiding a stack of superposed quills, of a pair of feed-rolls disposed on opposite sides of the stack, the peripheries of said rolls being provided with means for gripping and advancing between them the quills in successive order, substantially as described.

[Claims 6 to 34 not printed in the Gazette.]

900,049. LAMINATED METAL WHEEL-SPOKE. JOHN R. WELCH, Alexandria, Ind., assignor, by mesne assignments, to The American Steel Wheel Company, Alexandria, Ind., a Corporation of Indiana. Filed Dec. 19, 1906. Serial No. 348,538.



1. In a laminated metal wheel spoke, the combination of an outer part with an internal longitudinal joint seam, an inner layer extending from one side of the seam along the outer part to the opposite side of the seam and attached to said outer part and the seam thereof, and a tenon end part attached to said outer part and said inner layer.

2. In a laminated metal wheel spoke, the combination of a tenon end part, an outer tubular part with an internal longitudinal joint seam, and an inner layer extending from one side of the seam along the tubular part to the opposite side of the seam and attached to said tubular part and the seam thereof and attached also to said end part, said tubular part being attached also to said end part.

3. In a laminated metal wheel spoke, the combination of a tenon end part, an outer tubular main part with an internal joint seam, and an inner layer extending from one side of the seam along the outer part to the opposite side of the seam and having the inner side thereof attached to the tenon end part, said inner layer being attached to the said main part and to the seam thereof, and said tenon end part having a collar attached to the outer side of said main part, substantially as set forth.

4. In a laminated metal wheel spoke, the combination of a tenon end part, an outer tubular main part with an internal longitudinal joint seam, and an inner layer extending from one side of the seam along the main part to the opposite side of the seam and having the inner side thereof attached to the tenon end part, said inner layer being attached to the said main part and to the seam thereof.

5. In a laminated metal wheel spoke, the combination of a tenon end part, an outer tubular main part with an internal longitudinal joint seam, and an inner layer extending from one side of the seam along the main part to the opposite side of the seam and joined to the tenon end part, said inner layer being attached to the said main part and to the seam thereof, and said tenon end part having a collar attached to the outer side of said main part.

[Claim 6 not printed in the Gazette.]

900,050. OVERALLS. LEO H. WISE, New York, N. Y., assignor to Wise Brothers, New York, N. Y., a Firm. Filed June 30, 1908. Serial No. 441,120.

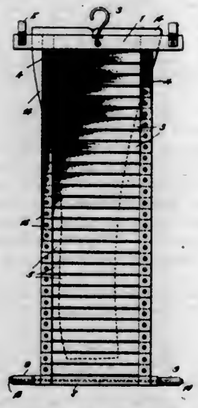
1. An overall garment for men comprising the leg-fronts; the breast-piece made of two parts, 8, united by a central vertical seam and having vertical side edges, 15, that take vertical position under the arm-pit of the wearer and a waist-band at the front only connecting said leg-fronts and breast-piece and the ends of the said front waist-band terminating at the aforesaid side edges; and the leg-backs, hip-parts and body-backs consisting of two pieces each continuous from the lower ends of the legs to the shoulder and united together at the body-back by a center vertical seam, 14, and having vertical side edges which underlap the side-edges of the said breast-piece under the arm and button thereto.

2. Overalls for men comprising the leg-fronts having front pockets and provided with a fly-opening; a breast-piece made of two parts, 8, united by a central vertical seam and having side edges, 15, that take vertical position under the arm-pit of the wearer; a waist-band at the front only connecting said leg-fronts and breast-piece and extending across the top of the fly-opening and the ends of the said waist-band terminating at the aforesaid side edges; and two back pieces each continuing from the lower



end of the legs upward to the shoulder and neck and united to the leg-fronts by an outside seam, 16, extending from the lower edge to the upper part of the front pockets, and therefrom having upward-extending free vertical side-edges which underlap the vertical side edges of the said breast-piece, and the uppermost part provided with inclined edges, 19, extending to the arm-pit.

900,051. CLOTHES PRESSER AND HANGER. LOUIS ALBERT, New York, N. Y., assignor of one-half to Harry S. Wynkoop, New York, N. Y. Filed Oct. 9, 1907. Serial No. 396,562.



1. In a clothes hanger and presser, the combination of a head for receiving one end of the article, and a plurality of springs coiled at each side of said head, between which springs the article of clothing is held and pressed, together with a series of strips connecting together the several springs on each side.

2. In a clothes hanger, the combination with a head for gripping the article, consisting of parallel strips and curved springs connecting them, and a plurality of springs coiled at each side of said head and adapted to hold between them the article to be pressed, together with slats or strips connecting together the springs at each side.

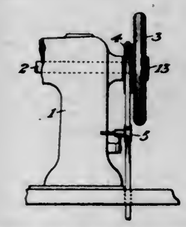
3. In a clothes hanger and presser, the combination with a head consisting of parallel strips and curved springs connecting them, said head being adapted to receive and hold a garment, of one or more extensible and collable sides each consisting of a spring or springs and a series of transverse strips or slats carried by said springs.

4. In a clothes hanger and presser, the combination with a spring head, of a pair of sides adapted to lie alongside of the article and tightly press the same, said sides each consisting of a plurality of springs and a series of transverse strips or slats connecting said springs at each side.

5. In a clothes hanger and presser, the combination with a spring head for receiving and holding one end of an article, of one or more extensible and collable sides each consisting of a spring or springs and a series of transverse strips or slats carried by the springs on each side.

[Claims 6 and 7 not printed in the Gazette.]

900,052. CLUTCH. WILLIAM M. AMMERMAN, New Haven, Conn., assignor, by mesne assignments, to Annie Elizabeth Avery, administratrix. Filed Mar. 3, 1906. Serial No. 303,950.



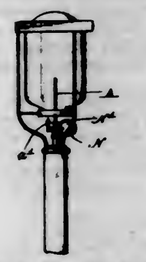
1. The combination of a shaft, a wheel connected thereto to rotate therewith, said wheel having a hub formed with a longitudinal seat, an element rotatably mounted on said hub, a clutch comprising a rocker cam supported in said seat and extending within the hub of said rotatable element, said clutch being movable to and from an operative position of clutching engagement with said rotatable element, a cap rotatably mounted on the hub of said wheel and a loose connection between said cap and clutch element.

2. The combination of a wheel having a hub, a second wheel rotatably mounted on one end of said hub, a clutch comprising a rocker-cam mounted in the hub of the first-mentioned wheel and being movable to and from an operative position of clutching engagement with the second-mentioned wheel, and a cap rotatably mounted on the end of the hub of the first-mentioned wheel opposite to that carrying said second wheel and having connection with the said cam for moving it to and from its said operative position.

3. A sewing machine hand-wheel having a hub projecting at each side thereof, said hub having a longitudinal seat, a belt-wheel or pulley rotatably mounted on the hub of said hand-wheel at one side thereof and covering said seat, a cap rotatably mounted on the hub of the hand-wheel at that side thereof opposite the said belt-wheel, and a clutch comprising a rocker-cam mounted in the seat in the hub of the hand-wheel and extending within the hub of the belt wheel and being movable to and from an operative position of clutching engagement with the belt-wheel and having connection with the said rotatable cap to be operated thereby.

4. The combination of a sewing machine hand-wheel having a hub projecting at each side thereof, a belt-wheel or pulley rotatably mounted on the hub of said hand-wheel at one side thereof, a cap rotatably mounted on the hub of said hand-wheel at that side thereof opposite the said belt-wheel, means for holding the cap against endwise displacement from the hand-wheel hub, and a clutch comprising a rocker-cam mounted in the hub of the hand-wheel and being movable to and from an operative position of clutching engagement with the belt-wheel and having connection with the said cap to be operated thereby.

900,053. TIME-CONTROLLED MECHANISM. MATHIAS K. BAUER, Evanston, Ill., assignor of one-half to Joseph Heinzen, Gross Point, Ill. Filed Sept. 16, 1907. Serial No. 393,128.



1. The combination with an oscillating, spring-actuated part, of time controlled mechanism comprising, in combination with a clock train, means for locking said oscillating part against the action of its spring, a spring actuated tripping device for releasing the locking means, means for normally restraining said spring actuated tripping device, embracing a rotative pawl and ratchet mechanism, one member of which is driven by the clock train, and means disposed in axial alinement to the axis of rotation of the members of the pawl and ratchet mechanism for disengaging said members from each other at a predetermined point in the rotation thereof to effect the release of the tripping device.

2. The combination with an oscillating, spring actuated part, of time controlled mechanism comprising, in combination with a clock train, means for locking said oscillating part against the action of its spring, a spring actuated tripping device for releasing said locking means, pawl and ratchet mechanism controlled by the clock train for normally restraining said spring actuated tripping device, and a cam disposed in axial alinement to the axis of oscillation of the pawl for releasing the pawl of the pawl and ratchet mechanism to permit the operation of said tripping device.

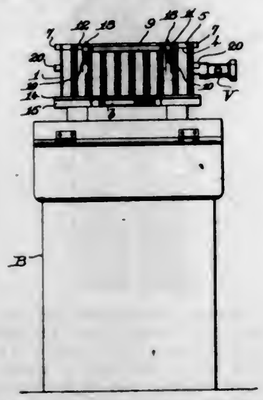
3. The combination with an oscillating, spring actuated part, of time controlled mechanism comprising, in combination with a clock train, means for locking said oscillating part against the action of its spring, a spring actuated tripping device for releasing said locking means, pawl and ratchet mechanism controlled by the clock train for normally restraining said spring actuated tripping device, and a cam disposed in axial alinement to the axis of oscillation of the pawl for releasing the pawl of the pawl and ratchet mechanism to permit the operation of said tripping device, said cam being adjustable to vary the periods of operation of the mechanism.

4. The combination with an oscillating, spring actuated part, of time controlled mechanism comprising, in combination with a clock train, means for locking said oscillating part against the action of its spring, a spring actuated rotative tripping device for releasing said locking means, a ratchet wheel geared to said clock train, an arm rotating with said tripping device and carrying a pawl which engages the teeth of said ratchet wheel, a cam located at the side of said wheel and adapted for engagement by a bearing on the pawl to throw the pawl out of engagement with the teeth of the ratchet wheel and to hold it out of engagement therefrom for a predetermined time, said cam thereafter permitting reëngagement of the pawl with the ratchet wheel.

5. The combination with an oscillating, spring actuated part, of time controlled mechanism comprising, in combination with a clock train, means for locking said oscillating part against the action of its spring, a spring actuated, rotative shaft carrying a tripping arm for releasing said locking means, and means controlling said shaft embracing a ratchet wheel geared to said clock train, an arm fixed to said shaft and carrying a pawl engaging the teeth of said ratchet wheel, and a cam mounted on said shaft and arranged to disengage said pawl from said ratchet wheel and to hold it out of engagement therefrom to permit said shaft to rotate and the tripping arm to release said rotative part.

[Claims 6 to 14 not printed in the Gazette.]

900,054. CORE-MOLDING APPARATUS. HOWARD W. BRACKEN, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Jan. 20, 1908. Serial No. 411,581.



1. In apparatus of the class described, a core-box having a group of open-ended core-molds, laterally extended supports on opposite sides of the box, and an external rib on the box to sustain a vibrator.

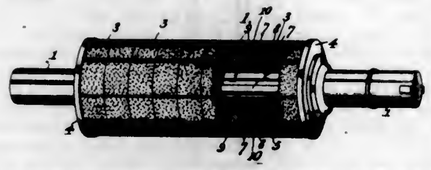
2. A two part core-box comprising a box proper having a series of open-ended molds each comprising an elongated body portion having the same cross-section throughout and a tapered end, a removable top part having tapered openings to register with the larger ends of the molds and thereby complete the molds for double-tapered cores, and stops rigidly connected with the box and having their faces in a plane parallel to the top of the box and at a distance therefrom equal to the thickness of the removable top part.

3. In apparatus of the class described, a box having a series of open-ended core-molds tapered at one end, a top-plate having tapered openings, to form the opposite tapered ends of the core-molds when the plate is laid upon the top of the box, laterally extended wings on the box near its top, and stops on said wings having their faces in a plane parallel to the top of the box and at a distance therefrom equal to the thickness of the top-plate, to sustain the box when reversed after the top-plate is removed.

4. In apparatus of the class described, a metallic box having a series of open-ended core-molds with cylindrical bodies and tapered at one end, a removable top-plate having tapered openings to register with the larger ends of the mold-bodies and form tapering ends thereat, and stops rigidly connected with the box and having their faces in a plane parallel to the top of the box and at a distance therefrom equal to the thickness of the top-plate.

5. In apparatus of the class described, a metallic box having a series of open-ended core-molds with cylindrical bodies and tapered at one end, a removable top-plate having tapered openings to register with the larger ends of the mold-bodies and form tapering ends thereat, and stops rigidly connected with the box and having their faces in a plane parallel to the top of the box and at a distance therefrom equal to the thickness of the top-plate, two of the stops diagonally opposite having positioning pins, and a bottom-board having sockets to receive the pins when the top-plate is removed and the box is reversed, the bottom-board supporting the projecting ends of the cores while the stops rest upon the board and sustain the box.

900,055. SQUEEZE-ROLL FOR WOOL-WASHING MACHINERY. IRA F. BURNHAM, Stoughton, Mass., assignor to The Stoughton Rubber Company, a Corporation of Massachusetts. Filed Feb. 2, 1907. Serial No. 355,526.

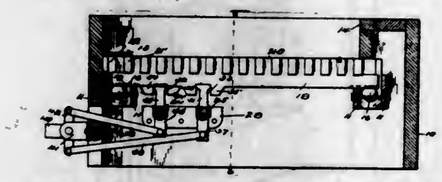


A squeeze-roll, comprising a shaft, a plurality of collars keyed thereon having inclined seating surfaces for the roll-sections and outwardly-extending flanges adapted to engage the faces of the roll-sections, and a plurality of roll-sections supported upon and between said collars and engaging said inclined seating surfaces, the flanges on said collars having circumferentially-corrugated faces for engagement with recessed corrugations on said roll-sections and having radially-arranged lugs on said corrugated faces engaging the recesses in said corrugations, whereby said roll-sections are gripped and locked against rotative movement upon said collars.

900,056. FERTILIZER. LEONARD R. COATES, Baltimore, Md., assignor to The American Bacteria-ized Fertilizer Company, a Corporation of Maryland. Filed Oct. 17, 1907. Serial No. 397,762.

An improved bacteria-carrying vehicle adapted for mixture with other materials, which consists of dry ground roots of plants of the species of *Leguminosæ* with their bacteria-bearing nodules.

900,057. SHAKING-GRATE. WILLIAM E. COLE, Norfolk, Va. Filed Apr. 6, 1906, Serial No. 310,357. Renewed Apr. 24, 1908. Serial No. 429,056.

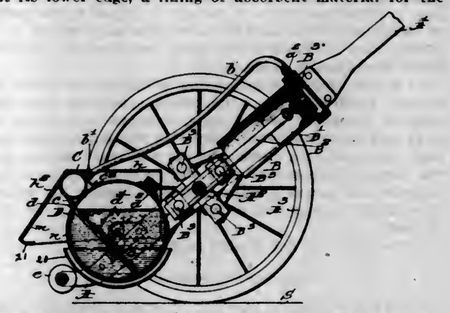


1. In combination with a shaking-grate, two bearing bars, each comprising spaced bars, a series of spaced uprights between said bars, a perforated plate supported by said uprights, a series of ball tracks located between said uprights and balls located thereon, grate-bars provided with fuel supporting surfaces and depending webs resting on said balls, and means for moving alternate grate bars longitudinally in opposite directions.

2. In a shaking grate, two bearing bars each comprising spaced bars, a series of spaced uprights located between said bars, the inner one of said bars being provided with notches located between the uprights, ball tracks below said notches connecting the bars, a ball located thereon, grate bars provided with fuel supporting surfaces and depending webs, said webs passing through the notches of the inner bars and resting on the balls, means for supporting the bearing bars, and means for moving alternate grate bars longitudinally in opposite directions.

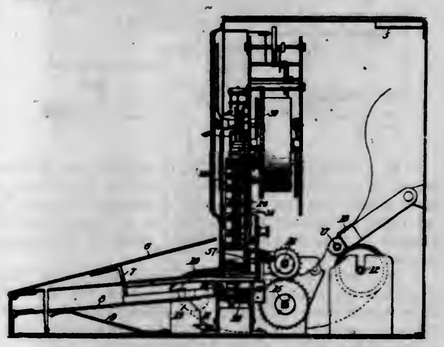
900,058. LIQUID-SPRAYING TRUCK. GEORGE T. CONNOR, Stoneham, Mass., assignor to Charles P. Renfew, Frank W. Bennett, and George T. Connor, a Copartnership under firm-name of Hydrocarbon Chemical Company, Boston, Mass. Filed June 2, 1905. Serial No. 263,386.

In an apparatus of the class described, a truck, an air pump thereon, means to operate the pump by the movement of the truck, an air tank connected to the air pump, a fluid-containing tank, and a hood embracing said tanks and provided with an opening, said hood having a trough at its lower edge, a lining of absorbent material for the



hood, and a nozzle for each tank, said nozzles being arranged to form an atomizer for delivering spray through the opening of the hood.

900,059. AUTOGRAPH TIME-RECORDER. WILLARD D. DOREMUS, Washington, D. C., assignor to Henry L. Bryan, trustee, Washington, D. C. Filed Nov. 28, 1905, Serial No. 289,450. Renewed Apr. 16, 1908. Serial No. 427,487.



1. A time recorder comprising a depressible plate, a pivoted shutter operated by the plate, a paper feed roller, a pawl connecting the feed roller and the shutter whereby as the shutter oscillates the roller is rotated, a spring actuated hammer, and means connected with the hammer whereby as the plate is depressed the spring of the hammer is placed under tension and is released as the plate is returned to its normal position, substantially as described.

2. A time recorder comprising a depressible plate, a spring arranged below the plate, a pivoted shutter having ears engaged by a projection from the plate, a paper feed roller, a connection between the shutter and the feed roller whereby the feed roller is operated by the oscillation of the shutter, time printing disks, a spring actuated hammer, and means connected with the hammer whereby as the plate is depressed the spring of the hammer is placed under tension and is released as the plate returns to its normal position, substantially as described.

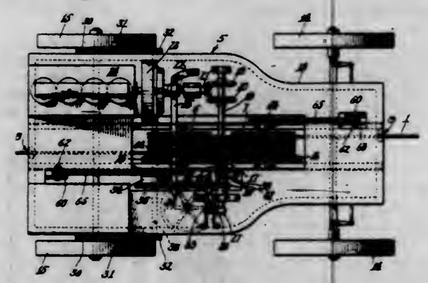
3. A time recorder comprising a pivoted plate forming a hand rest and having therein an opening, a depressible plate on which the pivoted plate bears, a pivoted shutter adapted to oscillate to cover and uncover a strip of paper, a paper feed roller over which the paper passes, a connection between the shutter and the feed roller whereby the roller is rotated by the oscillation of the shutter, time printing disks, a spring operated hammer, and means connected with the hammer whereby as the pivoted plate is depressed the spring of the hammer is placed under tension and is released as the plate returns to its normal position, substantially as described.

4. A time recorder comprising a depressible plate, a pivoted shutter having ears engaged by the plate, a paper feed roller having ratchet teeth, a pawl on the shutter engaging the teeth, printing disks, a spring actuated hammer, a projection from the hammer arranged in the path of movement of the plate and a dog for engaging the projection also arranged in the path of movement of the plate, substantially as described.

5. A time recorder comprising a depressible plate, a pivoted shutter having a projection extending into the path of movement of the plate, a paper feed roller, a pawl and ratchet connection between the shutter and the feed roller, printing disks, a spring actuated hammer, an ink ribbon interposed between the printing disk and the hammer and means for automatically feeding the roller alternately in opposite directions, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

900,060. CABLE-POWER. CLYDE J. EASTMAN, Los Angeles, Cal. Filed Apr. 22, 1907. Serial No. 369,709.



1. In a cable power apparatus, a carriage, one or more drums on the carriage, means for driving the drums, a cable wound over the drums, and a detachable section in the cable permitting the carriage to be turned around without turning around the whole cable or disengaging it from the drums.

2. In a cable power apparatus, a carriage, one or more drums on the carriage, means for driving the drums, a cable wound over the drums, and a detachable section in the cable having a length at least as great as the linear circuit of the cable through the carriage.

3. In a cable power apparatus, a carriage, cable engaging mechanism on the carriage including one or more drums and tension devices, a cable wound over the drums and engaging the tension devices, and a detachable section in the cable having a length at least as great as the linear circuit of the cable through the cable engaging mechanism on the carriage.

4. In a cable power apparatus, a carriage, one or more drums on the carriage, a cable wound over the drums, means for driving the drums to propel the carriage along the cable, and relatively short sections detachably connected in the cable near both ends of the cable.

5. In a cable power apparatus, a carriage, one or more drums on the carriage, a cable wound over the drums, means for driving said drums to propel the carriage along the cable, tension devices on the carriage, and means for driving the tension devices to keep the cable taut between the tension devices and drums.

[Claims 6 to 8 not printed in the Gazette.]

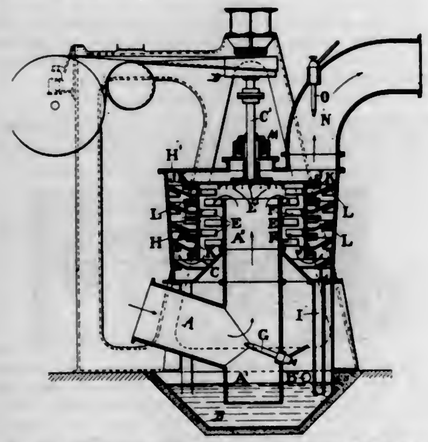
900,061. LIFTING AND TRANSPORTING APPARATUS. JOSEPH ELSNER, Berlin, Germany, assignor of one-half to George Sonnenthal, London, England. Filed Oct. 14, 1904. Serial No. 228,462.

1. In lifting apparatus, the combination of vertically arranged frames, gearing coöperatively connected with the upright portions of the said frames, a roller extending between and supported by the frames and adapted to be raised and lowered by the gearing, and toothed gearing for operating the said roller rotatively.



2. In lifting apparatus, the combination of vertically arranged frames having racks thereon, a roller extending between the frames, gear wheels operatively connected with the roller, another roller also extending between the said frames, gear wheels operatively connected with the said second roller, carriers adapted to slide in the aforesaid frames, and means adapted to hold the one roller inoperative while the other is being worked.

900,062. PROCESS OF CLEANING GASES. ALFRED ERNST, Pittsburg, Pa., assignor to The Coal and Coke By-Products Company, a Corporation of West Virginia. Original application filed Feb. 14, 1908, Serial No. 415,847. Divided and this application filed Apr. 15, 1908. Serial No. 427,163.



1. The improvement in the art of cleaning gases, which consists in subjecting the impure gas to a spray or jet of water or steam and causing the gas to take up vapor, then subjecting the gas to a combined beating and centrifugal action, allowing the excess of liquid with contained impurities to drain off, and then passing the gas in an upward direction between water-bearing shelves and there subjecting it to a beating, spraying and whirling action and to successively purer quantities of water.

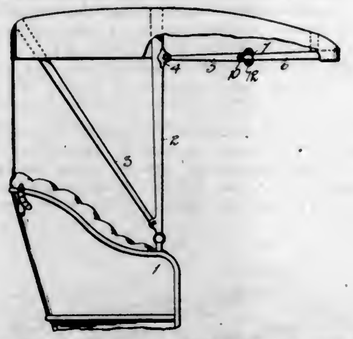
2. The improvement in the art of cleaning gases, which consists in subjecting the gas while in a heated state to finely divided water and causing evaporation and draining off and catching the excess of water with attendant impurities, subsequently passing the gas in an upward direction and subjecting it while passing upward to a whirling, beating, and centrifugal action and to intimate contact with water passing in a downward direction and itself subjected to being thrown by the centrifugal action in a fine spray across the gas currents.

3. The improvement in the art of cleaning gases, which consists in subjecting the gas while in a heated state to a spray of water or steam and causing the gas to take up vapor before being subjected to centrifugal and beating effect, then conveying the gas to beaters and subjecting it to combined beating and centrifugal action, subsequently passing the gas in an upward direction and there subjecting it while passing upwards to a beating action a plurality of times and to successively purer quantities of water each time, for substantially the purposes set forth.

4. The improvement in the art of cleaning gases, which consists in subjecting the gas while in a heated state to a spray of water or steam and causing the gas to take up vapor before being subjected to centrifugal and beating effect, then conveying the gas to beaters and subjecting to combine heating and centrifugal action, subsequently passing the gas in an upward direction and there subjecting it while passing upwards to a beating action a plurality of times and to successively purer quantities of water each time and subsequently subjecting the gas to a jet or spray of water after it leaves the immediate vicinity of the beaters, for substantially the purposes set forth.

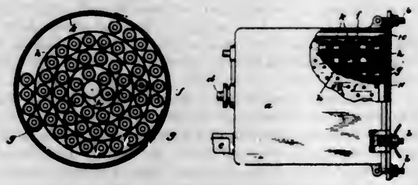
5. The improvement in the art of cleaning gases, comprising subjecting the gas to water and to beating and centrifugal action while passing the gas upwards and the water downwards in contact with the gas, whereby the gas is violently beaten while being subjected to successively purer quantities of water.

900,063. CARRIAGE-TOP. JOSEPH P. FILLINGHAM, Lansing, Mich., assignor to Reo Motor Car Company, Lansing, Mich., a Corporation of Michigan. Filed Mar. 25, 1908. Serial No. 423,081.



In the horizontal bow of a carriage top, the combination of a bow member and a pair of base members, couplings uniting the said members provided with a pair of pins around either of which the two members may swing, the said pins being adapted to hold the members in rigid arrangement when both are inserted, but to permit the swinging of one member with respect to the other when either of said pins is removed, substantially as described.

900,064. REVOLVER FOR PROCESSING CANNED GOODS. HENRY L. FORHAN, Portland, Me. Original application filed Feb. 13, 1907, Serial No. 357,178. Divided and this application filed Jan. 17, 1908. Serial No. 411,221.

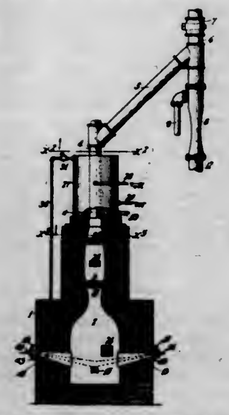


1. In an apparatus for processing canned goods, a retort, a series of pans, each provided with a spiral partition extending from the center of the pan to the wall thereof, a container adapted to receive and hold said pans, and means for revolving said container first in one direction and then in the other within said retort, substantially as described.

2. In an apparatus for processing canned goods, a retort, a series of pans, each provided with a spiral partition, a container with perforated walls, and means for revolving said container first in one direction and then in the other within said retort, substantially as described.

3. In an apparatus for processing canned goods the combination of a retort, a horizontal container situated within the retort, removable pans adapted to be supported upon their sides within said container, each of said pans provided with a spiral partition extending from the center of the pan to the wall thereof forming a continuous canal for the reception of cans, said canal being of substantially the same width as said cans, and means for revolving said container first in one direction and then in the other, whereby said cans are revolved in opposite directions and agitated.

900,065. PROCESS OF PRODUCING GAS. WARREN H. FROST and JOSHUA J. NIX, Los Angeles, Cal.; said Nix assignor to said Frost. Original application filed Feb. 18, 1907, Serial No. 358,152. Divided and this application filed Oct. 22, 1907. Serial No. 398,655.



1. The process of producing gas from carbonaceous material which consists in continuously generating in a chamber, in the presence of air at substantially atmospheric pressure, a zone of high temperature gases, passing into said chamber carbonaceous material with an elastic fluid medium, during such generation of the high temperature zone, and withdrawing the produced gases by suction from the chamber, the high temperature zone being between the place of admission of the carbonaceous material and the place of the suction of the produced gases.

2. The process of producing gas from liquid hydro-carbons, which consists in continuously generating in a chamber in the presence of air at substantially atmospheric pressure, a zone of high temperature gases, passing into said chamber hydro-carbon with an elastic fluid medium during such generation of the high temperature zone, and withdrawing the produced gases, by suction, from the chamber, the high temperature zone being between the place of admission of the hydro-carbon and the place of suction of the produced gases.

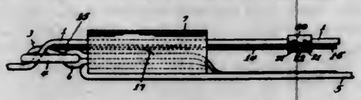
3. The process of producing gas from liquid hydro-carbons, which consists in directing a burner flame into a chamber in the presence of air at substantially atmospheric pressure to internally heat the chamber, passing hydro-carbon with an elastic fluid medium into the chamber below the level of the burner flame and withdrawing, by suction, the gases from the chamber above the level of the burner flame.

4. The process of producing gas from liquid hydrocarbons which consists in heating the hydrocarbon, separating the lighter from the heavier constituents thereof, burning a heavier portion of the oil in a chamber to heat the same internally and continuously, passing a lighter portion of the oil into the chamber with an elastic fluid medium, and drawing the same through the heated portion of the chamber and out of the chamber by suction applied to the chamber.

5. The process of producing gas for a variable supply, which consists in directing a burner flame into a chamber, in the presence of air at substantially atmospheric pressure, to internally heat the chamber, passing oil with elastic fluid medium into said chamber, drawing produced gas from the chamber to a variable consuming means, and controlling the oil supply in accordance with the demands of the consuming means.

[Claim 6 not printed in the Gazette.]

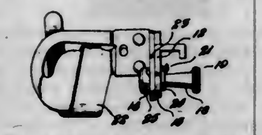
900,066. TRACE-HOLDER. HARRIE S. GEER, Watervliet, N. Y. Filed Oct. 15, 1904. Serial No. 228,520.



1. A trace-holder attachment for harnesses, consisting of a detachable arm provided at one end with means for supporting the arm within the usual trace-loop of a harness and at its opposite projecting end with a slideway; a trace-loop movable along said slideway; and means for securing the movable loop in differing positions on the arm, substantially as described.

2. The combination with an arm provided, at one end with a shank adapted to be inserted in the trace-loop of a harness, and an attaching spur adapted to engage with the harness to hold the shank within the loop, and at its opposite end with a slideway; of a metallic trace-loop provided with spring-actuated attaching clips, whereby the metallic loop can be slid to and secured in differing positions on the slideway of the arm, substantially as described.

900,067. SEWING-MACHINE-ATTACHMENT HOLDER. HUBERT M. GREIST, New Haven, Conn., assignor to The Greist Manufacturing Company, a Corporation of Connecticut. Filed Jan. 30, 1908. Serial No. 413,470.



1. A sewing machine attachment holder consisting of the combination with a presser-foot having a vertical shank, of a clamping head having a shank extending horizontally through a portion of said presser-foot shank and so mounted therein as to be prevented from turning, and between which clamping head and the front wall of said presser-foot shank a portion of a sewing machine attachment may be clamped, the said shank of said clamping head having a threaded portion, and a nut engaging said threaded portion, said clamping head and nut being so connected together as to prevent their separation.

2. A sewing machine attachment holder consisting of the combination with a presser-foot having a vertical shank provided with a polygonal opening, of a clamping head arranged at the front of said presser-foot shank and provided with a shank having a polygonal portion, fitting said opening, and having also a threaded portion, so that a portion of a sewing machine attachment may be clamped between the said clamping head and the front wall of said presser-foot shank, and a nut engaging said threaded portion, said clamping head and nut being so connected together as to prevent their separation.

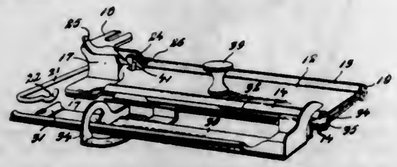
3. A sewing machine attachment holder consisting of the combination with a presser-foot the shank portion of which is provided with a polygonal aperture, of a clamping head having a polygonal shank one portion of which is adapted to be received by said polygonal aperture, and another portion of which is screw-threaded, a nut engaging the screw-threaded portion of said shank, and means for preventing said nut from becoming detached from said shank when it is turned, said clamping head having a horizontal concave recess on its inner face.

4. A sewing machine attachment holder consisting of the combination with a presser-foot the vertical shank portion of which is provided with a polygonal aperture, of a clamping head having a horizontally disposed shank one portion of which is polygonal so as to fit said polygonal aperture, and another portion of which is screw-threaded, a nut engaging the screw-threaded portion of said shank, means for preventing said nut from becoming detached from said shank when it is turned, and a sewing machine attachment having a shank fitting between the said clamping head and the front wall of said presser-foot shank and provided with a horizontal slot or opening to permit of horizontal adjustment of the attachment.

5. A sewing machine attachment holder consisting of the combination with a presser-foot having a vertical shank, of a clamping head having a shank extending horizontally through a portion of said presser-foot shank and so mounted therein as to be prevented from turning, and between which clamping head and the front wall of said presser-foot shank a portion of a sewing machine attachment may be clamped, the said shank of said clamping head having a threaded portion and an enlarged end, and a nut engaging said threaded portion and having a counterbored portion forming a recess in which said enlarged end of said clamping-head shank loosely fits.

[Claim 6 not printed in the Gazette.]

900,068. TUCK-CREASER FOR SEWING-MACHINES. MARY F. W. GREIST and PERCY R. GREIST, New Haven, Conn., administrators of John M. Greist, deceased, assignors to The Greist Manufacturing Company, a Corporation of Connecticut. Filed Jan. 24, 1908. Serial No. 412,526.



1. A sewing machine tuck creaser comprising a main frame or body consisting of a folded sheet metal plate having a cylindrical rear portion and two longitudinally extending half round front portions, one above the other combined with tuck-creasing and work-guiding devices mounted on said frame or body.

2. A sewing machine tuck creaser comprising a main frame or body consisting of a folded sheet metal plate the upper and lower members of which are adapted to be compressed together, of lengthwise adjustable tuck-creasing and work-guiding devices having parts extending between the said members of said main frame or body, and clamping means by which said members may be compressed together to hold the said tuck-creasing and work-guiding devices in any desired positions to which they may have been adjusted.

3. A sewing machine tuck-creaser comprising a main frame or body consisting of a folded sheet metal plate the upper and lower members of which are adapted to be compressed together, of lengthwise adjustable tuck-creasing and work-guiding devices having parts extending between the said members of said main frame or body, a separating plate between the said parts, and clamping means by which said members may be compressed to hold the said tuck-creasing and work-guiding devices in any desired positions to which they may have been adjusted.

4. A sewing machine tuck creaser comprising a main frame or body consisting of a folded sheet metal plate having a cylindrical rear portion and half round front portions, combined with a rocking bar journaled in said cylindrical rear portion, a creasing arm operated by said rocking bar, a sliding plate having a longitudinal convex rib fitting one of said half round portions, a lower creasing member or lip connected with said sliding plate, a second sliding plate having a longitudinal convex rib fitting the other of said half-round portions, a work-guide connected with said second sliding plate, and clamping means to compress the upper and lower members of said folded body together to secure said creasing devices and work-guide in any desired position of adjustment.

5. A sewing machine tuck-creaser comprising a main frame or body consisting of a folded sheet metal plate having a cylindrical rear portion and half round front portions, combined with a rocking bar journaled in said cylindrical rear portion, a creasing arm operated by said rocking bar, a sliding plate having a longitudinal convex rib fitting one of said half round portions, a lower creasing member or lip connected with said sliding plate, a second sliding plate having a longitudinal convex rib fitting the other of said half-round portions, a work-guide connected with said second sliding plate, a separating plate arranged between said sliding plates and also having a longitudinal convex rib, and clamping means to compress the upper and lower members of said folded body together to secure said creasing devices and work-guide in any desired position of adjustment.

[Claims 6 to 10 not printed in the Gazette.]

900,069. SEWING-MACHINE BRAIDER OR CORDER. PERCY R. GREIST, New Haven, Conn., assignor to The Greist Manufacturing Company, a Corporation of Connecticut. Filed Jan. 24, 1908. Serial No. 412,406.



1. A sewing machine braider or corder comprising a folded strip of sheet metal having guiding apertures formed in its upper and lower members and arranged in different vertical planes.

2. A sewing machine braider or corder comprising a folded strip of sheet metal having its upper member provided with a needle-hole and with a guiding aperture in front of said needle-hole, and having its lower member provided with a guiding aperture registering vertically with said needle-hole.

3. A sewing machine braider or corder consisting of a vertical shank, having a horizontal extension, and a folded strip of sheet metal the members of which embrace the said horizontal extension and which members are each formed with a guiding aperture, the aperture in the upper member being forward of the aperture in the lower member.

4. A sewing machine braider or corder consisting of a vertical shank, having a horizontal extension, and a folded strip of sheet metal the members of which embrace the said horizontal extension and which members are each formed with a guiding aperture, said strip having a vertical extension which, in coöperation with said vertical shank, is adapted to serve as an attachment holder.

5. A sewing machine braider or corder consisting of a suitable shank, having a horizontal extension, and a folded strip of sheet metal the members of which embrace said horizontal extension and the upper and lower members of which are each provided with a guiding aperture and which apertures are arranged in different vertical planes.

[Claims 6 and 7 not printed in the Gazette.]

900,070. SEWING-MACHINE-ATTACHMENT HOLDER. PERCY R. GREIST, New Haven, Conn., assignor to The Greist Manufacturing Company, a Corporation of Connecticut. Filed Jan. 24, 1908. Serial No. 412,407.



1. A sewing machine attachment holder consisting of a vertical presser-foot shank, and a sheet metal strip having an outwardly bent portion which is partly convex or rounded and thus forming, between itself and a vertical wall or surface of said shank, a partly rounded recess or opening adapted to hold a shank of a sewing machine attachment.

2. A sewing machine attachment holder consisting of a vertical presser-foot shank having a horizontal extension, a folded strip of sheet metal having upper and lower members embracing said extension and thus forming a presser-foot, said strip having a vertical extension constructed to form, between itself and a vertical wall or surface of said shank, a horizontal opening suitable to receive the shank of a sewing machine attachment.

3. A sewing machine attachment holder comprising a presser-foot to the vertical portion or shank of which is secured a sheet metal plate between which and the front wall of said shank is formed an opening, combined with an attachment having a horizontal shank fitting said opening and having also a horizontal finger below and separated from said horizontal shank of said attachment, said finger being arranged to bear frictionally against the top of the presser-foot proper, thus serving to assist in steadily securing the attachment frictionally in working position.

4. A sewing machine attachment holder comprising a presser-foot to the vertical portion or shank of which is secured a sheet metal plate between which and the front wall of said shank is formed an opening, combined with an attachment having a horizontal shank fitting said opening and having also a horizontal finger bearing frictionally against the top of the presser-foot proper, and thus serving to assist in steadily securing the attachment frictionally in working position, said attachment also having a projecting lug, as 20, adapted to be pressed against in removing the attachment from the holder.

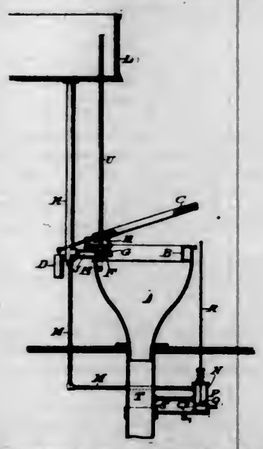
5. A sewing machine attachment holder consisting of a vertical presser-foot shank having a horizontal extension, a folded strip of sheet metal having upper and lower members embracing said extension and thus forming a presser-foot, said strip having a vertical extension constructed to form, between itself and a vertical wall or surface of said shank, a horizontal opening suitable to receive the shank of a sewing machine attachment, combined with an attachment having a horizontal shank fitting said opening and having also a horizontal finger bearing frictionally against the top of the presser-foot proper, and thus serving to assist in steadily securing the attachment frictionally in working position.

900,071. WATER-CLOSET. NATHAN B. GRIFFITH, Philadelphia, Pa., assignor to Keystone Supply & Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 19, 1905. Serial No. 256,353.

1. In a water closet, the combination with a bowl and a seat of an endwise compressible member outside the flush pipe and depending directly from the under side of the seat in front of its hinge, a horizontally-movable valve stem on the bowl beneath the seat, and a lever mounted on the bowl with one arm bearing directly against the end of the said stem and the other arm arranged to receive one end of said compressible means, whereby as the seat is lowered the lever is actuated to move said stem and said means are compressed.

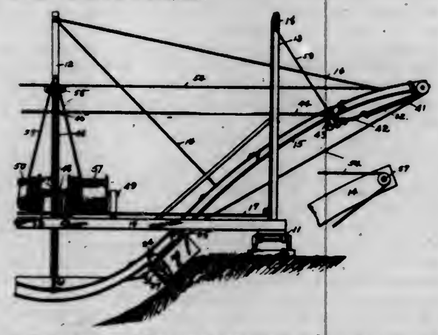
2. In a water closet, the combination with a bowl and a

seat, and a flushing pipe connected with the bowl and having a valve seat, of an endwise compressible member outside of said flushing pipe and depending directly from the under side of the seat in front of its hinge, said member being compressible at right angles to the direction of movement of the valve a horizontally-movable valve stem on the



bowl beneath the seat, a valve carried by said stem, and a lever mounted on the bowl with one arm bearing directly against the end of the said stem and the other arm arranged to receive one end of said compressible means, whereby as the seat is lowered the lever is actuated to move said stem and said means compressed.

900,072. DITCHING-MACHINE. OSCAR T. GULLIXSON and ORIN C. GULLIXSON, Bode, Iowa. Filed Jan. 27, 1908. Serial No. 412,845.



1. In a device of the class described, the combination of a shovel supporting track, a shovel capable of movement relative to the track, and open at both ends, a shovel blade or back capable of sliding movement relative to the shovel from one end to the other, a clutch device connected with the shovel blade or back, and designed to engage the shovel supporting track.

2. In a device of the class described, the combination of a shovel supporting track, a shovel capable of movement relative to the track, and open at both ends, a shovel blade or back capable of sliding movement relative to the shovel from one end to the other, an automatic clutch device connected with the shovel blade or back and designed to engage the shovel supporting track.

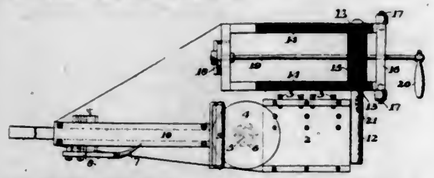
3. In a device of the class described, the combination of a shovel supporting track, a shovel capable of movement relative to the track and open at both ends, a shovel blade or back capable of sliding movement relative to the shovel, from one end to the other, means connected with the shovel blade or back for automatically clutching it to the supporting track, and means carried by the shovel for automatically releasing the clutching means when the end of the shovel moves to position adjacent to the shovel blade or back.

4. In a device of the class described, the combination of a shovel supporting track, a shovel capable of movement relative to the track, and open at both ends, a shovel blade or back capable of sliding movement relative to the shovel from one end to the other, two automatic clutch devices connected with the shovel blade or back, one arranged to engage the shovel supporting track when the shovel is moving in one direction, and the other to engage the shovel supporting track when the shovel is moving in an opposite direction, and stops at the ends of the shovel designed to engage said clutch devices.

5. In a device of the class described, the combination of a shovel supporting track, a shovel capable of movement relative to the track and open at both ends, a shovel blade or back capable of sliding movement relative to the shovel from one end to the other, two brake shoe levers pivoted to the shovel blade or back and extended outwardly and in a direction toward one end of the shovel brake shoes thereon, means for yieldingly holding the levers in engagement with the tracks, a second pair of levers with brake shoes thereon inclined slightly toward the end of the shovel, means for yieldingly holding them against the supporting tracks, and stops fixed to the ends of the shovel to engage said brake shoes.

[Claims 6 to 10 not printed in the Gazette.]

900,073. APPARATUS FOR PRINTING TUBULAR ARTICLES. JAMES M. JOHNSON, New Brighton, Pa., assignor to Standard Specialty & Tube Company, New Brighton, Pa., a Corporation of New Jersey. Filed July 12, 1906. Serial No. 325,766.



1. In apparatus for printing tubes, a mandrel, a printing form, the mandrel projecting laterally over the form from one side thereof and having a free end over which the tubes can be slipped, means for reciprocating the mandrel back and forth over the form, a tilting frame located to one side of the printing form in which the mandrel is mounted and means for tilting the frame, substantially as described.

2. In apparatus for printing tubes, a mandrel, a stationary printing form, the mandrel projecting laterally over the form and having a free end over which the tubes to be printed can be slipped, a tilting frame located to one side of the printing form and having means for guiding the mandrel for carrying the mandrel and upon which it is arranged to reciprocate, and means for rotating the mandrel as it is reciprocated, substantially as described.

3. In apparatus for printing tubes, a stationary printing form, a frame having a pivotal support at one side of the printing form, a mandrel rotatably and movably supported and guided on said frame, and having a free end portion projecting over the form, and means for raising and lowering the frame as the mandrel is moved thereon; substantially as described.

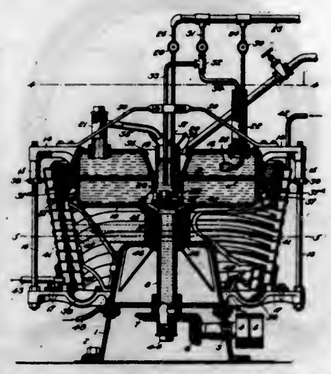
4. In apparatus for printing tubes, a stationary printing form, means for inking the same, a rotary mandrel located to one side of the printing form, and arranged to project over the form and having a free end over which the tubes to be printed can be slipped, means to reciprocate the mandrel over said form, a frame on which the mandrel is rotatably mounted, said frame being located at one side of the printing form, and means for raising the frame to lift the mandrel above the level of the form; substantially as described.

5. In apparatus for printing tubes, a stationary form, a mandrel arranged to project over said form from one side and having a free end over which the tubes to be printed can be slipped to reciprocate over said form, means for rotating the mandrel as it is reciprocated, an inking roller also arranged to reciprocate over the form, an inking plate in the path of movement of said roller, and a pawl-and-ratchet mechanism actuated by the movement of said roller for intermittently rotating the plate, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

REISSUES.

12,858. PASTEURIZING APPARATUS. LEROY S. PFOUTS, Canton, Ohio, assignor to The Miller Pasteurizing Machine Company, Canton, Ohio, a Corporation of New Jersey. Filed July 30, 1908. Serial No. 446,216. Original No. 870,841, dated Nov. 12, 1907, Serial No. 328,466.



1. In a pasteurizing apparatus of the class described, the combination of a rotating chamber, a stationary chamber located above the rotatable one, stand pipes secured to the upper chamber, said stand pipes formed of different heights, means for heating the liquid within the chambers, and means for circulating the liquid as between the chambers, and pasteurizing plates spaced from each other, substantially as and for the purpose specified.

2. In a pasteurizing apparatus, a rotatable casing, a pasteurizing plate carried thereby, a fixed casing, a pasteurizing plate secured to said casing, a steam pipe leading to and communicating with the chamber inclosed by the fixed casing, and pasteurizing plate and a steam pipe leading to and communicating with the chamber inclosed by the rotatable casing and pasteurizing plate and an injector located between the rotatable and non-rotatable chambers, substantially as and for the purpose specified.

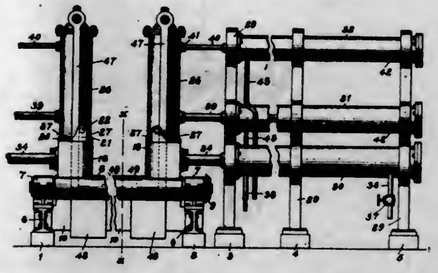
3. In a pasteurizing apparatus of the class described, a rotatable pasteurizing plate, a chambered casing located thereunder, and rotatable therewith, a stationary pasteurizing plate secured to a stationary chambered casing, said stationary pasteurizing plate and casing adjustable to and from the rotatable pasteurizing plate and its chamber and means for conveying liquid from the rotatable chamber to the non-rotatable one, and means for heating liquid in both chambers, substantially as and for the purpose specified.

4. In a pasteurizing apparatus of the class described, a suitable supporting frame, a rotatable casing, a rotatable pasteurizing plate secured thereto, a stationary chambered casing having fixed thereto, a pasteurizing plate, stand pipes secured to the stationary casing, said stand pipes formed of different heights, steam pipes leading to the non-rotatable and rotatable chambers respectively and a siphon located intermediate the non-rotatable and rotatable chambers, substantially as and for the purpose specified.

5. In a pasteurizing apparatus of the class described, a suitable supporting frame, a rotatable casing, a rotatable pasteurizing plate secured thereto, a stationary chambered casing having fixed thereto, a pasteurizing plate, stand pipes secured to the stationary casing, said stand pipes formed of different heights, steam pipes leading to the non-rotatable and rotatable chambers respectively, and a siphon located intermediate the non-rotatable and rotatable chambers, and a cooling plate located around and adjacent the pasteurizing plates and a liquid receiving trough, substantially as and for the purpose specified.

[Claims 6 to 14 not printed in the Gazette.]

12,859. MANIPULATOR. JOHN W. WEBER, Pittsburg, Pa. Filed Apr. 20, 1908. Serial No. 428,295. Original No. 843,422, dated Feb. 5, 1907, Serial No. 309,340.



1. In a manipulator, the combination with rollers, and guideways mounted between said rollers, a head slidably mounted upon said guideways, a cylinder carried by said head, a piston slidably mounted within said cylinder, depending turning-bars raised and lowered by said piston-head, a frame mounted adjacent to said rollers, cylinders supported by said frame, a piston-rod mounted in one of said cylinders and connecting with said head to move said head upon said guideways, tubes extending into the other of said cylinders and connecting with the first-named cylinder, substantially as described.

2. In a manipulator, a table comprising a suitable support and a plurality of rollers transversely arranged thereon, guideways arranged transversely of the support, a head slidably mounted on said guideways, a vertically-disposed cylinder mounted on said head, a piston therein having its rod extending through the upper end of the cylinder, a cross-head on said rod, turning-bars suspended from said cross-head, a plurality of transversely disposed cylinders arranged adjacent the table, a piston in one of said cylinders having its rod connected to said head, and tubes communicating with the vertical cylinder and extending into the others of said horizontal cylinders.

3. In a manipulator, a table embodying a support and a plurality of rollers arranged transversely of the support, guideways arranged transversely of the support, a head mounted to slide on said guideways and having upwardly-extending brackets, a cylinder mounted on said head, a piston in said cylinder having its rod extending through the upper end of the cylinder, a cross-head on said rod, turning-bars suspended from said cross-head and extending through the sliding head and guided by said brackets, and hydraulic means for actuating the sliding head and the piston in said vertical cylinder to operate the turning bars.

4. In a manipulator, a work-receiving table, a head mounted thereon, a vertical cylinder carried by said head, a piston within said cylinder having its rod extending through the upper end of the cylinder, a cross-head on said rod, turning-bars carried by said cross-head and extending through the sliding head, and hydraulic means for actuating the sliding head and the piston in said vertical cylinder for operating the turning-bars.

5. In a manipulator for ingots, the combination of a work-receiving table, a slidably-mounted head, a cylinder carried by the head, a piston in said cylinder having its rod extending through the end of the cylinder, a cross-head on said rod, turning-bars carried by said cross-head and extending through the slidable head and hydraulic means for operating the sliding head to move it across the work-receiving table, and other hydraulic means for actuating the piston to operate the turning-bars.

[Claims 6 to 11 not printed in the Gazette.]

DESIGNS.

39,584. BADGE. JEANNETTE SABIN, Coeur d'Alene, Idaho. Filed July 29, 1908. Serial No. 446,019. Term of patent 3½ years.



The new and ornamental design for a badge, substantially as shown and described.

39,585. BADGE OR SIMILAR ARTICLE. ALBERT W. SOUTHARD, New York, N. Y. Filed Aug. 24, 1908. Serial No. 450,121. Term of patent 3½ years.



The original design for a badge or other similar article as shown.

39,586. CAMPAIGN EMBLEM. EMIL J. POSPISIL, New York, N. Y. Filed Aug. 27, 1908. Serial No. 450,593. Term of patent 7 years.



The ornamental design for a campaign emblem, as shown.

39,587. EMBLEM OR SIMILAR ARTICLE. CHARLES B. BRAUNSTEIN, Cincinnati, Ohio. Filed Aug. 3, 1908. Serial No. 446,823. Term of patent 3½ years.



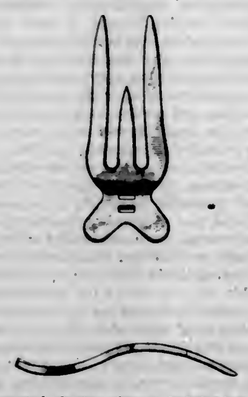
The ornamental design for an emblem, or similar article, as shown.

39,588. BORDER FOR SILVERWARE. JOSEPH E. STRAKER, Jr., Attleboro, Mass. Filed May 12, 1908. Serial No. 432,505. Term of patent 7 years.



The ornamental design for a border for silverware as shown and described.

39,589. LADY'S HAT-FASTENER. MARGUERETTE ELIZABETH PURDY, Ridgefield Park, N. J. Filed June 24, 1908. Serial No. 440,199. Term of patent 7 years.



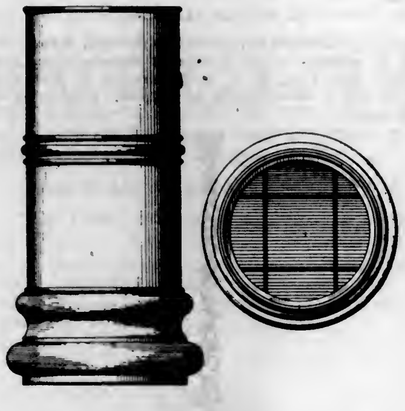
The ornamental design for a lady's hat fastener, as shown.

39,590. CAP FOR POWDER-CONTAINERS. FRANK S. HYATT, New York, N. Y. Filed July 3, 1908. Serial No. 441,921. Term of patent 7 years.



The ornamental design for a cap for powder containers as shown.

39,591. IMPLEMENT-HOLDER. ABBOT A. LOW, Horseshoe, N. Y. Filed Apr. 29, 1908. Serial No. 430,031. Term of patent 14 years.



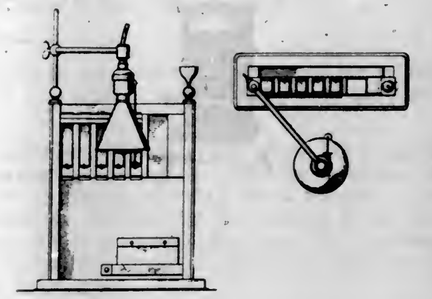
The ornamental design for an implement holder as shown and described.

39,592. SHADE-HOLDER. HOWARD E. WATKINS, New York, N. Y., assignor to The Enos Company, New York, N. Y., a Corporation of New York. Filed May 13, 1908. Serial No. 432,742. Term of patent 14 years.



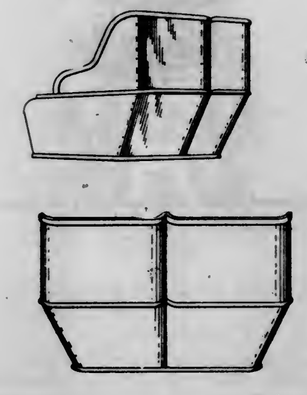
The ornamental design for a shade holder as shown.

39,593. CABINET. ABBOT A. LOW, Horseshoe, N. Y. Filed Apr. 29, 1908. Serial No. 430,030. Term of patent 14 years.



The ornamental design for a cabinet as shown and described.

39,594. VEHICLE-SEAT. WILLIAM H. MCINTYRE, Auburn, Ind. Filed Sept. 16, 1907. Serial No. 393,232. Term of patent 7 years.



The ornamental design for a vehicle seat as shown and described.

39,595. STOVE. EDWARD B. COLBY, Montclair, N. J. Filed June 27, 1908. Serial No. 440,772. Term of patent 3½ years.



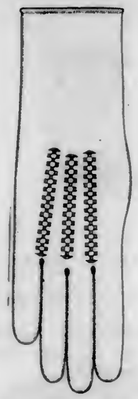
The ornamental design for a stove, as shown.

39,596. BIRD-CAGE. LYMAN H. JOHNSON, Jr., New Haven, Conn., assignor to The Andrew B. Hendryx Co., New Haven, Conn., a Corporation. Filed July 6, 1908. Serial No. 442,266. Term of patent 14 years.



The ornamental design for a bird cage, as shown.

39,597. GLOVE. CARL LEPPERT, Johnstown, N. Y., assignor to The Firm of Joyce & Leppert, Johnstown, N. Y. Filed July 22, 1908. Serial No. 444,874. Term of patent 7 years.



The ornamental design for a glove, as shown and described.

39,598. TRIMMING. WALTHER HELBIG, Jersey City, N. J., assignor to The Kursheedt Manufacturing Company, New York, N. Y., a Corporation of New York. Filed July 7, 1908. Serial No. 442,436. Term of patent 3½ years.



The ornamental design for a trimming substantially as herein shown.

TRADE-MARKS

PUBLISHED SEPTEMBER 29, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 10,952. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DR. MAGORIS HOME TREATMENT COMPANY, Binghamton, N. Y. Filed July 28, 1905.



Particular description of goods.—Menstruums for Solids, Pastes, and Pills.

Ser. No. 17,116. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WILSON AND GLENNY LIMITED, Hawick, Roxburgh, Scotland. Filed Feb. 16, 1906.



Particular description of goods.—Tweed Cloths.

Ser. No. 23,498. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) C. DE KONING TILLY, Haarlem, Holland. Filed Nov. 20, 1906.



Particular description of goods.—A Medicinal Oil for Internal and External Use.

Ser. No. 24,182. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) NITEDALS TAENDSTIKFABRIK, Grönvold in Östre Aker, near Christiania, Norway. Filed Dec. 21, 1906.



The cross being red.

Particular description of goods.—Safety-Matches.

Ser. No. 25,859. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) C. DE KONING TILLY, Haarlem, Holland. Filed Mar. 8, 1907. Used ten years.



Particular description of goods.—A Medicinal Oil for Internal and External Use.

Ser. No. 28,888. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) THE MONARCH MANUFACTURING COMPANY, Toledo, Ohio. Filed July 10, 1907.



Particular description of goods.—Axle-Grease.

Ser. No. 30,719. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE STROH BREWERY COMPANY, Detroit, Mich. Filed Oct. 22, 1907.



Particular description of goods.—Beer, Brown Stout, Porter, and Malt Extract.

Ser. No. 31,540. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE S-L DRUG COMPANY, East Palestine, Ohio. Filed Dec. 4, 1907.

NA-MOW

Particular description of goods.—Medicines for the Treatment of Female Complaints and Diseases of the Urinary and Genital Organs.

Ser. No. 31,541. (CLASS 47. WINES, EXCEPT MEDICATED.) GIOVANNI AQUINO, New York, N. Y. Filed Dec. 4, 1907.



Particular description of goods.—Red Wine Made in Villanova.

Ser. No. 31,685. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLAUDE E. PIERCE, San Francisco, Cal. Filed Dec. 12, 1907.

Pop-Er-Eata

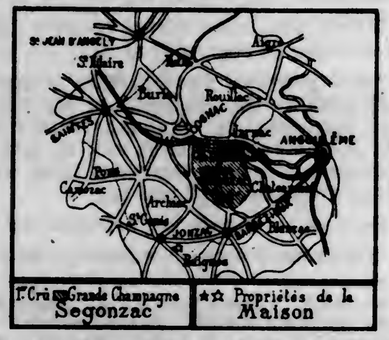
Particular description of goods.—Popcorn Candy.

Ser. No. 31,858. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) H. MUELLER MANUFACTURING COMPANY, Decatur, Ill. Filed Dec. 20, 1907. Used ten years.

COLUMBIA WATER TAPPER

Particular description of goods.—Machines for Tapping Mains, and Parts of Such Machines.

Ser. No. 31,868. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) P. FRAPIN & Co., Cognac, France. Filed Dec. 21, 1907.



The central field of the map and the rectangular figure at the lower left-hand corner of the drawing being green.

Particular description of goods.—Cognac Brandy.

Ser. No. 31,944. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GETZ BROS. & Co. INC., San Francisco, Cal. Filed Dec. 27, 1907.



Particular description of goods.—Canned Salmon and Canned Vegetables.

Ser. No. 32,114. (CLASS 43. THREAD AND YARN.) THE AMERICAN THREAD COMPANY, Jersey City, N. J. Filed Jan. 7, 1908. Used ten years.



Particular description of goods.—Lace-Thread.

Ser. No. 32,591. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BLISS SYRUP REFINING CO., Kansas City, Mo. Filed Feb. 5, 1908.

BEAR BRAND



Particular description of goods.—Compound of Corn, Cane, and Refiners' Syrups, Compound of Maple and Cane Syrup, Compound of Cane and Corn Syrup, and Compound of Sorghum and Corn Syrup.

Ser. No. 32,790. (CLASS 48. MALT EXTRACTS AND LIQUORS.) TEMPERANCE BEVERAGE CO., Chicago, Ill. Filed Feb. 15, 1908.

QUAKER



Particular description of goods.—A Non-Intoxicating Compound of Malt, Hops, and Vegetable Matter.

Ser. No. 32,867. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) UNION CARBIDE COMPANY, Chicago, Ill. Filed Feb. 19, 1908.



Particular description of goods.—Calcium Carbid.

Ser. No. 32,948. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WAYNE COUNTY CONDENSED MILK Co., Rochester, N. Y. Filed Feb. 24, 1908.



Particular description of goods.—Condensed Milk.

Ser. No. 33,223. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) MARSHALL-WELLS HARDWARE Co., Duluth, Minn. Filed Mar. 6, 1908. Used ten years.



Particular description of goods.—Babbitt Metal, Sheet-Steel, Tin-Plate, and Silver-Solder.

Ser. No. 33,230. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) MARSHALL-WELLS HARDWARE Co., Duluth, Minn. Filed Mar. 6, 1908. Used ten years.



Particular description of goods.—Rubber Belting, Rubber Hose, Cotton and Linen Fabric Hose, Rubber Gaskets, Rubber Packing.

Ser. No. 33,231. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) MARSHALL-WELLS HARDWARE Co., Duluth, Minn. Filed Mar. 6, 1908. Used ten years.



Particular description of goods.—Duck Tents, Awnings, Paulins, and Felt Weather-Strips.

Ser. No. 33,395. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) MARSHALL-WELLS HARDWARE Co., Duluth, Minn. Filed Mar. 16, 1908. Used ten years.



Particular description of goods.—Harness, Harness Parts, Riding-Saddles, Horse-Collars, Horse-Blankets, Fur Carriage-Robes, Lap Dusters or Robes, Horsewhips, Harness-Rosettes, and Horse-Covers.

Ser. No. 33,514. (CLASS 47. WINES, EXCEPT MEDICATED.) CERRUTI MERCANTILE CO., San Francisco, Cal. Filed Mar. 21, 1908.

OLD PROMOTION

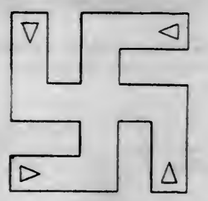
Particular description of goods.—Sauterne, Claret, Port, Sherry, Tamarindo, and Zinfandel Types of Wine.

Ser. No. 33,823. (CLASS 12. MASONRY MATERIALS.) H. W. JOHNS-MANVILLE COMPANY, New York, N. Y. Filed Apr. 3, 1908. Used ten years.

TRADE MARK ASBESTOS

Particular description of goods.—Pipe and Boiler Covering.

Ser. No. 33,881. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) HARRY L. MCCOY, Minneapolis, Minn. Filed Apr. 6, 1908.



Particular description of goods.—Colanders and Spoons Made of Iron, Steel, and Brass.

Ser. No. 33,882. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) HARRY L. MCCOY, Minneapolis, Minn. Filed Apr. 6, 1908.

DILVER

Particular description of goods.—Colanders and Spoons Made of Iron, Steel, and Brass.

Ser. No. 33,934. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE MOTHER SEIGEL'S SYRUP CO., New York, N. Y. Filed Apr. 7, 1908. Used ten years.

[redacted]

Particular description of goods.—Dyspepsia Remedies.

Ser. No. 34,007. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) NEW YORK COAL COMPANY, Augusta, Me., and Columbus, Ohio. Filed Apr. 10, 1908.

Knickerbocker

Particular description of goods.—Coal.

Ser. No. 34,035. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) FRANZ HARTMANN SINALCO-AKTIENGESELLSCHAFT IN DETMOLD, Detmold, Germany. Filed Apr. 11, 1908.

Sinalco

Particular description of goods.—Fruit Lemonades.

Ser. No. 34,076. (CLASS 17. TOBACCO PRODUCTS.) JUSTIN SEUBERT, INCORPORATED, Syracuse, N. Y. Filed Apr. 14, 1908.



The cross and the upper and lower segments of the circle being red.

Particular description of goods.—Cigars.

Ser. No. 34,119. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GALLIA SILK MILLS, Portland, Me. Filed Apr. 15, 1908.



Particular description of goods.—Silk Piece Goods.

Ser. No. 34,127. (CLASS 39. CLOTHING.) BORSALINO GIUSEPPE E FRATELLO SOCIETA ANONIMA, Alessandria, Italy. Filed Apr. 15, 1908.



Particular description of goods.—Gentlemen's Felt Derbies and Soft-Brimmed Hats.

Ser. No. 34,128. (CLASS 39. CLOTHING.) BORSALINO GIUSEPPE E FRATELLO SOCIETA ANONIMA, Alessandria, Italy. Filed Apr. 15, 1908.

Borsalino
Grand Prix - Paris 1900

Particular description of goods.—Gentlemen's Felt Derbies and Soft-Brimmed Hats.

Ser. No. 34,129. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BEDFORD MEDICINE CO., Bedford, Ind. Filed Apr. 15, 1908.

EZO

Particular description of goods.—Remedy for Affections of the Urinary and Rectal Channels.

Ser. No. 34,233. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) SAMUEL SLOAN & CO., Rochester, N. Y. Filed Apr. 20, 1908.

X RAY

Particular description of goods.—Furnace-Boilers.

Ser. No. 34,255. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) L. & E. STIRN, New York, N. Y. Filed Apr. 21, 1908.



The inner part of the selvage being blue.

Particular description of goods.—Silk Piece Goods.

Ser. No. 34,283. (CLASS 12. MASONRY MATERIALS.) MCKALLIP AND COMPANY, Pittsburg, Pa. Filed Apr. 23, 1908.



Particular description of goods.—Lime, Plaster, and Roofing-Paper and Roofing-Felt.

Ser. No. 34,284. (CLASS 12. MASONRY MATERIALS.) MCKALLIP AND COMPANY, Pittsburg, Pa. Filed Apr. 23, 1908.

PYRAMID

Particular description of goods.—Lime and Roofing-Paper and Roofing-Felt.

Ser. No. 34,302. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS ROSEMOND, San Diego, Cal. Filed Apr. 23, 1908.

Louis Rosemond TRIUVE

Particular description of goods.—A Hair-Oil.

Ser. No. 34,360. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) JOSEPH W. SCHLOSS, New York, N. Y. Filed Apr. 25, 1908.

EMBRO-SHEEN

Particular description of goods.—Braid for Embroidering Purposes.

Ser. No. 34,727. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE WESCO SUPPLY COMPANY, St. Louis, Mo., and Fort Worth, Tex. Filed May 14, 1908.



Particular description of goods.—Telegraph Instruments and Parts Therefor, Insulators, Generators and Parts Therefor, Motors and Parts Therefor, Dynamos and Parts Therefor, Sockets, Annunciators, Electric Batteries, Electric Bells, Insulated Wires and Cables, Switches, Electric Fans, Electric Lamps, Telephone Instruments and Parts Therefor, Tapes, and Rosettes.

Ser. No. 34,761. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CRYSTAL GELATINE COMPANY, Boston, Mass. Filed May 15, 1908. Used ten years.

CRYSTAL

Particular description of goods.—Gelatin.

Ser. No. 34,769. (CLASS 37. PAPER AND STATIONERY.) BLEISTIFTFABRIK VORMALS JOHANN FABER ACTIEN GESELLSCHAFT, Nuremberg, Germany. Filed May 15, 1908.

„Postograph"

Particular description of goods.—Lead, Colored, Slate, and Copying Pencils, Mechanical Pencils, Penholders, Rubber Erasers, and Nickel-Plated Lead-Pencil Holders.

Ser. No. 34,772. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FREDERIC W. HOPKINS, Providence, R. I. Filed May 15, 1908.



Particular description of goods.—A Remedy in Powder Form for Scratches, Wounds, and Sores.

Ser. No. 34,787. (CLASS 17. TOBACCO PRODUCTS.) CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y., and Caguas, Porto Rico. Filed May 16, 1908.



Particular description of goods.—Cigars, Cheroots, and Cigarettes Made of Cigar-Tobacco.

Ser. No. 34,788. (CLASS 17. TOBACCO PRODUCTS.) CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y., and Caguas, Porto Rico. Filed May 16, 1908.



Particular description of goods.—Cigars, Cheroots, and Cigarettes Made of Cigar-Tobacco.

Ser. No. 34,913. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FALLS CITY FLOUR CO., Louisville, Ky. Filed May 23, 1908.



Particular description of goods.—Wheat-Flour.

Ser. No. 34,939. (CLASS 39. CLOTHING.) CHARLES W. JOHNSON, Natick, Mass. Filed May 25, 1908.

SALAMANDER SHOE

Particular description of goods.—Shoes Manufactured of Leather.

Ser. No. 34,961. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) VINCENT B. THOMAS, New York, N. Y. Filed May 26, 1908.

LUXURIA

Particular description of goods.—Face-Cream.

Ser. No. 34,965. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROYAL PACKING COMPANY, Los Angeles, Cal. Filed May 26, 1908.



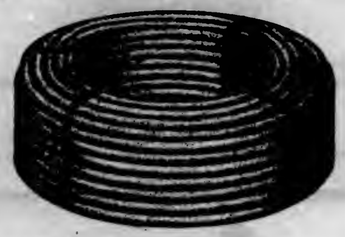
Particular description of goods.—Peeled - Green - Chilli and Vegetable Sauces for Meats and Stews.

Ser. No. 34,979. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HILLS BROS., San Francisco, Cal. Filed May 27, 1908.



Particular description of goods.—Coffee.

Ser. No. 35,125. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) AMERICAN CIRCULAR LOOM COMPANY, Portland, Me., and Boston, Mass. Filed June 3, 1908. Used ten years.



The ribbons securing the coil being red.

Particular description of goods.—Flexible Electric Conduits.

Ser. No. 35,142. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HARRY LONGBOTTOM, Bradford, England. Filed June 4, 1908.

Kamac

Particular description of goods.—Cloths of Wool, Worsted, or Hair.

Ser. No. 35,179. (CLASS 37. PAPER AND STATIONERY.) JOHN BLAIR, New York, N. Y. Filed June 5, 1908.



Red Robin

Particular description of goods.—Stylographic and Fountain Pens.

Ser. No. 35,278. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) R. E. DIETZ COMPANY, New York, N. Y. Filed June 11, 1908.

MAJESTIC

Particular description of goods.—Gas-Headlights Designed Particularly for Motor-Vehicles.

Ser. No. 35,281. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROSWELL D. TRIMBLE, Richmond, Va. Filed June 11, 1908.



Particular description of goods.—Compressed Tea.

Ser. No. 35,290. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) EDWARD M. ELLIS, Memphis, Tenn. Filed June 11, 1908.

Tan-Taz

Particular description of goods.—A Non-Alcoholic Carbonated Beverage and Syrup Therefor.

Ser. No. 35,340. (CLASS 39. CLOTHING.) FRANK BROTHERS, New York, N. Y. Filed June 13, 1908. Used ten years.

FRANK BROS.

Particular description of goods.—Boots and Shoes of Leather, Cloth, and Satin.

Ser. No. 35,373. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EDMUND R. WEBSTER, Cincinnati, Ohio. Filed June 15, 1908.

ROOKWOOD

Particular description of goods.—Coffee of All Kinds, Including Roasted and Blended, Tea, Flavoring Extracts, and Spices.

Ser. No. 35,383. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MOHAWK CONDENSED MILK CO., Rochester, N. Y. Filed June 15, 1908. Used ten years.

SWEET CLOVER

Particular description of goods.—Condensed Milk.

Ser. No. 35,401. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WILLIAM F. BLAINE, Denver, Colo. Filed June 15, 1908.

Only a Joke

Particular description of goods.—Preparations for Cleaning and Polishing Glass, Metal, Marble, and Similar Materials.

Ser. No. 35,408. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) STRAUS SADDLERY COMPANY, St. Louis, Mo. Filed June 16, 1908. Used ten years.



The background being in red.

Particular description of goods.—Harness, Saddles, Horse-Collars, Bridles, Stage-Breechings, Team-Breechings, Cart-Breechings, Turnbacks, Hip-Straps, Hip-Breechings, Plow Belly-Bands, Leather Back-Bands, Web Back-Bands, Hame-Straps, Chain-Pipes, Bell-Collars, Breast-Straps, Yoke-Straps, Leather Halters, Web Halters, Cart-Saddles, Halter-Leads, Hitching-Straps, Check-Lines, Buggy-Lines, Gig-Saddles, Gig-Pads, Riding-Martingales, Stirrup-Leathers, Saddle-Pockets, Collar-Housings, Feed-Bags, Buggy-Traces, Team-Traces, Breast-Collars, Hame-Tugs, Spread-Straps, Crupper-Docks, Winker-Braces, Shaft-Tugs, Buggy-Turnbacks, Buggy-Martingales, Buggy-Overchecks, Bridle-Reins, Team Gag-Reins, Buggy and Team Pad-Skirts, Check-Blinds, Pack-Saddles, Coach-Pads, Bridle-Fronts.

Ser. No. 35,410. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUSSELL GRAIN CO., Kansas City, Mo. Filed June 16, 1908.

RUSLMO

Particular description of goods.—Stock Food.

Ser. No. 35,423. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) E. C. ATKINS & COMPANY, Atlanta, Ga.; Chicago, Ill.; Memphis, Tenn.; Minneapolis, Minn.; New Orleans, La.; New York, N. Y.; Portland, Oreg.; San Francisco, Cal.; Seattle, Wash., and Hamilton, Ontario, Canada. Filed June 17, 1908.

TAR

Particular description of goods.—Rubber and Fabric Beltings, Hose, and Packings.

Ser. No. 35,601. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) O'DONOHUE COFFEE COMPANY, New York, N. Y. Filed June 18, 1908.

5th Ave.

Particular description of goods.—Coffee, Tea, Spices, Pepper, and Mustard.

Ser. No. 35,602. (CLASS 39. CLOTHING.) NAZARETH WAIST CO., Nazareth, Pa., and New York, N. Y. Filed June 18, 1908.



Particular description of goods.—"Union Suits," Undershirts, and Underdrawers.

Ser. No. 35,648. (CLASS 47. WINES, EXCEPT MEDICATED.) HAMMONDSPORT WINE COMPANY, Hammondsport, N. Y. Filed June 20, 1908.

TOKAYA

Particular description of goods.—White Wines of the Tokay Type.

Ser. No. 35,649. (CLASS 12. MASONRY MATERIALS.) H. W. JOHNS-MANVILLE COMPANY, New York, N. Y. Filed June 20, 1908.

"ASBESTUCCO,,

Particular description of goods.—Wall-Plaster.

Ser. No. 35,673. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) SOCIÉTÉ ANONYME DE LA DISTILLERIÉ DE LA LIQUEUR BÉNÉDICTINE DE L'ABBAYE DE FÉCAMP, Fecamp, France. Filed June 22, 1908.

VÉRITABLE BENEDICTINE LIQUEUR
FÉCAMP (France)

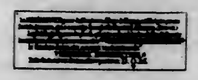
Particular description of goods.—A Liqueur Called Benedictine.

Ser. No. 35,674. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) SOCIÉTÉ ANONYME DE LA DISTILLERIÉ DE LA LIQUEUR BÉNÉDICTINE DE L'ABBAYE DE FÉCAMP, Fecamp, France. Filed June 22, 1908.

VÉRITABLE BÉNÉDICTINE

Particular description of goods.—A Liqueur Called Benedictine.

Ser. No. 35,675. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) SOCIÉTÉ ANONYME DE LA DISTILLERIÉ DE LA LIQUEUR BÉNÉDICTINE DE L'ABBAYE DE FÉCAMP, Fecamp, France. Filed June 22, 1908.



Particular description of goods.—A Liqueur Called Benedictine.

Ser. No. 35,736. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DAVID HERZFELD, San Antonio, Tex. Filed June 24, 1908.

OYSTERASCO

Particular description of goods.—A Sauce Used as a Relish and Condiment.

Ser. No. 35,758. (CLASS 48. MALT EXTRACTS AND LIQUORS.) MUTUAL UNION BREWING COMPANY, Aliquippa, Pa. Filed June 25, 1908.

MUTUAL UNION BREWING COMPANY
ALIQUIPPA BEAVER Co. PENNA.

Particular description of goods.—Beer, Porter, and Ale.

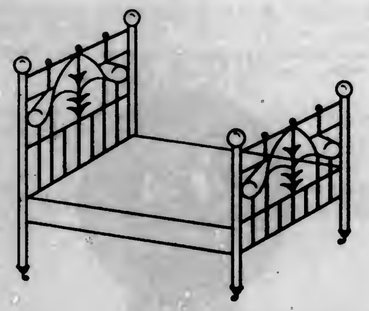
Ser. No. 35,803. (CLASS 7. CORDAGE.) THE AMERICAN STEEL & WIRE COMPANY OF NEW JERSEY, Worcester, Mass. Filed June 26, 1908.



One strand being colored blue and extending spirally round the rope or cable.

Particular description of goods.—Wire Rope and Cables.

Ser. No. 35,805. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE MONROE COTTON MILLS, Monroe, N. C. Filed June 26, 1908.



Particular description of goods.—Bleached and Unbleached Sheetings.

Ser. No. 35,807. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLARD WHITE COMPANY, Chicago, Ill. Filed June 26, 1908.



Particular description of goods.—A Flesh-Tonic in Tablet Form.

Ser. No. 35,812. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE GOTHAM COMPANY, New York, N. Y. Filed June 26, 1908. Used ten years.

CLINGFAST

Particular description of goods.—Nursing-Nipples.

Ser. No. 35,844. (CLASS 48. MALT EXTRACTS AND LIQUORS.) KOPPITZ-MELCHERS BREWING CO., Detroit, Mich. Filed June 29, 1908.

VIM

Particular description of goods.—Malt Beverage.

Ser. No. 35,863. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FOLEY BROS. & KELLY, St. Paul, Minn. Filed June 30, 1908.

"THE ROYAL CHOP"

Particular description of goods.—Teas.

Ser. No. 35,901. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) A MARTIN INC., New York, N. Y. Filed July 1, 1908.

KROMARIK

Particular description of goods.—Eyeglass and Spectacle Lenses.

Ser. No. 35,908. (CLASS 2. RECEPTACLES.) JAMES S. BARRON, New York, N. Y. Filed July 2, 1908.

XXX

Particular description of goods.—Hand-Buckets.

Ser. No. 35,909. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN T. DALE, Wichita, Kans. Filed July 2, 1908.

JAP-A-JAP

Particular description of goods.—Salves and Ointments.

Ser. No. 35,995. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE GOTHAM COMPANY, New York, N. Y. Filed July 8, 1908. Used ten years.

THE BEST

Particular description of goods.—Nursing-Bottles.

Ser. No. 36,077. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE MCINTOSH HARDWARE CORPN., Cleveland, Ohio. Filed July 13, 1908.

"TRY-ME"

Particular description of goods.—Wrenches.

Ser. No. 36,111. (CLASS 31. FILTERS AND REFRIGERATORS.) NASH HARDWARE CO., Fort Worth, Tex. Filed July 14, 1908.

BLUE NORTHER

Particular description of goods.—Water-Coolers, Ice-Cream Freezers, Ice-Boxes, and Refrigerators.

Ser. No. 36,131. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LONG ISLAND POTATO EXCHANGE, Riverhead, N. Y. Filed July 15, 1908.



Particular description of goods.—Fresh Vegetables.

Ser. No. 36,141. (CLASS 48. MALT EXTRACTS AND LIQUORS.) TERRE HAUTE BREWING COMPANY, Terre Haute, Ind. Filed July 15, 1908.

Velvetcan

Particular description of goods.—A Malt Beverage.

Ser. No. 36,143. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) G. A. STAFFORD & Co., Greenwich, Conn., and New York, N. Y. Filed July 16, 1908.

DREAMLAND

Particular description of goods.—Wide Sheetings and Ready-Made Sheets.

Ser. No. 36,160. (CLASS 5. ADHESIVES.) PETER COOPER'S GLUE FACTORY, New York, N. Y. Filed July 16, 1908. Used ten years.

PETER COOPER'S GLUE NEW YORK

Particular description of goods.—Glue.

Ser. No. 36,161. (CLASS 5. ADHESIVES.) PETER COOPER'S GLUE FACTORY, New York, N. Y. Filed July 16, 1908. Used ten years.

PETER COOPER'S COMMUTATOR GLUE NEW YORK

Particular description of goods.—Glue.

Ser. No. 36,162. (CLASS 39. CLOTHING.) FRIEND BROTHERS CLOTHING COMPANY, Milwaukee, Wis. Filed July 16, 1908.

FRIEND BROTHERS CLOTHING COMPANY MILWAUKEE "FRIEND MADE CLOTHES MAKE FRIENDS"

Particular description of goods.—Overcoats and Outer Suits.

Ser. No. 36,168. (CLASS 39. CLOTHING.) ZEEMAN FUR COAT COMPANY, New York, N. Y. Filed July 17, 1908.

THE Broadway COAT

Particular description of goods.—Fur-Lined and Fur-Trimmed Overcoats for Men and Women.

Ser. No. 36,210. (CLASS 31. FILTERS AND REFRIGERATORS.) AUSTRO-AMERICAN SEPARATOR CO., Cleveland, Ohio. Filed July 18, 1908.

NOSHAMMY

Particular description of goods.—Gravity-Filtering Liquid-Separators for Separating Liquids of Different Specific Gravity, Particularly Water from Gasolene.

Ser. No. 36,221. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) MICHAEL E. SCHOENING, New York, N. Y. Filed July 20, 1908.

Le Superbe

Particular description of goods.—Strings for Musical Instruments.

Ser. No. 36,222. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) MICHAEL E. SCHOENING, New York, N. Y. Filed July 20, 1908.

AKADEMIE

Particular description of goods.—Strings for Musical Instruments.

Ser. No. 36,223. (CLASS 37. PAPER AND STATIONERY.) THE PARKER PEN COMPANY, Janesville, Wis. Filed July 20, 1908.

RED GIANT

Particular description of goods.—Fountain-Pens.

Ser. No. 36,234. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. P. BADENOCH & SONS, Richmond, Va. Filed July 20, 1908.

THISTLE

Particular description of goods.—Sweet Gherkins, Chow-Chow, Sour Gherkins, Sour Pickles, Prepared Mustard, Tomato Catsup, Sweet Pickles, and Canned Vegetables.

Ser. No. 36,240. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) R. M. ROSE COMPANY, Chattanooga, Tenn. Filed July 21, 1908.

FOREFATHER

Particular description of goods.—A Blend of Straight Corn Whiskies.

Ser. No. 36,243. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE HOME BREWING COMPANY, Newark, N. J. Filed July 21, 1908.

Zythos

Particular description of goods.—A Non-Intoxicating Malt Beverage.

Ser. No. 36,287. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) AJAX PAINT COMPANY, Indianapolis, Ind. Filed July 23, 1908.

WOODPECKER

The head of the bird being printed in red.

Particular description of goods.—Paints.

Ser. No. 36,359. (CLASS 39. CLOTHING.) LEBANON MILL CO., Pawtucket, R. I. Filed July 27, 1908.

LEBANON FRENCH BALBRIGGAN

Particular description of goods.—French Balbriggan Undervests, Underdrawers, and Hosiery for Ladies, Gentlemen, and Children.

Ser. No. 36,360. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) GUTMANN & COMPANY, Chicago, Ill. Filed July 27, 1908.

"ELKSHU"

Particular description of goods.—Tanned Leather.

Ser. No. 36,364. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) STANDARD OIL CO. OF NEW YORK, New York, N. Y. Filed July 28, 1908. Used ten years.

FROM PRATT WORKS NEW YORK, U.S.A. RADIANT OIL

Particular description of goods.—Refined Petroleum for Illuminating, Heating, and Power Purposes.

Ser. No. 36,419. (CLASS 7. CORDAGE.) THE AMERICAN STEEL & WIRE COMPANY OF NEW JERSEY, Worcester, Mass. Filed Aug. 1, 1908.

MONITOR

Particular description of goods.—Wire Rope and Cables.

Ser. No. 36,420. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NATIONAL STARCH COMPANY, New York, N. Y. Filed Aug. 1, 1908.



Particular description of goods.—Laundry Starch.

Ser. No. 36,423. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) KAMPFE BROS., New York, N. Y. Filed Aug. 1, 1908.



Particular description of goods.—Manicure Articles, Comprising Cuticle-Knives, Corn-Knives, Scalpel-Blades, Cuticle-Blades, File and Cuticle Knife Combined, Nail-Files, Nail File and Cleaner Combined, Nail-Scrapers, Nail-Polishers, Corn-Chisels, Corn-Releasers, Cuticle-Releasers, Shearing Nail-Clippers, Cuticle-Scissors, Straight Nail-Scissors, and Curved Nail-Scissors.

Ser. No. 36,451. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) UNITED STATES FIRELESS COOKER COMPANY, Boston, Mass. Filed Aug. 3, 1908.

MOTORETTE

Particular description of goods.—Fireless Cooking Apparatus.

Ser. No. 36,464. (CLASS 17. TOBACCO PRODUCTS.) THE INDEPENDENCE CIGAR MFG. CO., Detroit, Mich. Filed Aug. 4, 1908.



Habit

Particular description of goods.—Cigars.

Ser. No. 36,465. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) NEW YORK AND KENTUCKY CO., Rochester, N. Y. Filed Aug. 4, 1908.



ATLASTA

Particular description of goods.—Distilled Dry Gin.

Ser. No. 36,489. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) THE A. WILHELM CO., Reading, Pa. Filed Aug. 5, 1908.

Genuine Royal

Particular description of goods.—Ready-Mixed Paints, Enamels, Stains, Colors in Oil, and Colors in Japan.

Ser. No. 36,490. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) THE A. WILHELM CO., Reading, Pa. Filed Aug. 5, 1908. Used ten years.

ATLANTIC COAST

Particular description of goods.—Ready-Mixed Paints, Varnish, Enamels, Stains, Colors in Oil, and Colors in Japan.

Ser. No. 36,491. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) THE A. WILHELM CO., Reading, Pa. Filed Aug. 5, 1908.

EASTLAKE

Particular description of goods.—Ready-Mixed Paints, Stains, Colors in Oil, and Colors in Japan.

Ser. No. 36,543. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) JOHN C. RAYMOND, New York, N. Y. Filed Aug. 7, 1908.



Particular description of goods.—Fruit Beverages.

Ser. No. 36,601. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) THE CORNISH EUREKA GOLD SIZE CO., San Francisco, Cal. Filed Aug. 11, 1908. Used ten years.



Particular description of goods.—Gold Size.

Ser. No. 36,602. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) EXCELSIOR SUPPLY COMPANY, Chicago, Ill. Filed Aug. 11, 1908.

Excelsior Auto Cycle

Particular description of goods.—Motor-Bicycles.

Ser. No. 36,606. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM IKLE, New York, N. Y. Filed Aug. 11, 1908.

LE-NO

Particular description of goods.—Coloring-Dye.

Ser. No. 36,627. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) BREYMANN & HÜBENER, Hamburg, Germany. Filed Aug. 12, 1908. Used ten years.



Particular description of goods.—Lubricating-Oils.

Ser. No. 36,628. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) BREYMANN & HÜBENER, Hamburg, Germany. Filed Aug. 12, 1908.



Particular description of goods.—Lubricating-Oils.

Ser. No. 36,646. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EUGENE K. BLACK, Austin, Tex. Filed Aug. 13, 1908.

BOLL-I-CIDE

Particular description of goods.—An Insecticide.

Ser. No. 36,808. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) STANDARD OIL CO. OF NEW YORK, New York, N. Y. Filed Aug. 18, 1908. Used ten years.



Particular description of goods.—Lubricating-Oils.

TRADE-MARKS

REGISTERED SEPTEMBER 29, 1908.

70,698. FELT ROOFING. Barrett Manufacturing Company, New York, N. Y.
Filed June 23, 1908. Serial No. 35,096. PUBLISHED JULY 28, 1908.

70,699. CIGARS, CHEROOTS, AND LITTLE CIGARS. Harris Burger, New York, N. Y.
Filed June 13, 1908. Serial No. 35,331. PUBLISHED JULY 28, 1908.

70,700. UNDER-WATER EXHAUSTS FOR ENGINES. C. B. Chatfield, Grand Rapids, Mich.
Filed June 9, 1908. Serial No. 35,244. PUBLISHED JULY 28, 1908.

70,701. PAINT-BRUSHES. C. W. Snow & Company, Syracuse, N. Y.
Filed December 2, 1907. Serial No. 31,507. PUBLISHED JULY 28, 1908.

70,702. GRANULATED SMOKING-TOBACCO. The Khedivial Co., New York, N. Y.
Filed May 26, 1908. Serial No. 34,960. PUBLISHED JULY 28, 1908.

70,703. CERTAIN PAINTERS' MATERIALS. Alfred J. Lucas, Chicago, Ill.
Filed June 22, 1908. Serial No. 35,660. PUBLISHED JULY 28, 1908.

70,704. FISH-HOOKS. O. Mustad & Sön, Christiania, Norway.
Filed May 18, 1908. Serial No. 34,803. PUBLISHED JULY 28, 1908.

70,705. REFRIGERATORS. Norvell-Shapleigh Hardware Company, St. Louis, Mo.
Filed June 15, 1908. Serial No. 35,396. PUBLISHED JULY 28, 1908.

70,706. CERTAIN GLASSWARE. The Opalite Tile Co., Monaca, Pa.
Filed May 27, 1908. Serial No. 34,973. PUBLISHED JULY 28, 1908.

70,707. TOBACCO-PIPES. Peach Pipe Company, Boston, Mass.
Filed June 23, 1908. Serial No. 35,684. PUBLISHED JULY 28, 1908.

70,708. CIGARS. Smetzer Cigar & Tobacco Company, St. Marys, Pa.
Filed June 11, 1908. Serial No. 35,272. PUBLISHED JULY 28, 1908.

70,709. CIGARETTES. Ware-Kramer Tobacco Co., Norfolk, Va.
Filed June 11, 1908. Serial No. 35,266. PUBLISHED JULY 28, 1908.

70,710. BLOTTING-PAPER. The Wrenn Paper Company, Middletown, Ohio.
Filed December 19, 1907. Serial No. 31,842. PUBLISHED JULY 28, 1908.

70,711. ANTISEPTIC PREPARATION. Aktiebolaget Barnängens Tekniska Fabrik, Stockholm, Sweden.
Filed March 10, 1906. Serial No. 18,043. PUBLISHED JULY 28, 1908.

70,712. LINIMENT. Mathew W. Barker, Clarksville, Tenn.
Filed March 30, 1908. Serial No. 33,762. PUBLISHED JULY 28, 1908.

70,713. MEDICATED BATHING FLUID. George Buckle, New York, N. Y.
Filed June 6, 1908. Serial No. 35,195. PUBLISHED JULY 28, 1908.

70,714. REMEDY FOR CERTAIN DISEASES. Chicago Pharmacal Co., Chicago, Ill.
Filed May 15, 1908. Serial No. 34,756. PUBLISHED JULY 28, 1908.

70,715. LINIMENT. Coffin and Schamerhorn, Des Moines, Iowa.
Filed May 25, 1908. Serial No. 34,968. PUBLISHED JULY 28, 1908.

70,716. DISINFECTANTS AND VERMIN-EXTERMINATORS. Fredk. J. Herr, New York, N. Y.
Filed June 11, 1908. Serial No. 35,288. PUBLISHED JULY 28, 1908.

70,717. TOOTH-POWDER. Sharp & Dohme, Baltimore, Md.
Filed June 3, 1908. Serial No. 35,105. PUBLISHED JULY 28, 1908.

70,718. ANTISEPTIC EMOLLIENT FOR THE SKIN. Sharp & Dohme, Baltimore, Md.
Filed June 3, 1908. Serial No. 35,106. PUBLISHED JULY 28, 1908.

70,719. ODORLESS ANTISEPTIC DUSTING-POWDER. Sharp & Dohme, Baltimore, Md.
Filed June 15, 1908. Serial No. 35,356. PUBLISHED JULY 28, 1908.

70,720. REMEDY FOR HEADACHE. Otto L. Sherer, New York, N. Y.
Filed June 5, 1908. Serial No. 35,171. PUBLISHED JULY 28, 1908.

70,721. CERTAIN MEDICINAL PREPARATION. Joseph John Vetter, Brooklyn, N. Y.
Filed April 9, 1908. Serial No. 33,977. PUBLISHED JULY 14, 1908.

70,722. CORDIAL. Giovanni Aquino, New York, N. Y.
Filed January 27, 1908. Serial No. 32,446. PUBLISHED JULY 28, 1908.

70,723. CANNED FRUITS AND VEGETABLES. Burton & Davis Co., New York, N. Y.
Filed July 9, 1903. Serial No. 20,793. PUBLISHED JULY 28, 1908.

70,724. CHANDELIERS FOR GAS AND ELECTRIC LIGHTS. Chas. Polacheck & Bro. Co., Milwaukee, Wis.
Filed March 23, 1908. Serial No. 33,551. PUBLISHED JULY 28, 1908.

70,725. GLUTEN FEED. Corn Products Refining Company, Jersey City, N. J,, and New York, N. Y.
Filed May 25, 1908. Serial No. 34,923. PUBLISHED JULY 28, 1908.

70,726. GLUTEN FEED. Corn Products Manufacturing Company, Jersey City, N. J., and Chicago, Ill.
Filed May 25, 1908. Serial No. 34,924. PUBLISHED JULY 28, 1908.

70,727. NON-INTOXICATING MALT BEVERAGE. Evansville Brewing Association, Evansville, Ind.
Filed May 21, 1908. Serial No. 34,881. PUBLISHED JULY 28, 1908.

70,728. CERTAIN AGRICULTURAL MACHINERY. The Foos Manufacturing Company, Springfield, Ohio.
Filed April 6, 1908. Serial No. 33,883. PUBLISHED JULY 28, 1908.

70,729. MALT-VINEGAR. Grimble & Co., Limited, London, England.
Filed April 14, 1908. Serial No. 34,078. PUBLISHED JUNE 2, 1908.

70,730. BISCUITS, CRACKERS, AND BREAD. THE HESS BISCUIT AND BREAD CO., Ogden, Utah.
Filed April 25, 1908. Serial No. 34,383. PUBLISHED JULY 28, 1908.

70,731. NON-ALCOHOLIC CARBONATED TONIC BEVERAGE. FRANK H. KERON, Central Falls, R. I.
Filed April 13, 1908. Serial No. 34,048. PUBLISHED JULY 28, 1908.

70,732. BISCUITS OR CRACKERS. J. S. IVINS' SON, Philadelphia, Pa.
Filed April 27, 1908. Serial No. 34,410. PUBLISHED JULY 28, 1908.

70,733. WHEAT-FLOUR. THE LONGMONT FARMERS MILLING & ELEVATOR COMPANY, Longmont, Colo.
Filed May 14, 1908. Serial No. 34,748. PUBLISHED JULY 28, 1908.

70,734. WHEAT-FLOUR. THE LONGMONT FARMERS MILLING & ELEVATOR COMPANY, Longmont, Colo.
Filed May 14, 1908. Serial No. 34,750. PUBLISHED JULY 28, 1908.

70,735. WHEAT-FLOUR. THE LONGMONT FARMERS MILLING & ELEVATOR COMPANY, Longmont, Colo.
Filed May 16, 1908. Serial No. 34,775. PUBLISHED JULY 28, 1908.

70,736. UMBRELLAS AND PARTS THEREOF. LYCOMING WIRELESS UMBRELLA CO., Williamsport, Pa
Filed May 20, 1908. Serial No. 34,846. PUBLISHED JULY 28, 1908.

70,737. INSULATED WIRE. NATIONAL INDIA RUBBER CO., Bristol, R. I.
Filed May 18, 1908. Serial No. 34,805. PUBLISHED JULY 28, 1908.

70,738. INSULATED WIRE. NATIONAL INDIA RUBBER CO., Bristol R. I.
Filed May 18, 1908. Serial No. 34,806. PUBLISHED JULY 28, 1908.

70,739. CANNED SALMON. NORTH PACIFIC TRADING & PACKING CO., San Francisco, Cal.
Filed March 25, 1908. Serial No. 33,629. PUBLISHED MAY 5, 1908.

70,740. CANNED FRUITS AND VEGETABLES. J. F. PYLE & SON, San Jose, Cal.
Filed May 21, 1908. Serial No. 34,858. PUBLISHED JULY 28, 1908.

70,741. ELECTRIC LAMPS. R. E. DIETZ COMPANY, New York, N. Y.
Filed June 17, 1908. Serial No. 35,445. PUBLISHED JULY 28, 1908.

70,742. EVAPORATED SOUPS. JAMES W. SPENCE, New York, N. Y.
Filed October 15, 1907. Serial No. 30,610. PUBLISHED JULY 28, 1908.

70,743. WHEAT-FLOUR. TACOMA GRAIN COMPANY, Tacoma, Wash.
Filed April 27, 1908. Serial No. 34,389. PUBLISHED JULY 28, 1908.

70,744. MILK, CREAM, BUTTERMILK, BUTTER, AND COTTAGE CHEESE. WHITE SPRINGS FARM DAIRY CO., Geneva, N. Y.
Filed March 14, 1908. Serial No. 33,387. PUBLISHED MAY 26, 1908.

70,745. HORSE-BLANKETS. KNEEDLER & COMPANY, Philadelphia, Pa.
Filed June 6, 1908. Serial No. 35,192. PUBLISHED JULY 28, 1908.

70,746. DOG AND PUPPY BREAD AND CRACKERS. POTTER & WRIGHTINGTON, Boston, Mass.
Filed May 11, 1908. Serial No. 34,686. PUBLISHED JULY 28, 1908.

70,747. ORANGE BITTERS. GEORGES STIEGLER & Co., New York, N. Y.
Filed May 1, 1908. Serial No. 34,505. PUBLISHED JULY 28, 1908.

70,748. RUBBER BELTING, RUBBER HOSE, AND RUBBER MACHINERY PACKING. THE ANCHOR PACKING COMPANY, Philadelphia, Pa.
Filed June 12, 1908. Serial No. 35,299. PUBLISHED JULY 28, 1908.

70,749. DANDRUFF REMEDY AND HAIR-RESTORER. DUNDAS RALPH CAMPBELL, Newark, N. J.
Filed May 18, 1908. Serial No. 34,814. PUBLISHED JUNE 30, 1908.

70,750. UNBLEACHED SHEETINGS, SHIRTINGS, DRILLS, AND FLANNELS WOVEN OF COTTON YARN. CHINA & JAPAN TRADING COMPANY, LIMITED, New York, N. Y.
Filed January 12, 1907. Serial No. 24,589. PUBLISHED JULY 28, 1908.

70,751. TANNED AND DRESSED LEATHER. HARRY W. CLARK, North Woburn, Mass.
Filed April 16, 1908. Serial No. 34,160. PUBLISHED JULY 28, 1908.

70,752. CERTAIN TOOLS. THE COLLINS COMPANY, Collinsville, Conn.
Filed April 30, 1908. Serial No. 34,475. PUBLISHED JULY 14, 1908.

70,753. CERTAIN TOOLS. THE COLLINS COMPANY, Collinsville, Conn.
Filed April 30, 1908. Serial No. 34,477. PUBLISHED JUNE 30, 1908.

70,754. FRAMES FOR FEMININE HEAD-GEAR. CREAM CITY BONNET FRAME WORKS, Milwaukee, Wis.
Filed August 9, 1905. Serial No. 11,462. PUBLISHED JULY 28, 1908.

70,755. OIL LINIMENT. THE DR. J. H. MCLEAN MEDICINE COMPANY, St. Louis, Mo.
Filed March 2, 1908. Serial No. 33,126. PUBLISHED JUNE 2, 1908.

70,756. SHEETINGS AND DRILLINGS. EXPOSITION COTTON MILLS, Atlanta, Ga.
Filed February 23, 1906. Serial No. 17,257. PUBLISHED DECEMBER 10, 1907.

70,757. CERTAIN PLASTIC COMPOUND. THE G. E. WALTER COMPANY, New York, N. Y.
Filed March 27, 1908. Serial No. 33,695. PUBLISHED JULY 28, 1908.

70,758. SOAP. GILLETTE SAFETY RAZOR CO., Boston, Mass.
Filed May 27, 1908. Serial No. 34,985. PUBLISHED JULY 28, 1908.

70,759. VELVETEENS. J. HALLWORTH & SON, Manchester, England.
Filed September 23, 1905. Serial No. 12,929. PUBLISHED JULY 28, 1908.

70,760. PEANUTS AND PEANUT-BUTTER. THE KELLY CO., Cleveland, Ohio.
Filed January 3, 1908. Serial No. 32,047. PUBLISHED MARCH 24, 1908.

70,761. SHEET-MUSIC. LOUISE C. KÜSSNER, Chicago, Ill.
Filed March 2, 1908. Serial No. 33,133. PUBLISHED JULY 28, 1908.

70,762. WHITE AND COLORED COTTON DRESS GOODS. L. HESS & CO. INC., New York, N. Y.
Filed April 11, 1908. Serial No. 34,017. PUBLISHED JULY 28, 1908.

70,763. SERIAL CATALOGUE. MISSOURI GLASS COMPANY, St. Louis, Mo.
Filed June 10, 1908. Serial No. 35,258. PUBLISHED JULY 28, 1908.

70,764. CLOTH, LEATHER, AND RUBBER SHOES. NATIONAL SHOEMAKERS, Lewiston, Me.
Filed May 7, 1908. Serial No. 34,621. PUBLISHED JULY 28, 1908.

70,765. WOVEN SILK FABRICS. PHALANX SILK MILL, Jersey City, N. J.
Filed May 2, 1908. Serial No. 34,539. PUBLISHED JULY 28, 1908.

70,766. LOCK-WASHERS. THE POSITIVE LOCK WASHER COMPANY, Newark, N. J.
Filed April 8, 1908. Serial No. 33,942. PUBLISHED MAY 19, 1908.

70,767. SOAP FOR LAUNDRY USE. THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio.
Filed February 8, 1908. Serial No. 32,671. PUBLISHED JULY 28, 1908.

70,768. SOAP FOR LAUNDRY USE. THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio.
Filed February 8, 1908. Serial No. 32,673. PUBLISHED JULY 28, 1908.

70,769. SOAP FOR LAUNDRY USE. THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio.
Filed February 8, 1908. Serial No. 32,675. PUBLISHED JULY 28 1908.

70,770. SOAP FOR LAUNDRY USE. THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio.
Filed February 8, 1908. Serial No. 32,677. PUBLISHED JULY 28, 1908.

70,771. SOAP FOR LAUNDRY USE. THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio.
Filed February 17, 1908. Serial No. 32,834. PUBLISHED JULY 28, 1908.

70,772. SOAP FOR LAUNDRY USE. THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio.
Filed February 27, 1908. Serial No. 33,046. PUBLISHED JULY 28, 1908.

70,773. SOAP FOR LAUNDRY USE. THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio.
Filed February 27, 1908. Serial No. 33,048. PUBLISHED JULY 28, 1908.

70,774. SOAP FOR LAUNDRY USE. THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio.
Filed March 21, 1908. Serial No. 33,530. PUBLISHED JULY 28, 1908.

70,775. SOAP FOR LAUNDRY USE. THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio; Kansas City, Kans.; Staten Island, N. Y., and Cincinnati, Ohio.
Filed March 21, 1908. Serial No. 33,532. PUBLISHED JULY 28, 1908.

70,776. CERTAIN MUSICAL INSTRUMENTS. PUNTENNEY & EUTSLER, Columbus, Ohio.
Filed May 9, 1908. Serial No. 34,674. PUBLISHED JULY 28, 1908.

70,777. SOAP. MARY E. TAYLOR, Dallas, Tex.
Filed June 15, 1908. Serial No. 35,398. PUBLISHED JULY 28, 1908.

70,778. CORSETS. WRIGHT FORMETTE CO., Newark, N. J.
Filed April 25, 1908. Serial No. 34,384. PUBLISHED JULY 28, 1908.

70,779. AUTOMOBILES. OESTERREICHISCHE DAIMLER-MOTOREN-GESELLSCHAFT GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Vienna, and Wiener-Neustadt, near Vienna, Austria-Hungary.
Filed May 16, 1907. Serial No. 27,424. PUBLISHED SEPTEMBER 3, 1907.

LABELS

REGISTERED SEPTEMBER 29, 1908.

14,374.—*Title:* "ELFENBRÄU." (For Beer.) C. & J. MICHEL BREWING CO., La Crosse, Wis. Filed August 6, 1908.

14,375.—*Title:* "TABLE ROCK MINERAL WATER." (For Natural Mineral Water.) J P PORTER, Vancouver, Wash. Filed July 28, 1908.

14,376.—*Title:* "SPORTING EXTRA." (For Cigarettes.) HYMAN LAKOWETZKY, Chicago, Ill. Filed August 14, 1908.

14,377.—*Title:* "KEYSTONE." (For Condensed Milk.) THE LACKAWANNA DAIRY COMPANY, Scranton, Pa. Filed July 14, 1908.

14,378.—*Title:* "NAVAJO." (For Canned Corn.) THE MCCORD MERCANTILE COMPANY, Pueblo, Colo. Filed August 29, 1907.

14,379.—*Title:* "POND LILY." (For Cold-Cream.) STEPHEN M. SARGEANT, Worcester, Mass. Filed August 25, 1908.

14,380.—*Title:* "QUEEN ALEXANDRIAS OF JUDEA ROYAL RICE-POWDER." (For Face-Powder.) JUANO L. DE ZEABAULT, Cleveland, Ohio. Filed August 26, 1908.

14,381.—*Title:* "QUEEN ALEXANDRIAS OF JUDEA SWEET-FLORENTINE POWDER." (For Tooth-Powder.) JUANO L. DE ZEABAULT, Cleveland, Ohio. Filed August 26, 1908.

14,382.—*Title:* "DANIEL'S P. P. P. ROD PACKING." (For Rod-Packing.) CHARLES A. DANIEL, Philadelphia, Pa. Filed August 21, 1908.

14,383.—*Title:* "ROYAL-FLOOR-WAX." (For Wax for Polishing Floors, Woodwork, and Furniture.) ERNST A. BROMUND, New York, N. Y. Filed August 17, 1908.

PRINTS

REGISTERED SEPTEMBER 29, 1908.

2,351.—*Title:* "DON'T CROW." (For Teas and Coffees.) JAMES VAN DYK CO., New York, N. Y. Filed August 5, 1908.

2,352.—*Title:* "ARISTOS RED TURKEY WHEAT FLOUR." (For Wheat-Flour.) THE SOUTHWESTERN MILLING COMPANY, Kansas City, Mo. Filed June 6, 1908.

2,353.—*Title:* "MERION BUTTER." (For Butter.) WALTER R. LEES & BRO., Philadelphia, Pa. Filed August 26, 1908.

2,354.—*Title:* "OURS IS A RECORD OF VICTORY WITH VICTOR RECORDS." (For Disk Records.) GEORGE ALLEN STANLEY, New York, N. Y. Filed August 11, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

IN RE MIAMI CYCLE & MFG. COMPANY.

Decided July 17, 1908.

ACCESS TO PENDING APPLICATION—SHOWING OF INTEREST.

Access will not be granted to a pending application referred to in a patent purporting to be a division of such application merely upon an affidavit by an attorney that suit has been brought on such patent against one of petitioner's customers, that petitioner is desirous of defending such suit, and that access to the prior application is deemed necessary in order that a proper defense may be made. The practice requires that access to pending applications will be refused except to parties showing proper interest therein, and the mere allegation of an attorney that the company for which he is counsel desires to defend a suit brought on a patent divided out of such application is not a sufficient showing of interest.

ON PETITION.

Messrs. Brock, Becken & Smith for Miami Cycle & Mfg. Company.

Mr. T. Hart Anderson and *Mr. Melville Church* for Townsend.

MOORE, *Commissioner:*

This is a petition for access to application No. 693,117, filed by H. P. Townsend.

The ground upon which this petition is based is that Patent No. 850,077, which was granted to Townsend, purports to be a division of application No. 693,117; that suit has been brought by the owners of the Townsend patent against the Andrus and Naedele Company, who are customers of the Miami Cycle & Mfg. Company; that the latter company is desirous of defending the suit, and that it is essential in order that a proper defense may be made that access may be had to the parent application.

In the decision *in re Dyer*, (106 O. G., 1508,) where a similar petition was filed, it was held that—

Since the patent refers to the earlier application, and thereby accures to the patentee the benefit of its date, it is clear that the patentee is not entitled to demand that the application be concealed from any persons having a real interest in the record leading to the grant of the patent. The application is a part of the record on which the patent was granted and is public property in the sense that it may be seen by any one having good reasons for inspecting it. Notwithstanding the rights of the public in this matter, however, it is believed that the inventor may have some equitable rights which should be safeguarded in so far as possible. The earlier application may and probably does disclose other inventions besides that included in the patent, and those inventions should not be made public property or be disclosed to a stranger to the record except where necessary.

In the decision *in re The Bullock Electric Mfg. Company* (129 O. G., 1611) it was held that the fact that a suit had been threatened against the petitioner on a certain patent did not entitle him to be furnished with a copy of a prior application referred to in the prosecution of that patent. In the present case no allegation is made that the Miami Cycle & Mfg. Company has actually undertaken the defense of the suit against its customer, and the mere allegation of the attorney that the company for which he is the counsel is desirous of defending this suit is not believed to be a sufficient showing of interest on the part of that company to justify granting them access to the parent application.

It is urged by the attorney of petitioner that the fact that the patentee in his patent states that the application upon which it was granted is a division of an earlier application makes that earlier application a part of the record of the patent and that as such any person should be entitled to a copy of the same. As stated in the case of Dyer, above cited, the earlier application probably discloses other inventions besides that included in the patent, and while a party is entitled to see the whole record upon which the patent issued, if it is necessary to preserve his rights, he is not entitled to see it if he presents no good reasons therefor. The mere allegation that a party is in some way or other interested in the patent and in determining whether the application on which the patent was granted was, in fact, a division of an earlier application is not believed to be a sufficient showing of interest to justify granting him access to such earlier application.

The petition is denied.

CORRINGTON *v.* TURNER.

Decided August 7, 1908.

1. INTERFERENCE—ABANDONMENT OF INVENTION—RULE 125.

A declaration of abandonment accompanied by a statement that applicant abandons certain counts because they are either limited or anticipated or are not applicable to the structure will not be accepted under Rule 125.

2. SAME—SAME—STRIKING FROM FILES.

A declaration of abandonment accompanied by reasons for filing the same will not be made the basis for judgment under Rule 125, but it should not be stricken from the files.

APPEAL from Examiner of Interferences.

FLUID-PRESSURE BRAKE.

Mr. Murray Corrington pro se.

Mr. Edward A. Wright for Turner.

BILLINGS, *Acting Commissioner:*

This case is before me upon appeals by both parties from decisions of the Examiner of Interferences. Turner appeals from the decision of the Examiner of Interferences dismissing his declaration of abandonment and ordering it removed from the interference files. Said declaration of abandonment states:

In the matter of the interference above noted, under the provisions of Rule 125, I hereby abandon the invention set forth in counts 1, 2, 3, 4, 5, 8, and 9 of the issue of this interference for the following reasons:

This statement is followed by four paragraphs, in each of which Turner alleges that certain counts are either limited and anticipated or are not applicable to his structure.

Corrington, the junior party, took his testimony. Turner took no testimony, but upon the day his time for taking testimony expired he filed the above declaration of abandonment.

Turner's abandonment does not appear to be conditional or contain limitations stating that it is to be taken otherwise than absolute, and it does not, therefore, come within the class condemned for this reason by the Commissioner in *Gabrielson* v. *Felbel*, (121 O. G., 691.)

It is believed, however, to be objectionable in form. A statement of the reasons why the claims are abandoned is uncalled for and can serve no purpose other than to cast a cloud upon the patent that may issue to the opponent. If such a paper is held to be a proper declaration of abandonment upon which to base an award of priority under Rule 125, it might appear to a prospective purchaser of the invention or to one unfamiliar with such matters that the Patent Office in giving effect to the abandonment indorsed the reasons upon which it is alleged to be based. If a party wishes to avail himself of the privilege of terminating the interference by a declaration of abandonment of the invention, it is believed to be in the interest of good practice to require him to file a declaration of abandonment free from the above objections. For this reason the Examiner of Interferences properly held that Turner's declaration in its present form should not be made the basis of an action in the interference. It is not considered, however, that the Examiner of Interferences was warranted in ordering the physical removal of the paper from the interference files.

Corrington urges consideration of so much of his appeal as relates to suspension of proceedings and permission to take additional testimony as to counts 6 and 7 only in case the decision of the Examiner of Interferences refusing to base judgment on Turner's declaration of abandonment should be reversed. In view of the above holding these matters do not call for consideration. It may be stated, however, that no good reason appears for granting Corrington's request for permission to take additional testimony. Considering Corrington's request for sufficient time to permit him to print and file his testimony forty days before the final hearing, (Rule 162,) it appears from the decision of the Examiner of Interferences that he will postpone the final hearing if it should be necessary, and at the hearing Turner's counsel stated that he would consent to a reasonable extension of time.

The decisions of the Examiner of Interferences are affirmed to the extent indicated.

TREATIES BETWEEN THE UNITED STATES AND JAPAN.

PROTECTION OF TRADE MARKS, ETC., IN KOREA.

Signed at Washington, May 19, 1908. Ratification advised by the Senate, May 20, 1908. Ratified by the President, June 2, 1908. Ratified by Japan, August 3, 1908. Ratifications exchanged at Tokyo, August 6, 1908. Proclaimed, August 11, 1908.

By the President of the United States of America.

A PROCLAMATION.

Whereas a convention between the United States of America and the Empire of Japan providing for reciprocal protection in Korea for the inventions, designs, trade-marks and copyrights of their respective citizens and subjects, was concluded and signed by their respective plenipotentiaries at Washington on the nineteenth day of May, one thousand nine hundred and eight, the original of which convention is word for word as follows:

The President of the United States of America and His Majesty the Emperor of Japan being desirous to secure in Korea due protection for the inventions, designs, trade-marks and copyrights of their respective citizens and subjects have resolved to conclude a convention for that purpose and have named as their plenipotentiaries, that is to say:

The President of the United States of America, Robert Bacon, Acting Secretary of State of the United States; and

His Majesty the Emperor of Japan, Baron Kogoro Takahira, Shosammi, Grand Cordon of the Imperial Order of the Rising Sun, his Ambassador Extraordinary and Plenipotentiary to the United States of America;

Who, after having communicated to each other their full powers, found to be in good and due form, have agreed upon and concluded the following articles:

ARTICLE I.—The Japanese Government shall cause to be enforced in Korea simultaneously with the operation of this convention, laws and regulations relative to inventions, designs, trade-marks and copyrights similar to those which now exist in Japan.

These laws and regulations are to be applicable to American citizens in Korea equally as to Japanese and Korean subjects. In case the existing laws and regulations of Japan referred to in the preceding paragraph shall hereafter be modified, those laws and regulations enforced in Korea shall also be modified according to the principle of such new legislation.

ART. II.—The Government of the United States of America engages that in case of the infringement by American citizens of inventions, designs, trade-marks or copyrights entitled to protection in Korea, such citizens shall in these respects be under the exclusive jurisdiction of the Japanese courts in Korea, the extra-territorial jurisdiction of the United States being waived in these particulars.

ART. III.—Citizens of possessions belonging to the United States shall have in respect to the application of the present convention the same treatment as citizens of the United States.

ART. IV.—Korean subjects shall enjoy in the United States the same protection as native citizens in regard to inventions, designs, trade-marks and copyrights upon the fulfillment of the formalities prescribed by the laws and regulations of the United States.

ART. V.—Inventions, designs, trade-marks and copyrights duly patented or registered in Japan by citizens of the United States prior to the enforcement of the laws and regulations mentioned in Article I hereof shall without further procedure be entitled under the present convention to the same protection in Korea as is or may hereafter be there accorded to the same industrial and literary properties similarly patented or registered by Japanese or Korean subjects.

Inventions, designs, trade-marks and copyrights duly patented or registered in the United States by citizens or subjects of either high contracting party or by Korean subjects prior to the operation of the present convention shall similarly be entitled to patent or registration in Korea without the payment of any fees, provided that said inventions, designs, trade-marks and copyrights are of such a character as to permit of their patent or registration under the laws and regulations above mentioned and provided further that such patent or registration is effected within a period of one year after this convention comes into force.

ART. VI.—The Japanese Government engages to extend to American citizens the same treatment in Korea in the matter of protection of their commercial names as they enjoy in the dominions and possessions of Japan under the convention for the protection of industrial property signed at Paris March 20, 1883.

"Hong" marks shall be considered to be commercial names for the purpose of this convention.

ART. VII.—The present convention shall be ratified and the ratifications thereof shall be exchanged at Tokyo as soon as possible. It shall come into force ten days after such exchange of ratifications.

In witness whereof, the respective plenipotentiaries have signed the present convention in duplicate, and have thereunto affixed their seals.

Done at the city of Washington the 19th day of May in the nineteen hundred and eighth year of the Christian era corresponding to the 19th day of the 5th month of the 41st year of Meiji.

ROBERT BACON. [SEAL.]
K. TAKAHIRA. [SEAL.]

And whereas the said convention has been duly ratified on both parts, and the ratifications of the two governments were exchanged in the city of Tokyo, on the sixth day of August, one thousand nine hundred and eight;

Now, therefore, be it known that I, Theodore Roosevelt, President of the United States of America, have caused the said Convention to be made public, to the end that the same and every article and clause thereof, may be observed and fulfilled with good faith by the United States and the citizens thereof.

In testimony whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

Done in the city of Washington this eleventh day of August in the year of our Lord one thousand nine hundred and eight, and of the Independence of the United States of America, the one hundred and thirty-third.

THEODORE ROOSEVELT.

[SEAL.]

By the President:
ALVEY A. ADEE,
Acting Secretary of State.

PROTECTION OF TRADE-MARKS, ETC., IN CHINA.

Signed at Washington, May 19, 1908; ratification advised by the Senate, May 20, 1908; ratified by the President, June 2, 1908; ratified by Japan, August 3, 1908; ratifications exchanged at Tokyo, August 6, 1908; proclaimed, August 11, 1908.

By the President of the United States of America.

A PROCLAMATION.

Whereas a convention between the United States of America and the Empire of Japan providing for reciprocal protection in China for the inventions, designs, trade-marks, and copyrights of their respective citizens and subjects, was concluded and signed by their respective plenipotentiaries at Washington on the nineteenth day of May, one thousand nine hundred and eight, the original of which convention is word for word as follows:

The President of the United States of America and His Majesty the Emperor of Japan being desirous to secure in China reciprocal protection for the inventions, designs, trade-marks, and copyrights of their respective citizens and subjects have resolved to conclude a convention for that purpose and have named as their plenipotentiaries, that is to say:

The President of the United States of America, Robert Bacon, Acting Secretary of State of the United States; and

His Majesty the Emperor of Japan, Baron Kogoro Takahira, Shosammi, Grand Cordon of the Imperial Order of the Rising Sun, his Ambassador Extraordinary and Plenipotentiary to the United States of America;

Who, after having communicated to each other their full powers, found to be in good and due form, have agreed upon and concluded the following articles:

ARTICLE I.—Inventions, designs, and trade-marks duly patented or registered by citizens or subjects of one high contracting party in the appropriate office of the other contracting party shall have in all parts of China the same protection against infringement by citizens or subjects of such other contracting party as in the dominions and possessions of such other contracting party.

ART. II.—The citizens or subjects of each of the two high contracting parties shall enjoy in China the protection of copyright for their works of literature and art as well as photographs to the same extent as they are protected in the dominions and possessions of the other party.

ART. III.—In case of infringement in China by a citizen or subject of one of the two high contracting parties of any invention, design, trade mark or copyright entitled to protection in virtue of this convention the aggrieved party shall have in the competent territorial or consular courts of such contracting party the same rights and remedies as citizens or subjects of such contracting party.

ART. IV.—Each high contracting party engages to extend to the citizens or subjects of the other contracting party the same treatment in China in the matter of protection of their commercial names as they enjoy in the dominions and possessions of such contracting party under the Convention for the Protection of Industrial Property signed at Paris March 20, 1883. "Hong" marks shall be considered to be commercial names for the purpose of this convention.

ART. V.—Citizens of possessions belonging to the United States and subjects of Korea shall have in China the same treatment under the present convention as citizens of the United States and subjects of Japan respectively.

ART. VI.—It is mutually agreed between the high contracting parties that the present convention shall be enforced so far as applicable in any other country in which either contracting party may exercise extraterritorial jurisdiction.

All rights growing out of the present convention shall be recognized in the insular and other possessions and leased territories of the high contracting parties and all legal remedies provided for the protection of such rights shall be duly enforced by the competent courts.

ART. VII.—Any person amenable to the provisions of this convention who possesses at the time the present convention comes into force merchandise bearing an imitation of a trade-mark owned by another person and entitled to protection under said convention shall remove or cancel such false trade-mark or withdraw such merchandise from market in China within six months from the date of the enforcement of this convention.

ART. VIII.—Unauthorized reproductions by the citizens or subjects of one high contracting party prior to the operation of this convention of the works of literature and art as well as photographs of the citizens or subjects of the other contracting party published after the 10th day of May, 1906, and entitled to protection in virtue of this convention shall be withdrawn from sale or circulation in China within one year from the date of the enforcement of this convention.

ART. IX.—The present convention shall be ratified and the ratifications thereof shall be exchanged at Tokyo as soon as possible. It shall come into force together with the convention relative to the protection of inventions, designs, trade-marks, and copyrights in Korea, ten days after such exchange of ratifications.

In witness whereof, the respective plenipotentiaries have signed the present convention in duplicate and have thereunto affixed their seals.

Done at the city of Washington the 19th day of May in the nineteen hundred and eighth year of the Christian era corresponding to the 19th day of the 5th month of the 41st year of Meiji.

ROBERT BACON. [SEAL.]
K. TAKAHIRA. [SEAL.]

And whereas the said convention has been duly ratified on both parts, and the ratifications of the two Governments were exchanged in the city of Tokyo, on the sixth day of August, one thousand nine hundred and eight;

Now, therefore, be it known that I, Theodore Roosevelt, President of the United States of America, have caused the said convention to be made public, to the end that the same and every article and clause thereof, may be observed and fulfilled with good faith by the United States and the citizens thereof.

In testimony whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this eleventh day of August in the year of our Lord one thousand nine hundred and eight, and of the independence of the United States of America, the one hundred and thirty-third.

[SEAL.] THEODORE ROOSEVELT.

By the President:
ALVEY A. ADEE,
Acting Secretary of State.

OFFICIAL GAZETTE.

We hereby sanction and cause to be promulgated the Korea Patent Ordinance.

SIGN MANUAL.
PRIVY SEAL.

August 12, 1908.

(Countersigned) Marquis TARO KATSURA,
Prime Minister.
Viscount MASATAKE TERAUCHI,
Minister for Foreign Affairs.

IMPERIAL ORDINANCE NO. 196. KOREAN PATENT ORDINANCE.

ARTICLE 1.—With reference to patents in Korea the Patent Law* shall be followed; but in the said law the term "Empire" shall be understood to mean "Korea," "Patent Office" to mean "Patent Office of the Residency-General," "Court of Law" to mean "Residencies and the Residency-General Court," "Local Court" to mean "Residencies," and "Supreme Court" to mean "Residency-General Court."

The term "Expire" mentioned in article 6 of the Patent Law* shall be understood to mean "Japan" or "Korea" with reference to the application of this ordinance.

ART. 2.—This ordinance shall accord similar protection to Japanese and to Korean subject with reference to inventions, and shall be also applicable to subjects or citizens of countries which do not exercise extraterritorial jurisdiction in Korea with reference to the protection of inventions.

SUPPLEMENTARY ARTICLES.

ART. 3.—This ordinance shall take effect on August 16, 1908.

ART. 4.—Patents obtained in Japan prior to the operation of this ordinance by Japanese subjects, Korean subjects, or American citizens shall be regarded as having been obtained in Korea in accordance with this ordinance; but the term of the said patents shall correspond to the term of the same in Japan.

The patentee mentioned in the preceding paragraph shall not set up his patent against a person actually using in Korea at the time of the operation of this ordinance the product or the process of the invention in question, nor against his successor.

ART. 5.—Inventions for which patents have been obtained in the United States prior to the operation of this ordinance by Japanese subjects, Korean subjects, or American citizens may be patented free of charge if application for patent be made to the Patent Office of the Residency-General within one year from the date of operation of this ordinance; but the term of the said patent shall correspond to the term of the same in the United States.

*(Note: *i. e.*, of Japan.)

OFFICIAL GAZETTE, *August 13, 1908.*

We hereby sanction and cause to be promulgated the Korean design ordinance.

SIGN MANUAL.
PRIVY SEAL.

August 12, 1908.
(Countersigned) Marquis TARO KATSURA,
Prime Minister.
Viscount MASATAKE TERAUCHI,
Minister for Foreign Affairs.

IMPERIAL ORDINANCE No. 197. KOREAN DESIGN ORDINANCE.

ARTICLE 1.—With reference to designs in Korea the Design Law* shall be followed; but in the said law the term "Minister of Agriculture and Commerce" shall be understood to mean "Resident-General," "Patent Office" to mean "Patent Office of the Residency-General," "Court of Law" to mean "Residencies and the Residency-General Court," "Local Court" to mean "Residencies," and "Supreme Court" to mean "Residency-General Court."

The term "Empire" mentioned in article 6 of the Patent Law shall be understood to mean "Japan" or "Korea" with reference to the application of this ordinance.

ART. 2.—Designs identical with or similar to the form or pattern of the Imperial Crest of Japan or Korea shall not be registered.

If a registered design is in contravention of the provision of the preceding paragraph, the said registration shall be invalid.

A person who has discovered that a registered design falls under the provisions of the preceding paragraph may apply for a trial to the Patent Office of the Residency-General for the purpose of canceling the said registration.

ART. 3.—This ordinance shall accord similar protection to Japanese and to Korean subjects with reference to designs, and shall also be applicable to subjects or citizens of countries which do not exercise extraterritorial jurisdiction in Korea with reference to the protection of designs.

SUPPLEMENTARY ARTICLES.

ART. 4.—This ordinance shall take effect on August 16, 1908.

ART. 5.—Designs registered in Japan prior to the operation of this ordinance by Japanese subjects, Korean subjects, or American citizens shall be regarded as having been registered in Korea in accordance with this ordinance; but the period for the exclusive use of the said designs shall correspond to the period for the exclusive use of the same in Japan.

The owner of a registered design mentioned in the preceding paragraph shall not set up such registration against a person actually using in Korea at the time of operation of this ordinance the design in question nor against his successor.

ART. 6.—Designs registered in the United States prior to the operation of this ordinance by Japanese subjects, Korean subjects, or American citizens may be registered free of charge if application for registration be made to the Patent Office of the Residency-General within one year from the date of operation of this ordinance, but the period for the exclusive use of the said designs shall correspond with the period for exclusive use of the same in the United States.

OFFICIAL GAZETTE, *August 13, 1908.*

We hereby sanction and cause to be promulgated the Korean trade-mark ordinance.

SIGN MANUAL.
PRIVY SEAL.

August 12, 1908.
(Countersigned) Marquis TARO KATSURA,
Prime Minister.
Viscount MASATAKE TERAUCHI,
Minister for Foreign Affairs.

IMPERIAL ORDINANCE No. 198. KOREAN TRADE-MARK ORDINANCE.

ARTICLE 1.—With reference to trade-marks in Korea the Trade-Mark Law* shall be followed; but in the said law the term "Empire" shall be understood to mean "Korea," "Minister of Agriculture and Commerce" to mean "Resident-General," "Patent Office" to mean "Patent Office of the Residency-General," "Court of Law" to mean "Residencies and the Residency-General Court," "Local Court" to mean "Residencies," and "Supreme Court" to mean "Residency-General Court."

The term "Empire" mentioned in article 6 of the Patent Law* shall be understood to mean "Japan" or "Korea" with reference to the application of this ordinance.

ART. 2.—Trade-marks bearing devices identical with or similar to the Imperial crest, national flag, military flags or orders of merit of Japan or Korea or the national flags of other countries shall not be registered.

If a registered trade-mark is in contravention of the provisions of the preceding paragraph, the said registration shall be invalid.

A person who has discovered that a registered trade-mark falls under the provisions of the preceding paragraph may apply for a trial to the Patent Office of the Residency-General for the purpose of canceling the said registration.

ART. 3.—This ordinance shall accord similar protection to Japanese and to Korean subjects with reference to trade-marks, and shall be also applicable to subjects or citizens of countries which do not exercise extraterritorial jurisdiction in Korea with reference to the protection of trade-marks.

SUPPLEMENTARY ARTICLES.

ART. 4.—This ordinance shall take effect on August 16, 1908.

ART. 5.—Trade-marks registered in Japan prior to the operation of this ordinance by Japanese subjects, Korean subjects or American citizens shall be regarded as having been registered in Korea in accordance with this ordinance; but the period for the exclusive use of the said trade-marks shall correspond to the period for exclusive use of the same in Japan.

ART. 6.—With reference to merchandise bearing, prior to the operation of this ordinance, a trade-mark entitled to protection in accordance with the provisions of the preceding article or a trade-mark similar to the same, the provisions of article 16 of the Trade-Mark Law* shall be applicable only to such persons as, after six months from the date of operation of this ordinance, give, sell or store for sale the said merchandise.

ART. 7.—With reference to trade-marks registered in the United States prior to the operation of this ordinance by Japanese subjects, Korean subjects or American citizens, no registration fees shall be collected if the owners of the said trade-marks apply for registration to the Patent Office of the Residency-General within one year from the date of operation of this ordinance.

OFFICIAL GAZETTE, *August 13, 1908.*

We hereby sanction and cause to be promulgated the Korean trade-name ordinance.

SIGN MANUAL.
PRIVY SEAL.

August 12, 1908.
(Countersigned) Marquis TARO KATSURA,
Prime Minister.
Viscount MASATAKE TERAUCHI,
Minister for Foreign Affairs.

IMPERIAL ORDINANCE No. 199. KOREAN TRADE-NAME ORDINANCE.

ARTICLE 1.—With reference to trade-names in Korea the commercial code and the code of procedure relating to noncontentious matters† shall be followed; but in the said codes the term "cities, towns, and villages" (Shi-Cho-Son) shall be understood to mean "Fu and Gun," "prefectures" (Fu-Ken) to mean "Do," "Court of Law" to mean "Residencies and the Residency-General Court," "Japan" to mean "Korea," "Minister of Justice" to mean "Resident-General."

ART. 2.—This ordinance shall accord similar protection with reference to the trade-names of Japanese and of Korean subjects, and shall also be applicable to subjects or citizens of countries which do not exercise extraterritorial jurisdiction in Korea with reference to the protection of trade-names.

SUPPLEMENTARY ARTICLES.

ART. 3.—This ordinance shall take effect on August 16, 1908.

ART. 4.—The provisions of article 18 of the Commercial Code‡ shall not be applicable to those trade-names which have been used in Korea prior to the operation of this ordinance.

OFFICIAL GAZETTE, *August 13, 1908.*

We hereby sanction and cause to be promulgated the Korean copyright ordinance.

SIGN MANUAL.
PRIVY SEAL.

August 12, 1908.
(Countersigned) Marquis TARO KATSURA,
Prime Minister.
Viscount MASATAKE TERAUCHI,
Minister for Foreign Affairs.

IMPERIAL ORDINANCE No. 200. KOREAN COPYRIGHT ORDINANCE.

ARTICLE 1.—With reference to copyright in Korea the copyright law† shall be followed; but in the said law the term "Empire" shall be understood to mean "Korea," "Court of Law" to mean "Residencies and the Residency-General Court."

*(Note: i. e., of Japan.)

*(Note: Article 16 of the trade-mark law of Japan reads as follows:

"Any person who manufactures and gives, or sells a trade-mark identical with or similar to one which he knows to be the registered trade-mark of another, without the latter's permission, or who uses for articles of the same kind a trade-mark identical with or similar to one which he knows to be the registered trade-mark of another person, or who knowingly sells such articles or stores them for sale, shall be punished with imprisonment with hard labor for not less than one month and not more than two years, or with a fine of not less than yen 30 and not more than yen 500.

"Any person who uses for articles of the same kind a vessel, wrapper, etc., bearing the registered trade-mark of another person, or who knowingly sells such articles or stores them for sale, or who by advertisement, sign-board, handbill, or other means, uses, for the purpose of selling his goods, a trade-mark identical with or similar to one which he knows to be the registered trade-mark of another person, shall be liable to the same punishment as that mentioned in the preceding clause.")

†(Note: i. e., of Japan.)

‡(Note: Article 18 of the Commercial Code of Japan reads as follows:

"Where no commercial company exists, the trade-name must not contain any word indicating the existence of a commercial company. This applies when a person takes over the business of a commercial company.

"A person who acts in contravention of this provision is liable to a fine of from five yen to fifty yen.")

ART. 2.—This ordinance shall accord similar protection to Japanese and to Korean subjects with reference to copyrights, and shall also be applicable to subjects or citizens of countries which do not exercise extraterritorial jurisdiction in Korea with reference to the protection of copyrights.

SUPPLEMENTARY ARTICLE.

ART. 3.—This ordinance shall take effect on August 16, 1908.

ART. 4.—Copyrights possessed in Japan prior to the operation of this ordinance by Japanese subjects, Korean subjects, or American citizens shall be protected by virtue of this ordinance.

ART. 5.—Japanese subjects, Korean subjects, or American citizens whose copyrights have been registered in the United States prior to the operation of this ordinance may apply for the registration of the said copyrights free of charge to the Patent Office of the Residency-General within one year from date of operation of this ordinance.

ART. 6.—A person who without the consent of the holder of the copyright has produced, translated, or performed, or has commenced to produce, translate, or perform in Korea prior to the operation of this ordinance the works of Japanese subjects, Korean subjects, or American citizens which are protected in Japan or the United States, may complete the same and sell, distribute, or perform the same during one year following the date of operation of this ordinance.

ART. 7.—In the cases mentioned in the preceding article, the reproductions shall only be sold, distributed or performed subject to the procedure determined by an ordinance of the Residency-General.

OFFICIAL GAZETTE, *August 13, 1908.*

We hereby sanction and cause to be promulgated the ordinance relating to the protection of rights of patents, designs, trade-marks, and of copyrights in the Province of Kwantung and in other countries where Japan may exercise extraterritorial jurisdiction.

SIGN MANUAL.
PRIVY SEAL.

August 12, 1908.
(Countersigned) Marquis TARO KATSURA,
Prime Minister.
Viscount MASATAKE TERAUCHI,
Minister for Foreign Affairs.

IMPERIAL ORDINANCE No. 201.

ARTICLE 1.—The validity of rights of patent, design, trade-mark, and of copyrights enjoyed in Japan by Japanese or Korean subjects shall extend to Japanese and Korean subjects in the Province of Kwantung and other countries where Japan may exercise extraterritorial jurisdiction.

ART. 2.—The provisions relating to penalties in the patent law, design law, trade-mark law, and copyright law* shall be applicable to Japanese subjects and Korean subjects in the Kwantung Province and countries where Japan may exercise extraterritorial jurisdiction.

ART. 3.—With reference to industrial property rights and copyrights enjoyed in Japan by subjects or citizens of countries other than Japan and Korea, the provisions of the two preceding articles shall be applicable only when such other countries afford protection of industrial property rights and copyrights to Japanese and Korean subjects in foreign countries where the said countries may exercise extraterritorial jurisdiction, and when the said countries do not exercise extraterritorial jurisdiction in Korea with reference to the protection of industrial property rights and copyrights.

(Note: The two conditions are, (*a*) reciprocal protection of industrial property wherever extraterritorial jurisdiction may be exercised, and (*b*) the surrender of such jurisdiction in Korea with reference to industrial property rights.)

SUPPLEMENTARY ARTICLES.

ART. 4.—This ordinance shall take effect on August 16, 1908.

ART. 5. Any person who has on hand at the time this ordinance takes effect, merchandise fraudulently bearing trade-marks owned by another person and entitled to protection by virtue of this ordinance, or bearing an imitation of such a mark, shall remove or cancel the said trade-marks or withdraw the said merchandise from market in China within six months after the operation of this ordinance.

ART. 6.—Any person who, without the consent of the holder of a copyright, has reproduced, translated, or performed, or has commenced to reproduce, translate, or perform in China prior to the operation of this ordinance, works copyrighted in Japan or the United States by Japanese subjects, Korean subjects, or American citizens, may complete the same, and sell, distribute, or perform the same during one year following the date of operation of this ordinance.

OFFICIAL GAZETTE, *August 13, 1908.*

We hereby sanction and cause to be promulgated the regulations relating to the organization of the Patent Office of the Residency-General.

SIGN MANUAL.
PRIVY SEAL.

August 12, 1908.
(Countersigned) Marquis TARO KATSURA,
Prime Minister.

IMPERIAL ORDINANCE No. 202.

Regulations relating to the organization of the Patent Office of the Residency-General.

ARTICLE 1.—The Patent Office of the Residency-General shall, subject to the control of the Resident-General, take charge of matters relating to inventions, designs, trade-marks, and copyrights in Korea.

ART. 2.—The Patent Office of the Residency-General shall have the following personnel:

Director of the Patent Office.
Secretaries, 2 "sonin" rank.
Technical experts, 2 "sonin" rank.
Examiners, 5 "sonin" rank.
Assistant examiners, 6 "Hannin" rank.
Clerks, 5 "Hannin" rank.
Assistant technical expert, 1.
Interpreter, 1 "Hannin" rank.

The Director shall be appointed from among the councilors ("Sanyokan") of the Residency-General.

ART. 3.—The Director shall manage the business of the Patent Office under the direction and supervision of the Resident-General.

ART. 4.—The director, secretaries, and technical experts shall be judges. The judges shall take charge of trials relating to patents, designs, and trade-marks.

ART. 5.—The Examiners shall, under the direction of the director, take charge of examinations relating to patents, designs, and trade-marks.

ART. 6.—The Assistant Examiners shall, under the direction of their superiors, assist the Examiners and engage in examination.

ART. 7.—Clerks shall engage in the business of the office under the direction of their superiors.

ART. 8.—The assistant technical expert shall engage in technical work under the direction of his superiors.

ART. 9.—The interpreter shall engage in interpretation under the direction of his superiors.

SUPPLEMENTARY CLAUSE.

This ordinance shall take effect on the day of promulgation.

OFFICIAL GAZETTE, *August 13, 1908.*

We hereby sanction and cause to be promulgated the ordinance relating to the official ranks and salaries of the staff of the Patent Office of the Residency-General.

SIGN MANUAL.
PRIVY SEAL.

August 12, 1908.
(Countersigned) Marquis TARO KATSURA,
Prime Minister.

IMPERIAL ORDINANCE No. 203.

Ordinance relating to the official ranks and salaries of the staff of the Patent Office of the Residency-General.

ARTICLE 1.—The official ranks of the higher officials of the Patent Office of the Residency-General shall be from the third class to the seventh class inclusive for secretaries, and from the fourth class to the seventh class inclusive for examiners.

ART. 2.—With reference to the annual amounts of the regular salaries of the staff of the Patent Office of the Residency-General, table No. 1* for the regular salaries of civil officials of the "Sonin" rank in the allowance ordinance for the staff of the Residency-General and the Residencies and table No. 2* of the same shall be applied respectively to secretaries and examiners.

ART. 3.—The provisions of article 7** of the allowance ordinance for the staff of the Residency-General and the Residencies shall be applicable to the staff of the Patent Office of the Residency-General.

ART. 4.—Unless otherwise provided for in this ordinance, the ordinance relating to the official ranks and salaries of the higher officials shall be followed.

SUPPLEMENTARY CLAUSE.

This ordinance shall take effect on the day of promulgation.

Amendment to Rules of the Court of Appeals of the District of Columbia.

The following amendment to the rules of the Court of Appeals of the District of Columbia is published for the information of those practicing before that court.

EDWARD B. MOORE,
Commissioner of Patents.

It is ordered that section 3 of Rule VIII of this court be, and is hereby, amended by adding thereto the following paragraph:

(4) Whenever a decision of this court, that has been published in the official reports of the court, shall be

*(Note: i. e., Japan.)

*(Notes: Salaries in table No. 1 range from yen 1000 to yen 2800 per annum. Salaries in table No. 2 range from yen 700 to yen 2200 per annum.

**Refers to allowances for traveling and outfit.)

cited in a brief, the reference shall include the volume and page of the report wherein the same has been published.

This rule shall take effect on the first Tuesday in October, 1908, and apply to all cases submitted for hearing thereafter.

By the COURT,
June 9, 1908.

Test:
HENRY W. HODGES, *Clerk.*
Promulgated June 9, 1908.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 19, 1908.

Koster & Bial, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Hugo Goldschmidt, of 508 South Main street, Los Angeles, Cal., for registration of a trade-mark and a trade-mark registered to Koster & Bial, of 110 West Twenty-fourth street, New York, N. Y., and the notice of said declaration sent by registered mail to the said Koster & Bial having been returned undelivered, notice is hereby given to the said Koster & Bial, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 5, 1908.

William M. Marcus, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the J. G. Haas Soap Company, of Prairie avenue and Benedict street, St. Louis, Mo., for registration of a trade-mark and a trade-mark registered to William M. Marcus, of Talladega, Ala., and the notice of said declaration sent by registered mail to the said William M. Marcus having been returned undelivered, notice is hereby given to the said William M. Marcus, his assigns or legal representatives, that if he or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 27, 1908.

George H. Taylor, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Frederick O. Hanson, of Springfield, Mass., and Holyoke, Mass., for registration of a trade-mark and a trade-mark registered to George H. Taylor, of 207 Monroe street, Chicago, Ill., and the notice of said declaration sent by the Patent Office by registered mail to the said George H. Taylor having been returned undelivered, notice is hereby given to the said George H. Taylor, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 25, 1908.

Douglas & Kingsland, their assigns or legal representatives, take notice:

An interference having b en declared by this Office between the application of Geo. H. Baker, of 48-52 Edwards street, New Haven, Conn., for registration of a trade-mark and a trade-mark registered to Douglas & Kingsland, of Middletown, Conn., and the notice of said declaration sent by registered mail to the said Douglas & Kingsland having been returned undelivered, notice is hereby given to the said Douglas & Kingsland, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

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Designs	14	No. 39,599 to No. 39,612, inclusive.
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Labels	10	No. 14,384 to No. 14,393, inclusive.
Prints	2	No. 2,355 to No. 2,356, inclusive.
Reissues	2	No. 12,860 to No. 12,861, inclusive.
Total	705	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	2	1	New Hampshire	2	.....
Alaska, District of	1	.....	New Jersey	26	3
Arizona Territory	1	.....	New Mexico Ter't'y.	1	.....
Arkansas	2	.....	New York	83	14
California	29	1	North Carolina	6	.....
Colorado	6	2	North Dakota	1	.....
Connecticut	12	.....	Ohio	39	5
Delaware	.....	.....	Oklahoma	4	.....
District of Columbia	2	.....	Oregon	1	.....
Florida	1	.....	Panama	.....	.....
Georgia	8	1	Pennsylvania	69	7
Hawaii Territory	.....	.....	Philippine Islands	1	.....
Idaho	2	.....	Rhode Island	1	2
Illinois	66	13	South Carolina	1	.....
Indiana	27	4	South Dakota	3	.....
Iowa	19	1	Tennessee	6	1
Kansas	8	1	Texas	9	1
Kentucky	5	.....	Utah	7	.....
Louisiana	1	.....	Vermont	1	.....
Maine	4	.....	Virginia	1	1
Maryland	6	1	Washington	4	.....
Massachusetts	28	1	West Virginia	4	.....
Michigan	8	.....	Wisconsin	18	.....
Minnesota	8	4	Wyoming	1	.....
Mississippi	1	.....	U. S. Army	1	.....
Missouri	24	5	U. S. Navy	.....	.....
Montana	.....	.....			
Nebraska	4	.....	Total to citizens of the United States	565	69
Nevada	.....	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Austria-Hungary	2	.....	Netherlands	.....	.....
Belgium	3	.....	New South Wales	.....	.....
Brazil	.....	.....	New Zealand	3	.....
British West Indies	.....	.....	Norway	2	.....
Canada	8	.....	Russia	4	.....
Cuba	.....	.....	Scotland	1	.....
Denmark	1	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	.....	.....
England	12	3	Sweden	2	.....
France	4	.....	Switzerland	.....	.....
Germany	20	1	Transvaal, South Africa	1	.....
Haiti	.....	.....	Victoria	.....	.....
Ireland	1	.....	Western Australia	.....	.....
Italy	.....	.....			
Japan	1	.....	Total to citizens of foreign countries	65	4
Java	.....	.....			
Mexico	.....	.....			

Amendment of Rules.

(ORDER NO. 1,778.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., Sept. 23, 1908.

Acting under the provisions of section 483 of the Revised Statutes and with the approval of the Secretary of the Interior, Rule 47 of the Rules of Practice of the United States Patent Office is amended by canceling the words "a country foreign to" in lines 1 and 2 of the third paragraph thereof and inserting in their place the words *any country including* and by inserting after the word "ribbon" in lines 3 and 5 of the same paragraph the words *or tape*, so that the rule as amended shall read:

47. If the application be made by an executor or administrator of a deceased person or the guardian, conservator, or representative of an insane person, the form of the oath will be correspondingly changed.

The oath or affirmation may be made before any person within the United States authorized by law to administer oaths, or, when the applicant resides in a foreign country, before any minister, chargé d'affaires, consul, or commercial agent holding commission under the Government of the United States, or before any notary public, judge or magistrate having an official seal and authorized to administer oaths in the foreign country in which the applicant may be, whose authority shall be proved by a certificate of a diplomatic or consular officer of the United States, the oath being attested in all cases in this and other countries, by the proper official seal of the officer before whom the oath or affirmation is made, except that no acknowledgment may be taken by any attorney appearing in the case. When the person before whom the oath or affirmation is made is not provided with a seal, his official character shall be established by competent evidence, as by a certificate from a clerk of a court of record or other proper officer having a seal.

When the oath is taken before an officer in *any country including* the United States, all the application papers must be attached together and a ribbon *or tape* passed one or more times through all the sheets of the application, and the ends of said ribbon *or tape* brought together under the seal before the latter is affixed and impressed, or each sheet must be impressed with the official seal of the officer before whom the oath was taken, or, if he is not provided with a seal, then each sheet must be initialed by him.

This rule will become effective on December 1, 1908.

E. B. MOORE,
Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business September 29, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		Amended	New.	
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135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Sept. 8	June 18	455
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Aug. 31	July 15	272
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Aug. 25	Aug. 7	284
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Aug. 25	Apr. 11	700
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Aug. 20	July 13	406
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Aug. 19	July 14	230
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Aug. 18	July 10	685
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Aug. 14	July 20	272
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Aug. 10	July 10	530
125	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Aug. 10	Apr. 11	732
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Aug. 8	May 2	589
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Masonry and Concrete Structures; Tents, Canopies, Umbrellas, and Canes.	Aug. 7	June 10	517
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Aug. 6	Aug. 5	401
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Aug. 4	June 2	538
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Aug. 1	July 22	740
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	July 31	May 15	698
156	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	July 30	May 2	425
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	July 28	July 3	390
332	X. Carriages and Wagons.....	July 25	July 1	645

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		Amended	New.	
362	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	July 25	June 12	537
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	July 24	June 26	438
167	V. Bookbinding; Harvesters; Jewelry; Music.	July 24	Apr. 29	482
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	July 23	July 9	608
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	July 22	July 8	413
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	July 22	June 23	661
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	July 21	June 16	434
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	July 18	July 20	786
238	XIX. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	July 16	July 8	532
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	July 15	June 26	573
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	July 14	July 6	523
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	July 14	May 5	558
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	July 8	May 22	723
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	July 3	May 28	709
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	July 3	May 15	506
321	XXXIX. Baths and Closets; Water Distribution.	June 25	Apr. 13	777
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	June 19	Mar. 25	768
109	XVI. Telegraphy; Telephony.....	June 15	May 11	531
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	June 5	May 4	747
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	June 4	Mar. 6	503

Total number of applications awaiting action 22,386

161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks.....	Sept. 23	Sept. 1	600
	Designs.....	Sept. 24	Aug. 4	128
	Labels and Prints.....	Sept. 18	Sept. 25	21

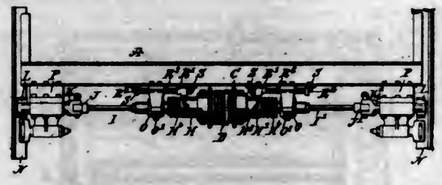
Printed Copies of Patents.

A printed copy of the complete specification and drawings of any patent published herein can be obtained for five cents.

PATENTS

GRANTED OCTOBER 6, 1908.

900,074. SAFETY DEVICE FOR ELEVATORS. JOHN N. ANDERSON, New York, N. Y., assignor to Charles W. Hoffman, New York, N. Y. Filed Feb. 17, 1905. Serial No. 246,022.



1. A safety device for elevators, comprising a safety rope, a drum on which are fastened the ends of the safety rope, nuts on which the drum is journaled, screw-rods screwing in the said nuts and provided with heads, brake-levers adapted to be actuated by the said heads, and means for imparting a bodily sliding motion to the said nuts, screw-rods and heads, to apply the brake-levers quickly on rotating the drum.

2. A safety device for elevators, comprising a safety rope, a drum on which are fastened the ends of the safety rope, nuts on which the drum is journaled, screw-rods screwing in the said nuts and provided with heads, brake-levers, brake-shoes mounted to slide on the ends of the for imparting a bodily sliding motion to the said nuts, screw-rods and heads, to apply the brake-levers quickly on rotating the drum, and means for holding the nuts against turning during their bodily movement.

3. A safety device for elevators, comprising a fixed guide, brake-levers, means for actuating the said brake-levers, brake-shoes mounted to slide on the ends of the said brake-levers, and springs interposed between the said brake-levers and the shoes.
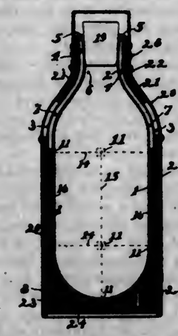
4. A safety device for elevators, comprising a fixed guide, a brake-lever, a brake-shoe mounted to slide on the end of the brake-lever and adapted to engage the said guide, a spring interposed between the brake-lever and the brake-shoe, and means for actuating the said lever, first quickly and with a slight compression of the spring, and then slowly and with a more powerful compression of the spring.

5. A safety device for elevators, comprising a drum, a safety rope for turning the drum, brakes, members connected with the drum, rods for operating the brakes, said rods being connected with the members to move endwise, and means for first imparting a bodily endwise movement to the members and rods so as to apply the brakes quickly on rotating the drum and subsequently rotating said members in unison with the drum to impart endwise movement to the rods for actuating the brakes slowly and more powerfully.

[Claims 6 to 11 not printed in the Gazette.]

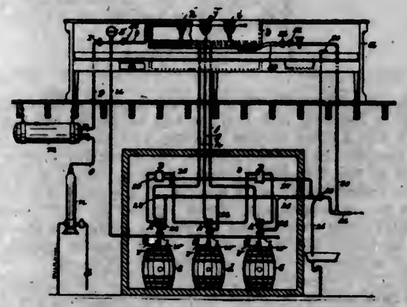
900,075. DOUBLE-WALLED VESSEL. GEORGE P. ALTENBERG, Cincinnati, Ohio. Filed Dec. 28, 1907. Serial No. 407,762.

1. In combination, a double walled vessel comprising an inner member and an outer member having a heat-insulating space therebetween, a basket composed of wire located in said space and surrounding the lower part of said inner member, supporting pieces located between the side walls of said inner and outer members and a supporting piece between the bottom walls of said members, said supporting pieces being held in place by said basket.



2. In combination, a double walled vessel comprising an inner member and an outer member having a heat-insulating space therebetween, a basket composed of heat-insulated wire located in said space and surrounding the lower part of said inner member, supporting pieces located between the side walls of said inner and onter members and a supporting piece between the bottom walls of said members, said supporting pieces being held in place by said basket.

900,076. BEER-DISPENSING APPARATUS. SYLVESTER J. ASBELL, Paterson, N. J. Filed Aug. 8, 1906. Serial No. 329,641.



1. The combination of a plurality of vessels, a plurality of faucets corresponding thereto, a tubular conductor connecting each vessel with its respective faucet, a valve chamber, a piston movable in said valve chamber, means for admitting fluid pressure to said chamber at one side of said piston, a tubular connection between said conductors, said valve chamber being arranged in said connection and the communications between said valve chamber and said connection being at the other side of said piston, and check valves arranged in said chamber on said other side of the piston and adapted to close the

way through said connection and chamber from either conductor to the other, said valves being controlled by the piston, substantially as described.

2. The combination of a plurality of vessels, a plurality of faucets corresponding thereto, a tubular conductor connecting each vessel with its respective faucet, a tubular connection between said conductors, check-valves in said connection opening the one against the flow through said connection from one direction and the other against the flow through said connection from the other direction, and means for effecting the opening of said valves, substantially as described.

3. The combination of a plurality of vessels, a plurality of faucets corresponding thereto, a tubular conductor connecting each vessel with its respective faucet, a tubular connection between said conductors, check-valves in said connection opening the one against the flow through said connection from one direction and the other against the flow through said connection from the other direction, and fluid-pressure means for effecting the opening of said valves, substantially as described.

4. The combination of a plurality of vessels, a plurality of faucets corresponding thereto, a tubular conductor connecting each vessel with its respective faucet, a tubular connection between said conductors, means, controlled by pressure emanating from either conductor, for closing off the way through said connection to the other conductor, and means for operating said first-named means to open the way through said connection, substantially as described.

5. The combination of a plurality of vessels, a plurality of faucets corresponding thereto, a tubular conductor connecting each vessel with its respective faucet, a tubular connection between said conductors, means for closing off the way through said connection in both directions, said means normally occupying the closing position, and means for operating said last-named means to open the way through said connection, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

900,077. RECLINING ATTACHMENT FOR CHAIRS. FRANK E. BARNICKLE, Rochester, N. H., assignor to Frank S. Barbian, Rochester, N. H. Filed Aug. 7, 1907. Serial No. 387,420.



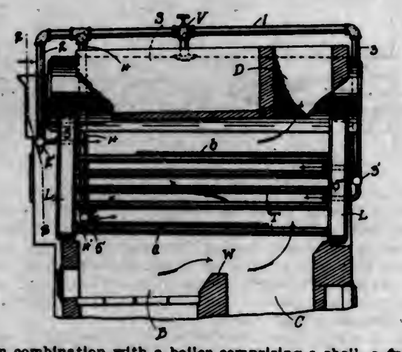
1. An attachment for chairs comprising a brace made from a rod bent into U-shape and having at the end of each arm a hinge member provided with an abutment face or shoulder 15, a complemental hinge member pivoted to each of the first-named hinge members, means to secure each complemental hinge member to the back of a chair, and an adjustable stop screw carried by each complemental hinge member and adapted to engage the shoulder or abutment face of the other hinge member thereby to limit backward swinging movement of the brace.

2. The combination with a chair, of a brace hinged to the back side of the chair, said brace comprising two connected side arms, a hinge member 6 at the upper end of each arm, a complemental hinge member 7 pivoted to each hinge member 6, each hinge member 7 having a body portion for attachment to the chair and strengthening ribs connected by the transverse flange 14 and a stop screw carried by said flange and adapted to engage the hinge member 6 to limit the backward swinging movement of the brace.

3. The combination with a chair, of a brace hinged to the back side of the chair, said brace comprising two parallel side arms 4 connected at their lower extremities by a cross piece 5, a rest at each end of the cross piece, each rest having an open slot to receive the angle of the brace, and projections to overlie the brace at the angle and retain the rest in position.

4. The combination with a chair, of a brace hinged to the back side of the chair, said brace comprising two connected side arms, a hinge member 6 at the upper end of each arm, each hinge member having the shoulder 15, a complemental hinge member 7 pivoted to each hinge member 6, each complemental hinge member having a body portion for attachment to the chair and a transverse flange, and stop screws adjustably mounted in said flange and adapted to engage said shoulder 15 for limiting the backward swinging movement of the brace.

900,078. BOILER-CLEANER. FRANK X. BAYER, St. Louis, Mo. Filed Jan. 31, 1908. Serial No. 413,682.



In combination with a boiler comprising a shell, a front and rear water-leg, a series of water-tubes communicating with the interiors of the respective water-legs, a fire-box and rear combustion chamber, a deflecting wall extending from the base of the front water-leg rearwardly over a portion of the combustion chamber, a second deflecting wall extending from the top of the rear water-leg and below the shell, forwardly to a suitable distance from the front water-leg, a steam pipe leading from the steam space of the shell and having terminal branches provided with nozzles passing through the top of the front water-leg and through the rear water-leg below the upper deflecting wall, and discharging respectively into the space between said wall and shell, and into the spaces between the water-tubes, and an intermediate branch terminating in nozzles discharging rearwardly at a point behind the front water-leg and above the lower deflecting wall, whereby the material dislodged follows the general direction of the draft of the boiler, the parts operating substantially as, and for the purpose set forth.

900,079. SASH-FASTENER. LOUIS A. BITTORF, Sterling, Ill. Filed Mar. 23, 1907. Serial No. 364,154.



1. In a sash fastener, the combination of a base plate, an operating lever mounted to rotate thereon, and a coiled spring coöperating with the lever to hold it in either one of its two positions with a yielding pressure and arranged to be oscillated as to one end from one side to the other of the axis of rotation of such lever when the latter is operated.

2. In a sash fastener, the combination of a base plate, an operating lever mounted to rotate thereon, and a coiled spring coöperating with the lever to hold it in either one of its two positions with a yielding pressure, fixed stationarily as to one end at a point on a line radial of the axis of rotation of the lever and connected at its other end with such lever at a point on a radial line substantially at right angles to the first named radial line.

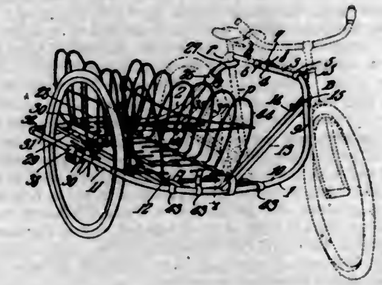
3. In a sash fastener, the combination of a base plate, an operating lever mounted to oscillate on one side thereof, a disk arranged to oscillate on the other side and connected with the lever, and a coiled spring fixed as to one end and secured as to the other end to the disk.

4. In a sash fastener, the combination of a base plate, an operating lever mounted to oscillate on one side thereof, a disk arranged to oscillate on the other side and connected with the lever, said disk having a series of projections on its inner side to decrease the amount of bearing surface between it and the plate, and means for holding the lever in either one of its two positions.

5. In a sash fastener, the combination of a base plate provided with a socket portion with an opening therein, a disk having a socket portion positioned in said opening, an operating lever secured to said disk, and a coiled spring connected at one end to the disk to hold the lever in either one of its two positions.

[Claims 6 to 8 not printed in the Gazette.]

900,080. PACKAGE-CARRIER FOR BICYCLES. GEORGE W. BLAKE, Bellingham, Wash. Filed Oct. 10, 1907. Serial No. 396,826.

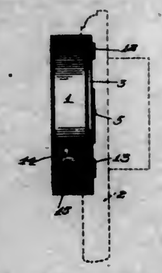


1. A package carrier for bicycles comprising a wheeled platform, frame bars secured thereto, one terminal of one of which is disposed parallel with the back bar of the bicycle frame and one terminal of the other frame bar being disposed beneath the back bar and bearing against the seat post, a stay rod secured at one end to the front bar of the bicycle frame and at its other end to the platform, and a clip for securing the stay rod to one of the frame bars.

2. A package carrier for bicycles comprising a platform provided with guards, frame bars secured to the platform, a side wheel supported by one of the frame bars, means for connecting the frame bars to the bicycle frame, and a stay rod having one end clipped to the front bar of the bicycle frame and to one of the frame bars and its other end secured to the platform.

900,081. MOUNTING FOR PHOTOGRAPHIC SHUTTERS. FRANK A. BROWNELL, Rochester, N. Y., assignor to Eastman Kodak Co., Rochester, N. Y., a Corporation of New York. Original application filed Aug. 3, 1904, Serial No. 219,287. Divided and this application filed Mar. 27, 1907. Serial No. 364,882.

1. A mounting for photographic shutters, comprising a shutter casing and a plate adapted to be rigidly secured to a camera, one of said parts being provided with a plurality of concentric slots and the other having a plurality of headed projections adapted to coöperate with said slots and to lock the plate and casing together when the latter is rotated on the former and a latch on one of the parts engaging the other to limit their relative rotary movement in one direction.



2. The combination with a support, an apertured plate thereon and a shutter casing, of studs on the casing adapted to extend through the apertures and having heads engaging in rear of the plate when the casing is revolved thereon in one direction, a latch on the plate and a shoulder on the casing adapted to engage therewith to prevent relative movement of parts in the other direction.

3. The combination with a support, a plate having a plurality of concentric apertures arranged therein and a shutter casing, of studs on the latter extending through the apertures and provided with heads adapted to engage the rear of the plate when the casing is revolved thereon and means on the plate projecting outwardly and coöperating with the shutter casing to hold it stationary on the plate.

4. The combination with a support, a plate having a plurality of concentric apertures arranged therein provided with enlarged ends and a shutter casing, of studs on the latter adapted to extend through the apertures and having heads engaging in rear of the plate, a spring finger carrying a projection and a shoulder on the casing coöperating therewith when the said casing and plate are rotated relatively.

5. The combination with a shutter casing having an aperture and leaves for closing it and headed studs on the rear of the casing, of a plate adapted to be attached to a lens support provided with a central aperture located in alinement with the shutter aperture and having concentrically arranged slots adapted to receive the studs, a spring finger on the plate and a projection on the casing engaging therewith.

[Claim 6 not printed in the Gazette.]

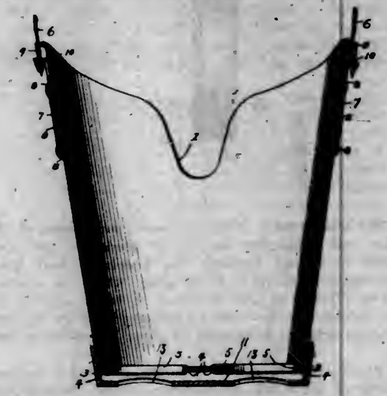
900,082. EGG-TESTER. JOHN W. BURKHOLDER, Moline, Ill. Filed Mar. 16, 1901. Serial No. 51,493.

1. In an egg tester consisting of a casing formed to fit over the eyes at one end, and the other end provided with circular openings having upper and lower alining curved recesses in their edges, wherein eggs may be disposed vertically and viewed transversely, and means to hold the casing in position to the eyes.

2. An egg tester composed of a tubular casing having its edges flared outwardly at one end and provided with a longitudinal recess adapted to fit around the nose of the wearer, a transverse bridge piece centrally disposed across the opening at the other end to provide two separated openings, a removable casing adapted to fit upon the end of the first mentioned casing, said removable casing having a transverse bridge piece and curved notches formed in its edges in which the eggs rest when viewed transversely.

3. In an egg tester, the combination with a tapering casing formed at its larger end to fit the face of the wearer adjacent to the eyes and surrounding the same and with two apertures in the smaller end spaced apart and adapted to receive two eggs with their longer axial lines longitudinally of the casing, a second casing fitting over the smaller end of the tapering casing and provided with

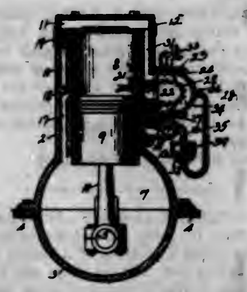
spaced apertures adapted to aline with the apertures of the casing and with the opposite edges of the apertures thereof provided with recesses adapted to receive two eggs with their axial lines disposed transversely of the casings, whereby eggs may be disposed and observed transversely or longitudinally.



4. In an egg tester, a casing formed to fit over the eyes of the wearer, means for supporting the eggs for observation endwise, and means for supporting the eggs for observation transversely.

5. In an egg tester, a casing formed to fit over the eyes of the wearer, means to support the casing upon the wearer, means for supporting the eggs for observation endwise, and means for supporting the eggs for observation transversely.

900,083. GAS-ENGINE. CLAUDE A. CLARK, Syracuse, N. Y. Filed Apr. 30, 1908. Serial No. 430,092.



1. An explosive engine, comprising a cylinder having a water-jacket and an exhaust port, an exhaust-member mounted on the side of the cylinder and connected thereto by means of said port, separate water-spaces to cool said exhaust-member, one of said water-spaces disposed on top, the other disposed on the underside of said exhaust-member, a port to connect said lower water-space with the lower end of the jacket of said cylinder, a port to connect said upper water-space with the top of said cylinder jacket, an inlet to connect said lower water-space with a source of cold water supply, an over-flow pipe connected to said upper water-space for drawing the hot-water away from said cylinder, an air-jacket disposed concentric to said exhaust-member between said upper and said lower water-space, a carbureter operatively connected to said cylinder, and a pipe connecting said air-jacket with said carbureter, adapted to conduct hot-air from the air-jacket to said carbureter, substantially as described.

2. An explosive engine, comprising a cylinder surrounded by a water-jacket, an exhaust port in said cylinder, an exhaust-member having an exhaust-passage connecting with said port, a water-space disposed along the underside of said exhaust-passage connecting with the lower end of the jacket of said cylinder, a water-space disposed along the upper side of said exhaust-passage connecting with the upper end of the jacket of said cylinder, an air-jacket disposed along the outer side of said exhaust-passage between said water-spaces, the opposite ends of said air-jacket being open to admit air drawn from the atmosphere, a carbureter disposed at the rear side of said cylinder, an intake mounted on the rear side of said cylinder, and a pipe forming a passage for hot-air from said air-jacket through said carbureter into said intake, substantially as described.

3. An explosive engine, comprising a cylinder having an exhaust port, an exhaust-member having an exhaust-passage disposed centrally therein and connecting with the exhaust port of said cylinder, the said exhaust-passage formed by a corrugated wall inclosed in a concentric casing, a water-jacket disposed on the upper side of said exhaust-passage, a water-jacket disposed underneath said exhaust-passage, and an air-jacket disposed concentric to said exhaust-passage between said water-jackets, adapted to cooperate with said water-jackets for cooling said exhaust-passage, substantially as described.

4. In a gas engine, the combination with a cylinder having a water-jacket formed around and above the same, and having an exhaust port, of an exhaust-passage formed by a corrugated wall and connecting with the port in said cylinder, the said exhaust-passage surrounded by an integral outer casing disposed parallel to said corrugated wall, a water-space disposed on the upper side of said passage between said casing and said corrugated wall, a water-space disposed on the underside of said passage between said casing and said corrugated wall, an inlet-pipe to connect the lower water-space with a source of cold-water supply, a port to connect the lower water-space with the water-jacket of the cylinder, a port to connect the upper water-space with the water-jacket of the cylinder, a pipe to drain the water from the upper water-space, an air-jacket disposed between said casing and said corrugated wall the upper and lower edges thereof abutting the outer edges of said upper and said lower water-spaces, the opposite ends of said air-jacket being open for the admission of air to cool said exhaust-passage, the air in said air-jacket adapted to be heated by contact with said corrugated wall, a carbureter attached to the rear side of said cylinder, and a pipe to conduct the heated air from said air-jacket to said carbureter, substantially as described.

5. In an exhaust engine, the combination with a plurality of explosion cylinders having separate water-spaces, each cylinder provided with an exhaust port, of an exhaust-member comprising a one-part casting having a central passage formed by a corrugated wall inclosed in an integral outer shell and connecting with the exhaust port of each cylinder, a water-jacket disposed on the upper side of said central passage and connected to the water-space of each cylinder, a water-jacket disposed underneath said central passage and connected to the water-space of each cylinder, and an air-jacket comprising a hollow compartment having its opposite ends disposed concentric to said central passage between said upper and said lower water-jacket, adapted to cooperate with said water-jackets for cooling said central passage, substantially as described.

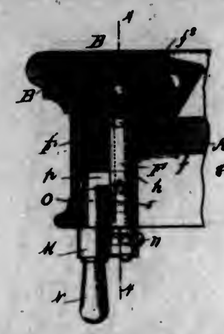
[Claims 6 to 11 not printed in the Gazette.]

900,084. BOX-FASTENER. NIKOLAI DAHL, Trondhjem, Norway. Filed Nov. 19, 1907. Serial No. 402,796.



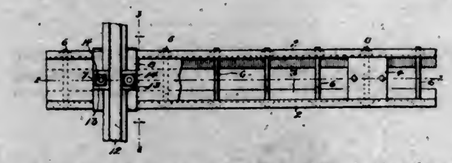
In closing device for cases and the like the combination of a springy metal plate the lower end of which is pivoted to the outside of the case wall, and a hook-shaped part pivoted to the upper end of the said plate and provided with a horizontal portion projecting over the top surface of the removable part of the cover.

900,085. CONVERTIBLE BILLIARD-TABLE. HARMON F. DAVENPORT, Chicago, Ill., assignor to The Brunswick-Balke-Collender Company, New York, N. Y., a Corporation of Ohio. Filed July 12, 1906. Serial No. 325,755.



In a convertible pocket-carom billiard table of the type alluded to, the combination, with the sliding rod for actuating a series of male locking devices, of male members, each of which is vertically adjustable within a suitable holder or housing that, in turn, is permanently secured to the said sliding rod; all in substantially the manner and for the purpose hereinbefore set forth.

900,086. RAILWAY-TIE. EDWIN N. DAVIS, Lodi, Wis. Filed Aug. 21, 1907. Serial No. 389,511.



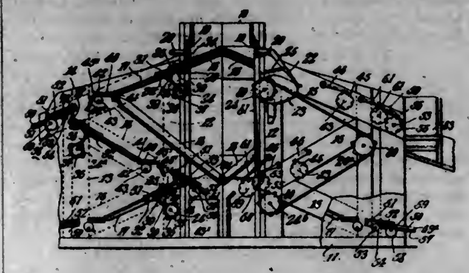
1. A railroad tie comprising body plates having flanges at their upper and lower edges, spacing sleeves having overlapping ends supported upon the lower flanges, connecting bolts, and a filling of plastic material.

2. A railroad tie comprising body plates having oppositely extending flanges at their upper and lower edges, spacing sleeves interposed between the plates and having overlapped ends, pairs of bolts extending vertically through the spacing sleeves, connecting bolts extending through the body plates and the spacing sleeves, and rail supporting plates engaging the vertical bolts and having downturned lugs engaging the upper flanges of the body plates.

3. A railroad tie comprising body plates having oppositely extending flanges at their upper and lower edges, spacing sleeves interposed between the plates and having overlapped ends supported upon the lower flanges, pairs of bolts extending vertically through the spacing sleeves, connecting bolts extending horizontally through the sleeves and the body plates, a filling of plastic material, and rail supporting plates engaging the vertical bolts and having downturned lugs engaging the upper flanges of the body plates.

900,087. SLATE-PICKER. WILLIAM J. DEVERS, Scranton, Pa. Filed Dec. 11, 1907. Serial No. 406,117.

1. In a slate picking machine, an inclined chute, a stop plate against which the mixed slate and coal engages, and means for elevating that row of lumps of coal and slate nearest the stop plate and delivering the same over the plate into the chute.



2. In a slate picking machine, an inclined chute, a stop plate extending transversely across the chute and against which the mass of mixed coal and slate rests, a vertically swinging bar arranged immediately to the rear of the plate and serving to support that row of lumps nearest the plate, and means for elevating said bar to discharge the row of lumps over the top of the plates onto the chute.

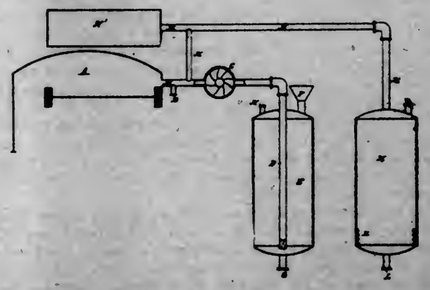
3. In a slate picking machine, an inclined chute, a stop plate extending transversely across the chute, a narrow bar arranged immediately to the rear of the plate, and means for elevating said bar to carry up beyond the top of the plate the lumps of coal and slate which are in engagement with the plate.

4. In a slate picking machine, an inclined chute, a stop plate extending transversely across the chute, a pivotally mounted member having a slot for the passage of the plate, that portion of the member beyond the plate forming a narrow bar for the support of the row of lumps resting against the plate, and means for swinging said plate upward to carry the lumps above the level of the top of the plate.

5. In a slate picking machine, an inclined chute, a stop plate extending transversely across the chute, a pivotally mounted member arranged at the upper portion of the chute, and slotted for the passage of the plate, and a revoluble eccentric connected to said member and arranged to swing the same upward to a point beyond the top of the plate.

[Claims 6 and 7 not printed in the Gazette.]

900,088. TREATING OXID OF ZINC. FREDERIC P. DEWEY, Washington, D. C. Filed June 8, 1898. Serial No. 682,910.



1. The process of dissolving oxid of zinc, which consists in adding it in small portions at a time to water containing sulfurous acid so that the free sulfurous acid remains always in excess, substantially as described.

2. The process of dissolving oxid of zinc, which consists in adding it to water containing sulfurous acid, and simultaneously supplying sulfurous acid to the solution so that the free sulfurous acid is always in excess, substantially as described.

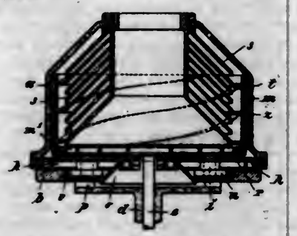
3. The process of separating oxid of zinc from oxids insoluble in sulfurous acid water, which consists in adding the mixed oxids to water containing sulfurous acid, simultaneously supplying sulfurous acid to the solution so that the free sulfurous acid is always in excess, and separating the solution from the residue, substantially as described.

4. The process of treating sulfids containing zinc, which consists in subjecting the sulfids to an oxidising roast and gradually introducing the roasted ore into water containing sulfurous acid so that the free sulfurous acid remains always in excess, substantially as described.

5. The process of treating sulfids containing zinc, which consists in subjecting the sulfids to an oxidizing roast, gradually introducing the roasted ore into water containing sulfurous acid, and at the same time supplying fresh sulfurous acid to the solution so that the free sulfurous acid is always in excess, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

900,089. CENTRIFUGAL MACHINE. ANDERS J. ERICSSON, Stockholm, Sweden, assignor to Aktiebolaget Separator, Stockholm, Sweden. Filed Oct. 2, 1906. Serial No. 337,063.



1. In centrifugal machines for separating solids from liquids, in combination, an outer bowl rotatably mounted and having an imperforate periphery, a second bowl, having an imperforate periphery above the lower end, mounted within the first mentioned bowl and concentric therewith, and adapted to rotate at a speed different from that of the first mentioned bowl, there being an outlet for the solids through the lower portion of the inner bowl and a corresponding outlet through the lower portion of the outer bowl.

2. In centrifugal machines for separating solids from liquids, in combination, an outer bowl rotatably mounted and having an imperforate periphery, a second bowl, having an imperforate periphery above the lower end, rotatably mounted within the first mentioned bowl and concentric therewith.

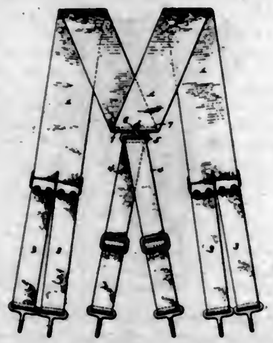
3. In centrifugal machines for separating solids from liquids, in combination, an outer bowl rotatably mounted and having an imperforate periphery, a second bowl, having an imperforate periphery above the lower end, rotatably mounted within the first mentioned bowl, and concentric therewith, means to bring the solids collected on the periphery of the second bowl to the lower portion thereof, there being an outlet for the solids through the lower portion of said inner bowl, and scrapers to convey said solids toward the center, there being an outlet for the solids through the outer bowl.

4. In centrifugal machines for separating solids from liquids, in combination, an outer bowl rotatably mounted and having an imperforate periphery, a second bowl, having an imperforate periphery above the lower end, rotatably mounted within the first bowl and concentric therewith, means to bring the solids collected on the periphery of the inner bowl to the bottom thereof, there being an outlet through the inner bowl at the lower portion thereof, and scrapers at the bottom, surrounded by said second bowl, to convey said solids toward the center, to which said scrapers are adapted to convey the solids, there being an outlet through the outer bowl.

5. In centrifugal machines for separating solids from liquids, in combination, an outer bowl rotatably mounted and having an imperforate periphery, a second bowl, having an imperforate periphery above the lower end, rotatably mounted within the first bowl and concentric therewith, and scrapers between the two bowls and revolving with the inner bowl.

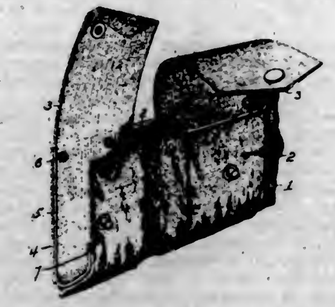
[Claims 6 to 9 not printed in the Gazette.]

900,090. SUSPENDERS. WILLIAM C. FISHER, Middletown, Conn., assignor to The Russell Manufacturing Company, Middletown, Conn. Filed Dec. 8, 1906. Serial No. 347,081.



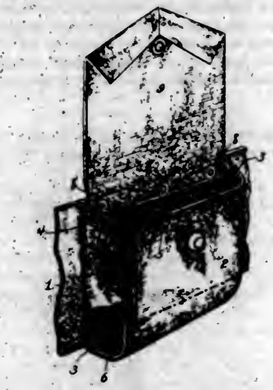
Suspenders comprising a body webbing made in one continuous piece and provided at its ends with attaching devices, said body webbing provided in its center with a button-hole, a cross-bar disposed transversely on the body webbing and terminating at its ends inwardly from the side edges of said body webbing, a loop, connecting means between said loop and cross bar and passing through the button-hole in the body webbing, and a back strap passing through said loop and provided at its ends with attaching devices.

900,091. CARTRIDGE-BELT. WILLIAM C. FISHER, Middletown, Conn., assignor to The Russell Manufacturing Company, Middletown, Conn. Filed Mar. 15, 1907. Serial No. 362,536.



The combination with a woven fabric cartridge pocket, of a woven fabric member made separate from the pocket and having a length appreciably greater than the depth of the pocket, said separate member having its intermediate portion disposed against the back wall of the pocket and directly secured to the latter near the upper edge thereof, the lower portion of said separate member extending over and covering the bottom of the pocket and having its upper edge secured to the front wall of the pocket and terminating below the upper edge thereof, and the upper portion of said separate member projecting from the top of the pocket a sufficient distance to constitute a cover for the latter.

900,092. CARTRIDGE-BELT. WILLIAM C. FISHER, Middletown, Conn., assignor to The Russell Manufacturing Company, Middletown, Conn. Filed June 17, 1907. Serial No. 379,484.



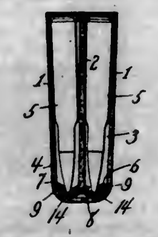
1. The combination with a cartridge pocket, of a tube of woven fabric disposed therein and dividing said pocket into compartments, the rear wall or member of said tube projecting above the pocket and constituting a flap or cover therefor.

2. The combination with a cartridge pocket, of a tube of fabric located therein and dividing the same into compartments, an integral extension from the rear wall or member of said tube lying upon the bottom of the pocket and constituting reinforcement for the bottoms of both compartments.

3. The combination with a cartridge pocket, of a tube of fabric located therein and dividing the same into compartments the rear wall or member of said tube secured to the rear wall or member of the pocket near the top of the latter, and an integral extension from the rear wall or member of the tube lying upon the bottom of the pocket and constituting reinforcement for the bottoms of both compartments thereof, said extension projecting upwardly against the front wall of the pocket and secured at its upper end to the latter.

4. The combination with a cartridge pocket, of a tube of fabric located therein and dividing the same into compartments the upper end of said tube secured to the back of the pocket, an integral extension from the upper end of the rear wall or member of the tube constituting a flap or cover for the pocket, and an integral extension from the lower end of the rear wall or member of the tube lying against the bottom and front wall of the pocket and secured at its upper edge to the latter.

900,093. CARTRIDGE-POCKET. WILLIAM C. FISHER, Middletown, Conn., assignor to The Russell Manufacturing Company, Middletown, Conn. Filed Sept. 24, 1907. Serial No. 394,290.



1. A woven fabric cartridge pocket provided therein at its bottom with a reinforce of material which will offer greater resistance to the penetration of pointed cartridges than the resistance offered by the material of which the body of the pocket is composed.

2. A woven fabric cartridge pocket having a reinforcing piece within the bottom portion thereof, and a yielding covering within the pocket and over said reinforcing piece.

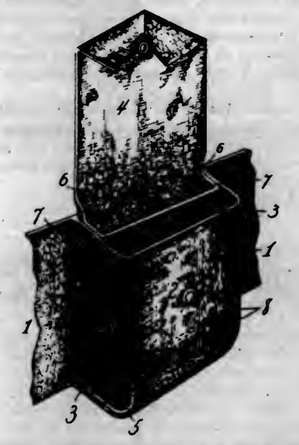
3. A woven fabric cartridge pocket provided with a metallic bottom piece inserted within the bottom portion of the fabric pocket, and a yielding covering disposed upon said metallic bottom piece to prevent the rattling of the pointed ends of cartridges on said metallic bottom piece.

4. A woven fabric cartridge pocket having a sheet metal bottom piece inserted within the bottom thereof, the upper surface of the bottom piece being provided with a yielding covering, substantially as set forth.

5. A woven fabric cartridge pocket having a partition, the upper portion of which is made of two-ply woven fabric and its lower portion having two single-ply extensions, in combination with a metallic bottom piece secured between such extensions and the bottom of a woven fabric pocket, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

900,094. CARTRIDGE-BELT. WILLIAM C. FISHER, Middletown, Conn., assignor to The Russell Manufacturing Company, Middletown, Conn. Filed Sept. 24, 1907. Serial No. 394,291.



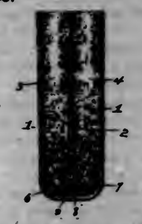
1. The combination with a cartridge pocket, of a fabric tube secured therein and dividing the same into two compartments, the lower end of said fabric tube being closed and forming a reinforcement for one of said compartments, and an extension from the closed lower end of the tube and forming a reinforcement for the other compartment.

2. The combination with a cartridge pocket, of a tube of woven fabric closed at its lower end and provided with a woven extension projecting from the closed end of said tube, said tube and the extension thereof, secured in said pocket and dividing the same into two compartments and providing reinforcement for both compartments.

3. The combination with a cartridge pocket, of a fabric tube made separate therefrom and secured therein, said fabric tube dividing the pocket into two compartments, both of which are accessible from the top, said tube having its lower end closed, and an extension integral with the rear wall of said separate tube at the upper end thereof and forming a foldable flap or cover for the pocket.

4. The combination with a cartridge pocket, of a tube secured therein and provided with integral extensions at both ends, the lower end of which tube being closed adjacent to the juncture of the lower extension therewith, the said lower extension covering the bottom of the pocket and secured to the front wall thereof and the upper extension projecting above the pocket and constituting a flap or cover therefor.

900,095. CARTRIDGE-POCKET. WILLIAM C. FISHER, Middletown, Conn., assignor to The Russell Manufacturing Company, Middletown, Conn. Filed Oct. 2, 1907. Serial No. 395,565.



1. A woven fabric cartridge pocket provided in its bottom with a lining of wire cloth and a covering of fabric over said wire cloth.

2. The combination with a woven fabric cartridge pocket, of flexible reinforcement in the bottom thereof, and a fabric covering on said reinforcement to separate the pointed ends of cartridges from the latter.

3. The combination with a woven fabric cartridge pocket, of flexible metallic reinforcement within the bottom thereof, and fabric over said metallic reinforcement and adapted to separate the pointed ends of cartridges from the latter.

4. The combination with a woven fabric cartridge pocket, of a flexible reinforcement within the bottom portion thereof and consisting of interwoven metallic members, and a yielding covering over the interwoven metallic reinforcement.

5. The combination with a woven fabric cartridge pocket, of fine-mesh wire cloth secured within the bottom portion thereof and constituting reinforcement for said bottom portion, and a yielding covering secured within the pocket over said wire cloth.

[Claim 6 not printed in the Gazette.]

900,096. CARTRIDGE-POCKET. WILLIAM C. FISHER, Middletown, Conn., assignor to The Russell Manufacturing Company, Middletown, Conn. Filed Apr. 6, 1908. Serial No. 425,474.



1. The combination with a cartridge pocket, of a tube secured therein between and spaced from the front and rear walls thereof, and an extension from the lower end of said tube and coöperating with a wall of said tube to form a compartment within the pocket.

2. The combination with a cartridge pocket, of a tube secured therein between the front and rear walls thereof, said tube forming a compartment within the pocket and coöperating with the front wall of the pocket to form another compartment, and an extension from the lower end of said tube and coöperating with a wall of the tube to form another compartment, said extension projecting beyond the top of the pocket and constituting a cover for the latter.

3. The combination with a cartridge pocket, of a tube secured therein between the front and rear walls thereof and spaced from both, each of the compartments thus formed being accessible from the top, and wire cloth between the lower end of said tube and the bottom of the pocket.

4. The combination with a cartridge pocket, of a tube secured therein between the front and rear walls thereof and spaced from both, an extension from the lower end of said tube projecting upwardly and coöperating with said tube to form a compartment within the pocket, and reinforcing material secured to said tube and extension at the juncture thereof with each other so as to be disposed between the lower ends of the compartments formed by said tube and extension and the bottom of the pocket.

900,097. EAR-TRUMPET. KARL F. HACKERT, East Cleveland, Ohio. Filed Dec. 20, 1907. Serial No. 407,269.



1. A sound receiver, comprising a flaring portion and a tubular portion at right angles thereto, a partition therein, the lower portion being curved to convey the sound vibrations into the tubular portion.

2. A sound receiver formed with a flaring portion and a tubular portion at right angles thereto, a partition member extending through the flaring portion and into the tubular portion.

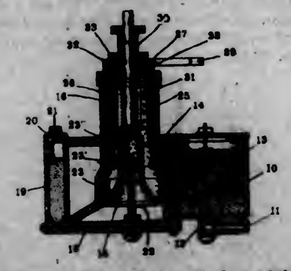
3. A sound receiver formed with a flaring portion and a tubular portion, a plurality of intersecting partition members in said sound receiver, one of said partitions extending into said tubular portion.

4. In a sound receiver, a partition of triangular form having its apex broadened and bent at approximately right angles to the plane of the partition.

5. A sound receiver formed with a flaring portion and a tubular portion at right angles thereto, a partition member extending through the flaring portion and into the tubular portion, and an imperforate diaphragm placed beyond the said partition.

[Claims 6 to 11 not printed in the Gazette.]

900,098. CARBURETER. FRANK H. HEITGER, Indianapolis, Ind. Filed Apr. 14, 1905. Serial No. 255,586.



1. In a device of the class described, a mixing chamber having an air inlet at its bottom and a mixture outlet at its top, in combination with a valve in said chamber and seated about the inlet opening therein, for automatically controlling the admission of air at said inlet, a spring resisting the movement of the valve, means for adjusting said spring, a vapor tube formed on said valve, a nozzle of less diameter than said tube and rising therein to a point above said valve, and a suitable reservoir wherewith said nozzle is connected, substantially as described.

2. In a device of the class described, two connected reservoirs, in combination with a supply duct, a suitable float valve, a nozzle supplied from said reservoirs and rising between the same at a point midway of their centers, and a mixing chamber arranged between said reservoirs to receive liquid from said nozzle, said chamber having suitable inlet and outlet openings, substantially as described.

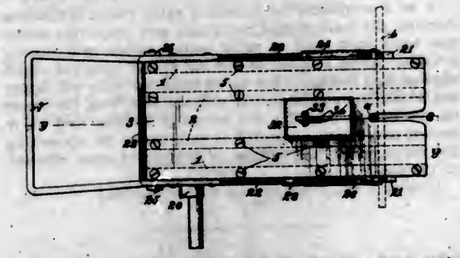
3. In a device of the class described, a mixing chamber having an air inlet opening in its bottom and provided with a mixture outlet in its side, in combination with a rotary throttle provided in the upper part of said chamber, an air valve arranged at the said inlet opening and vertically movable, a vapor tube formed on said valve and opening into said chamber, a suitable nozzle within said tube, an adjustable follower in the top of said throttle valve, and a spring interposed between said follower and said air valve, substantially as described.

4. In a device of the class described, a mixing chamber, having an air inlet in its bottom and an outlet in its side, in combination with a rotary throttle in the upper part of said chamber and operable from the top of said chamber, a combined air valve and mixing vapor tube in the lower part of said chamber, said tube being superimposed on said valve, a valve spring, a spring follower adjustable in the top of said throttle, a valve stem guided by and slidable in said follower, and a suitable liquid nozzle of less diameter than said tube and rising to a point above said valve, substantially as described.

5. In a device of the class described, a mixing chamber having an inlet at its bottom and an outlet at its top, in combination with an air valve for closing said inlet, a vapor tube rising from said air valve and containing a plurality of vapor perforations, means for adjusting the action of said valve and a liquid nozzle rising through said valve and tube to a point adjacent to the perforations in the latter, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

900,099. WIRE-FENCE-STAY-FASTENING MACHINE. ZIBA HURD, Chicago, Ill. Filed July 29, 1907. Serial No. 385,948.



1. In a device of the class described, a frame comprising a pair of vertical side plates and a pair of intermediate plates arranged parallel therewith, in combination with a pair of wheels mounted in axial alinement in said frame, cams on the adjacent faces of said wheels, and means for rotating said wheels, substantially as described.

2. In a device of the class described, a frame comprising a pair of side plates, a pair of intermediate plates and top and bottom plates suitably secured together, in combination with a pair of wheels, mounted in axial alinement in said frame, cams on the adjacent faces of said wheels, suitable means for actuating said wheels, and slots in said wheels and the ends of said frame, as and for the purpose specified.

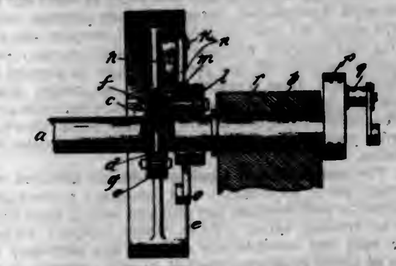
3. In a device of the class described, a suitable frame, in combination with a pair of wheels mounted in axial alinement in said frame, slots in said frame and wheels to receive the strand and stay wires of a fence, cams on the adjacent faces of said wheels, means for locking the device to the fence, means for feeding a staple into position to be operated upon by said cams, and means for rotating said wheels, substantially as described.

4. In a device of the class described, a suitable frame, in combination with a pair of wheels mounted in axial alinement in said frame, cams on said wheels, a staple magazine mounted on said frame, means for feeding the staples, one at a time from said magazine to a position to be operated upon by said cams, and means for rotating said wheels, substantially as described.

5. In a device of the class described, a suitable frame in combination with a pair of wheels mounted in axial alinement in said frame, slots in said wheels and said frame for receiving the strand and stay wires of a fence, cams on the adjacent faces of said wheels, means for simultaneously locking said device to the wires of the fence and for feeding a staple into position to be operated upon by said cams, and means for rotating said wheels, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

900,100. ENGINE. HARRY L. IDE, Springfield, Ill., assignor to A. L. Ide & Sons, Springfield, Ill., a Firm. Filed Dec. 14, 1907. Serial No. 406,418.



1. In an engine, the combination with a crank shaft formed in separable sections, the opposed ends of the sections having flanges, of a governing element support formed with inset recesses to receive said flanges, said recesses having a common bottom portion interposed between the flanges, clamping bolts passing through the flanges and serving to clamp the said bottom portion in place, thereby separably to secure the governing element support in place upon the shaft, a governing element carried upon said support, and an eccentric in operative connection with said governing element and carried by one of said flanges.

2. In an engine, the combination with a crank shaft formed in separable sections, the opposed ends of the sections having flanges, of a governing element support formed with inset recesses to receive said flanges, said recesses having a common bottom portion interposed between the flanges, clamping bolts passing through the flanges and serving to clamp the said bottom portion in place, thereby separably to secure the governing element support in place upon the shaft, a governing element carried upon said support, and an eccentric in operative connection with said governing element.

3. In an engine, the combination with a crank shaft formed in separable sections, the opposed ends of the sections having enlargements, of a governing element support interposed between said enlargements, clamping bolts passing through the enlargements and serving to separably secure the governing element support upon the shaft, a governing element carried upon said support, and an eccentric in operative connection with said governing element and carried by one of said enlargements.

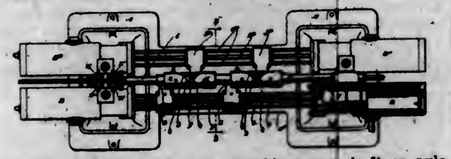
4. In an engine, the combination with a crank shaft formed in separable sections, the opposed ends of the sections having enlargements, of a governing element support interposed between said enlargements, clamping bolts passing through the enlargements and serving to separably secure the governing element support upon the shaft, a governing element carried upon said support, and an ec-

centric in operative connection with said governing element.

5. In an engine, the combination with a crank shaft formed in sections, the opposed ends of the sections having separably united enlargements, of a governing element support separably secured to an enlargement, a governing element carried upon said support, and an eccentric in operative connection with said governing element and carried by one of said enlargements.

[Claims 6 to 8 not printed in the Gazette.]

900,101. ENGINE. MAX E. KELLER, New York, N. Y., assignor of one-half to Charles F. Spotswood, New York, N. Y. Filed July 3, 1907. Serial No. 382,014.



1. The combination of a rotatable power-shaft or axle provided with reverse, spiral grooves which intersect between their ends and run into each other at their end portions, with a piston-rod, piston and shaft-actuator carried by the piston-rod and working in said grooves and compelling one complete rotation of the shaft at each longitudinal movement of the piston; means to prevent the shaft-actuator from running out of its proper groove where the grooves intersect; and means to switch the shaft-actuator from one groove into the other where the grooves communicate at their end portions with said switches.

2. The combination of a pair of pedestals provided with bearings for a work-shaft; said bearings; a work-shaft mounted in said bearings and provided with a plurality of sets of reverse, spiral grooves which intersect between their ends and communicate at their end portions; two pairs of piston-cylinders attached to said pedestals, a piston-rod connecting the pistons of each pair of piston-cylinders, and a plurality of shaft-actuators one in advance of another and fixed on each piston-rod and engaging said grooves.

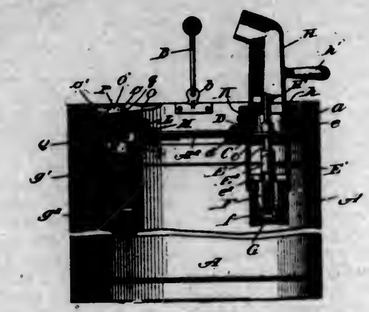
3. The combination of a pair of pedestals provided with bearings for a shaft; said bearings; a shaft mounted in said bearings and provided with a plurality of sets of reverse, spiral grooves which intersect between their ends and communicate at their end portions; two pairs of piston-cylinders; pistons supported by said pedestals; a piston-rod connecting the pistons of each pair of piston-cylinders; a plurality of shaft-actuators one in advance of the other, fixed on each piston-rod and engaging said grooves; and brace-rods connecting the piston-cylinder weights, the shaft-actuators being slidably mounted on said brace-rods.

4. The combination of a power-shaft or axle having reverse, spiral grooves which intersect between their ends and run into each other at their end portions, with a piston-cylinder, its piston and piston-rod; and an actuator adapted to engage said grooves and provided at its therein engaging end with an oscillating shoe.

5. The combination of a power-shaft or axle having reverse, spiral grooves which intersect between their ends and run into each other at their end portions, with a piston-cylinder, its piston and piston-rod; an actuator adapted to engage said grooves and provided at its therein engaging end with an oscillating shoe; and switches mounted in said grooves, one where the grooves run into each other at one end portion and the other in said groove where the grooves run into each other at their other end portion.

900,102. RECEPTACLE FOR COMBUSTIBLE LIQUIDS. LOUIS KESSLER, Des Moines, Iowa, assignor of one-half to Charles E. Holtsman, Chicago, Ill. Filed Sept. 22, 1906. Serial No. 335,745.

1. In a receptacle for liquids, the combination with a valve casing, of an outlet valve in said casing, a nozzle rotatably mounted upon said casing but axially immovable relatively thereto, a valve stem to which said valve is secured, a spring, the tension of which moves said stem to close said valve against its seat, and means connecting said stem with said nozzle whereby rotation of the nozzle opens the valve.



2. In a receptacle for liquids, the combination with a valve casing, of an outlet valve in said casing, a nozzle rotatably mounted upon said casing, a valve stem to which said valve is secured, a spring, the tension of which moves said stem to close said valve against its seat, a cam fixed to said valve stem, a coöperating cam fixed within said casing, and means connecting said stem to rotate with said nozzle whereby rotation of the nozzle opens the valve.

3. In a receptacle for liquids, the combination with a valve casing, of an outlet valve in said casing, a nozzle rotatably mounted upon said casing, a valve stem to which said valve is fixed, a spring interposed between said stem and casing for normally closing said valve against its seat, a cam fixed to said valve stem, a coöperating cam fixed within said casing, said stem projecting within said nozzle, and connected to rotate therewith whereby rotation of the nozzle rotates said stem against the tension of said spring, and thereby opens said valve.

4. The combination with a receptacle for liquids, of an inwardly seating safety valve, means for normally seating said valve, a screw-threaded plug secured in an opening in said valve, and an outwardly seating valve arranged in said plug.

5. In a receptacle for liquids, a valve casing projecting through one wall of said receptacle and projecting above and below said wall, a valve seated within said casing, a nozzle having a flange at one end seated upon the upper edge of said casing, a nut screw-threaded upon the upper end of said casing and having a flange over-lying the flange on the nozzle, a spring for normally holding said valve seated, and means connected to said nozzle for un-seating the valve against the tension of the spring upon rotation of the nozzle.

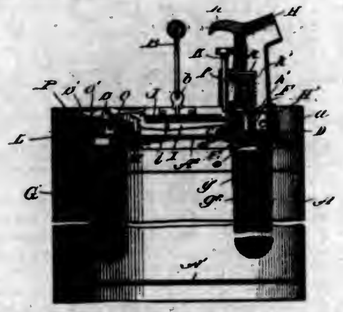
[Claims 6 and 7 not printed in the Gazette.]

900,103. PORTABLE RECEPTACLE FOR LIQUIDS. LOUIS KESSLER, Des Moines, Iowa, assignor of one-half to Charles E. Holtsman, Chicago, Ill. Filed Sept. 22, 1906. Serial No. 335,746.

1. In a receptacle for liquids the combination with a valve casing, of an outlet valve in said casing, a valve stem to which said valve is secured, a nozzle detachably supported upon said casing, a reciprocating rod within said nozzle alining with the valve stem, and means for depressing said rod mounted upon the exterior of said nozzle.

2. In a receptacle for liquids the combination with a valve casing, of an outlet valve in said casing, a valve stem to which said valve is secured, a nozzle detachably supported upon said casing, a reciprocating rod within said nozzle alining with the valve stem, and means for depressing said rod mounted upon the exterior of said nozzle, and a projection on said nozzle over-lying said means to protect the same.

3. In a receptacle for liquids, the combination with a valve casing, of an outwardly seating valve in said casing, a nozzle detachably supported upon said casing, a reciprocating rod within said nozzle alining with said valve, a plunger mounted upon said nozzle, means connecting said plunger with said rod, and a projection on said nozzle over-lying said plunger.



4. In a receptacle for liquids, the combination with an outwardly seating discharge valve, a detachable nozzle through which liquid is discharged, a reciprocating rod within said nozzle for opening said discharge valve, a plunger mounted upon said nozzle and operatively connected with said rod, an inwardly seating safety valve, a lever fulcrumed upon the receptacle one end of which extends beneath the lower end of said plunger, and means whereby an oscillation of said lever opens said safety valve.

5. In a receptacle for liquids, the combination with an outwardly seating discharge valve, a detachable nozzle through which liquid is discharged, a reciprocating rod within said nozzle for opening said discharge valve, a plunger mounted upon said nozzle and operatively connected with said rod, an inwardly seating safety valve, a lever fulcrumed upon the receptacle one end of which extends beneath the lower end of said plunger, a second lever to which said safety valve is connected, the end of said second lever extending above the end of said first lever, whereby the oscillation of said first lever lifts said safety valve.

[Claims 6 to 8 not printed in the Gazette.]

900,104. PORTABLE RECEPTACLE FOR FLUIDS. LOUIS KESSLER, Chicago, Ill., assignor of one-half to Charles E. Holtsman, Chicago, Ill. Filed Aug. 19, 1907. Serial No. 389,092.



1. In combination, a coupling, a nozzle detachably secured to one end of the coupling, means for detachably securing the other end of the coupling to a support, a member detachably secured to the latter end of said coupling, a perforated guard carried by said member, and a valve-device associated with said coupling.

2. In combination, a coupling, a nozzle detachably secured to one end of the coupling, means for detachably securing the other end of the coupling to a support, a spider detachably secured to the latter end of the coupling, a perforated guard carried by said spider, said coupling having a valve seat, and a valve coöperating with said seat.

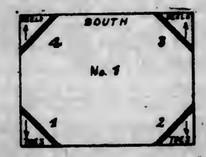
3. In combination, a coupling, a nozzle detachably secured to one end of the coupling, means for detachably securing the other end of the coupling to a support, a member detachably secured to the latter end of said coupling, a perforated guard carried by said member, a valve within said coupling, and a spring between said valve and said member for holding said valve closed.

4. In combination, a tubular coupling, a nozzle screw-threaded upon one end of the coupling, the opposite end of said coupling having screw threads for the purpose of securing it within the discharge opening of a receptacle, a spider screw-threaded within the latter end of the coupling, a valve for closing the passage through the coupling, a spring between the valve and the spider, and a perforated guard carried by said spider.

5. In combination, a fluid containing receptacle, a tubular coupling detachably secured within an opening in the receptacle, a nozzle detachably secured to the outer end of the coupling a spider located within the receptacle and detachably secured to the coupling, an outwardly-seating valve associated with the coupling, a spring between the valve and the spider, and a perforated guard carried by said spider.

[Claims 6 to 14 not printed in the Gazette.]

900,105. DANCING-CHART AND METHOD OF SELF-INSTRUCTION. GERTRUDE KOLP, Richmond, Ind. Filed Dec. 6, 1907. Serial No. 405,333.

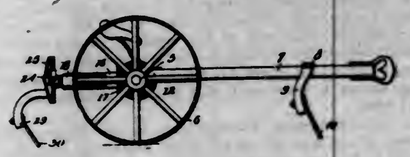


1. That improvement in the art of dancing which consists of a series of charts having four corners, a numeral printed in each corner portion of each chart, a word printed in each corner of each chart and designating either "heels" or "toes" a printed arrow pointing to each of said words, means for denoting the position each chart is to occupy with relation to the points of the compass, and a number printed in the central portion of each chart, all substantially as described and set forth.

2. That improvement in the art of dancing comprising a series of charts for self instruction in "square two-step" and "square waltz" dances, means for denoting the position the several charts are to occupy, means for denoting the positions for the students heels and toes, and a series of numerals arranged in progressive succession printed on each chart, all substantially as set forth.

3. That improvement in the art of teaching dancing which comprises a series of eight oblong charts to be placed upon the floor, a numeral printed near each corner of each chart, each of said corners also containing a numeral different from that of the other three corners, two of the corners of each chart having printed thereon the words "heels" and the other two corners of each chart having printed thereon the words "toes", an indicator pointing to each of said words, means for denoting the direction the top of the charts are to be directed, and a number printed on the central portion of each chart, all substantially as shown and described and for the purposes set forth.

900,106. COTTON CHOPPER AND CULTIVATOR. THOMAS T. LECROY, Lonsdale, Ark. Filed June 11, 1907. Serial No. 378,412.

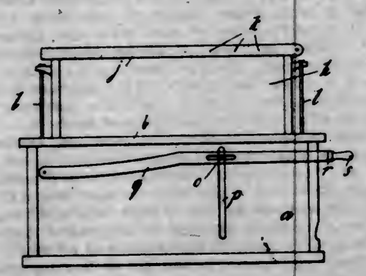


1. A combined cotton chopper and cultivator comprising a wheeled axle, a rearwardly extending arm carried by the axle, a sleeve revolubly engaged with the arm, means for driving the sleeve, chopping hoes connected with the sleeve, a cap member engaged with the arm rearwardly of the sleeve in position to prevent removal of the sleeve, said cap member being removable, and covering shovels connected with the cap member.

2. In a cotton chopper and cultivator, the combination with an arm, of a sleeve revolubly mounted upon the arm, said sleeve being arranged for removal from the arm, chopping hoes carried by the sleeve, a cap member removably engaged with the arm in position to hold the sleeve thereupon, and covering shovels carried by the cap member for movement therewith when the cap member is removed, said covering shovels lying normally in a position rearwardly of the chopping hoes.

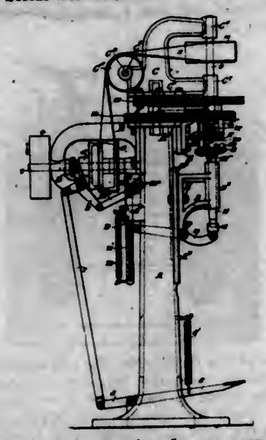
3. In a machine of the class described the combination with a revoluble axle, of a gear carried by the axle, an arm connected with the axle and extending laterally therefrom, a sleeve revolubly and removably engaged upon the arm, a gear carried by the sleeve and meshing with the gear of the axle for rotation thereby, chopping hoes carried by the sleeve, a cap member removably engaged with the arm rearwardly of the sleeve in position to prevent removal of the sleeve and in position to hold the sleeve with its gear in mesh with that of the axle, means for holding the cap member in position, and covering shovels carried by the cap member and arranged for removal from the arm when the cap member is removed.

900,107. MACHINE FOR SLICING BUTTER. MAURICE LEEN, Tralee, Ireland. Filed Apr. 8, 1907. Serial No. 367,069.



In a butter slicing machine, the combination of a box-like base having a board supported within it so that its upper surface is above the top of the box-like frame a frame slidable within the box-like base, a wire crossed frame hinged to the said slidable frame, pins outstanding from the bottom of the slidable frame and projecting through slots in the box-like base, slotted levers to receive the ends of the pins, and pivoted to the box-like base, and means for raising and lowering the said slotted levers and the slidable frame connected thereto, substantially as hereinbefore described.

900,108. CAN-END-SEAMING MACHINE. HALVOR H. LYCHE and VICTOR ODQUIST, Chicago, Ill., assignors, by direct and mesne assignments, to Torris Wold & Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 7, 1906. Serial No. 244,647.



1. In a machine for turning flanges upon non-circular cans or vessels, the combination, of suitable chucks for holding a can, with a seaming device adjacent thereto, a cam engaged with said device for moving the same toward and from the axis of said chucks, and means for shifting the cam to remove said seaming device from its position adjacent to said chucks, substantially as described.

2. In a machine for turning flanges upon non-circular cans or vessels, a can chuck, in combination with a seaming device adjacent thereto, a cam engaged with said seaming device for causing the same to follow the contour of a can held by said chuck, means for rotating said chuck at a certain speed, and means for rotating said cam at a higher speed, substantially as described.

3. In a machine for turning flanges upon non-circular cans or vessels, a can chuck, in combination with a seaming device adjacent thereto, a cam for moving said device toward and from the axis of said chuck to continuously conform the position of said device to the shape of a can held in said chuck, and means for rotating said chuck and said cam at different speeds, substantially as described.

4. In a machine for turning flanges upon non-circular cans or vessels, the can chucks and means for rotating the same, in combination with a flanging device adjacent thereto, a cam rotating at a higher speed than said chucks, the arrangement of parts being such that each revolution of said cam causes said flanging device to relatively follow or conform to a portion only of the perimeter of the can that is held in said chucks, substantially as described.

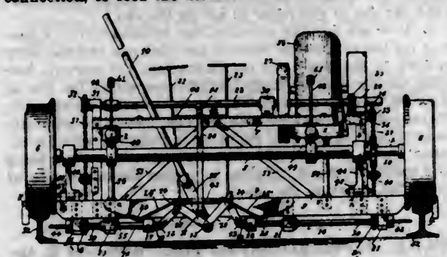
5. In a machine for turning flanges upon non-circular cans or vessels, suitable can chucks, in combination with a flanging device adjacent thereto, a cam for moving said device toward and from the axis of said chucks, said cam being so rotated and formed that successive revolutions thereof cause said device to conform to successive portions of the perimeter of a can held in said chucks, substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

900,109. RAILROAD-TRACK-RAIL-DRILLING MACHINE. FORD MARSELLIS, Berkeley, Cal., assignor of one-fourth to E. M. Cutting, Fruitvale, Cal., and one-fourth to W. W. Slater and one-fourth to H. C. Barnes, Oakland, Cal. Filed Mar. 7, 1907. Serial No. 361,024.

1. In a railroad track-rail drilling-machine, the combination of oppositely disposed drills, means for rotating the drills, and feeding and retracting mechanism including a pair of links for each drill, means for alternately alining each pair of links to present a rigid thrust connection with

the drills, and flexing them to retract the drills, and a single lever connected at one end with each pair of links to impose a pressure upon them when alined as a thrust connection, to feed the drills.



2. In a railroad track-rail drilling-machine, the combination of a drill; means for rotating it; and feeding and retracting mechanism comprising a pair of links, a rod for alternately alining said links to present a rigid thrust connection with the drill, and flexing them to retract the drill, and a lever connected with the links to impose a pressure upon them when alined as a thrust connection, to feed the drill.

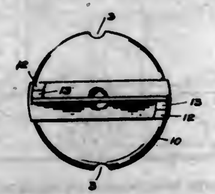
3. In a railroad track rail drilling machine, the combination of oppositely disposed drills, means for rotating the drills, and feeding and retracting mechanism, including a pair of links for each drill, means for alining each pair of links to present a rigid thrust connection with the drills, and flexing them to retract the drills, and means common to each pair of links to impose a pressure upon them when alined as a thrust connection to feed the drills.

4. In a railroad track rail drilling machine, the combination of oppositely disposed drills, means for rotating the drills, a means connected with the drills to feed the same forward and retract the same, separate latches to lock the drills in a retracted position and a single means to release the drills and permitting the release of only one drill at the same time, said means comprising a lever having lateral projections to engage and lift said latches.

5. In a railroad track rail drilling machine, the combination of a drill, means for rotating it, mechanism for feeding and retracting the drill, means for locking said drill in a retracted position and releasing the same, said means comprising a swinging stop latch engaging the drill connections and a lever provided with a lateral projection to lift said latch.

[Claims 6 to 19 not printed in the Gazette.]

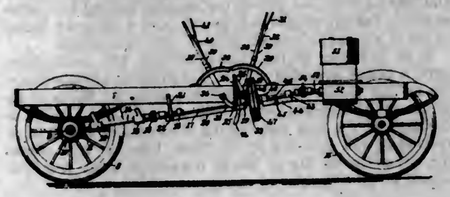
900,110. STOPPERING BOTTLES OR OTHER VESSELS. EDWARD A. MATTHIAS, Liverpool, England. Filed May 24, 1907. Serial No. 375,512.



1. In combination, a bottle neck, projections within said bottle neck, a stopper, circumferential inclined projections on the stopper surface adapted to engage the said bottle neck projections, and a diametral thumb piece joining together the inclined projections and extending across the stopper so as to form a limiting abutment for the projections, substantially as described.

2. In combination, a bottle neck, projections therein, a stopper provided with indents to pass the projections, a cap piece mounted on the stopper so as to be rotatable relatively thereto, and circumferential inclined planes on the cap piece adapted to engage the projections in the bottle neck, substantially as described.

900,111. TRANSMISSION-GEAR. ROBERT J. MILLION, Jefferson township, Carroll county, Ind. Filed June 12, 1906. Serial No. 321,834.



1. The combination of a revoluble member, a frame mounted thereupon and adapted to move so as to allow the said revoluble member to swing bodily upon an axis different from its axis of rotation, another revoluble member engaging said first mentioned revoluble member, a movable member supporting said second mentioned revoluble member so as to allow it to swing upon an axis independent of its axis of rotation, said revoluble members engaging each other directly, and means for turning said first mentioned revoluble member.

2. The combination of a revoluble friction disk, means for turning the same, a rocking frame supporting said revoluble friction disk, another revoluble friction disk adapted to engage said first mentioned friction disk, a swinging frame supporting said second mentioned friction disk, and means for shifting said swinging frame and said rocking frame in opposite directions, so as to vary the point of contact between said friction disks in order to change the relative speed therebetween.

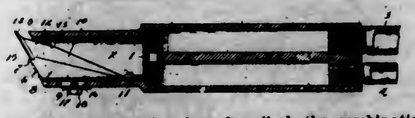
3. The combination of a rocking frame provided with bearings, a revoluble shaft mounted within said bearings, a friction disk mounted upon said shaft and rotatable by movements of the same, a swinging frame provided with bearings, a revoluble shaft supported within said bearings, a friction disk mounted upon said last mentioned shaft, and mechanism connected with both of said frames for moving the same in opposite directions.

4. The combination of a pair of frames movable in opposite directions, friction disks revolubly supported upon said frames and normally coaxial with each other, means controllable at will for shifting said frames in opposite directions thereby varying the relative bodily positions of said friction disks, means for driving one of said disks, and a driven member connected with the other of said disks.

5. The combination of a revoluble friction driving member, a revoluble friction driven member, a movable frame supporting one of said members, an arcuate bearing member mounted upon said frame, a bearing fork engaging said arcuate bearing member, and mechanism connected with said bearing fork for forcing the same against said arcuate bearing member.

[Claims 6 to 32 not printed in the Gazette.]

900,112. CRUDE-OIL BURNER. ALONZO D. MOORE, Needles, Cal. Filed Dec. 27, 1905. Serial No. 293,496.



1. In a burner of the class described, the combination with a nozzle provided with a commingling chamber having at one side of the nozzle an exit mouth of arc-shape, of a transversely curved inclined surface within the nozzle and extending in general transverse relation to the nozzle and leading from one side of the interior thereof to the exit mouth at the opposite side thereof, and means for introducing the oil and vaporizing element into the commingling chamber prior to their impinging the inclined surface.

2. In a burner of the class described, the combination with a nozzle provided with a commingling chamber hav-

ing at one side of the nozzle an exit mouth of arc-shape, of a transversely curved inclined surface within the nozzle and extending in general transverse relation to the nozzle and leading from one side of the interior thereof to a point adjacent the arc-shaped exit mouth, and a spraying flange or lip of arc shape located adjacent the exit mouth.

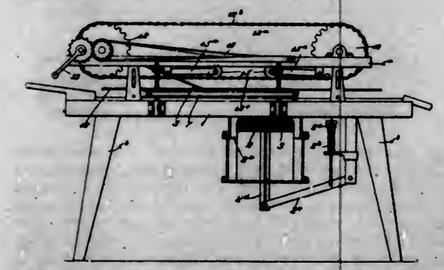
3. In a burner of the class described, the combination with a nozzle provided with a commingling chamber having an exit month of arc shape, of a spraying flange or lip of arc shape disposed beyond and substantially parallel to the said mouth, and coöperating shoulders or supports on the nozzle and spraying lip or flange, together with means for adjusting the lip or flange toward or away from the nozzle to vary the size of the mouth.

900,113. OVEN-DOOR. WILLIAM A. MOORE, Dayton, Ohio. Filed Oct. 18, 1907. Serial No. 397,985.



An oven door having an opening therein, a frame for said opening consisting of an inner member and an outer member, the latter member being provided with an outwardly extended flange, the frame so consisting of two members, surrounding the opening in said oven door and being secured to said door by means of pins extending from the outer member of said frame, a series of bars extending from one side to the other side of the inner member of said frame and lying across the opening, a glass secured between the two members of said frame on the outer side of said bars, a detachable cover fitting over the outwardly extended flange of the outer member of the frame, and springs on said cover engaging the inner side of said flange to maintain the cover in position.

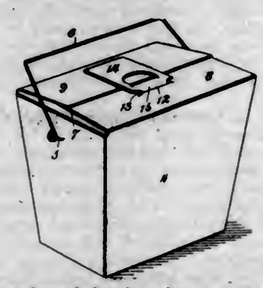
900,114. CAN-LABELING MACHINE. SAMUEL E. MORRAL and WILLIAM W. MORRAL, Morral, Ohio. Filed Aug. 10, 1907. Serial No. 387,964.



1. In a can labeling machine, the combination of a run way for the can, means whereby a label can be adherently applied to the can as it moves through the run way, a belt having metallic projections to operate on the can as it moves through the runway, a roller to press said metallic projections into contact with the can, said roller being provided with a belt guiding annular groove of a depth to permit the metallic projection of the belt to extend beyond the rim of the roller to act on the can.

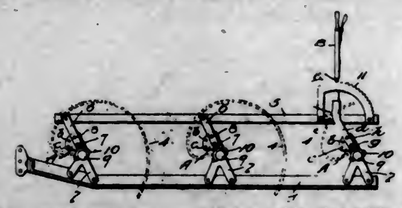
2. In a can labeling machine, the combination of a runway for the can, means whereby the label can be adherently applied to the can as it moves through the runway, two belts having metallic projections to operate on the can as it moves through the runway, a roller to press the metallic projections into contact with the can, means for pivotally hanging said roller, said roller being provided with an annular groove for each of said belts and said grooves being of a depth to permit the belts to project beyond the rim of the roller to act on the can.

900,115. PAPER BUCKET OR BOX. BENJAMIN B. MCFADDEN, Binghamton, N. Y. Filed Jan. 28, 1908. Serial No. 413,041.



A bucket or box of the class described, having an open end, flaps carried by opposite edges of the box or bucket, and having their inner margins overlapping, the inner flap having spaced openings or slots, one of which is located at the free edge of the outer flap, and a reinforcing strip secured to the outer flap and projecting beyond the free edge thereof, said strip terminating in a tongue and engages in one of the slots or openings in the inner flap, and said strip having an oppositely disposed tongue cut from the portion that overlies the outer flap, said latter tongue passing through the slot in the inner flap that is located at the edge of the outer flap, and passing beneath the inner flap and also beneath the outer flap.

900,116. HARROW. JOHN D. MCMILLAN, Alhambra, Cal. Filed Mar. 21, 1903. Serial No. 422,502.

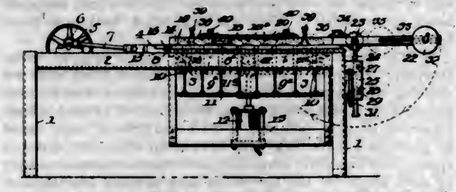


In a spring-tooth harrow, and in combination with pivoted tooth-bars and a connecting rod, an adjusting lever, links, and an adjusting device comprising a yoke for connection to a tooth-bar, and a lug having adjusting holes for the links.

900,117. MOLDING-MACHINE. JOHN F. NOLAN, Chicago, Ill. Filed May 20, 1907, Serial No. 374,617. Renewed Feb. 26, 1908. Serial No. 417,818.

1. In a core-molding machine, the combination of a horizontally-vibrating sand plate, a rocking core box adapted to be swung down upon the sand on the plate, and means to press the core box into the sand.

2. In a core-molding machine, the combination of a horizontally-vibrating sand plate, a rocking frame pivoted beside the same, a core box held by the frame, and adapted to swing down upon the sand on the plate, and means to apply pressure to the core box, to force the same into the sand.



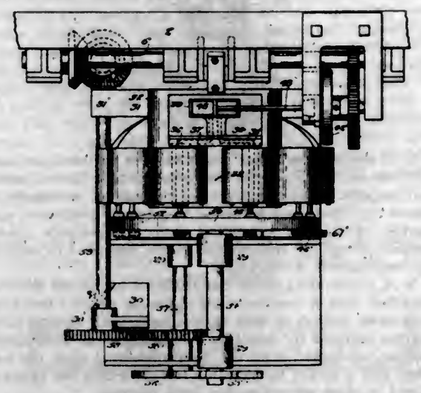
3. In a core-molding machine, the combination of a vibrating sand plate, a frame pivoted beside the plate, a core box mounted on the frame and arranged to swing therewith to and from the sand plate, and a counterweight on the frame, at the opposite side of the pivot to the core box.

4. In a core-molding machine, the combination of a supporting frame, a sand plate mounted to vibrate horizontally thereon, a rocking frame pivotally mounted at the end of the supporting frame and carrying a counterbalanced core box arranged to rock over to and from the plate, and clamps for attaching together the rocking frame and the sand plate.

5. In a core-molding machine, the combination of a sand plate and a vibrating support therefor, a rocking frame pivoted adjacent the plate, to swing to and from the same, a core box clamped to the frame, and clamps for attaching together the rocking frame and the sand plate.

[Claims 6 to 9 not printed in the Gazette.]

900,118. CAN-MAKING MACHINE. VICTOR ODQUIST, Chicago, Ill., assignor, by mesne assignments, to Torris Wold & Company, Chicago, Ill., a Corporation of Illinois. Filed May 28, 1904. Serial No. 210,251.



1. In a can making machine, a former horn and take-off mechanism, in combination with a heated body, adjacent thereto, a vertically disposed multiple can body carrier, to receive can bodies from said horn, said carrier being arranged to revolve in a vertical plane, and means for moving said carrier about said body, substantially as described.

2. In a can making machine, a former horn, in combination with a transversely moving vertically disposed multiple can body carrier, said carrier being arranged to revolve in a vertical plane, means for delivering can bodies from said former horn to said carrier successively, a heated body, over which said carrier operates and a soldering mechanism associated with said heated body, substantially as described.

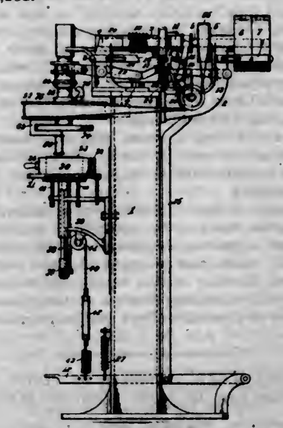
3. In a can making machine, a former horn, and a take-off mechanism, in combination with a heated body, adjacent thereto, a vertically disposed multiple can body carrier to receive successive can bodies from said horn, said carrier being arranged to revolve in a vertical plane, means for rotating said carrier about said heated body and a solder-applying mechanism, substantially as described.

4. In a can making machine, a can body forming mechanism, having a former horn, in combination with a heated body, adjacent to said horn, a vertically disposed multiple can body carrier, transversely movable with relation to said horn, for carrying can bodies into and out of contact with said heated body, said carrier being arranged to revolve in a vertical plane, means for removing successive can bodies from the horn to said carrier and a soldering mechanism, substantially as described.

5. In a can making machine, a can body forming mechanism, having a former horn, in combination with a heated body, adjacent to said horn, a vertically disposed multiple can body carrier, transversely movable with relation to said horn, for carrying can bodies into and out of contact with said heated body, said carrier being arranged to revolve in a vertical plane, means for removing successive can bodies from the horn to said carrier, said heated body being provided with a groove to receive solder, and means for supplying solder thereto, substantially as described.

[Claims 6 to 51 not printed in the Gazette.]

900,119. CAN-BODY-FLANGING MACHINE. VICTOR ODQUIST and HALVOR H. LYCHE, Chicago, Ill.; said Odquist assignor to Torris Wold & Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 4, 1906. Serial No. 346,282.



1. In a machine of the class described, an irregular non-rotatable can body holder comprising a clamp of less height than that of the can body to be flanged, in combination with a roller provided with annular flanges or collars separated by a space greater than the height of the clamp, and means for revolving said roller within said holder, substantially as described.

2. In a machine of the class described, the combination of a can body holder with an automatically operating gage for positioning a can body therein, means for adjusting said gage, a flanging device, and means for moving said flanging device into operative position within a can body held in said holder to form flanges on said can body, substantially as described.

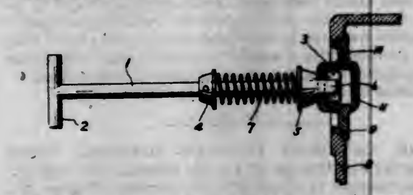
3. In a machine of the class described, a can body holder comprising a two-part clamp of less height than that of the can body to be flanged, in combination with a plate arranged beneath said clamp, means for adjusting said plate in relation to said clamp, a flanging device, and means for actuating said flanging device within a can held in said clamp to flange the can body, substantially as described.

4. In a machine of the class described, a can body holder comprising a clamp, in combination with a plate beneath said can body holder, means for automatically moving said plate toward and away from said can body holder, a flanging device, and means for moving said flanging device into coöperation with said clamp to flange a can body, substantially as described.

5. In a machine of the class described, a can body holder comprising a clamp of less height than that of the can body to be flanged, in combination with a plate beneath said clamp for gaging a can body therein, a flanging roller of greater height than the can body, means for inserting said roller within said can body and clamp, means for depressing said plate out of the path of said roller, and means for moving said roller into coöperation with said clamp to flange the can body, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

900,120. WRENCH. JOHN C. PARKER, Philadelphia, Pa. Filed Jan. 30, 1908. Serial No. 413,431.



1. A wrench comprising a shank having a transversely extending member fixed to an end thereof, and a device revolubly and longitudinally movable on said shank, said device having a member for engaging said transverse member to prevent relative revolution of said parts.

2. A wrench having a shank with a T-head, a device having projections revolubly and longitudinally movable on said shank so as to be placed in either free or interlocking relation with said head.

3. A wrench having a shank with a T-head, a collar with projections movable revolubly and longitudinally on said shank, a collar fixed to said shank, and a spring between said collars.

4. A wrench having a shank with a transversely extending member fixed to an end thereof, a bearing fixed to said shank, a bearing revolubly and longitudinally movable on said shank, and a spring disposed between said bearings, said movable bearing having means for engaging the transversely extending member of said shank whereby said movable member and shank are held against relative revolution.

900,121. SEAL-LOCK. RUDOLPH C. PLEINS, St. Paul, Minn. Filed Nov. 12, 1906. Serial No. 343,015.



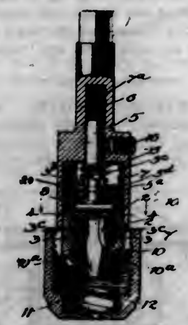
1. The combination with a box and a hinged cover therefor, the front wall of the box being formed with an opening near the cover, of a spring strip supported within said box adjacent to said opening, an outwardly extending finger hold carried by the free end of said strip, a latch carried by said cover in position to interlock with said strip when the cover is closed, and means for removably supporting a breakable seal between said strip and opening.

2. The combination with a box and a hinged cover therefor, the front wall of the box being formed with an opening near the cover, of a spring strip supported within said box adjacent to said opening, a latch carried by said cover in position to interlock with said strip when the cover is closed, and inwardly-extending supports for said seal arranged between said strip and the box, said supports being interspaced to allow the seal when broken to drop between the same.

3. The combination with a box and a hinged cover therefor, the front wall of the box being formed with an opening near the cover, of an open bottom keeper supported within said box, a spring strip carried by said keeper adjacent to said opening, a latch carried by said cover in position to interlock with said strip when the cover is closed, and inwardly-extending interspaced flanges carried by said keeper at the bottom of said opening for supporting said seal in the manner set forth.

4. The combination with a box and a hinged cover therefor, the front wall of the box being formed with an opening near the cover, of a spring strip supported within said box adjacent to said opening, a latch carried by said cover in position to interlock with said strip when the cover is closed, means for removably supporting a breakable seal between said strip and opening, and a flange extending downwardly from the free edge of said cover to occupy a position between said seal and the front wall of said cover when the box is closed.

900,122. YIELDING BIT AND TAP CHUCK. WILLIAM L. PROCUNIER, Chicago, Ill. Filed June 10, 1907. Serial No. 378,067.



1. A tool-holding chuck comprising, in combination with a driven holder, a pair of jaw pieces lodged in the holder and engaged therewith for rotation, having V-shaped recesses for engaging a tool-head to rotate it positively, and having projections extending into the recesses transversely thereof for engagement with a tool head to prevent its longitudinal withdrawal.

2. A tool-holding chuck comprising a holder for the tool provided with a longitudinally tapering cavity; tool-gripping jaws lodged in said cavity, said jaws having coöperating features for engaging a tool against relative longitudinal movement when the jaws are closed upon the tool head, and a spring for pressing the jaws into the tapering cavity to close them together onto the tool.

3. A tool-holding chuck comprising a tool holder and a coöperating element for rotating the same by frictional engagement therewith, said holder and coöperating element being correspondingly tapered for seating one upon the other for said frictional engagement; a spring for yieldingly pressing them into engagement, the holder having a longitudinally tapering cavity; a pair of tool-gripping jaws lodged in said cavity and adapted to be closed together for gripping the jaws by movement in the cavity toward the smaller end; a stop which resists the movement of the jaws in the opposite direction, the reaction of said spring being opposed to the resistance of such stop.

4. A tool-holding chuck comprising a holder having a longitudinally tapering cavity; a pair of tool-gripping jaws

lodged in the cavity and adapted to be closed together by movement therein toward the smaller end thereof, said jaws having features for engaging a tool to resist longitudinal withdrawing movement of the tool from the jaws; a spring reacting between the jaws to spread them for releasing the tool; a stop which opposes the movement of the jaws withdrawing from the holder, and means for yieldingly pressing the holder toward such stop.

5. A tool-holding chuck comprising an outer shell; a holder for the tool within the shell, and a driving element for the holder having positive engagement with the shell and frictional engagement with the holder; a spring for pressing the two parts into engagement, and means for adjusting the tension of the spring; jaws for gripping the tool lodged in the holder, said jaws and holder being relatively shaped to cause the jaws to be closed together by a longitudinal movement relative to the holder in one direction; means carried by the shell for stopping the jaws against movement for withdrawing from the holder, the reaction of said spring being in the direction opposed to said stop.

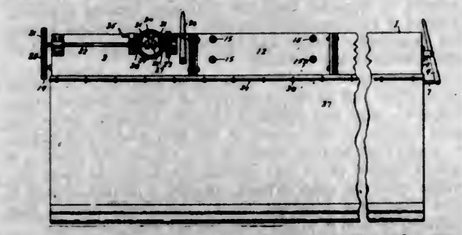
[Claims 6 to 17 not printed in the Gazette.]

900,123. BOX. GEORGE B. REED, Buffalo, N. Y., assignor of one-half to Alfred T. Kirkland, Buffalo, N. Y. Filed Oct. 23, 1907. Serial No. 398,704.



A box having a bottom, two side walls, two end walls, a lid, said bottom consisting of a single ply, each of said side walls consisting of an outer ply connected with its lower end to the adjacent side of the bottom and an inner ply connected at its upper end with the upper end of the companion outer ply and each of said end walls consisting of an outer ply connected at its lower end with the adjacent end of the bottom, an intermediate ply composed of two sections which meet at their opposing inner ends while their outer ends are connected respectively with the adjacent ends of the outer plies of both side walls, and an inner ply also composed of two sections which meet at their inner ends while their outer ends are connected with the adjacent ends of both inner plies of the side wall, the outer plies of the end walls extending above the upper ends of the inner and intermediate plies thereof but not overlapping the same, thereby forming rabbets which receive the end edges of the lid, substantially as set forth.

900,124. FERTILIZER-DISTRIBUTER. LUTHER E. ROBY and CLARENCE A. PATTISON, Peoria, Ill. Filed Mar. 5, 1907. Serial No. 360,691.

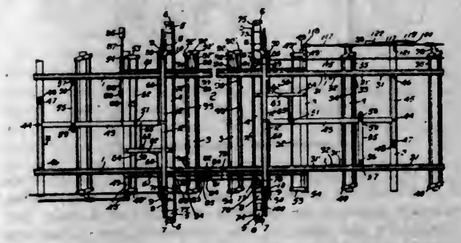


1. In a fertilizer distributer, the combination of a containing receptacle provided with discharge openings, means for mounting the said receptacle on the rear end of a wagon, a flexible inclosed apron or shield with which the discharge openings communicate, a weight member carried by said apron at the bottom thereof, and a brace connecting said weight member to a part on the wagon.

2. In a fertilizer distributer, in combination, a containing receptacle having discharge openings, means for mounting the receptacle on the rear end of a wagon, a flexible inclosed apron or shield with which the discharge openings communicate, a weight member carried by said apron at the bottom thereof, a bolt passing through the apron and the weight member, a brace pivoted to the projecting end of the bolt and a frangible connection between the brace and a part of the wagon.

3. In a fertilizer distributer, the combination of a containing receptacle having discharge openings, means for mounting the receptacle on the rear end of a wagon, a flexible inclosed apron or shield with which the discharge openings communicate a weight member carried by said apron at the bottom thereof, a brace connected to said weight member and a frangible connection between said brace and a part of the wagon.

900,125. RAILWAY-GATE. ELMER E. SAMPSON, London Mills, Ill. Filed Apr. 24, 1907. Serial No. 369,953.



1. In an apparatus of the type set forth, the combination with train operated gate actuating means of a vertical rock shaft, operatively connected with said means, a gate having portions of its frame loosely surrounding said rock shaft, and projecting on each side thereof, and resilient connections between said shaft, and the projecting portions of said gate on each side thereof.

2. In an apparatus of the type set forth, the combination with train operated gate actuating means of a vertical rock shaft, operatively connected with said means, a gate having portions of its frame loosely surrounding said rock shaft, and projecting on each side thereof, and retractile coil springs secured in oppositely disposed pairs to said shaft and to said projecting portions of said frame on each side thereof.

3. In an apparatus of the type set forth, the combination with a vertical gate shaft and its operating means, of a frame carried upon said shaft, and including a horizontally projecting pintle, and a gate including a frame having portions thereof loosely surrounding said pintle as a pivot.

4. In an apparatus of the type set forth, the combination with a vertical gate shaft and its operating means, of a frame carried upon said shaft, and including a horizontally projecting pintle, a gate including a frame having portions thereof surrounding said pintle as a pivot and resilient connections between said first and second named frames.

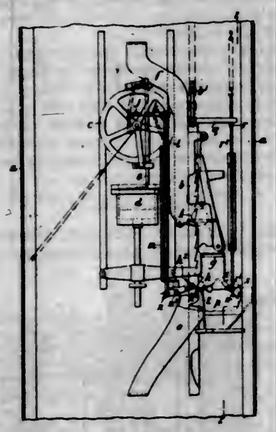
5. In an apparatus of the type set forth, the combination with a vertical gate shaft and its operating means, of a frame carried upon said shaft and including a horizontally projecting pintle, a gate including a frame having portions thereof surrounding said pintle as a pivot, and a retractile coil spring having its ends engaged with said respective frames.

[Claims 6 to 10 not printed in the Gazette.]

900,126. COIN-FREED PUNCH-BALL MACHINE. ALICK C. SAVAGE, Finsbury, London, England, assignor to Sweetmeat Automatic Delivery Company, Limited, London, England. Filed June 1, 1908. Serial No. 435,980.

1. In a coin actuated machine, the combination with a coin receiving chute, of a coin receptacle, and a coin de-

livery chute, a pair of pivoted cams interposed between the coin receiving chute and the said receptacle and delivery chute located in the path of and adapted to support the coins, and independent mechanism for rocking said cams, to deliver the coin into said receptacle or said delivery chute, substantially as described.



2. In a coin actuated mechanism, the combination with a coin receiving chute, of a pair of pivoted cams, having opposite portions for engaging the edges of a coin, and supporting the same, a coin receptacle, and a delivery chute located below said cams, and independent mechanisms for rocking said cams to deliver the coin into said receptacle or said delivery chute, substantially as described.

3. In a coin actuated mechanism, the combination with a coin receiving chute, of a pair of oppositely disposed, movable devices adapted to receive and support a coin, the distance between said devices being less than the diameter of the coin, independent mechanisms connected to said movable devices, and a coin receptacle and a delivery chute located below said movable devices, substantially as described.

4. In a coin actuated machine, the combination with a coin receptacle, and a delivery chute having portions adjacent to said receptacle, a pair of pivoted segmental cams arranged above said delivery chute and receptacle, and adapted to engage the edges of coins and support the same, when in normal position, the distance between the opposed surfaces of said cams being less than the diameter of the coins, and independent mechanisms for rocking said cams, and a coin chute for conducting coins to said cams, substantially as described.

5. In a coin actuated machine, the combination with a coin receiving chute, a pair of pivoted cams having opposed surfaces, arranged below said chute in relation thereto to engage the edges of coins and support the same, a coin receptacle and a delivery chute below said cams, independent actuating mechanisms for said cams, a rotary part having a projection thereon for operating one of said actuating mechanisms, and a longitudinally movable bar, having a part for operating the other of said actuating mechanisms, substantially as described.

[Claim 6 not printed in the Gazette.]

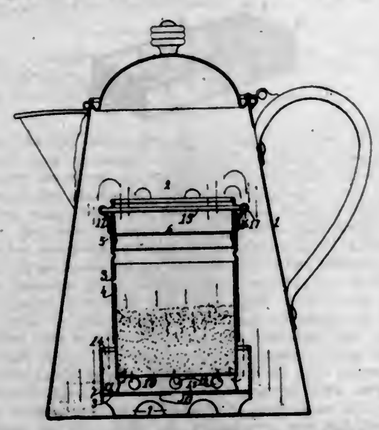
900,127. LAMP ATTACHMENT. HENRY J. SCHANICK, Kenney, Tex. Filed Apr. 28, 1908. Serial No. 429,676.

1. A device of the class described comprising lower and upper members adapted for engagement respectively with a lamp-body and a wick holder, said members being pivoted together for movement of the upper member laterally, the lower of said members having a lateral channel formed therein for sliding engagement therein of a wick when the device is operated, means for closing said channel, and means for yieldably locking said members in closed position.



2. A device of the class described comprising upper and lower members pivoted together for movement of the upper member laterally into and out of engagement with the lower member, said upper and lower members being arranged for engagement with a wick holder and with a lamp body respectively, said lower member having a lateral channel formed therein and arranged to receive a wick engaged in the upper member, when the upper member is moved laterally, means carried by the upper member for closing the channel, said members having milled outer edges, and a resilient locking device carried by the upper member and including portions arranged for engagement with the milled edges to hold the upper member against movement.

900,128. COFFEE-STEEPER. JACOB STEINBERG, Pittsburg, Pa. Filed Dec. 23, 1907. Serial No. 407,810.

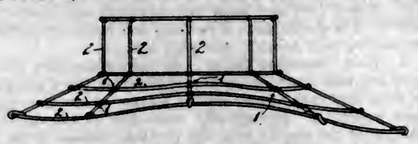


1. In coffee steepers, a coffeepot or boiler and a coffee holder to be placed within it; the said holder comprising two portions fitted to telescope together; a cup fitting into the upper portion and having a perforated bottom; a perforated bottom in the lower portion located above the lower edge thereof; openings through the sides of the lower portion below the said bottom thereof; a shield greater in diameter than the body and forming a gallery around it and removably secured to it; this shield having an imperforate bottom and provided with legs to stand on the bottom of the coffeepot.

2. In coffee steepers, a coffee holder adapted to be placed in a boiler and having a perforated bottom located above its lower edge and openings through the sides below the said bottom; a cup located in the said holder and having a perforated bottom which is the top of the holder; a shield located below and around the holder at some distance from the sides thereof, forming a gallery around it and removably attached to it; the shield having legs adapted to hold it raised from contact with the boiler.

3. In coffee steepers, a coffee holder having a perforated bottom located above its lower edge and openings through the sides below the bottom, and a removable perforated top; and a shield having legs and an imperforate bottom attached to the lower end of the coffee holder and forming an open gallery around it, substantially as shown and described.

900,129. WIRE HAT-FRAME. CHARLES W. STEVENS, New York, N. Y. Filed Oct. 16, 1907. Serial No. 397,600.



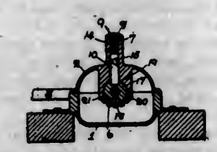
1. In a wire hat frame, wires crossing one another, a fastening device for said wires, said fastening device being U-shaped and overstanding two crossed wires diagonally, the free ends of said fastening device being curled in opposite directions under the lower wire and forming a clamp over the upper wire.

2. In a wire hat frame, a skeleton body formed of wires crossing one another, a fastening device for the junction of two wires, said fastening device overstanding the two crossed wires diagonally and extending down on opposite sides thereof, the free ends of said fastening device being curled in opposite directions to form a clamp around the two crossed wires from the opposite sides of the lower wire.

900,130. PROCESS OF FIXING COLORS. HANS TOEPFER, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Feb. 8, 1908. Serial No. 414,997.

The herein-described process for improving the fastness against water and washing of dyeings obtained on vegetable fiber with substantive colors, which process consists in treating the dyed material with magnesium salts, stannates and alkaline agents, substantially as described.

900,131. SWITCH STAND AND LOCK. JOSEPH W. TORPEY, Louisville, Ky. Filed Oct. 26, 1907. Serial No. 399,331.



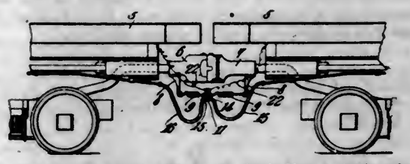
1. A combined switch-stand and lock, comprising a casing, a lever for throwing the switch, a shaft, a hub provided with peripheral keeper notches on said shaft, a vertically arranged socket for a lock-bolt in said casing, and a slidably mounted lock-bolt mounted in said socket and adapted to be shot into the keepers in said hub.

2. A lock for railroad switches, comprising in combination with a switch-stand having a shaft for throwing the switch, a hub provided with suitably located keepers in its periphery, a vertical socket for the lock-bolt provided in the casing of the switch-stand adjacent said hub, a bolt mounted loosely in said socket and adapted to be shot into one of said keepers in said hub, and a bearing for said hub in said casing.

3. A lock for railroad switches, comprising a socket for a bolt in the casing of the switch-stand, a bolt mounted in said socket, said bolt consisting of a plurality of bars with a plate between, said bars being adapted to receive the bit of a key, a key having a ward to straddle said plate, a key-hole in the switch-stand, the parts of the lock being so arranged that when the bolt is released from a keeper the bit of the key impinges on the wall of the socket, so that it cannot be turned in either direction and cannot be removed till said bolt again fully engages a keeper in said hub.

4. In a lock for railroad switches, a stationary pillar 7 forming the casing for a bolt, a composite bolt 10—11—12 loosely mounted in said pillar 7, said pillar 7 provided with a key-hole 16, a keeper-member 17 provided with keepers 18 and 19, a key 15, said bolts being notched to receive the bit of said key, all so arranged and coöperating that when said bolt is released from its keepers by means of the key, the bit of the key impinges against the inner wall of said pillar 7 when turned forward and stops and when turned backward impinges against the wall of the notch in said bolt, so that it cannot be brought into register with said key-hole and therefore cannot be removed from the lock till said bolt is brought into full engagement with said keepers.

900,132. AUTOMATIC AIR-HOSE COUPLING. NELSON TOY, Weir, Kans. Filed Apr. 7, 1908. Serial No. 425,722.

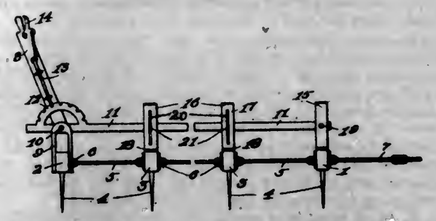


1. The combination with a car including a train pipe, a bracket depending from the car, a spring having one end thereof secured to the bracket, a main coupling head secured to the opposite end of the spring and provided with an auxiliary coupling head for connection with the train pipe, and a pyramidal shaped projection carried by the main coupling head and adapted to enter a correspondingly shaped recess formed in an adjacent main coupling head when said heads are united.

2. The combination with a car including a train pipe, a bracket depending from the car, a coupling head provided with a fluid passage for connection with the train pipe, there being a socket formed in the rear face of the coupling head, a coiled spring secured to the bracket and seated in said socket, and a projection extending laterally from the face of the coupling head and adapted to enter a correspondingly shaped recess formed in a mating coupling head when said heads are coupled.

3. The combination with a car including a train pipe, a bracket depending from the car, a coiled spring carried by the bracket, a main coupling head secured to the coiled spring and provided with a fluid passage opening through the rear of the coupling head, an auxiliary coupling head secured to the rear face of the main coupling head at the mouth of said passage for engagement with the train pipe, a gasket countersunk in the front face of the main coupling head and surrounding the walls of said passage, there being a recess piercing the main coupling head on one side of the gasket and having its walls converging towards the rear face of said head, and a pyramidal shaped projection disposed in spaced relation to the recess in said head and adapted to enter the recess in a mating main coupling head when said coupling heads are brought together.

900,133. HARROW. CHARLES E. TREASE, Valley Springs, Ark. Filed June 5, 1908. Serial No. 436,915.



1. A harrow comprising tooth bars, links flexibly connecting the same, a lever carried by one of the end bars, a standard upon the other end bar, a longitudinal adjusting bar pivoted to the lever and to said standard, slotted standards carried by the intermediate bars, pins projecting

from the adjusting bar and adapted to move in the slots in the last mentioned standards, and means for locking the adjusting bar and lever.

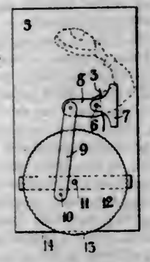
2. A harrow comprising tooth bars, links flexibly connecting the same, a lever carried by one of the end bars, a standard upon the other end bar, a longitudinal adjusting bar pivoted to the lever and to said standard, standards upon the intermediate bars, each of the last mentioned standards being formed by a strip of metal bent upon itself to provide parallel arms to receive the adjusting bar between them and formed with longitudinal slots, the ends of said parallel arms being bent outwardly to provide attaching feet to engage the top of the intermediate bars, transverse pins in the adjusting bar and having projecting ends arranged in the slots in the standards on the intermediate bars, a segmental rack upon the adjusting bar, and a pawl upon the lever to engage said rack.

900,134. GARMENT-BUTTON. LEVI D. VAN VALKENBURG, Holyoke, Mass. Filed Sept. 3, 1907. Serial No. 391,090.



A garment button comprising a sheet metal body portion having a central perforated teat stamped thereinto and formed with an integral radial tongue bent upon said body portion from the edge thereof and extending transversely thereacross, said tongue being disposed adjacent the concave face of the teat and serving as a garment supporting hook.

900,135. ILLUSTRATED POST-CARD. MAX VOLLMER, Berlin, Germany, assignor to The Firm of H. A. Schwerdtfeger & Co., Berlin, Germany. Filed Mar. 26, 1908. Serial No. 423,455.



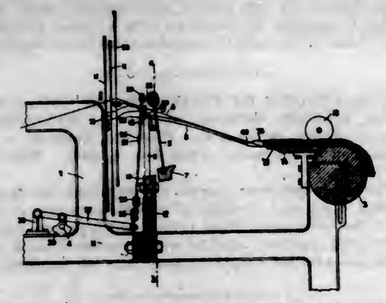
1. In an illustrated postal card, the combination of a card provided with an opening or slit and display matter on one side, the member projecting through said slit with one portion abreast of the display side and another portion abreast of the reverse side of said card, and means located on the reverse side of said card and operatively connected with said member and serving to automatically operate the same when the card is advanced upon a surface.

2. In an illustrated postal card, the combination of a card provided on one side with display matter and having a slit or opening, a member projecting through said slit with one portion abreast of the display side and the other portion abreast of the reverse side of said card, a bearing movably mounting said member on said card, a rod connected to said member at the rear of the card, and a toothed disk rotatably mounted on said card at the rear thereof and projecting beyond the lower end thereof, said rod being eccentrically connected with said disk.

3. In an illustrated postal card, the combination with a card provided with a plurality of display openings and a plurality of slits and display matter on one side, movable members extending through said slits and having portions abreast of the display side of said card and portions abreast of the reverse side thereof, a disk rotatably mounted on said card and provided with display matter movable abreast of said opening, said disk projecting below one part of said card and being automatically advanced when said card is moved upon a surface, and means operatively connecting said member with said disk.

4. In an illustrated postal card, the combination with a card provided with a plurality of openings and a plurality of slits, said card having display matter on one side, members projecting through said slits and having portions abreast of the display side and portions abreast of the reverse side of said card, a disk rotatably mounted on the rear of said card and provided with matter movable abreast of and observable through said opening, and means connecting said member with said disk.

900,136. LOOM FOR WEAVING PILE FABRICS. BENJAMIN WALKER, Shelley, near Huddersfield, and ALFRED SPINK, Leeds, England. Filed Oct. 3, 1905. Serial No. 281,154.



1. In a pile fabric loom the combination with a reed 5, of rigid uprights located immediately in rear thereof, pile forming wires secured to the tops of the uprights and extending through the reed to a point beyond where the weft is beaten up, and an approximately vertical reed mounted closely in rear of the uprights to have vertical reciprocating movement only, each of the dents of said reed having an upper and lower straight portion and an inclined portion connecting said straight portions together, substantially as described.

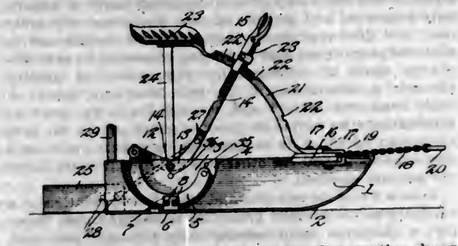
2. In a pile fabric loom the combination with a reed 5, of rigid uprights located immediately in rear thereof, pile forming wires secured to the tops of the uprights and extending through the reed to a point beyond where the weft is beaten up, and an approximately vertical reed mounted closely in rear of the uprights to have vertical reciprocating movement only, each of the dents of said reed having a single inclined portion and having also thickened portions above and below said inclined portions, substantially as described.

3. In a pile fabric loom the combination with a reed 5, of rigid uprights located in rear of said reed and having reduced ends with hooks thereon, and pile forming wires having eyes engaging the reduced ends and retained by the hooks, said wires extending through the reed to a point beyond the beat up of the lay, substantially as described.

4. In a pile fabric loom the combination with a reed of rigid uprights in rear thereof, pile forming wires having their rear ends supported at the upper ends of said uprights and inclining downwardly and forwardly and having horizontally extending forward portions, a support for the forward ends thereof, said horizontal portions having recesses in their under sides which recesses extend above the level of the upper surface of the support, substantially as described.

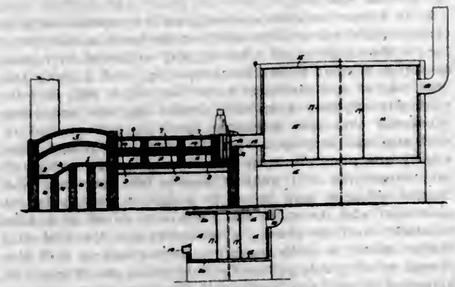
900,137. WEEDER AND CULTIVATOR. WILLIAM C. WARFIELD, Eminence, Kans. Filed Sept. 19, 1907. Serial No. 393,638.

In a weeder and cultivator of the character described, runners, means for adjusting said runners toward and from each other, curved levers pivoted in recesses in the sides of the runners, cutters carried by said curved levers, an operating lever for raising and lowering said curved levers and cutters, shields, and connecting rods attached



to said shields and connected to said operating lever, whereby said shields are simultaneously raised with the cutters, substantially as described.

900,138. MANUFACTURE OF ARSENIOUS OXID. UTLEY WEDGE, Ardmore, Pa. Filed Nov. 13, 1907. Serial No. 402,015.



1. The process herein described of recovering arsenious oxid from the sulfid of arsenic sludge produced in sulfuric acid manufacture, said process consisting in neutralizing the sludge, then drying and burning the same, then condensing the resulting vapors to deposit the oxid, and then collecting the latter.

2. In the process of recovering arsenious oxid from the sulfid of arsenic sludge produced in sulfuric acid manufacture, the improvement which consist in drying the sludge, then burning the same, then condensing the resulting vapors to deposit the oxid, and then collecting the latter.

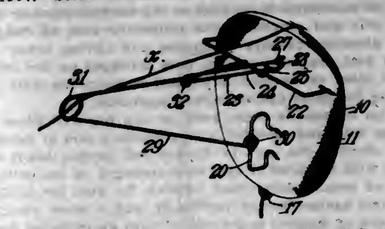
3. In the process of recovering arsenious oxid from the sulfid of arsenic sludge produced in sulfuric acid manufacture, the improvement which consists in burning the sludge, then condensing the resulting vapors to cause deposit of the oxid, and as a feature of such condensing operation so cooling the primary surfaces with which the vapors are brought into contact as to prevent the oxid from adhering thereto, and then collecting the oxid.

4. In the process of recovering arsenious oxid from the sulfid of arsenic sludge produced in sulfuric acid manufacture, the improvement which consists in burning the sludge, condensing the resulting vapors to deposit the oxid, and as a preliminary step in such condensing operation effecting a partial cooling of said vapors, and finally collecting the oxid.

5. In the process of recovering arsenious oxid from the sulfid of arsenic sludge produced in sulfuric acid manufacture, the improvement which consists in calcining the sludge, further heating the resulting vapors, and then condensing said vapors to cause deposit of the oxid, and, as a feature of such condensing operation, so cooling the primary surfaces with which the vapors are brought into contact as to prevent the oxid from adhering thereto, and finally collecting the oxid.

[Claims 6 to 10 not printed in the Gazette.]

900,139. FISHING DEVICE. JOHNSON B. WELCH and CALEB W. WHEATLEY, Stockport, Iowa. Filed Dec. 30, 1907. Serial No. 408,692.



1. In fishing apparatus, a substantially disk shaped float, a line connecting arm, a means for holding the said arm in adjusted position in a horizontal plane, and a catch for detachably holding the arm in a vertical plane.

2. In fishing apparatus, a substantially disk shaped float, a line connecting arm mounted for varying angular relations to said float in intersecting planes, means for holding said arm in fixed angular relation to the float in one plane and releasable means for holding said arm in fixed angular relation to said float in a second plane.

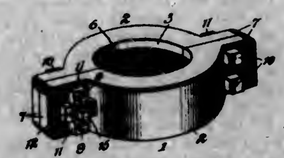
3. In fishing apparatus, a substantially disk shaped float, a fishing line, and means for connecting the fishing line to the float to permit the use of the line for towing purposes comprising an arm having pivotal connection with said float for the movement of the latter from normal position at approximately right angles to said arm to ineffective position substantially in line with said arm.

4. In fishing apparatus, a substantially disk shaped float, an arm pivotally connected to the float and provided with a guiding eye, a fishing line passing through said guiding eye and over the float, and a weight carried by the line and attached adjacent one edge of the float to maintain the float in effective position upright in the water.

5. In fishing apparatus, a substantially disk shaped float, a line guiding arm, a fishing line guided by the arm and extending over the float, a weight carried by the line and serving to maintain the float in upright position, said arm having a bracing member detachably connected with the float, the connection being separable under strain exerted from the weighted end of the line to thereby permit the float to assume an edgewise position to the direction of the strain.

[Claims 6 to 8 not printed in the Gazette.]

900,140. DRIVE HEAD OR CAP FOR WELL PIPES OR CASINGS. DAVID B. WHITEHILL, North Clarendon, Pa. Filed Mar. 5, 1908. Serial No. 419,309.



1. An expansible drive head or cap for well pipes or casings interiorly threaded to engage the threads of a well pipe or casing and provided with an interior shoulder to abut against the said pipe or casing, and means for clamping the head or cap in engagement with the well pipe or casing.

2. An expansible drive head or cap for well pipes or casings provided with an interior shoulder to fit against the upper end of a well pipe or casing, said head or cap being provided with projecting ears or flanges, and adjustable means for connecting the ears or flanges to clamp the head or cap on the well pipe or casing.

3. An expansible drive head or cap for well pipes or casings provided with interior threads and having an interior shoulder, said head or cap being split and provided at the

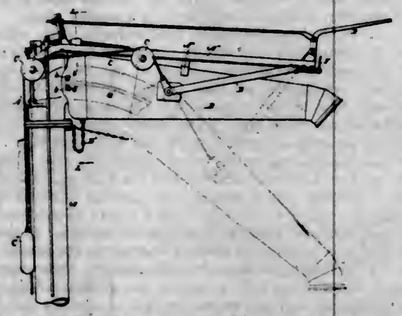
split portion with projecting ears or flanges, and bolts connecting the ears or flanges for clamping the head or cap on a well pipe or casing.

4. An expansible drive head or cap for well pipes or casings split and provided with projecting ears or flanges, bolts piercing the ears or flanges and having heads engaged with the head or cap, nuts arranged on the bolts, and a block or member interposed between the nuts for holding the same against rotary movement.

5. An expansible drive head or cap for well pipes or casings split and provided with projecting ears or flanges, bolts piercing the ears or flanges and having heads engaged with the head or cap, nuts arranged on the bolts, a block or member interposed between the nuts for holding the same against rotary movement, and a screw piercing the block or member and provided with an extended gravity head to prevent it from rotating.

[Claim 6 not printed in the Gazette.]

900,141. STAND-PIPE. FREDERICK N. WHITESELL, Three Rivers, Mich., assignor to The Sheffield Car Company, Three Rivers, Mich. Filed June 11, 1906. Serial No. 321,177.



1. In a water column or stand pipe the combination of a vertical pipe; a laterally projecting discharge nozzle therefor; a discharge spout telescopically arranged over said discharge nozzle; downwardly curved tracks or ways on the sides of said discharge nozzle; rollers on said discharge spout arranged in pairs to engage the said tracks or ways whereby the inner end of said discharge spout is adjustably supported and guided; an arm projecting outwardly over said discharge spout; a link pivoted thereto and to said discharge spout said link being connected to said discharge spout at substantially the center of gravity thereof; a counterweight for said discharge spout; a cable connected thereto and to said discharge spout at substantially its center of gravity; guide pulleys for said cable, one of which is arranged on said arm above said discharge spout and the other to the rear thereof; a rest on said arm for said spout when in its normal or upper position; and a chain connected to the vertical pipe and the inner end of the discharge spout to limit its outward movement, for the purpose specified.

2. In a water column or stand pipe the combination of a vertical pipe; a laterally projecting discharge nozzle therefor; a discharge spout telescopically arranged over said discharge nozzle; downwardly curved tracks or ways on the sides of said discharge nozzle; rollers on said discharge spout arranged in pairs to engage the said tracks or ways whereby the inner end of said discharge spout is adjustably supported and guided; an arm projecting outwardly over said discharge spout; a link pivoted thereto and to said discharge spout; a counterweight for said discharge spout; a cable connected thereto and to said discharge spout; a rest on said arm for said spout when in its normal or upper position; and a chain connected to the vertical pipe and the inner end of the discharge spout to limit its outward movement, for the purpose specified.

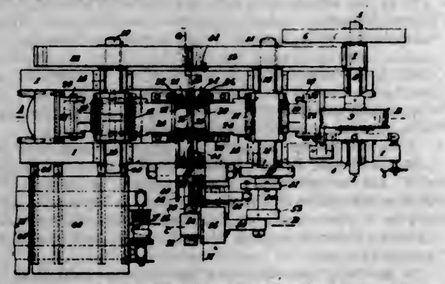
3. In a water column or stand pipe the combination of a vertical pipe; a laterally projecting discharge nozzle therefor; a discharge spout telescopically arranged over said discharge nozzle; downwardly curved tracks or ways on the sides of said discharge nozzle; rollers on said discharge spout arranged in pairs to engage the said tracks or ways whereby the inner end of said discharge spout is adjustably supported and guided; an arm projecting outwardly over said discharge spout; a link pivoted thereto and to said discharge spout said link being connected to said discharge spout at substantially the center of gravity thereof; a counterweight for said discharge spout; a cable connected thereto and to said discharge spout at substantially its center of gravity; guide pulleys for said cable, one of which is arranged on said arm above said discharge spout and the other end to the rear thereof, for the purpose specified.

4. In a water column or stand pipe the combination of a vertical pipe; a laterally projecting discharge nozzle therefor; a discharge spout telescopically arranged over said discharge nozzle; downwardly curved tracks or ways on the sides of said discharge nozzle; rollers on said discharge spout arranged in pairs to engage the said tracks or ways whereby the inner end of said discharge spout is adjustably supported and guided; an arm projecting outwardly over said discharge spout; a link connected to said discharge spout; a counterweight for said discharge spout; a cable connected thereto and to said discharge spout; for the purpose specified.

5. In a water column or stand pipe, the combination of a vertical pipe; a laterally projecting discharge nozzle therefor; a discharge spout telescopically arranged over said discharge nozzle; means for supporting and guiding the inner end of said discharge spout whereby it may be telescopically adjusted over said nozzle; an arm projecting outwardly over said discharge spout; a link pivoted to said arm and arranged with its lower end directed inwardly and pivotally connected to said spout in front of said supporting and guiding means for the inner end thereof whereby said spout is positively guided in its movement and its outer end caused to swing in a substantially vertical plane; a counterweight for said discharge spout; a cable connected thereto and to said discharge spout; guide pulleys for said cable, one of which is arranged on said arm above said discharge spout and the other to the rear thereof; a rest on said arm for said spout when in its normal or upper position; and a chain connected to the vertical pipe and the inner end of the discharge spout to limit its outward movement, for the purpose specified.

[Claims 6 to 11 not printed in the Gazette.]

900,142. PRESSING OR MOLDING MACHINE. WILHELM WYSSLING, Paris, France. Filed Sept. 16, 1904. Serial No. 224,670.



1. In a machine of the character described the combination with a vertically arranged rotatable mold wheel having a plurality of mold cavities therein extending transversely through the wheel between the opposite parallel sides of the same, of means for discharging material into the said cavities as they successively reach a predetermined position comprising a hopper for the plastic material, having two of its sides constructed to conduct said material into the mold cavities successively, a rotatably mounted cup arranged within said hopper and adapted to be periodically turned to discharge its contents, and two oppositely arranged reciprocable members mounted independently of the mold wheel and adapted to enter each cavity from opposite sides and compress the material between them, and means for reciprocating said members.

2. In a machine of the character described the combination with a vertically arranged rotatable mold wheel having a plurality of mold cavities therein extending transversely through the wheel between the opposite parallel sides of the same, of means for discharging material into said cavities as they successively reach a predetermined position, comprising a hopper for the plastic material, having two of its sides constructed to conduct said material into the mold cavities successively, a rotatably mounted cup arranged within said hopper and adapted to be periodically turned to discharge its contents, two oppositely arranged reciprocable pistons mounted independently of the mold wheel and blocks carried by said pistons adapted to enter each cavity from opposite sides and compress the material between them, and means for simultaneously reciprocating said pistons.

3. In a machine of the character described the combination with a vertically arranged rotatable mold wheel having a plurality of mold cavities therein extending transversely through the wheel between the opposite parallel sides of the same, of means for discharging material into said cavities as they successively reach a predetermined position, comprising a hopper for the plastic material, having two of its sides constructed to conduct said material into the mold cavities successively, a rotatably mounted cup arranged within said hopper and adapted to be periodically turned to discharge its contents, two oppositely arranged reciprocable pistons mounted independently of the mold wheel and blocks yieldingly connected with said pistons and adapted to enter the said cavities from opposite sides and compress the material between them, and means for reciprocating said pistons.

4. In a machine of the character described the combination with a vertically arranged rotatable mold wheel having a plurality of mold cavities therein, of means for discharging material into the said cavities as they successively reach a predetermined position, two oppositely arranged reciprocable members adapted to enter said cavities from opposite sides and compress the material between them, and means for simultaneously reciprocating said members comprising two rotatable shafts, an eccentric on each shaft, arms operated by said eccentrics, a cranked lever pivotally connected with each of said arms, blocks to which the arms of said cranked levers are connected and links pivotally connected at one end to the cranked levers and at the opposite end to the said reciprocable members, and a supporting frame supporting the said blocks.

5. In a machine of the character described the combination with a supporting frame, of a vertically arranged rotatable mold wheel having mold cavities therein, means for discharging material into said cavities as they successively reach a predetermined position, two oppositely arranged reciprocable members adapted to enter said cavities from opposite sides and compress the material between them, means for simultaneously reciprocating said members comprising two rotatable shafts, an eccentric on each shaft, arms operated by said eccentrics, a cranked lever pivotally connected with each of said arms, blocks to which the arms of said cranked levers are connected, one of said blocks being fixedly supported by the frame and the other block having a yielding connection with said frame, and links pivotally connected at one end to the cranked levers and at the opposite end to the said reciprocable members.

[Claim 6 not printed in the Gazette.]

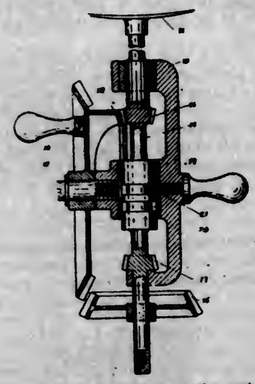
900,143. CRAYON-HOLDER. HENRY T. BAILEY, North Scituate, Mass. Filed Aug. 4, 1906. Serial No. 329,255.

1. A crayon holder comprising a main portion having longitudinal clamping members to engage a crayon; a projection from said portion longitudinally adjustable with relation thereto; and an inclosing member to inclose and coöperate with said clamping members, said inclosing member being provided with an inclined slot, substantially as and for the purpose described.



2. A crayon holder having longitudinal clamping members; an inclosing member coöperating therewith and provided with an inclined slot; a pin to coöperate with said slot; and a rotatable support for said pin to which said pin is eccentrically related.

900,144. COMBINATION-TOOL. DAVID BARNES and CLARENCE W. HUNT, Ossining, N. Y.; said Hunt assignor to said Barnes. Filed Apr. 26, 1907. Serial No. 370,436.

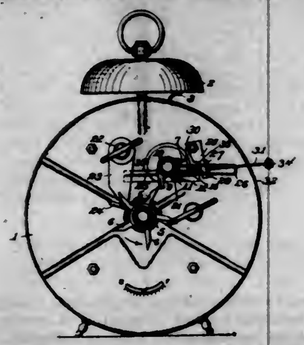


A combination breast drill and a valve grinder, comprising: a frame provided with an upper, lower and intermediate bearing; a vertically adjustable tool spindle mounted therein, and provided at its upper end with a brace; an upper and a lower gear wheel secured to said spindle; a third gear wheel secured to said spindle, said spindle having two peripheral grooves; a removable stop passing through the intermediate bearing of said frame and adapted to engage said peripheral grooves; an actuating gear wheel, and an actuating handle attached thereto, said gear wheel being adapted to engage said third gear wheel secured to the spindle when the said stop engages one of said peripheral grooves; and a segmental gear in connection with said actuating gear wheel adapted to alternately engage with said upper and lower gear wheels secured to said spindle when the said stop engages the other of said peripheral grooves.

900,145. ALARM. THOMAS E. H. BUCHANAN, Wheeling, W. Va. Filed Jan. 20, 1908. Serial No. 411,022.

1. In an intermittent alarm, a clock having an alarm-spring winding-shaft and an alarm shaft, a lever pivotally carried by the alarm-spring winding-shaft, a star-wheel carried by the arbor of the timekeeping train and adapted

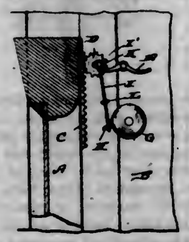
to move said lever forward, a guide-plate fixed upon the alarm shaft, a trigger pivotally mounted on said alarm shaft, and means for normally maintaining said trigger and plate in fixed relation, said means being controlled by said lever, and said trigger being adapted to be tripped with relation to said plate by said star-wheel.



2. In an alarm, a clock having an alarm-spring winding-shaft and an alarm shaft, a lever pivotally carried by the alarm-spring winding-shaft, a star-wheel carried by the arbor of the timekeeping train and adapted to move said lever forward, a guide-plate fixed upon the alarm shaft, a trigger pivotally mounted on said alarm shaft, and a dog having connection with said lever for normally maintaining said trigger and plate in fixed relation, said trigger being adapted to be tripped with relation to said plate by said star-wheel.

3. In an alarm, a clock having an alarm-spring winding-shaft and an alarm shaft, a lever pivotally carried by the alarm-spring winding-shaft, said lever having an outwardly and forwardly extending arm, a star-wheel carried by the arbor of the timekeeping train and adapted to contact with said arm for moving said lever forward, and mechanism intermediate said lever and said alarm shaft whereby the release of the latter is effected at predetermined intervals.

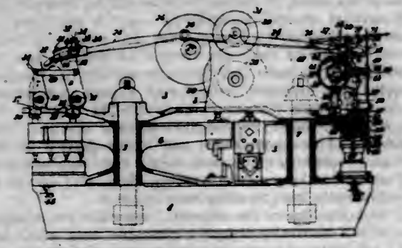
900,146. COMBINATION BURGLAR-ALARM AND WINDOW-SASH. THOMAS E. CAIN, Lombard, Md. Filed Apr. 24, 1906. Serial No. 313,457.



In a device of the kind described, the combination with the rack bar, pinion and pawl, of a bell provided with a lever or handle, a crank pin, carried by the pinion, an essentially rectangular shaped ball having an eye at its upper end adapted to fit upon the crank pin, the lower member of the ball fitting beneath the handle or lever and an eye through which the free end of the ball is adapted to move, all of said parts being arranged and adapted to operate substantially as shown and described.

900,147. MULTIPLEX PRESS. JULES CLIFFEL, Maubeuge, France. Filed Mar. 18, 1907. Serial No. 363,096.

1. In a multiplex press the combination with a stationary lower framework of an upper framework, two vertical connecting stay-bolts rigidly securing the upper framework with the lower one at spaced relation, two framings mounted on the said vertical stay-bolts so as to be adapted to be rotated round the said bolts, means for locking the said framing in their adjusted position, a plurality of sets of stationary lower and vertically movable upper tools mounted on the said revoluble framings, means mounted in the upper stationary framework and adapted to actuate the outer vertically movable tools of the said revoluble framings and means for coupling the said actuating means with the said vertically movable tools, substantially as and for the purpose set forth.



2. In a multiplex press the combination with a stationary lower framework of a stationary upper frame work, two vertical stay-bolts spaced apart and rigidly securing the said upper framework to the lower one in spaced relation, two framings mounted on the said stay-bolts and adapted to be rotated round the latter, means for locking the said framings in their adjusted position, two sets of vertically movable upper and stationary lower tools at one of the said rotatable framings and one set of similar tools at the other end of it and at both ends of the other framing, mechanical means mounted in the said upper framework for actuating the outer vertically movable tools of the said rotatable framings and means for coupling the said actuating means with the said vertically movable tools, substantially as and for the purpose set forth.

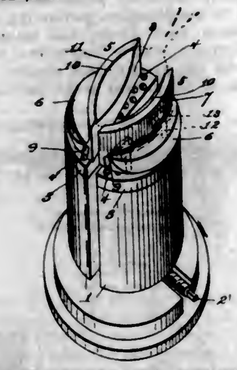
3. In a multiplex press the combination with a stationary lower framework, of a stationary upper frame work connected with and held in spaced relation to the lower framework by two spaced stay-bolts; two framings revolubly mounted on the said stay-bolts, means for locking the said revoluble framings in their adjusted position, a pair of vertically movable upper tools coöperating with a pair of stationary lower tools mounted at one end of one of the said revoluble framings, one upper vertically movable tool coöperating with a stationary lower tool arranged at the other end of the said framings, an upper extensible and vertically movable tool carrier mounted in one end of the other revoluble framing and coöperating with a lower stationary tool, an upper vertically movable tool coöperating with a lower stationary tool mounted in the other end of the last named revoluble framing, means arranged at one end of the said upper framework and adapted to actuate the said pair of vertically movable upper tools, means for coupling the said actuating means with the said pair of upper tools, actuating means mounted on the other end of the said upper framework and adapted to actuate the upper movable tools of the said other revoluble framing and means for coupling the last named actuating means with the corresponding upper tools, substantially as and for the purpose set forth.

4. In a press of the kind described the combination with a lower framework, an upper frame work and revoluble tool carrying frames, of a driving device comprising a crank, means for rotating the said crank by power, a press lever fulcrumed at each end of the said upper framework, two parallel curved slots at the upper end of the said lever, a cross bolt adapted to slide in the said curved slots, a connecting rod connecting the said cross bolt with the said crank, a pawl fulcrumed on the said cross bolt, an abutment on the said press lever and adapted to be engaged by the said pawl, means for automatically disengaging the said pawl from the said abutment, a vertically movable claw coupling box adapted to engage the upper

head of the corresponding tool carrier and a link pivotally connecting the said claw coupling box with the said press lever, substantially as and for the purpose set forth.

5. In a press of the kind described the combination with a lower framework, an upper framework and revoluble tool carrying framings of a driving device comprising a crank, means for rotating the said crank by power, a press lever fulcrumed at each end of the said upper framework, two parallel curved slots at the upper end of the said lever, a cross bolt adapted to slide in the said slots, a connecting rod connecting each of the cross bolts with the said crank, a pawl fulcrumed on the said connecting bolt, an abutment on the said press lever and adapted to be engaged by the said pawl, an extension on the said pawl, a handle on the said extension, a crank mounted on the said upper framework, an abutment secured to the said crank and adapted to be engaged by the extension of the said pawl so as to disengage the latter from the said abutment of the press lever when the crank occupies one position, and to be out of the way of said extension when its crank occupies its other position, means for holding the said pawl in its engaged and disengaged positions, a vertically movable claw coupling box adapted to engage the upper head of the corresponding tool carrier, a link connecting the said coupling box with the said press lever, a second press lever fulcrumed at one end of the upper framework, a link connecting the said second press lever to its neighboring one, a coupling box associated with the said second press lever, a link connecting the latter with the coupling box and a handle for moving the said press levers, substantially as and for the purpose set forth.

900,148. ENGRAVER'S SPOON-HOLDER. FRED W. CROCKER, North Baltimore, Ohio. Filed Jan. 25, 1908. Serial No. 412,608.

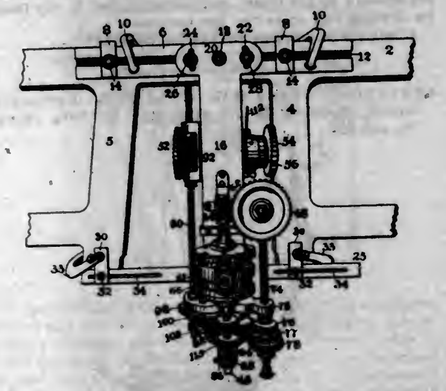


1. A work-holder attachment for engravers' blocks, comprising a pair of jaws each having a concavity lengthwise the top thereof, a slot extending throughout the length of the under side of the jaws, and a series of pins or pegs adjustable in said block and having heads fitting said slots to permit adjustment of the jaws at various angles to each other.

2. A work-holding attachment for engravers' blocks, comprising a pair of jaws each having a lune-shaped concavity lengthwise the top thereof and adapted to be operated jointly to form spoon seats of various size and shape, an inclined slot through the base length of each jaw, and a series of pins turnable in the block for swinging the jaws and having inclined heads upon which the jaws are slid.

900,149. PORTABLE MILLING-MACHINE. CHARLES W. DANGLEMEYER, Dubuque, Iowa. Filed Apr. 19, 1906. Serial No. 312,708.

1. In a device of the character described, a plate provided with a longitudinal T shaped groove therein, means for attaching said plate to the side of the frame of an engine by engagement with the groove, a frame carrying cutters and adapted to be adjustably attached to the plate in the groove, and means secured to the frame for driving the cutters.



2. In a device of the character described, a plate provided with a longitudinal groove and adapted to be adjustably and removably secured to the side of and parallel with the frame of an engine by hangers adjustably secured in the groove and loosely engaging the engine frame, clamps engaging one side of the engine frame and the opposite side of the plate, a frame carrying cutters with machinery rigidly fixed on the frame for operating the same and adjustably attached in the groove of the plate, a head carrying cutters one cutter upon each side of the frame adapted to attack and mill the face of the jaws of the frame, means attached to the frame for rotating the cutters, a screw engaging the head, and means attached to the frame for rotating the screw to raise and lower the head that carries the cutters.

3. In a device of the character described, a plate provided with a T shaped groove therein adapted to be secured to the frame of an engine, means for adjustably securing the plate on one side of the frame of an engine and parallel with the said engine frame, a frame carrying a head and provided with a dovetail along its longitudinal center, a head carrying cutters attached by a dovetail on the head engaging the dovetail on the frame that carries the head, means for adjusting the cutters on the head to attack the jaws of an engine frame in whatever angle the jaws are set to the said frame and means attached to the frame carrying the cutters for operating the cutters when attacking the jaws of an engine frame at an angle.

4. In a device of the character described, a plate provided with a longitudinal T shaped groove, means for adjustably and removably attaching the plate to the side of the engine frame and parallel therewith consisting of hangers secured in said groove and adapted to loosely engage the top of the frame of the engine, and clamps engaging the frame and the plate, in combination with a frame provided with slotted openings therein, bolts for removably and adjustably attaching the frame to the plate in the longitudinal groove through the slotted openings, cutters attached to the frame, and means carried by the frame for driving and operating the cutters.

5. In a device of the character described, a plate provided with a longitudinal T shaped groove, means for removably and adjustably attaching the plate to the frame of an engine consisting of hangers secured to the groove of the plate and engaging the top of the frame of the engine, and clamps adapted to engage the frame of the engine and the plate and securely clamp them together, in combination with a frame thickened in its longitudinal center and provided with a male dovetail and with slotted openings in its top, means for removably and adjustably attaching said frame to said plate by bolts through said slotted openings and engaging said longitudinal groove in

the plate, whereby the frame is adjustably held parallel with the engine frame and the cutters on the frame at right angles to the frame of the engine, a head carrying cutters adapted to slide on the frame in engagement with the dovetail on the frame, and means carried by the frame for driving and operating the cutters.

[Claims 6 to 9 not printed in the Gazette.]

900,150. CATAMENIAL APPLIANCE. DOUGLAS S. DAUDT, Plainfield, N. J. Filed May 14, 1908. Serial No. 432,924.



1. In an appliance of the class described, the combination of body attaching means, a rigid supporting member extending downwardly therefrom, means adjustably connecting said supporting member with the said attaching means, and a sack adjustably mounted upon the lower portion of the supporting member.

2. In an appliance of the class described, the combination of body attaching means, a rigid supporting member adjustably connected at its upper end with the body attaching means and extending downwardly and laterally from the front portion thereof, and a container adjustable longitudinally of the laterally extending portion of the said supporting member.

3. In an appliance of the class described, the combination of body attaching means, a rigid supporting member extending downwardly and laterally from the front portion of the said attaching means, and a resilient sack adjustably mounted on the laterally extending portion of said supporting member.

4. In an appliance of the class described, the combination of body attaching means, a rigid stem secured to and extending downwardly from the front portion of said attaching means, a sack of resilient material adjustably mounted on the lower end portion of said stem, and a spring frame applied to the bottom portion of said sack for the purpose of retaining the shape thereof.

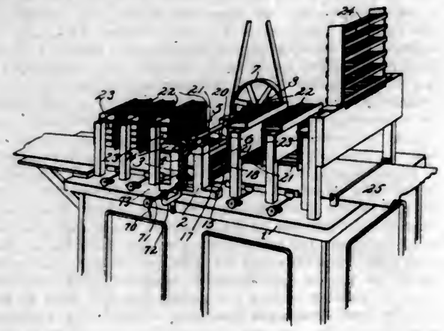
5. In an appliance of the class described, the combination of body attaching means, a resilient sack for receiving liquid discharges connected with said attaching means, and a spring frame applied to the bottom portion of said sack to hold the same in normal shape and prevented from contact with the body thereby.

[Claim 6 not printed in the Gazette.]

900,151. PATTERN-CONTROLLED PUNCH-SELECTING PERFORATING-MACHINE. GEORGE H. DAVIS, West Orange, N. J., and CHARLES T. BOWMAN, Schenectady, N. Y., assignors to Standard Music Roll Company, a Corporation of New Jersey. Filed Dec. 10, 1906. Serial No. 347,231.

1. In a pattern controlled punch selecting perforating machine, and in combination, perforating mechanism, a reader adapted to coöperate with a pattern to control the operation of the perforating mechanism, and means for effecting a relative longitudinal adjustment between the reader and pattern.

2. In a pattern controlled punch selecting perforating machine, and in combination, perforating mechanism, a reader, a pattern sheet support, and means for effecting a relative longitudinal adjustment between the reader and pattern sheet support.



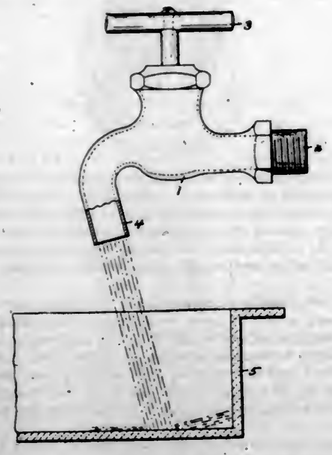
3. In a pattern controlled punch selecting perforating machine, and in combination, perforating mechanism, a reader, a pattern sheet, feeding means and means independent of the feeding means for effecting a relative longitudinal adjustment between the reader and pattern sheet feeding means.

4. In a pattern controlled punch selecting perforating machine, and in combination, perforating mechanism, a reader adapted to coöperate with a pattern sheet to control the operation of the perforating mechanism, and manually operable means for effecting a relative longitudinal adjustment between the reader and pattern sheet.

5. In a pattern controlled punch selecting perforating machine, and in combination, perforating mechanism, a reader, a pattern sheet holder, and manually operable means for effecting a relative longitudinal adjustment between the reader and pattern sheet support.

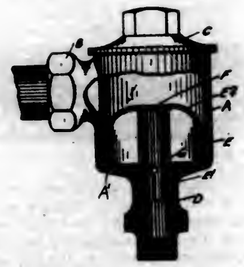
[Claims 6 to 40 not printed in the Gazette.]

900,152. FAUCET. LOUIS S. DE FOREST, New Haven, Conn. Filed Nov. 8, 1907. Serial No. 401,210.



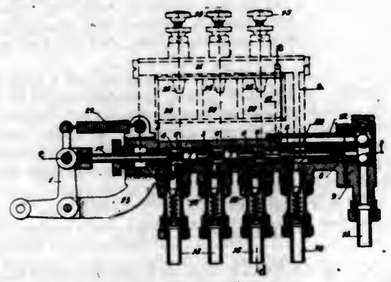
The combination with a sink; of a faucet having a port therethrough, the inlet end of said port being substantially parallel with the bottom of said sink, and the discharge end at an angle thereto other than a right angle, whereby the liquid from said faucet contacts with said sink so as to be deflected onto the back and bottom thereof.

900,153. VACUUM-VALVE FOR STEAM-HEATING. NICHOLAS DOLESE, Toronto, Ontario, Canada. Filed Jan. 27, 1908. Serial No. 412,881.



The combination with a casing having an inlet and a depending hollow stem, and a flat seat located at the bottom of the casing, of a valve comprising a central tube projecting down into the hollow stem and making a close fit therewith and having openings therein normally below the valve seat, and a dome shaped float connected to the top of the tube and having an opening therein putting the tube in communication with the casing, the lower edge of said float being flat and adapted to engage with the seat said depending tube and dome being so connected as to prevent the passage of air from the dome to the tube.

900,154. LUBRICATING-OIL DISTRIBUTER. LOUIS DUBRULLE, Paris, France. Filed Jan. 2, 1907. Serial No. 350,505.

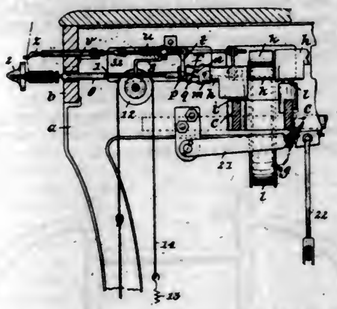


In a lubricator, a primary pump, a plurality of secondary pumps, and discharge pipes therefor, a rod on which all the pistons of the aforesaid pumps are mounted, a header provided with sight feeds for the secondary pumps, an inlet pipe and a discharge pipe leading, respectively, to and from the header, the primary pump being arranged to supply the header with lubricant and to remove the excess therefrom, the secondary pumps being arranged to take lubricant from the sight feeds and deliver it to the discharge pipes, and means for reciprocating the rods.

900,155. QUILLING-MACHINE. BENJAMIN EASTWOOD, Jr., and BERNARD SCHIBLER, Jr., Paterson, N. J., assignors to The Benjamin Eastwood Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 15, 1906. Serial No. 301,138.

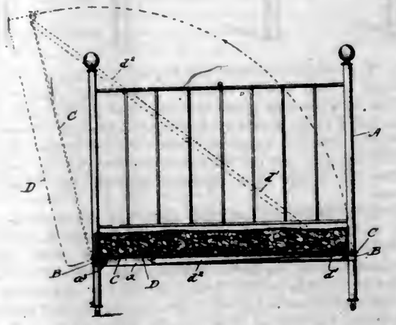
1. In a quilling machine, the combination, with the frame, of a rotary spindle, a longitudinally reciprocating thread-guide, a threaded rod connected with said thread-guide to move therewith longitudinally, and an oscillatory part having a peripherally serrated portion engaged peripherally by said threaded rod, substantially as described.

2. In a quilling machine, the combination, with the frame, of a rotary spindle, a longitudinally reciprocating thread-guide, a threaded rod connected with said thread-guide to move therewith longitudinally, a rock-shaft, and a worm wheel on said rock-shaft engaged peripherally by said threaded rod, substantially as described.



3. In a quilling machine, the combination, with the frame, of a rotary spindle, a longitudinally reciprocating thread-guide, a threaded rod connected with said thread-guide to move therewith longitudinally, a rock shaft, a worm wheel on said rock shaft engaged peripherally by said threaded rod, and a forked guide carried by the frame and straddling said threaded rod, substantially as described.

900,156. BED. OTTO E. ENELL, Chicago, Ill., assignor to Levi J. Lenox, Detroit, Mich. Filed Oct. 8, 1906. Serial No. 337,951.



1. In a device of the class described the combination with the head and foot boards each having upwardly and laterally opening sockets thereon, of side rails, each rotatively engaged in said sockets and means rigidly connecting said side rails together.

2. In a device of the class described the combination with the head and foot boards, each having a bearing seat adjacent each end thereof, and opening towards the corresponding seat on the other board, of side rails, each having a longitudinally directed bearing at each end adapted to be rotatively engaged in the seats at corresponding ends of said boards and means rigidly connecting said rails together.

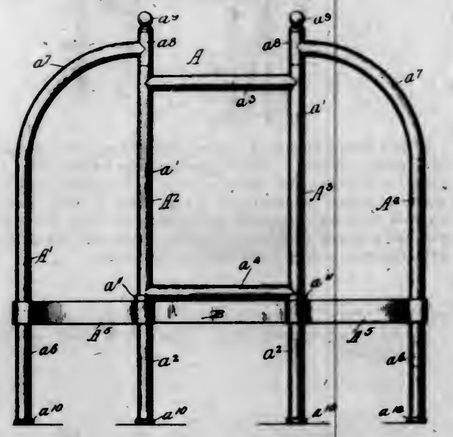
3. In a device of the class described the combination with head and foot boards, of inwardly projecting, slotted arms thereon, rotative side rails journaled in said slots and acting to hold the boards in parallel relation and a spring mattress frame rigidly engaged on said rails.

4. In a bed of the class described the combination with head and foot boards having bearing sockets at each end thereof opening through the side adjacent the opposite board, a side rail at each side of the bed, each rotatively engaged at its ends in the sockets at corresponding ends of the boards and a spring mattress frame rigidly engaged on said rails and adapted to be turned to a vertical position on either rail.

5. In a bed of the class described the combination with a head and a foot board, of a rotative side rail at each end of said boards, a longitudinally directed journal at each end of said rails, inwardly opening bearing seats on said boards in which said journals are rotatively engaged and means rigidly connecting said rails together.

[Claims 6 to 13 not printed in the Gazette.]

900,157. FOLDING BED. OTTO E. ENELL, Chicago, Ill., assignor to Levi J. Lenox, Detroit, Mich. Filed Nov. 15, 1906. Serial No. 343,510.



1. In a reversely folding bed the combination with a bed bottom, of end boards therefor, adapted to support the bottom in a vertical plane at either end thereof and each comprising three pivotally connected sections, either end section of which is immovable when the bed bottom is supported thereon, and the other end section and the central section of which turn inwardly against the upturned bottom.

2. In a device of the class described the combination with sectional head and foot boards, adapted to fold inwardly intermediate their centers and each lateral edge, of a bed bottom supported thereon and adapted to turn upwardly on edge on the lateral sections at either side of the bed and means adapted to prevent the lateral sections supporting the bottom from turning inwardly.

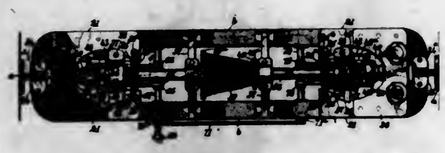
3. The combination with a reversely folding bed bottom of head and foot boards therefor, each having two hinged joints intermediate its lateral posts and adapting a portion only thereof to fold from either side of the bed against the upturned bottom and means preventing said swinging portions from turning outwardly beyond the plane of the boards while the bottom is in upturned position.

4. In a device of the class described the combination with a head and a foot board, each comprising a central and two lateral sections hinged together, of a bed bottom pivotally connected with each lateral section and adapted to be turned to a vertical plane at either side of the bed, said central section and either lateral section being adapted to fold inwardly against the upturned bottom, dependent upon which side of the bed the bottom rests while the other lateral section is held stationary.

5. In a device of the class described the combination with a bed bottom of head and foot boards therefor, each comprising a central section and two lateral sections and means affording a pivotal connection between each lateral section and the bed bottom and adapting the bed bottom to be turned upwardly at either side of the bed and either lateral section of said boards and the central section to be folded thereagainst while the other lateral section remains stationary.

[Claims 6 to 14 not printed in the Gazette.]

900,158. SAFETY MECHANISM FOR ELEVATORS. PATRICK F. FOLEY, New York, N. Y., assignor of one-half to Charles W. Hoffman, New York, N. Y. Filed Feb. 17, 1905. Serial No. 246,040.



1. The combination with an elevator-car and a fixed contact member, of a movable contact member carried by the car, an operating member for the car contact member, and means for moving the operating member quickly and then more slowly, to effect engagement of the car contact member and fixed contact member, comprising a normally engaged sleeve and releasing devices therefor, permitting the sleeve to rotate in and move longitudinally with the operating member.

2. The combination with an elevator-car and a fixed contact member, of a movable contact member carried by the car, an operating member for the car contact member, and a longitudinally movable and rotatable actuating member associated with the operating member.

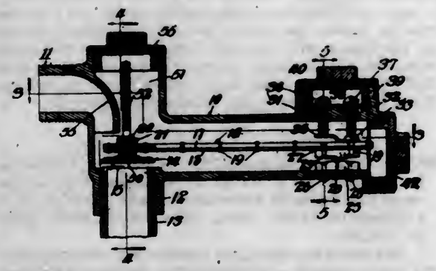
3. The combination with an elevator-car and a fixed contact member, of a movable contact member carried by the car, an operating member for the car contact member, and a longitudinally movable and rotatable actuating member having threaded engagement with the operating member.

4. The combination with an elevator-car and a fixed contact member, of a movable contact member carried by the car, an operating member for the car contact member, a longitudinally movable and rotatable actuating member associated with the operating member, and means for retaining the actuating member against rotation during its longitudinal movement.

5. The combination with an elevator-car and a fixed contact member, of a movable contact member carried by the car, an operating member for the car contact member, a longitudinally movable and rotatable actuating member associated with the operating member, and rotatable means for effecting both the longitudinal and rotatable movements of the actuating member.

[Claims 6 to 53 not printed in the Gazette.]

900,159. DRAIN-VALVE FOR STEAM-HEATING RADIATORS. LEWIS E. FULLER, Chicago, Ill., assignor of one-half to Arthur M. Heath, Chicago, Ill. Filed June 16, 1908. Serial No. 438,778.



1. A drain valve for removing water of condensation from steam heating systems comprising a horizontally elongated casing provided with a water inlet branch and at one end with a water discharge branch having a valve seat surrounding the same, a valve closure for controlling said discharge branch, a horizontally arranged thermostatic bar in said casing on one end of which said valve closure is mounted, means for pivoting the bar at its opposite end to the casing to swing towards and from said discharge branch, and means acting on the pivoted end of the bar for adjusting the valve towards and from said seat, said bar being composed of two strips of material having different coefficients of expansion.

2. A drain valve for removing water of condensation from steam heating systems comprising a casing provided with an inlet branch and with a discharge branch having a valve seat surrounding the same, a valve closure for controlling said discharge branch, a thermostatic bar in the casing on one end of which said valve closure is mounted, means for pivoting said bar at its opposite end to the casing, and means acting on said bar at its pivoted end for adjusting the valve towards and from its seat without imposing a bending stress on said bar.

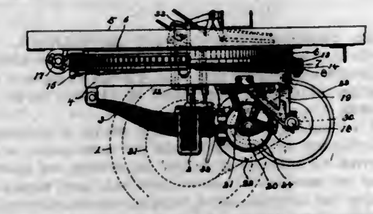
3. A drain valve for removing water of condensation from steam heating systems comprising a casing provided with an inlet branch and with an outlet branch having a valve seat, a valve closure for controlling said outlet branch, a thermostatic bar on one end of which said valve closure is mounted, means for pivotally connecting the other end of said bar with the casing, a presser device acting on said bar at one side of its fulcrum for holding the bar against its fulcrum, and an adjusting device acting on the bar on the other side of the fulcrum for adjusting the valve closure towards and away from its seat.

4. A drain valve for removing water of condensation from steam heating systems comprising a casing provided with an inlet branch and with an outlet branch having a valve seat, a valve closure for controlling said outlet branch, a thermostatic bar on one end of which said valve closure is mounted, means for pivotally connecting the other end of said bar with the casing, a presser device acting on said bar at one side of its fulcrum for holding the bar against its fulcrum, an adjusting device acting on the bar on the other side of the fulcrum for adjusting the valve closure towards and away from its seat, and a spring interposed between said presser device and said bar.

5. A drain valve for removing water of condensation from steam heating systems comprising a casing provided with an inlet branch and with a discharge branch, the latter having a valve seat, a valve closure for controlling said discharge branch, a thermostatic bar on one end of which said valve closure is mounted, pivotal connection between the other end of said bar and the casing comprising a fulcrum block fixed in the casing, a pivot piece fixed to the bar and having a knife-edge pivotal connection with said fulcrum block, and means acting on the bar to adjust the valve towards and from its seat.

[Claims 6 to 9 not printed in the Gazette.]

900,160. MOTOR-VEHICLE TRUCK. RODOLPHUS FULLER, Detroit, Mich. Filed Nov. 21, 1906. Serial No. 344,387.



1. In a truck for electric motor vehicle, the combination with a fixed axle and independent driving wheels thereon, of a drive shaft and a driven shaft substantially in the horizontal plane of the axle and in rear thereof, the driven shaft being in rear of the drive shaft and centrally provided with a differential gear, an electric motor upon one end of the drive shaft, a variable speed transmission gear upon the other end of said shaft and a drive pinion sleeved upon said shaft between the motor and said variable transmission gear and transmitting motion from the transmitting gear to the differential.

2. In a truck for electric motor vehicle, the combination with a fixed axle having independent wheels and a truck frame supported by springs upon the axle, of a drive mechanism comprising a drive shaft and a driven shaft supported in fixed connection with the truck frame in rear of the axle independently thereof, the driven shaft being in rear of the drive shaft and centrally provided with a differential gear, an electric motor upon one end of the drive shaft, a variable speed transmission gear upon the other end of said shaft, and a drive pinion upon said shaft between the motor and variable speed transmission gear, said pinion provided with a sleeve connecting the pinion with the transmission gear.

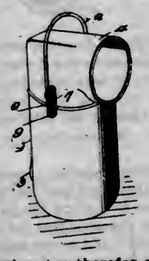
3. In a truck for motor vehicles, the combination with an axle and drive wheels on said axle, of springs secured to the axle, a truck frame attached to and supported by said springs and provided with a central hub portion, a bearing circle for the truck consisting of a lower circular member formed integral with the truck frame and an upper circular member formed with a ball bearing groove, and with a central hub portion corresponding to the hub portion of the truck frame, balls in said groove, an outwardly projecting flange on the upper member, clips on the lower member projecting upward and over said flange, a tubular king pin extending through both hub portions and pivotally connecting the hub portions together, and drive mechanism comprising an electric motor suspended from the said truck frame and having its electrical connections extending upward through the king pin and a variable speed gearing suspended from the truck frame, and provided with operating connections extending upward through the king pin.

4. In a truck for motor vehicles, the combination with a fixed axle and driving wheels mounted to turn freely thereon, of a divided shaft extending transversely of the truck, differential gearing connecting the divided ends of said shaft, sprockets on the outer ends of said shaft, sprockets on the hubs of the wheels, sprocket chains engaging said sprockets, a driving shaft extending parallel with the divided shaft between said shaft and the axle, a motor mounted on said driving shaft at one side of the differential, a sleeve on the other end of said driving shaft, a pinion on said sleeve to transmit motion to the differential, and a change speed gearing on the sleeve connecting the same with the driving shaft.

5. In a truck for motor vehicles, the combination with the axle and drive wheels, of a truck frame spring supported upon the axle, a circle on the truck frame consisting of two parts having hub portions, a tubular king pin extending through the hubs to connect the parts, an electric motor supported by the truck frame independently of the axle and having its electrical connections with its source of energy extending upward through said king pin, means for transmitting motion to turn the driving wheels, a variable speed gearing carried by the truck frame to transmit motion from the motor to said means, and means for operating said variable speed gearing extending upward through the tubular king pin.

[Claim 6 not printed in the Gazette.]

900,161. MILKING VESSEL. SAMUEL W. GERSTER, Gerster, Mo. Filed Feb. 18, 1908. Serial No. 416,507.

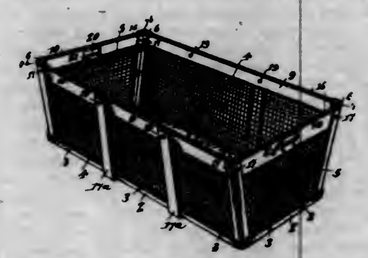


1. A milking vessel, a top therefor of approximately elbow form, an inclined bottom fitted within the vertical

member of said top and having an opening at its lowest point covered by wire gauze or like material forming a strainer.

2. In combination, a vessel, ears at opposite sides of the vessel near the upper end thereof, a top removably fitted to said vessel, ears at opposite sides of the top, a bail having connection with the ears of said top, and links fitted to the ears of the aforesaid top and adapted to make connection with the ears of the vessel.

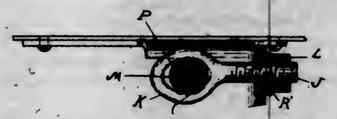
900,162. WIRE BASKET. THOMAS J. GOODWIN, Cleburne, Tex. Filed July 20, 1907. Serial No. 384,768.



1. A wire basket including a bottom, woven wire walls connected with the bottom and having their upper edges bent downward and outward to form a depending flange, a sheet metal rim folded longitudinally at the lower edge and bent upwardly to provide a bottom groove to receive the said depending flange, and exterior straps extending beneath the bottom and up the sides and having their terminals secured flat to the rim above the said groove to retain the depending flange in the said groove and maintain the parts in their interlocked relation.

2. A wire basket including a bottom, woven wire walls connected with the bottom and having their upper edges bent downwardly and outwardly to form a depending flange, a sheet metal rim folded longitudinally at the lower edge and bent upwardly to provide a bottom groove to receive the said depending flange, exterior straps extending from the bottom to the rim and retaining the depending flange in the said groove, a connecting device located at the corners and consisting of a piece of sheet metal folded longitudinally at opposite sides of the center to form grooves to receive the woven wire walls and the rim, and fastening devices piercing the connecting device, the rim and the woven wire walls.

900,163. FENDER-CLIP. WILLIAM C. GROEHN, Detroit, Mich., assignor to Briscoe Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 25, 1907. Serial No. 403,690.



1. A clip comprising a shank, a bifurcated member having open recesses formed in the furcations thereof forming seats for said shank, a bolt engaging said shank between said furcations, a clamping nut for engaging the shank of said bolt and a bearing for said nut on said bifurcated member opposed to the bearings for the shank in said furcations.

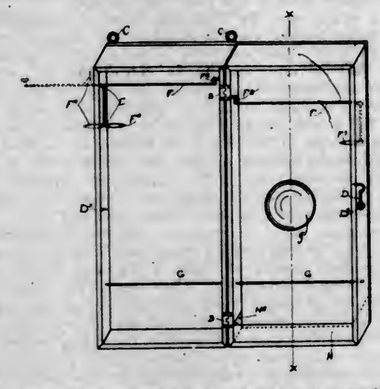
2. A clip comprising a shank, a member having a securing flange and a bifurcated portion projecting therefrom having open recesses formed in the furcations thereof for the reception of said shank, a bolt for engaging said shank between said furcations and a nut engaging said bolt having a bearing on said bifurcated member opposed to the bearing for said shank in said furcations.

3. In a clip, a member struck up from a sheet metal blank having a portion thereof fashioned to form a U-shaped section with open recesses formed in the parallel sides of the U and portions adjacent to the sides of the U-shaped portion bent into the same plane and adjacent to each other to form securing flanges.

4. In a clip, a member struck up from a sheet metal blank having a portion thereof fashioned to form a U-shaped section with open recesses formed in the sides of the U, and portions uniting with the sides of the U, but centrally severed from each other bent into the same plane perpendicular to the planes of the U-portion and with their outer ends arranged adjacent to each other.

5. A clip comprising a shank, a bifurcated member having a U-shaped portion with open recesses formed in the sides of the U constituting a seat for said shank, a bolt engaging said shank between the parallel sides of the U and passing through an aperture in the connecting portion of the U, said bolt having a threaded portion, a nut engaging the threaded portion of said bolt and a lock washer interposed between said nut and the bearing on the connecting portion of said U.

900,164. NECKTIE-CASE. FERDINAND G. HAAS, Springfield, Mo. Filed Feb. 10, 1908. Serial No. 415,122.



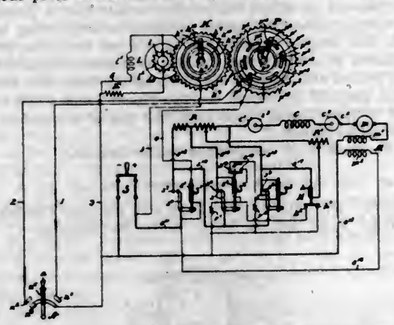
A necktie case comprising two box-like sections hinged vertically to each other to permit one section to swing in a horizontal plane upon the other section, and tie receiving members each comprising a vertical arm and two horizontal arms, said vertical arm being hinged to one of the box sections, one of the horizontal arms serving to receive ties and the other horizontal arm serving as a handle.

900,165. PROGRESSIVE CUT-OUT MECHANISM. JAY H. HALL, New York, N. Y., assignor to The Electric Controller and Supply Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 18, 1908. Serial No. 421,939.

1. The combination of an electric motor, a mechanism driven thereby, a starting switch for said motor, a cut-out switch for said motor, means for driving the movable member to successive cut-out positions, and means for rendering the said cut-out driving means inoperative for a predetermined travel of the driven mechanism after each cut-out operation.

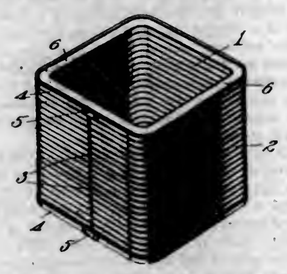
2. The combination of an electric motor, a mechanism driven thereby, a starting switch for said motor, a cut-out switch for said motor, means for driving the movable member to successive cut-out positions, and means for rendering the said cut-out driving means inoperative for a successively different period after each cut-out operation.

3. The combination of an electric motor, a mechanism driven thereby, a starting switch for said motor, a series of spaced contacts, connections including said spaced and movable contacts for making said motor operative, and means for driving said movable contact intermittently past the successive spaced contacts, and for rendering said movable contact inactive for variable successive periods prior to its actuation by its said driving means.



4. In a rotary automatic cut-out, stationary contact members spaced with reference to the successive degrees of angular travel required, a movable contact member coöperating with said stationary contact members, means for moving said movable contact forward at a definite angular ratio with respect to the mechanism to be controlled, and automatic means for returning said moving means to an initial position subsequent to each operation of the cut-out.

900,166. STORAGE-RECEPTACLE. OWEN K. HARRY, St. Louis, Mo. Filed Nov. 2, 1906. Serial No. 341,790.



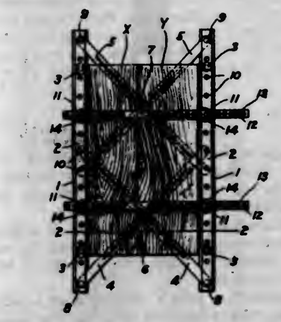
1. A storage receptacle consisting of inner and outer corrugated sheet metal shells, spaced apart and providing an open top and in which the corrugations extend horizontally, and filler wall of concrete located between said shells, and securing the shells together, substantially as set forth.

2. A storage receptacle consisting of inner and outer corrugated sheet metal shells, spaced apart and providing an open top, a concrete filler wall between said shells and securing the shells together, and reinforcing channel shaped top and bottom bands surrounding said outer shell, substantially as set forth.

3. A storage receptacle consisting of inner and outer corrugated sheet metal shells spaced apart, a concrete filler wall between the shells and securing the shells together, reinforcing channel shaped bands surrounding said outer shell and channel shaped clips connecting said channel shaped bands, substantially as set forth.

900,167. GLUING-FRAME. ANTON HETTEL, Rochester, N. Y., assignor to Alpha R. Beal, Rochester, N. Y. Filed Jan. 23, 1908. Serial No. 412,343.

1. In a gluing frame, the combination of a pair of side rails; a pair of lazy-tongs attached at one end to the side rails and whose free ends are adapted to bear against them; cross bars adapted to support the lumber; adjustable connections between said cross bars and said side rails, whereby the latter are locked by the former in an extended position; means attached to the side rails, adapted to engage the lumber and to compress it; substantially as shown and described.



2. In a gluing frame, the combination of a pair of side rails; a pair of lazy-tongs attached at one end to the side rails, and whose free ends are adapted to bear against them; posts extending up from said side rails in pairs, the members of which are placed opposite each other; cross bars perforated at each end to receive said upwardly extending posts, and adapted both to support the lumber and to lock the side rails in an extended position; and means attached to said side rails, adapted to engage the lumber and to compress it; substantially as shown and described.

3. In a gluing frame, the combination of a pair of side rails; a pair of lazy-tongs attached at one end to the side rails and whose free ends are adapted to bear against them; posts extending up from said side rails in pairs, the members of which are placed opposite each other; cross bars perforated at each end to receive said upwardly extending posts, and adapted both to support the lumber and to lock the side rails in an extended position; and cams eccentrically perforated to receive said upwardly-extending posts, and adapted to lie upon said cross bars and adjacent to the lumber; substantially as shown and described.

4. In a gluing frame, the combination of a pair of side rails; a pair of lazy-tongs attached at one end to the side rails and whose free ends are adapted to bear against them; posts extending up from said side rails in pairs, the members of which are placed opposite each other; cross bars perforated at each end to receive said upwardly-extending posts, and adapted both to support the lumber and to lock the side rails in an extended position; cams eccentrically perforated to receive said upwardly-extending posts, and adapted to lie upon said cross bars and adjacent to the lumber; and means for holding the lumber flat while under lateral compression; substantially as shown and described.
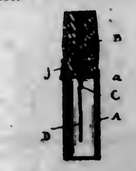
5. In a gluing frame, the combination of a pair of side rails; two or more pairs of lazy-tongs, each pair being attached at one end to the side rails, and having its other ends free and adapted, respectively, to bear against the side rails; cross bars, adapted to support the lumber; adjustable connections between said side rails and said cross bars, whereby the side rails are locked in an extended position; and means attached to the side rails, adapted to engage the lumber and to compress it; substantially as shown and described.

[Claim 6 not printed in the Gazette.]

900,168. ASEPTIC PACKAGE FOR VACCINE OR VIRUS. CHARLES H. HIGGINS, Ottawa, Ontario, Canada. Filed Mar. 14, 1908. Serial No. 421,267.

1. A package for virus or vaccine filaments, including a receptacle, closing means therefor, and means on the underside of the closing means for detachably supporting a filament within the receptacle.

2. A package for virus or vaccine filaments, including a receptacle, closing means therefor, a spring clip on the closing means adapted to detachably support the filaments within the receptacle.



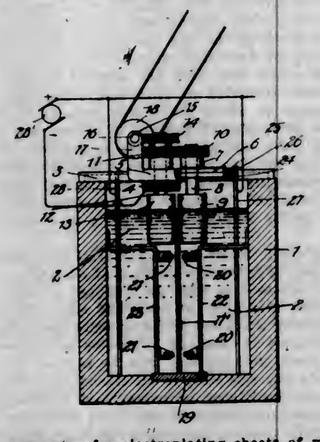
3. A package for virus or vaccine filaments, including a vial, a cork therefor having both ends thereof tapered, and means on the underside of the cork for detachably supporting a filament within the vial.

4. The combination with a receptacle, of a stopper having both ends thereof tapered, and a spring clip on one end of the same adapted to support a filament or other body within the receptacle.

5. The combination with a receptacle, of a stopper having both ends thereof tapered, a spring clip consisting of a plate of spring metal folded on itself and means for attaching the same to the stopper.

[Claims 6 to 8 not printed in the Gazette.]

900,169. APPARATUS FOR ELECTROPLATING METAL SHEETS. HENRY L. HOLLIS, Chicago, Ill. Filed Aug. 1, 1907. Serial No. 386,523.



1. In apparatus for electroplating sheets of metal, the combination of a vat holding a solution, mechanism secured to the top of said vat for engaging said sheets of metal, and driving means connected with said mechanism, said mechanism being adapted for conveying sheets of metal vertically from one end of the vat to the other end thereof.

2. In apparatus for electroplating sheets of metal, the combination of a vat for holding a metallic solution, mechanism secured to the top of said vat for engaging the upper portion of said sheets, and driving mechanism adapted to be connected therewith, thereby to convey said sheets of metal vertically from one end of the vat to the other end thereof.

3. In apparatus for electroplating sheets of metal, the combination of a vat for holding a solution, a plurality of vertical rotatable members suitably supported at the top of said vat, and driving mechanism adapted to be connected therewith, thereby to convey sheets of metal from one end of the vat to the other end.

4. In apparatus for electroplating sheets of metal, the combination of a vat for holding a solution, a plurality of rotatable rollers mounted in supporting mechanism, said rollers engaging the upper portions of said sheets of metal, and driving mechanism associated with said rollers and adapted to convey said sheets vertically from one end of the vat to the other.

5. In apparatus for electroplating sheets of metal, the combination of a vat for holding a solution, a plurality of vertical rotatable rollers mounted in supporting members, said members being secured to a bar extending longitudinally of the vat, and driving mechanism supported in said frames and adapted to actuate said rollers, said rollers being adapted to engage sheets of metal and when actuated to convey said sheets from one end of the vat to the other end thereof.

[Claims 6 to 17 not printed in the Gazette.]

900,170. FREIGHT-CAR. HARDY B. HAUSER, Cincinnati, Ohio. Filed Dec. 30, 1907. Serial No. 408,516.

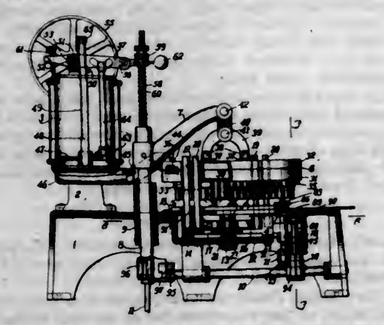


1. In a freight car the combination of a secondary floor adapted to be laterally extended to a width substantially equal to the inside width of the car and of being reduced to a width smaller than said inside width, a means of supporting the secondary floor in a position intermediate the main floor and the roof of the car and a mechanism for moving the secondary floor to a position adjacent to the roof and of returning it to its intermediate position.

2. In a freight car the combination of a secondary floor consisting of a central longitudinal section and two longitudinal side sections, hinges connecting the side sections to the central section, a means of supporting the secondary floor in a position intermediate the floor and the roof of a car, and a mechanism for moving the secondary floor to a position adjacent to the roof or of returning it to its intermediate position.

3. In a freight car having feed racks located at the sides and top thereof, a secondary floor adapted to be extended to a width substantially equal to the width of the inside width of the car and of being reduced to a width less than the distance between the feed racks, a means of supporting the secondary floor in a position intermediate the main floor and the roof of the car, and a mechanism for moving the secondary floor to a position adjacent to the roof, or of returning it to its intermediate position.

900,171. MACHINE FOR SNIPPING AND CEMENTING SHOE-UPPERS. HARRY I. ILLINGWORTH, Swampscott, Mass. Filed Sept. 4, 1906. Serial No. 333,100.



1. A machine of the kind described, comprising gaging means to position the work, a cement applier to cement the edges of the work, and snipping mechanism combined with operating mechanism constructed and arranged to move said snippers through the work and retain them in said position until after the cementing of the work.

2. A machine of the kind described, comprising gaging means to position the work, a cement applier to apply cement to said work, snipping means to snip said work, and power operating mechanism for said parts, constructed and arranged to actuate the cement applier and the snipping means simultaneously, said parts and their operating mechanism being so constructed and arranged as to cause the snipping and cementing to take place dissimultaneously at the same place on the work and the snipping means to be moved through and away from the surface to be cemented before the cementing of said surface.

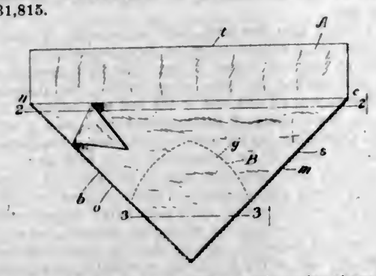
3. A machine of the kind described, comprising means for supporting the work to be cemented, a cement applier having a chamber for holding a body of cement, a plurality of delivery passages extending from said chamber to deliver cement simultaneously along the line to be cemented, and means for bodily raising and lowering said cement applier.

4. A machine of the kind described, comprising a cement applier formed in two parts, each part consisting of a chamber to hold a body of cement in bulk, and a series of delivery portions leading from said chamber, and adjusting means for accurately moving said two parts toward and from each other to suit different articles to be cemented.

5. A machine of the kind described, comprising a cement applier formed in two parts, having separate cement holding chambers and delivery portions, and means for accurately adjusting said parts toward and from each other to suit different articles to be cemented, said adjusting means being constructed and arranged to permit the cement delivery portions of said two parts to be brought close together for delivering closely adjacent lines of cement.

[Claims 6 to 21 not printed in the Gazette.]

900,172. BABY'S DIAPER. LOUISA E. IRWIN, London, Ontario, Canada. Filed Aug. 23, 1906. Serial No. 331,815.



A diaper for infants embodying a triangular-shaped portion formed of a plurality of duplex triangular shaped folds, certain of said folds being of less area than the other folds, said smaller folds positioned at one end of the large folds, said triangular shaped portion being of greater thickness at one end than at the other, said diaper further comprising a rectangular portion of a single thickness and which terminates in one of the folds of larger area of said triangular shape portion, the base of said fold of larger diameter in which terminates said rectangular portion being of a width equal to the length of said rectangular portion.

900,173. FOLDING BOX. JACOB M. JOHNSON, Edgerton, Wis. Filed May 31, 1907. Serial No. 376,663.

1. A folding box comprising a bottom wall, upright side and end walls, vertical metal cleats attached to the inner faces of the side and end walls and extending from top to bottom thereof at their vertical margins, thin metal cleats attached flatwise to the upper face and at opposing marginal parts of the bottom wall inside the planes of the adjacent upright walls and provided with integral arms to which the lower ends of the side and end cleats are hinged, and integral interlocking parts on the margins of the cleats of the side and end walls inside the upright walls constructed to lock the latter walls rigidly together in their open positions, the hinged connections between the arms of the bottom wall cleats and the cleats belonging to the various side and end walls being located at different vertical distances from the bottom wall, whereby said side and end walls may swing inwardly and lie flat upon each other and the bottom wall.



2. A folding box comprising a bottom wall, upright side and end walls adapted to swing over the bottom wall, thin metal cleats fixed flatwise to and extending continuously across the upper face of the bottom wall at opposite marginal parts thereof inside the planes of the adjacent upright walls, vertical metal cleats fixed to the inner sides of the side and end walls at their vertical margins and hinged at their lower ends to arms integral with said bottom wall cleats and interlocking connections between the side and end wall cleats inside the box for locking said walls in their open positions.

3. A folding box comprising a bottom wall, upright side and end walls adapted to fold over the bottom wall, a top wall, thin metal cleats fixed flatwise to the upper face of the bottom wall at opposite marginal parts thereof inside the planes of the adjacent upright walls and provided at their ends with upright integral arms, vertical metal cleats fixed to the inner sides of the side and end walls at the vertical margins thereof and hinged at their lower ends with the upright arms of said bottom wall cleats, marginal interlocking connections between the cleats of the upright walls at each corner of the box, metal cleats extending across opposite marginal parts of the cover and fixed to the lower sides thereof and interlocking connections between said cover cleats and the upper ends of the cleats of opposite upright walls of the box, all of said cleats and interlocking parts being contained within the box.

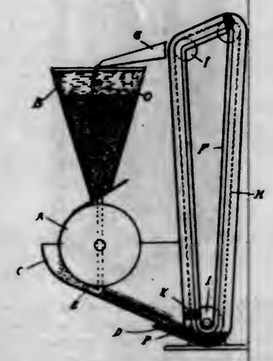
4. A folding box comprising a bottom wall, side and end walls adapted to be folded flat one over the other upon the bottom wall, vertical cleats fixed to and extending from top to bottom of the side and end walls at their vertical margins and contained wholly within the angles formed between adjacent side and end walls and directly connected at their lower ends to parts fixedly attached to the bottom wall, and inwardly turned integral hooks on the cleats of two opposite walls of the box, the cleats of the other two opposite walls being provided within the box with slits adapted to be engaged by said hooks for locking said walls in their open positions.

5. A folding box comprising a bottom wall, side and end walls adapted to be folded flat one over the other upon the bottom wall, vertical cleats fixed to and extending across the side and end walls at their vertical margins and contained wholly within the angles formed between adjacent side and end walls and directly connected at their lower

ends to parts fixedly attached to the bottom wall, inwardly turned integral hooks on the cleats of two opposite walls of the box; the cleats of the other two opposite walls being provided with slits adapted to be engaged by said hooks for locking said walls in their open positions, and means engaging the margins of said slitted cleats for locking said hooks from disengagement with the slitted cleats.

[Claims 6 to 12 not printed in the Gazette.]

900,174. CUTTING APPARATUS. CHRISTIAN KLINGENBEAG, Toledo, Ohio, assignor to The Libbey Glass Company, Toledo, Ohio, a Corporation of Ohio. Filed Mar. 28, 1908. Serial No. 423,963.



1. The combination with a grinder, of an elevator for returning the abrasive material discharged therefrom comprising a slitted tubular casing, an endless conveyer adjacent to but outside of said casing, a bucket within said casing and a support shank for said bucket passing out through the slit in said casing and secured to said conveyer.

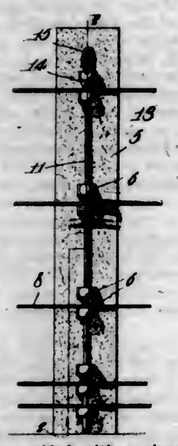
2. The combination with a grinder, of an elevator for returning the abrasive material discharged therefrom comprising a slitted tubular casing, a conveyer belt adjacent to but outside said casing, a shank secured to said conveyer projecting inward through the slit in said casing, and a cup or bucket of flexible material secured to said shank within said casing.

3. The combination with a rotary grinder, of a supply receptacle for the abrasive material thereabove, a receiving receptacle for the discharged abrasive material and grindings therebeneath, automatic means for purifying the discharged abrasive material and means for returning the same to the supply receptacle comprising a slitted tubular casing, an endless conveyer adjacent to but outside of said casing, a bucket within said casing and a support shank for said bucket passing out through the slit in said casing and secured to said conveyer.

4. The combination with a rotary grinder, of a supply receptacle for the abrasive material thereabove, a receiving receptacle for the discharged abrasive material and grindings therebeneath, automatic means for purifying the discharged abrasive material, comprising a water supply and a nozzle connected therewith and inclined contrary to the direction of travel of the material in the receiving receptacle, and means for returning the purified material to the supply receptacle.

5. The combination with a rotary grinder, of a supply receptacle for the abrasive material thereabove, a chute for the discharged abrasive material and grindings therebeneath, automatic means for purifying the discharged abrasive material therebeneath, comprising a conduit connected with the supply receptacle, a nozzle attached to said conduit and inclined contrary to the travel of the material in said discharge chute, and means for returning the purified material to the supply receptacle.

900,175. WIRE-FENCE FASTENER. JOHN H. KNICKERBOCKER, Logansport, Ind. Filed Jan. 29, 1908. Serial No. 413,227.



1. A fence post provided with a plurality of laterally extending loops spaced apart to form pockets for the reception of the line wires, said loops being concaved transversely and provided with plastic fillings having vertical openings formed therein, and a locking rod extending through the openings in the plastic fillings for locking the line wires against accidental displacement.

2. A fence post provided with a plurality of laterally extending loops spaced apart to form pockets for the reception of the line wires, a retaining rod extending through said loops for locking the line wires within the pockets, said rod being provided with a shoulder and having its adjacent end formed with a spring loop for rotating the rod thereby to lock the shoulder in engagement with the adjacent loop.

3. A fence post provided with a plurality of laterally extending loops spaced apart to form pockets for the reception of the line wires, a rod extending through said loops for locking the line wires within the pockets, a shoulder formed on one end of the rod and adapted to engage the lower edge of the adjacent loop, and a spring pressed depending lug adapted to enter one of the loops for locking the shoulder in engagement with said loop.

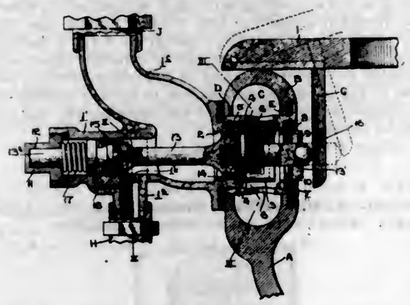
4. A fence post provided with a plurality of laterally extending loops spaced apart to form pockets for the reception of the line wires, each loop being formed with a socket, and a retaining rod extending through the sockets of the several loops for locking the line wires within the pockets, one end of the rod being provided with a shoulder terminating in a spring coil having a depending spring locking lug adapted to enter the socket of the adjacent loop for locking the shoulder in contact with the lower edge of said loop when the rod is rotated.

5. A fence post including a body portion, a plurality of loops embedded in the body portion and having their inner walls concaved, filling material located beyond the side of the post and between the concaved walls of the sockets, said loops being spaced apart to form intermediate pockets for the reception of the line wires, a retaining rod extending through the loops for locking the line wires within the pockets, and means for locking the rod against vertical movement.

[Claims 6 to 9 not printed in the Gazette.]

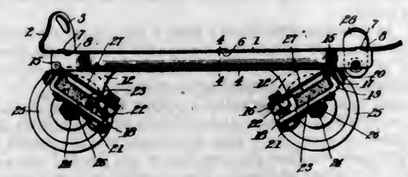
900,176. FLUSHING DEVICE FOR WATER-CLOSETS. LOUIS D. LAWNIN, Edwardsville, Ill., assignor of one-half to N. O. Nelson Manufacturing Company St. Louis, Mo., a Corporation of Missouri. Filed June 24, 1907. Serial No. 380,513.

A flushing device comprising a valve shell formed with a hollow horn, a tubular arm having a supply pipe nipple, and a by-pass between the tubular arm and the supply pipe nipple, and a nipple having a reduced neck provided with a radial perforation, a housing having an apertured diaphragm, and extending over the reduced neck and re-



ceiving the nipple of the valve shell, a nut closing the aperture in the diaphragm, a valve stem operable in the valve shell and its tubular arm, and valves carried by the valve stem.

900,177. ROLLER-SKATE. THOMAS S. LEITCH, Seattle, Wash. Filed Nov. 25, 1907. Serial No. 403,745.



1. In a roller skate, the combination with a foot-plate, of a strengthening brace substantially U-shaped in cross-section, extending longitudinally of and secured against said foot-plate, truck-brackets straddling said brace and secured to said foot-plate, and trucks secured to said truck-brackets.

2. In a roller skate, the combination with a foot plate, of a hollow brace having upturned sides extending longitudinally of said foot-plate and of substantially the same length as said plate, said brace provided with parallel end portions, said end portions provided with notches, truck-brackets secured to said plate and one of said brackets engaging one of the notches of said brace, toe clamps carried by said plate, an adjusting screw connecting said clamps and mounted in the other notch of said brace, and trucks attached to said truck-brackets.

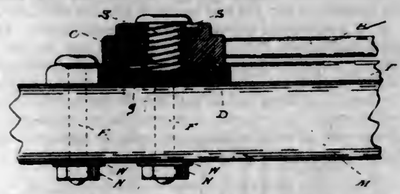
3. In a roller skate, the combination with a foot-plate, of a longitudinally-extending brace engaging and secured to said plate, said brace provided with upturned parallel sides spaced apart near their center and closed together at their ends, truck-brackets secured to said plate and straddling said brace and engaging the end portions thereof, and trucks secured to said truck-brackets.

4. In a roller skate, the combination with a foot-plate, of a brace having upturned sides extending longitudinally thereof, said brace having its sides integrally connected and spaced apart near their center and with parallel engaging end portions, truck-brackets secured to said foot-plate and engaging said brace near its ends, and trucks secured to said brackets.

5. In a roller skate, the combination with a foot-plate, of a reinforcing brace having upturned sides secured to said foot-plate, said brace having its longitudinal edges engaging said foot-plate, said brace having its sides intermediate its ends spaced apart, and at its ends with engaging sides, truck-brackets secured to said foot-plate and engaging said brace, and trucks secured to said brackets.

[Claims 6 to 11 not printed in the Gazette.]

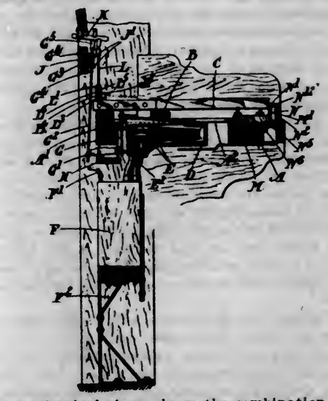
900,178. DRAFT ATTACHMENT FOR VEHICLE-THILLS. THORNTON H. LEONARD, Piqua, Ohio. Filed July 17, 1907. Serial No. 384,265.



1. In a draft appliance, the combination of an iron, a swinging draft arm having one end thereof pivotally connected to the iron and provided at its opposite end with trace engaging means, the pivot end of the arm having an opening formed therein and being connected to the iron by a tongue and groove which are concentric with the opening and receive the strain upon the joint, a pivot pin projecting from the iron and passing loosely through the opening in the draft arm, a coil spring fitted loosely within the opening in the draft arm and surrounding the pivot pin and tending to swing the draft arm in one direction, and means for limiting the swinging movement of the draft arm.

2. In a draft appliance, the combination of an iron, a loop carried by the iron, a draft arm pivoted to the iron and extending through the loop, an opening being provided in the draft arm at the pivot point thereof, a tongue and groove connection between the draft arm and the iron, the said tongue and groove connection being concentric with the opening, a pivot pin connecting the iron and draft arm and passing loosely through the opening in the latter, and a coil spring surrounding the pivot pin and housed within the opening in the draft arm, opposite ends of the spring being secured respectively to the iron and draft arm.

900,179. MECHANICAL PIANO-PLAYER. HUMPHREY T. LOGAN, Erith, England. Filed Apr. 13, 1906. Serial No. 311,515.



1. In a mechanical piano player the combination of striking mechanism, a key bottom having a recess, a striking pneumatic disposed in said recess, and operative connections between the striking mechanism and the pneumatic.

2. In a mechanical piano player the combination of striking mechanism, a key bottom, a series of striking pneumatics disposed in the key bottom, pivoted levers of different lengths angularly adjustable on vertical axes, connections between said levers and pneumatics, and striking rods operatively connected to the levers so that by varying the angle of inclination of the pivoted levers and using levers of different lengths a standard set of pneumatics can be used with piano actions of various widths.

3. In a mechanical piano player the combination of strik-

ing mechanism, a striking pneumatic, a striking rod operatively connected to the pneumatic, a slotted guide for said striking rod, adjustable buttons on the rod and a spring secured to the rod and working against the guide.

4. In a mechanical piano player the combination of a striking mechanism including a wippen, a key bottom, a key lever, a pilot pivoted to said key lever and operating in one position upon the wippen, a pneumatic disposed in the key bottom, a striking rod at the rear of the key lever and operating upon the wippen, a pivoted lever connected to the lower end of said striking rod, and an operative connection between the pneumatic and said pivoted lever.

900,180. PRESSURE-FILTER. PETER E. MAGGINI, Los Angeles, Cal. Filed May 28, 1907. Serial No. 376,209.



1. In a filter, in combination, a fluid-tight case composed of upper and lower detachable sections, a set of upright legs supporting said upper section adjacent its upper end, said section being vertically adjustable with relation to said legs, a flange at the lower end of said upper section adapted to guide the vertical movements of said upper section along said legs, a flange extending from the upper end of the lower section of the case, means for detachably securing said flanges together, granular filtering material in the upper section of the case, fibrous filtering material in the lower section of the case, an inlet for the upper section, and an outlet for the lower section.

2. In a filter, in combination, a fluid-tight case composed of upper and lower detachable sections, a set of upright legs supporting said upper section adjacent its upper end, said section being vertically adjustable with relation to said legs, means for securing said sections together to form a fluid-tight case adapted to resist internal pressure, filtering material in the upper section adapted to extract one class of impurities, filtering material in the lower section adapted to extract another class of impurities, inlet means for the upper section and outlet means for the lower section.

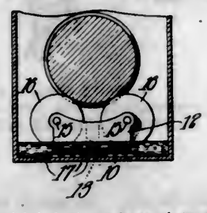
3. In a filter, in combination, a fluid-tight case composed of upper and lower detachable sections, a set of upright legs supporting said upper section adjacent its upper end, said section being vertically adjustable with relation to said legs, means for securing said sections together to form a fluid-tight case adapted to resist internal pressure, filtering material in the upper section adapted to extract one class of impurities, filtering material in the lower section adapted to extract another class of impurities, inlet means for the upper section and outlet means for the lower section, said legs being adapted to act as guiding and centering means for the lower section when the same is being elevated to operative position.

4. A filter provided with an elongated upright case consisting of upper and lower sections, means external to said case for detachably holding said sections together, a set of legs ranged around said case, and means for attaching said legs to the upper section of said case, said legs extending along the outer sides of the top section of said case and said top section being vertically adjustable between said legs.

5. In a filter, in combination, a case composed of upper and lower detachable sections, a set of upright legs fastened to and supporting said upper section, said section being vertically adjustable with relation to said legs, means for securing said sections together to form a fluid-tight joint therebetween, filtering material in the upper section adapted to extract one class of impurities, filtering material in the lower section adapted to extract another class of impurities, inlet means for the upper section and outlet means for the lower section.

[Claim 6 not printed in the Gazette.]

900,181. LUBRICATOR. WILLIAM C. MANESS, Laredo, Tex. Filed Feb. 8, 1908. Serial No. 414,956.



1. In a journal lubricator a base plate, frames hinged to the plate, and a pair of journal engaging rollers carried by each frame.

2. In a journal lubricator a base, a pair of frames hinged to the base, said hinges being arranged to limit the movement of the frames toward each other, and a pair of journal engaging rollers carried by each frame.

3. In a journal lubricator a spring supported base, a frame hinged to the base and provided with an eye for the reception of a tool by which said frame may be turned to upright position after its insertion in the journal box, and a pair of journal engaging rollers carried by the frame.

4. In a journal lubricator a base, journal engaging rollers, roller carrying frames hinged to the base, said frames being free to swing outward from each other, and being held from movement toward each other beyond positions at a right angle to the base.

5. In a journal lubricator, a base plate, a pair of frames pivoted thereto and each comprising a pair of spaced plates, the innermost plates of each frame being arranged to engage the upper face of the base plate, rollers mounted in said frames, and leaf springs secured to and forming a yieldable support for the base.

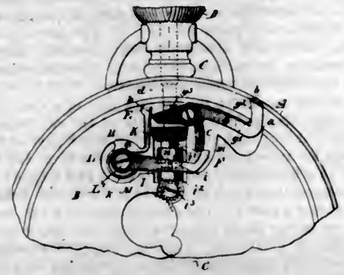
900,182. SYRINGE. KARL L. MAYERS, St. Louis, Mo. Filed Oct. 23, 1906. Serial No. 340,212.



A syringe comprising an inner tube; a flange formed on the end of the inner tube; lugs formed on the inner tube;

an outer tube; an inwardly projecting flange formed on the end of the said outer tube and located directly beneath the flange of the inner tube so as to deflect the liquid, forming a globular spray, the said lugs on the inner tube contacting with the inner surface of the outer tube to hold the inner tube in central position, the said outer tube having a tapered portion; a nipple formed on the tapered portion for the admission of the liquid; a bellows located on the opposite end of the inner tube; a bushing supporting the inner tube within the outer tube and supporting the bellows on the outer tube and forming a leak-proof connection; a shield located upon the outer tube, substantially as specified.

900,183. WATCH-MOVEMENT. WALTER B. MEHL, Waltham, Mass., assignor to E. Howard Watch Company, Waltham, Mass., a Corporation of New Jersey. Filed Feb. 29, 1908. Serial No. 418,466.



1. In a stem winding and setting watch, the combination with a movement plate, of an arbor rotatably supported thereby, a clutch slidingly mounted upon said arbor, a clutch lever pivoted to said plate for operating the clutch, a manually operated setting lever pivoted to said plate and adapted to move and lock said clutch lever in its setting position, and a spring one end of which holds said setting lever in both its setting and winding positions, and the opposite end of which spring engages and returns said clutch lever to its winding position, substantially as described.

2. In a stem winding and setting watch, the combination with a movement plate, of an arbor rotatably supported thereby, a clutch slidingly mounted upon said arbor, a clutch lever pivoted at one end to said plate and free at its opposite end, and provided with clutch engaging means between its free and pivoted ends, and a manually operated setting lever pivoted to said plate and adapted to engage the free end of said clutch lever to lower and lock the same in its setting position, and a spring, one end of which engages and holds the said setting lever in its different positions, and at its opposite end engages and operates to return said clutch lever to its winding position, substantially as described.

3. In a stem winding and setting watch, the combination with a movement plate, of an arbor rotatably supported thereby, a clutch slidingly mounted upon said arbor, a clutch lever pivoted at one end and free and curved at its opposite end, and provided with means between its free and pivoted ends for engaging and sliding said clutch, a manually operated setting lever pivoted to said plate and provided with a curved arm extending therefrom, adapted to co-act with the curved end of the clutch lever to lower and lock the same in its setting position, and a spring secured to said plate, and engaging at one end the setting lever to hold the same in its different positions and at its opposite end engaging said clutch lever to return the latter to its winding position when released by said setting lever, substantially as described.

4. In a stem winding and setting watch, a movement plate adapted to receive and hold pendant winding and setting mechanism on the train side thereof, and recessed on the dial side to receive lever setting mechanism and provided with an opening through the same whereby to pivot the clutch lever of either the pendant setting mechanism on the one side, or lever setting mechanism on the other side, substantially as described.

900,184. PRESSURE-FILTER. CHARLES W. MERRILL, Lead, S. D. Filed June 8, 1905, Serial No. 263,511. Renewed July 29, 1908. Serial No. 445,925.



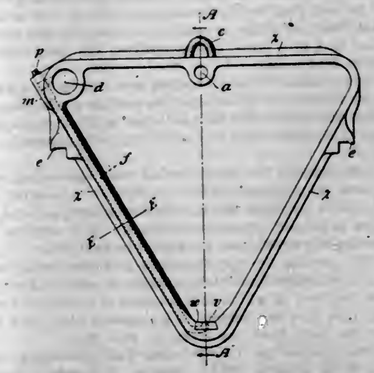
1. In a pressure filter, the combination with a container, of a grille or grating placed on either side thereof entirely within the same and in such position that when the container is put together with the filter plates in a filter press, said grille will retain a layer of unfilterable matter or precipitate.

2. In a pressure filter a series of containers, the sides of which converge toward the bottom substantially as set forth, each having an opening in the bottom angle forming a continuous channel entirely within the press when the containers are put together, and an opening which opens directly upward from said channel into the interior, and devices substantially as described whereby the openings into the containers may be closed at will.

3. In a pressure filter the combination with the feed channel, of a rotative pipe placed therein, provided with a series of ports, each one of which corresponds with and comes opposite to the inlet port of each container, whereby by the rotation of the pipe, closure of each port of all the containers is effected.

4. In a pressure filter the combination with the feed channel, of a rotative pipe placed therein, provided with a series of ports, each one of which corresponds with and comes opposite to the inlet port of each container, whereby by the rotation of the pipe, closure of each port of all the containers is effected, and means for rotating the pipe substantially as described.

900,185. FILTER-PRESS. CHARLES W. MERRILL, Lead, S. D. Filed June 19, 1906, Serial No. 322,388. Renewed Nov. 22, 1907. Serial No. 403,339.



1. A container for use in a pressure filter provided with a duct, leading from a feed channel located above the bottom of the container and terminating within the same adjacent to said bottom.

2. A container for use in a pressure filter provided with a duct located within its side wall, leading from a feed channel above the bottom of the container and terminating within the same adjacent to said bottom.

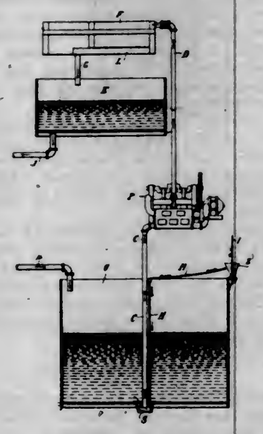
3. A pressure filter comprising with suitable plates a series of containers each provided with a duct, leading from a feed channel located above the bottom of the container and terminating within the container adjacent to said bottom.

4. A pressure filter comprising with suitable plates a series of containers each provided with a duct located within its side wall, leading from a feed channel above the bottom of the container and terminating within the same adjacent to said bottom.

5. A pressure filter comprising with suitable plates a series of converging containers each provided with a duct, leading from a feed channel located above the bottom of the container and terminating within the container adjacent to said bottom.

[Claims 6 to 9 not printed in the Gazette.]

900,186. PROCESS OF PRECIPITATING AND RECOVERING MATERIALS FROM SOLUTIONS. CHARLES W. MERRILL, Lead, S. D. Filed Nov. 23, 1906, Serial No. 344,701. Renewed July 29, 1908. Serial No. 445,926.



1. The process for precipitating and recovering material from its solution which consists in adding a precipitant to said solution while in motion, conducting the mixture without rest to a filter, and separating the solid from the liquid in said filter.

2. The process for precipitating and recovering material from its solution which consists in adding a precipitant to the duct through which said solution is being conveyed to a filter and separating the solid from the liquid in said filter.

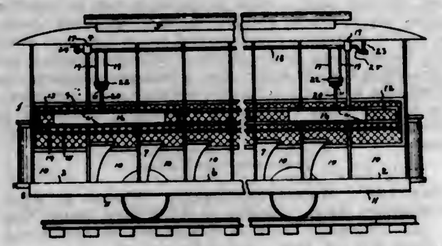
3. The process for precipitating and recovering material from its solution which consists in conveying said solution to a pressure filter, simultaneously forcing a precipitant into said pressure filter with said solution and separating the solid from the liquid in said filter.

4. The process for precipitating and recovering material from its solution which consists in adding a precipitant to the duct in which said solution is conveyed, forcing the mixture into the bottom of a pressure filter, and separating the solid from the liquid in said filter.

5. The process for precipitating and recovering material from its solution, which consists in adding a precipitant to a solution in motion at a point adjacent to the outlet of said solution from a receiver, forcing the mixture through a pressure filter, and separating the solid from the liquid in said filter.

[Claims 6 to 18 not printed in the Gazette.]

900,187. SAFETY-GUARD FOR CARS. MARTIN MEYER, Omaha, Nebr., assignor to Meyer Safety Guard Company, Omaha, Nebr., a Corporation. Filed Jan. 2, 1908. Serial No. 408,868.



1. A safety guard for the passage way of a car, comprising a fender disposed longitudinally of the car, supporting members mounted upon the upper part of the car and extended transversely from the side of said car to a mounting upon the fender, said supporting members adapted to have swinging movements exteriorly and transversely of the car to elevate or lower the fender.

2. A safety guard for the passage way of a car, comprising a fender disposed longitudinally of the car, supporting members pivotally mounted upon the upper part of the car and extended exteriorly and transversely from the side of said car to a mounting upon the fender, and means to actuate the supporting arms to elevate or lower the fender.

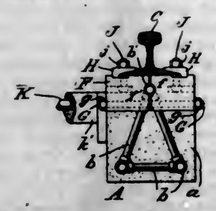
3. A safety guard for the passage way of a car, comprising an operating shaft mounted upon the upper part and longitudinally of the car, a fender disposed substantially parallel with the operating shaft and adjacent said passage way; supporting members having rigid end-mountings upon the operating shaft and extended transversely therefrom to a mounting upon said fender, said operating shaft being rotatable to elevate or lower said fender.

4. In combination with the longitudinal side step of a car, a safety guard, comprising a fender disposed substantially parallel with said longitudinal side step, supporting members mounted upon the upper part of the car and extended outwardly from the side of said car to a mounting upon the fender, said supporting members adapted to have swinging movements upon planes transverse to said longitudinal step for elevating or lowering the fender.

5. In combination, a safety guard for the passage way of a car, comprising a plurality of bars disposed adjacent and substantially in alinement to define a fender, said fender extending lengthwise and exteriorly of the car; supporting members mounted up n the upper part of the car and extended transversely to a mounting upon said fender, said supporting members adapted to have swinging movements upon planes transverse to the fender, for the purpose of raising or lowering said fender.

[Claims 6 to 15 not printed in the Gazette.]

900,188. RAILWAY-TRACK. EDMOND MOLLOY, Philadelphia, Pa. Filed Oct. 31, 1906. Serial No. 341,366.



1. In a railway track, a stringer adapted to extend beneath a rail, lengthwise thereof, comprising a tubular metallic core or framework substantially triangular in cross section, and concrete material incasing said core or framework, and rail-supporting means connected to said core or framework.

2. In a railway track, a stringer adapted to extend beneath a rail, lengthwise thereof, comprising a tubular metallic core or framework substantially triangular in cross section, and concrete material incasing said core or framework, and rail-chairs each attached to a member of said incased core or framework.

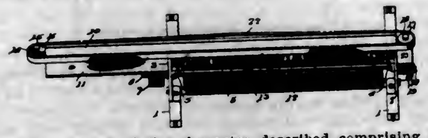
3. In a railway track, a stringer adapted to extend beneath a rail, lengthwise thereof, comprising a longitudinal core composed of tubular metallic members united to produce a skeleton structure, and an incasing material for said tubular skeleton structure.

4. In a railway track, a stringer adapted to extend beneath a rail, lengthwise thereof, comprising a tubular skeleton framework substantially triangular in cross section, and a concrete material substantially enveloping said framework and co-extensive in length thereto.

5. In a railway track, a stringer adapted to extend beneath a rail, lengthwise thereof, comprising a longitudinal metallic core composed of tubular metal united to produce a skeleton framework substantially triangular in cross section, incasing material substantially enveloping said core or framework, and rail-chairs secured to said core or framework and positioned externally with respect to said incasing material.

[Claims 6 to 20 not printed in the Gazette.]

900,189. MACHINE FOR REMOVING SILK FROM EARS OF CORN. SAMUEL E. MORRAL and WILLIAM W. MORRAL, Morral, and JOHN MORRAL, Larue, Ohio. Filed Jan. 24, 1907. Serial No. 353,928.



1. A machine of the character described comprising a frame, a trough mounted on said frame and having its lower side open, a rotary brush mounted on said frame adjacent to the open side of said trough, means independent of said trough for retaining an ear of corn within said trough, and means for moving said ear of corn longitudinally of said brush.

2. A machine of the character described comprising a frame, a trough mounted on said frame and having its lower side open, a rotary brush mounted on said frame adjacent to the open side of said trough and adapted to retain an ear of corn in said trough, and means for moving said ear of corn longitudinally of said brush.

3. A machine of the character described comprising a frame, a trough mounted on said frame and having its lower side open, a brush rotatably mounted on said frame adjacent to the open side of said trough and so arranged relatively thereto as to leave a continuous open space between said brush and one side of said trough, and means for moving an ear of corn longitudinally of said trough.

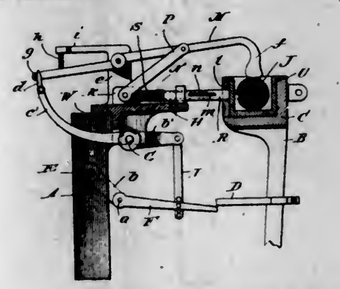
4. In a machine of the character described, the combination, with a frame, and a trough mounted on said frame and having its lower side open, of a brush mounted on said frame adjacent to the open side of said trough and comprising a plurality of rows of fibers separated by partitions terminating near the outer ends of said fibers.

5. In a machine of the character described, the combination, with a frame, and a trough mounted on said frame and having its lower side open, of a brush mounted on said frame adjacent to the open side of said trough and comprising a plurality of rings of fibers separated by disks of less diameter than the diameter of said rings.

[Claims 6 to 9 not printed in the Gazette.]

900,190. STOP-MOTION MECHANISM FOR LOOMS. GEORGE MCCARTNEY, Harrisville, R. I. Filed Jan. 22, 1908. Serial No. 412,072.

1. In a loom, the combination of a frame, a lay having a shuttle box in a wall of which there is an opening, a shuttle, a filling feeler mounted on the frame and arranged to bring up against the filling in the shuttle, means on the frame connected with and adapted to move the filling feeler and arranged to be moved in one direction by the shuttle on forward movement of the lay, means for moving the first named means in the opposite direction, and stop motion mechanism controlled by the filling feeler and arranged to be put into action when the filling in the shuttle is almost exhausted.



2. In a loom, the combination of a frame, a lay having a shuttle box in a wall of which there is an opening, a shuttle, a filling feeler mounted on the frame and arranged to bring up against the filling in the shuttle, means on the frame yieldingly connected with the filling feeler and arranged on forward movement of the lay to be moved by the shuttle and to move the filling feeler, and stop motion mechanism arranged to be put into action when the filling in the shuttle is almost exhausted.

3. In a loom, the combination of a frame, a lay having a shuttle box in a wall of which there is an opening, a shuttle, a filling-feeler mounted on the frame and arranged to bring up against filling in the shuttle, undue movement of the filling-feeler being adapted to effect the operation of a stopping instrumentality, and means on the frame connected with the filling-feeler and arranged on forward movement of the lay to be moved by the shuttle and to move the filling-feeler; said means being arranged to accommodate itself to differences between the extent to which the lay is moved and the extent to which the filling permits the filling-feeler to move.

4. In a loom, the combination of a frame, a lay having a shuttle box in a wall of which there is an opening, a shuttle, a filling-feeler mounted on the frame and arranged to bring up against filling in the shuttle, undue movement of the filling-feeler being adapted to effect the operation of a stopping instrumentality, a plunger arranged on the frame in position to be engaged by the shuttle on forward movement of the lay, a second plunger arranged on the frame and connected with the filling-feeler, and a spring interposed between the two plungers.

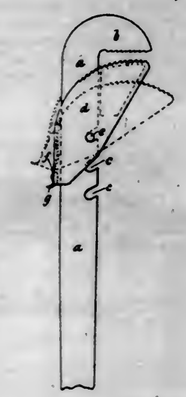
5. In a loom, the combination of a frame, a lay having a shuttle box in a wall of which there is an opening, a shuttle, a filling-feeler mounted on the frame and arranged to bring up against filling in the shuttle, undue movement of the filling-feeler being adapted to effect the operation of a stopping instrumentality, a tubular plunger arranged on the frame in position to be engaged by the shuttle on forward movement of the lay, a second plunger telescoped in the tubular plunger and connected with the filling-feeler, and a coiled spring surrounding the second mentioned plunger and interposed between an abutment thereon and the first mentioned plunger.

[Claims 6 and 7 not printed in the Gazette.]

900,191. PIPE-WRENCH. HENRY E. MCDONALD, Petone, Wellington, New Zealand. Filed May 8, 1906. Serial No. 315,737.

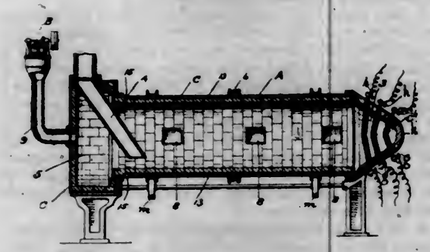
In a pipe wrench, a stem having slots formed at intervals along its inner edge and extending downwardly, a jaw fixed on said stem and overhanging its inner edge, a

jaw slidable along the stem and provided with a pivot adapted to enter and rest within any one of the slots, and



a flat spring carried by the sliding jaw and bearing against the outer edge of the stem.

900,192. ELECTRIC FURNACE. ROBERT MCKNIGHT, Pittsburg, Pa. Filed Aug. 28, 1906. Serial No. 332,403.



1. The combination with a rotating tubular furnace body, of an electrically heated fire-box, placed at the end of said furnace body, and means for passing a draft through the fire-box into the furnace, substantially as described.

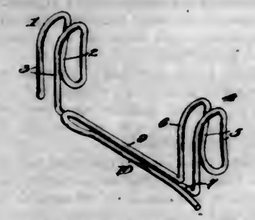
2. The combination with a rotating tubular furnace body of an electrically heated fire box having substantially a conoidal shape, placed at the end of the tubular furnace body, and means for passing a draft through the fire-box into the furnace; substantially as described.

3. The combination, with a rotating tubular furnace body of a fire-box placed at the end thereof and provided with inlet flues for admitting gaseous heat-carriers and with electrodes in juxtaposition to produce an electric arc or series of arcs over between or near which these heat-carriers pass substantially as described.

4. The combination of a revolving furnace, an electrically heated fire-box at the end thereof and a series of ore outlet ports, situated along the said revolving furnace and means for closing said ports, substantially as described.

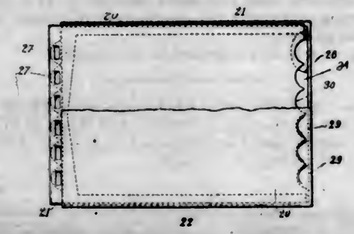
900,193. WHIP-HOLDER. THOMAS M. NELSON, Marseilles, Ill. Filed Sept. 19, 1907. Serial No. 393,610.

As a new article of manufacture, a whip holder made from a single piece of wire and comprising two spaced clips joined by an intermediate length of wire, one of said clips having a depending arm and terminating in a whip clip interposed between said first mentioned clips and comprising a horizontal arm bent back upon itself to form



another arm, said two last mentioned arms being substantially parallel.

900,194. PHOTOGRAPHIC-FILM PACKAGE AND HOLDER THEREFOR. MAGNUS NIELL, New York, N. Y. Filed June 18, 1907. Serial No. 379,648.



1. A photographic film package comprising an envelop, a body telescoping therein and open at the front, and a stack of films having means for selective engagement of any individual film through the wall of said body, and means for selective engagement of the remaining films through the wall of the envelop.

2. A stack of flexible photographic films for a film package, having differently-positioned individual tabs along one edge of the stack, and differently-positioned individual recesses along the opposite edge.

3. A flexible photographic film having a tab on one edge, and a recess in longitudinal alinement with said tab on the opposite edge.

4. A stack of flexible photographic films, each having a tab on one edge and a longitudinally-alined recess on the opposite edge, the tab and recess on each film having a lateral position differing for the several films.

5. A stack of films having differently-positioned individual tabs along one edge and differently-positioned individual recesses along the opposite edge, in combination with a container composed of an open-front body having a row of suitably-marked gripping places through which to engage the respective tabs and hold any individual film, and an envelop telescoping on said body and having a row of suitably-marked gripping places through which to engage the remaining films.

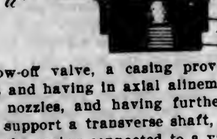
[Claims 6 to 23 not printed in the Gazette.]

900,195. SELF-THREADING SEWING-NEEDLE. MARINUS J. C. NYBORG, Minneapolis, Minn. Filed Nov. 21, 1907. Serial No. 403,241.



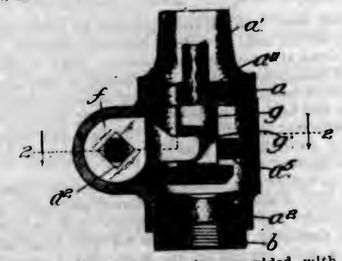
A needle comprising a main body portion formed with a channel entering the head end of the needle passing and emerging from the side of the needle, and having an inwardly tapering open-ended slot connecting with said channel, and provided with a tapered bent pointed hook or spring formed integral with the main body portion of the needle and having a longitudinal side groove, substantially as described.

900,196. NUT-LOCK. WILLIAM F. O'NEAL, Wenatchee, Wash., assignor of one-half to Robert T. Warner, Everett, Wash. Filed June 13, 1907. Serial No. 378,765.



In a nut lock, the combination with a bolt, of a nut, a key, square shaped in cross section, provided with flattened ends and having its side walls parallel for the major portion of its length and tapered the remainder thereof, a right angled key receiving groove extending longitudinally of said bolt and tapered to receive said key, the tapered end of said groove being curved upwardly, a right-angled groove extending transversely of the interior of said nut, the walls of said groove being parallel with the sides of the nut for the greater portion of its length but tapered toward the inner face thereof to a degree corresponding with that of the groove in the bolt, a cut away portion on the inner face of the nut adjacent said tapered part of the groove, a V-shaped bottom face in said cut away portion, said key being adapted to cooperate with the grooves in the bolt and nut, and the tapered end of the key being arranged to be deflected by the upwardly curved portion at the extremity of the reduced end of the bolt groove into the cut away portion in the inner face of the nut, the end of said key being positioned at right angles with the body thereof and two sides of the end portion arranged to lie in the aforementioned V-shaped bottom face of said cut away portion substantially as described.

900,197. BLOW-OFF COCK. GUSTAVE H. OSMAN, Topeka, Kans. Filed Oct. 8, 1906. Serial No. 338,028.

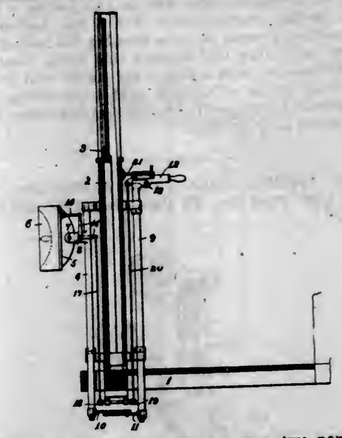


In a blow-off valve, a casing provided with internal guide rings and having in axial alinement therewith inlet and outlet nozzles, and having further a side extension adapted to support a transverse shaft, a valve member at one end of the casing connected to a valve stem embraced by said guide rings, a shaft in said external support, and an arm projecting from the inner end of said shaft and engaging the valve stem, one of said guide rings being split to admit the said arm to the said valve stem.

900,198. HEADLIGHT-CONTROLLER. HENRY R. PARKER, Reading, Pa. Filed Jan. 15, 1908. Serial No. 410,903.

1. A head-light controller for cars comprising two parallel rotary shafts arranged on the outer and inner sides of the car dash, a head light carried by the outer shaft, an operating handle on the inner shaft, and an operating connection between said shafts, substantially as set forth.

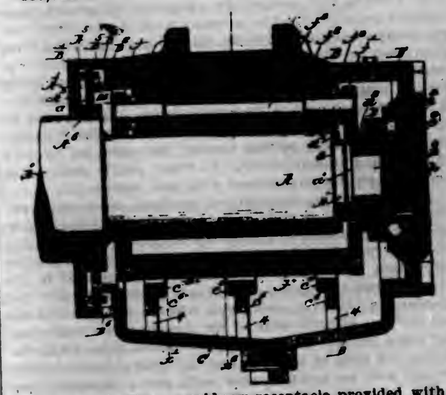
2. In a head light controller for cars, a head light bracket pivotally mounted outside the car dash, a handle pivotally mounted inside the dash, a bell crank controlling the movement of said pivoted bracket, and operating mechanism connecting said bell crank and pivoted handle comprising a rod outside the dash, a rod inside the dash, and a double crank, substantially as set forth.



3. In a head light controller for cars, two parallel rotary shafts arranged on the outer and inner sides of the car dash, an operating connection between said shafts outside the car body, a head light pivoted to the outer shaft, an operating handle pivoted to the inner shaft, a bell crank controlling the movement of said pivoted light, and operating mechanism connecting said bell crank and pivoted handle comprising a rod outside the dash, a rod inside the dash, and a double crank, all substantially as described.

4. A head light controller for cars comprising two parallel rotary shafts arranged on the outer and inner sides of the car dash, an operating connection between said shafts, a head light pivotally mounted on the outer shaft, an operating handle therefor pivotally mounted on the inner shaft, and a locking device to hold said light in fixed position.

900,199. ROLLER-BEARING. JULIUS A. PERKINS, Omaha, Nebr., assignor, by mesne assignments, to United States Roller Bearing Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 14, 1903, Serial No. 169,500. Renewed Aug. 28, 1908. Serial No. 450,743.

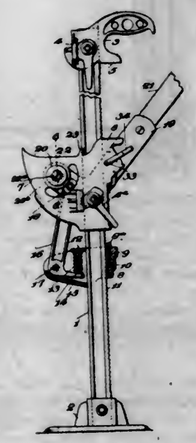


1. A box having a residuum-receptacle provided with a plurality of webs crossing the box and connected with the

opposite sides thereof, said webs being provided for part of their length at their upper edges with tracks over which bearing-rollers travel in their planetary movement about the journal of the axle, said tracks being so located as to enable the entire periphery of each bearing-roller in its planetary movement to be exposed above a space of the residuum-receptacle.

2. A roller-bearing comprising an axle having a journal, a cage having bearing-rollers, and a box having in its lower portion a series of webs crossing the bottom of the box and connecting the opposite side walls thereof, the upper portions of said webs having tracks that cross the longitudinal center of the box, each track acting to sustain different portions of the several bearing-rollers as they travel about said journal.

900,200. LIFTING-JACK. JOHN A. PHILLIPS, Bloomfield, Ind. Filed May 21, 1908. Serial No. 434,124.



1. A lifting jack comprising a standard, upper and lower runners mounted to slide on said standard, an operating lever fulcrumed on the upper runner and having a pitman connection with the lower runner, means carried by the lower runner for gripping the standard, the upper runner being formed with a cavity, a block rigidly secured in said cavity, and formed with a chamber, and an outwardly spring pressed dog mounted in said chamber and arranged to engage the standard.

2. A lifting jack, comprising a standard, upper and lower runners mounted to slide on said standard, the lower runner being arranged to grip the standard, an operating lever fulcrumed on the upper runner and having a pitman connection with the lower runner, the upper runner being formed with a cavity, a block rigidly secured in said cavity and formed with a forwardly facing chamber and an upwardly facing socket in the lower end of the chamber, and an outwardly spring pressed dog mounted in said chamber and supported with its lower end in said socket and arranged for engagement with said runner.

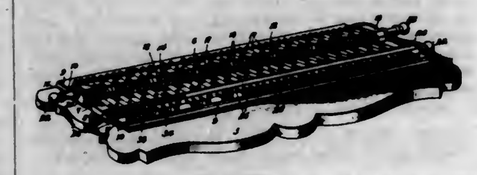
3. A lifting jack, comprising a standard, upper and lower runners mounted to slide on said standard, the lower runner being arranged to clutch the standard, an operating lever fulcrumed on the upper runner and having a pitman connection with the lower runner, a dog mounted in the upper runner and spring pressed into engagement with the standard, a cross-pin interposed between a portion of the dog and the adjacent edge of the standard, the upper runner being formed with laterally elongated slots, accommodating the ends of said pin and the runner being further formed with an inclined outer wall, and a releasing lever forked to embrace the runner and pivotally connected to the ends of said pin and arranged to ride upon the inclined wall of the runner whereby to draw the dog backwardly against its spring tensioning means.

4. A lifting jack, comprising a standard, upper and lower runners mounted to slide on said standard, the lower runner being arranged to clutch the standard, an operating lever fulcrumed on the upper runner and having a pitman connection with the lower runner, a dog mounted in the upper runner and spring pressed into engagement with the standard, a cross-pin interposed between a portion of the dog and the adjacent edge of the standard, the upper runner being formed with laterally elongated slots, accommodating the ends of said pin and the runner being further formed with an inclined outer wall, and a releasing lever forked to embrace the runner and pivotally connect the ends of said pin and arranged to ride upon the inclined wall of the runner whereby to draw the dog backwardly against its spring tensioning means, the runner being formed with a groove designed for the reception of said releasing lever whereby to hold the same in released position.

5. A lifting jack, comprising a standard, upper and lower runners mounted to slide in said standard, an actuating lever formed with a trunnion provided with a threaded bore, the upper runner being provided with a bearing opening receiving said trunnion, a screw working in said bore, and arranged to hold the trunnion in said opening, and an operative connection between said actuating lever and the lower runner.

[Claims 6 to 9 not printed in the Gazette.]

900,201. DEVICE FOR ASSISTING IN TEACHING AND WRITING MUSIC. CHARLES E. POMEROY, Salt Lake City, Utah. Filed Nov. 19, 1907. Serial No. 402,864.



1. In an instrument of the character set forth, the combination with a base, of a scale thereon indicative of successive musical tones, a reciprocatory slide mounted on the base alongside the scale and having a corresponding scale, and a plurality of indicators slidably mounted on the slide and disposed transversely thereof, said indicators being associated with the scale of the slide and being independently movable into and out of asssociated relation with the scale of the base.

2. In an instrument of the character set forth, the combination with a base, of a scale thereon indicative of successive musical tones, a reciprocatory slide mounted on the base alongside the scale and movable longitudinally thereof, a scale carried by the slide, and a plurality of reciprocatory indicating pins slidably mounted on the slide and disposed transversely thereof, said pins being associated with the scale of the slide and being separately movable into and out of associated relation with the scale of the base.

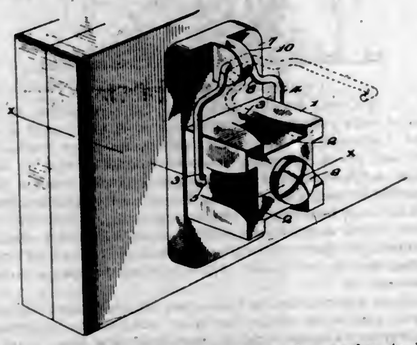
3. In an instrument of the character set forth, the combination with a base having a scale thereon indicative of successive musical tones, of a reciprocatory slide mounted on the base and movable to different positions longitudinally thereof, and a plurality of separate reciprocatory pointers mounted on the slide and independently slidable thereon into and out of associated relation with the scale of the base, said pointers being movable with the slide.

4. In an instrument of the character set forth, the combination with a base having a scale indicative of successive musical tones, of a support, and a plurality of separate pointers slidably mounted on the support and movable thereon into and out of association with the scale.

5. In an instrument of the character set forth, the combination with a scale of tone designations, of a support located adjacent to the scale and having a recess therein, a plurality of indicators slidably mounted on the support, and friction means located in the recess and engaging the indicators to hold them against accidental displacement.

[Claims 6 to 11 not printed in the Gazette.]

900,202. NUT-LOCK. SEBASTIAN C. PUGH, Nottingham township, Harrison county, Ohio. Filed Feb. 15, 1908. Serial No. 416,066.



1. In a nut lock, the combination of a washer to be slipped upon the bolt, a spring lock device of approximately U-form having pivotal connection with said washer and having inturned points at the extremities of its side members, and a nut having openings in opposite edges and having inclined portions leading outward from said openings for the inturned points of the lock device to ride upon when pressing the same home.

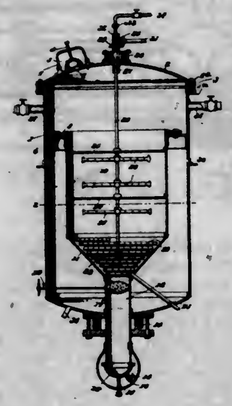
2. In a nut lock, the combination of a washer or plate having a lug, a spring lock device of approximately U-form having a crimp at its closed end mounted in the said lug and embracing opposite sides thereof and having inturned points at the extremities of its side members, and a nut having inclined portions in opposite edges which converge outwardly and having openings at the inner ends of said inclined portions to receive the inturned points of the lock device.

3. A nut lock comprising a washer or plate having an interlocking projection upon its rear side and provided with a lug upon its face, a spring lock device of U-form having inturned points at the extremities of its side members and having a crimp in its closed end which is mounted in the aforementioned lug and embraces opposite sides thereof, and a nut having inclined portions at opposite edges which converge and flare outwardly, and having openings at the inner ends of said inclined portions to receive the inturned points of the lock device.

900,203. TURPENTINE-STILL. EDWIN E. QUINKER, Valdosta, Ga. Filed Dec. 11, 1907. Serial No. 406,112.

1. A turpentine still, comprising a body portion, an angular ring secured to the interior of said body portion near the upper end of the latter, a collar secured to the ring, a pulp receptacle secured to the collar and suspended thereby within the cylinder, the lower end of the said pulp receptacle being tapered, a pulp discharge pipe extending downwardly from the lower end of the pulp receptacle and extending out through the bottom of the body portion, a removable closure for the upper end of the body portion, a vapor outlet pipe secured to the body portion above the pulp receptacle, and a worm mounted within the lower tapered end of the pulp receptacle, said worm being of inverted spiral form and formed in its convolutions with orifices, one end of said worm extending through the cylinder and designed to admit steam into the worm.

2. A turpentine still, comprising a body portion, a pulp receptacle mounted within said body portion, means for admitting steam to said receptacle, a pulp discharge pipe connected to said receptacle, and extending out through the bottom of the body portion, and a perforated damper adapted to control the communication between the receptacle and the discharge pipe.



3. In a turpentine still, the combination of a pulp receptacle, means for admitting steam to said receptacle, a pulp discharge pipe connected to said receptacle and a perforated damper adapted to control the communication between the receptacle and discharge pipe, said damper being arranged to be turned across the discharge pipe as well as in a position to provide a free opening therethrough.

4. A turpentine still, comprising a body portion, a pulp receptacle mounted in said body portion, means for admitting steam to said receptacle, a pulp discharge pipe connected to said receptacle, a perforated damper adapted to control the communication between the receptacle and the discharge pipe, and an operating rod for said damper extending out through the body portion.

5. A turpentine still comprising a body portion, a pulp receptacle mounted within said body portion, a discharge pipe connected to the lower end of said pulp receptacle, and extending out through the bottom of the body portion, means for admitting steam to the pulp receptacle, a closure for the lower projecting end of the discharge pipe, a draw-off cock secured to the closure, and a perforated damper mounted in the upper end of the discharge pipe.

900,204. CHEMICAL PRODUCT RESEMBLING CELLULOID AND PROCESS FOR PRODUCING THE SAME. FRIEDRICH RASCHIG, Ludwigshafen-on-the-Rhine, Germany. Filed June 27, 1906. Serial No. 323,721.

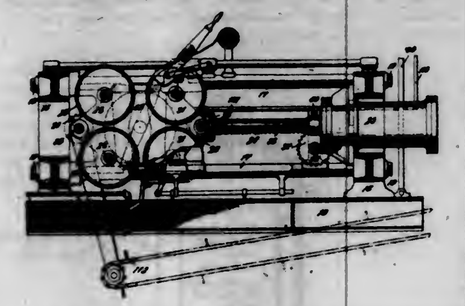
1. The improvement in the manufacture of chemical products resembling celluloid, which consists in replacing the camphor by cyclo-hexanone, substantially as described.

2. The improvement in the manufacture of chemical products resembling celluloid, which consists in replacing a portion of the camphor by cyclo-hexanone, substantially as described.

3. As a new chemical product, a hard, transparent and slightly aromatic body resembling celluloid and obtainable from nitro-cellulose and cyclo-hexanone, substantially as described.

4. As a new chemical product, a hard, transparent and slightly aromatic body resembling celluloid, and obtainable from nitro-cellulose, camphor and cyclo-hexanone, substantially as described.

900,205. ROLLER-PRESS. EDGAR REAGAN, San Antonio, Tex., assignor, by mesne assignments, to Reagan Bale Company, San Antonio, Tex. Filed July 7, 1906. Serial No. 325,122.



1. In a baling press, the combination with a plurality of compression rolls, a fluid pressure means for resisting outward movement of one of them as the diameter of the bale increases, automatic means for effecting gradual increase in the pressure exerted on the bale as the diameter of the bale gradually increases, and means for adjusting the period and extent of such increased pressure.

2. In a baling press, a plurality of rolls, movable housings carrying one pair of rolls, a cylinder, a piston arranged therein and connected to the movable housings, a fluid pressure supply pipe connected to the cylinder, a pressure regulating valve connected to said pipe, a lever bearing on the stem of the valve, a slidable weight carried by the lever, a pivotally mounted intermediate lever connected to the weight, a bar extending from the movable housings and connected to the intermediate lever, and means for varying the point of connection between the bar and the intermediate lever to thereby alter the period and extent of movement of the weight.

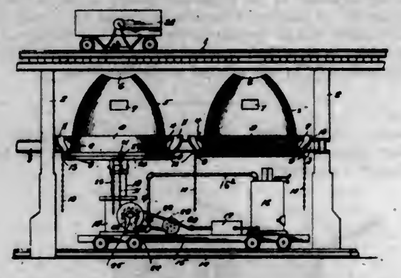
3. In a baling press, a plurality of pairs of rolls, movable housings carrying one pair of rolls, a fluid pressure cylinder, a piston arranged therein and connected to the movable housings, a fluid pressure supply pipe leading to the cylinder, a pressure regulating valve connected in the pipe, and a lever having two arms, one of which is arranged to engage the stem of the valve, an adjustable weight tending to prevent active movement of the lever against the valve stem, a slidably mounted weight tending to force the lever into engagement with the stem and open the valve, a lever connected to the weight, and a rod extending from one of the housings and connected to said lever.

4. In a roller press, the combination with a plurality of pairs of rolls, of movable housings carrying one pair of rolls, a fluid pressure cylinder, a piston arranged therein and connected to the housings, a pressure supply pipe leading to the cylinder, a pressure regulating valve in said supply pipe, a lever engaging the stem of the valve, a movable weight on said lever, a second lever having an elongated connection with the weight, an arm extending from said second lever, a rod connected to one of the housings and slidably connected to the second lever, a threaded rod extending between the connecting rod and the arm, and an adjusting nut on said threaded rod to alter the connection between the connecting rod and the second lever.

5. In a roller press, a plurality of rolls, housings carrying the rolls and movable relatively to each other, a pair of slidable brackets arranged between the housings, a pair of alining shafts journaled in the brackets, one of said shafts being movable in the direction of its length, freely revoluble disks carried by the shafts and arranged to engage with the opposite ends of the bale, a cylindrical block mounted in one of the brackets and connected to the movable shaft, and a cam for imparting endwise movement to said block.

[Claims 6 to 8 not printed in the Gazette.]

900,206. COKE-DRAWING APPARATUS. JAMES REED, Pittsburg, Pa. Filed May 2, 1907. Serial No. 371,392.



1. In a coke drawing apparatus, the combination of elevated coke ovens, cars adapted to travel above said ovens for discharging coal therein, detachable bases connected to said ovens, upwardly extended flanges carried by said base, a truck adapted to travel beneath said ovens, a ram carried by said truck, a head trunnioned upon the piston of the ram, hook-shaped levers connecting said head to the base of an oven, drums located upon said truck, chains connecting said drums with said head, and means for operating said drums to tilt said head and the base attached thereto.

2. In a coke drawing apparatus, the combination of elevated coke ovens, detachable bases connected to said ovens, upwardly extended flanges carried by said base, a truck adapted to travel beneath said ovens, a ram carried by said truck, a head trunnioned upon the piston of the ram, hook-shaped levers connecting said head to the base of an oven, drums located upon said truck, chains connecting said drums with said head, and means for operating said drums to tilt said head and the base attached thereto.

3. In a coke drawing apparatus, the combination of elevated coke ovens, a detachable base carried by each oven, a truck movable beneath said ovens, a ram carried by said truck, a head trunnioned upon the piston of the ram, drums carried by said truck and connecting with the diametrically opposed sides of said head, means to clamp said head to the base of an oven, and means carried by said truck for operating said drums to tilt said head.

4. In a coke drawing apparatus, the combination of elevated coke ovens, a base detachably connected to each oven, a truck adapted to travel beneath said ovens, a head supported from said truck and adapted to be detachably connected to the base of an oven, means carried by said truck for raising and lowering said head, and means for tilting said head.

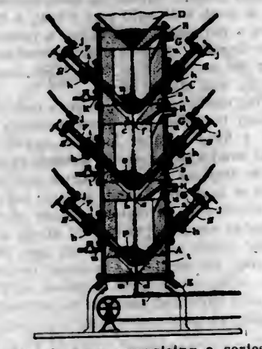
5. The combination with a coke oven, of a base detachably connected to said oven, a head adapted to be detachably connected to said base, means movable beneath said oven for raising and lowering said head, and means for tilting said head.

[Claims 6 and 7 not printed in the Gazette.]

900,207. ELECTRIC FURNACE. JAMES H. REID, Cornwall, Ontario, Canada, assignor of one-half to Stephen Lemuel Tingley, Ottawa, Canada. Filed Apr. 1, 1907. Serial No. 365,783.

1. An electric furnace comprising a series of separate and superimposed units, each unit discharging into the one below it, and means for creating an electric arc centrally within each unit, through which the material discharged from the previous unit is adapted to fall, and means for varying the chemical conditions in each unit, as and for the purpose specified.

2. An electric furnace comprising a series of separate and superimposed units, each unit discharging into the one below it, means for creating an electric arc centrally within each unit through which the material discharged from the previous unit is adapted to fall, means for varying the chemical conditions in each unit, and means for separately withdrawing the volatile products from each unit, as and for the purpose specified.



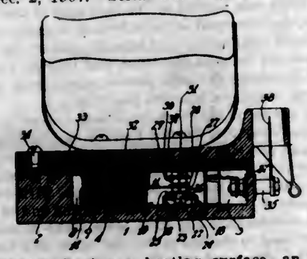
3. An electric furnace comprising a series of separate and superimposed units having centrally formed openings in their bottoms through which the material is adapted to pass and drop through the units, without contacting with the walls, thereof, means for creating an electric arc centrally within each unit, through which the material is adapted to pass, and means for varying the chemical conditions in each unit, as and for the purpose specified.

4. An electric furnace comprising a series of similarly formed separate and superimposed units, each unit having separate means for varying the temperature introducing chemical reagents, and withdrawing the volatile products, as and for the purpose specified.

5. An electric furnace including a plurality of chambers discharging into each other and forming together a single unitary furnace, a plurality of sets of electrodes in the chambers adapted to produce arcs therein, and conducting means leading into each of the chambers and separately discharging on the exterior of the whole furnace, whereby the particular volatile products sublimed in each chamber may be separately recovered.

[Claim 6 not printed in the Gazette.]

900,208. ELECTRIC LAUNDRY-IRON. EARL H. RICHARDSON, Ontario, Cal., assignor to Pacific Electric Heating Company, Ontario, Cal., a Corporation of California. Filed Dec. 2, 1907. Serial No. 404,873.



1. A member having a heating surface, an electrical heating unit within the member, a thermic fuse in circuit with the heating unit, and a fuse support unattached to the member and supporting the fuse.

2. An electric laundry iron comprising two members, a heating unit between the members, a thermic fuse in circuit with the heating unit, and a fuse support unattached to the members and supporting the fuse.

3. An electric laundry iron comprising two members, a heating unit between the members, a thermic fuse in circuit with the heating unit, and a fuse support unattached to the members and supporting the fuse, the two members when in place firmly pressing the fuse support between them to hold it in place.

4. A member having a heating surface, an electrical heating unit within the member, a thermic fuse in circuit with the heating unit, a fuse support unattached to the member and supporting the fuse, and a fuse receptacle of non-conducting material inclosing the fuse and its support.

5. In an electrically heated device, a member having a recess, a cover therefor, a pair of electrical heating units in the recessed member, a fuse support between the heating units, and a thermic fuse on said support and connected to the heating units.

[Claims 6 to 15 not printed in the Gazette.]

900,209. GUARD-RAIL-SPACING BLOCK. FREDERICK W. RIZER, Chicago, Ill., assignor of one-half to F. M. Patterson, Chicago, Ill. Filed Feb. 4, 1908. Serial No. 414,196.

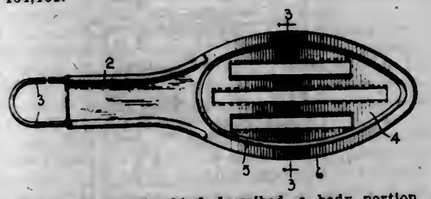


1. A guard rail block provided with a plurality of oppositely disposed lateral bearing faces arranged in pairs with the faces of each pair parallel with each other, the distance between the opposing faces of each pair varying with respect to the distance between opposing faces of the other pairs, said block being provided with a plurality of through bolt openings which intersect each other at the center of the block, each extending directly between to opposing lateral bearing faces.

2. A guard rail block having lateral bearing faces which are arranged to provide an irregular hexagon in horizontal section with the faces of opposing sides parallel, and bolt openings extending through the block and intersecting at the center thereof, each extending directly between two opposing parallel bearing faces.

3. A guard rail block having lateral bearing faces which are arranged to provide an irregular hexagon in horizontal section with the faces of opposing sides parallel, and bolt openings extending through the block and intersecting at the center thereof, each extending directly between two opposing parallel bearing faces, the bottom face of the block being curved or inclined upwardly and outwardly in line with each of said lateral bearing faces to conform to the base flanges of the rails in all positions of the block.

900,210. CAKE-MIXER AND EGG-BEATER. AARON J. SALTSMAN, Chicago, Ill., assignor to Rachel B. Saltsman, Chicago, Ill. Filed Nov. 29, 1907. Serial No. 404,461.

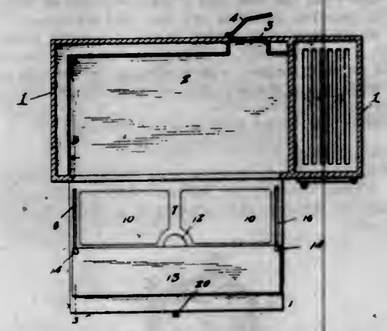


In a device of the kind described, a body portion, a flange surrounding the same and carrying an integral ledge, and a grid formed in said body portion, the bars or flat portions whereof are provided with oppositely extending vertical longitudinal flanges whose edges extend beyond the planes of the body and the ledge respectively.

900,211. ILLUMINATED OVEN FOR STOVES. FRED SANTOSKI, Stevens Point, Wis. Filed Apr. 24, 1908. Serial No. 429,003.

1. In an oven, a door having arranged therein transparent panels, a cover to protect said panels when the door is

in an opened position, and means to operate said cover whereby when the door is in closed position, said panels will be uncovered, substantially as described.



2. In an oven, a door having arranged therein transparent panels, and means operated by the opening and closing of the door to cover and uncover said panels, thereby preventing the same from being broken when the door is in an open position, substantially as described.

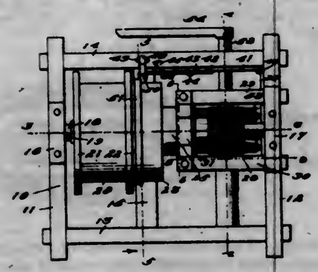
3. In an oven, a door having arranged therein transparent panels, a protecting plate to cover said panels, and combined door-supporting and plate-operating rods adapted to support the door in its open position and to move said plate over the panels when the door is opened, substantially as described.

4. An oven having arranged in its rear side a transparent panel, a door having therein transparent panels, a protecting plate to cover the panels in said door, and combined door-supporting and plate-operating devices adapted to move said plate over the panels when the door is opened and to support the door in an open position, substantially as described.

5. An oven having in its rear side a transparent panel, a reflector to throw the light into the oven through said panel, a door having transparent panels, a protecting plate to cover the panels in said door, and combined door-supporting and plate-operating rods adapted to support the door in an open position and to move said plate across the transparent panels when the door is opened, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

900,212. HOISTING-MACHINE. JOSHUA J. SAY, Unionville, Mo. Filed Jan. 15, 1908. Serial No. 411,010.

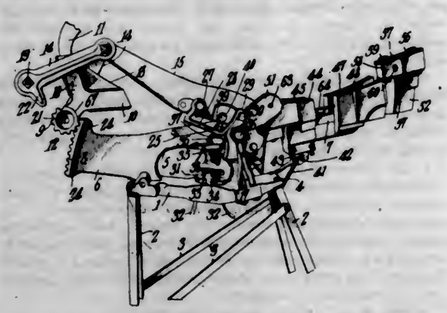


1. In a machine of the class described, the combination with a revolvable drum having a clutch face at one side, a sliding clutch member located adjacent said clutch face for co-engagement therewith, a gear wheel carried by said sliding clutch member, a driving worm in mesh with said gear wheel, a pivotally mounted lever disposed above said drum, a brake band carried by said lever for engagement with a portion of said drum, and connections between said lever and said sliding clutch member respectively.

2. The combination with a revoluble drum having a clutch face at one side and a movable clutch member located adjacent the drum for engagement with said clutch face, of a gear wheel carried by said clutch member, a drive worm in mesh with said gear wheel, a friction brake engaged with a portion of said drum, a pivoted brake operating lever disposed above said drum, and means carried by said lever for movement of said clutch member toward and away from said clutch face.

3. A hoisting mechanism comprising a revoluble drum including a shaft therefor, said drum having a clutch face at one side, a fixed member located rearwardly of said drum, a brake band fixed at one of its ends to said member, a pivoted lever disposed above said drum and engaged with the other end of said brake band, slidable bars located adjacent said clutch face, a clutch member carried by said bars and slidably arranged upon said shaft, a gear wheel carried by said clutch member, a worm gear engaged with said gear wheel, an oscillating member located adjacent said slidable bars, connections between said oscillating member and said bars, and connections between said lever and said oscillating bars respectively.

900,213. CUTTING, PUNCHING, AND TIRE-SHRINKING MACHINE. WILLIAM T. SEARS, Onslow, Iowa. Filed June 20, 1907. Serial No. 379,998.



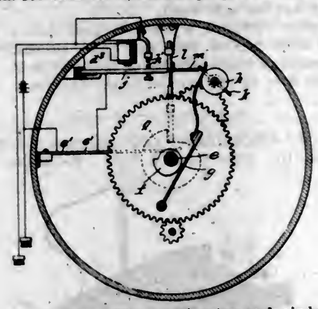
1. In a device of the class described, a fixed or bed member provided with a rack or gear teeth at one end and ledges adjacent to said gear teeth, a pivoted arm carried by the bed member, links carried by the end of the pivoted arm and having lugs formed on their free ends engaging behind the ledges on the bed member, and a pinion engaging the gear teeth and carried by the free ends of the links, said pinion having divergent sockets formed thereon, one of said sockets being adapted to over-ride the end of the bed member and extend between the links and thereby constitute a weighted extension for said pinion constrained by gravity to hold the pinion in inactive position.

2. In a device of the class described, a fixed or bed member, a pivoted member carried thereby and having an angle extension on one side of the pivot, a pair of clamping jaws carried by the bed member, another pair of clamping jaws carried by the bed member and movable with relation to the first pair of jaws, a lever engaging the end of the movable jaws remote from the fixed jaws, links connecting one end of the lever to the bed plate, and other link connections between the other end of said lever and the angle end of the pivoted arm.

900,214. VENT-VALVE FOR AUTOMATIC TRAIN-STOPS. HIRAM G. SEDGWICK, Mill Valley, Cal. Filed June 29, 1907. Serial No. 381,467.

1. In combination with a train-pipe, of a vent-valve therefor and a motor for operating said vent-valve, this motor embodying means for giving to the valve a differential movement, whereby a quick preliminary partial reduction and a subsequent full reduction of pressure is obtained with but a single action of the valve.

2. In combination with a train-pipe and air-brake system, a vent-valve therefor having an elongated port whose forward end is abruptly narrowed, and a differential motor mechanism for said valve, for the purpose set forth.



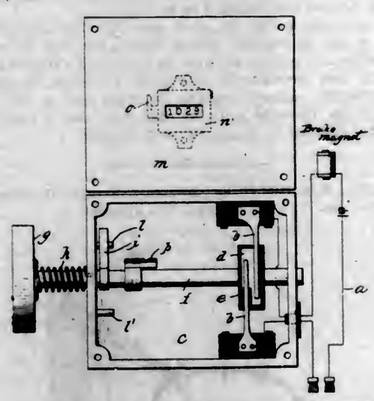
3. In combination with a train-pipe and air-brake system, a vent-valve therefor having an elongated port whose forward end is abruptly narrowed, and a differential motor mechanism for said valve, said motor mechanism being constructed to give an initial quick movement and a subsequent slower movement, for the purpose set forth.

4. In combination with a train-pipe of an air-brake system, a vent-valve therefor having an elongated port, and automatic mechanism for actuating said valve quickly during a part of its movement and slowly during another part of its movement, for the purpose set forth.

5. In combination with a train-pipe of an air-brake system, of a vent-valve therefor having an elongated port, a clock mechanism for actuating the valve a full stroke with each actuation and then stopping it, said mechanism embodying automatic braking means for retarding the movement of the valve during a portion of its stroke.

[Claims 6 to 11 not printed in the Gazette.]

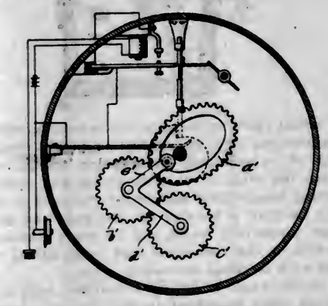
900,215. AUTOMATIC TRAIN-STOP. HIRAM G. SEDGWICK, Mill Valley, Cal. Filed Sept. 4, 1907. Serial No. 391,366.



In a train-stopping apparatus embodying a brake-applying circuit, a circuit-breaker in said circuit and means for manually-operating it, means for automatically restoring the circuit-breaker to normally closed position when released, and a registering device operated every time the to the valve, for the purpose set forth.

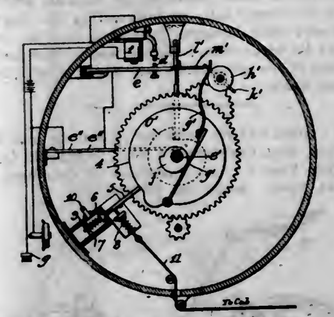
900,216. AUTOMATIC TRAIN-STOP. HIRAM G. SEDGWICK, Mill Valley, Cal. Filed Oct. 28, 1907. Serial No. 399,443.

1. In combination with a train-pipe of an air-brake system, of a vent valve therefor having an elongated port, a motor mechanism for actuating the valve a full stroke with each actuation and then stopping it, said mechanism embodying positively geared mechanism for imparting to the valve a quick movement during a part of its stroke and a slower movement during another part of its stroke, for the purpose set forth.



2. In an automatic train-stopping mechanism, a vent for the train-pipe embodying a rotary valve having an elongated port, a motor mechanism for actuating the valve a single stroke and then stopping it embodying positive differential gearing for imparting a differential movement to the valve, for the purpose set forth.

900,217. AUTOMATIC TRAIN-STOP. HIRAM G. SEDGWICK, Mill Valley, Cal. Filed Jan. 4, 1908. Serial No. 409,302.



1. In combination with automatic train-stopping devices embodying means for opening and closing a main vent, of a supplemental vent and means for opening and holding open the same after the main vent is closed, and means for manually closing this supplemental vent.

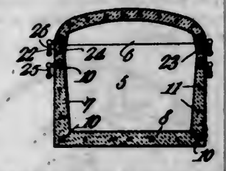
2. In combination with automatic train-stopping mechanism embodying a main vent and means for automatically opening and closing the same, of automatic means for preventing the automatic restoration of the brake mechanism to the control of the engineer, and manual means for releasing this latter preventing means.

3. The combination of automatic train stopping devices, of means operated thereby for automatically preventing the release of the brakes after the automatic devices have applied them, and manual means within the control of the engineer for releasing said automatic preventing means and thus restoring the brake mechanism to the control of the engineer.

900,218. VAULT. THOMAS H. SEIFERT, Springtown, Pa. Filed Dec. 28, 1907. Serial No. 408,410.

1. A burial vault including a concrete body portion, and a reinforcing shell embedded in the concrete forming the body portion and comprising a plurality of frames supported one above the other in parallel planes and connected by intersecting, longitudinal and transverse rods, a

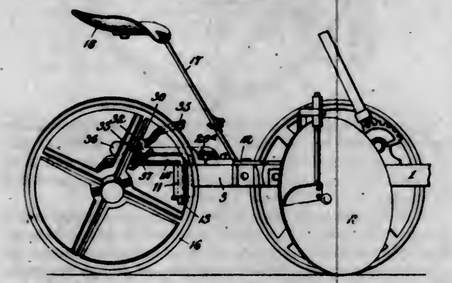
wire mesh covering forming a housing for the intersecting rods and secured to the upper supporting frame, and a cover for the body portion.



2. A burial vault including a concrete body portion having a reinforcing shell embedded therein and comprising a plurality of substantially rectangular frames supported one above the other in parallel planes and connected by intersecting longitudinal and transverse rods, a wire mesh covering forming a housing for the rods and secured to the upper supporting frame, and tie wires disposed at the intersection of the transverse and longitudinal rods and provided with terminal anchoring spurs.

3. A burial vault including a concrete body portion, a reinforcing shell embedded in the concrete forming the body portion and comprising a plurality of substantially rectangular frames supported one above the other in parallel planes and connected by intersecting longitudinal and transverse rods, a wire mesh covering forming a housing for the rods and secured to the upper reinforcing frame, tie rods disposed at the intersection of the transverse and longitudinal rods and provided with terminal anchoring spurs, a concrete cover, and a reinforcing shell embedded in the cover and comprising a frame having spaced arched end pieces secured thereto and connected by longitudinal rods, transverse rods connecting the opposite sides of the frame of the cover shell and intersecting the longitudinal rods, a wire mesh covering forming a part of the cover shell, and tie wires connecting the longitudinal and transverse rods of the cover shell and provided with terminal anchoring spurs.

900,219. DISK PLOW. EDWARD H. SHOLAR and WALTER W. PACE, East Chattanooga, Tenn., assignors to Volunteer Disc Plow Co., a Corporation of Tennessee. Filed July 31, 1906. Serial No. 328,604.



1. A plow including a movable axle, a shaft having a bearing between its ends and adjustable longitudinally in said bearing, means for normally holding the shaft against longitudinal movement but permitting it to be adjusted, an axle stop carried by one end of the shaft on one side of the bearing, and operating means for the shaft engaged with the other end thereof on the other side of the bearing.

2. A plow including a bracket, a movable axle associated therewith, upstanding ears carried by the axle, a shaft journaled and longitudinally movable in the ears, means coöperating with the ears to hold it in different longitudinal positions, an axle stop carried by one end of the shaft and disposed at one side of the bracket, and a treadle secured to the other end of the shaft and located at the other side of the bracket.

3. A plow including a movable axle, a movable stop therefor, and a support for the stop longitudinally adjustable to different positions to vary the location of the stop.

4. A disk plow including a trailing axle, a rotary stop shaft, an axle stop carried at one end of the shaft, and an adjusting nut for said shaft.

5. A plow including a movable axle, and a pivotally mounted stop therefor, said stop being adjustable to different positions longitudinally of its pivot axis.

[Claims 6 to 12 not printed in the Gazette.]

900,220. CLOTHES-GUARD. BERTREUM J. SIMPSON, Chicago, Ill. Filed Oct. 14, 1907. Serial No. 397,244.



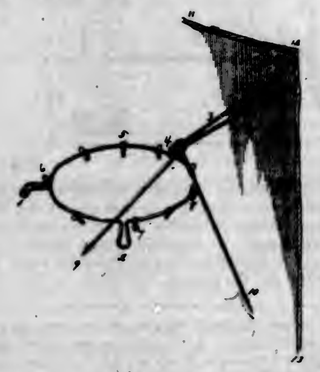
1. In a device of the class described the combination with a tray having a downwardly inclined end, of resilient attaching clips on the bottom thereof, a bracket adapted to be engaged on either side of the tray, and an adjustable arm at one end of the tray.

2. In a device of the class described the combination with a tray comprising a bottom and sides having one end inclined downwardly, sockets on each side of said tray, a bracket adapted to engage therein, spring clips on the bottom of the tray adapted to engage a porch railing, and a hooked arm slidably engaged on the bottom of the tray between said clips.

3. In a device of the class described the combination with a tray of sockets on the side walls thereof, a removable bracket adapted to be engaged in the sockets of either side wall, a pair of resilient clips on the bottom of said tray, loops on the bottom of the tray between said clips and a hooked arm engaged in said loops.

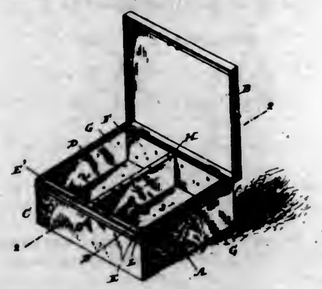
4. In a device of the class described the combination with a tray of resilient means thereon adapted to engage the same to a porch rail with its outer end extending outwardly and downwardly therefrom, a hooked, horizontal arm slidably engaged beneath the inner end of said tray, sockets on the side walls of said tray and a removable bracket adapted to engage in said sockets.

900,221. BAG-HOLDER. ADELE A. SMITH, Chicago, Ill. Filed Jan. 9, 1908. Serial No. 410,066.



A device of the character described comprising a wire bent to form an elongated handle portion and an annular body portion integral with said handle portion said body portion having outwardly and downwardly projecting members upon which the device is adapted to rest in combination with a brace member comprising two pointed members pivotally connected to each other, the lower pointed ends of said members being adapted to stick into a wall or like support and the upper ends of said members being bent to form handle engaging portions.

900,222. CIGAR-BOX. ALBERTIS B. SMITH, Binghamton, N. Y. Filed May 18, 1908. Serial No. 433,431.



1. In a cigar box, the combination of a receptacle, a floor lining therefor, removable side linings for the receptacle, removable end linings for the receptacle, feet projecting from the end and side linings holding said linings away from the ends and sides of the receptacle, said linings being perforated.

2. In a cigar box, the combination of a receptacle, a floor lining therefor, removable side linings for the receptacle, removable end linings for the receptacle, feet projecting from the end and side linings holding said linings away from the ends and sides of the receptacle, said linings being perforated, said side and end linings resting on the floor lining.

3. In a cigar box, the combination of a receptacle, a floor lining therefor, removable side linings for the receptacle, removable end linings for the receptacle, feet projecting from the end and side linings holding said linings away from the ends and sides of the receptacle, said linings being perforated, and means for locking said side linings and end linings one to the other.

4. In a cigar box, the combination of a receptacle, a floor lining therefor, removable side linings for the receptacle, removable end linings for the receptacle, feet projecting from the end and side linings holding said linings away from the ends and sides of the receptacle, said linings being perforated, and yielding means for locking said side linings and end linings one to the other.

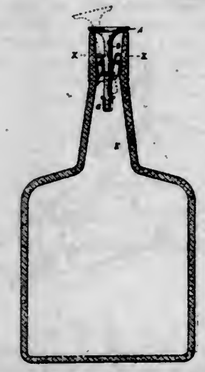
5. In a cigar box, the combination of a receptacle, a floor lining therefor, removable side linings for the receptacle, removable end linings for the receptacle, feet projecting from the end and side linings holding said side linings away from the end and side walls of the receptacle, and a hollow removable perforated partition resting on the floor of the receptacle for dividing the interior of the receptacle into compartments.

[Claim 6 not printed in the Gazette.]

900,223. BOTTLE-STOPPER. JAMES H. SMITH, Portland, Me. Filed Feb. 8, 1908. Serial No. 414,892.

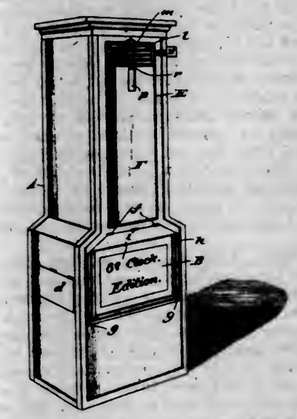
1. A bottle stopper having an attenuated stem provided with a shoulder intermediate its ends, a removable cap on its inner end and a detent mounted on said stem between said shoulder and said removable cap, said detent adapted to have lateral frictional engagement with the walls of a bottle.

2. A bottle stopper having an attenuated stem provided with a shoulder intermediate its ends and a cap on its lower end, in combination with a detent mounted on said stem and provided with flexible upwardly extending arms adapted to have frictional engagement with the walls of



the neck of a bottle, said detent being adapted to be forced into the neck of the bottle by means of said shoulder.

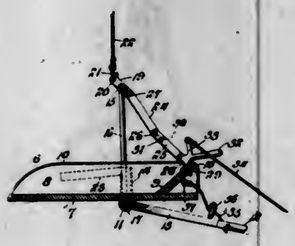
900,224. COIN-CONTROLLED OPERATING MECHANISM FOR VENDING APPARATUS. EVERETT X. SOMERS, St. Johnsbury, Vt. Filed Aug. 16, 1907. Serial No. 388,845.



1. In a coin-controlled operating mechanism, the combination of a frame, a shaft movable endwise in said frame, a friction piece fixed to the frame, a friction device fixed on the shaft and opposed to the said friction piece, means carried by the frame for adjusting the shaft endwise, to increase or diminish the pressure of the friction device against the friction piece; a coin chute, a disk fixed on the shaft and having notches, a spring-actuated trigger fulcrumed at an intermediate point of its length in the frame with one of its arms in position to engage the notches in the disk, and a lever fulcrumed at an intermediate point of its length on the frame and having one of its arms arranged to be depressed by a coin deposited in the chute, and its other arm connected to an arm of the trigger.

2. In a coin-controlled operating mechanism, the combination of a casing, a coin chute, a frame fixed in the casing, a shaft movable endwise in said frame, a friction piece fixed to the frame, a friction device fixed on the shaft and opposed to the said friction piece, means carried by the frame for adjusting the shaft endwise to increase or diminish the pressure of the friction device against the friction piece, a rotary device fixed on the shaft and means engaging the rotary device and arranged when actuated by a coin deposited in the chute to release said rotary device.

900,225. LOADING OR UNLOADING MEANS. HENRY O. SPARKS, near Shelbina, Mo. Filed Dec. 7, 1907. Serial No. 405,573.



1. In a device of the character set forth, the combination with a holder or receptacle, of a pivot bar extending transversely beneath the same between its ends and projecting beyond its opposite sides, elevating means connected to the projecting ends of the pivot bar, and a handle extending beneath the receptacle or holder between the sides thereof and connected to the pivot bar.

2. In a device of the character set forth, the combination with a holder or receptacle, of a pivot bar extending transversely beneath the same, pivotal connections between the pivot bar and holder or receptacle, a handle bar extending beneath the holder or receptacle between the sides thereof and being fixed to the pivot bar between its ends, and means for elevating the holder or receptacle.

3. In a device of the character set forth, the combination with a holder or receptacle, of a pivot bar extending transversely beneath the same between its ends and projecting beyond its opposite sides, of pivotal connections between said pivot bar and holder or receptacle, an elevating bail connected to the projecting ends of the pivot bar, a handle bar extending beneath the holder or receptacle and having its inner end fixed to the central portion of the pivot bar, and braces connecting the handle and pivot bars.

4. In a device of the character set forth, the combination with a scoop having an open front end and a rear wall provided with a socket, of a bail pivotally connected to the scoop, and a device for holding the scoop and bail against relative movement, said device comprising hingedly connected links, one of which is pivoted to the bail, the other having a spur that engages in the socket of said rear wall, one of said links having a finger that detachably engages the other link to hold said links in a predetermined position.

5. In a device of the character set forth, the combination with a scoop having an open front end and a rear wall, of a bail having side arms pivotally connected to the scoop, abutments carried by the scoop and located in the paths of movement of the side arms, and a device for holding the side arms against the abutments, said device comprising pivotally connected links, one of which is pivoted to the bail, the other having a spur that detachably engages the rear wall of the scoop.

[Claim 6 not printed in the Gazette.]

900,226. EAR-TRUMPET. BENJAMIN S. STEPHENSON, Brooklyn, N. Y. Filed Oct. 9, 1907. Serial No. 396,548.

1. An ear trumpet having a main speaking tube and branch tubes for the ears, and a mouth piece appurtenant to the main speaking tube adapted to be gripped in the mouth of the speaker.

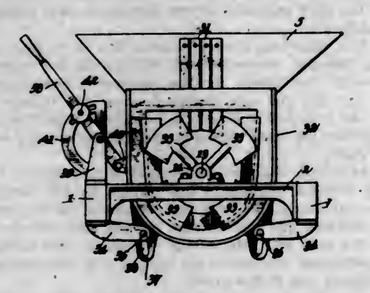
2. An ear trumpet having ear tubes and a main speaking tube, said speaking tube adapted to be held in the mouth of the speaker.

3. As an article of manufacture, an ear trumpet having an ear tube for each ear, a main speaking tube connected therewith, and a mouth piece adapted to be held in the



mouth of the speaker, said mouth piece and speaking tube having substantially the same conducting area.

900,227. MIXING APPARATUS. JOHN A. SVENSON, Pittsburg, Pa. Filed July 13, 1906. Serial No. 326,050.



1. In a mixing apparatus, in combination, a supporting frame comprising brackets provided with pins, a mixing trough resting upon said pins, mixing devices in said trough, means for tilting one side of said trough free of said pins, and means for guiding said trough back to its normal position upon said pins.

2. In a mixing apparatus, in combination, a mixing trough; a support for said trough at opposite sides thereof; mixing devices in said trough; and means interposed between one of said supports and said trough for moving said trough first off one support and then off the other toward said mixing devices.

3. In a mixing apparatus, in combination, a mixing trough; a support for said trough at each side thereof, mixing devices in said trough; means engaging said trough for tilting one side of said trough free of the support for that side; and means engaging said trough for guiding said trough back to said support.

4. In a mixing apparatus, in combination, a non-rotatable non-sectional mixing trough; a supporting frame comprising brackets at each side of said mixing trough upon which said trough is movably supported; mixing devices in said trough movable with relation to said trough; and means for moving said trough upon said brackets.

5. A concrete mixer comprising a supporting frame; a non-rotatable, non-sectional mixing trough; a supporting means in said frame for said trough at opposite sides of said trough, the supporting means at each side of said trough being adapted to serve as a separate pivot for the entire trough; mixing devices in said trough; and a lever pivoted in said frame and connected with said trough for moving the latter toward and away from the mixing devices.

[Claims 6 and 7 not printed in the Gazette.]

900,228. CALENDAR. HOWARD TAYLOR, Philadelphia, Pa., assignor of one-half to Sinclair W. Chiles, South Bethlehem, Pa. Filed Nov. 25, 1907. Serial No. 403,634.



1. In a calendar, a sheet having a series of transverse paper strips attached to it at intervals, and dates each printed partly upon the sheet and partly upon the strips intermediate of the points of attachment to the sheet.

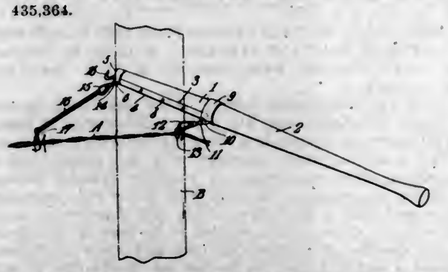
2. In a calendar, a sheet having a series of transverse paper strips attached to it at intervals and having weakened portions adjacent to the points of attachment, and dates each printed partly upon the sheet and partly upon the strips intermediate of the weakened portions and points of attachment to the sheet.

3. A calendar consisting of a sheet combined with detachable portions covering a portion of its surface, and dates each printed partly upon the paper sheet and partly upon the detachable portions.

4. A calendar consisting of a sheet, combined with a series of parallel strips secured to it at intervals in their length, and dates having the middle portions printed upon the strips and the top and bottom portions printed upon the sheet adjacent to the strips, whereby when the strip is removed the top and bottom portions of the date still remain visible.

5. A calendar consisting of a sheet having dates printed in part upon it, combined with detachable portions having the remaining portions of the dates printed upon them and attached to the sheet to bring the two portions of the dates into juxtaposition to complete the date.

900,229. WIRE-STRETCHER. AQUILAR W. TEMPLETON, Tornado, W. Va. Filed May 27, 1908. Serial No. 435,364.

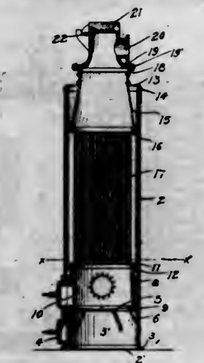


1. The combination with a body and a handle extending therefrom; of a ferrule upon one end of the body, a combined wear and retaining strip extending upon the body, projections extending from the body and through said strip, means surrounding one end of the body for retaining one end of the strip thereon, and separate wire engaging devices connected to said means and to the ferrule respectively.

2. The combination with a body and a handle extending therebeyond; of post engaging projections extending from the body, a combined wear and retaining strip disposed upon the body and engaged by said projections, a band surrounding each end portion of the body and of said strip, one of the bands being connected to the strip, and gripping devices connected to the respective bands.

3. The combination with a longitudinally grooved tapered body and a handle extending therefrom; of support engaging pointed projections detachably engaging the grooved portion of the body, a combined wear and retaining strip detachably mounted within the groove and having apertures for the reception of the support engaging projections, bands surrounding end portions of the body and strip, said strip being integral with one of the bands, separate gripping devices, and relatively long and short connections between the gripping devices and the respective bands.

900,230. BOILER FOR GAS-MAKING SYSTEMS. CHARLES I. TENNEY, Mason City, Iowa. Filed Apr. 19, 1907. Serial No. 369,051.



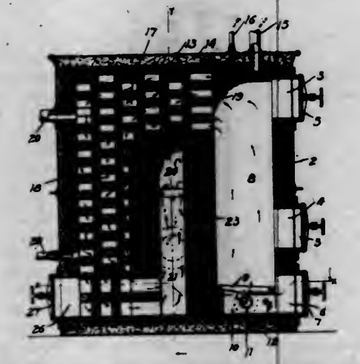
1. In a water gas producing system, an upright boiler comprising a shell, a series of submerged flues provided within said shell, a grate located below said flues, a gas intake connection above said grate and an air blast located below said grate, and a stack valve and gas outlet provided above said flues, said stack valve when open permitting the escape of any unburned gases in the top of the boiler and said gas outlet being located below said valve and through which the gas is discharged when said valve is closed, substantially as described.

2. In a water gas producing system, the combination, with an upright boiler having submerged flues therein, and a grate near its lower end, and a gas intake above said grate, of a drum located in the upper end of said boiler above said flues and having an open upper end, a bell-shaped dome removably mounted on said drum and having an open lower end, a stack valve arranged to close the open upper end of said dome and means for operating said valve, and a gas outlet provided in the side wall of said chamber below said valve, substantially as described.

900,231. GAS-GENERATOR. CHARLES I. TENNEY, Mason City, Iowa. Filed Apr. 19, 1907. Serial No. 369,052.

1. A carbureted water gas generator having an upright fuel or combustion chamber and doors therefor, a carbureting chamber communicating with the upper part of said fuel chamber and extending horizontally in said generator, a second carbureting chamber extending downwardly from said horizontal chamber, a super-heating chamber located beneath said horizontal carbureting chamber and between said fuel chamber and said second carbureting chamber, bricks of refractory material arranged in said carbureting chambers and between which tortuous passages are formed for the products of combustion, a wall or bridge dividing said super heating chamber into compartments, a space being provided above said bridge leading from one compartment to the other, one of said compartments having an outlet opening through the wall of the generator.

2. A carbureted water gas generator having an upright combustion chamber provided with fuel doors, a carbureting chamber communicating with the upper portion of said combustion chamber and extending horizontally in the generator, a second carbureting chamber extending downwardly from said first named chamber, said carbureting chambers having brick or blocks of refractory material arranged therein with spaces between them forming tortuous passages, a super-heating chamber provided below said horizontal carbureting chamber and between said second carbureting chamber and said combustion chamber, a wall or bridge dividing said super-heating chamber into compartments, a space being provided above said bridge leading from one compartment to the other and one of said compartments having an outlet opening through the wall of the generator, and air blast pipes leading into the upper and lower portions of said combustion chamber and into said carbureting chambers near the junction of one with the other, substantially as described.



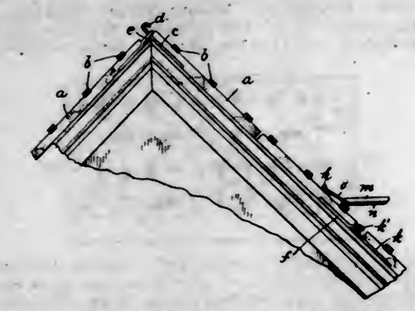
3. A carbureted water gas generator comprising an upright combustion chamber, a horizontal carbureting chamber communicating with said combustion chamber, a superheating chamber located beneath said horizontal carbureting chamber, a wall provided in said super-heating chamber and dividing it into compartments communicating with one another, one of said compartments having an inlet opening communicating with said horizontal carbureting chamber and the other of said compartments having a gas outlet opening, substantially as described.

4. A carbureted water gas generator comprising an upright combustion chamber, a horizontal carbureting chamber located in the upper part of the generator and communicating with the upper portion of said combustion chamber, a vertical carbureting chamber forming a descending continuation of said horizontal carbureting chamber, and a super-heating chamber located beneath said horizontal carbureting chamber and between said vertical carbureting chamber and said fuel chamber, and communicating with said vertical carbureting chamber and having a suitable gas outlet, a wall or bridge dividing said super-heating chamber into compartments, a space being provided above said bridge leading from one compartment to the other, said gas outlet being located in one of said compartments, substantially as described.

900,232. LADDER. LEROY W. THOMPSON, Waynesburg, Pa. Filed Apr. 22, 1908. Serial No. 428,580.

1. The combination with a ladder, provided with hook-supports or open clips, of a shelf; and hanger-straps one end of each of which is fastened to said shelf and the other end of each of which is shaped to engage removably one of said hook-supports; said hanger-straps being bent and adapted to rest upon one of the rungs of the ladder for support, and said shelf being supported solely by said hanger-straps.

2. A ladder of the class described made up of two parts; the rails of one part being each provided with a strap formed with a flange adapted to engage the crest of the roof and with an interlocking member which projects beyond said flange; and the rails of the other part being provided with straps formed to engage pivotally and removably said interlocking member; whereby the parts of said ladder are adapted to rest upon opposite sides of the roof interlocked with each other.



3. A ladder of the class described made up of two parts; the rails of one part being each formed with a strap having a flange adapted to engage the crest of the roof and with a hook which projects beyond said flange; and the ends of the rails of the other part being provided each with a strap formed with an eye adapted to interlock with said hook.

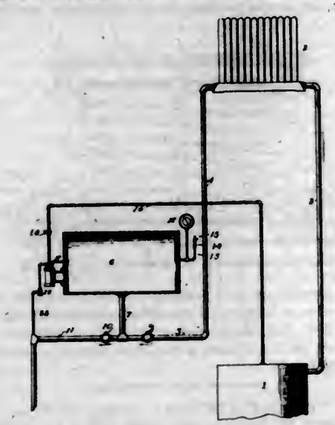
4. A three-part ladder of the class described; the rails of one of said parts being each provided at one end with a strap formed with an interlocking member; the rails of the second part being each provided at one end with a strap adapted to engage detachably said interlocking member; and at their opposite end being each provided with a strap which has a flange adapted to engage the crest of the roof and an interlocking member projecting beyond said flange; and the rails of the third part being each provided with a strap adapted to engage the last-named interlocking member.

5. The combination with a ladder having hook-supports or open clips, one of which is fastened to each rail of said ladder, of a shelf; and hanger-straps, one end of each of which is fastened to said shelf and the other end of each of which is formed with a laterally-extending lug adapted to engage one of said clips removably; said hanger-straps being bent and adapted to rest upon one of the rungs of said ladder for support and said shelf being supported solely by said hanger-straps.

900,233. VACUUM-GENERATING APPARATUS FOR STEAM-HEATING SYSTEMS. WALLACE E. TILLINGHAST, Worcester, Mass. Filed Jan. 21, 1908. Serial No. 411,919.

1. The combination with a steam generating device, steam radiating means, and a circulation system of pipes, all connected together in a steam heating system, of a vacuum generating tank connected with said system, and a siphon valve, comprising an auxiliary chamber having steam connection to the generating device and connection to said tank, a float valve within said chamber for automatically closing the connection to the tank by the rise in the chamber of condensation from said steam connection, and a siphon having its shorter leg terminating in said chamber below said float valve and means for automatically closing its longer leg when steam is present in the siphon.

2. In a steam heating system, the combination with a steam generating device, steam radiating means, and a circulation system of pipes, connected with said device and means, of a vacuum generating tank connected with said system, and a siphon valve, comprising an auxiliary chamber having steam connection to the generating device and connection to said tank, a float valve within said chamber for automatically closing the connection to the tank by the rise in the chamber of condensation from said steam connection, and a siphon having its shorter leg terminating in said chamber below said float valve, and the other leg provided with a thermostatic valve adapted to be closed by the presence of steam therein and opened by cooling.



3. In a steam heating system, the combination with a steam generating device, steam radiating means, and a circulation system of pipes, connecting said device and means, of a vacuum generating tank connected with said system, a siphon valve, comprising an auxiliary chamber having steam connection to the generating device and connection to said tank, a float valve within said chamber for automatically closing the connection to the tank by the rise in the chamber of condensation from said steam connection, and a siphon having its shorter leg terminating in said chamber below said float valve, and the other leg provided with a thermostatic valve adapted to be closed by the presence of steam therein and opened by cooling, and a connection from said thermostatic valve back to the generating device below the water line.

900,234. VEHICLE SPRING STRUCTURE AND FRAME. HARRY T. TILLOTSON, Chicago, Ill. Filed Dec. 21, 1906. Serial No. 348,922.



1. A supporting structure, a member fulcrumed intermediate of its ends on said structure, and springs mounted on said structure at each end of said member and normally urging both ends thereof downward to maintain said member in equilibrium.

2. A vehicle frame, comprising a body member, a front axle-frame having a rearwardly extending part, a spring connection between said body member and the rearward end of said rearwardly extending part, a rear axle-frame having a forwardly extending part, a spring connection between said body member and the front end of said forwardly extending part, said rearwardly and forwardly extending parts of said axle-frames being hinged to each other between said spring connections.

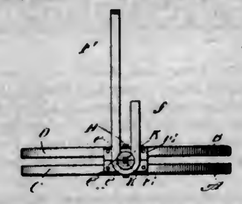
3. A vehicle frame, comprising a body member, a front axle, a rearwardly extending part connected with said front axle, a spring connection between said body member and the rearward end of said rearwardly extending part, a rear axle, a forwardly extending part connected with said rear axle, a spring connection between said body member and the forward end of said forwardly extending part, said body member and said rearwardly and forwardly extending parts being pivotally connected together on a transverse axis between said spring connections.

4. A vehicle frame comprising a body frame, a front axle frame having a rearwardly extending part, a rear axle frame having a forwardly extending part, said rearwardly and forwardly extending parts of the axle frames being hinged to each other, and springs bearing between said body frame and each of said axle frames at the same side of the hinged connection between said axle frames for yieldingly resisting the movement of said axle frames with respect to the body frame.

5. A vehicle frame, comprising a supporting structure, a member yieldingly supported thereon, the supports for said member being all in substantial alinement and located intermediate of the ends of said member, to permit said member to oscillate on said supports, and springs mounted on said structure at each end of said member and normally urging both ends thereof downward to maintain said member in equilibrium.

[Claims 6 to 10 not printed in the Gazette.]

900,235. APPARATUS FOR TURNING DOUGHNUTS AND THE LIKE. WALTER H. TOMLINSON, Chicago, Ill. Filed Oct. 28, 1907. Serial No. 399,413.



1. An apparatus for turning doughnuts or the like comprising a bail having the ends of its arms turned backwards so as to form bearings open on the side toward the yoke of the bail, a tray provided with diametrically opposed half-trunnions projecting laterally therefrom and arranged in said bearings, and a second tray super-posed upon but disconnected from the first tray and provided with half-trunnions arranged on diametrically opposite sides thereof and resting loosely upon the half-trunnions of the other tray, each of said bearings being of a size to receive through the open side thereof a trunnion formed by placing together two of the aforesaid half trunnions and to hold the halves of such trunnion together.

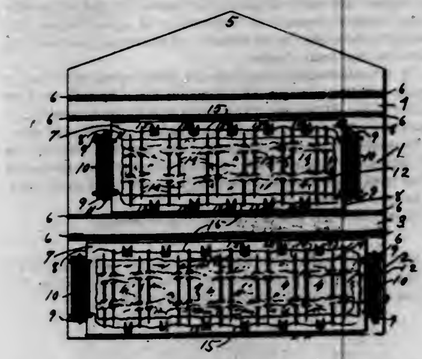
2. An apparatus for turning doughnuts or the like comprising a bail provided at the ends of its arms with bearings open on the side toward the yoke of the bail, a tray provided with diametrically opposed half-trunnions projecting laterally therefrom and arranged in said bearings, and a second tray super-posed upon the first tray and provided with half-trunnions arranged on diametrically opposite sides thereof and resting loosely upon the half-trunnions of the other tray of each of said trays having an eye on one side thereof together with a handle fitting said eye.

3. An apparatus for turning doughnuts or the like comprising a bail provided at the ends of its arms with bearings elongated in the direction toward the yoke of the bail and open on the side toward the yoke of the bail, a tray provided with diametrically opposed half-trunnions projecting laterally therefrom and arranged in said bearings, and a second tray super-posed upon but disconnected from the first tray and provided with half trunnions resting loosely upon the half trunnions of the other tray, each of said bearings being of a size to receive through the open side thereof a trunnion formed by placing together two of the aforesaid half trunnions and to hold the halves of such trunnion together during rotation of the trays in said bearings.

900,236. NEEDLE AND THREAD CASE. CLARA B. TOWER, New Rochelle, N. Y. Filed Apr. 13, 1908. Serial No. 426,903.

1. In a device of the class described, a supporting member; a series of thread guides carried by said supporting

member and arranged in line; a series of needles carried by said supporting member, the needles of said series being arranged in alternation with said thread guides and with their eyes in line therewith; and a spool of thread carried by said support, the free end of the thread thereof passing through said thread guides and through the eyes of said needles.



2. In a device of the class described, a series of thread guides arranged in line; a series of needles, the needles of said series being arranged in alternation with said thread guides and with their eyes in line therewith; and a spool of thread, the free end of the thread thereof passing through said thread guides and through the eyes of said needles.

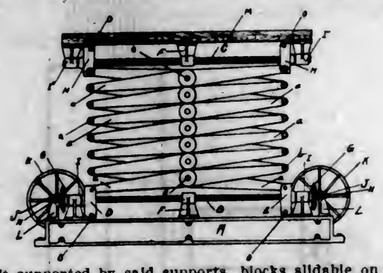
3. In a device of the class described, a supporting member comprising a sheet of thin metal; a series of thread guides formed from the material of said supporting member and arranged in line; a piece of fabric carried by said supporting member; a series of needles carried by said fabric, the needles of said series being arranged in alternation with said thread guides and with their eyes in line therewith; spool supports adjacent the end of said supporting member and formed from the material of the sheet of metal whereof said supporting member is formed; and a spool of thread carried by said spool supports, the free end of the thread thereof passing through said thread guides and through the eyes of said needles.

4. In a device of the class described, a supporting member; a plurality of series of thread guides carried by said supporting member, the guides of each series being arranged in line; a plurality of series of needles carried by said supporting member, the needles of each series being arranged in alternation with a coöperating series of thread guides and with their eyes in line therewith; and a plurality of spools of thread carried by said support, the free end of the thread of each of said spools passing through one of said series of thread guides and through the eyes of the series of needles arranged in line therewith.

5. In a device of the class described, an external case adapted to fold; a supporting member carried by said case; a series of thread guides carried by said supporting member and arranged in line; a series of needles carried by said supporting member, the needles of said series being arranged in alternation with said thread guides and with their eyes in line therewith; and a spool of thread carried by said support, the free end of the thread thereof passing through said thread guides and through the eyes of said needles.

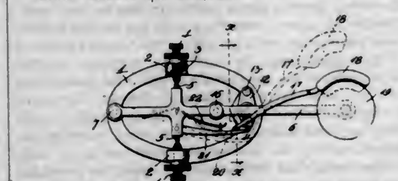
900,237. ELEVATOR. SIMEON V. TRENT, Salt Lake City, Utah. Filed Jan. 16, 1907. Serial No. 352,633.

A lazy tongs elevator comprising a base having a groove on its upper surface, end and intermediate bearings supported upon said base, a right and left threaded power shaft journaled in said bearings, traveling nuts mounted upon the threaded portions of said shaft, anti-friction rollers journaled in the lower ends of said nuts and operating in said groove to prevent tendency of the nuts to rotate, a series of pairs of toggle arms pivoted to the upper ends of said nuts, a vertically movable platform having a groove on its lower surface, end and intermediate supports secured to the lower surface of the platform, a stationary



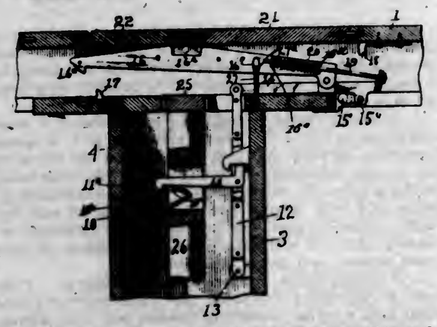
shaft supported by said supports, blocks slidable on said shaft, means whereby said blocks coöperate with said platform groove, said blocks being pivotally connected to the upper ends of the toggle arms, and means to rotate the power shaft.

900,238. TELEGRAPH-KEY. JAMES Z. TUCKER and LAWRENCE V. TUCKER, St. Louis, Mo. Filed Dec. 16, 1907. Serial No. 406,742.



In a telegraph key, the combination with a frame, an operating lever pivoted thereon, a spring-pressed terminal member pivoted to said lever and having a hooked end, a contact piece secured to but insulated from the frame of the key, a lever pivoted to the operating lever, a finger piece carried by said lever at one end adapted to be engaged by a finger of the operator to operate the same, a depending arm from the other end of the lever adapted to slidably engage said terminal member to throw the same out of engagement with the contact piece, and means for adjusting the operating lever.

900,239. EXTENSION-TABLE-LOCKING DEVICE. EMIL TYDEN, Hastings, Mich. Filed May 20, 1907. Serial No. 374,554.



1. In combination with a pedestal extension table, a device for locking the two members of the pedestal together; an additional device for locking together the two members of the table top; means for operating the pedestal-locking device for releasing, and connections between such operating means and the table-top-locking means, adapted for releasing the latter when the pedestal-locking devices are released.

2. In combination with a pedestal extension table, a device for locking the two members of the pedestal together; an additional device for locking together the two members of the table top; means for operating the pedestal locking device and connections from said operating means to the table locking devices adapted for moving the latter to top-locking position by the pedestal-locking movement.

3. In combination with a pedestal extension table, a device for locking the two members of the pedestal together; an additional device for locking together the two members of the table top; means for operating the pedestal locking device and yielding connections from said operating means to the table locking devices adapted for moving the latter to top-locking position by the pedestal-locking movement.

4. In combination with a pedestal extension table, a device for locking the two members of the pedestal together; a latching device mounted on one pedestal member and an abutment on the other member adapted to be engaged thereby when the two members are spread a short distance to retain them against further spreading, the pedestal-locking devices being adapted for engagement for drawing the members together when they are spread to the extent permitted by said latching device.

5. In combination with a pedestal extension table, a step-by-step feeding device for connecting and drawing together the two pedestal members, comprising an element on each pedestal member adapted to become engaged when the pedestal members are somewhat separated, and means for back-and-forth movement of one of said elements for such step-by-step feeding action.

[Claims 6 to 11 not printed in the Gazette.]

900,240. CLOSURE FOR JARS AND OTHER RECEPTACLES. GORDON VALENTINE, Chicago, Ill. Filed May 6, 1907. Serial No. 372,041.



1. A device of the class described in which is combined, a plurality of parallel disks of substantially uniform diameter formed from non-absorbent yielding material, a spacing stud located centrally between them, and means for detachably connecting said disks to the ends of said stud to provide an insulating space between said disks.

2. The combination in a closure of the class described, of parallel disks formed from non-absorbent yielding material, a hollow central stud interposed centrally between them, and a connecting bolt for rigidly compressing the same against said stud.

3. A closure of the class described comprising a plurality of connected disks having a space between them, said disks being formed from a yielding non-absorbent material, one of said disks being provided with an opening therein.

900,241. SPRING-CATCH BOX-FASTENER. GORDON VALENTINE, Chicago, Ill. Filed July 27, 1907. Serial No. 385,807.

1. A receptacle of the class described having a movable bottom yieldingly held in a normally raised position, a closure, a lock therefor, said lock being normally held in an unlocking position, and means for moving said lock to a locking position by the depression of said bottom.

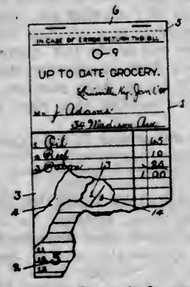
2. The combination with a receptacle having a movable supporting element for supporting articles placed therein, said element being yieldingly held in a predetermined normal position, of a closure having means thereon for engaging the guard members of a lock, a lock having a suitable ward, means for normally holding said guard members in an unlocking position and means connected with said movable supporting element for controlling the action of said holding means to permit said guard members to be moved into a locking position when a weight is placed upon said supporting element.



3. The combination with a receptacle having a vertically movable bottom yieldingly supported in a normal position, of a closure having means thereon for engaging the guard members of a lock, a lock consisting of pivoted wards, means for yieldingly holding said guard members in an unlocked position, and means connected with said movable bottom for modifying the action of said holding means to move said guard members to locking positions when the bottom is moved downwardly by the action of a weight thereon.

4. The combination with a receptacle having a vertically movable spring-balanced bottom, of a closure having a keeper thereon for engagement with the guard members of a lock, a lock consisting of guard members pivoted to a stationary point between the ends, hooks upon the upper ends thereof for engaging said keeper, a spring for normally holding said lower ends apart, and means for connecting said bottom with said spring.

900,242. FILE-CABINET. CHARLEY G. WARD, Jeffersonville, Ind. Filed Nov. 1, 1907. Serial No. 400,163.

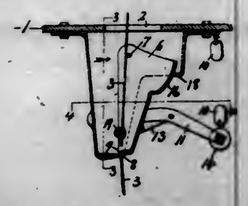


A filing cabinet comprising a body portion divided into a plurality of compartments, a pair of horizontally swinging doors hinged to said body portion and adapted to completely close the front thereof, a vertically swinging door hinged to the lower edge of said body portion, said door forming a table when in its lowered position, and overlying the inner doors when in its closed position, and a plurality of book-receiving hooks carried by said inner doors, the upper face of the vertically swinging door bearing letters of the alphabet.

900,243. FIRE-PROTECTIVE SHIELD. DAVID S. WATSON, Canastota, N. Y. Filed Mar. 16, 1908. Serial No. 421,470.

1. In combination with a floor and ceiling having a belt opening therethrough, a fire shield consisting of a casing secured to the ceiling around the opening to surround the adjacent portion of the belt and projecting downwardly some distance from the ceiling, said shield having a portion of one side movable to and from the opposite side,

means including a heat destructible detent for holding said movable portion open, said movable portion being released to close the lower end of the belt opening in the fire shield when the heat destructible detent is destroyed by heat.



2. In combination with a floor and ceiling having a belt opening therethrough, a fire shield secured to the under side of the ceiling around said belt opening to surround the adjacent portion of the belt and having a portion of one side hinged to the main body and movable toward and from the opposite side to open and close the lower end of the shield, means including a heat destructible detent for holding the movable side of the shield open, said movable side being self-closing when the heat destructible detent is disintegrated.

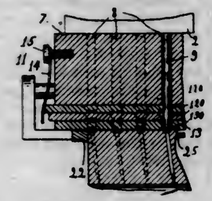
3. A fire protective shield for belt openings comprising a fixed part and a movable part forming a casing through which the belt passes, means to hold the movable part in its open position, said movable part being self closing, the two parts having coacting shearing edges to sever the belt when the movable part closes.

4. In combination with a floor having a belt opening, a fixed part secured to and extending downwardly from the floor and a self-closing movable part, said parts having coacting lower edges to engage opposite sides of the belt when the part is closed, and means including a heat destructible detent for holding the movable part in its open position.

5. A fire shield for belt openings in floors and ceilings comprising a fixed part secured to the under side of the ceiling around the belt opening and adjacent portion of the belt, and a movable part coacting with the fixed part to close the lower end of the belt opening in the shield, means including a heat destructible detent for holding the movable part in its open position, and means for forcibly closing the movable part when the detent is destroyed.

[Claims 6 to 8 not printed in the Gazette.]

900,244. HEEL-NAILING MACHINE. EDWIN A. WEBSTER, Haverhill, Mass., assignor, by direct and mesne assignments, to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 3, 1904. Serial No. 226,959.



1. In a nailing machine, a nail holder having a series of nail chambers therein leading to its face, a nail deflecting plate movable over the face of said holder and having a corresponding series of nail holes therethrough, means for holding said plate with its nail holes partly out of register with said chambers, and permitting movement thereof to bring said holes into register therewith, and a gang of drivers movable in said chambers, substantially as described.

2. In a nailing machine, a nail holder having a series of nail chambers therein leading to its face, a nail deflecting plate movable over the face of said holder and having a corresponding series of nail holes therethrough, a spring for holding said plate with its nail holes partly out of register with said chambers, and permitting movement thereof against the action of said spring to bring said holes into register therewith, and a gang of drivers movable in said chambers, substantially as described.

3. In a nailing machine, a nail holder having a series of nail chambers therein leading to its face, a work support, a pair of nail deflecting plates between the face of said holder and said support, each having nail holes therethrough corresponding to said chambers, and means for holding said plates with their respective nail holes partly out of register with each other, and permitting them to be moved into register with each other and with said chambers, and a gang of drivers movable through said chambers, substantially as described.

4. In a nailing machine, a nail holder having a series of nail chambers leading to its face, a nail deflecting plate having a series of nail holes therethrough and movable over the face of said holder to bring said holes into coincidence with said chambers, two springs acting to move said plate in opposite directions, and arranged to hold said plate in equilibrium with its nail holes partly in register with the ends of said chambers, means for varying the tension of one of said springs to vary the position of said plate, and a gang of drivers movable in said chambers, substantially as described.

5. In a nailing machine, a nail holder having a series of nail chambers leading therethrough, a face plate secured thereto and having a corresponding series of nail holes therethrough, in register with said chambers, and a nail-deflecting plate also having a corresponding series of nail holes therethrough and slidably mounted between said holder and face plate, and means for holding said deflecting plate with its nail holes partly out of register with the ends of said chambers and permitting movement thereof to bring said holes into register therewith to permit the passage of the nails therethrough, and a driver gang movable in said chambers, substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

900,245. FRICTION-MATCH. HENRY W. WHELAN, Detroit, Mich. Filed Aug. 23, 1907. Serial No. 389,797.



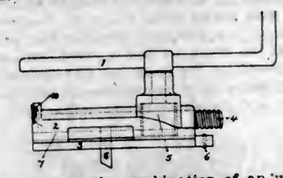
1. A strip of flexible material partially divided into splints whose free ends are coated with ignitible compound, said strip being rolled into cylindrical form, and the end of said strip being secured to maintain said cylindrical form during the removal of the individual matches for use.

2. A strip of flexible material partially divided to form match splints, and having a remaining integral base portion, the upper ends of said splints being coated with ignitible compound, the lower end of said splints being fragilely attached to the base portion and said strip being rolled into cylindrical form, an igniting surface upon the base of said strip and said strip being held in said cylindrical form in a manner to allow of the free removal of the individual matches.

3. A plurality of match splints in the form of a tubular body having a common base strip to which they are fragilely attached, the end of said strip being secured to said body to maintain it in tubular form, and an ignition surface on said base strip.

4. A strip of flexible material slit transversely to form a plurality of match splints which are fragilely attached at one end thereto, and at the other end are provided with a coating of ignitible compound, said strip being rolled to form a rounded body composed of parallel rows of separately detachable splints, and the free end of said strip being secured to said body to maintain said rounded form.

900,246. FLOOR-CRAMP. FRANK WILLIAMS, Bilston, England. Filed Feb. 10, 1908. Serial No. 415,162.



In a floor cramp, the combination of an upper portion and a lower portion, the upper portion sliding over the lower portion, the lower portion having levers with toothed grips attached, these said levers being worked by the upper portion sliding over the lower portion and pressing against the said levers, the sliding of the upper portion being caused by a screw with a plate attached to its one end being projected by a horizontal and a vertical helical wheel which are worked by a handle, all substantially as shown and described.

900,247. CHAIR-BOTTOM CLIP. JAMES P. WILLIAMS, Boston, Mass. Filed Nov. 23, 1907. Serial No. 403,547.



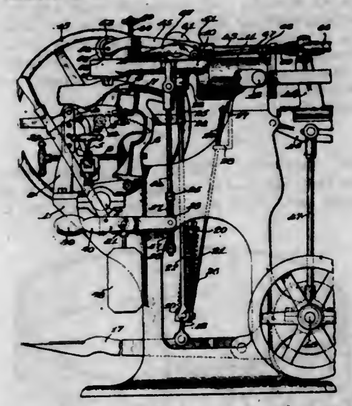
An adjustable clip for securing seat-pieces to the bottom frames of chairs, consisting of a plate of metal bent to form an offset and having its holding end pointed whereby it may admit of being driven into the bottom frame and having a hammer seat for receiving the blow of the driving hammer, the body part having a slot for the holding screw and having a holding nib at its rear end, substantially as and for the purpose set forth.

900,248. SOLE-LEVELING MACHINE. ERASTUS E. WINKLEY, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 28, 1905. Serial No. 271,630.

1. A sole leveling machine, having, in combination, a shoe supporting jack and means for applying pressure progressively to the sole of a shoe supported upon the jack to smooth out the sole and for simultaneously delivering a series of blows upon the sole in a direction substantially perpendicular to the surface of the sole.

2. A sole leveling machine, having, in combination, a shoe supporting jack and a sole leveling device relatively movable to transfer the point of operation of the leveling device over the sole of a shoe supported upon the jack and means for actuating said device to exert a progressive pressure upon the sole to smooth out the sole and for actuating said device to deliver upon the sole a series of blows in a direction substantially perpendicular to the sole.

3. A sole leveling machine, having, in combination, a shoe supporting jack and a rub stick relatively movable to transfer the point of operation of the rub stick over the sole of a shoe supported upon the jack, and means for actuating the rub stick to hammer the sole with a series of blows delivered in a direction substantially perpendicular to the surface of the sole.

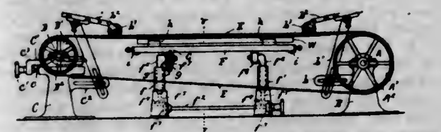


4. A sole leveling machine, having, in combination, a shoe supporting jack and a rub stick relatively movable to transfer the point of operation of the rub stick over the sole of a shoe supported upon the jack, a hammer and means for actuating the hammer to deliver a series of blows upon the rub stick while in contact with the sole.

5. A sole leveling machine, having, in combination, a shoe supporting jack and a rub stick relatively movable to transfer the point of operation of the rub stick over the sole of a shoe supported upon the jack, means for vibrating the rub stick longitudinally of the sole while in contact therewith, a hammer mounted to vibrate with the rub stick and means for actuating the hammer to deliver a series of blows upon the rub stick.

[Claims 6 to 10 not printed in the Gazette.]

900,249. ABRASIVE APPARATUS. OLMEDO C. WYSONG, Greensboro, N. C. Filed Aug. 8, 1907. Serial No. 387,605.



1. In a mechanism of the character indicated, a driving pulley, an idler pulley, an abrasive belt supported by said pulleys with its abrasive face to the pulleys, a work table interposed between the two reaches of said belt, and means for pressing the belt against the face of the work.

2. In a mechanism of the character indicated, a pair of pulleys, an abrasive belt supported upon and driven by said pulleys with the abrasive face of the belt toward the pulleys, a movable work table interposed between the two reaches of the belt, said table being movable relative to said belt to shift the work so that it may be acted upon by the belt and examined by the operator.

3. In a mechanism of the character indicated, a pair of pulleys, an abrasive belt supported upon and driven by said pulleys with the abrasive face of the belt toward the pulleys, a work table pivotally supported between the two reaches of said belt, and means for adjusting said table to varying positions relative to said pivotal support, and locking the table to its adjusted position.

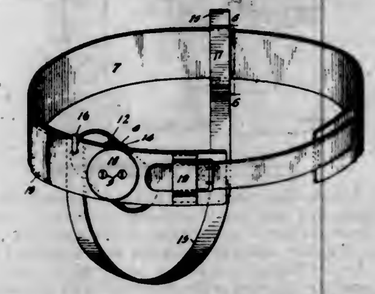
4. In a mechanism of the character indicated, a pair of pulleys, an abrasive belt supported upon and driven by said pulleys with the abrasive face of the belt toward said pulleys, a work table pivotally supported between the

two reaches of said belt, mechanism for adjusting said table to varying positions relative to said support and locking the table to its adjusted position, and means for pressing the belt against the face of the work.

5. In a mechanism of the character indicated, a pair of pulleys, an abrasive belt supported upon and driven by said pulleys with the abrasive face of the belt toward said pulleys, a work table adjustably supported between the two reaches of said belt, and cross rails carried by said table, said cross rails being adapted to support a detachable supplemental table.

[Claims 6 to 10 not printed in the Gazette.]

900,250. RUPTURE-TRUSS. ALEXANDER YOUNG, Laporte, Ind., assignor of one-half to William N. Rumely, Laporte, Ind. Filed May 11, 1908. Serial No. 432,046.



1. The combination with a device whereby the pad is supported, of a pad attached to the supporting device by a trunnion upon which the pad is adjustable in all directions across the axis of the trunnion.

2. The combination with a belt or supporting device carrying a circular rim forming a trunnion, and a pad having a recess adapted to set over said trunnion, said recess being larger in diameter than the trunnion, and the trunnion and wall of the recess being both adapted to receive a pin whereby the pad and belt may be locked together.

3. The combination with a belt or supporting device carrying a circular rim forming a trunnion, and a pad having a recess adapted to set over said trunnion, said recess being larger in diameter than the trunnion, said trunnion and pad being provided with means for locking them together without destroying the adjustability of the pad.

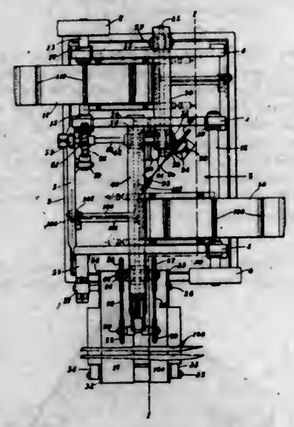
4. The combination with the belt and the recessed pad, of means for supporting the latter, consisting of a trunnioned plate at one side of the belt, a holding plate at the other side thereof, and bolts passing through the plates and belt, and permitting the insertion of filling material between the belt and trunnion plate.

900,251. FIBER-PREPARING MACHINE. ALBERT ZABRISKIE, Paterson, N. J. Filed July 23, 1907. Serial No. 385,121.

1. The combination of a scutching wheel and a scutching shoe, said shoe having the major portion of its working face substantially concentric with and relatively near the path of the scutching wheel and having its top edge relatively remote from said path of the scutching wheel and having said top edge connected with the concentric portion of said face by a surface tangent to said concentric portion where it merges therewith, means for adjusting the scutching shoe vertically and other means for adjusting the scutching shoe horizontally relative to the scutching wheel.

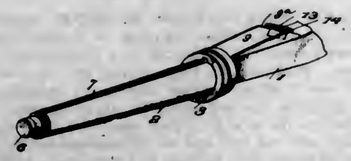
2. The combination of a scutching wheel and a scutching shoe, means for adjusting the scutching shoe bodily vertically and means for adjusting the scutching shoe bodily horizontally relative to the scutching wheel.

3. In a fiber preparing machine the combination of a set of two conveyer chains having longitudinal grooves in their working faces, said chains being mounted upon rear and forward sprocket wheels respectively, and parallel but offset in different planes and so arranged that the forward sprocket of the first chain is co-axial with the rearward sprocket of the second chain, a second set of two chains similarly mounted and disposed above the first set of chains respectively, said second set of chains having grooves in the working faces thereof complementary to the grooves in the first set of chains for frictional engagement therewith, means for actuating one set of said chains, the other set of said chains being driven by friction from the first set thereof, an obliquely disposed belt between the two chains of the lower set and a wheel between the first and second chains of the lower set and co-axial with the common sprocket axis of said chains to lift the fiber for delivery onto said second chain of the lower set.



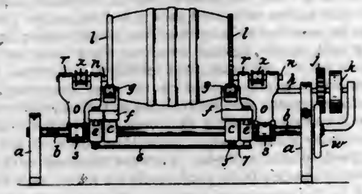
4. In a fiber preparing machine the combination of two conveyer chains mounted upon rear and forward sprocket wheels respectively, said chains being parallel but offset in different planes and so arranged that the forward sprocket of the first chain is co-axial with the rearward sprocket of the second chain, an obliquely disposed belt situated adjacent to the first belt and extending beyond the rearward sprocket of the second belt and a wheel disposed between the forward sprocket of the first chain and the rearward sprocket of the second chain and co-axial therewith, to assist the delivery of the fiber from the first chain and the oblique belt onto the second chain.

900,252. AXLE-LUBRICATOR. JOSEPH ADEN, Greensboro, N. C. Filed Mar. 19, 1907. Serial No. 363,183.



An axle having a spindle provided at its inner end with a collar forming an abutting shoulder, and having a lubricating channel in the top side of the spindle leading through the said collar and extending beyond the same a short distance and formed in the top portion of the axle adjacent to the said collar, and a block fitted upon the outer portion of the axle with its upper end abutting against the aforesaid collar and conforming thereto, said block having a channel in its lower face registering with the channel of the axle and the opening through the collar, and having its upper portion oppositely inclined from an intermediate point, the inclined portion remote from the collar having an opening therein in communication with the opening formed by the registering channels of the said block and axle.

900,253. MACHINE FOR USE IN CHIMING, CROZING, AND HOWELLING BARRELS. CHARLES J. ALLEY, Farndon, New Zealand. Filed Aug. 22, 1906. Serial No. 331,579.



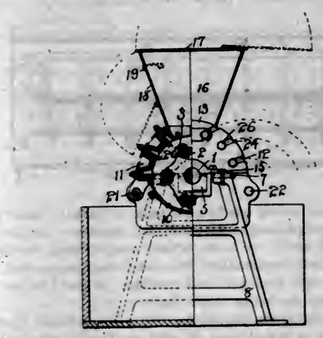
1. In means for chiming, crozing and howelling barrels, a barrel supporting frame comprising a pair of heads supported upon parallel horizontal bars and capable of adjustment thereon, and each having a roller mounted on a horizontal axis at the back end thereof, a pair of sliding blocks mounted on the bars, one on the outside of each head, and each having a roller mounted thereon and adapted to lie in the same horizontal plane as the roller upon the respective head, means whereby the sliding blocks may be moved outwards or inwards along the bars, and means for rotating a barrel supported upon the rollers, substantially as specified.

2. In means for chiming, crozing and howelling barrels, a barrel supporting frame comprising a pair of heads supported upon parallel horizontal bars and capable of adjustment thereon, and each having a roller mounted on a horizontal axis at the back end thereof, a pair of sliding blocks mounted on the bars, one on the outside of each head, and each having a roller mounted thereon and adapted to lie in the same horizontal plane as the roller upon the respective head, cutter carriers mounted on the horizontal bars, one on the outside of each sliding block, and connected to the respective block, so as to be capable of movement therewith, means whereby the sliding blocks may be moved outwards or inwards along the bars, and means for rotating a barrel supported upon the rollers, substantially as herein specified.

3. In means for use in chiming, crozing and howelling barrels, a barrel supporting and rotating frame slidably mounted upon a pair of parallel bars, in combination with cutter carriers mounted upon the bars, one upon each end of the frame, each of which is formed with an upwardly extending member adapted to form a bearing for the cutter spindle and with a forwardly extending portion formed with a slot therein, and eccentric sleeves mounted upon the front parallel bar and fitting within the slots in the respective cutter carriers, and means whereby such bar and the sleeves may be rotated, substantially as specified.

4. In means for use in chiming, crozing and howelling barrels, a barrel supporting and rotating frame slidably mounted upon a pair of horizontal parallel bars, and cutter carriers mounted upon the bars, one at each end of the frame, and each formed with bearings for carrying the cutter spindle arranged to allow of longitudinal movement thereof, in combination with a bar secured to one end of the cutter spindle and formed with a backwardly extending member, a bar slidably mounted upon the barrel supporting frame, a fork secured thereon adapted to engage with the truss hoop upon the barrel in the machine, and a fork upon the end of this bar adapted to engage with the backwardly extending member of the bar secured to the cutter spindle, substantially as specified.

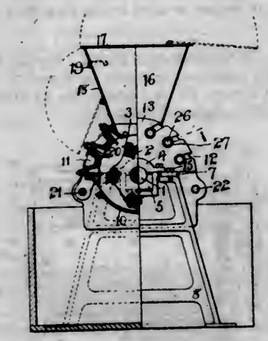
900,254. ROTARY CUTTER. CHARLES F. BALL, Richmond Hill, N. Y., assignor to Ball & Jewell, Brooklyn, N. Y., a Firm. Filed May 14, 1907. Serial No. 373,651.



1. In a rotary cutter, a bottom screen, cheek pieces, end plates to which the cheek pieces are hinged having elongated slots concentric with the hinges and opening through the sides of the end plates, bolts in said slots for clamping and releasing the cheek pieces and means for absolutely locking the cheek pieces against outward movement.

2. In a rotary cutter, a bottom screen, cheek pieces, end plates to which the check pieces are hinged having elongated slots concentric with the hinges and opening through the sides of the end plates, bolts in said slots for clamping and releasing the cheek pieces and means engaging certain of the bolts for absolutely locking the cheek pieces against outward movement.

900,255. ROTARY CUTTER. CHARLES F. BALL, Richmond Hill, N. Y., assignor to Ball & Jewell, Brooklyn, N. Y., a Firm. Filed May 14, 1907. Serial No. 373,652.



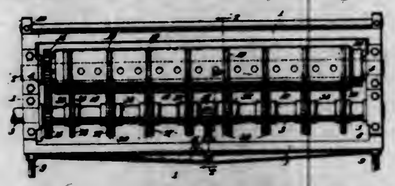
In a rotary cutter, a bottom screen, cheek pieces, end plates to which the cheek pieces are hinged, having elongated slots concentric with the hinges and opening through the sides of the end plates, bolts in said slots for clamping and releasing the cheek pieces and means for engaging certain of the bolts for locking each of the cheek pieces to the end plates to prevent outward movement of the cheek pieces, said means comprising washers surrounding certain of the bolts and countersunk in the end plate.

900,256. COMPOSITION. JAMES H. BATCHELDER, Keene, N. H. Filed May 5, 1908. Serial No. 431,027.

1. A composition of matter comprising silicate of soda, dextrin, molasses, glycerin and water.

2. A composition of matter comprising silicate of soda, silica, dextrin, molasses, glycerin and water.

900,257. PERFORATING-MACHINE. WILLIAM G. BEARY, Mechanic Falls, Me., assignor to Colonial Company, Mechanic Falls, Me., a Corporation of Maine. Filed Apr. 20, 1908. Serial No. 428,132.



1. In a perforating machine, a pair of parallel shafts, a plurality of coöperating, annular die members carried by said shafts, journal boxes in which one of said shafts is mounted at and intermediate its ends, and means for adjusting both said end and intermediate journal boxes toward and away from the other shaft.

2. In a perforating machine, a pair of parallel shafts, journal boxes in which one of said shafts is mounted at and intermediate its ends, means for adjusting said journal boxes relative to the other shaft, and spring pressed plungers carried by the frame of the machine, and bearing against said adjustable end journal boxes.

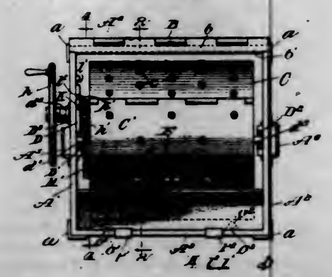
3. In a perforating machine, a shaft mounted in suitable bearings, a series of hollow, cylindrical spacing rings secured on said shaft, and a series of annular die plates supported by said rings between the same.

4. In a perforating machine, a shaft, a pair of spacing rings carried thereby, said rings being provided with annular grooves on their adjacent edges, and an annular die plate disposed between said rings and supported at its edges in said grooves.

5. In a perforating machine, a shaft, and a plurality of alternating spacing rings and annular die plates carried thereby, each of said spacing rings comprising a spider and cylindrical body portion, such body portion having an annular groove formed in each edge thereof for supporting said die plates.

[Claims 6 to 10 not printed in the Gazette.]

900,258. WASHING-MACHINE. WILLIAM F. BLAKE, Harvey, Ill., assignor, by mesne assignments, to Paragon Mfg. Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 24, 1906. Serial No. 349,261.



1. In a washing machine, the combination with a casing, of a cylinder rotatably supported within said casing, a gear wheel fixed to said cylinder, a pinion meshing with said gear wheel, an axially movable shaft on which said pinion is fixed, and adjustable means which retains said pinion in mesh with said gear wheel, or permits said pinion to be disengaged from said gear wheel to allow the removal of the cylinder from the casing, or locks said pinion against rotation when engaged with said gear wheel to retain said cylinder immovable while articles are being inserted therein or removed therefrom.

2. In a washing machine, the combination with a casing, of a cylinder rotatably supported within said casing, a gear wheel fixed to said cylinder, a pinion meshing with said gear wheel, an axially movable shaft on which said pinion is fixed, for disengaging said pinion from said gear wheel to permit the removal of said cylinder from said casing, an oscillatory lever for locking said shaft against axial movement when said pinion is in mesh with said gear wheel, and for locking said pinion against rotation to prevent the rotation of said cylinder while articles are being inserted therein or removed therefrom.

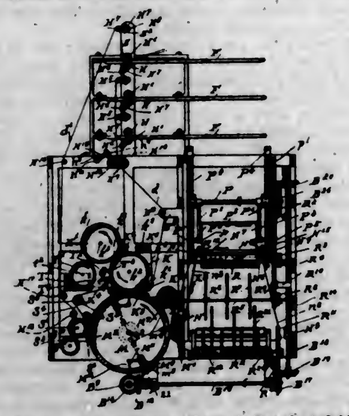
3. In a washing machine, the combination with a casing, of a cylinder rotatably supported within said casing, a gear wheel fixed to said cylinder, a pinion meshing with said gear wheel, an axially movable shaft on which said pinion is fixed, an oscillatory lever for locking said shaft against or permitting axial movement thereof to engage and disengage said pinion with said gear wheel to permit the cylinder to be removed from or inserted in said casing and for locking said pinion against rotation when meshing with said gear wheel, to retain said cylinder immovable while articles are inserted therein or removed therefrom, and means for retaining said lever in its adjusted positions.

4. In a washing machine, the combination with a casing, of a cylinder rotatably supported within said casing, a gear wheel fixed to said cylinder, a pinion meshing with said gear wheel, an axially movable shaft on which said pinion is fixed to disengage said pinion from said gear wheel to permit said cylinder to be removed from said casing, an oscillatory lever, a lug on said lever for engaging said pinion to retain the same in mesh with said gear wheel, said lever having a recess to engage a tooth of said pinion to lock the same against rotation and thereby retain such cylinder immovable while articles are inserted in or removed therefrom.

5. In a washing machine, the combination with a casing, of a cylinder rotatably supported within said casing, a gear wheel fixed to said cylinder, a pinion meshing with said gear wheel, an axially movable shaft on which said pinion is fixed to disengage said pinion from said gear wheel to permit the removal of said cylinder from said casing, a plate through which said shaft extends, secured to the inner surface of an end wall of said casing, a lever pivotally mounted upon said plate, a lug on said lever for controlling the axial movement of said shaft, and means on said lever for locking said pinion against rotation when meshing with said gear wheel and thereby retain said cylinder immovable to permit articles to be inserted therein or removed therefrom.

[Claims 6 to 11 not printed in the Gazette.]

900,259. APPARATUS FOR PRINTING AND FOLDING NEWSPAPERS. JOHN A. BOYCE, Springfield, Ill. Filed May 9, 1904. Serial No. 207,079.



1. A folder unit consisting of a rotative first folder cylinder and rotative main cutter cylinders, rotative supplement cutter cylinders and rotative folder rollers all contiguous and parallel to said first folder cylinder; in combination with plate cylinders rotative at full speed; plate cylinders rotative at half speed; means for leading to the main cutter cylinders the web or webs from the plate cylinders rotating at full speed; means for leading to the supplement cutter cylinders a web from the plate cylinders rotating at half speed; a paster device coöperating with one of said main cutter cylinders; and means for delivering to the main folder rollers the combined sheets cut by the first cutter cylinders and the supplement cutter cylinders; as set forth.

2. In an apparatus of the class described, the combination of a main frame, a rotative main folder cylinder, rotative first cutter cylinders and rotative supplement cutter cylinders mounted on the main frame, a stationary paste box contiguous to said main cutter cylinders, a paste roller turning in said paste box; and a rotative wiper periodically contacting with said paste roller and with one of said main cutter cylinders; as set forth.

3. In an apparatus of the class described, the combination of rotative main cutter cylinders, a cushion on one of said main cutter cylinders, a stationary paste box, a paste roller turning in said paste box, and a rotative wiper having yielding surfaces periodically contacting with said paste roller and with the cushion on the main cutter cylinder, as set forth.

4. In an apparatus of the class described, the combination of a two-page cutter device; a one-page cutter device, a guide device and a stripper device coöperating with said two-page cutter device; a folder cylinder coöperating with said cutter devices, a leader device between said cutter devices, folder rollers coöperating with said folder cylinder, and a leader device between said folder rollers and said two-page cutter device; as set forth.

5. In an apparatus of the class described, the combination of a rotating folder cylinder; projectile blades and retractive pins on said cylinder, rotative main cutter cylinders, a paster device periodically contacting with one of said main cutter cylinders, supplement cutter cylinders, leader devices contiguous to said folder cylinder and folder rollers contiguous to said folder cylinder; all coöperating to interpose and paste the supplement sheet and fold it with the concurrent sheet, as set forth.

[Claims 6 to 53 not printed in the Gazette.]

900,260. AUTOMATIC QUICK-CLOSING VALVE. ALBERT H. BOYD, Leadville, Colo. Filed Nov. 14, 1905. Serial No. 287,376.



1. In an automatic quick-closing valve, the combination with the valve seat, the valve disk, and the main valve stem, of an auxiliary valve stem arranged to be normally connected to said main stem, and means connected with said auxiliary stem for instantaneously releasing it from the said main stem and means for closing the valve upon such release.

2. In an automatic quick-closing valve, the combination with the valve seat and disk, and the hollow main valve stem, provided with a hand operating wheel, of an auxiliary valve stem connected at one end to said valve disk and extending loosely through said hollow main valve stem, a spring arranged between said main and auxiliary valve stems to hold said auxiliary stem and valve disk under closing compression, and means including a spring, connected at one end to said hand wheel, and to said auxiliary valve stem at its opposite end, for releasing said auxiliary stem and valve disk, and instantaneously closing said valve, as set forth.
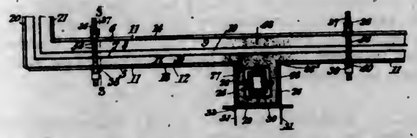
3. In an automatic quick-closing valve the combination with the valve seat, a main stem threaded to the cap of the valve, a hand wheel secured to said stem, an auxiliary stem extending loosely through said main stem, a valve disk connected to the lower end of said stem in operative relation to said valve seat, means for connecting said auxiliary valve stem to said main stem to manually operate the auxiliary valve stem, and means for disconnecting said auxiliary valve stem, as set forth.

4. In an automatic quick-closing valve, the combination with the body of the valve, the valve seat therein, the cap, the main stem, threaded to said cap, and provided with an axial aperture of two diameters, and the hand wheel secured to said main stem, of an auxiliary stem of two diameters slidably mounted in said main stem, a coiled expansive spring in said main stem arranged to bear at one end in the counter-bore of said main stem, a valve disk secured to the lower end of said auxiliary stem, in operative relation to said valve seat, a slot in the upper end of said stem, a spring secured at one end to said hand wheel and arranged to engage the slot of said stem, and a cord secured at one end to said spring and leading to a predetermined point, as set forth.

5. In an automatic quick-closing valve, the combination with the body of the valve, having a valve seat and a flanged cap, of a main stem threaded to said cap and having a collar at its lower end, a hand wheel adjacent to its upper end, and a packing nut threaded to its upper end, an auxiliary stem extending slidably through the axial center of said main stem and its packing nut, and having a valve disk at its lower end arranged in operative valve-seating relation to said valve seat, an expansive spring arranged between said auxiliary stem and said main stem, and a spring secured to said wheel and arranged to resiliently hold said auxiliary stem under resilient expansive pressure in said main stem, and means including a cord or cords connected at one end to said stem-holding spring, and extending to a predetermined point or points for releasing said auxiliary stem, as set forth.

[Claims 6 to 10 not printed in the Gazette.]

900,261. MACHINE FOR FORMING ARTIFICIAL-STONE WALLS. JACOB BREWER, Hazleton, Pa. Filed May 13, 1907. Serial No. 373,414.



1. A molding machine including adjustable side sections, intermediate sections spaced from the side sections, a clamping bar extending transversely across said sections, standards depending from the clamping bar and adapted to engage the side sections, an adjustable block carried by the clamping bar and interposed between the side and intermediate sections, and a locking key bearing against the intermediate sections.

2. A molding machine including adjustable side sections, intermediate sections spaced from the side sections, a slotted clamping bar extending transversely across said sections, standards depending from the clamping bar and slidably mounted for longitudinal movement therein for engagement with the adjacent outer mold sections, a cap interposed between the intermediate sections, and a lock-

ing key bearing against the walls of said intermediate sections.

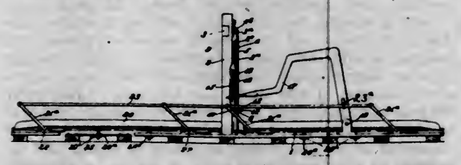
3. A molding machine including adjustable side sections, intermediate sections spaced from the side sections, a clamping bar extending transversely across the sections and provided with an elongated slot, standards bearing against the side sections, threaded bolts passing through the slots in the bar and provided with depending flanges engaging the standards, clamping nuts engaging the threads on said bolts, adjustable plugs bearing against the interior walls of the side and intermediate sections, respectively, and a locking key for exerting lateral pressure on the interior walls of the intermediate sections.

4. A molding machine including a wedge shaped supporting bar, adjustable side and intermediate sections bearing against said bar, a clamping member extending transversely across the top of said mold sections, standards depending from the clamping member and adapted to engage the walls of the side sections, and means carried by said clamping member for engagement with the interior walls of the side and intermediate mold sections.

5. A molding machine including a supporting member provided with spaced perforations, adjustable side and intermediate sections resting on the supporting member, a clamping bar extending transversely across the top of said sections, standards depending from the clamping bar and bearing against the side sections, means for locking the standards in engagement with the supporting member, and means carried by the clamping member for exerting lateral pressure on the interior walls of the side and intermediate sections.

[Claims 6 to 11 not printed in the Gazette.]

900,262. AUTOMATIC MINE-DOOR. BENJAMIN O. BYERS and CHARLES F. THIEDE, Columbus, Ohio. Filed Apr. 22, 1908. Serial No. 428,531.



1. In a mine door, the combination with fixed vertical standards 2, of folding door sections each comprising the cross bars 4 and 5, levers 15 linked to the cross bars at their junctions, weight arms 17 for operating said levers 15, movable tracks 20, and means connected with said arms and with said movable tracks.

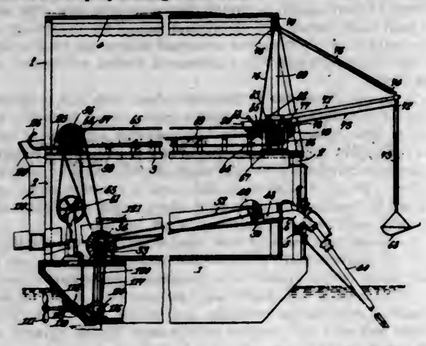
2. In a mine door, the combination of fixed standards 2, folding door sections each comprising the cross bars 4 and 5, levers 15 linked to the cross bars at their junctions, arms 17 for operating said levers 15, movable auxiliary tracks 20, fixed rails 1, horizontally arranged bars 23 operative by said rails, weight arms 17 having sliding connection with said bars 23 and the folding door sections, substantially as described.

900,263. DREDGE. JAMES C. CARTER, Pioneerville, Idaho. Filed Feb. 6, 1907. Serial No. 356,067.

1. A dredge comprising a scow, dredge mechanism mounted thereon, tracks on said dredge, connected dump cars on said tracks and traveling thereon by gravity, gravity locking means at one end of each track and gravity dumping means at the other end of each track, a gravity scoop and operating means therefor carried by the scow, and a prime mover carried by the scow and connected to the said scoop-operating means.

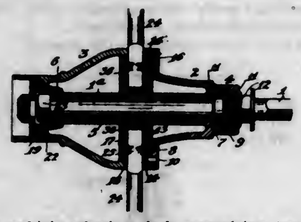
2. A dredge comprising a scow having a main deck and an elevated second deck, a dredging mechanism mounted on the second deck, tracks on said second deck, dump cars on said tracks, a scoop and operating means therefor carried by the second deck, and a prime mover mounted upon the main deck and connected for operation with the dredging means on the second deck.

3. A dredge comprising a scow having a main deck and an elevated second deck, a scoop and operating means therefor mounted on the second deck, a prime mover on the main deck, and connections between said prime mover and the scoop-operating mechanism.



4. A dredge comprising a scow having a main deck and an elevated second deck, a prime mover carried by the main deck, a propelling means connected to the prime mover, a scoop and operating means therefor operating on the second deck, cars mounted on said second deck and movable from the front to the rear thereof, chutes from the rear of the second deck leading downward therefrom at the rear of the dredge and in line with the cars for receiving material therefrom, and connections between the prime mover and scoop-operating mechanism.

900,264. VEHICLE-WHEEL. HERMAN CRAMER, Sonora, Cal. Filed Jan. 19, 1905, Serial No. 241,807. Renewed Nov. 26, 1907. Serial No. 403,905.



1. In a vehicle wheel, a hub comprising two separate hollow boxes, one of which is provided with a sleeve forming the axle bearing, said boxes being spaced apart to receive the spokes between them, a mass of hardened molten metal in the space between the boxes, and a nut engaging with said sleeve and bearing against the other box, whereby the said boxes are clamped on the spokes.

2. In a vehicle wheel, a hub comprising two separate hollow boxes, one of which is provided with a sleeve forming the axle bearing, said boxes being spaced apart to receive the spokes between them, and a nut engaging with said sleeve and bearing against the other box, whereby the said boxes are clamped on the spokes, and hardened molten metal between said boxes in which the spokes are embedded.

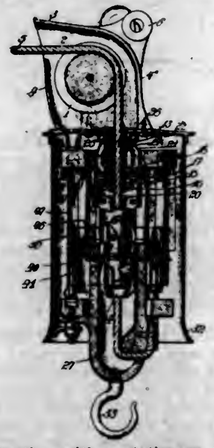
3. In a vehicle wheel, a hub comprising two separate boxes spaced apart so that the spokes can be admitted between them, an intermediate disk secured to one of the said boxes and having a flange approaching a corresponding flange on the other box, means for drawing said boxes together so as to secure the spokes between them, a mass of hardened metal in which the spokes are embedded, and registering holes in said disk and in the box to which it is secured, whereby such molten metal can be introduced so as to surround the said spokes.

4. In a vehicle wheel, the combination of an axle having a fixed collar and a box having a shoulder adapted to bear against said collar and provided with a socket surrounding said collar, a nut on the axle threaded into said socket, a second box, adapted in coöperation with the first box to receive the spokes, a mass of hardened metal between the boxes, and a nut bearing on said second box and engaging said first box whereby the parts are drawn together and clamped upon the spokes.

5. In a vehicle wheel, a hub comprising two separate boxes an intermediate disk secured to one of them, spokes inserted between said disk and the other box, a flange on said disk having an indented edge, and a mass of hardened molten metal in the space between said disk and the other box; whereby said molten metal surrounds the spokes and also enters said indented edge and anchors said disk.

[Claims 6 and 7 not printed in the Gazette.]

900,265. SUPPORTING MECHANISM. GEORGE CUTTER, Winnetka, Ill., assignor to George Cutter Company, Chicago, Ill. Filed Sept. 10, 1904. Serial No. 224,006.



1. The combination with a stationary member, and a movable member, of a rotary extension on the stationary member adapted to enter the movable member, and provided with external cam grooves, and means carried by the movable member for engaging in said cam grooves, the grooves being formed that the movable member is alternately released from and locked to the stationary member upon pulls on the movable member.

2. The combination with a stationary member, of a rotary part on said member, provided with cam portions, and a movable member having means engaging said cam portions, to alternately release the movable member from and lock it to the stationary member upon pulls on the movable member.

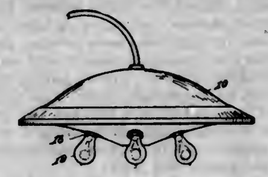
3. The combination with a stationary member, of a member movable thereon and carrying cam portions, and a movable member having means engaging in said cam grooves to alternately release the movable member from and lock it to the stationary member upon pulls on the movable member.

4. The combination with a stationary member, of a tubular member arranged to rotate on the stationary member and carrying a cam mechanism, a movable member adapted to coöperate with the cam mechanism, and a cable extending through the tubular member and connected to the movable member.

5. In a device of the class described, the combination with a pulley housing, of a member rotatably mounted on the housing and carrying cam mechanism, a cable, and a member having attachment with the cable and adapted for coöperation with said cam mechanism to become engaged therewith and to be disengaged therefrom upon the manipulation of the cable.

[Claims 6 to 21 not printed in the Gazette.]

900,266. HOOD AND REFLECTOR. GEORGE CUTTER, South Bend, Ind. Filed Oct. 30, 1907. Serial No. 399,853.

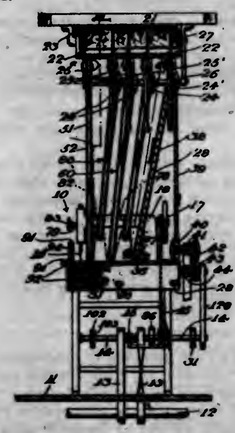


1. A device of the class described comprising a hood, having a depending rim provided with an inturned flange providing an opening in the lower end of the hood, a reflector whose inner end is of smaller cross sectional diameter than said opening, and an annular resilient member having a portion bearing upon said flange and also having a portion projecting beyond the free edge of the flange to engage said reflector and detachably support the latter relatively high above the flange.

2. A device of the class described comprising a hood including a depending rim provided with an inturned flange, a reflector, and a resilient element having a vertical portion resting at its lower edge upon said flange with the body of its vertical portion lying flush with the inner surface of said rim, said resilient member also having a substantially horizontal annular portion normally engaging said reflector to detachably support the latter, the substantially horizontal annular portion of the resilient member being curved in cross section throughout its length to form an annular seat for the reception of the inner end of the reflector.

3. A device of the character described comprising a hood including a rim having an integral inturned annular flange, the rim and flange being imperforate, a reflector of smaller cross sectional diameter than said flange, and means for detachably supporting the reflector within the hood above said flange said means being composed solely of an annular resilient member having detachable engagement with said flange.

900,267. STRAIGHT-SEAMING APPARATUS. ORLENA W. DAVIS, Los Angeles, Cal. Filed Oct. 29, 1907. Serial No. 399,762.



1. In combination with a machine having a cloth support, a post and an overhanging arm; a plurality of belt guides converging from points above the machine to points adjacent the space between the arm and the cloth support, cloth carrying belts passing over said guides and through the space between the arm and the cloth support, and means to operate said belts.

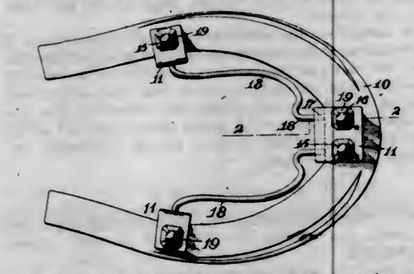
2. In combination with a machine having a cloth support, a post and an overhanging arm; a plurality of curved belt guides converging from a line above the machine to points adjacent the space between the arm and the cloth support, endless cloth carrying belts passing over said guides and through the space between the arm and the cloth support, and means to operate said belts.

3. In combination with a machine having a cloth support, a post and an overhanging arm; a plurality of cloth carrying belts arranged to pass between the arm and the cloth support, alternate belts being arranged in proximity to the cloth support and the arm respectively, and means to support and operate said belts.

4. In combination with a machine having a cloth support, a post and an overhanging arm; a plurality of belt guides converging from points above the machine to points adjacent the space between the arm and the cloth support, alternate guides converging to points near the arm and the cloth support respectively, cloth carrying belts passing over said guides and through the space between the arm and the cloth support, and means to operate said belts.

5. In combination with a machine having a cloth support, a post and an overhanging arm; a plurality of sets of belts passing through the space between the arm and the cloth support, alternate sets of belts passing close to the arm and the cloth support respectively, each set comprising a pair of belts adapted to grip the cloth between them, and means to support and operate said belts.

900,268. HORSESHOE. PETER DECH, West Orange, N. J., assignor of one-half to Henry G. Roilpilier, West Orange, N. J. Filed Jan. 15, 1908. Serial No. 410,950.



1. In combination with a horse-shoe, a series of U-shaped calk-clips bridging the inside edge of the shoe, calks on the clips, the clips having perforations on the bottom of the U, and a spring wire bent to form projections to enter the perforations in the clips and held therein by its own spring action, and acting to press the clips toward the shoe and keep them spaced apart, the wire being detachable.

2. In combination with a horse-shoe, a series of U-shaped calk-clips bridging the inside edge of the shoe, calks passing through the clips to secure the clips to the shoe, the clips having perforations on the bottom of the U, and a spring wire bent to form projections to enter the perforations in the clips and held therein by its own spring action, and acting to press the clips toward the shoe and keep them spaced apart, the wire being detachable and out of contact with the shoe.

900,269. ELEVATED RAILWAY. NAPOLEON B. DIXON, Dixie, Ala. Filed Nov. 13, 1907. Serial No. 401,983.

1. In combination, a hollow rail having a longitudinal slot in its upper side, a pulley arranged to travel within said rail, and guide pulleys at opposite sides of the rail and coöperating with the said pulley to steady and prevent displacement of the part to which the several pulleys are attached.

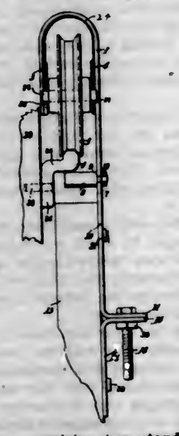
2. In transporting means of the character specified, the combination of a main rail, oppositely disposed guide rails arranged in a lower plane than the main rail and equidistant from a line passed perpendicular through said main rail, a car having a longitudinal depression in its bottom to receive the main and guide rails provided with supporting wheels and guide pulleys, and propellers located in said longitudinal depression upon opposite sides of a medial line and adapted to exert both a lifting and a pulling force.



3. In combination, a tubular rail of approximately circular outline in transverse section and having a longitudinal slot in its upper side and having horizontal flanges projected outward from the longitudinal edge portions of the rail bordering upon the slot, a pulley arranged to operate within the rail, and sets of guide pulleys at opposite sides of the rail, one pulley of each set being grooved and embracing the outer edge portion of the horizontal flange with which it coöperates, and the other guide pulley being grooved to conform to the outer side of the main portion of the rail.

4. In combination, a hollow rail of approximately circular outline in cross section and having a longitudinal slot in its upper side and outwardly extended flanges at opposite sides of the said slot, a bracket, a spheroidal shaped pulley mounted in said bracket and arranged within the rail, and sets of pulleys mounted upon said bracket and arranged at opposite sides of the rail, one pulley of each set being grooved to embrace the edge portion of the coöperating flange and the other pulley being grooved to embrace the side of the rail.

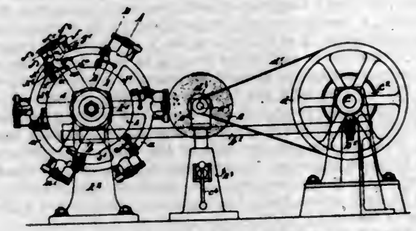
900,270. DOOR-HANGER. JOHN DORAN, Empire, Mich. Filed May 23, 1904. Serial No. 209,356.



A door hanger comprising two standards spaced apart, horisontal bars connecting the upper ends of the standards

together and fixing the same with relation to each other, a single track wheel having its axle bearing within alined slots provided in said bars between the standards, a track rail supporting said track wheel and a stud mounted upon one of the standards only and at all times being out of vertical alinement with the center of the wheel and lying under the track and being normally out of engagement with the same but which engages the track when the door is moved so that the axle of the wheel crosses a line lying in the vertical plane of the center of gravity of the door.

900,271. DEVICE FOR GRINDING WRITING-PENS. FRIEDRICH DÖRSING, Iserlohn, Germany, assignor to The Firm of F. Soennecken, Bonn, Germany. Filed Sept. 30, 1907. Serial No. 395,111.



1. In a pen grinding machine, a grinding wheel, a rotating pen holder carrier, means for bringing all points of the curved surface of the pen evenly in contact with the grinding wheel comprising, spring pressed pivoted pen holding jaws.

2. In a pen grinding machine, a grinding wheel, a rotating pen holder carrier, means for bringing all points of the curved surface of the pen evenly in contact with the grinding wheel comprising, pivoted pen holder jaws, curved bows springs holding said pen-holding jaws resiliently.

3. A pen grinding machine having in combination, a grinding wheel, a carrier wheel, pen holding jaws pivotally carried on the circumference of said wheel about axes parallel to the axis of the carrier wheel, a bow spring pressing said penholding jaws radially outward for the purpose set forth.

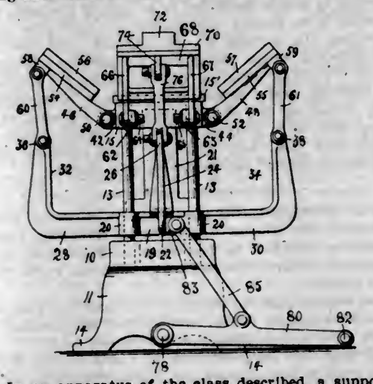
4. A pen grinding machine having in combination, a grinding wheel, a carrier wheel, centrally pivoted penholding jaws carried on the circumference of said wheel about axes parallel to the axis of the carrier wheel, bow springs pressing said penholding jaws radially outwards at one end, stop pins on the opposite end of said centrally pivoted jaws to the penholding side and co-acting with the circumference of the carrier wheel to limit the motion of the jaws, substantially as described.

5. A pen grinding machine having in combination, a grinding wheel, a carrier wheel, pivots mounted on the circumference of said carrier wheel and parallel to the axis thereof, penholding jaws carried on said pivots and comprising a pivoted inner jaw part, an outer jaw part, a band spring holding said outer to said inner jaw part together with a bow spring resiliently pressing said inner jaw part radially outwards.

[Claims 6 to 12 not printed in the Gazette.]

900,272. MACHINE FOR CONSTRUCTING HOLLOW CONCRETE BUILDING-BLOCKS. JOHN FISH, South Bend, Ind., assignor of one-fourth to Daniel Delbert Frick, one-fourth to Clyde Melvin Frick, one-eighth to Charles D. Lennox, and one-eighth to Monroe Strickler, South Bend, Ind. Filed Oct. 19, 1907. Serial No. 398,296.

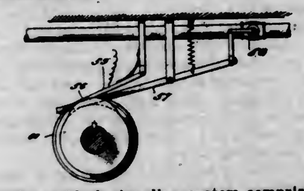
1. In an apparatus of the class described, a supporting base, a stationary frame, guide elements spaced apart and connecting the stationary frame and the base, a follower frame movable upon said guide elements, mold supporting frames swinging from said stationary frame, movable links between said mold supporting frames and follower frame, levers swinging from said base and connected at their free ends by a transverse member adapted to bear beneath the follower frame when in elevated position, and links connecting said follower frame and levers.



2. In an apparatus of the class described, a supporting base having spaced vertical sockets, guide elements movable in said sockets, means for securing said guide elements in their adjusted positions in said sockets, a stationary frame carried by said guide elements, mold supporting frames swinging from said stationary frame, a follower frame movable upon said guide elements, coupling devices between said follower frame and swinging mold frame, levers swinging from said base and connected at their free ends by a transverse member adapted to bear beneath the follower frame when in elevated position, and coupling means between said levers and follower frame.

3. In an apparatus of the class described, a supporting base, a stationary frame spaced from said base, a mold device comprising movable elements and carried by said stationary frame, a follower, connecting means between the elements of said mold and said follower, levers swinging from said base, a transverse member connecting the free ends of said levers and adapted to bear beneath the follower when elevated, and connecting means between said levers and follower.

900,273. ELECTRIC RAILWAY SIGNAL SYSTEM. THOMAS M. FREEBLE, Latrobe, Pa. Filed June 7, 1907. Serial No. 377,730.



1. A railway block signaling system comprising in combination track rails, one electrically continuous through a plurality of blocks, the other divided into block sections insulated from each other, a signal conductor divided into blocks insulated from each other and each connected to the insulated rail block section of the block next in advance and train-controlling means mounted on a railway vehicle on said track, and comprising a contact device adapted to make contact with such signal conductor, and electrically-operated signaling means, power-controlling means and brake-applying means and a generator therefor on said vehicle, and a permanently closed circuit extending from said contact device through said generator and controlling means to a part of said vehicle adapted to contact with the track rails, said circuit being normally open as a whole and arranged to be completed through the wheels and axles of any railway vehicle which may occupy the block in advance.

2. In a railway signaling system, means for automatically applying train brakes comprising a brake-applying valve, means for opening and closing same intermittently comprising a driving member arranged to be driven automatically by means connected to an axle of the train while the train is in motion, and electrically-controlled means controlling the driving of said member, and automatic block-signaling means controlling the operation thereof.

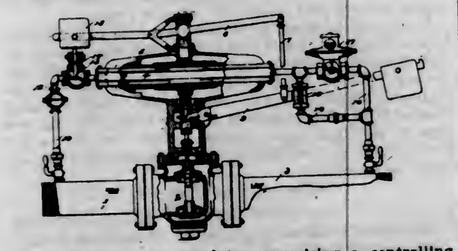
3. In a railway signaling system, means for automatically applying train brakes comprising a brake-applying valve, a cam on one of the train axles for opening and closing said valve intermittently, an electric clutch controlling said cam, and automatic block-signaling means comprising a circuit for energizing said clutch.

900,274. PROCESS FOR THE PRODUCTION OF A SOLUBLE GUM. FERDINAND FRITSCHE, Rumburg, Austria-Hungary, assignor to The Firm of Stolle and Kopke, Rumburg, Austria-Hungary. Filed Jan. 13, 1908. Serial No. 410,648.

1. A soluble gum consisting of an insoluble gum product, such as algæ or lichen, said product being soaked in a diluted perborate solution and afterwards heated.

2. Process for the production of a soluble gum consisting in soaking an insoluble gum product, such as algæ or lichen, in a diluted perborate solution, heating the same under addition of water until the required thickness of the solution is obtained, substantially as described.

900,275. FLUID-PRESSURE REGULATOR. LOUIS B. FULTON, Pittsburg, Pa., assignor to The Chaplin-Fulton Mauufacturing Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Dec. 11, 1907. Serial No. 406,060.



1. A fluid-pressure regulator comprising a controlling valve, a diaphragm, a casing for the latter, a pipe leading from the high-pressure side of said valve to said casing for supplying a lessened and variable volume of fluid under pressure to said casing, a second pipe connecting said casing with the low-pressure side of the valve, an auxiliary low-pressure regulator within such latter pipe, a valve for relieving excess fluid pressure on the diaphragm, and means for conveying the excess fluid to the low-pressure side of the controlling valve.

2. A fluid-pressure regulator comprising a controlling valve, a diaphragm, a casing for the latter, a pipe leading from the high-pressure side of said valve to said casing, a stricture in said pipe, a lessened and variable volume of fluid under pressure being supplied through said pipe to said casing, a second pipe connecting said casing with the low-pressure side of the valve, an auxiliary low-pressure regulator within such latter pipe, a valve for relieving excess fluid pressure on the diaphragm, and means for conveying the excess fluid to the low-pressure side of the controlling valve.

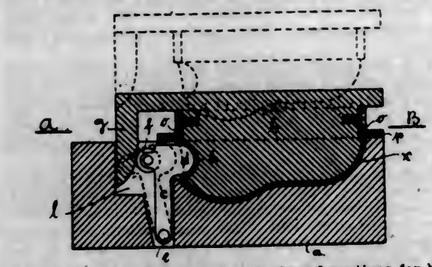
3. A fluid-pressure regulator comprising a valve, a diaphragm, a casing for the latter, a pipe leading from the high-pressure side of said valve to said casing, a cut-off valve in said pipe, a second pipe connecting said casing with the low-pressure side of the valve, an auxiliary low-pressure regulator within such latter pipe, and means actuated by the pressure in the diaphragm casing for effecting the seating of said cut-off valve.

4. A fluid-pressure regulator comprising, in combination, a valve, a diaphragm connected to such valve, a second diaphragm, said diaphragms being movable in opposite directions, a casing for such diaphragms, levers actuated by the movements of said diaphragms, a connection between said levers, one of said levers tending to unseat such valve, a pipe connecting the diaphragm casing at a point between the diaphragms with the high-pressure side of said valve and constructed to supply a lessened and variable volume of fluid under pressure, a second pipe connecting said casing with the low-pressure side of the valve, an auxiliary low-pressure regulator in said second pipe, and a valve-controlled by-pass connected to such second pipe on opposite sides of said auxiliary low-pressure regulator.

5. A fluid-pressure regulator comprising, in combination, a valve, a diaphragm connected to such valve, a second diaphragm, said diaphragms being movable in opposite directions, a casing for such diaphragms, levers actuated by the movements of said diaphragms, a connection between said levers, one of said levers tending to unseat such valve, a pipe connecting the diaphragm casing at a point between the diaphragms with the high-pressure side of said valve and constructed to supply a lessened and variable volume of fluid under pressure, a second pipe connecting said casing with the low-pressure side of the valve, an auxiliary low-pressure regulator in said second pipe, and a cut-off valve in the first mentioned pipe designed to be seated by one of said levers when the auxiliary low-pressure regulator is seated.

[Claim 6 not printed in the Gazette.]

900,276. MEANS FOR PRESSING HOLLOW BODIES HAVING DEPRESSIONS OR CAVITIES AT THEIR OUTER SIDES. CARL GEFFERS, Erfurt, Germany. Filed Apr. 9, 1906. Serial No. 310,860.



1. As a means for producing, in shaped portions for hollow bodies such as employed for dolls, imitations of animals, and the like, cavities extending into the hollow space of the respective portion at an angle with respect to the open side of the same, the combination with a matrix; a recess in the same, a stamp located in said recess and adapted to be moved in the same in the direction to and from the material under treatment; a patrix fitting into said matrix; a recess in said patrix adapted to receive said stamp, and means for moving the latter into the last-named recess, for the purpose as described.

2. As a means for producing cavities in shaped portions for hollow bodies, such as employed for dolls, imitations of animals and other objects, and the like, the combination with a matrix, a recess in the same, a stamp located in said recess and adapted to be moved in the same in the direction to and from the material under treatment, a patrix fitting into said matrix, and a lug of said patrix adapted to enter said recess and to move the said stamp, substantially and for the purpose as described.

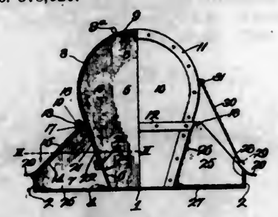
3. As a means for producing in shaped portions for hollow bodies such as employed for dolls, imitations of animals, and the like, cavities extending into the hollow space of the respective portion at an angle with respect to the open side of the same, the combination with a matrix; a recess in the same, a stamp located in said recess and adapted to be moved in the same in the direction to and

from the material under treatment; a patrix fitting into said matrix; a recess in said patrix adapted to receive said stamp, and means for moving the latter in to the last-named recess; lateral cutting-knives provided at said patrix, counter-knives provided upon the matrix, and oblique surfaces provided at the inner edges of said counter-knives, substantially and for the purpose as described.

4. As a means for producing cavities in shaped portions for hollow bodies, such as employed for dolls, imitations of animals and other objects, and the like, the combination with a matrix, a recess in the same, a stamp located in said recess and adapted to be moved in the same in the direction to and from the material under treatment, a patrix fitting into said matrix, and a lug of said patrix adapted to enter said recess and to move the said stamp, lateral cutting-knives provided at said patrix, counter-knives provided upon the matrix, and oblique surfaces provided at the inner edges of said counter-knives, substantially and for the purpose as described.

5. As a means for producing depressions in shaped portions for hollow bodies, such as employed for dolls, imitations of animals and other objects, and the like, the combination with a matrix, a recess in the same, a stamp located in said recess and adapted to be moved in the same in the direction to and from the material under treatment, a patrix fitting into said matrix, and a lug of said patrix adapted to enter said recess and to move the said stamp, substantially and for the purpose as described.

900,277. FEED-TROUGH. CHARLES B. HALDEMAN, Center township, Cloud county, Kans. Filed June 8, 1907. Serial No. 378,020.



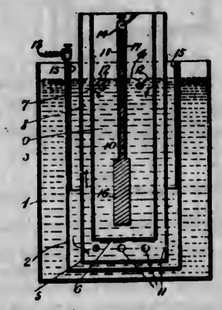
1. A feed trough, comprising a base, an inverted-U-shaped magazine secured to the base and provided in its lower edges with openings, angle irons secured to the base parallel with and outward of the sides of the magazine, angle irons secured in the opposite sides of the magazine, inclined brace bars connecting the angle irons secured to the magazine with the angle irons secured to the base at the corresponding sides of the magazine, end walls between the opposite sides of the magazine, the base and the angle irons secured to the latter and forming in conjunction with said magazine, base and angle irons, troughs in communication with the magazine through the openings of the latter, and lids hinged at their upper ends to the angle irons secured to the magazine and resting at their lower ends upon and projecting outwardly beyond the angle irons of the base at the corresponding sides of the magazine; each lid lapping over the adjacent pair of brace bars.

2. A feed trough, comprising a base, an inverted-U-shaped magazine secured to the base and provided in its lower edges with openings, angle irons secured to the base parallel with and outward of the sides of the magazine, angle irons secured to the opposite sides of the magazine, inclined brace bars connecting the angle irons secured to the magazine with the angle irons secured to the base at the corresponding sides of the magazine, end walls between the opposite sides of the magazine, the base and the angle irons secured to the latter and forming in conjunction with said magazine, base and angle irons, troughs in communication with the magazine through the openings of the latter, lids hinged at their upper ends to the angle irons secured to the magazine and resting at their lower ends upon and projecting outwardly beyond the angle irons of the base at the corresponding sides of the magazine; each lid lapping over the adjacent pair of brace bars, and adjustable valves for controlling the openings connecting the magazine and the troughs.

3. A feed trough, comprising a base, parallel angle irons secured to the same at its side margins, a substantially inverted U-shaped body portion fitting upon the base and secured thereto and provided in the lower edges of its opposite sides with openings and provided also with a door-controlled opening in its upper portion, end walls at the ends of said inverted-U-shaped body portion, angle irons securing said body portion and end walls together, a band around the magazine constituted by such body portion and end walls, provided with outwardly projecting flanges, brace bars secured at their upper ends to such flanges and at their lower ends to the angle irons of the base, end walls for the troughs fitting against the outer edges of the end-most brace bars and secured to the base, its angle irons, and the body portion, eye-bolts depending from the flanges of said band, rods extending through said eye-bolts and lids pivoted on said rods and resting upon and projecting outward of the angle irons of the base and overlapping adjacent brace bars.

4. A feed trough, comprising a base, parallel angle irons secured to the same at its side margins, a substantially inverted-U-shaped body portion fitting upon the base and secured thereto and provided in the lower edges of its opposite sides with openings and provided also with a door-controlled opening in its upper portion, end walls at the ends of said inverted-U-shaped body portion, angle irons securing said body portion and end walls together, a band around the magazine constituted by such body portion and end walls, provided with outwardly projecting flanges, brace bars secured at their upper ends to such flanges and at their lower ends to the angle irons of the base, end walls for the troughs fitting against the outer edges of the end-most brace bars and secured to the base, its angle irons and the body portion, eye-bolts depending from the flanges of said band, rods extending through said eye-bolts, lids pivoted on said rods and resting upon and projecting outward of the angle irons of the base and overlapping adjacent brace bars, and means for supporting the lids partially opened if desired.

900,278. ELECTROLYTIC ALTERNATING-CURRENT RECTIFIER. ARTHUR S. HICKLEY, Manasquan, N. J. Filed Nov. 12, 1907. Serial No. 401,835.

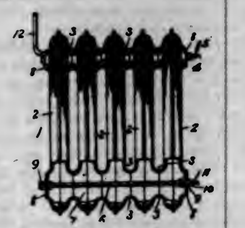


1. An electrolytic alternating-current rectifier having insulating members extending into the electrolyte and above the cell for protecting the terminals against short circuiting.

2. In an electrolytic alternating-current rectifier, an electrolyte containing a substance for preventing oxids and precipitates forming and collecting in the cell.

3. In an electrolytic alternating-current rectifier, an electrolyte containing glycerin for preventing oxids and precipitates forming and collecting in the cell.

900,279. ELECTROLYTIC ALTERNATING-CURRENT RECTIFIER. ARTHUR S. HICKLEY, Manasquan, N. J. Filed Jan. 16, 1908. Serial No. 411,174.



1. An electrolytic cell for alternating-current rectifiers having an active electrode extending across the cell near the bottom and through one wall thereof.

2. An electrolytic cell for alternating current rectifiers, having an active electrode submerged in, extending across the cell near the bottom thereof and supported in the wall of the cell.

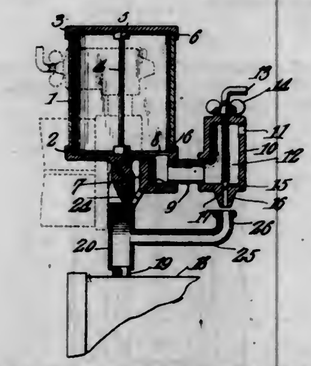
3. An electrolytic cell for alternating current rectifiers, having an active electrode extending across the cell near the bottom thereof and supported at both its ends in the wall of the cell.

4. An electrolytic cell for alternating current rectifiers composed of a plurality of hollow members, and an active electrode supported at its ends in the wall of the cell, and arranged to dispose of its heat to the electrolyte near the bottom of the cell.

5. An electrolytic cell for alternating-current rectifiers, composed of a plurality of hollow connected members having an active electrode submerged in and extending across the cell near the bottom thereof, and extending through one wall of the cell.

[Claims 6 to 10 not printed in the Gazette.]

900,280. LUBRICATOR. LLOYD R. HOFFMAN, Oil City, Pa. Filed Oct. 26, 1907. Serial No. 399,376.



1. In a lubricator, a pivotally mounted main receptacle, a supplemental receptacle below the same in free communication therewith, another receptacle connected at its lower end to the supplemental receptacle and extending above the point of connection, there being an outlet at the lower end of the third receptacle, a valve for said outlet, and means for conducting lubricant therefrom to the parts to be lubricated.

2. In a lubricator, a main receptacle for the lubricant, another receptacle connected to the main receptacle and extending above the point of connection, said second-named receptacle being provided with a freely open orifice near its upper end and a lubricant outlet at the lower end, and a valve in the said second receptacle for the lubricant outlet for regulating the flow of lubricant therefrom.

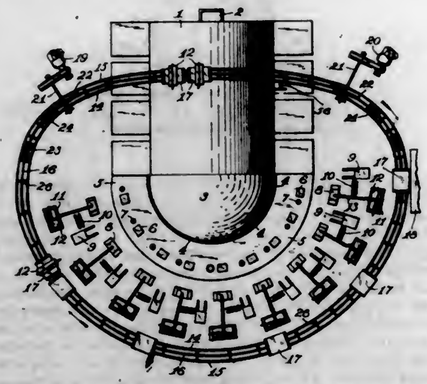
3. In a lubricator, a main receptacle pivotally mounted, another receptacle connected to the main receptacle and extending when in operative position above the point of connection and also provided above said point of connection with an orifice, a controlling valve in the second-named receptacle, and means for supporting the lubricator in an operative position with the second-named receptacle at one side thereof and in an inoperative position with the second-named receptacle uppermost.

4. A lubricator for explosive engines comprising a chamber connected with the interior of the engine cylinder, an oil duct leading to said chamber and open at the end remote therefrom, an escape pipe leading from the chamber to the atmosphere for diverting the exploded gases from the oil duct, a lubricant reservoir hinged to the top of the chamber and provided with a lubricant outlet in operative relation to the open end of the oil duct when the reservoir is in active position, and a governing means for controlling the flow of oil from the reservoir to the duct.

5. A lubricator for gas engines comprising a lubricant receptacle, a chamber in direct communication with the interior of the cylinder of the gas engine, an oil duct connected at one end to the chamber and at the other end in operative relation to and spaced from the lubricant outlet from the lubricant receptacle but not physically connected therewith, said space between the lubricant outlet and the open end of the duct constituting a sight feed for the lubricant, and a vent leading from the chamber to the atmosphere for diverting exploded gases from the lubricant receptacle.

[Claim 6 not printed in the Gazette.]

900,281. METHOD AND APPARATUS FOR MAKING GLASSWARE. WILLIAM E. HOLMES, Cicero, Ind. Filed Apr. 22, 1907. Serial No. 369,519.



1. The method of annealing articles of glassware after mechanically finishing the same while hot, which method consists in inclosing a plurality of the heated articles without reheating in a substantially tight portable oven and thereby producing an envelop of heat about the articles derived from the heat of the articles, to prevent rapid cooling of the articles, and then conveying the articles and the envelop of heat together in the oven through the natural atmosphere.

2. The method of making glass articles, which method consists in shaping the articles of molten substance, then reheating the articles, then applying a finishing tool to the articles while heated, then inclosing the articles while heated in an oven, then retaining the heat of the articles as an envelop in and about the articles, then conveying the articles and the envelop of heat together in the oven through the natural atmosphere.

3. The method of finishing glass articles, which method consists in heating the articles, then mechanically finishing the articles while heated, then inclosing a plurality of the articles while heated and without reheating in a portable oven and thereby causing an envelop of heat to be created about the articles derived from the heat of the articles, to retard loss of heat from the articles, and then gradually diminishing the temperature of the envelop by conveying the oven through the natural atmosphere to a delivery station for the articles.

4. The method of finishing glass articles, which method consists in heating the articles, then applying a finishing tool to the articles while still heated, then placing the articles while still heated and without reheating into a partially heated oven, then closing the oven to retain the heat therein, and then gradually diminishing the temperature by degrees uniformly in and around the articles by causing the oven with the articles and heat therein to be conveyed through the natural atmosphere, to cause radiation of the heat.

5. Apparatus for making glassware including a reheating furnace, a tooling station, a delivery station, a plurality of portable ovens having each a door to receive the glassware while heated and having also means for retarding heat radiation from the oven and the glassware, and guiding means for guiding the ovens from the tooling station to the delivery station.

[Claims 6 to 14 not printed in the Gazette.]

900,282. EXTINGUISHING DEVICE. FRANCIS HURSTHOUSE, Manchester, England. Filed July 6, 1906. Serial No. 325,032.



1. In combination with the cap and wick tube of a lamp burner, a skeleton frame depending from the base of the cap, said frame having a perforation, a weighted rod passing through the perforation of the frame, a head on said rod contacting with the frame, the contacting portion of the head being convexed and the opposing face concaved, a rod slidably held by the wick tube, said rod having a convexed end engaging the concaved surface of the head, a resilient plate secured to said rod, said plate being provided with bands to embrace the tube, the upper portion of the plate being flanged, said flange being held normally in contact with the wick tube, said bands being of such length as to permit movement of the plate with relation to the wick tube.

2. In combination with the cap and wick of a lamp burner, a skeleton frame depending from the base of the cap, said frame having a perforation, a weighted rod passing through the perforation of the frame, a head on said rod contacting with the frame, the contacting portion of the head being convexed and the opposing face concaved, a rod slidably held by the wick tube, said rod having a convexed end engaging the concaved surface of the head, a resilient plate secured to said rod, said plate being provided with bands to embrace the tube, the upper portion of the plate being flanged, said flange being held normally in contact with the wick tube, said bands being of such length as to permit movement of the plate with relation to the wick tube and stops carried by the wick tube for limiting the movement of the plate upwardly thereon.

3. In combination with the cap and wick tube of a lamp burner, a skeleton frame depending from the base of the cap, said frame having a perforation, a weighted rod passing through the perforation of the frame, a head on said rod contacting with the frame, a rod slidably held by the wick tube, said rod contacting with the head of the first named rod, a resilient plate secured to the second named rod, said plate being provided with bands to embrace the tube, the upper portion of the plate being flanged, said flange being held normally in contact with the wick tube, said bands being of such length as to permit movement of the plate with relation to the wick tube.

900,283. TRACE-EYE GUARD. LEWIS G. JOHNS, Denver, Ind., assignor of one-half to Madison E. Sloppy, Denver, Ind. Filed Mar. 30, 1908. Serial No. 424,162.



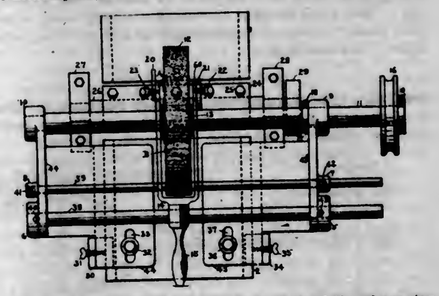
1. A trace eye guard comprising a pair of U-shaped members fitted one within the other and means for securing the same within the eye of a trace, substantially as described.

2. A trace eye guard comprising a U-shaped member and means for securing the same in the eye of the trace in combination with a second U-shaped member arranged within the first and having its outer edge extending beyond the outer edge of the former, substantially as described.

3. In a device of the class described a U-shaped member and means for securing the same in the eye of a trace, in combination with a second U-shaped member arranged within the first and having a rearwardly extending tongue, the first U-shaped member being apertured to receive said tongue, substantially as described.

4. In a device of the class described, a U-shaped member adapted to be arranged in the rear end of a trace eye and having a pair of lugs at each end to engage the outer and inner faces of the trace, and a lug extending rearwardly from the center of one edge thereof, fastening means adapted to extend through said lug and the trace, a second U-shaped member arranged within the former and having one edge extending outwardly beyond said lug and said fastening means substantially as described.

900,284. GRINDER FOR WOOD-PLANER KNIVES. WILLIAM H. KAHLE, Pottsville, and MAX HIMMELREICH, Philadelphia, Pa. Filed Mar. 9, 1908. Serial No. 420,040.



1. In a grinder for wood planer knives of the character described in combination with a planer table, a grinding wheel adapted to traverse a shaft and in revolving engagement therewith, a supporting means on said planer table for said shaft, a yoke embracing said grinding wheel and a driving means for said shaft; two radial arms each provided with a slot, a set screw engaging therewith and attached to said yoke by threaded engagement, one of said arms being adapted to engage with said planer table and the other with said planer knives, all substantially as and for the purpose shown and described.

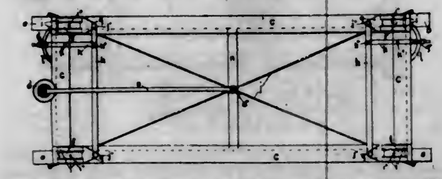
2. In a grinder for wood planer knives of the character described the combination of a planer table and a grinding wheel adapted to traverse a shaft and in revolving engagement therewith; a yoke embracing said grinding wheel provided with two removably adjustable radial arms, one of which is adapted to engage with said planer table and the other with said planer knives and bearing supports for said shaft provided with a slot which is provided with securing means on said planer table, all substantially as and for the purpose shown and described.

3. In a grinder for wood planer knives of the character described in combination with a planer table, a grinding wheel adapted to traverse a shaft and in revolving engagement therewith, bearing supports for said shaft, a yoke embracing said grinding wheel and a driving means for said shaft; two radial arms adjustably attached to said yoke one of which is adapted to engage with said planer table and the other with said planer knives, a slot in said base, a set screw in threaded engagement with said planer table and adapted to engage with said slot, all substantially as and for the purpose shown and described.

4. In a grinder for wood planer knives of the character described in combination with a planer table, a grinding wheel adapted to traverse a shaft and in revolving engagement therewith, a yoke embracing said grinding wheel and a driving means for said shaft; two radial arms adjustably attached to said yoke, one of which is adapted to engage with said planer table and the other with said planer knives, bearing supports for said shaft provided with a slot in the base thereof, set screws in threaded engagement with said planer table and adapted to engage with said slot, angle clips having a slot in one leg thereof, set screws in threaded engagement with the vertical side of said bearing supports and adapted to engage with said slots in said angle clips and one leg of said clips adapted to engage with the under side of said planer table, all substantially as and for the purpose shown and described.

5. In a grinder for wood planer knives of the character described in combination with a planer table 1 and 2, a grinding wheel 12 adapted to traverse a shaft 11 and in revolving engagement therewith, a yoke 15 embracing said grinding wheel and a driving means for said shaft; a collar 18 removably adjustably attached to said shaft, two radial arms 20 and 21 attached to said yoke, one of which is adapted to engage with said planer table 1 and the other with said planer knives, bearing supports 44 and 45, adjustably removably secured to said planer table 2 by means of set screws 32 and 36 engaging with slots 33 and 37 in said bearing supports 44 and 45, angle clips 30 and 34 having a slot 46 in one leg thereof which is adapted to engage with set screws 31 and 35 which are in threaded engagement with said supports 44 and 45, and the other leg of said clips adapted to engage with the under side of said planer table, all substantially as and for the purpose shown and described.

900,285. CONCENTRATING-TABLE. ALBERT M. KEMP, MERTON W. LOOMIS, and JOSEPH E. FITZWATER, Denver, Colo. Filed Aug. 13, 1906. Serial No. 330,396.



1. In an ore concentrator, in combination, a table-frame, a plurality of guides pivotally mounted thereon and movable in a plane parallel thereto, blocks movably mounted in said guides and carrying a deck having an ore-concentrating surface, means for connecting said guides in pairs, adjustable levers attached to said frame and each of said connecting means, means for holding said levers in any desired position, and means for reciprocating said deck.

2. In an ore-concentrator, in combination, a deck having an ore-concentrating surface, a table-frame, a plurality of guide-carrying plates pivoted to said frame and angularly adjustable in a plane parallel thereto, means for simultaneously adjusting said plates, blocks pivoted to said deck and movable in said guides, and adjustable means for reciprocating said deck and blocks.

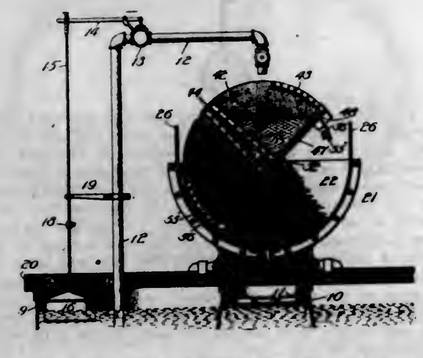
3. In an ore-concentrator, in combination, a table-frame, plates resting thereon and provided with guides, means for angularly adjusting a plurality of said plates and guides simultaneously in a plane parallel to the plane of said frame, blocks mounted to reciprocate in said guides and a deck having an ore-concentrating surface, pivotally secured to each of said blocks and movable therewith.

4. In an ore-concentrator, in combination, a table-frame, plates pivoted thereto and provided with guides, a deck having an ore-concentrating surface, blocks adjustably secured to said deck and movable in said guides, means for reciprocating said deck, and independently adjustable connecting means for said plates at each end of the table to angularly adjust said guides in a plane parallel to the plane of the frame, and cause the blocks at the same end of the table to move simultaneously in the same direction.

5. In an ore-concentrator, in combination, a deck having an ore-concentrating surface and means for reciprocating said deck, a table-frame, plates pivoted to said frame and provided with guides, said plates and guides being angularly adjustable in a plane parallel to the plane of the frame, blocks movable in said guides and pivotally attached to said deck, a cross-bar connecting plates at the same end of the table, a lever having one end attached to said cross-bar and an intermediate point thereof pivoted to said table-frame, and a clamp for holding said lever in any desired position.

[Claims 6 to 10 not printed in the Gazette.]

900,286. WATER-PURIFYING APPARATUS. CASS L. KENNICOTT, Chicago Heights, Ill., assignor to Kennicott Water Softener Co., Chicago, Ill., a Corporation of Illinois. Filed May 28, 1908. Serial No. 435,429.



1. In a water-purifying apparatus, the combination of a mixing-chamber provided with abutments, and a tipping-box containing compartments and supported in the path of the flow to said chamber of water to be treated and discharging into said chamber, and movable wings supported in said compartments and extending to engage said abutments in the rocking motion of said box and cushion the impact against the liquid therein.

2. In a water-purifying apparatus, the combination of a mixing-chamber provided with abutments, and a tipping-box containing compartments and supported in the path of the flow to said chamber of water to be treated and discharging into said chamber, and wings hinged in said compartments with bent protruding end-portions engaging said abutments in the rocking motion of said box, for the purpose set forth.

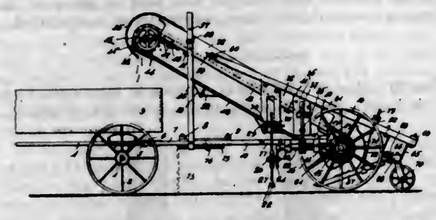
3. In a water-purifying apparatus, the combination of a mixing-chamber provided with abutments, and a tipping-box containing compartments and supported in the path of the flow to said chamber of water to be treated and discharging into said chamber, and wings hinged in said compartments with bent protruding end-portions engaging said abutments in the rocking motion of said box and provided with cushions for engaging the bases of said compartments, for the purpose set forth.

4. In a water-purifying apparatus, the combination of a mixing-chamber provided with abutments, and a tipping-box containing compartments and supported in the path of flow to said chamber of water to be treated and discharging into said chamber, and wings hinged in said compartments with bent protruding ends engaging said abutments in the rocking motion of said box and provided with openings, for the purpose set forth.

5. In a water-purifying apparatus, the combination of a mixing-chamber containing abutments in its base-portion, and a tipping-box containing compartments and supported in the path of flow to said chamber of water to be treated and discharging into said chamber, and wings hinged in said compartments with bent end-portions protruding through their discharge-openings to engage said abutments in the rocking motion of said box and provided with cushion-carrying seats on said end-portions and with valved openings, for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

900,287. COMBINED HAY RAKE AND ELEVATOR. CHARLES H. KNAPP, Chicago, Ill. Filed Jan. 6, 1908. Serial No. 409,509.



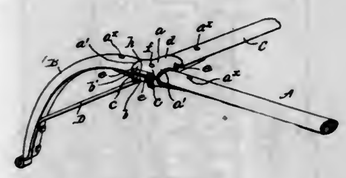
1. In a device of the class described, the combination with a wheeled vehicle, of a conveyer secured thereto, a rake detachably secured to the conveyer, means to direct the material to be received by the rake in the path thereof, and means carried by the rake for holding the material into engagement with the conveyer.

2. In a device of the class described, the combination with a wheeled vehicle, of a conveyer detachably secured thereto, a rake mechanism detachably secured to the conveyer, means for directing the material to be received by the rake in the path thereof, means carried by the rake for holding the material into engagement with the conveyer, and means for positively disengaging the material from the conveyer at the dumping point.

3. In a device of the class described, the combination with a wheeled vehicle, a conveyer secured thereto, a rake detachably secured to the conveyer, a pair of forks operated in the travel of the conveyer for throwing the material to be received by the rake into the path thereof, a series of spring arms carried by the rake for holding the material into engagement with the conveyer, and means for adjusting the conveyer independently of the rake to accommodate the material in the vehicle.

900,288. VEHICLE SHAFT OR THILL. GEORGE A. LAMBERT, Anderson, Ind. Filed Feb. 12, 1908. Serial No. 415,550.

1. A vehicle thill formed of two sections and a cross-bar, the end of the cross-bar lying between the adjoining ends of the thill sections, said thill sections and cross-bar being formed with heads at their ends, a pair of clamping plates, one of said plates being on the upper side of the thill sections and the other being on the lower side thereof, said plates bridging the joints between said sections and the cross-bar and having flanges bearing against the shoulders of the heads on the thills and cross-bar, and fastening devices whereby said thill sections and the cross-bar will be secured in position between said clamping plates.



2. A vehicle thill formed of two sections and a cross-bar, the end of the cross-bar lying between the adjoining ends of the thill sections, said thill sections and cross-bar being formed with shoulders near their ends, a pair of clamping plates, one of the said plates being on the upper side of the thill sections and the other being on the lower side thereof, said plates bridging the joints between said sections and the cross-bar, and having flanges on their side edges embracing the sides of the thill sections and the cross-bar, and being shaped to closely embrace the shoulders, four rigid fastening devices connecting said plates outside the said thill sections and cross-bar, whereby said thill sections and the cross-bar will be secured in position between said clamping plates.

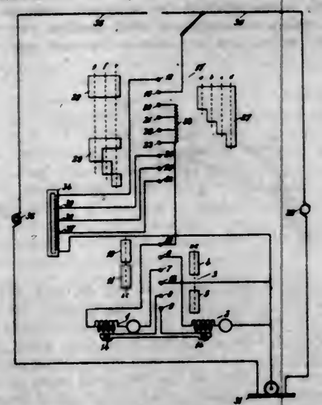
3. A vehicle thill formed of two sections and a cross-bar, the ends of these parts abutting, a pair of clamping plates, one of said plates being on the upper side of the thill and the other being on the lower side and both plates bridging the joints between the cross-bar and thill sections, and both plates being flanged so as to grasp the adjacent ends of the cross-bar and thill sections, rigid clamping or fastening devices connecting said plates at points outside of the thill sections and cross-bar, a brace-iron connecting the lower plate to the rear end of the thill, and a fastening bolt passing down through the clamping plates and the brace-iron, substantially as set forth.

4. A vehicle thill formed of two sections and a cross-bar, the end of the cross-bar lying between the adjoining ends of the thill sections, said thill sections and cross-bar being formed with shoulders near their ends, a pair of clamping plates, one of said plates being on the upper side of the thill section and the other being on the lower side thereof, said plates bridging the joints between said sections and the cross-bar, said plates being formed with studs or projections on their inner sides adapted to enter corresponding recesses in the ends of the thill sections and the cross bar, rigid fastening devices connecting said plates outside the thills and the cross-bar whereby said thill sections and the cross-bar will be secured in position between said clamping plates and the fastening means will not extend through said sections.

5. A vehicle thill formed of two sections and a cross-bar, the end of the cross-bar lying between the adjoining ends of the thill sections, said thill sections and cross-bar being formed with shoulders near their ends, a pair of clamping plates, one of said plates being on the upper side of the thill sections and the other being on the lower side thereof, the plates bridging the joints between said sections and the cross-bar, and being shaped to conform to the heads or enlargements formed by the shoulders, a brace-iron connecting the lower plate to the rear end of the thill section, fastening devices extending through said brace-iron and through the clamping plates, a set of rigid fastening devices connecting said plates adjacent the shoulders formed on the thills and cross-bar whereby said thill sections and the cross-bar will be secured in position between said clamping plates.

[Claims 6 and 7 not printed in the Gazette.]

900,289. SYSTEM OF CONTROL FOR ELECTRIC MOTORS. BENJAMIN G. LAMME, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 4, 1905. Serial No. 290,122.



1. The combination with an electric motor that may be operated by either alternating or direct currents, of an auxiliary field magnet winding therefor that remains open-circuited when the motor is operated by alternating currents but which is closed-circuited on itself when the motor is operated by direct currents.

2. The combination with a source of direct currents, a source of alternating currents and an electric motor that is provided with an auxiliary field magnet winding, of means for connecting the motor with and disconnecting it from the said source, and means for closing the circuit of the auxiliary winding upon itself when the motor is disconnected from the source of direct currents.

3. The combination with an electric motor that may be operated by either alternating or direct currents, of an auxiliary field magnet winding the circuit of which is normally open and means for closing the circuit thereof upon interruption of the circuits of the motor after operation by direct currents.

4. The combination with a source of direct currents, a source of alternating currents and one or more electric motors that may be operated by either character of energy, of auxiliary field magnet windings therefor that serve as closed-circuit secondary windings upon interruption of the circuits of the motors after operation by direct currents but which are ineffective as secondary windings when operating by alternating currents.

5. The combination with one or more electric motors that are adapted to be operated by either alternating or direct currents, of auxiliary field magnet windings therefor that serve as secondary windings to retard changes in field magnetism when operating by direct currents but are ineffective as secondary windings when operating by alternating currents.

[Claims 6 and 7 not printed in the Gazette.]

900,290. CAR-SEAL. ALEXANDER G. MALMSTROM, Chicago, Ill. Filed Sept. 18, 1907. Serial No. 393,465.

1. A car seal comprising before it is sealed an apertured metal strip with a bushing fitting and permanently held in one of said apertures, and a rivet extended through said bushing and held from dislodgment thereby, substantially as described.

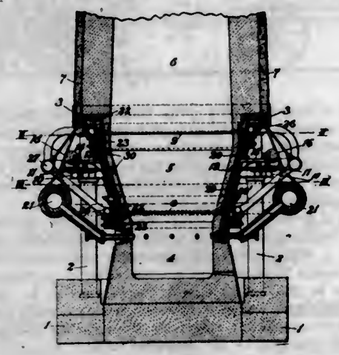
2. A car-seal comprising before it is sealed an apertured metal strip having a bushing integral therewith fitting in one of said apertures, and a rivet extended through said bushing and held from dislodgment thereby, substantially as described.

3. A car seal comprising an apertured metal strip having a folded-over portion provided with a plurality of tongues extended through one of said apertures and collectively forming a bushing, and a rivet fitted in said bushing and held from dislodgment by the tongues forming the same, substantially as described.



4. A car seal comprising an apertured metal strip having at one end a folded-over portion provided with a plurality of radiating ears integral therewith and lying against one face of said strip and a plurality of tongues integral therewith and extended through one of said apertures and grouped to collectively form a bushing, and a rivet extended through said bushing and held in place by the tongues composing the same, substantially as described.

900,291. BLAST-FURNACE. JULIUS H. MEISSNER, Pittsburg, Pa. Filed June 28, 1907. Serial No. 381,193.



1. In combination, a blast furnace having a hearth and an independent movable section thereabove, and means for giving the section a movement of rotation.

2. In combination, a blast furnace having a hearth and an independent movable section thereabove, and means for giving the section a back and forth movement.

3. In combination, a blast furnace comprising a plurality of independent sections, means for giving one of the sections a movement of rotation, and means for applying air pressure to the exterior of the joints between the relative movable sections whereby an outward flow of fluid from the interior of the furnace is avoided.

4. In combination, a blast furnace comprising a plurality of independent sections, means for giving one of the sections a movement of rotation, and water boxes adjacent the joints between the movable section and the other sections whereby such joints are cooled and protected.

5. In combination, a blast furnace comprising a plurality of independent sections for giving one of the sections a movement of rotation and a liquid seal for the opposing relatively movable edges of the sections.

[Claims 6 to 10 not printed in the Gazette.]

900,292. ELECTRIC CURLING-IRON HEATER. WYNN MEREDITH, San Francisco, Cal., assignor to Pacific Electric Heating Company, Ontario, Cal., a Corporation of California. Filed Sept. 25, 1907. Serial No. 394,582.



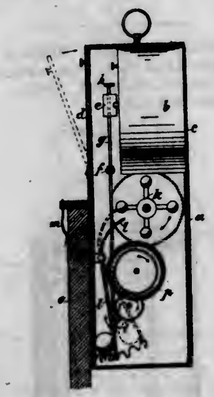
1. An electric curling iron heater comprising a tube adapted to receive a curling iron, a heating wire wound close to the tube, a thin electric insulation between the wire and tube, a thick heat insulation around the heating wire, a perforated shell surrounding the latter insulation with an air space between the shell and said insulation, a ring of insulation supported at the lower end of the shell, an insulating cap at the other end of the shell at the inner end of the tube, and washers encircling the tube at each end and fitting the shell for holding the tube concentrically in the shell.

2. An electric curling iron heater comprising a tube adapted to receive a curling iron, a heating wire wound close to the tube, a thin electric insulation between the wire and tube, a thick heat insulation around the heating wire, a perforated shell surrounding the latter insulation with an air space between the shell and said insulation, and belts around said thick insulation.

3. An electric curling iron heater comprising a tube adapted to receive a curling iron, a heating wire wound close to the tube, a thin electric insulation between the wire and tube, a thick heat insulation around the heating wire, a perforated shell surrounding the latter insulation with an air space between the shell and said insulation, a ring of insulation supported at the lower end of the shell, an insulating cap at the other end of the shell at the inner end of the tube, washers encircling the tube at each end and fitting the shell for holding the tube concentrically in the shell, the lower end of the shell having an inturned flange, a perforated plate resting on said flange and supporting the adjacent ring of insulation.

4. An electric curling iron heater comprising a shell having one end open and the other end provided with an inturned flange, a porcelain plug in the open end of the shell having its inner end flanged and recessed, screws through the shell into said recesses, a metal cap on the plug, terminals in the plug, one of which engages with said cap, a perforated plate in the other end of the shell resting against said flange, a layer of insulating material in each end of the casing, a heating tube located concentrically within the shell adapted to receive a curling iron and having its ends in engagement with said insulating material, washers around the ends of the tube, a thin layer of insulating material around the tube, a heating wire around said thin layer, the ends of which engage with said terminals, a thick layer of insulating material around said wire with its periphery at a distance from the shell, and bands around said thick layer.

900,293. ALARM-CLOCK. RUDOLF METZ, Oberursel in Taunus, Germany. Filed Mar. 27, 1908. Serial No. 423,772.

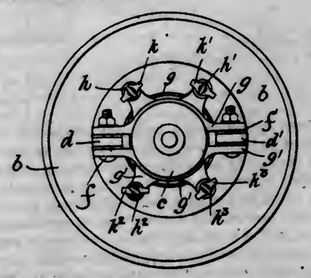


1. An alarm device, especially adapted for people who are hard of hearing, or deaf, comprising in combination, a casing, an alarm clock, located in said casing, a sounding device connected with said alarm clock, a hammer operated by said sounding device and a clip, substantially as described and shown.

2. An alarm device especially adapted for people who are hard of hearing, or deaf, comprising in combination, a casing, an alarm clock, located in said casing, a sounding device connected with said alarm clock, a rod, engaging said sounding device, and a handle, disengaging the sounding device by means of said rod, substantially as described and shown.

3. An alarm device especially adapted for people who are hard of hearing, or deaf, comprising in combination, a casing, an alarm clock, located in said casing, a sounding device connected with the said alarm clock, a hammer, operated by the said sounding device, said hammer designed to produce shocks on the bedstead and a clip, provided on the exterior of the casing for attaching the latter on the bedstead, substantially as described and shown.

900,294. FLANGE FOR WARP-BEAMS. WILLIAM J. MONK, Keighley, England, assignor to George Hattersley and Sons Limited, Keighley, England. Filed Apr. 11, 1906. Serial No. 311,023.



1. The combination with a warp beam, and a flange loosely mounted thereon, said flange being provided with lateral projections, of a sectional clamping ring adapted to engage with said projections and also said beam, said clamping ring being also provided with means for adjusting said flange longitudinally relatively to said beam.

2. The combination with a warp beam, and a flange loosely mounted thereon, said flange being provided with inwardly projecting members, of a sectional clamping ring mounted on said beam and adapted to clamp said project-

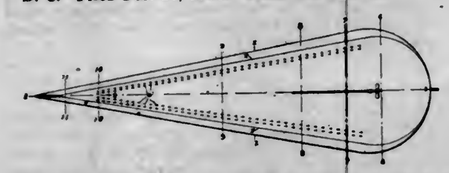
ing members between its sections, said clamping ring being also provided with outstanding portions carrying means for adjusting said flange longitudinally relatively to said beam.

900,295. ELECTRIC HEATING DEVICE. WILLIAM C. MORTENSEN, Salt Lake City, Utah, assignor of one-half to Joseph R. Harris, Woodruff, Idaho. Filed Apr. 6, 1908. Serial No. 425,523.



An urn of the class described, comprising a cylindrical vessel having a lower slotted flange, an open ended cylinder secured to the bottom of said vessel to form a heating chamber, a lid to close said vessel and chamber, an upper and a lower lamp supporting bar within said chamber, electric lamps secured to said bars, a switch pivoted to the under-surface of said urn having an operating handle extending through said slot, an electric terminal for each lamp in the path of said switch, conductors connecting said lamps and terminals, and conductors within a suitable circuit connected to said lamps and switch all arranged as set forth.

900,296. BOAT. WILLIAM B. MOTHERAL, Washington, D. C. Filed Feb. 27, 1908. Serial No. 418,058.



1. A boat comprising a hull the bottom of which is in the form of a section of a cone, having bulged-down portions on each side near the stern and the sides of which are formed curved at the stern and gradually flattened from the stern to the bow, substantially as set forth.

2. A boat comprising a hull formed wedge-shaped with its bottom in the form of a section of a cone and its sides curved outwardly at the stern and gradually decreasing in curvature until they run into flat portions at the bow, substantially as set forth.

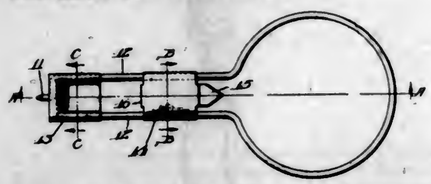
3. A boat comprising a hull the bottom whereof is curved in cross section, the curvature gradually decreasing from the bow toward the stern and formed with bulged-down portions on each side near the stern and having sides curved outwardly near the stern and decreasing in curvature from the stern toward the bow, substantially as set fortb.

4. A boat comprising a hull the bottom of which is curved in cross section, the curvature decreasing from the bow toward the stern, perforations in said bottom, an air-supply system connected with said perforations, and deflectors in the form of a section of a hollow cone attached to the bottom of said boat immediately in front of each of said perforations with the point of the cone towards the bow of the boat, substantially as set forth.

5. A boat comprising a hull formed with perforations in its bottom, an air-supply system connected with each of said perforations, a valve controlling the flow of air through said supply system, and a deflector shield on the bottom of said boat adjacent to the front side of each of said perforations, each of said shields being in the form of a section of a hollow cone with the point of the cone toward the bow of the boat, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

900,297. JAR-OPENER. JOSEPH F. MCCAIN, Chicago, Ill. Filed Mar. 3, 1906. Serial No. 303,971.

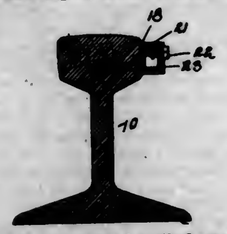


1. A jar opener formed from a single wire, comprising a ring-shaped portion, a handle extending therefrom, said handle comprising parallel members, a frame movably seated on said members and carrying a wedge shaped member extending toward the ring-member.

2. A jar opener formed from a single wire, comprising a ring-shaped portion, a handle extending therefrom, said handle comprising parallel members spaced apart, a frame movably seated on said members and carrying a wedge-shaped member extending toward the ring-member.

3. A jar opener formed from a single wire, comprising a ring-shaped portion, a handle extending therefrom, said handle comprising parallel members spaced apart, a frame movably seated on said members and carrying a wedge-shaped member extending toward the ring-member and located in a plane below that of the ring-member.

900,298. RAIL-BOND. ARCHIE W. MCCONNELL, Anderson, S. C. Filed Aug. 4, 1908. Serial No. 446,947.



1. A device of the character described comprising a bond, a plate positioned between said bond and a rail joint and a casing disposed about said bond.

2. A device of the character described comprising a bond, a plate clamped between said bond and a rail joint, a casing disposed about said bond and a copper lining carried by said casing.

3. A rail bond having means for securing the same to a rail, said means comprising a cylindrical body being split into a plurality of sections at its lower extremity, a head positioned upon the upper end of said body having an aperture formed therein and an expansion bolt positioned through said aperture and extending downwardly into said cylindrical body.

4. A device of the character described comprising a rail bond, expansion fastening means positioned at the extremities of said bond a plate having recessed extremities engaged about said fastening means, a casing disposed about said bond and secured to said plate and a lining of conducting material positioned in said casing.

5. In a device of the character described the combination with a rail bond of a plate disposed between said bond and a rail joint, of a casing positioned about said rail bond and a conducting lining in said casing.

900,299. METALLIC FASTENER. GEORGE W. MCGILL, New York, N. Y. Filed May 9, 1906. Serial No. 315,868.



1. A metallic fastener of the character described consisting of two integrally connected clamping members adapted to receive between their facing surfaces the material being fastened, one member being provided with a plurality of penetrating prongs and the other member being provided with a plurality of reëntrant cavities to each of which there is but one opening, such cavities providing sunken anvils with curved faces which automatically register with said prongs and bend the free ends of the latter down over the material being fastened and conceal, guard and house them thereon on the free ends of said clamping members being pressed toward each other.

2. A metallic fastener of the character described consisting of two integrally connected clamping members adapted to receive between their facing surfaces the material being fastened, one member being provided with a plurality of penetrating prongs and the other member being provided with sunken and curved anvil surfaces opening in one direction and which automatically register with said prongs and which bend the free ends of the latter down over the material being fastened and conceal, guard and house them thereon on the free ends of said clamping members being brought toward each other.

3. A metallic fastener of the character described having one of its integrally connected clamping members provided with a plurality of penetrating prongs and having its other clamping member provided with a plurality of slots to receive such prongs and with a plurality of reëntrant cavities to each of which there is but one opening, such cavities providing said member with sunken anvils having curved faces and said member being folded in manner to seat such cavities in reverse position over such slots and opening into them.

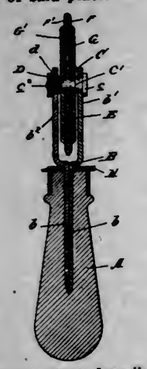
4. In a metallic fastener of the character described the combination of two integrally connected clamping members adapted to receive between their facing surfaces the material being fastened, one of such members being provided with a plurality of slots and with a plurality of depressions covering such slots and the other member being provided with a plurality of penetrating prongs registering with such slots and depressions, and said prongs being seated in their member sufficiently close together to enable the thumb of the user to bear simultaneously upon the rooted ends of both prongs in forcing the prongs through said material.

900,300. SKINNING DEVICE. JOSEPH F. NICOLAS, Chicago, Ill. Filed Oct. 24, 1907. Serial No. 398,884.

1. In a device of the class described the combination with a handle of a fork thereon, a rotary cutter on said fork having alternating teeth and cutting edges and retaining plates of less diameter than said cutter clamping it on either side.

2. In a device of the class described the combination with a handle of a rotary plate thereon having teeth on its periphery, and means rigidly engaged on either side of said plate and affording cutting edges alternating with said teeth.

3. In a device of the class described the combination with a handle of a fork thereon, an axle journaled in said fork, a serrated plate on said axle and an annular knife engaged on each side of said plate.

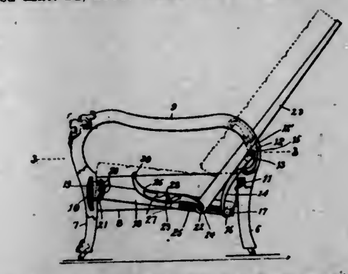


4. In a device of the class described the combination with a handle of a fork thereon, an axle journaled in said fork, a serrated plate on said axle, and a knife engaged on each side of said plate and having their edges exposed between its serrations.

5. In a device of the class described the combination with a handle of a fork thereon, an axle journaled on said fork and having a shoulder near one end thereof, a central, toothed plate on said axle, an annular knife on each side of said plate having their edges partially overlapping said teeth, a retaining plate against each knife, one of which abuts against said shoulder, and a nut on the other end of said axle adapted to abut against the other retaining plate and hold the knives firmly in place.

[Claims 6 and 7 not printed in the Gazette.]

900,301. CHAIR. OTTO L. OSTENDORF, Milwaukee, Wis. Filed Mar. 21, 1903. Serial No. 148,957.



1. In a chair of the character described, a chair body, a seat frame at or near its forward end pivotally hung to said chair body, means for supporting the rear of said seat frame in different positions vertically of said body, a back frame supported by said seat frame, a member pivoted to the lower end of said back frame and provided with a series of engaging elements, and an agent on said seat frame with which said engaging elements are adapted to contact whereby said back frame may be moved to and held in different positions.

2. In a chair of the character described, a chair body, a seat frame pivotally connected at or near its forward end to said body, an agent pivotally connected to said seat frame for supporting the rear end of said seat frame in different positions vertical of said body, a back frame supported at its lower end by said seat frame and means for securing the lower end of said back frame to different positions along said seat frame.

3. In a chair of the character described, a chair body, a seat frame adjustably connected at its forward and rear ends to said body, an adjustable back frame supported by said body and said seat portion, a member pivotally con-

nected to the lower end of said back frame and an agent carried by said seat frame and with which said member is adapted to engage whereby the lower end of said back frame may be moved to and held in different positions along said seat frame.

4. In a chair of the character described, a body portion, a seat frame pivoted at or near its forward end to said body portion, an agent pivotally connected to said seat frame and to said body portion for supporting the rear end of said seat frame in different positions vertical to said seat frame, a back frame supported by said body portion and said seat frame and a member pivotally connected to the lower end of said back frame whereby the lower end of said back frame may be moved longitudinally of said seat frame and held in different positions along it.

5. In a chair of the character described, a chair body, a seat frame pivotally hung at or near its forward end to said body, means for supporting the rear end of said seat frame in different positions relative to said body, a back frame supported by said body and at its lower end by said seat frame, a member pivoted to the lower end of said back frame and an agent on said seat frame with which said member is adapted to engage whereby said back frame may be moved to and held in different positions.

[Claims 6 and 7 not printed in the Gazette.]

900,302. PROCESS OF PRODUCING INDULIN COLORS. ADRIANO OSTROGOVICH, Bucharest, Roumania, and THEOPHILE SILBERMANN, Charlottenburg, Germany. Filed Feb. 8, 1907. Serial No. 356,404.

1. A process for producing indulin and indulin like colors, consisting in heating an aromatic amin with halogen to about 180° C., substantially as described.

2. A process for producing indulin and indulinlike colors, which consists in heating an aromatic amin with a substance which readily yields chlorin to a temperature sufficient to cause said substance to part with chlorin, substantially as described.

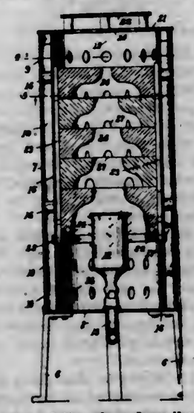
3. A process for producing indulin and indulinlike colors, consisting in treating a fused hydrohalogenid of an aromatic amin with an oxidising substance, substantially as described.

4. A process for producing indulin and indulinlike colors, consisting in treating a fused hydrohalogenid of an aromatic amin with air, substantially as described.

5. A process for producing indulin and indulinlike colors, consisting in treating a mixture of fused aromatic amin and a hydrohalogenid of an aromatic amin with an oxidizing substance, substantially as described.

[Claim 6 not printed in the Gazette.]

900,303. GAS-HEATER. JOHN S. PANASEVITCH, Bridgeport, Conn. Filed Dec. 26, 1907. Serial No. 408,100.

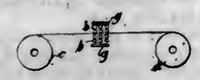


1. In a gas heater of the class described, the combination of a suitable perforated annular sheet metal cylinder, longitudinally disposed guide strips secured to the inside of said cylinder, an annular rest also secured to the inside of said cylinder, a series of pairs of bricks having notches to receive said strips and arranged one above the other to form annular layers in the cylinder with a central opening therethrough from top to bottom, and a gas burner located beneath said bricks.

2. In a gas heater the combination of a pair of sheet metal cylinders arranged one within the other, a pair of longitudinally disposed strips secured to the inside of the inner casing, a series of annular bricks located within the inner casing and notched to receive said strips, and a burner located beneath said bricks.

3. In a gas heater of the class described, the combination of a pair of spaced sheet metal cylinders arranged one within the other and having holes therein, a longitudinal strip secured to the inside of the inner cylinder, a series of annular bricks arranged one above the other and notched to receive the strips, having radial holes therethrough to register with some of the holes in the cylinder, and a burner situated beneath the bricks.

900,304. ELECTROMAGNET FOR TELEGRAPHONES. PEDER O. PEDERSEN and VALDEMAR POULSEN, Copenhagen, Denmark, assignors to American Telegraphone Company, a Corporation of the District of Columbia. Filed Apr. 9, 1902. Serial No. 101,994.



1. In telegraphones, the combination of a record medium and a solenoid coil through which the medium passes, said coil being of such dimensions, speed, form and position that an effective number of lines of force take a path outside of the coil, substantially as described.

2. In a telegraphone, the combination of a record medium and a solenoid coil surrounding said medium and through which the medium moves, said coil being of such position, form and construction that lines of magnetic force issuing from the magnetized record medium find a path in an effective number outside of the coil, substantially as described.

3. In a telegraphone, the combination of a movable record medium, a solenoid coil and an iron mantle surrounding said coil for directing an effective number of lines of force outside of the coil.

4. In a telegraphone, the combination of a record medium, a solenoid coil surrounding the same and having an iron mantle constructed in a plurality of sections, substantially as described.

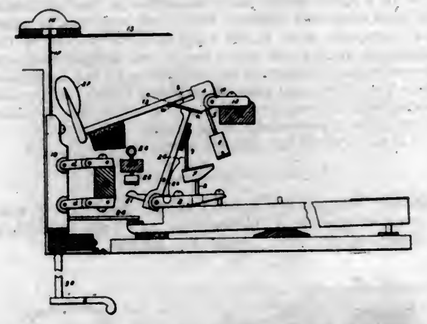
5. In a telegraphone, the combination of a record medium, a solenoid coil surrounding the same and a body or bodies of magnetic material located outside of the solenoid coil, for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

900,305. PIANO-ACTION. SAMUEL R. PERRY, Scranton, Pa. Filed Jan. 2, 1904. Serial No. 187,408.

1. In a piano action the combination of the hammer-head, its shank, the shank substantially horizontal and the hammer-butt, the hammer-butt so formed that a portion extends beyond its connection with the hammer-shank toward the hammer-head, the upper line of said portion running under the hammer shank parallel thereto and the under line of said portion forming an acute angle with said upper line, substantially as set forth.

2. In a piano action the combination of the hammer, its shank, the shank substantially horizontal the hammer-butt, and the key, the hammer-butt provided with an arm reaching downward toward the key, said arm carrying a back checking block, an arm attached to the key and provided with an adjusting device, the adjusting device and the back checking block adapted to contact one with the other upon the upward movement of the key and the retraction of the hammer from the strings, substantially as set forth.



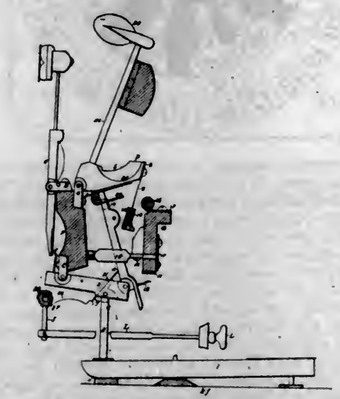
3. In a piano action the combination of the hammer, its shank, the shank substantially horizontal the hammer-butt, the key, the jack and the regulating button, the hammer-butt provided with an arm reaching downward toward the key, said arm carrying a back checking block, an arm attached to the key and provided with an adjusting device, the adjusting device and the back checking block adapted to contact one with the other upon the upward movement of the key and the retraction of the hammer from the strings, substantially as set forth.

4. In a piano action the combination of the hammer, its shank, and the hammer-butt, the piano key, the piano key carrying the jack, the jack, an adjustable post as 9, said post adapted to contact with the jack substantially as set forth.

5. In a piano action the combination of the hammer-head, its shank, the shank substantially horizontal and the hammer-butt, the hammer-butt so formed that a portion extends beyond its connection with the hammer-shank toward the hammer-head, the upper line of said portion running under the hammer-shank parallel thereto and the under line of said portion forming an acute angle with the said upper line, the jack, the piano key, an adjustable post adapted to hold the jack at various positions under the hammer-butt whereby the touch of the piano key may be varied, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

900,306. PIANO-ACTION. SAMUEL R. PERRY, Scranton, Pa. Filed Nov. 22, 1904. Serial No. 233,874.



1. A piano action comprising an action rail, a bar rigidly sustained in position forward of and parallel with the action rail, back check rails mounted on the bar and adjustable to and from the action rail, and means to support the action rail and the bar, substantially as set forth.

2. A piano action comprising an action rail, a bar sustained in position parallel with the action rail, back check rails adjustably mounted on the bar, rails adjustably attached to the under side of the bar and means to support the bar and rails and the action rail, substantially as set forth.

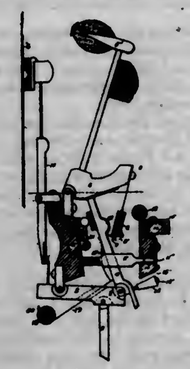
3. A piano action comprising an action rail, a bar sustained in position forward of and parallel with the action rail, back check rails adjustably mounted on the bar, means to sustain the action rail and the bar, a series of hammers and hammer-butts jointed to the action rail, a series of jack levers jointed to the action rail, a series of jacks, each jointed to one of the jack levers, and a series of back checks, the upper end of each rigidly attached to the forward end of a hammer butt, said back checks extending downward between the jacks and the back check rails substantially as set forth.

4. A piano action consisting of an action rail supported in a horizontal position by two or more brackets, a series of hammers and hammer-butts jointed to the action rail, a series of jack levers jointed to the action-rail and a series of jacks each jointed to one of the jack levers and each jack provided with a circular projection and a foot, a series of back checks, the hammer-butts each having a back check attached to its forward portion, the back check extending downward facing its corresponding jack, a bar held in a horizontal position at right angles to and facing the jacks and back checks, means to sustain the bar, one or more back check rails adjustably secured to the bar and one or more regulating rails adjustably attached to the bar, substantially as set forth.

5. A piano action consisting in part of an action rail supported in position, a series of hammers and hammer-butts jointed to the action rail, and a series of jack levers jointed to the action rail, a series of jacks each jointed to one of the jack levers, each jack provided with a foot, a series of depending back checks each attached to the front surface of one of the hammer-butts, a bar sustained in position at right angles to and facing the back check, and jacks, one or more back check rails adjustably secured to the bar and one or more regulating rails adjustably attached to the bar, substantially as set forth.

[Claims 6 to 20 not printed in the Gazette.]

900,307. PIANO-ACTION. SAMUEL R. PERRY, Scranton, Pa. Filed Oct. 24, 1905. Serial No. 284,137.



1. In a piano action a series of hammers and hammer-butts, a series of jacks and jack levers and a series of back checks, each back check attached to one of the hammer-butts and connected to its corresponding jack, substantially as set forth.

2. In a piano action a series of hammers and hammer-butts, a series of jacks and jack levers and a series of back

checks, each back check depending from one of the hammer-butts and connected to its corresponding jack, and a back check rail held in a horizontal position facing the jacks and back checks, substantially as set forth.

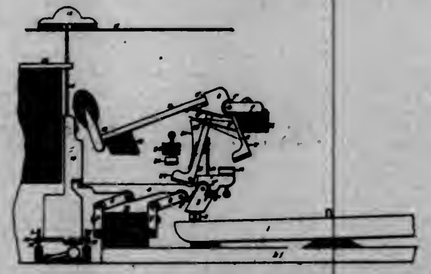
3. In a piano action a series of hammers and hammer-butts, a series of jacks and jack levers, a series of elastic back checks, each back check depending from one of the hammer-butts and connected to its corresponding jack, a back check rail and a regulating rail both held in a horizontal position facing the jacks and back checks, substantially as set forth.

4. In a piano action a series of hammers and hammer-butts, a series of jacks and jack levers, a series of elastic back checks, each back check depending from one of the hammer-butts and connected to its corresponding jack, a bar held in a horizontal position facing the jacks and back checks, a back check rail or rails carried by the bar and a regulating rail or rails carried by the bar, substantially as set forth.

5. In a piano action a series of hammers and hammer-butts, a series of jacks and jack levers, a back-checking rail held in a horizontal position facing the jacks, and a regulating rail held in a horizontal position facing the jacks, the jacks each provided with a foot or tripper, a series of back-checks each depending from one of the hammer-butts and connected to its corresponding jack, a set of keys, each key connected to and operating one of the jack levers, whereby the hammer in its retraction from the strings is held in check by pressure on the key, substantially as set forth.

[Claims 6 to 15 not printed in the Gazette.]

900,308. PIANO-ACTION. SAMUEL R. PERRY, Scranton, Pa. Filed Oct. 24, 1905. Serial No. 284,138.



1. In a piano action the combination of the key frame, the key supported thereon, the rail R, the horizontal piece 4, the links or arms jointed to the rail R and to the horizontal piece 4, the piece 4 overhanging and operated by the key substantially as set forth.

2. In a piano action the combination of the key frame, the keys supported thereon and carrying a capstan or adjusting screw, the rail R, the links or arms, the horizontal piece 4, the links or arms jointed to the rail R and to the horizontal piece 4, an extension piece jointed to the horizontal piece 4 and adapted to impinge upon the capstan screw in such manner that the keys may be removed or replaced upon the key frame at will, substantially as specified.

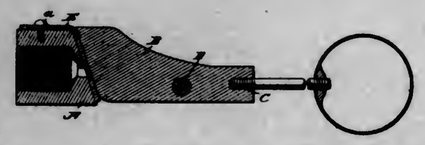
3. In a piano action the combination of the rail R, the links or arms, the horizontal piece 4, the horizontal piece 4 sustained in position on the rail R by means of the arms or links, the jack jointed to the horizontal piece 4, the hammer and hammer-butt, the jack adapted to operate upon the under side of the hammer butt, whereby the hammer is propelled toward the strings, substantially as set forth.

4. In a piano action the combination of the rail R, the links or arms, the horizontal piece 4, the links or arms jointed to the rail R and to the horizontal piece 4, the jack jointed to the horizontal piece 4, the hammer-butt having a straight under side upon which the jack operates, and the jack adapted to contact with the hammer-butt at any point along its under side, substantially as set forth.

5. In a piano action the combination of the key frame, the keys supported thereon, the rail R, the links or arms, the horizontal piece 4, the links or arms jointed to the horizontal piece 4 and to the rail R, the damper head and the mechanism operating the damper head, the horizontal piece 4 extended and adapted to contact with the damper mechanism, whereby the damper is lifted by the operation of the keys, substantially as set forth.

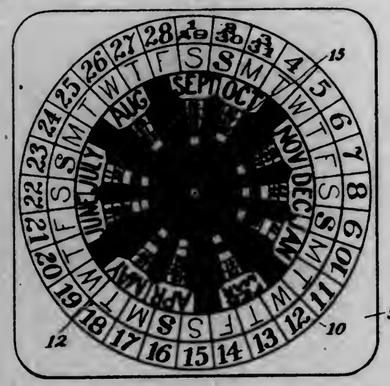
[Claims 6 to 18 not printed in the Gazette.]

900,309. WATER COCK OR VALVE. BENJAMIN J. PORTER and THOMAS H. BINNINGTON, Salt Lake City, Utah. Filed Nov. 25, 1907. Serial No. 403,806.



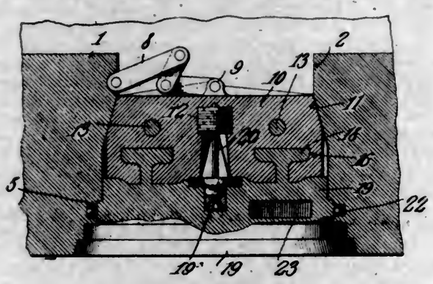
The combination of a valve nipple, with an opening therethrough and over one end of which is fitted a flexible valve, the central part of the same being cut away at an angle near 60°, the remaining parts of the end not so cut away being provided with an opening transversely therethrough, within which opening is pivoted one end of a lever cut at an angle opposing the angle at the end of the valve nipple the other end of the lever being provided with a float.

900,310. PERPETUAL CALENDAR. ALFRED W. PROCTOR, New York, N. Y. Filed Feb. 20, 1906. Serial No. 301,976.



In a perpetual calendar, a card having a central circular area with years of a century inscribed in radial groups thereon, and having a circular blank zone outside the same, and having outside of all a zone inscribed with characters, and a disk pivoted to said card and having an outside circle of characters adapted to register with said characters on the card, and having the calendar months inscribed in a circular series within the same and adapted to lie circumferentially just outside the said central area on said card, said disk having radial slots directed toward and extending actually to the various months of said circular series so that each month has its own definite slot plainly indicated, said slots having converging sides corresponding to the sides of a space whereon is inscribed one of said radial year groups, whereby any desired month may readily be brought into register with any desired year, as and for the purpose set forth.

900,311. SAFE-DOOR. DANIEL H. RIGGAN, Warrenton, N. C. Filed Mar. 5, 1908. Serial No. 419,367.



1. A safe door comprising movably connected sections, one of said sections being revoluble relative to the other section, the two sections being held against independent movement in the direction of their axes, locking members carried by one of the sections, and means operated by the movement of the revoluble section for actuating said locking members.

2. A safe door comprising an inner relatively fixed section, an outer section mounted to rotate thereon held against independent movement in the direction of its axis, and a combination lock carried by the relatively fixed member and actuated by the operation of the revoluble member.

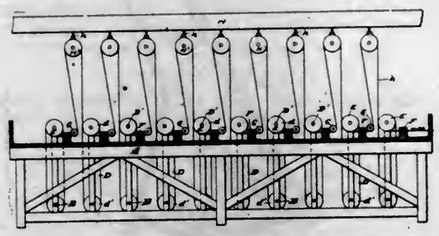
3. A safe door comprising a relatively fixed member, a combination lock carried thereby, a section revolubly mounted upon the first mentioned section and disposed when actuated to operate the lock, said sections being held against independent movement in the direction of their axes, and safe engaging locking projections carried by the revoluble section.

4. A safe door comprising a relatively fixed section, a relatively movable section mounted to rotate thereon, and a safe engaging locking projection carried by the movable section, said projection being held by gravity normally in a predetermined position relative to the fixed section.

5. A safe door comprising a relatively fixed section having a circular concentric groove therein, a relatively movable section mounted to rotate upon the first mentioned section, retaining devices carried by said movable section and mounted within the groove, and a lock carried by the relatively fixed section and disposed to be actuated by the rotation of the movable section.

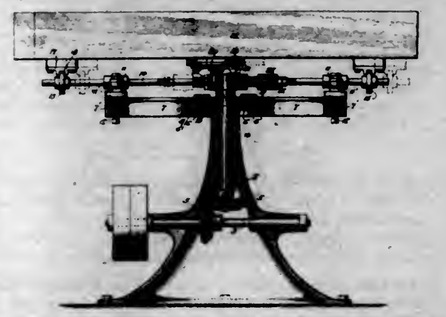
[Claims 6 to 11 no. printed in the Gazette.]

900,312. WIRE-DRAWING MACHINE. ALFRED RUSBATCH, Cleveland, Ohio. Filed Jan. 11, 1904. Serial No. 188,466.



In a wire drawing machine, the combination of a die, a drawing drum therefor, a second die adapted to operate upon the wire after it has passed through the first mentioned die, a second drawing drum therefor, common operative means for both said drums, said means including a ratchet device adapted to drive the first mentioned drum at its minimum rate of speed, but so constructed as to permit of free forward rotary movement of said drum at a greater speed.

900,313. GYRATOR. JOSEPH M. SCHUTZ, Minneapolis, Minn., assignor to Schutz-O'Neill Co., Minneapolis, Minn., a Corporation of Minnesota. Filed Apr. 1, 1905. Serial No. 253,344.



1. In a gyrator, a member to be gyrated, in combination with a support or frame, a mechanism for rotatively driving said member, and a movement resolving mechanism interposed between said member and said frame, and comprising rotary reciprocatory shafts equipped with rollers, and guides for said rollers, said shafts and guides being arranged at right angles upon said frame and said member, substantially as and for the purpose specified.

2. In a gyrator, a member to be gyrated, its frame and driving mechanism, in combination with guides attached to said members and in a horizontal plane, shafts having both rotary and reciprocatory movements, bearings on said frame for said shafts and at right angles to said guides, and rollers on said shafts engaged with said guides; substantially as described.

3. In a gyrator, a member to be gyrated, its frame and driving mechanism, in combination with parallel guides upon said member, rotary-reciprocating shafts, occupying a plane parallel to said guides, but at right angles to the latter, bearings upon said frame for said shafts, and rollers upon said shafts, fixed with relation to one another and engaged with said guides, substantially as described.

4. In a gyrator, a member to be gyrated, its frame and driving mechanism, in combination with guides upon said member, shaft bearings upon said frame, at right angles to the guides upon said member and in a plane parallel to the plane of said guides, and shafts adapted to reciprocate and rotate in said bearings and engaged with and supporting said guides and said member, substantially as described.

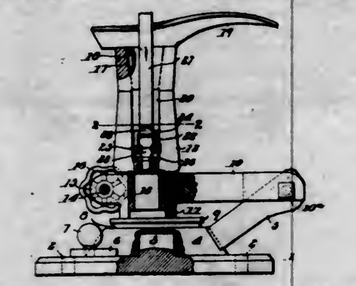
5. In a gyrator, a member to be gyrated, its frame and rotary driving mechanism, in combination with a plurality of bearings, arranged upon said frame and occupying a horizontal plane, parallel shafts slidably and rotatively mounted in said bearings, rollers upon said shafts, and horizontal guides upon said member, at right angles to said shafts and engaged with said rollers, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

900,314. LAST-SUPPORT. LADISLAV SEDIVI, Nashville, Tenn., assignor to John C. Goldbach, Louisville, Ky. Filed July 6, 1905. Serial No. 268,440.

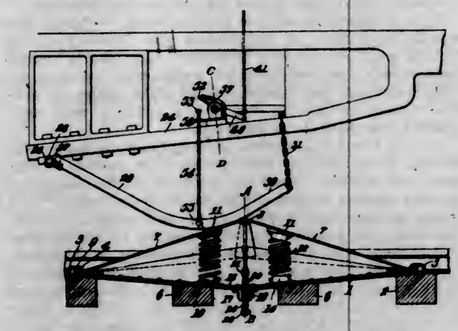
In a cobbler's last, the combination of a base plate having a pivot rising therefrom, a frusto-conical disk bearing on the top surface of the base plate and having a central opening extending vertically from the bottom thereof and terminating short of the top of the disk to provide a solid top face and into which the pivot snugly fits, said pivot having a smooth external surface for permitting the disk to be freely lifted off the base plate and to rotate on the pivot, said disk being held from lateral movement on the base plate by the pivot, a clamping block disposed at one side of the disk and having a beveled end face concaved on the same radius as the disk, said beveled surface being arranged to overlap the said disk to clamp the latter in

frictional engagement with the base plate, said block having an opening adjacent its outer end, and a clamping screw passing through the opening for securing the block



to the base plate and serving as a pivot on which the block can be turned, and a last-supporting device mounted on and rotatable with the disk and removable with the latter from the base plate.

900,315. RAILWAY BLOCK-SIGNAL. JOHN SHANNON and JAMES E. WOOD, Portland, Oreg. Filed May 9, 1908. Serial No. 431,933.



1. In a railway block signal, a track member comprising a main section, two vertically yielding sections hinged together at their normally highest point, and a sliding connection with the base section at their ends, and springs housed in the track member between the base and the yielding sections.

2. In a railway block signal, a track member comprising a base section having spaced sides, two vertically-yielding sections having sides straddling the spaced sides of the base section, the said yielding sections being hinged together at their normally highest points and in sliding connection with the base section at their ends, and springs housed in the track member between the base and yielding sections in the space between the sides thereof.

3. In a railway block system, a track member comprising a base section with spaced sides wide at the middle and sloping toward the ends, two yielding sections joined at contiguous ends and having sliding connection with the base section at the ends of the latter, the said yielding sections having sides widest at the junction of the said sections and tapering toward the ends, and springs between the base section and the yielding sections and housed between the sides thereof.

4. In a railway signal system, a track member comprising a base section with spaced sides tapering from the center toward the ends, the base section having the ends returned upon themselves in spaced relation to said base section to form guideways or pockets, top sections having sides straddling the sides of the base section, the said top sections being joined together midway of the length of the base section and the sides of the top sections tapering toward the ends of the base section and the ends of the top sections entering the guideways or pockets formed in the ends of the base section, and springs housed between the sides of the base section and engaging the top sections.

5. In a railway block signal, a track member comprising a base section with spaced sides tapering from the center toward the ends, the base section having the ends returned upon themselves in spaced relation to said base section to form guideways or pockets, top sections having sides straddling the sides of the base section, the said top sections being joined together midway of the length of the base section and the sides of the top sections tapering toward the ends of the base section and the ends of the top sections entering the guides or pockets at the ends of the base section, springs supported and housed in the base section and engaging the top sections, and manipulating means connected to the joined ends of the top sections.

[Claims 6 to 21 not printed in the Gazette.]

900,316. PROCESS OF MAKING TERPENE ESTERS. ALEXIS A. SHUKOFF, St. Petersburg, Russia. Filed May 4, 1907. Serial No. 371,918.

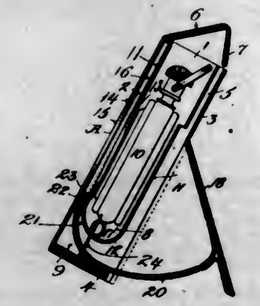
1. The described process of manufacturing esters of terpene alcohols which consists in preparing a solution of the terpene to be treated in a mixture of glacial acetic acid in less than theoretical quantity and an unsaturated acid of the higher fatty series, adding a mineral acid, and heating the mixture, substantially as described.

2. The described process of manufacturing esters of terpene alcohols which consists in preparing a solution of the terpene to be treated in a mixture of glacial acetic acid in less than theoretical quantity and linoleic acid, adding a mineral acid, and heating the mixture substantially as described.

3. The described process of manufacturing esters of terpene alcohols which consists in preparing a solution of the terpene to be treated in a mixture of glacial acetic acid in less than theoretical quantity and an unsaturated acid of the higher fatty series, adding chlorhydric acid and heating the mixture substantially as described.

4. The described process of manufacturing esters of terpene alcohols which consists in preparing a solution of the terpene to be treated in a mixture of glacial acetic acid in less than theoretical quantity and linoleic acid, adding hydrochloric acid and heating the mixture substantially as described.

900,317. PORTABLE CASE FOR CLOCKS AND THE LIKE. WILLIAM H. SLATTERY, New York, N. Y., assignor to Deitsch Brothers, New York, N. Y., a Firm. Filed Mar. 24, 1908. Serial No. 422,877.



1. In an article of the class described, the combination of a casing, an aperture formed in the casing, a movable element adapted to form a support for the casing, and means connected with said movable element for opening and closing said aperture.

2. In an article of the class described, the combination of a casing having an inner compartment adapted to hold a watch or other article, an aperture formed in the wall of the casing leading to said compartment, and means for opening and closing said aperture, and an exterior opening to said compartment.

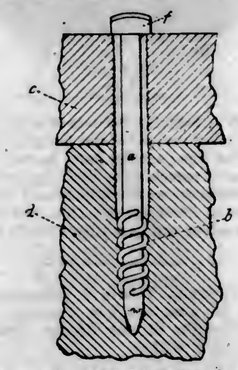
3. In an article of the class described, the combination of a casing, an aperture in said casing, a movable flap, a flexible tongue secured at one end to the flap, and a guideway in the casing adjacent said aperture, the free end of said flap being adapted to move in said guideway.

4. In an article of the class described, the combination of a casing, an aperture formed in the front wall of the casing, a guideway formed in said front wall extending past said aperture, a flap hinged to the rear wall of said casing, and a flexible tongue secured at one end of the flap and adapted to move past said aperture in said guideway.

5. In an article of the class described, the combination of a casing, having an interior compartment formed by a septum, apertures formed in the front wall of the casing and in said septum leading to said compartment, and a movable flap secured to the rear of the casing adapted to be extended from the body of the casing to form a support for the same in an inclined position.

[Claims 6 to 10 not printed in the Gazette.]

900,318. SPIKE-LOCK. ALLEN SMITH, U. S. Army. Filed Jan. 3, 1908. Serial No. 409,226.



1. A spike or nail provided between the point and head thereof with a transverse opening, and a lock of flexible metal passed through said opening and the length of which is greater than the transverse thickness of the spike or nail, and means for revolving the spike or nail.

2. A spike or nail having an approximately circular cross-section, provided near the point thereof with a transverse opening, a lock of flexible metal passed through said opening and the length of which is greater than the transverse thickness of the spike or nail, and means for revolving the spike or nail.

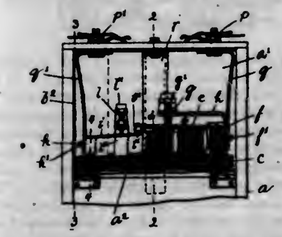
900,319. SLED-KNUCKLE. OSCAR SMITH, Remer, Minn. Filed Dec. 19, 1907. Serial No. 407,238.



The combination with a sled runner, of a metallic cap having suitable end openings, projecting side flanges and a centrally disposed lengthwise slotted upstanding boss, a curved rave having a central longitudinally projecting slot and perforated ears, and secured lengthwise to said cap, said ear perforations registering with said cap openings, a curved rub plate having a central inwardly dished perforated seat carried and revolubly held upon said boss, a bore provided beam carrying said curved rub plate, a pin having a head at one end and a shoulder-forming reduced termination at the other, the under surface of said pin head being spherical and movably held within said boss, and passing through said curved plate and bore and being carried by said beam, said reduced end being guided within said rave slot, and suitable bolts passing through said ear perforations and cap openings and extending into said runner to secure said rave and cap, in the manner set forth.

900,320. CIRCUIT-INTERRUPTER. CULLEN B. SNELL, Bradford, Mass. Filed Feb. 18, 1907. Serial No. 357,794.

1. A circuit operating device comprising an electro-magnet having a vibrating armature and means for yieldingly supporting said operating device, substantially as described.



2. A circuit operating device comprising an electro-magnet having a vibrating armature and means for yieldingly supporting said operating device composed of a plurality of contact springs, substantially as described.

3. A circuit interrupter comprising an electro-magnet having a vibrating armature, a base on which said interrupter is mounted having oppositely disposed contact terminals thereon, a pair of contact springs for said base disposed to engage said terminals, to support said base and absorb the shock of vibration caused by the vibrating parts, substantially as described.

4. In combination with a casing having a chamber open at one side, a base, an electro-magnetic circuit operating device mounted on said base having circuit terminals at opposite ends thereof, contact devices at opposite ends of said chamber, consisting of a pair of springs disposed to engage said terminals and to act in opposite directions to clamp said operating device therebetween, said springs having apertures and said terminals having projections disposed to enter said apertures and to lock said operating device in position, substantially as described.

5. A circuit interrupter comprising an electro-magnet having a vibrating armature, a base on which said interrupter is mounted having oppositely disposed contact terminals thereon, a pair of supporting contact springs for said base disposed to engage said terminals and having apertures therein, the lower ends of said apertures having upwardly inclined faces, projections on said base arranged to fit loosely in said apertures when said springs are in engagement with said terminals, and a third spring disposed to engage said base between said contact springs to lift the same by causing it to slide upwardly upon the inclined faces of said apertures, substantially as described.

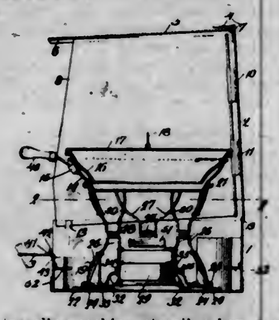
[Claims 6 to 9 not printed in the Gazette.]

900,321. TRAVELING COOKING UTENSIL. LOUIS K. SONE, New York, N. Y. Filed Feb. 23, 1906, Serial No. 302,347. Renewed Mar. 19, 1908. Serial No. 422,085.

1. In a traveling cooking utensil, a collapsible support, a box, a cover having folding flaps, a lamp, and a cooking vessel or vessels.

2. In a traveling cooking utensil, the combination with the cooking utensil and a box having a top with a plurality of flaps adapted to protect the lamp of the cooking utensil.

3. In a traveling cooking utensil, a box, a cooking utensil preferably secured within the same, a collapsible support, a cover to the box, a plurality of flaps adapted to cooperate with the cover and box to protect the cooking utensil from the elements.

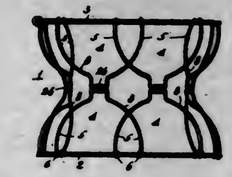


4. In a traveling cooking utensil, a box, a cooking utensil, a collapsible support, a cover, a plurality of flaps pivoted to the cover, two of which are adapted to form the sides of the box as extended and one to form a cover of the box as extended and all coöperating with the cover of the box to protect the cooking utensil from the elements.

5. In a traveling cooking utensil, a box, a cooking utensil, a collapsible support, a cover, a plurality of flaps pivoted to the cover, two of which are adapted to form the side of the box as extended and one to form a cover of the box as extended and all coöperating with the cover of the box to protect the cooking utensil from the elements and means upon the box adapted to coöperate with the side flaps to hold them in position.

[Claims 6 to 20 not printed in the Gazette.]

900,322. COLLAPSIBLE FRAME OR SUPPORT. LOUIS K. SONE, New York, N. Y. Original application filed Feb. 23, 1906, Serial No. 302,347. Divided and this application filed Mar. 1, 1907. Serial No. 360,023.



1. In a collapsible frame or support, two rings, members pivotally mounted upon the respective rings, means to clamp the meeting surfaces of two complementary members together, and means to prevent the support from being collapsed.

2. In a collapsible frame or support, two rings, members each having a plurality of legs pivotally mounted upon the respective rings, means to clamp the meeting surfaces of two complementary members together, and means to prevent the support from being collapsed.

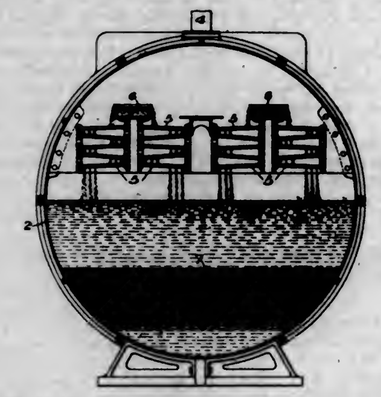
3. In a collapsible frame or support, two rings, members each having two legs pivotally mounted upon the rings and provided with offsets, means to clamp the meeting surfaces of two complementary members together, said means being located in the offsets.

4. In a collapsible frame or support, two rings, members each having two legs pivotally mounted upon the rings, and provided with offsets, means to clamp the meeting surfaces of two complementary members together, said means being located in the offsets, and means to prevent the support collapsing when in its operative position.

5. In a collapsible frame or support, two rings, members, each having two legs pivotally mounted upon the rings, the legs of two adjacent members bisecting each other, means for clamping the meeting surfaces of two complementary members together, and one or more lugs formed upon one or more of the legs of the members adapted to coact with legs of an adjacent member to lock the support in its extended or operative position.

[Claims 6 to 16 not printed in the Gazette.]

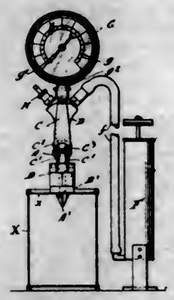
900,323. METHOD OF REDUCING THE CORROSIVE ACTION OF WATER. FRANK N. SPELLER, Pittsburg, Pa. Filed Dec. 3, 1907. Serial No. 404,957.



1. The method of reducing the corrosive action of water, consisting in heating the water and bringing it in contact with finely divided iron; substantially as described.

2. The method of reducing the corrosive action of water, consisting in feeding the water while heated over successive separated bodies of finely divided iron, and then feeding the water into heating systems; substantially as described.

900,324. CAN-TESTER. EDWIN V. SWANGREN, Maywood, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed June 17, 1907. Serial No. 379,359.



1. A can tester device comprising in combination a hollow plunger having a puncture-head furnished with shouldered wings adapted to be pushed through the head or other wall of the can, a movable sealing head surrounding the puncture-head, means for operating and locking the sealing-head to clamp the punctured wall of the can surrounding the puncture-head, an air pump and a pressure gage, and two connections from said hollow plunger, one to said pressure gage and the other to said pump substantially as specified.

2. A can tester device comprising a hollow plunger having a puncture-head with shouldered wings, a sealing head, means for operating the sealing-head and a pressure gage communicating with the hollow plunger, and two connections from the interior of said puncture head, one to said pressure gage and the other adapted for communication with a source of compressed air substantially as specified.

3. A can tester device comprising a hollow plunger having a puncture-head with shouldered wings, a sealing-head, means for operating the sealing-head and a pressure gage communicating with the hollow plunger, and a source of compressed air communicating with the hollow plunger, and two connections from said hollow plunger, one to said gage and the other to the source of compressed air substantially as specified.

4. A can tester device comprising a hollow plunger having a puncture-head with shouldered wings, a sealing-head, means for operating the sealing-head and a pressure gage communicating with the hollow plunger, a source of compressed air communicating with the hollow plunger, and a release valve, and two connections from said hollow plunger, one to said gage and the other to the source of compressed air substantially as specified.

5. In a can tester, the combination with a hollow plunger having an arrow puncture-head with shouldered wings, a sealing-head furnished with a sealing-pad surrounding the puncture-head, a lever and link for operating the sealing-head, the lever being pivotally connected to the hollow plunger, a coupling having a passage communicating with the hollow plunger, another passage adapted to communicate with a source of compressed air and another passage adapted to communicate with a pressure gage, substantially as specified.

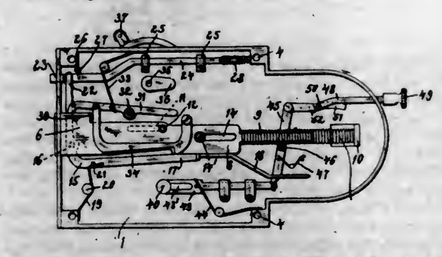
[Claims 6 to 12 not printed in the Gazette.]

900,325. RAIL-JOINT FASTENING. AMOS F. SWEIGART, South Hampton, Pa. Filed Sept. 10, 1907. Serial No. 392,173.



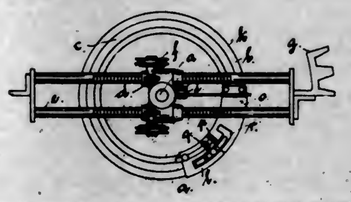
In a rail joint, the combination with the meeting ends of adjacent rails having notched edges registering with each other, of an inner and outer fish plate portion fitting closely against the rails between the heads and flanges, the outer fish plate portion having an upwardly extending portion fitting closely against the head and level with the upper surface of the same, integral chair portions extending laterally below the rails provided with transverse bores in alinement, tongues formed on said chair portions extending in the notched portions of the rails, bolts extending through said bores for securing said members together, and a reinforcing member secured on the inner fish plate member, for the purpose described.

900,326. LOCK-ALARM. LOUIS TÁLAS, New York, N. Y. Filed Sept. 12, 1907. Serial No. 392,554.



In a lock alarm, the combination with a lock case having a key hole, of a bolt extending into said key hole, a forked bar operatively held against said bolt, a bell, a clock-work in said bell adapted to actuate a hammer for ringing said bell, a stop-bar carrying a stop for said clock-work, a lever connecting said stop-bar and said forked bar, and a spring keeping said forked bar in operative engagement with said bolt and said stop against said clock-work, combined and arranged in the manner and for the purpose substantially as specified.

900,327. TOOTHED-WHEEL-MOLDING MACHINE. GUSTAV TEIKE, Tangerhütte, Germany. Filed Dec. 26, 1907. Serial No. 408,208.



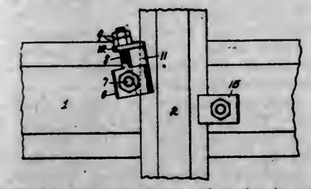
1. In a tooth wheel molding machine, the combination of a fixed ring (*b*), an exactly adjustable clamp (*l*), an exactly adjustable sliding shell (*o*), means to guide clamp and shell in a circle on the fixed ring, a stop (*p*) located on the shell, and an adjustable hook (*r*) mounted on the clamp and catching behind the said stop, substantially as described and for the purpose set forth.

2. In a tooth wheel molding machine, the combination of a fixed ring (*b*), an exactly adjustable clamp (*l*), an exactly adjustable sliding shell (*o*), a lever (*h*), a box (*d*), a slotted guide (*i*) fixed to said box, means to adjustably connect the one end of said lever in said guide, means to fix the other end of said lever to the fixed ring, a carrier (*e*) for the model tooth and means to lower or lift the box (*d*) with the carrier (*e*) and the model tooth (*g*) substantially as described and for the purpose set forth.

3. In a tooth wheel molding machine, the combination of a fixed ring (*b*), an exactly adjustable clamp (*l*), an exactly adjustable sliding shell (*o*), means to guide clamp and shell in a circle on the fixed ring, a stop (*p*) located on the shell, an adjustable hook (*r*) mounted on the clamp and catching behind the said stop, and a micrometer screw (*q*) adjustably and movably mounted on the clamp (*l*) substantially as described and for the purpose set forth.

4. In a tooth wheel molding machine, the combination of an arm (*h*), a fixed ring (*b*) of fixed diameter, a groove (*c*) on said fixed ring, a division located in said groove, an exactly adjustable clamp (*l*), an exactly adjustable sliding shell (*o*), and means to move clamp and shell towards or from each other, substantially as described and for the purpose set forth.

900,328. RAIL-CLAMP. JOSEPH M. VAIL, Bryan, Ohio. Filed Apr. 18, 1908. Serial No. 427,777.



1. A rail clamp comprising a plate having a key seat in one side thereof and a stem projecting from its end, a wedge key movable in said seat and having a part receiving said stem, means carried by the stem and movable thereon to effect a longitudinal movement of the key and means for fixing the plate to a tie.

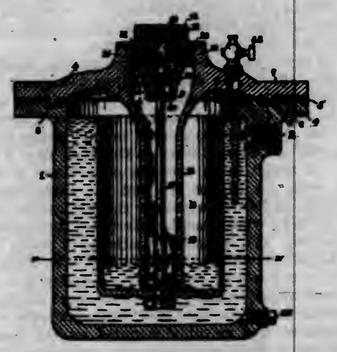
2. The combination with a tie and rail, of a member fixed to the tie and having a key-seat in the side contiguous to the rail and a stem projecting from one end

thereof, a key mounted for movement in said seat and having a part overlapping the contiguous base flange of the rail and a longitudinally tapered part coacting with the edge of said flange whereby a movement of the key in one direction effects a wedge-like action between the rail-base and member, and means carried by the stem for moving the key.

3. The combination with a tie and rail, of a member fixed to the tie at the side of the rail-base, and having a stem projecting from one end thereof, a wedge key working between the edge of the rail-base and said member, said key having a part which is held in contact with the top of the rail-base flange by said member and a laterally projecting part which receives the stem, and a nut threaded to the stem without said latter part and adapted to turn thereon and force the key between the member and rail-base.

4. A metal tie of I-beam construction in cross section having its base formed with a downwardly projecting flange, said flange being transversely slit at spaced points therein and longitudinally slit a short distance in either direction from each transverse slit to form wings, the contiguous wings being horizontally bent in opposite directions relative to the beam, substantially as described.

900,329. STEAM-TRAP. CHARLES E. VANCE, Pittsburg, Pa. Filed Nov. 30, 1907. Serial No. 404,557.



1. In a steam-trap, the combination with a casing, of a cover secured thereto having a discharge orifice therein, a hollow plug having a valve-seat, said plug also having an upper portion secured to the cover at said orifice and a lower portion depending therefrom, the upper part of said depending portion having ports, a discharge-tube carried by said cover adapted to communicate with the discharge orifice through said ports and depending into the trap-casing, a vertically-reciprocating valve in the depending portion of said plug having a vertical port therethrough, a valve-member adapted, when moved upward, to close the port through said valve and raise the valve against said valve-seat to shut off passage through said discharge-orifice, means in said casing controlled by the water-level therein for actuating said valve-member, and an inlet connection for said casing.

2. In a steam-trap, a casing, a cover attachable thereto and having a discharge-orifice and carrying a depending tube at the discharge-orifice, a plug screwed into the cover at the discharge-orifice thereof and having a lower recessed, internally-threaded portion, a hollow member screwed into said recessed portion and having a contracted lower portion and an upper, expanded, ported portion, a vertically-reciprocating valve disposed within said member and filling said contracted portion thereof, and having a vertical port therethrough, and a bucket disposed within the casing and carrying a pointed stem adapted, upon upward movement of the bucket, to close passage through said valve and reciprocate the same upward to shut off passage through said discharge orifice.

900,330. SWEAT-SHIELD FOR HATS. HENRY W. WAGSNET, Oakland, Cal. Filed Mar. 6, 1907. Serial No. 360,974.



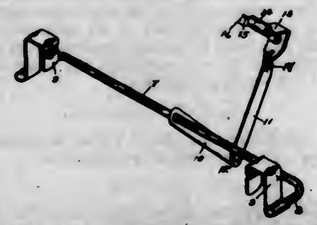
In combination with a hat having a sweat band stitched thereto, a strip of celluloid, shaped to conform to the shape of the sweat band and to cover any desired portion of the circumference thereof, the lower edge of said strip being bent out from the plane of the strip so as to lie immediately beneath said line of stitches, and a plurality of fastening devices suitably located at different points of the strip for detachably securing said strip to said sweat band.

900,331. DISPLAY-RACK. EDWARD B. WESTON, Dayton, Ohio. Filed June 9, 1906. Serial No. 321,067.



In a display rack, a series of shelves of graded sizes, arranged horizontally in pyramidal position one above the other, a series of tubes to separate the shelves, inclined outwardly from one shelf to another, near the outer edge of the shelves, and conforming in position to the outline of a pyramid, said tubes having squared ends, depressions in the shelves to receive the ends of the tubes, with rods extending through the tubes and shelves, and means for tightening the rods to draw the tubes together, whereby the rack will be securely braced without the necessity of any central support or braces, substantially as described.

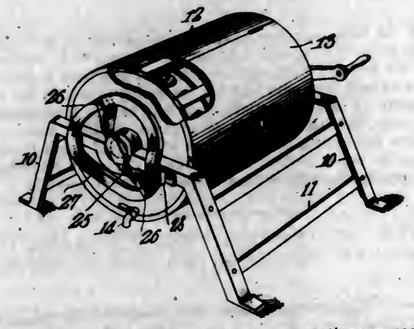
900,332. DISPLAY-RACK ATTACHMENT. EDWARD B. WESTON, Dayton, Ohio. Filed Aug. 19, 1907. Serial No. 389,196.



1. In a display rack attachment, the combination with the shelves of the rack, of a rod extending across the rear of the can underneath the hinge of the lid, and spring clips for securing said rod to the body of the can, with a folding lever comprising a plurality of bars pivoted together, one end of one of said bars being mounted on said rod to slide laterally, and the other end permanently secured to the back edge of the shelf above the can.

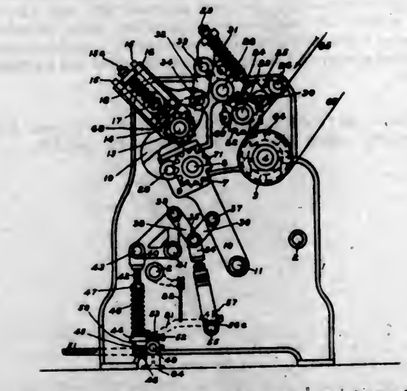
2. In a display rack attachment, the combination with the shelves of the rack, of a rod extending across the rear of the can underneath the hinge of the lid, and spring clips for securing said rod to the body of the can, with a folding lever comprising a plurality of bars pivoted together in a vertical plane, with one end of one of said bars mounted on said rod to slide laterally, and with the outer end of the other of said bars bent at right angles to the body of the bar, and a clip pivoted thereto, with means for securing the clip to the rear edge of the shelf above the can.

900,333. WASHING-MACHINE. WILLIE D. WHITNEY, Holley, N. Y. Filed Oct. 14, 1907. Serial No. 397,399.



In a washing machine, a frame, a stationary casing carried thereby, a revoluble cage arranged within the casing and comprising end disks having hollow hubs, and cross bars uniting the disks, the hubs being mounted in bearings in the frame, short shafts journaled respectively in the hubs, perforated disks arranged at the inner ends of said shaft, arms arranged at the outer end of each shaft, and cams carried by the frame and arranged to engage said arms.

900,334. HIDE-WORKING MACHINE. ROBERT F. WHITNEY, Winchester, Mass., assignor of one-half to Arthur E. Whitney, Winchester, Mass. Filed Jan. 4, 1907. Serial No. 350,793.



1. A hide working machine comprising the frame 1 and mounted thereon the work roll 3, bed roll 7 mounted in swinging arms 10 pivoted to said frame, pinch roll 12 mounted in swinging frames 16 pivoted to said frame 1 and in swinging arms 19 pivoted to said swinging arms 10, and feed roll 22 mounted in swinging arms 25 pivoted to swinging arms 27 pivoted to said frame 1 and connected by links 32 with said swinging frames 16, with means for rotating the swinging arms of the bed roll about their axes and thereby bringing the rolls into and out of operative position; substantially as described.

2. A hide working machine comprising the frame 1 and mounted thereon the work roll 3, bed roll 7 mounted in swinging arms 10 pivoted to said frame, pinch roll 12 mounted in swinging frames 16 pivoted to said frame 1 and in swinging arms 19 pivoted to said swinging arms 10, and feed roll 22 mounted in swinging arms 25 pivoted to swinging arms 27 pivoted to said frame 1 and connected by links 32 with said swinging frames 16, one or more of said rolls being spring controlled, such controlling springs, with means for rotating the swinging arms of the bed roll about their axes and thereby bringing the rolls into and out of operative position; substantially as described.

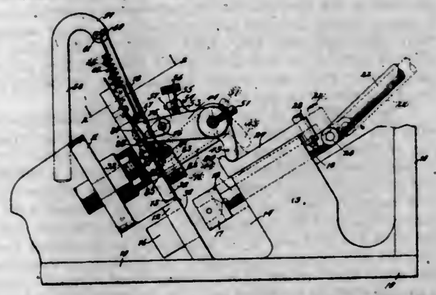
3. A hide working machine comprising a frame and mounted thereon a work roll, a bed roll mounted in swinging arms pivoted to said frame, a pinch roll mounted in swinging arms pivoted to the swinging arms of the bed roll and a feed roll mounted in swinging arms pivoted to the frame and connected by links with the swinging arms of the pinch roll, with means for rotating the swinging arms of the bed roll about their axes and thereby bringing the rolls into and out of operative position; substantially as described.

4. A hide working machine comprising a frame and mounted thereon a work roll, a bed roll mounted in swinging arms pivoted to said frame, a pinch roll mounted in swinging arms pivoted to the swinging arms of the bed roll and a feed roll mounted in swinging arms pivoted to the frame and connected by links with the swinging arms of the pinch roll, one or more of said rolls being spring-controlled, such controlling springs, with means for moving the swinging arms of the bed roll about their axes and thereby bringing the rolls into and out of operative position; substantially as described.

5. A hide working machine comprising a frame and mounted thereon a work roll, a bed roll mounted thereon in bearings movable to and away from the work roll, a feed roll mounted thereon in bearings movable to and away from said bed roll and a pinch roll mounted thereon in bearings movable to and away from said feed roll with means for moving said bed roll to and away from said work roll thereby through intermediate mechanism bringing the rolls into and out of operative position, together with such intermediate mechanism; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

900,335. SELF-FEEDING MECHANISM FOR PUNCH AND DIE PRESSES. CHARLES A. WILLIAMS, Detroit, Mich., assignor to Briscoe Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed May 24, 1907. Serial No. 375,548.



1. In mechanism of the class described in combination with a suitable supporting frame, one punch or die member, another punch or die member, and means for moving one of said punch members into and out of engagement with the other punch member, means for supporting a continuous strip of workable material in such a position that it may pass between said punch members, a member movable by the mechanism which drives the movable punch member, carrying a driving dog adapted to engage said material and forcibly move it in between said punch members, a locking dog mounted upon a stationary support adapted to permit said forward movement of the material and to prevent its moving backward as said first dog re-

turns to normal position, and a connection between said movable member and the moving parts of the punch press proper so constructed that feeding takes place only while the punch members are not in working position and is wholly inoperative when said punch members are carried into said operative position.

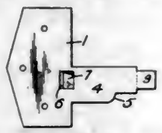
2. In mechanism of the class described in combination with a suitable supporting frame, two punch or die members, means for moving one of them with reference to the other, a detachable support for working material adapted to be secured to the machine adjacent to the stationary punch member, a lever pivoted to said detachable support carrying a feeding dog adapted to engage workable material passing over said support between said punch members to force it in between said punch members, a locking dog carried by said support so mounted that it does not obstruct the forward movement of the workable material but does prevent any backward movement after said material has once been fed forward, spring mechanism for causing said dogs to engage the workable material, and a detachable member secured to a portion of the machine moving with the movable punch member adapted to operate said movable lever at such times in the operation of the machine that the workable material is fed forward a predetermined distance between the die members during the period of time in the operation of the machine when they are out of engagement with each other and that it does not in any way engage said feeding mechanism during the time that said dies are in working engagement with each other.

3. In mechanism of the class described in combination with a suitable supporting frame carrying a punch or die member, another punch or die member movable with reference thereto, a casting detachably secured to the frame adjacent to the stationary die member, said casting carrying a plate or table approximately in line with the face of the stationary die member so that workable material may pass over said plate and between said die members, a lever arm pivoted to said casting carrying a feed dog adapted to engage working material upon said plate and force it between the die members, another dog pivotally mounted upon the casting adapted to engage working material upon said plate to hold it against movement tending to withdraw it from between said die members; spring mechanism adapted to hold said dogs in working positions and a detachable member adapted to be secured to a part moving in unison with the movable die member adapted to temporarily engage and move said lever and the first mentioned dog, all of the parts being so arranged and proportioned that material is fed between the die members a predetermined distance during the time said members are out of engagement with each other and said material is then locked in position and is not fed again while said members are in engagement with each other, substantially as described, for the purposes set forth.

4. In a machine of the class described, in combination with two punch or die members, and means for operating one of them with reference to the other, a support for workable material adjacent to said die members, a feeding dog adjacent to said support, a locking dog adjacent to said support engaging working material thereon and a power supplying means connecting the movable die member with the feed dog so arranged and proportioned that the feed dog moves the workable material in between the dies while they are out of engagement with each other and that said strip of workable material remains at rest at all other times.

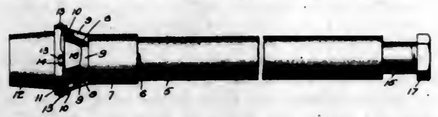
900,336. SHUTTER-HINGE. JOHN B. WILLIAMS, Houston, Tex. Filed Mar. 18, 1908. Serial No. 421,931.

1. A device of the class described comprising a pair of leaves, one of said leaves being stamped out of a single piece of metal, and provided with a projection, said projection being reduced near its terminal, said leaf having a slot, a recess extending half the thickness of said leaf, said projection being coiled in the form of a knuckle, the reduced portion being inserted in said slot and adapted to engage said recess for enabling the same to present an even surface, said projection being bent in the shape of an L, the other leaf having a pintle and adapted to engage said knuckle, substantially as described.



2. In a hinge, a pair of leaves, one of the leaves having a knuckle, the opposite leaf having a pintle to be received by the knuckle, said knuckle being formed from a projection of said leaf, said leaf having means to secure the extremity of said projection, each leaf having a projection to abut the opposite leaf to prevent rattling when the leaves are locked, the projection of one leaf being formed upon its upper portion thereof while the other projection of the opposite leaf is formed upon its lower portion.

900,337. FLUE-PLUGGER. WILLIAM B. WINGATE, Callahan, Fla. Filed Apr. 22, 1908. Serial No. 428,554.



1. In a flue plugging device, a tubular handle member exteriorly threaded at one end, a holding collar detachably engaging the threaded end of the handle member, said holding collar being provided with, a plurality of plug holding tongues and a resilient hoop or band encircling and connecting the same, and a driving rod extending longitudinally through the tubular handle member and the collar and having at one end a bulging portion constituting a head and at its other end an adjustable nut.

2. In a plug holding device, of the character described, a holding collar having a plurality of longitudinal slots forming tongues that are bent outward from the axis of the collar, said tongues being provided with shoulders forming a plug seat, in combination with a resilient hoop or band encircling the tongues and connected loosely therewith.

900,338. SPIKE-EXTRACTOR. WILLIAM WOLFE, Patton, Pa. Filed Dec. 10, 1907. Serial No. 405,871.

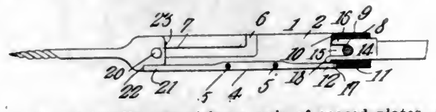


1. A spike extractor, consisting of a body provided with a handle and with claws or jaws for engagement with the spike, and a self-adjusting continuously shifting fulcrum freely pivoted thereto to automatically assume active position and having an extended active convex rolling surface of equal fulcrum value.

2. A spike extractor, consisting of a body 1, provided with a handle portion 3 and jaws or claws 2, and having an opening 4, a fulcrum 5 provided with an ear 6 projecting therefrom, and having an extended convex rolling fulcrum surface and a stop lip 8, and a pivot passing through the opening 4 and through the ear 6, substantially as described.

3. A spike extractor, consisting of a body provided with a handle and with fulcrum claws or jaws for engagement with a spike, and a supplemental self-adjusting continuously shifting fulcrum freely pivoted thereto and having an extended active convex rolling surface of equal fulcrum value.

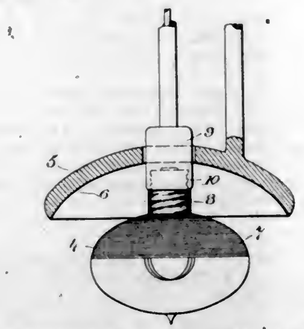
900,339. TOOL-HANDLE. WILLIS B. WOODRUFF, Cadiz, Ky. Filed Nov. 30, 1907. Serial No. 404,624.



1. A tool handle comprising a pair of spaced plates, a back spring between said plates and fastened thereto at its middle, each plate having on its inner face a transverse groove and a central longitudinal groove extending from said transverse groove to one end of the handle, and a block pivoted on a pin at the other end of the handle, said block having a through opening for a tool and a shoulder to engage with one end of said spring.

2. A tool handle comprising a pair of spaced plates, a back spring between said plates and fastened thereto at one edge thereof, a block pivoted between said plates on a through pin at one end of the handle and provided with an opening to receive a tool and a shoulder to engage with one end of said spring, and a tool having a shank fitted to said opening in the block and divided by a slot into two fingers adapted to straddle said pivot pin, one of said fingers having a lug to engage behind said block and prevent its withdrawal.

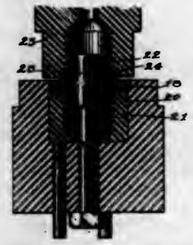
900,340. APPARATUS FOR ELECTROPLATING. JOHN A. YUNCK, South Orange, N. J. Filed Nov. 8, 1906. Serial No. 342,493.



The combination with an electroplating bath and circuit connections, of a cathode or negative pole adapted to hold an incandescent electric lamp, and an anode having its operative face shaped to conform to the adjacent surface of the lamp bulb, a coating of silver on the said surface, and a metal sleeve extending from the negative pole to said silver coating centrally located with reference to said silver coating.

900,341. METHOD OF MAKING SCREW-NUTS. ANDERS G. ANDERSON, Worcester, Mass., assignor, by mesne assignments, to Worcester Pressed Steel Company, Worcester, Mass., a Corporation of Massachusetts. Filed Jan. 14, 1903. Serial No. 138,950.

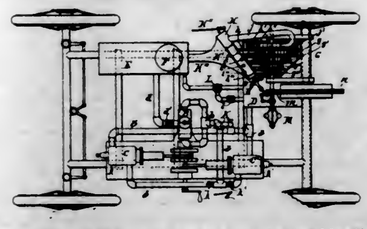
1. The within described method of making a screw nut from a funnel shaped blank, consisting in upsetting the larger end of the funnel shaped blank by the pressure of a reciprocating hollow die which compresses the funnel shaped blank around a stationary cylindrical spindle, forming a screw thread in the blank, centering the blank by its screw thread on a spindle having a reduced section and turning over the end of the blank to form an interior flange, substantially as described.



2. The within described method of making a screw nut from a sheet metal blank, consisting in stamping an annular plate, having a concentric hole whose diameter is less than the interior diameter of the nut, forcing said blank into a die having a funnel-shaped recess by a reciprocating die having a rounded end by which the central portion of the blank is expanded and its thickness reduced to form the crown of the nut, centering the funnel-shaped blank on a cylindrical spindle with the larger end of the blank supported and applying pressure to the outside of the blank by a reciprocating hollow die by which the metal is forced from the crown section into the base section of the blank and the blank is compressed around the cylindrical spindle, reducing the thickness of the crown section and forming an interior shoulder in the blank, cutting a screw thread in the base section of the blank and afterward turning over the crown section to form an interior flange, substantially as described.

3. The method of making a screw nut having an interior flange at its crown, consisting in first cutting a screw thread in a nut blank, supporting said blank by its base and centering the same by its screw thread in proper relation to a reciprocating die having a recess adapted to shape the flange and turning over a flange on the crown of the blank by the pressure of said die, whereby said flange is made concentric with said screw thread, substantially as described.

900,342. TRANSMISSION OF POWER. FRANK M. ASHLEY, New York, N. Y. Filed Nov. 26, 1902. Serial No. 132,965.



1. In power-transmitting apparatus, the combination of an accumulator of sufficient capacity to act as a storage of power as set forth, means for delivering liquid to said accumulator, a motor in operative relation with respect to the accumulator and embodying a plurality of rotary power elements of different diameters with respect to each other, nozzles coactive with said power elements and capable of a uniform jet velocity, and provision for independently placing said nozzles in communication with the accumulator.

2. In power transmitting apparatus, the combination of an internal combustion engine having a liquid-cooled cylin-

der, an accumulator, a pump driven by the engine and having its intake communicating with the liquid space of said cylinder and its discharge delivering to the accumulator, a motor comprising a plurality of impact wheels of relatively different diameters, provision for actuating the motor by the liquid supplied from the accumulator, and means for conveying the liquid back to the engine cylinder.

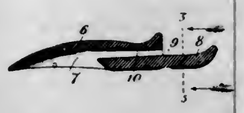
3. In power transmitting apparatus, the combination of an internal combustion engine having a liquid-cooled cylinder, an accumulator, a pump driven by the engine and having its intake communicating with the liquid space of said cylinder, and its discharge delivering to the accumulator, a motor embodying a plurality of rotary elements of relatively different diameters assembled together, nozzles coactive with said elements, means for independently placing the nozzles in communication with the accumulator, and means for conveying the liquid back to the engine cylinder.

4. In power transmitting apparatus, the combination of an accumulator, means for delivering liquid to said accumulator, a motor embodying a series of rotary power elements of different diameters and also reversing provision, a corresponding series of nozzles, and a revoluble cock common to all the nozzles and containing differentially located apertures adapted upon the turning of the cock to successively and independently bring the apertures into position with respect to their nozzles and thereby independently place each of the latter in communication with the accumulator.

5. In power transmitting apparatus, the combination of a prime mover and a secondary hydraulic power apparatus involving a plurality of impact wheels on a single shaft, an accumulator and means operable by the prime mover for providing the accumulator with a hydraulic power medium, said impact wheels being relatively of different diameters, a controller for delivering said power medium to either of said wheels at approximately the same force, whereby the speed and torque of the said power shaft may be varied through said plurality of wheels by said controller while an approximate constant efficiency of conversion of static into kinetic energy of said secondary power apparatus is maintained.

[Claims 6 to 35 not printed in the Gazette.]

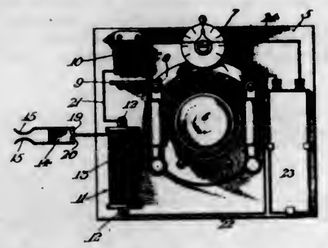
900,343. SURGICAL INSTRUMENT. WILLIAM H. BARNES, Homewood, Miss. Filed Nov. 29, 1907. Serial No. 404,471.



1. An instrument comprising a hollowed out portion adapted to be inserted into a mother at childbirth, a grip portion extending from said hollowed out portion in a manner to project from the mother when the instrument is in place, and an air-conduit extending from the hollowed out portion to the projecting end of the grip portion, said instrument being of general flattened contour throughout its length, and crossed on the side opposite to the hollowed out portion by a raised portion, and being adapted to lie with its hollowed out portion over the mouth and against the chin of the fetus.

2. An instrument comprising a spoon-like bowled portion on one side adapted to be inserted into a mother at childbirth, a grip portion extended therefrom, a raised portion adjacent to the grip portion on the side of the instrument opposite to the spoon-like portion, and an air-conduit extending from the bowled portion toward the end of the grip portion, the instrument from end to end on the side with the bowled portion being flattened and arranged to lie over the mouth and against the chin of a fetus.

900,344. MAGNETIC OPERATING MEANS FOR CAMERA-SHUTTERS. ARNOLD BARTELS, Los Angeles, Cal., assignor of one-half to Rosa Hug, Los Angeles, Cal. Filed June 10, 1907. Serial No. 378,055.



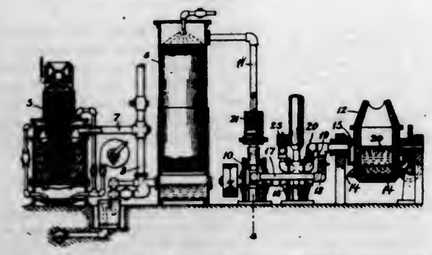
1. In a device of the class described, electro-magnetic shutter operating means mounted on the front board of the camera, a reel mounted on the front board, a connecting cord composed of two wires mounted on said reel, means to electrically connect the two wires of said cord together, and a source of electrical energy connected in series with said electro-magnetic means and the wires of said connecting cord.

2. In a device of the class described, a shutter operating arm, an armature rigidly affixed to said arm, an electro-magnet mounted on the front board of the camera and adapted to actuate said armature, a reel mounted on the front board, means to rotate said reel, a connecting cord composed of two wires wound on said reel, a switch on one end of said connecting cord adapted to connect the two wires of said cord together, and a source of electrical energy connected in series with said electro-magnet and said connecting cord.

3. In a device of the class described a camera having a front board with a shutter mounted thereon, an armature mounted on the shutter operating arm, an electro magnet mounted on the front board adjacent said armature, a reel revolubly mounted on the front board, spring means to rotate said reel, a connecting cord composed of two wires wound on said reel, a switch in the outer end of said connecting cord, said switch being connected to said wires, and a battery connected in series with said electro-magnet and said wires.

4. A device of the class described comprising an electro-magnetic shutter operating means mounted on the front board of the camera, a reel mounted on the front board, a pair of wires wound on said reel, the outer ends of said wires adapted to be connected together, and a source of electrical energy connected in series with said wires and said shutter operating means.

900,345. METHOD OF BESSEMERIZING COPPER MATTE. GEORGE H. BENJAMIN, New York, N. Y. Filed Dec. 8, 1906. Serial No. 346,912.



1. The herein described method of treating copper matte when in a converter having a suitable lining, which consists in successively subjecting it to the action first of an oxidizing gas, then of a reducing gas capable when ignited of maintaining the temperature of the copper.

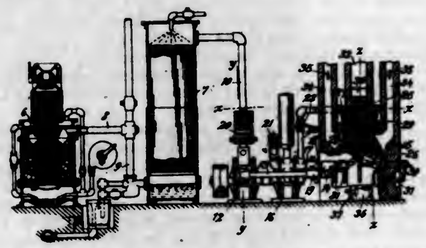
2. The herein described method which consists in subjecting copper matte while in a converter having a suitable lining to the action of an oxidizing gas under pressure to oxidize the iron and sulfur and with the lining form a slag, removing the slag, and then subjecting the remaining body in the converter to the action of a reducing gas under pressure and capable of generating a high temperature when ignited.

3. A step in the process of treating copper matte which consists in introducing into the metal in the converter after oxidation and the formation of a slag a reducing gas under pressure and capable of generating a high temperature when ignited.

4. A method of bessemerizing copper herein described, which consists in successively subjecting it to the action of an oxidizing gas and a reducing gas, the last gas employed capable of generating, when ignited, a high temperature.

5. The herein described method of bessemerizing copper matte, which consists in introducing it into a heated converter, then subjecting it to the action of an air blast, then to the action of a reducing gas capable, when ignited, of generating an extremly high temperature.

900,346. METHOD OF SMELTING COPPER ORES. GEORGE H. BENJAMIN, New York, N. Y. Filed Dec. 13, 1906. Serial No. 347,690.



1. The method described, which consists in subjecting within a furnace structure a body of ignited sulfid ore to the action of a flux and an oxidizing atmosphere, and the oxidized body derived therefrom to the action of a reducing atmosphere of high temperature.

2. The method described, which consists in subjecting simultaneously within a furnace structure a body of ignited sulfid ore to the action of an oxidizing atmosphere, and a body of oxidized ore to the action of a reducing atmosphere of high temperature.

3. The method described, which consists in subjecting within a furnace structure a body of ignited sulfid ore to the action of an air blast and the oxidized body derived therefrom to the action of a high temperature ignited reducing gas delivered under pressure.

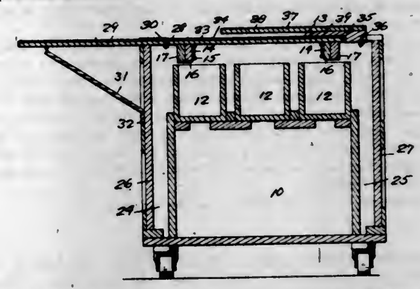
4. The method described, which consists in first igniting a sulfid ore to burn out its sulfur contents and simultaneously subjecting it to an oxidizing atmosphere to oxidize its iron and copper contents, and subsequently subjecting the oxidized copper to the action of a reducing atmosphere of high temperature to reduce it to a metallic state.

5. The method described, which consists in simultaneously burning the sulfur from a sulfid ore containing copper and iron and oxidizing the iron and copper contents thereof, and subsequently simultaneously heating the derived copper oxid in a reducing atmosphere and reducing it to a metallic condition.

[Claims 6 to 10 not printed in the Gazette.]

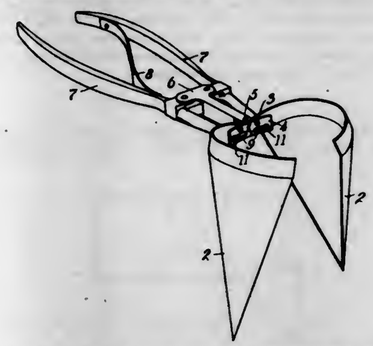
900,347. LAUNDRY-CABINET. WALTER P. BERRY, Washington, Pa. Filed Mar. 28, 1907. Serial No. 365,091.

1. A device of the class described comprising a cabinet, a cover hinged to the cabinet, an ironing board comprising a main portion and a hinged extension, cleats extended across the cabinet within the same and at its top, eye members carried by the cleats, hook members pivoted to the under side of the main section of the ironing board, a compartment located at one end of the cabinet, the said hinged extension of the ironing board being receivable in this compartment, a door hinged in position to close said compartment, a brace hinged to the under side of the said extension, and a seat for the free end of said brace fixed upon the said door.



2. A device of the class described comprising a cabinet, a cover hinged to the cabinet, an ironing board comprising a main portion and a hinged extension, cleats extended across the cabinet within the same and at its top, eye members carried by the cleats, hook members pivoted to the under side of the main section of the ironing board, a compartment located at one end of the cabinet, the said hinged extension of the ironing board being receivable in this compartment, a door hinged in position to close said compartment, a brace hinged to the under side of the said extension, a seat for the free end of said brace fixed upon the said door, the said extension being hinged in a cut away portion in one end of the body portion of the board, and a cover for the board, said cover being stretched across the said cut-away end of the main portion of the board to provide an unbroken ironing surface between the two members.

900,348. DEVICE FOR FILLING ICE-CREAM CORNETS. MARTIN BOHLIG, St. Paul, Minn., assignor to Bohlig Manufacturing Company, St. Paul, Minn., a Corporation of Minnesota. Filed Oct. 7, 1907. Serial No. 396,215.



1. A device of the class described comprising a handle, a two part receptacle pivotally supported upon one end of said handle, and means for swinging said receptacle parts away from each other in a progressing degree toward their lower ends, for the purpose set forth.

2. A device of the class described comprising a pair of fulcrumed handles, a two-part receptacle having hinge connection, and a pin and slot connection between said receptacle parts and the adjacent ends of said handles for the purpose set forth.

3. A device of the class described comprising in combi-

nation a pair of fulcrumed handles, a two-part receptacle pivotally supported on a connecting hinge, and a slot and pin connection between the inner ends of said lever arms and said receptacle and hinge for the purpose set forth.

4. A device of the class described comprising, in combination a pair of fulcrumed lever arms, a two part receptacle pivotally supported upon a connecting hinge, and a connection between the receptacle parts and the adjacent ends of said lever arms causing said receptacle parts to be tilted apart at their lower ends as the inner ends of said lever arms are forced apart.

5. A device of the class described comprising in combination a pair of fulcrumed lever arms, a two-part receptacle having independent pivotal support upon a connecting hinge, the leaves of said hinge being formed with longitudinally extending slots and the adjacent portions of said receptacle parts being formed with downwardly extending slots, and pins carried by the inner ends of said lever arms and extending through said slots, for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

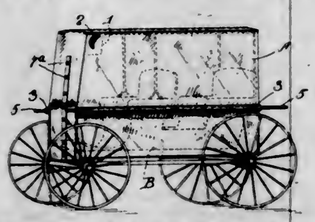
900,349. VENTILATOR ATTACHMENT. BURDETTE S. BOONE, Paxton, Ill. Filed Nov. 11, 1907. Serial No. 401,694.



1. A ventilator attachment comprising an elongated diaphanous body strip, a slide embracing and adjustably mounted upon each end of the strip, each slide having oppositely disposed channels for the reception of opposite edge portions of the strip, an extension upon each slide, and inwardly and upwardly extending slots within each extension for detachably engaging retaining means upon a window casing.

2. The combination with a window casing and headed fastening devices extending from opposite faces thereof; of a ventilator comprising a panel, slides embracing and movably mounted upon the end portions of the panel, and an extension upon each slide, each extension having L-shaped slots extending inwardly and upwardly thereinto for the reception of the fastening devices.

900,350. VEHICLE COVER. JOHN H. BROOKS, Pocahontas, Iowa. Filed Oct. 28, 1907. Serial No. 399,558.



1. A flexible detachable cover for vehicles and the like, and rigid handle-bars connected lengthwise with the two sides of said cover.

2. A flexible detachable cover for vehicles and the like, and rigid handle-bars slidably connected with the two sides of said cover.

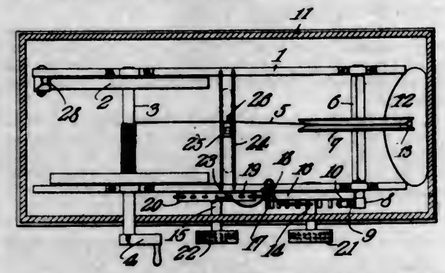
3. A flexible detachable cover for vehicles and the like, and rigid handle-bars connected slidably lengthwise with both sides thereof.

4. A flexible cover for vehicles and the like having pockets adjacent to its upper front corners, and handle-bars connected with the sides of the cover.

5. A flexible cover for vehicles and the like having pockets adjacent to the upper front corners, and handle-bars connected slidably lengthwise with the sides of the cover.

[Claims 6 to 11 not printed in the Gazette.]

900,351. MEASURING APPARATUS FOR INDICATING DEPTHS. HARRY H. BROWN, Stewart, Ohio. Filed May 22, 1908. Serial No. 434,435.



1. The combination with a winding device, a weighted flexible device connected thereto, and a wheel supporting and actuated by said device; of a revoluble indicator, projections thereon, and means operated by the wheel for actuating the indicator, said means comprising an element revoluble with the wheel, and a projection-engaging finger pivotally connected to said element, and shiftable into and out of the path of the projections.

2. The combination with a winding device, a grooved wheel, and a weighted flexible device secured to said first named device and supported by and disposed to actuate the wheel; of a finger pivotally connected to the wheel, a revoluble disk, and a projection upon the disk and normally in the path of and disposed to be actuated by the finger, said finger being shiftable out of the path of the projection.

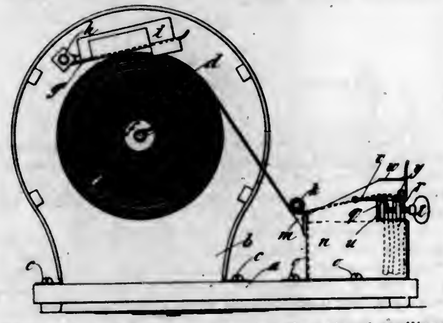
3. The combination with a housing; of a spool therein, a wheel journaled within the housing, an indicator carried by the housing, a flexible element secured to and disposed to be wound on to and unwound from the spool, said element being supported by and disposed to rotate the wheel, a weight connected to the outer end of said flexible element, a transversely oscillating lever within and extending beyond the housing, guides therefor, and an elongated guide loop carried by the lever and through which said flexible element extends.

4. The combination with a housing; of a spool therein, a wheel journaled within the housing, an indicator carried by the housing, a flexible element secured to and disposed to be wound on to and unwound from the spool, said element being supported by and disposed to rotate the wheel, a weight connected to the outer end of said flexible element, a transversely oscillating lever within and extending beyond the housing, guides therefor, and an elongated guide loop carried by the lever and through which said flexible element extends, means outside the housing for actuating the spool, and a brake lever within and extending beyond the housing, said lever being shiftable against the spool.

900,352. STRIP-MOISTENING DEVICE. MICHAEL C. BROWNE, Holyoke, Mass. Filed May 13, 1908. Serial No. 432,662.

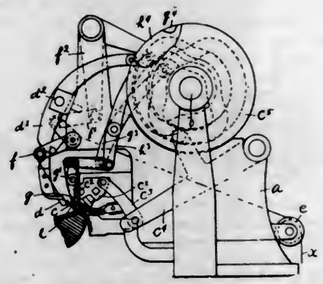
1. A strip-moistening device having in combination with a suitably mounted roll of gummed material, a strip-moistening element proper comprising liquid absorbent material located in the path of the free end of the strip, means for normally holding the free end of the strip in contact with the absorbent material, means for varying the capillary attraction of the absorbent material, and means for severing the strip.

2. A strip-moistening device having in combination, a base-piece, a casing mounted thereon and provided with means for supporting a roll of gummed material, a supporting casing mounted on the base-piece and spaced from the casing, a roller secured to the supporting casing for directing the free end of the gummed strip when drawn from the roll, a container tank mounted in the supporting casing, absorbent material supported by the supporting



casing, clamping means for varying the rate of capillary attraction of the absorbent material, a device for detachably retaining the absorbent material in the supporting casing, and means for directing the free end of the strip into contact with the absorbent material, and a severing device for the strip, the free end of the strip being in contact with the absorbent material at all times.

900,353. SHOE-SEWING MACHINE. FRANK CHATEAUNEUF, Haverhill, Mass. Filed Oct. 15, 1907. Serial No. 397,467.



1. A shoe-sewing machine comprising a needle, a looper and a pair of oppositely acting thread fingers for taking up thread between the work and the looper, substantially as described.

2. A shoe-sewing machine comprising a looper, a needle, a main and a supplemental thread finger having oppositely disposed thread engaging faces, said supplemental finger being disposed to engage the thread adjacent the path of the needle, and means for moving the main finger to take up thread running from the supplemental finger to the looper, substantially as described.

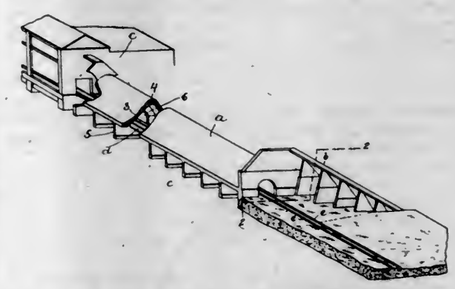
3. A shoe-sewing machine comprising a looper, a needle, a pair of oppositely disposed thread fingers and means for moving said fingers in opposite directions to take up thread between the looper and the work and thereafter to give it off to the needle, substantially as described.

4. A shoe-sewing machine comprising a looper, a needle, a pair of thread fingers having oppositely disposed thread-engaging faces about which the thread leading from the work to the looper may be successively passed, means for advancing one of said fingers to take up thread between the other finger and the looper, and subsequently retracting it to give off thread to the needle, substantially as described.

5. A shoe-sewing machine comprising a looper, a needle, movable towards and from the looper, a thread-engaging device disposed at one side of the path of the needle in position to engage the strand, which leads to the looper, of a loop which has been drawn into the work to form a stitch, between the looper and the point where said strand enters the work, and to draw said strand in the direction of said path and towards the looper, a finger, and means for moving the same to engage said strand between the looper and the point of engagement therewith by said thread-engaging device, to take up thread therebetween, and for thereafter moving it to give off the thread, thus taken up, to the needle, as the latter draws the loop through the work, substantially as described.

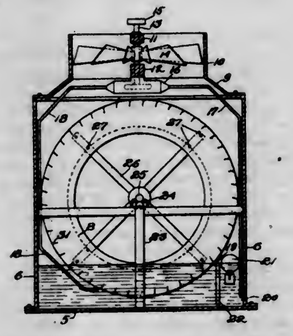
[Claims 6 to 11 not printed in the Gazette.]

900,354. BRIDGE-DAM. HOWARD L. COBURN, Boston, Mass. Filed May 1, 1908. Serial No. 430,273.



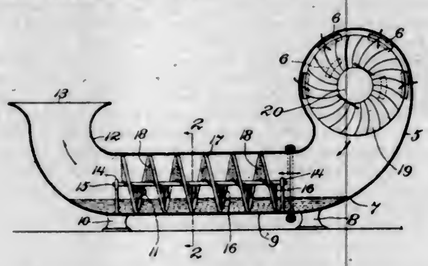
A dam comprising a body portion over which the overflow from the impounded water passes, said body portion forming a passageway under the overfall, and water-confining structures at the ends of the body portion, said structures being offset upstream from the body portion, whereby approaches and exits are provided substantially in line with said passageway.

900,355. HUMIDIFIER. FRANK B. COMINS, Sharon, Mass. Filed Apr. 16, 1906. Serial No. 311,847.



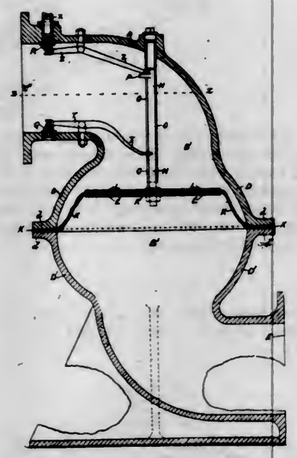
A humidifier comprising a casing having air outlets in their ends, a tank in said casing, a humidifier element rotatably mounted in said casing and comprising a series of disks one of which is furnished with blades, a pump, pipes communicating with the pump casing and with the tank one of said pipes being adapted to direct water passing from the pump under pressure against the blades of said disk to drive the humidifier element, as and for the purpose described.

900,356. HUMIDIFIER. FRANK B. COMINS, Sharon, Mass. Filed May 28, 1907. Serial No. 376,076.



A humidifier comprising a cylindrical moistening chamber having upturned ends one of which forms a fan chamber, a shaft journaled in bearings in said chamber and having a spiral support, a moisture distributing element mounted on said support, and a fan rotatably mounted in said fan chamber, as and for the purpose described.

900,357. PUMP AND THE LIKE. ALFRED E. DAVIS, Johannesburg, Transvaal. Filed May 16, 1905. Serial No. 260,657.

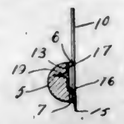


1. In a pump of the nature indicated, a diaphragm chamber interposed between the oscillatory mechanism and the main suction and delivery valves of the pump, a flexible vibrating diaphragm arranged in said chamber, relief valves interposed between said flexible vibrating diaphragm and the oscillatory mechanism of the pump, and means actuated by the flexible diaphragm for operating said relief valves, substantially as described.

2. In a pump of the nature indicated, a diaphragm chamber interposed between the oscillatory mechanism and the main suction and delivery valves of the pump, a flexible vibrating diaphragm arranged in said chamber, a rod fixed to said diaphragm and a guide for said rod fixed inside the chamber, relief valves in said chamber, and levers actuated by the diaphragm through the rod to operate said relief valves, substantially as described.

3. In a pump of the nature indicated, a diaphragm chamber interposed between the oscillatory mechanism and the main suction and delivery valves of the pump, a flexible vibrating diaphragm arranged in said chamber, a disk at either side of said diaphragm and a rod fixed to said disks, said rod formed with a projection or lug, a slotted tubular guide for said rod fixed inside the chamber, relief valves fitted in the chamber and levers pivoted inside the chamber which are adapted to operate the valves when engaged by the projection on the rod, substantially as described and shown.

900,358. STAIR-ROD. ANNIE DAVIS, Scranton, Pa. Filed Mar. 27, 1908. Serial No. 423,596.

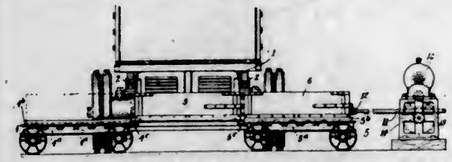


1. The combination with a stair rod having a securing base at each end, the bottom of said stair rod being recessed between said base ends, an ear secured to each of said bases, teeth projecting beyond one edge of said rod and means to secure said ears.

2. The combination with a stair rod having a projecting securing base at each end, of a securing ear extending from each of said base ends, said ears being projected parallel and in like direction, means to adjustably secure said ears, and teeth secured to said rod intermediate of said base ends.

3. The combination with a recessed stair rod, of a laterally extending securing ear fixed to the base of said rod at each end, each of said ears extending in like direction and having a key-hole slot, and a plurality of offset teeth secured to the under surface of said bar, said teeth extending beyond the edge of said bar all arranged as and for the purpose set forth.

900,359. CHANGING BATTERIES IN ELECTRICALLY-PROPELLED VEHICLES. ALBERT J. DOTY, Mount Vernon, N. Y., assignor of one-half to Charles Berg, Philadelphia, Pa. Filed Feb. 3, 1908. Serial No. 413,948.

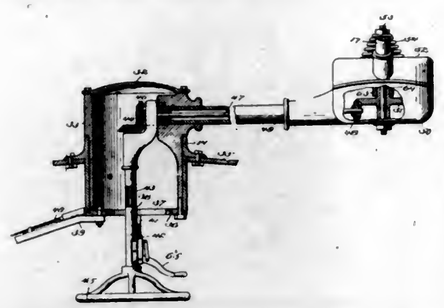


1. The combination with an electrically propelled vehicle having a battery receptacle depending from its bed and provided with an opening at each side of the vehicle, of a pair of battery-trucks on opposite sides of the vehicle in position to deliver a battery into one side of the battery receptacle and receive a battery from the other side, means for detachably connecting the trucks to the vehicle and mechanism for moving a battery from one of the trucks into the receptacle against a battery therein, whereby the latter will be displaced and delivered upon receiving truck.

2. The combination with an electrically propelled vehicle having a battery receptacle depending from its bed and provided with openings at each side of the vehicle, of a pair of battery-trucks on opposite sides of the vehicle in line with the openings in the battery receptacle, means for locking the said trucks to the vehicle and a ram comprising a plunger adapted to bear against a battery on one of the trucks and mechanism for actuating the plunger whereby the said battery will be pushed into the receptacle and will displace the exhausted battery therefrom upon the truck on the opposite side of the vehicle.

3. The combination with an electrically propelled vehicle having a battery receptacle depending from its bed and provided with an opening at each side of the receptacle, of a pair of battery trucks on opposite sides of the vehicle adapted to assume a position to deliver a battery into one side of the battery receptacle and to receive a battery from the other side, means for detachably connecting the trucks and the vehicle so as to provide a substantially continuous platform for the movement of the batteries, said means comprising hooks carried by one of said elements and adapted to engage eyes on the other of said elements.

900,360. BLOCK-SIGNALING DEVICE. WILLIAM FECHNER and ALBERT H. FECHNER, Goliad, Tex. Filed July 23, 1907. Serial No. 385,107.



1. The combination with a block signaling system, of a trolley mounted upon a train the same comprising a stationary casing, a rotating casing, an arm mounted on said rotating casing and adapted to be rotated thereby, a trolley mounted on one end of said arm, said arm having at its outer end a V shaped portion and said trolley having at its lower end an inverted V shaped portion for fitting into the V shaped portion of said arm, a bolt for holding said trolley and said arm together, and a spring for permitting said trolley to be rotated upon said arm.

2. The combination with a signaling system of a trolley mechanism mounted upon an engine for permitting signals to be conveyed from said signaling system to said train, said mechanism comprising a stationary member, a rotating member, an arm rigidly secured to said rotating member, a trolley mounted on said arm, a plurality of gear for rotating said arm, means for rotating said gear from said stationary member, a lever for raising and lowering said trolley, a rack, and a catch secured to said lever for engaging said rack for holding said trolley in any desired position.

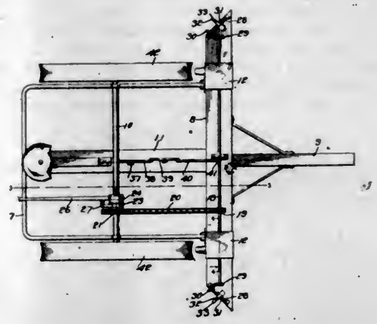
3. The combination with a signaling system of a trolley mounted on a locomotive comprising a rotating arm, a lever for rotating said arm, a catch on said lever for holding said lever in any adjusted postion, a trolley mounted on one end of said arm, and means engaging said trolley for rotating the same.

4. The combination with a signaling system of a trolley mounted upon a locomotive comprising a rotating arm, a lever for rotating the same, a trolley mounted on one end of said arm formed with a depending lug, a gear mounted in one end of said rotating arm formed with an engaging member, said engaging member being adapted to engage said depending lug whereby when said gear is rotated said trolley will be rotated, a shaft for rotating said gear, a hand wheel for rotating said shaft, and means connecting said hand wheel and said shaft for permitting power from said hand wheel to be communicated to said shaft.

5. The combination with a signaling system of a trolley mounted upon a locomotive, a rotating arm for supporting said trolley formed with a plurality of beveled surfaces, said surfaces forming a V shaped member, a trolley formed with a plurality of beveled surfaces adapted to engage said first mentioned beveled surfaces, a spring for normally holding all of said beveled surfaces in contact, thereby holding said trolley at right-angles to said supporting arm, and means for rotating said trolley.

[Claims 6 to 9 not printed in the Gazette.]

900,361. CHECK-ROW CORN-PLANTER. PORTER C. FOX, McComb, Okla. Filed Nov. 4, 1907. Serial No. 400,685.



1. In a machine of the class described, in combination, a frame; a transverse shaft mounted upon one of the end members of the frame; means for driving said shaft; a diagonally-disposed shaft mounted upon one end of said frame member and provided with a crank portion; an endwise movable vertical blade pivoted at its upper end to said crank portion and provided with a longitudinal slot; a driving connection between said transverse shaft and said diagonal shaft, for effecting the movement of said blade; and a pin carried by said frame member and extending through the slot in said blade, for effecting a swinging movement of the latter during its vertical movements.

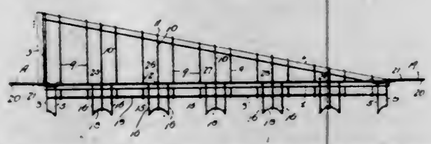
2. In a machine of the class described, in combination, a frame; a transverse shaft mounted upon one of the end members of the frame; a diagonally-disposed shaft mounted upon one end of said frame member and provided with a crank portion; a vertically-movable blade pivoted at its upper end to said crank portion and provided with a longitudinal slot; a sprocket carried by said transverse shaft; an axle; a sprocket carried by said axle; a sprocket chain connecting said sprockets; a driving connection between said transverse shaft and said diagonal shaft, for effecting the movement of said blade; a pin carried by said frame member and extending through the slot in said blade, for effecting a swinging movement of the latter during its vertical movements; and means for rotating the last-mentioned sprocket independently of the rotation of the axle.

3. In a machine of the class described, in combination, a frame; a transverse shaft mounted upon one of the end members of the frame; means for driving said shaft; a diagonally-disposed shaft mounted upon one end of said frame member and provided with a crank portion; an endwise movable vertical blade pivoted to said crank portion and provided with a longitudinal slot; a driving connection between said transverse shaft and said diagonal shaft, for effecting the movement of said blade; a pair of depending straps secured to said frame member; and a horizontal pin carried by said straps and extending through the slot in said blade, for effecting a swinging movement of the latter during its vertical movements.

4. In a machine of the class described, in combination, a frame; a transverse shaft mounted upon one of the end members of the frame; a diagonally-disposed shaft mounted upon one end of said frame member, and provided with a crank portion; an endwise movable vertical blade pivoted at its upper end to said crank portion, and provided with a longitudinal slot; a driving connection between said transverse and diagonal shafts, for effecting the vertical movement of said blade; a sprocket carried by said transverse shaft; an axle; a sprocket loosely mounted on said axle and provided with a hub having a clutch face and a peripheral series of ratchets; a sprocket chain connecting said sprockets; a clutch member keyed

upon said shaft and provided with a circumscribing groove; a lever carried by said member for moving the same into and out of engagement with the last mentioned sprocket, said lever being provided with a yoke portion fitted in said groove; a pin carried by said frame member and extending through the slot in said blade, for effecting a swinging movement of the latter during its vertical movement; and a pawl carried by said lever and adapted for engagement with said ratchet, to rotate the last-mentioned sprocket independently of the rotation of the axle.

900,362. COMBINED BAG-HOLDING RACK AND TWINE-HOLDER. JENNESS B. FREAR, Excelsior, Minn. Filed Jan. 8, 1908. Serial No. 409,847.



1. A device of the character described comprising a front bar, a rear bar, end bars connecting said front and rear bars, a supporting wire carried by the end bars and held below the said front bar, crossing wires having their upper ends connected to the rear bar and their lower ends connected to the supporting wire, said crossing wires being arranged in series to provide a plurality of bag supports, and guards carried by said front bar and held in front of each of the bag supports.

2. A device of the character described comprising a front bar and a rear bar, said bars being arranged in different planes and at a relative inclination, end bars connecting said front and rear bars, a longitudinally arranged supporting wire having its ends connected to each of the end bars, said supporting wire being held below the plane of the said front bar, crossing wires having one of their ends connected to the rear bar and their other ends connected to the supporting wire, said crossing wires being arranged in series to provide a plurality of independent bag supports, and a guard for each bag support.

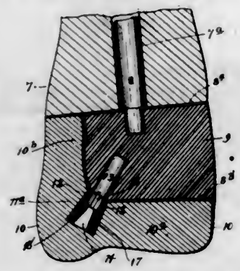
3. A device of the character described comprising a front bar, a rear bar extending at an inclination with respect to said front bar and arranged above the front bar, side bars connecting the front and rear bars together, inclined bag-supporting wires connected at one end to the rear bar, means for supporting the forward ends of said inclined bag-supporting wires, divisional wires connected to said front and rear bars, and guards connected to the front bar and supported at their lower ends by said divisional wires.

4. A device of the character described, comprising a front bar, a rear bar extending at an inclination with respect to said front bar and arranged above the front bar, side bars connecting the front and rear bars together, inclined bag-supporting wires connected at one end to the rear bar, means for supporting the forward ends of said inclined bag-supporting wires, divisional wires connected to said front and rear bars, guards connected to the front bar and supported at their lower ends by said divisional wires, a twine cone support projecting laterally from each of said side bars, and an arm projecting laterally from each of said side bars and provided with an eye through which extends the twine.

5. A device of the character described comprising a front bar, a rear bar extending at an inclination with respect to said front bar and in a higher plane, end bars connecting said front and rear bars, a longitudinally arranged supporting wire carried by the end bars and held below the said front bar, bag supporting wires each having one of its ends connected to the rear bar and its other end connected to the longitudinally extending supporting wire, said bag supporting wires being arranged in pairs to provide a plurality of independent bag supports, a guard for each of the bag supports comprising depending arms carried by the front bar the lower portion of which are inturned, and a divisional wire arranged between each pair of wires forming the bag supports and having a depending portion forming a support for the inturned end portion of the said guards.

[Claim 6 not printed in the Gazette.]

900,363. ARTIFICIAL TOOTH-CROWN AND SECURING MEANS THEREFOR. ENOCH M. FREDERICKS, Chicago, Ill. Filed Jan. 20, 1908. Serial No. 411,634.



1. As an article of manufacture, an artificial tooth-crown having a post-receiving tapered cavity therein, and a tapered metallic shell located in said cavity and having on the inner surface of its smaller end one or more longitudinally extending grooves.

2. As an article of manufacture, an artificial tooth-crown having a tapered metallic shell molded therein and presenting its contracted portion outwardly, the walls of said shell tapering from its base to a point near its outer end and then extended in parallelism to form an enlarged bearing area for a securing-post.

3. The combination with a tooth-crown having a post-receiving tapered cavity, of a tapered metallic shell located in said cavity against the walls thereof and having on the inner surface of its smaller end one or more longitudinally extending grooves, a securing-post located at one of its ends in the shell and having a portion within the shell tapered from its free end towards the contracted end of the shell.

4. The combination with a tooth-crown having a post-receiving tapered cavity, of a tapered metallic shell located in said cavity against the walls thereof and having on the inner surface of its smaller end one or more longitudinally extending grooves, a securing-post located at one of its ends in the shell and having a portion within the shell tapered from its free end towards the contracted end of the shell, the post also having at the smaller end of the tapered part thereof an annular shoulder and one or more grooves extending longitudinally and outwardly from said shoulder.

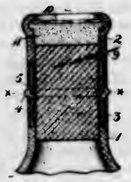
5. The combination with a tooth-crown having a post-receiving-tapered-cavity, of a tapered metallic shell located in said cavity against the walls thereof and provided on the inner surface of its smaller end with one or more longitudinally extending grooves, a securing-post located at one of its ends in the shell.

900,364. BOTTLE. GEORGE GEISENDORFER, Ukiah, Cal. Filed Nov. 23, 1907. Serial No. 403,525.

1. In combination with a glass bottle, a sleeve embedded in the neck thereof, said sleeve having self-contained means for rupturing it and thereby shortening the bottle.

2. In combination with a glass bottle, a sleeve of relatively soft material secured in the bottle neck, and an accessible cutting or tearing implement projecting from the sleeve and forming means for rupturing it; whereby after the rupturing a part of the sleeve remains associated with the bottle neck.

3. In combination with the neck of a bottle, a cork seated entirely within the same and below its mouth, an immovable filling above the cork, a sleeve of rupturable material associated with the bottle, and means carried by the sleeve for rupturing it; whereby when the sleeve is ruptured, the upper part of the neck including said filling is removed.

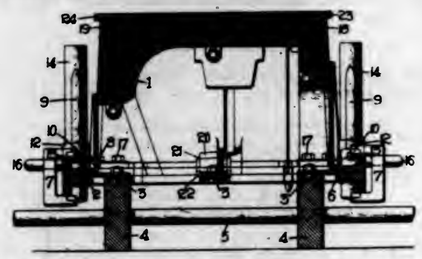


4. In combination with the neck of a bottle having an interior groove at its mouth, a cork seated entirely within the same and below its mouth, an immovable filling above the cork, a plate above the filling, extending with said filling into said groove, a sleeve of rupturable material associated with the bottle neck, and means carried by the sleeve for rupturing it; whereby when the sleeve is ruptured, the upper part of the neck including said filling is removed.

5. In combination with a bottle, a sleeve of rupturable material embedded in the neck, and a wire lying within the sleeve and protruding from it.

[Claims 6 to 8 not printed in the Gazette.]

900,365. APPARATUS FOR MAKING MOLDS. JAMES W. GIBNEY, Buffalo, N. Y., assignor to W. P. Taylor Company, Buffalo, N. Y., a Corporation of New York. Filed Oct. 16, 1907. Serial No. 397,730.



1. In an apparatus for making molds, a base carrying a suitable pattern, a flask around the pattern, a stripping plate and an exterior clamp for securing the stripping plate to the base.

2. In an apparatus for making molds, a base carrying a suitable pattern, a flask around the pattern, a stripping plate and an exterior ⊏ shaped clamp for securing the stripping plate to the base.

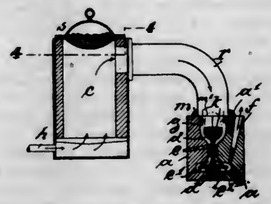
3. In an apparatus for making molds, a base carrying a suitable pattern, a flask around the pattern, a stripping plate, an exterior clamp for securing the stripping plate to the base and separate clamps for securing the stripping plate to the flask.

4. In an apparatus for making molds, a base carrying a suitable pattern, a flask around the pattern and a stripping plate, an exterior clamp for securing the stripping plate to the base and separate tapered clamps for securing the stripping plate to the flask.

5. In an apparatus for making molds, a base carrying a suitable pattern, a flask around the pattern, a stripping plate and an exterior clamp for securing the stripping plate to the base; said stripping plate having handles secured thereto at each corner thereof.

900,366. PROCESS OF UNITING METALS. HANS GOLDSCHMIDT and FELIX LANGE, Essen-on-the-Ruhr, Germany. Filed Jan. 30, 1905. Serial No. 243,401.

1. The improvement in the art of uniting metals, which consists in placing a mold in juxtaposition to solid metal with a mold-space therebetween, then forcing a current of heated gas through the mold space, and then running superheated molten metal into said mold-space and thereby partly fusing said solid metal, said superheated molten metal and the partly fused portion of the solid metal forming when solidified a uniform weld.



2. The improvement in the art of uniting solid pieces of metal, which consists in placing a mold in juxtaposition to adjacent portions of said pieces of metal with a mold-space therebetween, then forcing a current of heated gas through the mold-space, and then running superheated molten metal into said mold-space and thereby partly fusing said solid pieces of metal, said superheated molten metal and the partly fused portions of the solid pieces of metal forming when solidified a uniform weld.

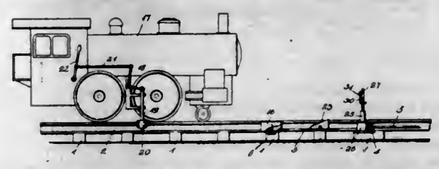
3. The improvement in the art of uniting metals, which consists in placing a mold in juxtaposition to solid metal with a mold-space therebetween, then forcing a current of heated gas through the mold-space, and then running into said mold-space a mixture of molten metals, one of which is a superheated molten metal and thereby partly fusing said solid metal, said superheated molten metal and the partly fused portion of the solid metal forming when solidified a uniform weld.

4. The improvement in the art of uniting metals, which consists in placing a mold in juxtaposition to solid metal with a mold-space therebetween, then forcing a current of heated gas through the mold-space, and then running into said mold-space a mixture of superheated molten metals and thereby partly fusing said solid metal, said superheated molten metals and the partly fused portion of the solid metal forming when solidified a uniform weld.

5. The improvement in the art of uniting metals, which consists in placing in juxtaposition to solid metal a mold of such construction as to form therewith a mold-space having narrow channels, then forcing a current of heated gas through the mold-space, and then running superheated molten metal into said mold-space and thereby partly fusing said solid metal, said superheated molten metal and the partly fused portion of the solid metal forming when solidified a uniform weld.

[Claims 6 to 12 not printed in the Gazette.]

900,367. SWITCH MECHANISM AND TRAIN-CARRIED ACTUATING MEANS THEREFOR. EDWARD HAAS, San Antonio, Tex. Filed Nov. 11, 1907. Serial No. 401,755.



1. In switch mechanism, the combination with the switch tongues, of a connecting bar connecting the free ends of the tongues and arranged to work under the track rails, switch throwing bars arranged longitudinally of the track, pivoted intermediately of their ends to the cross ties, and connected at their inner ends to the connecting bar for the switch tongues, transverse bars connecting the outer ends of said switch throwing bars, and cam blocks having outwardly beveled inner faces arranged at the outer ends of said switch throwing bars.

2. In a switch mechanism, the combination with the switch tongues of a connecting bar arranged between the free ends of the tongues, a pair of pivoted switch-throwing bars arranged at each side of the track the inner ends of the bars being connected with said connecting bar, connecting bars for connecting the outer or free ends of one pair of switch-throwing bars with said ends of the other pair of said bars, and cam blocks arranged at the outer ends of the switch-throwing bars.

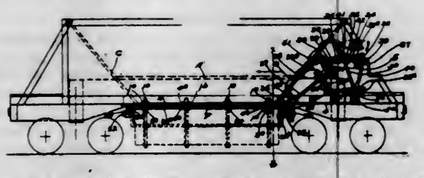
3. In switch mechanism, the combination with the switch tongues, of a laterally movable connecting bar arranged to work under the track rails for connecting the free ends of said tongues, a locking bar comprising two separable sections arranged between and hinged at its ends to the free ends of the switch tongues, a U-shaped hinge member hinged to one of the cross ties and connected at its central or intermediate portion to the inner ends of the locking bar sections and coacting therewith to hold either of the switch tongues in secure engagement with the adjacent track rail after the switch has been thrown, and means adapted to be actuated for moving the laterally movable connecting bar in either direction.

4. In switch mechanism and train carried actuating means therefor, the combination with the switch tongues of a laterally movable connecting bar for connecting the free ends of the tongues, a pair of pivoted switch throwing bars arranged at each side of the track and connected with said connecting bar, transverse connecting bars arranged between the outer or free ends of the switch throwing bars, cam blocks having outwardly beveled inner side faces arranged at the outer ends of the switch throwing bars, and means adapted to be carried by a train for actuating the switch mechanism, said means comprising shoes adapted to engage the beveled faces of the cam blocks.

5. In a switch mechanism, the combination with the switch tongues of a laterally movable connecting bar arranged to slide under the track rails and as a connection for the free ends of the tongues, a set of pivoted switch-throwing bars arranged at each side of the track, the inner ends of the bars of each set being connected with the adjacent end of the connecting bar, connecting bars for connecting the outer or free ends of the switch-throwing bars of one set with said ends of the bars of the other set and switch actuating mechanism adapted to be carried by a train for actuating the switch-throwing bars.

[Claim 6 not printed in the Gazette.]

900,368. DUMPING-CAR. HERBERT T. HERR, JAMES R. GROVES, and DAVID H. FOREMAN, Denver, Colo., assignors, by direct and mesne assignments, to The Herr Dump Car Company, Denver, Colo., a Corporation of Colorado. Filed Dec. 27, 1905. Serial No. 293,490.



1. In a dumping car, the combination with the car body and a hinged dumping door forming a part of the car bottom, of pivoted devices for locking the door in the closed position, the said devices having their axes parallel with the hinging axis of the door, an operating rod extending longitudinally of the car body, stationary devices mounted on the car body at suitable intervals and forming supporting guides for the rod which slides freely thereon, an operating lever connected with the rod at one extremity, and a suitable operative connection between the rod and the locking means whereby the door may be locked in the closed position or released at pleasure.

2. The combination with the car body, and a hinged door forming a part of the bottom thereof, of means for locking the door in the closed position, said means including stationary hangers mounted on the car, locking devices pivotally mounted on the hangers, an operating rod supported and guided by the hangers, and an operative connection between the rod and the pivoted locking devices.

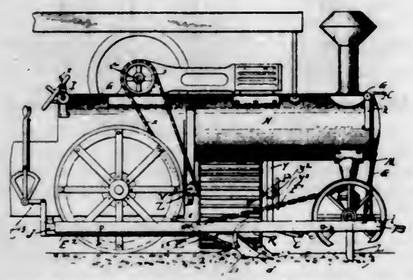
3. The combination with the car body and a hinged dumping door, of means for locking the door in the closed position including stationary hangers carried by the car, locking devices pivotally mounted on the hangers, an operating rod supported and guided by the hangers, an operative connection between the rod and the pivoted locking devices, the latter being mounted to swing in vertical planes, the door-engaging parts of the said devices projecting when released, below the plane of the door when closed, thus allowing them to perform the door lifting function to a limited degree when moving to the door-locking position, to overcome any sagging tendency.

4. In apparatus of the class described, the combination with a car body, and a dumping door forming a part of the bottom of the car, of locking means including pivoted devices for locking the door in the closed position, the axes of the locking devices extending lengthwise of the car whereby they swing in vertical planes cutting the car transversely, and means for operating the pivoted locking devices, including a rod extending lengthwise of and suitably supported on the car, and a suitable operative connection between the rod and the pivoted locking devices.

5. The combination with a car body, and a hinged dumping door forming a part of the bottom of the car, of locking means including pivoted devices for locking the door in the closed position, and means for operating the pivoted devices including a rod extending lengthwise of and suitably supported on the car, said rod having a back and forth movement in the direction of the car's length, and a suitable operative connection between the rod and the pivoted locking devices, said connection including toggle links.

[Claims 6 to 31 not printed in the Gazette.]

900,369. ROAD-GRADER. ELIJAH A. HOLLENBECK, Funk, Nebr. Filed May 29, 1908. Serial No. 435,770.



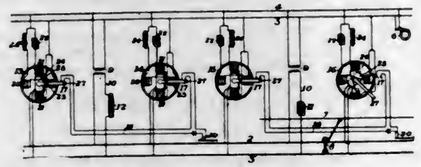
1. A road grader comprising an excavator, a draw-bar, said excavator having connection with said draw-bar, a conveyer adapted to receive the dirt upturned by said excavator, means of connection between said excavator and the grader frame, having an eye member, a rod member engaging the latter and said conveyer, and means for manually actuating said rod member.

2. A road grader comprising an excavator, a draw-bar formed of connected approximately E-shaped members spaced apart to receive between them the beam of said excavator, and having a bracket to which is connected the forward end of said excavator beam, means of connection between said excavator, and the grader frame having an eye member, a conveyer adapted to receive the dirt upturned by said excavator, a rod member extending through said eye member and connecting with said conveyer, and manually actuated means for said rod member.

3. A road grader comprising a conveyer or carrier in sections, means for effecting the adjustment of the upper conveyer section and its retention in position and additional adjusting means for the lower conveyer section, an excavator arranged to deliver the upturned earth into said conveyer, and means for effecting the simultaneous adjustment of said conveyer and said excavator for coöperative action as set forth.

4. A road grader comprising a draw-bar, means for adjustably suspending the forward end of said draw-bar in position, an excavator carried by said draw-bar, a conveyer for receiving the dirt from said excavator, means of connection between said excavator and the grader frame, a manually actuated rod member and means for adjusting said conveyer and said excavator from and by a common manually actuated means.

900,370. BLOCK-SIGNALING SYSTEM. JOHN S. HOLLIDAY, Wilkinsburg, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Feb. 21, 1908. Serial No. 417,009.



1. In a block signaling system, track rails which are electrically continuous for all currents, synchroscopic relays each having a movable element connected across the track rails, and means for impressing signaling currents upon the track rails, said currents being in phase in each block with the current in one field winding of the relays for that block; substantially as described.

2. In a block signaling system, track rails which are electrically continuous for all currents, relays having each a coil or winding connected across the track rails, and two other windings at an angle to each other, means for supplying said windings with currents which differ in phase by substantially the same angle as the angle between the different windings, and means for impressing upon the track rails currents which differ in phase in adjacent blocks by an angle corresponding approximately to the angle of difference between the two windings of the relays; substantially as described.

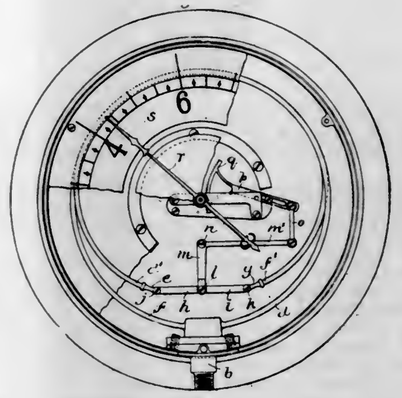
3. In a block signaling system, track rails which are electrically continuous for all currents, transformers for supplying signaling current to the track rails, means whereby the currents supplied by adjacent transformers are of different phase, relays having one winding connected across the track rails and two other sets of windings at an angle to each other, and means for supplying currents of different phase to the last named windings; substantially as described.

4. In a block signaling system, track rails which are electrically continuous for all currents, transformers for impressing signaling currents upon the track rails, means for causing the currents impressed upon adjacent blocks to differ in phase from each other by substantially ninety degrees, relays having one set of coils connected across the track rails, and two other windings approximately ninety degrees from each other, and means for supplying currents to the last named windings differing in phase by approximately ninety degrees; substantially as described.

5. In a block signaling system, track rails which are electrically continuous for all currents, a transformer connected across the track rails for supplying signaling current to each block at an intermediate portion thereof, means whereby the current supplied by adjacent transformers will differ in phase, a pair of relays for each block having their contacts in series with each other in the signal-controlling circuit, said relays each having one winding connected across the track rails, and two other windings at an angle to each other, and means for supplying currents of different phase to the last named windings; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

900,371. DIFFERENTIAL-PRESSURE GAGE. FRANK H. HOPKINS, Somerville, Mass., assignor to American Steam Gauge and Valve Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed Jan. 30, 1907. Serial No. 354,859.



1. A differential gage comprising a single indicator, a plurality of pressure actuated flexible tubes each connected with a separate source of pressure, means so connecting said members as to cause the pressure in each member to directly and positively oppose any movement of the other member, and operating means for the indicator controlled by said connecting means, whereby the indicator is actuated proportionally to the movement caused by the stronger pressure.

2. A differential gage comprising a single indicator, a plurality of flexible tubes each connected with a separate source of pressure, means so connecting said devices as to cause the pressure in each device to directly and positively oppose any movement of the other member, and operating means for the indicator attached to and controlled by said connecting means, whereby the indicator is actuated proportionally to the movement caused by the stronger pressure.

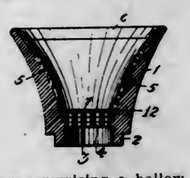
3. A differential gage comprising a single indicator, a plurality of curved tubular members supported at one end and each connected with a separate source of pressure, means so connecting the free ends of said members as to cause the pressure in each member to directly and positively oppose any movement of the other member, and operating means for the indicator controlled by said connecting means, whereby the indicator is actuated proportionally to the movement caused by the stronger pressure.

4. A differential gage comprising a single indicator, a plurality of curved spring tubes each having closed ends and each connected with a separate source of pressure, links uniting the closed ends of said tubes and so arranged as to cause the pressure in each tube to oppose the movement in the other tube, and a lever operatively connected with said links for actuating said indicator proportionally to the movement caused by the stronger pressure.

5. A differential gage comprising a single indicator, a plurality of curved spring tubes each having a closed end and each connected with a separate source of pressure, a link connected at one end to each of the closed ends of said tubes, the opposite ends of said links being united, and a lever connected with said links at their point of union and connected with means for actuating the indicator.

[Claims 6 and 7 not printed in the Gazette.]

900,372. ANTISEPTIC MOUTHPIECE FOR TELEPHONES, SPEAKING-TUBES, &c. MILTON S. HUFSCHMIDT, San Francisco, Cal. Filed Apr. 7, 1906. Serial No. 310,566.



1. A mouth piece comprising a hollow body, a porous disk extending transversely across the interior of the same, and a perforated metallic plate located over said disk.

2. A mouth piece comprising a hollow body, a porous disk extending transversely across the interior of the same, and a perforated plate located over said disk and having an upturned engaging edge.

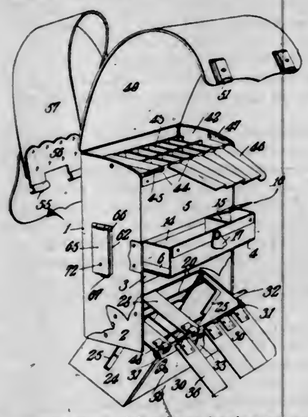
3. A mouth piece comprising a hollow body, a porous disk extending transversely across the interior of the same, and a perforated metal plate located over the disk and having a serrated engaging edge.

4. A mouth piece comprising a hollow body, a porous disk extending transversely across the interior of the same, and a metallic plate located over said disk and having an upturned serrated engaging edge.

5. In a mouthpiece of the character described, a hollow trumpet-shaped body adapted to be secured to a transmitter and provided with a perforated partition, a lining of felt extending from the partition to the rim of the body, perforated disks of felt upon the partition, a perforated disk secured upon the felt disks, and means for fastening the outer portion of the felt lining in position.

[Claim 6 not printed in the Gazette.]

900,373. PHYSICIAN'S MEDICINE-CASE. JOHN O. HUNTER and WILLIAM L. HUNTER, Red Sulphur Springs, and WILLIAM A. WYKEL, Hinton, W. Va. Filed Apr. 29, 1908. Serial No. 429,938.



1. The combination with a case having an open bottom and front portion; of a longitudinally removable pivot rod extending through the case, and a container slidably and pivotally mounted upon said rod and movable within and beyond the case, said container having angular slots for the reception of the rod.

2. The combination with a case having an open front portion; of a container mounted to slide and swing within and beyond the case, said container having angular slots in the ends thereof, and a combined pivot and supporting rod mounted within the case and extending through the slots.

3. The combination with a case having an open front portion; of a container mounted to slide and swing within and beyond the case, said container having angular slots in the ends thereof, a combined pivot and supporting rod mounted within the case and extending through the slots, and means within the container for holding receptacles at opposite sides of the path of the rod within the container.

4. The combination with a case having an open front; of a container mounted to slide vertically and horizontally and to swing within and beyond the case, said container having angular slots in the ends thereof, a longitudinally removable pivot and supporting rod within the case and extending through the slot, and means for locking the rod against removal.

5. The combination with a case having an open front; of a container mounted to slide and swing within and beyond the case and having angular slots therein, a combined supporting and pivot rod removable longitudinally from the case and extending through the slots, a spring controlled locking lever within the case for engaging the rod, and means projecting beyond the case for shifting the lever to release the rod.

[Claims 6 to 13 not printed in the Gazette.]

900,374. ERASER FOR INK. JOSEPH C. HUSS, Philadelphia, Pa. Filed Oct. 8, 1907. Serial No. 396,398.

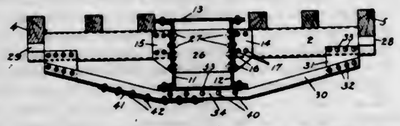


1. As an article of manufacture, an eraser having an erasing end formed of a flat part having straight beveled edges to form knife edges uniting in a point and having a neck portion cut away to render the cutting edges operative to their extreme ends, and a shank integral with the erasing end adapted for attachment to an ordinary pen holder and by which the eraser may be manipulated.

2. As an article of manufacture, an eraser having an erasing end formed of a flat body having two opposite straight erasing knife edges terminating in a V point, said body being made flat and smooth on one side and having the edges ground off obliquely on the other side to form sharp knife edges, a shank curved in cross section for attachment to a holder and by which the eraser may be manipulated and a neck portion for uniting the shank and erasing end.

3. A removable erasing point for a pen holder consisting of a flat pointed knife edged part, a shank curved in cross section to fit the holder, and a connecting neck stamped up in ribbed-like form connecting the shank and knife-edged part.

900,375. CAR-UNDERFRAME CONSTRUCTION. FRANK L. IRWIN, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio, a Corporation of Ohio. Filed Jan. 18, 1908. Serial No. 411,517.



1. In a car underframe a center sill, a flange member positioned beneath said center sill transversely and secured thereto, transverse angles beneath said center sill between which angles a flange of said flange member is adapted to be positioned and to which flange said angles are firmly secured, a transverse member mounted upon said center sill and means at the ends of said transverse member for supporting the ends of said angles.

2. In a car underframe a center sill formed of side channels, a T-bar positioned beneath said center sill and secured to said channels, parallel supporting angles embracing the depending flange on said T-bar and being secured thereto, a transverse member mounted on said center sill, supporting members depending from the ends of said transverse member and positioned between the ends of said supporting angles and secured thereto.

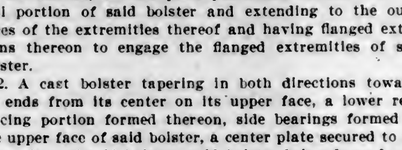
3. In a car underframe, a center sill formed of side channels secured together, a transverse channel mounted on said center sill and forming a support for the underframe stringers, a flange member secured at the end of said transverse member and shaped to form the seat for the side sill, a T-bar positioned transversely beneath said center sill and secured to the channels thereof, supporting angles embracing said T-bar and secured thereto, said angles at their ends being secured to said flange member, whereby a truss construction for said car underframe is formed.

4. In a car underframe, a center sill, a flanged member positioned transversely on the under side thereof, transverse truss members receiving said flanged member between themselves and being secured thereto, an upper transverse member borne upon said center sill, said truss members and said upper transverse member being connected together at their outer extremities.

5. In a car underframe, a center sill, a flanged member positioned transversely on the under side thereof, transverse truss members secured thereto, an upper transverse truss member borne upon said center sill, a seat-forming member mounted upon the end of said upper transverse member and connected with the adjacent ends of said truss members.

[Claim 6 not printed in the Gazette.]

900,376. CAR-BOLSTER. FRANK L. IRWIN, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio, a Corporation of Ohio. Filed Feb. 21, 1908. Serial No. 417,192.



1. A bolster cast with a heavy central portion and tapering towards its extremities, lateral flanges formed upon its extremities, a truss plate positioned beneath the central portion of said bolster and extending to the outer faces of the extremities thereof and having flanged extensions thereon to engage the flanged extremities of said bolster.

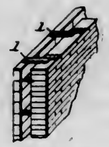
2. A cast bolster tapering in both directions towards its ends from its center on its upper face, a lower reinforcing portion formed thereon, side bearings formed on the upper face of said bolster, a center plate secured to the upper face of said bolster, said bolster being formed with lateral flanges at its ends and adjacent thereto, and a truss plate positioned beneath the central portion of said bolster and extending in both directions to the outer faces of the ends of said bolster, and having upwardly bent ends formed thereon to engage the outer face of the flanges formed on the ends of said bolster, and means for securing said truss plate to said bolster.

3. A cast bolster formed with a heavy central web portion, lateral flanges thereon forming the upper face thereof and extending around the ends and along the lower sides thereof, a truss plate positioned beneath the central portion of said bolster and extending to the ends thereof to overlap the outer faces of the same, and means for securing said truss to said flange portion of said bolster both on its lower side and at the ends thereof.

900,377. WALL-TIE. JOSEPH H. JACKSON, Pittsburg, Pa., assignor of forty-nine one-hundredths to Karl H. Butler, Pittsburg, Pa. Filed Feb. 28, 1905. Serial No. 247,656.

1. A wall tie consisting of a strip of metal having on its edge a plurality of tuberous projections and intervening conformable inverted recesses.

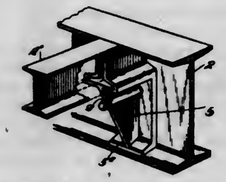
2. A wall tie consisting of a strip of metal having a plurality of headed projections on its edge and intervening conformable inverted recesses.



3. A wall tie consisting of a strip of metal having a plurality of recesses formed in its edges, a plurality of headed projections carried by the edges of said tie and alternating with said recesses, said projections being substantially the same size and shape as said recesses.

4. A wall tie consisting of a strip of metal having on each edge a plurality of headed projections and having intervening conformable inverted recesses.

900,378. BUILDING CONSTRUCTION. PETER H. JACKSON, East Oakland, Cal. Filed Dec. 18, 1907. Serial No. 407,047.



1. In a structural beam support for floors, side-walks, roofs and the like, the combination of parallel beams, transverse beams abutting said parallel beams and having their top surfaces substantially level therewith, and shoes or brackets of less height than the maximum height of the parallel beams and supported on the latter and having channels in their upper portions opening through the top thereof, said shoes being slidably mounted upon the transverse beams.

2. In a structural beam support for floors, side-walks, roofs and the like, the combination of parallel beams, transverse beams abutting the top flanges of the parallel beams and substantially level therewith, shoes or brackets of less height than the maximum height of the parallel beams, said shoes having lower portions resting in direct contact with the lower flanges of the parallel beams and having channels in their upper portions, said channels opening through the top of the shoes to allow the top flanges of the transverse beams to overlie the shoes.

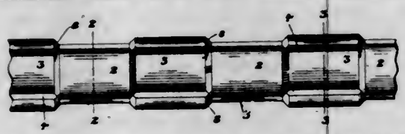
3. In a structural beam support for floors, side-walks, roofs and the like, parallel beams, similar transverse beams abutting the top flanges of said beams and substantially level therewith, shoes or brackets having their upper portions disposed below the plane of the top of the parallel beams and the top of the transverse beams and having channels in the upper part loosely slidable upon the transverse beams, bases supported upon the lower flanges of the I-beams, and means for securing said brackets in position.

4. In a fire-proof construction of the character described, parallel beams, similar transverse beams having their ends abutting the upper flanges of said beams and with the surfaces of said beams substantially coincident, brackets or shoes loosely sliding upon the transverse beams and capable of abutting against the flanges of the parallel beams, said shoes or brackets having bolt holes through them, and having channels in their upper portions opening through the top thereof whereby the flanges of the transverse beams overlie the shoes and are disposed substantially level with the top flanges of the parallel beams, and screw bolts passing through the brackets and through the web of the abutting beam to which it is secured.

5. In a fire-proof construction of the character described,

parallel beams, similar transverse beams having the ends abutting the upper flanges of said beams, and with the top flanges of said beams substantially coincident, channeled brackets or shoes loosely slidable upon the transverse beams and capable of abutting against the flanges of the parallel beams, said brackets having their lower ends formed to fit and be supported upon the flanges of the I-beams, and a bolt hole through the bracket portion of the shoe, with a bolt extending through the bracket and through the web of the beam securing the shoe to the side of the transverse beam.

900,379. REINFORCING-BAR. ALFRED C. R. JANNI, St. Louis, Mo. Filed Feb. 27, 1907. Serial No. 359,604.



1. A concrete-reinforcing bar cylindrical in shape and of constant cross-sectional area, the surface of said bar being provided with a plurality of longitudinal and a plurality of circumferential rows of projections, each circumferential and each longitudinal row comprising the succession of a projection, a depression, a projection, and a depression, the sides of each projection extending to but not beyond the sides of each adjoining projection, the ends of adjoining projections being so related to each other that the bottom edge of each end of any projection lies beyond the bottom edge of the end of each adjoining projection, while the top edge of said first-mentioned projection falls short of the top edge of the end of each adjoining projection.

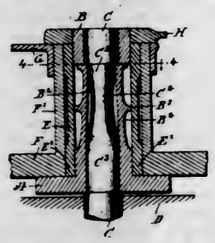
2. A concrete-reinforcing bar cylindrical in shape and of constant cross-sectional area, the surface of said bar being provided with a plurality of longitudinal and a plurality of circumferential rows of projections, each circumferential and each longitudinal row comprising the succession of a projection, a depression, a projection, and a depression, the sides of each projection extending to but not beyond the sides of each adjoining projection, the ends of adjoining projections being so related to each other that the bottom edge of each end of any projection lies beyond the bottom edge of the end of each adjoining projection, while the top edge of said first-mentioned projection falls short of the top edge of the end of each adjoining projection, each projection occupying approximately the same proportion of the surface of the bar as any other projection or as any depression.

3. A concrete-reinforcing bar cylindrical in shape and of constant cross-sectional area, the surface of said bar being provided with a plurality of longitudinal and a plurality of circumferential rows of projections, each circumferential and each longitudinal row comprising the succession of a projection, a depression, a projection, and a depression, the sides of each projection extending to but not beyond the sides of each adjoining projection, the ends of adjoining projections being beveled and so related to each other that the bottom edge of the end of any projection is in circumferential alinement with the top edge of the end of each adjoining projection, and the bottom edge of the end of each second-mentioned projection is in circumferential alinement with the top edge of the end of said first-mentioned projection.

900,380. CANNON-PINION. WILLIAM F. JOST, Pocatello, Idaho. Filed Feb. 26, 1908. Serial No. 417,846.

1. A cannon pinion having oppositely arranged spring jaws integral with the cannon and ranging lengthwise thereof, each spring jaw having an external lug, and a sleeve fitting on the said cannon and engaging the said lugs to press the jaws inward.

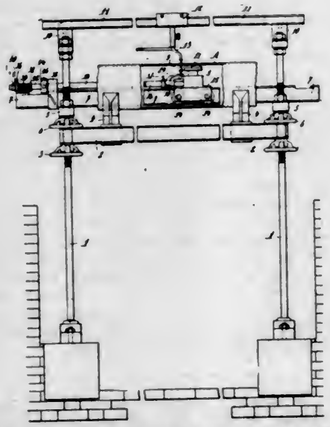
2. A cannon pinion having oppositely arranged spring jaws integral with the cannon and ranging lengthwise thereof, each spring jaw having an external lug, a sleeve fitting on the said cannon and engaging the said lugs to press the jaws inward, and a center arbor having a reduced portion practically engaged by the said jaws.



3. In combination, a cannon pinion having oppositely arranged integral jaws in the cannon and lengthwise thereof, each jaw having an external lug, a center arbor having a reduced cylindrical portion, and a reduced waist portion continuous to the said reduced cylindrical portion, and a sleeve fitting over the said cannon and bearing on the said jaw lugs to press the jaws inward and to move the free ends thereof into frictional contact with the said cylindrical portion of the arbor.

4. In combination, a cannon pinion having oppositely arranged integral jaws in the cannon, and extending legthwise thereof, each jaw having an external lug at approximately the center thereof, a center arbor having a reduced cylindrical portion, and a reduced waist portion contiguous to the said reduced cylindrical portion, a shoulder being formed between said portions, and a sleeve fitting over the cannon and bearing on the lugs of the jaws, to press the jaws inward, and to move the free ends thereof into frictional contact with the cylindrical portion of the arbor, and with the ends of the jaws abutting the shoulder.

900,381. MACHINE FOR WELDING METAL TUBES, RINGS, AND THE LIKE. FÉLIX JOTTRAND, Uccle, near Brussels, Belgium; Julia Renard Jottrand, widow of said Félix Jottrand, deceased, for herself and as guardian, and Auguste Jottrand, as associate guardian of the heirs-at-law, assignors to Société Anonyme L' Oxhydrique Internationale, a Corporation of Belgium. Filed Aug. 10, 1905. Serial No. 273,518.



1. In a machine of the class described, an anvil, a support for said anvil, means for elevating said anvil from its support, and a heater also carried by the same support.

2. In a machine of the class described, an anvil, a support therefor, means for elevating said anvil from its support, a heater also carried by said support, and means for displacing said heater through the movement of the anvil.

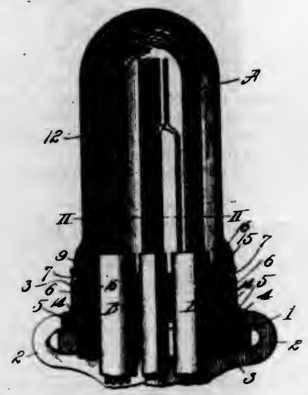
3. In a machine of the class described, an anvil, a support therefor, means for elevating said anvil, a heater pivoted to said support, and means for swinging said heater laterally away from said anvil through the movement of the latter.

4. In a machine of the class described, an anvil, a support therefor, a heater also carried by said support, and a single means for elevating said anvil and displacing said heater with respect to said support.

5. In a machine of the class described, an anvil, a longitudinally movable carriage supporting the same, a heater also supported on said carriage, and means for displacing said heater laterally with respect to said anvil.

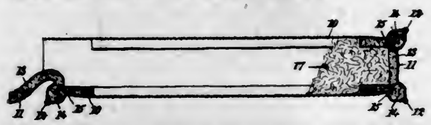
[Claims 6 to 15 not printed in the Gazette.]

900,382. MOISTURE-PROOF CASE FOR INSULATED WIRES. ADRIAN L. JOYNES, Paducah, Ky., assignor of one-third to Charles L. Meyers, St. Louis, Mo. Filed June 4, 1906. Serial No. 320,004.



In a moisture-proof wire case, a bracket provided with a supporting ring screw-threaded internally, a sleeve screw-threaded externally at both of its ends and fitted at one end into said supporting ring and having intermediate of its screw-threads an external rim and interior thereof a ledge, a hood having screw-threaded connection with the end of said sleeve opposite that fitted to said supporting ring and adapted to rest on said external rim, and a sectional washer adapted to rest on said ledge and having its mating edges recessed, substantially as set forth.

900,383. MATTRESS. FRANK A. KAISER, Scranton, Pa. Filed June 2, 1908. Serial No. 436,196.

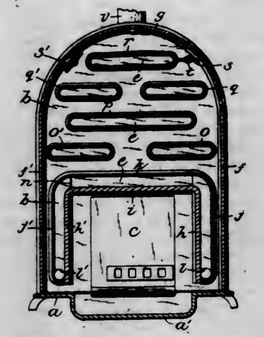


1. The method of making mattresses or cushions, consisting in placing a strip of felt or the like along the intersection of two adjacent inner faces and covering a portion of both of said faces, securing said strip in position by sewing through both of said faces and the strip at a distance from the line of intersection, to form a roll or bead prior to the insertion of the main filling material and separate therefrom, and inserting said main filling material.

2. A mattress or cushion having a covering, a strip of felt or the like, separate from the filling material and in engagement with the inner surface of the covering adjacent the lines of intersection of adjacent faces, said strip being secured in place by stitching through said adjacent faces at a distance from their line of intersection, and a filling material separate from said strip.

3. A mattress having a covering, a strip of felt or the like upon the inner surface of the covering along the intersection of adjacent faces, a cord in engagement with the inner surface of the strip, and a line of stitching through said adjacent faces to secure them together at a distance from their line of intersection and to hold a portion of said strip and said cord therebetween to form a roll edge.

900,384. WOOD-BURNING STOVE. GEORGE G. KAISER, Harrison township, Clay county, Ind. Filed Mar. 23, 1908. Serial No. 422,668.

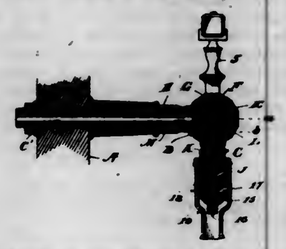


1. A stove comprising a base, a front wall on the base, a door mounted on the front wall, a back wall on the base, a body part having side walls and a top connected to the front and back walls, the side walls being attached to the base, and the top having a draft opening therein, a combustion chamber having two side walls and a roof plate attached to the front and back walls, the side walls being clear of the base, and an air-chamber formed by walls between the walls of the body part and the walls of the combustion chamber, the air-chamber having inlet openings and outlet openings.

2. A stove comprising a base, a front wall on the base, a door mounted on the front wall, a back on the base, a body part having side walls and a top connected to the front and back, the side walls being attached to the base, and the top having a draft opening therein, a combustion chamber having two side walls and a roof plate attached to the front and back walls, the walls being clear of the base, an air-chamber formed by walls between the walls of the body part and the walls of the combustion chamber and by a roof plate extending above the roof plate of the combustion chamber, the air-chamber having inlet openings and outlet openings, a plurality of air-flues above the air-chamber extending from the front wall to the back wall, the flues being open at their ends, and a false front attached to the front wall to form a chamber at the outlet ends of the air flues and at the outlet openings of the air-chamber.

3. A stove comprising a base, a front wall, a door mounted on the front wall, a back wall on the base and having cleaning holes therein, a body part having side walls and a top connected to the front and back walls and therewith forming walls of draft passages, the side walls being attached to the base, and the top having a draft opening therein, a combustion chamber having two side walls and a roof plate attached to the front and back walls, the side walls being clear of the base, an air-chamber formed by walls between the walls of the body part and the walls of the combustion chamber, the walls of the air-chamber forming parts of the draft passages, said air-chamber having inlet openings and outlet openings, and closures on said back wall opposite said cleaning openings.

900,385. FAUCET. JACOB G. KASJENS, Peoria, Ill. Filed May 13, 1907. Serial No. 373,525.



1. In a faucet the combination of the body of the faucet having a central bore, a disk seated therein having a substantially flat face and also having a raised annular flange extending up from said face, a second disk also having a substantially flat face and adapted to rest upon that of the first said disk, and also to seat within the said flange, the said faucet having fluid passages therein, there being passages in the first said disk having terminal opening through the face of the said disk, there being a passage in the second disk having two terminals opening through its face and adapted to register with those of the passages of the first disk, a member for carrying said second disk, an adjusting device adjacent to said member for holding the disks together with pressure, a series of balls interposed between the member and said adjusting device, and means for turning the second disk upon the first.

2. In a faucet the combination of the body of the faucet having a central bore, a disk seated therein having a substantially flat face, and also having a raised annular flange extending up from said face, a second disk also having a substantially flat face and adapted to rest upon that of the first said disk, and to seat within the said flange, the said faucet having fluid passages therein, there being passages in the first said disk having terminals opening through the face of said disk, there being a passage in the second disk having two terminals opening through its face and adapted to register with those of the passages of the first disk, a member for carrying said second disk, an adjusting device adjacent to said member for holding the disks together with pressure, a series of balls interposed between the member and said adjusting device, means for securing the adjusting device in position, and means for turning the second disk upon the first.

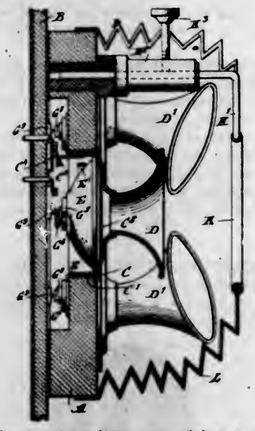
900,386. TELEPHONE-TRANSMITTER. ADOLPH G. KAUFMAN and LEOPOLD J. LIPPMANN, New York, N. Y., assignors to American Caliaphone Company, New York, N. Y., a Corporation of Georgia. Filed Jan. 19, 1907. Serial No. 353,004.

1. A telephone transmitter comprising a casing, a diaphragm, a conducting carrier facing the diaphragm, loose conducting material between the carrier and the diaphragm, and ball-shaped contact members projecting into said loose conducting material.

2. A telephone transmitter comprising a casing, a diaphragm, a flat carbon disk on the inner face of the diaphragm clamped thereto by projecting contact members, a conducting carrier facing said disk and loose conducting material between the disk and the carrier, the said contact members projecting into the loose conducting material a sufficient distance to enable them to act as efficient agitators thereof.

3. A telepnone transmitter comprising a casing, a diaphragm, a flat carbon disk on the inner face of the diaphragm, a conducting carrier facing said disk, loose conducting material between the disk and the carrier and separate spaced contact members projecting from said disk into the loose conducting material.

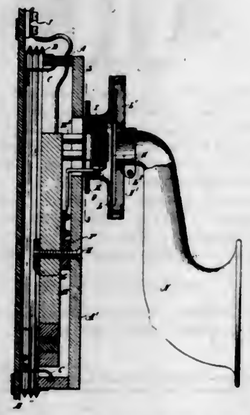
4. A telephone transmitter comprising a casing, a diaphragm, a flat carbon disk on the inner face of the diaphragm, a conducting carrier facing said disk, loose conducting material between the disk and the carrier and ball-shaped contact members projecting from said disk into the loosé conducting material.



5. A telephone transmitter comprising a thimble provided with a sound receiving tube, a diaphragm holding member fitted into said thimble, and a spring for pressing said member toward said tube.

[Claims 6 to 18 not printed in the Gazette.]

900,387. TELEPHONE-RECEIVER. ADOLPH G. KAUFMAN and LEOPOLD J. LIPPMANN, New York, N. Y., assignors to American Caliaphone Company, New York, N. Y., a Corporation of Georgia. Filed Feb. 7, 1907. Serial No. 356,171.



1. A telephone receiver, comprising a casing, a magnet support therein, a magnet carried by said support and projecting in opposite directions therefrom, pole pieces at the ends of the magnet, coils on said pole pieces, a diaphragm box carried by the magnet independently of the casing, and a diaphragm located in said box adjacent to the pole pieces.

2. A telephone receiver comprising a casing, a magnet supported therein, magnet coils, a diaphragm box carried by the magnet directly and independently of the casing, and a diaphragm in said box.

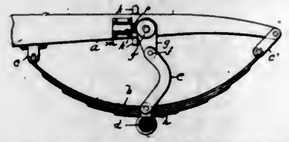
3. A telephone receiver comprising a casing, a magnet supported therein, magnet coils, a diaphragm box carried by the magnet directly and independently of the casing and adjustable toward and from the magnet, and a diaphragm in said box.

4. A telephone receiver comprising a magnet the pole pieces of which having opposite polarity are located alongside of one another, each of said pole-pieces having a lateral offset for connecting it to the magnet and being provided with a plurality of slits and a curved outer edge.

5. A telephone receiver comprising a casing, a magnet supported therein, magnet coils, a screwthreaded socket secured to the magnet directly and supported independently of the casing, a diaphragm box having a screw connection with said socket, and a diaphragm in said box.

[Claims 6 to 8 not printed in the Gazette.]

900,388. SHOCK-ABSORBING MECHANISM FOR VEHICLE-SPRINGS. WELLINGTON P. KIDDER, Boston, Mass. Filed Jan. 11, 1907. Serial No. 351,852.



1. In a shock absorbing mechanism for vehicle springs, a vehicle body portion, a supporting axle, a spring intermediate of the axle and the body, a toggle joint intermediate of and connecting the axle and body and comprising a comparatively short member and a comparatively long member, the short member being provided with a curved bearing surface at its end farthest from the long member and a friction mechanism comprising a spring actuated plunger bearing against said curved surface on the short member for the purpose set forth.

2. In a shock-absorbing mechanism for vehicle-springs, a vehicle-body portion, a supporting axle, a spring intermediate of the axle and the body, a toggle-joint intermediate of and connecting the axle and body and comprising a comparatively short member connected with the body and a comparatively long member connected with the axle, stops supported by the body and adapted to prevent the toggle from reaching a dead center, and a friction-mechanism bearing against said toggle, for the purpose set forth.

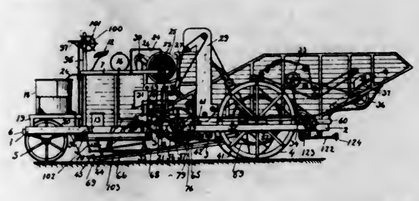
3. In a shock-absorbing mechanism for vehicle-springs, a vehicle-body portion, a supporting axle, a spring intermediate of the axle and body portion, a comparatively large stud secured to said portion, a toggle consisting of a comparatively short member pivoted on and around said stud and a comparatively long member connected with the axle, and a friction-mechanism comprising a case, a spring, and a soft plunger bearing against the portion of the upper member which is pivoted on and around the stud, for the purpose set forth.

4. In a shock-absorbing mechanism for vehicle-springs a vehicle-body portion, a supporting axle, a spring intermediate of the axle and the body, a toggle-joint intermediate of and connecting the axle and body and comprising a comparatively short member connected with the body and a comparatively long member centrally curved and connected with the axle, and a friction-mechanism bearing against said toggle, for the purpose set forth.

900,389. SELF-PROPELLING COMBINED HARVESTER, AGRICULTURAL ENGINE, AND TRUCK. FRED L. KINCAID and HENRY T. PREBLE, Stockton, Cal. Filed Aug. 31, 1905. Serial No. 276,627.

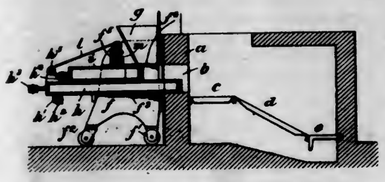
1. A machine of the class described comprising a truck provided with a guide wheel in front and bearing wheels at the rear, two motors mounted on the truck, means for connecting either one or both of the motors with the bearing wheels, a threshing cylinder located upon the truck, and means operatively connecting the threshing cylinder with the motors.

2. A machine of the class described comprising a truck provided with a guide wheel in front and bearing wheels at the rear, a propelling means, a feeder house at the forward end of said truck, a seat on top of the said feeder house, and steering mechanism for said guide wheel located adjacent to said seat.



3. A machine of the class described comprising a self moving truck having a platform, detachable elements carried thereby, a draw-bar at the rear, and a coupling attached to the draw-bar, said bar and coupling lying under the detachable elements specified.

900,390. MECHANISM FOR FEEDING FURNACES. FRANK KINGSLEY, New York, N. Y. Filed Nov. 1, 1907. Serial No. 400,302.



1. The combination with a furnace having a fire door of a hopper a reciprocating pusher below the hopper and adapted to receive a charge of fresh fuel upon its upper surface, means to project the pusher through the fire door opening into the furnace to carry with it the charge of fresh fuel, and a second reciprocating pusher overlying the first pusher to discharge the fresh fuel from the first pusher into the furnace.

2. The combination with a furnace having a fire door of a reciprocating pusher arranged to receive a charge of fresh fuel, means to project the pusher through the fire door opening into the furnace with its charge of fuel, a second pusher overlying the first, means to reciprocate the same, and means to hold the second pusher stationary during the first part of the rearward movement of the first named pusher whereby the fuel carried by the first named pusher is discharged within the furnace.

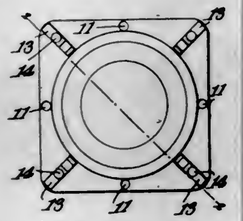
3. A fuel feeding mechanism comprising a supporting frame, a hopper, a pusher mounted on the frame below the hopper and arranged to receive a charge of fresh fuel on its upper surface and carry the same into the furnace, and a second reciprocating pusher overlying the first and adapted to discharge the fresh fuel from the first pusher into the furnace.

4. A fuel feeding mechanism comprising a supporting frame, a reciprocating pusher mounted thereon and adapted to carry a fresh charge of fuel into the furnace, a second reciprocating pusher overlying the first, and means to hold the second pusher stationary during the withdrawal of the first pusher to effect the discharge of the fuel therefrom within the furnace.

5. A fuel feeding mechanism comprising a supporting frame, a reciprocating pusher mounted thereon, a second reciprocating pusher mounted thereon and overlying the first pusher, a flexible connection secured at one end of the frame and at the other end to the second pusher, and a guide pulley therefor carried by the first pusher, whereby the second pusher is withdrawn by the rearward movement of the first pusher and at a greater speed.

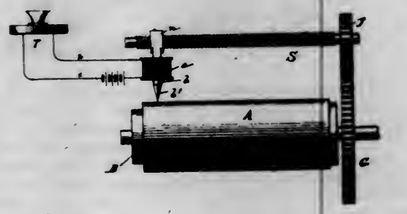
[Claims 6 and 7 not printed in the Gazette.]

900,391. BARREL-RAISER. FRANK H. KING and DAVID F. ARBURN, Evansville, Ind. Filed Mar. 7, 1907. Serial No. 361,168.



A barrel raiser comprising a pedestal having means for longitudinal adjustment, a table journaled for rotation thereon and being provided with perforations located at different distances from its center, standards having at opposite ends alined lugs which are adapted to fit snugly in said perforations and adjacent shoulders the shoulders at one end being at a different distance from the lugs than the shoulders at the opposite ends.

900,392. SOUND RECORDING AND REPRODUCING INSTRUMENT. GEORG KIRKEGAARD, New York, N. Y., assignor to Stilson Hutchins, Washington, D. C. Filed Nov. 18, 1899, Serial No. 737,406. Renewed Mar. 5, 1908. Serial No. 419,391.



1. A sound recording and reproducing instrument consisting of a number of magnetizable bodies arranged in a series, means for successively magnetizing said bodies in accordance with sound waves and a diaphragm subjected to the successive action of said bodies.

2. A sound recording instrument consisting of an electro-magnet and means for varying its magnetism in accordance with sound waves, in combination with a relatively moving surface containing a multiplicity of pieces of magnetic material adapted to be successively brought under the influence of the magnet.

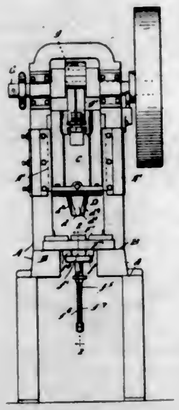
3. A sound recording and reproducing instrument consisting of a series of independent bodies of magnetizable material, means for successively magnetizing them in accordance with successive changes in sound waves and an armature adapted to be brought successively under the influence of said bodies after they have been magnetized.

4. The combination of an electric circuit, a magnet in said circuit, a series of magnetizable bodies adapted to be magnetized successively under the influence of said magnet, and a record electric circuit adapted to be affected successively by the said magnetized bodies.

5. A sound recording and reproducing instrument consisting of an electro-magnet and means for changing its strength in accordance with sound waves, and a relatively moving surface of magnetic material exposed to the influence of said magnet for the purpose of making a record of said sound waves, in combination with a reproducing device consisting of a vibratory body carrying an armature adapted to be exposed to the magnetic record contained in said moving surface, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

900,393. MACHINE FOR MANUFACTURING ONE-PIECE FOLDED SHEET-METAL TURPENTINE-CUPS. JOHN KOHKE, Atlanta, Ga., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed May 2, 1908. Serial No. 430,455.



1. In a machine for forming sheet metal blanks for production of one piece folded vessels having the ends thereof flared at different angles from the sides, the combination with a bed plate and reciprocating slide or cross head, of a female forming die having slightly flaring side die faces or members and widely flaring end die faces or members, and angular openings or free spaces at the corners between the side and end die members, and a coöperating male forming die having correspondingly flared side and end die members or faces, the side die members being provided at each end with rigid projecting wings extending in line therewith, said projecting wings forming and fitting within the angle folds produced in the blank by said male and female forming dies substantially as specified.

2. In a machine for forming sheet metal blanks for production of one piece folded vessels having the ends thereof flared at different angles from the sides, the combination with a bed plate and reciprocating slide or cross head, of a female forming die having slightly flaring side die faces or members and widely flaring end die faces or members, and angular openings or free spaces at the corners between the side and end die members, and a coöperating male forming die having correspondingly flared side and end die members or faces, the side die members being provided at each end with rigid projecting wings extending in line therewith and having their lower edges inclined at a greater angle than that of the end die members, said projecting wings forming and fitting within the angle folds produced in the blank by said male and female forming dies substantially as specified.

3. In a machine for the purpose specified, the combination with a female forming die having differently flared side and end die faces or members and angular spaces at the corners between the side and end die members, of a male forming die having side and end die faces or members and provided with rigid projecting wings at the corners extending in line with said side die faces or members, said projecting wings forming and fitting within the angle folds produced in the blank by said male and female forming dies substantially as specified.

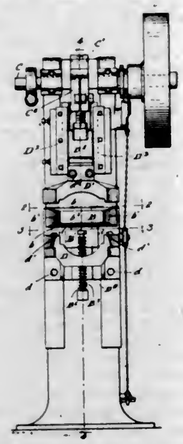
4. In a machine for the purpose specified, the combination with a female forming die having differently flared side and end die faces or members and angular spaces at the corners between the side and end die members, of a male forming die having side and end die faces or members and provided with rigid projecting wings at the corners extending in line with said side die faces or members, said projecting wings having inclined lower edges, said projecting wings forming and fitting within the angle folds

produced in the blank by said male and female forming dies substantially as specified.

5. The combination with a female forming die having flaring side and end die faces or members with a male forming die having flaring side and end die faces or members, and provided with rigid projecting wings at the corners extending in line with said side die faces or members, said projecting wings forming and fitting within the angle folds produced in the blank by said male and female forming dies substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

900,394. MACHINE FOR MANUFACTURING ONE-PIECE FOLDED SHEET-METAL TURPENTINE-CUPS. JOHN KOHKE, Atlanta, Ga., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed May 8, 1908. Serial No. 431,666.



1. In a machine for folding the wings or angle folds of a one-piece-formed sheet metal blank against the flaring ends thereof, the combination with a horn having flaring end faces mounted upon a reciprocating slide, of a lower stationary wing folding die having inclined or flaring die members, and an upper reciprocating wing folding die having inclined or flaring die members, substantially as specified.

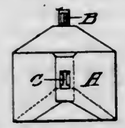
2. In a machine for folding the wings or angle folds of a one-piece-formed sheet metal blank against the flaring ends thereof, the combination with a horn having flaring end faces mounted upon a reciprocating slide, of a lower stationary wing folding die having inclined or flaring die members, and an upper reciprocating wing folding die having inclined or flaring die members, a spring acting against the said horn slide to cause the movable folding die to fold one pair of angle folds or wings in advance of the other pair so that the final pair will overlap the first pair, substantially as specified.

3. In a machine for folding the wings or angle folds of a one-piece-formed sheet metal blank against the flaring ends thereof, the combination with a horn having flaring end faces mounted upon a reciprocating slide, of a lower stationary wing folding die having inclined or flaring die members, and an upper reciprocating wing folding die having inclined or flaring die members, a spring acting against the said horn slide to cause the movable folding die to fold one pair of angle folds or wings in advance of the other pair so that the final pair will overlap the first pair, and means for freeing the formed and folded blank from the horn folding die, substantially as specified.

4. The combination with a movable horn having flaring end faces, of a stationary wing folding die and a reciprocating wing folding die acting to move the horn in coöperation with the stationary wing folding die after starting the folding of the pair of wings engaged by said wing folding die, substantially as specified.

5. In a machine for closing or folding the wings or angle folds of a one piece folded sheet metal vessel against the flaring ends thereof, the combination with a horn having flaring die faces, of wing folding dies on opposite sides of the horn and having inclined or flaring die members and means for causing said wing folding dies to successively act against the horn, substantially as specified.

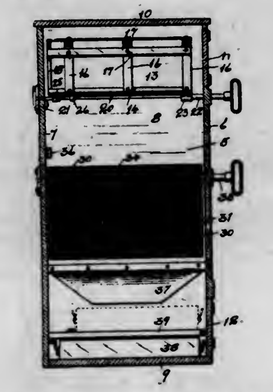
900,395. ENVELOP. ERNEST KOHLER, Alameda, Cal. Filed Apr. 3, 1908. Serial No. 424,880.



1. An envelop having overlapping flap members, and a fastening device for said flaps comprising two members normally detached from the envelop, one of said members arranged on one side of the overlapped flaps and the other of said members arranged on the opposite side of the overlapped flaps, and said overlapping members having means for engaging each other and the interposed envelop material, one of said members adapted to press the said material into the opening of the other member.

2. An envelop having overlapping flap members, and a sealing device comprising two complementary interlocking boxes, and said flap members having projecting tongues engageable between said boxes and adapted to be pressed into the opening of one of said boxes by the other box to seal the envelop.

900,396. ASH-SIFTER. GUSTAVE LANGE, Chicago, Ill. Filed Nov. 25, 1907. Serial No. 403,671.



1. In an ash sifter, the combination of a sifter box, a screen sifter within the box, a rotatably mounted cage above the screen sifter and adapted to receive and hold a pan of unsifted ashes, a support for normally holding the cage in upright position, and a handle adapted to move the cage away from the support and permit its reversal, substantially as described.

2. In an ash sifter, the combination of a sifter box, a screen sifter within the box, a revoluble cage eccentrically mounted above the screen sifter and adapted, when in normal position, to receive and hold a pan of unsifted ashes, a support for the heavier side of the cage, and a handle adapted to move the cage away from the support

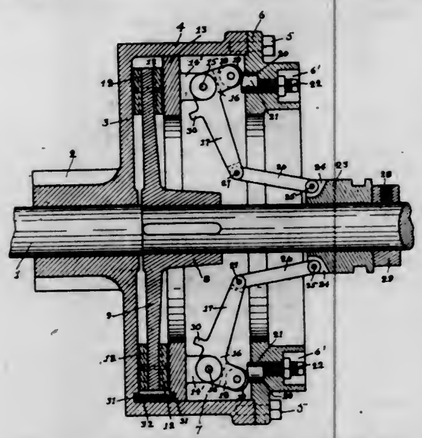
to permit it to reverse itself by gravity and discharge the ashes into the sifter, substantially as described.

3. In an ash sifter, the combination of a sifter box, a screen sifter located within the box, a revoluble cage eccentrically mounted above the sifter and comprising a flat floor adapted to receive a pan of unsifted ashes, and an openwork top adapted to embrace and hold the pan of unsifted ashes supported upon the floor, a bracket at the rear side of the sifter box for supporting the heavier side of the cage, and a handle adapted to pull the cage forward and away from the supporting bracket for permitting its reversal, substantially as described.

4. In an ash sifter, the combination of a sifter box, a screen sifter located within the box, a revoluble cage eccentrically mounted above the sifter and comprising a flat floor adapted to receive a pan of unsifted ashes, and an openwork top adapted to embrace and hold the pan of unsifted ashes supported upon the floor, a bracket at the rear side of the sifter box for supporting the heavier side of the cage, a handle adapted to pull the cage forward and away from the supporting bracket for permitting its reversal, a receptacle below the screen sifter adapted to receive the ashes, and guideways above said receptacle adapted to receive and support a suitable receptacle for receiving coals after sifting, substantially as described.

5. In an ash sifter, the combination of a sifter box provided with upper and lower doors, a cage in alinement with the upper door and adapted to receive and hold a pan of unsifted ashes, means for reversing the cage to discharge the ashes from the pan, a rocking screen sifter pivoted below the cage, a stop for limiting the movement of the rocking screen sifter, a chute below the rocking screen sifter, and a receptacle, in alinement with the lower door, for receiving sifted ashes from the chute, substantially as described.

900,397. FRICTION-CLUTCH. PAUL M. H. LANGE, Toledo, Ohio, assignor to The Toledo Machine and Tool Company, Toledo, Ohio. Filed Dec. 26, 1907. Serial No. 408,210.



1. In a friction clutch, in combination with a shaft, a friction disk, fixedly mounted on the shaft, a driving wheel loosely mounted on the shaft beside the friction disk, and provided with a cylindrical casing concentric around the friction disk, said casing having an inner end adapted to frictionally engage one side of the friction disk, an annular ring concentric within the casing between the friction disk and the outer end of the casing, and movable to engage and disengage the friction disk, an annular end plate secured to the outer end of the casing having cam projections on its inner face, and means to press the end of the casing and the annular ring oppositely against the friction disk, comprising a sleeve on the shaft adapted to move longitudinally of the shaft, and bell cranks pivotally connected to the annular ring and having arms connected to the sleeve and arms adapted to engage and disengage the cam projections of the annular end plate, substantially as set forth.

2. In a friction clutch, in combination with a shaft, a friction disk, fixedly mounted on the shaft, a driving wheel loosely mounted on the shaft beside the friction disk, and provided with a cylindrical casing concentric around the friction disk, said casing having an inner end adapted to frictionally engage one side of the friction disk, an annular ring concentric within the casing between the friction disk and the outer end of the casing, and movable to engage and disengage the friction disk, an annular end plate secured to the outer end of the casing having cam projections on its inner face, springs between the inner end of the casing and the annular ring, adapted to yieldingly hold the casing end and the annular ring disengaged from the friction disk, and means to press the end of the casing and the annular ring oppositely against the friction disk, comprising a sleeve on the shaft adapted to move longitudinally of the shaft, and bell cranks pivotally connected to the annular ring and having arms connected to the sleeve and arms adapted to engage and disengage the cam projections of the annular end plate, substantially as set forth.

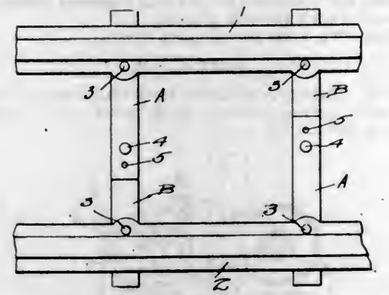
3. A friction clutch comprising a shaft, a cylindrical casing having an end disk provided with a hub, adapted to be loosely mounted on the shaft, a hubbed friction disk, adapted to be fixedly mounted on the shaft, within and concentric to the casing, a friction ring, movable as a piston moves, within the flange, having its inner face adapted to engage the friction disk, and its outer face provided with lugs, an annular end plate secured to the open end of the casing, and having cam projections opposite the lugs of the ring, bell cranks pivoted to the lugs of the friction ring, having long arms extending towards the shaft, and having stop lugs adapted to limit the inward movement of the arms, and short arms having end rollers adapted to engage the cam projections of the annular end plate, and means mounted on the shaft and connected to the long arms of the bell cranks, adapted to be moved longitudinally of the shaft and thereby move the short arms of the bell crank to and from engagement with the cam projections of the end plate, substantially as set forth.

4. A friction clutch comprising a shaft, a cylindrical casing having an end disk provided with a hub, adapted to be loosely mounted on the shaft, a hubbed friction disk, adapted to be fixedly mounted on the shaft, within and concentric to the casing, a friction ring, movable as a piston moves, within the flange, having its inner face adapted to engage the friction disk, and its outer face provided with lugs, an annular end plate secured to the open end of the casing, and having cam faced plugs mounted in the end plate opposite the lugs of the friction ring, screws in the end plate adapted to adjust the inward projections of the plugs, bell cranks pivoted to the lugs of the friction ring having long arms extending towards the shaft, and provided with stop lugs adapted to limit the inward movement of the arms, and short arms having end rollers adapted to engage the cam faces of the plugs, and means mounted on the shaft and connected to the long arms of the bell cranks, adapted to be moved longitudinally of the shaft and thereby move the short arms of the bell cranks to and from engagement with the plugs of the end plates, substantially as set forth.

900,398. PORTABLE TRACK. GOMER LEWIS, Uniontown, Pa. Filed June 29, 1908. Serial No. 440,908.

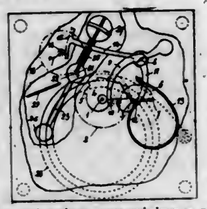
1. A device of the class described comprising a pair of rails said rails being mounted on a metallic tie each tie being pivotally connected with said rail, said ties being also pivoted together in the center.

2. A device of the class described comprising a pair of rails, ties connecting said rails, each tie being composed of two sections, and pivotally connected together, each



section being also pivotally connected with one of the rails, and means for locking said sections against pivotal action.

900,399. STRIKING MECHANISM FOR CLOCKS AND THE LIKE. JÖNS P. L. LINDSTRÖM, Paris, France. Filed Sept. 29, 1900. Serial No. 31,557.



1. A striking mechanism comprising a revolving and deviating hammer, and mechanisms for operating the same, a main shaft, a snail on said shaft, a second shaft and let off cam thereon, and connections between the hammer operating mechanism, the snail and the let off cam for the purpose specified.

2. A striking train including an oscillating and endwise movable spindle having a lifting arm, a limiting arm and a gear rack thereto, means for impelling said train and a revolving and deviating hammer operated by said train, substantially as shown and described.

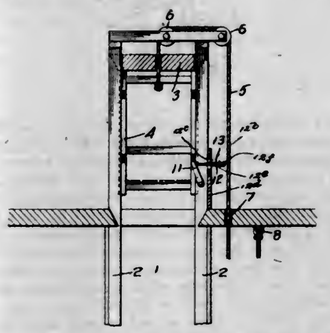
3. In a striking mechanism a reciprocating gear rack and a revolving hammer in combination with a clutching and transmitting device comprising: a separate shaft, a gear wheel loosely mounted on the said shaft, a driving pinion fixed on the shaft, a spring and a clutch on the said wheel adapted to engage with the said pinion as it is turning in one direction and to escape it as it is turning in the opposite direction.

4. A striking mechanism including a shaft, a balanced rigid hammer mounted on said shaft and rotating with it, and a cam for causing said hammer to deviate from its normal plane for striking on the gong when the hammer is operated.

5. In a striking mechanism a balanced hammer, means for revolving it and means for deviating the same and comprising: a spring on the hammer tending to preserve its median position, an inclined offset on the hammer for causing and regulating its deviation in combination with a stationary abutment adapted to be brought in contact with said offset when the hammer revolves.

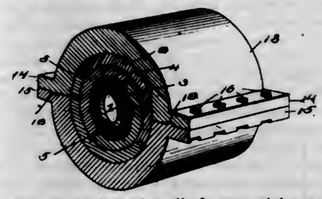
900,400. ICELESS REFRIGERATOR. CHARLES M. LIPHAM, Fairburn, Ga. Filed Nov. 9, 1907. Serial No. 401,424.

1. The combination of a floor having an opening therein, a movable carrier, a guiding frame extending through said opening, and below and above the floor, means for locking or holding the carrier in the upper portion of the guiding frame, comprising a pivoted latch member adapted to engage the said carrier, a push rod having swiveled connections with said pivoted member, said guiding frame having a standard provided with an elongated aperture through which said push rod extends, said rod having a disk, a spring interposed between the face of the standard and said disk, whereby the rod is held normally in an outward position, a transverse bar or pin on said rod to engage the inner face of said standard, that is, when the said push rod is pushed inward so as to cause the locking member to engage the said carrier and to be held in locked engagement therewith.



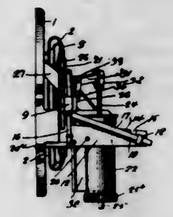
2. The combination of a floor having an opening therein, a movable carrier, a guiding frame extending through said opening, and below and above the floor, means for locking or holding the carrier in the upper portion of the guiding frame, comprising a pivoted latch member adapted to engage the said carrier, a push rod having swiveled connections with said pivoted member, said guiding frame having a standard provided with an elongated aperture through which said push rod extends, said rod having a disk, a spring interposed between the face of the standard and said disk, whereby the rod is held normally in an outward position, a transverse bar or pin on said rod to engage the inner face of said standard, that is, when the said push rod is pushed inward so as to cause the locking member to engage the said carrier and to be held in locked engagement therewith, a closure for said floor opening, pulleys mounted on the upper cross piece of said frame, a cable or rope mounted on said pulleys and fastened to said carrier and passing freely through an opening in said closure and thence over said pulleys, said rope or cable being next passed through an aperture in said floor, and secured to the under side of the latter and a counterbalancing weight movably suspended upon a looped portion of said cable or rope.

900,401. APPARATUS FOR SHAPING HEATED METAL. FREDERICK J. LOOMIS, Yonkers, N. Y. Filed May 16, 1906. Serial No. 317,245.



A device of the class described, comprising a tube, a cylinder formed in segments surrounding said tube and provided on each end with internal and external flanges, the inner flanges thicker than the external flanges and bearing against the tube, insulating material between said tube and cylinder, a second segmental cylinder provided with an offset portion on its ends and surrounding the cylinder last mentioned, the offset portion engaging the flanges of the flanged cylinder, and a detachable casing engaging an annular recess in the second cylinder.

900,402. VENTILATOR FOR FIRE-DOORS, &c. ALBERT H. LOWAY, Sheridanville, Pa. Filed Oct. 8, 1907. Serial No. 396,422.



1. In a ventilator for fire doors, the combination with a door frame, and a door hinged thereto and having an opening formed therein, of a latch pivotally connected to said door, a latch keeper carried by said door frame, a spring pressed slide bar carried by said latch-keeper, for gradually raising said latch, a keeper carried by said door for supporting said latch when said door is open, a dash-pot supported by said keeper, a shutter movably mounted in the opening of said door, a crank arm for moving said shutter, said crank arm connecting with the piston of said dash-pot, a depending pin carried by said crank arm, a head carried by said pin, a lug carried by said latch for engaging said head and raising said crank arm, and means for regulating said dash-pot to retard the closing movement of said shutter.

2. In a ventilator for doors, the combination with a door frame, and a door hinged thereto and having an opening formed therein, of a latch pivotally connected to said door, a latch keeper carried by said frame, a keeper carried by the door for supporting said latch when said door is open, a dash-pot supported from said keeper, a gravity closing shutter movably mounted in the opening of said door, a crank arm for moving said shutter and connecting with the piston rod of said dash-pot, a depending pin carried by said crank arm, a head carried by said pin, a lug carried by said latch for engaging said head and elevating said crank arm, means for regulating said dash-pot for retarding the closing movement of said shutter, and means carried by said latch keeper for elevating said latch, and actuating said crank arm.

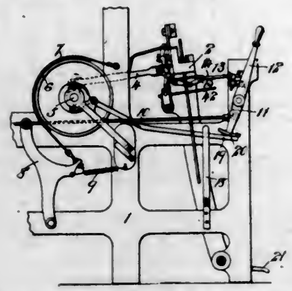
3. In a ventilator for doors, the combination with a door frame, of a door hinged thereto and having an opening formed therein, a latch pivotally connected to said door, a latch keeper carried by said frame, a gravity closing shutter movably mounted in the opening of said door, a crank arm for opening said shutter, a dash-pot carried by said door for retarding the closing movement of said shutter, a head suspended beneath said crank arm, a lug carried by said latch for engaging said head and elevating said crank arm, means for regulating the operation of said dash-pot, and means carried by said latch keeper for elevating said latch and actuating said crank arm.

4. In a ventilator for doors, the combination with a door frame, a door hinged thereto and having an opening formed therein, a latch pivotally carried by said door, and a latch keeper carried by said frame for holding said latch in a closed position, of a gravity closing shutter movably mounted in the opening of said door, a crank arm for opening said shutter, a dash-pot carried by said door and operating with said crank arm for controlling the closing movement of said shutter, means carried by said crank arm and impinged by said latch for raising said crank arm and opening said shutter, and means carried by said latch keeper for raising said latch and actuating said crank arm.

5. In combination with a door-frame, a door hinged thereto and provided with an opening, a rock-shaft carried by the door, a shutter carried by said rock-shaft for closing the opening in the door, a latch-keeper carried by the door-frame, a latch carried by the door, means carried by said latch-keeper to be engaged by said latch during closing movement of said door to effect operation of said rock-shaft and open said shutter, a dash pot supported from said latch-keeper, and connections between said dash pot and said rock-shaft for effecting a gradual closing of the shutter after the door is closed.

[Claims 6 to 8 not printed in the Gazette.]

900,403. PROTECTOR MECHANISM FOR LOOMS. WILLIAM J. LUTTON, Paterson, N. J. Filed July 31, 1906. Serial No. 328,514.



1. In a loom, the combination with a shuttle, a shuttle box, means for operating the shuttle and means for arresting the action of the loom, of a plurality of shuttle binders located in a shuttle box, one of said binders being at the extreme outer end of the shuttle path and means connecting the said movable gripping device with the loom stopping mechanism whereby the action of the loom is arrested when the shuttle fails to reach the limit of its travel in the box.

2. In a loom, the combination with a shuttle, a shuttle box, means for operating the shuttle and means for arresting the action of the loom, of a binder movable into and out of the path of the shuttle as it enters the box and a second binder or sub-swell movable independent of the aforesaid binder and out of position within the shuttle box to engage the shuttle as it approaches the limit of its throw and means connecting the said sub-swell with the loom arresting mechanism for preventing the action of the loom when the shuttle fails to seat.

3. In a loom, the combination with a shuttle, a shuttle box, means for operating the shuttle, means for arresting the action of the loom, of a binder pivotally secured in the shuttle box for gripping the shuttle as it enters the box, a sub-swell or binder independent of the aforesaid binder for gripping the end of the shuttle when it reaches the extreme limit of its travel and means for connecting the sub-swell or binder with the loom stopping mechanism for arresting the action of the loom when the shuttle fails to reach the intended limit of its throw.

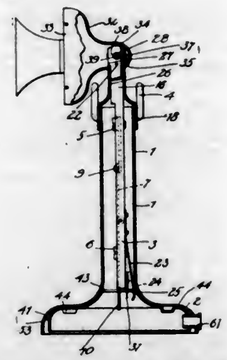
4. In a loom, the combination with a shuttle box, a shuttle, a binder pivotally secured in the side thereof and a spring for actuating the binder, of a sub-swell pivotally secured to the shuttle box in proximity to the binder and free to swing independently thereof, a spring for operating the sub-swell and a stop mechanism under control of the sub-swell.

5. In a loom, the combination with a shuttle box, a shuttle, a binder pivotally secured therein and recessed throughout a portion of its length, of a sub-swell pivotally secured in said recessed portion of the binder, springs for operating the binder and sub-swell and a stop motion under the control of the sub-swell.

[Claims 6 and 7 not printed in the Gazette.]

900,404. TELEPHONE DESK SET. RAY H. MANSON, Elyria, Ohio, assignor to Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed Aug. 23, 1907. Serial No. 389,813.

1. In a telephone desk set, a standard comprising a stamped and formed base and upright in one piece, a stamped and formed cap and hinge member in one piece, and means within the upright for securing the hinge member to the base.



2. In a telephone desk set, a standard comprising a stamped and formed base and upright in one piece, a stamped and formed cap and hinge member in one piece, and a stamped and connecting member within the upright, the ends of such connecting member being connected to the hinge member and to the base respectively.

3. In a telephone desk set, a supporting frame consisting in a first piece comprising a stamped and formed base and upright, a second piece comprising a stamped and formed cap and hinge piece, a third piece comprising a stamped and formed transmitter shell and coöperating hinge connection, and means for holding the pieces together in operative relation.

4. In a telephone desk set, a supporting frame consisting in a first piece comprising a stamped and formed base and upright, a second piece comprising a stamped and formed cap and hinge piece, a third piece comprising a stamped and formed transmitter shell and coöperating hinge connection, and a stamped and formed member for holding the hinge members to the base.

5. In a telephone desk set, a supporting frame consisting in a first piece comprising a stamped and formed base and upright, a second piece comprising a stamped and formed connecting cap and hinge piece, a third piece comprising a stamped and formed transmitter shell and coöperating hinge connection, and a member secured to the hinge at one end and engaging the base at the other by means of a spring catch when the parts are in operative relation.

[Claims 6 to 17 not printed in the Gazette.]

900,405. HAND-TRUCK. DE WITT C. MARKHAM, Port Leyden, N. Y. Filed Feb. 18, 1907. Serial No. 357,786.



1. In a truck having an axle with wheels and a rigid frame on the axle adapted to be tilted therewith, a load-rack pivotally mounted on the frame at the end of the rack which receives the load and having at its other end a link connection with the corresponding end of the frame whereby to raise the rack vertically by tilting the frame and the operation of the link connection, substantially as described.

2. A truck provided with an axle and wheels, a tilting frame mounted intermediate of its ends on the axle and having forwardly extending side arms, and a rack pivotally supported at one end on said arms to take a load by tilting the arms of the frame downwardly, the rack having at the other end link connection with the end of the frame whereby to lift said end of the rack, substantially as described.

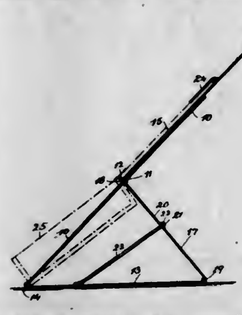
3. A truck comprising a frame mounted about midway of its ends on the axle and extending forwardly in an open end to engage the load, and a rack pivotally mounted at one end on the frame adjacent the forward end of the latter and at the rear end supported on the frame by a link and lever whereby to raise the rack at the end opposite that which receives the load, substantially as described.

4. A truck having a frame and a rack, the two being pivoted to each other at corresponding ends to receive and lift a load at that end by the tilting of the frame and rack downward, and at the other end having lever connections to raise that end of the rack to substantially horizontal position, substantially as described.

5. In a truck, an axle with a frame mounted to swing therewith, and a rack with bearings on the frame on each side of its mounting on the axle and at a substantial distance therefrom, one of said bearings comprising a link wherewith by tilting of the frame and the manipulation of the link member the rack is raised vertically relative to the axle, the link member being curved to pass its end across its line of lift whereby to lock the rack in elevated position, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

900,406. DISPLAY-RACK. MORITZ MAYER, New York, N. Y. Filed July 16, 1908. Serial No. 443,774.



1. A collapsible display rack comprising a frame, a cross-bar connected thereto and adapted to slide thereon, a base, a top member connected to said cross-bar and a member intermediate of the said base and top member, and connected and adapted to swing at one edge on the said cross-bar and at the other edge on one edge of the said base, the opposite edge of the said base being connected to the said frame.

2. A collapsible display rack comprising a rectangular frame, a cross-bar connected to and adapted to slide on the opposite sides of the said rectangular frame, a base connected at one edge to the said frame and adapted to swing thereon, a top member connected to and adapted to swing on the said cross-bar, and a member intermediate of the said base and top member and connected at one edge to the said cross-bar and adapted to swing thereon and connected at the opposite edge to an edge of the said base.

3. A collapsible display rack comprising a rectangular wire frame, a cross-bar extending between the short sides of the said frame an adapted to slide thereon, a base hinged at one edge to the lower long side of the said frame, a top member hinged to the said cross-bar and an intermediate member hinged at one edge to the said cross-bar and at the opposite edge to an edge of the said base.

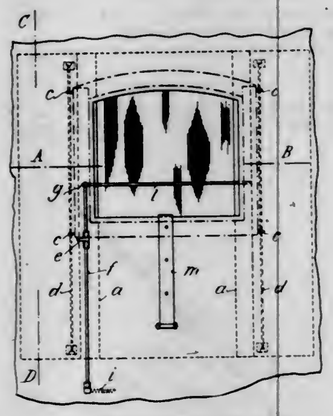
4. A collapsible display rack comprising a rectangular wire frame, a cross-bar extending between the short sides of the said frame and adapted to slide thereon, a base hinged at one edge to the lower long side of the said frame, a top member hinged to the said cross-bar and a rod pivotally mounted on the rear side of the said intermediate

member and whose extremities are turned at right angles thereto and passed through slots provided therefor in the said intermediate member and adapted to rest upon the said base to form support legs for the boxes to be received and supported in the rack.

5. A collapsible display rack comprising a rectangular wire frame, a cross-bar extending between the short sides of the said frame and adapted to slide thereon, a base hinged at one edge to the lower long side of the said frame, a top member hinged to the said cross-bar, an intermediate member hinged at one edge to said cross-bar and at its opposite edge to one edge of the said base, and tongues cut from the said top member adapted to secure in position the hinged lid of the box received and supported in the rack.

[Claims 6 and 7 not printed in the Gazette.]

900,407. SASH-WINDOW FOR RAILWAY-CARS. REINHOLD MENDE, Munich, Germany. Filed Dec. 18, 1907. Serial No. 407,011.



1. In a car or the like, side walls provided with a window opening, and sash lapping said openings, the outer edge of the sash being out of contact with the car side whereby to prevent jamming of the sash by any contraction of the opening.

2. In a car or the like, side walls provided with a window opening, and sliding sash lapping said openings and guided by the walls, a free space being provided outside the outer edges of the sash, whereby to prevent jamming of the sash by any contraction of the opening.

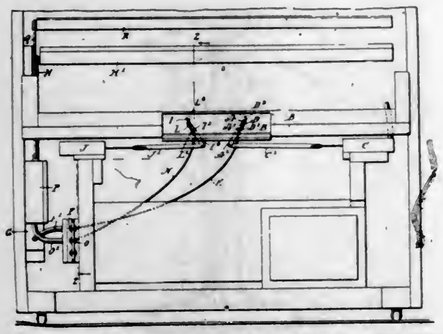
3. In a car or the like, side walls provided with a window opening, guides carried by the wall and facing away from the opening, and sliding sash lapping the opening and having inturned flanges bearing on the guides, a free space being provided outside the outer edges of the sash, whereby to prevent jamming of the sash by any contraction of the opening.

4. In a window for cars and the like, the combination, with side walls provided with window openings, guides carried by the window frame and facing away from the window, of a sash taking over the frame and having inturned guides bearing on the frame guides.

5. In a car or the like, side walls provided with a window opening, and sliding sash lapping said openings and guided by the walls, a free space being provided outside the outer edges of the sash, whereby to prevent jamming of the sash by any contraction of the opening, in combination with a catch to hold the sash up, and means actuated by the collapsing of the window frame to release the catch and permit the sash to drop.

[Claims 6 to 10 not printed in the Gazette.]

900,408. CONTROLLING MECHANISM. HERMANN MEYER, New York, N. Y. Filed Dec. 27, 1907. Serial No. 408,293.

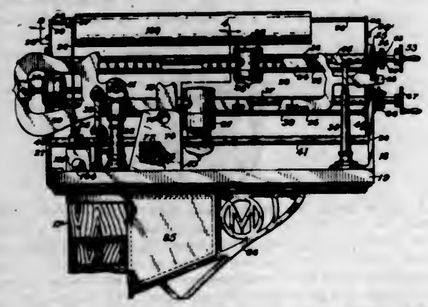


1. A self-playing piano provided with an expression valve, a pneumatically operated valve, a hand lever, a hollow shaft for the said hand lever connected with the said expression valve to actuate the latter on imparting a swinging motion to the said hand lever, the said hollow shaft having its conduit connected with the said pneumatically operated valve, the said hollow shaft having an air port and a manually-controlled lever valve mounted on the said hand lever and controlling the said air port to control the said pneumatically operated valve.

2. A self-playing piano provided with a damper rail, a hand lever, a hollow shaft for the said hand lever and provided with an air port, a valve for controlling the speed of the note sheet and mechanically connected with the said hollow shaft, a pneumatically operated valve for controlling the said damper rail and connected with the conduit of the said hollow shaft, and a manually-controlled self-closing lever valve fulcrumed on the said hand lever and controlling the said air port to actuate the said pneumatically operated valve.

3. A self-playing piano provided with a hammer rail, a hand lever, a hollow shaft for the said hand lever provided with an air port, a valve for controlling the action pneumatics and mechanically connected with the said hollow shaft, a pneumatically operated valve for controlling the said hammer rail and connected with the conduit of the said hollow shaft, and a manually-controlled self-closing lever valve fulcrumed on the said hand lever and controlling the said air port to actuate the said pneumatically operated valve.

900,409. COIN OPERATED WEIGHING-SCALE. HERBERT S. MILLS, Chicago, Ill. Filed Mar. 31, 1908. Serial No. 424,390.



1. In a weighing scale, the combination with a scale-beam and a movable weight coöperating therewith, of a rotatable screw-shaft, a releasable connection between said shaft and weight for actuating the weight to adjust it relative to the beam, and means normally holding said connection out of operating engagement with said shaft, for the purpose set forth.

2. In a weighing-scale, the combination with a scale-beam and a movable weight coöperating therewith, of a rotable screw-shaft, a releasable connection between said shaft and weight for actuating the weight to adjust it relative to the beam, and means, including a beam-covering shield, normally holding said connection out of operating engagement with said shaft and said shield out of its beam-covering position, for the purpose set forth.

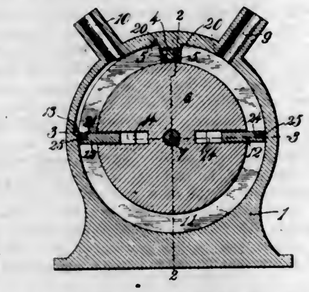
3. In a weighing-scale, the combination with a scale-beam and a movable weight coöperating therewith, of a rotatable screw-shaft, a releasable connection between said shaft and weight for actuating the weight to adjust it relatively to the beam, an automatic clutch-device on said shaft operating to reverse its movement, and means normally holding said connection out of operating engagement with said shaft, for the purpose set forth.

4. In a weighing-scale, the combination with a scale-beam and a movable weight coöperating therewith, of a rotatable screw-shaft, a releasable connection between said shaft and weight for actuating the weight to adjust it relative to the beam, means normally holding said connection out of operating engagement with said shaft, and plunger-operated mechanism for restoring said means and connection to normal position after being released therefrom, for the purpose set forth.

5. In a weighing-scale, the combination with a scale-beam and a movable weight coöperating therewith, of a rotatable screw-shaft, a releasable connection between said shaft and weight for actuating the weight to adjust it relative to the beam, vertically movable connected plates carrying said connection, a rock-shaft having reduced end-portions on which said plates are supported, and means normally locking the rock-shaft to maintain said plates in raised position to support said connection out of operating engagement with said screw-shaft, for the purpose set forth.

[Claims 6 to 12 not printed in the Gazette.]

900,410. ROTARY ENGINE. WALTER S. MINOR, Cunningham, Tenn. Filed Apr. 9, 1908. Serial No. 426,118.



1. A rotary engine comprising a cylinder having open ends, a longitudinal abutment and inlet and exhaust ports on opposite sides of said abutment, the bore of the cylinder adjacent to the exhaust port having a cut away portion, said abutment being formed with a longitudinal slot, a spring pressed packing strip arranged in said slot, cylinder heads covering the open ends of the cylinder and formed in their inner faces with circular depressions, the latter being formed in their bottoms with grooves having concentric and cam or eccentric portions, a shaft arranged concentrically in the cylinder and having its ends journaled in said heads, a cylindrical piston fixed concentrically on said shaft and formed at opposite points in its periphery with radial grooves, end plates removably secured to the ends of the piston and arranged to project into the circular depressions in the cylinder heads, said end plates being formed with radial slots to aline with the ends of the grooves in the piston and having their inner edges formed with annular grooves, annular spring pressed packing strips arranged in the last mentioned annular grooves at the ends of the piston and adapted to engage the side walls of the circular depressions in the cylinder heads, piston blades arranged for radial sliding movement in the grooves in the piston and formed at their ends with pins to project through the slots in said end plates and into the grooves in the bottoms of the circular depressions in the cylinder heads, the outer ends of said blades being formed with grooves, and angular spring pressed packing strips arranged in the grooves in the piston blades to bear against the inner wall of the cylinder and the adjacent portions of the inner faces of the cylinder heads, substantially as shown and described.

2. In a rotary engine, the combination of a cylinder having open ends, a longitudinal abutment and inlet and exhaust ports on opposite sides of the abutment, cylinder heads closing the open ends of the cylinder and being formed with concentrically arranged circular depressions, the latter having in their bottoms grooves provided with concentric and eccentric or cam portions, a concentric shaft journaled in the cylinder heads, a concentric piston fixed on said shaft and formed in its periphery with the radial grooves 14 and with the recesses 14^a at the ends of the bottom portions of the recesses 14, end plates secured upon the ends of the piston and formed with the radial slots 18 to register with the grooves 14 in the piston, slidably mounted piston blades arranged in the grooves of the piston and formed with extensions 12 to cover the slots in said end plates and to project into said recesses 14^a when the blades are in retracted position, and pins carried by the ends of the blades and projecting through the slots in the end plates of the piston and into the grooves in the bottoms of the circular depressions in the cylinder heads.

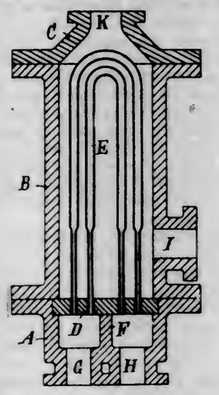
3. In a rotary engine, the combination of a cylinder having open ends, cylinder heads upon the same and formed with concentric circular depressions, a concentric rotary piston, concentric end plates upon the latter and formed in their inner edges with the annular grooves 33 having the sockets 36 arranged at intervals in their bottoms, and the split packing rings 34 arranged in the grooves 33 between the end plates of the piston and the ends of the latter and formed with the inwardly projecting radial pins to enter the sockets 36, and the coil springs 37 arranged upon the pins 35 for expanding the rings and holding them in contact with the side walls of the circular depressions in the cylinder heads.

4. In a rotary engine, the combination of a cylinder, a piston therein formed with radial recesses, piston blades in said recesses and formed in their outer edges and the adjacent portions of their ends with the grooves 24, said blades being also formed with the transverse openings 30 intersecting said grooves, the right angular packing strips 25 arranged in the grooves 24 and having short arms to project beyond the ends of the blades and long arms to project beyond the outer longitudinal edges of the blades, said long arms being formed with the elongated openings or slots 31 to register with the openings 30 in the blades, said long arms of the packing strips having their ends recessed and overlapping, the recessed end of one being formed with the slot 29 and the recessed end of the other carrying the pin 28 to enter the slot 29, transverse pins passed through the openings 30 and 31 in the blades and packing strips and springs arranged in the bottoms of the grooves 24 and adapted to bear against the inner edges of both arms of the packing strips to force the latter outwardly, substantially as shown and described.

900,411. APPARATUS FOR TRANSMITTING HEAT FROM ONE MEDIUM TO ANOTHER. EINAR MORTERUD, Torderöd, near Moss, Norway. Filed Mar. 11, 1908. Serial No. 420,462.

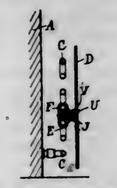
An apparatus for transmitting heat from one medium to another, comprising a tube plate, a casing adapted to serve as a conduit for a heat transmitting medium hav

ing a lateral opening near the tube plate, and freely expanding tubes in the said tube plate, said tubes being



reduced in diameter at the part extending from the tube plate past said opening.

900,412. COIL-SCREEN CLAMP. JAMES MCCRYSTAL, New York, N. Y., assignor to E. Rutzler Co., New York, N. Y., a Corporation of New York. Filed May 11, 1908. Serial No. 432,070.



1. The combination of a coil screen clamp, comprising main and supplemental members provided with coöperating jaws adapted to be clasped about the coils of a pipe, a bolt passing longitudinally through said members and countersunk in the outer end of one member to afford a flat surface against which a screen may be held, said member which receives the countersunk end of the bolt also being provided with a separate longitudinal internally screw threaded aperture for the reception of a retaining screw for the screen, a screen, and a screw passing through the screen into said aperture.

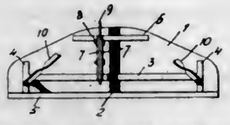
2. The combination of a coil screen clamp, comprising a main member having a body provided with an outwardly extending supporting boss at one side and clamping jaws at the other side, a supplemental member having clamping jaws at one side adapted to coöperate with the jaws of the main member, both of said members having central longitudinal bolt holes, a bolt adapted to be inserted in said holes and having its head countersunk in the end of the outer supporting boss of the main member, and a nut on the other end of the bolt, said supporting boss also being provided with a separate internally screw threaded aperture extending inwardly from the face of the boss, to receive a retaining screw for the screen to be supported by the clamp, a screen, and a screw passing through the screen into said aperture.

3. The combination of a coil screen clamp, comprising a main member having a body provided with an outwardly extending supporting boss at one side and clamping jaws at the other side, a supplemental member having clamping jaws at one side adapted to coöperate with the jaws of the main member and a slot or aperture at the other side for receiving a nut, both of said members having central longitudinal bolt holes, a bolt adapted to be inserted in said holes and having its head countersunk in the end of the outer supporting boss of the main member, and a nut on the other end of the bolt seated in the recess provided therefor in the supplemental member, whereby the nut is prevented from turning, said supporting boss also being provided with a separate internally screw threaded aperture extending inwardly from the face of the boss, to receive a retaining screw for the screen to be supported by the clamp, a screen, and a screw passing through the screen into the said aperture.

4. The combination with the coils of a radiator or other heater, of a screen adapted to be supported in front of said coils, one or more screen clamps supported on the coils and having said screen secured thereto, said clamps each comprising two members having jaws clasping pairs of the coils and a bolt for tightening the jaws, the bolts being countersunk in the outer members to afford flush surfaces against which the screen is placed, said outer members also having separate internally screw threaded recesses for the reception of retaining screws for the screen, and screws passing through the screen and seated in said recesses for holding the screen against the outer members of the clamps.

5. The combination of a coil screen clamp, comprising main and supplemental members provided with coöperating jaws adapted to be clasped about the coils of a pipe, a bolt passing longitudinally through said members and countersunk in the outer end of one member to afford a flat surface against which a screen may be held, said member which receives the counter-sunk end of the bolt, also being provided with a separate retaining aperture for the reception of a retaining device for the screen, a screen and a retaining device passing through the screen and seated in said aperture.

900,413. ATTACHMENT FOR PLOWS. WILLIAM J. MCFAUL, Oakdale, Pa. Filed Dec. 13, 1907. Serial No. 406,346.



1. The combination with a plow embodying a beam and a sod cutter, of a plate arranged transversely of said plow, said plate having a straight lower edge, a shoe secured to said lower edge, upper and lower bars secured to the rear face of said plate for bracing the same, straps carried by said brace bar and connecting with said sod cutter, and braces carried by the lower of said bars upon each side of the plow and secured to the beam thereof.

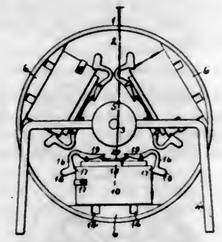
2. The combination with a plow having a sod cutter, of a spreader attachment for said plow embodying a plate arranged transversely of the plow and resting at its lower end on the plow point, brace bars secured to the rear face of said plate, straps connected to said brace bars and to said sod cutter, and braces connected at their outer ends to said plate and at their inner ends to the beam of the plow.

3. The combination with a plow embodying a plow point, of a spreader attachment secured to the plow and comprising a plate disposed transversely of the plow point and resting at its lower edge on the plow point and supported thereby, and means for firmly securing said plate to the plow.

900,414. CENTRIFUGAL BLOCK-MACHINE. MENZO NASHOLD, Davis Junction, Ill. Filed Feb. 3, 1908. Serial No. 414,103.

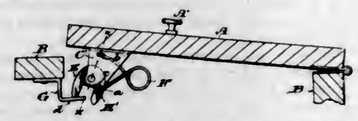
1. A centrifugal block machine, comprising a rotatable drum, a mold located in the drum having one side secured to the drum, and other sections movable, a movable pallet and a stationary pallet support.

2. A centrifugal block machine, comprising a rotatable drum, a mold located in the drum having one side secured to the drum and other sections movable, a movable pallet, a stationary pallet support, a removable portion for the open end of the mold, and self adjustable catches for the removable portion.



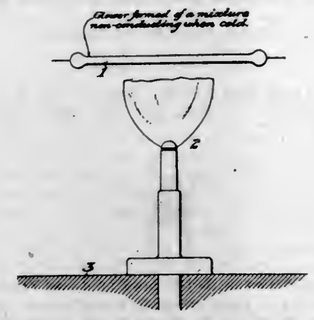
3. A centrifugal block machine comprising a rotatable drum, a mold located in the drum having one side secured to the drum and other sections movable, a movable pallet, a stationary pallet support, a removable portion for the open end of the mold, and spring operated catches for the removable portion.

900,415. CATCH FOR SWING-CLOSURES. JOHN H. NELSON, Madison, Wis. Filed Nov. 19, 1906. Serial No. 344,005.



The combination of a bracket attachable to a swinging closure such as a door, a tumbler in pivotal connection with the bracket and recessed to provide tappet-fingers, a spiral-spring having crossed end branches in pivotal connection with said bracket and tumbler, one of these branches being in the path of the tumbler, a gripping-plate attachable to the closure frame for engagement with the tumbler-recess on swing of the closure to its seat, said spring having swing in connection with the aforesaid bracket coincident with expansion and contraction incidental to pivotal play of said tumbler, and means for limiting contraction of the aforesaid spring when the aforesaid tumbler clears the gripping-plate.

900,416. ELECTRIC GLOW-LAMP. WALTHER NERNST, Göttingen, Germany, assignor, by mesne assignments, to Nernst Lamp Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Mar. 29, 1898. Serial No. 675,603.

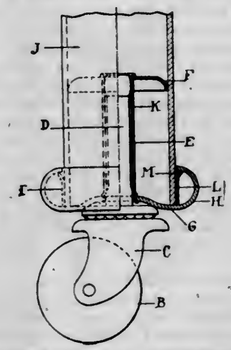


1. An improved glower for electrical incandescent lamps which is a non-conductor when cold but which becomes a good conductor and incandescent under the action of an electric current at high temperatures, and which consists essentially of a mixture of refractory metallic oxids.

2. An improved glower for electrical incandescent lamps which is a non-conductor at normal atmospheric temperatures but which readily becomes conductive and incandescent under the action of an electric current when heated, comprising a mixture of zirconium oxid and another refractory metallic oxid.

3. An improved glower for electrical incandescent lamps which is a non-conductor at normal atmospheric temperatures but which readily becomes conductive and incandescent under the action of an electric current when heated, comprising a mixture of zirconium oxid with thorium oxid.

900,417. CASTER FOR FURNITURE. GEORGE E. NEUBERTH, Newark, N. J., assignor to Universal Caster & Foundry Company, a Corporation of New Jersey. Filed May 21, 1908. Serial No. 434,045.



1. A caster for tubular legs provided with means coacting with the exterior surface of the leg for holding it to the leg, and a pintle-supporting frame or socket extending within the tubular leg.

2. A caster for tubular legs having means coacting frictionally with the exterior surface of the leg for securing the caster, and a pintle-supporting frame or socket co-acting with the interior of the leg.

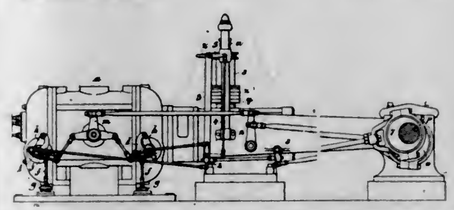
3. A caster for tubular legs having an interior pintle-supporting frame or socket a leg mount for exteriorly centering the foot of the leg and spring means for acting frictionally on the exterior of the leg.

4. A caster for tubular legs having a leg mount for exteriorly centering the foot of the leg and spring means separate from but confined or held by the leg mount for acting frictionally on the exterior of the leg.

5. A caster having a leg supporting disk centered on the pintle means for centering the pintle against the interior of a tubular leg and means for centering the disk and pintle against the exterior surface of the leg and for producing friction thereon to secure the disk to the leg.

[Claims 6 to 11 not printed in the Gazette.]

900,418. VARIABLE-CAPACITY COMPRESSOR. BRUNO V. NORDBERG, Milwaukee, Wis. Filed Sept. 8, 1903. Serial No. 172,368.



1. In a variable capacity compressor the combination with the compressor cylinder and piston and suction and

discharge valves, of automatic valve releasing and operating gear constructed and arranged to release and positively close the suction valve at different points in the suction stroke of the piston according to the varying demand on the compressor, said gear operating to advance the time of closing the suction valve to reduce the compression and being directly controlled in its action by pressure from the compressor while the compressor runs at a constant speed, substantially as described.

2. In a variable capacity compressor the combination with the cylinder, piston and suction and discharge valves, of automatic valve releasing and operating gear constructed and arranged to release and positively close the suction valve at different points in the suction stroke of the piston and to keep said valve closed during the compression stroke of said piston, said gear operating to advance the time of closing the suction valve to reduce the compression and being directly controlled in its action by pressure from the compressor while the compressor runs at a contant speed, substantially as described.

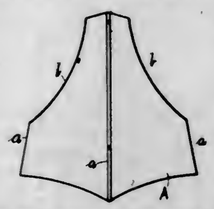
3. In a variable capacity compressor the combination with a cylinder and piston, of a self acting discharge valve, a positively actuated suction valve and automatic valve releasing and operating gear constructed and arranged to release and close the suction valve at different points in the suction stroke of the piston, said gear operating to advance the time of closing the suction valve to reduce the compression and being directly controlled in its action by pressure from the compressor, whereby the volume of air or gas compressed on the return stroke is varied according to the varying demand on the compressor while the compressor runs at a constant speed, substantially as described.

4. In a variable capacity compressor the combination with the compressor cylinder having suction and discharge valves, of automatic valve releasing and operating gear constructed and arranged to release and close the suction valve at different points in the suction stroke of the compressor, said gear operating to advance the time of closing the suction valve to reduce the compression and a pressure regulator comprising an expansion chamber having a movable part which is connected with the releasing mechanism of said valve gear and is actuated by pressure from the compressor while the compressor runs at a constant speed, substantially as described.

5. In a variable capacity compressor the combination with the compressor piston and a cylinder having suction and discharge valves, of automatic valve releasing and operating gear constructed and arranged to release and close the suction valve at different points in the suction stroke of the piston, and a pressure regulator comprising an expansion chamber having a movable part, a weight connected with the releasing mechanism of said valve gear, and a spring or elastic connection between said movable part and weight, the movable part of said pressure regulator being actuated by pressure from the compressor to vary the volume of air admitted to the compressor cylinder while the compressor runs at a constant speed, substantially as described.

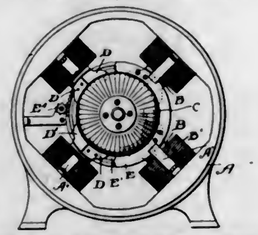
[Claims 6 to 8 not printed in the Gazette.]

900,419. SLIDING JACK. LUTHER S. PAGE, North Salem, Ind. Filed Oct. 21, 1907. Serial No. 398,416.



In a jack of the character described consisting of a single casting so formed as to produce a base A, the sides of which are curved inward, and the angles of the meeting surfaces being on a slight incline, and the upper portion of the jack tapering toward the top, and the angles of the meeting surfaces being curved so that a vehicle wheel when driven over the jack will be forced sidewise, as shown and described.

900,420. VARIABLE-SPEED MOTOR. ALVIN A. PIPER and CHARLES E. F. AHLM, Cleveland, Ohio, assignors, by mesne assignments, to F. B. Wagner, Cleveland, Ohio. Filed Feb. 14, 1906. Serial No. 300,983.



1. A regulator for a dynamo electric machine comprising two pole-shoe sections adapted to be moved from and toward each other, the center of each section moving substantially in the plane passing through the axes of the pole pieces of the machine.

2. A regulator for a dynamo electric machine comprising two separate and independent pole-shoe sections adapted to be moved toward and from each other and circumferentially about the armature, the center of each section moving substantially in the plane passing through the axes of the pole pieces of the machine.

3. A regulator for dynamo electric machinery comprising two separate pole-shoe sections adapted to be moved toward and from each other, the center of each section moving substantially in the plane passing through the axes of the pole pieces of the machine and means for causing such movement to be simultaneous.

4. A regulator for dynamo electric machinery comprising two separate pole-shoe sections adapted to be moved toward and from each other, circumferentially about the armature, the center of each section moving substantially in the plane passing through the axes of the pole pieces of the machine and means for causing such movement to be simultaneous and of the same angular extent.

5. A regulator for dynamo electric machinery comprising two supports each carrying pole-shoe sections, and means for simultaneously moving said supports so that said sections may be made to approach or recede from each other, the center of each section moving substantially in the plane passing through the axes of the pole pieces of the machine.
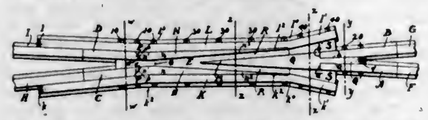
[Claims 6 to 9 not printed in the Gazette.]

900,421. LOCK FOR BAG-FRAMES. LOUIS B. PRAHAR, New York, N. Y. Filed Dec. 19, 1907. Serial No. 407,161.



The combination with the jaws of a bag frame, of a lock consisting of a box or casing formed of two portions, one portion adapted to be secured to one jaw of the frame and the other portion of less width and less length than the first-mentioned portion and extending outwardly therefrom, said first-mentioned portion having an opening in the side thereof extending from the lower edge of said casing to the lower edge of the second-mentioned portion, a latch formed of spring metal and comprising a body section extending longitudinally of the first-mentioned portion of the box or casing and having its ends held against outward movement by the inner surface of the outer side of said first-mentioned portion and having the central portion thereof in engagement with the jaw carrying said casing, and a thumb piece integral with said body portion and extending through said opening and disposed at an obtuse angle to said body portion, the thumb piece being movable within said opening to a position substantially in the plane of the side of the first-mentioned body portion of the casing, engaging the side of the second-mentioned body portion of the casing, to bring the central portion of the latch out of engagement with the bag frame, and coacting means for preventing separation of said jaws when the central portion of said latch is in engagement therewith.

900,422. RAILWAY-FROG. WILLIAM H. RABBE, EDWARD W. HARDEN, and MICHAEL E. DEMPSEY, Hamilton, Ohio. Filed Apr. 25, 1908. Serial No. 429,243.



1. A railway frog comprising a hard-block having a point thereon and a combined riser, reinforce and guard-rail at the side thereof said last-named rail having a downwardly sloping riser-face at its riser-end.

2. A railway frog comprising a hard-block provided with a point and opposing gage-faces adjacent thereto and a reinforce-rail at each side of said hard-block constructed as a riser-rail at its toe-end and as a wing-rail at its heel-end, each of said reinforce-rails having a downwardly sloping riser-face at its riser-end.

3. In combination, in a railway frog, a hard-block having a point and gage-face walls thereon, said gage-face walls extending beyond said point past the point of greatest convergence between said gage-face walls at the throat of said block, rails whose inner ends abut against said gage-face walls, and reinforce-rails spanning the joint between said first-named rails and gage-face walls, substantially as described.

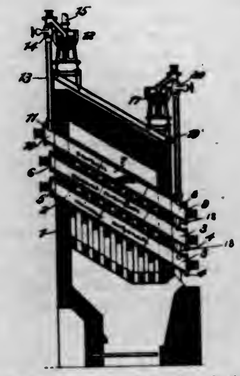
4. In combination, in a railway frog, a hard-block having a point and gage-face walls thereon, said gage-face walls extending beyond said point past the point of greatest convergence between said gage-face walls at the throat of said block, said hard-block having an extension beyond said gage-face walls, rails at the respective sides of said extension, the inner ends of said rails abutting against said gage-face walls, said extension acting as a filling-block between said rails, and a reinforce-rail at each side of said hard-block spanning the joints between said first-named rails and hard-block, substantially as described.

5. In combination, in a railway frog, a hard-block having a point and gage-face walls thereon, said gage-face walls extending beyond said point past the point of greatest convergence between said gage-face walls at the throat of said block, said hard-block having an extension beyond said gage-face walls, stub-rails at the respective sides of said extension, the inner ends of said stub-rails abutting against said gage-face walls, said extension acting as a filling-block between said stub-rails, and a reinforce-rail at each side of said hard-block spanning the joints between said stub-rails and hard-block, said reinforce-rails extending forwardly beyond said stub-rails for spanning the joints between said stub-rails and the continuation-rails of the trackage next said frog, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

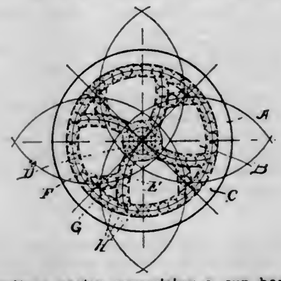
900,423. APPARATUS FOR MANUFACTURING GAS. ELMER RIDER, St. Louis, Mo. Filed Nov. 12, 1907. Serial No. 401,865.

1. An apparatus for manufacturing fuel gas from mineral carbonates and carbonaceous material, comprising a furnace, a series of inclined retorts arranged therein and adapted to receive the mineral carbonates, a water seal arranged above the lower ends of said retorts, tubular connections leading from the forward ends of the retorts to the water seal, a pair of retorts arranged adjacent the first mentioned retorts and adapted to receive carbonaceous material, tubular connections leading from the lower ends of the second mentioned pair of retorts to the water seal, valves located in said last mentioned tubular connections, a water seal arranged above the rear ends of the retorts, tubular connections leading from the second mentioned pair of retorts to the second mentioned water seal, and valves located in the last mentioned pair of tubular connections.



2. An apparatus for manufacturing fuel gas from mineral carbonates and carbonaceous material, comprising a furnace, a plurality of inclined retorts arranged therein and adapted to receive the mineral carbonates, air tight fittings arranged on the ends of said retorts, a water seal arranged above the lower ends of said retorts, tubular connections leading from the air tight fittings on the lower ends of said retorts to the water seal, and the ends of which tubular connections extend below the water line in the water seal, a pair of retorts arranged adjacent the first mentioned retorts and adapted to receive carbonaceous material, air tight fittings on both ends of said pair of retorts, tubular connections leading from the air tight fittings on the lower ends of said pair of retorts to the water seal, valves located in the last mentioned tubular connections, a water seal arranged above the rear ends of the retorts, tubular connections leading from the air tight fittings on the rear ends of the pair of retorts to the last mentioned water seal, valves located in said tubular connections, and means whereby suction is created through the last mentioned water seal and the tubular connections leading thereto.

900,424. FURNITURE-CASTER. EUGENE P. ROTHER, Chicago, Ill. Filed Nov. 2, 1907. Serial No. 400,378.



1. A furniture caster comprising a cup having a substantially semi-spherical recess, a removable flange secured to the mouth portion of said cup and serving to increase the depth thereof, an annular runway for balls in the

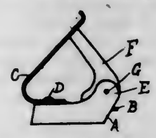
mouth portion and flange of said cup, a central runway in the bottom thereof, lateral runways connecting said central and annular runways, balls disposed in said runways, a spherical roller disposed in said cup and resting on said balls, said roller being capable of limited outward movement relatively to said cup and the outer most balls in said annular runway being adapted to limit said outward movement, and being normally out of engagement with said roller when the latter is at the inner limit of its movement.

2. A furniture caster comprising a cup having a substantially semi-spherical recess, a removable flange secured to the mouth portion of said cup and serving to increase the depth thereof, an annular runway for balls in the mouth portion and flange of said cup, a central runway in the bottom thereof, lateral runways connecting said central and annular runways, balls disposed in said runways, a spherical roller disposed in said cup and resting on said balls, said roller being capable of limited outward movement relatively to said cup and the outer most balls in said annular runway being adapted to limit said outward movement, and being normally out of engagement with said roller when the latter is at the inner limit of its movement, said lateral runways being deflected out of diametric planes of said cup.

3. In a furniture caster, the combination with the spherical roller and a cup containing the same, of runways for anti-friction devices disposed in the inner face of said cup, said runways consisting of a central annular and a concentric runway disposed in the mouth portion of the cup, and laterally disposed runways connecting said central and concentric runways, said lateral runways being curved, and anti-friction balls traveling in said runways and having surface contact with said spherical roller.

4. In a furniture caster, the combination with the spherical roller and a cup containing the same, of runways for anti-friction devices disposed in the inner face of said cup, said runways consisting of a central annular and a concentric runway disposed in the mouth portion of the cup, and laterally disposed runways connecting said central and concentric runways, said lateral runways being curved, there being additional runways connecting said lateral runways between their ends with said annular runway, and anti-friction balls traveling in said runways and having surface contact with said spherical roller.

900,425. CHECKREIN-HOOK. JOHN B. ROTZ, Fort Loudon, Pa. Filed Oct. 1, 1907. Serial No. 395,357.

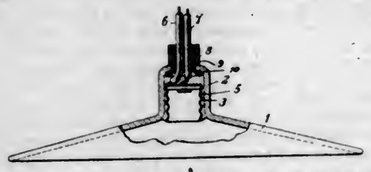


1. A check rein hook consisting of a casing, ears formed with said casing, a hook pivoted to said ears, a flat spring fastened to the casing adapted to bear against the hook to hold it in its closed position, a flat piece of metal also attached to the casing adapted to act as a shield, and a screw for holding said flat spring and shield to the casing, as specified.

2. In a check rein hook, a casing, ears formed with said casing, a member pivoted to said ears for engaging the rein, a flexible member for preventing the accidental disengagement of said rein and means for holding the first named member in its closed position against a certain amount of pull upon the rein.

900,426. SHADE AND SOCKET FOR INCANDESCENT LAMPS. BENJAMIN P. RUCKER, Wilkinsburg, Pa. Filed June 21, 1906. Serial No. 322,768.

1. The combination with a non-corrosive insulating shade or reflector having an integral protuberant cap or dome, of a lamp socket located entirely within and sheathed by the cap or dome, the latter conforming substantially in shape to the socket and extending over one end thereof.



2. The combination with a non-corrosive insulating shade or reflector having an integral protuberant cap or dome, of a lamp socket located entirely within and sheathed by the cap or dome, the latter conforming substantially in shape to the socket and extending over one end thereof, and conducting leads that connect to the socket and project through the cap or dome.

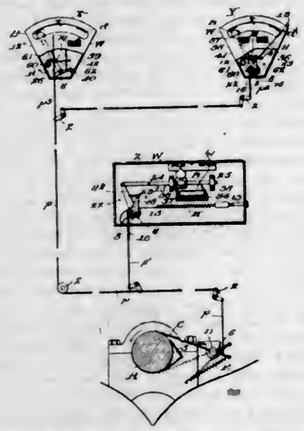
3. The combination with a non-corrosive insulating shade or reflector having an integral protuberant cap or dome, of a lamp socket located entirely within and sheathed by the cap or dome, the latter conforming substantially in shape to the socket and extending over one end thereof, and cement securing the socket in the cap or dome and filling the interstices between the said parts.

4. The combination with a non-corrosive insulating shade or reflector having an integral protuberant cap or dome, of a lamp socket located entirely within and sheathed by the cap or dome, the latter conforming substantially in shape to the socket and extending over one end thereof, conducting leads that connect to the socket and project through the cap or dome, and cement filling the interstices between the cap or dome and the socket and leads.

5. The combination with a lamp socket, of a shade or reflector having a protuberant cap or dome that serves as a sheath or covering for the socket and is provided with an aperture, a sleeve that projects through the aperture and to which the reflector is secured, and conductors that connect to the socket and extend outwardly through the sleeve.

[Claim 6 not printed in the Gazette.]

900,427. MOTION-INDICATOR. WALTER S. RUSH, San Francisco, Cal. Filed Apr. 29, 1907. Serial No. 370,874.



1. The combination with an engine-driven shaft, of an indicator for showing the movements thereof comprising a member having a to and fro movement and shiftable as to its working position from one side of a central point to the other side, and capable of vibratory motion in either of said positions, the said member by its working position serving to indicate the direction in which the shaft is being turned and by its vibrations the speed at which it is being driven, and means actuated directly from the said shaft and controlled by its revolutions, operating at every reversal of the motion thereof to shift the working position of the said member from one side of the center to the other, and to vibrate it in either position in harmony with the movements of the driven shaft, substantially as set forth.

2. The combination with an engine-driven shaft, of means for showing the movements thereof comprising a case having a sight opening and an indicator having a to and fro movement at the sight opening, and capable of being shifted as to its working position and of being vibrated in either of its working positions, and mechanical connections actuated directly from the shaft and controlled by its revolutions, and operating to vibrate the indicator in whatever position it may occupy in consonance with the rotations of the shaft, and arranged to shift the working position of the said indicator at each reversal of the direction of rotation of the shaft, substantially as set forth.

3. In a motion-indicator for an engine-driven shaft, the combination of an indicator mounted for vibratory movement at a sight-opening, and shiftable as to working-position from one side of the sight-opening to the opposite side, means operating to vibrate the said indicator in harmony with the revolutions of the engine-driven shaft and to shift the working-position of said indicator in every reversal of the said shaft, and a registering-device connected with the said vibrating means and operated in unison with the vibrations of the said indicator.

4. In a motion-indicator for an engine-driven shaft, the combination with a shaft, and a hand having vibratory motion at a sight-opening, and adapted by its vibrations to indicate the motion of the engine-driven shaft, and by its working-position with relation to the center of the sight-opening to indicate by its position the direction in which the said shaft is being driven; of means for vibrating the hand and for changing its working-position from one side of the center to the opposite side in every reversal of the engine, comprising a bar movable in an arc on a pivot-bearing, and also movable longitudinally through the said bearing, means connecting the indicator-hand with the member of the said bar on one side of its bearing, for moving the hand in harmony with the said bar, a projection on the shaft adapted to engage the said bar on the opposite side of said bearing and to lift and drop the bar in the revolutions of the shaft and by contact with the end of the said bar in a reverse movement of the shaft to change the working-position of the bar with relation to the shaft, and a spring acting on the bar in opposition to the projection carried by the shaft.

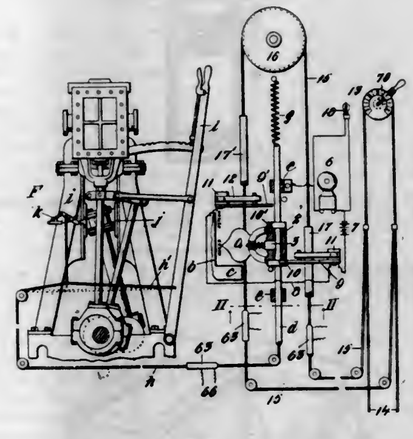
5. In a motion-indicator for an engine-driven shaft, the combination with a shaft, of a hand, a pivot on which the hand is mounted for vibratory motion behind a sight-opening, means for changing the working-position of the hand from one side of such center to the opposite side in every change made in the direction of travel of the shaft, and for imparting vibratory motion to the hand in either working-position; comprising a rocking-bar, a projection on the shaft adapted to lift and drop the said bar in the revolutions of the shaft and by engaging the end of said bar to change the working position of the bar as often as the direction of rotation of the shaft is changed, an arm movable angularly above on the pivot of the hand, a friction-clutch connecting said arm with the hand, and means connecting the said arm with the rocking-bar.

[Claims 6 to 19 not printed in the Gazette.]

900,428. ALARM OR SIGNAL SYSTEM FOR ENGINES AND MOTORS. WALTER S. RUSH, Stillwater, Okla. Filed Oct. 4, 1907. Serial No. 395,972.

1. In an alarm system, the combination with an engine driven shaft, of mechanism for giving orders for driving the said shaft, alarm or signal devices, and means for controlling the alarm or signal devices from the order transmitting mechanism arranged to operate whenever the said shaft is turned in a direction contrary to that ordered, substantially as set forth.

2. In a signal system, the combination with an engine-driven shaft, of signal or alarm devices, means operated by the turning of the shaft for causing the signal or alarm devices to operate, order transmitting mechanism, and means controlled by the order transmitting mechanism arranged to set the alarm operating devices out of operative relation with the said shaft, whereby the turning of the shaft does not cause a signal to be given when the shaft is properly turned in response to the signal transmitted.



3. The combination of signal or alarm devices, means operated from an engine for causing the signal or alarm devices to operate when the engine moves, order transmitting mechanism, and means controlled by the order transmitting mechanism for setting the alarm operating devices to operate if the movements of the engine do not correspond with the signal transmitted, substantially as set forth.

4. The combination of signal or alarm devices, order transmitting mechanism, and means for operating the said signal or alarm devices, including two co-acting members, one of which is operated from the engine when it moves and the other is set into active or inactive position accordingly as the order transmitting mechanism is set, substantially as set forth.

5. The combination of signal or alarm devices, two separate sets of devices for causing the signal or alarm to operate, one set to operate when the engine turns forward and the other when it turns backward, order transmitting mechanism, and means controlled by the order transmitting mechanism for setting one of the sets of alarm operating devices when one order is given, and for setting the other set when a contrary order is given, substantially as set forth.

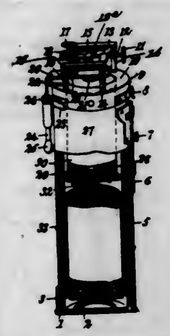
[Claims 6 to 32 not printed in the Gazette.]

900,429. ELECTROSONATOR. RYUSAI SAKAMOTO, Tokyo, Japan. Filed Apr. 11, 1907. Serial No. 367,492.

1. A device of the class described, comprising a casing, an electromagnet, and a battery mounted within said casing, an electric plate spring mounted on said casing adjacent said electromagnet, a frame carried by said casing and disposed adjacent said plate spring, a regulating screw mounted in said frame for engagement with said spring to limit the movement thereof, and means for moving said regulating screw laterally to vary its point of contact on the spring.

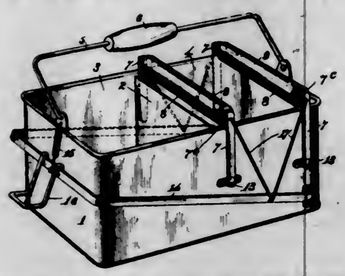
2. A device of the class described, comprising a casing, an electromagnet, and a battery mounted within said casing, an electric plate spring mounted on said casing adjacent said electromagnet, a frame carried by said casing and disposed adjacent said plate spring, a regulating screw

mounted in said frame for engagement with said spring to limit the movement thereof, and a slide carried upon one



side of said casing and movable longitudinally for closing the circuit through said plate spring.

900,430. MOP-WRINGER. SIMON M. SCHAEFLE, Naperville, Ill. Filed June 21, 1907. Serial No. 380,054.

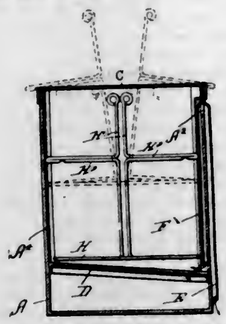


1. An elongated pail, in combination with a pair of rigid yokes pivotally connected to the sides of said pail, each of said yokes comprising a pair of lever portions extending above the level of the top of the pail, and then bent downwardly within the pail and a cross member connecting the ends of the downwardly extending portions, said downwardly extending portions being slotted, a roller having gudgeons mounted in said slots and means operable to move said rollers toward and from each other, substantially as described.

2. A pail having parallel sides in combination with a pair of rigid yokes pivotally connected to said sides and each comprising vertical end members extending above the upper edges of said sides, inwardly extending offset portions, depending portions extending into said pail, and an integral cross-bar portion connecting the ends of said depending portions, a roller mounted in each of said yokes between said depending portions and above said cross-bar, gudgeons on the ends of said roller, and said off-set portions and said depending portions of the yokes being slotted to receive said gudgeons, and said gudgeons being provided with heads, and the slots in the off-set portions being enlarged to permit passage thereof, and the means operable to move said rollers toward and from each other substantially as described.

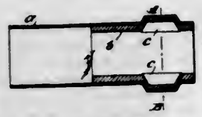
900,431. FIXING AND WASHING TANK. GEORGE H. SCHEER, Sheboygan, Wis. Filed Aug. 7, 1907. Serial No. 387,557.

1. A device of the kind described consisting of a tank apertured upon one side adjacent the top and horizontally slotted upon one adjacent side, a trough carried by the apertured side and communicating with the tank through the aperture, an inclined bottom arranged in said tank the lower edge of said bottom resting adjacent the slotted side of the tank, a bowed plate, the bow portion of said plate being secured to the upper edge of the slot, a portion of the plate extending down the inner side of the tank and a portion extending down the outer side of the tank, the outer portion of the plate having its side edges secured to the tank, and having its lower edge extending below the lower edge of the inclined bottom, the inner portion of the plate terminating short of said bottom and a cover common to the tank and trough.



2. A device of the kind described comprising a tank having an inclined bottom, the ends of said tank being vertically grooved, a siphon arranged at one end of the tank, means for supplying a current of water to said tank, and a plate holder consisting of a rectangular wire frame arranged horizontally and movably in the tank, said frame having integral spring wire handles extending upwardly from one of its side members midway the ends of the frame, and laterally extending arms carried by said handles, said arms being grooved upon their under sides, the free ends of said arms extending into the grooves of the ends of the tank, when said plate holder is in its normal position, the spring wire arms being parallel to each other, and the grooves of said arms engaging the upper edges of the ends of the tank when the plate holder is in an elevated position and the arms sprung apart.

900,432. PRODUCTION OF SHELLS EMPLOYED IN THE MANUFACTURE OF CIGARETTES. IWAN SEMENOFF, St. Petersburg, Russia. Filed June 5, 1908. Serial No. 436,889.



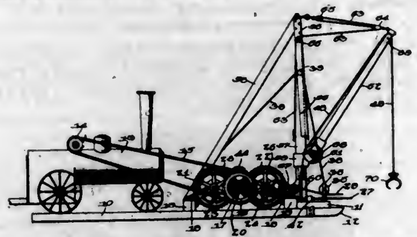
1. As a new article of manufacture, a combined shell and mouthpiece, having a distortion in either thereof, to form an interlock therebetween.

2. As a new article of manufacture, a combined shell and mouthpiece, the material thereof being distorted, whereby an interlock between the said shell and mouthpiece is formed.

900,433. LAND-CLEARING MACHINE. WILLIAM M. SEYMOUR, Marshfield, Wis., assignor of one-half to John P. Hume, Marshfield, Wis. Filed Sept. 27, 1907. Serial No. 394,808.

1. In a device of the class described, a frame or base adapted to be skidded over the ground, a motor on the frame, stump pulling and piling mechanism on the frame including cables, one of said cables adapted to raise the front end of said frame and another to skid said frame over the ground.

2. In a device of the class described, a frame or base adapted to be skidded over the ground, a motor on the frame, stump pulling and piling mechanism on the frame including a hoisting cable and a pair of field cables, and a guide on the frame adapted to coöperate with one of the field cables to raise the front of the frame when the said cable is hitched above the frame.



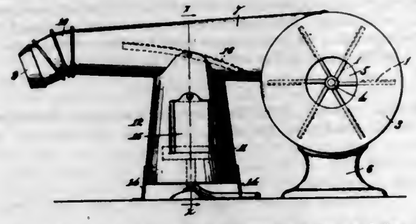
3. In a device of the class described, a frame or base adapted to be skidded over the ground, a motor on the frame, stump pulling and piling mechanism on the frame including a hoisting cable and a pair of field cables, a horizontal guide on the frame for one field cable, and a hinged guide on the frame for the other field cable.

4. In a device of the class described, a frame or base adapted to be skidded over the ground, a motor on the frame, stump pulling and piling mechanism on the frame including a hoisting cable and a pair of field cables, a fixed guide on the frame to produce lateral change of direction of one field cable, and a self-adjusting guide on the frame to produce lateral or vertical change of direction of the other field cable.

5. In a device of the class described, a frame or base adapted to be skidded over the ground, a motor on the frame, stump pulling and piling mechanism on the frame including a hoisting cable and a pair of field cables, a pair of horizontal sheaves on the frame for one field cable, and a hinged pulley on the frame for the other field cable.

[Claims 6 to 12 not printed in the Gazette.]

900,434. HAIR-DRYING DEVICE. GEORGE SIEGFRIED, Chicago, Ill. Filed Nov. 9, 1907. Serial No. 401,385.

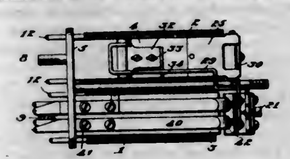


1. In a device of the class described, a fan and fan casing, in combination with a flue leading therefrom, a hood arranged beneath said flue and communicating therewith at a point beyond said fan casing and a heater in said hood, substantially as described.

2. In a device of the class described, a fan and fan casing, in combination with a flue leading therefrom, a hood arranged beneath said flue and communicating therewith, a heater in said hood and a diagonally disposed partition within said flue and across the entrance from said hood into said flue, substantially as described.

900,435. SELF-RESTORING DROP-RELAY. FRANK M. SLOUGH, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed May 29, 1907. Serial No. 376,435.

1. In a drop relay, a pair of electromagnets disposed in parallel arrangement, a pair of pivotally mounted armatures at one end thereof, a contact adapted to establish a local circuit through one of said armatures, means actuated by the second armature to drop the first armature against its contact, and contact springs arranged in proximity to said first armature and adapted to be actuated by said first armature when its magnet is energized.



2. In a drop relay, a pair of electromagnets, a pair of pivotally mounted armatures therefor, one of said armatures being provided with insulating cam rollers, contact springs arranged in proximity to said cam rollers and adapted to be engaged by said rollers when the armature has been drawn up by its magnet, a contact screw adapted to contact with said armature, and means controlled by the second armature to drop the first armature against its contact, said means acting to normally detain said first armature in inoperative condition.

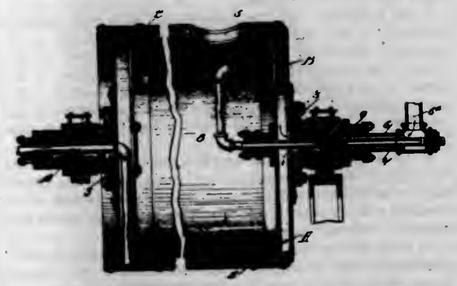
3. In a drop relay, a pair of electromagnets, a pair of pivotally mounted armatures therefor, one of said armatures having a laterally extending yoke and being provided with cam rollers, contact springs adapted to be engaged by said cam rollers when said armature has been drawn up by its magnet, a pivoted retaining hook adapted to be actuated by the second armature and arranged to engage the arms of said yoke to forcibly release the first armature and drop it against its contact.

4. In a drop relay, a pair of electromagnets, disposed in parallel arrangement, common mounting means for said electromagnets at one end thereof, a separate pivoted armature for each magnet arranged at the other end, one of said armatures being provided with insulating cam rollers, contact springs arranged in proximity to said first armature and adapted to be engaged by said rollers, and means actuated by the second armature for forcibly releasing the first armature.

5. In a magneto relay, a pair of electromagnets, a pair of armatures therefor, one of said armatures having three positions, a signal controlled by said armature when in its lowest position, circuits controlled by said armature when in its highest position, means for normally detaining said armature in its intermediate inoperative position, and means controlled by the second armature to release the first armature and set the signal.

[Claims 6 and 7 not printed in the Gazette.]

900,436. ROTARY VACUUM-DRIER. JESSE O. SNYDER and FRANK O. CLAWSON, South San Francisco, Cal. Filed Apr. 22, 1908. Serial No. 428,522.



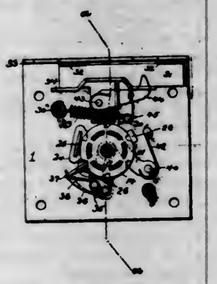
1. In an apparatus of the character described, concentric interspaced drums, with supporting stay-bolts, trunnions at opposite ends upon which the drums are mounted and revoluble, a steam pipe entering through one of said trunnions, with a surrounding stuffing-box whereby steam is admitted into the interspace between the drums, a second pipe entering the opposite trunnion having

a down-turned stationary extension within the interspace, whereby the water of condensation may be removed from time to time.

2. In an apparatus of the character described, concentric interspaced drums, with supporting stay-bolts, means for introducing material to be dried into the inner drum, trunnions upon which the drums are mounted and revoluble, a steam pipe passing through one of said trunnions, and a stuffing-box therefor, and discharging into the space between the drums, a pipe of smaller diameter passing through said steam pipe, having a stuffing-box at the outer end, and another where the pipe enters the inner drum, said pipe having an upturned stationary branch whereby vapors and effluvia from the contained mass are discharged.

3. In an apparatus of the character described, concentric interspaced drums with supporting stay-bolts, hollow trunnions upon which the drums are supported and revoluble, a steam pipe extending through one of said trunnions, delivering steam into the interspace between the drums, a stationary interior pipe passing through the steam pipe into the inner drum having an upturned end, said inner pipe having stuffing-boxes at the outer and inner ends, and a stationary pipe extending through the other trunnion, and to the bottom of the space between the drums, and serving to conduct away water of condensation.

900,437. COMBINATION LATCH-LOCK. FRANK SOLBY, Philadelphia, Pa., assignor to Miller Lock Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 3, 1906. Serial No. 324,614.



1. In a spring lock, the combination of a bolt, notched tumblers, a dog engaging the same and remaining in engagement therewith when the bolt is retracted, and automatic means independent of the tumblers and acting directly upon the dog to effect ejectment of the same and permit dispersal of the tumblers by rotation of the same when the bolt is projected.

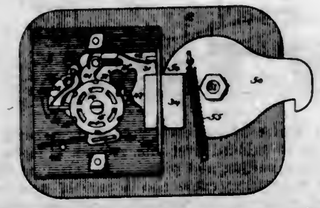
2. In a spring lock, the combination of a bolt, notched tumblers, a dog engaging the same and remaining in engagement therewith when the bolt is retracted, a bolt thrower carrying said dog, and means independent of the tumblers and acting directly upon the dog to effect automatic ejectment of the same and permit dispersal of the tumblers by rotation of the same when the bolt is projected.

3. In a spring lock, the combination of a bolt, notched tumblers, a dog for engaging the same, and a dog-engaging device which is moved out of the way by the dog in the opening movement of the lock and engages and ejects said dog when the bolt is projected.

4. In a spring lock, the combination of a bolt, notched tumblers, a dog for engaging the same, and a pivoted and spring-actuated dog-ejector which is moved out of the way by the dog in opening the lock, and acts upon said dog to eject the same from the notches of the tumblers when the bolt is projected.

5. In a spring lock the combination of notched tumblers, a dog for engaging the same, and a dog-engaging device having a free end normally projecting into the path of the dog but swinging in a plane eccentric to said path, whereby it is automatically freed from engagement with the dog as the latter moves forward, said free end of the ejector having a cam formation which acts upon the dog to eject the same from the notches of the tumblers as it moves backward.

900,438. COMBINATION-LOCK. FRANK SOLBY, Philadelphia, Pa., assignor to Miller Lock Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 5, 1907. Serial No. 366,590.



1. A combination lock having tumblers, a bolt which is projected by the action of a spring, and a tumbler-controlled member having a portion for engaging the bolt and preventing retraction of the same by pressure upon it, and another portion for engaging the bolt and effecting retraction of the same.

2. A combination lock having a locking bolt and a tumbler-controlled and spring-actuated bolt thrower which engages the bolt when the latter is in the projected position and retains it in such position.

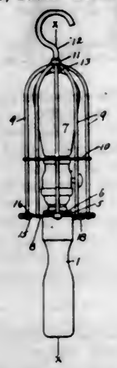
3. A combination lock comprising a tumbler-controlled and spring-actuated bolt thrower, a spring-actuated dog carrier, a series of notched tumblers, a dog for engaging the same, and means for automatically ejecting said dog from the notches of the tumblers when the bolt is projected.

4. The combination of a lock having a tumbler-controlled and spring-projected bolt, with supplementary and independently operated bolt mechanism retained in locked position by engagement with the bolt of the lock.

5. The combination of a lock having a tumbler-controlled and spring-projected dead bolt, with supplementary bolt mechanism independently operated and retained in locked position by engagement with the bolt of the lock.

[Claims 6 to 8 not printed in the Gazette.]

900,439. LAMP-GUARD. PETER SORENSEN, Brooklyn, N. Y. Filed Dec. 19, 1907. Serial No. 407,124.



1. In a lamp guard, the combination of a plurality of wires forming a cage, a base provided with a central opening secured to the ends of said wires, supporting means comprising a handle and a plate secured thereto adapted to register with the opening in said base and adapted to be revolved therein, and inwardly projecting clamping members formed of a single piece of metal bent over the edge of said base and adapted to engage said plate on both faces, said members being secured to said base by the ends of said wires.

2. In a lamp-guard the combination of a plurality of wires forming a cage, a base provided with a central opening secured to the ends of said wires, long and short inwardly projecting clamping members secured to the base by said wires, and consisting of a single piece bent back upon itself over the outer edge of said base, a supporting handle, and a plate secured thereto provided with recesses in its periphery for the passage of the short clamping members, said plate being adapted to be revolved in the opening in said base to bring said recesses into and out of alinement with said clamping members.

3. In a lamp-guard the combination of a plurality of wires forming a cage, a base provided with a central opening secured to the ends of said wires, long and short clamping members secured to the base by said wires, a supporting handle, a plate secured to said handle provided with recesses in its periphery for the passage of the short clamping members, said plate being adapted to be revolved in the opening in said base to throw said recesses out of alinement with said clamping members to secure said cage, a fixed stop and a pivotally mounted movable stop operating on said clamping members to lock said plate and said cage.

4. In a lamp-guard the combination of a plurality of wires forming a cage, a base provided with a central opening secured to the ends of said wires, long and short clamping members secured to the base by said wires, a supporting handle, a plate secured to said handle provided with recesses in its periphery for the passage of the short clamping members, said plate being adapted to be revolved in the opening in said base to throw said recesses out of alinement with said clamping members to secure said cage, a fixed stop on said plate operating on one of said clamping members adapted to prevent said plate being revolved in one direction and a spring-actuated movable stop operating on one of said clamping members adapted to prevent said plate being revolved in the opposite direction.

5. In a lamp guard the combination of a plurality of wires forming a cage, a base provided with a central opening secured to the ends of said wires, long and short clamping members secured to the base by said wires, a supporting handle, a plate secured to said handle provided with recesses in its periphery for the passage of the short clamping members, said plate being adapted to be revolved in the opening in said base to throw said recesses out of alinement with said clamping members to secure said cage, a fixed stop on said plate operating on one of said clamping members adapted to prevent said plate being revolved in one direction and a detent mounted on said plate operating on one of said clamping members adapted to prevent said plate being revolved in the opposite direction.

900,440. ANCHOR MECHANISM FOR WELL-PACKERS. GEORGE A. SPANG, Butler, Pa., assignor to Spang & Company, Butler, Pa., a Corporation of Pennsylvania. Filed Apr. 7, 1908. Serial No. 425,609.

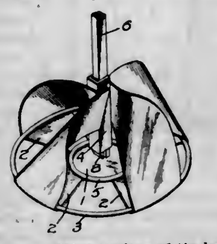
1. The combination of a tube, an expansible anchor through which the tube is movable vertically and in which it is rotatable when fully raised with relation to the anchor, the anchor having two vertical grooves—one larger than the other, two lateral projections on the tube at different elevations thereon and both adapted to pass through the larger groove, the upper projection being larger than the lower projection—too large to pass through the smaller groove, and anchor expanding means carried by the tube and operative when the upper projection and larger groove are in register.

2. The combination of a tube, an expansible anchor through which the tube is movable vertically and in which it is rotatable when fully raised with relation to the anchor, a rib disposed longitudinally of the tube with a shoulder on the rib, the anchor having two vertical passageways for the rib—one deeper than the other and adapted to pass the shoulder therethrough, said shoulder adapted to engage the anchor when in register with the shallower passageway and stop downward movement of the tube through the anchor, and anchor-expanding means movable with the tube and operative when the shoulder and deeper passageway are in register.



3. In a packer, the combination of a tube, an anchor through which the tube is movable vertically and in which it is rotatable when fully raised in relation to the anchor, the anchor consisting of a base ring and upwardly projecting laterally expansible slips carried by the ring with means on the anchor for frictionally engaging the well wall, a stop on the tube for engaging the lower end of the anchor, a laterally projecting rib extending longitudinally of the tube, the lower end of the rib being above said stop and a shoulder on the rib above the lower end of the latter, the anchor ring having two depressions in its inner face—one deeper than the other—and through each of which the rib is adapted to move, said shoulder engaging the anchor ring when the rib is in register with the shallower depression and thus limiting the downward movement of the tube in the packer, and means carried by the tube for expanding said slips and operative when the rib is in register with the deeper ring-depression through which said shoulder is adapted to move downward.

900,441. CHURN-DASHER. LEROY A. SPROUT, Waukomis, Okla. Filed Mar. 28, 1908. Serial No. 423,884.

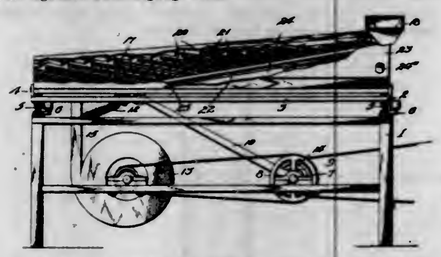


A churn dasher comprising a piece of tin having a rounded central portion, an inner ring soldered to the periphery of said central portion, an outer ring having arms or wings bent thereover, said arms or wings being connected to the central tube, and a rod adapted to engage said central tube for actuating the same.

900,442. ORE-CONCENTRATOR. ALBERT H. STEBBINS, Los Angeles, Cal. Filed Aug. 9, 1907. Serial No. 387,766.

1. In an ore concentrator, the combination with an inclined and diagonally disposed perforated plate, a stepped

or zigzag wall at the upper side of said plate, and riffles extending across said plate from the wall opposite said stepped or zigzag wall so arranged as to direct the material against said zigzag wall.



2. In an ore concentrator, the combination with an inclined and diagonally disposed perforated plate, a stepped or zigzag wall at the upper side of said plate, and riffles extending across said plate from the wall opposite said stepped or zigzag wall, so arranged as to direct the material against said zigzag wall, whereby in effect said zigzag wall forms a buffing surface, said riffles being spaced apart a distance equal to the width of said buffing surfaces.

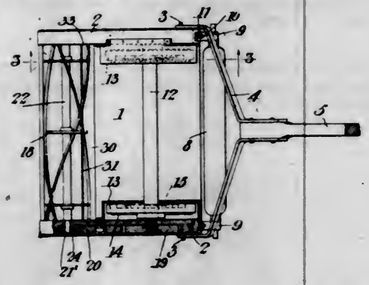
3. In an ore concentrator, the combination with a shaking screen, of riffles located thereon and disposed at an angle to the path of movement thereof, each succeeding riffle increasing in height and a plate or zigzag wall at the side of said screen adjacent the discharge ends of said riffles.

4. In an ore concentrator, the combination with a shaking screen, of a plurality of series of riffles thereon, each succeeding riffle of each series increasing in height and a plate or zigzag wall at the side of said screen adjacent the discharge ends of said riffles.

5. In an ore concentrator, the combination with a shaking screen, of a plurality of series of riffles thereon, the successive riffles of each series increasing in height and some of said riffles tapering in height and a stepped or zigzag wall at one side of said screen.

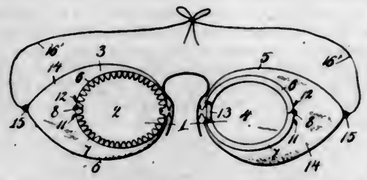
[Claims 6 to 8 not printed in the Gazette.]

900,443. LAWN-MOWER. WILLIAM E. STEUBEN, Visalia, Cal. Filed Aug. 6, 1906. Serial No. 329,394.



A lawn mower having a frame consisting of a base and a pair of side plates, a drive shaft journaled in said side plates, a pair of drive wheels loosely mounted on said shaft and adapted to contact with the ground through openings in said base, each of said drive wheels having a ratchet connection with said drive shaft, a cutter shaft journaled in said side plates and having a cutter mounted thereon, said cutter shaft being formed in its ends with slots, a rocking member mounted in each of said slots and having oppositely extending beveled arms projecting therefrom, a pinion mounted on said cutter shaft adjacent each of said rocking members and having an annular chamber provided with cam teeth adapted alternately to engage the oppositely extending arms of said rocking member so as to rock the same in said slot, and gear wheels connecting said pinions with said drive shaft.

900,444. CONVERTING DEVICE FOR EYEGLASSES AND SPECTACLES. FRED K. STICKLE, New York, N. Y. Filed July 29, 1907. Serial No. 385,976.



1. A pair of eye lenses secured one to the other by a nose bridge in combination with a pair of converting members, said members each comprising a two piece hinged frame for ready attachment to and removal from the rim of the eye lens and rearwardly extending means secured to said frame for engaging the head of the wearer and capable of being secured thereto, so that said members when combined with said eye lenses will convert the original eye lens construction into one having additional functions.

2. A converting member for an eye lens comprising a readily attachable and detachable frame; said frame comprising two lens-rim clamping curved members, a hinge joint for said members, a spring for clamping said members towards one another; and means secured to said frame for engaging the head of the wearer and securing said lens in position.

3. In a device for temporarily converting eye glasses and spectacles into goggles, a readily attachable and detachable frame for an eye lens, said frame comprising two oppositely bowed channel members for inclosing the rim of said lens; a flexible connection securing said channel members end to end; and a finger engageable lug projecting from one of said channel members adjacent to said hinge joint for readily moving said members into open position.

4. In a device for temporarily converting eye glasses and spectacles into goggles, a readily attachable and detachable frame for an eye lens, said frame comprising two oppositely bowed channel members for inclosing the rim of said lens; a hinge joint securing said channel members end to end; a spring for clamping said channel members upon said lens; and a finger engageable lug projecting from one of said channel members adjacent to said hinge joint for readily moving said members into open position.

5. In a device for temporarily converting eye glasses and spectacles into goggles, a readily attachable and detachable frame for an eye lens, said frame comprising two oppositely bowed channel members for inclosing the rim of said lens; a flexible connection securing said channel members end to end; a clasp for holding said channel members locked together; and a finger engageable lug projecting from each of said channel members adjacent to said flexible connection for readily moving said members into open position.

[Claims 6 to 41 not printed in the Gazette.]

900,445. GARMENT-FASTENER. EDWIN B. STIMPSON, New York, N. Y., assignor to Edwin B. Stimpson Company, a Corporation of New York. Filed Sept. 27, 1906. Serial No. 336,479.



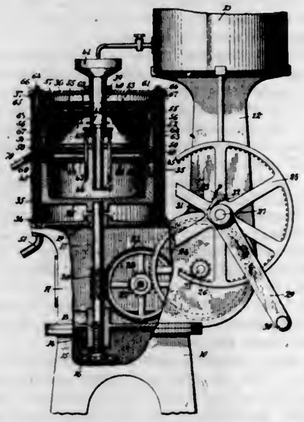
1. A fastener comprising two members, one of which is a metallic hook-like part, and the other of which is a plate formed from thin flat metal, adapted to fit flush upon the material of a legging or the like and having apertures produced in a longitudinal series for successive engagement with said hook-like part, each such aperture being of elongated formation and a portion of the metal of said plate at each such aperture being integrally attached to the plate along the side of said aperture and being bent rearwardly at angles to the plate to produce an elongated

flange extended therefrom for engagement in an opening produced in the material of a legging or the like to which such apertured member is attached.

2. An article having two flaps, one of which is non-apertured and the other of which has in it a plurality of parallel, elongated apertures 9, separated by tie-pieces 10, and means for detachably securing said flaps together comprising a metal hook mounted on the non-apertured flap, and a metal plate having in it a plurality of parallel, elongated apertures, said plate being adapted to fit flush upon the apertured flap with the apertures in the plate and flap registering, said plate having integral flanges 7 bent into the apertures 9 and against the sides of the tie-pieces 10, each of said tie-pieces being compressed between a pair of flanges 7.

3. An article having two flaps, one of which is non-apertured and the other of which has in it a plurality of parallel, elongated apertures 9 separated by tie-pieces 10, and means for detachably securing said flaps together, comprising a metal hook mounted on the non-apertured flap, and a metal plate having in it a plurality of parallel, elongated apertures mounted on the apertured flap with its apertures registering with the apertures 9 in said flap, said plate having integral flanges 7 bent into the apertures 9 adjacent the sides of the tie-pieces 10 and further having integral lugs 7^a bent into the apertures 9 at the ends thereof and clenched over upon the other side of the flap.

900,446. MILK PURIFYING AND HOMOGENIZING MACHINE. HENRY H. STÜSSY, Sioux City, Iowa. Filed Feb. 27, 1908. Serial No. 418,040.



1. In a machine of the class described, a receptacle for homogenizing milk, means for operating said receptacle to eject the milk therefrom at a high velocity whereby the milk escapes from said receptacle in the form of a spray, and irregularly shaped and spaced members arranged to receive the spray therebetween whereby the butter fat globules are comminuted.

2. In a machine of the class described, a receptacle for milk, means for ejecting the milk from said receptacle, means in said receptacle for removing impurities from the milk, and irregularly shaped and spaced members arranged to receive therebetween the milk escaping from said receptacle.

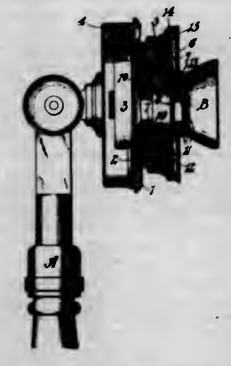
3. In a machine of the class described, a rotatable receptacle for an emulsion, means in said receptacle for removing impurities from the emulsion, means in said receptacle for straining the emulsion, means for rotating said receptacle whereby the emulsion is centrifugally expelled therefrom, and a conduit having walls provided with projections and arranged to permit the passage therethrough of the emulsion after it escapes from the receptacle whereby the globules of material in the emulsion are comminuted.

4. In a machine of the class described, a movable, hollow member constituting a receptacle for milk, a fixed hollow member encompassing said movable member, means within said movable member and operated by a movement thereof for ejecting impurities from the milk in said movable member at the sides thereof, means for operating said movable member centrifugally to eject the milk therefrom, and means arranged to receive the milk escaping from said movable member and serving to homogenize the same.

5. In a machine of the class described, a rotatable milk receptacle, means for rotating the same whereby milk therein is expelled centrifugally, means within said receptacle and operable by the movement thereof for freeing the milk within said receptacle from impurities, means within said receptacle for directing the milk escaping therefrom, and homogenizing means arranged to receive the milk escaping from said receptacle.

[Claims 6 to 15 not printed in the Gazette.]

900,447. ANTISEPTIC ATTACHMENT FOR TELEPHONES. FRANK C. TABLER, St. Louis, Mo., assignor of fifty-one one-hundredths to Gus V. R. Mechin, St. Louis, Mo. Filed Jan. 24, 1908. Serial No. 412,515.



1. An antiseptic attachment for telephones, comprising fibrous material arranged in front of, and parallel to, the diaphragm of a telephone, and means for supplying said fibrous material with an antiseptic medium; substantially as described.

2. An antiseptic attachment for telephones, comprising fibrous material arranged in front of the diaphragm of a telephone and in alinement therewith, and absorbent material saturated with an antiseptic compound for keeping said fibrous material moist; substantially as described.

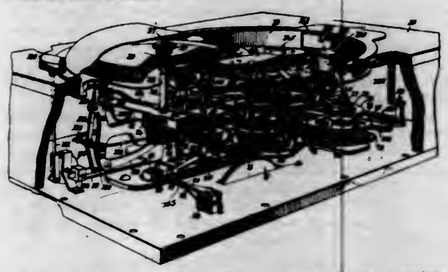
3. An antiseptic attachment for telephones, comprising an imperforate piece of fabric arranged in front of the diaphragm of a telephone in such a manner that it is penetrated by the sound waves of the voice of the person using the telephone, and means for supplying said fabric with an antiseptic medium; substantially as described.

4. An antiseptic attachment for telephones, comprising an imperforate piece of fabric arranged in front of the diaphragm of a telephone in such a manner that it is penetrated by the sound waves of the voice of the person using the telephone, and absorbent material saturated with an antiseptic solution which is supplied to said piece of fabric by capillary attraction; substantially as described.

5. An antiseptic attachment for telephones, comprising a piece of fabric arranged in front of the diaphragm of a telephone and extending parallel to said diaphragm, and a receptacle or reservoir containing an antiseptic medium which keeps said piece of fabric moist; substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

900,448. BLACKING-MACHINE. EDWARD E. TALIAFERRO, Colorado Springs, Colo. Filed June 30, 1906. Serial No. 324,180.



1. In a blacking machine, the combination of a stationary foot rest, a set of brushes mounted on axes perpendicular to the plane of the foot rest, means for simultaneously rotating the brushes on their own axes and moving them bodily around the foot rest, a vertically movable toe brush normally held in position to engage a shoe on the foot rest, and means for automatically raising the toe brush when the machine is stopped.

2. In a blacking machine the combination of a stationary foot-rest, a set of brushes mounted on axes perpendicular to the plane of the foot-rest, means for simultaneously rotating the brushes on their own axes and moving them bodily around the foot-rest, a revoluble plate mounted under the foot-rest and having curved slots, and shafts for supporting said brushes passing throuh said slots.

3. In a blacking machine the combination of a stationary foot-rest, a revoluble corrugated plate mounted thereunder and provided with slots radiating from the center thereof, a set of brushes, shafts upon which said brushes are mounted, said shafts passing through said slots, means for simultaneously rotating the brushes on their shafts and for moving the shafts around the foot-rest, and resilient means for normally forcing the shafts toward the foot-rest along said slots.

4. In a blacking machine, the combination of a stationary foot rest, a set of brushes mounted adjacent to the foot rest on movable supports, means for simultaneously rotating the brushes on their own axes and moving them bodily around the foot rest, resilient means for normally forcing the brushes toward the foot rest, guides for forcing the brushes outwardly from the foot rest and provided with means at their outer ends for holding the brushes in the position to which they have been moved, and means for releasing the brushes from the guides to permit them to move inwardly toward the foot rest.

5. In a blacking machine, the combination of a stationary foot rest, a set of brushes mounted on movable supports adjacent to the foot rest, means for simultaneously rotating the brushes on their own axes and moving them bodily around the foot rest, resilient means for normally forcing the brushes toward the foot rest, a rotatable guide for forcing the brushes outwardly from the foot rest and holding them in this position, means for holding the guide stationary, and means for releasing the guide to permit it to rotate and thereby permit the brushes to move inwardly toward the foot rest.

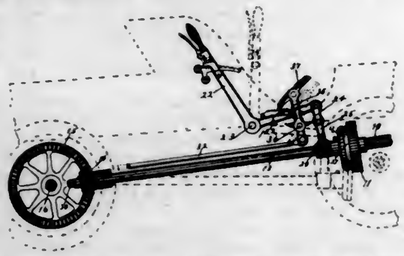
[Claims 6 to 50 not printed in the Gazette.]

900,449. MOTH-BALL HOLDER. GEORGE THOMPSON, New York, N. Y. Filed July 19, 1907. Serial No. 384,561.



A moth ball holder adapted for use in pianos, comprising a shank having at one end thereof a longitudinal slot, the slot being adapted to receive one of the bracket screws on the action whereby to secure it in place, and having at the other end an approximately hemi-spherical cup opening upward for the purpose set forth.

900,450. VARIABLE-SPEED DRIVING MECHANISM. MARION E. VAUGHN, Plainfield, Ind. Filed Feb. 8, 1906. Serial No. 300,103.



1. In a speed changing mechanism, driving and driven wheels with their sides in frictional engagement, and means for shifting the position of one wheel in the arc of a circle to which the engaging surface of the other wheel is tangential.

2. In a speed changing mechanism, driving and driven wheels with their sides in frictional engagement, one of said wheels being mounted yieldingly with relation to the other wheel, and means for shifting the position of one wheel in the arc of a circle to which the engaging surface of the other wheel is tangential.

3. In a speed changing mechanism, a driving wheel, a driven wheel with its side in frictional engagement with the side of the driving wheel, the engaging surface of one of said wheels being yielding, and means for shifting the position of the driven wheel, one of said wheels being so mounted that the extent of the engaging surfaces is varied by the shifting of said driven wheel.

4. In a speed changing mechanism, a driving wheel, a driven wheel with a yielding contact surface on its side in frictional engagement with the side of the driving wheel, one of said wheels being mounted yieldingly in relation to the other wheel means for mounting the driven wheel so that when coaxial with the driving wheel its entire engaging surface will be in contact with the driving wheel and the extent of such engaging surface of the driven wheel will diminish proportionately as it is shifted away from such coaxial position.

5. In a speed changing mechanism, a driving wheel, a driven wheel with its side in frictional engagement with the side of the driving wheel, a shaft on which said driving wheel is mounted that is substantially coaxial with the driving wheel, means for mounting said shaft so that the end carrying the driven wheel may be oscillated, and means for oscillating such end of the driven shaft.

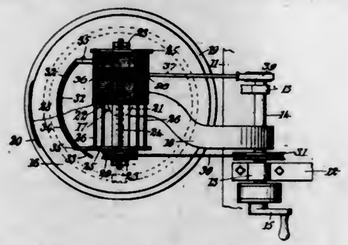
[Claims 6 to 26 not printed in the Gazette.]

900,451. MACHINE FOR UNRAVELING TEXTILE FABRICS. PAUL F. VOGEL, Clinton, Tenn. Filed Jan. 22, 1908. Serial No. 412,144.

1. The combination, with a looper, of means for holding the fabric to be worked upon by the looper, means for unraveling the selvage of the fabric, and means for simultaneously operating said looper and said unraveling means, said looper having means for guiding the yarn from the fabric to said unraveling means.

2. In combination, a looper, a reel, means for holding a fabric upon said looper, means for guiding yarn from the fabric to said reel, and means for simultaneously operating said looper and said reel.

3. In combination, a looper having a needle blade and a hub, a frame mounted upon said hub, a reel carried by said frame, and means for simultaneously operating said looper and said reel, said needle blade having a guide plate, and said frame having a guide bar adapted to coöperate with said guide plate to direct yarn from the fabric to said reel.



4. In combination, means for holding a fabric, a reel, means for operating said reel, and means for guiding yarn from the fabric to said reel, said guiding means including means for severing the yarn.

5. In combination, means for holding a fabric, a frame, a reel rotatably mounted upon said frame, a guide plate having a part constituting a knife, said frame having arms, a guide bar carried by said arms and arranged adjacent to said guide plate, said guide plate and said guide bar serving to direct the yarn from the fabric to said reel, and means for driving said reel.

900,452. ART OF SEPARATING METALS FROM MATTE. ALBION J. WADHAMS, Riverton, N. J., and ROBERT C. STANLEY, New Brighton, N. Y., assignors to International Nickel Company, Bayonne, N. J., a Corporation of New Jersey. Filed Feb. 16, 1907. Serial No. 357,718.

1. The method herein described of separating silver from cobalt, nickel and iron, which consists in treating the material with hydrochloric acid, thereby dissolving nickel, cobalt and iron, leaving silver mainly undissolved as chlorid or metallic silver, adding an alkali to precipitate iron and to hold the dissolved portion of the silver in solution, and then separating the silver.

2. The method herein described of separating metals, which consists in removing arsenic from speiss containing cobalt, nickel, silver and iron, treating the residue with hydrochloric acid, precipitating iron from the solution, and then separating silver therefrom; substantially as described.

3. The method herein described of separating metals, which consists in removing arsenic from speiss containing cobalt, nickel, silver and iron, by alternately subjecting the speiss to oxidizing and reducing roast, then completing the removal of arsenic by roasting the material with a sodium compound and converting the arsenic into arsenate of soda, dissolving the arsenate of soda therefrom, and then treating the residue with hydrochloric acid and separating silver from the solution; substantially as described.

4. The method herein described of separating metals, which consists in removing arsenic from speiss containing cobalt, nickel, silver and iron, treating the residue with hydrochloric acid, precipitating iron from the solution by treatment with an alkali, and then separating silver therefrom; substantially as described.

900,453. ART OF SEPARATING METALS FROM MATTE. ALBION J. WADHAMS, Riverton, N. J., and ROBERT C. STANLEY, New Brighton, N. Y., assignors to International Nickel Company, Bayonne, N. J., a Corporation of New Jersey. Filed Feb. 16, 1907. Serial No. 357,719.

1. The method herein described of separating metals, which consists in removing arsenic from speiss containing cobalt, nickel, silver and iron, dissolving the material with sulfuric acid, and then partially removing silver therefrom; substantially as described.

2. The method herein described of separating metals, which consists in removing arsenic from speiss containing cobalt, nickel, silver and iron, dissolving the material with sulfuric acid, and then partially removing silver therefrom by cementing on a metal; substantially as described.

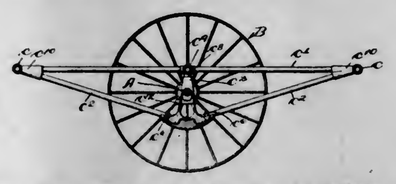
3. The method herein described of separating metals, which consists in removing arsenic from speiss containing cobalt, nickel, silver and iron, dissolving the material with sulfuric acid, then partially removing silver from the solution, precipitating the nickel and cobalt from the solution as sulfates, calcining the sulfates to form oxids, dissolving the oxids in hydrochloric acid, and separating iron from the solution; substantially as described.

4. The method herein described of separating metals, which consists in removing arsenic from speiss containing cobalt, nickel, sulfur and iron, treating the material with sulfuric acid, dissolving the metals therein, then partially removing silver from the solution, precipitating nickel and cobalt from the solution as sulfates, calcining the sulfates to form oxids, dissolving the oxids in hydrochloric acid, separating iron from the solution, and then separating the residue of silver from the solution; substantially as described.

900,454. ART OF SEPARATING METALS FROM SPEISS. ALBION J. WADHAMS, Riverton, N. J., and ROBERT C. STANLEY, New Brighton, N. Y., assignors to International Nickel Company, Bayonne, N. J., a Corporation of New Jersey. Filed Feb. 16, 1907. Serial No. 357,720.

The method herein described of removing arsenic from speiss, which consists in alternately subjecting the speiss to oxidizing and reducing roasts, then completing the removal of arsenic by roasting the material with a sodium compound capable of combining with the arsenic to form an arsenate, thus converting the arsenic into arsenate of soda; substantially as described.

900,455. CART. ROBERT WEIR, Muskegon, Mich., assignor of one-half to Philip P. Schnorbach, Muskegon, Mich. Filed Oct. 25, 1907. Serial No. 399,096.



1. A truck comprising a pair of vehicle wheels connected by an axle, a pair of inverted king-post trusses mounted upon said axle near said wheels, keys and blocks for clamping said axle against turning relatively to said king-posts, and cross-bars for connecting said trusses.

2. A truck comprising a pair of vehicle wheels connected by an axle, a pair of inverted king-post trusses mounted on said axle, said axle passing through openings in said king-posts, keys and blocks for clamping said axle against turning relatively to said king-posts, and cross-bars connecting said trusses, the upper members of said trusses and also the said cross-bars being located in a plane above the said axle, so as to provide a practically flat surface upon which to load lumber or other material.

3. A truck comprising a pair of vehicle wheels, a pair of inverted king-post trusses mounted upon said wheels, the lower compression member of said trusses being provided with upwardly extending flanges adapted to receive the ends of the side rods.
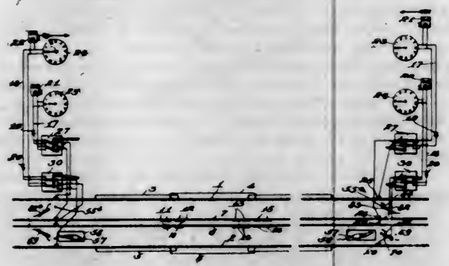
4. A truck comprising a pair of vehicle wheels connected by an axle, a pair of inverted apertured king-post trusses provided with integral bases adapted to receive the lower ends of the truss rods mounted upon said axle, adjacent to said wheels, and cross bars for connecting said trusses.

5. A truck comprising a pair of vehicle wheels connected by an axle, a body frame mounted upon said axle, said body frame being composed of a pair of oppositely dis-

posed parallel apertured king-post trusses provided with integral bases adapted to receive the lower ends of the truss rods arranged adjacent to said wheels, and cross bars for connecting said trusses.

[Claim 6 not printed in the Gazette.]

900,456. BLOCK-SIGNAL SYSTEM FOR RAILWAYS. JAMES T. WEST, Rockingham, N. C. Filed Mar. 25, 1908. Serial No. 423,178.



1. A signal system for railways comprising current carrying rails extending along the track, a signaling circuit adapted to be carried by a train or vehicle and having a suitable signaling device therein and responsive to current impulses through such circuit, and means located at predetermined distances along the track for opening and closing said signaling circuit in prearranged numbers at different points along the track to actuate said signaling device to give prearranged signals to the operator of such train which will indicate the position of the train on said track.

2. A signaling system for railways comprising current carrying rails extending along the track, a signaling circuit adapted to be carried by a train and having a suitable signaling device connected therein and responsive to current impulses through such circuit, and means arranged at suitable intervals along the track to open and close the signaling circuit in progressively varying numbers for transmiting groups of impulses differing in number as the train passes over certain portions of the track, the signaling devices serving to receive such impulses and to indicate a prearranged signal.

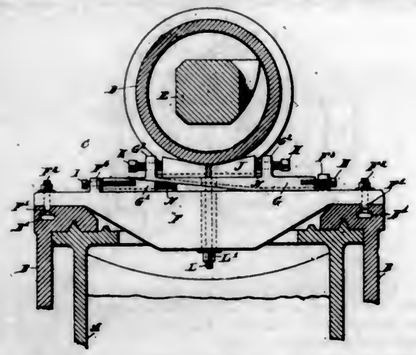
3. A signaling system for railways comprising current carrying rails, one of said rails being provided at suitable intervals along the track with insulated sections varying in number, a signaling circuit arranged on the train and having means for electrically connecting it to said rails, and a signaling device connected in said circuit and responsive to impulses produced by the passage of the train over such insulated sections.

4. A signaling system for railways comprising a track divided into block sections and having current carrying rails extending along said track one of said rails being provided with insulated sections arranged at the beginning and end of each block section and varying progressively in number, a signaling circuit arranged on a train and having contact devices which travel along said current carrying rails, and a signaling device connected in such circuit and responsive to the impulses produced by one of said contact devices passing over the insulated sections.

5. A signaling system for railways comprising current carrying rails extending along the track, a pair of signaling circuits adapted to be carried by a train or vehicle having a series of contacts and a pair of signaling devices connected in circuit therewith, the contact devices being adapted to travel along said rails, a pole changer connected in each signaling circuit for reversing the polarity of its respective contact devices relatively to the source of current supply, and means located on or adjacent to the track for automatically setting said pole changer.

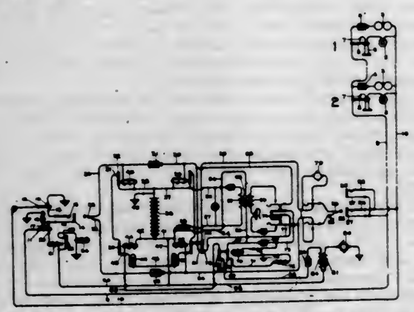
[Claims 6 to 17 not printed in the Gazette.]

900,457. LATHE ATTACHMENT. ARCHIE E. WHITING, Weston, W. Va. Filed July 25, 1907. Serial No. 385,466.



A lathe attachment comprising a support for attachment to the lathe carriage, wedges arranged transversely of the support and slidable on each other, a rest on the uppermost wedge, means for moving one of said wedges whereby to raise and lower the rest, the uppermost wedge being provided with spaced lugs between which the rest is arranged, and bolts threaded through the lugs and engaging the rest whereby to adjust said rest longitudinally of the wedge, and transversely of the support.

900,458. TELEPHONE TESTING SYSTEM FOR PARTY-LINES. CHARLES S. WINSTON, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed May 31, 1905. Serial No. 263,028.



1. In a testing system, the combination with a telephone line having a busy testing terminal, of an operator's testing contact for testing the busy condition of the line, a testing circuit including a portion of the talking circuit of the answering end of the cord adapted to be closed when a busy line is tested, and means associated with said circuit for interrupting the current flow therein, whereby when said circuit is closed a special tone is produced in the operator's receiver, substantially as described.

2. In a testing system, the combination with a telephone line having a busy testing terminal, of an operator's testing contact for testing the busy condition of the line, a cord circuit for making connection with the line, a testing circuit including a portion of the answering end of the sleeve talking strand, closed when a busy line is tested, and a suitable current interrupter associated with said circuit for interrupting the current flow therein, whereby when a busy line is tested a special tone is produced in the operator's receiver, substantially as described.

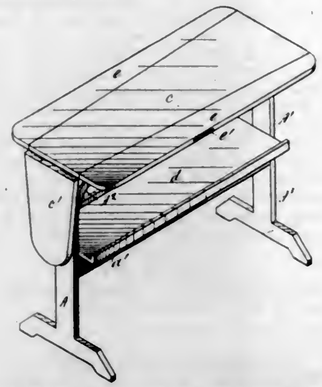
3. In a testing system, the combination with a telephone line having a busy testing terminal, of an operator's testing contact for testing the busy condition of the line, an alternating current testing circuit, an electro-magnetic device for connecting said circuit with the answering end of the sleeve voice current conductor when a busy line is tested, said circuit being adapted to produce a special tone in the operator's receiver, substantially as described.

4. In a testing system, the combination with a telephone line having a busy testing terminal, of a cord circuit for making connection with the line, an operator's testing contact for testing the busy condition of the line connected with the tip strand of the cord circuit, and an alternating current testing circuit including a portion of the answering end of the sleeve talking strand, said circuit being adapted to produce a special tone in the operator's receiver when a busy line is tested, substantially as described.

5. In a testing system, the combination with a telephone line having a busy testing terminal, of a cord circuit for making connection with the line, an operator's testing contact for testing the busy condition of the line, an alternating current testing circuit including a portion of the sleeve strand of the cord circuit and a line conductor, and means for closing said circuit when a busy line is tested, said circuit being adapted to produce a special tone in the operator's receiver, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

900,459. IRONING-TABLE. ALEXANDER E. WISE, New York, N. Y. Filed Mar. 18, 1908. Serial No. 421,921.



1. In a table of the character designated, the combination of the end standards formed with interlocking extension bars, means for securing said extension bars rigidly together, a center board hinged to one end standard, an extension flap hinged to said center board, means for supporting said flap in its extended position, a spring under said center board arranged to thrust it upward and means for holding said center board in position against the resistance of said spring, for the purpose described.

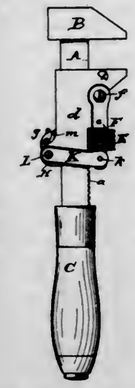
2. In a table of the character designated, the combination of the end standards formed with interlocking extension bars, means for securing said extension bars rigidly together, a center board hinged to one end standard, an extension flap hinged to said center board, a bracket upon the other end standard arranged to support said flap when extended, side leaves hinged to said center board, means for supporting said side leaves when folded under the center board and means for supporting said side leaves in their extended position, for the purpose described.

3. In a table of the character designated, the combination of the end standards formed with interlocking extension bars, means for securing said extension bars rigidly together, a shelf attached to one of said extension bars, a center board hinged to one end standard, side leaves hinged to said center board, means for supporting said side leaves when folded under the center board, and means for supporting said side leaves in their extended positions, for the purpose described.

4. In a table of the character designated, the combination of the end standards formed with interlocking extension bars, means for securing said extension bars rigidly together, a center board hinged to one end standard, side leaves hinged to said center board, means for supporting said side leaves when folded under the center board, and means for supporting said side leaves in their extended position consisting of slotted cross bars pivotally supported upon the standards and adapted to hang vertically when not in use, substantially in the manner and for the purpose described.

5. In a table of the character designated, the combination of the end standards formed with interlocking extension bars, means for securing said extension bars rigidly together, a shelf attached to one of said extension bars, a center board hinged to one end standard, an extension flap hinged to said center board, a bracket on the other end standard arranged to support the flap in its extended position, side leaves hinged to said center board, means for supporting said side leaves when folded under the center board, and means for supporting said side leaves in their extended positions, substantially in the manner and for the purpose described.

900,460. WRENCH. JAMES H. WOODARD, Dayton, Ky., assignor to Matthew J. Maloney, Dayton, Ky. Filed July 18, 1908. Serial No. 444,245.

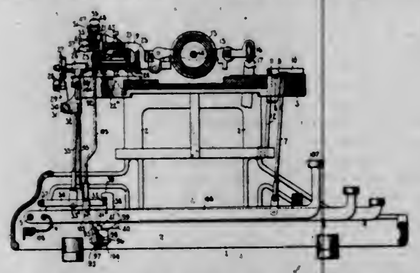


1. In a quick-acting wrench, the combination of a shank provided with a rack on its front-side and with a stationary jaw at one of its ends, a movable jaw provided with a sleeve fitted to the shank, a pin jointed at one of its ends to the underside of this jaw, a nut mounted thereon so as to be opposite the rack on the front side of the shank, a cylindrical rocker, a bearing in which it is oscillatably supported and whereby it is carried so as to move with the adjustable jaw, and links jointed at one of their ends to the free end of the pin mentioned and at their other ends to each end of the rocker, the connection to this latter being eccentrically with reference to the axis of its oscillation and whereby such actuation causes the nut to either engage or to leave the rack mentioned.

2. In a quick-acting wrench, the combination of a shank provided with a rack on its front side and with a stationary jaw at one of its ends, a movable jaw provided with a sleeve fitted to the shank and extended downwardly to form a semi-cylindrical bearing the open side of which is opposite the rack of the shank and closed thereby, said bearing being provided with an outwardly open slot, a cylindrical rocker fitted to this bearing and confined between it and the back of the shank, there being a laterally extended thumbpiece on the rocker which projects outwardly through the slot in the bearing and whereby the rocker may be oscillated, a pin jointed at one of its ends to the underside of the movable jaw, a nut rotatably mounted on it so as to be opposite the rack on the shank,

and links jointed at one of their ends to the free end of this pin and at their other ends, one to each end of the rocker, the connection to this latter being eccentrically with reference to the axis of its oscillation.

900,461. TYPE-WRITING MACHINE. OSCAR WOODWARD, New York, N. Y., assignor to Densmore Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Jan. 31, 1906. Serial No. 298,794.



1. In a typewriting machine, the combination of type bars; key levers therefor; a carriage; step-by-step feeding devices therefor; a line stop on said carriage; a slidable bar coöperative with said line stop; a plurality of guides for said bar, said guides being fixed on the frame of the machine; a locking bar lying beneath the key levers and connected with said slidable bar, said locking bar being normally inoperative; and means for maintaining said slidable bar in position to coöperate with said line stop and for releasing said slidable bar from engagement with said line stop, said means including a spring-pressed key lever and a link connected at one end directly to said spring-pressed key lever and connected at the other end directly to said slidable bar.

2. In a typewriting machine, the combination of type bars; key levers for operating said type bars; a carriage; step-by-step feeding devices for said carriage; a universal bar operated by said key levers and connected with the carriage feeding devices; a rack bar on said carriage; a line stop adjustable on said rack bar; a bar mounted to slide on the frame of the machine; a bell crank lever pivoted to the frame and connected to said slidable bar; a link; a pivoted locking bar lying beneath the key levers and connected by said link with said bell crank lever; a spring acting on said locking bar and tending to maintain the latter inoperative and to press said slidable bar in a direction opposite to that in which the carriage is fed step-by-step, said line stop being coöperative with said slidable bar to arrest the carriage and to operate said locking bar; and means for releasing said slidable bar, said means comprising a releasing key lever and a link directly connected both to said slidable bar and to said releasing key lever.

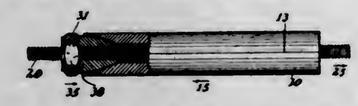
3. In a typewriting machine, the combination of a carriage; type bars; key levers for operating said type bars; a line stop adjustable on the carriage; a bell trip pivoted to said line stop; a bell hammer pivoted on the machine frame and operable by said bell trip; a slidable bar on the machine frame operable by said line stop; a pair of fixed guides coöperative with said slidable bar, one of said guides serving also as a pivot for said bar; a pivoted locking bar disposed transversely of said key levers; connections between said slidable bar and said pivoted locking bar for operating the latter to lock the key levers, said slidable bar also serving as a stop coöperating with said line stop to arrest the movement of the carriage in the printing direction; and key operated means for giving a rotary movement to said slidable bar to release said carriage from said locking bar, one of said guides coöperating with said slidable bar to guide it during both its slidable and rotary movements.

4. In a typewriting machine, the combination of type bars; key levers for operating said type bars; a carriage; step-by-step feeding devices for said carriage; a universal bar operated by said key levers and connected with the carriage feeding devices; a rack bar on said carriage; a line stop adjustable on said rack bar; a margin stop adjustable on said rack bar; a bar mounted to slide on the frame of the machine; a pivoted locking bar lying beneath said key levers; connections comprising a bell crank lever and a link between said slidable bar and said locking bar; a spring tending to maintain said locking bar inoperative and to press said slidable bar in a direction opposite to that in which the carriage is fed step-by-step, said line stop being coöperative with said slidable bar to operate said locking bar and to arrest the carriage from movement in printing direction and said margin stop co-acting with said bar to arrest the carriage on its return movement; and means for moving said slidable bar to inoperative position, said means including a spring-pressed key lever and a link connected directly both to said spring-pressed key lever and to said slidable bar.

5. In a typewriting machine, the combination of type bars; key levers for operating said type bars; a carriage; step-by-step feeding devices for said carriage; a universal bar operative by said key levers and connected with the carriage feeding devices; a rack bar on said carriage; a line stop adjustable on said rack bar; a margin stop adjustable on said rack bar; a slidable bar mounted on the frame of the machine, said slidable bar being also capable of rotary movement; a locking bar pivoted to the frame of the machine beneath said key levers; connections between said locking bar and said slidable bar; means tending to maintain said locking bar inoperative and to press said slidable bar in a direction opposite to that in which the carriage is fed step-by-step, said line stop being cooperative with said slidable bar to operate said locking bar and also to arrest the carriage; and key operated means for giving rotary movement to said slidable bar to unlock said locking bar and to free the carriage for further letter space movements, said slidable bar being coactive with said margin stop to arrest the carriage on its return movement, said key operated means including a spring-pressed key lever and a link connected directly both to said spring-pressed key lever and to said slidable bar.

[Claims 6 to 10 not printed in the Gazette.]

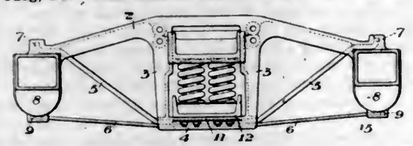
900,462. NUT-LOCK. JULIUS ADERER, New York, N. Y. Filed Mar. 27, 1908. Serial No. 423,520.



1. The combination of a shell provided with a bore extending into a conoidal seat, the shell being longitudinally split through the seat, a screw threaded stem entering the bore and of less diameter than said bore, and a conoidal nut member mounted upon the stem, the smaller end of the conoidal nut member being of less diameter than the diameter of the said bore and constructed and adapted to enter the same beyond said seat.

2. The combination with a screw threaded member, of a nut thereon having a conoidal bearing portion, the general line of the face of the larger end of said conoid being disposed at a slight angle to its axis and the general line of the face of the smaller end being disposed at a relatively greater angle, and a shell provided with a longitudinal bore extending into a conoidal seat, the outer and larger end of the seat being disposed on a general line at a slight angle to the axis of said seat and constructed and adapted for engaging the larger end of the conoid of the nut, the wall of the shell at such outer and larger end being resilient, the seat face at the inner and smaller end being disposed at a relatively greater angle to the said axis and being constructed and adapted for engaging the smaller end of the conoid on the nut, the said wall of the shell at the region of the smaller end of the seat being less resilient than the wall at the larger end of said seat.

900,463. TRUCK SIDE FRAME. HENRY AIKEN, Pittsburg, Pa. Filed Feb. 19, 1908. Serial No. 416,652.



1. A truck side frame having a side frame member with its end portions inclosed by another side frame member cast about the parts, substantially as described.

2. A truck side frame having an upper cast frame member with its ends formed of metal flowed about a lower frame member, substantially as described.

3. A truck side frame having a compression member formed as a steel casting and a tension member consisting of wrought metal, the steel casting being flowed about the other member to secure the parts together, substantially as described.

4. A truck side frame having a cast upper arch bar member with an intermediate integral downward extension and a lower wrought metal bar having its ends secured to the cast arch bar member, substantially as described.

5. A truck side frame having a cast compression member with an intermediate frame extension formed of metal flowed about the lower arch bar and the tie bar, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

900,464. SPOOL-CASE. CLARENCE J. ALFRED, New York, N. Y. Filed June 22, 1908. Serial No. 439,745.



1. A spool case comprising two telescoping thimbles adapted to inclose a spool of thread, said thimbles being of such relative size as to admit of the passage of the thread from the spool between them and provide a frictional engagement therefor.

2. A spool case comprising two telescoping thimbles adapted to inclose a spool of thread, and between which the thread from the spool is adapted to pass outwardly, and a cutter for severing the thread, carried by one of said thimbles.

3. A spool case comprising two telescoping thimbles adapted to inclose a spool of thread, and between which the thread is adapted to pass from the spool to the outside, the outer of said thimbles having a fillet at the inside of its bottom edge to limit the inward movement of the other thimble.

4. A spool case comprising two telescoping thimbles adapted to inclose a spool of thread, and between which the thread from the spool is adapted to pass to the outside, the inner edge of the smaller thimble being rounded to permit of the free passage of the thread thereover, and the bottom edge of the larger thimble at the inside filleted to limit the inward movement of the smaller thimble.

900,465. OVERSHOE-FASTENER. JOHN H. AULD, De Haven, Pa. Filed May 23, 1908. Serial No. 434,500.

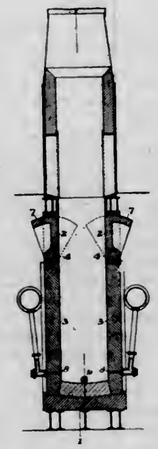
1. The combination with an overshoe, of a plate secured therein and to the sole of said shoe, said plate having slitted longitudinal edges bent to provide raised portions alining with transverse grooves provided by bending said plate, a rod pivotally mounted in one of said grooves and under two of said raised portions, a curved upwardly extending arm carried by one end of said rod, a pronged extension carried by said rod for engaging in the heel of a shoe, and a coil spring encircling said rod, for normally holding said pronged extension in a vertical position.



2. An over shoe fastener comprising a slitted plate adapted to be secured to the inner side of a sole of an overshoe, a rod pivotally mounted upon said plate, a pronged extension carried by said rod for engaging the heel of a shoe, a curved arm carried by one end of said rod for moving said pronged extension, and a spring encircling said rod for normally holding said pronged extension in a vertical position.

3. An over shoe fastener comprising a plate, an adjustable and pivotally mounted rod carried by said plate, a pronged extension carried by said rod for engaging the heel of a shoe, an arm carried by one end of said rod for moving said pronged extension and means arranged upon said plate for normally holding said pronged extension in a vertical position.

900,466. METHOD OF SMELTING ORES. RALPH BAGGALEY, Pittsburg, Pa. Filed Feb. 8, 1906. Serial No. 300,071.

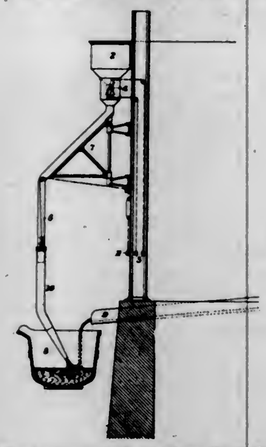


1. The method of treating ores, which consists in producing a molten bath high in fuel values, dissolving in the bath ores having constituents for releasing and fluxing the iron and mineral values contained in the molten bath, the process when started being carried out without the use of carbonaceous fuel and by the heat produced by the oxidation of the fuel values of the ore and bath, and during such process varying the area of the escape opening of the vessel in which the process is carried out conformably to the heat requirements of the bath, whereby the heat produced within the vessel may be held therein to a controllable maximum extent; substantially as described.

2. The method of treating ores, which consists in producing a molten bath high in fuel values, dissolving in the bath ores whose distinctive constituents are silica for releasing and fluxing the iron contained in the molten bath, and mineral values, the process when started being carried out without the use of carbonaceous fuel and by the heat produced by the oxidation of the fuel values contained in the ore, and during such process varying the area of the escape opening of the vessel in which the process is carried on conformably to the heat requirements of the bath

and without materially increasing the pressure within the vessel, whereby the heat produced within the vessel may be held therein to a maximum extent; substantially as described.

900,467. METHOD OF RECOVERING VALUES FROM FLUE-DUST AND FINES. RALPH BAGGALEY, Pittsburg, Pa. Filed Oct. 30, 1906. Serial No. 341,337.

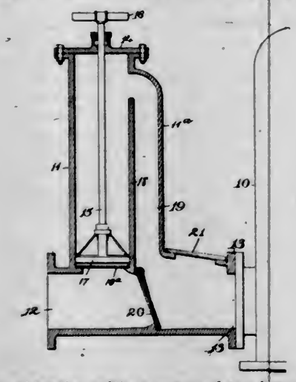


1. The method of recovering values from flue dust and fines, which consists in intermingling the flue dust or fines with molten matte to a point short of solidification, and then subjecting the mixture, while it is still in the molten state to the refining action of an oxidizing blast; substantially as described.

2. The method of recovering values from flue dust and fines, which consists in mixing the flue dust or fines with molten matte to a point short of solidification, and then subjecting the mixture, while still in a molten state, to a bessemerizing process and to the addition of silicious ores; substantially as described.

3. The herein described method of recovering flue dust and fines, which consists in intermingling the flue dust or fines with low grade matte to the extent to which the matte will absorb the dust or fines without solidification, then placing the mixture while still in a molten state in a converter and bessemerizing it and adding silicious ores for the removal of the contained iron; substantially as described.

900,468. PUMP-PRIMER. JOHN J. BATAILLE, East Orange, N. J. Filed Oct. 12, 1907. Serial No. 397,062.



1. In combination with a pump, of a primer comprising a casing having an inlet portion and an outlet portion, the outlet portion being adapted to be secured to the inlet of the pump, a pump portion transversely arranged on the casing, a partition in the pump portion forming two ducts, a piston and its rod on one side of the partition, and a check valve arranged at the bottom of the partition between the ducts, whereby the water passing from the pump portion to the pump holds the check valve shut.

2. In combination with a pump, of a primer comprising a casing having an inlet portion and an outlet portion in line with the inlet, the outlet portion being adapted to be secured to the inlet of the pump, a pump portion arranged perpendicularly on the casing, a partition in the pump portion and stopping short of the top to form connected ducts, a pump and its piston in one duct, and a check valve hinged to the bottom of the partition and kept closed by the suction on the pump portion and also by the water passing from the pump portion to the pump.

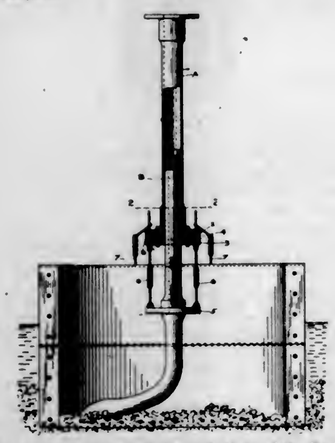
900,469. HOOK AND EYE. JOSEPH P. BAUMGARTNER, Philadelphia, Pa. Filed Feb. 27, 1906. Serial No. 303,175.



1. In a device of the character described, a member of a hook and eye fastener having locking eyes and passage ways to the locking eyes in which the material is adapted to be grasped, and overlapping attaching pins.

2. In a device of the character described, a member of a hook and eye fastener, locking eyes therefor, and pins extending in opposite directions and overlapping for piercing the material.

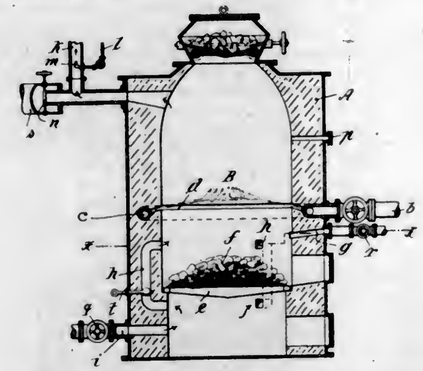
900,470. TELESCOPE MINING-PIPE. WILLIS W. BEESON, Redwood City, Cal. Filed June 24, 1908. Serial No. 440,162.



1. In an apparatus of the character described, a suction pipe having flanges at the lower end, a flexible joint-forming collar clamped between, an extension pipe slidable within the first named pipe and through the collar, said extension having its lower end adapted to collect material when a vacuum is produced, and means by which said pipe is suspended from the uppermost section, and extensible with relation thereto, said flanges having peripheral slits and said means including flexible elements joined together and adapted to enter said slits and to stand crosswise above the same.

2. In an apparatus of the character described, the combination of a main pipe having flanges, and a joint-forming collar at the lower end, said flanges being provided with peripheral slots, a second pipe slidable through the collar and forming a tight joint therewith, and having its lower end adapted to collect material when a vacuum is produced, and chains connected with the second pipe and having its links adapted to enter said slots and to stand cross-wise above the same, whereby the lower pipe may be gradually extended by shifting the positions of the links.

900,471. PROCESS OF MAKING NITRIC ACID. OSCAR BENDER, Neu-Babelsberg, Germany. Filed Apr. 15, 1907. Serial No. 368,343.



1. In the process of making nitric-acid, the improvement consisting in heating a mixture of oxygen and nitrogen in a furnace by a coal fire and subsequently by an oxy-hydrogen flame, the oxy-hydrogen being produced from superheated steam blown into the hot space above the fuel, the products of combustion being finally cooled immediately and then drawn off.

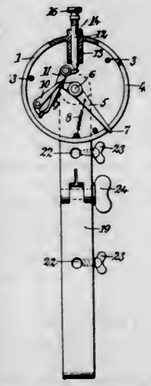
2. Process of making nitric-acid consisting in heating oxygen and nitrogen by heating a mixture of oxygen and nitrogen in a furnace by a coal fire and subsequently by an oxy-hydrogen flame, the oxy-hydrogen being produced from a steam superheated by the fire of the furnace and blown into the hot space above the fuel, the products of combustion being finally cooled immediately by a cooler steam current and then drawn off.

3. Process of making nitric-acid consisting in heating oxygen and nitrogen by heating a mixture of oxygen and nitrogen in a furnace by a coal fire and subsequently by an oxy-hydrogen flame, the oxy-hydrogen being produced from steam superheated by the fire of the furnace and blown into the hot space above the fuel, the products of combustion being finally cooled immediately by a cooler steam current, flowing in the direction of the escaping gases.

4. In the process of making nitric-acid, the improvement consisting in heating a mixture of oxygen and nitrogen in a furnace by a coal fire and subsequently by an oxy-hydrogen flame, the oxy-hydrogen being produced from steam superheated by the fire of the furnace and blown into the hot space above the fuel from all sides in a disklike thin stream, filling out the whole section of the producer, the products of combustion being finally cooled immediately and drawn off.

900,472. UNIVERSAL INDICATOR. HENRY P. BOETTCHER, Jersey City, N. J., assignor of one-third to Frank C. Braun, Jersey City, N. J. Filed June 4, 1907. Serial No. 377,196.

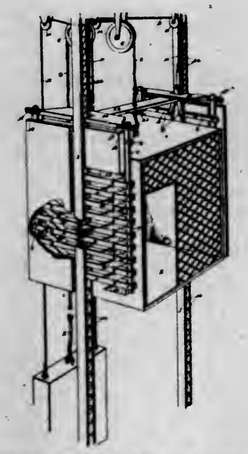
1. In an indicator, a casing, an indicating lever fulcrumed on the casing and having a pointer, a piston slidably mounted through the circumference of the casing in a plane with the fulcrum or axis of rotation of the indicating lever, and actuating and converting levers having arms extending from opposite sides of their fulcrum and respectively engaged with the piston and with the indicating lever at the opposite side of its fulcrum from the pointer, and engaged with each other, for transmitting the movement of the piston to the indicating lever.



2. In an indicator, a bar composed of two members hingedly connected together, a circular casing revolubly attached to one of said members, a piston slidably mounted in the casing, an indicating lever pivoted at the center of the casing and having a pointer passing through a slot in the circumference of the casing adapted to traverse a scale thereon, an actuating lever in engagement with the piston, a converting lever in engagement with the actuating and indicating levers, a detachable tip carried by the piston, an arm attached to the opposite side of the casing from said bar, and alining fingers and an intermediate finger pivoted to the outer end of said arm, one of which is adapted to contact with said tip.

3. In an indicator, a circular casing, an indicating lever fulcrumed concentrically in said casing and having a pointer, a radially-arranged piston slidably mounted in the circumference of the casing, and means for transmitting the movement of the piston to the indicating lever at the opposite side of its fulcrum from the pointer.

900,473. SAFETY DEVICE FOR ELEVATORS. RALPH BOHLEN, Canton, Ohio. Filed Mar. 23, 1908. Serial No. 422,663.



1. In a safety device for elevators, the combination of an elevator car, catch-bars carried by said car and pivoted intermediate their ends, vertical bars connected to the outer ends of the catch-bars, cross bars connected to said

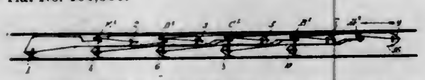
vertical bars, a bar adapted to lift the cross bars and the vertical bars, a cable located through the bar adapted to lift the cross bars, a counter balance connected to said cable, actuating bars pivoted to the vertical bars, links pivoted to said actuating bars, cables adapted to lift the inner ends of the actuating bars, said cables being connected to the counter balance and parallel bars provided with a series of notches adapted to receive the inner ends of the catch-bars, substantially as and for the purpose specified.

2. In a safety device for elevators, the combination of parallel bars provided with a series of notches, an elevator car or platform, a series of catch-bars pivoted intermediate their ends and carried by the elevator car, vertical bars connected to the catch bars and cross bars connected to said vertical bars, actuating bars pivoted intermediate their ends and their outer ends pivoted to the vertical bars, means for lifting the inner ends of the actuating bars and a cable connected to the car, substantially as and for the purpose specified.

3. In a safety device for elevators, notched parallel bars, an elevator car guided by said parallel bars, a cable connected to said car, a counter weight connected to said cable, catch bars adapted to engage the notches of the parallel guide bars, stop blocks located between the catch bars and provided with beveled ends, and means for actuating the catch bars, substantially as and for the purpose specified.

4. In a safety device for elevators, notched guide bars a car or platform guided by said notched-bars, a counter weight, a cable connected to said counter weight and to the car respectively, bars located above the car and adapted to be lifted by the aforesaid cable, catch bars pivoted intermediate their ends and carried by the car, means for holding the outer ends of the catch bars in elevated positions, said means carried by the bars located above the car, bars adapted to actuate the catch bars and cables adapted to actuate the actuating bars by the down pull of the counter weight connected to the car cable, substantially as and for the purpose specified.

900,474. SAFETY APPARATUS FOR RAILWAYS. ALFRED BONOM, New York, N. Y. Filed Nov. 30, 1907. Serial No. 404,500.



1. In apparatus of the class described, in combination, a set of trip devices adapted to arrest trains going in one direction, a second set of trip devices adapted to arrest trains going in the opposite direction, sets of track devices coöperating with each of said sets of trip devices, and a transversely movable trip bracket carried by the train and coöperating with either of said sets of track devices.

2. In apparatus of the class described, in combination, a transversely guided bracket carried by the train having two operative positions and having a trip plate operating in one direction of movement of the train, and a second trip plate operating in the opposite direction of movement.

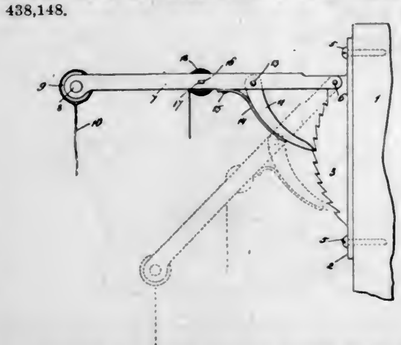
3. In apparatus of the class described, in combination, a slide guided transversely to the track and carried by the train, a member for shifting the same, a trip plate carried by said slide and facing in one direction, and a second trip plate carried by said slide and facing in the opposite direction.

4. In apparatus of the class described, in combination, a plurality of trip devices disposed at intervals along the track, a plurality of track devices disposed along the track and having opposite arms, a pair of cords attached to one of said arms and extending rearwardly on the track, one of said cords being attached to the adjacent trip device and affording means for raising the same, the other of said cords being attached to the trip device next beyond and affording means for depressing the same, a second pair of cords attached to the opposite arm of said track device and extending forwardly along the track, one of said second pair of cords being attached to the trip device adjacent and affording means for depressing the same, the other of said cords being attached to the trip device next beyond and affording means for raising the same.

5. In apparatus of the class described, in combination, a track device having an upwardly extending arm adapted to be depressed by a passing train, and a second arm, trip devices disposed along the track at intervals apart, and cords attached to said arms and connecting the same directly with said trip devices respectively, and affording means for depressing or raising the same.

[Claims 6 and 7 not printed in the Gazette.]

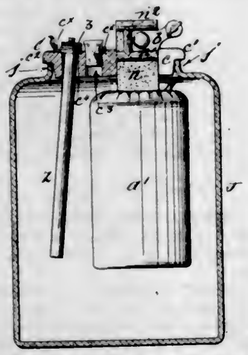
900,475. ADJUSTABLE BRACKET. DAVID G. BRADSTOCK, Frank, Pa. Filed June 12, 1908. Serial No. 438,148.



1. A bracket for curtain poles and curtain shade rollers comprising a plate, a central longitudinally disposed segment shaped apertured rack carried thereby, a channel shaped bifurcated pole and roller support pivotally connected to said rack, a pawl pivotally carried by said support and adapted to normally engage said rack, and a spring secured to said support for holding said pawl in engagement with said rack, substantially as described.

2. A bracket for curtain poles and curtain shade rollers comprising a plate, a segment shaped rack carried thereby, a channel shaped support pivotally connected to said rack for holding one end of a curtain pole and curtain shade roller, and a spring pressed pawl carried by said support for engaging said rack and holding said support.

900,476. COVER FOR ELECTRIC BATTERIES. HORATIO J. BREWER, New York, N. Y. Filed May 29, 1908. Serial No. 435,625.

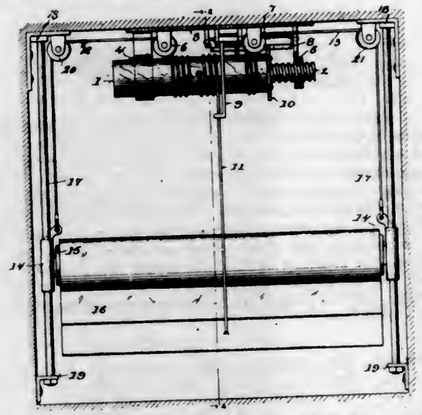


1. In an electric battery of the character designated, the combination with the rim of the mouth of the jar of a cover formed with a slot for the carbon negative plate,

said slot extending through the edge of the cover for the reception of said carbon negative plate, and said carbon negative plate formed with a broad flat portion adapted to fit in said slot in the cover, and with lateral shoulders adapted to rest upon the upper edges of said slot, for the purpose described.

2. In an electric battery of the character designated, the combination with the jar of a cover formed with a radially arranged slot for the reception of the carbon negative plate, said carbon negative plate formed with shoulders resting upon the edges of said radial slot, a hole for the positive zinc rod electrode formed in the cover on the side thereof opposed to that in which said radial slot is formed and of a diameter sufficiently larger than that of the zinc electrode to admit of the inclination of the longitudinal axis of the latter, the surface of the cover around the mouth of said hole being inclined toward the center of the cover, and said positive zinc rod electrode provided with an annular shoulder thereon occupying a plane at right angles to the longitudinal axis of the rod and engaging with said inclined surface on the top of the cover, for the purpose described.

900,477. ADJUSTABLE WINDOW-SHADE FIXTURE. ORESTES S. BROWN, Milwaukee, Wis. Filed Oct. 26, 1907. Serial No. 399,253.

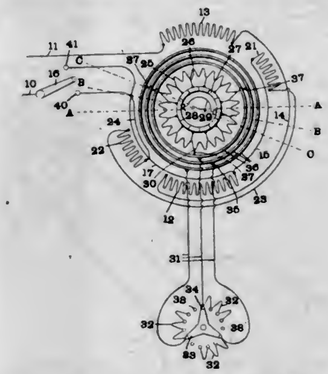


1. The combination of suspending brackets, a roller having a screw-extension and engaging the brackets one of which is a stationary nut for the screw, a pair of cords in connection with the roller, suitably arranged pulleys on which said cords are trained, a shade having the roller thereof suspended by said cords, an operating-cord in connection with the roller first aforesaid to wind and unwind opposite the other cords, a ratchet in connection with the cord-roller, a detent of a length sufficient to be engageable with the ratchet in any position of same, and a bell-crank lever having one arm thereof arranged under the detent, its other arm being provided with a loop engaged by the operating-cord and normally at such an angle that direct down-pull on said cord will actuate said lever to trip the detent from the ratchet.

2. The combination of suspending brackets one of which constitutes a stationary nut, a roller and screw-extension of the same engaging the brackets, a pair of cords in connection with the roller, suitably arranged pulleys on which the cords are trained, a shade having the roller thereof suspended by said cords, an operating-cord in connection with the roller first aforesaid to wind and unwind opposite the other cords, a ratchet in connection with the cord-roller, a detent of suitable length engageable with the ratchet, and a trip-lever for the detent controlled by the operating-cord with which it is engaged at such an angle as to be actuated by direct down-pull of said operating cord to trip said detent, automatic reëngagement of the detent with the ratchet being a result of slacking the aforesaid operating-cord or of an outward pull of same.

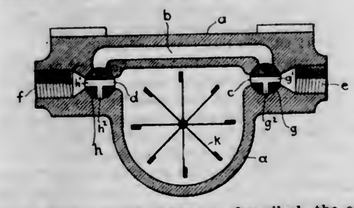
3. The combination of suspending brackets one of which constitutes a stationary nut, a roller and screw-extension of same engaging the brackets, a pair of cords in connection with the roller, suitably arranged pulleys on which the cords are trained, a shade having the roller thereof suspended by said cords, an operating-cord in connection with the roller first aforesaid to wind and unwind opposite the other cords, and means controlled by the operating-cord for stopping and releasing the cord-roller.

900,478. ALTERNATING-CURRENT MOTOR. JAMES H. BRYSON, St. Louis, Mo., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Oct. 7, 1907. Serial No. 396,202.



In an electric motor, the combination with a pair of relatively rotatable members, of means for producing definite poles in one of said members, and a pair of windings for the other of said members, one of said windings producing poles at one side of the poles of said first member, and the other of said windings coöperating with all of said first winding to shift said poles to the other side of the poles of said first member.

900,479. BY-PASS. EDWIN BURHORN, Hoboken, N. J. Filed Sept. 16, 1907. Serial No. 393,058.



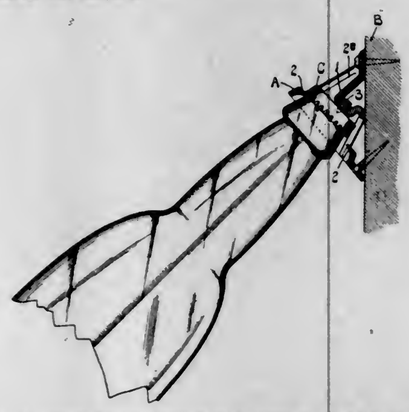
1. In a device of the character described, the combination of a casing for a water meter, with a passage therein opening into the supply and discharge mains, valves at the ends of said passage whereby the water may be turned into the meter or diverted therefrom through the said passage, and means for locking the valves against movement, substantially as shown and described.

2. In combination, a casing composed of a main portion and a by-pass passage which has its ends terminating at points adjacent said main portion of the casing, said by-pass passage being independent of said main portion of the casing, a valve seat at each end of said by-pass passage, communicating with said main portion of the casing, and manually operable valves in said valve seats constructed in one position thereof to allow of the passage of fluid

through the main portion of the casing, and in another position thereof, to allow of the passage of the fluid through said by-pass passage.

3. In combination, a casing composed of a main portion and a by-pass passage which extends around one side of said main portion and is independent of the latter and has its ends terminating adjacent the ends of said main portion, a valve seat at the termination of each end of said by-pass passage communicating with said passage and with said main portion, and a manually operable turning plug, in each valve seat, each plug having a main aperture therein to allow of the flow of liquid through said main portion in one position of the plugs and a branch aperture to allow of the flow of the liquid through said valves and through said by-pass passage in another position of said valves.

900,480. BOTTLE-OPENER. AUGUST A. BUSCH, St. Louis, Mo., assignor of one-third to Otto S. Busch and one-third to Morris Freund, St. Louis, Mo. Filed May 11, 1908. Serial No. 432,175.



1. A bottle-opener comprising a member provided with means for removing a closure cap from a bottle, and a removable device on said member for forming an indentation or perforation in the top face of said cap during the operation of removing same; substantially as described.

2. A bottle-opener consisting of a member provided with a post against which a bottle-closure is pressed, means cooperating with said post for removing the closure, and a removable device on said post for forming an indentation or perforation in the closure during the operation of removing same; substantially as described.

3. A bottle-opener consisting of a member provided with a post against which a bottle-closure is pressed, means cooperating with said post for removing the closure, and a sharp-pointed device adjustably mounted in said post for forming a perforation in the closure during the operation of removing same; substantially as described.

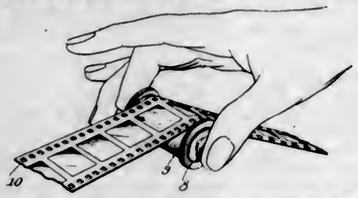
4. A bottle-opener comprising a member that is adapted to be connected to a support, side walls on said member, inwardly extending lips arranged between said side walls, a post centrally arranged between said lips, and an indenting or perforating member carried by said post for forming an indentation or perforation in the closure during the operation of removing same; substantially as described.

900,481. PULLEY. CLARENCE C. CAMPBELL, Los Angeles, Cal. Filed Feb. 17, 1908. Serial No. 416,210.

1. A device of the class described, comprising, a spindle provided on one end thereof with a thimble, and a sheave rotatively mounted on said spindle.

2. A device of the class described, comprising, a spindle provided with means for detachably securing it to a finger, and a sheave mounted on said spindle.

3. A device of the class described, comprising, a spindle provided on one end thereof with a finger attaching means, and a flanged sheave rotatively mounted on said spindle.

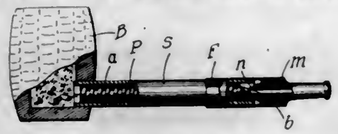


4. A device of the class described, comprising, a spindle provided on one end thereof with finger attaching means, and a sheave having a resilient face rotatively mounted on said spindle.

5. A device of the class described, comprising, a spindle adapted for placement on a finger, and a sheave rotatively mounted on said spindle.

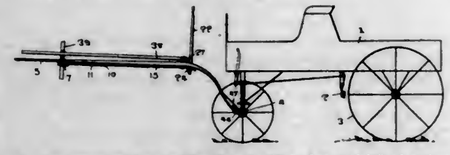
[Claims 6 to 11 not printed in the Gazette.]

900,482. SMOKING-PIPE. WILLIAM O. CAMPBELL, St. Louis, Mo. Filed Jan. 6, 1908. Serial No. 409,472.



A smoking-pipe comprising a bowl, an open-ended hollow stem carried by the same, a mouth-piece at the outer end of the stem, a nipple formed at the inner end of the passage of the mouth-piece and having inner tapering walls, a plug within the stem and engaging the inner walls of the stem, the said plug having a peripheral spiral formation forming a circuitous passage for the smoke, the end of the plug adjacent the nipple beveling sufficiently to pass between the tapering walls of the nipple and stem, and permit the smoke discharged from the passage to enter the nipple and the passage of the mouth-piece, substantially as set forth.

900,483. HORSE-DETACHER. JOHN R. CLAXTON, Doon, Iowa. Filed June 2, 1908. Serial No. 436,277.



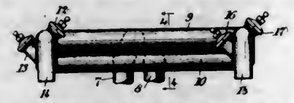
1. In combination with the shafts of a vehicle having breech hooks thereon and having a whiffle-tree provided with trace hooks; of plates carried by the cross bar of the shafts, a lever pivoted between the plates, connections between the lever and the trace hooks and the breech hooks, whereby a movement of the lever in one direction will impart movement to said hooks, and means carried by one of the plates acting in conjunction with the lever for holding the lever against return movement when said lever has been moved in one direction.

2. In combination with the shafts of a vehicle having breech hooks thereon and having a whiffle-tree provided with trace hooks; of plates carried by the cross bar of the shafts, a lever pivoted between the plates, connections between the lever and the trace hooks and the breech hooks, whereby a movement of the lever in one direction will impart movement to said hooks, a gravity dog pivoted to one of the plates, said dog having an L-shaped slot therein, the stem of the slot extending upwardly and a post on the lever projecting through the slot.

900,484. REMEDY FOR COUGHS OF HORSES. JAMES COLTER, Durhamville, N. Y. Filed May 4, 1908. Serial No. 430,880.

The herein-described composition of matter, consisting of spirits of niter, spirits of turpentine, sulfur, animal skunk-oil, pumpkinseed oil, and kerosene substantially as described and for the purpose specified.

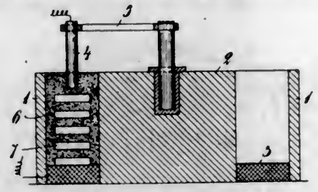
900,485. CONNECTION FOR WATER-RECEPTACLES. EDWARD F. COOK, Freeport, N. Y. Filed Mar. 27, 1908. Serial No. 423,559.



1. The combination of a substantially U-shaped member provided with two separate barrels and with a partition separating said barrels and integral therewith, said barrels at their ends being merged together, a pair of separate valves mounted adjacent to each end of said U-shaped member for controlling the barrels thereof independently of each other, and pipes connected substantially in the center of said U-shaped member, one of said pipes communicating with one of said barrels, and another of said pipes communicating with the other barrel.

2. The combination of a U-shaped pipe member consisting of two barrels secured together throughout their entire lengths, a tub upon which said U-shaped member is mounted, the middle portion of said U-shaped member being back of said tub and the ends of said U-shaped member extending through the walls of said tub into the interior thereof, the barrels of said U-shaped member being disposed one above the other to facilitate the heating of the upper barrel or the lower barrel, separate hand valves connected with the respective barrels, and separate pipes for supplying hot water to one barrel and cold water to the other barrel.

900,486. ELECTRIC FURNACE. ERIK CORNELIUS, Trollhättan, Sweden. Filed July 9, 1908. Serial No. 442,755.



1. An electric furnace for the purpose set forth, comprising an annular chamber, a fixed electrode in and coextensive with the bottom of said chamber, and a movable electrode arranged to travel along the top of the chamber.

2. An electric furnace for the purpose set forth, comprising an annular chamber, an annular electrode therein, and an electrode point in the chamber, one of said electrodes being movable relative to the other electrode.

3. An electric furnace provided with a ring-shaped operating chamber and with an electrode movable along the said chamber, a radial arm carrying the movable electrode, and a rotary support for said arm mounted centrally in the furnace whereby the operations of charging, heating and discharging may be effected simultaneously, substantially as described and for the purpose set forth.

900,487. BASKET. AMOS H. CRAWFORD, Liverpool, N. Y. Filed Oct. 12, 1906. Serial No. 338,506.

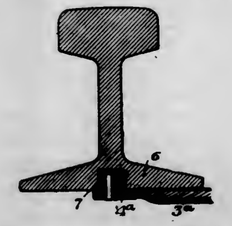
1. A willow basket bottom composed of a board disposed in a plane below the base of the body of the basket and constituting the central and main portion of said bottom, rigid spurs projecting horizontally from the edges of the said board, and the marginal portion of the bottom consisting of willows woven on said spurs and supported thereby in a plane above the bottom of the board.



2. A basket having its bottom composed of a board constituting the central section of the bottom, nails driven into the edges of said board and projecting outward therefrom, a marginal bottom-section composed of wickers woven on said nails, and the standards having their lower ends turned inward and passing between the woven wickers of the aforesaid marginal section of the bottom as set forth.

3. A basket having its bottom composed of a rigid central board, nails driven into the edges of said board and extending outward in a plane above the bottom of the board, a bottom-section surrounding the board and formed from woven wickers receiving between them the aforesaid nails, standards having their lower ends turned inward to the central board and inserted between the wickers of the bottom section, rods extending upward from the bottom of the basket and united above the top of the basket by a transverse portion of the jointed rods, a handle embracing said transverse portion, and the lower ends of said rods formed with loops projecting below the wicker portion of the bottom and terminating in inwardly extending prongs fastened to the bottom of the basket as set forth.

900,488. RAIL-BOND. FRED H. DANIELS and CHARLES R. STURDEVANT, Worcester, Mass., assignors to American Steel & Wire Company, Chicago, Ill., a Corporation of New Jersey. Filed Dec. 1, 1906. Serial No. 345,899.



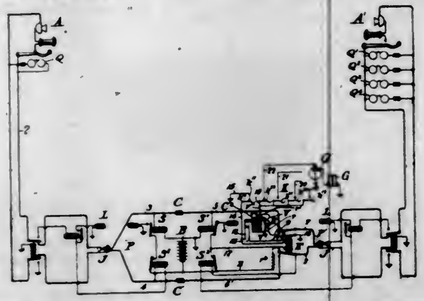
1. A rail having a hole with a closed bottom, a terminal stud expanded within the hole and provided with a longitudinal recess opening through the outer end of the stud and terminating short of the opposite end thereof, and an expanding pin driven into the recess, the bottom wall of the hole protecting the stud and also forming an anvil or backing therefor.

2. A rail having a hole provided with a closed bottom and an annular groove or recess in the wall of the hole, a terminal stud expanded within the groove of the hole and provided with a longitudinal recess opening through the outer end of the stud and terminating short of the inner end thereof, and an expanding pin driven into the recess, the bottom wall of the hole protecting the stud and also forming an anvil or backing therefor.

900,489. TELEPHONE-EXCHANGE SYSTEM. WILLIAM W. DEAN, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed Oct. 18, 1906. Serial No. 339,476.

1. In a telephone exchange system, an operator's cord circuit and calling plug, a ringing relay adapted to con-

nect the generator to line, and a static relay controlling the ringing relay.



2. An automatic ringing device for telephone systems, comprising a ringing relay having line and generator connections, an operator's key adapted to momentarily close the relay circuit, short circuit contacts controlled by the relay so that when energized it will lock itself, and statically operated means controlled by the wanted subscriber to break the relay locking circuit.

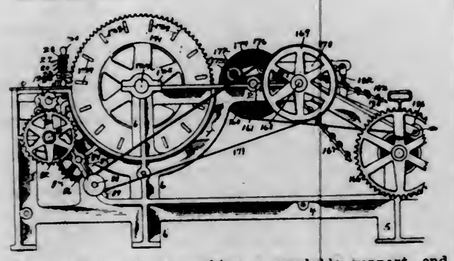
3. In a telephone system, a cord circuit automatic ringing device comprising a ringing relay, an operator's key adapted to temporarily close the circuit of said relay, a locking circuit closed through itself by the relay when energized, and statically operated means then becoming associated with the wanted subscriber's line circuit, adapted to brake said locking circuit when the subscriber removes his telephone.

4. In a telephone system, a cord circuit automatic ringing device comprising a ringing relay, a generator circuit adapted to be connected to line, a locking circuit closed by the relay through itself when energized, statically operated means for breaking the locking circuit, and means included in the generator circuit adapted to control said statically operated means.

5. In a telephone system, a cord circuit automatic ringing device comprising a ringing relay, a generator circuit adapted to be connected thereby to line, a locking circuit closed by the relay through itself when energized, means for breaking the locking circuit, and an induction coil responsive to an act of the called subscriber for operating the locking-circuit-breaking means.

[Claims 6 to 11 not printed in the Gazette.]

900,490. WIRE-FENCE-MAKING MACHINE. JOSEPH M. DENNING, Cedar Rapids, Iowa. Filed Sept. 16, 1905. Serial No. 278,758.



1. In a wire fence machine, a revoluble support, end coiling devices mounted in a longitudinal row on said support and operating to coil the overlapping ends of the sections of a transverse stay around the strand wires, and means carried by said support and movable longitudinally beneath the end coiling devices and operative within the support to give the end coilers a forward and backward rotation of equal duration with each complete revolution ofthe support, substantially as described.

2. In a wire fence machine, a revoluble support, end coiling devices arranged in parallel rows on the support and adapted to receive strand wires and operating to coil the overlapping ends of the sections of a transverse stay around the strand wires, and means in coacting relation to said support for feeding the sections of the transverse stay to the support and in operative relation to the end coilers, substantially as described.

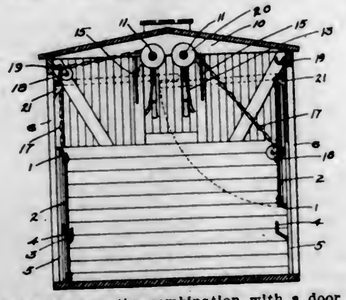
3. In a wire fence machine, a revoluble support, several sets or rows of end coilers mounted on the support, each end coiler adapted to receive a strand wire, means in coacting relation to said support for feeding the sections of a transverse stay to the support during the movement of the latter, and means for operating the end coilers to connect the transverse stay to the strand wires by coiling the overlapping ends of the stay sections transversely around the strand wires, said means operative to give the end coilers a forward and backward rotation of equal duration with each complete revolution of the support, substantially as described.

4. In a wire fence machine, a revoluble drum, means on the drum for continuously drawing the strand or running wires of the fence fabric circumferentially over said drum, and end coilers mounted on said drum in position to receive said strand or running wires and operating to coil the overlapping ends of the sections of a transverse stay around the strand or running wires, uniting the stay sections with the strand or running wires and extending longitudinally of the drum, substantially as described.

5. In a wire fence machine, a revoluble drum, means on the drum for continuously drawing the strand or running wires of the fence fabric circumferentially over said drum, end coilers mounted on said drum in postion to receive said strand or running wires and operating to coil the overlapping ends of the sections of a transverse stay around the strand or running wires, uniting the stay sections with the strand or running wires and extending longitudinally of the drum, a reel for the completed fence and operating to draw the strand or running wires of the fence over and away from said drum, and means for continuously driving said drum and reel, substantially as described.

[Claims 6 to 151 not printed in the Gazette.]

900,491. GRAIN-CAR DOOR. ABNER J. DENTON, Nebraska City, Nebr. Filed Dec. 18, 1907. Serial No. 407,078.



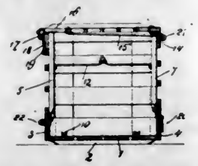
1. In a grain car, the combination with a door having vertical outwardly extending flanges at the sides thereof, of guides secured to the door-posts, rollers held within said guides, and plates resting against said rollers, the flanges at the sides of the door being arranged to engage said plates, substantially as described.

2. In a grain car, the combination with a door having vertical outwardly extending flanges at the sides thereof, of guides secured to the door posts, rollers held within said guides, means for spacing and supporting said rollers, and plates held by each of said guides and resting against said rollers, the flanges at the sides of the door being arranged to engage said plates, and the arrangement being such that the plates may move up with the door when the same is raised while under pressure of grain.

3. In a grain car, a vertically slidable door, hooks disposed near the roof of the car above the door and adapted to support the same when engaged therewith, a hoisting-shaft disposed near the center of the car and extending longitudinally near the roof thereof, chains connecting said shaft and the door, and pulleys engaged by said chains and removably held near the supporting-hooks, as and for the purpose described.

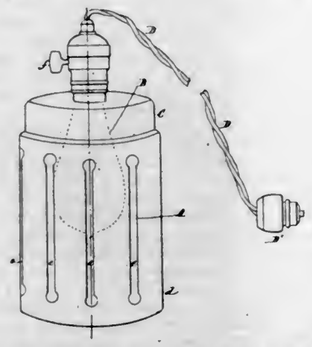
4. In a grain car, a door, anti-friction devices arranged between the door and door-posts, means disposed above the door near the car roof for swingably supporting the door, a hoisting-shaft and chains adapted to raise the door vertically, and pulleys engaged by said chains, the said pulleys being releasable to change the direction of pull of the chains upon the door, whereby the same after being lifted and engaged with the supporting means may be swung upwardly to a position adjoining the car roof.

900,492. FOLDING BOX OR CRATE. JOHN H. DERBY and EDWARD E. DERBY, Greensburg, Pa. Filed Mar. 6, 1908. Serial No. 419,494.



A folding crate comprising a bottom, a front board carried by said bottom, a rear board carried by said bottom, a front wall hinged to said front board and provided with slots, a rear wall hinged to said rear board, end walls pivotally connected to said bottom, said front and rear wall having grooves to receive the vertical edges of said end walls, eyelets carried by said rear wall, a lid or cover, rods connected at one end to said lid or cover and extending through said slots and engaging in said eyelets, said rods having the other end thereof looped and connected to said cover, hooks carried by said rear board, adapted to engage in the loop shaped ends of said rods for maintaining said crate in a collapsed form, and means carried by the front edge of said lid or cover for maintaining said lid or cover in a closed position.

900,493. APPLIANCE FOR THE CURE OF RHEUMATISM AND OTHER DISEASES. DANIEL R. DEWEY, Hamilton, Ontario, Canada. Filed Dec. 26, 1907. Serial No. 408,053.



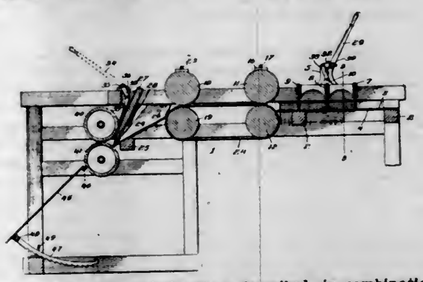
1. An apparatus for the cure of disease, comprising a glass receptacle, an incandescent electric lamp inclosed in the receptacle, a perforated inner coating of a non heating substance as asbestos, felt, paper or kindred substance, lining the interior of the glass receptacle, and a perforated jacket or coating of a similar substance covering the outside of the said glass receptacle, perforations or openings in the inner and outer coverings to register or made opposite each other, so as to emit the rays of the electric lamp through the glass at the openings, and a cord or wire connecting the lamp inclosed in the receptacle with an electric wire to supply a current of electricity to the lamp, substantially as and for the purpose specified.

2. An apparatus for the cure of disease comprising a blue glass receptacle, a lamp inclosed in the receptacle, a perforated inner and outer coating of a non-heating substance as asbestos, felt, paper &c., covering the interior and exterior surface of the said glass receptacle, the said perforations or openings to register on both sides to emit the rays of light and heat from the lamp, and means to conduct the source of light and heat to the lamp.

3. An apparatus for the cure of disease comprising a transparent receptacle of blue color, a lamp inclosed in the said transparent receptacle, a perforated inner and outer coating of a non-heating substance as asbestos, felt, paper &c., covering the interior and exterior surface of the said glass receptacle, the said perforations to be in line with each other on both sides, to emit the rays of heat and light from the lamp and means to light the lamp.

4. An apparatus for the cure of diseases comprising a single blue glass receptacle of any form inclosing an electric light filament to produce light and heat, the said receptacle covered with a perforated non-combustible substance, as asbestos or kindred substance, the said receptacle having its filament connected with an electric wire to carry a current of electricity, for the purpose specified.

900,494. FIBER STRIPPING AND CLEANING MACHINE. SIDNEY O. DICKINSON, Manila, Philippine Islands. Filed July 16, 1907. Serial No. 384,084.



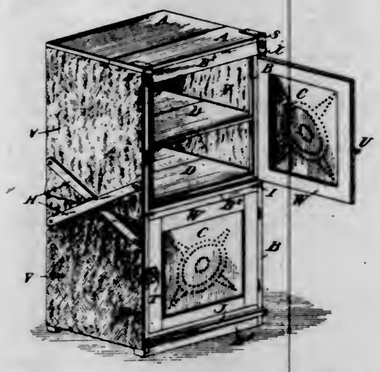
1. In a machine of the class described, in combination with fiber stripping and pulling mechanisms, an inclined bed to which the fiber is fed by the pulling mechanism, a scraping blade also inclined and converging to the lower discharge end of said bed, means to adjust said blade and means in rear of said bed to discharge the fiber therefrom.

2. In a machine of the class described, the combination of a plate or table having openings, a plurality of stripping blades to bear on the same and having serrations at their bearing edges varying in size in the respective blades, and means to pull the stock between said plate or table and the bearing edges of said blades.

3. In a machine of the class described, in combination with fiber stripping and pulling mechanisms, an inclined bed to which the fiber is fed by the pulling mechanism, a scraping blade also inclined and converging to the lower discharge end of said bed, means to adjust said blade, means in rear of said bed to discharge the fiber therefrom and an inclined receiver in rear of such discharging means and provided with means whereby the inclination of such receiver may be varied.

4. In a machine of the class described, in combination with fiber stripping and pulling mechanisms, a bed to which the fiber is fed by the pulling mechanism, a scraping blade to bear on said bed, means to raise and lower said scraping blade and vary the pressure thereof, and heating and drying rollers in rear of said bed and scraping blade engaging the fiber in rear of said bed and scraping blade.

900,495. FOLDING CAMP-CUPBOARD. ISAM B. DODSON, Milan, Mo. Filed Apr. 13, 1907. Serial No. 368,024.



1. A knockdown cabinet comprising two opposed walls each composed of sections, means for foldably connecting the sections of one wall, means detachably connecting the sections of the other wall, and foldable elements connected with the walls for holding the latter in set-up position.

2. A knockdown cabinet comprising two opposed walls each composed of two sections, hinges connecting the meeting ends of the sections of one wall, means for detachably connecting the sections of the other wall together, bracing members connecting the walls together and holding them spaced apart, each member consisting of jointed parts, and hinges connecting the members with the walls.

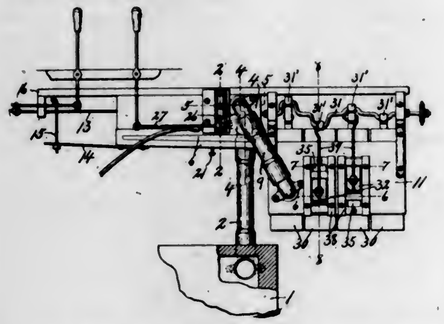
3. A knockdown cabinet comprising front and rear walls composed of sections, means connecting the sections of one wall together at their meeting ends for permitting one section to fold back against the other, means for detachably connecting the meeting ends of the sections of the other walls together, foldable elements permanently connecting the sections of one wall with the corresponding sections of the other wall, flexible closures for the sides of the cabinet, rods at the sides of the cabinet pivotally connected with one wall and detachably connected with the other wall for holding the walls in set-up position, and a cover hingedly connected with one wall and detachably connected with the other wall and arranged to secure the sections of the walls together when the cabinet is knocked down.

4. A knockdown cabinet comprising front and rear walls composed of sections, hinges permanently connecting the sections of one wall together, means for detachably connecting the sections of the other wall together, foldable elements disposed between and connected with the walls, a cover hingedly connected with one wall and composed of hingedly connected parts, one part of the cover being arranged to extend across the ends of the wall sections when the cabinet is folded and the other part being adapted to fold down at an angle to the first-mentioned part against the outermost wall section for preventing the parts of the cabinet from unfolding, and a fastening device for holding the cover in place.

5. A knockdown cabinet comprising a front wall consisting of hingedly connected frames, doors carried by the frames, a back wall composed of sections, a plate for detachably connecting the said sections together, a cover hingedly connected with the upper section, foldable elements disposed between and connected with the walls, the frames of the front wall being foldable back against each other and the sections of the rear wall being carried by the said frames during the folding of the latter, means for securing the cover across the frames and sections at one end, and means for securing the said plate across the frames and sections at the opposite end when the cabinet is folded.

[Claim 6 not printed in the Gazette.]

900,496. MOTOR-ACTION FOR SELF-PLAYING MUSICAL INSTRUMENTS. LEWIS B. DOMAN, Elbridge, N. Y., assignor to Amphion Piano Player Company, Elbridge, N. Y., a Corporation of New York. Original application filed Aug. 8, 1906, Serial No. 329,692. Divided and this application filed Sept. 26, 1906. Serial No. 336,339.



1. In a motor action for self-playing musical instruments, a wind chest having exhaust ports and atmosphere ports, motor pneumatics communicating with the atmosphere ports, means actuated by the motor pneumatics for opening and closing the atmosphere ports and alternately connecting them with the exhaust port, an exhaust device, a governor pneumatic forming a part of a connection between the exhaust device and exhaust port of the wind chest and provided with a valve for partially cutting off communication as the air tension increases, and pneumatic means for establishing direct communication between the exhaust device and wind chest outside of the governor pneumatic.

2. In a motor action for self-playing musical instruments, a pneumatic motor including a wind chest, an exhaust device, connections between the exhaust device and wind chest including a governor pneumatic forming a part of such connection, and a valve mounted directly upon the movable side of the governing pneumatic for reducing the air tension in the motor as the air tension in the pneumatic increases and means including a primary pneumatic for establishing direct communication between the exhaust device and said wind chest outside of the governor pneumatic.

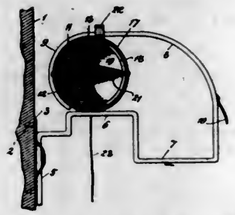
3. In a motor action for self-playing musical instruments, a pneumatic motor including a wind chest, an exhaust device, connections between the exhaust device and wind chest including a governor pneumatic for regulating the air tension in the motor, said governor pneumatic forming a part of the connection between the exhaust device, and pneumatic means for establishing direct communication between the exhaust device and wind chest, outside of the governor pneumatic.

4. In a motor action for self-playing musical instruments, an exhaust device, a pneumatic motor including a wind chest, a governor pneumatic for regulating the air tension in the wind chest, a valve chamber communicating with the governor pneumatic and connected directly to the wind chest, a valve controlling communication between the valve chamber and governing pneumatic, an exhaust chamber connected to the exhaust device and communicating with said governor pneumatic, a valved port connecting the valve chamber with said exhaust chamber, a self-closing valve for said port, and pneumatic means for opening said valve to establish direct communication between the exhaust device and wind chest outside of the governor pneumatic.

5. A motor action for self-playing musical instruments comprising an exhaust device, a wind-chest having an exhaust port and atmosphere ports, the exhaust port communicating with the exhaust device, pneumatics each connected to one of the atmosphere ports, a valve covering the exhaust port and alternately connecting the atmosphere port thereto, means actuated by the motor pneumatics for actuating said valve, a governing pneumatic in and forming a part of the connection between the exhaust device and exhaust port, and pneumatically operated means for establishing direct communication between the exhaust device and wind chest.

[Claim 6 not printed in the Gazette.]

900,497. CURTAIN-POLE. FRANCIS V. DONNELLY, Greensburg, Pa. Filed Apr. 30, 1908. Serial No. 430,195.

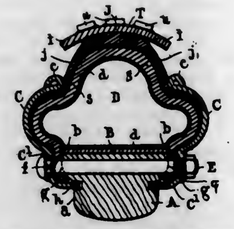


1. The combination of brackets, each bracket comprising a permanent support, a temporary support, a guide and a hook-shaped support, a stationary semi-cylindrical member carried by said permanent and said hook-shaped supports, said member comprising telescopic shells, plates closing the outer ends of said shells, a movable member slidably connected to said guides and adapted to be moved to said temporary supports, said movable member comprising telescopic shells, springs connecting the shells of said movable member to the shells of said stationary member, and means carried by said guides for holding said movable member upon said temporary supports.

2. The combination with brackets, of a stationary member carried thereby, a movable member connected to said brackets and adapted to normally engage said stationary member, said members comprising telescopic shells, springs for holding said movable member in engagement with said stationary member, and means carried by said brackets for holding said movable member in an open position.

3. A curtain pole embodying a stationary member, a movable member, said members comprising telescopic semi-cylindrical shells, plates closing the outer ends of said members, and springs arranged between said members for normally holding said movable member in engagement with said stationary member, substantially as described.

900,498. PNEUMATIC TIRE. HORACE W. DOVER, Northampton, England. Filed Apr. 8, 1907. Serial No. 366,985.



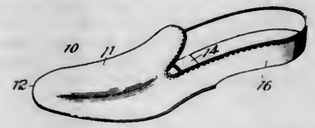
1. In a wheel provided with a pneumatic tire, the combination of a tire cover fastened to the sides of the wheel rim and having laterally extending hollow lobes situated radially beyond the point of attachment, a pair of side flanges gripping the said hollow lobes, and an inflatable inner tube confined between the cover and the wheel rim, in such manner that the internal pressure increases the grip of said lobes against the flanges, substantially as specified.

2. In a wheel provided with a pneumatic tire, the combination of a tire cover fastened to the sides of the wheel rim and having laterally extending hollow lobes situated radially beyond the point of attachment, a pair of side flanges gripping the said hollow lobes, and a circumferentially extending peripheral band secured to the rim and having its edges projecting beyond the sides of the rim and embedded in the tire cover.

3. In a wheel provided with a pneumatic tire, the combination of a tire cover fastened to the sides of the wheel rim and having laterally extending hollow lobes situated radially beyond the point of attachment, a pair of side flanges gripping the said hollow lobes, an inflatable inner tube confined between the cover and the wheel rim, and a tread band secured to the tire.

4. In a wheel provided with a pneumatic tire, the combination of a tire cover fastened to the sides of the wheel rim and having laterally extending hollow lobes situated radially beyond the point of attachment, a pair of side flanges gripping the said hollow lobes, an inflatable inner tube confined between the cover and the wheel rim, and a detachable tread band for the tire, said tread band being provided at its edges with beadings or projections adapted to engage the recesses or apertures of the said flanges, whereby the said band will be interlocked between the tire and flanges.

900,499. SHOE-PROTECTOR. AUGUST ECKHARD, Jr., New York, N. Y. Filed Mar. 9, 1908. Serial No. 419,928.



A shoe protector having a body portion, a strap adapted to fit around the rear of the shoe, a short angular metallic tip having one part thereof embedded within the body portion and the other part extending inward and adapted to engage under the sole of the shoe, and a narrow integral part extending transversely of the strap and adapted to engage under the instep of the shoe and to provide an open space between the tip and said transverse part for the sole.

900,500. PROCESS OF PURIFYING GASES CONTAINING SULFUR DIOXID. GEORG ESCHELLMANN, St. Petersburg, Russia. Filed May 8, 1907. Serial No. 372,501.



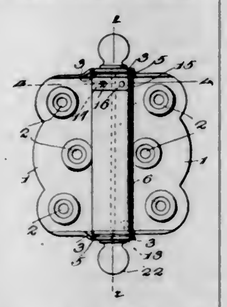
1. The process of purifying burner gases which consists in separating dust therefrom, cooling the gases and condensing sulfuric acid by contact with cooled surfaces, removing residual dust and sulfuric acid vapors by filtration, and thereafter subjecting the gases to a solution of metallic hydroxid to absorb chlorin.

2. The process of purifying burner gases which consists in separating dust therefrom, cooling the gases and condensing sulfuric acid by contact with cooled surfaces, removing residual dust and sulfuric acid vapors by filtration, and thereafter subjecting the gases to milk of lime to absorb chlorin and precipitate residual impurities.

900,501. SCREEN-DOOR SPRING-HINGE. ALBERT FALKENRATH, Racine, Wis., assignor to Racine Metal Stamping Company, Racine, Wis., a Corporation of Wisconsin. Filed Jan. 15, 1908. Serial No. 410,893.

In a spring-hinge, the combination with a pair of leaves bent at their upper and lower edges to form pintle receiv-

ing ears, the ears on one of the leaves being bent outwardly to form a cup-shaped seat or bearing for the ears of the other leaf, and washers seated on said pintle between the respective bearing portions of the leaves, of a barrel confined between the ears of the shorter leaf, rotatable, slotted and perforated heads closing the ends of said barrel, a



spring therein having its ends seated in said heads, a pintle threaded through the leaf ears and the barrel heads, pins seated in the perforations of the heads to prevent the rotation thereof, and a pin adapted to be inserted in the perforation in the head to rotate the same to tighten the spring, as set forth.

900,502. ELECTRODE FOR ELECTROLYTIC PURPOSES. PAUL FERCHLAND, Berlin, and JOSEPH NUSSBAUM, Charlottenburg, Germany. Filed Nov. 5, 1906. Serial No. 342,140.



1. The herein described process for making electrodes for electrolytic purposes, consisting in dipping suitable conductors into a solution of a lead salt to form the anode and the cathode of an electric current, passing an electric current through the said conductors and the solution, until a deposit of considerable thickness has formed on the anode, and then removing the original conductor forming the anode.

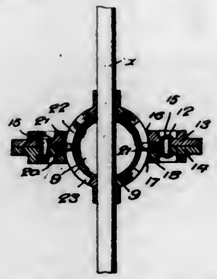
2. The herein described process of making electrodes for electrolytic purposes, consisting in coating a non-conductor of electricity with a thin layer of peroxid of lead and then depositing peroxid of lead upon said layer by dipping the said non-conductor coated with a conducting layer into a solution of a lead salt to form the anode of an electric current, another suitable conductor forming the cathode of the said current, and then passing an electric current through the said conducting layer, the solution and the conductor forming the cathode.

3. The herein described process for making electrodes for electrolytic purposes, consisting in dipping suitable conductors into a solution of a lead salt to form the anode and the cathode of an electric current, passing an electric current through the said conductors and the solution, until a deposit of considerable thickness has formed on the anode, and then separating the said deposit from the said conductor forming the original anode.

4. The herein described process for making electrodes for electrolytic purposes, consisting in dipping suitable conductors into a solution of a lead salt to form the anode and the cathode of an electric current, rotating the said anode and at the same time passing an electric current through the said conductors and the solution, until a deposit of considerable thickness has formed on the said anode, and then separating the said deposit from the said conductor forming the original anode.

5. The herein described process for making electrodes for electrolytic purposes, consisting in coating a non-conductor of electricity with a thin layer of peroxid of lead and then depositing peroxid of lead upon said layer by dipping the said non-conductor coated with a conducting layer into a solution of a lead salt to form the anode of an electric current, another suitable conductor forming the cathode of the said current, then rotating the said non-conductor and at the same time passing an electric current through the said conducting layer, the solution and the said cathode.

900,503. DRIVING MECHANISM FOR SWINGING AXLES. ALLEN H. FETZER, Galion, Ohio, assignor of one-eighth to Grover M. Shumaker and one-third to Melvin E. Shumaker, Galion, Ohio. Filed Nov. 30, 1907. Serial No. 404,478.



1. A mechanism of the character described, comprising an axle equipped with a ball having cavities in its periphery, the side walls of said cavities being convex and their end-walls being concave and a sectional sprocket whose sections are provided with central alining openings with their walls curved inwardly to conform to the periphery of said ball and means projecting from, and secured between said sprocket-sections, for engagement with said cavities.

2. A driving mechanism for swinging axles, comprising the combination with an axle; of a ball fixed to said axle, said ball having cavities around the periphery thereof, the side walls of said cavity being convex and the end walls concave; of a sprocket having an opening therein to receive said ball, the wall of said opening being concave and means on said sprocket adapted to enter said cavities and cause the sprocket to drive the ball and axle when power is applied to the sprocket.

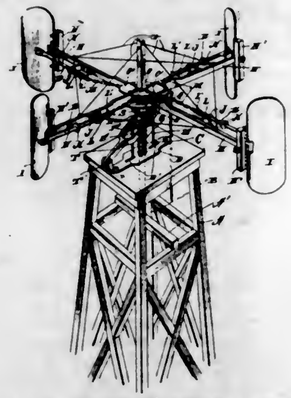
3. A driving mechanism for axles, comprising the combination with an axle; of a ball fixed to said axle, said ball having cavities around the periphery thereof, the side walls of said cavities being convex and their end-walls being concave; a sprocket having an opening to receive said ball, the wall of said opening being concave and stems carried by the sprocket and adapted to enter said cavities on the ball and rotate the ball when power is applied to the sprocket.

4. A driving mechanism for axles, comprising the combination with an axle; of a ball fixed to said axle, said ball having cavities in its periphery, the side walls of said cavities being convex and their end walls being concave, a sprocket having an opening therein to receive the ball, stems depending from said sprocket and adapted to enter said cavities, means to removably secure the stems to the sprocket and friction rollers on said stems.

5. A driving mechanism of the class described, comprising a ball having cavities in its periphery; of a sprocket formed in two sections, said sections having openings therein to receive the ball, the walls of said openings being concave when assembled together, stems adapted to enter said cavities, heads on said stems, said sections having dove-tailed recesses to receive said heads and friction rollers on said stems.

[Claim 6 not printed in the Gazette.]

900,504. WINDMILL. RICHARD G. FINCH, Plainville, Kans., assignor of one-half to A. E. Finch, Plainville, Kans. Filed May 8, 1908. Serial No. 431,701.



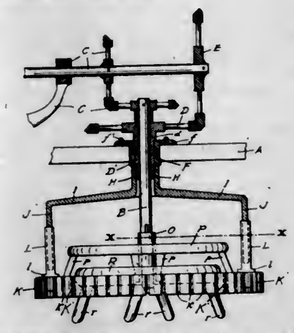
1. A wind mill comprising a vertically disposed rotatable shaft, a tower, a bearing for the lower end of said shaft, arms fixed to said shaft, a wing hinged to each arm, a spring-pressed flanged collar mounted upon said shaft and adapted to rotate with the latter, means for moving said collar longitudinally upon said shaft, eyes upon a flange of said collar, a rod pivotally connected to each wing, an apertured guide finger upon each arm and through which said rod passes, a collar upon each rod and designed to contact with one of said fingers to limit the movement of each rod in one direction, a spring interposed between the inner end of each rod and guide finger, a pulley upon each arm, a chain fastened at its outer end to one of said rods, passing over said pulley and connected to said flanged collar, as set forth.

2. A wind mill comprising a tower, a pivotal point mounted upon a cross-piece thereof, a vertically disposed shaft journaled upon said point, apertured plates through which said shaft passes, rods connecting said plates, a flanged collar swiveled to one of said plates and to said shaft, a spring interposed between said collar and the platform of the tower, serving to normally hold the plates at their farthest upper throw, a lever mechanism for moving said plates against the tension of said spring, a flanged collar swiveled to one of said plates and to said shaft, arms radiating from said shaft, a hinged wing mounted upon each arm, a rod pivoted to each wing, an apertured guide finger upon each arm through which said rod passes, and chain connections between said rods and flanged collar, as set forth.

900,505. WASHING-MACHINE. JOHN C. FLOWERS, St. Joseph, Mo. Filed July 11, 1907. Serial No. 383,244.

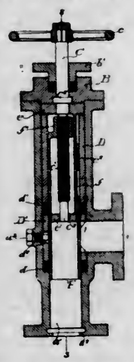
1. In a washing machine, a collar rigidly attached to a gear, a neck rigidly attached on said collar, beams projecting outward therefrom and arms thereon turned downward, a rub wheel and vertical sockets thereon, said arms engaging therewith to rotate said wheel and permit an up and down movement of said wheel, substantially as shown and described.

2. In a washing machine the combination with a central vertical revoluble shaft rigidly attached to a gear and a drag wheel supported thereby, of a collar around the upper end of said shaft rigidly attached to a reverse gear and revoluble in reverse direction from that of said shaft, a neck rigidly attached to said collar, beams projecting therefrom, downwardly turned arms thereon, a rub wheel and the vertical sockets thereon, said arms engaging therewith to rotate said wheel oppositely from the rotation of the shaft and permit an up and down movement, substantially as shown and described.



3. In a washing machine a central vertical revoluble shaft rigidly attached to a gear and a drag wheel carried thereby, a revoluble collar around the upper end of said shaft rigidly attached to a reverse gear, a neck rigidly attached to said collar, beams projecting outwardly therefrom and the downwardly turned arms thereof, a rub wheel having an open center and surrounding said drag wheel, a cap supported thereby, and the sockets on said rub wheel with which said arms engage rotating said rub wheel and cap in reverse direction from said shaft, substantially as set forth and shown.

900,506. BLOW-OFF VALVE. JOHN S. FORBES, Philadelphia, Pa. Filed June 13, 1907. Serial No. 378,759.



1. The combination in a valve, of a casing having openings in its side and at its ends, a cylindrical shell movable within the casing and having an opening capable of being brought opposite the side opening thereof, means for moving the shell, and a structure extending within the casing so as to form with the interior thereof a recess for the reception of that part of the shell having the side opening, substantially as described.

2. The combination with a casing having a cylindrical bore provided with side and end openings, a disk-shaped structure mounted in the casing and to one side of the side opening thereof, a shell longitudinally movable in the casing and fitting outside of said disk structure, with means for moving said shell to open or close the valve, substantially as described.

3. The combination in a valve, of a casing having inlet and outlet openings, a shell in the casing, means for moving the shell so as to close the valve, packing surrounding

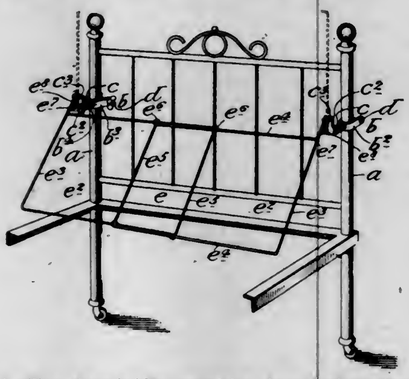
the shell to prevent leakage between the inlet and the outlet, means for moving the shell, and a device for tightening the packing said device being placed to be actuated by the continued operation of the shell moving means after the shell has been moved to its closed position, substantially as described.

4. The combination in a valve, of a casing having inlet and outlet openings, a shell longitudinally movable in the casing, bodies of packing surrounding the shell on both sides of the said opening, and means for moving the shell to close the valve, with a device actuated by said means for tightening the packing, substantially as described.

5. The combination in a valve, of a casing having an inlet and an outlet opening, a sleeve in the casing, a body of packing confined between one end of said sleeve and the casing and placed between the inlet and the outlet opening thereof, a shell in the casing, means for moving the shell to close the valve, and means for causing said shell moving means to exert pressure on the sleeve to cause the packing to prevent leakage around the shell, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

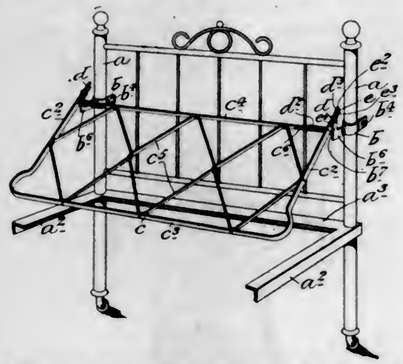
900,507. PILLOW-SHAM HOLDER. GEORGE A. FRANCIS, Westfield, N. J., assignor of one-half to Rufus S. Green, Westfield, N. J. Filed Jan. 18, 1908. Serial No. 411,483.



A pillow sham holder comprising clamp devices adapted to be connected with the head posts of a bedstead and provided with forwardly directed arms having upwardly directed flat extensions, the flat surfaces of which are in a plane parallel with the head portion of the bedstead, said upwardly directed extensions being provided with forwardly directed members having apertures formed therein, and a frame provided at its opposite corners with parallel rods which are passed through said apertures and formed into loops which secure said frame to said forwardly directed members, said loops being movable longitudinally in said members and acting in connection with the upwardly directed extensions of said arms to hold said frame in an upright position while permitting said frame to be lowered forwardly and downwardly.

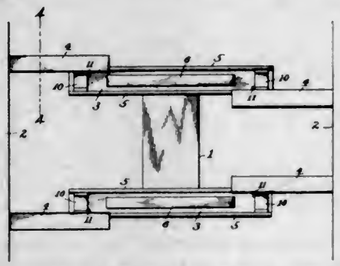
900,508. PILLOW-SHAM HOLDER. GEORGE A. FRANCIS, Westfield, N. J., assignor of one-half to Rufus S. Green, Westfield, N. J. Filed Mar. 5, 1908. Serial No. 419,250.

1. A pillow sham holder, comprising clamps adapted to be connected with the head posts of a bed stead, said clamps being provided with forwardly directed arms having upwardly directed extensions, a frame having angle pieces connected with opposite corners thereof and provided with arms, two of which project parallel with or in line with the ends of the frame and with the other two of which said frame is adjustably connected, the arms which project parallel with or in line with the ends of the frame being provided with longitudinal recesses in their ends forming parallel fingers and at a predetermined distance therefrom with longitudinal slots, and bolts passed through the ends of the upwardly directed extensions of the arms of the clamps and adapted to be passed through said slots.



2. A pillow sham holder, comprising clamps adapted to be connected with the head posts of a bed stead, said clamps being provided with forwardly directed arms having upwardly directed extensions, a frame having angle pieces connected with opposite corners thereof and provided with arms, two of which project parallel with or in line with the ends of the frame and with the other two of which said frame is adjustably connected, the arms which project parallel with or in line with the ends of the frame being provided with longitudinal recesses in their ends forming parallel fingers and at a predetermined distance therefrom with longitudinal slots, and bolts passed through the ends of the upwardly directed extensions of the arms of the clamps and adapted to be passed through said slots; the said arms of the frame in which said slots are formed being also provided between said slots and the ends of said arms and adjacent to said slots with apertures through which said bolts may also be passed.

900,509. EXTENSION-TABLE SLIDE. ORRIN G. FRANKS, Chicago, Ill., assignor to The Seng Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 23, 1906, Serial No. 344,676. Renewed Sept. 3, 1908. Serial No. 451,607.



1. An extension table slide comprising a section having an engaging portion or way substantially U-shape in cross-section and a lateral retaining flange at the open end of said U-shaped engaging portion, and a companion section having an engaging portion or way adapted to slidably engage the engaging portion or way of the other section and be retained in such slidable engagement by the flange, substantially as shown and described.

2. An extension table slide comprising sections having U-shaped portions in slidable engagement with each other, one of the members of each U-shaped portion lying within the other U-shaped portion, and a retaining flange on one of the sections of the slide adapted to bear against the curved end of the U-shaped engaging portion of the other section.

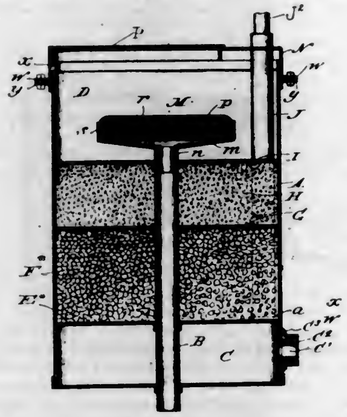
3. An extension table slide made up of sheet metal and comprising a center section bent upon itself at its longitudinal edges to provide engaging portions or ways of inverted U-shape in cross-section, outer sections bent at one of their longitudinal edges to provide U-shaped engaging portions or ways adapted to slidably engage the engaging portions or ways of the center section, and filling pieces secured to the center section between the ways thereon.

4. An extension table slide made up of sheet metal and comprising sections or plates bent at their longitudinal edges to provide engaging portions or ways substantially U-shape in cross-section, and inwardly projecting shoulders at the inner or open end of said U-shaped ways.

5. An extension table slide made up of sheet metal and comprising sections or plates bent at their longitudinal edges to provide engaging portions or ways substantially U-shape in cross-section and further bent to produce shoulders at the inner or open end of said U-shaped ways.

[Claims 6 to 9 not printed in the Gazette.]

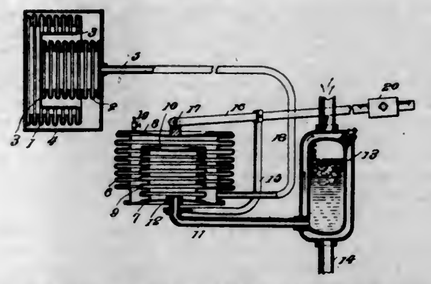
900,510. RAIN-WATER FILTER. LEROY W. FRENCH, Holton, Kans. Filed Jan. 27, 1908. Serial No. 412,822.



1. The combination in a filter, of a casing, a top frame removably arranged and adapted to be changed in position on the casing and having an opening adjacent to one of its corners, a lower foraminous plate supported in the casing above the lower end thereof to form a lower chamber in the casing, filtering material arranged on said plate, an upper foraminous plate removably arranged in the casing and on the filtering material to form an upper chamber in the casing and having an opening adjacent to one of its corners, a discharge pipe arranged in the casing and extending from the upper chamber down through the upper foraminous plate, and a pipe extending down through the corner openings in the top frame and upper foraminous plate and the filtering material and bearing at its lower end on the lower foraminous plate; said upper foraminous plate and second named pipe being adapted to be changed in position in the casing when the top frame is changed in position on said casing, for the purpose set forth.

2. The combination in a filter, of a casing, a top frame removably arranged and adapted to be changed in position on the casing and having an opening, and an interior flange resting on the casing and also having an opening adjacent to one of its corners, a cover removably arranged in the first named opening of the top frame and on the flange thereof, a lower foraminous plate supported in the casing above the lower end thereof to form a lower chamber in the casing, filtering material arranged on said plate, an upper foraminous plate removably arranged in the casing and on the filtering material to form an upper chamber in the casing and having an opening adjacent to one of its corners, a discharge pipe arranged in the casing and extending from the upper chamber down through the upper foraminous plate, an auxiliary filter arranged in the upper chamber and on said pipe, and a pipe extending down through the corner openings in the top frame and upper foraminous plate and the filtering material and bearing at its lower end on the lower foraminous plate.

900,511. DAMPER-REGULATOR. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed June 27, 1905. Serial No. 267,255.



1. In a damper regulator of the character described, the combination of a thermo-sensitive element comprising a collapsible and expansible corrugated sheet metal vessel having stationary end walls and a rigid movable diaphragm dividing the vessel into two compartments of unequal cross-sectional areas in one of which is sealed an expansible medium; a motor vessel for actuating a damper, comprising a collapsible and expansible corrugated sheet metal vessel having a stationary end wall; and a fluid containing conduit in open communication with one of said compartments and said motor vessel, for transmitting power from said thermo-sensitive element to the motor to actuate the latter for controlling a damper.

2. In a damper regulator of the character described, the combination of a thermo-sensitive element comprising a collapsible and expansible corrugated sheet metal vessel having fixed end walls and a rigid movable diaphragm dividing the vessel into compartments of unequal cross-sectional areas in one of which is sealed an expansible medium; a motor vessel comprising a collapsible and expansible annular walled vessel having a stationary end wall and movable end walls; and power transmitting means for transmitting movements of said diaphragm to one of said end walls and means operative at a predetermined elevated temperature for imparting movements to the other of said walls.

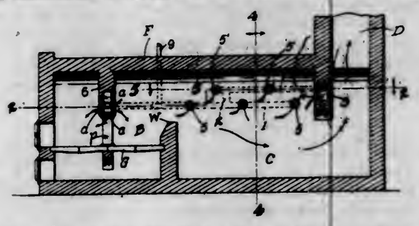
900,512. ROOFING MATERIAL. GEORGE D. FUST, New Orleans, La. Filed Dec. 19, 1907. Serial No. 407,233.

The herein described roofing material comprising cement, asbestos fiber, paint and gum arabic, combined substantially as described.

900,513. FURNACE. WILLIAM A. GARVENS, St. Louis, Mo., assignor of one-fourth to John P. McDonough, St. Louis, Mo. Filed Feb. 3, 1908. Serial No. 414,066.

1. In a furnace having a fire-box and a combustion chamber, the furnace being provided at the sides with intercommunicating passageways disposed at different levels, and also provided with common discharge openings into the fire box for establishing communication between the passageways and said fire-box, and with intake openings along the length of said passageways, said intake openings establishing communication between the passageways and the combustion chamber, whereby a portion of

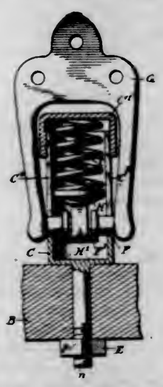
the unconsumed products are free to return from the combustion chamber to the fire-box, and devices for effecting such return of said products, substantially as set forth.



2. In a furnace having a fire-box, and a combustion chamber, an exit flue leading from the combustion chamber, a hollow deflecting wall at the base of the exit flue having an intake opening communicating with the combustion chamber, the furnace being provided at the sides with passageways leading from the chamber of said deflecting wall to the fire-box, said passageways having intake openings disposed along the length thereof for establishing communication between the passageways and the combustion chamber, and an injector for returning a portion of the products from the combustion chamber into the fire-box, substantially as set forth.

3. In a furnace having a fire-box and a combustion chamber, an exit flue leading from the combustion chamber, a hollow deflecting wall at the base of the exit flue, a hollow deflecting wall above the fire-box, the said deflecting walls being respectively provided with intake openings and discharge openings, the furnace being provided at the sides with passage-ways establishing intercommunication between the chambers of the respective hollow deflecting walls, said passage-ways having intake openings establishing communication between the passage-ways and the interior of the combustion chamber at different levels in the latter chamber, and injectors located in the passage-ways and inducing a current therein in proper direction to return the products from the combustion chamber through the chamber of the deflecting wall at the base of the exit flue, and through the passage-ways directly from said combustion chamber, into the chamber of the deflecting wall above the grate and into the fire-box, substantially as described.

900,514. POST-HINGE FOR WATER-CLOSET SEATS, COVERS, AND THE LIKE. GEORGE A. GEARY, New York, N. Y., assignor to William S. Emery, New York, N. Y. Filed Oct. 18, 1907. Serial No. 397,969.

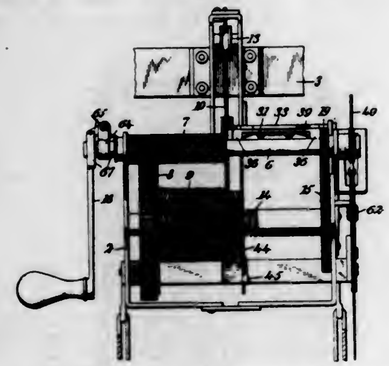


1. A post hinge for water closet covers, seats and like articles, comprising a tubular post, a crank shaft mounted to turn and to slide in the said tubular post and provided with an arm for attachment to the cover, seat or like article, and a spring pressing the said crank arm of the said crank shaft.

2. A post hinge for water closet covers, seats and like articles, comprising a tubular post, a crank shaft mounted to turn and to slide in the said tubular post and provided with an arm for attachment to the cover, seat or like article, a spring within the said tubular post, and a washer pressed on by the said spring and having a forked extension straddling the said crank arm.

3. A post hinge for water closet covers, seats and like articles, comprising a tubular post having means for attaching the post to a fixed support, the said tubular post having registering slots and a screw cap, a crank shaft having its crank arm within the said post and having its bearing in the said slots, an arm on the outer ends of the said crank shaft for attachment to the seat or cover, a washer within the said post and pressing the said crank arm, and a coil spring within the said tubular post and interposed between the said cap and the said washer.

900,515. UNIVERSAL ELEVATING AND LOWERING DEVICE. EMIL G. GEBAUER, Santa Fe, N. Mex. Filed Dec. 24, 1907. Serial No. 407,900.



1. In mechanism of the class described, in combination, a frame, a feed screw mounted therein, a drum rotatably mounted on said feed screw and adapted to be advanced by the thread thereof, means for rotating said drum, and means for intermittently rotating said feed screw, whereby said drum travels to and fro upon said feed screw.

2. In mechanism of the class described, in combination, a frame, a drum rotatably mounted therein and adapted to receive a cable, said drum having a head with a dog attached thereto, means for advancing said drum longitudinally as it rotates, and mechanism actuated by said dog for reversing the direction of longitudinal movement of said drum.

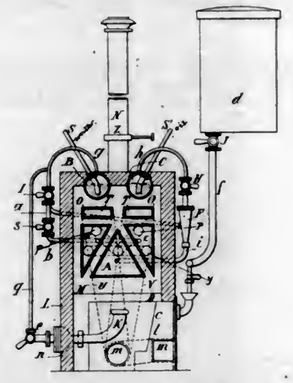
3. In mechanism of the class described, in combination, a frame, a drum rotatably mounted in said frame, means for advancing said drum longitudinally as it rotates, a dog carried by said drum, a trip plate adapted to be engaged by said dog, and mechanism actuated by said trip plate for reversing the longitudinal movement of said drum.

4. In mechanism of the class described, in combination, a frame, a feed screw mounted therein, a drum rotatably mounted on said feed screw, means for rotating said drum, mechanism for driving said feed screw, and automatic means for throwing said last mechanism in and out of connection with said feed screw.

5. In mechanism of the class described, in combination, a frame, a feed screw, means for normally holding said feed screw fixed against rotation, a drum rotatably mounted on said feed screw, means for rotating said drum, mechanism for rotating said feed screw, and automatic means for connecting and disconnecting said last mechanism with and from said feed screw.

[Claims 6 to 21 not printed in the Gazette.]

900,516. APPARATUS FOR MANUFACTURING HYDROGEN GAS. EDMOND GEISENBERGER, Liege, Belgium. Filed Jan. 12, 1906. Serial No. 295,755.



1. An apparatus for manufacturing hydrogen gas comprising, a chamber for water and a chamber for containing a liquid hydrocarbon, a mixer in communication with said chambers for producing a mixture of steam and hydrocarbon vapors produced in said chambers, a retort in communication with said mixer and adapted to heat said mixture, an auxiliary retort in communication with one of said chambers, means of communication between said retorts, means for heating said retorts and chambers and means for conducting off the gas produced, substantially as described.

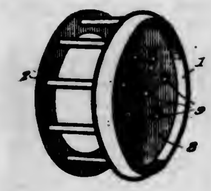
2. An apparatus for manufacturing hydrogen gas comprising a casing containing a chamber for water and a chamber for containing hydrocarbon, a retort in communication with both chambers and a plurality of retorts connected by a pipe connection with one only of said chambers, means of communication between said last named retorts and separate means of communication between said last named retorts and said first named retort, means located within said casing for simultaneously heating said chambers and retorts and means for conducting off the gas produced, substantially as described.

3. An apparatus for manufacturing hydrogen gas comprising a casing, a chamber for containing water and a chamber for containing a liquid hydrocarbon, both chambers being disposed within said casing, a retort in communication with each of said chambers, means for simultaneously heating said chambers and retort, and an overflow tank located without said casing and communicating with each of said chambers at the lower portion thereof, substantially as described.

4. An apparatus for manufacturing hydrogen gas comprising a plurality of chambers adapted to contain liquid, the retort located beneath said chambers and in communication therewith, a furnace adapted to supply heat to said chambers and retort, and an air conduit located beneath said retort and chambers and in communication with the fire box of said furnace, substantially as and for the purpose specified.

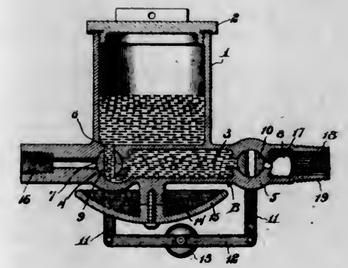
5. An apparatus for manufacturing hydrogen gas comprising a chamber for containing water, and a chamber for containing hydrocarbon, a mixer in communication with both of said chambers for producing a mixture of steam and hydrocarbon vapor, a retort in communication with said mixer, a plurality of retorts in communication with the water-containing chamber and said first named retort, a furnace for supplying heat to said chambers and retorts, a fluid pressure operated blower in the fire box of said furnace and in communication with the said water-containing chamber by a valve controlled pipe and means for conducting off the gas produced, substantially as described.

900,517. COLUMN-STEP. JOHN GLOVER, Steubenville, Ohio. Filed Mar. 17, 1908. Serial No. 421,629.



As an article of manufacture, a supporting step for wooden columns embodying upper and lower rings spaced apart, and a circular series of stanchions interposed between said rings and connected at their opposite ends thereto, the upper ring comprising a bottom plate formed with drain and ventilation perforations and the lower ring having an open center.

900,518. GAS-ENGINE STARTER. RALEIGH W. GODFREY, Oberlin, Ohio. Filed Aug. 7, 1907. Serial No. 387,478.



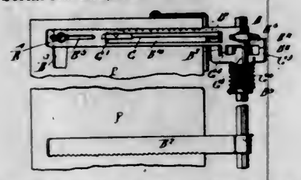
1. A device of the class described comprising a reservoir, a tube or barrel adjacent thereto and containing a measuring chamber communicating with the reservoir through a port or duct, and two way valves in the tube or barrel adjacent to the ends of the measuring chamber, one of said valves being adapted to obstruct the port leading to the reservoir.

2. In a device of the class described, a reservoir, a tube containing a chamber communicating with said reservoir, valves in the tube to cut off communication between the chamber and the ends of the tube, one of said valves being adapted to cut off communication between the chamber and the reservoir, a compressed air chamber at one end of the tube and a perforated wall at the opposite end of the tube.

3. In a device of the class described, a reservoir, a tubular barrel extending diametrically across the bottom thereof and having a chamber communicating therewith through a port or duct, valves or closures adjacent to the ends of the chamber, one of said valves being adapted to obstruct the port leading to the reservoir, cranks connected with the valve stem, a link connected to said cranks, and a heating pan supported beneath the chamber in the tube or barrel.

4. In a device of the class described, a reservoir, a tubular barrel extending diametrically across the bottom thereof and having a chamber communicating therewith through a port or duct, valves adjacent to the ends of the chamber, one of said valves being adapted to obstruct the port leading to the reservoir, a lug depending from the said tubular barrel and arranged intermediate the ends thereof, a heating pan connected to the said lug, and a crank for effecting simultaneous movement of the valves.

900,519. CLAMPING AND ADJUSTING DEVICE FOR PRINTING-PRESSES. WILLIAM H. GOLDING, Boston, Mass. Original application filed Feb. 4, 1905, Serial No. 244,209. Divided and this application filed Oct. 10, 1905. Serial No. 282,164.

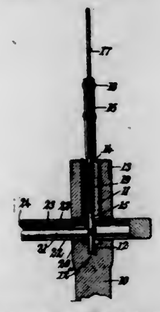


1. In a printing-press, a platen for supporting the sheets, a rocker shaft having a clamping finger attached, a sheet-moving registering gage slidably connected with said clamping finger and having a moving quill by which it is attached to a second quill on said rocker shaft, and means for automatically changing the position of the said registering gage in relation to the said clamping finger; substantially as and for the purpose set forth.

2. In a printing-press, a platen for supporting the sheets to be printed, a clamping finger having movably attached to it a sheet-moving gage; quills attached respectively to said clamping finger and sheet-moving registering gage and having arms provided with inclines whereby the movement of the fingers will cause a movement of the said gage, and cause it to move the sheet into the field of action of the gripping device; substantially as and for the purpose set forth.

3. In a printing-press, a platen for supporting the sheets, a clamping finger for holding the sheets, and a rocker shaft for operating said clamping finger, a registering gage mediately connected to said rocker shaft and clamping finger, a set of arms mediately connected to the said rocker shaft and having inclined terminals, a second set of arms connected to the said clamping finger also having inclined terminals constructed to engage with and operate the arms on the rocker shaft constructed to control the registering gage in its action; substantially as and for the purpose set forth.

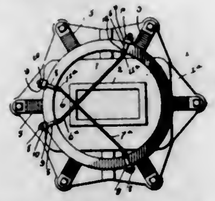
900,520. FAN. EMIL GOOSCH, New York, N. Y. Filed Apr. 13, 1908. Serial No. 426,708.



1. A fan, comprising a handle, a spindle arranged longitudinally of said handle, a leaf carried thereby, a resilient member wound upon said spindle and having the ends secured respectively to said spindle and said handle, a reciprocable member arranged to move transversely of said handle and having a slot to receive said spindle, and a flexible member secured to said reciprocable member and said spindle and partly wound upon the latter.

2. A fan, comprising a handle having a longitudinal bore, a spindle rotatably mounted in said bore and projecting therefrom, a leaf rigid with said spindle at its projecting end, said handle having a transverse bore, a cylindrical, reciprocable member movable in said transverse bore and having registering slots in the sides thereof to receive said spindle, a spring wound upon said spindle and having the ends secured respectively to said handle and said spindle, and a flexible member arranged within said cylindrical member and having the ends secured respectively to said spindle and said cylindrical member and partly wound upon said spindle.

900,521. ATTACHMENT FOR BRICK-MACHINES. MILTON N. GRANT, Columbus, and CARLTON J. GRANT and ALEX H. GRANT, Groveport, Ohio. Filed Feb. 13, 1908. Serial No. 415,675.



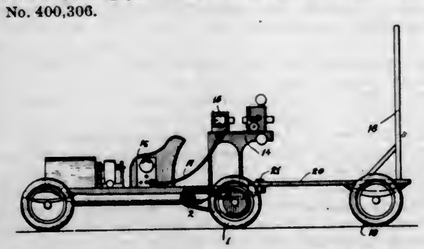
1. In an attachment for brick machines, the combination with a brick machine and a die supported in the discharge end thereof, of a ring supported in front of said die, and a rod adapted to have its ends adjustably and detachably connected with said ring.

2. In an attachment for brick machines, the combination with a brick machine and a clay discharging and shaping die connected with the discharge end of said machine, of a circular frame supported in front of the discharge end of said brick machine, clips adapted to be detachably and adjustably connected with said frame, and rods intersecting said frame and held by said clips.

3. In an attachment for brick machines, the combination with a brick machine and a clay discharging and shaping die connected with the discharge end of said machine, of a circular frame supported in front of the discharge end of said brick machine, clips adapted to be detachably and adjustably connected with said frame, and an outer and inner rod intersecting said frame and having their ends connected with said clips.

4. The combination with a brick machine and its angular die, of a ring supported in front of and centered with relation to said die, a plurality of members adapted to engage said ring at any point upon its periphery and a clay engaging member extending between said first named members.

900,522. PICTURE-EXHIBITION DEVICE. JAMES H. GRAVELL, Philadelphia, Pa., and GEORGE D. FARWELL, Bridgeport, Conn., assignors of one-third to Percy C. Farwell, Bridgeport, Conn. Filed Nov. 1, 1907. Serial No. 400,306.

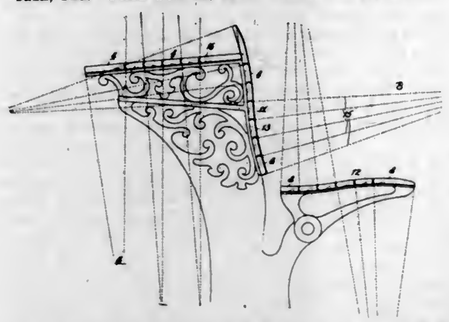


1. The combination of a self-propelled vehicle, a motor therefor, an electric generator, means for transmitting power from the motor to the generator, a picture exhibition outfit, and means for connecting the generator and picture exhibition outfit, with mechanism whereby the same motor is utilized for propelling the vehicle and for driving the generator, substantially as described.

2. The combination with a self-propelled vehicle, of an exhibition screen trailer therefor, and means carried by the vehicle whereby pictures may be thrown upon the screen, substantially as described.

3. The combination with a self-propelled vehicle, its motor and a picture exhibition apparatus, of clutch mechanism whereby said motor may be caused to actuate the self-propelled vehicle or the picture exhibition mechanism at will, substantially as described.

900,523. FURNITURE-SLAT. FRANCIS P. GRODE, Wabash, Ind. Filed Oct. 25, 1907. Serial No. 399,155.



1. An article of furniture having either its seat or back or both of said parts formed of a series of interchangeable slats joined together by tongue and grooved joints, the tongue-equipped and groove-equipped sides of the slats converging towards each other and extending at equal angles to the face of the slats, with the slats assembled in reverse series to produce the plane of the surface desired.

2. An article of furniture having a portion of its structure composed of a series of flat-surfaced interchangeable slats having converging tongue and groove sides and arranged in single alternate relation one with another to form a flat surface and in alternate group relation to form surfaces of differing curves, as set forth.

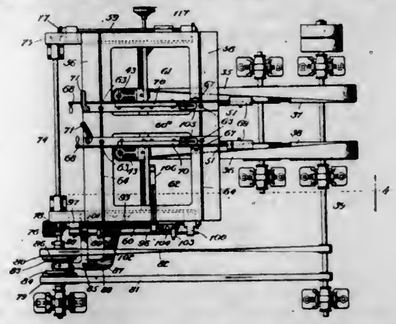
3. An article of furniture having a portion of its structure composed of a series of flat-surfaced interchangeable slats having converging tongue and groove sides and arranged in alternate group relation to form surfaces of differing curves, as set forth.

4. A school desk composed of a series of interchangeable slats forming a reverse-curve seat, back and flat top, with tongue and groove joints joining the slats together, said slats having their tongue-equipped and groove-equipped sides converging toward each other and extending at equal angles to the face of the slats, the slats forming the seat and back being arranged in reverse series for the purpose set forth.

5. A school desk composed of a series of interchangeable slats forming a reverse-curve seat, back and flat top, with tongue and groove joints joining the slats together, said slats having their tongue-equipped and groove-equipped sides converging toward each other and extending at equal angles to the face of the slats, the slats forming the seat and back being arranged in reverse series and the slats forming the top of the desk being arranged with their wide and narrow faces in staggered relation, for the purpose set forth.

900,524. ROUTING-MACHINE. FRANK P. GRODE, Wabash, Ind. Filed Mar. 26, 1908. Serial No. 423,466.

1. In a routing-machine, the combination of a traveling work-support, a form-plate supported in a manner to cause it to move with the support, a rotating cutter-head of inverted frusto-conical form, and a reciprocable support for the cutter-head bearing normally against the form-plate, the whole being constructed and arranged to move the work and form-plate across the end of said cutter-head support while the work is engaged by the rotary cutter, and to cause the form-plate to reciprocate the cutter-head, thereby to produce a routing-groove having a series of undercut opposed walls and a bottom portion formed of a series of oppositely tapering surfaces.



2. In a routing-machine, the combination of a traveling work-support, a form-plate supported in a manner to cause it to move with the support and affording a guide-surface composed of a series of opposed inclines, a rotating cutter-head of inverted frusto-conical form, and a reciprocable support for the cutter-head bearing normally against the form-plate, the whole being constructed and arranged to move the work and form-plate across the end of said cutter-head support while the work is engaged by the rotary cutter, and to cause the form-plate to reciprocate the cutter-head, thereby to produce a routing-groove having a series of undercut opposed walls and a bottom portion formed of a series of oppositely tapering surfaces.

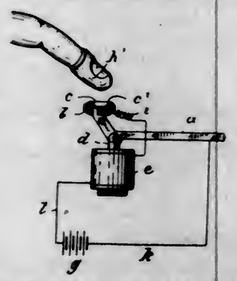
3. In a routing-machine, the combination of a traveling work-support, a form-plate supported in a manner to cause it to move with the support, a rotating cutter-head of inverted frusto-conical form, a reciprocable support for the cutter-head bearing normally against the form-plate and adapted to present the cutter-head carried by it to the under side of the work, and means for yieldingly maintaining the cutter-head in raised position, the whole being constructed and arranged to move the work and form-plate across the end of said cutter-head support while the work is engaged by the rotary cutter, and to cause the form-plate to reciprocate the cutter-head, thereby to produce a routing-groove having a series of undercut opposed walls and a bottom portion formed of a series of oppositely tapering surfaces.

4. In a routing-machine, the combination of a traveling work-support, a form-plate supported in a manner to cause it to move with the support and present its guide-surface on its under side, a rotating cutter-head of inverted frusto-conical form, a reciprocable support for the cutter-head bearing normally against the under side of said form-plate, and means for yieldingly maintaining the cutter-head in raised position, the whole being constructed and arranged to move the work and form-plate across the end of said cutter-head support while the work is engaged by the rotary cutter, and to cause the form-plate to reciprocate the cutter-head, thereby to produce a routing-groove having a series of undercut opposed walls and a bottom portion formed of a series of oppositely tapering surfaces.

5. In a routing-machine, the combination of a traveling work-support, a form-plate supported in a manner to cause it to move with the support, a rotating cutter-head of frusto-conical form, a shaft carrying the cutter-head journaled in bearings in the machine, and a reciprocable upright bar supporting the shaft and bearing at its upper end against the form-plate, the whole being constructed and arranged to move the work across the end of said cutter-head and the form-plate across the end of said bar while the work is engaged by the cutter and to cause the form-plate to reciprocate the cutter-head, thereby to produce a routing-groove having a series of undercut opposed walls and a bottom portion formed of a series of oppositely tapering surfaces.

[Claims 6 to 8 not printed in the Gazette.]

900,525. TYPE-WRITER. HERMANN GRÖSSLER, Berlin, Germany. Filed Jan. 9, 1908. Serial No. 410,028.



1. In combination with a typewriting machine a pivoted lever, a key thereon, a pair of contacts thereon, an electric line connecting said contacts, an electro magnet, and a source of current connected in series in said line and a plunger for said electro magnet, said plunger being connected with said lever.

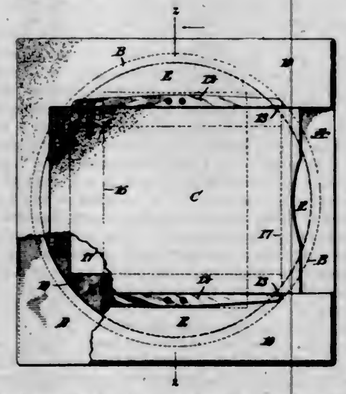
2. In combination with a typewriting machine, a pivoted lever, a key thereon, a pair of contacts thereon, an electric line connecting said contacts, an electro magnet, and a source of current connected in series in said line and a plunger for said electro magnet, said plunger being connected with said lever, said contacts being adapted to be connected by a conducting means carried by the finger of the operator of the machine.

3. In combination with a key of an electrical typewriting machine, a pair of contacts on said key, a plunger depending from said key, an electro magnet adapted to attract said plunger, a source of electrical current and a line connecting said contacts, said source of current and said electro magnet being connected in series between said contacts in said line.

4. In a typewriting machine, a key, an electric circuit having both its terminals on said key, a key-operating magnet in said circuit, and means carried by the finger of the operator to connect said terminals and complete said circuit, thereby energizing said magnet.

5. In a typewriting machine, an electric circuit, a key lever, a key, and an electro-magnet arranged in said circuit, electrically separated terminals on said key, and means carried by the finger of the operator to connect said terminals and thereby complete said circuit and energize said magnet to cause the latter to operate said lever.

900,526. CIRCULAR BACK FOR CAMERAS. EDWARD L. HALL, New York, N. Y. Filed Aug. 17, 1907. Serial No. 389,031.



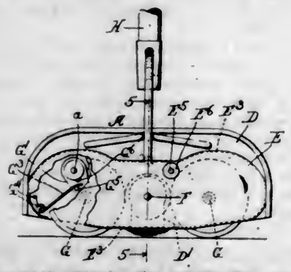
1. In a circular back for cameras, a movable rear plate and a movable inner plate, both of which have corresponding openings, a fixed intermediate plate having a circular opening therein of greater diameter than the greatest length of the openings in the rear and inner plates, segmental spacing plates located between the rear and inner plates surrounding the openings therein, their outer convex surfaces being adapted for engagement with the wall of the circular opening in the fixed plate, and means for connecting the rear, inner, and spacing plates.

2. In a circular back for cameras, a camera box, a plate fixed thereto and having a circular opening therein, connected rear and inner plates adapted for circular movement at opposite sides of the fixed plates, and provided with corresponding and registering openings of lesser size than that in the fixed plate, and spacing plates located between the rear and inner plates, being secured thereto, which spacing plates are approximately of the same thickness as the fixed plates and enter the opening therein and act as guides for the connected inner and rear plates.

3. In a circular back for cameras, the combination with the camera box, a plate secured thereto, which plate is provided with a circular opening therein, of a circular inner plate of greater diameter than the diameter of the circular opening in the fixed plate, the said circular inner plate having a rectangular opening therein, an outer or rear plate located at the rear face of the fixed plate, which outer or rear plate is provided with a rectangular opening corresponding to and adapted to register with the opening in the inner plate, the openings in both the inner and the rear plates being of lesser size than the size of the said circular opening, and segmental spacing plates located between the rear and the inner plates around the opening therein, the convexed edges of the said spacing plates forming a combined circular edge removed from the outer edge of the inner plate, the edge formed by the outer portions of the spacing plates being adapted to enter and engage with the wall of the circular opening, and means for connecting the inner, rear, and the spacing plates.

4. The combination with a camera box, of a back therefor consisting of a fixed plate having a circular opening and secured to the camera box, a rear plate having a rectangular opening and constructed to receive and hold a plate holder, a circular inner plate having a rectangular opening, and segmental spacing plates secured to and between the rear and inner plates around the openings thereof, said spacing plates being approximately the same thickness as the fixed plate and fitting in the opening thereof.

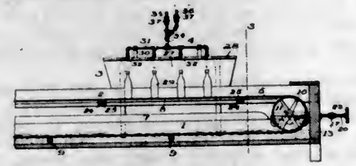
900,527. CARPET-SWEEPER. LEWIS P. HALLADAY, Streator, Ill., assignor to Streator Metal Stamping Company, Streator, Ill., a Corporation of Illinois. Filed July 27, 1905. Serial No. 271,430.



1. In a carpet sweeper, the combination of a sweeper case with a bail extending into a hole in the end of the case, wheels mounted on the outside of the end of the case, and a flanged shield covering a portion of the end of the case and provided with a depression in the upper side of the flange thereof into which the bail extends so as to maintain the end thereof in engagement with the end of the case.

2. In a carpet sweeper, the combination of a sweeper case, with wheels mounted on the outside of the end of the case, a brush roll extending through an opening in the end of the case, a pulley on the end of the brush roll having a perforation in the end thereof, a flanged shield covering the wheels and brush roll pulley and provided with apertures through which the wheels extend, a pivot on said shield extending into the perforation in the brush roll pulley, a bail pivoted to the end of the casing, the upper flange of said flanged shield being provided with a depression into which the end of the bail extends, and means for securing the shield to the end of the case.

900,528. BOTTLE-WASHING MACHINE. JOSEPH F. HALLER, Sheridan borough, Pa. Filed May 23, 1908. Serial No. 434,607.



1. A bottle washing machine, comprising upper and lower troughs, shafts mounted at the ends of said troughs, guide wheels on said shafts, an endless conveyer passing over said guide wheels, means in the upper trough supporting the upper reach of said conveyer, and means for holding the conveyer from dragging on the bottom of the lower trough.

2. A bottle washing machine, comprising upper and lower troughs spaced apart, an endless conveyer having its reaches located in said troughs, guide wheels for said conveyer at the ends of said troughs, inwardly projecting ledges in the upper trough upon which said conveyer rests, and means in lower trough for holding said conveyer from dragging on its bottom.

3. A bottle washing machine, comprising upper and lower troughs spaced apart, shafts mounted between said troughs at their ends, guide wheels on said shafts, an endless conveyer passing over said guide wheels, and ledges in the upper trough supporting the upper reach of said conveyer, said lower trough being provided with outwardly flaring upper edges.

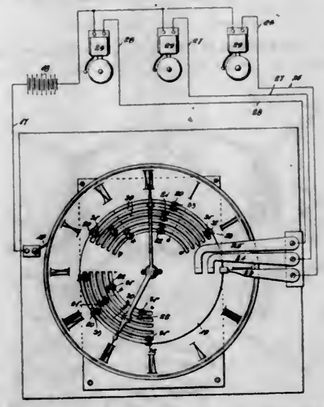
4. A bottle washing machine, comprising upper and lower troughs spaced apart, shafts mounted between said troughs at their ends, wheels on said shafts, an endless conveyer working on said wheels, means in the upper trough for holding the conveyer from sagging, and removable cross headers connecting the lower edges of the sides of said upper trough.

5. A bottle washing machine, comprising a trough, shafts mounted at the ends of said trough, wheels on said shafts, an endless conveyer working on said wheels, rods having threaded connections with the bearings of one of said shafts, a yoke or cross head to which said rods are rotatably connected, and a screw for adjusting said yoke longitudinally on the trough.

900,529. PROGRAM ATTACHMENT FOR CLOCKS. JULIUS W. HANSEN, Princeton, Ind. Filed Feb. 28, 1908. Serial No. 418,339.

1. In an attachment of the character described, a clock having a striking mechanism, a minute dial operatively connected to said clock, a series of trip pins on said dial, a lifting rod adapted to be engaged by said pins to start said striking mechanism, a contact brush, means actuated by said striking mechanism to engage said brush and thereby close an electrical circuit at any desired time, substantially as described.

2. In an attachment of the character described, a clock having a striking train, a minute-hand shaft, an hour-hand shaft, a minute dial adapted to be secured to the minute hand shaft of the clock to turn therewith, a series of trip pins arranged on said dial, a lifting rod adapted to be engaged by said pins to start the striking mechanism of the clock, a contact brush, a contact rod operated by said striking mechanism and held in engagement with said brush, thereby closing an electric circuit, and means operated by said hour-hand shaft to complete said electric circuit at any desired time, substantially as described.



3. In an attachment of the character described, a clock having a striking mechanism, a minute hand shaft, an hour hand shaft, a minute dial adapted to be secured to the minute hand shaft of the clock to turn therewith, a series of trip pins arranged on said dial, a lifting rod adapted to be engaged by said pins to start the striking mechanism of the clock, a contact brush, a contact rod operated by said striking mechanism and held in engagement with said brush, thereby closing an electric circuit, an hour-dial adapted to be secured to said hour-hand shaft, contact pins secured to said hour-dial, and a contact brush adapted to be engaged by said contact pins to complete said electric circuit, and thereby sound a signal, substantially as described.

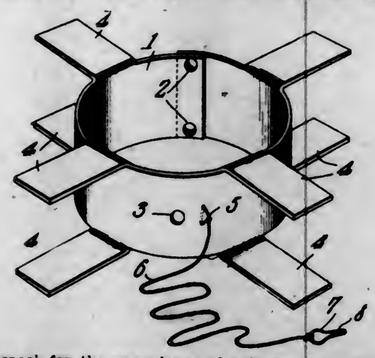
4. In an attachment of the character described, a clock having a striking mechanism, a minute hand shaft, an hour hand shaft, a minute dial adapted to be secured to the minute hand shaft, a series of trip pins arranged on said dial, a lifting rod adapted to be successively engaged by said trip pins to periodically start the striking mechanism of the clock, an electric circuit, a contact brush in said circuit, a contact rod adapted to be lifted and held in engagement with said brush by the operation of said striking mechanism, an hour dial adapted to be secured to said hour hand shaft, said dial having formed therein segmental slots, series of contact pins adjustably mounted in said slots whereby the same may be set opposite the hour it is desired to sound the signal, and contact brushes arranged in said electric circuit and in the path of movement of said contact pins whereby the latter are brought into engagement with said brushes to complete said electric circuit and sound the signals therein, substantially as described.

5. In an attachment for clocks, a minute hand shaft, an hour hand shaft, a minute dial adapted to be secured to the minute hand shaft of the clock to turn with said shaft, said dial being divided into minute divisions, trip pins secured to said dial opposite to the divisions thereon, a striking mechanism, a lifting rod adapted to be successively engaged by said trip pins to periodically start the striking mechanism of the clock, a notched commutator disk adapted to be revolved by said striking mechanism, a contact rod adapted to normally engage the notch in said commutator disk when in an operative position when said disk is turned by the striking mechanism, an electric circuit, a contact brush in said circuit adapted to be engaged by said contact arm when held up by said commutator disk, an hour dial adapted to be secured to the hour-hand shaft of the clock, a series of contact pins adjustably se-

cured to said dial, contact brushes arranged in said circuit and adapted to be engaged by said contact pins, and a series of bells arranged in said circuit and adapted to be sounded when said circuit is completed by the engagement of said contact pins with said brushes, substantially as described.

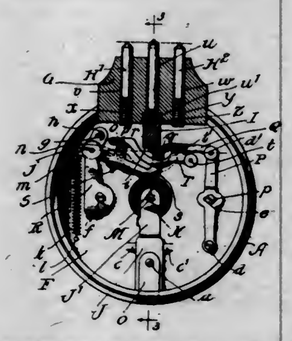
[Claims 6 and 7 not printed in the Gazette.]

900,530. WARP-BEAM FOR LOOMS. REBECCA HARBOUR, Charlie, Tex. Filed Aug. 21, 1907. Serial No. 389,514.



A spool for the warp beam of a loom consisting of a band bent into circular form and having lapping ends, said ends being provided with registering fastening receiving openings, arms integral with the edges of the band and radiating therefrom, a thread engaging device, and an elongated flexible connection between said device and the band.

900,531. LENS-MEASURING INSTRUMENT. FRANKLIN HARDINGE, Chicago, Ill., assignor to Geneva Optical Company, Chicago, Ill., a Corporation. Filed Nov. 17, 1906, Serial No. 343,791. Renewed Aug. 22, 1908. Serial No. 449,822.



1. In a measuring instrument of the class described, the combination of relatively fixed contact members, a movable contact member, an indicating pointer, a lever pivoted at one end and engaging at its other end with the movable contact member, a second lever pivoted at one end and having driving connection at its other end with the pointer, and a third lever pivoted at one end, the other end of the lever engaging the second lever at an intermediary point thereof and said third lever engaging an intermediary point of the first lever.

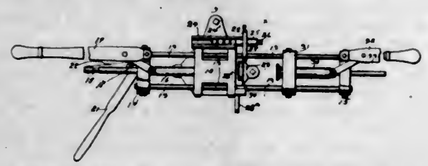
2. In a measuring instrument of the class described, the combination of comparatively fixed measuring contact members, a relatively movable measuring contact member, an indicating pointer, and multiplying lever mechanism comprising three pivoted levers the first lever having contact with the second lever and the second lever having contact with the third lever, such levers being so arranged that the pivot centers of two of the levers and the contact points thereof lie in a straight horizontal line when the points of the contact members are in a horizontal plane.

3. In a measuring instrument of the class described, the combination of comparatively fixed measuring contact members, a relatively movable measuring contact member, an indicating pointer a lever pivoted to the instrument frame and having direct connection with the movable member, a second lever pivoted to the instrument frame and having driving connection with the pointer, and a third lever pivoted to the instrument frame and having contact engagement with the first and second levers, the pivot centers of the first and second levers and the engagement contact points between said levers and the third lever lying all in the same horizontal plane when the points of the measuring contact members lie all in another horizontal plane.

4. In a measuring instrument of the class described, the combination of fixed measuring contact members, a relatively movable measuring contact member, an indicating pointer, a pivoted lever having direct contact with the movable member, a second pivoted lever having direct driving connection with the pointer, and additional lever mechanism having contact engagement with the first and second levers for transferring movement from one of said levers to the other, the pivot points of the first and second levers, the contact of the first lever and the contacts of the additional lever mechanism with the first and second levers being all in the same horizontal plane when the points of the measuring contact members are in a common horizontal plane.

5. In a measuring instrument of the class described, the combination of fixed measuring contact members, a relatively movable measuring contact member, an indicating pointer, and multiplying lever mechanism comprising three pivoted levers the first lever having contact with the second and the second lever having contact with the third lever, said levers being so arranged that the pivot centers of two of the levers and the contact points of all the levers lie in a straight horizontal line when the points of the contact members are in a horizontal plane.

900,532. MACHINE FOR REPAIRING CARTRIDGE-SHELLS. JOHN W. HAUGHAWOUT, Fort Dodge, Iowa, assignor to Willard P. Markle, St. Louis, Mo. Filed Oct. 23, 1905. Serial No. 284,080.



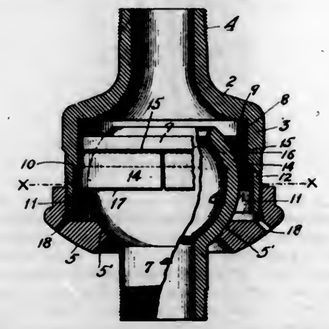
1. In a machine for repairing cartridge shells, the combination of a body having a bore, a stop member for retaining a shell in said bore, a reciprocatory expander arranged to enter said bore to operate upon a shell therein, means for operating said expander, a cap ejector arranged to operate through said expander, and means for operating said ejector, substantially as set forth.

2. In a machine for repairing cartridge shells, the combination of a shell supporting member, a swinging cap carrier arranged to be brought into alinement with the shell supporting member and having a cap receiving tube, a plunger reciprocatorily positioned in said tube, and means for operating said plunger to deliver a cap from said tube to a shell, substantially as set forth.

3. In a machine for repairing cartridge shells, the combination of a shell supporting member, a swinging cap carrier arranged to be brought into alinement with the shell supporting member and having a cap receiving tube, a plunger reciprocatorily positioned in said tube, and a pressure plunger for engagement with said cap carrier plunger to deliver a cap from said tube to a shell, substantially as set forth.

4. In a machine for repairing cartridge shells, the combination of a shell supporting member, a swinging cap carrier arranged to be brought into alinement with the shell supporting member and having a cap receiving tube, a plunger reciprocatorily positioned in said tube, and means for exerting pressure against said plunger to deliver the cap from said tube; said plunger having slot and pin connection with said tube, substantially as set forth.

900,533. FLEXIBLE FLUID-JOINT. CHARLES G. HAWLEY, Chicago, Ill., assignor, by direct and mesne assignments, to Barco Brass and Joint Company, Chicago, Ill., a Corporation. Filed May 6, 1905. Serial No. 259,190.



1. A conduit joint of the class described, comprising suitable members, in combination with a gasket of wedge-like form in cross section, arranged between said members, and a spring arranged at the small end of said gasket and adapted to draw the same into engagement with said members, substantially as described.

2. In a conduit joint of the class described, suitable joint members, in combination with a gasket of wedge-like form in cross section, arranged between said members to close the joint, a flange at the small end of said gasket and a suitable spring engaging said flange and acting to draw the gasket between and against said members, as and for the purpose specified.

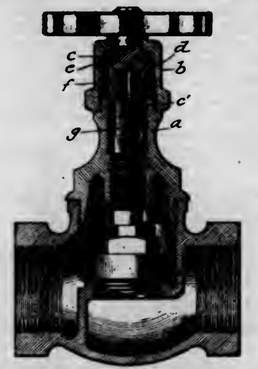
3. In a conduit joint of the class described, suitable joint members having a wedge-like space between them, in combination with a gasket of wedge-like form occupying said space to close the same and adapted to be forced into place by fluid pressure within the joint, and a spring interposed between the wall of one of said members and said gasket at the outer end of the joint, in position to be protected from the action of fluids, substantially as described.

4. In a ball and socket joint of the class described, a socket member having a ball socket, in combination with a ball member seated in said socket and having a shank, a gasket ring of wedge-like cross section within said socket member and engaging the same and said ball member, and a spring arranged in the outer end of said socket member adjacent to the shank of the ball member and connected with said gasket, as and for the purpose specified.

5. In a ball and socket joint of the class described, a socket member having an internal cylindrical wall and an annular shoulder, in combination with a ball member arranged within said socket member and having a shank, a gasket having surfaces that engage said cylindrical wall and said ball member, a spring flange upon said gasket projecting in the direction of the shank of the ball member and a spring arranged between said flange and said shoulder, substantially as described.

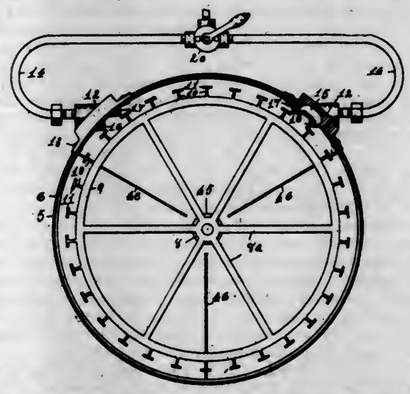
[Claims 6 to 13 not printed in the Gazette.]

900,534. VALVE-STEM. JAMES T. HAYDEN, Chicago, Ill., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 23, 1903. Serial No. 174,374.



In a valve, the combination with a valve bonnet, of an angularly headed valve stem threaded therein, a supplemental valve stem slidably engaging said valve stem and provided with a radially projecting flange, a cap engaging the bonnet and partially inclosing the supplemental valve stem, a compressible packing ring interposed between the cap and radial flange, the portion of the supplemental valve stem projecting through the packing and cap being of the same diameter throughout its entire length, together with a coil spring interposed between the flange and the top of the bonnet for holding the packing under compression.

900,535. WATER-MOTOR. HENRY H. HELD, Menasha, Wis. Filed Mar. 7, 1908. Serial No. 419,624.

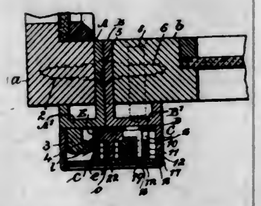


1. A wheel for a water motor arranged to revolve in a horizontal plane, a suitable case for the wheel, a suitable hub and a circular rim outside of the hub of the desired width of face for the buckets, a series of buckets arranged outside of said rim, said buckets consisting, each of a thin plate arranged across the face of said rim in a plane parallel with the axis of the wheel and extending in a radial direction therefrom, a wing extending in a circumferential direction at equal distances from the rim from one side of the outer ends of each of said radially arranged plates, each of said buckets having an unobstructed escape for water, both above and below said plates and wings, and a suitable nozzle arranged for directing a jet of water into said buckets.

2. A wheel for a water motor arranged to be revolved in a horizontal plane, a suitable case for the wheel, a suitable

hub and a circular rim outside of the hub of the desired width of face for the buckets, a series of buckets arranged around and outside of the rim, said buckets consisting each of a thin plate arranged across the face of said rim in a plane parallel with the axis of the wheel and extending in a radial direction therefrom, a wing extending an equal distance in a circumferential direction, from each side of each plate at an equal distance from the rim of said wheel, each bucket having an unobstructed escape for water both above and below said plates and wings, and suitable nozzles for directing a jet of water into the buckets for revolving the wheel in either direction.

900,536. LOCK. JULIUS HENKY, New York, N. Y. Filed Apr. 6, 1908. Serial No. 425,529.



1. A lock for show cases and the like, consisting of a post member and a door member, the post member being provided with a catch lug, and the door member having upon its outer surface a casing divided by a partition into a closed compartment, and another compartment open at the rear, a locking bolt within the closed compartment, the said second compartment receiving the catch lug upon the post member when the two members are brought together, and means by which the said locking bolt is actuated in both directions.

2. A lock for show cases and the like, consisting of a post member and a door member, the post member carrying a catch lug, there being upon the door member a casing divided by a partition into a closed compartment, and a compartment open at the rear, a key actuated locking bolt within the closed compartment, the said second compartment receiving the catch lug carried by the post member when the two members are brought together in their operative position, and a key for actuating the locking bolt.

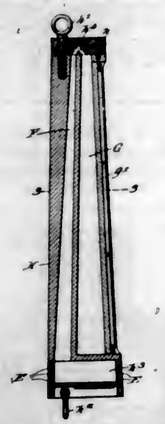
3. A lock for show cases and the like, consisting of a post member and a door member, the post member being provided with a catch lug, and the door member having upon its outer surface a casing divided by a partition into a closed compartment, and a compartment open at the rear, a key actuated bolt within the closed compartment, the said second compartment receiving the catch lug on the post member when the two members are brought together in their operative position, means within said closed compartment for locking the bolt in either a retracted or projected position, and a key for releasing the said locking means and for actuating the bolt in both directions.

4. A lock for show cases and the like, consisting of a post member and a door member, the post member being provided with a catch lug, and the door member having upon its outer surface a casing divided by a partition into a closed compartment, and a compartment open at the rear, a key actuated bolt within the closed compartment, the said second compartment receiving the catch lug on the post member when the two members are brought together in their operative position, spring actuated tumblers within said closed compartment by means of which the bolt is locked in either a retracted or projected position, and a key for releasing the bolt from the tumblers, and for actuating the bolt.

5. In a lock, and in combination, a casing divided by a partition into a closed compartment, and a compartment open at the rear, a key actuated bolt, a guide pin for supporting and guiding the bolt for reciprocal travel, spring actuated tumblers also guided by said guide pin, and provided with means for locking the bolt, in either a retracted or projected position, and a key for releasing the bolt from the tumblers and for actuating the bolt.

[Claim 6 not printed in the Gazette.]

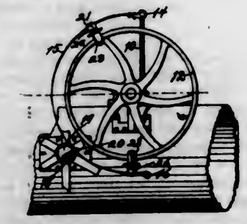
900,537. BATHOMETER. PAUL HENZE, Lehe, Germany. Filed June 4, 1907. Serial No. 377,202.



1. A bathometer comprising a structure provided with a vertically disposed measuring tube having a slotted wall, a transparent graduated member closing said slotted wall, said structure having inlet tubes formed therein in angular relation with respect to said measuring tube and having passages establishing communication between said inlet tubes and measuring tube at the upper ends thereof, said structure having a compartment below said tubes and communicating with said inlet tubes and having inlet openings establishing communication between said compartment and the surrounding water.

2. A bathometer comprising a structure provided with a vertically disposed measuring tube having a slotted wall, a transparent graduated member closing said slotted wall, said structure having an inlet tube in angular relation with respect to said measuring tube and having a passage establishing communication between said inlet tube and measuring tube at the upper ends thereof, said inlet tube communicating with the surrounding water at its lower end.

900,538. BELT-HOLDER FOR ENGINES. ELMER HICKS and CLARENCE HICKS, Montezuma, Iowa. Filed Jan. 17, 1908. Serial No. 411,335.



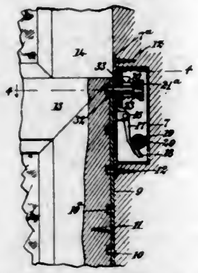
1. A belt holder for engines, comprising a strap pivotally mounted at one end and adapted to be moved through an arc, guide pulleys carried by said strap, and means for adjustably holding said strap concentric with a pulley rim.

2. A belt holder for engines, comprising a bracket, a strap hinged at one end to said bracket, cross bars on said strap, guide rollers on said cross bars, and detachable means for holding said strap concentric with the rim of a pulley.

3. A belt holder for engines, comprising a bracket, a strap hinged at one end to said bracket, cross bars on said strap, guide rollers on said cross bars, and detachable means for holding said strap concentric with the rim of a pulley, said guide rollers projecting radially of said pulley and on opposite sides of the rim thereof.

4. A belt holder for engines, comprising a bracket, a strap hinged at one end to said bracket, cross bars on said strap, guide rollers on said cross bars, an arm, and detachable connections between said arm and strap.

900,539. WINDOW-LOCK. CHARLES C. HIGGINS, Woodmere, N. Y. Filed Mar. 18, 1908. Serial No. 421,828.



1. The combination of movable sashes, a casing disposed adjacent thereto, bolts mounted within said casing and adapted to be thrust outwardly therefrom, springs for actuating said bolts, pins connecting said springs with said bolts, a plate movably mounted within said casing and adapted to engage said pins, a lever for controlling said plate, and means controllable at will for actuating said lever so as to move both of said bolts simultaneously.

2. The combination of a stationary framework, a casing mounted therein, sashes movable relatively to said casing, bolts mounted partially within said casing and movable relatively to said sashes for the purpose of securing the latter in predetermined positions, a lever pivotally mounted within said casing and connected with said bolts for actuating the latter, a revoluble member mounted within said casing and provided with a finger for moving said lever, and means for turning said revoluble member.

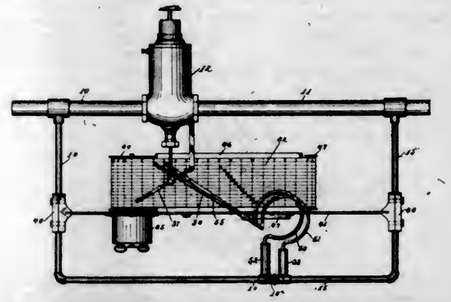
3. The combination of a stationary framework, a casing mounted therein, sleeves connected with said casing and provided with slots, bolts slidably mounted within said sleeve, a sash movable relatively to said stationary framework and adapted to be held in predetermined positions by aid of said bolts, pins connected with said bolts and extending through said slots in said sleeves, springs encircling said sleeves and engaging said pins for the purpose of moving said bolts into engagement with said sashes, and means for moving said bolts against the action of said springs.

900,540. STEAM-SERVICE CONTROLLING AND RECORDING APPARATUS. GEORGE M. HILGER, Chicago, Ill. Filed Sept. 7, 1905. Serial No. 277,383.

1. The combination of a shell or casing having high and low pressure sides, a valve moving therein to control fluid movement through said casing, a recording device in connection with the valve, and recording devices respectively in communication with the high and low pressure sides of the shell or casing.

2. The combination of a shell or casing having a high and low pressure side, high and low pressure pipes communicating respectively with the said sides of the casing, a valve operating in the shell or casing to control fluid movement, a recording device in connection with said valve, and recording devices respectively in connection with the high and low pressure pipes.

3. The combination of a shell or casing having high and low pressure sides, high and low pressure pipes respectively in connection with said sides of the casing, a valve operating in the casing to control fluid movement through the same, a recording device having connection with the valve, branch pipes communicating with the high and low pressure pipes, and pressure recording devices communicating respectively with the branch pipes.



4. The combination of a shell or casing having high and low pressure sides, high and low pressure pipes respectively in connection with said sides of the casing, a valve operating in the casing to control fluid movement through the same, a recording device having connection with the valve, branch pipes communicating with the high and low pressure pipes, pressure recording devices communicating respectively with the branch pipes, and means for holding a ribbon or the like in position to receive the records of all of said recording devices.

5. The combination of a shell or casing having a high and low pressure side, high and low pressure pipes communicating respectively with the said sides of the casing, a valve operating in the shell or casing to control fluid movement, a recording device in connection with said valve, recording devices respectively in connection with the high and low pressure pipes, and means for holding a ribbon or the like in position to receive the records of all of the said recording devices.

[Claims 6 to 21 not printed in the Gazette.]

900,541. DENTAL APPLIANCE. ERWIN E. HOLMES, Indianapolis, Ind. Filed Nov. 2, 1907. Serial No. 400,387.



1. A dental appliance for taking wax impressions or bites consisting of a primary and a secondary plate, means on said plates adapted to force the secondary plate to travel longitudinally when moved toward the primary plate and to limit said longitudinal travel, and a lug on said primary plate to limit the longitudinal travel of said secondary plate in the direction to open the appliance.

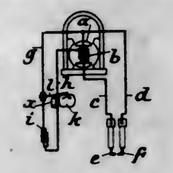
2. A dental appliance for taking wax impressions or bites consisting of a primary and a secondary plate, and a bar pivoted at each end to the plates and adapted to permit said plates to be tilted and to force the secondary plate to travel longitudinally when moved toward the primary plate and to limit said longitudinal travel, in the direction to close the appliance.

3. A dental appliance for taking wax impressions or bites consisting of a primary and a secondary plate, means connecting the plates to permit one of said plates to tilt vertically and to travel longitudinally of the other, and means arranged on the plates to intermesh to prevent lateral play between the plates when the latter are in contact.

4. A dental appliance for taking wax impressions or bites consisting of two plates, and a connection permitting each plate to move from and toward the other in a parallel plane.

5. A dental appliance for taking wax impressions or bites consisting of two plates, a connection permitting the plates to be separated in a parallel plane, and a stop means adapted to prevent said connection being moved into a right angle position relative to said plates.

900,542. ELECTRIC GENERATOR. GOTTLOB HONOLD, Stuttgart, Germany. Original application filed Apr. 30, 1902, Serial No. 105,380. Divided and this application filed June 16, 1905. Serial No. 265,573.



1. The combination, with a generator having a plurality of generating turns, of spark-electrodes arranged to be energized from the generator-turns, means for shunt circuiting a portion of said generator-turns, and means for opening said shunt-circuit, whereby a spark is produced between the electrodes.

2. The combination, with a generator having a plurality of generating turns, of spark-electrodes arranged to be energized from the generator-turns, a shunt circuit arranged to shunt circuit a portion of said generator turns, a condenser included in said shunt-circuit, and means for opening said shunt circuit.

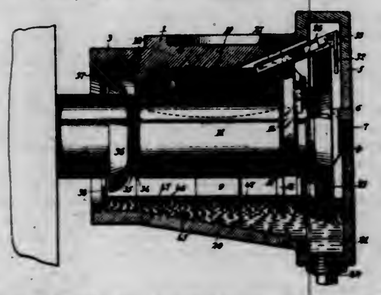
3. The combination, with a generator having a plurality of armature-turns, of spark-electrodes out of contact with each other, a circuit including said electrodes and arranged to be energized by the armature turns of the generator, a shunt-circuit in which some of said armature turns are included, and means for opening said shunt-circuit.

4. The combination, with a generator having a plurality of armature-turns, of spark-electrodes out of contact with each other, a circuit including said electrodes and arranged to be energized by the armature-turns of the generator, a shunt-circuit in which some of said armature-turns are included, a condenser in said shunt-circuit, and means for opening said shunt-circuit.

5. The combination, with a generator having a plurality of armature-turns, of spark-electrodes out of contact with each other, a circuit including said electrodes and arranged to be energized by the armature-turns of the generator, a shunt-circuit in which some of said armature-turns are included, and means for opening and closing said shunt-circuit.

[Claims 6 to 10 not printed in the Gazette.]

900,543. JOURNAL-BOX. WILLIAM A. HUFF, Newark, N. J. Filed Jan. 8, 1907. Serial No. 351,337.



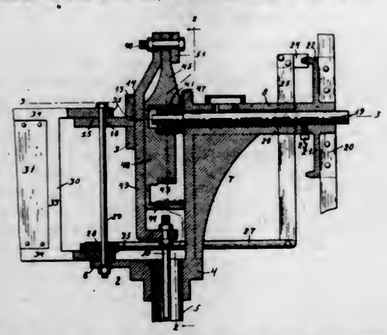
1. In a journal box, in combination, a case, a journal therein, a brass on said journal having an oil reservoir for supplying oil to the journal, a check plate retaining said brass, said case having an oil bath therein, a cone attached to the end of said journal running in said bath and adapted to raise oil, and a stripper wiping the oil from said cone and passing through said check plate to deliver to said reservoir.

2. In a journal box, in combination, a case, a journal rotating in said case, a brass against said journal and having a reservoir provided with openings in its bottom, a check plate retaining said brass and having a notch in the upper edge thereof, said case having an oil bath therein, a cone attached to said journal dipping in said bath and adapted to raise oil therefrom, and a stripper wiping the oil from said cone and passing through said notch to deliver oil to said reservoir.

3. A journal box having a case adapted to receive an oil bath and having transversely disposed ribs adapted to collect solid matter carried in the oil.

4. In a journal box, in combination, a case, a journal, a brass resting against said journal and having a reservoir formed therein, a check plate retaining said brass, said case having an oil bath therein, a cone dipping in said oil bath and adapted to raise oil therefrom, and a stripper wiping the oil from said cone, and passing through said check plate, said stripper having shoulders resting against the outer face of said check plate.

900,544. WINDMILL-GEAR. ORLA L. HUFFMAN, Erie, Kans. Filed June 13, 1907. Serial No. 378,797.



1. In a gear for a wind mill or the like, the combination of a support provided with a bearing and a vertical guide groove or channel arranged opposite said bearing, a shaft in the bearing, a pinion upon the latter, a slide arranged in said guide groove or channel and having offset upper and lower ends, a rack yoke to co-act with the pinion arranged vertically between the offset ends of the slide and horizontally between the latter and the bearing, the upper end of the yoke being pivoted to the upper offset end of the slide to pivotally suspend the yoke and a pump rod connected to the offset lower end of the slide and disposed vertically beneath the yoke, substantially as and for the purposes set forth.

2. In a gear for a wind mill or the like, the combination of a support provided with a bearing and a vertical guide groove or channel arranged opposite the bearings, a shaft in the bearing, a pinion upon the shaft, a slide arranged in said guide groove or channel, a rack yoke to co-act with the pinion arranged between the slide and the bearing, a pump rod connected to the lower end of the slide, a link pivoted at one end upon the support and a single pivot passing through the other end of the link, the upper end of the yoke and the upper end of the slide, substantially as and for the purposes set forth.

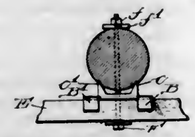
3. In a gear for a windmill or the like, the combination of a support provided with a bearing and a vertical guide groove or channel arranged opposite the bearing, a slide arranged in said guide groove or channel, a pump rod connected to the lower end of the slide, a yoke pivotally suspended from the upper end of the slide and arranged between the slide and the bearing, said yoke having in one of its faces an oblong groove having a continuous outer wall, the inner wall of said groove being formed with teeth to provide a continuous rack, the latter being disposed entirely within the groove, a shaft arranged in said bearing and having one of its ends projecting into the groove in the yoke, a pinion fixed upon the outer portion of said projecting end of the shaft and engaged with said rack and a roller journaled upon the inner portion of said projecting end of the shaft and arranged between said pinion and said bearing, said roller being adapted to engage the continuous outer wall of the groove in the yoke to hold said pinion in mesh with said rack, substantially as described.

4. In a wind mill gear, the combination of a support having a horizontal portion formed with stop shoulders 16, 17 arranged substantially at right angles to each other, a vertical pivot, a vane arranged upon said pivot, a spring for actuating the vane in one direction and holding it normally against one of said stop shoulders, the brake operating lever 32 fulcrumed intermediate its ends upon said pivot and having one of its ends disposed adjacent to the other stop shoulder and in the path of the vane, means for actuating the vane against the tension of said spring to cause it to actuate said lever and engage the last mentioned stop shoulder, a wind wheel, a brake device for the latter, and means connected to the other end of the brake operating lever 32 for actuating said brake device, substantially as set forth.

5. In a windmill gear, the combination of a head or turn table having a tubular lower portion and an open upper portion provided with a guide and a bearing, a shaft arranged in said bearing, a slide arranged in said guide and having offset upper and lower ends, a pump rod connected to the lower end of said slide and projecting through the tubular base portion of the turn table, a yoke having an arm at its upper end and an oblong groove in one face with a rack formed in said groove, a link pivoted at one end to the turn table, a pivot connecting said link, said arm of the yoke, and the upper end of said slide, a pinion upon said shaft arranged in said groove in the yoke and in mesh with said rack and a roller journaled upon said shaft and adapted to engage the outer wall of the groove in the yoke, substantially as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

900,545. SUPPORT FOR CROSS-ARMS. JOHN M. HUMISTON, Berwyn, Ill., assignor to Steel Gain Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed June 4, 1906. Serial No. 320,192.



1. The combination of a pole, a cross-arm, a single interposed member having a plane surface to receive the cross-arm, and a curved surface formed in resilient material adapted to engage the pole, and means for clamping said member and the cross-arm to the pole.

2. The combination of a pole, a cross-arm, a body having a plane surface against which said cross-arm may rest, and a smooth curved surface adapted to engage the pole, means to prevent the cross-arm from moving on said body, and a through bolt for clamping the support against the pole.

3. The combination of a pole, a cross-arm, an interposed support having a smooth curved surface for engaging the pole, and projecting members for engaging the cross-arm to prevent angular motion thereof, and a through bolt for clamping the cross-arm and support to the pole.

4. The combination of a pole, a cross-arm, a single member interposed between them provided with a smooth curved surface to engage the pole, and arms to engage the cross-arm, and a bolt passing through the cross-arm, the interposed member, and the pole for securing all the parts together.

5. A support for cross-arms comprising a sheet metal plate having forwardly projecting flanges for engaging the cross-arm, and rearwardly projecting flanges adapted to partially surround a pole, said flanges being integral with the plate.

[Claims 6 to 24 not printed in the Gazette.]

900,546. CAR-UNDERFRAME CONSTRUCTION. FRANK L. IRWIN, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio, a Corporation of Ohio. Filed Feb. 21, 1908. Serial No. 417,193.



1. In a metallic underframe construction for cars, a center sill formed of channels, a diaphragm plate positioned on each side of said center sill, a flange provided on the inner edge of said diaphragm plate through which the same is secured to a center sill channel, a flange provided on the upper edge of said diaphragm, a cover plate secured to said flange and adapted to be inserted through slits in said center sill, a flange formed on the lower edge of said diaphragm plate, a truss member positioned beneath said diaphragm plate and secured thereto through said last mentioned flange, said diaphragm plate having a recess formed therein adjacent its outer end, and a Z-plate positioned in said recess and secured to the upper flange of said diaphragm plate to form a seat for the side sill, said truss member being also intended to form a reinforcement for said side sill seat.

2. In a metallic underframe for cars a center sill, a pair of diaphragm plates located on each side of said center sill and flanged at their inner edges and secured to said center sill through said flanges, lateral flanges formed on the upper edges of said diaphragm plates, a cover plate mounted upon said diaphragm plates and secured thereto and passing through said center sill and being secured to the oppositely disposed pair of diaphragm plates, a plurality of angle truss members embracing the lower edges of the diaphragm plates on one side of the center sill, and being secured thereto, and extending beneath said center sill, and embracing the lower edges of the diaphragm plates on the opposite side of said center sill and being secured thereto, whereby said oppositely disposed pairs of diaphragm plates are firmly bound together in operative position both on their upper faces and on their lower faces.

3. In a metallic underframe for cars a center sill, a pair of diaphragm plates located on each side of said center sill and flanged at their inner edges and secured to said center sill through said flanges, lateral flanges formed on the upper edges of said diaphragm plates, a cover plate mounted upon said diaphragm plates and secured thereto and passing through said center sill and being secured to the oppositely disposed pair of diaphragm plates, a plurality of angle truss members embracing the lower edges of the diaphragm plates on one side of the center sill, and being secured thereto, and extending beneath said center sill, and embracing the lower edges of the diaphragm plates on the opposite side of said center sill and being secured thereto, whereby said oppositely disposed pairs of diaphragm plates are firmly bound together both on their upper faces and on their lower faces, said diaphragm plates at their outer ends having a recess formed therein, a plate to conform to said recess being secured to the upper flanges of said diaphragm plates and forming a seat for a side sill, said seat being reinforced by said angle truss members.

4. In a car bolster, a diaphragm plate having an inner flange, whereby said plate is secured to the center sill, a flange on the lower edge of said plate terminated near the outer end thereof, said plate having a recess formed in its

upper edge at its outer end, an angle member secured to said plate to form a continuation of said lower flange and to abut against the same at its inner end and having its upper face adapted to supplement the edge of said plate in said recess to form a seat for a side sill.

5. In a car bolster, a diaphragm plate recessed at its outer end, a seat member formed to fit the walls of said recess and overlapping the top of said plate, means to secure said overlapping part to said plate, a flange on the lower edge of said plate cut away near its outer end, an angle abutting against the outer end of said flange secured to said plate and adapted to form a support for said seat member.

[Claims 6 to 9 not printed in the Gazette.]

900,547. AGITATOR FOR WASHING-MACHINES. JAMES ST. CLAIR JAMES, Hiawatha, Kans. Filed Mar. 18, 1908. Serial No. 421,836.



A washing machine, comprising a tub having a cover hinged thereto, a shaft journaled in the cover and mounted for sliding movement therethrough, a handle for manipulating the shaft, and an agitator comprising a plurality of hollow cone-shaped bodies open at their outer ends connected with the shaft and radiating therefrom, said bodies having their apexes connected with the support and being arranged at right angles to each other, the outer end of each of the said bodies being provided with a curved strap thereacross, for the purpose set forth.

900,548. CRADLE OR ROCKER ATTACHMENT. HILDUS A. JENSON, Salt Lake City, Utah. Filed Jan. 8, 1908. Serial No. 409,820.



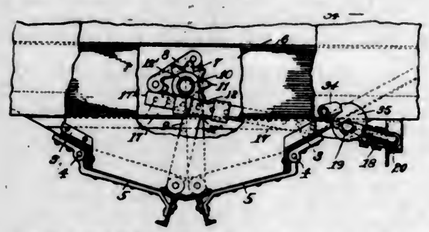
1. A cradle or rocker attachment for baby carriages comprising an upper frame having channel iron tracks, rockers secured to said frame, means for adjusting said tracks toward and from each other, means for holding a carriage wheel in said tracks, and a frame mounted on caster wheels, said frame being connected to the rocker frame by means of springs secured at opposite sides of the longitudinal center of said frames.

2. In a device of the character described, a rocker frame comprising laterally adjustable channel tracks, a system of sliding bolts for securing the wheels of the baby carriage in said tracks, a foot lever for simultaneously operating the system of bolts, a supporting frame mounted upon caster wheels, and springs connecting the two frames disposed upon opposite sides of the longitudinal center thereof.

3. In a device of the character described, a rocker frame comprising side tracks, means for adjusting said tracks, means for securing the wheels of a baby carriage in said tracks, rockers comprising an upper straight bar, a lower curved bar and an intermediate wooden core, a supporting frame mounted on casters and comprising each a metal outside plate, a wooden lining or filling, and casters mounted in the ends of said metal plates, said frames being connected by spiral springs.

4. In a device of the character described, a frame comprising tracks, rockers upon which said tracks are supported, said rockers each comprising an upper flat cross bar, a curved lower bar and an intermediate wooden core.

900,549. OPERATING MECHANISM FOR DUMPING-CARS. SINCLAIR J. JOHNSON, Montclair, N. J. Filed June 4, 1908. Serial No. 436,537.



1. The combination with a car door and operating mechanism therefor including a lever, of a crank actuated rack bar, a pinion rigid with said lever and with which said rack bar engages, and means for insuring the engagement of the rack and pinion in all positions assumed by the crank actuated rack bar.

2. The combination with a car door and operating mechanism therefor including a lever, of a crank actuated rack bar, a pinion rigid with said lever and with which said rack bar engages, and a rack bar suspender having a swiveled relation to said pinion.

3. The combination with a car door, of an operating lever having a link connection therewith, a crank actuated rack bar, a pinion rigid with said lever and with which said rack bar engages, and a rack bar suspender having a swiveled relation to said pinion.

4. The combination with a car door, of an operating lever having a link connection therewith embodying a link adapted for a portion of the door-opening and closing movements to be swung bodily by said lever, a rack bar and a pinion rigid with said lever and with which said rack bar engages.

5. The combination with a car door of an operating lever having a link connection therewith embodying a link adapted for a portion of the door opening and closing movements to be swung bodily by said lever, a crank operated rack bar, a pinion rigid with said lever and with which said rack bar engages, and a rack bar suspender having a swiveled relation to said pinion.

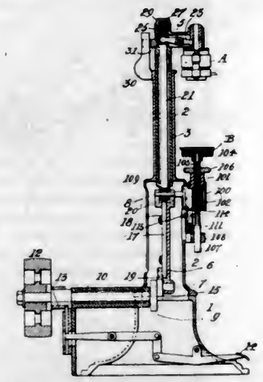
[Claims 6 to 12 not printed in the Gazette.]

900,550. MACHINE FOR SECURING SEALING-CAPS TO BOTTLES. ALBERT JONES, Baltimore, Md., assignor to Lewis Kalling, Baltimore, Md. Filed Nov. 17, 1904. Serial No. 233,114.

1. In a machine to compress an annular gasket or joint forming ring, between the flange of a sealing cap and the surface of a bottle head, the combination of a capping mechanism provided with cap-drawing devices, and cap-supporting devices, means to effect the holding of a sealing cap between the said cap-drawing and cap-supporting devices, means to bring a bottle head within the held sealing cap and to jointly put in motion the cap-drawing devices to effect the sealing of the bottle, substantially as specified.

2. In a machine to compress an annular gasket or joint forming ring between the flange of a sealing cap and the surface of a bottle head, the combination of a capping mechanism provided with cap-drawing devices, and cap-supporting devices, means to effect the holding of a sealing cap between the said cap-drawing and cap-supporting devices, and means to bring a bottle head within the held sealing cap and move the capping mechanism as an entirety down and along the sealing cap, substantially as specified.

3. In a machine to compress an annular gasket or joint forming ring, between the flange of a sealing cap and the surface of a bottle head, the combination of a seat for the bottle, a capping mechanism provided with cap drawing devices, and cap-supporting devices, mechanism to effect a vertical reciprocating motion of the capping mechanism as an entirety, and other mechanism to produce an independent reciprocating motion of the cap-drawing and the cap-supporting devices, substantially as specified.



4. In a machine to compress an annular gasket or joint forming ring, between the vertical flange of a sealing cap and the surface of a bottle head, for the purpose described, the combination of a seat for the bottle, a capping mechanism provided with yieldingly-held cap-drawing devices, distensible supporting devices for the sealing caps, mechanism to effect a vertical reciprocating motion of the said capping mechanism, and other mechanism to produce an up-and-down motion of one of the said sets of devices independently of the other, substantially as specified.

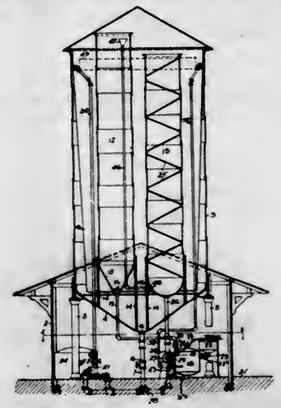
5. In a machine to compress an annular gasket or joint forming ring, between the vertical flange of a sealing cap and the surface of a bottle head, for the purpose described, the combination of a seat for the bottle, a capping mechanism provided with yieldingly-held cap-drawing devices, distensible cap-supporting devices, means to introduce sealing caps to the cap-supporting devices, mechanism to effect a vertical reciprocating motion of the said capping mechanism, and other mechanism to produce an up-and-down motion of one or both of the said sets of devices independently of the other, substantially as specified.

[Claims 6 to 23 not printed in the Gazette.]

900,551. WATER-SOFTENER. LLEWELLYN W. JONES and FREDERICK B. LEOPOLD, Sewickley, Pa., assignors to Pittsburgh Filter Manufacturing Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Dec. 3, 1906. Serial No. 346,018.

1. In water softening apparatus, the combination of a tank having up-take and down-take compartments therein of substantially the same height as said tank, a solution chamber in said down-take compartment, a re-action chamber in said down-take compartment communicating at its upper end with said down-take compartment, an over-flow pipe in said solution chamber communicating with the lower end of said re-action chamber, and means for introducing the water to be treated to the lower end of said re-action chamber.

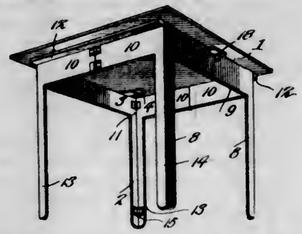
2. In water softening apparatus, the combination of a tank having up-take and down-take compartments therein of substantially the same height as said tank, a solution chamber in said down-take compartment, a re-action chamber in said down-take compartment communicating at its upper end with said down-take compartment, said solution chamber extending to a greater height than said re-action chamber, an over-flow pipe in said solution chamber communicating with the lower end of said re-action chamber, and means for introducing the water to be treated to the lower end of said re-action chamber.



3. In water softening apparatus, the combination of a tank, baffle plates extending across said tank and dividing the same into three compartments, comprising a down-take and up-takes of substantially the same height as the said tank, a solution chamber in said down-take compartment, a re-action chamber in said down-take compartment communicating at its upper end with said down-take compartment, an over-flow pipe in said solution chamber communicating with the lower end of said re-action chamber, and means for introducing the water to be treated to the lower end of said re-action chamber.

4. In water softening apparatus, the combination of a main tank, a closed lime tank at the lower end of said main tank, a lime slaking receptacle at a low level, pipe connections between said slaking receptacle and said lime tank, a valve controlling said connections, a pump, means for connecting said pump to a water supply, and means for forcing the water directly from said pump into said lime tank, a solution chamber, pipe connections between said solution chamber and said lime tank, and a valve in said connections.

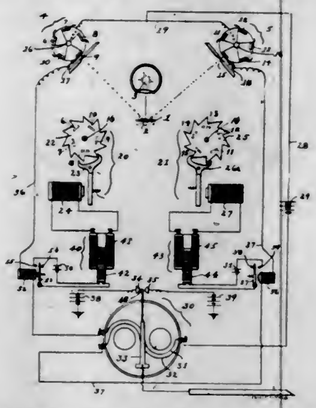
900,552. FOLDING TABLE. OTTO C. KADE, Chicago, Ill. Filed Aug. 21, 1907. Serial No. 389,557.



An article of furniture comprising a top portion having parallel guides on its under side, a pair of legs having a cross bar connecting their upper ends, hinges connecting the said cross bar to the under side of the top portion to enable such legs to be turned under such top portion or disposed in a vertical position, a pair of legs connected together and slidable under the top between the said guides and pairs of foldable links pivotally connected to and connecting the first-mentioned pair of legs and the slidable legs, the said links being adapted when folded to lie between the hinged legs and the slidable legs and to be turned, together with such hinged legs and slidable legs to a position parallel with said top portion, the said hinges

which connect the cross bar of the first mentioned legs to the underside of the top portion having spacing leaves connected to said cross bar and of a length in the clear between said cross bar and the top portion equal to the combined thickness of the links when folded and the slidable legs, substantially as described.

900,553. TELEGRAPHIC RELAY. ISIDOR KITSEE, Philadelphia, Pa. Filed Feb. 14, 1908. Serial No. 415,892.



1. In a telegraphic receiving device, a local circuit, a selenium organism comprising a series of independent selenium cells, means to lower the resistance of said cells through the incoming impulses, and means to move, after each impulse, the selenium cell formerly in the local circuit out of said circuit and to move a selenium cell, formerly out of said circuit, in operative connection with said circuit.

2. In a device of the class described, a series of selenium cells, a support for the same, means to conduct the incoming impulses, electro-magnetic means depending on the incoming impulses to place successively successive selenium cells in the path of the rays of light, and a local circuit adapted to be operated by one or the other of said selenium cells.

3. In a device of the class described, a series of selenium cells, and electro-magnetic means to replace the selenium cell acted upon by the rays of light with a selenium cell in its normal state and a local circuit containing a translating device and adapted to be operated by the selenium cells acted upon by the rays of light.

4. In a device of the class described, two series of selenium cells, and electro-magnetic means for each of said series to place in the circuit a selenium cell of normal resistance after the lowering of the resistance of a neighboring cell.

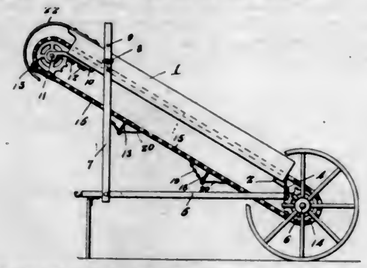
5. In a device of the class described, a relay inserted in the line of transmission, a series of selenium cells, means to lower the resistance of one of said cells through rays of light deflected with the aid of said relay, and means operatively related to said series of cells to take out of the circuit the cell with lower resistance and place in its stead a cell of normal resistance.

[Claims 6 to 8 not printed in the Gazette.]

900,554. CONVEYER. CHARLES H. KNAPP, Chicago, Ill. Original application filed Jan. 6, 1908, Serial No. 409,509. Divided and this application filed May 11, 1908. Serial No. 432,091.

1. A device of the class described comprising an endless conveyer, grasping devices carried thereby, means to throw said devices out of normal position, and means to forcibly return them to normal position to disengage the material carried by the conveyer.

2. A device of the class described comprising an endless conveyer, cross slats carried thereby, means for axially rotating said slats out of normal position, and means to snap said slats to normal position to forcibly disengage the material carried by the conveyer.



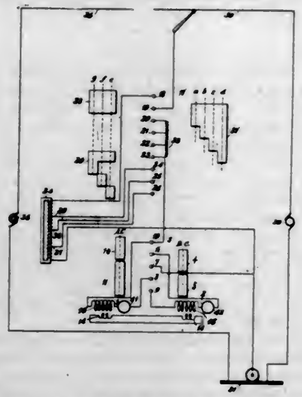
3. A device of the class described comprising an endless conveyer, cross slats journaled in the conveyer chains, a rigid arm projecting from each of said slats, flexible connections between said arms and the conveyer chains, means to rotate said slats to throw them out of normal, and means connected to the arms and chains for snapping the slats back to normal whereby the material carried by the conveyer is forcibly disengaged.

4. In a device of the class described, a conveyer, cross slats carried thereby, stub shafts secured to the slats and journaled in the conveyer chains, a flexible connection between the conveyer chains and the stub shafts, and a resilient connection between the stub shafts and the conveyer chains which permits axial rotation of the slats.

5. In a device of the class described, a conveyer, cross slats carried thereby, stub shafts secured to the slats and journaled in the conveyer chains, a flexible connection between the conveyer chains and the stub shafts, a resilient connection between the stub shafts and the conveyer chains which permits axial rotation of the slats, and a pair of curved arms adapted to forcibly engage and rotate said slats.

[Claim 6 not printed in the Gazette.]

900,555. CONTROLLING SYSTEM FOR ELECTRIC MOTORS. BENJAMIN G. LAMME, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Original application filed Dec. 4, 1905, Serial No. 290,122. Divided and this application filed Feb. 24, 1908. Serial No. 417,367.

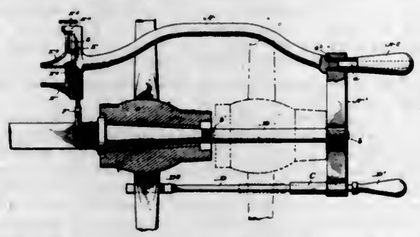


1. The combination with a source of direct currents, a source of alternating currents, a plurality of electric motors adapted to be operated by either character of energy and provided with auxiliary field magnet windings connected in closed circuit, of means for arranging the circuit relations of the motors in accordance with the character of energy supplied thereto and so that induced currents in the respective auxiliary field magnet windings may traverse the closed circuit in the same direction when operating by direct currents and in opposite directions when operating by alternating currents.

2. The combination with a source of direct currents, a source of alternating currents, a plurality of electric motors adapted to be operated by either character of energy and provided with auxiliary field magnet windings connected in closed circuit, of means for so connecting the motors in series relation when operated by direct currents and in parallel relation when operated by alternating currents that the induced electro-motive forces in the respective auxiliary field magnet windings may be added in the first case and may oppose each other in the second case.

3. The combination with a source of direct currents, a source of alternating currents, a plurality of electric motors adapted to be operated by either character of energy and provided with auxiliary field magnet windings connected in closed circuit, of means for so connecting the motors in series relation when operated by direct currents and in parallel relation when operated by alternating currents that the induced currents in the respective auxiliary field magnet windings may traverse the closed circuit in the same direction for direct current operation and in opposite directions for alternating current operation.

900,556. COMBINED VEHICLE JACK AND WRENCH. DOCTRINE C. LASSITER, Shelmerdine, N. C. Filed Feb. 5, 1908. Serial No. 414,359.

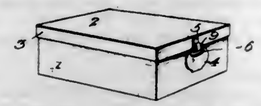


1. The combination in a lifting jack of a bowed arm or goose-neck, a fulcrum bearing at one end, a handle at the opposite end, a hub bearing rod, and a grab rod slidably connected with said handle for engaging the spokes of the wheel and sliding the hub on the hub bearing rod.

2. The combination in a lifting jack of a bowed arm or goose-neck, a fulcrum bearing at one end thereof, a wrench member projecting from said arm, a handle at the opposite end of the bowed arm, a hub bearing rod projecting from said arm and having a socket in its free end, a tubular projection at the lower end of the goose-neck, and a grab rod fitted to slide in said tubular projection.

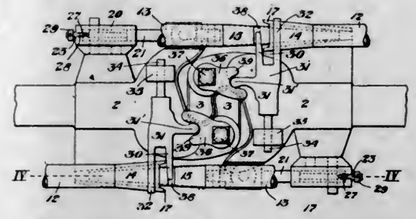
3. The combination in a lifting jack, of a bowed arm or goose-neck, a fulcrum bearing at one end, a hub bearing bar projecting from said bowed arm at its opposite end, and a grab rod slidably mounted with respect to the bowed arm adjacent to its end.

900,557. PAPER BOX. EDWARD K. LATHROP, Springfield, Mass. Filed Dec. 15, 1906. Serial No. 347,957.



A fastening for paper boxes comprising the end wall of the box with an opening therein, a flanged cover also having an opening in one end, a strip of sheet-metal having one end inserted through the opening of the cover and bent in contact with the inner and outer faces of the flange of the same, a locking member having an enlarged opening therein and also provided with a tongue on its base portion, said tongue being inserted through the opening in the end wall of the box and bent upwardly so as to be out of contact with the inner face of the end wall to permit of the locking member having an outward lateral movement in said opening in said end of the box, and said strip having its outer portion inserted through the enlarged opening of said locking device and serving to be bent upwardly in hook form, substantially as described.

900,558. COUPLING MECHANISM. WILLIAM D. LEFTWICH, Pittsburg, Pa. Filed Apr. 3, 1907. Serial No. 366,180.



1. In a car coupler, the combination with the main coupler head provided with a swinging jaw and a fluid conducting terminal at one side adapted to receive and make connection with a co-acting terminal of another similar coupler; of a transversely arranged sliding locking wedge adapted to tighten said terminals together, with an actuating arm operable by the swinging jaw and adapted to move said wedge in conformity with the movement of the jaw, substantially as set forth.

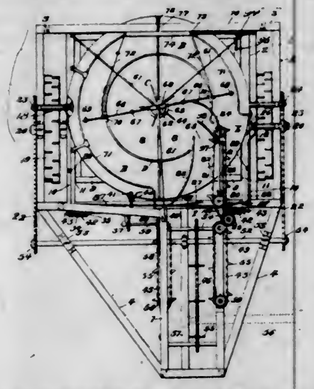
2. In a car coupler, the combination of a main coupler head provided with a swinging jaw, a fluid-conducting terminal at one side thereof adapted to receive and make connection with a co-acting terminal of another similar coupler and having a vertically arranged portion provided with a tapered guiding socket, a fluid-conducting terminal at the other side of the coupler head provided with a vertically arranged guiding projection and a guide stem loosely coupled therewith, a guiding housing mounted on the coupler head engaging said stem and provided with a cushioning spring, a transversely arranged sliding locking wedge adapted to engage and couple together one of said conducting terminals with the terminal of a co-acting coupler head, and an actuating arm operable by the swinging jaw of the coupler adapted to move said wedge in conformity with the movement of the jaw, substantially as set forth.

900,559. GRAIN-SHOCKING MACHINE. WILLIAM A. LEITCH, Sarles, N. D., assignor of one-half to Frank J. Hodgins, Sarles, N. D. Filed May 16, 1907. Serial No. 374,049.

1. The combination of a wheel-supported structure, horizontal frames, hinges connecting the frames with the structure, a rotatable table consisting of sections, a pivotal connection between the table sections and frames, means for holding the frames in horizontal position, and a locking device arranged to be automatically released for permitting the frames and sections to swing open for depositing a shock when each section is supported wholly on its respective frame.

2. In a shocking machine, the combination of a rotatable table composed of sections, a movable supporting member for each section and arranged to permit the sections to move from under a shock formed on the table, and means for moving each section from one member to the other during the formation of a shock on the table, means for supplying sheaves to the table, and a

locking device arranged to be automatically released for permitting the table to deposit the shock when the table sections are on their respective members.



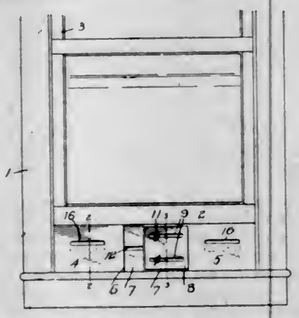
3. In a shocking machine, the combination with a rotary table composed of sections, non-rotatable swinging frames, means for movably mounting the table sections on the frames, means for locking the sections together, an automatic means for releasing the sections to deposit the shock, and a mechanism for feeding sheaves to the table.

4. In a shocking machine, the combination of a supporting structure, a rotatable table composed of sections mounted to swing outwardly and downwardly for depositing a shock, a rack composed of parts carried by the sections, a plurality of pinions meshing with the rack when the table is in normal position, and a mechanism controlled by the feed of sheaves to the table for intermittently turning the table.

5. In a shocking machine, the combination of a table composed of sections mounted to deposit a shock formed thereon, frames mounted to swing on horizontal axes, means for rotatably mounting the sections on the frames, means for rotating the table by a step by step movement, and means for feeding sheaves to the table.

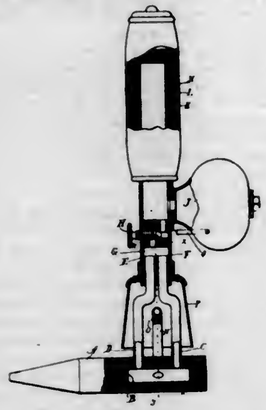
[Claims 6 to 30 not printed in the Gazette.]

900,560. VENTILATOR. EDWARD B. LOOMIS and GALEN O. LOOMIS, Memphis, Tenn. Filed May 21, 1908. Serial No. 434,171.



In a device of the class described, the combination with a pair of members, of means for holding said members in alinément with each other, a pair of bolts carried by one of said members and adapted to enter adjusting slots in the other of said members, nuts carried by said bolts whereby the members may be held in adjusted position, and beveled edges to fit the sill and sash, said members each having a diagonally disposed elongated ventilating slot.

900,561. SELF-HEATING SOLDERING-IRON. FRANK J. MANN, Scranton, Pa., assignor to Self-Heating Soldering Iron Company, a Corporation of New York. Filed Dec. 21, 1907. Serial No. 407,511.



1. In a self-heating soldering iron, the combination with a hollow body portion, of a soldering iron or block provided with a cavity, tubes arranged to afford communication from the cavity of said block with the said hollow body, a valve device arranged to shut off such communication, and a tube projecting exteriorly from the said block and having a nipple whereby a jet of vapor may be directed towards the said block, the said tube being in communication with the said soldering iron, the supply of fluid being governed by the said valve device, substantially as described.

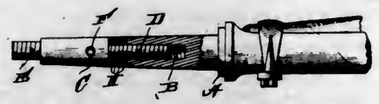
2. In a self-heating soldering iron, the combination with a hollow body portion adapted to contain fluid fuel, of a soldering iron having a cavity, tubes arranged to afford communication from the cavity of said block with the said hollow portion, a bent tube extending from and returning to the cavity iron and passing between the said tubes first mentioned, the said bent tube having a nipple arranged exteriorly between the said tubes first mentioned and near the iron whereby a jet of vapor may be directed towards the said iron, substantially as described.

3. In a self-heating soldering iron, the combination with a hollow body portion, of a soldering iron or block provided with a cavity, tubes arranged to afford communication from the cavity of said block with the said hollow body, a valve device arranged to shut off such communication, a bell surrounding the said tubes, and a tube having a nipple whereby a jet of vapor may be directed towards the said block, the said tube being in communication with the soldering iron, the supply of fluid being governed by the said valve device, substantially as described.

4. In a self-heating soldering iron, the combination with a soldering iron or block provided with a cavity, of a handle portion provided with a reservoir, tubular connections extending between the said handle portion and the said block whereby the reservoir may be placed in communication with the cavity of the said block, a valve arranged to shut off such communication, a nipple arranged exteriorly near the block and adapted to direct a jet of vapor towards the said block, the said nipple being in communication with the said iron, and the said valve being arranged to shut off the fluid supply, substantially as described.

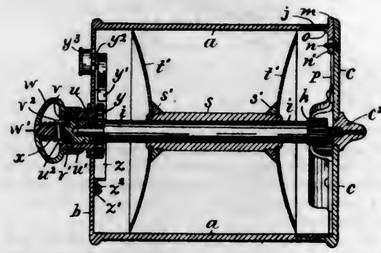
5. In a self-heating soldering iron, the combination with a soldering iron or block provided with a cavity, of a handle portion provided with a reservoir, tubular connections extending between the said handle portion and the said block whereby the reservoir may be placed in communication with the cavity of said block, a nipple arranged exteriorly near the block and adapted to direct a jet of vapor towards the block, the said nipple being in communication with the said iron, and a valve arranged to shut off the fluid supply, substantially as described.

900,562. AXLE-SPINDLE. THOMAS L. MARTIN, Wrightsville, Ga. Filed June 1, 1908. Serial No. 436,133.



In combination with an axle having a threaded aperture in the end thereof, an axle section having a screw engaging the threaded end of the axle, and washers interposed between the axle and said section, as set forth.

900,563. FISHING-REEL. GEORGE E. MATTS, Newark, N. J. Filed Mar. 30, 1908. Serial No. 424,100.



1. In a reel, the combination, with a cage having a spool therein and a notch upon the extreme end of the cage, of a flat head *c* having a cylindrical flange *f* fitted to the end of the cage adjacent said notch, and a slot through the flange flush with the inner flat side of the head, means to engage the flange and cage, a radially moving latch-lock *m* fitted through the slot in the flange and held movably upon the inner flat side of the head, a catch-pin *o* projected from the side of the block to engage the notch in the end of the cage and limit the outward movement of the latch-block, and a spring operating upon the latch-block to press the same normally outward.

2. In a reel, the combination, with the tubular cage *a* having a spool therein and provided with the bayonet slots *k* opening upon the end of the cage, of a flat head *c* having a cylindrical flange *f* fitted to the end of the cage and provided with the pins *l* to engage such bayonet slots, the head having a slot through the flange adjacent one of the pins *l* and flush with the inner flat side of the head, the latch-block *m* fitted through the said slot and having the slot *n'* in its tail with the screw *u* fitted through the same into the head to hold the latch-block movably, the catch-pin *o* projected from the latch-block in a suitable position to engage the outer end of the bayonet slot when engaged by the adjacent pin *l*, and the curved wire-spring *p* inserted within the flange and extended around the same to hold itself in place, and one end engaged with the latch-block to press the same normally outward to engage the pin *o* with the outer end of the bayonet slot, the outer end of the latch-block projecting above the flange *f* when the pin is thus engaged, so that the latch-block may be pressed inwardly to remove the pin from the bayonet slot.

3. In a fishing reel, the combination, with a cage, and a spool having a spindle with journals at the ends, of the head *c* at one end of the cage having the end bearing c^2 for one of the journals, the head *b* at the opposite end of the cage having a hub *u* with a socket therein, and the means for pressing the spindle elastically toward the end bearing c^2 consisting of the step-block *u'* fitted to slide in the socket without rotation and fitted also to the journal upon the spindle, means for pressing the step-block elastically toward the end of the journal, and means for readily varying such elastic pressure.

4. In a fishing reel, the combination, with a cage, and a spool having a spindle with journals at the ends, of the head *c* at one end of the cage having the end bearing c^2 for one of the journals, the head *b* at the opposite end of the cage having a hub *u* threaded externally and having a smooth cylindrical socket therein with keyway *v* at one side, the smooth cylindrical step-block *u'* fitted to said socket and journal and having tongue v^2 to engage the keyway, and the cap *w* fitted to turn upon the threaded hub and having the central stud *w'* with spiral spring fitted thereon and pressed upon the end of the step-block by a suitable adjustment of the cap and thereby enabled to prevent lost motion or form a drag upon the spool, such elastic pressure being resisted by the end bearing c^2.

5. In a fishing reel, the combination, with a cage, and a spool having a spindle with journals at the ends, of the head *c* at one end of the cage having the end bearing c^2 for one of the journals, the head *b* at the opposite end of the cage having a hub *u* threaded externally and having a smooth cylindrical socket therein with keyway *v* at one side, the smooth cylindrical step-block *u'* fitted to said socket and journal and provided with the stud u^2 upon its outer end, the plate *v'* secured upon the stud *u'* and formed with tongue v^2 to engage the keyway, the hub having an adjustable cap *w* thereon with spring pressed by the same against the plate *v'* to vary the pressure of the step-block upon the journal, such pressure being resisted by the end bearing *c'*.

[Claim 6 not printed in the Gazette.]

900,564. METHOD OF MANUFACTURING STEEL. JOHN W. MAXWELL, Williamsport, Pa. Filed Feb. 20, 1906. Serial No. 302,124.

1. The method of manufacturing steel consisting in charging an open hearth furnace with a calcareous material such as limestone or lime, a carbonaceous material or materials, and scrap iron or steel, the whole being charged in such a manner as to bring the scrap iron or steel into intimate contact with the carbonaceous material or materials and at the same time to protect the carbonaceous material or materials from oxidation by the free oxygen in the furnace, then melting the charge and completing the refining thereof in the usual manner, and finally removing it from the furnace.

2. The method of manufacturing steel, consisting in charging an open hearth furnace with pig iron and a calcareous material such as limestone or lime, then a carbonaceous material or materials, and finally covering the same with wrought iron or steel and then melting and refining the charge in the usual manner and tapping from the furnace.

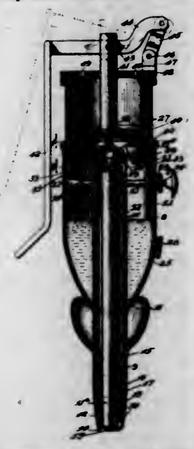
3. The method of manufacturing steel, consisting in placing a charge of pig iron and material containing calcium in an open hearth furnace, then placing on this charge carbonaceous material covered by scrap iron or steel, and then melting the charge.

900,565. VAGINAL SYRINGE. KARL L. MAYERS and MAURICE B. BENAS, St. Louis, Mo. Filed Nov. 25, 1907. Serial No. 403,820.

1. In a vaginal syringe, a liquid-container having a nozzle comprising inner and outer connecting tubes, an air-pump, an inlet valve connecting the inner tube to the interior of the air-pump, outlet valves connecting the air-pump with the interior of the liquid container, means for closing the nozzle of the liquid-container while forcing air from the air-pump into the fluid contents of said container, and means for opening said nozzle after the fluid has been charged with air, substantially as specified.

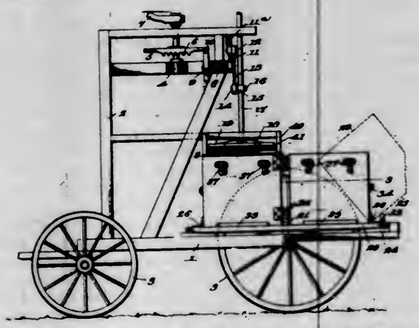
2. In a vaginal syringe, a liquid-container having a nozzle comprising inner and outer connecting tubes, an air-pump, an inlet valve connecting the inner tube to the

interior of the air-pump, outlet valves connecting the air-pump with the interior of the liquid container, means for closing the nozzle of the liquid-container while forcing air from the air-pump into the fluid contents of said con-



tainer, means for opening said nozzle after the fluid has been charged with air, and a bulb mounted about said nozzle, substantially as specified.

900,566. MULTIPLE HAY-PRESS. JESSIE H. MEANS, Carnesville, Ga. Filed Feb. 24, 1908. Serial No. 417,450.



1. In a hay press, the combination of a plunger, means for operating same, a platform, and a press box hinged to said platform and comprising two pairs of walls, one pair hinged to the other to open laterally, substantially as described.

2. In a hay press, the combination of a plunger, a platform beneath same, and a press box hinged to said platform, said press box being formed of two sections hinged together, substantially as described.

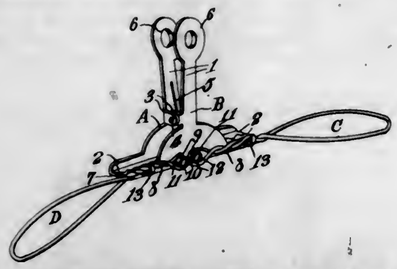
3. In a hay press, the combination of a plunger, means for operating same, a platform, a press box hinged thereto and adapted to be tilted over on its hinged face, said press box being formed in two sections hinged together and adapted to swing in a plane at right angles to said hinged face, substantially as described.

4. In a hay press, the combination of a plunger and means for operating same, a revolving platform, and a plurality of press boxes having their forward walls hinged to said platform, said press boxes comprising a forward wall fixedly secured to a side wall and a rear wall fixedly secured to another side wall, said rear wall being hinged to said first-mentioned side-wall to swing laterally thereof, substantially as described.

5. In a press box, the combination of a support, a plunger rod, means for operating said plunger rod, a revolving platform, a plurality of press boxes carried by said platform, and a feeding trough carried by said support and comprising a frame adjacent said plunger and having enlarged depending side walls at the other end thereof, coöperating with an inclining bottom to form a feeding chute to said press boxes, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

900,567. GARMENT-HANGER. NANCY E. MILES, Indianapolis, Ind. Filed Dec. 24, 1907. Serial No. 407,888.



1. The combination of a trousers or skirt hanging device, a pair of coat-supporting arms, parallel pivots on the device, collars rotatably mounted on the pivots, means for securely connecting the arms with the collars, and hook-shaped stops on the device for holding the arms in supporting position.

2. The combination of skirt or trousers supporting device, a pair of studs fixed on the device to form pivots, collars rotatably mounted on the pivots and having diametrically-disposed openings, looped wires forming coat-supporting arms and arranged with their ends bent into the apertures of the collars, and hook-shaped stops on the device for holding the arms in supporting position.

900,568. SKIRT-MEASURING DEVICE. NANCIE E. MILES, Indianapolis, Ind. Filed Mar. 14, 1908. Serial No. 421,082.



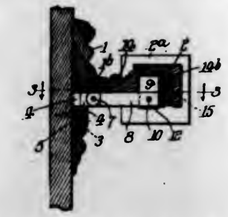
1. A device for measuring skirt lengths, consisting of a belt; a plate slidably connected at its ends to the belt and a tape measure slidably connected at one end to the plate with its end secured to the plate, and a weight on its other end.

2. A device for measuring skirt lengths, consisting of a belt; a plate with means at its ends slidably connecting it with the belt, and a depending portion with means for slidably connecting a tape measure thereto; and a tape measure with a weight at one end, and slidably connected with and fastened to the plate at its other end to form a loop.

3. A device for measuring skirt lengths, consisting of a belt; a plate with a transverse slot at each end, and a depending portion with a transverse slot on its lower end; the belt extending through the slots in the end of the plate; and a tape measure with a weight at one end, and at its other end passing through the slot in the depending portion and secured at its end to the plate.

4. In a device for measuring dress skirts, the combination with a belt, of a slidable plate thereon having a horizontal portion with a slot in each end through which said belt passes, and a depending portion having slots for an adjustable tape, in combination with a tape measure having a weight at one end and passing through the slots in the depending portion of the slidable plate and secured to the horizontal portion thereof and having a handle for moving the slide on the belt, as herein set forth.

900,569. CASKET-HANDLE. JOSEPH H. MILLS, Richmond, Ind. Filed Mar. 17, 1908. Serial No. 421,664.



1. A casket handle comprising a handle proper, hinges therefor, and removable pieces adapted to be applied to the hinges for concealing them, said hinges being arranged to take the strain and acting independently of said pieces; substantially as described.

2. A casket handle, comprising a handle proper, hinges therefor, and removable pieces adapted to be applied to the hinges to conceal them and engaging the handle proper leaving the inner faces of the hinges and the handle proper open; substantially as described.

3. A casket handle comprising a handle proper, hinges therefor, and removable pieces having grooves upon their inner faces to receive the leaves of the hinges to conceal them, said grooves being of the same width as said leaves to strengthen them by preventing buckling thereof; substantially as described.

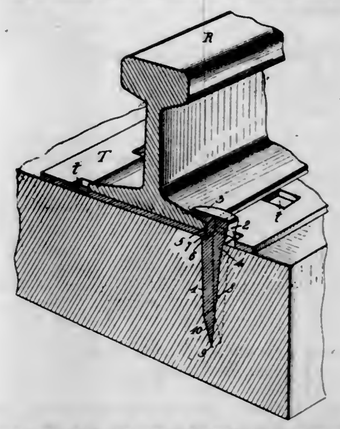
4. A casket handle comprising a handle proper, hinges therefor, and removable pieces fitting upon the hinges to conceal them and having a lower portion partially encompassing the handle proper; substantially as described.

5. A casket handle comprising a handle proper, hinges therefor, each hinge comprising a member or leaf secured at one end in the handle and a second leaf to which the first leaf is pivoted, and socket pieces in the handle to receive the first named leaves; substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

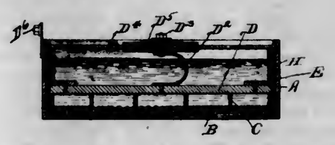
900,570. MEANS FOR SECURING RAILROAD-RAILS TO TIES OF RAILROAD-BEDS. OSCAR J. MORRIS, Laramie, Wyo. Filed Mar. 4, 1907. Serial No. 360,517.

A spike in combination with a tie plate and a railroad rail, the tie plate being provided with an elongated opening therein, said rail having its flange section mounted on said tie plate and the length of the opening of the tie plate being greater than the width of the spike, said spike having an approximately rectangular notch formed therein next to the head of the spike, one wall of the notch being downwardly inclined forming a lip on its outward forward edge, and said notch engaging the underface of the tie plate and the upper face of the flange of the rail, the inner edge of the opening and the outer edge of the flange of the



rail contacting with the vertical wall of the notch, and said lip on said inclined wall of the notch contacting with the underface of the tie plate to prevent lateral movement of said plate, substantially as specified.

900,571. SECONDARY BATTERY. WILLIAM MORRISON, Chicago, Ill. Filed June 8, 1903, Serial No. 160,646. Renewed Dec. 9, 1907. Serial No. 405,747.



1. In a reversible electric galvanic battery in which there is an alkaline solution and zinc is one of the positive active elements, an electrode disposed in a substantially horizontal plane at or near the bottom of the cell, and an insulating band extending about and protecting the inner surfaces of the sides of the cell against electrical action.

2. In a reversible electric galvanic battery in which there is an alkaline solution and zinc is one of the active positive elements, a positive electrode disposed in a substantially horizontal plane at or near the bottom of the cell, and an insulating band extending about the interior sides of the cell and resting at its lower edges upon the positive electrode.

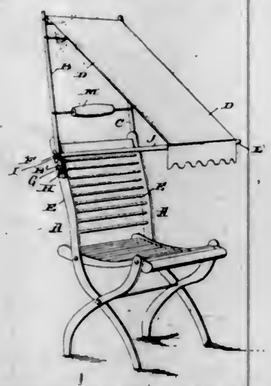
3. In a reversible electric galvanic battery in which there is an alkaline solution and zinc is one of the active elements, and a metal cell, an electrode disposed in a substantially horizontal plane at or near the bottom of the metal cell, and an insulating band extending about and protecting the inner side surfaces of the metal cell against electrical action.

900,572. CHAIR-CANOPY. THOMAS MORTON, Rutherglen, Scotland. Filed July 19, 1907. Serial No. 384,670.

1. The combination of a seat having a back provided with the uprights E; a spring roller; supports for the same pivoted to said uprights near their upper ends; a canopy adapted to be coiled on said roller; and additional means attached to said uprights for holding said canopy in its uncoiled position, substantially as described.

2. The combination of a seat provided with a back having uprights E; a frame attached to said uprights, provided with a pair of slotted members B, C; a spring roller

mounted between the upper ends of said members; a canopy adapted to be coiled on the roller; and means attached to said uprights near their upper ends for holding said canopy in its extended or uncoiled position, substantially as described.



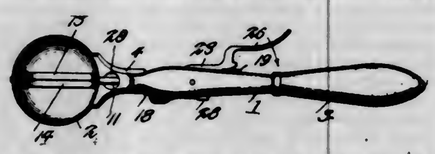
3. The combination of a seat provided with a back having uprights; a frame attached to said uprights near their upper ends and provided with a pair of slotted members; a spring roller mounted between the upper ends of said members; a canopy adapted to be coiled on the roller; and means attached to said seat for holding said canopy in its extended or uncoiled position, comprising a pivoted frame attached to said uprights, substantially as described.

4. The combination of a seat provided with a back having uprights; a slotted frame pivoted to said uprights; a spring roller pivoted between the upper ends of said frame; a canopy adapted to be coiled on said roller; and means for holding said canopy in its extended position, the whole being adapted to swing over the back, and down behind the seat when not in use, substantially as described.

5. The combination of a seat provided with a back having uprights; a slotted frame pivoted to said uprights; a head rest secured to the said frame; a spring roller pivoted between the upper ends of said frame; a canopy adapted to be coiled on said roller; and means for holding said canopy in its extended position, the whole adapted to swing over the back, and down behind the seat when not in use, substantially as described.

[Claim 6 not printed in the Gazette.]

900,573. ICE-CREAM SPOON. CHARLES E. MCCARREN, Cincinnati, Ohio. Filed June 26, 1908. Serial No. 440,564.



1. An ice cream spoon comprising a shank, a bowl secured to the shank, scrapers journaled in the bowl, the scrapers occupying the deepest portion of the bowl when in normal position, and means by which the scrapers can be operated.

2. An ice cream spoon comprising a shank, a bowl secured to the shank, scrapers journaled in the bowl, the scrapers lying one in contact with the other in the deepest portion of the bowl when in normal position, and means by which the scrapers can be operated.

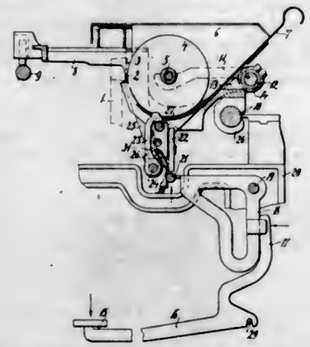
3. An ice cream spoon comprising a shank, a bowl secured to the shank, scrapers journaled in the bowl, the scrapers lying one in engagement with the other in the deepest portion of the bowl when in their normal position, and means by which the scrapers can be moved in opposite directions to the edge of the bowl.

4. An ice cream spoon comprising a shank, a bowl secured to the shank, shafts journaled on the shank, scrapers carried by the bowl and shafts, and means by which the shafts may be moved in reverse directions.

5. An ice cream spoon comprising a shank, a bowl secured to the shank, shafts journaled on the shank, scrapers connected to the shafts and bowl, means by which the shafts may be rotated in reverse directions to operate the scrapers, and means acting upon the shafts to yieldingly retain the scrapers in their normal position.

[Claims 6 to 10 not printed in the Gazette.]

900,574. TYPE-WRITING MACHINE. JOHN C. MCLAUGHLIN, Jersey City, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed July 7, 1908. Serial No. 442,367.



1. In a typewriting machine, the combination with a carriage, a platen, and a platen frame mounted on the carriage to shift for writing capitals, of latches at the ends of the carriage to catch over the platen frame to hold it in one position, a rock-shaft extending along and mounted upon the carriage, both of said latches being fixed to said rock-shaft, and a key-operated mechanism to shift the platen frame, a rail being operated by said key to engage a part projecting from said rock-shaft to rotate it to release the latches, to permit the platen frame to be shifted by said key-operated mechanism.

2. In a typewriting machine, the combination with a carriage, a platen and a platen frame mounted on the carriage to shift for writing capitals, of latches at the ends of the carriage to catch over the platen frame to hold it in one position, a rock-shaft extending along and mounted upon the carriage, both of said latches being fixed to said rock-shaft, a roll swiveled on said rock-shaft about midway of the length of the latter, a shift-key operating a rail to engage said roll to rock the shaft and release the latches, and a platen-frame shifting mechanism also operated by said key.

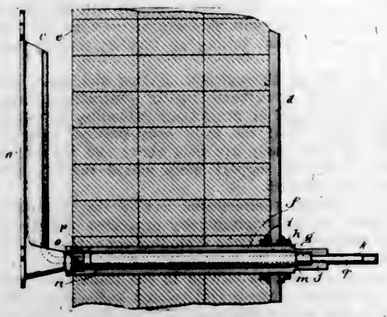
3. In a typewriting machine, the combination with a carriage, a platen and a platen frame mounted on the carriage to shift for writing capitals, of latches at the ends of the carriage to catch over the platen frame to hold it in one position, a rock-shaft extending along and mounted upon the carriage, both of said latches being fixed to said rock-shaft, a roll swiveled on said rock-shaft about midway of the length of the latter, a shift-key operating a rail to engage said roll to rock the shaft and release the latches, and a platen-frame shifting mechanism also operated by said key; said rail being constructed to detain said latches in released positions during the shifting movement of the platen frame.

4. In a typewriting machine, the combination with a carriage, a platen, and a platen frame mounted on the carriage to shift for writing capitals, of latches to operate between the ends of the carriage and the ends of the platen frame to hold the latter in one position, said latches being fixed to a rock-shaft, and a key-operated mechanism to shift the platen frame, a rail being operated by said key to engage a part projecting from said rock-shaft to rotate it to release the latches to permit the platen frame to be shifted by the key.

5. In a typewriting machine, the combination with a carriage, a platen, and a platen frame mounted on the carriage to shift for writing capitals, of latches to operate between the ends of the carriage and the ends of the platen frame to hold the latter in one position, said latches being fixed to a rock-shaft, and a key-operated mechanism to shift the platen frame, a rail being operated by said key to engage a part projecting from said rock-shaft to rotate it to release the latches to permit the platen frame to be shifted by the key; said rail constructed to turn said projecting part out of its path, and having a face sufficiently broad to detain said projecting part during the shifting of the platen frame.

[Claims 6 to 12 not printed in the Gazette.]

900,575. THERMOMETER. STEPHENS NEAL, Cordele, Ga., assignor to The Neal Naval Stores Company, Cordele, Ga., a Corporation of Georgia. Filed Jan. 22, 1908. Serial No. 412,212.



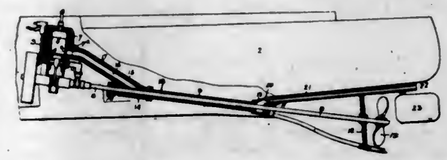
1. The combination of a still, a tube passing through the wall of said still and having its outer end interiorly screw-threaded, and having its inner end extending within said still and provided with a shoulder, and terminating in a hollow, thin walled nipple, a thermometer, part of which passes inside of said tube, with its bulb in contact with said nipple, a protecting tube for said thermometer, having a reduced portion adapted to fit into the hollow shoulder of said first named tube, and a sleeve for removably securing said protecting tube within said first named tube, substantially as described.

2. The combination of a still, a tube permanently secured in the wall of said still, said tube having its outer end interiorly screw-threaded, and provided on the part inside the still with a hollow projection having an interior shoulder and terminating in a thin walled nipple, a thermometer bent at right angles and having its horizontal part adapted to pass inside of said tube with the bulb of the thermometer in contact with said nipple, a face plate for said thermometer, a protecting tube fitting within said first named tube and having a reduced portion adapted to fit within the hollow shoulder of the first named tube, and a sleeve adapted to screw into said first named tube, holding the thermometer and protecting tube removably in position within said first named tube, substantially as described.

900,576. UNDER-WATER EXHAUST FOR LAUNCHES. HENRY C. NELSON and WILLIAM H. MULLINS, Salem, Ohio. Filed Jan. 15, 1906. Serial No. 296,179.

1. In a motor-boat, the combination of a gas-engine, a propeller shaft casing, and means for connecting up said casing with the exhaust port of said engine and with an under-water exhaust.

2. In a motor-boat, the combination of a gas-engine, a propeller shaft casing, a conduit connected to the exhaust of said engine, and to said casing, and an exhaust-pipe connected to said casing and extending below the water-line.

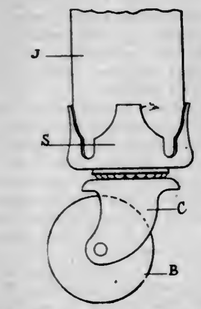


3. In a motor-boat, the combination of a gas-engine, a propeller shaft casing, a conduit connected to said gas-engine and to said casing, said conduit having two passages therein, one connecting with the exhaust of said engine and the other with the water-jacket, both leading into said casing, and an exhaust-pipe leading from said casing to a point below the water-line.

4. In a motor-boat, the combination of a gas-engine, a propeller shaft casing, a conduit connected to said casing and to the exhaust of said engine, and an exhaust-pipe connected to said casing and extending out to the rear end of said boat below the water-line.

5. In a motor-boat, the combination of a gas-engine, a propeller shaft casing, a conduit connected to said casing and to the exhaust of said engine, a connection at the other end of said casing forming a stuffing-box and having an outlet, and an exhaust-pipe connected to said outlet extending below the water-line.

900,577. CASTER FOR FURNITURE. GEORGE E. NEUBERTH, Newark, N. J., assignor to Universal Caster & Foundry Company, a Corporation of New Jersey. Filed May 21, 1908. Serial No. 434,046.



1. A caster having upwardly extending resilient gripping arms or members for frictionally bearing against the exterior of the leg and means for supporting its pintle within the leg.

2. A caster having upwardly extending resilient gripping arms or members for frictionally bearing against the exterior of a cylindrical leg and provided with inclined inner faces for coöperation with the leg.

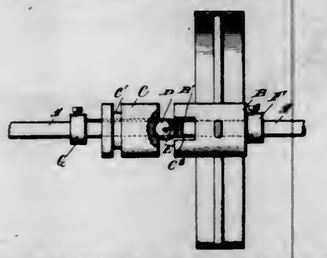
3. A caster having upwardly extending resilient gripping arms or members for frictionally bearing against the exterior of the leg, combined with bearings for the pintle adapted to be received and contained within the interior of the leg.

4. A caster having upwardly extending resilient gripping arms or members for frictionally bearing against the exterior of the leg, combined with bearings for supporting the caster pintle inside of the leg and in which the pintle is detachably secured.

5. A caster having a leg-supporting disk secured in respect to the pintle and having upturned resilient members frictionally embracing the exterior of the leg and securing the disk thereto and a frame or socket for receiving the pintle within the leg.

[Claims 6 to 8 not printed in the Gazette.]

900,578. CLUTCH. FRANCIS M. NICHOLS, Chillicothe, Ohio. Filed June 20, 1908. Serial No. 439,488.



1. A clutch substantially as described comprising a drive section and a driven section movable relatively toward and from each other, and provided in their adjacent faces one with diametrically opposite notches, and the other with diametrically opposite arms projecting toward the first section and adapted to enter the notches thereof, and rollers pivoted to said arms on axes which aline, the said rollers projecting at their circumference beyond the opposite faces of their respective arms, substantially as and for the purposes set forth.

2. The combination in a clutch of a drive section and a driven section movable relatively toward and from each other, and provided at their adjacent faces one with a notch and the other with a projecting arm to enter said notch, and a roller pivoted in said arm on approximately a radial axis and projecting at its circumference beyond the opposite faces of the arm.

3. The combination in a clutch of a drive section and a driven section movable relatively toward and from each other, one of said sections being provided with an end notch and the other with a projecting arm to operate therein, and an anti-friction roller carried by the said arm and movable on an approximately radial axis and projecting at its circumference beyond the two side faces of the arm whereby it may operate against either side of the notch in the notched section.

4. A clutch comprising a drive section and a driven section movable relatively toward and from each other, and provided at their adjacent faces the one with diametrically opposite notches opening toward the other section, and the other with diametrically opposite arms projecting toward said first section, and adapted to enter the notches thereof, the said arms being provided with openings formed through them from side to side and approximately in a circumferential direction, and with rollers pivoted in said openings on approximately radial axes, and projecting at their circumference beyond the opposite faces of their respective arms, all substantially as and for the purposes set forth.

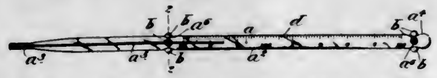
900,579. HINGE. MARTIN S. NOLAN, Waltham, Mass. Filed Feb. 25, 1908. Serial No. 417,664.



1. A hinge comprising connected leaves having interfitting projections, said leaves being arranged for relative lateral movement to dispose the projections of one leaf between the free ends of the projections of the other leaf, and means for limiting the return movement of the leaves to accurately disposed the projections for interfitting.

2. A hinge comprising connected leaves having interfitting projections, said leaves being arranged for relative lateral movement to dispose the projections of one leaf between the free ends of the projections of the other leaf, one of the projections being extended to form a stop for the other leaf during the return movement of the leaves.

900,580. CLINICAL AND OTHER THERMOMETER. CHARLES NURNBERG, New York, N. Y. Filed Aug. 8, 1907. Serial No. 387,618.



1. A clinical thermometer having the main body within a short distance of the mercury bulb provided with knobs or projections extending outwardly beyond the line of the main body, whereby the bulb, when the instrument is placed on a table or other support, will be held above and out of contact with said support and the thermometer be prevented from rolling or turning, substantially as described.

2. A clinical thermometer, having the main body of the same at two longitudinally separated points provided with knobs or projections extending outwardly beyond any part of the main body portion, whereby the bulb and main body are held above and out of contact with a table or support when placed thereon, substantially as described.

3. A clinical thermometer having the main body of the same at two longitudinally separated points provided with knobs or projections extending outwardly beyond any part of the bulb or main body portion, and two colored knobs or projections located in the transverse planes of the knobs first named, said colored knobs extending outwardly the same distance as the other knobs, substantially as described.

4. A thermometer of the class described, the bulb end of which is provided between the scale and said end and adjacent to said scale and at the bottom thereof with knobs or projections which raise said end of the scale of the thermometer when the latter is placed upon a table or other support, the top of said thermometer being also provided at said point with a colored knob or projection all of said knobs or projections extending outwardly beyond the line of the main body, substantially as described.

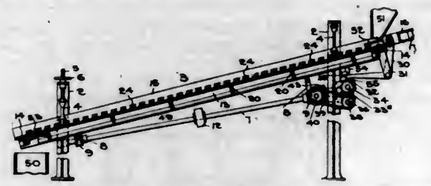
5. A clinical thermometer, the body portion of which is triangular in form in cross section, said body portion being provided at the opposite ends of the scale with a plurality of knobs or projections arranged at the corners thereof, and two of which at each end of the scale are placed at the bottom thereof and prevent the thermometer from rolling when placed upon a table or other support and raise the same above said table or support, the other two knobs being placed at the top of the body portion of the thermometer and serving to locate the scale to aid in the reading thereof, the knobs or projections extending outwardly beyond the main body, substantially as described.

900,581. ORE-SEPARATOR. JOSEPH F. PAGETT, Denver, Colo. Filed Oct. 12, 1907. Serial No. 397,173.

1. In an ore separator, an inclined plate, a plurality of transverse hollow riffles thereon and means to conduct air into the said riffles from a suitable source, the said riffles having air outlets in one of their sides.

2. In an ore separator, an inclined trough including longitudinally disposed air flues, and a plurality of transverse hollow riffles upon the plate connected with the said flues, the said riffles having air outlets in one of their sides.

3. In an ore separator, a member having an inclined surface, a plurality of transverse hollow riffles thereon and means to conduct air into the latter, the said riffles having downwardly converging sides and a longitudinal orifice in one of the latter.

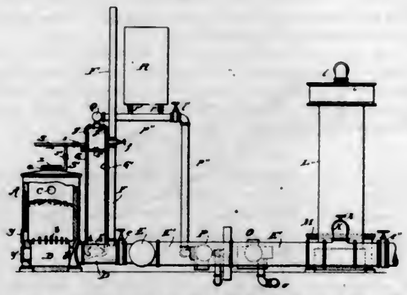


4. In an ore separator, a member having an inclined surface, a plurality of transverse hollow riffles thereon and means to conduct air into the latter, the said riffles having downwardly converging sides, and an upwardly ranging orifice in one of them.

5. In an ore separator, a member having an inclined surface, a plurality of transverse hollow riffles thereon and means to conduct air into the latter, the said riffles having downwardly converging sides, one of which is composed of an upper portion and an overlapping portion spaced therefrom.

[Claims 6 to 11 not printed in the Gazette.]

900,582. APPARATUS FOR MANUFACTURING GAS. HAWLEY PETTIBONE, New Rochelle, N. Y., assignor to The Power and Mining Machinery Company, a Corporation of New Jersey. Filed Jan. 11, 1907. Serial No. 351,860.



1. The combination with a gas generator and outlet pipe, of a jet exhauster, means for compressing part of the outflowing gas, and a pipe connection therefrom to said exhauster, substantially as described.

2. The combination with a gas-generator having means for admitting air and the main gas outlet pipe, of a double jet injector device in said outlet pipe, and adapted for discharging jets in opposite directions, and means for supplying compressed gas to the nozzles of said device, whereby hot gas may be drawn off from the generator and the current reversed through the generator, substantially as described.

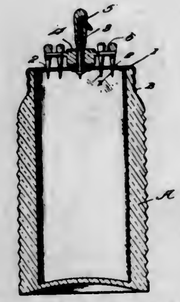
3. The combination with a gas-generator having means for admitting air and the main gas outlet pipe, of a double jet injector device in said outlet pipe, and adapted for discharging jets in opposite directions, and means for compressing gas and storing it under pressure and supplying such compressed gas to the jet nozzles, whereby hot gas may be drawn off and the current through the generator reversed, substantially as described.

4. The combination with a pair of generators or chambers connected near the top, of a main gas outlet pipe connecting with the base of each and a jet injector exhauster in each outlet pipe, whereby the current may be reversed through both chambers, substantially as described.

5. The combination with a gas generator, of a main gas outlet pipe having a jet injector exhauster, means for compressing and supplying gas thereto under pressure, a second pipe arranged for supplying gas in the opposite direction, and a valve in said outlet pipe, whereby gas can be passed from the second pipe into the generator, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

900,583. COVER FOR RECEPTACLES. WILLIAM H. PHENICE, Vernon, Ind., assignor of one-half to Alfred B. Simpson, Vernon, Ind. Filed Apr. 22, 1908. Serial No. 428,658.



1. The combination with a perforated cover, of a longitudinally disposed shank secured thereto, a collar loosely encircling the shank and arranged for longitudinal movement thereon, a plurality of arms carried by the collar and formed with plugs adapted to be seated in the respective perforations, and means carried by the shank for limiting the longitudinal movement of the collar thereon, as and for the purpose specified.

2. A receptacle of the character described, having a perforated cover, a shank rigidly secured thereto, a collar encircling the shank and arranged to move outwardly thereon upon the inversion of the receptacle, and a plurality of arms carried by said collar and formed with tapering plugs normally seated in the respective perforations to close the same, the said plugs being arranged to be carried outwardly in the perforations, upon the outward movement of the collar.

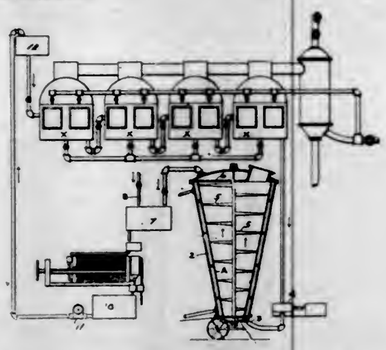
3. A receptacle of the character described, having a perforated cover, a threaded shank rigidly secured to the cover and perpendicularly disposed thereto, a nut working on said shank, a collar encircling the shank and arranged to be carried outwardly against the nut, upon the inversion of the receptacle, and a plurality of arms carried by the said collar, and formed with tapering plugs normally seated in the respective perforations, to close the same, the said plugs being arranged to be carried outwardly in the perforations, upon the outward movement of the collar.

4. A receptacle of the character described, having a perforated cover, a shank rigidly secured thereto, a collar loosely mounted upon the shank and arranged to move outwardly thereon upon the inversion of the receptacle, arms carried by said collar and formed with tapering plugs normally seated in the perforations in the cover, the said plugs being arranged to be carried outwardly in the perforations upon the outward movement of the collar, and adjustable means for limiting the outward movement of the collar, as and for the purpose specified.

900,584. TREATING MOLASSES. ROBERT D. PIKE, Berkeley, Cal. Filed Oct. 2, 1907. Serial No. 395,570.

1. The method herein described of treating molasses which consists, essentially, in rapidly osmosing and then concentrating the osmose syrup to supersaturation; then crystallizing this syrup until the purity coefficient of the resulting molasses is approximately that of the molasses previously osmosed; then adding fresh molasses to the osmosed molasses; and then reosmosing the combined molasses.

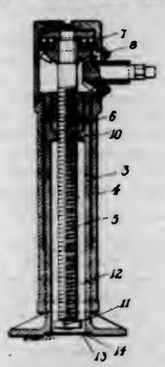
2. The method herein described of treating molasses which consists, essentially, in rapidly osmosing the molasses and then concentrating the osmose syrup to supersaturation; then crystallizing the syrup while the same is flowing or in motion, and until the purity coefficient of the resulting molasses is approximately that of the molasses previously osmosed; then adding fresh molasses to the osmosed molasses; and then reosmosing the molasses of the crystallizer.



3. The method herein described of treating molasses which consists, essentially, in rapidly osmosing the molasses and then concentrating the osmose syrup to supersaturation; then crystallizing the syrup in a closed chamber on exciting crystals, and simultaneously flowing the syrup therethrough with a velocity which is greater in the inlet portion of the crystallizer than in the outlet portion thereof; then adding fresh molasses to this osmosed molasses; and then reosmosing the combined molasses.

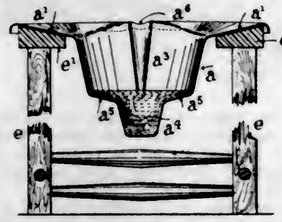
4. The method herein described of treating molasses which consists, essentially, in rapidly osmosing the molasses and then concentrating the osmose syrup to supersaturation; then crystallizing the syrup in a closed chamber on exciting crystals, and simultaneously flowing the syrup therethrough with a velocity which is greater in the inlet portion of the crystallizer than in the outlet portion thereof; while subjecting the crystallizer to a temperature sufficient to maintain the supersaturation of the syrup; adding fresh molasses to the osmosed molasses, and then reosmosing the molasses of the crystallizer.

900,585. JACK. FREDERICK E. PLACE, Chicago, and MERRILL L. JENKINS, Harvey, Ill., assignors to Buda Foundry & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 11, 1908. Serial No. 415,324.



A stop mechanism for jacks, comprising in combination a movable screw shaft, a stop flange, and a stop collar carried by said screw shaft and secured by a thread the reverse of the thread on the screw shaft, substantially as described.

900,586. BATH AND STAND FOR THE SAME. RICHARD H. QUINE, Manchester, England. Filed Jan. 15, 1908. Serial No. 410,959.



1. In portable bath contrivances, a bath having longitudinal inwardly and downwardly slipping rims, a cavity in said bath, ledges at the base of said cavity, and a well, and a stand for supporting said bath, as herein described.

2. A portable bath consisting of a longitudinal tank, longitudinal inwardly and downwardly sloping rims, a main cavity, ledges therein, and a well, substantially as described.

3. A portable bath consisting of a longitudinal tank, longitudinal inwardly and downwardly sloping rims, a main tank, ledges, and an intermediate well, and detachable handles for the bath, substantially as described.

4. A portable bath consisting of a longitudinal tank, longitudinal inwardly and downwardly slipping rims, a main tank, ledges, and an intermediate well, and a pouring spout, substantially as described.

5. A portable bath contrivance consisting of a longitudinal tank, downwardly and inwardly sloping rims, a main cavity in the tank, a well, ledges connecting the walls forming the well with the walls forming the cavity and a collapsible stand having legs.

900,587. COMPOSITION FOR SOLIDIFYING FLUE-DUST. SAMUEL W. RAMSEY and GUY W. SMITH, Youngstown, Ohio, assignors to The Ramsey-Smith Company, Youngstown, Ohio, a Corporation of Ohio. Filed Jan. 9, 1908. Serial No. 410,003.

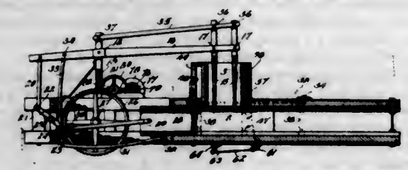
1. A composition for solidifying flue dust and fine iron ore, consisting of lime, hydraulic cement and sesquioxid of iron in or about the proportions named.

2. A composition for solidifying flue dust and fine iron ore, said composition containing lime, hydraulic cement, sesquioxid of iron and calcium sulfate, in or about the proportions named.

3. A composition for solidifying flue dust and fine iron ore, said composition containing lime, slag cement and "Prince's metallic" in or about the proportions named.

4. As a new article of manufacture, a conglomerate brick, composed of flue dust, lime, hydraulic cement and sesquioxid of iron in or about the proportions named incorporated together and solidified by means of water and then dried.

900,588. HAY-PRESS. GUSTAVE A. RAPP, Fort Collins, Colo. Filed May 18, 1907. Serial No. 374,319.



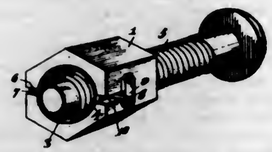
1. In a hay press, the combination of a press box, a reciprocating plunger moving in said box, a folding lever, folding arms connected to said lever and adapted to fold the hay in the press box, a curved bar pivoted to the frame, a curved connecting bar attached to said curved bar and connected to said lever, a lever having a beveled end, a connecting rod connecting said levers, a revolving pin for bearing against said beveled end to operate the folding lever in one direction and against the curved bar to operate the folding lever in the other direction, and feeding mechanism comprising two horizontally disposed endless aprons spaced apart to press the hay between them, said aprons being located at one side of the top of the press box, the lower apron being longer than the upper one.

2. In a hay press, the combination of a press box, a reciprocating plunger, folding arms, means to reciprocate said arms, an end block dropping mechanism comprising a lever having a lug to engage the end block, and means for releasing the lug from the end block during the forward movement of the plunger.

3. In a hay press, the combination of a press box, a feed box, means for feeding the hay from the feed box into the press box, means for folding the hay in the press box, an end block chamber, a lever having a lug projecting into the chamber to engage the end block, and means for withdrawing the lug during the forward movement of the plunger.

4. In a hay press, the combination of an end block having a spring projected pin, a press box, a feed box having a grooved wall to engage said pin, a lever having a lug to engage said end block, and means for withdrawing the lug from the end block to permit the block to drop during the forward movement of the plunger.

900,589. NUT-LOCK. CHARLES E. RATCLIFFE, Paducah, Ky. Filed Dec. 18, 1907. Serial No. 407,042.



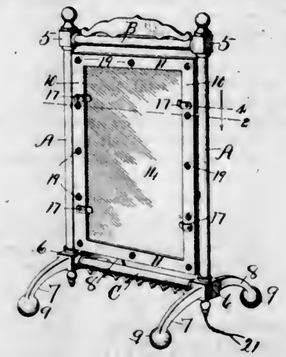
1. A nut provided with an opening for the passage of a bolt and having a recess communicating with the opening, a locking spring arranged within the said opening and having its outer end rigidly secured to the nut and provided at its inner end with an operating arm located within the recess and adapted to be moved backward transversely of the nut to expand the coils of the spring for premitting the removal of the said nut.

2. A nut lock comprising a nut provided with a longitudinal slot and having a transverse recess, and a coiled locking spring provided at its outer end with a radially arranged longitudinally disposed loop extending into the longitudinal slot of the nut and held against transverse movement, the other end of the spring being movable transversely of the nut in the said recess to expand the coils.

3. A nut lock comprising a nut provided with a longitudinal slot and having a transverse recess, and a coiled locking spring arranged within the nut and provided at its outer end with a radially arranged loop extending longitudinally and terminating at and engaging the inner coil and secured within the longitudinal slot of the nut, the inner end of the spring being extended to form an operating arm and arranged in the transverse recess for expanding the coils.

4. A nut lock comprising a nut provided with a transverse recess and having an entrance slot extending from the front face of the nut to the recess, said nut being also provided with a longitudinal slot, and a coiled locking spring arranged within the nut and provided with an operating arm located within the said recess, said spring being also provided with a longitudinally disposed loop secured in the slot of the nut.

900,590. PORTABLE SIGN. CONNESS T. RAYMOND, Chicago, Ill., assignor of one-half to John W. Pax, Chicago, Ill. Filed Sept. 26, 1907. Serial No. 394,690.



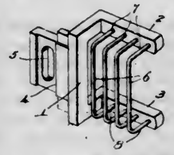
1. A portable sign, comprising a frame, a sign-frame pivotally inclosed therein, the transparent display panels separated by a space and mounted in said sign-frame, and means for removably retaining said panels in place, substantially as set forth.

2. A portable sign having a tubular supporting-frame comprising companion standards, the upper horizontal part, the connecting corner-pieces, the lower horizontal part, the lower connecting corner pieces having feet formed integral therewith, the sign-frame pivoted within said supporting-frame, the transparent panels removably mounted in said sign-frame and facing outward on opposite sides, and means for removably retaining said panels in place, substantially as set forth.

3. In a portable sign, a tubular supporting frame having feet for holding the same in an upright position, a hollow sign-frame pivotally hung therein, companion transparent panels spaced apart and removably mounted in said sign frame, and means for illuminating the display surfaces, substantially as set forth.

4. In a portable sign, a tubular frame, provided with feet for supporting the same in an upright position, a hollow sign-frame pivotally mounted therein, transparent panels inserted in said sign-frame and readable from opposite sides, the clips for removably retaining said panels in place, and means for illuminating the display surfaces.

900,591. FORK-GRID FOR LOOMS. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Jan. 28, 1908. Serial No. 413,124.



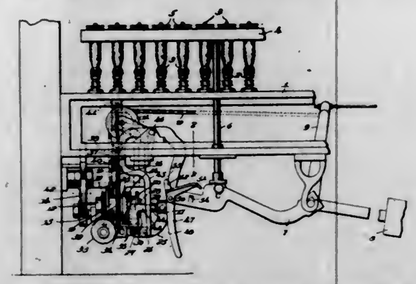
1. As a new article of manufacture, a fork-grid for looms comprising a cast-metal body having laterally extended head and foot portions, and an attaching lug, and wire bars arranged in parallelism and bent at their upper and lower ends, the extremities of such ends being permanently embedded in the metal forming the head and foot portions of the body.

2. As a new article of manufacture, a fork-grid for looms comprising a cast-metal body having laterally extended head and foot portions, and a series of C-shaped wire bars arranged in parallelism and having the extremities of their upper and lower ends permanently embedded in the metal forming the head and foot portions of the body.

3. As a new article of manufacture, a fork-grid for looms comprising an C-shaped cast-metal body having parallel and laterally extended head and foot portions, and a series of round wire bars arranged in parallelism and also C-shaped, the upper and lower ends of the bars being permanently embedded in the metal forming the head and foot portions of the body.

4. As a new article of manufacture, a fork-grid for looms comprising an C-shaped metal body having parallel and laterally extended head and foot portions and an attaching lug, and a series of C-shaped bars arranged in parallelism and having the extremities of their upper and lower ends permanently united with the head and foot portions of the body.

900,592. SPINNING OR TWISTING APPARATUS. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Mar. 9, 1908. Serial No. 419,870.



1. In apparatus of the class described, in combination, a vertically-reciprocating ring-rail, a builder-motion, including a winding mechanism, controlling connections between it and the ring-rail, including a flexible member gradually let off by the winding mechanism, and means to effect automatically winding-back of the winding mechanism when the ring-rail is manually depressed for doffing, said means being under the control of the winding mechanism during its operation, and until manual depression of the ring-rail.

2. In apparatus of the class described, in combination, a vertically-reciprocating ring-rail, a builder-motion, controlling connections, including a flexible member, between said builder-motion and ring-rail, the builder-motion including a winding drum to which the flexible member is attached, an instrumentality to effect winding-back automatically, said instrumentality being controlled and set in operative condition by the drum during the normal rotation thereof, and a manually operated device to cause said instrumentality to assume operative control of the winding drum.

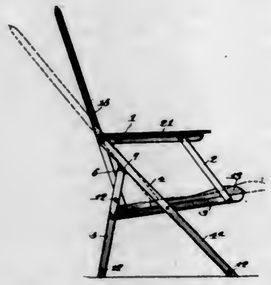
3. In apparatus of the class described, a reciprocating ring-rail, a builder-motion including a winding mechanism, operatively connected with and to control the reciprocations of the ring-rail, means to effect automatically winding-back of said mechanism, and a manually actuated device to depress the ring-rail for doffing, and by such depression, cause said means to assume operative control of the winding mechanism.

4. In apparatus of the class described, a reciprocating ring-rail, a builder-motion, including a winding mechanism, controlling connections between it and the ring-rail, means to cause said mechanism to gradually let off the controlling connections and thereby effect the gain of the traverse, an automatic winding-back instrumentality for the winding mechanism, placed in operative condition by the operation of the letting-off means acting through the winding mechanism, and a manually actuated device to release the winding mechanism from the control of the letting-off means and permit the winding-back instrumentality to assume operative control of the winding mechanism.

5. In apparatus of the class described, a reciprocating ring-rail, a builder-motion, including a winding drum, letting-off means normally coöperating with the drum, controlling connections between the ring-rail and builder-motion, including a chain attached to the drum, a winding-back instrumentality connected with said drum, to reversely rotate it automatically to wind up the chain, and a manually controlled clutch between the drum and the letting-off means, release of the clutch freeing the drum from coöperation with the letting-off means and permitting the winding-back instrumentality to operate.

[Claims 6 to 15 not printed in the Gazette.]

900,593. ADJUSTABLE CHAIR. CHARLES H. RHODES, Cold Brook, N. Y. Filed June 14, 1907. Serial No. 378,894.



1. An adjustable chair comprised of rails arranged on each side, with means for locking them in a given position, and a back pivotally mounted on the side rails, a seat portion with slidable and pivotal connection between the back and seat, the seat portion having a groove-guide on each side, and the back portion being mounted on each side therein and being adapted for sliding the back portion in the groove whereby the back maintains a given position relative to the length of the seat in different positions of the chair, substantially as described.

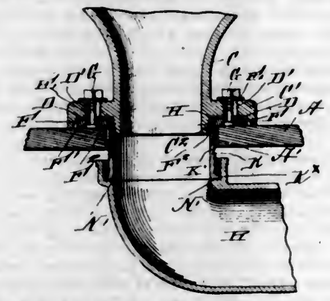
2. In a reclining chair, the combination with a collapsible frame adapted to be set up rigidly, of a seat mounted on portions of the frame and slidable thereon in a given plane, and a back portion adjustably and slidably connected with the seat portion by engagement with a guide fixed on the seat portion whereby the back may tilt as the seat is given different positions in its plane, the back portion having a fixed pivotal mounting on the frame, substantially as described.

3. A folding chair having a frame portion adapted to be secured in rigid position, having arm pieces comprising portions of the said frame and having front and rear extended rails rigidly held and adapted to support a seat slidably thereon and a back pivoted at the end of the arm portions and extended downward to the seat portion and connected therewith with slotted connections whereby the back may tilt as the seat is moved to or fro, substantially as described.

900,594. WATER-CLOSET CONNECTION. EDWARD J. RICE, Rochester, N. Y. Filed Feb. 5, 1906. Serial No. 299,570.

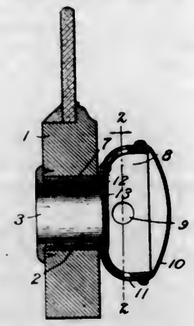
In combination with a flooring having an opening therein, a bowl having an interior circular apertured flange about the same, said flange being recessed upon its under face, the opposite longitudinal walls of said recess tapering, a ring seated in said recess and having a series of curved slots which are in alinement with one another, the opposite longitudinal walls of said slots being inclined, bolts passing through said slots and having heads which bear against the inclined walls of the slots and extend through the apertures in said flange, nuts mounted upon said bolts, the inner marginal edge of said ring being

threaded, a shell with a threaded circumference engaging said threads upon the ring, a portion of the bowl below



said flange being tapering and extending within the shell, as set forth.

900,595. VENTILATOR. JOHN D. RIPSON, Rochester, N. Y. Filed Feb. 4, 1908. Serial No. 414,228.

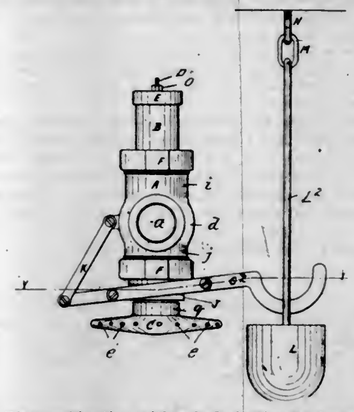


1. A ventilator for window sashes comprising a thimble having exterior threads and a flange provided with spikes, a sleeve having interior threads adapted to engage the threads of the thimble, an extension upon the sleeve, said extension being provided with a series of openings, a hollow knob for the extension provided with openings adapted to aline with the openings of the sleeve, the knob being provided with a cut away portion, the sleeve being provided with a pintle within the cut away portion, one shoulder of the cut-away portion adapted to contact with the pin when the openings of the extension and knob aline and the opposite shoulder adapted to contact with the pin when the openings are not alined.

2. In a ventilator, a sleeve having interior threads and an extension and being provided with a ventilating grate, a thimble having threads adapted to aline with the threads of the sleeve, a flange having spikes upon the thimble whereby the thimble is secured to a window sash frame, a hollow knob upon the extension of the sleeve, the extension of the sleeve and the knob being provided with openings, the knob being provided with a cut away portion, the sleeve being provided with a projection adapted to contact the shoulders of the cut away portion of the knob to bring the openings of the sleeve into and out of alinement with the openings of the knob.

900,596. FIRE-EXTINGUISHING APPARATUS. JOHN G. ROBINSON and HARRY G. ROBINSON, Holyoke, Mass. Filed July 9, 1908. Serial No. 442,635.

1. The combination with a body having an intermediate chambered enlargement with a supply water way leading thereto, and alined cylindrical members above and below such enlargement, of a cylindrical shell, fitting, and vertically movable in said cylindrical members having ports normally closed by the wall of the upper cylindrical member, a sprinkler at the bottom of the shell, a weighted device coacting with, and for downwardly moving the shell to bring its ports within the enlarged chamber of the body, and a fusible piece for sustaining the weighted device.



2. The combination with a body having an intermediate chambered enlargement with a supply water way leading thereto, and alined cylindrical members above and below such enlargement, of a cylindrical shell, fitting, and vertically movable in said cylindrical members having ports normally closed by the wall of the upper cylindrical member, a rod supported by an upper portion of the shell, extending centrally and vertically therethrough and having an enlargement at its lower end, a rotary sprinkler having an opening at its top in communication with the lower open end of the shell and rotatively supported by the lower end enlargement of said rod, a weighted device coacting with, and for downwardly moving the shell to bring its ports within the enlarged chamber of the body, and a fusible piece for sustaining the weighted device.

3. The combination with a body having an intermediate chambered enlargement with a supply water way leading thereinto, and alined cylindrical members above and below such enlargement, of a cylindrical shell, fitting, and vertically movable in said cylindrical members, and downwardly protruding below the lower one, and having ports, normally closed by the wall of the upper cylindrical member, a sprinkler at the bottom of the shell, a lever articulated to the body and having an engagement with the downwardly protruding portion of the shell, a weighted appliance related to the lever, and a fusible piece for sustaining the weighted appliance.

4. The combination with a body having an intermediate chambered enlargement with a supply water way leading thereinto, and alined cylindrical members above and below such enlargement, of a cylindrical shell, fitting, and vertically movable through said cylindrical members, downwardly protruding below the lower member, having ports, intermediately of its length, normally closed by the wall of the upper cylindrical member, and having an annular groove at its downwardly protruding lower end, a sprinkler supported at and rotatable about, the lower end of the shell, a yoke shaped lever linked to the body and having inwardly projecting studs in engagement with the grooved lower end portion of the shell, a weighted appliance related to the lever, and a fusible piece for sustaining the weighted appliance.

900,597. PROCESS FOR PRODUCING AN ELECTROLYTIC DEPOSIT OF METALLIC CHROMIUM. FRANZ SALZER, Dresden, Germany. Filed Jan. 16, 1908. Serial No. 411,138.

1. The process for producing an electrolytic deposit of metallic chromium by employing a bath containing a mixture of chromic acid and chromoxid.

2. The process of producing an electrolytic deposit of metallic chromium by employing a bath containing chromic acid and chromoxid, the proportion of chromoxid approximating that of the chromic acid.

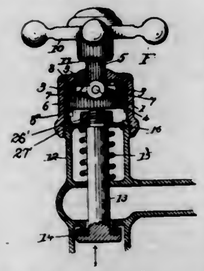
3. The process for producing an electrolytic deposit of metallic chromium by employing a bath containing a mixture of chromic acid and chromoxid, chromic acid being in excess.

4. The process for producing an electrolytic deposit of metallic chromium by employing a bath containing a mixture of chromic acid and chromoxid and a small amount of an electrolyte.

5. The process for producing an electrolytic deposit of metallic chromium by employing a bath containing a mixture of chromic acid and chromoxid and using anodes, which facilitate the oxidation of about the same amount chromoxid to chromic acid, as chromic acid is reduced at the cathode by passing an electric current through the bath.

[Claims 6 to 10 not printed in the Gazette.]

900,598. ROLLER-BEARING FOR SELF-CLOSING LIQUID SHUT-OFFS. ANTON SCHUERMANN, Decatur, Ill., assignor to The H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed Nov. 21, 1905. Serial No. 288,489.



1. In a self-closing liquid shut-off, the combination with the body having a valve seat, the valve, the valve stem, and means for normally closing the valve; of the cap, a fixed roller way carried thereby, the handle disconnected from said stem and rotatable with reference to the cap, a movable roller way carried by the handle and whose track is opposed to that of the fixed way, a spider between said ways and having radial pins corresponding to the depressions in said tracks, rollers journaled on said pins, and means for checking the rotation of the handle just before said rollers reach the apexes of the tracks.

2. In a self-closing liquid shut-off, the combination with the body having a valve seat, the valve, the valve stem, and the closing spring for the valve; of the cap, a fixed roller way carried thereby, the handle disconnected from said stem and rotatable with reference to the cap, a movable roller way carried by the handle and whose track is opposed to that of the fixed way, a spider between said ways and having radial pins corresponding to the depressions in said tracks, rollers journaled on said pins, and a shoulder on the handle shank abutting against the cap just before the rollers reach the apexes of the tracks.

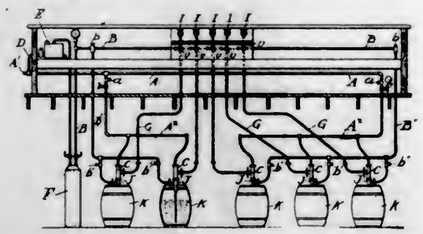
3. In a self-closing liquid shut-off, the combination with the body having a valve seat, the valve stem, and the valve; of the cap, a fixed roller way carried thereby, the handle whose shank is journaled through said cap but disconnected from said stem, a movable roller way carried by said shank and impinging against the stem, the track of this way being opposed to that of the fixed way, a spider journaled on the shank between said ways and having radial pins corresponding to the depressions of the tracks, rollers journaled on said pins, and means for checking the rotation of the handle just before said rollers reach the apexes of the tracks.

4. In a self-closing liquid shut-off, the combination with the body having a valve seat, the valve, the valve stem, and the closing spring for the valve; of the cap, a fixed roller way carried thereby, the handle whose shank is journaled through said cap but disconnected from said stem, a movable roller way carried by said shank and impinging against the stem, the track of this way being opposed to that of the fixed way, a spider between said ways and having radial pins corresponding to the depressions of the tracks, rollers journaled on said pins, and a shoulder on the handle shank abutting against the cap just before the rollers reach the apexes of said tracks.

5. In a self-closing liquid shut-off, the combination with the body having a valve seat, the valve, the valve stem having a reduced upper end, and a disk held on said end and guided within said body; of the cap, a fixed roller way within its upper end, the handle whose shank is journaled through the cap but disconnected from the valve stem, a movable roller way fixed to said shank and impinging against the reduced upper end of said stem, the track of this way being opposed to that of the fixed way, a spider having a central hole journaled on the shank between the ways, and rollers carried by the spider and corresponding with the tracks.

[Claims 6 to 13 not printed in the Gazette.]

900,599. AUTOMATIC PIPE-CLEANING APPARATUS. GUSTAV A. SETZER, New York, N. Y., assignor to Charles S. Averill, Syracuse, N. Y. Filed Aug. 30, 1906. Serial No. 332,722.



1. In apparatus for dispensing liquids under pressure such as beer, the combination of a device having an outlet and inlets, the latter for the admission of the liquid under pressure and a second liquid, respectively, said device including valve-means adapted to alternately cut off each inlet from the outlet before opening communication between said outlet and the other inlet, and a pipe together with manually operable means at a comparatively remote point for admitting the second liquid to the device, the alternate movements of the valve-means being effected by the liquids acting directly thereon.

2. In apparatus for dispensing liquids under pressure such as beer, the combination of a device having an outlet and inlets, the latter for the admission of the liquid under pressure and a second liquid, respectively, said device including valve-means adapted to alternately cut off each inlet from the outlet before opening communication between said outlet and the other inlet, a pipe together with manually operable means at a comparatively remote point, for admitting the second liquid to the device, the alternate movements of the valve-means being effected by the liquids acting directly thereon, and a vent for said pipe contiguously located with respect to said manually operable means.

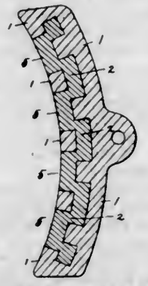
3. In apparatus for dispensing liquids under pressure such as beer, the combination of a device adapted for connection with a receptacle for containing such liquid, and having an outlet and inlets, one of the latter for communication with the receptacle and the other for the admission of the second liquid, said device including valve-means adapted to alternately cut off each inlet from the outlet before opening communication between said outlet and the other inlet, a remotely located dispensing faucet communicating with said outlet by way of a pipe, means for equalizing the pressure within the outlet pipe and the receptacle, a second pipe and manually operable means for admitting the second liquid to the device, said manually operable means being conveniently located with respect to said faucet, and the alternate movements of the valve-means being effected by the liquids acting directly thereon.

4. In apparatus for dispensing liquids under pressure such as beer, the combination of a device adapted for connection with a receptacle for containing such liquid, and having an outlet and inlets, one of the latter for communication with the receptacle and the other for the admission of a second liquid, said device including valve-means adapted to alternately cut off each inlet from the outlet before opening communication between said outlet and the other inlet, a remotely located dispensing faucet communicating with said outlet by way of a pipe, a source of compressed air, a pipe supplied from said source and communicating with the receptacle independent of the said outlet, a valve in proximity to the dispensing faucet for establishing communication between the air-pipe and the outlet-pipe for equalizing the pressure within the said latter pipe and the receptacle, an additional pipe and manually operable means for admitting the second liquid to the device, said manually operable means being conveniently located with respect to the faucet, the alternate movements of the valve-means being effected by the liquids acting directly thereon.

5. In apparatus for dispensing liquids under pressure such as beer, the combination with a tap, of a device mounted thereon and having an outlet and inlets, the latter for the admission of the liquid under pressure via the tap and a second liquid, respectively, said device including valve-means adapted to alternately cut off each inlet from the outlet before opening communication between said outlet and the other inlet, and a pipe together with manually operable means at a comparatively remote point for admitting the second liquid to the device, the alternate movements of the valve-means being effected by the liquids acting directly thereon.

[Claims 6 to 12 not printed in the Gazette.]

900,600. BRAKE-SHOE. CHARLES S. SHALLENBERGER, St. Louis, Mo. Filed June 5, 1908. Serial No. 436,777.



1. An insert-plate for brake-shoes comprising face and back-offsets, so formed and disposed relatively to each other that the face and back-surfaces of such offsets are parallel with and equidistant from each other, and the back-surface of a face-offset would if extended intersect the face-surface of a back-offset.

2. An insert-plate for brake-shoes having a series of offsets along the face and back of such plate, the offsets in the back of the plate alternating with the offsets in the face of the plate.

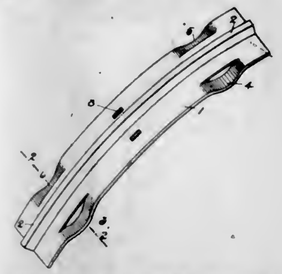
3. An insert-plate for brake-shoes having in its face a series of transverse grooves, and in its back a series of corresponding transverse grooves, the grooves in the face being located opposite the spaces between the grooves in the back respectively.

4. An insert-plate for brake-shoes having a series of grooves in the face and back of such plate, the grooves in the back of the plate alternating with the grooves in the face of the plate, all the grooves being approximately of the same depth, and of a depth equal to one-half the thickness of the insert-plate.

5. In a brake-shoe, the combination with an insert-plate having a series of offsets in the face and back of such plate, the offsets in the back of the plate alternating with the offsets in the face of the plate; of a cast-metal body wholly inclosing the insert-plate except the face surfaces of the face-offsets.

[Claims 6 to 8 not printed in the Gazette.].

900,601. BRAKE-SHOE. CHARLES S. SHALLENBERGER, St. Louis, Mo. Filed June 24, 1908. Serial No. 440,067.



1. In a brake-shoe, the combination with a metal face-insert; of a back-insert comprising a longitudinally flanged ductile plate provided with oppositely disposed supports in engagement with the back of the face-insert; a key-way attachment; means for securing the same to the middle portion of the back-insert; and a metal body cast upon such inserts.

2. In a brake-shoe, the combination with a metal face-insert; of a back-insert comprising a ductile metal plate having a central longitudinal flange on its back, and on its face a plurality of supporting projections in engagement with the back of the face-insert; and a metal body cast upon such inserts.

3. In a brake-shoe, the combination with a back insert comprising a ductile metal plate; of a comparatively non-ductile key-way attachment; means for riveting the attachment to the plate; and a metal body cast upon such insert.

4. In a brake-shoe, the combination with a face-insert; of a back-insert comprising a ductile metal plate provided with a longitudinal strengthening flange, and having support-projections in engagement with the back of the face-insert; and a metal body cast upon such inserts.

5. In a brake-shoe, the combination with a face-insert; of a back-insert comprising a ductile metal plate having on one side a longitudinal strengthening flange, and on its opposite side support-projections in engagement with the back of the face-insert; and a metal body cast upon such inserts.

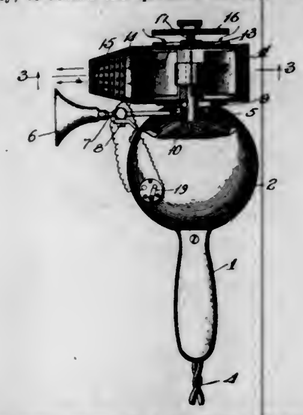
[Claims 6 and 7 not printed in the Gazette.]

900,602. MASSAGE-VIBRATOR. WILLIAM G. SHELTON, Chicago, Ill. Filed Sept. 3, 1907. Serial No. 391,176.

1. A massaging apparatus, comprising a handle, a massaging head mounted on said handle and adapted to be operated while said head is in contact with a patient's body, mechanism for vibrating said head, a blower mounted on said handle, a nozzle directed so as to blow toward the surface upon which said head is operating, and means for heating the air delivered by said blower.

2. A massaging apparatus, comprising a handle, a massaging head mounted on said handle and adapted to be operated while said head is in contact with a patient's body, mechanism for vibrating said head, a blower mounted on said handle, a nozzle for directing air from said blower toward the surface upon which said head is operating, and heating coils mounted in said nozzle and adapted to heat the air in its passage therethrough.

3. A massaging apparatus, comprising a handle, a massaging head mounted on said handle and adapted to be operated while said head is in contact with a patient's body, mechanism for vibrating said head, a centrifugal blower mounted on said handle, a nozzle for directing air from said blower, and means for controlling the supply of air to said blower and adapted, through a choking of such air supply, to retard the speed of vibration of said head.

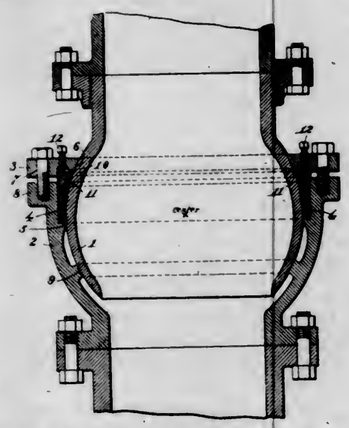


4. The combination of a handle, a massaging head mounted to vibrate on said handle, a motor carried by said handle for operating said head, and a blower driven by said motor and adapted to direct a current of air adjacent to the operating face of said head.

5. The combination of a handle, an electric motor having a rotatable armature mounted on said handle, a massaging head extending transversely with respect to the axis of said armature, and connected therewith so as to vibrate through the rotation of said armature, a centrifugal blower mounted in axial alinement with said armature and rotatable therewith, a nozzle for directing air from said blower adjacent to the operating face of said head, and an electric heater for heating the air during its passage through said nozzle.

[Claims 6 to 8 not printed in the Gazette.]

900,603. FLEXIBLE FLUID-JOINT. EDWARD E. SILK, Chicago, Ill., assignor to Barco Brass and Joint Company, Chicago, Ill., a Corporation of Illinois. Filed July 28, 1906. Serial No. 328,269.

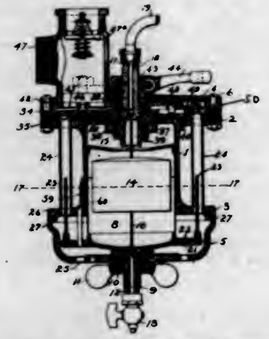


1. In a flexible fluid joint for pipes, a ball member in combination with a two part socket member, said socket member being provided with a packing pocket extending inwardly to a plane beyond the center of the socket, a metallic closure arranged in the outer end of the pocket and closing the joint between the parts of the socket member, and means for forcing said metallic closure into said pocket, substantially as described.

2. In a flexible fluid joint for pipes, a ball member in combination with a two part socket member, a packing pocket in one part of said socket member, an annular recess in the other part thereof, a metallic closure arranged in said annular recess and extending into said pocket to close the joint or opening between the parts of said socket member, and means for forcing said metallic closure into said pocket, substantially as described.

3. In a flexible pipe, a ball member, in combination with a socket member, comprising relatively adjustable parts; said socket parts together containing a packing recess and an adjustable metallic packing-follower, arranged in said recess, and closing the joint between the parts of the socket member, substantially as described.

900,604. CARBURETER. HOWARD SMALL, Chicago, Ill., assignor to John W. Duntley and William O. Duntley, Chicago, Ill. Filed Dec. 28, 1904. Serial No. 238,600.



1. A carbureter having a plurality of vaporizing nozzles communicating with a common source of fuel and arranged in a circle, and a rotary disk valve for cutting one or more of the nozzles into and out of service at the will of the operator.

2. A carbureter having a fuel chamber or reservoir, a plurality of vaporizing or aspirating nozzles communicating with the common source of fuel therein and arranged concentric of such reservoir, and a rotary disk valve for cutting one or more of the nozzles into and out of service at the will of the operator.

3. A carbureter having a fuel chamber or reservoir, a plurality of vaporizing or aspirating nozzles communicating with the common source of fuel therein, and arranged in two separate groups, and a rotary disk valve for cutting one or more of the nozzles of the two groups into and out of service at the will of the operator.

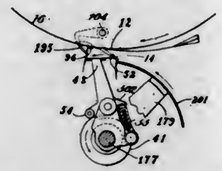
4. A carbureter having a fuel chamber or reservoir, a plurality of vaporizing or aspirating nozzles communicating with the common source of fuel therein and arranged concentric of such reservoir, in two separate groups, and a rotary disk valve for cutting one or more of the nozzles of the two groups into and out of service at the will of the operator.

5. A carbureter having a plurality of vaporizing nozzles arranged in groups, and a valve for cutting the nozzles in or out of service alternately in the groups.

[Claims 6 to 71 not printed in the Gazette.]

900,605. PAPER-BAG MACHINE. CHARLES F. SMITH, Bridgeport, Conn., assignor to Continental Paper Bag Company, a Corporation of Maine. Filed June 8, 1907. Serial No. 377,896.

1. The combination of a folding bed, means for holding a bag-blank thereon, means for forming the diamond fold on the bag-blank, a rear-flap-tucker and a rear-flap-folder, mounted upon a common axis independent of the folding bed, means for actuating the rear-flap-tucker, means for actuating the rear-flap-folder for folding the rear flap over the rear-flap-tucker, and means for folding the front flap.



2. The combination of a revoluble folding-bed, means for holding a bag-blank thereon, means for forming the diamond fold on the bag-blank, a rear-flap-tucker and a rear-flap-folder, revolubly mounted upon a common axis independent of the folding-bed and remote from the axis thereof, means for actuating the rear-flap-tucker at a variable speed, means for actuating the rear-flap-folder, and means for folding the front flap.

3. The combination of a folding-bed, means for holding a bag-blank thereon, means for forming the diamond-fold on the bag-blank, a revolubly mounted rear-flap-tucker, means for actuating the same at a variable speed, a rear-flap-folder revolubly mounted concentric with the rear-flap-tucker, means for actuating the rear-flap-folder at a uniform speed for folding the rear-flap over said rear-flap-tucker, and means for folding the front flap.

4. The combination of a revoluble folding-bed, means for holding a bag-blank thereon, means for forming the diamond-fold on the bag-blank, means for folding the front flap of the diamond fold, means, including a rear-flap-tucker and a rear-flap-folder, revolubly mounted upon a common axis independent of the folding-bed and remote from the axis thereof, for folding the rear flap of the diamond fold, means for actuating the rear-flap-tucker and means for actuating the rear-flap-folder.

5. The combination of a revoluble folding-bed, means for holding a bag-blank thereon, means including a pair of oppositely-disposed turn-over-grippers for forming the diamond-fold on the bag-blank, means for oscillating said turn-over-grippers; a rear-flap-folder and a rear-flap-tucker, each revolubly mounted independent of the folding-bed and co-axial with each other, means for actuating the rear-flap-tucker at a variable speed, means for actuating the rear-flap-folder and means for folding the front flap of the diamond fold.

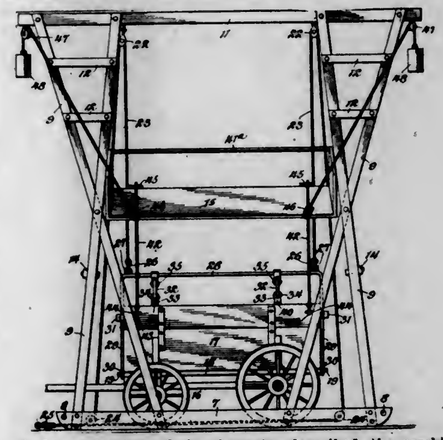
[Claims 6 to 11 not printed in the Gazette.]

900,606. VEHICLE-UNLOADING MECHANISM. HENRY O. SPARKS, Shelbina, Mo. Filed Dec. 7, 1907. Serial No. 405,574.

1. In mechanism of the character set forth, the combination with sleepers spaced apart to permit a vehicle passing between them, of a supporting beam located centrally over the space and longitudinally of the sleepers, sets of convergent standards supporting the beam, the standards of each set having their lower ends secured directly to the sleepers at one end and having their upper ends secured directly to the opposite sides of the supporting beam at one end, braces connecting the upper portions only of the standards, leaving the space between the lower portions and between the sleepers entirely unobstructed, and elevating mechanism suspended from the supporting beam.

2. In mechanism of the character set forth, the combination with sleepers spaced to permit a vehicle passing between them, of a supporting beam located over the space, a plurality of pairs of crossed standards, each pair having spaced lower ends secured to each end portion of a sleeper and spaced upper ends secured to an end portion of the supporting beam, the opposite pairs of crossed standards converging toward their upper ends, and elevating mechanism suspended from the supporting beam.

3. In mechanism of the character set forth, the combination with a derrick comprising sleepers, spaced to permit a vehicle passing between them, a supporting beam located centrally over the space, and convergently disposed sets of crossed standards secured at their lower ends directly to the sleepers and having their upper ends fastened directly to the supporting beam, of elevating mechanism suspended from the supporting beam.

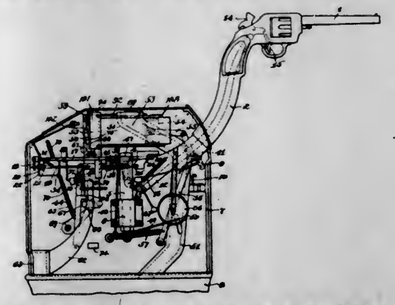


4. In mechanism of the character described, the combination with elevating means, of material holding means having a pivotal connection with the elevating means, said material holding means having a socket, a link pivoted to the elevating means, another link pivoted to the first link and free of the elevating means, said second link having an offset spur engaging in the socket, and means for limiting the relative swinging movement between the links in one direction.

5. In mechanism of the character described, the combination with elevating means, of material holding means having a pivotal connection with the elevating means, and a device for preventing the pivotal movement of the material holding means on the elevating means, said device comprising pivotally connected links, one of which is pivoted to one of the means, the other being pivoted to the first mentioned link and having a detachable engagement with the other means, said link projecting beyond said engagement to form an actuating device for relatively swinging the links.

[Claims 6 to 15 not printed in the Gazette.]

900,607. TARGET-PRACTICE APPARATUS. HENRY A. STEBBINS, Malden, Mass., assignor to Sub-Target Gun Company, Saco, Me., a Corporation of Maine. Filed May 28, 1906. Serial No. 319,150.



1. A target practice apparatus having an aiming device for aiming at a distant target, means for reproducing

the aim thereat with reference to, and recording the same upon, a miniature target or the like, a stationary target magazine for holding a plurality of such miniature targets, and means for presenting said targets successively in recording position.

2. A target practice apparatus having an aiming device for aiming at a distant target, means for reproducing the aim thereat with reference to, and recording the same upon, a miniature target or the like, a magazine for holding a plurality of such miniature targets, said magazine comprising a holding receptacle in which the individual targets are held in bulk, one against another, and means for separating and feeding the said targets singly from the magazine to their recording position.

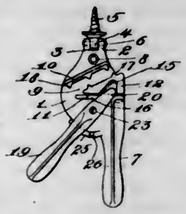
3. A target practice apparatus having an aiming device for aiming at a distant target, means for reproducing the aim thereat with reference to, and recording the same upon, a miniature target or the like, a magazine for holding a plurality of such miniature targets, means near the exit end of said magazine for drawing said targets singly therefrom, and means for moving the remainder of said targets toward said exit end.

4. A target practice apparatus having an aiming device for aiming at a distant target, means for reproducing the aim thereat with reference to, and recording the same upon, a miniature target or the like; means for holding a plurality of said miniature targets in bulk and packed one against another, and means for separating and withdrawing said targets singly from the bulk and transferring it to recording position.

5. A target practice apparatus having an aiming device for aiming at a distant target, means for reproducing the aim thereat with reference to, and recording the same upon, a miniature target or the like, means for holding a plurality of targets, means for moving the same rectilinearly, and means acting transversely the direction of rectilinear movement for withdrawing a target from said holding means.

[Claims 6 to 34 not printed in the Gazette.]

900,608. CLOTHES-LINE HOLDER. JAMES C. R. STEIRLY, Oil City, Pa., assignor to L. J. Roess, Oil City, Pa. Filed Mar. 2, 1907. Serial No. 360,181. Renewed Feb. 28, 1908. Serial No. 418,289.



1. In a holder of the class specified, a body having a rope seat with a fully open front side, the walls of said seat converging towards one extremity, a wedge member slidably mounted in said seat, and an operating lever loosely fulcrumed at an intermediate point of the body and having a straight free extremity loosely extending into the rope seat and the adjacent side portion of the wedge member, the said free extremity of the lever operating also to hold the said wedge member in place in the seat.

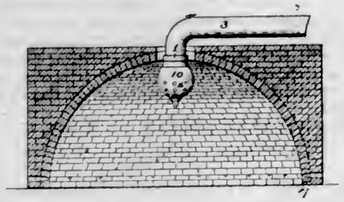
2. In a holder of the class specified, a body having a transversely straight wall and an inclined wall to provide a rope seat which is fully open at the front side, a guide rib extending longitudinally into the seat and parallel with the transversely straight wall, a wedge-shaped slidable clamping member loosely and separably mounted in the seat and having a bottom groove to engage the said rib, and an operating means having a free extremity loosely extending into the side portion of the member and also operating to hold the latter in place in the seat, the one side edge of the clamping member and the inclined wall serving to directly engage the rope placed therebetween.

3. A holder of the class set forth having a body with a handle or grip extending therefrom, a securing device movably attached to the extremity of the body opposite that from which the handle projects, a rope seat being formed at an intermediate point on the body by a transversely straight wall and a converging wall, the seat being fully open at the front side, a wedge member slidably and separably disposed in the said rope seat between the walls, and an operating lever loosely pivoted at an intermediate point on the body and having a longitudinally straight free end loosely projecting into the side portion of the wedge member, the handle extremity of the lever being adjacent to the handle or grip of the body.

4. In a holder of the class set forth, a body having a rope seat and a segmental projection provided with notches the rope seat being fully open at the front, a wedge member slidably mounted in the seat, and a lever loosely fulcrumed at an intermediate point to the body and having a straight free extremity loosely projecting into the side portion of the wedge member and also provided with a projection adjacent to the body to engage the notches of the segmental projection of the said body, the fulcrum of the lever being between the projection and the end that engages the wedge member.

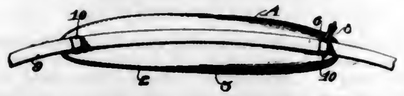
5. A holder of the class set forth comprising essentially three main elements, consisting respectively of a body having a handle projecting from one extremity, a rope seat formed by a transversely straight and an inclined wall and having a rib extending longitudinally thereinto, all of the parts of the body being formed integral, a slidable wedge block having a recess opening outwardly through one side and a back groove to engage the rib of the rope seat, and a lever pivoted at an intermediate point to the body and having a straight free extremity projecting into the recess of the wedge block, the handle of the lever being adjacent to the handle of the body.

900,609. ROTARY SPRINKLER. THOMAS S. STEWART and JAMES E. STEWART, Saltsburg, Pa. Filed June 6, 1907. Serial No. 377,528.



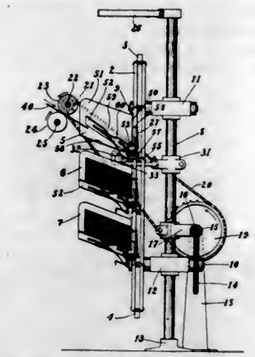
A sprinkler comprising a pipe having a closed lower end and a frusto conical stud depending therefrom, the pipe having a beveled undercut shoulder near its end and being of reduced diameter from the undercut shoulder to the end, there being tangentially arranged slots in the walls of the pipe extending from the closed end upward, the material in which the slots are formed being thickened and depressed inwardly and the mouth of each slot being below the surface of the pipe exterior, a circular sprinkler shell having a constricted neck portion encircling the lower end of the pipe and provided with a beveled edge engaged beneath the undercut shoulder on the pipe, radial paddle blades in the upper portion of the shell, there being clearance space provided between the exits of the slots and the edges of the blades, the shell having an internal upwardly projecting frusto conical stud in its lower portion opposite the depending stud on the pipe, an external boss at the lower end of said shell provided with a concave seat, a supporting bolt passed downward through a bore formed in the conical studs and having its head resting on the closed end of the pipe, said head being rounded to direct the flow into the slots, a cone on the lower end of the bolt engaging the conical seat in the boss of the shell, lock nuts for holding the cone in place, and a cross key passed through the bolt to secure the lock nuts.

900,610. PNEUMATIC PAD. HORTENSIUS E. STOW, Windsor, N. Y. Filed July 6, 1907. Serial No. 382,526.



As an article of manufacture, a pneumatic pad comprising a flat flexible piece of material, a pocket of softer and more flexible material, the two being secured together all around their edges, including their ends as well as their sides, a rubber bag inclosed within the pocket, and means for connecting a strap at each end of the pad.

900,611. BUNCHING AND COUNTING MACHINE. FREDERICK E. STRASBURG, Rumford Falls, Me., assignor to Continental Paper Bag Company, a Corporation of Maine. Filed Feb. 7, 1908. Serial No. 414,682.



1. The combination of a conveyer, means for moving said conveyer vertically downward in regular movement, a series of boxes carried by said conveyer and canted relative to the perpendicular, means for delivering articles into the path of travel of said boxes, a movable bottom in each box, means for holding said bottom out of the path of delivery of said articles and means for moving said bottom across the path of delivery of said articles.

2. The combination of a series of boxes, uniformly spaced and canted relative to their direction of travel, means to move said boxes in regular movement in a rectilinear path of travel, means for delivering articles at a uniform rate and in a constant direction into the path of travel of said boxes, a movable member in each box, means for maintaining said movable member out of the path of delivery of said articles and means for moving at a predetermined time, the movable member across said path of delivery of the articles.

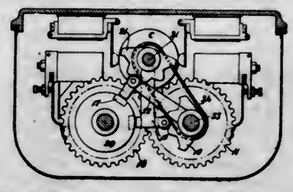
3. The combination of a conveyer chain, a series of boxes uniformly spaced thereon, means to move the conveyer chain in regular rectilinear movement, means for delivering articles at a uniform rate and in a constant direction into the path of travel of said boxes, a bottom pivotally mounted in each box and inclined to its direction of travel and means for intermittently swinging said bottom across the path of delivery of said articles.

4. The combination of an endless chain, means for moving said chain in regular movement, a series of boxes uniformly spaced on said chain, means for delivering articles at a uniform rate and in a constant direction into the path of travel of said boxes, a bottom pivotally mounted in each box and means for intermittently swinging the entrance end of said bottom across the path of delivery of said articles and means carried by said bottom for deflecting the articles into the box next adjacent to said bottom.

5. The combination of a conveyer, means for moving said conveyer in regular movement, a series of boxes uniformly spaced on said conveyer, means for delivering articles at a uniform rate and in a constant direction into the path of travel of said boxes, a bottom pivotally mounted in each box, means for swinging said bottom across the path of delivery of said articles and yieldable means for deflecting said articles into the box next adjacent to said bottom.

[Claims 6 to 10 not printed in the Gazette.]

900,612. CONTROLLER. EMMETT W. STULL, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed Feb. 15, 1908. Serial No. 416,005.



1. In combination, a plurality of regulating switches, a motor and its regulating resistance under the control of each of said switches, and another switch arranged to connect the first mentioned switches and the motors controlled thereby in series and in multiple and to cut out the regulating resistance associated with one of said motors when the switches are connected in series.

2. In combination, a plurality of regulating switches, a motor and its regulating resistance under the control of each of said switches, and another switch arranged to connect the first mentioned switches and the motors controlled thereby in series and in multiple and to short-circuit all save one of the regulating resistances associated with said motors.

3. In combination, a plurality of drums, each drum being arranged to control one or more motors and a regulating resistance therefor, and a switch arranged to connect said drums and their associated motors in series and in parallel and to short-circuit the regulating resistance associated with less than all of said drums when said drums are connected in series.

4. In combination, a plurality of regulating switches connected to operate together, a motor and its regulating resistance under the independent control of each of said switches, and another switch arranged to connect said first mentioned switches in series or in parallel, cutting out the resistance associated with one of said first mentioned switches when the first mentioned switches are in series, and to cut out any one of the first mentioned switches and the motor controlled thereby.

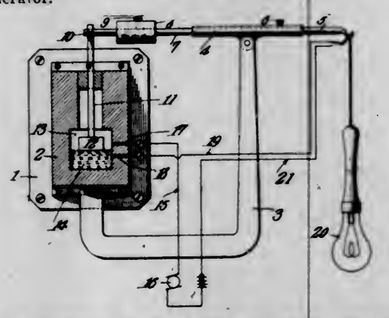
5. In combination, a plurality of drums connected to operate together, each of said drums being connected and arranged to independently control one or more motors by means of a resistance, and a switch arranged to cut out any one of said drums and the motor or motors controlled thereby, to connect said drums with their associated motors either in series or in parallel, and to render the resistance associated with one of said drums ineffective when said drums are in series.

[Claims 6 to 16 not printed in the Gazette.]

900,613. AUTOMATIC CIRCUIT-CLOSER FOR ELECTRIC-LAMP HOLDERS. WILLIAM D. TICKNER and LUCIUS C. TICKNER, Blanchardville, Wis., assignors of one-half to Charles M. Crowell, Blanchardville, Wis. Filed Feb. 3, 1908. Serial No. 414,085.

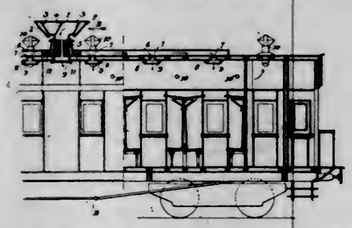
1. An automatic circuit closer for electric lamp holders comprising a pivotally mounted lamp holder, a plunger

and plunger rod connected with the same, a chamber receiving the plunger, a liquid located in said chamber and adapted to be displaced by immersion of the plunger, electric terminals entering the chamber at different levels and a lamp electrically connected with the terminals and a gencrator.



2. An automatic circuit closer for lamps comprising a pivotally mounted holder, a weight shiftably mounted thereon, a plunger operatively connected with the holder, a chamber receiving said plunger, a conducting liquid located in the chamber, an electric generator, terminals entering the chamber at different levels and a lamp adapted to be suspended from the holder and being electrically connected with the generator and terminals.

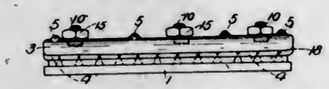
900,614. VENTILATING SYSTEM FOR RAILWAY-CARRIAGES AND THE LIKE. SERGIUS TIMOCHOWITSCH, Moscow, Russia. Original application filed Mar. 7, 1905, Serial No. 248,802. Divided and this application filed Oct. 27, 1906. Serial No. 340,891.



1. In a ventilating system for railway carriages and the like the combination of a conduit extending longitudinally along the roof of the carriage, conduits extending transversely of the roof of the carriage, tubular ways connecting the longitudinal conduit with the transverse conduits, said conduits being open on the underside and there covered with filtering material, an air receiver on the exterior of the carriage communicating with the longitudinal conduit and provided with an air filter, a swinging valve in the receiver for deflecting the air current toward the filter in either direction of motion of the carriage and air exhaust ways extending through the roof of the carriage as set forth.

2. In a ventilating system for railway carriages and the like the combination of a conduit extending longitudinally along the roof of the carriage exteriorly thereof conduits extending transversely of the roof of the carriage interiorly thereof, tubular ways connecting the longitudinal conduit with the transverse conduits, said conduits being open on the underside and there covered with filtering material, an air receiver upon the exterior of the carriage communicating with the longitudinal conduit and provided with an air filter a swinging valve in the receiver for deflecting the air current toward the filter in either direction of motion of the carriage and air exhaust ways extending through the sides immediately below the roof of the carriage as set forth.

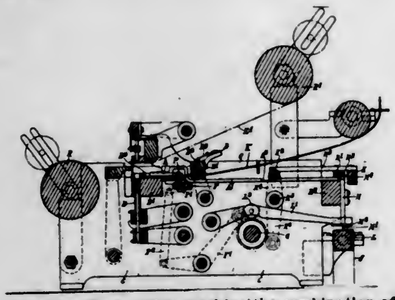
900,615. BELT-FASTENER. ARTHUR G. TOMKIES, Westport, New Zealand, assignor of one-half to William Edmond Reynolds, Greymouth, New Zealand. Filed Nov. 7, 1907. Serial No. 401,126.



1. A belt fastener, comprising a lower flat plate having its two parallel edges turned up at intervals to form vertical teeth, a substantially concaved upper plate wider than the said lower plate, said teeth being adapted to extend into the cavity, and means for securing the two plates together with the ends of the belt between them.

2. A belt fastener comprising a lower flat plate having a row of vertical teeth on each of two of its edges, a longitudinal central flange formed integral with said lower plate, threaded pins secured into and riveted below said flange, a concaved upper plate wider than said lower plate and provided with holes for said pins, and nuts secured on said pins above said upper plate so as to hold the plates together with the ends of the belt between them.

900,616. CHENILLE-SPOTTING MACHINE. LOUIS O. TRIVETT, Nottingham, and FRED RANDALL, Beeston, England, assignors to L. O. Trivett and Company, Limited, Nottingham, England. Filed Jan. 17, 1907. Serial No. 352,798.



1. In a chenille spotting machine the combination of the spotting devices, an independent chenille feeding device in connection with each, jacquard mechanism for imparting a feeding movement to the same, means for controlling the angular movement of the fabric rollers, and means for moving the said rollers longitudinally, substantially as described.

2. In a chenille spotting machine, the combination with the spotting devices, of chenille feeding devices each carried by a separate and distinct bar, and jacquard mechanism for imparting a feeding movement to the same, comprising a driving bar, and droppers provided with parts which are interposed between the said driving bar and the ends of the feeder bars, substantially as described.

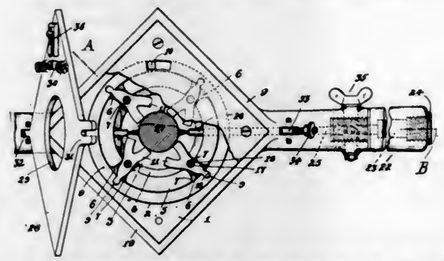
3. In a chenille spotting machine, the combination with the spotting devices, of toothed chenille feeding devices, a bar for carrying each of the same mounted in guide-ways so as to be movable in the direction of their length, a rocking bar for lifting the feeders, droppers each provided with a sliding pin, a reciprocating driving bar, locker bars for returning the several parts to their normal positions again, and a card prism for the pattern cards, substantially as described.

4. In a chenille spotting machine, the combination with the ratchet wheels and pawls for advancing the fabric rollers, of adjustable shields which may be interposed between the respective pawls and ratchet wheels, and pattern cam mechanism for adjusting the position of said shields as the work proceeds, substantially as described.

5. In a chenille spotting machine, the combination with the fabric rollers, of means for moving said rollers longitudinally comprising a rocking shaft provided with arms acting on the ends of the roller axles and pattern cam mechanism controlling the same, substantially as described.

[Claim 6 not printed in the Gazette.]

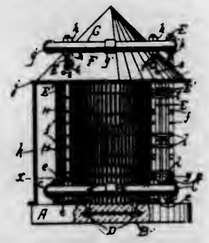
900,617. STOCK AND DIE. JOSEPH E. TROTTER and HUGUES A. CREVIER, Ste. Anne de Bellevue, Quebec, Canada. Filed May 15, 1908. Serial No. 433,084.



1. In stocks and dies, a die having a central circular recess arranged in the body portion thereof and arc-shaped concentric bosses projecting upwardly from the bed of said recess and therewithin, a plurality of chasers having leg projections and pivotally secured to said body between said bosses and having right and left hand threads on their leg projections respectively at one end and a head projecting beyond said bosses at the other end and a ring engaging the heads of said chasers and turning between the said bosses and the wall of said recess and a suitable stock containing said die.

2. In stocks and dies, a rectangular die having a central circular recess in the body portion and arc-shaped bosses projecting upwardly from the bed of said recess concentric therewith, said bosses being suitably spaced in said recess and terminating in curved ends, a plurality of chasers pivotally secured to said body between said bosses and having a rounded head at one end and spreading legs at the other, said legs having right and left hand threads respectively cut on their end faces, a ring rotatably arranged between the said bosses and the wall of said recess and having rounded slots therein arranged into which the said heads of the chasers extend, a pin rigidly secured to said ring and extending upwardly, a cover plate closing in said dies and having a curved slot through which said pin extends and a stock having a rectangular shaped receptacle receiving the said die and suitable handles extending outwardly therefrom.

900,618. CORN-CRIB. JOHN W. VAN WYHE, Hawarden, Iowa. Filed Jan. 11, 1908. Serial No. 410,464.



1. In a corn crib, the combination of a cement or concrete base, a circular, metallic band inclosing said base, bolts or metallic posts embedded in said base, a metallic ring supported by said bolts or posts, rods or posts secured to said ring, and a metallic roof adjustably supported on said rods or posts, substantially as described.

2. In a corn crib, the combination of a floor, bolts secured to said floor, a ring adjustably supported by said bolts, rods adjustably secured to said ring, a second ring secured to the upper part of said posts, a roof supported on pins adjustable in openings in said posts, and means connected with one of the posts for raising said roof, substantially as described.

900,619. MANUFACTURE OF ARTIFICIAL FUEL. AVANDO W. H. VIVIAN, London, England, assignor to The Composite Fuel Syndicate Limited, London, England. Filed Nov. 24, 1906. Serial No. 344,913.

1. An artificial fuel in the form of briquets composed of carbonaceous material in a state of fine division; oil mixed with a suitable salt to increase its viscosity; lime; a cement consisting of chlorid of magnesium and calcined magnesite suitably treated and containing substantially from 2 per cent. to 5 per cent. carbonic acid, and sufficient water to bind all the parts together under pressure, substantially as described.

2. An artificial fuel in the form of briquets consisting of a compressed mixture of the following substances and in substantially the following proportions, coal dust 65 per cent.; oil treated with a suitable salt to increase its viscosity 30 per cent.; lime 3 per cent.; chlorid of magnesium and calcined magnesite mixed with suitable other salts to form a cement and containing substantially 2 per cent. to 5 per cent. carbonic acid and sufficient water to bind all the parts together, substantially as described.

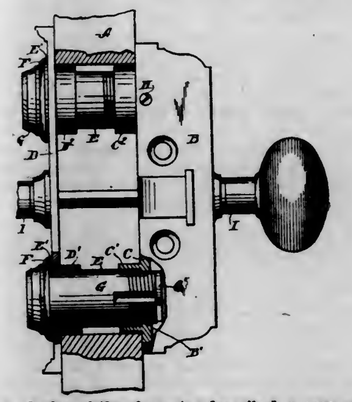
3. The method of making artificial fuel comprising the mixing and heating together of carbonaceous material and a magnesite cement in a finely divided condition, the mixing and heating together of specially sulfurized oil and water, and the mixing together of the resultant masses, substantially as hereinbefore set forth.

4. The method of making artificial fuel comprising the mixing and heating together of carbonaceous material, and a magnesite cement and chalk, in a finely divided condition, the mixing and heating together of specially sulfurized oil and water and lime, and the mixing together of the resultant masses, substantially as hereinbefore set forth.

5. The method of making artificial fuel which comprises the mixing and heating of carbonaceous material and a magnesite cement, in a finely divided condition, the separate mixing and heating of oil which has been previously subjected to a sulfurizing process and water, and the mixing together of the resultant masses, substantially as and for the purposes hereinbefore set forth.

[Claims 6 to 12 not printed in the Gazette.]

900,620. LOCK ATTACHMENT. HENRY G. VOIGHT, New Britain, Conn., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Feb. 21, 1908. Serial No. 417,017.



1. In a device of the character described, a case adapted to one side of a door, an escutcheon adapted to the other side of said door, an annular threaded boss projecting

rearwardly from the case, a flanged sleeve passing through said escutcheon, engaging the same and being screw-threaded at its inner end to connect with the threaded boss on said case, and a passage into said case in line with said sleeve-like connection.

2. In a device of the character described, a case adapted to one side of a door, an escutcheon adapted to the other side of said door, an annular threaded boss carried by the case at its rear, an annular boss carried by said escutcheon plate at its rear, a tubular coupling arranged to engage the said escutcheon passing through said boss thereon and screw-threaded at its inner end to engage the screw-threaded boss on the case.

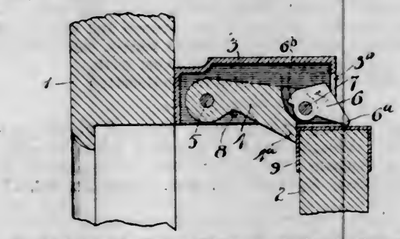
3. In a lock, a lock case adapted to one side of a door, an escutcheon plate adapted to the other side of said door, two sets of annular bosses, one member of each set being threaded and carried by the lock case, the other member of each set being carried by the escutcheon, two tubular couplings flanged at the outer ends and passing through the bosses on the escutcheon plate, and threaded at their inner ends to engage with the threaded bosses on the case.

4. In a lock, a case adapted to one side of a door, an escutcheon adapted to the other side, an annular threaded boss carried by the lock case at its rear, an annular boss carried by said escutcheon plate at its rear, a tubular coupling arranged to engage the said escutcheon passing through said boss thereon and screw-threaded at its inner end to engage the screw-threaded boss on the case, a central reduced threaded opening into the case in line with the passage through said coupling.

5. In a lock, a lock case, an escutcheon plate, a threaded annular boss carried by and projecting to the rear of said case, a reduced and threaded opening into said case within said boss, an escutcheon plate and a tubular coupling threaded at one end to engage in the aforesaid boss, and means carried thereby at its other end to engage said escutcheon plate.

[Claim 6 not printed in the Gazette.]

900,621. DOOR-HOLDER. HENRY G. VOIGHT, New Britain, Conn. Filed June 26, 1908. Serial No. 440,432.



1. In a door holder, a frame or carrier, a stop carried thereby having a rear cam face and a front stop shoulder, a cam section carried by said stop and having a front cam face, a portion of said cam projecting into the path of the door to be engaged thereby when the same moves in either direction.

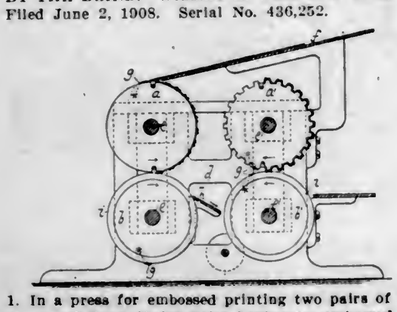
2. In a door holder, a frame or carrier, a stop carried thereby having a rear cam face and a front stop shoulder, a cam section carried thereby having a front cam face, and a portion of said cam projecting below the lower edge of the stop.

3. In a door holder, a frame or carrier, a stop carried thereby and pivoted thereto, said stop having an abrupt stop shoulder, a cam section hinged to said stop section toward the outer end, said cam section having an outer cam face, said cam section being free to swing outwardly.

4. In a door holder, a frame or carrier, a stop carried thereby having a rear cam face and a front stop shoulder, a cam section carried thereby having a front cam face, a portion of said cam projecting into the path of the door to be engaged thereby when the same moves in either direction, and separate means to limit the range of movement of both of said parts.

5. A door holder including a stop member arranged to allow the door to pass when the latter is being opened and constructed to prevent the door from closing after the latter has been opened to a predetermined position, means operative by the movement of the door to remove the stop from the path of the door when the said door is opened beyond a predetermined position and is then closed.

900,622. PRESS FOR EMBOSSED PRINTING OF LITERATURE, MUSIC, AND THE LIKE, FOR READING BY THE BLIND. WILLIAM B. WAIT, New York, N. Y. Filed June 2, 1908. Serial No. 436,252.

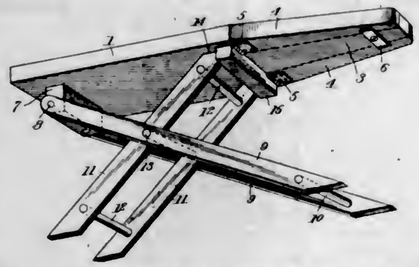


1. In a press for embossed printing two pairs of cylinders one of the cylinder pairs having an embossed plate and a succeeding cylinder provided with a plate having depressed spaces and elevations for receiving and protecting the impressions produced by the first cylinder pair while forming impressions on the reverse side of a sheet.

2. In a press for embossed printing two pairs of cylinders adapted to emboss opposite sides of a sheet, each cylinder of a pair provided with an embossing plate, one of the cylinders of each pair having a soft blanket for receiving indentations or impressions, and a cylinder of the other pair having depressed spaces to receive the indentations already formed on one side of the sheet while the opposite side thereof is being embossed.

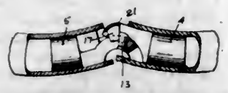
3. In a press for embossed printing two pairs of cylinders, one of the cylinder pairs having an embossed plate, and a succeeding cylinder having its surface channeled and provided with a plate suitably ridged to fit the channels, said ridged plate being embossed on its elevated portions, said channeled portions being made to receive and protect the impressions formed by the first plate during the formation of the second set of impressions.

900,623. IRONING-TABLE. MARY J. WALKER, Salt Lake City, Utah. Filed Jan. 14, 1908. Serial No. 410,726.



An ironing board having a tapering extension at one end and shouldered portions at the base of said extension, leaves hinged to said shouldered portions on each side of the tapering extension, a turn button on the extension to support the leaves, cleats on the under face of the board, legs pivoted to one of said cleats, and legs pivotally mounted between the first pair of legs, there being pockets in the side of one of said cleats to seat the upper ends of the inner set of legs.

900,624. JOINT FOR BRACELETS. WALFRID WALLENTHIN, Attleboro, Mass., assignor to S. O. Bigney and Company, Attleboro Mass. Filed Oct. 10, 1907. Serial No. 396,805.



1. In a bracelet, a joint formed of two interlocking members slidably mounted one upon the other, the edges of one or both of said members being provided with recesses, projections on the opposite member adapted to enter said recesses whereby a stop is formed to prevent the members of the joint from being disengaged.

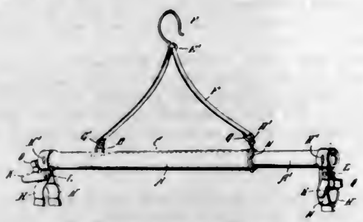
2. In a bracelet, a joint formed of two members slidably mounted one upon the other, the edge of one of said members being provided with a recessed portion, a projecting boss on the edge of the opposite member adapted to be bent over into said recessed portion to form a stop and prevent the members of the joint from becoming disengaged.

3. In a bracelet, a joint formed of two members slidably mounted one upon the other, the edge of one or both of said members being beveled off for a portion of its length leaving a projecting abutting portion near its end, a projecting boss or member on the edge of the opposite member adapted to be bent over into said beveled portion to form a stop and prevent the members of the joint from becoming disengaged.

4. In a bracelet, a joint formed of two members slidably mounted one upon the other, both edges of one or both of said members being provided with a recessed portion, a projecting boss on each edge of one or both of the opposite members adapted to be bent over into said recessed portions to form a double stop and prevent the members of the joint from becoming disengaged.

5. In a bracelet, a joint formed of two members slidably mounted one upon the other, both edges of one of said members being beveled off on its inner side for a portion of its length leaving a projecting abutting portion at each edge near its end, a projecting boss or member on each edge of the opposite member adapted to be bent over into said beveled portion adapted to bring up against said abutting portion to form a double stop and prevent the members of the joint from becoming disengaged.

900,625. GARMENT-SUPPORTER. CHARLES W. WALLIS, Los Angeles, Cal. Filed June 11, 1908. Serial No. 437,984.



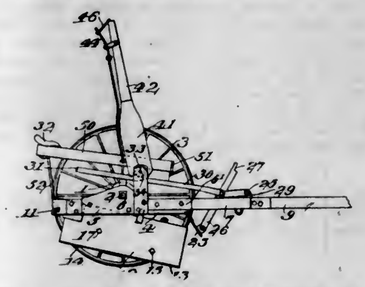
1. A garment hanger comprising sections each telescoping one within the other, an eye carried by one of said sections and adapted to be guided in a longitudinal slot in the other, a hook, a strap fastened to said eye and also to the outer section, and clamping means carried by said sections, as set forth.

2. A garment hanger comprising sections each telescoping one within the other, an eye carried by one of said sections and adapted to be guided in a longitudinal slot in the other, an eye upon the outer of said sections, a hook, a resilient strap fastened at its ends to said eyes and passing through an eye upon said hook, and clamping members fastened to the outer ends of said sections, as set forth.

3. A garment hanger comprising sections each telescoping one within the other, an eye carried by one of said sections and adapted to be guided in a longitudinal slot in the other, an eye upon the outer of said sections, a hook, a resilient strap fastened at its ends to said eyes and passing through an eye upon said hook, clamping members having portions which surround the outer ends of said sections, and indentures formed in said clamping members for holding the same upon the sections, as set forth.

4. A garment hanger comprising sections each telescoping one within the other, an eye carried by one of said sections and adapted to be guided in a longitudinal slot in the other, an eye upon the outer of said sections, a hook, a strap fastened at its ends to said eyes and passing through an eye upon said hook, clamping members fastened one to the outer end of each section and having resilient arms, pivotal clamp holding members mounted upon the arms of said clamps and each having a laterally projecting lug, as set forth.

900,626. SCRAPER. WILLIAM P. WARREN, Sheridan, Ill. Filed June 15, 1908. Serial No. 438,617.



1. The combination with a wheeled support, of a scoop frame carried thereon, scoop members carried by said frame, means to raise and lower the scoop frame, and means to lock the scoop sections in operative position.

2. The combination with a wheeled support, of a scoop frame pivoted thereto, means for raising and lowering said scoop frame, a pair of scoop sections pivotally mounted upon the frame, means to lock said scoop sections in operative position, and means hinged to the front of the support for closing the front of the frame.

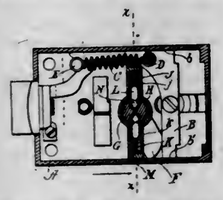
3. The combination with a wheeled support, of a scoop frame pivoted to said support, a pair of scoop sections pivotally mounted upon said frame, means for holding the scoop sections in operative position with their bottoms alined, means for raising and lowering the scoop frame and its associated sections, means for closing the front of said scoop frame, and means for operating said closing means.

4. The combination with a wheeled support, of a scoop frame pivotally secured thereto, a pair of dumping scoop sections pivotally mounted upon the scoop frame and having their inner edges meeting in the center of the frame, means for limiting their inward movement, means for locking them in normal scooping position, means to raise the scoop frame and associated sections to normal horizontal position, means to close the front of the scoop frame, means to operate said controlling means, and a self operated lock carried by said operating means.

900,627. CYLINDER-LOCK. CHARLES J. WAUGH and FRITZ HARENDT, Camden, N. J. Filed Dec. 10, 1907. Serial No. 405,914.

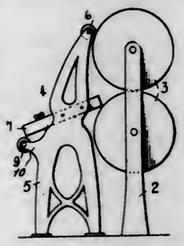
1. In a cylinder lock, the combination with a casing, the opposite sides of the casing having parallel interior surfaces, a bolt having a surface in contact with one of said parallel surfaces of the casing, the said bolt having a rear portion extending across the interior of the casing

and the end of said portion of the bolt being arranged in contact with the other parallel surface of the casing, a revoluble cylinder and a cylinder housing having corresponding spring pins, and a device actuated by the cylinder and arranged to act against the said rear portion of the bolt to move the bolt, substantially as described.



2. In a cylinder lock, the combination with a casing, the opposite sides of the casing having parallel interior surfaces, a cylinder and a cylinder housing provided with corresponding spring pins whereby the cylinder may be locked and unlocked, the said housing being arranged transversely within the casing, and a bolt having a horizontal portion passing above the said housing and provided with a surface arranged movably against one of the said parallel interior surfaces of the casing, the said bolt having a vertical rear portion integral at its upper end with the said horizontal portion, the lower end of the said vertical rear portion of the bolt being arranged movably against the remaining parallel interior surface of the casing, and a plate attached to the cylinder and arranged to act against the said rear portion of the bolt to move the bolt, substantially as described.

900,628. ATTACHMENT FOR RUBBER-STOCK MACHINES. LIDA A. WELLS, Akron, Ohio. Filed Aug. 16, 1907. Serial No. 388,894.

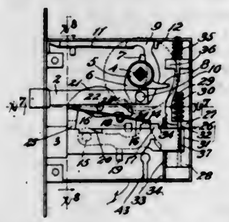


1. A device of the character described, comprising a pair of supporting standards adapted to be arranged adjacent to the rollers of a calendering machine, steadying rollers journaled in the upper end of said standards and adapted to bear against the upper rollers of said machine, an inclined feed chute arranged between said standards, gage devices to regulate the width of said chute, and a guide roller revolubly mounted adjacent to the outer end of said feed chute, substantially as described.

2. An attachment for rubber stock machines, comprising a pair of supporting standards adapted to be arranged adjacent to the rolls of said machine, said standards being independent or of separate construction from said machine, a pair of steadying rollers revolubly mounted on the upper ends of said standards and adapted to be engaged with the upper roll of the machine, a guide roller revolubly mounted in the lower portion of said standards and arranged transversely between the same, an inclined feed chute secured between said standards, said chute comprising a flat box-like structure open at its upper and lower edges, spacing strips arranged in said chute, and means to secure said spacing strips in adjustable positions therein, whereby the width of the guiding space of the chute is regulated, substantially as described.

3. An attachment for rubber stock machines, comprising a pair of supporting standards adapted to be arranged adjacent to the rolls of said machine, said standards being independent or of separate construction from said machine, a pair of steadying rollers revolubly mounted on the upper ends of said standards and adapted to be engaged with the upper roll of the machine, a guide roller revolubly mounted in the lower portion of said standards and arranged transversely between the same, an inclined feed chute secured between said standards, said chute comprising a flat box-like structure open at its upper and lower edges, and provided in its upper side with transversely disposed slots, spacing strips arranged in said chute transversely of said slots, bolts secured to said strips and adapted to project upwardly through said slots, and clamping nuts adapted to be secured onto said bolts whereby said strips are held in adjusted position in said chute to vary the guide strips thereof, substantially as described.

900,629. COMBINATION LATCH AND KEY LOCK. ROBERT WETTEL and MORDECAI P. FREEBEY, Los Angeles, Cal. Filed Feb. 15, 1906. Serial No. 301,205.



1. A lock provided with a bolt, a plurality of bolt-intercepting dogs, a key for releasing one of said dogs and operating the bolt, and means operable first in one and then in the other direction for releasing first one and then another of the other bolt-intercepting dogs.

2. A lock provided with a latch and a bolt, a plurality of means for intercepting the bolt, and means for retracting the latch operable in one and the other direction to operate first one and then another of the bolt-intercepting means.

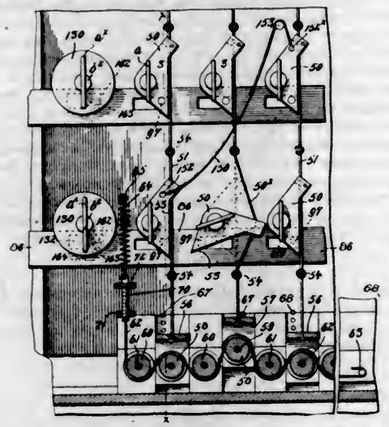
3. A lock provided with a bolt, a lock bar in the path of the bolt provided with yieldingly separable abutments spaced apart to provide a recess to receive the end of the bolt, means to retract the bolt, means to move the lock-bar into position to admit the end of the bolt into said recess, and a latch spindle adapted to move the recess in the lock bar beyond the end of the bolt when the bolt is extended.

4. In a lock, a bolt, a latch, a lock-bar to intercept the bolt, said lock-bar being formed of two members yieldingly connected together and provided with abutments respectively, and with a recess to receive the bolt between said abutments; means to retract the latch and to move the lock-bar.

900,630. INTERLOCKING MECHANISM FOR VOTING-MACHINES. DONALD I. WHITESIDE, San Francisco, Cal., assignor to Green Majors, trustee, Alameda, Cal. Original application filed May 15, 1905, Serial No. 261,444. Divided and this application filed Feb. 6, 1906. Serial No. 299,823.

1. In a voting machine, the combination of a series of voting keys arranged in rows, a check wire for each row, means for putting under tension any particular check wire, means for putting under tension all of the check wires simultaneously, and separate means for putting under tension any one or more check wires.

2. In a voting machine, the combination of a series of voting keys arranged in rows, a check wire for each row, means for putting under tension any particular check wire, means for putting under tension all of the check wires simultaneously, separate means for putting under tension any one or more check wires, and means for automatically releasing the last mentioned means.



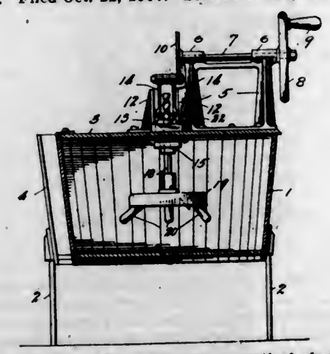
3. In a voting machine, the combination of a voting key, a check wire arranged to be engaged by the operation of a key, a sliding stirrup secured to one end of the check wire, guideways in which the stirrup is mounted and in which it is free to move whenever a voting key is operated and engages the check wire, and a pin for limiting the movement of the stirrup, substantially as set forth.

4. In a voting machine, the combination of voting keys arranged in pairs side by side and adjustable by a movement axially, and means for controlling one key of the pair by the other, comprising a disk on the axis of each key, and a link connecting the disks of every pair together, the link being positively secured to the adjacent sides of the two disks, the said link by the axial movement of either disk being adapted to prevent the remaining disk of the pair from moving.

5. In a voting machine, the combination of a series of voting keys arranged in rows, registering devices for recording the votes upon the operation of the voting keys, a wire, 151, extending alongside of the keys in each row, but normally out of engagement therewith, means for connecting it with selected keys in the row at will whereby the operation of one key to register a vote will prevent the operation of the other selected keys, and means for returning the operated one of the keys to inoperative position, substantially as set forth.

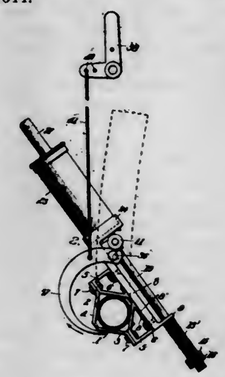
[Claims 6 to 14 not printed in the Gazette.]

900,631. GEARING. WALTER J. WILDE, American Fork, Utah. Filed Oct. 22, 1907. Serial No. 398,612.



In combination with a support, a vertical shaft passed therethrough and having spiral screw threads on its upper exposed end, ball bearings between the support and shaft, upstanding guides on the support closely adjacent to the shaft on opposite sides thereof, a nut block recessed in its opposite ends to receive the guides and provided with an opening to receive the spiral portion of the shaft, oppositely disposed lugs projecting inward from the edges of said opening engaging the screw threads in the shaft, standards on the support, a horizontal shaft journaled in the standards, a crank fly wheel on the outer end of the shaft, a crank disk on the inner end of the shaft, a wrist pin carried by the disk, connecting rods journaled at one end to the wrist pin, the nut block having sockets on opposite sides of the spiral shaft to receive the lower ends of the rods, and fastenings passed inward through the ends of the nut block through the sockets and ends of the connecting rods to pivot the connecting rods in the nut block.

900,632. PUMP FOR PNEUMATIC TIRES. HENRY M. WILLIAMS, Vincennes, Ind., assignor of one-half to J. Frank Whyte, Coatesville, Ind. Filed July 8, 1907. Serial No. 382,644.



1. In a mechanism of the class described, the combination with a revoluble support, of a guide-plate carried by said support, a cross-head slidably mounted on said guide-plate, a cylinder carried by said guide plate, a piston-head in said cylinder, means connecting said cross-head to said piston-head, a roller secured to said cross-head, and an adjustable cam member positioned contiguous to said cross-head and capable of being placed in the path of movement of said roller, whereby said piston will be reciprocated in said cylinder, when said revoluble support is rotated.

2. In a mechanism of the class described, the combination of a guide-plate, a cylinder secured near one end of said guide-plate, a cross-head slidably mounted upon said guide plate between said cylinder and the opposite end of said guide-plate, a piston-rod connected to said cross-head, a piston-head positioned within said cylinder and connected to said piston-rod, and means coöperating with said cross-head for reciprocating said piston-head within said cylinder.

3. A pump of the class described, comprising a guide-plate provided near one end with a stop, and at its opposite end with a cylinder, a piston-rod extending into said cylinder and through said stop, a piston-head positioned within said cylinder and secured to said piston-rod, a spring mounted upon said piston-rod and interposed between said stop and the outer end thereof, and means coöperating with said piston-rod between said cylinder and stop for reciprocating said rod and piston-head.

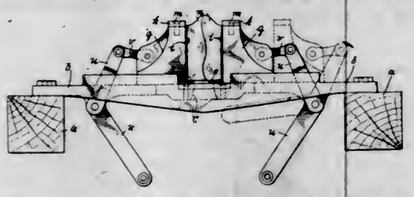
4. A pump of the class described, comprising a guide-plate provided at one end with an extension or stop and at its opposite end with an internally threaded portion constituting one end of a cylinder, the cylinder-casing threaded into said end, a piston-head mounted in said cylinder-casing, a piston-rod secured to said piston-head and extending beyond the outer face of said extension or stop, a nut threaded upon the outer end of said piston-rod,

yieldable means positioned upon said piston-rod between said stop and nut, and means connected with said piston-rod between the ends of said guide-plate and adapted to intermittently move said piston-rod and slide said piston-head within said cylinder.

5. In a device of the character described, the combination with a support, of a curved cam member pivotally mounted near one end upon said support, a bell-crank lever, a link connected near one end to said lever near one of its ends, and said link connected at its opposite end to the cam member intermediate its ends, a cylinder, a piston-head mounted in said cylinder, a piston-rod connected to said piston-head, and means coöperating with said piston-rod and said cam-member whereby said piston-head may be moved within said cylinder.

[Claims 6 to 9 not printed in the Gazette.]

900,633. MOLDING-MACHINE. JAMES A. WILLIAMS, Ironton, Ohio. Filed Jan. 6, 1908. Serial No. 409,433.



1. The combination with a bed formed with an aperture, of a pair of carrier-blocks mounted free to be moved on said bed; a die carried by each of said carrier-blocks; a hollow core the interior of which communicates with the aperture in said bed; and mechanism for moving said carrier-blocks towards said core.

2. The combination with a bed, of a pair of carrier-blocks mounted free to be moved thereon; a die carried by each of said carrier blocks; a core formed with a ledge which supports said core on said bed and upon which rests the material to be molded; and mechanism for moving said carrier-blocks towards said core.

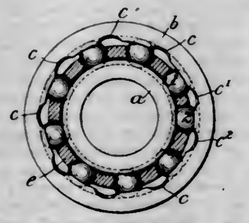
3. The combination with a bed, of a pair of carrier-blocks mounted thereon; dies carried by said carrier-blocks and formed with studs, and a hollow core formed with holes adapted to receive said studs.

4. The combination with a bed, of a pair of carrier-blocks mounted thereon; dies carried by said carrier-blocks and formed with studs; and a hollow core formed with a ledge and with holes adapted to receive said studs.

5. The combination with a bed formed with an aperture, of a pair of slidable carrier-blocks mounted one on each side of said aperture; dies mounted on said carrier-blocks and formed with studs; and a hollow core mounted over said aperture and formed with holes adapted to receive said studs.

[Claims 6 and 7 not printed in the Gazette.]

900,634. BALL-BEARING. FREDERICK W. WITTE, Chelmsford, England. Filed Apr. 23, 1906. Serial No. 313,254.

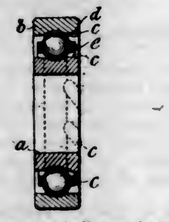


1. A ball bearing comprising balls, a spacing device for the same adapted to unequally space the balls, an inner and an outer ring, each having a curved track, and having a gap for each ball in one of the rings only, passing from one side inwardly toward the track.

2. A ball bearing comprising balls, a spacing device for the same adapted to unequally space the balls, an inner and an outer ring, each having a curved track, and having a series of gaps in one of the rings unequally spaced around the same to correspond with the spacing of the balls, such gaps passing from one side inwardly toward the track.

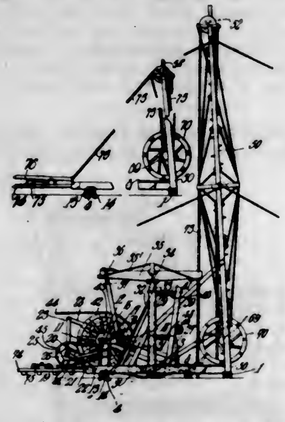
3. A ball bearing comprising balls, a spacing device for the same adapted to unequally space the balls, an inner and an outer ring, each having a curved track and having a series of gaps in one of the rings unequally spaced around the same to correspond with the spacing of the balls, such gaps being of a depth where they enter the track which is less than the full depth of such track.

900,635. BALL-BEARING. FREDERICK W. WITTE, Leipzig-Plagwitz, Germany. Original application filed Apr. 23, 1906, Serial No. 313,254. Divided and this application filed Apr. 11, 1908. Serial No. 426,624.



A ball bearing comprising balls, an inner and an outer ring, each having a curved track, and one of said rings having gaps around its edge for the balls, each gap passing spirally from one side inwardly toward the track and being of a depth where it enters the track which is less than the full depth of such track, whereby an abutment for the balls is left at the end of each gap.

900,636. WELL-DRILLING MACHINE. ROY L. WOODARD, Richburg, N. Y. Original application filed Nov. 15, 1906, Serial No. 343,600. Divided and this application filed Dec. 13, 1907. Serial No. 406,340.



1. In a machine of the character described the combination with a base; of a band wheel supported above the base, a rotatable drum, means for transmitting rotary motion from the band wheel to the drum, a track extending onto the base from a point beyond one end thereof, a tool carrying truck mounted upon the track, and flexible means secured to the drum for engagement with a tool upon the truck to transmit motion from the drum to the truck.

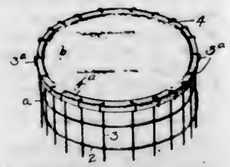
2. In a machine of the character described the combination with a base frame consisting of mud sills, beams thereon, and truss rods disposed beneath the beams and extending under one of the sills; of a samson post disposed above said last mentioned sill, a walking beam mounted upon the samson post, an inclined post adjacent the samson post, connections between said posts, braces extending from the base frame to the samson post, reinforcing rods extending longitudinally of said braces and connections, a crank arm, a stirrup upon the walking beam, and a rod connecting said stirrup with the crank arm.

3. In a machine of the character described the combination with a base frame; of a track extending onto the base frame from a point beyond one end thereof, a tool carrying truck mounted to travel upon the track, a derrick, a bull wheel, a drum revoluble therewith, and a cable carried by the derrick and connected to the drum, said cable being disposed to be wound upon the drum and to be secured to a tool upon the truck to actuate the truck.

4. In a machine of the character described the combination with a base frame consisting of mud sills, beams thereon, and truss rods disposed beneath the beams and extending under one of the sills; of a samson post disposed upon that sill extending over the truss rods, a walking beam mounted upon the samson post, a crank arm, a stirrup upon the walking beam, and a rod connecting the stirrup and crank arm.

5. In a machine of the character described the combination with a base frame consisting of mud sills, beams thereon, and truss rods disposed beneath the beams and extending under one of the sills; of a samson post disposed upon that sill extending over the truss rods, a walking beam mounted upon the samson post, braces extending from the base frame to the samson post, and reinforcing rods extending longitudinally of said braces.

900,637. CRATE. CHARLES S. YOUNG, Pittsburg, Pa. Filed Aug. 19, 1907. Serial No. 389,150.

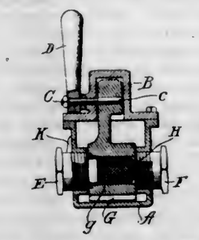


1. A crate comprising a body portion having intersecting members forming a cage and certain of said members projecting therefrom, a cover having an annular marginal bead the concave side of which is adapted to rest upon the outermost intersections of said members and apertures in said marginal bead for the passage of said projecting portions.

2. A crate comprising a body portion having intersecting members forming a cage and certain of said members projecting therefrom, a cover having an annular marginal bead provided with a series of apertures and terminating in a depending peripheral flange, said projecting members passing through said apertures and turned back over said peripheral flange and the concave side of the marginal bead resting upon the outermost intersections of said members.

900,638. GASOLENE-STRAINER. OSCAR ZSCHOCH, Brooklyn, N. Y. Filed Apr. 15, 1908. Serial No. 427,274.

1. In a strainer, the combination with the casing having oppositely located inlet and outlet, of a movable block within the casing having a plurality of passages arranged to register with the said inlet and outlet of the casing, strainers placed in the said passages and movable with the block, and means for moving the block from the outside, substantially as described.

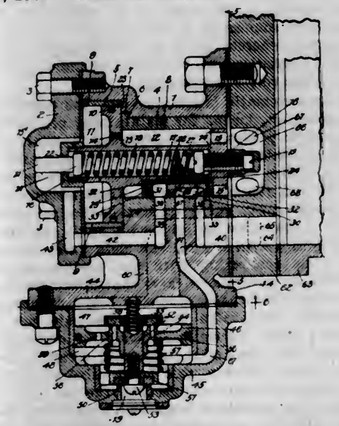


2. In a strainer, the combination with a casing having oppositely located inlet and outlet, said casing being also provided with additional openings and removable caps for closing the said additional openings, a movable block having a plurality of passages arranged to register with the said inlet and outlet and the additional openings of the casing, strainers placed in the said passages of the block and movable with the block, and means for moving the block from the outside, substantially as described.

3. In a strainer, the combination with the casing having oppositely located inlet and outlet, of a swinging block within the casing having a plurality of passages arranged to register with the said inlet and outlet of the casing, strainers placed in the said passages and movable with the block, and means for moving the block from the outside, substantially as described.

4. In a strainer, the combination with a casing having oppositely located inlet and outlet, said casing being also provided with additional openings and removable caps for closing the said additional openings, a swinging block within the casing having a plurality of passages arranged to register with the said inlet and outlet and with the additional openings of the casing, strainers placed in the said passages of the block and movable with the block, and means for moving the block from the outside.

900,639. AIR-BRAKE SYSTEM. BERT AIKMAN, Chicago, Ill., assignor to National Brake and Electric Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Dec. 9, 1907. Serial No. 405,632.



1. In an automatic braking system, the combination of a main reservoir, a plurality of auxiliary reservoirs, a brake cylinder associated with each auxiliary reservoir, an emergency pipe, a train pipe, a motorman's valve, connections between the valve mechanisms and the other members enumerated, said valve mechanisms being nor-

mally balanced and arranged to connect the main reservoir with the emergency pipe and the emergency pipe with the auxiliary reservoirs whereby said auxiliary reservoirs are charged, said valve mechanisms also normally connecting brake cylinders with the train pipe and said motorman's valve normally connecting said train pipe with atmosphere and closing the emergency pipe, actuation of the motorman's valve to connect the emergency pipe with atmosphere causing unbalancing of the valve mechanisms to disconnect the main reservoir from the emergency pipe and to connect the brake cylinders directly with the auxiliary reservoirs, and local means at each valve mechanism for assisting in the unbalancing thereof to cause more rapid connection of the brake cylinders with the auxiliary reservoirs.

2. In an automatic braking system, the combination of a main reservoir, means for maintaining pressure in said main reservoir, an auxiliary reservoir, a brake cylinder, an emergency pipe, a valve controlling said emergency pipe, a main valve connected with the main reservoir and with the auxiliary reservoir and the emergency pipe, a piston controlling the operation of said main valve, the pressure at the sides of said piston being normally equal and the valve mechanism being normally disposed to cause connection of the main reservoir and the auxiliary reservoir with the emergency pipe, opening of the emergency pipe to atmosphere upon actuation of the controlling valve causing reduction of pressure at one side of the piston whereby the main valve is moved to disconnect the main reservoir and auxiliary reservoir from the emergency pipe and to connect the auxiliary reservoir directly with the brake cylinder.

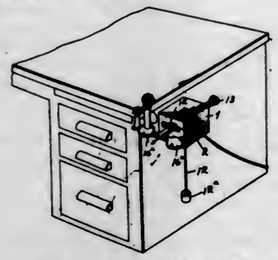
3. In an automatic braking system, the combination of a main reservoir, means for maintaining pressure in said main reservoir, an auxiliary reservoir, a brake cylinder, an emergency pipe, a valve controlling said emergency pipe, a main valve connected with the main reservoir and with the auxiliary reservoir and the emergency pipe, a piston controlling the operation of said main valve, the pressure at the sides of said piston being normally equal and the valve mechanism being normally disposed to cause connection of the main reservoir with the auxiliary reservoir with the emergency pipe, opening of the emergency pipe to atmosphere upon actuation of the controlling valve causing reduction of pressure at one side of the piston whereby the main valve is moved to disconnect the main reservoir and auxiliary reservoir from the emergency pipe and to connect the auxiliary reservoir directly with the brake cylinder, and means independent of the emergency pipe for causing direct connection to atmosphere from the one side of the piston whereby quick actuation of the main valve and quick connection of the brake cylinders and of the auxiliary reservoir are assured.

4. In an automatic braking system, the combination of a main reservoir, means for maintaining pressure in said main reservoir, a plurality of auxiliary reservoirs, a brake cylinder associated with each auxiliary reservoir, a main valve mechanism associated with each brake cylinder and connected with the associated auxiliary reservoir, a main valve for the main valve mechanism and a piston controlling the operation of said main valve, an emergency pipe connecting with the various main valve mechanisms, a train pipe connecting with the various main valve mechanisms, a motorman's valve controlling the condition of the pipes, said main reservoir being connected with one of said main valve mechanisms, said main valve mechanisms being normally disposed to maintain equal pressure at both sides of the piston to maintain the main valve in normal position, said main valve mechanisms in their normal position connecting the auxiliary reservoirs with the emergency pipe and connecting the main reservoir with the emergency pipe, whereby said auxiliary reservoirs are normally charged from the main reservoir, said brake cylinders during the normal position of the main valve mechanisms being connected with the train pipe, said motorman's valve being normally in position to connect the train pipe with atmosphere and to close the emergency pipe, said motorman's valve being adapted to connect the emergency pipe with the train pipe whereby air under reservoir pressure may flow from the emergency pipe into the train pipe and through the various main valve mechanisms into the brake cylinders, and means for actuating the motorman's valve to connect the emergency pipe with atmosphere whereby to connect one side of the piston with atmosphere to thereby cause unbalancing of the piston and movement of the main valve, movement of the main valves causing disconnection of the main reservoir from the emergency pipe and direct connection of the auxiliary reservoirs with the brake cylinders.

5. In an automatic braking system, the combination of a main reservoir, means for maintaining pressure in said main reservoir, a plurality of auxiliary reservoirs, a brake cylinder associated with each auxiliary reservoir, a main valve mechanism associated with each brake cylinder and connected with the associated auxiliary reservoir, a main valve for the main valve mechanism and a piston controlling the operation of said main valve, an emergency pipe connecting with the various main valve mechanisms, a train pipe connecting with the various main valve mechanisms, a motorman's valve controlling the condition of the pipes, said main reservoir being connected with one of said main valve mechanisms, said main valve mechanisms being normally disposed to maintain equal pressure at both sides of the piston to maintain the main valve in normal position, said main valve mechanisms in their normal position connecting the auxiliary reservoirs with the emergency pipe and connecting the main reservoir with the emergency pipe, whereby said auxiliary reservoirs are normally charged from the main reservoir, said brake cylinders during the normal position of the main valve mechanisms being connected with the train pipe, said motorman's valve being normally in position to connect the train pipe with atmosphere and to close the emergency pipe, said motorman's valve being adapted to connect the emergency pipe with the train pipe whereby air under reservoir pressure may flow from the emergency pipe into the train pipe and through the various main valve mechanisms into the brake cylinders, means for actuating the motorman's valve to connect the emergency pipe with atmosphere whereby to connect one side of the piston with atmosphere to thereby cause unbalancing of the piston and movement of the main valve, movement of the main valves causing disconnection of the main reservoir from the emergency pipe and direct connection of the auxiliary reservoirs with the brake cylinders, and local means at each valve mechanism for directly connecting the side of the piston with atmosphere.

[Claims 6 to 12 not printed in the Gazette.]

900,640. DESK-TELEPHONE SUPPORT. FOLSOM P. ANDERSON, Columbus, Ohio. Filed Mar. 13, 1908. Serial No. 420,868.



1. The combination with a case adapted to be secured to a desk, said case having oppositely located openings, a horizontal shaft within the case, and a gear wheel loose on said shaft, of a rack bar having a traveling engagement with said gear wheel and extending through said case, and means on the rack bar for supporting a telephone transmitter.

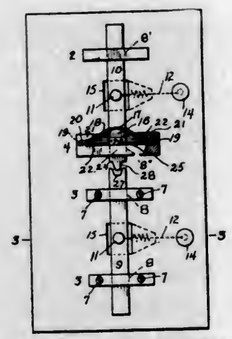
2. In a telephone transmitter support, the combination with a case adapted to be secured to a desk, said case having opposing openings, a shaft having a swinging support in said case, and a gear wheel mounted on said shaft, of a rack bar having a traveling engagement with said gear wheel and extending through said case openings, said rack-bar being adapted to support a telephone transmitter.

3. In a telephone transmitter support, the combination with a case having opposing openings therein, a shaft within the case having a swinging support at one end, and a gear wheel loose on said shaft, of a rack bar having a traveling engagement with said gear wheel, said rack bar extending through said case openings and being adapted to support a telephone transmitter at one end, and means for normally retaining said rack bar in its rearmost position and returning said rack bar to such position when the same has been pulled forward and released.

4. In a telephone supporting attachment, the combination with a case having opposing openings therein, a shaft pivoted at one end to swing in said case, and a gear wheel on said shaft having a peripheral groove, of a rack bar having a traveling engagement with said gear wheel and projecting through said case openings, said rack bar adapted to support a telephone transmitter at one end, a cord connected to said rack bar and running through the groove of said gear wheel, and a weight on said cord.

5. In a telephone transmitter support, the combination with a case having opposing openings therein, a shaft pivoted within said case at one end and adapted to swing therein, and a gear wheel loose on said shaft, of a rack bar having a traveling engagement with the upper side of said gear wheel, said rack bar projecting through said case openings and adapted to support a telephone, a bar 11 capable of a swinging horizontal movement within the upper portion of the case, and a keeper bar connected with said movable bar 11, said keeper embracing opposite sides of said rack bar and retaining the same in engagement with the teeth of the gear wheel, and means for automatically returning the movable parts to their normal positions by releasing the rack bar after the same has been pulled outward or swung laterally.

900,641. ELECTRIC FIRE-ALARM. HARRY ANDERSON, Haddonfield, N. J. Filed Feb. 14, 1908. Serial No. 415,948.

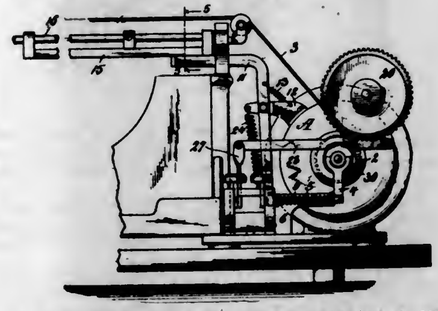


1. In a device of the character described, stationary and movable contact members, a housing for the movable member, a lug or projection on said movable member, a spring engaging said lug or projection and having its ends slidably seated in said housing, fusible means between said lug or projection and the housing to normally disengage said contact members.

2. In a device of the character described, stationary and movable contact members, adjusting means for the stationary member, a housing for the movable member, said housing being provided with an opening to slidably receive the movable member, said movable member being formed with a lug on its outer face, a spring having its ends seated in the outer ends of the housing and bearing centrally against said lug, and fusible means arranged between said lug and housing normally holding said contact members disengaged.

3. In a device of the character described, stationary and movable contact members, adjusting means for the stationary member, a housing for the movable member, said housing being provided with an opening to slidably receive the movable member, said movable member being provided with a lug on its outer face, a spring having its ends slidingly seated in the outer end portions of the housing and its central portion exerting lateral spring pressure upon said lug, fusible means between said lug and housing normally holding said contact members disengaged, the contact ends of said contact members interfitting when engaged.

900,642. TYPE-WRITER CARRIAGE-RETURN MECHANISM. NEAL L. ANDERSON, Winston Salem, N. C. Filed Jan. 29, 1908. Serial No. 413,264.



1. In a typewriter carriage-return mechanism, a constant-potential series-wound electric motor for returning the carriage, and means for connecting the motor to the carriage, the carriage constituting a material overload for the motor at the motor's rated speed, whereby the motor develops a high starting torque, but does not attain an excessive speed during the return of the carriage; substantially as described.

2. In a typewriter carriage-return mechanism, a constant-potential series-wound electric motor for returning the carriage, and means for intermittently closing the circuit of the motor and connecting the motor to the carriage, the carriage constituting a material overload for the motor at the motor's rated speed, whereby the motor develops a high starting torque, but does not attain an excessive speed; substantially as described.

3. In a type-writer carriage-return mechanism, a constant potential series-wound electric motor for returning the carriage, means for intermittently closing the circuit of the motor and connecting the motor to the carriage, and means for opening the circuit of the motor and disconnecting the motor from the carriage near the end of the return movement, the carriage constituting a material overload for the motor at the motor's rated speed, whereby the motor develops a high starting torque but does not attain an excessive speed, and objectionable jar is prevented; substantially as described.

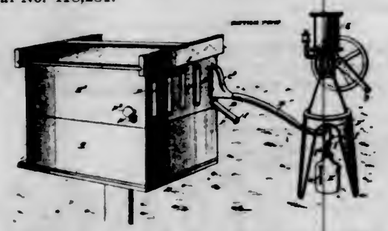
4. In an electric-motor-driven typewriter carriage-return mechanism operative on either a direct-current circuit or an alternating current circuit, an electric-motor having armature windings and field-windings, means for connecting the armature windings and field windings in series for operating on the direct-current circuit, means for connecting the armature windings and field windings in parallel for operating on the alternating-current circuit, and mechanism for connecting the motor to the carriage; substantially as described.

5. In an electric-motor-driven typewriter carriage-return mechanism, operative on either a direct-current circuit or an alternating-current circuit, an electric motor having an armature winding and field windings, means for connecting the armature winding and field windings

in series for operation on the direct-current circuit, the carriage constituting a material overload for the motor at the motor's rated speed when so connected, means for reducing the resistance of the motor circuit when it is connected on the alternating current circuit, and mechanism for connecting the motor to the carriage; substantially as described.

[Claims 6 to 26 not printed in the Gazette.]

900,643. PROCESS FOR EXTRACTING HONEY. LEONIDAS W. AVANT, Atascosa, Tex. Filed Feb. 28, 1908. Serial No. 418,281.



1. The process of extracting honey from honey comb which consists in simultaneously pulling out the wax from the ends of the cells to open the latter and then extracting the fluid contents.

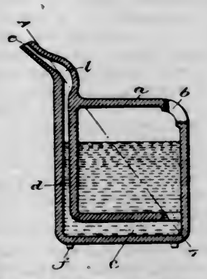
2. The process of extracting honey from honey comb which consists in simultaneously pulling out the wax from the ends of the cells to open the latter and then extracting the fluid contents by suction.

3. The process of extracting honey from honey comb which consists in simultaneously pulling out the wax from the ends of the cells to open the latter and then extracting the fluid contents by atmospheric pressure.

4. The process of extracting honey from bee hives, which consists in rupturing the ends of the cells within the hive and removing the honey therefrom by atmospheric pressure.

5. The process of extracting honey from bee hives, which consists in rupturing the ends of the cells within the hive and applying to one end of each cell a suction for removing the contents of the same.

900,644. DISPENSING VESSEL. HANS VON BAEYER, Munich, Germany. Filed Dec. 30, 1907. Serial No. 408,622.

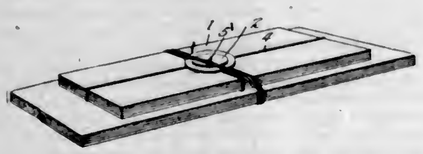


1. In a dispensing vessel, a cup divided by a horizontal partition into an upper storage chamber and a lower measuring chamber, the upper chamber having an unobstructed inlet at one side and near the top and the two chambers intercommunicating at the same side as the inlet, and an outlet pipe extending from the lower chamber vertically on the outside of the cup to a point higher than the cup interior and on the side opposite the inlet and communicating opening.

2. In a dispensing vessel, a cup divided by a horizontal partition into an upper storage chamber and a lower measuring chamber, the upper chamber having an inlet at one side and near the top and the two chambers intercommunicating at the same side as the inlet, and an outlet pipe extending from the lower chamber vertically on the outside of the cup to a point higher than the cup interior and on the side opposite the inlet and communicating opening and then bent away from the cup, that portion of the outlet pipe corresponding in elevation to the cup interior being of restricted cross-sectional area with an internal enlargement at the bend.

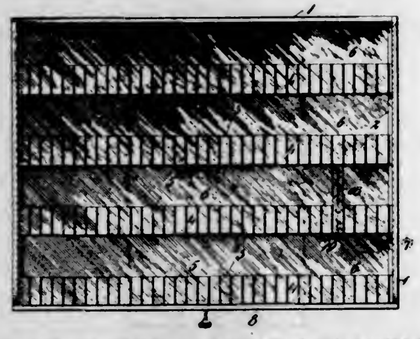
3. In a dispensing vessel, a cup divided by a horizontal partition into an upper storage chamber and a lower measuring chamber, the upper chamber having an inlet at one side and near the top and the two chambers intercommunicating at the same side as the inlet, and an outlet pipe extending from the lower chamber vertically on the outside of the cup to a point higher than the cup interior and on the side opposite the inlet and communicating opening, that portion of the outlet pipe corresponding in elevation to the cup interior being of restricted cross-sectional area, and said outlet pipe having an internal enlargement near its outer extremity above the level of the cup interior.

900,645. BUNDLE-TIE. ANDREW W. BAIRD, Marne, Iowa. Filed Oct. 8, 1907. Serial No. 396,495.



A bundle tie comprising a flat-sided disk having a flexible circular marginal edge and provided with a central hole, a concentric reinforcement which stiffens the central portion of the disk, and a string passing through said hole and provided with a knot at one end.

900,646. ACCOUNT-CABINET. JOSEPH S. BASH, Champaign, Ill. Filed Apr. 7, 1908. Serial No. 425,733.

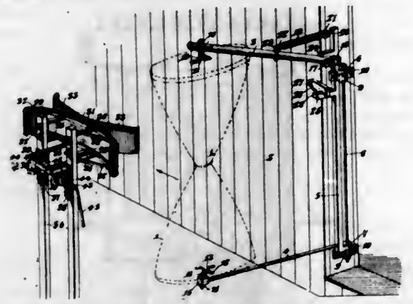


1. The combination of a casing having a transparent top, and a support with a series of spaces under said top adapted to receive charge slips, the transparent top extending beyond the support to receive slips bearing customers' names.

2. The combination of a box, a glass plate across the top thereof, and a strip extending lengthwise under one edge of the glass and having ribs forming a series of spaces under said edge, said spaces being adapted to receive slips which may be inserted therein from the outside.

3. The combination of a box, a series of glass plates arranged in steps and extending across the box, and a corresponding series of strips located under the edges of said plates and having spaces under the plates into which slips may be inserted from the outside.

900,647. MAIL-DELIVERING DEVICE. GEORGE M. BEARD, Hanover, Pa. Filed Jan. 16, 1908. Serial No. 411,175.



1. In a device of the class described, the combination with a mail bag catcher, of a mail bag supporting crane including a vertically disposed hinged bar, a lower mail bag supporting arm rigid with the hinged bar, an upper mail bag supporting arm pivotally connected with the said bar, and a spring connected with the upper arm and with the hinged bar for swinging the former outwardly.

2. In a device of the class described, the combination with a mail bag catcher, of a mail bag supporting crane including a vertically disposed hinged bar provided with a stop, upper and lower mail bag supporting arms carried by the hinged bar, the upper arm being pivotally connected with the bar at a point below the stop, and a spring connected with the upper arm and with the hinged bar at a point above the stop for stretching the mail bag.

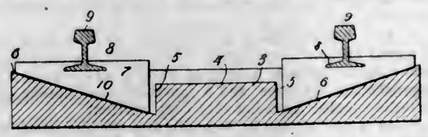
3. In a device of the class described, the combination with a mail bag catcher, of a mail bag supporting crane including a hinged bar provided with a projecting lug, upper and lower mail bag supporting arms carried by the hinged bar, and a pivoted catch provided with means for engaging the lug of the hinged bar for locking the crane against movement.

4. In a device of the class described, the combination with a mail bag catcher, of a mail bag supporting crane including bearing brackets, a hinged bar provided with ears and having spaced lugs, a pintle rod passing through the ears and hinging the bar to the bearing brackets, upper and lower mail bag supporting arms carried by the said bar, the upper arm being pivoted between the said lugs and arranged to engage one of the lugs, a spring connected with the bar and with the upper arm, and a catch arranged to engage the other lug of the bar.

5. In a device of the class described, the combination with mail bag supporting means, of a mail bag catcher comprising two members curved longitudinally to form outwardly diverging jaws at each end of the mail bag catcher, one of the members being fixed and the other member being movable toward and from the other, means for yieldably holding the movable member at the limit of its inward movement, and operating mechanism for forcing the movable member outward to release the mail bag.

[Claims 6 to 10 not printed in the Gazette.]

900,648. RAILWAY-TIE. HARRY C. BENNETCH, Cocalico, Pa. Filed Oct. 10, 1907. Serial No. 396,743.



1. A railroad tie, and rail supporting seats connected with the tie, said seats being freely movable in a direction from the center of the tie and at an angle to the surface thereof.

2. A tie, and a rail supporting seat mounted for a free inclining sliding movement relative to the tie.

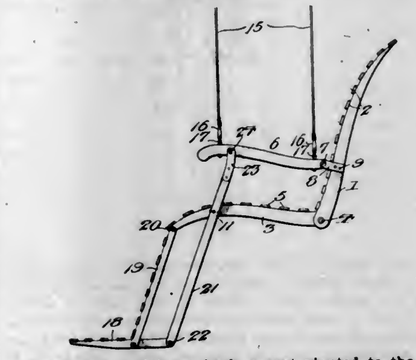
3. A tie, and rail supporting seats, said seats being freely movable longitudinally of the tie and at an incline relative to the surface thereof.

4. A tie formed with a longitudinal recess, the end portions of said recess forming ways inclined downwardly from the ends toward the center of the tie, and rail supporting seats freely movable on said ways.

5. A tie formed with a longitudinal recess, the end portions of said recess forming ways inclined downwardly from the ends toward the center of the tie, rail supporting seats in said recess, and rails carried thereby, said rails limiting the movement of the seats in one direction.

[Claims 6 to 9 not printed in the Gazette.]

900,649. SWING. MILTON E. BEST, Lewisburg, Pa. Filed June 1, 1907. Serial No. 376,843.



A swing comprising a back, a seat pivoted to the back, brackets extending forward from the back, arms pivoted to said brackets, a foot rest, bars pivotally connected to the foot rest upon opposite sides thereof, said bars being pivotally connected to the seat, the leg rest being pivotally connected at one end to the seat and at the other end to the foot rest, and brace rods having angularly bent ends connected to the foot rest and to the seat.

900,650. PHOTOGRAPHIC VIGNETTER. CHARLES A. BIRDSALL, Holden, Mo., assignor of one-half to Richard Henry Tatlow, Holden, Mo. Filed Dec. 14, 1907. Serial No. 406,476.



1. A photographic vignetter comprising an adjustably mounted support, a plurality of vignetting screens carried thereby and a movable element in said support for selective engagement with any of the screens.

2. Vignetting apparatus comprising a support, a series of vignetting shields carried thereby, means for adjusting the inclination of said shields and means for elevating any of said shields.

3. A vignetting apparatus comprising a support, a series of screens supported thereby, and a shiftable pinion in the support to engage any of the series of screens for selectively adjusting any of the screens.

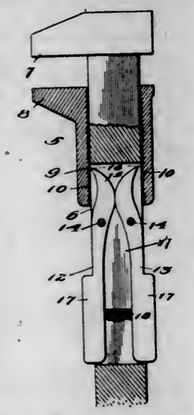
4. A vignetter comprising a base, a tubular support adjustably mounted therein, a head adjustably mounted on the tubular support, means for adjusting the head, slides mounted in the head and carrying screens of different character, and means inclosed within the tubular support for selectively adjusting the screens.

5. The combination with a base, of a support carried thereby, a guiding element carried by the support and

means for adjusting said guiding element, a series of screens supported in the guiding element, means for adjusting any of said screens, and designating means to assist in operating the different screens.

[Claims 6 to 12 not printed in the Gazette.]

900,651. WRENCH. DAVID BLANKENSHIP, Raven, Va. Filed Feb. 4, 1908. Serial No. 414,210.



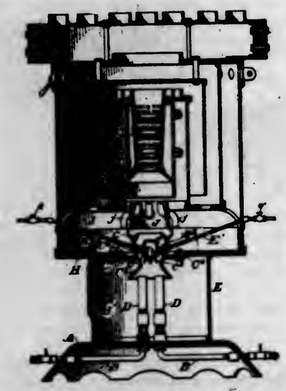
1. In a wrench of the class described, the combination with a shank having a fixed jaw at one end and an elongated slot opening at the edges of said shank, a sliding jaw carried by said shank and having transverse series of serrations, of dogs located within the slot and having portions at their lower ends disposed partly outwardly at each edge of said shank and arranged in parallel spaced relation, and elastic means located between said dogs for holding portions thereof normally disengaged from said serrations.

2. A wrench of the class described comprising a shank having a fixed jaw at one end, said shank having an elongated slot opening at the edges, a sliding jaw carried by said shank, said sliding jaw having a plurality of transversely disposed serrations located adjacent the edges of said shank, dogs pivotally mounted between the walls of said slot and having portions at their upper ends curved away from each other and directed toward said serrations, said dogs having enlarged portions at their lower ends disposed partly outwardly of said slot, and spring means located between said dogs for holding their curved upper ends normally disengaged from said serrations.

900,652. HYDROCARBON-BURNER. VIRGIL W. BLANCHARD and VIRGIL W. BLANCHARD, guardian of Luther S. Blanchard, (an insane person,) New York, N. Y. Filed Jan. 22, 1906. Serial No. 297,249.

1. The combination of a mixing tube, a burner above the mixing tube, and a vaporizer interposed between the mixing tube and burner comprising a tubular body through which the current of gases is passed, a retort arranged within the tubular body so as to be enveloped by the upwardly flowing of gas, and means for admitting oil and water into said retort; with a tube interposed between the retort and burner and provided with inwardly and upwardly directed jet pipes for supplying air to the upwardly flowing gases and vapors.

2. A retort comprising a hollow tubular body provided with a skirt flange on its lower end and air inlet perforations, means for discharging burning gases into said body a tubular retort arranged axially in said body above the perforations and provided with an internal liquid holding flange and adapted to be traversed internally and surrounded externally by the hot gases, hollow arms connecting said retort with the walls of the vaporizer, and oil and water supply pipes connected with said arms.

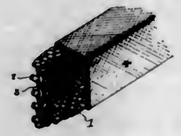


3. The combination of a gas and air mixing tube and a burner above the mixing tube; with a tubular fuel vaporizer interposed between but separated from both the burner and mixing tube, and through which the current of gases passes from the tube to the burner; with an air heating device also interposed between the vaporizer and the burner and adapted to be traversed by the gases issuing from the mixing tube and discharge jets of air into the gases.

4. The combination of a gas and air mixing tube, a burner above the mixing tube, and a tubular fuel vaporizer interposed between the burner and mixing tube and through which the current of gases is passed from the tube to the burner; with an air heating device interposed between the vaporizer and the burner and traversed by the gases and provided with interior upwardly directed jet pipes adapted to discharge jets of air into the current of gases.

5. The combination of a mixing tube, a burner above the mixing tube, and a vaporizer interposed between the mixing tube and burner comprising a tubular body through which the current of gases is passed, a tubular retort arranged within the tubular body so as to be traversed internally and enveloped externally by the upwardly flowing gases, and means for admitting oil and water into said retort.

900,653. PACKING. ABRAM F. BOOK, Chalfont, Pa. Filed Feb. 28, 1908. Serial No. 418,315.



1. As a new article of manufacture, packing composed of a body member consisting of a woven fabric made of fibrous and metallic threads, a body of paraffin penetrating and impregnating the same, and a fabric cover inclosing said body portion.

2. As a new article of manufacture, packing composed of a body member comprising a woven fabric having fibrous and metallic threads, a body of paraffin penetrating and impregnating the same, and a fabric cover of fibrous and metallic threads inclosing said body portion.

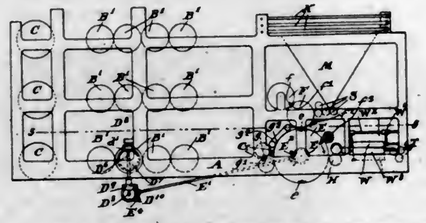
3. As a new article of manufacture, packing composed of a body member consisting of a woven fabric of mineral fiber and soft metal threads, a body of paraffin penetrating and impregnating said body portion, and a fabric cover inclosing the same.

4. As a new article of manufacture, packing composed of a body member comprising a woven fabric consisting of threads of mineral fiber and threads of a soft metal, a coating of paraffin penetrating and impregnating the same, a cover of fabric consisting of threads of asbestos fiber and brass wire inclosing said body portion, and a graphite coating for said cover.

5. The combination, in packing, of a body portion comprising fabric made from fibrous and metallic threads in which said threads are disposed diagonally at right angles to each other, a body of paraffin penetrating and impregnating the fibrous threads, and a cover for said body portion.

[Claims 6 to 10 not printed in the Gazette.]

900,654. APPARATUS FOR PRINTING AND FOLDING PAPERS. JOHN A. BOYCE, Springfield, Ill. Original application filed May 9, 1904, Serial No. 207,079. Divided and this application filed Sept. 23, 1904. Serial No. 225,644.



1. In an apparatus of the class described, the combination of full-speed rotary plate cylinders equipped with exclusively original plates with columns lengthwise of the plate cylinders, coöperating blanket cylinders, a rotary first folder cylinder parallel to the plate cylinders, means for leading invariably toward the folder cylinder and always in parallel and associating in book form all the members of a single web, main cutter cylinders cutting independently of the folder cylinder and adapted to cut the full-speed web members into sheets in length equal to the width of two pages plus margins and always cutting off a complete paper exclusive of supplement for each revolution of the plate cylinders, half-speed supplement printing couples printing said supplement web, rotary supplement cutter cylinders cutting the supplement web into sheets one page in length and delivering same on the quarter of the folder cylinder approaching the female main cutter cylinder and rotary folder rollers contiguous to said first folder cylinder: all coöperating to produce a complete paper in book form with supplement for each and every revolution of the full speed plate cylinders.

2. In an apparatus of the class described, the combination of rotary plate cylinders carrying plates with columns lengthwise of said plate cylinders, coöperating blanket cylinders, a rotary folder cylinder parallel to said plate cylinders, main cutter cylinders adjacent and parallel to said folder cylinder and cutting independently thereof and always cutting off a complete paper exclusive of supplement, for each revolution of the plate cylinders, supplement cutter cylinders between said folder cylinder and said plate cylinders, rotary folder rollers adjacent to said folder cylinder and a former in operative relation to said plate cylinders and first cutter cylinders, as set forth.

3. In a multiple deck apparatus of the class described, the combination of multiple sets of full-speed plate cylinders carrying exclusively original plates with columns lengthwise of said plate cylinders, multiple sets of coöperating blanket cylinders, a rotary folder cylinder parallel to and turning in unison with the full speed plate cylinders, half-speed supplement printing couples, rotary supplement cutter cylinders adjacent to and cutting independently of the folder cylinder and in line with and between the folder cylinder and the half-speed plate cylinders, an associating device in operative relation to the full-speed plate cylinders and adapted to lead always in parallel and invariably toward the folder cylinder all of the web members from all of the full-speed plate cylinders, main cutter cylinders in operative relation to said associating device and adapted to cut the associated full speed web members into sheets in length equal to the width of two pages plus margins and cutting off a complete paper exclusive of supplement for each and every revolution of the full-speed plate cylinders.

4. In a multiple deck apparatus of the class described, the combination of multiple sets of plate cylinders carrying plates with columns lengthwise of said plate cylinders, multiple sets of coöperating blanket cylinders, a rotary folder cylinder parallel to said plate cylinders, rotary supplement cutter cylinders in operative relation to said folder cylinder and one set of said plate cylinders, angle bars and a former in operative relation to the other set or sets of plate cylinders; main cutter cylinders in operative relation to said former and cutting independently of the folder cylinder and always cutting off a complete paper in book form—exclusive of supplement—for each revolution of the plate cylinders and folder rollers in operative relation to said main cutter cylinders, supplement cutter cylinders and first folder cylinder, as set forth.

5. In a multiple deck apparatus of the class described, the combination of multiple sets of rotary plate cylinders carrying plates with columns lengthwise of said plate cylinders; blanket cylinders coöperating with said plate cylinders; a rotary folder cylinder parallel to said plate cylinders; main cutter cylinders, supplement cutter cylinders and folder rollers in operative relation to said folder cylinder; a former in operative relation to said main cutter cylinders and one or more sets of said plate cylinders and angle bars and a slitter-device in operative relation to said former and said plate cylinders, as set forth.

[Claims 6 to 18 not printed in the Gazette.]

900,655. PROTECTED IRON. JOHN J. BRADLEY, Brooklyn, N. Y., assignor, by mesne assignments, to Lillian Von Gessner, Brooklyn, N. Y. Filed Feb. 12, 1907, Serial No. 357,006. Renewed Mar. 7, 1908. Serial No. 419,768.



1. A metallic article having a body of ordinarily pure metal and a surface of an alloy comprising elemental hydrogen formed integral and adapted to serve substantially as herein specified.

2. A metallic article having a body of ordinarily pure metal and a surface of an alloy comprising elemental hydrogen and copper formed integral and adapted to serve substantially as herein specified.

3. A metallic article having a body of ordinarily pure metal and a surface of an alloy comprising elemental hydrogen, copper and carbon formed integral and adapted to serve substantially as herein specified.

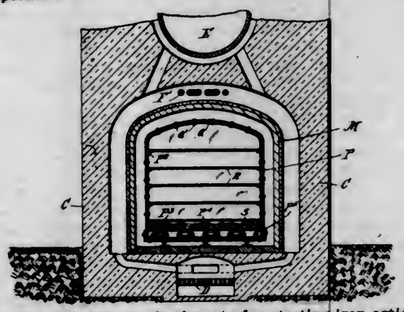
900,656. METHOD OF PROTECTING IRON. JOHN J. BRADLEY, Brooklyn, N. Y., assignor, by mesne assignments, to Lillian Von Gessner, Brooklyn, N. Y. Filed Feb. 12, 1907, Serial No. 357,007. Renewed Mar. 7, 1908. Serial No. 419,769.

1. A method of treating iron articles by first shaping complete, second subjecting them at a high temperature to a bath comprising elemental hydrogen, and third slowly cooling, all substantially as herein specified.

2. A method of treating iron articles by first shaping complete, second subjecting them at a high temperature to a bath comprising elemental hydrogen and copper, and third slowly cooling, all substantially as herein specified.

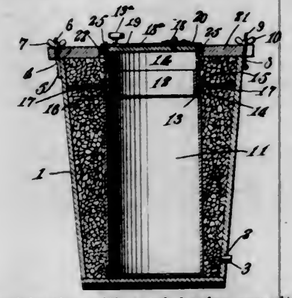
3. The improvement in the art of protecting iron articles which consists in subjecting them at a high temperature to

a bath comprising elemental hydrogen and afterwards to hydro-carbon and cooling slowly, all substantially as herein specified.



4. The improvement in the art of protecting iron articles which consists in subjecting them at a high temperature to a bath comprising elemental hydrogen and copper and afterwards to hydro-carbon and cooling slowly, all substantially as herein specified.

900,657. ATTACHMENT FOR ICE-CREAM FREEZERS. OTIS R. BRIGGS, Colby, Wis. Filed Nov. 19, 1907. Serial No. 402,893.

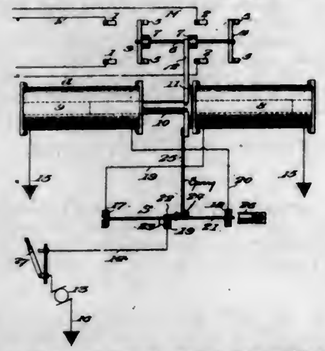


The combination with a tub having oppositely disposed threaded extensions, one of said extensions being hingedly connected with the tub, a closure having a central opening and being provided with ears engaging the extensions of the tub, securing elements upon the extensions, a can having a reduced mouth within the tub, a collar extending through the central opening of the closure to the top of the tub and engaging the reduced mouth of the can, a supporting ring upon the collar, radiating fingers upon the ring and engaging the tub, and a closure for the collar comprising a stationary portion secured to the collar and a door member hingedly connected with the stationary member.

900,658. REMOTE-CONTROL ELECTRIC SWITCH. JAY S. BRISTOL, Gillespie, Ill. Filed Apr. 6, 1907. Serial No. 366,818.

1. In a system of remote control, the combination of a main switch, oppositely disposed solenoids, a common core for the solenoids, means between the core and switch for opening and closing the latter, a circuit changer, circuits between the said changer and solenoids, and a controllable source of current, said circuit changer comprising fixed contacts, a blade adapted to engage one of the contacts at a time, an insulated member for moving the blade, a retarding device connected with the member, and a resilient element secured directly to the core and to said member cooperating with the retarding device to cause the said blade to move a suitable interval after the core begins to operate in either direction.

2. The combination of a main switch, electric devices for opening and closing the switch, a circuit-changer for automatically cutting one device into circuit while cutting the other device out of circuit, a resilient member connected with the circuit-changer and arranged to be actuated by the devices, and a dash pot connected with the circuit-changer and arranged to cause the said member to yield prior to the operation of the changer.

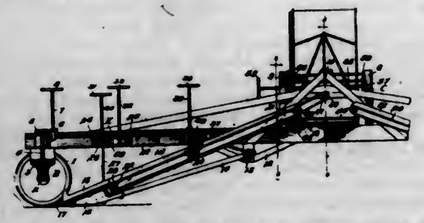


3. In a system of remote control, the combination of a switch, solenoids arranged to open and close the circuit, a circuit changing device controlled by the solenoids, an element actuated by the solenoids, a spring having one end attached to the element and the other end connected with the circuit-changer, means for delaying the movement of the circuit changing device with respect to the solenoids, and a switch adapted to be closed for producing a momentary flow of current to one or the other solenoids and to be opened before the said device completes its movement in each direction.

4. In a system of remote control, the combination of a switch, oppositely-disposed solenoids having a common core, a rigid connection between the core and switch, a source of current connected in circuit with the solenoids, a circuit changer including a movable element, a resilient member connected with the core and said element and insulated from the latter and adapted to actuate the circuit changer by the movement of the core, and means for retarding the movement of the said element.

5. In a system of remote control, the combination of a main switch, oppositely disposed solenoids having a common core, a source of current connected in circuit with the solenoids, an engineer's switch located at a point remote from the solenoids, a circuit changer between the engineer's switch and solenoids and adjacent the latter and including a movable element, a spring mechanically connecting the said element of the circuit changer with the core, and a dash-pot connected with the movable element for delaying the movement of the circuit changer with respect to the core.

900,659. EXCAVATING-MACHINE. WILLIAM M. BROWN, Crookston, Minn. Filed July 23, 1907. Serial No. 385,168.



1. In an excavating machine, a wheel supported traveling frame, shafts supported transversely in said frame, a scoop carrying frame laterally slidable upon one of said shafts, a carrier frame slidably supported upon the other shaft and loosely supported at its free end upon the scoop carrying frame, means for effecting lateral adjustment of the scoop carrying frame, and means for effecting rotation of the shaft supporting the carrier frame.

2. In an excavating machine, a wheel supported traveling frame, shafts supported transversely in said frame, a laterally adjustable scoop carrying frame slidable upon one of said shafts, a transversely adjustable carrier frame slidable upon the other shaft, an adjusting frame supported in the traveling frame for transverse slidable movement, a drum carrying shaft supported for rotation in the adjusting frame, flexible elements connecting the said shaft with the free end of the scoop carrying frame, means for effecting transverse adjustment of the latter, and a hand operated shaft carrying a worm gear for effecting rotation of the shaft supporting the carrier frame.

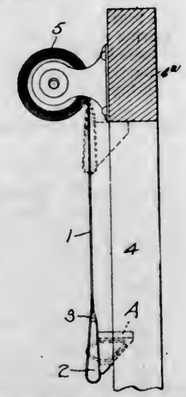
3. In an excavating machine, a wheel supported traveling frame, laterally adjustable scoop carrying frames supported therein, carrier troughs having free ends supported by the scoop carrying frames and adjusted with the latter, a transversely disposed endless carrier arranged intermediate the carrier troughs to receive material discharged from the latter, laterally extending endless carriers supported beneath and adjacent to the transversely disposed endless carrier, and means for operating the several carriers.

4. In an excavating machine, a wheel supported traveling frame having transversely disposed shafts and transversely disposed channel bars, an adjusting frame slidably supported by the channel bars, a scoop carrying frame slidably supported upon one of the transverse shafts, a carrier frame slidably supported upon another transverse shaft and having a free end supported upon the trough carrying frame, a drum carrying shaft supported for rotation in the adjusting frame, flexible elements connecting said shaft with the free end of the scoop carrying frame, a worm gear upon the drum carrying shaft, an adjusting shaft having a worm meshing with said gear, means for effecting transverse adjustment of the adjusting frame, means for effecting transverse adjustment of the scoop carrying frame, and means for rotating the shaft supporting the carrier frame.

5. In an excavating machine, a wheel supported traveling frame having laterally extending lugs or brackets, shafts supported for rotation in said brackets, carrier frames pivoted upon said shafts, endless carriers supported in said frames, supporting bars pivoted upon the lugs or brackets and converging to form V-shaped frames, flexible elements connecting the apices of said frames with the carrier frames, shafts supported for rotation upon the traveling frame, and flexible elements connecting said shafts with the apices of the V-shaped frames.

[Claims 6 to 8 not printed in the Gazette.]

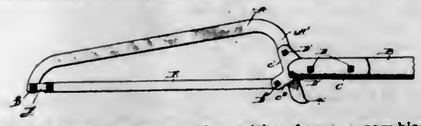
900,660. WINDOW-BLIND GUIDE AND STOP. WILLIAM W. BRUCE, Baltimore, Md. Filed Sept. 14, 1907. Serial No. 392,858.



1. The combination, with sides 4 and top 4^a of a window casing, and a shade roller and shade having a stick applied to its lower end, of the combined stops and guides A formed of blocks having a vertical outer side and horizontal top, and secured to the shade and stick on the inner side and close to the sides of the window casing, as shown and described.

2. A window shade having a stick applied to its lower end and provided with combined guides and stops formed of blocks secured to, and projecting inward from, the shade and stick, adjacent to the sides of the shade, as shown and described.

900,661. PRUNING-SAW. PHILIP BURDETT, Clifton, N. Y., assignor to John F. McAmmond and John B. Gatenbee, Scottsville, N. Y. Filed Dec. 6, 1907. Serial No. 405,397.



1. In a saw, the combination, with a frame, a saw-blade and means for attaching the blade to the frame at its front end, of a handle, and a socket device arranged to secure the handle and frame together said socket device being provided with means for securing the heel of the saw-blade.

2. In a saw, the combination, with a frame, a saw-blade, and means for attaching the blade to the frame at its end, of a handle, a pair of scales arranged one on each side of the handle and frame, each of said scales having a portion projecting forward of the rear portion of the frame, between which the heel of the saw-blade is inserted, and means for securing the scales to the handle, the frame and the saw-blade.

3. In a saw, the combination, with a frame having its rear end provided with a hook, a saw-blade and means for attaching the blade to the frame at its front end, of a handle, a socket-device attached to the handle and extending across the frame on each side, the hook of the frame projecting outside the socket-device, said socket-device being provided with a portion projecting forward of the rear end of the frame and arranged to engage the heel of the saw-blade and means for securing said blade to said projecting portion.

4. In a saw, the combination, with a frame having its rear end provided with a hook, a saw-blade, and means for attaching the blade to the frame at its front end, of a handle, and a pair of scales located one on each side of the handle, the frame, and the heel of the saw-blade, and means for clamping said scales together and to the handle, the frame and the saw-blade respectively, the hook of the frame extending beyond the scales, substantially as described.

5. In a saw, the combination with a frame, a saw blade, a handle and means for securing the same together of a link-device connected loosely to the point of the saw and to the front of the frame, so as to be capable of angular movement during the operation of the saw.

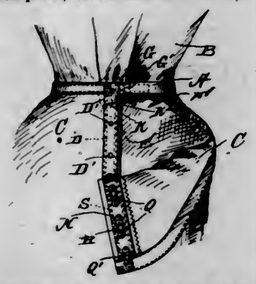
[Claims 6 and 7 not printed in the Gazette.]

900,662. PLACKET-CLOSER. JONATHAN L. BRASSINGTON, Mount Carmel, Pa. Filed Jan. 28, 1908. Serial No. 413,009.

1. A placket closer and skirt supporter, comprising, in combination with a skirt, a belt, a plate having a slot with a right angled lateral extension therein, the opposite edges of said plate being recessed with contracted openings therein to receive said belt, headed studs fixed to the meeting edges of the placket, plates having slots therein to receive the headed studs upon the opposite meeting edge of the placket, said plates having offsets, and a stud adapted to engage the slot of said belt engaging plate, as set forth.

2. In combination with a waist and skirt, a belt, a plate detachably supported by said belt and provided with a slot, a series of headed studs upon the edge of the placket, plates fastened to the opposite edge of the skirt and provided with an inwardly projecting offset having an elon-

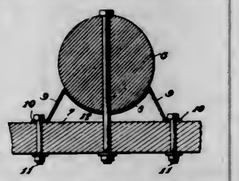
gated slot therein for the reception of a headed stud, a headed stud projecting from the inner edge of one of the edges of the placket and adapted to engage a slot in said belt supported plate, as set forth.



3. In combination with a waist and skirt, a belt, a plate detachably supported by the belt and provided with a slot, means upon the skirt for engagement with said slot a series of headed studs upon the edge of the placket, eyelets secured to the opposite edge of the placket, springs secured to said eyelets and adapted to retain the studs in place, as set forth.

4. In combination with a waist and skirt, a belt, a plate detachably supported by the belt and provided with a slot, means upon the skirt for engagement with said slot a series of headed studs upon the edge of the placket, eyelets secured to the opposite edge of the placket, springs secured to said eyelets and adapted to retain the studs in place.

900,663. CROSS-ARM SUPPORT. WALDO E. CALLANE, Flora, Ind. Filed Nov. 19, 1906. Serial No. 344,101.



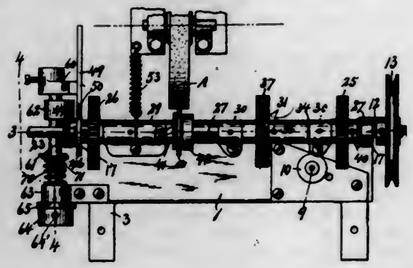
1. A cross arm support formed from a single piece of material, and comprising a curved pole-engaging strap, arms integral with and extending rearwardly from the ends of the strap, and outstanding spaced ears projecting from and integral with the rear ends of the arms, said ears being arranged for securement to a cross arm.

2. In a device of the character described, the combination with a pole, of a cross arm associated therewith, a support formed from a single piece of material, and comprising a curved strap interposed between the pole and cross arm and engaging the former, arms integral with and extending rearwardly from the ends of the strap, outstanding spaced ears projecting from and integral with the rear ends of the arms, said ears resting flat against the cross arm and maintaining the strap in spaced relation thereto between them, fasteners passing through the ears into the cross arm, and a fastener passing through the cross arm and through the strap into the pole.

3. A cross arm support formed from a single piece of material, and comprising a curved pole engaging strap, and integral inclined arms extending rearwardly from the ends of the strap, the length of the arms being such as to space the cross arm from the pole and the strap.

900,664. LENS-GRINDING MACHINE. BENNETT F. CLARK, Geneva, N. Y., assignor to The Standard Optical Company, Geneva, N. Y., a Corporation of New York. Filed Apr. 9, 1907. Serial No. 367,219.

1. In a lens forming machine, the combination with a rotary grinding element, rotary lens clamps and supports therefor movable back and forth across the face of the grindstone, means for effecting such back and forth movement, a yielding thread and a nut engaged therewith for adjusting one of the clamps toward and from the other clamp, a lens form rotating with one of the clamps and a contact plate for the lens form adjustable in a straight line toward and from the axis of the lens form.



2. In a machine for forming lenses, the combination with a rotary grinding element, a rotary lens holder and actuating means therefor, additional means for moving the lens holder across the face of the grinding element, a lens form rotating with the lens holder, a contact piece for the lens form, and means including a non-rotatable sliding rod for adjusting the contact piece in a straight line radially of the lens form and a spring pressing the rod in one direction.

3. In a machine for grinding the edges of lenses, coaxial rotary lens clamps and rotating means therefor, separate means for adjusting one of the lens clamps toward and from the other, a lens form rotating with said lens clamps, a contact piece for the lens form, and means including a nut for adjusting the contact piece in a straight line radial of the lens form, said nut being composed of two concentric parts, one of which is adjustable about its axis relatively to the other, and means for locking said parts together.

4. In a lens grinding machine of the class described, in combination with a rotary grinding element, a rotary lens holder and driving means therefor, a lens form coaxial with the lens holder and revolving therewith, a bearing for the lens form concentric with the axis of the grindstone, and adjustable in a direct line between the axis of said grinding element and lens-form, and means including a sliding rod and spring for adjusting said bearing.

5. In a lens grinding machine of the class described, in combination with a grinding element, a rotary lens holder movable parallel with and toward and from the axis of the grinding element, a lens form co-axial and rotating with the lens holder, a bearing for the lens form, a sliding support for the bearing and having a screw threaded end, and a rotary graduated adjusting nut engaging said threaded end for moving the sliding support endwise in one direction, and a spring for forcing said rod in the opposite direction.

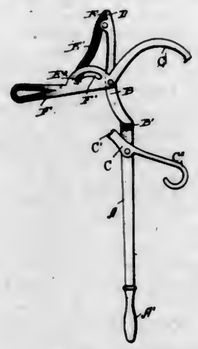
[Claims 6 to 14 not printed in the Gazette.]

900,665. WIRE-STRETCHER. DANIEL J. O'CONNOR, Parry Sound, Ontario, Canada. Filed Oct. 12, 1907. Serial No. 397,205.

1. A device of the kind described comprising a lever having a curved shank terminating in a jaw, wire gripping means carried by said lever, a post engaging means carried by said shank and movable thereon, and a coöperating jaw, pivotally connected to the shank and slidably connected to the post engaging means.

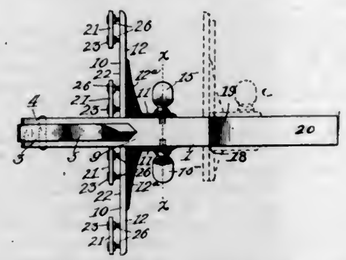
2. A tool of the kind described comprising a lever, having an integral shank at one end, offset to form a shoulder and provided with a handle at the other end, said shank having a jaw formed at its end, a pivoted jaw

mounted on said shank provided with a shank carrying a pin, a handle mounted on the fixed shank provided with a curved slot in which the pin of the pivoted shank



works, a post engaging hook carried by said handle, and a pivoted dog mounted on the lever adjacent the shoulder of the shank, for the purpose set forth.

900,666. SAW-TOOL. THOMAS E. COOKMAN, Everson, Wash. Filed Sept. 16, 1907. Serial No. 393,106.



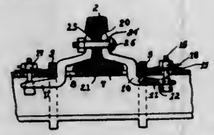
1. In a device of the character described, a base having a bifurcated end portion, the inner end of said bifurcated portion being beveled to form an anvil, a die mounted in said bifurcation, and guides adjustably mounted on said base, as and for the purpose specified.

2. In a device of the character described, a base having a bifurcated end portion, the inner end of said bifurcation being beveled to form an anvil, a die pivotally supported in said bifurcation, a spring housed in said bifurcation and adapted to normally hold said die in a raised position, and adjustable guides mounted on said base, substantially as set forth.

3. In a device of the character described, a base having a transverse groove in its upper surface adapted to receive a file, a die mounted on said base, an anvil on said base, and adjustable guides mounted on said base, adapted to be arranged to either regulate the amount of set of a saw or clamp a file in place in said transverse groove.

4. In a device of the character described, a base having a transverse groove in its upper surface adapted to receive a file, one edge of said groove being beveled to allow clearance for the set of a saw, a die mounted on said base, an anvil on said base, longitudinal grooves in opposite sides of the base, guides having slotted shank pieces adapted to slide in said longitudinal grooves, two screw-threaded sockets in each of said longitudinal grooves to receive set screws adapted to pass through the slots in said shank pieces and clamp the guides in position to either regulate the amount of set of a saw or to clamp the file in place in said transverse groove.

900,667. RAIL-SUPPORT. GEORGE M. COTE, Pittsburg, Pa., assignor to Standard Steel Tie Company, Pittsburg, Pa., a Corporation of Delaware. Filed July 27, 1907. Serial No. 385,896.



1. In rail supports, a member adapted to bear against the rail and provided with an arm adapted to extend through an aperture in the tie, said arm having a longitudinally slotted hole therein, and a bolt secured to said tie and engaging said slotted hole, for the purposes described.

2. In rail supports, a member adapted to bear against the rail and provided with an arm adapted to extend through an aperture in the tie, said arm having a longitudinally slotted hole therein, and a bolt upwardly extending through said slotted hole and secured to said tie.

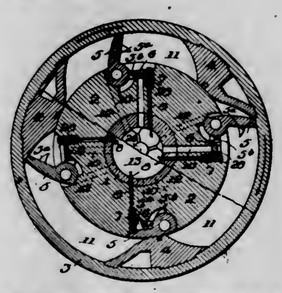
3. In rail supports, a member adapted to bear against the rail and provided with an arm adapted to extend through an aperture in the tie, said arm having a longitudinally slotted hole therein, and a bolt extending upwardly through said slotted hole and also through a loosely fitting hole in the top of the tie, for the purposes described.

4. In rail supports, a member adapted to bear against the rail and provided with an arm adapted to extend through an aperture in the tie, said arm having a longitudinally slotted hole therein, a bolt having a rounded head extending upwardly through said slotted hole and also through a hole in the top of the tie, for the purposes described.

5. In rail supports, a member adapted to bear against the rail and provided with an arm adapted to extend through an aperture in the tie, said arm having a longitudinally slotted hole therein, a bolt having an oval shank engaging said slotted hole and also engaging a hole in the top of the tie, for the purposes described.

[Claims 6 and 7 not printed in the Gazette.]

900,668. EXPLOSION-ENGINE. ALBERT W. COTTRELL and MILTON A. MOORE, Douglas, Ariz. Filed Aug. 5, 1907. Serial No. 387,139.



1. A rotary explosion engine, comprising a stationary hub having on its periphery one or more hinged abutments, with a recess into which each may be turned, and an inlet port opening into each recess, a valve controlling the inlet ports, spark terminals arranged inside each recess of the stationary hub and a revolving cylinder having a plurality of inwardly projecting piston heads arranged to strike the abutments and turn the same inwardly.

2. A rotary explosion engine comprising a stationary hub having on its periphery one or more hinged abutments, a recess into which the same may be turned, and an inlet port opening into said recess, spark terminals

also arranged in said recess, and a valve controlling the port and operated by the swinging movement of the abutment.

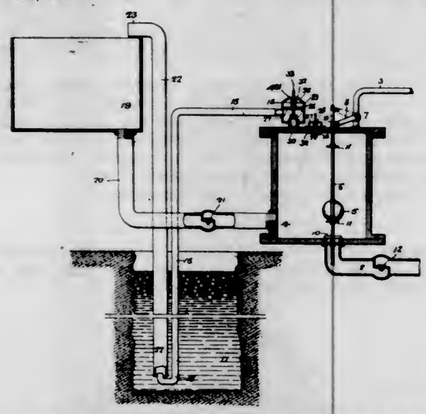
3. A rotary explosion engine comprising a stationary hub having on its periphery one or more hinged abutments, a recess into which the same may be turned, an inlet port opening into the recess, a valve controlling said inlet port, and operated by the hinged abutment, spark terminals also located in the recess of the hub, said hub being also formed with an exhaust port on the opposite side of the abutment from the inlet port, and which is opened and closed by the abutment.

4. A rotary explosion engine, comprising a stationary hub having on its periphery four hinged abutments with a corresponding number of ports, feed valves operated by the abutments, and spark terminals all arranged inside the periphery of the hub, and a revolving cylinder having three inwardly projecting piston heads arranged to strike the abutments and turn them inwardly to successively feed each explosion chamber, and arranged to produce twelve successive explosions for each revolution.

5. In a rotary explosion engine the combination with a fixed hub having radial ports, of a slide valve for each port, a hinged abutment with two cams arranged to operate respectively on opposite sides of the slide valve and spark terminals with circuit closer operated by the slide valve.

[Claims 6 to 10 not printed in the Gazette.]

900,669. PUMPING MECHANISM. EDMUND J. D. COXE, Houtzdale, Pa. Filed June 22, 1908. Serial No. 439,790.



1. The combination of a closed casing forming a water receiving chamber, inlet and outlet openings communicating therewith, a source of air supply in communication with said casing for discharging water therefrom, means for controlling the passage of air to said chamber, a tank in communication with the water inlet to said chamber, and means for raising water into said tank by air exhausting from said chamber.

2. The combination of a closed casing forming a water receiving chamber, inlet and outlet openings communicating therewith, a source of air supply in communication with said casing for discharging water therefrom, means for controlling the passage of air to said chamber, a tank in communication with the water inlet to said chamber, means for raising water into said tank by air exhausting from said chamber, and means for exhausting said air at a constant pressure.

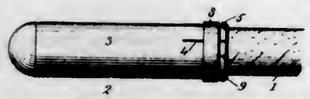
3. The combination of a closed casing forming a water receiving chamber, inlet and outlet openings communicating therewith, a source of air supply connected to said casing for discharging water therefrom, means for controlling the passage of air to said chamber by the water therein, a tank in communication with the water inlet to said chamber, and means for raising water into said tank by the waste air exhausting from said chamber.

4. The combination of a closed casing forming a water receiving chamber, inlet and outlet openings communicating therewith, a source of air supply connected to said casing for discharging water therefrom, a float for controlling the passage of air to said chamber, a tank in communication with the water inlet to said chamber, means for raising water into said tank by the waste air exhausting from said chamber, and means for exhausting said air at constant pressure.

5. The combination with a pumping mechanism, of a casing forming a chamber to receive water, said casing having inlet and outlet passages, a source of air supply communicating with said casing for discharging the water therefrom, and means for raising water to a supply tank by the air exhausting from said casing, said means including a reducing valve carried by the casing having a piston, and a spring for regulating the movement imparted to said piston by the air exhausting from said chamber.

[Claims 6 to 8 not printed in the Gazette.]

900,670. WATERPROOF FUSE-CAP. THOMAS M. DANIELS, Valdez, Alaska. Filed Mar. 11, 1908. Serial No. 420,388.



1. A fuse cap having a cylindrical shell adapted to contain an explosive cartridge, closed at one end and open at the other end, the open end having longitudinally disposed slits dividing the inner end of said shell into sections, and means for clamping said sections inwardly upon the end of the fuse extending into said shell.

2. A fuse cap consisting of a cylindrical shell closed at one end and open at the other end, the open end having longitudinally disposed slits therein, and having spurs adapted to engage the sides of a fuse extending in said shell, and a sliding ring on said shell adapted to force said spurs inwardly to clamp said shell upon the fuse.

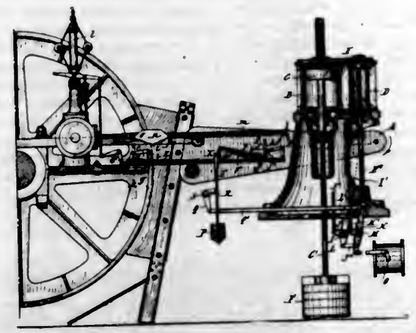
3. A fuse cap consisting of a shell having an open end and slits in the wall thereof extending longitudinally at said open end, a sliding ring on said shell adapted to clamp the slit portion of said shell upon the fuse passing into said shell, and a sleeve of water-proofing material disposed between said shell and the fuse and disposed under said slits, said sleeve affording means for excluding water from the interior of said shell.

4. A fuse cap consisting of a cylindrical shell having a split open end receiving the fuse, said open end having spurs formed thereupon projecting inwardly, a clamping ring sliding on said shell and adapted to clamp said spurs upon a fuse extending into said shell, and a sleeve of waterproofing material adapted to surround the fuse and having a greater length than the split portion of said shell, whereby said sleeve excludes water from the interior of said shell.

5. A fuse cap having an open end with a crimped edge, said open end having longitudinal slits formed therein and spurs projecting inwardly, and a sliding sleeve on said shell adapted to force said spurs inwardly to clamp said cap upon the fuse.

900,671. BRAKE-GEAR FOR WINDING MACHINERY. HUBERT J. DEBAUCHE, Gilly, Belgium. Filed Apr. 28, 1908. Serial No. 429,666.

1. The hereindescribed controller for hoisting apparatus comprising, in combination, a brake, a main power device, a connecting element associated operatively therewith, an auxiliary power device connected to said element, automatic operating means for one of the power devices, and means whereby the auxiliary power device may operate the brake through said connecting element either alone or in conjunction with the main power device.



2. The hereindescribed controller for hoisting apparatus comprising, in combination, a brake, a main power device, a balance lever between said power device and the brake, an auxiliary power device connected to said lever, automatic operating means for one of the power devices, and means to apply power to said brake through said balance lever either by one of said power devices acting alone or in conjunction with the other.

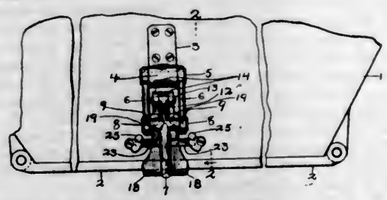
3. In hoisting apparatus, the combination with friction means, of a balance lever connected thereto, a main power device so associated with said lever as to operate the same in one direction, an auxiliary power device connected to said lever to hold the same in position to be engaged by the main power device or to operate the lever independently of the main power device and automatic operating means for one of the power devices.

4. In hoisting apparatus, the combination with a brake, a lever, and a main power device associated therewith, of an auxiliary power device connected to said brake lever to operate the same independently or in conjunction with the main power device, automatic operating means for one of the power devices, and a hand lever whereby the said power devices may be controlled.

5. In hoisting apparatus, the combination with a brake, a lever, and a main power device associated therewith, of an auxiliary power device connected to said brake lever to operate the same, automatic operating means for one of the power devices, and a hand lever movable a certain distance to operate one of the power devices alone and subsequently movable in the same direction to bring into action the other power device.

[Claims 6 to 10 not printed in the Gazette.]

900,672. HOPPER-BOTTOM CATCH. JOHN W. EGAN, Cleveland, Ohio. Filed Feb. 23, 1907. Serial No. 358,905.

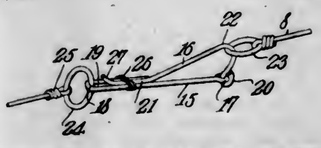


1. In a device of the character indicated, the combination with a hopper and doors thereof, of a device for securing the doors in their closed position comprising a pair of links pivotally supported from the side of the hopper, a bell-crank lever fulcrumed between the lower ends of said links a plate hinged to the shorter arm of said lever, hooks pivotally secured to said plate and means for locking said lever against the side of the hopper.

2. In a device of the character indicated, the combination with a hopper and the doors thereof of a device for securing the doors in their closed position, said device comprising a plate, a pin journaled in said plate, links supported from said pin, a bell crank lever fulcrumed between said links, a plate hinged to one end of said lever, hooks pivotally supported from said plate, arms secured to said lever and means for locking said arms against the side of the hopper.

3. In a device of the character indicated, the combination with a hopper and the doors thereof of a device for securing the doors in their closed position comprising a plate, a pin journaled in said plate, links hung from said pin, a bell crank lever provided with arms arranged to extend into bearings formed in the lower ends of said links, a plate hinged at the end of said lever, hooks pivotally connected with said plate, curved arms secured on said lever, plates formed on the ends of said arms and arranged to abut against the side of the hopper when the device is in its closed position and cam-shaped latches for locking said plates against the side of the hopper.

900,673. DESTRUCTIBLE LINK OR AUTOMATIC FIRE-EXTINGUISHER. JONATHAN D. FARR, Monroe, Ga. Original application filed Oct. 26, 1907, Serial No. 399,380. Renewed Sept. 4, 1908, Serial No. 451,739. Divided and this application filed Jan. 18, 1908. Serial No. 411,481.



1. In a device of the class described a restraining member including a link formed of pivotally united sections movable laterally to open position, one of said sections being provided with a contracted throat adapted to receive the free end of the mating section when said sections are in closed position, and a destructible member embracing both link sections at said throat.

2. In a device of the class described, a restraining member formed of a plurality of sections, links connecting the several sections comprising the restraining member, said links being each formed of pivotally united members movable laterally to open position, said link members being locked in closed position by a destructible member extending transversely across and embracing both link sections at the free ends thereof.

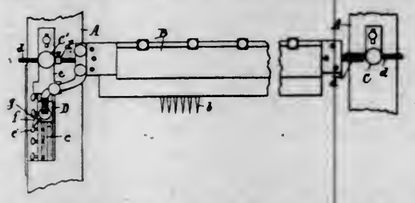
3. In a device of the class described, a flexible restraining member, and a link constituting a part of the restraining member and formed of pivotally united members one of which is provided with a laterally extending bill, and a destructible member extending transversely across and surrounding both of said link sections at said bill.

4. In a device of the class described, a restraining member, a link forming a part of the restraining member and comprising pivotally united sections one of which is formed with an arm terminating in a laterally extending bill and the other with a contracted throat for the reception of said arm, and a destructible member surrounding the link sections at said bill.

5. In a device of the class described, a restraining member including a link formed of pivotally united sections one of which is bent upon itself to form a contracted throat, the other link section being inclined laterally at the pivoted end thereof and having its opposite end seated in the throat and terminating in a laterally extending bill, and a destructible member surrounding the link sections at said bill for normally locking the sections in closed position.

[Claims 6 and 7 not printed in the Gazette.]

900,674. DIAGONAL-RULING ATTACHMENT FOR PAPER-RULING MACHINES. JEREMIAH E. FOSTER, Portland, Me. Filed Jan. 11, 1908. Serial No. 410,314.



1. In a paper ruling machine, the combination of a pen beam journaled to slide longitudinally, a grooved cam wheel, a cam rest secured by one end to the pen beam and having its free end terminate above the cam wheel, a sectional cam adapted to be detachably secured in the groove of the cam wheel, said cam having a wing or angular portion adapted to act on the free end of the cam rest for moving said beam longitudinally.

2. In a paper ruling machine, the combination of a pen beam journaled to slide longitudinally, a grooved cam wheel, a cam rest secured by one end to the pen beam and having its free end terminate above the cam wheel, a sectional cam adapted to be detachably secured in the groove of the cam wheel, said cam having a plain portion adapted to be clamped in the groove of the cam wheel and a wing or angular portion adapted to act on the free end of the cam rest for moving the beam longitudinally.

3. In a paper ruling machine, the combination of a pen beam journaled to slide longitudinally, a grooved cam wheel, a cam rest secured by one end to the pen beam and having its free end terminate above the cam wheel and having a projection on the under side thereof, a sectional cam adapted to be detachably secured in the groove of the cam wheel, said cam having a wing or angular portion adapted to act on the said projection for moving said beam longitudinally.

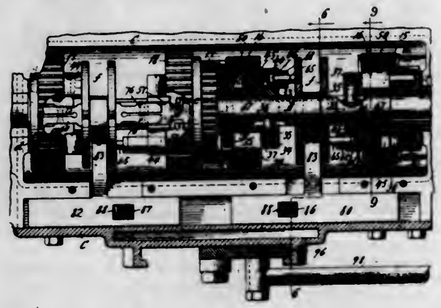
4. In a paper ruling machine, the combination of a pen beam journaled to slide longitudinally, a grooved cam wheel, a cam rest secured by one end to the pen beam and having its free end terminate above the cam wheel, a pin passing vertically through the end of the cam rest and projecting on the under side thereof, a sectional cam adapted to be detachably secured in the groove of the cam wheel and having a plain portion and a wing or angular portion adapted to act on said pin for moving the pen beam longitudinally.

5. In a paper ruling machine, the combination of a beam journaled to move longitudinally, a cam rest therefor and a cam having a feeding wing or angular portion adapted to act against the cam rest to throw over the beam to produce diagonal ruling, a straight portion, and an oppositely inclined return wing adapted to hold the cam rest raised and to permit the beam to return to its normal position.

900,675. VARIABLE-SPEED TRANSMISSION MECHANISM. ALBERT LATHAM, Waltham, Mass., assignor of one-half to James W. Nourbourn, Somerville, Mass. Filed Feb. 26, 1906. Serial No. 303,118.

1. In a variable speed transmission mechanism, a transmission shaft and a countershaft, a circular clutch member rotatively free on the transmission shaft, gearing connecting the countershaft and said clutch member, a support mounted on and non-rotative relatively to the transmission shaft and carrying a fellow clutch member for coaction with the said first clutch member, a collar, having a clutch device operating member, a slide movable parallel with the transmission shaft, having a member engaging for endwise movements, only, the said collar, a rock shaft having an arm engaging said slide and having an angular lever, a revoluble cam coacting with said angular lever, and means for turning said cam and correspondingly positioning the said collar.

2. In a variable speed transmission mechanism, a transmission shaft and a countershaft, a plurality of circular clutch members rotatively free on the transmission shaft, variable speed gearing in sets connecting the countershaft and said clutch members, supports mounted on and non-rotative relatively to the transmission shaft and each carrying fellow clutch devices for coaction with the said clutch members, collars, one of each located between a pair of the clutch members having clutch device operating members, slides movable parallel with the transmission shaft having members engaging for endwise movements, only, the said collars, oppositely located rock shafts having arms engaging said slides and having angular levers, a revoluble cam located between said angular levers and coacting with both thereof, and means for positioning said cam and correspondingly positioning the said collars.

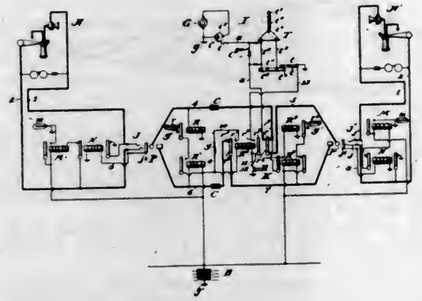


3. In a variable speed transmission mechanism, a transmission shaft and a countershaft, a plurality of circular clutch members rotatively free on the transmission shaft, variable speed gearing in sets connecting the countershaft and said clutch members, supports mounted on and non-rotative relatively to the transmission shaft and each carrying contributory clutch devices for coaction with the said clutch members, collars, one of each located between a pair of the clutch members having clutch device operating members, slides movable parallel with the transmission shaft having members engaging for endwise movements, only, the said collars, oppositely located rock shafts having arms engaging said slides and having angular levers, a rotative shaft having a cam located between said angular levers and coacting with both thereof, and a pinion on said cam shaft, a sector gear meshing with said pinion, and means for swinging said sector gear.

4. In a variable speed transmission mechanism, a transmission shaft and a countershaft, a plurality of circular clutch members rotatively free on the transmission shaft, variable speed gearing in sets connecting the countershaft and said clutch members, supports mounted on and non-rotative relatively to the transmission shaft and each carrying contributory clutch devices for coaction with the said clutch members, collars, one of each located between a pair of the clutch members having clutch device operating members, slides movable parallel with the transmission shaft having members engaging for endwise movements, only, the said collars, oppositely located rock shafts having arms engaging said slides and having angular levers, a rotative shaft having a cam located between said angular levers and coacting with both thereof, and a pinion on said cam shaft, a sector gear meshing with said pinion, an arc shaped plate having detent notches therein, a lever fulcrumed to swing alongside said plate, and having a spring detent for engagement in said notches, and a link connecting said lever and said sector gear.

5. In a variable speed transmission and controlling mechanism, in combination, two shafts having sets of differently proportioned gears connecting the one with the other, and each set having appurtenant thereto, a clutch comprising frictional, and positively-locking, clutch members, and means individual to each clutch for placing it free, for placing it frictionally clutched, and for placing it additionally lock clutched, and a controlling lever coacting with the clutch operating means and so operative that a degree of movement of such lever will first cause a frictional setting of a given clutch, and a further degree of movement of such lever will cause the additional positively locking of the clutch continued movements of said lever in succession releasing one of the clutches, and frictionally, and then positively lock-setting the next clutch.

900,676. TELEPHONE-EXCHANGE SYSTEM. RAY H. MANSON, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Original application filed Feb. 1, 1907, Serial No. 355,208. Divided and this application filed May 29, 1907. Serial No. 376,425.



1. In a telephone exchange system, subscribers' line circuits, a cord circuit for interconnecting them, a plurality of ringing generators adapted to supply current of different frequencies, means for selectively connecting the same through the cord circuit to the line of a wanted subscriber, non-inductive controlling means responsive to the act of the called subscriber to disconnect the same, and an equalizer for said controlling means, whereby it will be equally affected by current at different frequencies, substantially as described.

2. In a harmonic signaling system, means for supplying a plurality of currents at different frequencies, means for connecting the same to a wanted subscriber's line, and controlling means therefor, with an equalizing shunt for said controlling means, substantially as described.

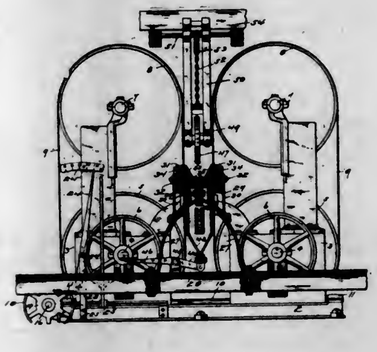
3. In a telephone exchange system, harmonic signaling means comprising a plurality of current sources, a switching device for connecting the same selectively to a wanted subscriber's line, and a non-inductive controlling device for said switching device together with an equalizing shunt for the controlling device, substantially as described.

4. In a telephone exchange system, harmonic signaling means comprising a plurality of devices supplying current at different frequencies, a plurality of selective keys, a generator wire common to said keys, a ringing relay controlling the generator wire, a non-inductive device controlling the ringing relay, and an equalizing shunt for the non-inductive device, substantially as described.

5. In a telephone exchange system, harmonic signaling means comprising a plurality of sources supplying current at different frequencies, a source of direct current, a plurality of commutators, a generator wire common to all the commutators and having branches thereto, a ringing relay controlling the generator wire, a thermal relay connected to the generator wire and controlling the ringing relay, and a capacity shunt for said thermal relay, adapted to equalize the effect thereon of currents at different frequencies, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

900,677. TWIN BAND-SAW MILL. ARNO MERREN and ANDREW E. GAGNON, Minneapolis, Minn., assignors of one-half to C. A. Smith Lumber Co., Minneapolis, Minn., a Corporation. Filed May 18, 1903, Serial No. 157,549. Renewed May 18, 1906. Serial No. 317,592.



1. The combination with a saw, of a feed chain operating to feed a log to the saw, means for centering the log on the chain, said means comprising oppositely disposed members having faces to engage the log tangentially at an angle to its line of movement, said members being supported so as to be capable of movement towards the chain to center the log thereon and to recede therefrom into non-holding position after the log is centered, and means for actuating said members, substantially as described.

2. The combination with a saw, of a feed chain operating to feed a log to the saw, means for centering the log on said chain, said means comprising oppositely disposed members having the upper portion thereof formed with oppositely disposed beveled faces, and supported so as to be capable of movement towards the chain to center the log thereon and to recede therefrom into non-holding position after the log is centered, and means for actuating said members to cause them to lift or push the log centrally between the members by contact of the beveled faces of the members with the log to center the log on the chain, substantially as described.

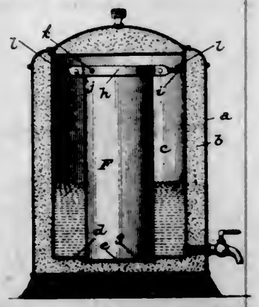
3. The combination, in a twin saw mill, of a log way, a feed chain operating in said way between the twin saws, means for holding the log upon said chain, and means for centering the log on said chain, said means comprising oppositely disposed members having along their upper portion oppositely disposed beveled faces and supported so as to be capable of movement towards the chain to lift or push the log centrally by contact of the beveled faces therewith to center the log and to recede into non-holding position after the log is centered, substantially as described.

4. The combination, with a twin band sawmill, of a feed chain operating between the saws, means for holding the log to be slabbed upon said chain, timbers movable in parallel vertical planes provided upon each side of said chain and adapted to center the log thereon, and mechanism for operating said timbers.

5. The combination, with a twin band saw mill, of a feed chain operating between the saws, means for holding a log upon said chain, a tilting log way provided on the receiving side of said chain, a foot operated mechanism for tilting said log way, a second tilting log way, a toothed feed chain operating in the bottom thereof, and a steam operated mechanism for tilting said second log way, substantially as described.

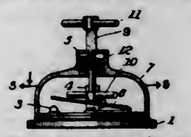
[Claims 6 to 16 not printed in the Gazette.]

900,678. WATER-COOLER. ERNST MOHR, Milwaukee, Wis., assignor to National Enameling and Stamping Company, a Corporation of New Jersey. Filed June 17, 1905. Serial No. 265,669.



A water cooler comprising an outer shell an ice receptacle and an intermediate water receptacle with a filling between said shell and water receptacle; a draw-off faucet extending through the outer shell and filling, and communicating with the water receptacle,—the inner wall of said intermediate water receptacle being provided with inwardly-projecting rigid lugs while the ice receptacle is provided at its upper end with semi-circular bars which are rigidly secured to its upper edge and which extend around the same and the ends of one bar being secured to the ends of the other bar and the secured ends projecting laterally from diametrically opposite sides of the ice receptacle and extending beneath the rigid lugs on the intermediate receptacle whereby to hold the ice receptacle down in the intermediate receptacle.

900,679. SIGNAL APPARATUS. WALTER T. MOON, Baltimore, Md., assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed Jan. 5, 1905. Serial No. 239,698. Renewed Mar. 6, 1908. Serial No. 419,567.



1. The combination with a signal, of means for ascertaining the identity of said signal, means for operating said signal, means for operating said ascertaining means, and means for preventing the operation of said signal operating means until after said ascertaining means has been operated.

2. The combination with a signal, of an indicator for denoting the said signal, a lamp adapted to illuminate said indicator, means for lighting said lamp, means for operating said signal, and means for preventing the operation of said signal until after said lamp has been lighted.

3. The combination with a signal, of a switch for said signal and means for identifying it, a lamp adapted to illuminate said identifying means, a circuit for said signal and a circuit for said lamp, said switch comprising contacts in said signal circuit, contacts in said lamp circuit, conductors adapted to connect said contacts to close the respective circuits, and a spindle adapted to be depressed to close one circuit and to be turned to close the other.

4. The combination with a signal, of a switch for said signal and means for identifying it, a lamp adapted to illuminate said identifying means, a circuit for said signal and a circuit for said lamp, said switch comprising contacts in said signal circuit, contacts in said lamp circuit, conductors adapted to connect said contacts to close the respective circuits, and a spindle adapted to be depressed to close the signal circuit and to be turned to close the lamp circuit.

5. The combination with a signal, of a switch for said signal and means for identifying it, a lamp adapted to illuminate said identifying means, a circuit for said signal and a circuit for said lamp, said switch comprising contacts in said signal circuit, contacts in said lamp circuit, conductors adapted to connect said contacts to close the respective circuits, and a spindle adapted to be depressed to close said signal circuit and to be turned to close said lamp circuit, and means for preventing the depression of said spindle until after it has been turned.

[Claims 6 to 12 not printed in the Gazette.]

900,680. BOAT. WILLIAM B. MOTHERAL, North McGregor, Iowa, assignor to Gliding Boat Company of America, New York, N. Y., a Corporation of New York. Filed Dec. 24, 1901, Serial No. 87,065. Renewed Feb. 25, 1908. Serial No. 417,703.



1. A boat formed with a bottom curved in cross section, the curvature gradually decreasing from bow to stern.

2. A boat having a wedge shaped hull with a bottom curved in cross section, the greatest curvature being near the bow, and the least near the stern.

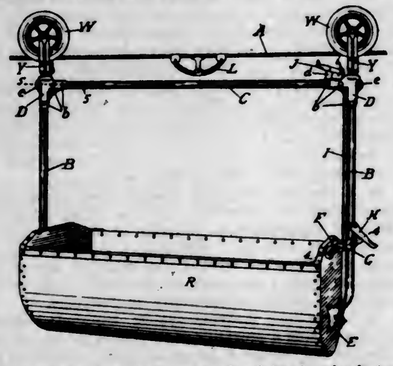
3. A wedge shaped boat with a bottom curved in cross section, with an even keel but a bulged down portion on each side near the stern.

4. A boat formed with a wedge shaped hull having a bottom curved in cross section the radius of the curvature increasing from bow to stern, with an abrupt decrease in curvature at a point near the stern.

5. A boat formed wedge-shaped with a bottom curved in cross section, having flexible air supply pipes projecting through its bottom connected to a system of pipes supplied from an outwardly extending supply pipe.

[Claim 6 not printed in the Gazette.]

900,681. ELEVATED CARRIER. ALBERT H. NELLER and WILLIAM LOUDEN, Fairfield, Iowa, assignors to Louden Machinery Company, Fairfield, Iowa, a Corporation of Iowa. Filed Sept. 3, 1907. Serial No. 390,998.



1. In elevated carriers, an overhead track, wheels to run on the track, yokes to carry the wheels, a receptacle, hangers for the receptacle having tubular upper ends, the lower ends of the yokes being inserted in the tubular ends of the hangers and adapted to swivel therein, and plates applied to the outer circumference of the hangers and extended above them so as to hold the yokes in operative position.

2. In elevated carriers, an overhead track, wheels to run on the track, yokes to carry the wheels, a receptacle, hangers for the receptacle having tubular upper ends, the lower ends of the yokes being inserted in the tubular ends of the hangers and provided with annular ribs on the upper portions of said ends, and plates having recesses to fit over said ribs being applied to the outer circumference of the hangers and extended above them so as to hold the yokes in position and permit them to swivel.

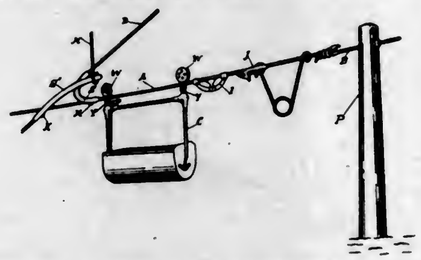
3. In elevated carriers, an overhead track, wheels to run on the track, yokes to carry the wheels, a receptacle, hangers for the receptacle having tubular upper ends, the central outer circumference of the lower ends of the yokes being recessed and being inserted in the upper ends of the hangers and adapted to swivel therein, and plates being applied to the outer circumference of the hangers and extended above them so as to hold the yokes in operative position.

4. In elevated carriers, an overhead track, yokes carrying wheels to run on the track, a receptacle, hangers having their lower ends pivoted to each end of the receptacle and their upper ends connected to the yokes, a connecting bar placed between the upper ends of the hanger and plates applied to opposite sides of the adjoining ends of the connecting bar and hangers so as to hold them together.

5. In elevated carriers, an overhead track, yokes carrying wheels to run on the track, a receptacle, hangers having their lower ends pivoted to each end of the receptacle and their upper ends connected to the yokes, a connecting bar placed between the upper ends of the hanger, plates applied to opposite sides of the adjoining ends of the connecting bar and hangers so as to hold them together, the outer ends of the plates being extended beyond the hangers and bolts passed through the extended ends to clamp them more securely together.

[Claims 6 to 24 not printed in the Gazette.]

900,682. ELEVATED CARRIER. ALBERT H. NELLER and WILLIAM LOUDEN, Fairfield, Iowa, assignors to Louden Machinery Company, Fairfield, Iowa, a Corporation of Iowa. Original application filed Sept. 3, 1907, Serial No. 390,998. Divided and this application filed Jan. 24, 1908. Serial No. 412,400.



1. In elevated carriers, two overhead track wires crossing each other, a carriage to run on said wires, a tubular switch-piece curved so the ends will co-incide with the wires, a slot cut in the lower side of each end of the piece so as to fit down over the wires and means to key the piece thereon.

2. In elevated carriers, two overhead track wires crossing each other, a carriage to run on said wires, a tubular switch-piece curved so the ends will co-incide with the wires, a slot cut in the lower side of each end of the piece so as to fit down over the wires, means to key the piece thereon, and means to hold one end suspended.

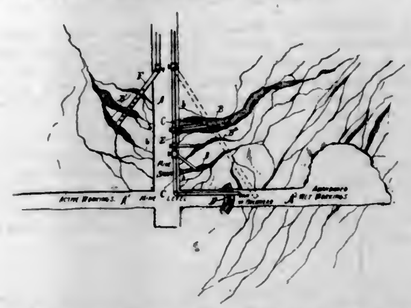
3. In elevated carriers, two overhead track wires crossing each other, a carriage to run on said wires, a tubular switch-piece curved so the ends will co-incide with the wires, a slot cut in the lower side of each end of the piece so as to fit down over the wires, and wedges to drive into the ends of the piece and key them thereon.

4. In elevated carriers, two overhead track wires crossing each other, a carriage to run on said wires, a tubular switch-piece curved so the ends will co-incide with the wires, a slot cut in the lower side of each end of the piece so as to fit down over the wires, and an overhead hook to hold one end of the piece suspended.

5. In elevated carriers, two overhead track wires crossing each other, a carriage to run on said wires, a tubular switch-piece curved so the ends will co-incide with the wires, a slot cut in the lower side of each end of the piece so as to fit down over the wires, and wedges to drive into the ends of the piece and key them thereon, and lugs on the wedges adapted to project downward through the slots in the switch piece.

[Claims 6 to 11 not printed in the Gazette.]

900,683. PROCESS FOR STOPPING OR SEALING OFF UNDERGROUND FLOWS OF WATER INTO MINE-WORKINGS, &c. EDMUND B. KIRBY, Flat River, Mo. Filed May 21, 1908. Serial No. 434,182.



1. The described process of sealing off flows of water issuing from the earth's crust into excavations made therein, which consists in the introduction into said flows, at any convenient points prior to their points of exit, of any kind of solid matter, which is capable of being carried by said moving flows toward said exits and of accumulating and choking up the passages leading thereto.

2. The described process of sealing off flows of water issuing from the earth's crust into excavations made therein, which consists in the injection into said flows, at any convenient points prior to their points of exit, of water carrying in suspension any kind of solid matter which is capable of being carried by said moving flows towards the said exits and of accumulating and choking up the passages leading thereto.

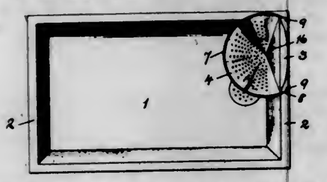
3. The described process of sealing off flows of water from the earth's crust into excavations therein, which consists in inserting pipes into holes leading to passages through which said water is flowing toward the exits into said excavations, and in the forcing through said pipes into said flowing water, of water carrying in suspension any kind of solid matter which is capable of being carried by said flowing water toward said exits and of accumulating in and choking the passages leading thereto.

4. The herein described process of sealing off flows of water issuing from the earth's crust into excavations therein, which consists in erecting artificial barriers in the larger passages through which the water so flows for the purpose of wholly or partly shutting off said flows or making the passages leading to the exits of so much smaller size that they are capable of being choked in the manner stated, and of then introducing into the water passages behind said barriers any kind of solid material capable of being carried by said moving flows of water toward the exits and of accumulating in and choking up the passages leading thereto.

5. The herein described process of sealing off flows of water issuing from the earth's crust into excavations therein which consists in introducing into said flows at any convenient points prior to their points of exit into the mine of any kind of solid matter which is capable of being carried by said moving flows toward said exit and

of accumulating and choking up the passages leading thereto, and in erecting artificial barriers in the passages which are too large to be so closed, and introducing into the water behind said barriers and solid material.

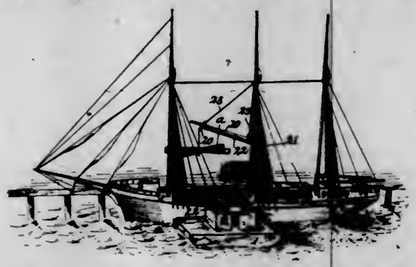
900,684. DRAINER FOR KITCHEN-SINKS. GEORGE W. KNAPP, Baltimore, Md., assignor to National Enameling and Stamping Company, a Corporation of New Jersey. Filed Aug. 9, 1907. Serial No. 387,804.



1. A drainer for sinks comprising a body having a V-shaped flat wall, and an outward-curved wall terminating in a downward point and united to the said V-shaped wall, and supporting legs attached only to the outward-curved wall by means which permit of their ready removal.

2. A drainer for sinks having a flat wall whose lower part terminates in a point; an outward-curved wall attached to the said flat wall, and two supporting legs whose upper ends are attached to said outward-curved wall and whose lower ends terminate on a plane even with the said point, whereby the point and two legs together form a tripod.

900,685. STEVEDORE-RIG. JOHN KNUPPEL, New York, N. Y., assignor of one-third to Julius H. Reiter, New York, N. Y. Filed Feb. 15, 1906. Serial No. 301,187. Renewed Aug. 13, 1908. Serial No. 448,379.



1. The combination of a support, a jointed hoop adapted loosely to encircle the same, a gaff, a clamp encircling the gaff and pivoted to the hoop, additional clamps fastened to the gaff at opposite sides of the first named clamp, braces attached to said additional clamps and pivoted to the hoop, means to sustain the gaff at a point removed from the said clamps, and a hoisting line guided along the gaff.

2. The combination of a vessel having a mast, a gaff, means adjacent to one end of the gaff for mounting the same to swing around the mast, dividing the gaff into arms of unequal lengths, means for sustaining the free or longer arm of the gaff, a hoisting line, means for guiding the same along the gaff at points respectively at opposite sides of the means for mounting the gaff to swing, and a hoisting means located at the side of the vessel and adapted to engage the hoisting line.

900,686. WOOD SUBSTITUTE. FRANZ SCHNELL, Gutenstein, Austria-Hungary. Filed May 2, 1907. Serial No. 371,513.

1. A process for the manufacture of wood substitute for the manufacture of turnery ware, consisting in making a thick magma by mixing flour from cereals with water and adding to this magma a large quantity of wood dust and a very small quantity of a fibrous material, the said process yielding a composition of a very low specific gravity.

2. A composition suitable for use as a substitute for wood comprising flour from cereals, wood dust and a small quantity of fibrous material.

3. A composition suitable for use as a substitute for wood and composed of 40% of flour from cereals, 59% of wood dust and 1% of fibrous material.

4. A composition suitable for use as a wood substitute, comprising flour of cereals, wood dust, fibrous material and chrome glue.

900,687. VARNISH COMPOSITION. CARLETON ELLIS, White Plains, N. Y., assignor to Ellis-Chalmers Company, a Corporation of West Virginia. Filed May 22, 1907. Serial No. 375,016.

1. A varnish composition comprising rubber resin and Chinese wood oil.

2. A varnish composition comprising rubber resin, wood oil and a thinner.

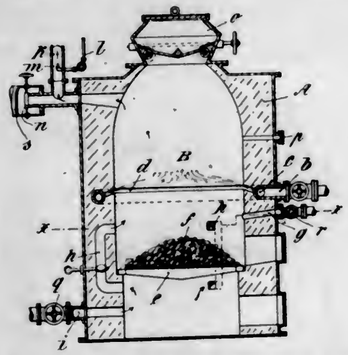
3. A varnish composition comprising rubber resin, wood oil, a thinner, and a drier.

4. A varnish composition comprising pontianac resin and wood oil.

5. A varnish composition comprising pontianac resin other resinous materials and wood oil.

[Claims 6 to 9 not printed in the Gazette.]

900,688. PROCESS OF MAKING SULFURIC ACID. OSCAR BENDER, Neu-Babelsberg, near Berlin, Germany. Original application filed Apr. 15, 1907, Serial No. 368,343. Divided and this application filed Mar. 24, 1908. Serial No. 422,884.



1. A process of making sulfuric acid which consists in heating sulfur dioxid, oxygen and nitrogen first by the fire of a carbonaceous fuel and then by an oxy-hydrogen flame, whereupon the products of reaction are cooled at once and drawn off.

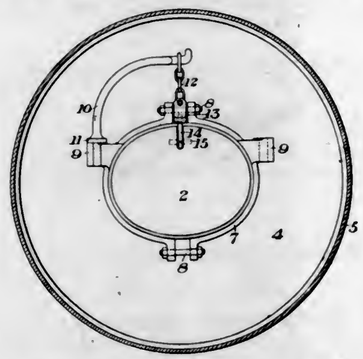
2. A process of making sulfuric acid which consists in heating sulfur dioxid, oxygen and nitrogen by the fire of a carbonaceous fuel and then by an oxy-hydrogen flame, the oxy-hydrogen being produced from steam superheated by the fire of the furnace blown into the heat space above the fuel, the products of reaction being finally cooled immediately and drawn off.

3. A process of making sulfuric acid consisting in heating sulfur dioxid, oxygen and nitrogen by the fire of a carbonaceous fuel and then by an oxy-hydrogen flame, the oxy-hydrogen being produced from steam blown into the heat space above the fuel and superheated thereby, the products of reaction being finally cooled immediately by a cooler steam current and drawn off.

4. A process of making sulfuric acid which consists in heating sulfur dioxid, oxygen and nitrogen by the fire of a carbonaceous fuel and then by an oxy-hydrogen flame, the oxy-hydrogen being produced by steam superheated by the fire of the furnace, said steam being blown into the heat space above the fuel, the products of the reaction being finally cooled immediately and drawn off by a cooler steam current flowing in the direction of the escaping gases.

5. A process of making sulfuric acid consisting of heating sulfur dioxid, formed by burning sulfur with oxygen and nitrogen by the fire of a carbonaceous fuel and then by an oxy-hydrogen flame, the products of reaction being finally cooled immediately and drawn off.

900,689. MAN-HEAD CRANE FOR STEAM-BOILERS. SYDNEY DILLON, Edgewood Park, and JOHN NOEY, Braddock, Pa. Filed June 17, 1908. Serial No. 438,944.



1. A boiler or similar closed vessel having a man-hole therein provided with a flanged edge defining its sides, a man-head, a swinging man-head support and means clamped on the flanged edge of the man-hole for securing said support in place; substantially as described.

2. A boiler or similar closed vessel having a man-hole provided with a flanged edge defining its sides, a man-head, a bent arm from which said man-head is suspended, and means clamped on the flanged edge of said man-hole for securing said arm in place on the flange of said man-hole; substantially as described.

3. A man-head support comprising a boiler or similar closed vessel having a man-hole therein, said man-hole having an inwardly turned flange defining the edge of the man-hole, a man-head for closing said man-hole, a swinging arm having connections from which said man-head is suspended so as to be vertically adjustable, and a clamp having a socket in which said swinging arm is pivotally mounted, said clamp embracing the inwardly turned flange and having means for tightening the clamp in place on said flange; substantially as described.

4. In a man-head crane for boilers or similar closed vessels, the combination with a boiler or vessel having a man-hole therein, said man-hole having an inwardly projecting flange, of a clamp secured on said flange and having a socket therein, a swinging arm mounted in said socket and a man-head suspended from said arm so as to be vertically adjustable thereon; substantially as described.

5. In a man-head crane for boilers or similar closed vessels, the combination with a boiler or vessel having a man-hole therein, said man-hole having an integral, inwardly projecting flange, of a clamp secured on said flange, and having a socket therein, a swinging arm removably mounted in said socket, and a man-head suspended from said arm; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

REISSUES.

12,860. CONDENSER AND PROCESS OF MAKING SAME. MAURICE K. MCGRATH, Antwerp, Belgium, assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 6, 1907. Serial No. 366,865. Original No. 825,405, dated July 10, 1906, Serial No. 133,014.



1. The herein described process of making condensers, which consists in assembling the strips of foil and insulating material in a flat roll, folding said flat roll, treating the same with melted wax or the like, and finally subjecting the folded roll to continual pressure on all sides while allowing the wax to cool and set.

2. The herein-described process of making condensers, which consists in assembling strips of foil and paper in a flat roll, reversely folding the flat roll into an S-shape, treating the same with melted paraffin wax or the like, placing the folded roll in a narrow rectangular mold and subjecting the same to continued pressure while allowing the wax to cool and set.

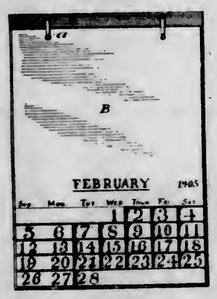
3. An electric condenser consisting of a flat roll of alternate layers of conducting and insulating material reversely folded two times or a multiple thereof, whereby distortion of the laminæ is prevented.

4. A condenser comprising a flat roll of strips of foil and paper reversely folded in a complete zigzag, paraffined, and pressed.

5. A condenser comprising strips of paper and tin-foil, assembled and folded reversely into an S-shape, and finally pressed on four sides, the pressure being sufficient to produce intimate contact between the strips of foil and insulating material where the same are folded.

[Claims 6 to 9 not printed in the Gazette.]

12,861. CALENDAR. HUGH E. SHEDD, Austin, Minn. Filed Sept. 26, 1906. Serial No. 336,373. Original No. 795,009, dated July 18, 1905, Serial No. 252,507.



1. A calendar comprising a plurality of leaflets, each leaflet having thereon suitable numerals indicating the days that have passed and a numeral indicating the current day only, each class of numerals being of different color or design to distinguish them from each other, substantially as and for the purpose set forth.

2. A calendar comprising a plurality of leaflets, each leaflet having thereon suitable numerals indicating the days that have passed and a numeral indicating the cur-

rent day only, the last one of the series of leaflets of each month having a tab with distinguishing-mark to designate the month, substantially as and for the purpose specified.

3. A calendar comprising a plurality of leaflets having characters indicating the current day and characters indicating the days that have passed, the two sets of characters being different in design or color to distinguish them from each other, said leaflets being cut so that upon successive removal of the leaflets the current day, the days that are to come and the days that have passed will be exposed to view.

4. A calendar comprising a plurality of leaflets, having two groups of characters of different color or design, one group of characters indicating the days that have passed and the other group indicating the days to come and the current day, a series of the group of characters designed to be used to indicate the days of the month that are past being arranged to indicate particular days of the week, each leaflet being cut to expose to view the characters indicating the days that have passed, and the series of the group indicating particular days of the week, the characters representing the current day and the days that are to come.

5. A calendar comprising a plurality of leaflets having two groups of distinguishable characters, one group of characters indicating the days that have passed, and the other group of characters indicating the current day and the days to come, each leaflet being cut so that as each successive leaflet is removed characters of the two groups will be exposed to indicate days of a complete month.

[Claims 6 and 7 not printed in the Gazette.]

DESIGNS.

39,599. BADGE. THOMAS F. GAYNOR, New York, N. Y. Filed Aug. 28, 1908. Serial No. 450,793. Term of patent 3½ years.



The ornamental design for a badge, as shown.

39,600. BADGE. MARSHALL A. HUDSON, Syracuse, N. Y. Filed Aug. 10, 1908. Serial No. 447,916. Term of patent 14 years.



The ornamental design for a badge as shown and described.

39,601. BROOCH. HENRY C. PERLEY, New Rochelle, N. Y., assignor to Perley & Brother, a Corporation of New York. Filed July 29, 1908. Serial No. 446,021. Term of patent 3½ years.



The ornamental design of a brooch as shown.

39,602. BROOCH. FREDERICK W. ORDING, Jersey City Heights, N. J., assignor to Perley & Brother, a Corporation of New York. Filed July 29, 1908. Serial No. 446,020. Term of patent 3½ years.



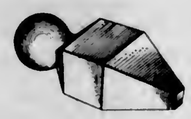
The ornamental design of a brooch as shown.

39,603. IMAGE. FLORENCE PRETZ, Kansas City, Mo. Filed June 9, 1908. Serial No. 437,599. Term of patent 7 years.



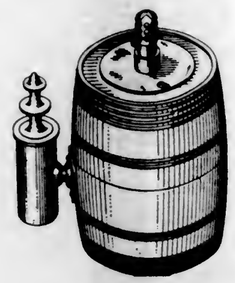
The ornamental design for an image, as shown.

39,604. TOY CAT USED IN PLAYING THE GAME OF TIP-CAT. LAWRENCE F. RYAN, New York, N. Y. Filed May 6, 1908. Serial No. 431,287. Term of patent 7 years.



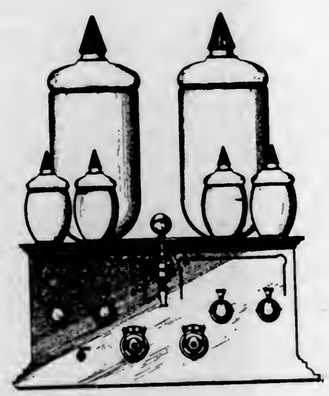
The ornamental design for a toy cat used in playing the game of tip-cat, as shown and described.

39,605. CIGAR-LIGHTER. CONRAD HUBERT, New York, N. Y. Filed June 25, 1908. Serial No. 440,405. Term of patent 7 years.



The ornamental design for a cigar lighter as shown and described.

39,606. CASING FOR SODA-WATER FOUNTAINS. CHARLES F. POWERS, Coosada Station, Ala. Filed June 6, 1908. Serial No. 437,207. Term of patent 7 years.



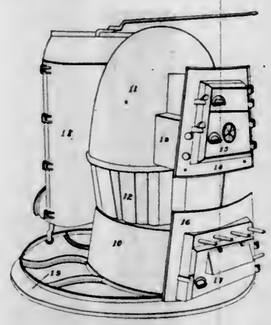
The ornamental design for a casing for a soda water fountain, as shown.

39,607. KINDERGARTEN-TABLE. HERBERT N. VAN FLEET, Alva, Okla. Filed Apr. 17, 1908. Serial No. 427,740. Term of patent 14 years.



The ornamental design for a kindergarten table, as shown and described.

39,608. FURNACE. FRANK O. GREEN, Des Moines, Iowa. Filed May 14, 1907. Serial No. 373,670. Term of patent 7 years.



The ornamental design for a furnace, as shown and described.

39,609. GLOVE. DOROTHY E. RICHARDS, Hamilton, Ontario, Canada. Filed June 8, 1908. Serial No. 437,465. Term of patent 3½ years.



The ornamental design for a glove as shown and described.

39,610. NECK AND CHEST PROTECTOR. JOSEPH S. MEAD, Milwaukee, Wis. Filed June 17, 1908. Serial No. 439,070. Term of patent 7 years.



The ornamental design for a neck and chest protector as shown.

39,611. NECK AND CHEST PROTECTOR. JOSEPH S. MEAD, Milwaukee, Wis. Filed June 17, 1908. Serial No. 439,071. Term of patent 7 years.



The ornamental design for a neck and chest protector as shown.

39,612. NECK AND CHEST PROTECTOR. JOSEPH S. MEAD, Milwaukee, Wis. Filed June 17, 1908. Serial No. 439,069. Term of patent 7 years.



The ornamental design for a neck and chest protector as shown.

TRADE-MARKS

PUBLISHED OCTOBER 6, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 14,605. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) WEAVER ORGAN & PIANO CO., York, Pa. Filed Nov. 14, 1905. Used ten years.

Weaver.

Particular description of goods.—Pianos and Organs.

Ser. No. 26,687. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRIEDRICH ADOLF RICHTER, Rudolstadt, Germany, and New York, N. Y. Filed Apr. 13, 1907.

SOROL

Particular description of goods.—A Medicine for Ailments of the Bladder.

Ser. No. 26,764. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TOWLE MAPLE SYRUP COMPANY, St. Paul, Minn. Filed Apr. 17, 1907.

GREAT MOUNTAIN



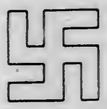
Particular description of goods.—A Blend of Cane and Maple Syrups.

Ser. No. 28,418. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KINGAN AND COMPANY, LIMITED, Belfast, Ireland, and Indianapolis, Ind. Filed June 27, 1907. Used ten years.

PEERLESS

Particular description of goods.—Bacon.

Ser. No. 31,676. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MAX KLAAS, New York, N. Y. Filed Dec. 11, 1907.



Particular description of goods.—Razors, Scissors, Shears, Knives, Table Cutlery Not of Precious Metal, and Cigar-Cutters.

Ser. No. 31,866. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) P. FRAPIN & Co., Cognac, France. Filed Dec. 21, 1907.



Particular description of goods.—Cognac Brandy.

Ser. No. 32,278. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) JOHN J. TOBIN, Fond du Lac, Wis. Filed Jan. 17, 1908.



Particular description of goods.—A Non-Alcoholic Carbonated Beverage.

Ser. No. 32,284. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARION H. CRAWMER, Newark, Ohio. Filed Jan. 17, 1908.



Particular description of goods.—A Liquid Remedy for Prolapse, Fistula, Blind, Bleeding, or Protruding Piles.

Ser. No. 32,978. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALLEN CUGLEY, Philadelphia, Pa. Filed Feb. 24, 1908.



Particular description of goods.—Bird Foods.

Ser. No. 33,365. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) O. F. SCHMID CHEMICAL COMPANY, Jackson, Mich. Filed Mar. 14, 1908.

THIMIDOL

Particular description of goods.—Antiseptic Powders for External Application.

Ser. No. 33,596. (CLASS 5. ADHESIVES.) CORN PRODUCTS REFINING COMPANY, Jersey City, N. J., and New York, N. Y. Filed Mar. 25, 1908.



Particular description of goods.—Dextrins.

Ser. No. 33,840. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) URBAIN VOISIN, Marseillan, France. Filed Apr. 3, 1908.



Particular description of goods.—A Tonic Aperient Wine.

Ser. No. 33,980. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) BALTIMORE COPPER PAINT CO., Baltimore, Md. Filed Apr. 9, 1908.



Particular description of goods.—A Paint in Paste Form for Coating Iron Structures.

Ser. No. 34,010. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) FLEMISH ART COMPANY, New York, N. Y. Filed Apr. 11, 1908.

The Gas-o-pen

Particular description of goods.—A Pyrographic Pencil.

Ser. No. 34,123. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) D. I. BUSHNELL & Co., St. Louis, Mo. Filed Apr. 15, 1908.



Particular description of goods.—Clover-Seed, Grass-Seed, Millet-Seed, and Mixed Seed.

Ser. No. 34,202. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE PANSY COMPOUND CO., Crawfordsville, Ind. Filed Apr. 18, 1908.



Particular description of goods.—A Laxative and Remedy for Constipation and All Diseases of the Alimentary Canal.

Ser. No. 34,366. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) J. M. DELANEY & Co., New York, N. Y. Filed Apr. 25, 1908.



Particular description of goods.—Sole-Leather.

Ser. No. 34,398. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EXCELSIOR SPECIALTY COMPANY, Chicago, Ill. Filed Apr. 27, 1908.



Particular description of goods.—Baking-Powder.

Ser. No. 34,664. (CLASS 27. HOROLOGICAL INSTRUMENTS.) E. HOWARD WATCH Co., Riverside, N. J., and Waltham, Mass. Filed May 9, 1908.



Particular description of goods.—Watches.

Ser. No. 34,691. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE M. SIEFE, Kansas City, Mo. Filed May 11, 1908.



Particular description of goods.—Ice-Cream-Cone Waffles.

Ser. No. 34,721. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ATLANTIC MACARONI Co., New York, N. Y. Filed May 13, 1908.



Particular description of goods.—Macaroni.

Ser. No. 34,873. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CORN PRODUCTS REFINING COMPANY, Jersey City, N. J., and New York, N. Y. Filed May 21, 1908.

DIAMOND

Particular description of goods.—Gluten Feed.

Ser. No. 34,922. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARMIN RIESZ, Kis-Kun-Halas, Austria-Hungary. Filed May 25, 1908.

Argonauta

Particular description of goods.—A Remedy for Seasickness.

Ser. No. 35,058. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. D. FOSS & CO. INCORPORATED, Boston, Mass. Filed June 1, 1908.

THE "HOUSE OF QUALITY"

Particular description of goods.—Chocolates.

Ser. No. 35,078. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEHE & CO., AKTIENGESELLSCHAFT, Dresden, Germany. Filed June 2, 1908.

TANNYL

Particular description of goods.—Medicines for Internal Use Used in the Treatment of All Catarrhs of the Stomach and the Bowels, for Ulcerous Colitis with Loss of Blood, for Gastric Diarrhea in Connection with Achylia, and for Diarrhea in Cases of Tuberculosis.

Ser. No. 35,082. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANNIE MÖLLER, Manchester, England. Filed June 2, 1908.

FLESHETTE

Particular description of goods.—Liquid Preparations, Ointments, and Powders for the Complexion.

Ser. No. 35,126. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) JOHN COSTELLO, Grand Rapids, Minn. Filed June 3, 1908.

IRON RANGE

Particular description of goods.—Artificial Cherry-Cider, Ginger-Ale, Limeade, Orange-Soda, Lemon-Soda, Cream-Soda, Birch-Beer, Root-Beer, Artificial Raspberry-Cider, Artificial Strawberry-Cream Cider, Artificial Orange-Cider, and Carbonated Natural Table-Water.

Ser. No. 35,130. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JOHN DIEDRICH HEIMSOTH, Chicago, Ill. Filed June 4, 1908.

J. D. HAGE

Particular description of goods.—Straight Bourbon and Straight Rye Whisky.

Ser. No. 35,146. (CLASS 48. MALT EXTRACTS AND LIQUORS.) PABST BREWING COMPANY, Milwaukee, Wis. Filed June 4, 1908. Used ten years.

MEAD

Particular description of goods.—A Malt Tonic.

Ser. No. 35,147. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) P. L. FAVALE & CO., New York, N. Y. Filed June 4, 1908.



Particular description of goods.—Lucca Olive-Oil.

Ser. No. 35,178. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE CROWN PERFUMERY CO., London, England. Filed June 5, 1908.

BATHODORA

Particular description of goods.—Perfumed Powder for Softening Water.

Ser. No. 35,213. (CLASS 39. CLOTHING.) SQUARE WEAR COLLAR CO., Troy, N. Y. Filed June 8, 1908.

SQUARE WEAR

Particular description of goods.—Collars Made of Textile Fabric.

Ser. No. 35,252. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE WISE MFG. CO., Webster City, Iowa. Filed June 10, 1908.

Particular description of goods.—Root-Beer Extract.

Ser. No. 35,293. (CLASS 48. MALT EXTRACTS AND LIQUORS.) AKTIENBRAUEREI ZUM LOWENBRÄU IN MÜNCHEN, Munich, Germany. Filed June 11, 1908.

ST. BENNOBIER

Particular description of goods.—Beer.

Ser. No. 35,318. (CLASS 17. TOBACCO PRODUCTS.) PAVÓN ALVAREZ & CA., Ciales, Porto Rico. Filed June 13, 1908.

LA VEGABAJEÑA



Particular description of goods.—Cigars.

Ser. No. 35,319. (CLASS 17. TOBACCO PRODUCTS.) PAVÓN ALVAREZ & CA., Ciales, Porto Rico. Filed June 13, 1908.

LA GLORIA DE CIALES



Particular description of goods.—Cigars.

Ser. No. 35,320. (CLASS 17. TOBACCO PRODUCTS.) PAVÓN ALVAREZ & CA., Ciales, Porto Rico. Filed June 13, 1908.

LA FLOR DE CIALES



Particular description of goods.—Cigars.

Ser. No. 35,403. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) VEIL-PICARD & CIE., Pontrailer, France. Filed June 15, 1908.

ABSINTHE SUPERIEURE
PERNOD FILS
Usine fondée en 1805
COUVET (Suisse) & PONTARLIER (France)

Particular description of goods.—Absinthe.

Ser. No. 35,406. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MANHATTAN DISINFECTING COMPANY, New York, N. Y. Filed June 16, 1908.

Particular description of goods.—Disinfectants and Fumigating Materials, Rat and Roach Exterminators, and Bed-bug-Exterminators.

Ser. No. 35,626. (CLASS 48. MALT EXTRACTS AND LIQUORS.) LAURITZEN MALT CO., Minneapolis, Minn. Filed June 19, 1908.

CRYSTAL FOAM

Particular description of goods.—A Non-Intoxicating Malt Beverage.

Ser. No. 35,627. (CLASS 48. MALT EXTRACTS AND LIQUORS.) LAURITZEN MALT CO., Minneapolis, Minn. Filed June 19, 1908.



Particular description of goods.—A Non-Intoxicating Malt Beverage.

Ser. No. 35,628. (CLASS 12. MASONRY MATERIALS.) WOODBURY GRANITE COMPANY, Hardwick, Vt. Filed June 19, 1908.



Particular description of goods.—Quarried Granite for Monumental and Building Purposes.

Ser. No. 35,634. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE FRANCO-AMERICAN FERMENT COMPANY, New York, N. Y. Filed June 20, 1908.



Particular description of goods.—Milk.

Ser. No. 35,657. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BURNEY J. KENDALL, Geneva, Ill. Filed June 22, 1908.



Particular description of goods.—Laxative Tonic, Kidney-Pills, Cough-Tablets, Liver-Pills, Stomach-Tablets, Nerve-Tonic, Heart-Tonic, Rheumatic Tablets, Catarrh-Tablets, Uterine Tablets, and Uterine Catholicon.

Ser. No. 35,730. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) STANDARD ELECTRIC WORKS, Racine, Wis. Filed June 24, 1908.



Particular description of goods.—Electrically-Actuated Massage Vibrators and Applicators.

Ser. No. 35,748. (CLASS 39. CLOTHING.) SAWYER BOOT & SHOE CO., Bangor, Me. Filed June 25, 1908.

REINDEER

Particular description of goods.—Moccasins.

Ser. No. 35,754. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FOUNTAIN MEDICINE COMPANY, Fountain, N. C. Filed June 25, 1908.



Particular description of goods.—A Remedy for External Use in the Treatment of Rheumatism, Neuralgia, Lame Back, Paralysis, Sprains, and Bruises.

Ser. No. 35,764. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHINA & JAPAN TRADING COMPANY, LIMITED, New York, N. Y. Filed June 25, 1908.



Particular description of goods.—Unbleached Sheetings, Shirtings, Drills, and Flannels Woven of Cotton Yarn.

Ser. No. 35,767. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHINA & JAPAN TRADING COMPANY, LIMITED, New York, N. Y. Filed June 25, 1908.



Particular description of goods.—Unbleached Sheetings, Shirtings, Drills, and Flannels Woven of Cotton Yarn.

Ser. No. 35,830. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANK MARCHIONY, Brooklyn, N. Y. Filed June 27, 1908.

CRISPO

Particular description of goods.—Wafers.

Ser. No. 35,839. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE J. W. MILLER COMPANY, Freeport, Ill. Filed June 29, 1908.

"IDEAL"

Particular description of goods.—Fireless Cookers.

Ser. No. 35,848. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) UNITED CHEMICAL CO., Minneapolis, Minn. Filed June 29, 1908.

VERMOLENE

Particular description of goods.—Deodorizing and Disinfecting Liquid for Destroying Germs and Insects.

Ser. No. 35,857. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) DUNFORD ROOF & BRIDGE PAINT MANUFACTURING CO., Atlanta, Ga. Filed June 29, 1908.



Particular description of goods.—Paint.

Ser. No. 35,858. (CLASS 38. PUBLICATIONS.) THE NATIONAL ASSOCIATION OF STATIONARY ENGINEERS, Utica, N. Y., and Chicago, Ill. Filed June 27, 1908.

THE NATIONAL ENGINEER

Particular description of goods.—Magazines.

Ser. No. 35,916. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WILLIAM S. FREEMAN, Philadelphia, Pa. Filed July 2, 1908.

PORT AND STARBOARD

Particular description of goods.—Garters.

Ser. No. 35,936. (CLASS 7. CORDAGE.) WATERBURY & COMPANY, New York, N. Y. Filed July 3, 1908.

DIAMOND

Particular description of goods.—Wire Ropes.

Ser. No. 35,945. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SUSQUEHANNA SILK MILLS, New York, N. Y. Filed July 6, 1908.

Directra

Particular description of goods.—Silk Piece Goods and Silk-Mixed Piece Goods.

Ser. No. 35,946. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SUSQUEHANNA SILK MILLS, New York, N. Y. Filed July 6, 1908.

Prema

Particular description of goods.—Silk Piece Goods and Silk-Mixed Piece Goods.

Ser. No. 35,962. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) LORENZO WILLIS LEWIS, Columbus, Ohio. Filed July 6, 1908.



Particular description of goods.—A Chemical Preparation for Removing Tarnish from Metallic Ware.

Ser. No. 35,989. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) S. GUGGENHEIMER, ROSENBERG & CO., New York, N. Y. Filed July 7, 1908.

"PICQUETTE"

Particular description of goods.—Rep Cotton Fabrics.

Ser. No. 36,081. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) ISAAC A. SHEPPARD & CO., Philadelphia, Pa. Filed July 13, 1908.



Particular description of goods.—Stoves, Furnaces, Hot-Air Heaters, and Steam and Hot-Water Boilers.

Ser. No. 36,121. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) HOERSTING & HOLTMANN, Dayton, Ohio. Filed July 15, 1908.

GEM CITY

Particular description of goods.—Hot-Air Furnaces.

Ser. No. 36,144. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ORVILLE D. JONES, Chicago, Ill. Filed July 16, 1908.



Particular description of goods.—Chewing-Gum.

Ser. No. 36,190. (CLASS 39. CLOTHING.) LOUIS ABRAHAM, Milwaukee, Wis. Filed July 17, 1908.

Uneedme

Particular description of goods.—A Combination Muffler and Chest and Back Protector.

Ser. No. 36,205. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JONES-PADDOCK CO., San Francisco, Cal. Filed July 18, 1908.

ALTA

Particular description of goods.—Ground Spices and Flavoring Extracts.

Ser. No. 36,247. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LAFAYETTE BAKING COMPANY, La Fayette, Ind. Filed July 21, 1908.

"POWDER" BREAD

Particular description of goods.—Bread.

Ser. No. 36,252. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) B. J. SEMMES & Co., Memphis, Tenn. Filed July 21, 1908. Used ten years.

Ucleq

Particular description of goods.—Straight Rye Whisky and Blended Rye Whisky.

Ser. No. 36,257. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) THE RELIANCE PAINT COMPANY, New York, N. Y. Filed July 21, 1908.



Particular description of goods.—Paints.

Ser. No. 36,286. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MARMONT EDSON, New York, N. Y. Filed July 23, 1908.

EDSONIA

Particular description of goods.—A Metal-Polishing Material.

Ser. No. 36,302. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JNO. T. BARBEE & Co., Louisville, Ky. Filed July 24, 1908.



Particular description of goods.—Straight Whisky and Blended Whisky.

Ser. No. 36,314. (CLASS 37. PAPER AND STATIONERY.) BLAKE MCFALL COMPANY, Portland, Oreg. Filed July 24, 1908.

SULFIBRE

Particular description of goods.—Printing and Wrapping or Uncalendered Paper.

Ser. No. 36,327. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HUEGELY MILLING COMPANY, Nashville, Ill. Filed July 25, 1908.

ILLINI

Particular description of goods.—Wheat-Flour.

Ser. No. 36,401. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GERHARD MENNEN CHEMICAL CO., Newark, N. J. Filed July 31, 1908. Used ten years.



Particular description of goods.—Borated Skin-Soap.

Ser. No. 36,425. (CLASS 11. INKS AND INKING MATERIALS.) THE OLIVER TYPEWRITER COMPANY, Chicago, Ill. Filed Aug. 1, 1908.

REVILO

Particular description of goods.—Carbon or Transfer Paper and Inking-Ribbon for Type-Writing Machines.

Ser. No. 36,448. (CLASS 17. TOBACCO PRODUCTS.) THE A. STRASSBURGER CO., Pittsburg, Pa. Filed Aug. 3, 1908.

PETÓFI SÁNDOR



Particular description of goods.—Smoking-Tobacco.

Ser. No. 36,495. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) L. & E. STIRN, New York, N. Y. Filed Aug. 5, 1908.

SATIN POMPADOUR

Particular description of goods.—Satin Ribbons.

Ser. No. 36,501. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ECONOMY ELECTRIC COMPANY, New York, N. Y. Filed Aug. 6, 1908.



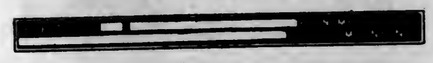
Particular description of goods.—Electric Lamps of All Kinds.

Ser. No. 36,502. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ECONOMY ELECTRIC COMPANY, New York, N. Y. Filed Aug. 6, 1908.



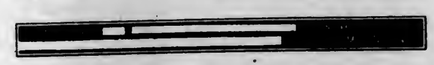
Particular description of goods.—Electric Lamps of All Kinds.

Ser. No. 36,503. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ECONOMY ELECTRIC COMPANY, New York, N. Y. Filed Aug. 6, 1908.



Particular description of goods.—Electric Lamps of All Kinds.

Ser. No. 36,504. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ECONOMY ELECTRIC COMPANY, New York, N. Y. Filed Aug. 6, 1908.



Particular description of goods.—Electric Lamps of All Kinds.

Ser. No. 36,536. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WM. COOPER & NEPHEWS, Berkhamsted, England. Filed Aug. 7, 1908.



Particular description of goods.—Spray Fluids for Fruit-Trees.

Ser. No. 36,537. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WM. COOPER & NEPHEWS, Berkhamsted, England. Filed Aug. 7, 1908.



Particular description of goods.—Spray Fluids for Fruit-Trees.

Ser. No. 36,546. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) RUDDY DISTILLERY COMPANY, Louisville, Ky. Filed Aug. 7, 1908. Used ten years.



Particular description of goods.—Straight Whisky.

Ser. No. 36,567. (CLASS 38. PUBLICATIONS.) THE SPORTING LIFE PUBLISHING COMPANY, Philadelphia, Pa. Filed Aug. 8, 1908.

THE CALL

Particular description of goods.—A Printed Periodical.

Ser. No. 36,586. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) HIBBARD, SPENCER, BARTLETT & COMPANY, Chicago, Ill. Filed Aug. 10, 1908.



Particular description of goods.—Washing-Machines for Laundry Purposes and Parts Thereof.

Ser. No. 36,587. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) HIBBARD, SPENCER, BARTLETT & COMPANY, Chicago, Ill. Filed Aug. 10, 1908.

H.S.B.&Co. REV-O-NOC

Particular description of goods.—Dry Batteries, Telephones, and Insulated Tape.

Ser. No. 36,595. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) WESTERN COCA COLA BOTTLING COMPANY, Chicago, Ill. Filed Aug. 10, 1908.

GOLD SEAL

Particular description of goods.—Ginger-Ale.

Ser. No. 36,596. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FOX TYPEWRITER CO., Grand Rapids, Mich. Filed Aug. 10, 1908.

Fox

Particular description of goods.—Type-Writers and Parts Thereof.

Ser. No. 36,874. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE DAYTON BREWERIES COMPANY, Dayton, Ohio. Filed Aug. 21, 1908.



Particular description of goods.—Beer.

Ser. No. 36,886. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEO. F. SMITH, Woodsboro, Md. Filed Aug. 22, 1908.

ROSEBLOOM



Particular description of goods.—Borated Talcum Powder.

Ser. No. 36,892. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SALT UNION LIMITED, Liverpool, England. Filed Aug. 24, 1908. Used ten years.

BUCKLEY'S FACTORY FILLED SALT

Particular description of goods.—Salt.

Ser. No. 36,893. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SALT UNION LIMITED, Liverpool, England. Filed Aug. 24, 1908. Used ten years.

GEORGE DEAKIN'S FACTORY FILLED

Particular description of goods.—Salt.

Ser. No. 36,894. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SALT UNION LIMITED, Liverpool, England. Filed Aug. 24, 1908. Used ten years.

"EUREKA"

Particular description of goods.—Salt.

Ser. No. 36,961. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) NEW JERSEY CAR SPRING & RUBBER CO., Jersey City, N. J. Filed Aug. 26, 1908.

RED OAK

Particular description of goods.—Rubber Packing.

Ser. No. 36,969. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) UNITED DRUG COMPANY, Boston, Mass. Filed Aug. 26, 1908.

Rexall

Particular description of goods.—Hot-Water Bags or Bottles and Fountain-Syringes.

Ser. No. 37,040. (CLASS 48. MALT EXTRACTS AND LIQUORS.) ANHEUSER-BUSCH BREWING ASSOCIATION, St. Louis, Mo. Filed Aug. 31, 1908.

Berg

Particular description of goods.—A Non-Intoxicating Malt Beverage.

Ser. No. 37,174. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JAMES PYLE & SONS, Edgewater, N. J. Filed Sept. 3, 1908. Used ten years.

JAMES PYLE'S

Particular description of goods.—Soap of All Kinds and Washing-Powder.

Ser. No. 37,175. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JAMES PYLE & SONS, Edgewater, N. J. Filed Sept. 3, 1908.

JAMES PYLE'S OK PEARLINE

Particular description of goods.—Washing-Powder.

Ser. No. 37,176. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JAMES PYLE & SONS, Edgewater, N. J. Filed Sept. 3, 1908.

PEARLINE

Particular description of goods.—Washing-Powder.

TRADE-MARKS

REGISTERED OCTOBER 6, 1908.

70,780. MAGAZINES. The System Company, Chicago, Ill.
Filed February 6, 1908. Serial No. 32,612. PUBLISHED AUGUST 4, 1908.

70,781. METAL BEDSTEADS. Francis W. Adams, Chicago, Ill.
Filed March 21, 1908. Serial No. 33,515. PUBLISHED AUGUST 4, 1908.

70,782. DEVICES FOR SHARPENING PENCILS, HAVING A CUTTING EDGE. Frederick Edward Vesey Baines, Blackheath, England.
Filed February 14, 1908. Serial No. 32,764. PUBLISHED AUGUST 4, 1908.

70,783. CIGARS. C. W. Barnes Inc., Syracuse, N. Y.
Filed April 25, 1908. Serial No. 34,370. PUBLISHED AUGUST 4, 1908.

70,784. PASTE FOR DRY-CLEANING GARMENTS. Samuel Becker, Cincinnati, Ohio.
Filed March 7, 1908. Serial No. 33,236. PUBLISHED AUGUST 4, 1908.

70,785. ATOMIZING APPARATUS FOR MEDICINAL USE. Robert L. Benson, Chicago, Ill.
Filed May 25, 1908. Serial No. 34,948. PUBLISHED AUGUST 4, 1908.

70,786. TEA AND COFFEE. James M. Cody, St. Louis, Mo.
Filed May 26, 1908. Serial No. 34,954. PUBLISHED AUGUST 4, 1908.

70,787. COMPOUND OF REFINED BEEF-FAT AND COTTON-SEED OIL. John H. Filbert, Baltimore, Md.
Filed April 8, 1908. Serial No. 33,956. PUBLISHED AUGUST 4, 1908.

70,788. CIGARS. Theodore Fischer, New York, N. Y.
Filed June 3, 1908. Serial No. 35,118. PUBLISHED AUGUST 4, 1908.

70,789. SWEEPING COMPOUNDS. The Floor Clean Company, Chicago, Ill.
Filed March 2, 1908. Serial No. 33,117. PUBLISHED AUGUST 4, 1908.

70,790. SARDINES IN OIL. Jed Frye & Co., New York, N. Y.
Filed August 22, 1907. Serial No. 29,529. PUBLISHED AUGUST 4, 1908.

70,791. PANCAKE-FLOUR. Henry B. Fuller, New York, N. Y.
Filed May 15, 1908. Serial No. 34,763. PUBLISHED AUGUST 4, 1908.

70,792. MEDICINE FOR TREATMENT OF PILES AND ECZEMA. Rolla W. Graves, Nashville, Tenn.
Filed April 11, 1908. Serial No. 34,012. PUBLISHED JUNE 2, 1908.

70,793. CIRCULAR SLIDE-RULES. J. Halden & Co. Ltd., Manchester, England.
Filed May 25, 1908. Serial No. 34,940. PUBLISHED AUGUST 4, 1908.

70,794. SEEDS, AGRICULTURAL, FLOWER, AND GARDEN. Haskell Implement & Seed Company, Boston, Mass.
Filed April 14, 1908. Serial No. 34,080. PUBLISHED AUGUST 4, 1908.

70,795. WRITING-PAPER AND ENVELOPS. George B. Hurd & Co., New York, N. Y.
Filed February 18, 1908. Serial No. 32,853. PUBLISHED AUGUST 4, 1908.

70,796. BROOMS, WHISKS, AND MOPS. Lang Union Broom Company, Pittsburg, Pa.
Filed May 26, 1908. Serial No. 34,957. PUBLISHED AUGUST 4, 1908.

70,797. WHEAT-FLOUR. The Longmont Farmers Milling & Elevator Company, Longmont, Colo.
Filed May 14, 1908. Serial No. 34,749. PUBLISHED AUGUST 4, 1908.

70,798. ARTIFICIAL STONE AND COMPOSITION FOR MAKING THE SAME. Marblecrete Products Co., Akron, N. Y.
Filed March 12, 1908. Serial No. 33,342. PUBLISHED AUGUST 4, 1908.

70,799. CIGARS. Merchants Cigar Company, Birmingham, Ala.
Filed July 17, 1907. Serial No. 28,841. PUBLISHED AUGUST 4, 1908.

70,800. CIGARS. Francis H. Powell, Camden, N. J.
Filed May 13, 1908. Serial No. 34,716. PUBLISHED AUGUST 4, 1908.

70,801. CLOTHES-PROPS, IRONING-BOARDS, AND WASHBENCHES. Samuel Cupples Wooden Ware Company, St. Louis, Mo.
Filed May 14, 1908. Serial No. 34,734. PUBLISHED AUGUST 4, 1908.

70,802. PASTE. Sanford Manufacturing Co., Chicago, Ill.
Filed June 1, 1908. Serial No. 35,066. PUBLISHED AUGUST 4, 1908.

70,803. PAINTS AND VARNISHES. The Schoedinger-Marr Company, Columbus, Ohio.
Filed April 30, 1908. Serial No. 34,500. PUBLISHED AUGUST 4, 1908.

70,804. LUBRICATING-OILS. Sun Company, Philadelphia, Pa.
Filed May 14, 1908. Serial No. 34,733. PUBLISHED AUGUST 4, 1908.

70,805. WEEKLY PERIODICAL. Theodore C. Wood & Co., Chicago, Ill.
Filed December 16, 1907. Serial No. 31,735. PUBLISHED MARCH 10, 1908.

70,806. COMPOSITION OF MATTER FOR THE TREATMENT AND FILLING OF NERVE-CANALS IN TEETH. Henry J. Bowerfind, Fort Wayne, Ind.
Filed June 6, 1908. Serial No. 35,183. PUBLISHED AUGUST 4, 1908.

70,807. PACKINGS, PUMP-VALVES, GASKETS, HOSE, AND BELTING. Consolidated Packing & Supply Co., New York, N. Y.
Filed April 24, 1908. Serial No. 34,352. PUBLISHED AUGUST 4, 1908.

70,808. STEEL. Crucible Steel Company of America, Pittsburg, Pa.
Filed June 24, 1908. Serial No. 35,718. PUBLISHED AUGUST 4, 1908.

70,809. STEEL. Crucible Steel Company of America, Pittsburg, Pa.
Filed June 24, 1908. Serial No. 35,719. PUBLISHED AUGUST 4, 1908.

70,810. COAL-TAR PAINT. Andrew C. Cunningham, Norfolk, Va.
Filed June 4, 1908. Serial No. 35,128. PUBLISHED AUGUST 4, 1908.

70,811. MOTOR-BUGGIES. ECONOMY MOTOR BUGGY COMPANY, Fort Wayne, Ind.
Filed June 23, 1908. Serial No. 35,689. PUBLISHED AUGUST 4, 1908.

70,812. CERTAIN SMOKERS' ARTICLES. MAX FEDER, Cleveland, Ohio.
Filed April 3, 1908. Serial No. 33,838. PUBLISHED AUGUST 4, 1908.

70,813. SOAP. IOWA SOAP COMPANY, Burlington, Iowa.
Filed June 26, 1908. Serial No. 35,800. PUBLISHED AUGUST 4, 1908.

70,814. PREPARATION FOR WHITENING ALL ARTICLES OF BUFF OR BUCKSKIN LEATHER. JOSEPH PICKERING AND SONS, LIMITED, Sheffield, England.
Filed June 17, 1908. Serial No. 35,434. PUBLISHED AUGUST 4, 1908.

70,815. CARTRIDGES AND CARTRIDGE-SHELLS. NATIONAL CARTRIDGE COMPANY, Belleville, Ill.
Filed June 26, 1908. Serial No. 35,789. PUBLISHED AUGUST 4, 1908.

70,816. STEEL CASTINGS. THE NEW JERSEY STEEL CO., Rahway, N. J.
Filed June 24, 1908. Serial No. 35,729. PUBLISHED AUGUST 4, 1908.

70,817. VEGETABLE LINIMENT. THOMAS M. SAYMAN, St. Louis, Mo.
Filed June 13, 1908. Serial No. 35,316. PUBLISHED AUGUST 4, 1908.

70,818. PREPARATION FOR CERTAIN DISEASES. THOMAS M. SAYMAN, St. Louis, Mo.
Filed June 23, 1908. Serial No. 35,697. PUBLISHED AUGUST 4, 1908.

70,819. SOAP AND SOAP POWDER. THE SUMMIT CITY SOAP WORKS, Fort Wayne, Ind.
Filed July 2, 1908. Serial No. 35,915. PUBLISHED AUGUST 4, 1908.

70,820. LUBRICATING OILS AND GREASES. THE U. S. MILL SUPPLY CO., Providence, R. I.
Filed June 20, 1908. Serial No. 35,647. PUBLISHED AUGUST 4, 1908.

70,821. REMEDY FOR RHEUMATISM, SPRAINS, BRUISES, AND BURNS. JACOB UHRIG, Chillicothe, Ohio.
Filed June 25, 1908. Serial No. 35,763. PUBLISHED AUGUST 4, 1908.

70,822. LUBRICATING OILS AND GREASES. VALVOLINE OIL COMPANY, New York, N. Y.
Filed June 11, 1908. Serial No. 35,269. PUBLISHED AUGUST 4, 1908.

70,823. HORSESHOE-CALKS. THE WILLIAMS DROP FORGING COMPANY, Scranton, Pa.
Filed June 17, 1908. Serial No. 35,433. PUBLISHED AUGUST 4, 1908.

70,824. CERTAIN TOILET PREPARATIONS. THE ZONA TOILET CO., Wichita, Kans.
Filed March 24, 1908. Serial No. 33,586. PUBLISHED MAY 19, 1908.

70,825. SWEAT-SHIELDS AND BELTS. MARK BERNSTEIN, New York, N. Y.
Filed May 14, 1908. Serial No. 34,737. PUBLISHED AUGUST 4, 1908.

70,826. CORN-OIL. CORN PRODUCTS REFINING COMPANY, Jersey City, N. J., and New York, N. Y.
Filed May 21, 1908. Serial No. 34,872. PUBLISHED AUGUST 4, 1908.

70,827. CERTAIN YARNS AND THREADS. DOLLFUS-MIEG & CIE SOCIÉTÉ ANONYME, Mulhouse, Germany.
Filed January 6, 1908. Serial No. 32,090. PUBLISHED AUGUST 4, 1908.

70,828. STRAIGHT RYE WHISKY. FRANC, HEYN & CO., Toledo, Ohio.
Filed March 21, 1908. Serial No. 33,502. PUBLISHED JUNE 23, 1908.

70,829. SHOE-LACES. CHRISTOPHER E. HERTLEIN, New York, N. Y.
Filed May 4, 1908. Serial No. 34,570. PUBLISHED AUGUST 4, 1908.

70,830. OVERALLS, JACKETS, AND PANTS. HUNDLEY DRY GOODS CO., St. Joseph, Mo.
Filed April 4, 1908. Serial No. 33,867. PUBLISHED AUGUST 4, 1908.

70,831. ARTICLES OF JEWELRY FOR PERSONAL WEAR. JOHN T. MAURAN MANUFACTURING COMPANY, Providence, R. I.
Filed May 18, 1908. Serial No. 34,853. PUBLISHED AUGUST 4, 1908.

70,832. PIANOS. KRELL AUTO-GRAND PIANO CO., OF AMERICA, Connersville, Ind.
Filed April 17, 1908. Serial No. 34,190. PUBLISHED JUNE 23, 1908.

70,833. JEWELRY FOR PERSONAL WEAR. LEBOLT & COMPANY, Chicago, Ill.
Filed April 27, 1908. Serial No. 34,422. PUBLISHED AUGUST 4, 1908.

70,834. JEWELRY FOR PERSONAL WEAR. LEBOLT & COMPANY, Chicago, Ill.
Filed April 27, 1908. Serial No. 34,423. PUBLISHED AUGUST 4, 1908.

70,835. NATURAL MINERAL WATER. PETER P. MAURIN, Cold Spring, Minn.
Filed June 15, 1908. Serial No. 35,392. PUBLISHED AUGUST 4, 1908.

70,836. NATURAL MINERAL WATER. PETER P. MAURIN, Cold Spring, Minn.
Filed June 15, 1908. Serial No. 35,393. PUBLISHED AUGUST 4, 1908.

70,837. NATURAL MINERAL WATER. PETER P. MAURIN, Cold Spring, Minn.
Filed June 15, 1908. Serial No. 35,394. PUBLISHED AUGUST 4, 1908.

70,838. CHOCOLATE-FLAVORED FOOD PREPARATIONS. THE MEATOX COMPANY, Coney Island, N. Y., assignor to Hawley & Hoops, a Copartnership of New York, N. Y.
Filed March 13, 1908. Serial No. 33,361. PUBLISHED JUNE 9, 1908.

70,839. COTTON VELVETS. LOUIS ROESSEL & CO., New York, N. Y.
Filed May 13, 1908. Serial No. 34,713. PUBLISHED AUGUST 4, 1908.

70,840. BLENDED GRAPE-BRANDY. WICHMAN, LUTGEN & CO. INC., San Francisco, Cal.
Filed January 2, 1908. Serial No. 31,998. PUBLISHED MAY 19, 1908.

LABELS

REGISTERED OCTOBER 6, 1908.

14,384.—*Title:* "THE MERRY WIDOW STOGIES." (For Stogies.) ALBERT HURWITZ, Pittsburg, Pa. Filed September 5, 1908.

14,385.—*Title:* "PRIDE OF COLUMBUS." (For Cigars.) N. HIMMELWEIT & Co., Columbus, Ga. Filed September 3, 1908.

14,386.—*Title:* "MALT VITA." (For Malt Extract.) GARDEN CITY BREWERY, Chicago, Ill. Filed July 27, 1908.

14,387.—*Title:* "SPICED BEETS." (For Spiced Beets.) I. S. ELAM & Co., Duluth, Minn. Filed July 14, 1908.

14,388.—*Title:* "McCORD'S EXTRAS." (For Canned Peaches.) THE McCORD MERCANTILE Co., Pueblo, Colo. Filed August 29 1907.

14,389.—*Title:* "YAMA-YAMA-YUM." (For Confectionery.) EDWIN O. GROVER, Chicago, Ill. Filed August 10, 1908.

14,390.—*Title:* "YAMA-YAMA GUM." (For Chewing-Gum.) EDWIN O. GROVER, Chicago, Ill. Filed August 10, 1908.

14,391.—*Title:* "SWEETHEART." (For Chewing-Gum.) STATES CHEWING GUM COMPANY, Dallas, Tex. Filed August 17, 1908.

14,392.—*Title:* "SOFT SPUN." (For Handkerchiefs.) FRANCIS J. CRYSTAL, New York, N. Y. Filed September 5, 1908.

14,393.—*Title:* "SNOOKLIM REPRO." (For Blank Transfer-Cards and a Fluid by Means of Which Pictures May be Transferred to the Said Cards.) HATTIE F. COONS, New York, N. Y. Filed July 10, 1908.

PRINTS

REGISTERED OCTOBER 6, 1908.

2,355.—*Title:* "SCHOOL, A NEW PARLOR GAME." (For a Game.) JOHN FRANKLIN MACINDOE, Philadelphia, Pa. Filed August 22, 1908.

2,356.—*Title:* "SEERA." (For Astrological and Phrenological Charts.) MINNIE KINGSLEY, Chicago, Ill. Filed June 29, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

Supreme Court of the United States.

CONTINENTAL PAPER BAG COMPANY *v.* EASTERN PAPER BAG COMPANY.

Decided June 1, 1908.

1. INFRINGEMENT—EQUIVALENTS—RANGE DEPENDS UPON NATURE OF INVENTION.

The range of equivalents depends upon the extent and nature of the invention. If the invention is broad and primary in its character, the range of equivalents will be correspondingly broad under the liberal construction which the courts give to such inventions.

2. CONSTRUCTION OF CLAIMS—LIMITATION BY DESCRIPTION.

An inventor must describe what he conceives to be the best mode of constructing his invention; but he is not confined to that if his claims are broad, particularly where he states in his specification that means other than the means shown may be employed.

3. SAME—"MEANS" FOR PERFORMING CERTAIN FUNCTIONS.

The following claim: "In a paper-bag machine, the combination of a rotating cylinder provided with one or more pairs of side-forming fingers adapted to be moved toward or from each other, a forming-plate also provided with side-forming fingers adapted to be moved toward or from each other, means for operating said fingers at definite times during the formative action upon the bag-tube, operating means for the forming-plate adapted to cause the said plate to oscillate about its rear edge upon the surface of the cylinder during the rotary movement of said cylinder, the whole operating for the purpose of opening and forming the bottom of the bag-tube, and means to move the bag-tube with the cylinder," *Held* not merely for the function of the machine, but for mechanical means to bring into working relation the folding-plate and cylinder.

4. INJUNCTION—EFFECT OF NON-USE OF PATENTED INVENTION.

The non-use of a patented invention by the owner of the patent occasioned by a desire to save the expense incident to changing from an old type of machine to the patented device is not so unreasonable as to warrant a court in refusing injunctive relief during the latter part of the term of the patent, there being no question of a diminished supply of the product of such machine or of an increase of prices.

5. CERTIORARI—REVIEW OF FACTS.

The concurrent finding of a circuit court and circuit court of appeals on questions of fact will not be disturbed by the Federal Supreme Court on certiorari unless clearly erroneous.

ON writ of certiorari to the United States Circuit Court of Appeals for the First Circuit.

Mr. Albert H. Walker for the petitioner.

Mr. Samuel R. Betts and *Mr. Francis T. Chambers* for the respondent.

STATEMENT OF THE CASE.

This is a bill in equity to restrain the infringement of Letters Patent No. 558,969, April 28, 1896, issued to William Liddell for an improvement in paper-bag machines for making what are designated in the trade as self-opening square bags. The claims in suit do not include mechanism for making a complete bag, but only mechanism for distending one end of a tucked or bellows-folded paper tube made by other mechanism, and folding it down into a form known in the art as the "diamond fold." This fold is flattened and pasted by other mechanism and forms a square bottom to the bag.

The bill is in the usual form and alleges infringement of the claims by the Continental Paper Bag Company, hereafter called the Continental Company, and prays for an accounting and an injunction.

The answer interposed the defense of non-jurisdiction of a court of equity, non-infringement of the Liddell patent by defendant (Continental Company) and want of invention.

The allegation of the answer as to the jurisdiction of the court is as follows:

The defendant says, on information, advice and belief, that a court of equity has no jurisdiction to grant any prayer of the bill of complaint, even if the said Liddell patent, No. 558,969, were valid, and even if the defendant's paper-bag machines were to be held to infringe that patent, because the said patent, No. 558,969, is a mere paper proposition which the complainant has never put into effect or use, and because it is contrary to equity to suppress a useful and established business, like that which the defendant is prosecuting with its paper-bag machines, at the request of a complainant which simply owns one paper-bag machine patent that has never been employed by that complainant in any way in any paper-bag machinery, and because the complainant in this case has a plain, adequate and complete remedy at law for any infringement which may have been done upon Liddell Letters Patent, No. 558,969.

The circuit court adjudged the patent valid as to the first, second and seventh claims thereof; that the Eastern Paper Bag Company was the owner of the Letters Patent; that Liddell was the original and first inventor of the improvements described in the claims, and that the Continental Company had infringed the same. It was also adjudged that the Eastern Company recover of the Continental Company the profit the latter had made or received by the infringement. An account was ordered and a perpetual injunction decreed. (142 Fed., 479.) The decree was affirmed by the circuit court of appeals. (150 Fed., 741.) This certiorari was then granted.

Mr. Justice MCKENNA delivered the opinion of the Court.

The defense of want of invention in the Liddell machine is not urged here, because it is said that the decision of that question depends upon mechanical comparisons, too numerous and complicated to be conveniently made by a bench of judges, and because, though the Liddell patent approaches closely the prior art, it "perhaps covers a margin of differentiation sufficient, though barely sufficient, to constitute invention."

The two questions, therefore, which remain for

decision are the jurisdiction of the court and the question of infringement. We will consider the latter question first. It does not depend, counsel for the Continental Company says—

upon any issue of fact, but does depend, as questions of infringement—

sometimes do, upon a "point of law." This point of law, it is further said, has been formulated in a decision of this Court as follows:

Where the patent does not embody a primary invention, but only an improvement on the prior art, and defendant's machines can be differentiated, the charge of infringement is not sustained.

Counsel for respondent do not contend that the Liddell invention is primary within the definition given of that term by petitioner. Their concession is that it is—

not basic in the sense of covering the first machine ever produced to make self-opening square bags by machinery.

They do contend, however, that it is one of high rank, and if it be given a—

fair construction and scope, no matter whether we call it basic, primary or broad, or even merely entitled to be construed as covering obvious mechanical equivalents, the question of infringement of the claims in suit by petitioner's machine becomes mechanically, and from a patent-law standpoint, a simple one, in spite of slight differences of operation, and of reversal of some of the moving parts.

The lower courts did not designate the invention as either primary or secondary. They did, however, as we shall presently see, decide that it was one of high rank and entitled to a broad range of equivalents. It becomes necessary, therefore, to consider the point of law upon which petitioner contends the question of infringement depends.

The citation is from *Cimiotti Unhairing Company* v. *American Fur Refining Company* (198 U. S., 399) and *Kokomo Fence Machine Company* (189 U. S., 8) was adduced to sustain the proposition. But the whole opinion must be considered, and it will be seen from the language which we shall presently quote that it was not intended to say that the doctrine of equivalents applied only to primary patents.

We do not think it is necessary to follow counsel for petitioner in his review of other cases which, he urges, sustain his contention. The right view is expressed in *Miller* v. *Eagle Manufacturing Company*, (151 U. S., 186, 207,) as follows:

The range of equivalents depends upon the extent and nature of the invention. If the invention is broad and primary in its character, the range of equivalents will be correspondingly broad, under the liberal construction which the courts give to such inventions.

And this was what was decided in *Kokomo Fence Machine Company*, *Cimiotti Unhairing Company* v. *American Fur Refining Company*, and *Computing Scale Company* v. *Automatic Scale Company*, (204 U. S., 609.) It is from the second of those cases, as we have seen, that the citation is made which petitioner contends the point of law upon which infringement depends is formulated; but it was said in that case:

It is well settled that a greater degree of liberality and a wider range of equivalents are permitted where the patent is of a pioneer character than when the invention is simply an improvement, may be the last and successful step, in the art theretofore partially developed by other inventors in the same field.

It is manifest, therefore, that it was not meant to decide that only pioneer patents are entitled to invoke the doctrine of equivalents, but that it was decided that the range of equivalents depends upon and varies with the degree of invention. (See *Ives et al.* v. *Hamilton, executor*, 92 U. S., 426; *Hoyt* v. *Horne*, 145 U. S., 302; *Deering* v. *Winona Harvester Works*, 155 U. S., 286; *Walker on Patents*, sec. 362; *Robinson on Patents*, sec. 258.)

We start, then, with the proposition that the Eastern Company may invoke for the Liddell patent the doctrine of equivalents, but without deciding now how broadly we proceed to the consideration of the question of infringement. Invention is conceded to the Liddell machine, as we have seen, by the Continental Company. The concession, however, is qualified by the assertion that it covers only a "margin of differentiation" from the prior art. The circuit court and the circuit court of appeals had a higher estimate of it. The circuit court said that the nature of its invention—

was clear * * * was disconnected from what precedes it by such a hiatus, that, if the claims are as extensive as the invention, there is no difficulty so far as concerns the application to the case of the rules with reference to equivalents.

And answering the contention that it was the twentieth in the line of patents in its branch of the arts, and that it should be limited to the details described in its specifications, it was said that there was—

such a hiatus between them and what appears on the face of the Liddell patent, that they have no effect either in narrowing or broadening the alleged Liddell invention.

The circuit court of appeals affirmed the decree of the circuit court. It was less circumstantial than the circuit court in describing the invention. It said, however, after stating the claims, that their breadth—

would imperil the patent, were the real invention less broad; but the defendant (the Continental Company) has not pointed out, and we have been unable to find, any operative combination of a rotary cylinder and forming-plate oscillating thereon earlier than the patent in suit. If, therefore, the patent is valid, it has a wide scope, and the mechanical arrangement used by the defendant is fairly within its terms.

The lower courts, therefore, found that the invention was a broad one and that the machine used by the Continental Company was an infringement. And these were questions of fact upon which, both of the courts concurring, their findings will not be disturbed, unless clearly wrong. (*Deslions* v. *La Compagnie Generale Transatlantique*, *ante*, p. ——.) To decide the question of invention an examination of the prior art was necessary and a consideration of what step in advance of that art, if any, the Liddell patent was. To decide the question of infringement a comparison of the Liddell machine with the machine used by the Continental Company was necessary and a determination of their similarity or difference. What was involved in these inquiries of fact and the conclusions from them is indicated by a record of many hundred pages of expert testimony and exhibits.

We shall proceed, then, to consider upon what grounds the circuit court and circuit court of appeals proceeded and their sufficiency to sustain the judgments rendered within the rule announced.

The bill alleges the infringement of claims 1, 2 and 7. The courts below selected claim 1 for consideration, as determinative of the questions arising, as well on the other two claims as on it. In this counsel for the Continental Company acquiesced. Claim 1 is as follows:

In a paper-bag machine, the combination of a rotating cylinder provided with one or more pairs of side-forming fingers adapted to be moved toward or from each other, a forming-plate also provided with side-forming fingers adapted to be moved toward or from each other, means for operating said fingers at definite times during the formative action upon the bag-tube, operating means for the forming-plate adapted to cause the said plate to oscillate about its rear edge upon the surface of the cylinder during the rotary movement of said cylinder for the purpose of opening and forming the bottom of the bag-tube, and means to move the bag-tube with the cylinder.*

"The pith of the invention," the circuit court said—

is the combination of the rotary cylinder with means of operating the forming-plate in connection therewith, limited, however, to means which causes the plate to oscillate about its rear edge.

The court expressed the opinion that the invention extended to every means by which that result could be attained, and rejected the contention of the Continental Company that the invention was no broader than the details described in the specification. The court said that it was unable to see upon what the proposition could be based. And further said that there was nothing in the prior art which either broadened or narrowed the Liddell invention.

If any of the nineteen patents which had been put in evidence—

the court added—

pointed out any form of combining the forming-plate with a rotating cylinder, they would of course narrow what Liddell could claim; but they have nothing of that kind.

And speaking of the claims and their limitation by the description, it was said:

Nothing in the manner in which the claims are expressed adopts as the elements the detailed description contained in the specification. So far as the details of the description are concerned, they come within the ordinary rule of preferable method.

We think it is clear that the court considered that Liddell sought to comply with section 4888 of the Revised Statutes.† In other words, he filed a description of his invention, explained its principle and the best mode in which he "contemplated applying that principle," and did not intend to give up all other modes of application. An inventor must describe what he conceives to be the best mode, but he is not confined to that. If this were not so most patents would be of little worth.

The principle of the invention is a unit, and invariably the modes of its embodiment in a concrete invention may be numerous and in appearance very different from each other. (*Robinson on Patents*, sec. 485.)

The invention, of course, must be described and the mode of putting it to practical use, but the claims measure the invention. They may be explained and illustrated by the description. They cannot be enlarged by it. (*Yale Lock Co.* v. *Greenleaf*, 117 U. S., 554.) *Snow* v. *Lake Shore etc. Railway Co.*, (121 U. S., 617,) is a case where a claim was limited by a description of the device, with reference to drawings. The court, in rejecting the contention that the description of the particular device was to be taken as a mere recommendation of the patentee of the manner in which he contemplated to arrange the parts of his machine, said there was nothing in the context to indicate that the patentee contemplated any alternative for the arrangement of the parts of the device. Therein the description is distinguished from the description in the Liddell patent. Liddell was explicit in the declaration that there might be alternatives for the device described and illustrated by him. He was explicit in saying that in place of the device for controlling the movement of the forming-plate relatively to the cylinder that the plate might "be moved or operated by any other suitable means."

This Court said in *Cimiotti Unhairing Company* v. *American Fur Refining Company*, *supra:*

In making his claim the inventor is at liberty to choose his own form of expression, and while the courts may construe the same in view of the specifications and the state of the art, they may not add to or detract from the claim.

See also *Howe Machine Co.* v. *National Needle Co.*, (134 U. S., 388, 394.)

The discussion thus far brings us to two propositions: that infringement is not averted merely because the machine alleged to infringe may be differentiated from the patented machine, even though the invention embodied in the latter be not primary; and, second, that the description does not necessarily limit the claims. It is probably not contended abstractly by the Continental Company that the description necessarily limits the claims, but only in the case at bar as following from the first proposition, that is, as resulting from the alleged narrow character of the Liddell invention. A few words more may be necessary to develop fully the contention. Counsel separate the claims of the Liddell machine into divisions, and says that the fourth division of the claimed mechanism in each of the three claims alleged to be infringed is in exactly the same words, which words are:

Operating means for the forming-plate, adapted to cause the said plate to oscillate about its rear edge upon the surface of the cylinder during the rotary movement of said cylinder.

And it is argued that neither claim designates "operating means," either by names or by reference letters or numerals, and recourse must therefore be had to the descriptive part of the specification to ascertain what "operating means" are meant, and then construe the claim as calling for those "operating means" or their equivalents. The other way, it is said, is to ignore the descriptive part of the specification—

and to construe the claim as being satisfied by any "operating means" which can perform the particular function designated in the claim.

Under the second method, it is insisted, identity of function constitutes infringement. Under the first method identity of function must be accompanied by substantial identity of character and substantial identity of mode of operation in order to constitute that result. The second method was adopted, it is urged,

*2. In a paper-bag machine, the combination of the rotating cylinder provided with one or more pairs of side-folding fingers adapted to be moved toward or from each other, a forming-plate also provided with side-forming fingers adapted to be moved toward or from each other, means for operating said fingers at definite times during the formative action upon the bag-tube, operating means for the forming-plate adapted to cause the said plate to oscillate about its rear edge upon the surface of the cylinder during the rotary movement of said cylinder for the purpose of opening and forming the bottom of the bag-tube, a finger moving with the forming-plate for receiving the upper sheet of the tube and lifting it during the formative action, power devices for returning the forming-plate to its original position to receive a new bag-tube, and means to move the bag-tube with the cylinder.

7. In a paper-bag machine, the combination of the rotating cylinder for the bag-tube provided with one or more pairs of folding-fingers adapted to be moved toward or from each other, a forming-plate also provided with forming-fingers adapted to be moved toward or from each other, means for operating said fingers at definite times during the formative action upon the bag-tube, operating means for the forming-plate adapted to cause the said plate to oscillate about its rear edge upon the surface of the cylinder during the rotary movement of said cylinder for the purpose of opening and forming the bottom of the bag-tube, and connecting mechanism for timing the movements of the rotating cylinder and the forming-plate.

†Sec. 4888. Before any inventor or discoverer shall receive a patent for his invention or discovery, he shall make application therefor, in writing, to the Commissioner of Patents, and shall file in the Patent Office a written description of the same, and of the manner and process of making, constructing, compounding, and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use the same; and in case of a machine, he shall explain the principle thereof, and the best mode in which he has contemplated applying that principle, so as to distinguish it from other inventions; and he shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery. The specification and claim shall be signed by the inventor and attested by two witnesses.

by the circuit court, and led it into the error of deciding that—

> Liddell's alleged invention covers every method of combining the rotary cylinder with the forming-plate to oscillate about its rear edge on the surface of the cylinder, and the claims are as broad as the invention.

It may be well before considering these contentions to refer again to the view which the circuit court and the circuit court of appeals had of Liddell's patent. The circuit court said that the "pith" of the invention—

> is the combination of the rotary cylinder with means for operating the forming-plate in connection therewith, limited, however, to means which cause the plate to oscillate about its rear edge on the surface thereof—

and distinguished the invention from the prior art, as follows:

> Aside from the cylinder and the forming-plate oscillating about its rear edge everything in these claims [the claims of the patent] is necessarily old in the arts.

It was this peculiar feature of novelty, it was said, which clearly distinguished it from all that went before it. This conclusion was in effect affirmed by the circuit court of appeals. The latter court said that the folding of the bottoms of S. O. S. paper bags had been accomplished in the prior art—

> both by a folding-plate reciprocating upon a plane, and by the operation of fingers upon a cylinder. The folding-plate and the cylinder had never been combined. The complainant urges with much probability that the reason why they had not been combined lay in the difficulty of operating a pivoted folding-form upon the surface of a cylinder. Two circles external to each can be in contact at but one point, while, in order that the folding-plate may operate, its end, as it moves upon a pivot, must remain for some distance in contact with the surface of the revolving cylinder. The problem may be solved by causing the pivot or axis of the folding-plate to yield away from the cylinder, or by causing the surface of the cylinder to be depressed away from the folding-plate. The patent in suit adopts the first device, the defendant's machine the second, and the crucial question before the court is this: Under all the circumstances of the case, is the second method, as compared with the first, within the doctrine of equivalents?

The court, as we have seen, concluded, from the character of the Liddell patent, that "the second method," that is, the method of the Continental Company's machine, was "within the doctrine of equivalents."

Counsel, however, contends that the circuit court, in its decision, virtually gave Liddell a patent for a function by holding that he was entitled to every means to cause the forming-plate to oscillate about its rear edge.

The distinction between a practically operative mechanism and its function is said to be difficult to define. (*Robinson on Patents*, sec. 144, *et seq.*) It becomes more difficult when a definition is attempted of a function of an element of a combination which are the means by which other elements are connected and by which they coact and make complete and efficient the invention. But abstractions need not engage us. The claim is not for a function, but for mechanical means to bring into working relation the folding-plate and the cylinder. This relation is the very essence of the invention, and marks the advance upon the prior art. It is the thing that never had been done before, and both the lower courts found that the machines of the Continental Company were infringements of it. It is not possible to say that the findings of those courts on that fact or on the fact of invention were clearly wrong, notwithstanding the great ability of the argument submitted against them.

2. The next contention of the petitioner is that a court of equity has no jurisdiction to restrain the—

> infringement of Letters Patent the invention covered by which has long and always and unreasonably been held in non-use * * * instead of being made beneficial to the art to which it belongs.

It will be observed that it is not urged that non-use merely of the patent takes jurisdiction from equity but an unreasonable non-use. And counsel concedes indulgence to a non-use which is "non-chargeable to the owner of the patent," as lack of means, or lack of ability or opportunity to induce others to put the patent to use. In other words, a question is presented, not of the construction of the law simply but of the conduct of the patentee as contravening the supposed public policy of the law.

The foundation of the argument of the petitioner is, as we have intimated, the policy of the patent laws executing the purpose of the Constitution of the United States to promote the progress of science and useful arts by securing for limited times to inventors the exclusive right to their respective discoveries. (Art. I, sec. 8.) And it is urged that the non-use of an invention for seventeen years (of course, the whole term of the patent may be selected to test the argument) is not to promote the progress of the useful arts, and the contention is that equity should not give its aid to defeat the policy of the statute, but remit the derelict patentee to his legal remedy. The penalty does not seem to fit the case. It is conceded that the patent is not defeated; only that a particular remedy is taken away. It is conceded that the remedy at law remains. It is conceded, therefore, that a right has been conferred. but it is said that it may be infringed, though the policy of the law is violated. The petitioner, further to sustain its side of the question, refers to the provision in section 4921, giving power to the courts to grant injunctions. The provision is:

> The several courts vested with jurisdiction of cases arising under the patent law shall have power to grant injunctions according to the course and principles of equity, to prevent the violation of any right secured by the patent, * * *

and the petitioner cites *Root* v. *Railway Company* (105 U. S., 183, 216) for the contention that the statute does not confer power to grant the injunction, except as incidental to some other equity.

It may be well, however, before considering what remedies a patentee is entitled to, to consider what rights are conferred upon him. The source of the rights is, of course, the law, and we are admonished at the outset that we must look for the policy of a statute, not in matters outside of it—not to circumstances of expediency and to supposed purposes not expressed by the words. The patent law is the execution of a policy having its first expression in the Constitution, and it may be supposed that all that was deemed necessary to accomplish and safeguard it must have been studied and provided for. It is worthy of note that all that has been deemed necessary for that purpose, through the experience of years, has been to provide for an exclusive right to inventors to make, use and vend their inventions. In other words, the language of complete monopoly has been employed, and though at first only a remedy at law was given for a violation of the right, a remedy in equity was given as early as 1819. There has been no qualification, however, of the right, except as hereinafter stated. An exception which, we may now say, shows the extent of the right—a right so explicitly given and so complete that it would seem to need no further explanation than the word of the

statute. It has, however, received explanation in a number of cases which bring out clearly the services rendered by an inventor to the arts and sciences and to the public. Those cases declare that he receives nothing from the law that he did not have before, and that the only effect of the patent is to restrain others from manufacturing and using that which he has invented. (*United States* v. *Bell Telephone Company*, 167 U. S., 224, 249.) And it was further said in that case that the inventor could have kept his discovery to himself, but to induce a disclosure of it Congress has, by its legislation, made in pursuance of the Constitution, guaranteed to him an exclusive right to it for a limited time, and the purpose of the patent is to protect him in this monopoly—not to give him a use which he did not have before, "but only to separate to him an exclusive use." And it was pointed out that the monopoly which he receives is only for a few years. The court further said:

> Counsel seem to argue that one who has made an invention and thereupon applies for a patent therefor occupies, as it were, the position of a quasi trustee for the public; that he is under a sort of moral obligation to see that the public acquires the right to the free use of that invention as soon as is conveniently possible. We dissent entirely from the thought thus urged. The inventor is one who has discovered something of value. It is his absolute property. He may withhold a knowledge of it from the public, and he may insist upon all the advantages and benefits which the statute promises to him who discloses to the public his invention.

And the same relative rights of the patentee and the public were expressed in prior cases, and we cite them because there is something more than the repetition of the same thought by doing so. It shows that whenever this Court has had occasion to speak it has decided that an inventor receives from a patent the right to exclude others from its use for the time prescribed in the statute.

> And for his exclusive enjoyment of it during that time the public faith is forever pledged. (Chief Justice Marshall in *Grant* v. *Raymond*, 6 Pet. 243, p. 242.)

And, in *Bloomer* v. *McQuewan*, (14 How., 539,) Chief Justice Taney said:

> The franchise which the patent grants consists altogether in the right to exclude every one from making use or vending the thing patented without permission of the patentee. This is all he obtains by the patent.

In *Patterson* v. *Kentucky*, (97 U. S., 501,) it was said that an inventor's own right to the use was not enlarged or affected by a patent. See also *Willson* v. *Rouseau*, (4 How., 646, 674;) *Seymour* v. *Osborne*, (11 Wall., 516, 533;) *Cammeyer* v. *Newton*, (94 U. S., 225;) *Densmore* v. *Scofield*, (102 U. S., 375.)

It may be said that these cases deal only with the right of a patentee, and not with the remedy, whether at law or equity, that he may, at any time, or in all his situations, be entitled to. And there is no case in this Court that explicitly does so. However, in the three last cases cited it was decided that patents are property, and entitled to the same rights and sanctions as other property.

In *Bement* v. *National Harrow Company*, (186 U. S., 70, 90,) adopting the language of the Circuit Court of Appeals for the Sixth Circuit in *Heaton Peninsular Company* v. *Eureka Specialty Company*, (77 Fed., 294,) it was said:

> If he [a patentee] sees fit, he may reserve to himself the exclusive use of the invention or discovery. If he will neither use his device nor permit others to use it, he has but suppressed his own, * * * his title is exclusive, and so clearly within the constitutional provisions in respect to private property that he is neither bound to use his discovery himself or permit others to use it. The dictum found in *Hoe* v. *Knapp*. (17 Fed., 204.) is not supported by reason or authority.

In *Hoe* v. *Knapp*, Judge Blodgett refused an injunction against the infringer, holding that—

> under a patent which gives a patentee a monopoly, he is bound to either use the patent himself or allow others to use it on reasonable terms.

In a number of the circuit courts of appeals it has been decided that as a consequence of the exclusive right of the patentee he is entitled to an injunction against an infringer, even though he (the patentee) does not use the patented device. The cases are inserted in the margin,* also decisions of the circuit courts,† some of which define the right of a patentee and others holding that as incident to the right he is entitled to an injunction, though he had not used his invention.

Counsel for petitioner cites counter cases, which he contends are more direct authority.‡ He also reviews the cases cited by respondent, and contends that they are not relevant to the question in the case at bar, which is not that of the simple non-use of a patent, but a long and unreasonable non-use of it. Judge Aldrich, in his dissenting opinion in the court of appeals, excluded the cases as authoritative for a different reason than counsel expresses. The learned judge said:

> Simple non-use is one thing. Standing alone, non-use is no efficient reason for withholding injunction. There are many reasons for non-use which, upon explanation, are cogent, but when acquiring, holding and non-use are only explainable upon the hypothesis of a purpose to abnormally force trade into unnatural channels—a hypothesis involving an attitude which offends public policy, the conscience of equity, and the very spirit and intention of the law upon which the legal right is founded—it is quite another thing. This is an aspect which has not been considered in a case like the one here.

Respondent attacks the conclusion of Judge Aldrich and that of petitioner, and insists that there is nothing in the record to show that the non-use of the patent was either unreasonable or sinister. A very strong argument is presented by respondent. Its counsel pointedly say that "there is no record evidence at all on the subject or character of complainants' [respondents'] use or non-use," and points out that neither the assignments of error on appeal to the circuit court of appeals nor the petition for rehearing in that court presented the question that the injunction should be denied on the ground of mere non-use or unreasonable non-use. Let us see what the courts say and what petitioner says. The circuit court says:

> We have stated that no machine for practical manufacturing purposes was ever constructed under the Liddell patent. The record also shows that the complainant, so to speak, locked up its patent. It has never attempted to make any practical use of it, either itself or through licensee, and, apparently, its proposed policy has been to avoid this. In this respect it has not the common excuse of a lack of means, as it is unquestioned that the complainant is a powerful and wealthy corporation. We have no doubt that the complainant stands in the common class of manufacturers who accumulate patents merely for the purpose of protecting their general industries and shutting out competitors.

The comment of the circuit court of appeals is:

> The machine of the patent in suit is mechanically operative, as was shown experimentally for the purposes of this suit, but it has not been put into commercial use. No reason for the nonuser appears in the evidence, so far as we can discover. The defendant's machine has been an assured commercial success for some years. It was suggested at the oral argument that an unused patent is not entitled to the protection given by the extraordinary remedy of an injunction. This contention was not

*Edison v. Mt. Morris Co., 57 F. R., 642, 644 (2d Cir.); Heaton-Peninsular v. Eureka, 77 F. R., 294 (6th Cir.); Crown Cork & Seal Co. v. Aluminum Stopper Co., 108 F. R., 845, 868 (4th Cir.); Fuller v. Berger, 120 F. R., 274, 277 (7th Cir.); Lamson Consolidated Store Service Co. v. Hillman, 123 F. R., 416, 422 (7th Cir.); Victor Talking Machine Co. v. Fair, 123 F. R., 425 (7th Cir.); U. S. Seeded Raisin Co. v. Griffin, 126 F. R., 364, 368 (9th Cir.); Rupp v. Elliott, 131 F. R., 730 (6th Cir.); Munroe v. Railway Appliance Co., 145 F. R., 646, 648 (7th Cir.); Filter Co. v. Jackson, 140 F. R., 340, 343 (8th Cir.); U. S. Fastener Co. v. Bradley, 140 F. R., 222 (2d Cir.); Rubber Tire Co. v. Milwaukee, 154 F. R., 358, 361 (7th Cir.); Indiana Mfg. Co. v J. I. Case Co., 154 F. R., 365 (7th Cir.).

†Carr v. Rice, 1 Fish., 198, 200 (N. Y.); Wintermute v. Redington, 1 Fish., 243 (Ohio); Ransom v. Mayor, 1 Fish., 255 (N. Y.); Pitts v. Wemple, 2 Fish., 15 (Ill.); Whitney v. Emmett, 1 Bald., 304; Broadnax v. Central Stock Yard, 4 F. R., 214, 216 (N. J.); *in re* Brosnahan, Jr., 18 F. R., 62 (Justice Miller) (Mo.); Consolidated Roller Mill Co. v. Coombs, 39 F. R., 803 (Mich.); Wirt v. Hicks, 46 F. R., 71 (N. Y.); Campbell v. Manhattan Railway, 49 F. R., 930 (N. Y.); Edison v. Mt. Morris, 57 F. R., 642, 644 (N. Y.); Masseth v. Johnston, 59 F. R., 612 (Pa.); Bonsack v. Smith, 70 F. R., 383 (N. C.); Columbia v. Freeman, 71 F. R., 302, 306 (Mo.); Wyckoff v. Wagner, 88 F. R., 515 (N. Y.); White v. Peerless, 111 F. R., 190 (Pa.); Brodrick v. Mayhew, 131 F. R., 92 (Wis.); National Co. v. Daab, 136 F. R., 891, 895 (N. J.); Hoe v. Miehle, 141 F. R., 115 (N. Y.); Hartman v. Park & Son, 145 F. R., 358 (Ky.).

‡Isaacs v. Holland, 4 Wash., 54; Ogle v. Eye, 4 Wash., 584; Mott v. Bennett, 2 Fisher, 642; Sullivan v. Redfield, 1 Paine, 441; Magic Ruffle Co. v. Daughlas, 2 Fisher, 333; Hoe v. Knap, 27 Fed., 204; Germain v. Wilgus, 67 Fed., 600, C. C. A. Ninth Circuit; Campbell Printing Press Co. v. Duplex Printing Press Co., 86 Fed., 331; Robinson on Patents, vol. 1, sec. 43; Curtis on Patents, sec. 320 of the two first editions and sec. 406 of the third and fourth editions.

made in the defendant's printed brief. While this question has not been directly passed upon, so far as we are informed, in any considered decision of the Supreme Court, yet the weight of authority is in favor of the complainant.

The cases were cited.

If these statements are to be reconciled it can only be by supposing that the circuit court inferred the motive of the respondents from the unexplained non-use of the patent. But petitioner has given its explanation of the purpose of respondent. Quoting Judge Aldrich, that the patent in suit has been "deliberately held in non-use for a wrongful purpose," petitioner asks:

What was that wrongful purpose? It was the purpose to make more money with the existing old reciprocating Lorenz & Honiss machines and the existing old complicated Stilwell machines than could be made with new Liddell machines, when the cost of building the latter was taken into account. And this purpose was effective to cause the long and invariable non-use of the Liddell invention, notwithstanding that new Liddell machines might have produced better paper bags than the old Lorenz & Honiss machines or the old Stilwell machines were producing.

But, granting all this, it is certainly disputable that the non-use was unreasonable or that the rights of the public were involved. There was no question of a diminished supply or of increase of prices, and can it be said, as a matter of law, that a non-use was unreasonable which had for its motive the saving of the expense that would have been involved by changing the equipment of a factory from one set of machines to another? And even if the old machines could have been altered, the expense would have been considerable. As to the suggestion that competitors were excluded from the use of the new patent, we answer that such exclusion may be said to have been of the very essence of the right conferred by the patent, as it is the privilege of any owner of property to use or not use it, without question of motive. (*Connolly* v. *Union Sewer Pipe Co.*, 184 U. S., 546.)

The right which a patentee receives does not need much further explanation. We have seen that it has been the judgment of Congress from the beginning that the sciences and the useful arts could be best advanced by giving an exclusive right to an inventor. The only qualification ever made was against aliens in the act of 1832. That act extended the privilege of the patent law to aliens, but required them—

to introduce into public use in the United States the invention or improvement within one year from the issuing thereof—

and indulged no intermission of the public use for any period longer than six months. A violation of the law rendered the patent void. The act was repealed in 1836. It is manifest, as is said in *Walker on Patents*, section 106, that Congress has not "overlooked the subject of non-user of patented inventions."

And another fact may be mentioned. In some foreign countries the right granted to an inventor is affected by non-use. This policy, we must assume, Congress has not been ignorant of nor of its effects. It has, nevertheless, selected another policy; it has continued that policy through many years. We may assume that experience has demonstrated its wisdom and beneficial effect upon the arts and sciences.

From the character of the right of the patentee we may judge of his remedies. It hardly needs to be pointed out that the right can only retain its attribute of exclusiveness by a prevention of its violation. Anything but prevention takes away the privilege which the law confers upon the patentee. If the conception of the law that a judgment in an action at law is reparation for the trespass, it is only for the particular trespass that is the ground of the action. There may be other trespasses and continuing wrongs and the vexation of many actions. These are well-recognized grounds of equity jurisdiction, especially in patent cases, and a citation of cases is unnecessary. Whether, however, a case cannot arise where, regarding the situation of the parties in view of the public interest, a court of equity might be justified in withholding relief by injunction we do not decide. Decree affirmed.

Mr. Justice Harlan thinks that the original bill should have been dismissed. He thinks the facts are such that the court should have declined, upon grounds of public policy, to give any relief to the plaintiff by injunction, and he dissents from the opinion and judgment.

Interference Notices.

Department of the Interior,
United States Patent Office,
Washington, D. C., September 19, 1908.

Koster & Bial, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Hugo Goldschmidt, of 506 South Main street, Los Angeles, Cal., for registration of a trade-mark and a trade-mark registered to Koster & Bial, of 110 West Twenty-fourth street, New York, N. Y., and the notice of said declaration sent by registered mail to the said Koster & Bial having been returned undelivered, notice is hereby given to the said Koster & Bial, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the Official Gazette for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

Department of the Interior,
United States Patent Office,
Washington, D. C., September 5, 1908.

William M. Marcus, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the J. G. Haas Soap Company, of Prairie avenue and Benedict street, St. Louis, Mo., for registration of a trade-mark and a trade-mark registered to William M. Marcus, of Talladega, Ala., and the notice of said declaration sent by registered mail to the said William M. Marcus having been returned undelivered, notice is hereby given to the said William M. Marcus, his assigns or legal representatives, that if he or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the Official Gazette for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

Department of the Interior,
United States Patent Office,
Washington, D. C., August 27, 1908.

George H. Taylor, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Frederick O. Hanson, of Springfield, Mass., and Holyoke, Mass., for registration of a trade-mark and a trade-mark registered to George H. Taylor, of 207 Monroe street, Chicago, Ill., and the notice of said declaration sent by the Patent Office by registered mail to the said George H. Taylor having been returned undelivered, notice is hereby given to the said George H. Taylor, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the Official Gazette for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

Department of the Interior,
United States Patent Office,
Washington, D. C., August 25, 1908.

Douglas & Kingsland, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Geo. H. Baker, of 48-52 Edwards street, New Haven, Conn., for registration of a trade-mark and a trade-mark registered to Douglas & Kingsland, of Middletown, Conn., and the notice of said declaration sent by registered mail to the said Douglas & Kingsland having been returned undelivered, notice is hereby given to the said Douglas & Kingsland, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the Official Gazette for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

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TO CITIZENS OF THE UNITED STATES.

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Alaska, District of	....	....	New Jersey	29	4
Arizona Territory	....	....	New Mexico Ter't'y	....	....
Arkansas	1	....	New York	100	32
California	14	....	North Carolina	1	....
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Connecticut	12	....	Ohio	46	7
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Illinois	44	6	South Carolina	....	1
Indiana	20	3	South Dakota	5	1
Iowa	15	....	Tennessee	4	2
Kansas	3	1	Texas	4	1
Kentucky	3	....	Utah	3	....
Louisiana	1	....	Vermont	1	....
Maine	2	1	Virginia	11	1
Maryland	8	4	Washington	9	1
Massachusetts	39	5	West Virginia	2	....
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Nevada	....	....			

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Belgium	3	....	Newfoundland	....	....
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Canada	9	....	Norway	....	....
Cape Colony	....	....	Persia	....	....
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China	....	....	Roumania	....	....
Costa Rica	....	....	Russia	....	....
Cuba	....	....	Scotland	....	....
Denmark	1	....	South Australia	....	....
Ecuador	....	....	Spain	....	....
England	15	3	Sweden	....	....
France	10	....	Switzerland	1	....
Germany	19	....	Transvaal, South Africa	....	....
Haiti	....	....	Victoria	....	....
Ireland	1	....	Western Australia	....	....
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NOTICES.

Department of the Interior,
United States Patent Office.
Washington, D. C., September 30, 1908.

Attention is called to the amendment on the 23d instant (136 O. G., 853) of the third paragraph of Rule 47, which amendment requires that ALL application papers filed on and after December 1, 1908, must be attached together and a ribbon or tape passed one or more times through all the sheets of the application and the ends of said ribbon or tape brought together under the seal before the latter is affixed or impressed, or each sheet must be impressed with the official seal of the officer before whom the oath was taken, or if he is not provided with a seal then each sheet must be initialed by him.

EDWARD B. MOORE,
Commissioner.

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Printed Copies of Patents.

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APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business October 6, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Sept. 22	June 10	795
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Sept. 10	Sept. 8	152
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Sept. 10	July 23	261
135	VIII. Beds; Chairs; Furniture, Kitchen and Table Articles; Store Furniture.	Sept. 8	July 1	420
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Masonry and Concrete Structures; Tents, Canopies, Umbrellas, and Canes.	Sept. 5	July 3	477
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Sept. 4	July 6	275
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Aug. 31	Aug. 10	263
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Aug. 25	Apr. 27	695
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers	Aug. 24	July 24	399
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Aug. 22	Aug. 8	360
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Aug. 22	May 18	683
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Aug. 20	July 16	691
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Aug. 19	July 14	266
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Aug. 17	July 7	604
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Aug. 17	May 16	370
125	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Aug. 17	Apr. 13	732
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Aug. 11	June 25	707
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Aug. 10	July 20	560
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Aug. 10	July 8	354
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Aug. 10	May 9	603
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Aug. 7	July 28	725
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Aug. 7	June 22	494
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Aug. 6	July 8	404
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Aug. 5	July 2	420
167	V. Bookbinding; Harvesters; Jewelry; Music.	Aug. 5	May 12	504
322	X. Carriages and Wagons	Aug. 3	July 7	625
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Aug. 1	July 2	551
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	July 30	July 17	592
238	XIX. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	July 29	Aug. 10	460
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	July 28	July 16	398
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	July 28	June 23	541
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	July 20	June 4	663
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	July 16	July 15	506
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	July 16	June 4	702
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	July 15	May 9	557
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	July 14	May 25	590
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	July 6	Apr. 7	735
321	XXXIX. Baths and Closets; Water Distribution.	July 2	Apr. 16	736
109	XVI. Telegraphy; Telephony	June 15	May 26	488
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	June 9	Mar. 6	470
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	June 8	May 4	718

Total number of applications awaiting action 21,546

161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks	Oct. 1	Sept. 2	509
	Designs	Oct. 1	Aug. 8	133
	Labels and Prints	Oct. 1	Sept. 30	24

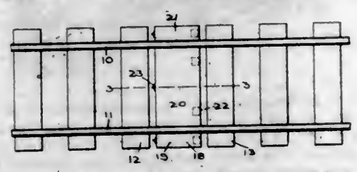
Money by Mail.

Money sent by mail to the Patent Office will be at the risk of the sender. Letters containing money should be registered.

PATENTS

GRANTED OCTOBER 13, 1908.

900,690. HOSE-BRIDGE. MOSES T. ANDRICK, Terre Haute, Ind. Filed Apr. 18, 1908. Serial No. 427,866.



A device of the character described comprising an integrally formed elongated U-shaped receptacle having a straight passage-way therethrough disposed beneath and in contact with the rails of a track, a plurality of hingedly supported covers disposed between the rails on said receptacle and means for securing said covers in a closed position.

900,691. FRAME FOR HOLDING WIRE-CLOTH OR OTHER FABRIC. CHARLES C. ARMSTRONG, Marysville, Ohio. Filed Feb. 18, 1907. Serial No. 358,053.

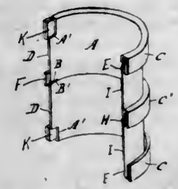


1. In combination in a frame for holding a fabric, a main frame member formed of sheet metal having a channeled outer portion and a rolled inner portion, a clamping member having a rolled outer portion in pivotal connection with the channeled portion of the main member and having a rolled inner portion co-acting with the rolled inner portion of the main frame member, the said members having lateral resilience and the clamping member being held solely by springing the same into connection with the main frame member, substantially as described.

2. In combination in a frame for holding a fabric, a main frame member formed of sheet metal having a channeled outer portion and a rolled inner portion, a clamping member having a rolled outer portion in pivotal connection with the outer portion of the main frame member and having a rolled inner portion coacting with the rolled inner portion of the main frame member and lying with its crest slightly below that of the rolled inner portion of the main frame member, the said members having lateral resilience and the clamping member being held solely by springing the same into connection with the main frame member, substantially as described.

900,692. CYLINDRICAL CASK. WILLIAM G. AVERY, Painesville, Ohio. Filed Oct. 19, 1905. Serial No. 283,383.

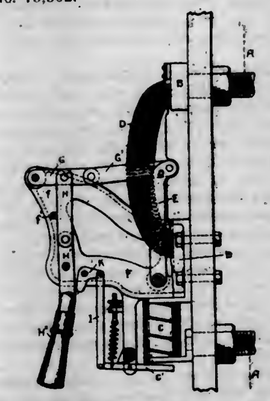
1. A cask of the type set forth comprising three annular reinforcements in the form of hoops made integral with the body of the cask by bending the metal upon itself, one of said hoops positioned at the top and one at the bottom of the cask and one positioned intermediate the top and bottom thereof, said hoops having tongues formed at one end thereof, receiving troughs formed contiguous the opposite ends of said top and bottom hoops and a receiving socket formed on the opposite end of said intermediate hoop and adapted to receive said tongues, and means for securing said tongues within said troughs and sockets.



2. A cask of the type set forth comprising reinforcements in the form of hoops made integral with the body of the cask by bending the metal upon itself, interlocking ends provided upon said hoops and means for securing said ends in a locked position.

3. A cask of the type set forth comprising reinforcements in the form of hoops made integral with the body of the cask by bending the metal upon itself, said hoops having tongues formed at one end thereof, receiving sockets formed on the opposite ends of said hoops adapted to receive said tongues, and means for securing said tongues within said sockets.

900,693. CIRCUIT-BREAKER. CHARLES C. BADEAU, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 16, 1901. Serial No. 75,502.



1. In an electric switch, the combination with fixed and movable contacts, of inter-operating toggles connected in tandem to multiply the force exerted on the movable contact one of said toggles being overset in the closed position of the switch to lock the contacts in engagement.

2. In an electric switch, the combination with coöperating contacts, of a main toggle and an auxiliary toggle connected in tandem for actuating one of said contacts, one of said toggles being slightly underset and the other slightly overset when the contacts are in engagement.

3. In an electric switch, the combination with coöperating contacts, of a main actuating toggle for one of said

contacts slightly underset when the contacts are in engagement, and an auxiliary actuating toggle for the main toggle slightly overset when the contacts are in engagement.

4. In an electric switch, the combination with stationary movable contacts, of a main toggle connected with said movable contact, an auxiliary toggle for operating the main toggle and slightly overset to lock the main toggle, and an operating handle rigidly connected with one of the links of said auxiliary toggle to increase the leverage of said handle on the main contact.

5. An automatic circuit-breaker comprising a main contact, a main toggle connected thereto, an auxiliary actuating toggle for multiplying the force of the main toggle slightly overset to lock the main toggle, an operating handle connected to said auxiliary toggle, and an electro-responsive tripping device for forcing the auxiliary toggle to underset position to release both toggles.

900,694. SPOT-SETTING MACHINE. EVERETT A. BARNER, Quincy, Mass., assignor to Standard Rivet Company, Boston, Mass., a Corporation of New Hampshire. Filed Feb. 21, 1907. Serial No. 358,558.



1. In a machine of the class described, a stationary hopper having an outlet opening in its side wall, a raceway in communication with the outlet in said hopper, and a bridge in said hopper adjacent the outlet and grooved at its under side to receive the upturned legs of the spots, when said legs are positioned one behind the other, combined with a detachable spot introducing guideway located in the hopper and longitudinally grooved to receive the head of a spot with its legs upturned, and means to position the legs of a spot to enter the groove in said bridge.

2. In a machine of the class described, a hopper having a bridge grooved at its under side and provided at its upper end with a horn presenting a shoulder, a detachable spot-introducing guideway crossing the bottom of the hopper and extended under the bridge beneath the groove therein, and a raceway to receive the spots from said hopper, combined with an agitator having spiral spring fingers adapted in their movement to sweep up over the shoulder of said horn and scatter any spots that may be clogged in the guideway at the upper end of said bridge.

3. In a machine of the class described, a hopper grooved transversely in its bottom, a raceway in communication with said hopper in line with such groove, combined with a detachable spot-introducing guideway adapted to be seated in said groove and having a longitudinal channel of a size to receive the heads of the particular sized spots to be introduced into the raceway.

4. In a machine of the class described, a hopper, having a slot in its side wall and grooved transversely in its bottom, and a raceway in communication with said hopper in line with said groove, combined with a detachable spot-introducing guideway adapted to be seated in the transverse groove and having a longitudinal channel of a size to receive the heads of the particular sized spots to be introduced into the raceway, and a bridge grooved at its under side to receive the legs of the spots passing thereunder on their way into said raceway, the groove in the bridge maintaining the legs one behind the other during such passage.

5. In a machine of the class described, a stationary hopper having an outlet in its side wall, and a detachable spot-introducing guideway at the bottom of the hopper having a channel of a size to receive the heads of the particular sized spot to be introduced into the raceway, combined with a raceway external to the hopper adjacent the outlet thereof, said raceway being in line and communicating with the channel of the guideway.

900,695. OIL-FURNACE. EDWARD A. BARNES, Fort Wayne, Ind., assignor to General Electric Company, a Corporation of New York. Filed Feb. 19, 1906. Serial No. 301,805.



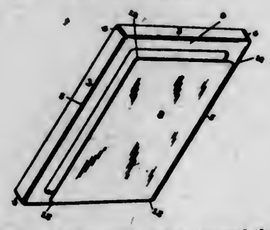
1. In a melting furnace, the combination of a cylindrical fire chamber, an exit flue leading from the upper portion of the chamber, a helical duct or channel in the inner wall of the lower portion of the chamber which terminates below the opening of the exit flue, the wall above the end of the duct being smooth or unchanneled, and a burner nozzle which discharges into the beginning of the duct to generate a whirling or rotating flame at the bottom of the fire chamber.

2. In a crucible furnace having an exit flue, the combination of a chamber for the crucible which affords free passage for the flame around it and over its top to the exit flue, means which supports the bottom of the crucible above the floor of the chamber, a helical channel or duct in the lower portion of the wall of the chamber which terminates adjacent the bottom of the crucible and delivers the flame in a whirling column about said crucible, and a burner nozzle which discharges into the channel to generate the whirling or rotating column of flame.

3. In a crucible furnace, the combination of a cylindrical chamber, an exit flue leading from the chamber at a point below its top to bend the flame down over the top of the crucible, a helical channel in the lower portion of the wall of the chamber which terminates below the exit flue, and a burner nozzle which discharges tangentially into the beginning of the channel to generate a whirling flame at the bottom of the chamber.

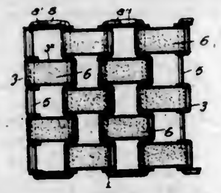
4. In a crucible furnace, the combination of a cylindrical chamber, a radially extending exit flue in the chamber wall located below its top to bend the flame down over the top of the crucible, a support which holds the bottom of the crucible above the floor of the chamber, a helical channel in the inner wall of the chamber extending from a point adjacent the floor to a point adjacent the top of the support, and a burner nozzle discharging into the lower end of the channel to generate a whirling flame at the bottom of the chamber.

900,696. SAFE. JACOB BAUM, Cincinnati, Ohio. Filed Feb. 27, 1906. Serial No. 303,255.



In a safe, a flanged front plate formed from a single piece of sheet metal and having a plate sheared therefrom and hinged thereon to form a door, substantially as described and for the purposes set forth.

900,697. METALLIC FABRIC. CLARENCE E. BEDIENT, Chicago, Ill. Filed May 2, 1906. Serial No. 314,880.



1. A metallic fabric composed of transverse rows of units, each unit comprising two U-shaped members arranged with their open side facing each other and the two plain side pieces the units of one row alternating with the spaces between the unit of the adjacent row and the adjacent U-shaped members of adjacent rows facing in opposite directions and the rods passing through the oppositely facing U-shaped members, substantially as described.

2. In a metallic fabric the combination of units composed of metal strips, rods or wires connecting said units, said rods or wires being spaced apart, and blocks having forked opposite ends engaging the said rods or wires and being removable therefrom, and replaceable into connection therewith without removing the said rods, substantially as described.

3. In a metallic fabric composed of metal strips forming units and connected by rods or wires, a coupling consisting of a sleeve with the ends of the rods overlapping therein and extended beyond the ends of the sleeve and bent back thereon.

4. A fabric composed of units, each consisting of two rectangular pieces and two plain pieces extending between the rectangular pieces with rods passing through said rectangular and plain pieces and blocks fitting within the said units and having notched ends engaging the rods, substantially as described.

900,698. GUIDING ATTACHMENT FOR CULTIVATORS. RICHARD E. BERRY, Ashgrove, Va. Filed June 24, 1908. Serial No. 440,141.



1. An attachment for pivotal axle cultivators comprising, in combination with the stub axles, bars pivotally connected to the foot rests of the axles and extending rearward of the machine and affording means for guiding the apparatus, as set forth.

2. An attachment for pivotal axle cultivators comprising, in combination with the stub axles, bars pivotally connected to the foot rests of the axles and pivoted together at their rear ends, and a handle connected to the outer end of one of said bars, as set forth.

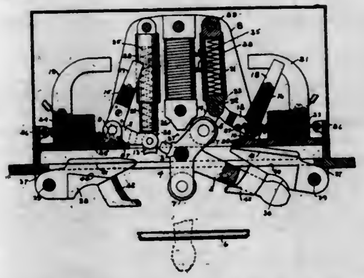
3. An attachment for pivotal axle cultivators comprising, in combination with the stub axles, bars pivotally connected to the foot rests of the stub axles and having their rear ends pivoted together, said bars intersecting each other, and means for holding the same in adjusted positions, as set forth.

4. An attachment for pivotal axle cultivators comprising, in combination with the stub axles, bars pivotally connected to the foot rests of the stub axles and having their rear ends pivoted together, said bars intersecting each other, collars swiveled together, one of said bars passing through each collar, a set screw carried by each collar and adapted to hold a bar in an adjusted position, as set forth.

5. An attachment for pivotal axle cultivators comprising, in combination with the stub axles, bars pivotally connected to the foot rests of the stub axles and having their rear ends pivoted together, said bars intersecting each other, collars swiveled together, one of said bars passing through each collar, a set screw carried by each collar adapted to hold a bar in an adjusted position, and a handle connected to the rear end of one of said bars, as set forth.

[Claims 6 to 8 not printed in the Gazette.]

900,699. CIRCUIT-CONTROLLER. ALEXANDER BEVAN, Providence, R. I. Filed Sept. 16, 1907. Serial No. 393,005.



1. A circuit controller comprising an actuating lever, a circuit terminal, a circuit closer, means whereby the movement of said lever causes said closer to engage said terminal and complete a circuit, and means for absorbing the excess momentum of said lever at the end of its effective stroke.

2. A circuit controller comprising an actuating lever, a circuit terminal, an insulated circuit closer, means whereby the movement of said lever will cause said closer to engage said terminal and complete a circuit, and yielding means for absorbing the excess momentum of said lever at the end of its effective stroke.

3. A circuit controller comprising an actuating lever, a circuit terminal, an insulated circuit closer, means whereby the movement of said lever causes said closer to engage said terminal and complete a circuit, means adapted to yield when said lever is thrown violently against the same, and means on said yielding means for engaging said lever to prevent a rebound of the same.

4. A circuit controller comprising an actuating lever, a circuit terminal on either side of said lever, an insulated circuit closer for each terminal, means whereby a movement of said lever will cause one of said closers to engage its terminal and complete a circuit, and means for absorbing the excess momentum of said lever at the end of its effective stroke when thrown in either direction.

5. In a circuit controller, an actuating lever, an insulated circuit closer operated through the movement of said lever, an inertia bumper arranged to yield and absorb the excess motion of said lever when struck by the same whereby rebound is prevented.

[Claims 6 to 22 not printed in the Gazette.]

900,700. TURBINE-ROTOR. WILLIAM A. BOLE, Pittsburg, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Mar. 18, 1905. Serial No. 250,822.

1. In an elastic fluid turbine, a drum consisting of two Z-shaped sections combined to resist lateral distortion when subjected to the actions of centrifugal force and lateral fluid pressure.

2. In an elastic fluid turbine, a drum or cylinder consisting of two transversely connected Z-shaped cast sections.



3. In an elastic fluid turbine, a drum comprising symmetrically-formed and transversely-connected Z-shaped sections.

4. In an elastic fluid turbine, a drum comprising two symmetrically-formed and transversely-connected Z-shaped sections.

5. In an elastic fluid turbine, a drum consisting of symmetrically-formed Z-shaped sections combined to resist lateral distortion when subjected to the action of centrifugal force and lateral fluid pressure.

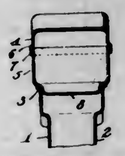
[Claims 6 to 13 not printed in the Gazette.]

900,701. FOOD COMPOUND. COLONEL E. BRIGHT, Columbus, Ohio. Filed Nov. 18, 1905. Serial No. 288,003.

1. A food compound containing animal fat, and a cereal containing a fat comprising a high percentage of olein, the ingredients being present in such proportions that the stearin content of said product is reduced approximately 50% from the stearin in the uncompounded animal fat and said ingredients being boiled, substantially as described.

2. A food compound containing boiled animal fat and oat meal, the fat content of said food product containing between 10 and 15% of stearin.

900,702. ARM-REST. EDWARD G. BUDD, Philadelphia, Pa., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 6, 1906. Serial No. 333,449.



1. An arm-rest consisting of two sheet-metal parts secured together at their edges and pressed to provide on each part a body portion and a flange extending entirely around the same and turned at an angle thereto and to form an integral projection on the bottom of the arm-rest adapted to coact with the upper end of a seat-end to secure the arm-rest in position, substantially as set forth.

2. The combination of a seat-end consisting of two sheet-metal plates secured together with open space between them, and an arm-rest consisting of two sheet-metal parts secured together at their edges, said parts being pressed to provide an integral projection on the bottom of the arm-rest, and said arm-rest being secured upon the seat-end with said projection entering the open upper end of the seat-end, substantially as set forth.

3. The combination of a seat-end consisting of two sheet-metal plates secured together with open space between them, and an arm-rest consisting of two sheet-metal parts secured together at their edges and pressed to provide on each part a body-portion and a flange extending entirely around the same and turned at an angle thereto and to form an integral projection on the bottom of the arm-rest, said arm-rest being secured upon the seat-end with said projection entering within the open upper end of the seat-end, substantially as set forth.

4. The combination of a seat-end formed of two sheet-metal plates secured together with open space between them, an arm-rest consisting of two sheet-metal parts secured together at their edges, each of said parts being pressed into form to provide a body-portion and an integral flange about the sides and ends of the body-portion turned at an angle thereto and the division between said parts being in a horizontal plane, said arm-rest having an integral projection on the bottom thereof, and means for securing the arm-rest upon the seat-end with said projection entering within the upper end of the seat-end between said plates, substantially as set forth.

5. The combination of a seat-end, formed of two sheet-metal plates secured together with open space between them, and an arm-rest consisting of two sheet-metal parts each pressed into form to provide a body-portion and an integral flange about said body-portion, and said parts being secured together with open space between the body-portions thereof and with said flanges closing the ends of the arm-rest, and said arm-rest having an integral projection on the bottom thereof entering between the plates of said seat-end to position the arm-rest thereon, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

900,703. ARM-REST. EDWARD G. BUDD, Philadelphia, Pa., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 6, 1906. Serial No. 333,450.



1. An arm-rest consisting of two sheet-metal parts having abutting edges, each of said parts being pressed into form to provide a body-portion and an integral inwardly turned flange about said body-portion, a metallic strip underlying the abutting edges of said parts, and means securing said edges to said strip, substantially as described.

2. An arm-rest consisting of two sheet-metal parts having their edges abutting, a metallic partition within said parts having an integral flange underlying said abutting edges, and means securing said edges to said flange, substantially as described.

3. An arm-rest consisting of two sheet-metal parts having their edges abutting, a metallic strip underlying said edges, means for securing said edges to said strip, a metallic partition mounted within said parts and a hook extending within said arm-rest and engaging said partition, substantially as described.

4. A hollow arm-rest formed of metal, a metallic partition secured in position within the arm-rest, and a member extending within the arm-rest and engaging said partition to secure the arm-rest in position, substantially as described.

5. An arm-rest consisting of two sheet-metal parts pressed into form and secured together at their edges, a metallic partition mounted within the arm-rest, and a member extending within the arm-rest and engaging said partition to secure the arm-rest in position, substantially as described.

900,704. ARM-REST. EDWARD G. BUDD, Philadelphia, Pa., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 25, 1906. Serial No. 336,105.



1. An arm-rest comprising an upper part formed of non-metallic material and a lower part made of metal, said upper part having a tongue on the bottom thereof entering within the lower part, and the side walls of said lower part having ribs therein with which the end of said tongue is adapted to coact, substantially as described.

2. An arm-rest comprising an upper part formed of wood impregnated with a fire-proofing compound and having a tongue on the bottom thereof, a lower part consisting of sheet-metal pressed to provide a bottom portion, a flange around said bottom portion forming the side and end walls of the arm-rest and two ribs in said flange forming shoulders, and means for securing said parts together with said tongue on the upper part extending within the lower part, said bottom portion of the lower part being adapted to coact with a supporting structure, substantially as described.

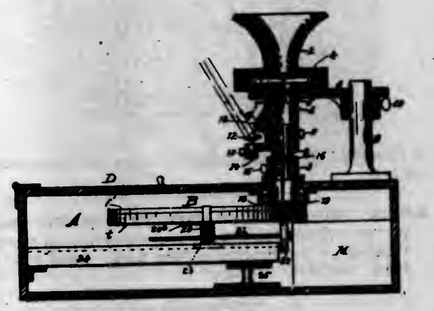
900,705. DUST-PAN. LEE J. CHAPMAN, Columbus, Ohio. Filed Feb. 14, 1907. Serial No. 357,407.



1. A device of the class described comprising a pan, a hinge element thereon consisting of a strip of sheet metal doubled on itself and angularly bent at the front to form an upwardly projecting eye, one of the thicknesses of the metal being extended in rear of the doubled portion and bowed to form a rear eye, a handle having a pintle arranged in the front eye of the hinge element, an operating rod connected with the rear eye of the hinge element and extending to the upper portion of the handle, and means arranged at the upper portion of the handle for guiding and moving the operating rod.

2. A device of the class described comprising a hooded pan having an inclined top, a handle hinged to the top of the pan at the front thereof and provided near its upper end with an eye, an operating rod also hinged to the top of the pan at a point below and in rear of the point at which the handle is hinged, the lower end of the rod being spaced from the lower end of the handle to cause the rod to assume an inclined position when the handle is vertical, and the said rod being extended to the upper portion of the handle and passing through the said eye and bent to engage the same to limit the forward swing of the handle, whereby the latter is supported in an upright position.

900,706. PROCESS OF MAKING SOUND-REPRODUCING RECORDS. FRANCIS W. H. CLAY, Whitehall, Ky. Filed May 23, 1900. Serial No. 17,773.



1. The process of making sound reproducing records by photographically recording the movements of a sound-actuated body and photo-etching the said graphic record to produce an undulating surface corresponding in form to the sound waves recorded.

2. The process of making sound reproducing records by vibrating a ray of light in consonance with the movements of sound waves, moving a light-sensitive film across the field of play of the said ray and reducing the resulting trace of the said ray by chemical means to material form as an undulating surface in amorphous material.

3. The process of making a reproducing sound record by moving a ray of light in consonance with the vibrations of sound waves, translating a light-sensitive material across the field of play of the said ray, developing, and by chemical means changing the relative elevation of the material along the said trace on the sensitive surface thereof.

4. The process of making sound reproducing records consisting in vibrating a ray of light in consonance with the motions of sound waves over a moving sensitive surface, developing the photographed line thus formed, exposing under the photograph amorphous material capable of being rendered insoluble by the action of light and dissolving out the unexposed and soluble portions of the same, to leave an undulating surface.

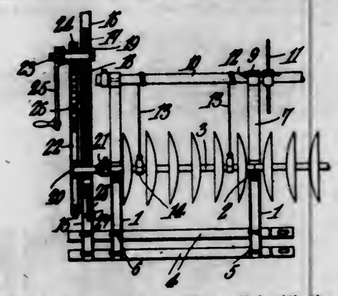
5. The process of making sound reproducing records which consists in exposing successive portions of a light-sensitive film to the action of a ray of light vibrated in consonance with the movement of sound waves, developing the same to reduce the trace of the ray to an opaque line, exposing under this film a second film rendered insoluble where light-struck, and dissolving out the unexposed portions of the said second film, whereby an undulating surface in the form of the path of the light ray is produced in the said second film.

[Claims 6 to 15 not printed in the Gazette.]

900,707. APPARATUS FOR SHARPENING DISKS AND COLTERS. ELMER E. COMBS and WILLIAM E. COMBS, Evansville, Wis.; said William E. Combs assignor to said Elmer E. Combs. Filed Apr. 29, 1907. Serial No. 370,894.

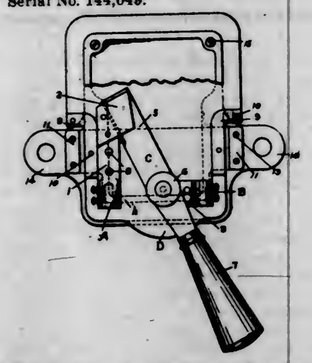
In a disk sharpener the combination with standards, a connecting bar thereon, and fixed open bearings on the standards; of parallel guides supported adjacent one of the standards, driving mechanism vertically adjustable in the guides and including a shaft having a socket, arms extending upward from the standards and a winding shaft jour-

nailed in the arms and supported above and in vertical alinement with the bearings, said bearings being disposed



in alinement for holding a shaft parallel with the connecting bar.

900,708. HIGH-TENSION CIRCUIT-BREAKER. FRED B. COREY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 19, 1903. Serial No. 144,049.



1. The combination of stationary and movable electric contacts, an insulating support to which said contacts are connected, and means for unequally distributing the magnetic field accompanying a current traversing said contacts consisting of two connected plates of magnetic material disposed upon opposite sides of said contacts and to which said insulating support is connected.

2. The combination with stationary and movable contacts, of connected plates of magnetic material located on opposite sides of said contacts, and sheets of insulation secured to the inner surfaces of said plates and to which said contacts are secured.

3. The combination of stationary and movable contacts and their metallic connections arranged to form a bend or loop in the electric circuit, a sheet of insulation to which said contacts are secured, and connected plates of magnetic material between which said sheet and the parts carried thereby are secured.

4. The combination of stationary and movable contacts and their metallic connections arranged to form a bend or loop in the electric circuit, sheets of insulation between which said contacts and connections are secured, plates of magnetic material between which said sheets are secured, and magnetic conductors connecting said plates at one or more points outside said bend or loop.

900,709. ARC-LAMP. JAMES A. DALZELL and CHARLES E. HARTHAN, Lynn, Mass., assignors to General Electric Company, a Corporation of New York. Filed Feb. 11, 1904. Serial No. 193,095.

1. In an arc lamp, a movable electrode, a clutch arranged to engage the electrode, operating devices for moving the clutch back and forth to position the electrode, a clutch-stop above the clutch, and arms integral with said stop depending therefrom on either side of the clutch jaw near its pivotal point to prevent lateral movement thereof.



2. In an arc lamp, a gas-cap having a gas-passage therethrough, and a plurality of openings from the under side of the cap to the passage, said openings being threaded to receive screws whereby entrance to the gas-passage may be partially or entirely closed.

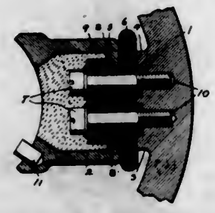
3. As an article of manufacture, a clutch for use in an arc lamp, consisting of a yoke and a jaw pivoted thereto, said jaw having a body portion and wings bent at right angles to the body portion and provided with holes for pivotally connecting the jaw to the yoke of the clutch and to the clutch-connecting rod.

4. As an article of manufacture, a clutch for use in an arc lamp, consisting of a yoke, and a jaw pivoted thereto, said jaw having a body portion and wings bent at right angles to the body portion, and having a tongue adapted to be bent around in proximity to the body portion to form an engaging tooth.

5. An electric arc lamp having an arc-inclosing bulb communicating with the air through an elongated passage, and means for adjusting the effective length of said passage.

[Claim 6 not printed in the Gazette.]

900,710. MEANS FOR SUPPORTING COLLECTOR-RINGS. WILLIAM F. DAWSON, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed Feb. 20, 1907. Serial No. 358,458.



1. In a dynamo-electric machine, a shaft, a collector ring, and a connection between said shaft and said ring comprising a cup-shaped member insulated from said ring and engaging said shaft at its open end.

2. In a dynamo-electric machine, a shaft, a collector ring, and a connection between said shaft and said ring consisting of cups secured at their bases to and insulated from said ring and engaging said shaft at their open ends.

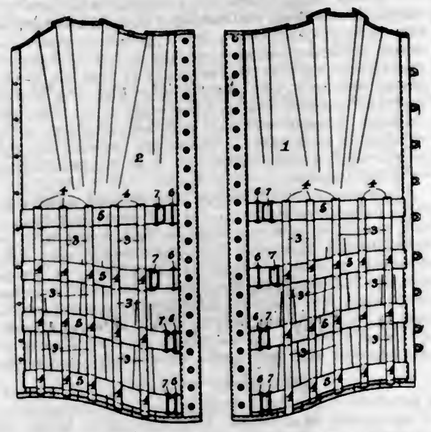
3. In a dynamo-electric machine, a shaft, a collector ring, and a plurality of cup-shaped members secured to and insulated from said ring, said members projecting radially from the ring and having their open ends fitted to the shaft.

4. A collector ring having extending radially therefrom a plurality of cup-shaped members secured to and insulated from said ring at their bases, and having their open ends shaped to fit a supporting member.

5. In combination, a collector ring member, a cup member, a layer of insulation between the ring member and the base of the cup member, a holding member passing through the base of the cup and into the ring, and insulation between said holding member and one of the other members.

[Claims 6 to 10 not printed in the Gazette.]

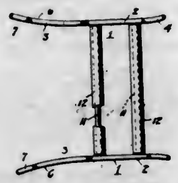
900,711. CORSET. FRANK J. DIGNEY and NELLIE L. DIGNEY, Bridgeport, Conn. Filed Feb. 11, 1908. Serial No. 415,418.



1. A corset attachment comprising a series of horizontally disposed parallel loops secured to the corset below the waist line, and strips of webbing extending loosely through said series of loops and having their extremities secured to the front and rear edges of the corset sections.

2. A corset attachment comprising a series of loops secured to the corset sections below the waist line and extending in parallel series one above the other from the front to the rear edges of said sections, and separate elastic webbings passed through each of said series, the ends of said webbings being secured at the front and rear edges of said sections and capable of adjustment whereby an increased or decreased tension may be obtained.

900,712. OVERCHECKING-BIT FOR BRIDLES. FRANK S. DURE, Wilmington, Del. Filed July 18, 1907. Serial No. 384,380.



In a device of the class described, side members having upper and lower end loops, outer and inner spaced cross bars connecting said members, intermediate loops on said side members near the ends of said outer cross bar, a nose band connecting said upper loops, over checks passing upwardly from said lower loops and crossing the nose band, and a chin strap connecting said intermediate loops.

900,713. AERIAL CABLEWAY. FREDERICK B. DYE, Fay, Ohio. Filed May 16, 1908. Serial No. 433,266.

1. In a device of the character described, a pair of inclined suspension cables, the opposite ends of each lying in the same horizontal plane, transporting means on each of said cables, and other means connecting the transporting means and simultaneously moving the transporting means on one cable as the other transporting means moves.

2. In a device of the character described, a pair of inclined suspension cables, the opposite ends of each lying in the same horizontal plane, a transporting means on each of said cables, and a tension element connecting the transporting means to simultaneously move one of said transporting means as the other moves, the movement of both being toward the same end of the suspension cables.



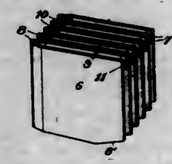
3. In a device of the character described, a pair of inclined suspension cables, the opposite ends of each lying in the same horizontal plane, a transporting means on each of said cables, a pair of sheaves one held near each of the upper ends of said cables, a rope connected to one of the transporting means and running then the sheave at the upper end of the cable whereon said means move, then to the other sheave, and then to a connection with the other transporting means.

4. In a device of the character described, a pair of inclined suspension cables, the opposite ends of each lying in the same horizontal plane, transporting means on each of said cables, other means connecting the transporting means and simultaneously moving the transporting means on one cable as the other transporting means moves, and elements for controlling the movement of said transporting means.

5. In a device of the character described, a pair of inclined suspension cables, the opposite ends of each lying in the same horizontal plane, a transporting means on each of said cables, a tension element connecting the transporting means to simultaneously move one of said transporting means as the other moves, the movement of both being toward the same ends of the suspension cables, and elements for controlling the movement of said transporting means.

[Claims 6 to 17 not printed in the Gazette.]

900,714. HOLDER FOR DISK GRAPHOPHONE OR PHONOGRAPH RECORDS. FRANK EBERHART, New York, N. Y. Filed Feb. 21, 1908. Serial No. 417,129.



1. A holder for disk records for graphophones, phonographs or the like, constructed of a thin pliable material such as paper or the like, said thin pliable material being accordion folded to present a series of front edges and a series of rear edges forming a series of partitions, the material forming said partitions having a portion of its adjacent surfaces secured together by glue, cement or the like in such manner that the said after edges and material adjacent thereto is pliable to allow the said partitions flexibility, said holder being arranged to be inserted within a case or cabinet and to receive a disk record between each pair of said partitions, substantially as described.

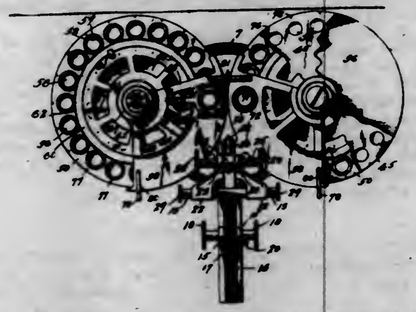
2. A holder for disk records for graphophones, phonographs or the like constructed of a thin pliable material such as paper or the like, said thin pliable material being

accordion folded to present a series of front edges and a series of rear edges forming a series of partitions, the material forming said partitions having a portion of its adjacent faces secured together in any suitable manner such as by glue, cement or the like in such manner that the said rear edges and material adjacent thereto is pliable to allow the said partitions flexibility, the lower forward portions of the said partitions being cut away on the bevel to conform to the front beveled molding of a cabinet for disk records, said holder being arranged to be inserted within said cabinet and to receive a disk record between each pair of said partitions, substantially as described.

3. A holder for disk records for graphophones, phonographs or the like constructed of a thin pliable material such as paper or the like, said thin pliable material being accordion folded to present a series of front edges and a series of rear edges forming a series of partitions, the forward bottom portion of said partitions being cut away on the bevel to conform to the front beveled molding of a cabinet for disk records, said holder being arranged to be inserted within said cabinet to receive a disk record between each pair of said partitions, substantially as described.

4. A holder for disk records for graphophones, phonographs or the like constructed of a thin pliable material such as paper or the like, said thin pliable material being accordion folded to present a series of front edges and a series of rear edges forming a series of partitions, said holder being arranged to be supported in such manner that it will accommodate a disk record between each pair of said partitions, substantially as described.

900,715. OPTOMETER. CORNELIUS EDWAARD, Paterson, N. J. Filed Nov. 21, 1906. Serial No. 344,368.



1. An optometer comprising a stationary support, a bar supported therefrom, a head frame carried by said support, an arm carried by said bar, brackets having apertured portions slidable upon said arm, and provided with alined threaded openings, a threaded shaft mounted through said bar, and engaging within said openings to simultaneously move said brackets, sight testing apparatuses carried by said brackets, and a chin rest mounted adjacent said testing apparatuses, substantially as described.

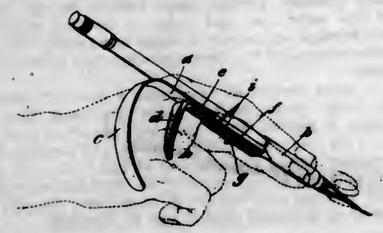
2. An optometer comprising a stationary support, a bar supported therefrom, an arm carried by said bar, brackets having apertured portions slidable upon said arm and provided with alined threaded openings, a threaded shaft mounted through said bar and engaging within said openings to simultaneously move said brackets, and sight testing apparatuses carried by said brackets, substantially as described.

3. An optometer comprising a stationary support, a bar supported therefrom and having a rack formed longitudinally thereof, a shaft journaled in portions of said support having a pinion meshing with said rack, an arm carried by said bar, brackets having apertured portions slidable upon said arm and provided with alined threaded openings, a threaded shaft mounted through said bar and engaging within said openings to simultaneously move said brackets, and sight testing apparatuses carried by said brackets, substantially as described.

4. An optometer comprising a stationary support, a bar supported therefrom and having a rack formed longitudinally thereof, a shaft journaled in portions of said support having a pinion meshing with said rack, a head rest carried by said support, an arm carried by said bar, brackets having apertured ears slidable upon said arm and provided with alined threaded openings, a threaded shaft mounted through said bar, and engaging within said openings to simultaneously move said brackets, and sight-testing apparatuses carried by said brackets substantially as described.

5. An optometer comprising a stationary support having a tubular extension, a bar supported therefrom, an arm carried by said bar, brackets having apertured portions slidable upon said arm, and provided with alined threaded openings, a threaded shaft mounted through said bar and engaging within said openings to simultaneously move said brackets, sight testing apparatuses carried by said brackets, and a shank adjustably carried within said tubular extension and provided with a chin rest adjacent said apparatuses substantially as described.

900,716. PENCIL-HOLDER. JOSEPH A. EUBANKS, Greenfield, Ohio. Filed Feb. 20, 1908. Serial No. 416,862.



1. A device of the character described comprising a pencil holder having an upwardly extending shank carrying lateral arms for embracing the writer's hand, one of said arms being adjustable longitudinally of said shank.

2. A device of the character described comprising a shank carrying at its lower end a pencil holder and at its upper portion a member to set within the palm of the hand and another member for clasping the back of the hand.

3. A device of the character described comprising an attachment for the hand having a shank provided with a pencil holder and a palm-bar adjustable longitudinally of said shank and adapted to fit within the hand and thereby prevent finger movement.

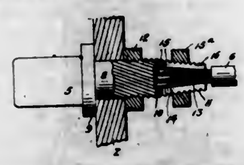
4. A device of the character described comprising an attachment for the hand having a shank provided with a pencil holder, a member to set within the palm of the hand, and means for overlying the back of the hand and holding said member to the palm of the hand.

5. A device of the character described comprising a pencil holder having an upwardly extending shank provided with means for attachment on the hand, including an adjustable angle-shaped member one arm of which constitutes a palm-bar to set within the palm and restrain finger movement, a case on the shank in which the other arm of said member is slidably arranged, and a catch for holding the latter in desired position in said case.

[Claim 6 not printed in the Gazette.]

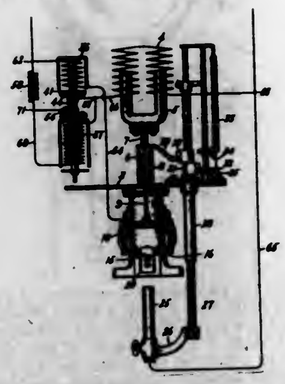
900,717. CABLE FASTENER OR CLAMP. EDWARD B. FEASTER, Kansas City, Mo. Filed Sept. 26, 1907. Serial No. 394,747.

1. In a cable fastening device, a solid member of resilient metal having one of its ends tapered longitudinally and externally screw threaded, said end being also formed with a longitudinally extending cylindrical socket having a flat imperforate bottom and said end being further provided with a plurality of transverse intersecting slots extending longitudinally the full length of the socket and dividing said end of the member into a plurality of resilient clamping fingers, a cable of less diameter than said socket and having its end arranged in the socket, a plurality of tapered or wedge-shaped nails inserted between the portions of the strands of the cable within said socket before the cable is inserted in said socket whereby the extremity of the cable is enlarged, and a clamping nut formed with a longitudinally tapered opening internally screw threaded to engage the screw threads on the body and cause said spring fingers to clamp the strands of the cable, substantially as described.



2. The combination with an apertured member, of a terminal post arranged in the aperture of said member and formed adjacent to one end with an annular stop flange to engage one face of said member, the other projecting end of the post having its outer portion tapered longitudinally and its outer surface externally screw threaded from its extremity inwardly to said member, the tapered outer portion of said end of the post being formed with a longitudinal bore or socket having a flat imperforate bottom and being also formed with a plurality of transverse intersecting slots extending longitudinally the full length of the socket and dividing said end of the post into a plurality of resilient clamping fingers, a cable having its end arranged in said socket, a plurality of tapered or wedge-shaped nails inserted between the strands of the cable before the latter is inserted in said socket, a fastening nut arranged upon the threaded end of said post and screwed up against the face of said member to retain the post in the latter, and a second clamping nut formed with a longitudinally tapered opening internally screw threaded to engage the screw threads on the tapered end of the post to cause said resilient clamping fingers to move inwardly and clamp the strands of the cable between them, substantially as described.

900,718. ARC-LAMP. RICHARD FLEMING and CROMWELL A. B. HALVORSON, Jr., Lynn, Mass., assignors to General Electric Company, a Corporation of New York. Filed May 1, 1905. Serial No. 258,214.



1. In an arc lamp, a draft tube having an opening formed in it, an electrode comprising a metallic bar movable through said opening, a shield or guard carried by said bar and arranged to engage the side of said draft tube to limit the movement of the bar in one direction relative to said tube and to assist in closing said opening, and means for adjustably securing said shield to said bar.

2. In an arc lamp, a coil in series with the arc and a voltage coil shunting the arc and the series coil placed end to end and in alinement with each other, a movable armature entering said series coil, a contact carried thereby, and a movable armature entering said voltage coil and contact carried thereby, said contacts being in engagement with each other when both coils are deënergized, out of engagement with each other when the series coil is operatively energized and in engagement with each other when both coils are operatively energized.

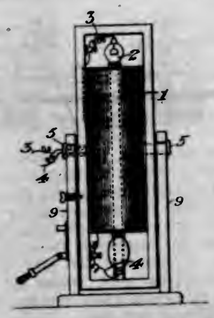
3. In an arc lamp, an electrode-feeding magnet and a pair of coöperative contacts controlling the energization thereof, a coil in series with the arc for moving one of said contacts to deënergize the feeding magnet, and a voltage coil shunting the arc and the series coil to move the other of said contacts to energize said feeding magnet on a predetermined rise in voltage of the arc.

4. In an arc lamp, a draft tube having an opening formed in it, electrodes each comprising a metallic bar movable in or through said opening, and a shield or guard detachably secured to said bar and arranged to engage the side of said draft tube to limit the movement of the bar in one direction relative to said tube and to assist in closing said opening.

5. In an arc lamp, a draft tube having an opening formed in it, an electrode comprising a metallic bar movable through said opening, and a shield or guard carried by said bar and arranged to engage the side of said draft tube to limit the movement of the bar in one direction relative to said tube and to assist in closing said opening, said guard or shield being formed of sheet metal.

[Claims 6 to 8 not printed in the Gazette.]

900,719. ADJUSTABLE SUPPORT FOR VAPOR-LAMPS. STANWOOD E. FLICHTNER, Englewood, N. J., assignor to Cooper Hewitt Electric Company, New York, N. Y., a Corporation of New York. Original application filed July 28, 1904, Serial No. 218,473. Divided and this application filed Jan. 9, 1905. Serial No. 240,277.

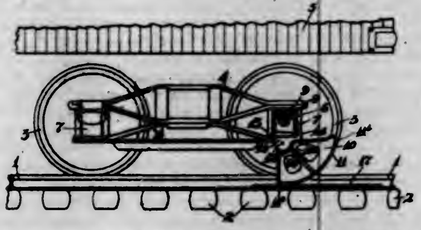


The combination with a tilting frame and a vapor electric lamp supported thereby, of a guide located behind the lamp and extending along practically the entire luminous body thereof, the said guide being of curved form and being adapted to receive reflecting material.

900,720. LIFTING-JACK. GEORGE H. GILMAN and HENRY M. ROBERTSON, St. Paul, Minn. Filed May 18, 1908. Serial No. 433,461.

1. A lifting jack comprising a segment and a bearing head pivotally connected thereto and having engaging bearing flanges and shoulders, and coöperating stop surfaces for limiting the pivotal movements of said parts in respect to each other, the said segment having an eccentric

rim portion, the distance of which between the pivotal connection of the two elements increases from one extremity to the other of the said rim, substantially as described.

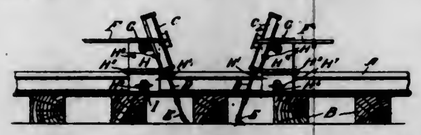


2. In a lifting jack, the combination with a segment 10 having an eccentric bearing rim 11 and formed with a hinge lug 10^a and with segmental bearing shoulders 10^b, of a bearing head 13 having laterally spaced bearing flanges 13^a embracing and pivotally connected to said lug 10^a and engaging said shoulders 10^b, substantially as described.

3. In a lifting jack, the combination with a lifting segment having an eccentric bearing rim, of a bearing head pivotally connected to said segment, one of the said parts having a lug and the other a coöperating seat located eccentric to the pivotal connection between the two parts and adapted to be engaged when said segment is moved into one extreme position, substantially as described.

4. In a lifting jack, the combination with a lifting segment 10 having an eccentric rim 11 and provided with a hinge lug 10^a, bearing shoulders 10^b and lugs 16, of a bearing head 13 having laterally spaced bearing flanges 13^a that embrace and are pivotally connected to said lug 10^a and engage with the said shoulders 10^b, the said head further having a seat 15 adapted to be engaged by the lug 16 when said segment 10 is moved into an extreme lifting position, substantially as described.

900,721. TIE-TAMPER. FRANK J. GILROY, Buffalo, N. Y. Filed Nov. 26, 1907. Serial No. 403,908.



1. In tamping apparatus, the combination with a fluid pressure cylinder, a piston working in the cylinder and provided with a non-cylindrical piston rod, a tamping tool carried by the piston rod, and means for supporting the cylinder above the plane of the tie to be operated upon.

2. In a tie tamping apparatus, the combination with a transverse bar, of supports for said bar adapted to rest directly upon the rails, means for clamping the supports to the rails, and a fluid pressure tamping device slidably mounted upon said bar.

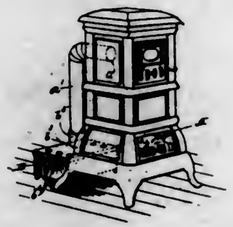
3. In tie tamping apparatus, the combination with a transverse bar of a length materially greater than the width of the track, brackets adapted to be clamped to the rails and to support, respectively, the outer ends of the bar, and fluid pressure tamping devices slidably mounted upon said bar.

4. In a tamping apparatus, the combination with a transverse bar, of means for securing the bar to the rails, a fluid pressure cylinder mounted to slide freely along said bar and to swing freely in planes parallel thereto, a piston working in said cylinder, and a tamping tool carried by said piston; whereby ballast may be tamped obliquely beneath the rail.

5. In a tamping apparatus, the combination with a transverse bar, of means for rigidly supporting the same above the rails, means for rigidly clamping the supports to the rails, a cylinder-supporting block mounted to slide along the bar and to swing transversely thereon, and a tool-carrying fluid pressure cylinder mounted upon the block to swing in planes parallel to the bar.

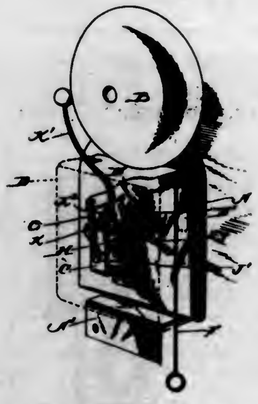
[Claims 6 to 12 not printed in the Gazette.]

900,722. DEODORIZING ATTACHMENT FOR GAS-HEATERS. HOMER A. GORSLINE and ADOLPH KLEIN, Cleveland, Ohio, assignors of one-third to Samuel Klein, Cleveland, Ohio. Filed Dec. 20, 1907. Serial No. 407,304.



As an article of manufacture, a deodorizing attachment for gas stoves comprising an open rectangular box adapted to contain a liquid, a sheet with a central opening secured across the top of said box intermediate between the latter's ends, wire mesh secured across the top of said box between such sheet and ends, and a removable cover for said box, said cover being provided with a gas inlet opening disposed to register with the opening in said sheet and surrounded by a sleeve for external flue connection and with gas outlet openings near its ends disposed to lie over such wire mesh.

900,723. MECHANICAL BELL-OPERATING DEVICE. JOSEPH GRAVELLE, Philadelphia, Pa., assignor of one-third to C. A. Blumhard and one-third to J. S. Koch, Philadelphia, Pa. Filed Aug. 20, 1907. Serial No. 389,411.



A device of the kind described consisting of a bell, a pivoted toothed striker-rod, a lever, a spring connected to one end of the lever, a pull device secured to the opposite end of the lever, a shaft, a toothed-wheel on said shaft in engagement with a tooth of the striker-rod, a pinion on said shaft, a ratchet segment engaging said pinion and carried by the lever midway of its ends, the pivotal point of the lever being at the center of said segment.

900,724. WEARING-APPAREL, SUCH AS COLLARS AND CUFFS. SPENCER M. GRIFFITHS, Easton, Pa., assignor to himself, and Moses May, Philadelphia, Pa. Filed Mar. 20, 1908. Serial No. 422,261.



1. An article of wearing apparel of the character described, provided with a button hole for securing the article to a garment, and having, on one end, a hooked shaped tongue and in the other end a slot independent of the button hole, said hook shaped tongue being adapted to pass through said slot and interlock therewith.

2. An article of wearing apparel of the character described, provided with a button hole for securing the article to a garment, and having on one end, a hook shaped tongue, and in the other end an inclined slot independent of the button hole, said hook shaped tongue being adapted to pass through said slot and interlock therewith.

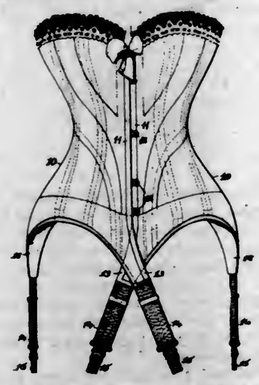
3. An article of wearing apparel of the character described, provided with a button hole for securing the article to a garment, and having, on one end, a hook shaped tongue having an inclined portion, and in the other end an inclined slot independent of the button hole, said hook shaped tongue being adapted to pass through said slot and interlock therewith.

4. An article of wearing apparel of the character described, provided with button holes for securing the article to a garment in each end, a hook shaped tongue on one end, and a slot independent of the button holes in the other end, said hook shaped tongue being adapted to pass through said slot and interlock therewith.

5. An article of wearing apparel of the character described, provided with button holes for securing the article to a garment in each end, a hook shaped tongue on the upper portion of one end, and a slot independent of the button holes in the other end, said hook shaped tongue being adapted to pass through said slot and interlock therewith.

[Claims 6 to 9 not printed in the Gazette.]

900,725. COMBINED GARMENT AND HOSE-SUPPORTER. DAVID GROTTA, Newark, N. J. Filed Nov. 9, 1907. Serial No. 401,433.

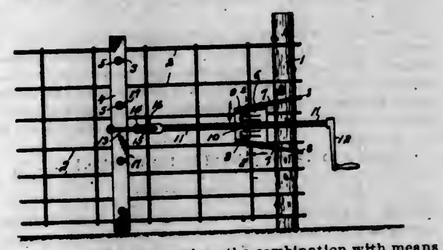


1. A garment having front meeting edges, the sides adjacent to the meeting edges having integral downwardly and obliquely extending tabs arranged to cross each other, and hose supporters secured to the tabs.

2. A garment having front meeting edges, the bottom end of each meeting edge being cut to extend across the other and the bottom edge of each side extending downwardly toward the front meeting edge so that two obliquely arranged and crossed tabs are formed in one piece with the garment and in extension of each side, and hose supporters attached to the tabs.

3. A garment having front meeting edges, and hose supporters extending downwardly and obliquely from the bottom of the garment, each supporter being secured adjacent to the front edge and the supporters being attached on opposite sides and each supporter disposed to be normally suspended under the front edge other than the one to which it is attached.

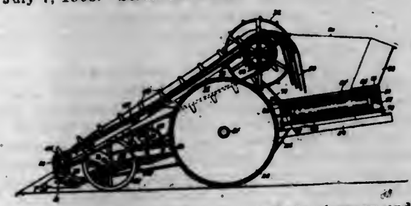
900,726. WIRE-FENCE STRETCHER. JOHN H. GWYNNE, Kansas City, Mo. Filed Oct. 15, 1907. Serial No. 397,523.



1. In a wire fence stretcher, the combination with means for clamping the fence wires, of a frame having two arms provided with return bends for embracing one side of a fence post one above the other, and provided also with two hooks disposed one above the other, the ends of said hooks extending in a direction opposite that in which said return bends extend, a bearing block pivoted in the bends of said hooks and provided with a horizontal threaded hole, a threaded rod fitted in said hole and having a crank, and means connecting said rod and said wire clamping means by which when the rod is moved lengthwise in one direction the wire clamping means will be drawn toward said frame.

2. In a wire fence stretcher, the combination with means for clamping the fence wires, of a frame having means for embracing a fence post and provided with means for releasably and pivotally supporting a bearing block, a bearing block pivotally and detachably mounted in said supporting means on said frame and provided with a threaded hole disposed transversely to the axis of said bearing block, a threaded rod fitted in said hole and having a crank, and means connecting said rod and clamping means by which when the rod is turned in one direction the clamping means will be drawn toward said frame.

900,727. SIDE-DELIVERY MECHANISM FOR HARVESTERS. FRANK HAMACHEK, Kewaunee, Wis. Filed July 7, 1905. Serial No. 268,636.



1. In combination with a cutting mechanism, an endless conveyer for side delivery mechanism, comprising a series of conveyer chains extending rearwardly from above the cutting mechanism and having prongs to engage and straighten the material in front of the cutting mechanism.

2. In combination with a cutting mechanism, an endless conveyer, comprising a series of pronged conveyer chains extending rearwardly from above the cutting mechanism

to engage and straighten the material in front of the cutting mechanism, and shields for stripping the cut material from the conveyer chains.

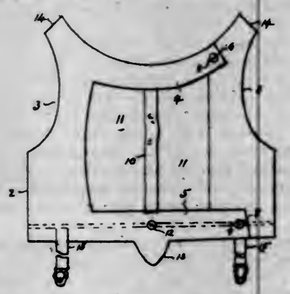
3. In combination with a cutting mechanism, an elevating conveyer comprising a series of pronged conveyer chains extending rearwardly from above the cutting mechanism to engage and straighten the material in front of the cutting mechanism, and an inclined decking extending beneath the conveying portions of the conveyer chains.

4. In combination with a cutting mechanism, a side delivery mechanism comprising an endless conveyer of pronged conveyer chains extending rearwardly from above the cutting mechanism to engage and straighten material in front of the cutting mechanism, a decking beneath the conveyer portions of the conveyer chains to support the material carried thereby, and guard plates between and extending beyond the conveyer chains to strip the material therefrom.

5. In combination with a cutting mechanism, a side delivery mechanism comprising a series of conveyer chains adapted to receive the cut material and move it rearwardly, and means for driving the chains with the outside chain moving at a relatively greater speed than the other chains, whereby the uncut material is separated from the cut material.

[Claims 6 to 24 not printed in the Gazette.]

900,728. GARMENT-SUPPORTER. CLEO B. HARRIS, Minneapolis, Minn. Filed July 24, 1907. Serial No. 385,324.



1. A garment-supporter having neck and shoulder portions forming a yoke, side portions continuous with the shoulder portions, a waist-encircling portion continuous with the side portions, said yoke, side and waist portions surrounding an opening or cut-away portion over the chest of the wearer, means for attaching garments to the waist-encircling portion and a band connecting said waist-encircling portion with the yoke.

2. A garment-supporter characterised by a body-portion extending over the back, shoulders, and sides of the wearer, the side portions of said garment-supporter being separated in front to form an opening over the chest, a neck strap and a waist strap joining said side portions at the neck and waist respectively, means for attaching garments to said waist strap, and a yielding connection between said neck and waist straps.

3. A garment-supporter having a neck-encircling portion or yoke, a waist-encircling portion, side portions extending over the shoulders and connecting the waist-encircling portion and yoke, said side portions separated in front to form an opening over the chest of the wearer, a yielding connection between the yoke and waist-encircling portion, and means to attach garments to the waist-encircling portion.

4. A garment-supporter having a neck-encircling portion or yoke, a waist encircling portion, side portions connecting the yoke with the waist-encircling portion and extending over the shoulders, said side portions separated in front to form an opening over the chest of the wearer, a yielding connection between the said neck and waist portions and extending across said opening, hose-supporting devices attached to said waist portion at points vertically below the shoulders and garment-supporting devices attached to said waist portion in line with said yielding connection.

5. A garment-supporter having a body portion extending around the back, sides and shoulders of the wearer, the sides of said body portion being separated at the front to leave an opening or space over the chest of the wearer, a neck strap and a waist strap for connecting said sides at the neck and waist respectively, a yielding connection between said neck and waist straps and extending centrally across said opening, and means for securing garments about the waist of said body portion, said means situated at points vertically below the shoulders and also in line with said yielding connection.

900,729. WOOD-BLOCK PAVING. WILLIAM H. HARVEY, Vancouver, British Columbia, Canada. Filed Mar. 11, 1908. Serial No. 420,443.



1. In a wood block paving, the combination with a roughened surface dressed with a layer of bituminous distillate, of a layer of felt evenly laid thereupon which layer is further dressed with bituminous distillate, strips of absorbent material such as felt underlying each row of blocks and extending upward between each row, wood blocks arranged edge grain on said strips and a grouting of bituminous asphalt and oil of tar "floated" over the blocks to fill the seams and interstices.

2. In a wood block paving, a foundation of timber arranged diagonally side by side and spiked to one another and to the foundation frame, a layer of planks of gaged thickness and rough upper side nailed to the underlying floor the joints at an angle of approximately 45° to those of the floor beneath, a dressing of bituminous distillate on the upper surface of these boards, a layer of felt evenly spread thereon, a further dressing of bituminous distillate, and wood paving blocks laid on this felt in rows edge grain up with means for securing the blocks on their bed and to one another.

900,730. BRUSH-HOLDER. HARRY E. HEATH, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 7, 1904. Serial No. 201,963.



1. In combination, a cylindrical surface, a brush engaging said surface, and a supporting frame for the brush free to rock about an element of said surface as an axis.

2. In a brush holder, a brush having a curved surface, and a frame for supporting the brush free to rock about an element of said surface as an axis.

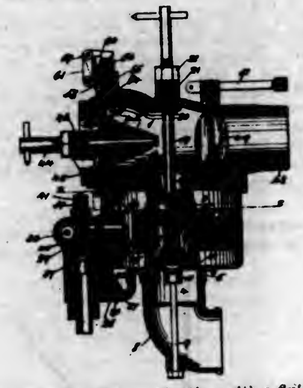
3. In combination, a cylindrical surface, a brush engaging said surface, and a frame for supporting the brush free to rock about an axis substantially coincident with an element of said surface.

4. In combination, a cylindrical surface, a brush holder, and a brush supporting frame pivoted to rock about an axis substantially coincident with an element of said surface.

5. In a brush holder, a brush and a supporting frame therefor free to rock about an axis substantially coincident with a line in the face of said brush.

[Claims 6 and 7 not printed in the Gazette.]

900,731. CARBURETER. FRANK H. HEITGER, Indianapolis, Ind., assignor to Heitger Carburetter Company, a Company organized in Indiana. Filed Aug. 24, 1907. Serial No. 389,976.



1. In a carbureter, the combination with a fluid fuel supplying nozzle, a valve seat situated at the top end of the latter, a throat surrounding the top end of said nozzle, an air admission nozzle extending downwardly from the open base end of said throat and terminating in an enlarged air inlet end, an ejecting nozzle extending from the top outlet end of said throat terminating in an enlarged ejecting end, and an air deflecting collar on the top end of said fluid fuel supplying nozzle having its under surface inclined and situated to be approximately parallel with the inner lower surface of said throat, of a valve stem, a valve coacting with said valve seat on the end of said stem, a deflecting collar situated on said stem above said valve having its flat under surface situated to be impinged against by the outflowing jet of fluid fuel from the fluid fuel supplying nozzle.

2. In a carbureter, the combination with a fluid fuel supplying nozzle, a valve seat situated on the top end of the latter, a spherically formed throat surrounding the top end of said nozzle, an air admission nozzle connected to the inlet open base end of said throat, said air admission nozzle gradually expanding to its enlarged open air inlet end, and an ejecting nozzle connected to the top outlet end of said throat, said nozzle having its bore gradually expanded toward its outlet end, of an air deflecting collar situated at the top end of said fluid fuel nozzle having its under surface approximately concentric with the inner lower surface of said throat, a valve stem, a valve on the end of said stem coacting with said valve seat, and a deflecting collar situated on said stem above said valve so that its flat under surface will be impinged against by the outflowing jet of fluid fuel from the fluid fuel supplying nozzle.

3. In a carbureter, the combination with a fluid fuel supplying nozzle, a valve seat on the top end of the latter, an air admission and primary mixing nozzle having a fluid fuel collecting peripheral groove situated at or near the base thereof, a strainer surrounding said groove, a fluid fuel supplying duct integral with and extending across the open base of said air admission and primary mixing nozzle to connect the collecting groove and said fluid fuel supplying nozzle, an auxiliary mixing chamber connected to the open ejecting end of said air admission and primary mixing nozzle, and a fluid fuel reservoir surrounding said latter nozzle, of a needle-valve coacting with said valve seat and a deflecting collar situated above said valve and having its flat under surface so situated above said needle-valve as to deflect the fluid discharged from said fluid fuel supplying nozzle.

4. In a carbureter, the combination with a fluid fuel supplying nozzle, a valve seat on the top end of the latter, an air admission and primary mixing nozzle having open base air inlet and top outlet ends surrounding said fluid fuel supplying nozzle, a fluid fuel reservoir surrounding said air admission and primary mixing nozzle, and a fluid fuel fuel supplying duct connecting said reservoir and said fluid fuel supplying nozzle, of an auxiliary mixing chamber, having opposing inlet and outlet openings, arranged to be connected to the outlet end of said air admission and primary mixing nozzle so that the latter will be situated intermediate the opposing inlet and outlet ends of said auxiliary mixing chamber, and a baffle-plate extending across said auxiliary mixing chamber and situated adjacent the inlet end thereof, said baffle-plate having a curved top portion arranged to extend partially over the outlet end of said air admission and primary mixing nozzle.

5. In a carbureter, the combination with an auxiliary mixing chamber having an air admission opening situated at one end of said chamber and an opposing outlet opening, of a fluid fuel supplying nozzle, a valve coacting with said nozzle, an air admission and primary mixing nozzle surrounding said fluid fuel supplying nozzle having its open top end connected to said auxiliary mixing chamber intermediate the air admission and outlet ends thereof and a baffle-plate extending transversely of said auxiliary mixing chamber and intermedinte the air admission end and primary mixing nozzle.

900,732. ELECTRICALLY-HEATED CURLING-IRON. HARRY HERTZBERG and MAURICE J. WOHL, New York, N. Y., assignors to Economy Electric Company, Brooklyn, N. Y., a Corporation of New York. Filed Apr. 18, 1907. Serial No. 368,836.



1. In an electrically heated tool, a pair of coöperating members, one of which is tubular, a resistance within said tubular member, a return tubular conductor incasing said resistance, said tubular conductor and the resistance being electrically connected at one end, and a plurality of insulations, one of which is between the resistance and the tubular conductor, and another being between the conductor and a wall of said tubular member.

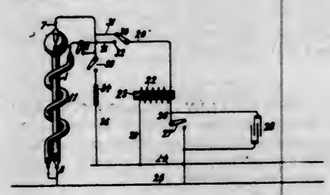
2. As a new article of manufacture, a hair curler provided with a hollow leg composed of heat-absorbing metal, a resistance pencil extending lengthwise of and incased within said leg, a metallic tube incasing said pencil, an interposed electrical insulation between said tube and the pencil, an electrical connection between corresponding ends of the pencil and the metallic tube, and another electrical insulation between the metallic tube and the heat-absorbing metal of said hollow leg.

3. In a device of the class described, a resistance pencil, an independent metallic tube incasing said pencil and connected electrically therewith, whereby said tube is adapted to serve as a return conductor, and a tubular layer of insulating material between the pencil and the aforesaid tube.

4. In a device of the class described, a resistance pencil having metal capped ends, an independent tube of conducting material incasing said pencil and connected electrically to one of the capped ends thereof, and a tubular layer of insulating material between the pencil and the metallic tube.

5. In a device of the class described, two coöperating members, one of which is a hollow mass of heat absorbing metal, each of said members having a shank provided with a handle, an electrical resistance within the hollow member and electrically insulated therefrom, a cord anchored on the handle of one of said members, and leading wires connecting said cord with the respective ends of the resistance.

900,733. ELECTRIC LIGHTING. PETER C. HEWITT, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, a Corporation of New York. Filed Apr. 5, 1900, Serial No. 11,608. Renewed Apr. 15, 1908. Serial No. 427,207.



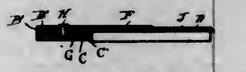
1. The combination with a gas or vapor lamp, consisting of a chamber containing a vapor of comparatively low electric resistance and adapted to pass an electric current of definite voltage and be made luminous thereby to produce light, said vapor or gas yielding a spectrum deficient in certain rays, of a similar lamp having a vapor or gas path yielding a spectrum containing rays of the character in which the spectrum of the first named lamp is deficient, one of said lamps partially surrounding the other, whereby a resulting light containing the rays of both spectra is produced.

2. The combination with a plurality of vapor electrical devices, each requiring a starting current of higher potential than that upon which it is to be operated, of a reactance device, and means for impressing upon the vapor devices successively high potential currents derived from the reactance device.

3. The combination with a plurality of vapor electrical devices, each requiring a starting current of higher potential than that upon which it is to be operated, of a common reactance device, and means for impressing upon the vapor devices successively high potential currents derived from the reactance device.

4. The combination with a plurality of vapor electrical devices, each requiring a starting current of higher potential than that upon which it is to be operated, of a reactance device, means for impressing upon the vapor devices successively high potential currents derived from the reactance device, and means whereby the reactance device can be cut-out of the circuit of one or all of the vapor devices.

900,734. METAL FRAME. EMIL J. HOCHULE and JOSEPH A. BOUSQUET, St. Paul, Minn. Filed Nov. 8, 1907. Serial No. 401,298.

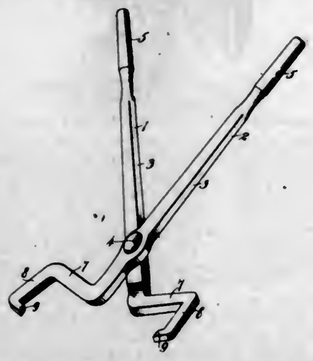


1. A frame comprising vertical and horizontal inner and outer strips, the outer strips being flanged on the outer edge and the inner on the inner edge to form a groove, and angle irons secured in the grooves at the corners, and means for locking said strips and angle irons together.

2. A metal frame formed of inner and outer strips having flanged edges to form a groove, the inner strips being provided with biting spurs, outer angle-irons arranged over the corners of said frame, an inner angle-iron arranged in the groove formed by said strips opposite said outer angle-irons, said strips and angle-irons being secured together by rivets.

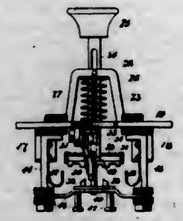
3. A metal frame formed of inner and outer vertical and horizontal strips, the inner strips being provided with biting spurs adapted to engage the edges of the wire net when arranged in said frame, the inner strips being provided with flanged inner edges and the outer strips with flanged outer edges, said strips being secured together by rivets, flanged angle-irons arranged over the ends of the outer strips, and a flanged angle-iron arranged over the ends of the inner strips, said angle-irons being secured together by rivets.

900,735. GRAPPLING-TONGS. PETER HOLMBERG, Parkston, S. D. Filed May 25, 1908. Serial No. 434,924.



The herein described gripping tongs comprising a pair of levers having straight portions crossed and pivoted intermediate their ends, said levers having handles at one end and their other ends being curved longitudinally, then bent angularly to provide the outwardly projecting portions 7 and then again at right angles to provide the forwardly projecting portions 8, said portions 7, forming angular jaws disposed in a plane at an angle to the handles of said levers owing to the curvature in the latter, the outer extremities of the portions 8 being formed with the inwardly projecting spurs 9, substantially as and for the purpose set forth.

900,736. QUICK-BREAK ELECTRIC SWITCH. HARRY H. HOWARD, Plainfield, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, a Corporation of New York. Filed Oct. 24, 1902. Serial No. 128,531.

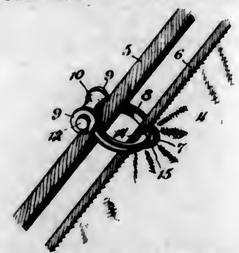


1. In an electric switch, a pair of stationary switch terminals, a fly-piece having sliding terminals adapted to make contact therewith, a spring tending to hold the terminals of the fly-piece towards each other, the inner ends of the sliding terminal pieces being beveled, and beveled lugs arranged in the path of movement of the said terminal pieces, whereby, when the fly-piece is pushed inward, the sliding pieces are moved outward into firm electrical contact with the stationary switch terminals.

2. In an electric switch, a pair of stationary switch terminals, a fly-piece having sliding terminals adapted to make contact therewith, means for pressing the terminals of the fly-piece into contact with the said stationary terminals, and means brought into action after the removal of the power applied for pressing the terminals together, whereby the fly-piece is thrown into the power of a master spring adapted to break the contact.

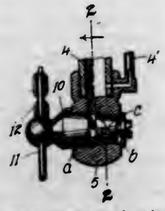
3. In an electric switch, a pair of stationary switch terminals, a fly-piece having sliding terminals adapted to make contact therewith, a spring tending to hold the terminals of the fly-piece towards each other, the inner ends of the sliding terminal pieces being beveled, beveled lugs arranged in the path of movement of the said terminal pieces, whereby, when the fly-piece is pushed inward, the sliding pieces are moved outward into firm electrical contact with the stationary switch terminals, and means for breaking contact between the terminals of the fly-piece and the stationary switch termipals when the power applied to the switch for making the described contact is removed.

900,737. SAIL-HANK. SAMUEL A. JACKSON, Kittery, Me. Filed June 23, 1908. Serial No. 440,029.



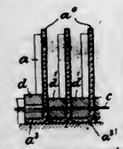
A sail hank comprising a substantially circular body having spaced ends, a roller detachably journaled between the ears and having its inner portion concaved to form substantially a continuation of the inner curved face of the body, said body having spaced inwardly extending lugs opposite to the ears, said lugs forming between them a curved socket disposed diametrically opposite to the roller and inside the general contour of the body, the curved outer face of the body being preserved.

900,738. VAPOR-BURNING LAMP. RALPH W. JORRES, St. Louis, Mo., assignor to Paris Lamp Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 3, 1908. Serial No. 414,145.



In combination with the supply-pipe of a gas-lamp, a valve casing, a pair of hollow burner-arms extending in opposite directions from said casing, a hollow rock-valve mounted in said casing, the walls of the valve having a pair of elongated intake and discharge ports removed from each other a suitable distance and having their adjacent ends relatively overlapping, the respective ports being adapted to be brought into communication with the discharge end of the supply-pipe and with the passage of one of the burner-arms for one position of the valve, the latter having a second discharge port adapted to be brought into communication with the passage of the opposite burner-arm for another position of the valve, and the intake port being adapted to be cut off from the supply-pipe for a third position of the valve, substantially as set forth.

900,739. TURBINE. ALEXANDER JUDE and REGINALD K. MORCOM, Birmingham, England, assignors to Belliss & Morcom Limited, Birmingham, England. Filed May 10, 1907. Serial No. 372,974.



1. In a turbine, means for securing the guide-blades to the stator, consisting of shanks formed on said blades, a stringer to which said shanks are secured and an undercut groove in the stator in which said stringer and shanks are secured by deformation of one of said elements within said groove.

2. In a turbine, means for securing the vanes to the rotor, consisting of shanks formed on said vanes, a stringer to which said shanks are secured and an undercut groove in the rotor in which said stringer and shanks are secured by deformation of one of said elements within said groove.

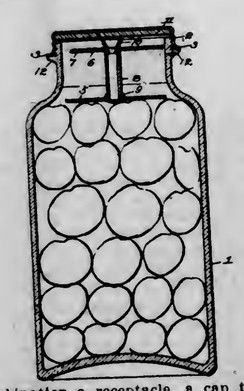
3. In a turbine, means for securing the guide-blades to the stator, consisting of shanks formed on said blades, distance pieces separating said blades, a stringer to which said shanks are secured and an undercut groove in the stator in which said stringer, shanks and distance pieces are secured by deformation of one of said elements within said groove.

4. In a turbine, means for securing the vanes to the rotor consisting of shanks formed on said vanes, distance pieces separating said vanes, a stringer on which said shanks are secured and an undercut groove in the rotor in which said stringer, shanks and distance pieces are secured by deformation of one of said elements within said groove.

5. In a turbine, means for securing the guide-blades to the stator, consisting of shanks formed on said blades, each shank having an aperture, distance pieces separating said blades, a stringer rod inserted within the apertures in said shanks and an undercut groove in the stator in which said stringer rod, shanks and distance pieces are secured by deformation of the distance pieces within said groove.

[Claims 6 to 12 not printed in the Gazette.]

900,740. DEPRESSER FOR FRUIT-JARS. NORA K. KEELEY, Owensboro, Ky., assignor to Jesse E. Rice, Owensboro, Ky. Filed Jan. 17, 1908. Serial No. 411,317.



1. In combination a receptacle, a cap therefor, and a depresser, said depresser being provided with a plurality

of disks, one of which having a cut-away portion for permitting the passage of liquid into said receptacle, a connecting tube, and a lug for spacing said cut away disk from said cap and for holding the other of said disks in contact with the matter contained in said receptacle.

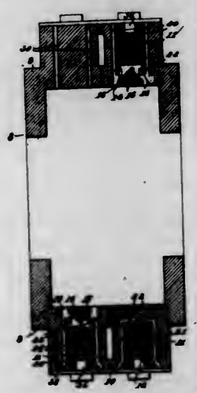
2. In combination a receptacle, a cap therefor, and a depresser positioned in said receptacle comprising a disk for engaging the matter in said receptacle, a second disk for preventing the dislocation of said first mentioned disk, a tube connecting said disks, and means for holding said second mentioned disk out of contact with said cap, said second mentioned disk being provided with a cut-away portion for permitting liquid to be passed into said receptacle on top of the matter contained therein.

900,741. WINDOW-SHADE TOOL. HARRY B. KERR, Baltimore, Md. Filed Sept. 24, 1906. Serial No. 335,985.



The herein described device, consisting of a body of metal having one end reduced and slotted and the other rounded, a projection carried by said rounded end, and an enlargement near the slotted end having a rectangular opening at the opposite side from the slotted end, said enlargement having a projection at substantially right angles to the body of the device.

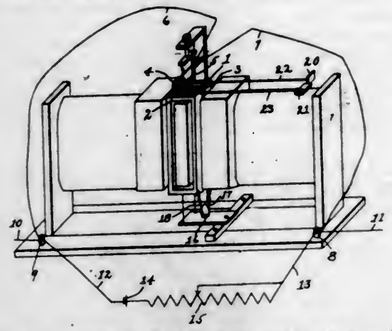
900,742. CALORIFIC KILN. EDWIN A. KING, Philadelphia, Pa. Filed Oct. 15, 1907. Serial No. 397,585.



1. The combination with a calorific kiln having a floor with a fire-chamber formed as an extension of the front walls and with furnace-flues in the front walls in alinement with the floor and arranged to equally divide heat and products of combustion from said chamber prior to entrance into said flues, of air-flues at each side of said fire-chambers in alinement with said furnace-flues and directly terminating therein and means to control the inlet of air in said air-flues so that through partial or complete closing of certain of said flues is adapted to be deflected by increasing or decreasing the draft, the greater part or entire portion of the heat and flames of said furnace-chamber into one of said furnace-flues.

2. The combination with a calorific kiln having a floor with a fire-chamber formed as an extension of the front walls and with furnace-flues in the front walls in alinement with the floor and arranged to equally divide heat and products of combustion from said chamber prior to entrance into said flues, of air-flues at each side of said fire-chambers in alinement with said furnace-flues and directly terminating therein and means to control the inlet of air in said air-flues so that through partial or complete closing of certain of said flues, oppositely arranged, to conduct by increasing or decreasing the draft, the greater part or entire portion of the heat and flames of one of said fire-chambers into one of said furnace-flues up to a certain portion or throughout the entire length of the arches of clay products.

900,743. RELAY. ISIDOR KITSEE, Philadelphia, Pa. Filed Oct. 19, 1907. Serial No. 398,233.



1. In combination with a cable relay, means to bring the relaying contacts together independent of the incoming impulses and means to lessen the pressure of these contacts independent also of the incoming impulses one of said means comprising a localized electric circuit connecting in shunt said relay.

2. Means to adjust an electric relay, said means comprising mechanical means to normally connect the relaying contacts and electrical means to lessen the pressure of said contacts one of said means comprising a localized electric circuit connecting in shunt said relay.

3. In combination with an electric relay, two forces, a mechanical force to induce in the movable parts a movement in one direction, and electrical force to counteract said movement, both forces independent of the incoming impulses.

4. In combination with a relay in which the movable parts consist of two coils, each carrying a relaying contact, mechanical means to force both coils in a direction so as to close the relaying contacts, and an electric circuit shunting said coils and inducing in said coils a movement opposite to the movement induced by the mechanical means.

5. Means to adjust the movable coil or coils of a relay adapted to respond to feeble currents, said means comprising gravity means to induce in the coils a movement in one direction and electric means to induce in the coils a movement in the opposite direction, one or both of these means being adjustable said electric means independent of the electric impulses arrived over the line of transmission.

[Claims 6 to 9 not printed in the Gazette.]

900,744. METHOD OF PRODUCING CELLULOSE COMPOUNDS. ISIDOR KITSEE, Philadelphia, Pa. Filed Mar. 7, 1908. Serial No. 419,745.

1. The process of producing a compound useful for retainer for secondary cells, which consists in first producing a cellulose compound impervious to moisture, in second, producing an asbestos compound impervious to moisture, and in third, intermixing both compounds with the addition of sulfur.

2. In the production of useful articles from amorphous cellulose, the process, which consists in boiling the filling for such cellulose in oil, and intermixing then said filling with said cellulose and a flour of sulfur and then vulcanizing the same with the aid of heat.

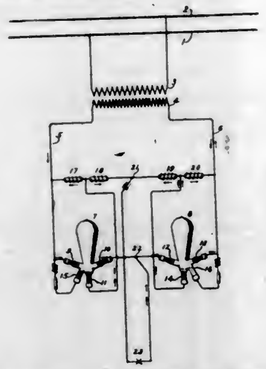
3. The method of curing or vulcanizing articles made of amorphous cellulose, which consists in subjecting the cellulose to a process whereby the same is made impervious to moisture and second, to a process whereby the same is vulcanized with the aid of a sulfur.

4. As an article of manufacture, a compound, consisting of an amorphous cellulose, a rosin or resin, a flour of asbestos, and oil, cured or vulcanized with the aid of sulfur.

5. Means to produce a retainer for liquid, out of an amorphous cellulose, said means comprising a dissolved rosin or resin intermixed with said cellulose, a flour of asbestos boiled in oil, and a sulfur intermixed with said compounds.

[Claim 6 not printed in the Gazette.]

900,745. SYSTEM OF ELECTRICAL DISTRIBUTION. OSIAS O. KRUH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 15, 1905, Serial No. 278,553. Renewed Mar. 6, 1908. Serial No. 419,570.



1. The combination of alternating current leads, a plurality of energy-storing devices connected in series across said leads, a plurality of rectifiers, a work circuit extending from said energy-storing devices and connected to said rectifiers, and connections between the rectifiers and the energy-storing devices for passing rectified current through said rectifiers and work circuit in series.

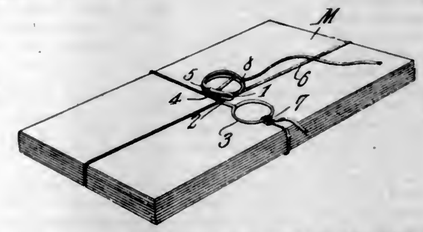
2. The combination of alternating current supply mains, reactances connected in series across said mains, rectifiers having their positive electrodes linked together across said mains and their negative electrodes connected respectively to junction points between pairs of said reactances, and a work circuit connected between a point in said reactances and the junction between two of the anodes of said rectifiers.

3. The combination of alternating current leads, energy-storing devices in series across said leads, a plurality of vapor electric devices having their positive electrodes linked together across said mains, and connections both from the negative electrodes and the junction between adjacent anodes to separate points in the circuit of said energy-storing devices.

900,746. PACKAGE-TIE. ALBERT H. LAGESON, Mabel, Minn. Filed Apr. 10, 1908. Serial No. 426,333.

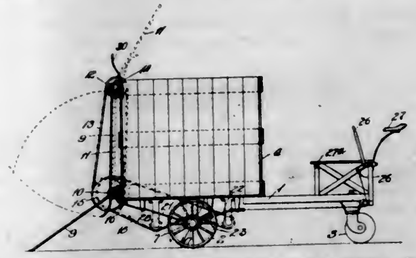
1. A package tie comprising a piece of wire bent to form a double-crotched shank, one terminal of the wire being formed into an eye and its other terminal into a two-whirled binder clamp, the eye and clamp being disposed in substantially parallel planes and at right angles to the shank.

2. A package tie comprising a piece of wire bent to form a double-crotched shank, one terminal of the wire being formed into an eye and its other terminal into a two-whirled binder clamp, a portion of one of the whirls being disposed within one of the crotches to brace the former against undue yielding relatively to the other whirl.



3. A package tie comprising a piece of wire bent to form a double-crotched shank, one terminal of the wire being formed into an eye and its other terminal into a two-whirled binder clamp, a portion of one of the whirls being disposed within one of the crotches with its terminal disposed to bear upon the other whirl thus to brace the first-named whirl against undue yielding relatively to the last-named whirl.

900,747. HAY-LOADER. CHARLES M. LEE, Gibbon, Nebr. Filed Dec. 12, 1907. Serial No. 406,185.



1. A hay loader, comprising a frame, a lifting fork hinged on said frame and adapted to extend in a forwardly inclined direction toward the ground for picking up hay therefrom, a loading fork hinged on said frame on a separate axis and having tines extending alternately between the tines of said lifting fork, and mechanism operated through the movement of the vehicle for swinging said lifting fork upwardly and simultaneously causing said loading fork to remove the hay from said lifting fork and discharge the same in a rearward direction.

2. In a device of the class described, the combination of a vehicle, a lifting fork hinged thereto on a horizontal axis and adapted to lift hay from the ground, a loading fork hinged on said vehicle on an axis located above that of said lifting fork, and having tines disposed so as to extend into the spaces between the tines on said lifting fork, and mechanism controlling the movements of said forks and adapted to first swing said lifting fork upwardly to lift the hay from the ground, and then cause the tines of said loading fork to swing upwardly through the spaces between the tines of said lifting fork to remove the hay therefrom and discharge it upon the vehicle.

3. The combination of a vehicle, a lifting fork hinged thereon and adapted to normally extend forward in an inclined direction for picking up hay from the ground, a loading fork hinged on said vehicle on an axis above that of said lifting fork and adapted to normally extend downwardly with its tines extending through the spaces between those of said lifting fork, mechanism for swinging said lifting fork upwardly to lift a quantity of hay from the ground, and mechanism for swinging said loading fork

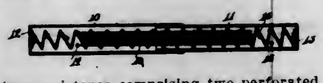
so as to remove the hay from said fork and discharge the same in a rearward direction, said loading fork being geared to swing at a greater speed than that of said lifting fork.

4. A hay loader, comprising a frame, a lifting fork hinged on said frame and adapted to extend in a forwardly inclined direction toward the ground for picking up hay therefrom, a loading fork hinged on said frame on a separate axis and having tines extending alternately between the tines of said lifting fork, mechanism operated through the movement of the vehicle for swinging said lifting fork upwardly and simultaneously causing said loading fork to remove the hay from said lifting fork and discharge the same in a rearward direction, and means for automatically disconnecting said forks from their operating mechanism as said loading fork approaches its discharging position.

5. A hay loader, comprising a frame, a lifting fork hinged on said frame and adapted to extend in a forwardly inclined direction toward the ground for picking up hay therefrom, a loading fork hinged on said frame on a separate axis and having tines extending alternately between the tines of said lifting fork, mechanism operated through the movement of the vehicle for swinging said lifting fork upwardly and simultaneously causing said loading fork to remove the hay from said lifting fork and discharge the same in a rearward direction, means for automatically disconnecting said forks from the operating mechanism when one of said forks arrives at a certain lifted position, and means for causing said forks to automatically return to their normal initial position.

[Claims 6 to 8 not printed in the Gazette.]

900,748. MOISTENING DEVICE. BENJAMIN F. LEISER, South Bend, Ind. Filed Feb. 3, 1908. Serial No. 414,110.



1. A cigar moistener comprising two perforated tubular members telescopically arranged, a spring within said tubular members and operating to maintain the same yieldably distended, and absorbent material within the tubular members and supported by the spring.

2. A device of the character described comprising two perforated tubular members telescopically arranged and open at the inner ends and closed at the outer ends, a spring within said tubular members and bearing against said closed ends and operating to maintain the tubular members yieldably distended, and absorbent material within the tubular members and supported by the spring.

3. A device of the class described comprising two perforated tubular members telescopically arranged, a spring within said tubular members and operating to maintain the same yieldably distended, and absorbent material within the spring and supported thereby.

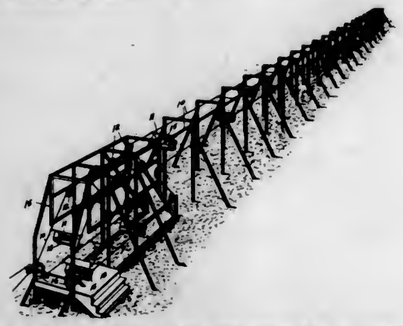
4. A device of the class described and comprising two perforated members telescopically arranged and open at the inner ends and closed at the outer ends with inwardly extending loops carried by said closed ends, a spring within said tubular members and engaging said loops by the terminal whirls, and absorbent material within the tubular members.

5. A device of the class described comprising two perforated tubular members telescopically arranged and open at the inner ends and closed at the outer ends with inwardly extending loops carried by said closed ends, a spring within said tubular members and engaging said loops by the terminal whirls, and absorbent material within the spring and supported thereby.

[Claim 6 not printed in the Gazette.]

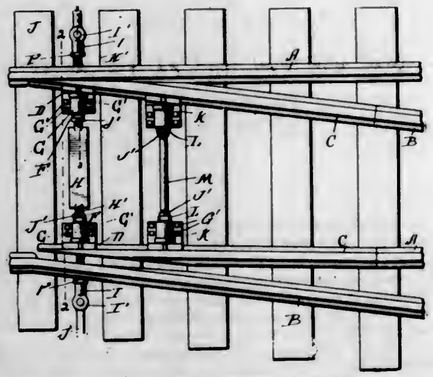
900,749. AMUSEMENT DEVICE. WILLIAM B. LEONARD, Chicago, Ill. Filed Feb. 8, 1908. Serial No. 414,882.

1. In an apparatus of the class described, the combination of an endless carrier, suitable supports therefor, means by which the carrier may be driven, a plurality of cars pivotally suspended from said carrier, and means for adjusting said supports and thus varying the course of said endless carrier.



2. In an apparatus of the class described, the combination of a pair of parallel endless members, cross-bars connecting said members, cars pivotally depending from said cross-bars, two series of supports for said endless members between which the cars may pass, and means for adjusting said supports and thus varying the course of said endless carrier.

900,750. CONNECTING-ROD FOR SWITCH-POINTS. JAMES E. LEWIS, Steelton, Pa. Filed Nov. 12, 1907. Serial No. 401,843.



1. The combination with a switch point carrying socket plates, nuts mounted in said plates, and a connecting rod working in said nut, for the purpose described.

2. A device of the kind described comprising socket plates adapted to be connected to switch-points, nuts mounted in said socket-plates, a connecting rod working in said nuts, and means for locking said nuts, for the purpose set forth.

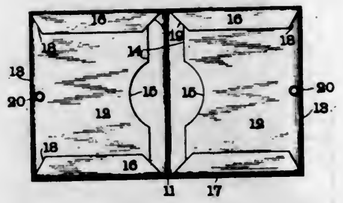
3. The combination with pivoted switch-points, of socket-plates secured to said points, sectional nuts mounted in said plates, and connecting rods having threaded ends working in said nuts, whereby said points can be adjusted, for the purpose set forth.

4. In a device of the kind described, the combination with pivoted switch-points, of socket-plates having angled portions fitting over the base and against the web of said points and secured thereto by bolts, nuts mounted in said plates, a connecting rod working in said nuts and locking nuts working on said connecting rod, adapted to engage said nut, for the purpose described.

5. In a device of the kind described, the combination with pivoted switch-points, of socket-plates and angled portions fitting over the base of said points and against the web and bolted thereto, sectional nuts mounted in said plates, a connecting rod extending through said nuts carrying sockets at its ends adapted to be connected to switch-operating rods, means for securing said nuts in said socket-plates, and means for locking said nuts in their adjusted position, for the purpose described.

[Claim 6 not printed in the Gazette.]

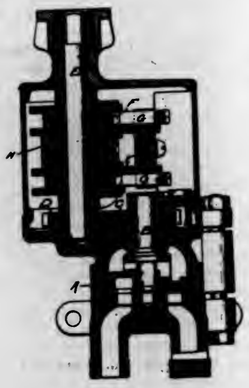
900,751. ENVELOP. GEORGE R. LOCKWOOD, St. Louis, Mo. Filed Sept. 30, 1907. Serial No. 395,070.



1. An envelop having two integrally connected main parts, side flaps opposite the connecting portion of said main parts and folded on said main parts to form the bodies of pockets with integrally closed sides, said flaps being of less width than said main parts, end flaps overlapping and permanently secured to said side flaps to close the ends of the pockets, said pockets being adapted to be folded together and provided with fastening means for securing them in folded position.

2. An envelop having two integrally connected main parts, side flaps opposite the connecting portion of said main parts and folded on said main parts to form the bodies of pockets with integrally closed sides, said side flaps being of less width than said main parts, end flaps overlapping and permanently secured to said side flaps to close the ends of the pockets, said end flaps being beveled at their inner ends and extending to the connecting portion of said main parts, said pockets being adapted to be folded together and provided with fastening means for securing them in folded position.

900,752. CONTROLLING MEANS FOR AIR-BRAKES. GEORGE MACLOSKIE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 5, 1908. Serial No. 419,284.



1. Controlling means for braking systems controlled both electrically and pneumatically, comprising a valve for controlling the brakes pneumatically, switch contacts for controlling the brakes electrically, a single operating member for said valve and said switch contacts, and connections between said valve and said member adapted to permit the movement of said member to operate said contacts without movement of said valve.

2. Controlling means for braking systems controlled both electrically and pneumatically, comprising a valve for controlling the brakes pneumatically, switch contacts for controlling the brakes electrically, a single operating member for said valve and said contacts, and mutilated gears in the connection between said valve and said member, whereby said member may be moved to operate said contacts without movement of said valve.

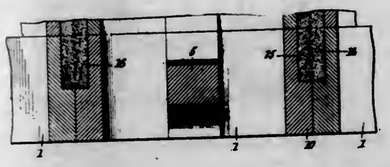
3. Controlling means for braking systems controlled both electrically and pneumatically, comprising a valve for controlling the brakes pneumatically, switch contacts for controlling the brakes electrically, a single operating member for said valve and said switch contacts, connections between said valve and said member adapted to permit the movement of said member to operate said contacts without movement of said valve, and means for locking said valve in position except when it is being moved by said member.

4. Controlling means for braking systems controlled both electrically and pneumatically, comprising a valve for controlling the brakes pneumatically, switch contacts for controlling the brakes electrically, a single operating member for said valve and said contacts, and mutilated gears in the connection between said valve and said member, whereby said member may be moved to operate said contacts without movement of said valve, said gears having bearing surfaces adapted to lock said valve in position except when the teeth of said gears are in mesh.

5. Controlling means for braking systems controlled both electrically and pneumatically, comprising a valve for controlling the brakes pneumatically, an operating spindle therefor, a second spindle adapted to receive, and to be moved by, a handle, mutilated gears connecting the two spindles, and switch contacts for controlling the brakes electrically carried by said second spindle.

[Claim 6 not printed in the Gazette.]

900,753. BUILDING-BLOCK. ADAM G. MAHLER, Medford, N. Y. Filed Nov. 21, 1907. Serial No. 403,154.

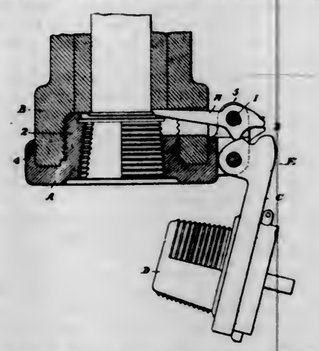


A building block having end walls with vertically disposed ribs at the sides thereof, and bosses with tapered side edges formed on said end walls near a horizontal face of said block, the outer faces of said bosses being substantially flush with the outer faces of said ribs whereby a bonding space is formed between said ribs and said bosses adapted to receive concrete to bond adjacent horizontal rows, the said end walls between said ribs and said bosses being flat and depressed.

900,754. BREECH APPLIANCE FOR GUNS. JOHN F. MEIGS and HERMAN G. JAKOBSSON, South Bethlehem, Pa., assignors to Bethlehem Steel Company, South Bethlehem, Pa., a Corporation of Pennsylvania. Filed Apr. 15, 1907. Serial No. 368,264.

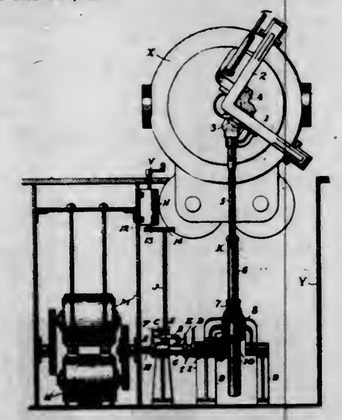
The combination in a gun, of a barrel having a socket at the breech threaded internally, and a cap-piece having supports for the block carrier, a hub threaded internally to

receive the breech-block and externally to fit the socket of the barrel, and a flange inclosing the rear of the barrel.



said cap-piece constituting a fixed and permanent part of the gun.

900,755. AUTOMATIC MEANS FOR CONTROLLING MOVEMENTS OF GUN-RAMMERS. JOHN F. MEIGS and ROBERT P. STOUT, South Bethlehem, Pa., assignors to Bethlehem Steel Company, South Bethlehem, Pa., a Corporation of Pennsylvania. Filed May 22, 1907. Serial No. 375,064.



1. The combination with a gun, a rammer and devices connected with the rammer to communicate movement to the same, of a motor for operating the said devices, a controller for the motor, and means connected with the motor to be moved thereby and interposed between the motor and the said devices to operate the controller.

2. The combination with a gun, a mechanically operated rammer and motor, of a controller for the motor and contact devices and means for moving them from the motor arranged between the motor and the rammer, and connections between said devices and the controller.

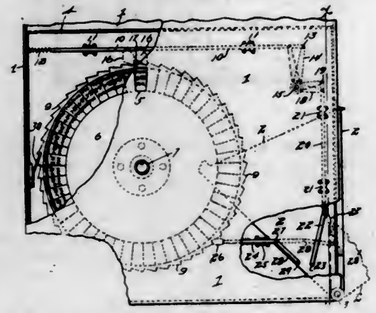
3. The combination in rammer actuating mechanism for guns, of a driving shaft and means connecting it to operate the rammer, means for rotating said shaft, a controller whereby the rotating means is stopped, started and reversed, a shifting device for said controller, contacts connected with the controller and contacts and means for swinging them from the driving shaft, the latter contacts arranged to engage contacts of the shifting device to carry the latter to its different positions.

4. The combination in rammer actuating mechanism for guns, of a driving shaft and means connecting it to operate the rammer, means for rotating said shaft, a controller whereby the rotating means is stopped, started or reversed, a shifting device for said controller, and adjustable contacts deriving their movements from the driving shaft and arranged to engage the shifting device at different intervals.

5. The combination in rammer actuating mechanism for guns, of a driving shaft and means connecting it to operate the rammer, means for rotating said shaft, a controller and connections whereby the rotating means is stopped, started or reversed, a shifting device for said controller, and a plurality of contact devices arranged independently of the rammer and in different positions to shift the shift device to different positions to reverse and stop the rammer.

[Claims 6 to 9 not printed in the Gazette.]

900,756. MAIL-BOX. CHARLES E. MENDENHALL, Dayton, Ohio. Filed Oct. 19, 1907. Serial No. 398,154.

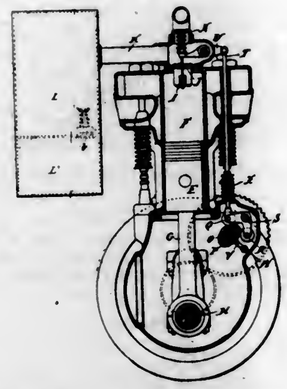


1. The combination with a letter box having a sight opening in a side thereof and a door the side portions of which are movable within the box, of a dial having the times for the collections of mail inscribed thereon in positions to be indicated through the sight opening in the box, and ratchets around the periphery of said dial, a slidable bar mounted above the dial, a ratchet pawl carried on said bar and engaging the ratchets on the dial, a bell-crank lever to which said pawl-carrying bar is connected, a slidable bar movable at right angles to the pawl-carrying bar and connected to said bell-crank lever, and a link lever pivoted to the slidable bar moving at right angles to the pawl-carrying bar, said link lever having a pivotal connection to the door of the box and whereby the pawl-carrying lever is actuated and is set to its initial position through the opening and closing of said door.

2. The combination with a letter box having a sight opening in a side thereof and a door the side portions of which are movable within the box, of a dial having the times for the collections of mail inscribed thereon in position to be exposed through the sight opening in the box, and ratchets around the periphery of said dial, of a pawl-carrying bar adapted to actuate said dial, a vertically-slidable bar, a bell-crank lever interposed between the pawl-carrying bar and said vertical bar, a link lever connected to said vertical bar and to the door of the mail box and whereby the pawl-carrying bar is actuated to impart to the indicating dial an advancing movement each time the door is opened, a locking bolt, and a link lever connecting said locking bolt with the door and whereby the dial is locked in each set position when the door is closed after each collection of mail.

3. The combination with a letter box having a sight opening in a side thereof and a door, of a collection-indicating dial provided with ratchet teeth upon its periphery and a collection indication associated with each of said ratchet teeth, a single pawl engaging one of said ratchet teeth at a time, a slidable rod supporting said pawl, an angular lever to actuate said bar, a slidable bar to actuate said lever, a link connected to said last-named bar and to the door and through which the angular lever is actuated.

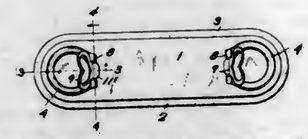
900,757. ENGINE. FRANK J. MILLER, Cleveland, Ohio. Filed Dec. 12, 1906. Serial No. 347,478.



1. In an explosive engine, the combination of a compression cylinder having inlet and outlet valves in the head thereof, a reservoir connected to the outlet valve, a rocker engageable with either valve to vary its normal action, a shaft driven by a moving part of the engine and having a cam thereon connected to the rocker, and means to shift the cam to vary the operation of the rocker and valves.

2. In an explosive engine, the combination of a compression cylinder having inlet and outlet valves, a reservoir connected to the outlet valve, a shaft driven by a moving part of the engine, a cam on the shaft, having an operative connection to the valves, the cam having at least three positions, in one of which the connection is idle and the valves act normally, in another of which the inlet valve is held open during the in-stroke to avoid compression, and in a third of which the normal action of the valves is reversed.

900,758. MANICURE IMPLEMENT. THEODORE MILLER, New York, N. Y. Filed July 6, 1908. Serial No. 442,007.



1. A manicure implement, comprising a strip of resilient material having a soft pliable strip secured to one surface thereof, said resilient strip being provided at either end with finger clips.

2. A manicure implement, comprising a strip of resilient material having a soft pliable strip secured to one surface thereof and having movable finger clips located at either end thereof.

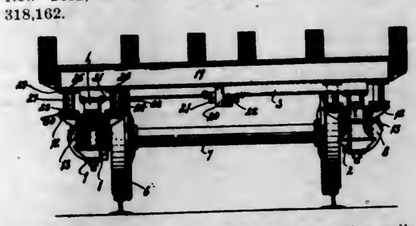
3. In a manicure implement, in combination, a strip of resilient material, a strip of soft pliable material secured to one surface of said resilient strip and projecting beyond its lateral edges, finger rings secured to said resilient strip at either end thereof, and finger clips pivotally mounted upon said finger rings.

4. In a manicure implement, in combination, an elongated strip of resilient material, a soft pliable strip secured to one surface of said resilient strip and projecting beyond its lateral edges, a plurality of finger rings mounted upon the opposite surface of said resilient strip, and finger clips pivotally mounted upon said finger rings and adapted to lie in erect or inclined positions with respect to said strip.

5. In a manicure implement, in combination, an elongated strip of resilient material having rounded end portions, a finger receiving member fastened to either end of said strip, a finger clip carried by each of said finger receiving members and provided with means for holding the same in erect or inclined positions with respect to said strip, and a soft buffer member cemented to the opposite side of said strip.

[Claim 6 not printed in the Gazette.]

900,759. RAILWAY-CAR TRUCK. JOHN V. MCADAM, New York, N. Y. Filed May 22, 1906. Serial No. 318,162.



1. The combination with the side frames of a railway car truck, of a car body and rocker bearings having a limited rocking movement in all directions, interposed between the car body and the truck for supporting the car load symmetrically over the side frames independently of a truck bolster.

2. The combination with the cast side frames of a railway car truck, of a car body and rocker bearings having a limited rocking movement in all directions, interposed between the car body and the truck for supporting the car load symmetrically over the side frames independently of a truck bolster.

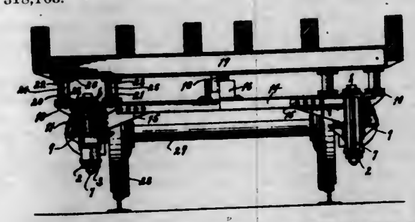
3. The combination with the side frames of a railway car truck, of a car body bolster and rocker bearings having a limited rocking movement in all directions, interposed between the car body bolster and the truck for supporting the car load symmetrically over the side frames independently of a truck bolster.

4. The combination with the cast side frames of a railway car truck, of a car body bolster and rocker bearings having a limited rocking movement in all directions, interposed between the car body bolster and the truck for supporting the car load symmetrically over the side frames independently of a truck bolster.

5. The combination with the side frames of a railway car truck, of a car body, springs seated in the side frames, spring caps and rocker bearings having a limited rocking movement in all directions, interposed between the spring caps and the car body for supporting the car load symmetrically over the side frames independently of a truck bolster.

[Claims 6 to 20 not printed in the Gazette.]

900,760. RAILWAY-CAR TRUCK. JOHN V. MCADAM, New York, N. Y. Filed May 22, 1906. Serial No. 318,163.



1. The combination with the built up side frames of a railway car truck, of a car body and rocker bearings, having a limited rocking movement in all directions, inter-

posed between the car body and the truck for supporting the car load symmetrically over the side frames independently of a truck bolster.

2. The combination with the built up side frames of a railway car truck, of a car body bolster, and rocker bearings having a limited rocking movement in all directions, interposed between the body bolster and the truck for supporting the car load symmetrically over the side frames independently of a truck bolster.

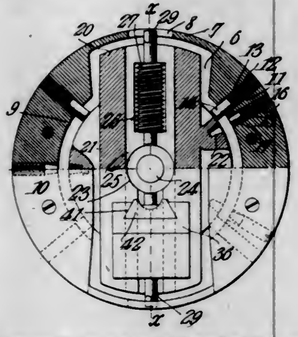
3. The combination with the built up side frames of a railway car truck, of a car body and means for supporting the car load symmetrically over the side frames independently of a truck bolster, comprising springs seated in the side frames and rocker bearings having a limited rocking movement in all directions, interposed between the springs and the car body.

4. The combination with the built up side frames of a railway car truck, of a car body bolster and means for supporting the car load symmetrically over the side frames independently of a truck bolster, comprising springs seated in the side frames and rocker bearings having a limited rocking movement in all directions, interposed between the springs and the car body bolster.

5. The combination with the built up side frames of a railway car truck, of a car body and means for supporting the car load symmetrically over the side frames independently of a truck bolster, comprising springs seated in the side frames, spring caps and rocker bearings having a limited rocking movement in all directions, interposed between the spring caps and the car body.

[Claims 6 to 12 not printed in the Gazette.]

900,761. LATHE-DOG. DAVID R. MCKIM, West Jordan, Utah. Filed Nov. 20, 1907. Serial No. 403,100.



1. In a device of the character described the combination with a casing having a recess in one face thereof, and retaining means upon the casing; of a dog movably mounted within the recess, wings thereon lapped by the retaining means, resilient means for centering the dog within the recess, and adjustable jaws upon the dog.

2. The combination with a recessed casing; of a dog loosely mounted to be movable universally within the recess, radially disposed spring pressed means within the casing for centering the dog, spring pressed means within the casing for exerting an outward pressure upon the dog, and adjustable dogs upon the jaws.

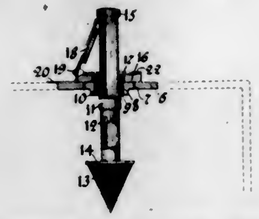
3. In a device of the character described the combination with a revoluble casing having a recess; of a dog loosely mounted to be movable universally within the recess, retaining means for holding the dog within the recess, spring pressed centering means bearing upon the dog, spring pressed means for holding the dog normally against the retaining means, a center extending through the dog, and independently adjustable jaws upon the dog.

4. In a device of the character described the combination with a casing having a recess in one face thereof, and retaining means upon the casing; of a dog movably mounted within the recess, wings thereon lapped by the retaining means, adjustable jaws upon the dog, and resilient means for yieldingly holding the wings against the retaining means.

5. In a device of the character described the combination with a casing having a recess in one face thereof provided with recessed walls; of retaining means extending across the recessed walls, a dog movably mounted within the casing and having wings disposed within the recessed walls, jaws adjustably mounted upon the dog, and resilient means for holding the dog normally spaced from the bottom of the recess and with its wings against the retaining means.

[Claims 6 to 8 not printed in the Gazette.]

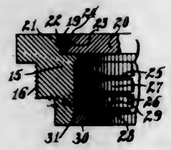
900,762. FILLING DEVICE FOR CANS. WILLIAM H. MCNUTT, New York, N. Y., assignor to William E. Roche, New York, N. Y. Filed Feb. 8, 1907. Serial No. 356,407.



1. The combination with a closed vessel having a threaded opening in its top, a sleeve screwed into said opening, a filling tube slidable in the sleeve, the sleeve having minute openings therethrough adjacent its bore, a collar secured to the said sleeve at the upper part having a larger bore than the sleeve bore whereby the said minute openings are exposed, a valve member hinged to the said collar, said filling tube having a head at its upper end preventing its passing down through the bore of the sleeve but permitting the valve member to close down on the collar on top of the head, and a strainer member having minute openings at the lower end of the filling tube.

2. The combination with a closed vessel having a threaded opening in its top, a sleeve screwed into said opening, a filling tube slidable in the sleeve, the sleeve having minute openings therethrough adjacent its bore, a collar secured to the said sleeve at the upper part having a larger bore than the sleeve bore whereby the said minute openings are exposed, a valve member hinged to the said collar, said filling tube having a head at its upper end preventing its passing down through the bore of the sleeve but permitting the valve member to close down on the collar on top of the head, the filling tube having a flat ring member secured to its lower end, and a conical perforated member having minute openings and secured to the periphery of said collar providing an outlet for the filling tube to permit free exit of its contents.

900,763. NON-EXPLOSIVE CLOSURE FOR TANKS. WILLIAM H. MCNUTT, New York, N. Y., assignor to William E. Roche, New York, N. Y. Filed Nov. 19, 1906. Serial No. 343,991.

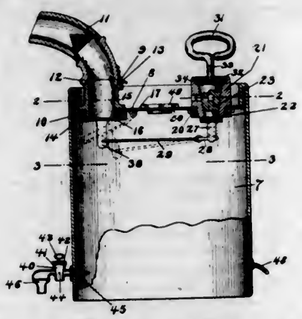


1. A closure for tanks comprising a bushing provided with an annular shouldered portion at its outer part, a closure disk located in said shouldered portion and of less

diameter than the shouldered portion, the disk being provided with an annular channel in its periphery, the opposite wall of the shouldered portion being also provided with an annular channel, a fusible ring arranged between the periphery of the disk and the channel portion whereby the disk is normally locked in position, the bushing having its aperture threaded at one portion, a plurality of apertured diaphragms extending across the aperture, ring members separating the diaphragms at their margins, and a ring nut threaded in the aperture of said bushing clamping the diaphragm and ring members in position.

2. A closure for tanks comprising a bushing, fusible means arranged to close the aperture in the bushing at normal temperature, said bushing being internally threaded at its opposite end, a series of apertured diaphragms located in the bushing, ring members inserted between the diaphragms at their margins to separate the diaphragms, and a ring nut member screwed into the threaded aperture to clamp the diaphragm and ring members in position.

900,764. SAFETY FILLER-CAN. WILLIAM H. MCNUTT, New York, N. Y., assignor to William E. Roche, New York, N. Y. Filed Dec. 10, 1906. Serial No. 347,224.



1. In a filler can, the combination of a can, an outlet for the can, a valve controlling the outlet, a valve seat member providing an air vent at the upper portion of the can, a plug valve rotatable in the valve seat, an arm secured to the plug valve, a spring organized to close the plug valve, and a link connecting the spout valve with said arm whereby the closing of the plug valve by its spring will close the outlet valve and lock it in such position.

2. In a filler can, a can having an outlet, a valve for controlling the outlet, a valve seat in the can, a plug valve in the valve seat controlling the air admission to the can, a spring yieldingly retaining the plug in closed position, an arm on the plug, and a link connecting the arm and the outlet valve which is in alinement with the arm when the plug is in closed position to lock the outlet closed and prevent its movement until the plug is swung to other positions.

900,765. CARTRIDGE SYSTEM FOR EXPLOSIVE-ENGINES. WILLIAM H. MCNUTT, New York, N. Y., assignor to William E. Roche, New York, N. Y. Filed Jan. 14, 1907. Serial No. 352,110.

1. The combination of the cartridge vessel having a conical lower end terminating in a plug, the plug having a conical extremity and provided with a threaded portion above said extremity, a sleeve member comprising a body portion and a flange portion adapted for attachment to a receiving vessel, a sleeve member having a threaded portion in its upper end, and a conical portion below the threaded portion corresponding in shape to the said plug for attachment thereto, the sleeve having a chambered portion in its lower end, a valve at the upper part of the chambered portion arranged to close the opening, a spring in the chambered portion arranged to engage the valve and yieldably retain it seated, fingers attached to the valve and projecting into the plug engaging portion causing the valve to be automatically opened and retained open when the plug is secured in the bushing.



2. The combination of the cartridge vessel having a conical lower end terminating in a plug, the plug having a conical extremity and provided with a threaded portion above said extremity, a sleeve member comprising a body portion and a flange portion adapted for attachment to a receiving vessel, a sleeve member having a threaded portion in its upper end, and a conical portion below the threaded portion corresponding in shape to the said plug for attachment thereto, the sleeve having a chambered portion in its lower end, a valve at the upper part of the chambered portion arranged to close the opening, a spring in the chambered portion arranged to engaged the valve and yieldably retain it seated, fingers attached to the valve and projecting into the plug engaging portion causing the valve to be automatically opened and retained open when the plug is secured in the bushing, the cartridge member having a flaring based portion arranged to rest on the receiving vessel when the plug is secured to said bushing, and latch members carried by the receiving vessel and arranged to secure the cartridge base in position.

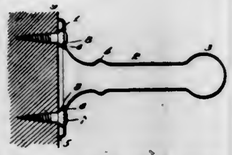
900,766. ADJUSTABLE SOCKET-WRENCH. EMIL C. NAGEL, Chicago, Ill. Filed Nov. 19, 1907. Serial No. 402,933.



1. A wrench having spring jaws at its end provided with work engaging sockets combined with an open link and a reinforcing collar adapted to compress or lock said jaws as set forth.

2. A wrench having spring jaws at its end provided with work engaging sockets combined with an open link and a reinforcing collar with set screw therefor adapted to compress or lock said jaws as set forth.

900,767. TOWEL-PIN. CHARLES NELSON, New York, N. Y., assignor to The S. Sternau & Company, New York, N. Y., a Copartnership. Filed Apr. 3, 1908. Serial No. 424,017.

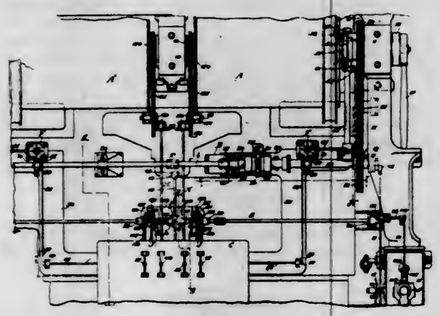


1. A towel pin formed of sheet metal and having a base, a flange thereon, screw holes and countersink cups for the screw holes, the depth of the cups being equal to the depth of the flange.

2. A towel pin formed of sheet metal and having a base, screw holes therein, and countersink cups for the screw holes, which are engaged with the support when the pin is secured thereto, the greater part of the base being held at a distance from the support equal to the depth of the cups.

3. A towel pin formed of sheet metal, spun to shape, with an enlarged spherical head, a flange base, screw holes in the base, and countersink cups for the screw holes, the depth of the countersink cups being equal to the depth of the flange.

900,768. HOISTING-ENGINE. SVEN T. NELSON, Chicago, Ill., assignor to Sullivan Machinery Company, Chicago, Ill., a Corporation. Filed May 9, 1906. Serial No. 315,955.



1. In a hoisting engine, the combination with the engine shaft, hoisting drum and clutch mechanism for connecting said drum to said shaft, of mechanism for automatically throttling the flow of motor fluid to the engine at a predetermined point and means controlled by the operation of said clutch mechanism for restoring said throttling mechanism.

2. In a hoisting engine, the combination with a plurality of hoisting drums, a common engine shaft, and separate clutch mechanisms for connecting and disconnecting each of said drums and said shaft, of mechanism for cutting off the flow of motor fluid to said engine, and means driven by each of said drums for actuating said mechanism at a predetermined point.

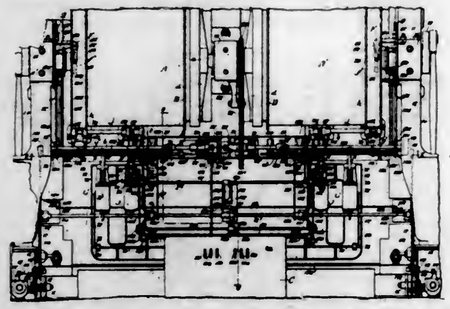
3. In a hoisting engine, the combination with the engine shaft, hoisting drum and clutch mechanism for coupling said drum to said shaft, of throttling mechanism for the engine, means actuated by the drum for operating said throttling mechanism at a predetermined point and means controlled by the operation of said clutch mechanism for disengaging said operating means.

4. In a hoisting engine, the combination with the engine shaft, hoisting drum and clutch mechanism for coupling said drum to said shaft, of throttling mechanism for the engine, actuating means driven by the drum for automatically operating said throttling mechanism at a predetermined point and a clutch controlling gear arranged to restore said automatic operating means.

5. In a hoisting engine, the combination with a plurality of hoisting drums, a common engine shaft, and separate clutch mechanisms for connecting and disconnecting each of said drums and said common shaft, of throttling mechanism for the engine and separate actuating devices, one geared to and driven by each of said drums, for operating said throttling mechanism at predetermined points.

[Claims 6 to 36 not printed in the Gazette.]

900,769. HOISTING-ENGINE. SVEN T. NELSON, Chicago, Ill., assignor to Sullivan Machinery Company, Chicago, Ill., a Corporation. Filed June 28, 1906. Serial No. 323,824.



1. In a hoisting engine, the combination with the engine shaft, hoisting drum and clutch for connecting said drum to said shaft, of mechanism for automatically throttling the flow of motor fluid to the engine at a predetermined point, an operating shift mechanism connected to said clutch and means connected to and actuated by said clutch operating mechanism for releasing or restoring said automatic throttling mechanism.

2. In a hoisting engine, the combination with the engine shaft, hoisting drum and clutch for coupling said drum to said shaft, of throttling mechanism for the engine, actuating means driven from the drum for operating said throttling mechanism at a predetermined point, an operating shifter connected to said clutch and means connected to and operated by said shifter for placing the actuating means of said throttling mechanism into and out of operative condition.

3. In a hoisting engine, the combination with the engine shaft, hoisting drum and clutch for coupling said drum to the shaft, of throttling mechanism for the engine, a shifter controlling said throttling mechanism, an actuator geared to and driven from said drum for operating said shifter at a predetermined point, an operating shifter connected to said clutch and means connected to and operated by said shifter for disengaging said actuator and shifter.

4. In a hoisting engine, the combination with the engine shaft, hoisting drum and clutch for coupling said drum to said shaft, of a throttle valve for the engine, a shift lever, connections between said lever and said throttle valve, an operating hand lever, connections between said hand lever and said shift lever an actuator driven from said drum for automatically operating said shift lever at a predetermined point and means connected to said clutch and shifted therewith for throwing said actuator and shift lever into and out of operative condition.

5. In a hoisting engine, the combination with the engine shaft, hoisting drum and a clutch for coupling said drum to said shaft, of a throttle valve for the engine, a rock shaft connected to said throttle valve, a shifter arm connected to said rock shaft, an operating hand lever connected to said shifter arm, an actuating cam member driven from said drum for automatically operating said shifter arm at a predetermined point and means connected to and shifted with said clutch for throwing said actuating cam and shifter arm into and out of operative relation.

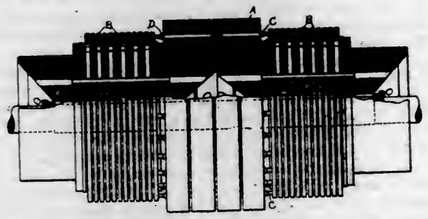
[Claims 6 to 66 not printed in the Gazette.]

900,770. SASH WEIGHT AND PULLEY. ROBERT D. NOE, Bozeman, Mont. Filed June 25, 1907. Serial No. 380,773.



In combination with a window frame having pulleys journaled in the upper portions of its sides and sliding sashes mounted therein, a sash cord attached at its ends to the upper and lower sash respectively and passing over the side pulleys in the frame, a pulley wheel mounted upon the intermediate portion of said cord, a band passing continuously and diametrically around said pulley wheel, said pulley wheel being journaled in said band and having its upper side at a higher point than the band or any part attached thereto, an integral loop depending from said band and passing transversely under the pulley, a hook fixed to the lowest point of said loop and a weight having a pivoted bail in engagement with said hook.

900,771. ARMATURE FOR UNIPOLAR MACHINES. JAKOB E. NOEGGERATH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 25, 1907. Serial No. 370,192.



1. An armature for unipolar machines having two sets of collector rings, and armature conductors between said sets of rings and connected thereto, each conductor being divided at a point between said sets of rings into separable parts.

2. An armature for unipolar machines having two sets of collector rings, and armature conductors between said sets of rings and connected thereto, each conductor being divided at a point near its center into separable parts.

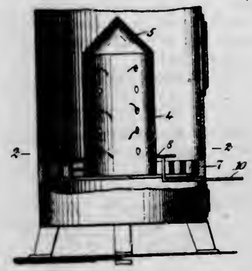
3. In an armature for unipolar machines, armature conductors divided near their centers into separable parts, one of said parts being adapted to enter the other at their meeting ends.

4. In an armature for unipolar machines, collector-rings at opposite ends of the armature, armature conductors divided at a point between the two sets of rings into separable parts, each of said parts being secured near its outer end to one of said collector-rings.

5. In an armature for unipolar machines, collector-rings at opposite ends of the armature, armature conductors divided at a point between the two sets of rings into separable parts, each of said parts being secured near its outer end to one of said collector-rings, and the inner end of one of said parts being adapted to enter the inner end of the other part.

[Claims 6 to 10 not printed in the Gazette.]

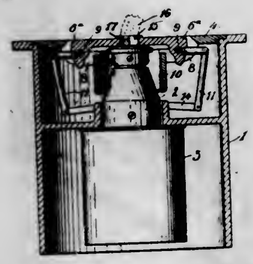
900,772. DEVICE FOR CREATING A CENTRAL DRAFT FOR FIRE-BOXES. GEORGE F. PANNEBAKER, St. Louis, Mich., assignor of one-half to Lewis A. Drury, St. Louis, Mich. Filed May 20, 1907. Serial No. 374,572.



1. In a fire box, the combination with a grate formed of concentric and spaced grate bars and having a central opening, of a hollow cylindrical perforated body open at its bottom and having a conical top, said body being of less diameter than the opening of the grate and provided at its lower end on its outer face with blocks having flanges resting upon the top of the inner grate bars, the body being of a height to extend above the line of fuel.

2. In a fire box, the combination with a grate having an opening therein, of a hollow perforated body open at the bottom and closed at the top, said body being of less diameter than the opening of the grate and provided at its lower end on its outer face with blocks having flanges resting upon the inner grate bars, the body being of a height to extend above the line of fuel.

900,773. ELECTRIC PLUG-RECEPTACLE. GEORGE L. PATTERSON, New York, N. Y., assignor to Alice C. Patterson, New York, N. Y. Filed Oct. 8, 1907. Serial No. 396,525.



1. In an electrical connection, the combination of a plug and socket, a box, a horizontally disposed cover therefor having an opening adapted to admit the plug, a horizontally hinged closure for said opening, and separate means passing through the top or cover of the box to operate said closure.

2. In an electrical connection, the combination of a plug and socket, a box, a horizontally disposed cover therefor having an opening adapted to admit the plug, two closures for said opening hinged at opposite sides thereof, and separate means to operate both of said closures simultaneously.

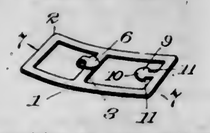
3. In an electrical connection, the combination of a plug and socket, a box therefor having an opening adapted to admit the plug, two pivoted closures for said opening, a lever extending from each closure, and means connected with said levers to operate said closures.

4. In a device of the character described, a plug and socket, a box therefor having an opening adapted to admit said plug, closures for said opening hinged at opposite sides thereof and having recesses to afford clearance for the plug connecting wire to pass therethrough, and separate means to operate said closures arranged at one side thereof.

5. In a device of the character described, a plug and socket, a box, a top plate thereon having an opening adapted to admit the plug, a guide sleeve secured to said top plate, a pair of pivoted closures for said opening, lever arms extending from said closures and inside of the box, and means connected with said lever arms to operate the closures simultaneously.

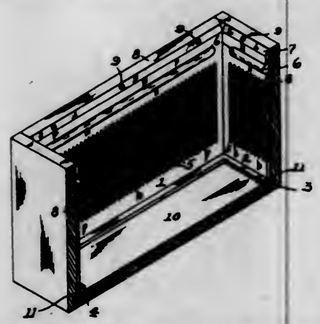
[Claims 6 to 9 not printed in the Gazette.]

900,774. BUCKLE. EUGENE PEARL, Passaic, N. J. Filed July 31, 1907. Serial No. 386,468.



A buckle comprising an open rectangular frame, the outer face of which is concaved from end to end to reduce curvature of the strap, a cross bar integrally formed with said frame, a centrally disposed projection bent upwardly and then inwardly and terminating in an approximately heart-shaped head, said heart-shaped head lying in a horizontal plane above said cross bar and a second similarly formed projection extending inwardly from one of the end bars of the frame in a direction opposite that of the first named projection, said latter projection also terminating in an approximately heart-shaped head which lies substantially in the plane of the bar by which it is carried.

900,775. LINING FOR WATER-CLOSET TANKS. CHARLES PFAU, Cincinnati, Ohio, assignor to The Pfau Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Sept. 14, 1906. Serial No. 334,601.



1. As an article of manufacture, a ductile metal lining for water closet tanks having vertical corrugations extending outwardly in its sides to stiffen said lining and provide for ventilation between the lining and an adjacent tank casing, said adjacent tank casing in which said lining is placed, and an outwardly flaring upper edge adapted to bear against the upper edge of the tank casing and having vents therein adapted to connect with the ventilating ducts between the tank casing and lining whereby the same is ventilated.

2. As an article of manufacture, a ductile metal lining for water closet tanks having vertical corrugations extending outwardly in its sides to stiffen said lining and to provide for ventilation between the lining and an adjacent tank casing, said adjacent tank casing in which said lining is placed, and an outwardly flaring upper edge adapted to bear and fit against the upper edge of said tank casing.

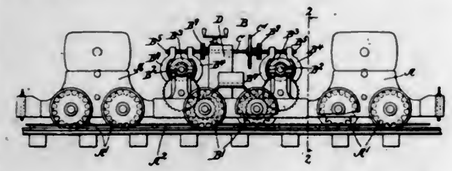
3. A metal lining for water closet tanks comprising sides 1, ends 2 and bottom 3 seamed and soldered together to form water tight joints 4, corrugations 5 on said sides and ends respectively, corrugations 6 on each side and end, outwardly flaring flange 7, ventilating ducts 11, and vents 9 therein adapted to communicate with said ventilating ducts 11, all arranged and adapted to be used, substantially as and for the purposes set forth.

4. As an article of manufacture, a ductile metal lining for water closet tanks formed in suitable shape and having its joints secured together and soldered, embossing on said lining and a resilient flange flaring outwardly and having a rib extending inwardly, substantially as and for the purposes set forth.

5. As an article of manufacture, a ductile metal lining for water closet tanks having its sides, ends and bottom formed into substantially rectangular shape, and having its joints secured together by seams and solder and embossing in the sides, ends and bottom whereby the distortions are removed and said lining has an even shape, substantially as and for the purposes set forth.

[Claims 6 to 10 not printed in the Gazette.]

900,776. COMPOSITE LOCOMOTIVE. CHARLES A. PRATT, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 17, 1906. Serial No. 348,343.



1. A composite locomotive comprising a motor unit and a brake unit separate from each other but connected together, a power controller for the motor unit located on the brake unit.

2. A composite locomotive comprising a motor element, a brake element separate therefrom and connected therewith, a sprocket wheel on said brake element, a toothed rack with which said sprocket wheel is operatively connected, and means on the brake element for retarding the rotation of the sprocket wheel to produce a braking effect.

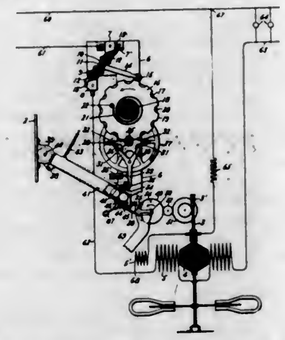
3. A composite locomotive comprising a plurality of motor units each provided with a sprocket wheel operatively connected with a toothed rack, a brake unit associated with said motor units and provided with a sprocket wheel also operatively connected with said rack, and means for retarding the sprocket wheel on the braking element to secure a braking effect.

4. A composite locomotive comprising a motor unit, a brake unit separate therefrom, and connected therewith, a sprocket wheel mounted on said brake unit and operatively connected with a toothed rack located beneath the brake unit, a shaft on the brake unit provided with braking elements adapted to frictionally retard its rotation, and an operative connection between said shaft and said sprocket wheel.

5. A composite locomotive comprising a motor unit and a brake unit distinct from each other but connected together, a positive driving connection between the motor unit and the braking device upon the brake unit, whereby the heating of the brake does not affect the motor unit.

[Claims 6 to 8 not printed in the Gazette.]

900,777. PREPAYMENT-METER. WILLIAM H. PRATT, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 10, 1905. Serial No. 254,660.



1. In a prepayment device, a meter, a switch, operating means therefor including a movable coin chute arranged to be held in one position when empty and in another position when one or more coins are contained therein, mechanism normally preventing the escape of coins from the chute, and means controlled by the meter for releasing coins from the chute one at a time.

2. In a prepayment mechanism, a switch, a pivoted coin chute arranged to be held in one position when empty and in another position when one or more coins are contained therein, and switch-operating means controlled by the position of said chute whereby when the chute is empty the switch is open and when it contains one or more coins the switch is closed.

3. In a prepayment device, a meter, a switch, a movable coin chute arranged to be held in one position when empty and in another position when one or more coins are contained therein, means controlled by said meter for controlling the release of coins from said chute, and operating means for said switch controlled by the movement of said chute.

4. In a prepayment device, a meter, a switch, operating means therefor including a movable coin chute arranged to be held in one position when empty and in another position when one or more coins are contained therein, a catch normally preventing the escape of coins from said chute and adapted by its movement to release one coin at a time, a weight pivoted at a point remote from its center of gravity, and means driven by the meter for moving the weight over its center of gravity, said weight being arranged to strike said catch in its descent.

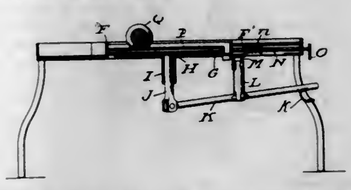
5. In a prepayment device, a coin chute, a catch normally retained by the action of gravity in a position to prevent the escape of coins therefrom and adapted when moved to release one coin at a time and to return automatically to its normal position, a weight pivoted at a point remote from its center of gravity, and means for moving the weight over its center of gravity, said weight being arranged to strike and move said catch in its descent.

[Claim 6 not printed in the Gazette.]

900,778. SHINGLE-MOLDING MACHINE. WILLIAM PUGH, Streator, Ill. Filed Mar. 27, 1908. Serial No. 423,609.

1. In a molding machine a table having an opening in its top, a pattern plate in the opening having an offset portion to form a flange on the molded article, punches slidable longitudinally and adapted to penetrate the flange, and means for elevating the pattern plate.

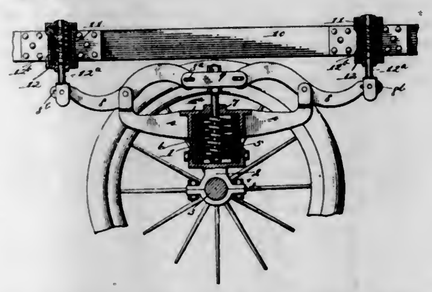
2. In a molding machine, a frame comprising L-shape side and end sills, longitudinal and transverse L-shaped and U-shaped sills respectively between the side and end sills forming an inclosure; a pattern plate supported in the inclosure, punches having bearing in the duplicate walls of said U-shaped sills or members and means for elevating the pattern plate.



3. In a molding machine, a frame comprising L-shape side and end sills, longitudinal and transverse L-shaped and U-shaped sills respectively between the side and end sills forming an inclosure; a pattern plate supported in the inclosure, punches having bearing in the duplicate walls of said U shaped sills or members, a roller having trunnions movable on the intermediate longitudinal sills.

4. A molding machine comprising a pattern plate means for its support of frame-like outline embracing longitudinal and transverse L-shaped and U-shaped sills, and punch-members having bearings in the parallel walls of said U-shaped sills or members and having applied thereto springs to retain them in retracted initial position, said punch members having their outer ends yoked together by a common member.

900,779. AUTOMOBILE-SPRING. WILLIAM R. RANTZ, Greenville, Ohio. Filed Nov. 13, 1907. Serial No. 402,007.

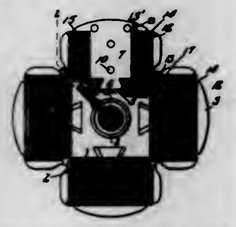


1. A device of the kind described comprising three spring pressed piston rods, one of said rods being arranged below and between the others, and curved levers pivotally connected intermediate their ends and having their end portions loosely connected to said piston rods.

2. In a device of the kind described, three cylinders, one cylinder being carried by a vehicle axle and two by a vehicle body, bracket arms supported from the vehicle axle, and levers pivoted upon said arms, spring pressed piston rods in said cylinders, and means loosely connecting the inner ends of said levers to the piston rod of the cylinder supported by the axle, the outer ends of said levers being pivotally connected respectively to the other piston rods.

3. A spring for automobiles comprising a cylinder carried by the axle, cylinders supported from the body, and upon opposite sides of the axle cylinder, spring pressed pistons in said cylinders, piston rods, a block carried by the piston rod of the axle cylinder, bracket arms carried by the axle cylinder, and S-shaped levers pivoted upon said arms, the ends of said levers being loosely connected respectively to the block of the axle piston rod and to the lower ends of the other piston rods.

900,780. DYNAMO-ELECTRIC MACHINE. HENRY G. REIST, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 20, 1904. Serial No. 213,203.



1. In a dynamo-electric machine, a polar projection, a winding thereon, and braces for opposite sides of said winding, said braces being integrally connected together.

2. In a dynamo-electric machine, the combination with the field poles and the windings thereon, of a support for the winding of each pole comprising a portion encircling the pole, and another portion secured thereto for engaging the exterior of the winding.

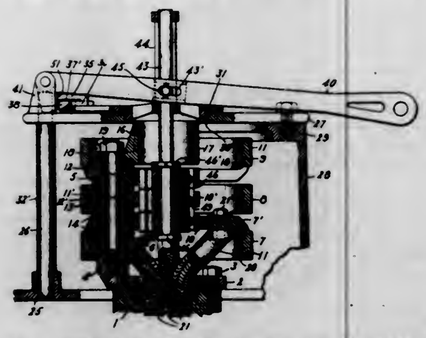
3. In a dynamo-electric machine, the combination with the field poles and the windings thereon, of a support for the winding of each pole comprising a portion encircling the pole, and another portion integrally secured thereto for enguging the exterior of the winding.

4. In a dynamo-electric machine, the combination of the field poles and the windings thereon, of a support for the winding of each pole comprising a portion encircling the pole, and other portions at right angles thereto engaging the exterior of the winding, said other portions of the supports for adjacent windings mutually engaging and supporting each other.

5. In a dynamo-electric machine, a rotating member provided with radially-extending polar projections, a winding for each polar projection, a support for each winding comprising a portion encircling the polar portion beyond the winding, and portions carried by said encircling portion for engaging the exterior of the winding.

[Claims 6 to 16 not printed in the Gazette.]

900,781. DYNAMO-ELECTRIC MACHINE. HENRY G. REIST, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 1, 1905. Serial No. 247,850.



1. In combination, a rotating body, collector rings secured thereto, each of said collector rings being provided with a cylindrical external contact surface and with a cylindrical internal contact surface, and brushes for engaging each of said surfaces, each of said brushes for the internal contact surface being arranged to engage all the collector rings and thereby short-circuit them.

2. In a dynamo electric machine, a rotating shaft, a set of collector rings each having an internal cylindrical contact surface and an external cylindrical contact surface, said collector rings being secured to said shaft with the contact surfaces concentric with the axis of the shaft, brushes engaging the external contact surfaces of the rings, each brush being electrically insulated from the other brushes, and a short-circuiting device movable into and out of position in which it engages the inner contact surfaces of the collector rings to electrically connect them together, said device comprising brushes, each of said brushes engaging all the rings in the short-circuiting position.

3. In combination, a set of collector rings each of which has two contact surfaces, a set of coöperating brushes movable into and out of position in which they engage one of the contact surfaces on each ring, the brush or brushes engaging each collector ring being insulated from the others, short-circuiting means movable into and out of the position in which it engages the others of said contact surfaces to electrically connect the collector rings together, a lever pivoted to turn in one plane for moving said short-circuiting means, a lever pivoted to turn in a plane at right angles to the first-mentioned plane to move the brushes into and out of position in which they engage the collector rings, and an interlocking connection between said levers whereby the brush-operating means can be operatively moved only when the rings are short-circuited.

4. In combination, a set of collector rings each of which has two contact surfaces, a set of brushes movable into and out of the position in which they engage one of the contact surfaces on each ring, the brush or brushes engaging each collector ring being insulated from the others, short-circuiting means movable into and out of the position in which it engages the other of said contact surfaces to electrically connect the collector rings together, a lever pivoted to turn in one plane for moving said short-circuiting means, a lever pivoted to turn in a plane at right angles to the first-mentioned plane to move the brushes into and out of position in which they engage the collector rings, and an interlocking connection between said levers whereby the brush-operating means can be operatively moved only when the rings are short-circuited, said interlocking means comprising a portion on one of said levers which engages the other lever to prevent the operation of the first-mentioned lever except when the second lever is in a predetermined position.

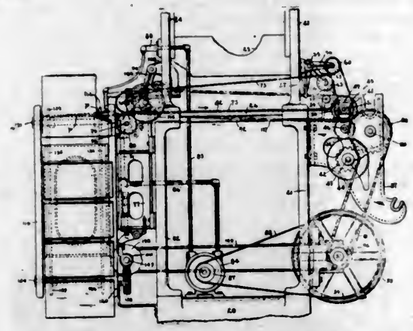
5. In combination, a rotating shaft, collector rings each having an internal cylindrical contact surface secured to the shaft with said surfaces concentric with the shaft, a tubular support secured to the end of the shaft having its inner surface concentric with the shaft, a short-circuiting device, and means for moving it from the position in which it engages the inner contact surface of the collector rings to a position in which it is engaged and supported by the friction of the inner surface of said support.

[Claims 6 to 16 not printed in the Gazette.]

900,782. MACHINE FOR FEEDING OFF NEWSPAPERS. GEORGE L. RICHARDS, Brookline, Mass., assignor, by mesne assignments, to Nellsen Mailing Machinery Company, Erie, Pa., a Corporation of Maine. Filed Mar. 21, 1904. Serial No. 199,150.

1. A machine for feeding off newspapers, etc., from piles comprising upper and lower series of frictional feeding devices one of which is mounted to yield at the engaging point, and is frictionally driven, a carriage mounted to slide, means for reciprocating said carriage, feeding arms pivotally mounted on the carriage, cams on which said arms ride during the reciprocation of the carriage, said cams being shaped to permit the depression of said arms.

2. A machine for feeding off newspapers, etc., from piles comprising a carriage mounted to slide, means for reciprocating said carriage, feed arms pivoted to the carriage, cams on which the arms ride during the movement of the carriage, means for rotating the cams, said cams being shaped to permit the depression of the arms only at the retracted position of the carriage and to move said arms upward before the forward movement of the carriage, upper and lower series of frictional feeding means defining a path of movement below the path in which said carriage slides, the upper of said frictional feeding means being yieldingly mounted and frictionally driven.



3. A machine for feeding off newspapers, etc.; from piles comprising upper and lower feed tapes the upper of which is frictionally driven, defining a lateral path, a carriage mounted to slide above said path, arms pivotally mounted on the carriage and having suction cups, spring means for exerting a strain on said arms to move the free ends of the same downward, rotatable cams adapted to support the arms against said springs during the movement of the carriage and at times to permit the springs to act, and means for moving the carriage.

4. A machine for feeding off newspapers, etc., from piles comprising upper and lower series of feed tapes the upper series of which is yieldingly mounted and is frictionally driven by contact with the lower series, means for moving a pile of newspapers, etc., vertically, including a clutch connection adapted to be released by resisting the movement of a rotatable member thereof, an electrical circuit including a circuit breaker positioned to intercept said papers and a magnet, and a detent, for said rotatable clutch, pivotally mounted and adapted to be attracted by said magnet when the circuit is closed, an air blast located slightly above said circuit breaker, and a carriage mounted to slide above the level of said circuit breaker and provided with depressible arms furnished with mouth pieces forming air inlets as described.

900,783. MANURE-POUCH. WILLIAM A. ROBERTS, Kansas City, Mo. Filed Dec. 18, 1907. Serial No. 407,084.



1. A manure pouch, comprising a tube having an extension at one side adapted to be folded under and form a bottom for the tube and be fastened to its opposite side, and an extension projecting upward from said opposite side of the tube.

2. A manure pouch, comprising a tube having an extension at one side adapted to be folded under and form a bottom for the tube and be fastened to its opposite side, and an extension projecting upward from said opposite side of the tube, and provided at its upper end with means for attaching it to the tail of a draft animal.

3. A flattened tube, having gores in its upper end and provided with an extension depending from its front side, adapted to be folded up and around the lower end of the tube, means for fastening the free end of said extension to the tube when thus folded, an extension projecting upward from the rear side of the tube and provided with a recess in its upper end, and a strap attached to said extension contiguous to the recess.

4. The combination with a suitable harness fitted upon a horse and provided with a pair of buckles 30 and a breech strap below said buckles, of a manure pouch comprising a tube fitted under the tail of the horse with its front side attached at its upper end to said breech strap and having its rear side provided with an upwardly projecting extension and having straps to engage said buckles and a strap adapted to be fastened around the tail of the horse, an extension projecting from the lower end of the front side of the tube and adapted to be folded back under the latter and up against its rear side, and means to detachably fasten said last-named extension to said back wall.

900,784. SEED-PLANTER. BENJAMAN F. ROBINSON, Camp Hill, Ala. Filed May 20, 1908. Serial No. 433,810.



1. In a seed planter the combination with a plow carrying frame, and a wheel and seed hopper carrying frame, of an agitator arranged in the seed hopper and comprising a shaft journaled in the sides thereof and having a U-shaped agitator mounted thereon and a hub mounted on the shaft and having radial arms extending therefrom, and means connecting the supporting wheel and agitator shaft whereby the former is operated in the movement of the latter.

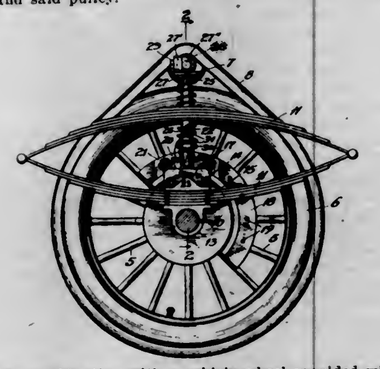
2. In a seed planter, the combination with an outer plow carrying frame, an inner frame, a seed hopper mounted on said inner frame, a wheel journaled therein, a seed agitator in the hopper comprising a shaft extending across the same, a U-shaped frame mounted on said shaft, a sector-shaped agitator mounted on the shaft and having radial arms extending downwardly in line with the feed opening in the bottom of the hopper, and connections between the seed agitator and the wheel whereby the former is operated in the revolution of the latter.

900,785. VEHICLE-TIRE PROTECTOR. JAMES E. ROBINSON, Chicago, Ill. Filed Dec. 20, 1906. Serial No. 348,684.

1. In combination, a vehicle wheel provided with a pneumatic tire, an axle therefor, a pulley in the plane of but separated from said vehicle wheel, a support for said pul-

ley, associated with the axle for movement therewith and a tire protecting belt running over said tire and said pulley.

2. In combination, a wheel provided with a pneumatic tire, an axle therefor, an arm extending outward from the axle and supported for movement therewith, a rotatable pulley mounted on said arm, arranged in the plane of the vehicle wheel, and a tire protecting belt running over said tire and said pulley.



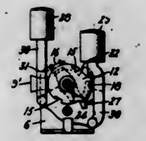
3. In combination with a vehicle wheel provided with a pneumatic tire, a pulley arranged in the plane of but out of contact with said vehicle wheel, a support for the pulley secured to the axis of said wheel, a belt passing over said pulley and under the tread of the vehicle wheel, and an elastic means for automatically exerting a pressure on said pulley to maintain the belt under uniform tension.

4. In combination with a vehicle tire, a structure to which said vehicle wheel is attached, a pulley supported from said structure and arranged in the plane of but out of contact with said vehicle wheel, a belt passing around said vehicle wheel and the pulley, and a means for adjusting said pulley circumferentially relative to the axis of rotation of the wheel.

5. In combination with a wheel and axle of a vehicle, a pulley, arranged in the plane of but out of contact with said wheel, a belt passing around said pulley and wheel, and a spring pressed support for the pulley connected with and supported from the axle.

[Claim 6 not printed in the Gazette.]

900,786. TWO-BUTTON SWITCH. FRANK W. SANFORD, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 2, 1905. Serial No. 280,881.



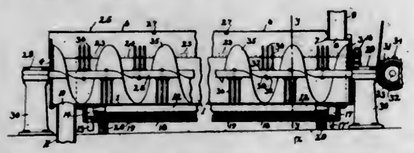
1. In a two-button snap switch, the combination with a contact-blade, of an escape-plate rigidly connected therewith and having an escapement-lug, a spring for actuating said plate, a spring-stretcher, a tilting locking-plate connected by a pin and slot with the spring-stretcher and having a pallet-lug coöperating with the escapement-lug, and buttons connected with said locking-plate.

2. In a two-button snap switch, the combination with a contact-blade, of an escape-plate rigidly connected therewith and having an escapement-lug and an arm, a spring having its ends standing on opposite sides of said arm, a pivoted spring-stretcher having an arm lying between the ends of said spring, a tilting locking-plate connected by a pin and slot with said spring-stretcher and having a pallet-lug adapted to pass across the ends of said escapement-lug, and buttons pivotally connected with said locking-plate.

3. In a snap switch, the combination with the tilting lever, of a frame plate having a trunnion on which said lever is fulcrumed, and a lip bent up from said plate and overlying said lever to prevent its disengagement from said trunnion.

4. In a two-button snap switch, the combination with an arbor, of two insulated contact-blades journaled thereon, an escape-plate also journaled on said arbor between said blades and rigidly connected therewith, a spring concentric with said arbor, a forked spring-stretcher journaled on said arbor, arms on the escape-plate and spring-stretcher engaging with said spring, a locking-plate pivoted adjacent to said arbor, a pin on said plate engaging the fork of the spring-stretcher, and coöperating lugs on said escape-plate and locking-plate.

900,787. DRIER-CONVEYER FOR WHITE LEAD. MICHAEL SCHRECK, Sr., Cincinnati, Ohio. Filed Apr. 21, 1908. Serial No. 428,364.



1. In a white-lead drier-conveyer, the combination of a white-lead trough having a rounded bottom, a spiral-conveyer rotatable therein with its outer edge adjacent said bottom for conducting the white-lead from the feed-in end toward the feed-out end of said trough, stirrer-blades between the spirals of said spiral-conveyer, and heating pipes under said trough close to the bottom thereof, said trough having opening at its top extending longitudinally of said trough for permitting the escape of steam and fumes, said heating pipes being partly surrounded by cement, substantially as and for the purpose specified.

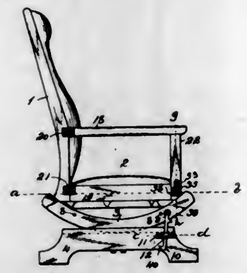
2. In a white-lead drier-conveyer, the combination of a white-lead trough having a rounded bottom, a spiral-blade rotatable therein with its outer edge adjacent said bottom for conducting the white lead from the feed-in end toward the feed-out end of said trough, heating pipes under said trough close to the bottom thereof, said trough having opening at its top extending longitudinally of said trough for permitting the escape of steam and fumes, said heating pipes being partly surrounded by cement, substantially as and for the purpose specified.

3. In a white-lead drier-conveyer, the combination of a white-lead trough having a rounded bottom, a spiral-blade rotatable therein with its outer edge adjacent said bottom for conducting the white lead from the feed-in end toward the feed-out end of said trough, heating pipes under said trough close to the bottom thereof, said trough having opening at its top extending longitudinally of said trough for permitting the escape of steam and fumes, the said heating pipes arranged in substantially half-round form extending longitudinally of said white-lead trough, and a cement-bed having a similarly formed inner face with which said pipes are partly surrounded, substantially as and for the purpose specified.

4. In a white-lead drier-conveyer, the combination of a white-lead trough having an inlet-end and an outlet-end for the white lead, said trough slanting upwardly continuously from said inlet-end toward said outlet-end, a spiral-conveyer in said trough similarly slanted, stirrer-blades between the spirals of said spiral-conveyer, means for rotating said spiral-conveyer and stirrer-blades, and heating pipes arranged under said trough, substantially as described.

5. In a white-lead drier-conveyer, the combination of a white-lead trough comprising a rounded bottom and hinged top-plates spaced apart at their upper edges, a spiral-blade rotatable in said trough with its outer edge adjacent said bottom for conducting the white lead from the feed-in end toward the feed-out end of said trough, stirrer-blades rotatable with said spiral-blade, and heating-pipes under said white-lead trough for heating the white lead being forced through the trough, the space between said top-plates permitting escape of steam and fumes, substantially as described.

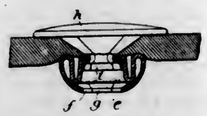
900,788. NURSERY ROCKING-CHAIR. AGNES D. SIMMONDS, Kansas City, Mo. Filed Apr. 4, 1905. Serial No. 253,812.



1. A nursery chair provided with the chair body having the seat and back, an arm rest comprising two horizontal members disposed one above the other and hinged at their rear ends respectively to the back, and a vertical member secured at its ends respectively to the forward ends of the horizontal members, and a shelf carried by the lower horizontal member of the arm rest and movable, when the arm rest is properly swung, to and from a position under the seat.

2. A nursery chair provided with the chair body having a seat and back, an arm rest comprising two horizontal members disposed one above the other and hinged at their rear ends respectively to the back, and a vertical member secured at its ends respectively to the forward ends of the horizontal members, a shelf carried by the lower horizontal member of the arm rest and movable, when the arm rest is properly swung, to and from a position under the seat, and means for releasably locking the arm rest in the open and closed position.

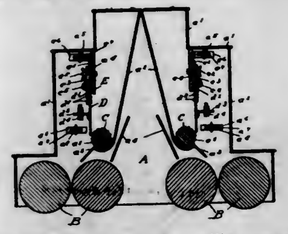
900,789. SNAP-FASTENER SOCKET. ERNEST D. SIMONS, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 21, 1908. Serial No. 428,363.



1. A snap fastener socket, having a base provided with an attaching hole, a fold projecting from said base, and an outer fold-encircling and fold-inclosing spring element extending from the level of the base downward and over the fold and composed of a number of springs converging to form the mouth of the socket and whose edges form stud-engaging lips, the fold being located between the base and the spring element.

2. A snap fastener socket, having a base provided with an attaching hole, a fold projecting from said base, and an outer fold-encircling and fold inclosing spring element extending from the level of the base downward and over the fold and composed of a number of converging springs in contact with the outer portion of the said fold whereby said springs are reinforced against pressure in setting and using, and constituting a mouth having lips formed of the free ends of said springs which engage the complemental stud of the snap fastener when said stud is inserted in the socket through the mouth, the fold being located between the base and the spring element.

900,790. FEED MECHANISM OF ROLLER-MILLS. WILLIAM H. SMITH, Aberdeen, S. D., assignor of one-half to Harry W. Gifford, Aberdeen, S. D. Filed Mar. 21, 1906. Serial No. 307,160.



1. In feed mechanism for roller mills, comprising feed roll, a feed gate consisting of two sections connected together, the upper section laterally adjustable and rigid, and a lower section vertically adjustable and freely swinging on the upper section and adjustable means for limiting the movements of the lower section relative to the feed rolls.

2. In feed mechanism for roller mills having grinding rolls, the combination of back hopper boards, feed rollers, deflector boards arranged at the rear of the back hopper boards in planes substantially parallel therewith and above the grinding rolls, feed gates each consisting of two sections connected together, an upper section rigid and laterally adjustable, and a lower section vertically adjustable on said upper section, and swinging thereon, means for limiting the movements of the lower section relative to the feed rolls.

900,791. ENVELOP-SEALING MACHINE. HENRY C. STANLEY, New York, N. Y. Filed Feb. 24, 1908. Serial No. 417,411.



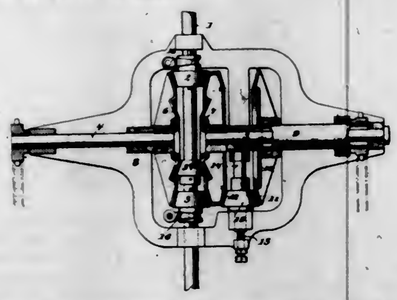
In an envelop sealing device, the combination with the main frame of a plate set longitudinally in the upper surface thereof and provided with a projecting portion bent upwardly, forwardly, downwardly and backwardly to form a flap guide, a wick extending along said flap guide, a tank in which the other end of the wick is immersed located below the plate and a pair of pressure rollers located at one end of the plate, said plate having an opening under the upper end of the wick and over the tank, and a second opening in the rearwardly bent portion of the plate under the end of the wick and over the first mentioned opening.

900,792. TRANSMISSION-GEAR. ERNST M. STERNBERG, Milwaukee, Wis. Filed Nov. 29, 1907. Serial No. 404,315.

1. In a transmission-gear, a power-shaft, axially alined transverse counter-shafts disposed on opposite sides of the power-shaft, a gear-wheel in connection with each counter-shaft, a driving gear-wheel carried by the power-shaft for engagement with the counter shaft gear-wheels, an arbor revolubly mounted about one of said counter-shafts, a gear-wheel secured thereto, and an idle gear-wheel engaging the arbor gear-wheel and gear-wheel of the aforesaid counter-shaft about which said arbor is mounted.

2. In a transmission-gear, a power-shaft, axially alined transverse counter-shafts disposed on opposite sides of the power-shaft, a bevel gear-wheel in connection with each counter-shaft, a driving bevel gear-wheel carried by the power-shaft for engagement with the counter-shaft bevel

gear-wheels, an arbor revolubly mounted about one of said counter-shafts, a bevel gear-wheel secured thereto, and an idle bevel gear-wheel engaging the arbor bevel gear-wheel and bevel gear-wheel of the aforesaid counter-shaft about which said arbor is mounted.



3. In a transmission-gear, a power-shaft, axially alined transverse counter shafts disposed on opposite sides of the power-shaft, a friction bevel-wheel in connection with each counter-shaft, a friction cone-wheel carried by the power-shaft, for engagement with friction bevel-wheels of the counter-shafts, an arbor revolubly mounted about one of said counter-shafts, a friction bevel-wheel secured to the arbor, and an idle friction cone-wheel engaging the arbor friction bevel-wheel and friction bevel-wheel of the aforesaid counter-shaft about which said arbor is mounted.

4. In a transmission-gear, a power-shaft, axially alined transverse counter-shafts on opposite sides of the power-shaft, driving-gears connecting said power-shaft and counter-shafts, an arbor revolubly mounted about one of the counter-shafts, a gear-wheel secured to the arbor and an idle gear-wheel in gear-connection with the arbor gear-wheel and driving-gear connection of the power and counter-shafts, the idle gear being capable of permitting differential speed between the arbor and opposite counter-shaft.

5. In a transmission-gear, a power-shaft, axially alined transverse counter-shafts on opposite sides of the power-shaft, a wheel secured to one of the counter-shafts, having a bevel face upon one side, a wheel secured to the other counter-shaft having bevel-faces on opposite sides, cones carried by the power-shaft for engagement with the adjacent bevel-faces of said counter-shaft wheels, an arbor revolubly mounted about that counter-shaft having secured thereto the oppositely bevel-faced wheel, a bevel-faced wheel secured to the arbor, and an adjustable idle cone for engagement with the bevel-face of the arbor wheel and adjacent bevel-face of the counter-shaft wheel.

900,793. ARC-LAMP. GEORGE E. STEVENS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 27, 1906. Serial No. 336,383.

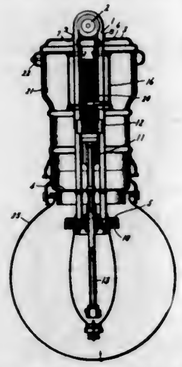
1. An arc lamp frame composed of a backbone made of a rod bent into the form of a yoke having depending legs, a sheet metal hood having holes through which said legs pass, and one or more platforms carried upon said legs.

2. An arc lamp frame composed of a backbone made of a rod bent into the form of a yoke having depending legs, a sheet metal hood having holes through which said legs pass, and a platform connected to the lower ends of said legs.

3. In an arc lamp, a backbone consisting of a rod bent into the form of a yoke having two depending legs, a platform secured to the lower ends of the said legs, and a hood mounted on the backbone intermediate the ends thereof.

4. In an arc lamp, a backbone comprising a yoke and a pair of legs depending from said yoke, a hood mounted on the backbone intermediate the ends thereof, a platform mounted on said legs, a crosshead located above said platform and arranged to slide between said legs, and an electrode carried by said crosshead and extending through said platform.

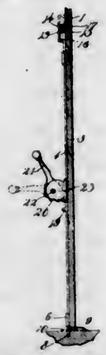
5. In an arc lamp, a backbone consisting of a piece of metal bent into the form of a yoke having depending legs, a hood having openings through which said legs pass, a platform secured to said legs, electrodes, one of said elec-



trodes being arranged between said legs and extending through said platform, and a crosshead slidingly mounted on said legs and carrying said latter electrode.

[Claims 6 and 7 not printed in the Gazette.]

900,794. DOOR-FASTENER. MICKUS N. STOFFELS, Medaryville, Ind. Filed June 15, 1908. Serial No. 438,560.

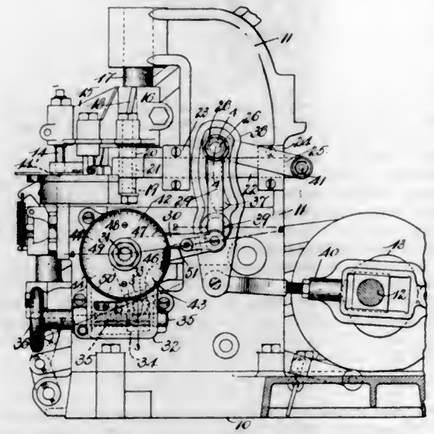


1. The combination with a wall having a door opening and a door to close said opening, of keepers upon the wall, a bolt slidably mounted upon the door and provided at one end with an offset loop having a locking tongue to engage one of said keepers, the other end of the bolt being adapted to simultaneously engage the other keeper, a rack upon the intermediate portion of the bolt and a lever fulcrumed upon the door and having a segment in mesh with said rack.

2. The combination with a wall having a door opening and a door to close said opening, of keeper plates arranged at the top and bottom of the opening, guides upon the door, a vertically disposed bolt slidably mounted in said guides, the lower end of the bolt being adapted to enter the lower keeper plate and its upper end being shaped to provide an offset loop having a depending locking tongue to drop into the keeper plate at the top of the door opening, a series of rack teeth formed upon the intermediate portion of the bolt, a bearing upon the door, and a lever having a segment in mesh with the rack teeth and pivoted to said bearing.

3. The combination with a wall having a door opening and a door for the latter, of upper and lower apertured keeper plates secured in the door opening, upper and lower guide plates upon the door, a vertically disposed bolt slidably mounted in said guide plates, the lower end of the bolt being adapted to enter the lower keeper plate and the upper end of the bolt being bent outwardly, then upwardly, then inwardly, and then downwardly to provide a depending locking tongue to drop into the upper keeper plate, rack teeth formed upon the outer face of the bolt intermediate its ends, angular bearing plates secured to the door on opposite sides of the bolt and adapted to guide the same, a lever formed at one end with a gear segment to engage said rack teeth and pivoted between the outwardly projecting flanges of the bearing plates, said outwardly projecting flanges being enlarged to protect the teeth of the segment and rack, substantially as described.

900,795. LACING-HOOK-SETTING MACHINE. SYDNEY E. TAFT, South Framingham, Mass., assignor to American Lacing Hook Co., a Corporation of New Jersey. Filed Mar. 27, 1908. Serial No. 423,762.



1. In a lacing hook setting machine, a vertical shaft, an arm rigidly attached to said shaft, an anvil fast to said arm, said anvil having a projection thereon constituting a feed point, mechanism to impart a reciprocatory motion to said shaft, a slide operatively connected to impart a rocking movement to said arm, whereby a lateral movement is imparted to said anvil and feed point, and a lever pivotally supported upon the frame of said machine, mechanism to impart a rocking movement to said lever, means connecting said lever to said slide, and mechanism to adjust said connecting means relatively to the pivot of said lever, whereby the extent of movement of said slide and the lateral movement of said anvil and feedpoint may be varied.

2. In a lacing hook setting machine, a vertical shaft, an arm rigidly attached to said shaft, an anvil fast to said arm, said anvil having a projection thereon constituting a feed point, mechanism to impart a reciprocatory motion to said shaft, a slide operatively connected to impart a rocking movement to said arm, whereby a lateral movement is imparted to said anvil and feed point, and a lever pivotally supported upon the frame of said machine, mechanism to impart a rocking movement to said lever, means connecting said lever to said slide, mechanism to adjust said connecting means relatively to the pivot of said lever, whereby the extent of movement of said slide and the lateral movement of said anvil and feed point may be varied, and means to indicate the extent of said variation.

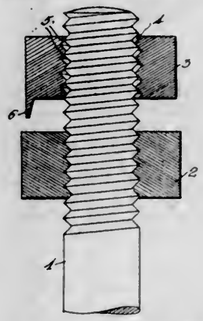
3. In a lacing hook setting machine, a vertical shaft, an arm rigidly attached to said shaft, an anvil fast to said arm, said anvil having a projection thereon constituting a feed point, mechanism to impart a reciprocatory motion to said shaft, a slide operatively connected to impart a rocking movement to said arm, whereby a lateral movement is imparted to said anvil and feed point, and a lever pivotally supported upon the frame of said machine, mechanism to impart a rocking movement to said lever, a link connecting said lever to said slide, and mechanism to adjust said link relatively to the pivot of said lever, whereby the extent of movement of said slide and the lateral movement of said anvil and feedpoint may be varied.

4. In a lacing hook setting machine, a vertical shaft, an arm rigidly attached to said shaft, an anvil fast to said arm, said anvil having a projection thereon constituting a feed point, mechanism to impart a reciprocatory motion to said shaft, a slide operatively connected to impart a rocking movement to said arm, a lever pivotally supported upon the frame of said machine, mechanism to impart a rocking movement to said lever, a link pivoted at one end thereof to said slide, and a stud to which the other end of said link is connected, said stud projecting through a curved slot provided in said lever, and mechanism to adjust said stud longitudinally of said slot toward or away from the pivot of said lever, whereby the extent of movement of said slide and the lateral movement of said anvil and feedpoint may be varied.

5. In a lacing hook setting machine, a vertical shaft, an arm rigidly attached to said shaft, an anvil fast to said arm, said anvil having a projection thereon constituting a feed point, mechanism to impart a reciprocatory motion to said shaft, a slide operatively connected to impart a rocking movement to said arm, a lever pivotally supported upon the frame of said machine, mechanism to impart a rocking movement to said lever, a link pivoted at one end thereof to said slide and a stud to which the other end of said link is connected, said stud projecting through a curved slot provided in said lever, an index lever operatively connected to said stud, and means to adjust and lock said lever, whereby said stud is moved longitudinally of said slot toward or away from the pivot of said lever and the extent of movement of said slide and the lateral movement of said anvil and feed point may be varied.

[Claims 6 to 16 not printed in the Gazette.]

900,796. NUT-LOCK. FRANK C. TAMBLING, Seattle, Wash., assignor of one-third to Elsie G. Smiley, Stevens Point, Wis. Filed Sept. 26, 1907. Serial No. 394,719.



1. A lock nut of the character specified having a threaded aperture of greater diameter than the aperture of the bolt nut, and an engaging portion or tooth formed on its inner face, designed to engage the outer face of the bolt nut, the engagement between the bolt body and lock nut threads being sufficiently loose to cause the threads of the latter to cross and bite into those of the bolt body, when screwed into locking position.

2. A lock nut of the character specified, having a threaded aperture of greater diameter than the aperture of the bolt nut and having formed at one edge of its inner face a projecting portion or tooth arranged to engage the outer face of bolt nut, the engagement between the bolt body and lock nut threads being sufficiently

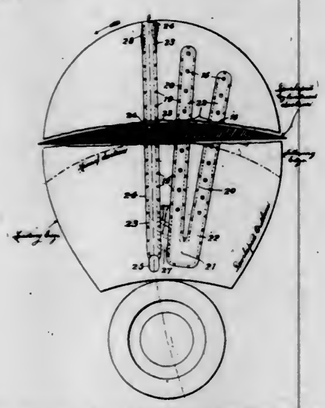
loose to cause the threads of the latter to cross and bite into those of the former, when the lock nut is screwed into locking position, said operation resulting in the mutilation of the engaging portions of the bolt body and lock nut threads, whereby the latter is locked against removal.

3. A lock nut of the character specified having a threaded aperture of greater diameter than the aperture of the bolt nut and an engaging portion or tooth arranged to engage the outer face of the bolt nut, the engagement between the bolt body and lock nut threads being sufficiently loose to cause those of the latter to cross and bite into those of the former when the latter is screwed into locking position.

4. A locking nut having a threaded aperture of greater diameter than the diameter of the threaded portion of the bolt on which it is to be used and provided on its inner face with a projection.

5. A locking nut having a threaded aperture of greater diameter than the diameter of the threaded portion of the bolt on which it is to be used and provided on its inner face near one edge with a projection for engaging a stationary member and causing the threads of the nut to engage those of the bolt at an angle thereto and to bite thereinto.

900,797. SCREW-PROPELLER. DAVID W. TAYLOR, Washington, D. C. Filed Nov. 11, 1907. Serial No. 401,656.



1. The method of preventing cavitation at screw propellers which comprises exhausting the air from the cavity formed at the propeller during its rotation.

2. The method of preventing cavitation at screw propellers which comprises exhausting the air from the cavity formed at the back of the propeller blade through the propeller blade during its rotation.

3. The method of preventing cavitation at screw propellers which comprises exhausting the air from the cavity formed at the back of the blade, through the blade on the following half thereof during its rotation.

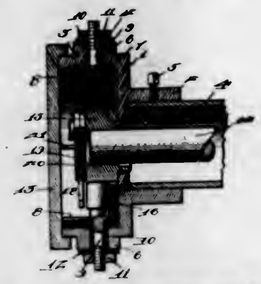
4. The method of preventing cavitation at screw propellers which comprises centrifugally exhausting the air from the cavity formed at the back of the propeller during its rotation.

5. The method of preventing cavitation at screw propellers which comprises admitting the air from the cavity formed at the back of the blades into the blades and automatically and centrifugally discharging the air from the blades by their rotation.

[Claims 6 to 15 not printed in the Gazette.]

900,798. SPARKING DEVICE FOR GAS-ENGINES, AND THE LIKE. FREDUS A. THURSTON, Chicago, Ill. Filed June 15, 1904. Serial No. 212,647.

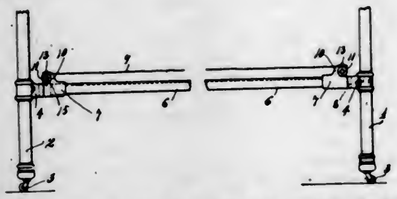
1. An apparatus of the class specified, comprising a ring or annulus made of insulating material, and having a series of contacts on the inner side of its periphery, a rotary member having a spring-actuated contact adapted to travel on the inner surface of said ring, and make connection with said contacts thereon, said rotary member being also provided with a second contact member adapted to make connection with said ring contacts after the making connection therewith, of said spring controlled member, and a connection on the ring extending to said contacts on said rotary member.



2. A circuit distributing mechanism for spark producing apparatus, comprising an armature and commutator, one of which is rotatable relatively to the other, one of said members being provided with a plurality of separated contacts arranged in annular order, and the other being provided with a pair of contact devices insulated from one another and arranged one in advance of the other, and both being adapted to make connection with said separated contacts on the other member.

3. A current distributing device, comprising a fixed armature provided with a series of contacts 8, 8, and a rotary armature provided with a pair of contacts 16 and 18 both adapted to make connection with the contacts 8, 8, the contact 16 being arranged in advance of the contact 18 and insulated therefrom.

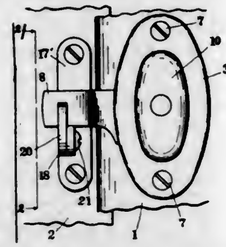
900,799. BED-SPRING FRAME. GUSTAF A. TORNKVIST, Minneapolis, Minn. Filed May 13, 1908. Serial No. 432,607.



The combination with side rails and coupling brackets secured to the ends thereof, said coupling brackets having curved anchoring lugs, of tubular shafts rotatively held by said lugs, plugs having angular wrench seats secured to the ends of the tubular shafts, pins driven through seats in the anchoring lugs, through diametrically alined perforations in the tubular shafts and plugs and into seats in the coupling brackets, and a woven wire spring secured at its ends to said shafts, substantially as described.

900,800. LATCH. DANIEL W. TOWER, Grand Rapids, Mich. Filed May 15, 1908. Serial No. 433,032.

1. The combination with a casing comprising a latch plate having an inturned flange at its edges, said flange having a slot therein at one side, said latch plate and flange being an integral sheet metal stamping; a latch bolt provided with a spring-securing finger at one side and a projecting offset spring retaining lug at its inner end, said latch, spring-securing finger and retaining lug being an integral sheet metal stamping; a spring secured to said latch bolt at one end by swaging said spring-securing finger thereon and arranged between said spring-retaining lug and said latch plate with its free end in engagement with said latch plate flange; and a knob stem pivoted in said latch plate, said latch bolt being arranged through said slot in said flange, the ends of which serve as stops therefor.



2. The combination with a casing comprising a latch plate having an inturned flange at its edges, said flange having a slot therein at one side; a latch bolt provided with a spring-securing finger at one side and a projecting offset spring retaining lug at its inner end; a spring secured to said latch bolt at one end by swaging said spring-securing finger thereon and arranged between said spring retaining lug and said latch plate with its free end in engagement with said latch plate flange; and a knob stem pivoted in said latch plate, said latch bolt being arranged through said slot in said flange, the ends of which serve as stops therefor.

3. The combination with a casing comprising a latch plate having an inturned flange at its edges, said flange having a slot therein at one side, said latch plate and flange being an integral sheet metal stamping; a latch bolt provided with a spring-securing finger at one side and a projecting offset spring retaining lug at its inner end, said latch spring-securing finger and retaining lug being an integral sheet metal stamping; a spring secured to said latch bolt at one end by said spring-securing finger and engaged under said spring retaining lug; and a knob stem pivoted in said latch plate, said latch bolt being secured to said stem, said latch bolt being arranged through said slot in said flange.

4. The combination with a casing comprising a latch plate having an inturned flange at its edges, said flange having a slot therein at one side; a latch bolt provided with a spring-securing finger at one side and a projecting offset spring retaining lug at its inner end; a spring secured to said latch bolt at one end by said spring-securing finger and engaged under said spring retaining lug; and a knob stem pivoted in said latch plate, said latch bolt being secured to said stem, said latch bolt being arranged through said slot in said flange.

5. The combination with a casing comprising a latch plate having an inturned flange at its edges, said flange having a slot therein at one side; a latch bolt having a spring retaining lug at its inner end; a spring secured to said latch bolt at one end and arranged between said spring retaining lug and said latch plate with its free end in engagement with said latch plate flange; and a knob stem pivoted in said latch plate, said latch bolt being arranged through said slot in said flange, the ends of which serve as stops therefor.

[Claims 6 and 7 not printed in the Gazette.]

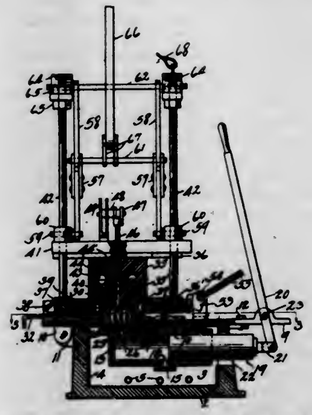
900,801. METHOD OF MAKING ARTIFICIAL VARIEGATED STONE VENEER. JOHN TULLY, Chicago, Ill. Filed Mar. 30, 1906. Serial No. 308,979.

1. The method of manufacturing imitation stone veneer consisting, first, in mixing a plastic composition and separating the same into independent masses; second, impregnating several of said masses each with a separate color ingredient; third, rolling one or more of said colored masses with one or more uncolored masses; fourth, folding and rolling said intermixed mass several times; and fifth, compressing the resultant mass into thin sheets.

2. The method of manufacturing imitation stone veneer consisting, first, in mixing a plastic composition and separating the same into independent masses; second, impregnating several of said masses each with a separate color ingredient composed of pulverized glass; third, rolling one or more of said colored masses with one or more uncolored masses; fourth, folding and rolling said intermixed mass several times; and fifth, compressing the resultant mass into thin sheets.

3. The method of manufacturing imitation stone veneer consisting, first, in mixing a plastic composition and separating the same into independent masses; second, impregnating several of said masses each with a separate color ingredient; third, rolling one or more of said colored masses with one or more uncolored masses; fourth, folding and rolling said intermixed mass several times; and fifth, compressing the resultant mass into thin sheets and applying the same while in a plastic state.

900,802. CASTING APPARATUS. ELBERT B. VAN WAGNER, Syracuse, N. Y. Filed Mar. 28, 1908. Serial No. 423,819.



1. A casting apparatus, comprising a fire-box having an open top inclosed by a hinged cover, a casting cylinder secured to the under side of said cover and disposed in the fire-box, a melting-pot formed integrally with said cylinder, having an open top to receive metal to be melted, and connected with the interior of said cylinder by a port disposed in the bottom of said cylinder, a discharge-tube formed integrally with said cylinder and connected with the interior thereof by a port, an independent heater for said discharge-tube comprising a gas burner consisting of a perforated inner tube and a plain outer tube disposed concentric with said discharge-tube, a gas supply pipe connected to said plain tube, a nozzle formed upon a cap mounted upon and inclosing the upper ends of said heater tubes concentric with said discharge-tube, a die support mounted upon said cover and hinged thereto, a die comprising two sections, the lowermost section secured to said hinged support, the uppermost section secured to a second support slidably mounted upon guide-rods carried by said first support, a mold formed in said die sections and connecting with the casting cylinder by means of a port coinciding with the passage in said discharge-tube, and means comprising a pair of knuckle-levers and a hand-lever supported by said guide-rods for effecting the clamping and spreading apart of said die-sections, substantially as described.

2. A casting apparatus, comprising a furnace having an open top and a hinged cover therefor, a casting cylinder disposed in said furnace secured to said cover and movable therewith, a plunger operatively disposed in said cylinder,

means for operating said plunger by hand, a melting-pot formed integrally with said cylinder and connected with the interior thereof by means of a port, a discharge-tube formed integrally on one end of the cylinder, a nozzle formed on a cap mounted on the upper end of said discharge-tube, a gas burner for heating said discharge-tube and said nozzle, comprising a perforated tube disposed around said discharge-tube and a plain tube disposed around the said perforated tube, a pipe connected to said plain tube for supplying gas to said heater, a die comprising two sections, the lowermost section mounted upon a support hinged to said cover and movable therewith, and also movable independently, the uppermost section secured to the under side of a second support mounted upon guide-rods carried by said first support, a port connecting said discharge-tube with a mold formed in said die sections through which molten metal may be forced from the cylinder into said mold by the operation of said plunger, a gate supported by said second support adapted to close the port leading to said mold after the latter has been filled with molten metal, a lever mounted on said second support for operating said gate, a gage to limit the movement of said lever, a pair of knuckle-levers carried by said guide-rods and connected to said upper support for raising and lowering the upper die-section, and a hand-lever for operating said knuckle-levers, substantially as described.

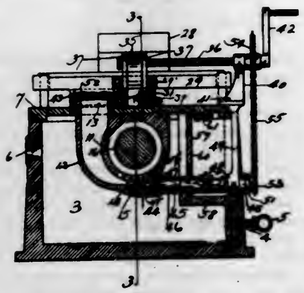
3. A casting apparatus, comprising a furnace and means for heating the same, the furnace having an open top, and a hinged cover adapted to close said opening, a melting-pot and casting cylinder combined in one part supported by said cover and movable therewith, a plunger for said cylinder, means for operating said plunger, a discharge-tube cast integrally with and forming an outlet for molten metal forced from said cylinder by the plunger, a nozzle formed upon a cap mounted upon the upper end of said discharge-tube, a heater for said discharge-tube and nozzle, comprising a gas-burner disposed around said tube beneath said nozzle, a pipe for supplying gas to said burner, a support disposed above and hinged to said cover, a series of vertical guide rods secured to said support, a second support movable reciprocally on said guide-rods, a die comprising two separate sections, one section secured to the lower support, the other section secured to and movable with the upper support, a mold cavity formed in the abutting faces of said sections, a port passing through said sections and connecting with the casting cylinder by means of the passage in said discharge-tube and nozzle, a gate operable in the port in said die-sections adapted to permit or prevent the flow of molten metal into said cavity, a pivoted lever to operate said gate, a pair of tie-bars adjustably mounted on said guide-rods, a pair of knuckle-levers to effect the reciprocal movement of the second support and upper die-section, the said knuckle-levers connected at their lower ends to said second support, their upper ends pivotally connected to said tie bars, and a hand-lever supported by said tie-bars adapted to operate said knuckle-levers, substantially as described.

4. In a casting apparatus, the combination with a fire-box having an open top, a gas supply-pipe and an exhaust-pipe, of a casting-cylinder disposed in the fire-box, a plunger for said cylinder, a melting-pot formed on one side of said cylinder, a port to connect said pot with the interior of said cylinder, a molten metal discharge-tube formed upon the inner end of said cylinder, an independent gas-heater disposed around and concentric with said discharge-tube, a common cap mounted upon the top of said discharge-tube and inclosing the upper end of said heater, a nozzle formed on the upper face of said cap having a port registering with the opening in said discharge-tube, a sectional mold mounted upon a hinged-support disposed above said nozzle, a port in said mold sections registering with the port in said nozzle, a gate disposed in the port in the upper section of said mold adapted to permit or prevent the passage of molten metal to and from said mold, means for clamping and holding said mold sections tightly together while the metal is passing into the mold, and also for separating the said sections for the purpose of removing the castings, and a locking member for holding the lower mold section and the nozzle tightly together, substantially as described.

5. A casting apparatus, comprising a fire-pot having an open top and a hinged cover therefor, a sectional mold mounted upon a support hinged to said cover, a casting-cylinder in said fire-pot, a melting-pot formed on the side of said cylinder, a port connecting said melting-pot and cylinder, a tubular-extension formed on the top of said cylinder for conducting molten metal from said cylinder to said mold, a gas-burner for heating said tubular-extension, comprising a perforated-tube and a plain tube disposed outside of and concentric with said tubular-extension, and means for supplying gas to said burner, substantially as described.

[Claim 6 not printed in the Gazette.]

900,803. CASTING APPARATUS. ELBERT B. VAN WAGNER, Syracuse, N. Y. Filed Apr. 29, 1908. Serial No. 429,880.



1. A casting apparatus, comprising a furnace, a casting-cylinder disposed in said furnace, a plunger for said cylinder, a lantern support for said plunger, the inner end of said support inserted in the outer end of said cylinder, a mold disposed above said casting-cylinder, a tubular passage connecting said cylinder with said mold, means for locking said mold in casting position, a melting-pot mounted on the side of said casting-cylinder, a port connecting the melting-pot with said cylinder, a valve to control the flow of molten metal from said melting-pot into said cylinder, a train of sprocket-gears to connect said valve with said mold-locking means, and a crank adapted for synchronously operating said valve and said mold-locking-means.

2. A casting apparatus, comprising a furnace and means for heating the same, a casting-cylinder disposed in said furnace, a plunger loosely fitting said cylinder, a cylindrical guide for said plunger, the inner end of said guide tightly fitted to the outer end of said cylinder, a hand-lever for operating said plunger, a mold disposed above said casting-cylinder, a discharge tube connecting said cylinder with said mold, a locking-member mounted upon a rock-shaft adapted to hold said mold in casting position, a melting-pot disposed in said furnace and connecting with said cylinder by means of a port, a valve interposed between said melting-pot and said cylinder adapted to permit or prevent the flow of molten metal from said melting-pot into said cylinder, the said valve having an operating-rod extending outwardly through a slot in the wall of said furnace, a guard to close said slot, a sprocket-wheel mounted on the outer end of said valve-rod, a sprocket-wheel mounted on said rock-shaft, a chain to connect said sprocket-wheels, and a crank mounted on said rock-shaft adapted to operate said lock and said valve synchronously.

3. The combination with a fire-box and a mold operatively mounted upon said box, of a casting-cylinder having one open end disposed in said fire-box, a plunger loosely fitting said cylinder adapted to be operated for displacing and forcing molten metal into the mold, a lantern-guide to support said plunger when in its outer position and adapted to guide said plunger concentric to the bore of said cylinder when operated reciprocally therein, the inner end of said guide tightly fitting the outer end of said cylinder, a packing-ring disposed around

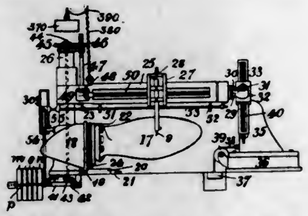
the inner end of said cylinder and against the inner end of said guide, a melting-pot disposed in said fire-box, a port to connect said melting-pot with said cylinder, a valve disposed in the bottom of said cylinder adapted to open and close said port, the said valve formed on the inner end of an operating-stem, a tubular casing surrounding said valve stem, the inner end of said casing connected by threads to the bottom of said cylinder, a sprocket-gear mounted on the outer end of said valve stem, a rock-shaft mounted upon said fire-box, a sprocket-wheel mounted on the outer end of said rock-shaft, a chain to operatively connect said sprocket-wheels, a locking-member mounted on the inner end of said rock-shaft, adapted to lock and hold the mold in casting position, a crank mounted upon the outer end of said rock-shaft for operating said locking-member and said valve in the same time, and a lever for operating said plunger.

4. A casting apparatus, comprising a casting-cylinder having a discharge tube disposed near one end, a mold disposed above said cylinder and connecting with said discharge tube, a melting-pot having an open top and having a contracted passage in its bottom, a port in said cylinder connecting with said passage, a valve disposed in said passage adapted to permit or prevent the flow of molten metal from said melting-pot into said cylinder, means for locking and holding said mold against the free end of said discharge tube, means for connecting said valve with said locking-means, and means for operating said valve and said locking-means synchronously.

5. A casting apparatus, comprising a casting-cylinder having a discharge tube disposed near one end, a mold disposed above said cylinder and connecting with said discharge tube, a melting-pot having an open top and having a contracted passage in its bottom, a port in said cylinder connecting with said passage, a valve disposed in said passage adapted to permit or prevent the flow of molten metal from said melting-pot into said cylinder, means for locking and holding said mold against the upper end of said discharge tube, means for connecting said valve with said locking-means, means for operating said valve and said locking means synchronously, a cylindrical plunger operable reciprocally in said cylinder, the said plunger having a smaller diameter than the bore of said cylinder, the said plunger adapted to be operated for displacing molten metal and forcing the same from said cylinder into said mold, and a hand-lever for operating said plunger.

[Claims 6 to 12 not printed in the Gazette.]

900,804. APPARATUS FOR MACHINING HELICAL SURFACES, SUCH AS THOSE OF PROPELLERS AND PROPELLER-BLADES. WILLIAM N. VENNER, Brockley, England. Filed Apr. 6, 1906. Serial No. 310,371.



1. Apparatus for machining helical surfaces such as those of propellers and propeller blades, comprising means for holding the work in position, two standards, a radial bar or cross head to move in the direction of the pitch of the propeller, being mounted on one standard so as to oscillate in a horizontal plane on the axis of the said standard and simultaneously to move up and down on said standard, whereby the resultant motion of the radial bar follows the direction of the desired pitch line of the helical surface in every vertical plane thereof, the said radial bar being supported at its other end by the other standard, a driving shaft, means for causing said shaft to revolve in either direction, positive gearing for causing the motion of the radial bar or cross head in the direction of the pitch of the propeller, a saddle for the tool adapted to slide on said radial bar and means for communicating motion to said saddle, substantially as set forth.

2. Apparatus for machining helical surfaces such as those of propellers and propeller blades comprising means for holding the work in position, two standards, a radial bar or cross head adapted to move in the direction of the pitch of the propeller, being mounted on one standard so as to be free to oscillate in a horizontal plane on the axis of the said standard and also to move up and down on said standard, the said radial bar being supported at its other end by the other standard, a bed on which said standard is adapted to slide, a driving shaft, means for causing said driving shaft to revolve in either direction, positive gearing for causing the motion of the radial bar or cross head in the direction of the pitch, a saddle for the tool adapted to slide on said radial bar and gearing for communicating motion to said saddle substantially as set forth.

3. Apparatus for machining helical surfaces such as those of propellers and propeller blades, comprising means for holding the work in position, two standards, a radial bar or cross head adapted to move in the direction of the pitch of the propeller, being mounted on one standard so as to be free to oscillate in a horizontal plane on the axis of the said standard and also to move up and down on said standard, the said radial bar being supported at its other end by the other standard, a bed concentric with the first standard and on which the second standard is adapted to slide, a driving shaft, means for causing said driving shaft to revolve in either direction, positive gearing for causing the motion of the radial bar in the direction of the pitch of the propeller, a saddle for the tool adapted to slide on said radial bar and gearing for communicating motion to said saddle substantially as set forth.

4. Apparatus for machining helical surfaces such as those of propellers and propeller blades comprising means for holding the work in position, two parallel standards, a radial bar or cross head adapted to move in the direction of the pitch of the propeller, being mounted on one standard so as to be free to oscillate in a horizontal plane on the axis of the said standard and also to move up and down on said standard, the said radial bar being adapted at its other end to slide up and down on the second standard, a bed concentric with the first standard and on which the second standard is adapted to slide, a driving shaft, means for causing said driving shaft to revolve in either direction, positive gearing for causing the motion of the radial bar in the direction of the pitch of the propeller, a saddle for the tool adapted to slide on said radial bar and gearing for communicating motion to said saddle substantially as set forth.

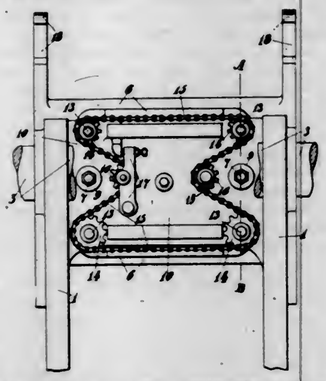
5. Apparatus for machining helical surfaces such as those of propellers and propeller blades, comprising means for holding the work in position, two parallel standards, a radial bar or cross head adapted to move in the direction of the pitch of the propeller being mounted on one standard so as to be free to oscillate in a horizontal plane on the axis of said standard and also to move up and down in a vertical plane on said standard, the said radial bar being adapted at its other end to slide up and down on the second standard, means for adjusting the radial arm so that the angle it forms with the first standard may be varied, means for clamping said radial bar in position, a horizontal bed concentric with the first standard and on which the second standard is adapted to slide, a driving shaft, means for causing said driving shaft to revolve in either direction, positive gearing for causing the motion of the radial bar in the direction of the pitch, a saddle for the tool adapted to slide on said radial bar and gearing for communicating motion to said saddle substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

900,805. PLATEN PRINTING-PRESS. FRED WAITE, Otley, England. Filed Dec. 1, 1906. Serial No. 345,893.

1. In a printing press, the combination with the type-bed and bed-plate, of screws operatively engaging the type-

bed and bed-plate, connections between said screws whereby said screws may be rotated together, and means whereby the rotation of said screws varies the angular position of the type-bed.



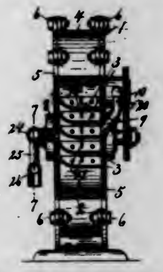
2. In a printing press, the combination with the type-bed and bed-plate, of screws operatively engaging the type-bed and bed-plate, connections between said screws whereby said screws may be rotated together, and means whereby the rotation of said screws varies the angular position of the type-bed, and independent screws for securing a fine adjustment of the type-bed.

3. In a printing press, the combination of the type-bed and bed-plate, of screws operatively engaging the type-bed and bed-plate, gears of different sizes on the screws, and an endless chain connecting said gears whereby said screws may be rotated together to vary the angular position of the type-bed.

4. In a printing press, the combination with the bed-plate, the type-bed, and means to secure the type-bed to the bed plate including springs to hold the type-bed yieldingly to the bed-plate, screws extending through the bed-plate, gears of different sizes on said screws, connections between said gears whereby said screws may be rotated together to vary the angular position of the type-bed, and independent screws in the type-bed and against which the other screws operate.

5. In a printing press, the combination with the type-bed, the bed-plate, a supply inking roller, and means to vary the angular position of the type-bed, of spring guides or tracks between the type-bed and supply inking roller to guide the traveling inking rollers.

900,806. ENGINE. JOSEPH W. WATKINS, Syracuse, N. Y. Filed Nov. 23, 1906. Serial No. 344,725.



1. In a rotary engine, a rotary impeller and casing therefor, said impeller having a series of buckets open at one end and provided with transverse partitions terminating a short distance from the bottoms of the buckets leaving an intervening narrow passage, said casing having an inlet in one side and an exhaust port in its opposite side directly opposite the inlet, both the inlet and exhaust ports being disposed in the same circumferential plane as the buckets, the inlet port being disposed at an angle with the axis of the runner at the open end of the buckets.

2. A rotary engine comprising a casing, and a rotary impeller therein having a series of buckets arranged in close proximity, radial partitions extending through but terminating a short distance from the bottom of the buckets leaving an intervening passage, said casing having an inlet in one side and an exhaust port in its opposite side directly opposite the inlet, the inlet and exhaust ports being disposed in the same circumferential plane as the buckets.

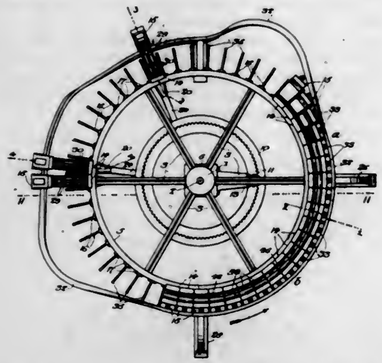
3. A rotary engine comprising a casing having an oblique inlet in one side and an exhaust port in the opposite side directly opposite the inlet, opposite branch conduits connected to the exhaust port and reunited some distance from said port whereby the impact of the opposing forces of the exhaust through the branches neutralize each other to muffle the noise of the exhaust, and a rotary impeller in said casing.

4. A rotary engine comprising a casing having an oblique inlet in one side and an exhaust port in its opposite side directly opposite the inlet, an exhaust conduit connected to the exhaust port and provided with diverging branches reunited some distance from the exhaust port, a rotary element in said casing, buckets on said element revolving between the inlet and exhaust port and having their ends nearest the inlet open.

5. In a rotary engine, a rotary element having diametrically opposite sets of buckets upon its periphery, those of one set being spaced some distance apart from those of the other set, an inclosing case for said rotary element having an inlet port in one side and an exhaust port in the opposite side, said ports being located at opposite ends and in the plane of travel of said buckets.

[Claims 6 to 10 not printed in the Gazette.]

900,807. CASTING APPARATUS. WILLIAM S. WESTON, Chicago, Ill. Filed Mar. 8, 1907. Serial No. 361,236.



1. An automatic, continuously operating casting apparatus comprising a series of traveling molds, each mold consisting of separable sections, mechanism for automatically moving one of the sections of each mold to and from the other in a curved path at an angle to the plane of movement of the molds to open and close the same, and means for continuously supplying molten metal to the closed molds.

2. An automatic, continuously operating casting apparatus comprising a series of traveling molds, each mold consisting of separable sections, mechanism for automatically and successively moving one of the sections of each mold to and from the other to open and close the same and for inverting the movable mold section in open position to discharge the casting, and means for continuously supplying molten metal to the closed molds.

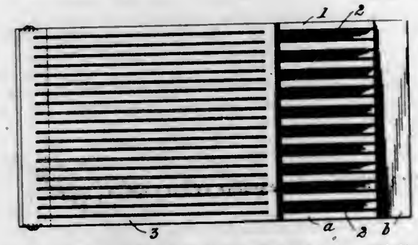
3. A continuously operating, automatic casting apparatus comprising a traveling carrier and a series of molds mounted thereon, each mold consisting of a fixed and a movable mold section, said movable mold sections being independently shiftable in curved paths to and from the fixed mold sections and at an angle to the plane of movement of said carrier, mechanism for controlling the shift of said movable mold sections to automatically open and close the molds and means for continuously supplying molten metal to the closed molds.

4. A continuously operating automatic casting apparatus comprising a rotating mold carrier, a plurality of molds mounted thereon, each mold having a movable section, mechanism for shifting the movable mold sections to and from the other sections to automatically close and open the molds and for revolving the movable sections when in open position to automatically discharge the casting, and means for continuously supplying molten metal to the closed molds.

5. An automatic casting apparatus comprising a series of traveling molds, each having a movable mold section and a series of pivoted arms whereon said movable mold sections are mounted to shift bodily in curved paths to and from open position and mechanism for continuously and automatically controlling the operation of the movable mold sections.

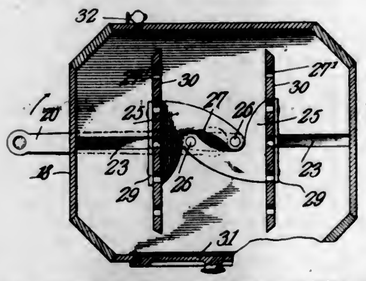
[Claims 6 to 67 not printed in the Gazette.]

900,808. NOODLE-CUTTER. WALTER I. WHITEHURST, Baltimore, Md., assignor to Keston Manufacturing Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Oct. 25, 1907. Serial No. 399,098.



In a noodle cutter a board provided with a multiplicity of grooves, with cutting strips of U shaped section, which are seated in the grooves and separated to a distance which is practically the same as the width of the strips, combined with a slotted plate which is hinged to the board and adapted to be folded over the cutting strips, substantially as specified.

900,809. WASHING-MACHINE. WILLIE D. WHITNEY, Holley, N. Y. Filed Oct. 14, 1907. Serial No. 397,400.



1. In a washing machine, a clothes containing casing movable about an axis, a pair of reciprocatory squeezing members arranged within the casing, and of less width than the casing to permit the clothes to fall back into the suds after each squeezing operation, and means for reciprocating said members in a direction transverse to the axis of movement of the casing.

2. In a washing machine, a clothes containing casing movable about an axis, said casing being imperforate and arranged to hold the water and detergent, a pair of perforated squeezing members arranged within the casing, and of less width than said casing to permit the clothes to fall for fresh saturation after each squeezing operation, and an operating means for moving said members toward and from each other and maintaining them in parallel relation, and at the same time varying the angular position of said members with respect to the sides of the casing.

3. In a washing machine, a clothes container, movable about an axis, the end walls of said container being provided with grooves radiating from such axis, a pair of perforated squeezing members having projections entering said grooves, a pair of stationary crank pins extending within the container, and arms connecting the crank pins to the squeezing members, whereby on movement of the container about its axis, the members are reciprocated in a direction transverse to such axis.

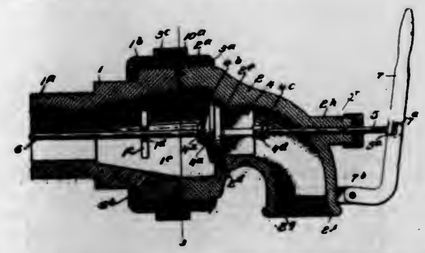
4. In a washing machine, a clothes container movable about an axis, a pair of crank pins arranged within each end of the container, the end walls of said container having grooves radiating from the axis, arms extending from the crank pins and provided with flanges, and projections at their rear ends, the projections entering the grooves, and perforated squeezing members rigidly secured to the flanges.

5. In a washing machine, a frame, a pair of axially alining stationary shafts carried thereby, an approximately rectangular clothes container, the end walls of which have openings for the passage of the shafts, double cranks carried by the shafts and provided with pins, the inner faces of the end walls of the container having grooves that radiate from the axes of the shafts, a pair of perforated squeezing members, flanged arms to which said members are firmly secured, the arms being connected to the crank pins, and projections extending from said arms and entering the grooves.

900,810. ALUMINUM-SOLDER. TOUSSAINT J. WIBRIN and RENÉ WIBRIN, Chaudefontaine, Belgium. Filed Apr. 22, 1908. Serial No. 428,627.

Solder for aluminium, also permitting of soldering to aluminium metals of different natures, characterized by an alloy having the proportions of 1000 grams of tin, 750 grams of zinc, and 100 grams of copper.

900,811. VALVE. MARTIN S. WILCOX, Middleport, Ohio. Filed Feb. 21, 1907. Serial No. 358,618.



1. A valve comprising a sectional casing, means for removably securing the sections together, packing devices for the joint between said sections, the first section having a fixed web and the second section having a valve seat, a valve held in said second section to coöperate with the valve seat, a valve guide rod removably secured to said valve and passing through a bearing aperture in said web member and projecting through the first section, a valve stem secured to the rod and projecting through an aperture in the second section, said second section having a projection surrounding said valve stem, and means for operating the valve.

2. A valve comprising a sectional casing, means for removably securing the sections together, packing devices for the joint between said sections, the first section having a fixed web and the second section having a valve seat, a valve held in said second section to coöperate with the valve seat, a valve guide rod secured to said valve and passing through a bearing aperture in said web and projecting through the first section, a valve stem secured to the valve and projecting through an aperture in the second section, said second section having a projection surrounding said valve stem, means for operating the valve, said valve operating means comprising a pivoted lever and means for pivotally connecting the lever to the valve stem.

3. A valve comprising a casing formed of two sections removably secured together, the first section having an internal apertured web, the second section having a valve seat receiving portion, a valve seat removably held therein, a valve held in said second section to coöperate with the valve seat, a supporting rod secured to the valve and passing through the apertured web and through the first section, said second section having an apertured projection, a valve stem secured to the valve and passing through the aperture in said second section projection, and means for operating said valve.

4. A valve comprising a casing formed of two sections removably secured together, the first section having an internal apertured web, the second section having a valve seat receiving portion, a valve seat removably held therein, a valve held in said second section to operate with the valve seat, a supporting rod secured to the valve and passing through the apertured web and through the first section, said second section having an apertured projection, a valve stem secured to the valve and passing through the aperture in the said second section projection, means for operating said valve, said means comprising a lever pivotally secured to the valve stem and to the second section of the valve casing.

5. A valve comprising a casing formed of two sections removably secured together, the first section having an internal apertured web, the second section having a valve seat receiving portion, a valve seat removably held therein, a valve held in said second section to coöperate with the valve seat, a supporting rod secured to the valve and passing through the apertured web and through the first section, said second section having an apertured projection, a valve stem secured to the valve and passing through the aperture in the said second section projection, means for operating said valve, said means comprising a lever pivotally secured to the valve stem and to the second section of the valve casing, said valve casing sections having their abutting faces provided with coincident annular grooves and a packing wire adapted to be held in said grooves.

[Claims 6 and 7 not printed in the Gazette.]

900,812. DENTAL BLOWER. PERCY E. WILLIAMS, Savannah, Ga. Filed May 7, 1907. Serial No. 372,380.



1. A blower comprising a frame, a pair of spaced opposed alined compressor cylinders having open inner ends and outer end heads, a connecting web between said cylinders having an upwardly extending side supporting flange, said cylinders formed from a tube having its intermediate portion between the cylinders open at the front and top and forming said web and supporting flange, means securing said flange to the frame to support the cylinders, pistons in said cylinders having piston rods, a rotary shaft carried by said means, and operating connections between said shaft and rods to reciprocate said pistons, substantially as described.

2. A blower comprising a frame, a pair of opposed compressor cylinders having a connecting web between their inner ends and a supporting flange from said web secured to said frame and supporting said cylinders, reciprocatory pistons in said cylinders having piston rods, a rotary shaft, means operatively connecting said shaft and rods for reciprocating said pistons, a compressed air main arranged longitudinally of and spaced from said cylinders, air outlet pipes from the cylinders fixed to the outer ends thereof and extending laterally therefrom to said main and in connection therewith constituting a brace for and between the outer ends of the cylinders and carried thereby.

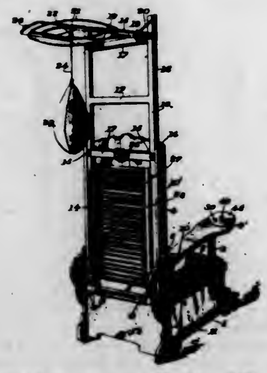
3. A blower comprising a frame, a pair of spaced opposed compressor cylinders having open inner ends and a connecting supporting web between said inner ends, means securing said web to said frame and thereby supporting said cylinders from their inner ends, reciprocating pistons in said cylinders having piston rods extending over said web, a rotary shaft, operative means between the inner ends of said cylinders and connecting shaft and rods to reciprocate said pistons, and a compressed-air-offtake pipe system having a compressed air outlet and comprising a stiff main spaced from and arranged about parallel with said cylinders and lateral stiff pipes fixed thereto and to the outer ends of the cylinders, whereby the outer ends of the cylinders are connected by said pipe system.

4. A dental blower comprising an air compressor supporting frame, a pair of opposed spaced air compressor cylinders having a connecting web provided with a supporting flange between the cylinder ends and secured to said frame and forming the sole support for the cylinders, pistons in said cylinders, means for reciprocating said pistons, and a compressed air main having a discharge and arranged longitudinally of and above said cylinders, and depending compressed air inlet pipes from the cylinders to said main, whereby the cylinders are braced by said main and pipes, substantially as described.

5. A dental blower comprising a frame, a pair of opposed air compressor cylinders arranged beside said frame and fixed thereto, a cross head between said cylinders, means for reciprocating the same, pistons in said cylinders having their piston rods secured to said head, a compressed air main arranged to one side of said frame and longitudinally of and spaced from said cylinders and having a slideway for said head fixed to an intermediate part thereof, said main having an air discharge from one end, and valved air discharge passages from the outer ends of said cylinders to said main.

[Claims 6 to 14 not printed in the Gazette.]

900,813. MECHANICAL CHAIR. STEPHEN G. WILSON, Philadelphia, Pa. Filed Dec. 20, 1906. Serial No. 348,814.



1. In a device of the character described, a fixed support, a vertically slidable frame mounted thereon, bag-supporting means upon said frame, means for supporting said means in substantially horizontal position from the upper end of the frame, and means projecting from the lower portion of the support forming a lower point of attachment for the punching bag.

2. In a device of the character described, a support, a frame slidable thereon to nest within the back of said support, a second frame pivoted to said first mentioned frame, a punching bag support upon said second frame and a suitable auxiliary punching bag connection for the lower end of said bag movable within the lower part of the support.

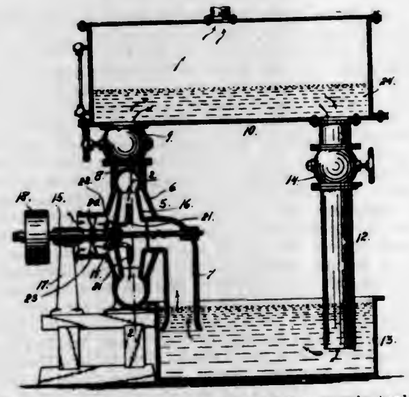
3. In a device of the character described, a support having guides in the back thereof, a frame slidable in said guides, a second frame pivoted to the first frame, a punching bag support carried by said second frame, springs normally extending the second frame into horizontal right angular position with respect to the first frame, and a rod automatically locking the second frame in an angular relation with the first frame when extended.

4. In a device of the character described, a support, a frame guided in the back of said support, a punching bag support upon said frame forming a point of attachment for a punching bag and a second point of attachment for the lower end of the bag variable with respect to the said support.

5. In a device of the character described, a frame for supporting a punching bag and a guard therefor, said guard comprising a single piece of material forming circles of different radii.

[Claim 6 not printed in the Gazette.]

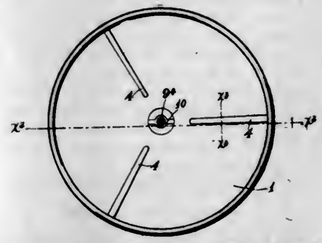
900,814. AIR-COMPRESSOR. WYLIE G. WILSON, Denver, Colo. Filed Feb. 19, 1906. Serial No. 301,789.



The combination with a receiving tank, a supply tank, a centrifugal pump arranged to take water from the supply tank and discharge it into the receiving tank, the said pump comprising a casing, a hollow rotatable impeller located within the casing, a water induction conduit connected with the casing and communicating with the impeller on one side, open-ended air inlet nozzles connected with the impeller on the opposite side from the induction conduit and extending through the casing to an air-opening, the said nozzles being radially disposed rotating with the impeller, whereby the air and water enter the impeller from opposite directions and are forced together into the receiving tank.

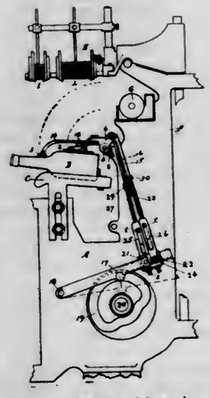
900,815. APPARATUS FOR COATING RECEPTACLES WITH PARAFFIN. LEWIS A. WOBBROCK, Merton, Minn. Filed Jan. 9, 1908. Serial No. 409,918.

1. In an apparatus for coating butter tubs and other articles with paraffin, the combination with a basin, of a steam supply pipe leading into the bottom of said basin, and a check valve in the vicinity of the bottom of said basin normally closing the steam passage thereto but adapted to be opened by steam pressure, substantially as described.



2. In an apparatus for coating butter tubs and other articles with paraffin, the combination with a basin adapted to contain a body of paraffin and provided with radial tub-supporting ribs, of a steam supply pipe opening centrally into the bottom of said basin, and a check valve located in the vicinity of the bottom of said basin normally closing the steam supply passage thereto and adapted to be opened by steam pressure, substantially as described.

900,816. LABELING-MACHINE. FRANK O. WOODLAND, Worcester, Mass. Filed Feb. 18, 1907. Serial No. 357,804.



1. In a bottle labeling machine, in combination with means for gluing and placing a body label and a neck label in position for affixment to a bottle, a grip-device for the body label, a separate grip-device for the neck label, and an operating means connected therewith for imparting an independent movement to the respective grip-devices to and from the bottle.

2. In a bottle-labeling machine adapted for simultaneously placing a plurality of labels and affixing the same, a plurality of separately acting, individually controlled grip-devices for respectively retaining the several labels against the bottle preparatory to their permanent affixment to a bottle.

3. In a bottle-labeling machine, a set of label-carrying plates or pickers that bring the labels into position against the neck and body of the bottle for being affixed, and a plurality of label-holding grip-devices that act between said plates for synchronously clamping the respective labels individually to the bottle, and means for independently imparting movement to the respective grip-devices.

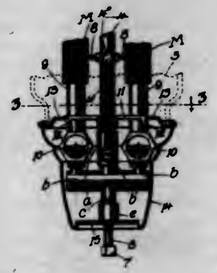
4. In a bottle-labeling machine, in combination with a stationary bottle-supporting rest, a label-supply holder delivering labels from a plurality of packs, and glue-applying pickers adapted for placing a plurality of labels for attachment to a bottle; of label-gripping means com-

prising a plurality of individual grip-devices, and independently connected devices for separately moving said grip-devices.

5. In a bottle-labeling machine, the combination with a stationary bottle-supporting rest, a label-supply holder delivering labels from a plurality of packs, and glue-applying pickers adapted for placing a plurality of labels for attachment to a bottle laid upon said rest; of label-gripping means comprising a plurality of individual grip-fingers, independent connections for moving the separate grip-fingers, and means for varying the working relation or motion of said grip-fingers in respect to each other and to the bottle supporting rest.

[Claims 6 to 14 not printed in the Gazette.]

900,817. GAS-LAMP. RICHARD W. ZIERLEIN, St. Louis, Mo., assignor to Paris Lamp Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 5, 1908. Serial No. 414,371.



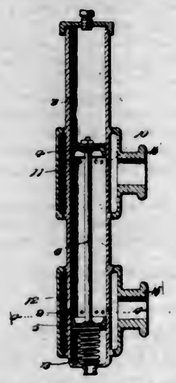
1. In combination with the supply-pipe of a gas-lamp, a burner at the lower end of the pipe, a terminal valve for regulating the flow of the gas to the burner, a filter or strainer disposed below the valve-casing, a draft-shield open at both ends passed about the burner, means for supporting the draft-shield, the filter being adapted to substantially close the bottom opening of the shield when the latter is in position on the lamp, and means on the shield for supporting a suitable globe, substantially as set forth.

2. In combination with the supply-pipe of a gas-lamp, burners disposed at the lower end of the pipe and deriving their supply therefrom, a spider having radiating arms disposed about the bases of the burners, a draft-shield adapted to be passed around the burners and having cut-away portions or notches to permit the free passage therethrough of the ends of the arms aforesaid, pockets disposed between the notches for locking the shield, the shield being adapted to be supported by the arms when turned sufficiently to bring the notches out of alinement with said arms, substantially as set forth.

3. In combination with the supply-pipe of a gas-lamp, a series of burners at the lower end of the pipe, a terminal rotatable valve for regulating the flow of the gas to the burners, a filter or strainer disposed about the axis of the valve, a draft-shield open at both ends passed about the burners, means for supporting the draft-shield, the filter being adapted to substantially close the bottom opening of the shield when the latter is in position on the lamp, and means on the shield for supporting a suitable globe, substantially as set forth.

4. In combination with the supply-pipe of a gas-lamp, a hollow burner casting at the lower end of the pipe, incandescent mantle burners leading from the casting, a gas-regulating screw-valve mounted in line with the axis of the supply pipe and having a section projecting beyond the casting, a perforated screen or filter-disk disposed about the valve, a spider having a series of radiating arms secured to the pipe above the casting, the arms terminating in depending beveled guide-fingers, a draft-shield having an upper notched globe-supporting flange adapted to be passed above the spider arms and by proper rotation be supported on the arms, said flange being provided with a series of pockets for the reception of the arms whereby the shield becomes locked against accidental displacement, the filter serving to substantially close the lower open end of the shield when the latter rests on the spider, and a hood with which the globe mounted on the shield coöperates to practically inclose the burners and mantles from outside interference, substantially as set forth.

900,818. WATER-FIXTURE AND CONTROLLING MEANS THEREFOR. RALPH D. ALBRIGHT, Reynoldsville, Pa. Filed Mar. 21, 1907. Serial No. 363,672.



In a device of the character described, the combination of a barrel provided at one end thereof with a waste opening and communicating at the opposite end with an air supply pipe, the said barrel being provided with an upper annular row of openings and a lower annular row of openings, a pair of annular casings surrounding the barrel and communicating respectively with the upper set of openings and the lower set of openings, a service pipe communicating with one of the casings, a supply pipe communicating with the opposite casing, a pair of pistons mounted within the cylinder and connected by a rod for simultaneous movement, the space between the pistons being greater than that between the two sets of openings, a spring interposed between the end of the barrel provided with the waste opening and one of the pistons and operating to normally move the pistons so that the space between the same is in communication with the inlet pipe while the service pipe is in communication with the waste opening, and an air pump coöperating with the air supply pipe at the opposite end of the barrel to force air into the barrel and move the pistons against the action of the spring so that the space between the same is in communication with both the supply pipe and the service pipe.

900,819. MATCH-BOX. ALVIN W. AYLSWORTH, Fostoria, Ohio. Filed Sept. 6, 1907. Serial No. 391,654.



1. A match box having a delivery opening at the end, a slide for moving the matches, and jaws one of which is fixed at one side of said opening and the other one of which is carried by the slide and projected beyond said opening and fixedly held in said position by the slide for igniting the match at such position.

2. A match box having a delivery opening at one end, a slide for moving the matches, and jaws for igniting the match at said opening, one of said jaws being carried by the slide and projected thereby beyond said opening, the other jaw being rigid with the end wall of the box.

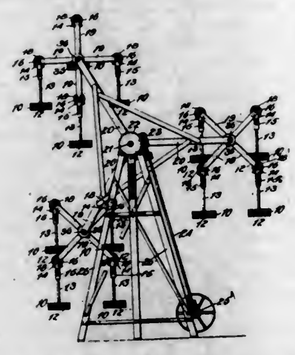
3. A match box having a delivery opening at one end, a slide for moving the matches, and jaws at right angles to each other for igniting the match at said opening, one of said jaws being carried by the slide and curved toward the other jaw and fixedly held by the slide beyond the opening in the end of the box.

4. A match box of the character described comprising a case having a delivery opening at one end, a fixed jaw adjacent said opening, and a slide movably mounted in the case at right angles to the fixed jaw and having one end constituting a jaw movable with and held projected beyond said opening by the slide for coöperation with the other jaw for the ignition of a match.

5. A match box of the character described comprising a case having a delivery opening at one end, a spring for pushing the matches transversely of the case toward said opening, a slide movable at right angles to the influence of said spring upon the matches having at one end a lateral portion to engage a match and at the other end a serrated jaw movable by the slide beyond said opening, and a fixed jaw adjacent said opening and having its acting face serrated.

[Claim 6 not printed in the Gazette.]

900,820. AMUSEMENT RIDING DEVICE. MATHIAS B. BECKER, Chicago, Ill. Filed Nov. 19, 1907. Serial No. 402,826.

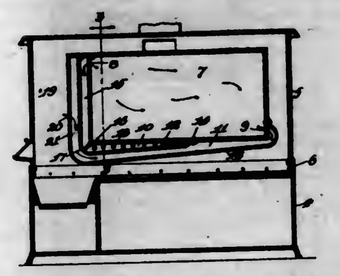


1. In an amusement riding device, the combination of primary arms extending in different directions from a common center and rotatable in a vertical plane about said center, a set of secondary arms mounted at the end of each of the primary arms and rotatable in a vertical plane about a center located at the end of each of said primary arms, and a car suspended from the end of each of said secondary arms, each car being adapted to turn about a vertical axis passing through said car.

2. In an amusement riding device, the combination of primary arms extending in different directions from a common center and rotatable in a vertical plane about said center, a set of secondary arms mounted at the end of each of the primary arms and rotatable in a vertical plane about a center located at the end of each of said primary arms, means for simultaneously rotating the primary and secondary arms about their respective centers, and a car suspended from the end of each of said secondary arms, each car being adapted to turn about a vertical axis passing through said car.

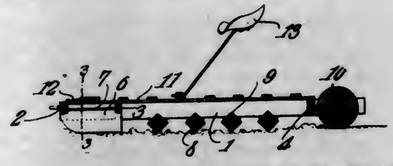
3. In an amusement riding device, the combination of two parallel primary arms extending in the same direction from a common horizontal axis, means for rotating said arms in a vertical plane about said axis, two parallel secondary arms each separately pivoted to the end of one of said primary arms so as to rotate in a vertical plane about said end as an axis, means for rotating said secondary arms about their axes at the ends of said primary arms, a car suspended from the end of said secondary arms, the car extending downward from its point of suspension farther than the distance between such point of suspension and the end of the primary arms, and means for rotating said car about a vertical axis.

900,821. STOVE OR RANGE. DANIEL D. BERRY, Springfield, Mo. Filed Jan. 22, 1908. Serial No. 412,067.



A device of the class described comprising a stove or range composed of two sections, one mounted upon the other, a bake oven, casings connected to the bake oven and located beneath and at one side of said bake oven forming inner and outer chambers, a bridge wall located at the corner of the bake oven, dividing the innermost chamber into two compartments, said bridge wall having an air passage to permit the fresh heated air to pass from one compartment to the other, the front and rear walls of the upper section provided with air passages, communicating with the innermost chamber for admitting fresh air into the same, the two end walls of the bake oven provided with air passages, and the vertical wall of the outer casing provided with air passages through which the heated air after having passed through the oven, can pass out into the flue, substantially as specified.

900,822. SOIL-PULVERIZER. STEPHEN D. BEUM, Cleveland, Ohio. Filed Jan. 14, 1908. Serial No. 410,838.

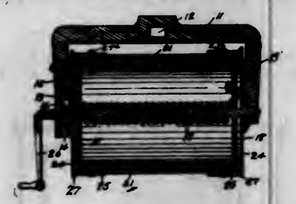


An implement as described comprising a frame, having at its forward end a receptacle, a platform hinged to the frame and adapted to close said receptacle, harrow blades carried by the forward portion of the implement, non-circular clod crushers journaled for rotation behind the harrow blades and adapted to lie under said platform, and a soil pulverizer journaled for rotation behind the clod crushers.

900,823. CLOTHES-LINE REEL. EOLA E. BLACKLEDGE and JOHN CHAPLIN, Newton, Iowa. Filed Jan. 25, 1907. Serial No. 353,971.

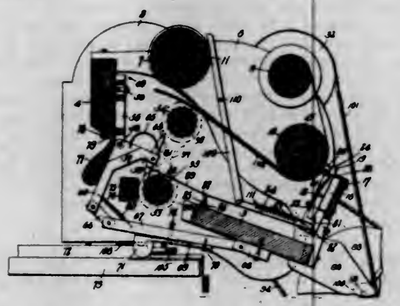
In a clothes line reel, the combination of a frame comprising a body portion provided with an angular opening to receive a hook, and one arm having an opening at one end, and another arm having a hook, a shaft having one end inserted in said opening, and the other end detachably mounted in the hook and having formed near each end a disk, a ratchet wheel formed on the shaft beyond the disk at one end and outside of said hook, a pawl pivoted to the adjacent arm to engage said ratchet wheel, a crank

on one end of said shaft, a casing comprising a cylindrical body portion having a slot at one side, a detachable head at each end of the body portion overlapping the body portion, and rotatably mounted upon the shaft adjacent to the outer face of one disk, one of said heads being formed of two semi-circular parts arranged in overlapping posi-



tions, and secured together, and two bars secured to said heads and arranged to stand on opposite sides of said slot to thereby form smooth edges for the opening, and also to provide a weight that will normally hold the side of the casing to which they are attached downwardly, said bars also serving to connect the casing heads together.

900,824. SELF-PLAYING INSTRUMENT. ALEXANDER J. BLUNTACH, Winona, Minn., assignor to Charles O. Goss, Winona, Minn. Filed Apr. 30, 1906. Serial No. 314,414.



1. In an automatic piano-player, the combination with a series of elements each adapted to depress a key of a piano, each of said elements comprising a lever fulcrumed intermediate of its ends, a second lever adapted to depress a key of the piano, a link by which one end of said first lever is connected to said second lever, and a movable part carried by the other end of the first mentioned lever, of means adapted for continuous movement and means for moving said movable part into and out of the path of the continuously movable part.

2. In an automatic piano-player the combination with a series of elements each adapted to depress a key of a piano, each of said elements comprising a lever fulcrumed intermediate of its ends, a second lever adapted to depress a key of the piano, a link by which one end of said first lever is connected to said second lever, and a pawl pivotally mounted in the other end of the first mentioned lever, of a toothed roll adapted for continuous rotation, and means for moving said pawl into and out of the path of said toothed roll.

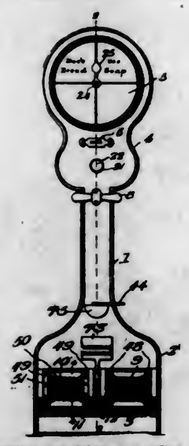
3. In an automatic piano player the combination with a series of elements each adapted to depress a key of a piano, each of said elements comprising a lever fulcrumed intermediate of its ends, a second lever adapted to depress a key of the piano, a link by which one end of said first lever is connected to said second lever, and a pawl pivotally mounted in the other end of the first mentioned lever, a pair of toothed rolls adapted for continuous rotation, and means for moving said pawl alternately into the path of said toothed rolls.

4. In an automatic piano player, the combination with a series of elements each adapted to depress a key of a piano, each of said elements comprising a lever fulcrumed intermediate of its ends, a second lever adapted to depress a key of the piano, a link by which one end of said first lever is connected to said second lever, a spring connected to both said levers, and a movable part carried by the other end of the first mentioned lever, of means adapted for continuous movement and means for moving said movable part into and out of the path of the continuously movable part.

5. In an automatic piano player the combination with a series of elements each adapted to depress a key of a piano, each of said elements comprising a lever fulcrumed intermediate of its ends, a second lever adapted to depress a key of the piano, a link by which one end of said first lever is connected to said second lever, and a pawl pivotally mounted in the other end of the first mentioned lever, said pawl being centrally pivoted with its ends extending in opposite directions from the lever, a pair of toothed rolls adapted for continuous rotation, and means for moving the ends of said pawl into the path of said rolls.

[Claim 6 not printed in the Gazette.]

900,825. SHOE-POLISHING MACHINE. JOHN A. BREWER, Jackson, Mich. Filed Dec. 14, 1906. Serial No. 347,811.



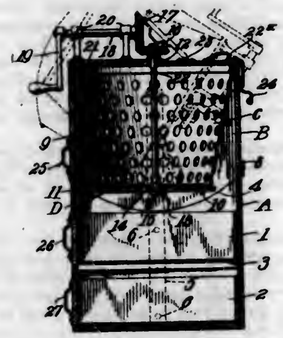
In a shoe polishing machine, a casing, a shaft mounted in said casing, a brush on said shaft, said brush comprising a series of fabric disks spaced apart by intermediate disks of less diameter than the fabric disks, end members or heads of greater diameter than the fabric disks, and the latter increasing in diameter from the center toward the ends, substantially as described.

900,826. ASH-SIFTER. HENRY S. BREWINGTON, Baltimore, Md. Filed Dec. 9, 1907. Serial No. 405,634.

1. The combination in an ash sifter of the character described, comprising a casing, a circumferential perforated pot secured therein, a revoluble perforated bottom plate secured to the said pot, a plurality of agitator blades secured on the said bottom plate, means for rotating the said bottom plate substantially as described.

2. The combination of an ash sifter of the character described comprising a circumferential perforated pot, a revoluble perforated bottom plate secured thereto, a plurality of agitator blades secured on the said bottom plate, means for rotating the said bottom plate, substantially as described.

3. The combination of an ash sifter of the character described, comprising a casing, a circumferential pot secured therein, a revoluble perforated bottom plate secured within the said pot, a plurality of agitator blades provided on the said bottom plate and within the said pot, a vertical shaft secured to the said bottom plate, means for rotating the said shaft, substantially as described.

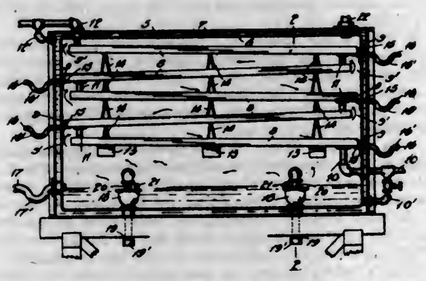


4. The combination in an ash sifter of the character described, comprising a casing, a circumferential perforated pot secured therein, a revoluble perforated bottom plate secured on the said pot, a plurality of agitator blades provided on the said bottom plate, a vertical shaft, means for rotating the said vertical shaft and the said bottom plate, substantially as described.

5. The combination in an ash sifter of the character described, comprising an upper and lower case, standards secured to the lower case with the upper case pivotally secured therein-between, a cylindrical pot secured in the upper case, a vertical shaft, a revoluble perforated plate forming the bottom of the pot carried on the lower end of the said shaft, agitator blades provided on the said bottom plate, a beveled pinion wheel carried on the upper end of the said vertical shaft, a cover provided with a hinged lid secured on the top of the upper case, a metal frame, a horizontal shaft carried by the said frame, a vertical beveled wheel carried on one end of the said horizontal shaft, and intermeshed with the said beveled pinion wheel, carried on the upper end of the said vertical shaft, a handle provided on the free end of the horizontal shaft by which means the said perforated bottom plate is made to rotate and the said agitator blades made to stir the contents within the said cylindrical pot, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

900,827. CONDENSER. PETER BROWN, Troy, Idaho. Filed Sept. 28, 1907. Serial No. 394,989.



1. In a condenser, the combination with the casing provided with intake and discharge pipes, of a series of closed pans within the casing, the said pans inclining alternately towards opposite sides of the casing and each pan having the top surface thereof inclined from opposite sides to a medial plane, each of said pans communicating at its upper end with the lower end of the pan next above, bridges between said pans, means to supply water for condensation purposes to said pans, and means to individually draw off the condensed liquids which collect upon each of said pans.

2. In a condenser, the combination with the casing provided with intake and discharge pipes, of a series of closed pans within the casing, the said pans inclining alternately towards opposite ends of the casing and each pan having the top surface thereof inclined from opposite sides of the pan to a medial plane, each of said pans communicating at its upper end with the lower end of the pan next above, bridges between said pans, means to supply water for condensation purposes to said pans, receptacles to receive the condensations upon the respective pans, and a draw-off for each of said receptacles.

3. In a condenser, the combination with the casing provided with intake and discharge pipe connections, of a series of closed pans within the casing arranged one above another in alternating inclined positions, the top of each pan besides inclining towards one end of the casing being inclined from opposite sides of a medial plane tubular connections between the pans, means to supply water interiorly of the pans for condensation purposes, and a draw-off pipe for each of the pans.

4. In a condenser, the combination with the casing having a double shell to furnish a water-space therein and provided with intake and discharge pipe connections, of a series of closed pans within the casing and arranged one above the other in alternating inclined positions, a plurality of bridges interposed between the pans and acting both as supports and as obstructions to the free flow of gas between the pans, tubular connections between the pans, means to supply water interiorly of the pans for condensation purposes, and a draw-off pipe for each of the pans.

5. In a condenser, the combination with the casing provided with intake and discharge pipe connections, of a series of closed pans within the casing and arranged one above the other in alternating inclined positions, bridges interposed between each pan and the adjacent pan above the same tubular connections between the pans, means to supply water interiorly of the pans for condensation purposes, and a draw-off pipe for each of the pans.

[Claims 6 to 19 not printed in the Gazette.]

900,828. ADJUSTABLE WRENCH. JAMES C. BURGESS, Indianapolis, Ind., assignor to Leo M. Barrett, Indianapolis, Ind. Filed Apr. 20, 1908. Serial No. 428,185.



1. An adjustable wrench comprising a bar with an integral jaw thereon, a screw-threaded abutment on the bar having two opposing flanges engaging opposite sides of the bar, a rivet extending through the bar and the flanges, a slide carrying a jaw movably on the bar, a double-acting screw having one end screwed into the slide and its other end screwed into the screw-threaded abutment and provided with a lock-nut thereon movable into engagement with the abutment.

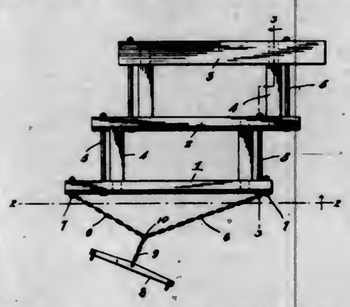
2. An adjustable wrench comprising a bar with an integral jaw thereon, a screw-threaded abutment having a bearing part on the bar and having also two opposing flanges engaging opposite sides of the bar, the abutment having also a recess in the bearing part, a casing connected to the abutment and having a slot therein, a rivet extending through the bar and the flanges, a slide carrying a jaw movably on the bar, a double-acting screw having one end screwed into the slide and its other end screwed into the screw-threaded abutment and extending

into the casing thereof, and a lock-nut partially in the slot of the casing and partially in the said recess and screwed onto said screw-end.

3. In an adjustable wrench, the combination with a bar, an integral jaw on the bar, a slide carrying a jaw on the bar, and a double-acting screw having one of its ends screwed into the slide, of an abutment on the bar and having two opposing flanges engaging opposite sides of the bar, there being screw-threads in the abutment that are engaged by the opposite end of the screw, and a rivet extending through the bar and said two flanges and securing said abutment rigidly to said bar, substantially as shown and described.

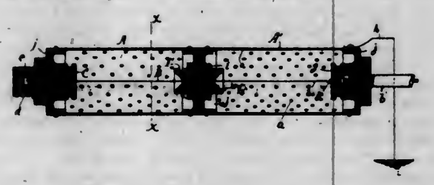
4. In an adjustable wrench, the combination with a bar that has a shank thereon, an integral jaw on the bar, a slide carrying a jaw on the bar, and a screw connected to the slide, of an abutment on the bar and having two opposing flanges engaging opposite sides of the bar, the abutment being engaged by the screw which extends through the abutment, a rivet extending through the bar and said two flanges, a casing extending from said abutment over the end of the screw that extends therethrough, two handle members extending from said casing opposite to but at a distance from said shank, and two handle members engaging the inner sides of said first-described handle members and also two opposite sides of said shank, each one of said counterpart members having two portions that extend over against two other opposite sides of said shank to the like portions of the companion counterpart member, substantially as shown and described.

900,829. ROAD-LEVELER. SYLVESTER J. CHAPMAN, Marietta, Ohio. Filed May 4, 1908. Serial No. 430,774.



A road leveler comprising two scraper beams and a packing beam arranged in parallel and overlapping relation, the packing beam being heavy and the scraper beams light, metal scraper blades upon the scraper beams, braces between said beams and having shouldered ends inserted in said beams, tie bolts between said beams, a draft chain attached at its ends to the front scraper beam adjacent to the ends of the latter, and a whiffletree having a hook adjustably engaged with said chain.

900,830. APPARATUS FOR NEUTRALIZING STATIC ELECTRICITY. WILLIAM H. CHAPMAN, Portland, Me. Filed Jan. 23, 1908. Serial No. 412,232.



1. The herein described apparatus for neutralizing static electricity consisting of a hollow conductor connected to earth and having one or more openings through its walls and an electrically charged insulated conductor with small radiating surfaces secured within said hollow conductor.

2. The herein described apparatus for neutralizing static electricity consisting of a hollow perforated cylindrical conductor connected to earth and an electrically charged insulated conductor with small radiating surfaces secured longitudinally within said cylinder.

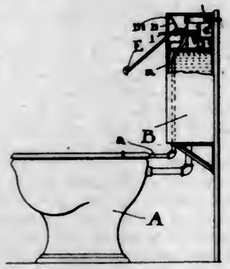
3. The herein described apparatus for neutralizing static electricity consisting of a hollow perforated cylindrical conductor connected to earth and an electrically charged insulated wire secured longitudinally within said cylinder.

4. The herein described apparatus for neutralizing static electricity consisting of a hollow perforated cylindrical conductor connected to earth and an electrically charged insulated wire secured in the axis of said conductor.

5. The herein described apparatus for neutralizing static electricity consisting of a hollow perforated cylindrical conductor connected to earth, a plug of insulating material in each end, a wire connecting said plugs and an electric cable terminating in one of said plugs in electrical contact with said wire.

[Claims 6 to 8 not printed in the Gazette.]

900,831. WATER-CLOSET. HARRY W. CHARLTON, Ottawa, Ontario, Canada. Filed Aug. 5, 1907. Serial No. 387,228.



1. In a water closet, the combination with the bowl and flushing tank therefor of a water motor discharging into the flushing tank, an inlet pipe therefor, a valve in the inlet pipe, a tiltable back, connecting means between the valve and the tiltable back, and means operated by the motor for creating a current of air in the bowl, lever connecting means between the same and the valve, a projection connected to the lever by a rule joint, a pivoted lever adapted to be tilted by the projection on the return movement of the first mentioned lever, and connecting means adapted to extend between the same and the flushing mechanism.

2. In a water closet, the combination with the bowl and flushing tank supported adjacent thereto, of a fan adapted to exhaust the bowl, a water motor for operating the same, a back rest tiltably supported from the tank, and a controlling valve for the water motor operated by the tilting of the back rest.

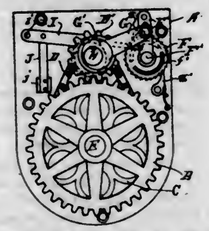
3. In a water closet, the combination with the bowl, flushing tank therefor and flushing mechanism, of a tiltable back rest, hydraulically operated exhausting means for the bowl, means operated by the backward movement of the back rest for throwing the exhausting means into operation and means operated by the forward movement of the back rest for operating the flushing mechanism.

4. In a water closet, the combination with the bowl, flushing tank therefor and flushing mechanism, of a tiltable back rest, hydraulically operated exhausting means for the bowl, means operated by the backward movement of the back rest for throwing the exhausting means into operation, means operated by the forward movement of the back rest for operating the flushing mechanism, and means engaging the back rest and retaining it in its innermost position during use of the closet whereby the pressure on the back of the user may be eliminated.

5. In a water closet, the combination with the bowl, flushing tank therefor and flushing mechanism, of a tiltable back rest, hydraulically operated exhausting means for the bowl, means operated by the backward movement of the back rest for throwing the exhausting means into operation, means operated by the forward movement for operating the flushing mechanism, and a spring catch for retaining the back rest in its innermost position.

[Claims 6 and 7 not printed in the Gazette.]

900,832. REVERSING MECHANISM. ALBERT P. CRELL, Ionia, Mich. Filed Oct. 28, 1907. Serial No. 399,608.



1. In a reversing mechanism, a base, a driving shaft and a driven shaft supported in said base, a small gear wheel and a small sprocket wheel mounted to revolve freely on the driving shaft, a clutch longitudinally adjustable on the driving shaft between the gear wheel and the sprocket wheel and a lever pivotally mounted at one end upon the base, its center engaging the clutch, and a ratchet wheel formed to engage the free end of the lever and cause it to reciprocate sidewise for adjusting said clutch to alternately engage the gear wheel and the sprocket wheel, a large gear wheel mounted on the driven shaft and directly engaging the small gear wheel, and a large sprocket wheel mounted on the driven shaft and a sprocket chain directly connecting said large sprocket wheel with the small sprocket wheel.

2. In combination, a reversing mechanism consisting of a base, a driving shaft and a driven shaft revolubly mounted on the base, a small gear wheel and a small sprocket wheel revolubly mounted on the driving shaft, and having lugs on their adjacent faces, a clutch mounted on the driving shaft, longitudinally adjustable thereon and having a lug on each side, a ratchet wheel mounted on the base and having a lug on each side diametrically opposite each other, an eccentric rod pivotally connected at one end to the actuating arm, an eccentric mounted on the driving shaft and engaging the other end of the eccentric rod, an actuating pawl on the arm and a retaining pawl on the base adjacent to the ratchet wheel, a lever mounted on the base and having one end bifurcated to pass one fork each side of the ratchet wheel to alternately engage the lugs on this wheel and so connected with the clutch that the revoluble motion of the ratchet wheel will shift the clutch and cause it to engage the lugs on the gear wheel and on the sprocket wheel alternately, a large gear wheel mounted on the driven shaft and directly engaging the small gear wheel, a large sprocket wheel mounted on the driven shaft, and a sprocket chain directly connecting said sprocket wheel with the small sprocket wheel.

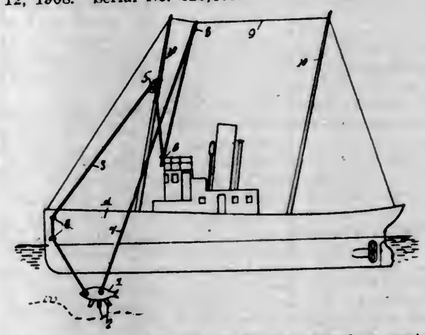
3. The combination in a reversing mechanism, of a base, a driving shaft mounted thereon, a small gear wheel and a small sprocket wheel revolubly mounted on said shaft, a clutch mounted on said shaft between the gear wheel and the sprocket wheel and longitudinally adjustable on the shaft, a ratchet wheel mounted on the base and having a lug on each side diametrically opposite each other, an eccentric, eccentric rod and pawl mounted to actuate the ratchet wheel, a pin mounted on the base, a lever slidingly mounted on said pin, a spring supporting one end of said lever, said lever passing over and engaging the clutch with the end bifurcated to engage each side of the ratchet wheel to actuate the clutch to engage the gear wheel and the sprocket wheel alternately, a driven shaft mounted on the base, a large gear wheel mounted on said shaft and directly connected with the small gear wheel, a large sprocket wheel mounted on the driven shaft, and a chain directly connecting the large and the small sprocket wheels.

900,833. FOUNTAIN-PEN. ALONZO T. CAOSS, Providence, R. I. Filed Aug. 21, 1906, Serial No. 331,517. Renewed May 14, 1908. Serial No. 432,902.



A fountain pen provided with an ink-duct adapted for the passage of ink from the reservoir to the writing pen, and having an air-duct leading upward to the ink reservoir, and an automatic valve adapted to close the air-duct, to regulate the flow of ink to the pen.

900,834. SOUNDING DEVICE FOR VESSELS. EUCHARISTE DEGAGNÉ, Limoilou, Quebec, Canada. Filed Mar. 12, 1908. Serial No. 420,605.



In combination with the hull of a vessel, a contact member, a flexible adjustable member secured to the hull of the vessel and having its lower end secured to the contact member, a block movably supported by the vessel, a flexible member secured to the contact member and disposed through the block, and means for securing the free end of the flexible member.

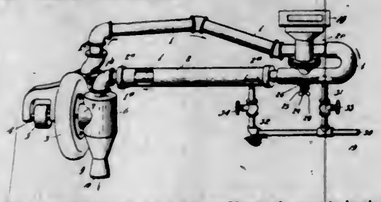
900,835. ANTISEPTIC ORGANIC-SILVER COMPOUND. MARTIN DODSWORTH, Detroit, Mich., assignor to Nelson, Baker & Co., Detroit, Mich., a Corporation of Michigan. Filed Apr. 4, 1908. Serial No. 425,179. (Specimens.)

1. An antiseptic organic silver compound, derived from a soluble silver salt, ammonia and formaldehyde, which is characterized by a powerful germicide and substantially non-irritant action, is lustrous white in color, has the form of acicular crystals, is substantially odorless, is sparingly soluble in water and insoluble in alcohol, chloroform and ether, and decomposes at substantially 197° C.

2. An antiseptic organic silver compound, derived from silver nitrate, ammonia and formaldehyde in substantially

the proportions and amounts specified characterized by a powerful germicidal and substantially non-irritant action, is lustrous white in color, substantially odorless, sparingly soluble in water, and insoluble in alcohol, chloroform and ether, and decomposes when heated to 197° C.

900,836. GRAIN-STEAMER. KENNEDY DOUGAN, Minneapolis, Minn., assignor to Columbian Feed Governor Company, a Corporation of Minnesota. Filed July 6, 1905. Serial No. 268,462.



1. The combination with an endless air-trunk including a fan and a grain trap, the latter having an eduction port for the grain, and said air-trunk having an induction port located at a point distant from said trap, of yieldingly closed valves controlling said induction and eduction ports and arranged to be opened by the pressure of grain thereon, and means for introducing steam or vapor into said air-trunk and to produce a blast to propel the grain therein, substantially as described.

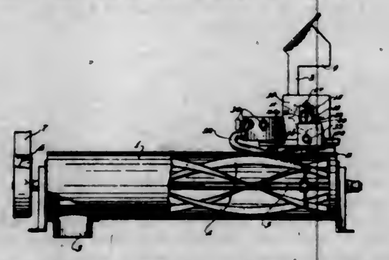
2. The combination with an endless trunk having induction and eduction ports located at distant points, of means for producing a blast in said trunk, to propel the grain from said induction port to said eduction port, and means for applying steam or vapor to said grain while it is being propelled within said trunk, substantially as described.

3. In a device of the kind described, an endless air trunk having at least one swivel joint through which a portion of said air trunk is extended, the said swivel joint permitting the body of the air trunk to be pivotally adjusted around the axis of said joint, and the said air trunk having an induction port located at a point distant from said swivel joint, substantially as described.

4. In a device of the character described, an air-trunk having axially alined swivel joints constituting part of said air trunk and permitting the body of the air-trunk to be pivotally adjusted, and having an induction hopper applied to the said pivotally adjustable body section at a point distant from its pivot, substantially as described.

5. The combination with an air trunk and means for producing a blast of air therein to propel the grain, said air trunk having induction and eduction ports, of a valve coöperating with said eduction port, and an adjustable support for said valve having screw-threaded parts arranged to be adjusted by rotation of said valve, substantially as described.

900,837. APPARATUS FOR DAMPENING WHEAT AND OTHER MATERIALS. KENNEDY DOUGAN, Minneapolis, Minn. Filed June 19, 1907. Serial No. 379,713.



1. The combination with two conduits arranged to deliver two flowing materials to a place where they are commingled, of a motor wheel in one of said conduits arranged to be driven by the force of the material flowing therethrough, and a delivery passage and a propeller in the other conduit, which propeller is driven by said motor wheel, at a speed proportionate to the speed thereof, and acts on the material in said latter conduit with a force which raises the altitude thereof, in the vicinity of said delivery passage and causes an overflow of said latter material, through said delivery passage, and hence a commingling of the two materials which is proportionate to the flow of the material passing through the first noted conduit, substantially as described.

2. In an apparatus for dampening wheat and other materials, the combination with a motor wheel arranged to be driven by the flowing stream of material to be dampened, of a water delivery conduit having a water delivery passage located above the normal water level, and an impact water propeller in said water conduit driven by said motor wheel at a speed proportionate to the speed thereof and acting on the water in said conduit with a force which raises the altitude of the water in the vicinity of said water delivery passage, whereby the water is caused to overflow through said delivery passage and to pass to the material to be dampened in proportion to the flow of said latter material, substantially as described.

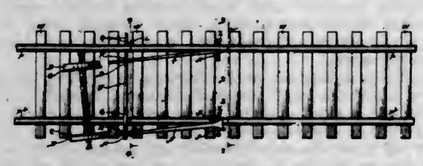
3. The combination with a mixer, of a material conduit and a water conduit arranged to deliver into the same, said water conduit having a water delivery passage located above the normal water level, a motor wheel in said material conduit subject to the flow of the material to be dampened, and an impact water propeller in said water conduit driven from said motor wheel at a speed proportionate to the speed thereof, said water propeller operating on the water in said water conduit with a force which raises the altitude of the body of water in the vicinity of said water delivery passage and causes said water to overflow through said passage and to pass to the material to be dampened in proportion to the flow of the latter, substantially as described.

4. In an apparatus for dampening wheat and other materials, the combination with a motor wheel arranged to be driven by the flowing stream of the material to be dampened, a water conduit, a water propeller in said water conduit driven by said motor wheel at a speed proportionate to the speed of said wheel, and an adjustable water distributer adapted to be set for different proportionate amounts of water per unit of material to be dampened, substantially as described.

5. In an apparatus for dampening wheat and other materials, the combination with a motor wheel arranged to be driven by the flowing stream of material to be dampened, a water conduit, a water propeller in said water conduit for delivering the water to the material to be dampened, arranged to be driven by said motor wheel at a speed proportionate to the speed thereof, and a water distributer having a multiplicity of valved ports adapted to be variously set for different proportionate amounts of water per unit of material to be dampened, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

900,838. CAR-REPLACER. SAMUEL N. ELLENWOOD, Jones, Okla. Filed Apr. 20, 1908. Serial No. 428,231.



1. In a car-replacer, a rail member adapted to have one of its ends secured in contact with the inner side of a track-rail, a second rail member adapted to have one of its ends secured in contact with the outer side of the opposite track-rail, a bar connecting the free ends of said rail members for holding them spaced for proper track gage, said bar passing over and resting upon said opposite track-rail and extending under said first-named track-rail.

2. In a car-replacer, a rail member adapted to have one of its ends attached to the inner surface of a track-rail, a second rail member adapted to have one of its ends attached to the outer surface of the opposite track-rail, a bar connecting the free ends of said rail members and holding them spaced to proper track gage, said bar being adapted to pass over and rest upon said opposite track-rail and extend under said first-named track-rail, and a pin adapted to pass down through said bar and into the road-bed to prevent said bar and the rail members connected thereby from moving laterally of the track.

3. In a car-replacer, a rail member adapted to be clamped against the inner surface of a track-rail and have one of its ends extend into position to receive a derailed truck, a second rail member adapted to be clamped against the outside surface of the opposite track-rail and have one of its ends extend into position to receive a derailed truck, the second-named rail member having a hooked extension adapted to hook over the upper or bail portion of said opposite rail, clamps for securing said rail members to said track-rails, a bar connecting and supporting the free or extending ends of the rail members, said bar passing over and resting upon said opposite track-rail and extending under said first-named track-rail, a pin adapted to pass down through said bar on the outside of the first-named track-rail to prevent said bar and the rail members from swinging in the direction of derailment of the car trucks.

900,839. ROTOR CONSTRUCTION. BERNARD ELSHOFF, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Sept. 7, 1906. Serial No. 333,612.

1. In a rotor of a dynamo-electric machine, a core, coils carried thereby, said coils having end-turns projecting beyond the ends of the core, an end-cover surrounding the end-turns at each end of the core, a member resting on the shaft and engaging said end-cover, a plurality of wedges for forcing the end-turns outward against the end-cover, and means carried by said member for adjusting each wedge separately.

2. In a rotor of a dynamo-electric machine, a core, coils carried thereby, said coils having end-turns projecting beyond the ends of the core, an end-cover surrounding the end-turns at each end of the core, a member mounted on the shaft, said member having radial arms engaging said end cover, wedges for forcing said end-turns outward against the end-cover, and means carried by said radial arms for separately adjusting the wedges.

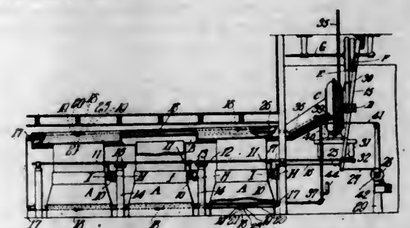
3. In a rotor of a dynamo-electric machine, a core, coils carried thereby, said coils having end-turns projecting beyond the ends of the core, an end-cover surrounding the end-turns at each end of the core, said end-cover consisting of a cylindrical ring-shaped portion, and an inwardly extending portion at right angles thereto, wedges for forcing said end-turns outwardly against the end-cover, a ring or collar having radial arms engaging the inwardly extending portion of the end-cover, said arms being located opposite the said wedges, and means mounted in said radial arms for independently adjusting the said wedges.

4. In a rotor of a dynamo-electric machine, a core, coils carried thereby, said coils having end-turns projecting beyond the ends of the core, an end-cover surrounding the end-turns at each end of the core, a member supported on the shaft or shaft projection of the core, and engaging said end-cover, a plurality of wedges for forcing the end-turns outwardly against the end-cover, and screws carried by said member for adjusting each wedge separately.

5. In a rotor of a dynamo-electric machine, a core and shaft, coils carried by said core and projecting beyond the ends thereof, an end-cover surrounding the projecting ends of the coils at each end of the core, a ring or collar having radial arms engaging the end-cover, wedges for forcing said end-turns outwardly against said end-cover, and adjusting screws carried in said radial arms for adjusting each wedge separately.

[Claims 6 to 17 not printed in the Gazette.]

900,840. AUTOMATIC FIRE-EXTINGUISHING APPARATUS. JONATHAN D. FARR, Monroe, Ga. Filed Oct. 26, 1907, Serial No. 399,380. Renewed Sept. 4, 1908. Serial No. 451,739.



1. The combination with a machine for operating on fibrous material, of a machine controlling device, a sprinkler, means for actuating the controlling device and setting the sprinkler into operation, and means including a destructible member for holding said actuating means inoperative.

2. The combination with a machine for operating on fibrous material, of a controlling device, a sprinkler, a controlling valve therefor, an actuating device tending to shift the controlling device and stop the operation of the machine and to open the sprinkler valve, and means including a destructible member for holding said actuating means inoperative.

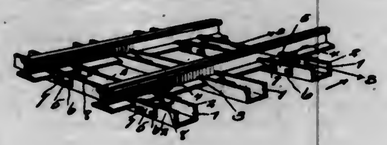
3. The combination with a machine for operating on fibrous material, of a controlling device for stopping the operation of the machine, a lever connected to said controlling device, an actuating means for the lever, and a restraining device for holding said lever from movement, said restraining device extending within the casing of the machine and including a destructible member.

4. The combination with a machine for operating on fibrous material, of a trunk connected to said machine, a fan connected to the trunk, an operating member tending normally to stop the machine and the operation of the fan, and a restraining device connected to the operating member and extending through the casing of the machine and the trunk, said restraining device including a destructible member.

5. The combination with a machine for operating on fibrous material, of a trunk connected thereto, a fan connected to the trunk, a driving belt for the fan, a belt shipper, a clutch controlling the operation of the machine, a lever connected to the shipper and clutch, a lever operating means, and a restraining device normally holding said lever from movement, the restraining device extending through the casing of the machine and the trunk and having a destructible member.

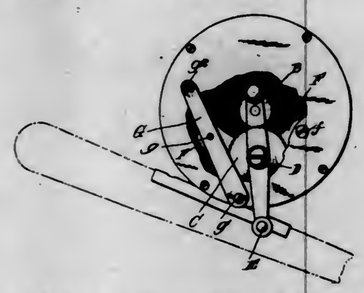
[Claims 6 to 9 not printed in the Gazette.]

900,841. METAL AND WOOD COMBINED RAILWAY-TIE. JOHN FENDERSON, Owego, N. Y. Filed Feb. 11, 1907. Serial No. 356,732.



A device of the class described comprising a metallic railway tie having vertical side portions connected by a horizontal portion, each end of said tie having a pair of recesses formed in the vertical portion thereof, each pair of recesses forming perpendicular shoulders and integral jaws for engaging the rail, a pair of pivoted jaws also mounted on the vertical portions of said tie for coöperation with said integral jaws, a pair of oppositely disposed wedge-shaped blocks arranged in each end of said tie between said vertical portions and immediately beneath the rail, thus forming a yieldable seat for the same, substantially as described.

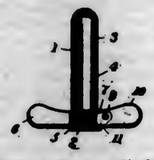
900,842. FISHING-REEL. BERNARD A. FLYNN, New York, and FREDRICK C. ROTHENBERGER, Brooklyn, N. Y. Filed May 7, 1908. Serial No. 431,431.



1. In a fishing reel, the combination of the reel frame, the winding spindle mounted to turn therein, a pinion on the spindle, a driving wheel engaging the pinion, a handle connected with the driving wheel, a segmental plate pivotally connected at one end to the frame of the reel having an aperture at its opposite end and centrally connected with the drive wheel and handle, a spring engaging the outer free end of the segmental plate and tending to separate the drive wheel and pinion, and a spring metal catch plate attached at one end to the side of the reel near the rod seat provided with a catch pin adapted to engage the aperture in the segmental plate and having its outer end turned to form a handle lying at the side of the reel above the rod seat.

2. In a fishing reel, the combination of the reel frame, the winding spindle mounted to turn therein, a pinion connected with the spindle, a driving wheel engaging the pinion, a handle connected with the driving wheel, a segmental plate pivotally connected at one end to the frame of the reel having an aperture at its opposite end and centrally connected with the driving wheel and handle, a spring engaging the outer free end of the segmental plate and tending to separate the driving wheel and pinion, and a spring metal catch plate attached at one end to the outside of the reel near the rod seat extending diagonally upwards and rearwards therefrom in a plane between the path of the handle and the side of the reel and which when the catch is disengaged from the segmental plate moves into the path of the handle and prevents it from rotating, and a catch pin carried by the catch plate intermediate its end adapted to engage the aperture in the segmental plate.

900,843. QUICK-RELEASE NUT. WILLIAM FOLBERTH and FRED G. FOLBERTH, Cleveland, Ohio. Filed Oct. 10, 1907. Serial No. 396,843.



1. The combination with a cylindrical sleeve having screw threads on its interior at one end and having two longitudinal slots through its walls at that end forming a tongue which is bent to normally stand out from the surface of the sleeve, of a pivoted arm carrying a cam adapted to force the tongue back into alinement with the surface of the sleeve.

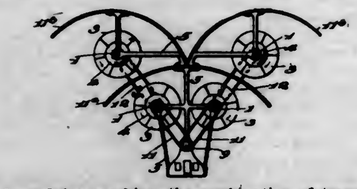
2. The combination with a cylindrical sleeve having screw threads on its interior at one end and having two longitudinal slots through its walls at that end forming a tongue which is bent to normally stand out from the surface of the sleeve, of a pivoted arm carrying a cam adapted to force the tongue back into alinement with the surface of the sleeve, and a thumb piece projecting from said sleeve by which it may be turned.

3. The combination with a cylindrical sleeve having screw threads on its interior at one end and having two longitudinal slots through its walls at that end forming a tongue which is bent to normally stand out from the surface of the sleeve, of two ears projecting from the sleeve adjacent the tongue, and a short arm pivoted to said ears, and carrying on its inner end a cam surface adapted to force the tongue into alinement with the balance of the sleeve.

4. The combination with a cylindrical sleeve having screw threads on its interior at one end and having two longitudinal slots through its walls at that end forming a tongue which is bent to normally stand out from the surface of the sleeve, of two ears projecting from the sleeve on opposite sides of the end of the tongue, a short arm in the shape of a thumb piece pivoted to said ears and carrying on its inner end a cam surface adapted to force the tongue into alinement with the balance of the sleeve when the arm is in a position at right angles to the sleeve, and a second thumb piece on the sleeve opposite the arm.

5. A quick release nut made up of two parts, each carrying a section of complementary screw threads, one part being normally held by spring action without the circumference of the circle upon which the threads of the other part are drawn, two ears projecting from one part on opposite sides of the other, and a short arm in the shape of a thumb piece pivoted to said ears and carrying a cam surface adapted to force the parts together whereby the nut may be locked or may be released quickly.

900,844. FLYING-MACHINE. ALBERT H. FRIEDEL, Cleveland, Ohio. Filed Oct. 23, 1905. Serial No. 284,038.

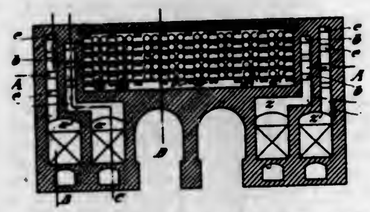


1. In a flying machine, the combination of transversely spaced propellers, an aeroplane arranged above the propellers and transversely curved, a motor located below the propellers and arranged medially of parallel planes passed vertically through the axis of said propellers and independent connecting means between the motor and the propellers, other propellers located above the said aeroplane and

spaced apart a greater distance than the first mentioned propellers and connected therewith and with the motor for simultaneous operation, and an aeroplane arranged above the last mentioned propellers.

2. In a flying machine, the combination of upper and lower transversely spaced propellers, an aeroplane separating the upper and lower propellers and extending beyond the sides of the latter and transversely curved, upper aeroplanes, one for each upper propeller and transversely curved and having their inner lower edges in connection with the lower aeroplane, a motor located below the propellers upon a median line and independent connecting means between said motor and the propellers on opposite sides of said median line.

900,845. GAS-FURNACE. LOUIS G. FROMONT, Liege, Belgium. Filed Apr. 6, 1905. Serial No. 254,168.



1. A gas furnace having a plurality of retorts therein and having burners arranged in the spaces between the retorts, each burner consisting of two orifices which extend laterally from and respectively communicate at their outer ends with air and gas channels, the inner ends of said orifices being in alinement in the direction of movement of the gases within the furnace chamber.

2. A gas furnace having a plurality of furnace chambers, retorts arranged in tiers in said chambers, a central partition separating said chambers and provided with flues and a tier of burners opening into each chamber, each burner comprising two orifices for the admission of air and gas, respectively arranged one behind the other with relation to the direction in which the gases move in the furnace.

3. A gas furnace provided with a plurality of independent furnace chambers, a central partition separating said chambers, a series of gas channels in said partition, a series of air channels in said partitions, exhaust channels leading from the furnace chambers, and apertures connecting the furnace chambers with said channels, said chambers and channels being arranged and coöperating so that the courses traversed by the air and gas are constantly the same length and so that the course traversed is of minimum length.

4. In a gas furnace having a plurality of independent furnace chambers each adapted to support a series of retorts, a partition separating two of said chambers and provided with a plurality of interior channels or ducts, said ducts communicating with apertures opening into the retort chambers between the retorts therein and corresponding in number to the number of retorts in said chamber, substantially as and for the purpose described.

5. In a gas furnace having a plurality of independent furnace chambers each adapted to support a series of retorts, a partition separating two of said chambers and provided with a plurality of longitudinally extending independent air and gas ducts, each communicating with apertures opening into the retort chambers between the retorts therein, said apertures being arranged in pairs and the members of each pair communicating respectively with an air and gas duct.

900,846. PLATED METALLIC BODY. GEORGE A. GOODSON, Minneapolis, Minn. Filed Mar. 28, 1906. Serial No. 308,445.

1. As a new article of manufacture, a metallic body plated with an alloy composed chiefly of lead but containing a small percentage of some hardening metal, which alloy has been subjected to an electric current while in molten condition.

2. As a new article of manufacture, a metallic body plated with an alloy composed chiefly of lead but containing a small percentage of antimony, which alloy has been subjected to an electric current while in a molten condition.

900,847. PROCESS OF PLATING METALLIC BODIES. GEORGE A. GOODSON, Minneapolis, Minn. Filed Mar. 28, 1906. Serial No. 308,446.

1. The process of plating metallic bodies which consists in subjecting plating metal to an electric current while in a molten condition, discontinuing the passage of the current, and thereafter applying the plating metal to the metallic body to be plated.

2. The process of plating metallic bodies, which consists in subjecting plating metal to an electric current while in a molten condition, allowing the said plating metal to solidify, and subsequently remelting said plating metal and applying the same to the metallic body to be plated.

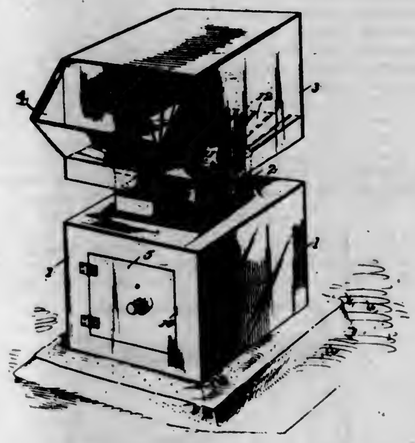
3. The process of plating metallic bodies, which consists in subjecting lead to an electric current while in a molten condition, allowing the lead to solidify, subsequently remelting said lead and applying it to the metallic body to be plated.

4. As a new article of manufacture, a metallic body plated with a metal which has been previously subjected to an electric current while in molten condition.

5. As a new article of manufacture, a metallic body plated with lead which has been previously subjected to an electric current while in molten condition.

[Claims 6 and 7 not printed in the Gazette.]

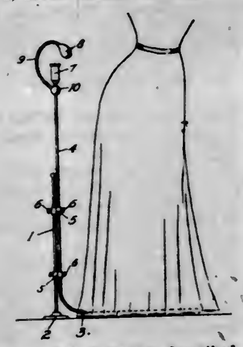
900,848. MAIL-BOX. WILLIAM C. GROENKE, Milwaukee, Wis. Filed Mar. 12, 1908. Serial No. 420,661.



1. A mail bag receiver, the same comprising a catcher, having an open mouth, a throat portion, and a box, and an automatic dumping table mounted in said throat portion.

2. A mail bag receiver, comprising a catcher having an open mouth, a throat portion, and a box, means interposed between the sides of the box and the upper end of the said throat portion to prevent the formation of shoulders, and an automatic dumping table arranged within said throat portion.

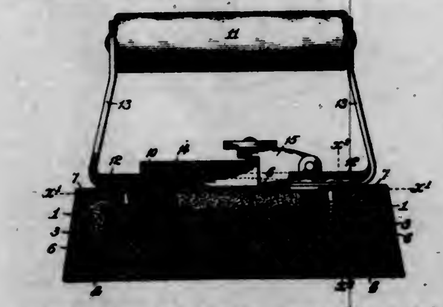
900,849. SKIRT-MARKER. AUGUST GSCHWEND and RAYMOND G. CUMBER, Seattle, Wash.; said Gschwend assignor to Adelbert F. Hammer, Seattle, Wash. Filed Nov. 8, 1907. Serial No. 401,347.



1. A device of the character described comprising a stand, a vertically disposed pipe supported thereon for vertical adjustment, a horizontally disposed head on the lower portion of said pipe for discharging the marking material, a coupling secured to the upper end of said pipe, said coupling being formed with a vertical conduit and an inclined conduit communicating with said first named conduit intermediate its ends, a supply receptacle arranged above said coupling and having a nipple depending from its lower portion, said nipple being secured in the upper portion of the vertical conduit of said coupling, a pipe communicating with the inclined conduit of said coupling and extending upwardly over said receptacle, and a bulb on said last named pipe arranged on the same side of said stand as said horizontally disposed head.

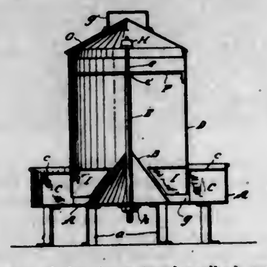
2. A device of the character described comprising a stand, a vertically disposed pipe having a horizontally disposed head on its lower portion, couplings slidably engaged on said stand and on said pipe, set screws in said couplings engaged with said stand and with said pipe, a coupling secured on the upper end of said pipe, said coupling being formed with a vertical conduit and an inclined conduit communicating with said first named conduit intermediate its ends, a supply receptacle arranged above said coupling and having a funnel shaped bottom portion provided with a nipple secured in the upper end of the vertical conduit of said coupling, a pipe communicating with the inclined conduit of said coupling and extending upwardly to form a handle, and a bulb on the upper end of said last named pipe.

900,850. SAD-IRON. JAMES M. HARPER, Chicago, Ill., assignor to The Harper Supply Company, a Corporation of Illinois. Filed Sept. 19, 1904. Serial No. 225,003.



A sad iron comprising a body, a cover plate secured to the body, a horizontal longitudinally arranged rectangular catch bar, secured to the cover plate, and having, at one end, a horizontal forwardly projecting and overhanging toe, and at the other end, a vertical heel, a removable handle consisting of a cylindrical grip, a straight attaching bar of convexo-concave shape in cross-section, seating on the cover plate, and having a longitudinal slot through which the catch bar projects, and with the toe of which the attaching bar engages, a pair of vertical ears, at one end of the attaching bar, on opposite sides of the longitudinal slot, and flat angular arms, having their lower ends merged into the attaching bar, and their upper ends secured flat against the cylindrical grip, and a longitudinally arranged dog having its rear end pivoted to the vertical ears, and its forward end curved and adapted to enter the longitudinal slot and to bear against the vertical heel of the catch bar so as to seat the attaching bar beneath the horizontal toe and lock the handle to the cover plate.

900,851. FEEDING APPARATUS. CHARLES T. HATCH, Waterville, N. Y. Filed May 8, 1907, Serial No. 372,478. Renewed Aug. 31, 1908. Serial No. 451,029.



1. In a device of the character described, a feed trough, a hopper located centrally thereto, the said hopper discharging feed to the trough, walls dividing the trough into a plurality of compartments, and plates supported on said walls and partially covering the compartments, substantially as shown.

2. In a device of the character described, a feed basin, a hopper centrally mounted thereon, a standard supporting the hopper and adjustably mounted vertically of the device and terminating in a bar, a cap on the bar, the said standard and the said cap being adapted to permit free revolution of the hopper on the standard and limit the lifting of the hopper, substantially as described.

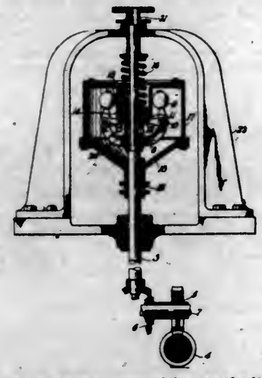
3. In a device of the character described, a standard, a hopper axially mounted and revoluble thereon and provided with radial interior blades adapted on the revolution of the hopper to loosen the contents thereof.

4. In a device of the character described, a feed trough, a bar mounted within the confines of the trough, a hopper supported on the bar adjustable relative to the trough and revoluble on the bar and vertically movable thereon, blades radially mounted in the hopper and crossing the outlet from the hopper to the trough.

5. In a device of the character described, a circular trough, partitions dividing the same and having horizontally extended tops, a vertical bar, a hopper revolubly and slidably mounted on the bar and within the confines of the trough, a conical structure within the hopper adapted to assist the discharge of its contents and blades radially mounted in the hopper extending substantially to the conical structure across the line of discharge from the hopper to the trough, for the uses and purposes set forth.

900,852. GOVERNOR. FRANCIS HODGKINSON, Edgewood Park, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Apr. 7, 1905, Serial No. 254,419. Renewed Sept. 13, 1907. Serial No. 392,761.

1. In a speed regulating device, a shaft rotatable synchronously with the apparatus to be regulated, pivoted weights rotatable with said shaft, a member surrounding said shaft and reciprocable by said weights and a stationary sleeve interposed between said shaft and said member.



2. A governing device comprising a shaft rotated synchronously with the apparatus to be governed, a bracket rigidly mounted on said shaft, a centrifugal ball pivotally mounted on said bracket, a reciprocable sleeve surrounding said shaft, a rotatable collar, provided with a ball bearing thrust joint, surrounding said sleeve and located between it and said ball.

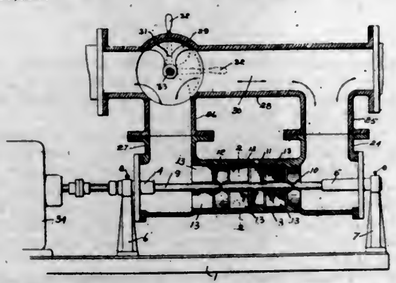
3. A governing device comprising a shaft rotated synchronously with the apparatus to be governed, a bracket rigidly mounted on said shaft, a centrifugal ball pivotally mounted on said bracket, a reciprocable sleeve surrounding said shaft, a rotatable collar surrounding said sleeve and located between it and said ball.

4. A governing device comprising a shaft rotated synchronously with the apparatus to be governed, a non-rotatable reciprocable sleeve surrounding said shaft, a bracket mounted on said shaft, a centrifugal weight pivotally mounted on said bracket adapted to reciprocate said sleeve, a collar rotatably mounted on said sleeve and located between it and said weight.

5. A governing device comprising a shaft rotated synchronously with the apparatus to be governed, a spring-restrained, non-rotatable reciprocable sleeve surrounding said shaft, a bracket mounted on said shaft, a centrifugal weight pivotally mounted on said bracket adapted to reciprocate said sleeve, a collar, provided with a ball bearing thrust joint, rotatably mounted on said sleeve and located between it and said weight.

[Claims 6 to 11 not printed in the Gazette.]

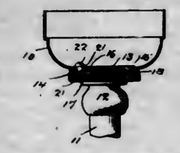
900,853. LIQUID-IMPELLING DEVICE. EDGAR P. HOLLY, Roxbury, Mass., assignor to The Holly Steam Engineering Company, Providence, R. I., a Corporation of Rhode Island. Filed Feb. 26, 1908. Serial No. 417,829.



1. A liquid impelling device comprising an impelling chamber provided with an inlet and an outlet, the wall of said chamber being provided with annular recesses, a shaft rotatably mounted in said chamber, a plurality of propellers carried by said shaft and successively increasing in diameter as they approach the outlet, said propeller being located at points between said recesses, and removable blades located in said recesses and interposed between said propellers for preventing a whirling motion of the fluid passing through said chamber.

2. A liquid impelling device comprising an impelling chamber provided with an inlet and an outlet, the wall of said chamber being provided with annular recesses, a shaft rotatably mounted in said chamber, a plurality of propellers carried by said shaft, and located at points between said recesses, a plurality of blades provided with T-shaped heads fitting against the inner walls of said recesses, and means for securing said blades in potion.

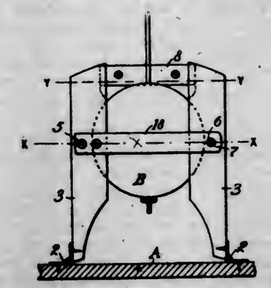
900,854. MEANS FOR LOCKING ELECTRIC SOCKETS TO FIXTURES. HARVEY HUBBELL, Bridgeport, Conn. Filed Mar. 16, 1907. Serial No. 362,630.



1. A socket shell having a coupling device permanently secured thereto and comprising a two-wing bushing internally threaded to receive a threaded end of a fixture, the two wings of the bushing being slightly separated, one wing being inclosed by a portion of the shell and the other wing free inside of said shell, and a screw having its head inside the shell and connecting the two wings of the bushing whereby the frictional engagement of the threads of the coupling and fixture may be varied.

2. A socket shell having a coupling device permanently secured thereto and comprising a two-wing bushing internally threaded to receive a threaded end of a fixture, the two wings of the bushing being slightly separated, one wing having angular faces over which the metal of the shell is closed, the other wing being circular and being mounted free inside of said shell, and a screw having its head inside the shell and connecting the two wings of the bushing whereby the frictional engagement of the threads of the coupling and fixture may be varied.

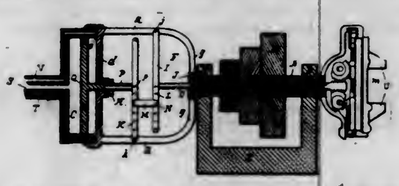
900,855. ATTACHMENT FOR CLOCKS. ERNEST A. HUMMEL, St. Paul, Minn., assignor to Albert L. Haman, St. Paul, Minn. Filed June 29, 1907. Serial No. 381,469.



1. In combination with the pendulum of a clock, a pair of members movably supported adjacent thereto and formed with grooves to receive the opposite sides of said pendulum, means holding said members locked together with the pendulum fitted in said grooves, and a stationary block secured between and engaging with said members to hold the same rigid and in locking position.

2. In combination with the pendulum of a clock, a pair of arms 3 having hinge support upon opposite sides of the pendulum and formed with grooves in their inner edges to receive the opposite sides thereof, a locking strip hinged upon one of said arms and constructed to interlock with the other arm, and a stationary block 8 secured above the pendulum and extending into grooves in the inner sides of the arms 3 when said arms are in locking position, to hold the same rigid.

900,856. MEANS FOR OPERATING CHUCKS. JACOB JECKLIN and CHARLES W. SCHREIBER, Dubuque, Iowa. Filed Aug. 17, 1903. Serial No. 169,840.



1. In a device of the character described, a rotatable yoke, a spindle connected to, and rotatable with the yoke, a pull-bar, a fluid-pressure device connected to the yoke and rotatable therewith for operating the pull-bar, connections between the pull-bar and the fluid-pressure device, and means connected with the pull-bar and yoke for varying the pull and thrust on the pull-bar without change in the pressure in the fluid of the fluid-pressure device.

2. In a device of the character described, a rotatable yoke, a spindle connected to and rotatable with the yoke, a pull-bar, a rotatable cylinder provided with a piston, connections between the cylinder and the pull-bar, means for operating the piston by fluid-pressure, a lever interposed in the pull-bar, and connected with the pull-bar and yoke for varying the pull and thrust of the pull-bar without change in the pressure of the fluid, connections between the lever and piston, and means for changing the leverage.

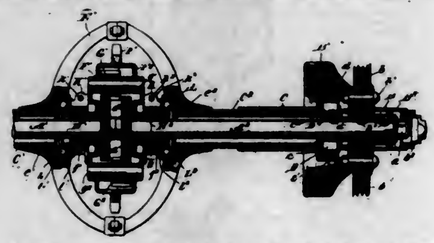
3. In a device of the character described, a yoke, a pull-bar, a chuck provided with jaws coupled to the pull-bar, a lever consisting of plates each pivoted at one end to the opposite sides of the yoke respectively and provided with means for connecting the plates together at various places along the plates to vary the pressure upon the pull-bar to which the plates are attached, a cylinder attached to the yoke and provided with a piston, a piston rod connecting one of the plates with the piston, the other plate being connected to the pull-bar and connection with the fluid-pressure.

4. In a device of the character described, a spindle carrying a chuck, a yoke removably attached to the spindle and rotatable therewith, a pull-bar, connections between the pull-bar and yoke, a fluid-pressure device connected to the yoke and rotatable therewith, consisting of a cylinder and piston in the cylinder, connections between the piston and the pull-bar, and connections between the fluid-pressure device and the yoke and rotatable with the yoke.

900,857. GEARING. THOMAS B. JEFFERY, Kenosha, Wis. Filed Feb. 23, 1904. Serial No. 194,761.

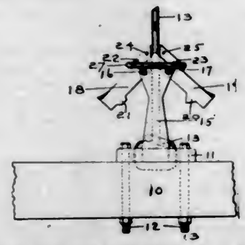
1. The combination with a pair of alined shafts, of a rotary power transmission member having hubs surrounding the adjacent ends of the shafts, exteriorly screw-threaded sleeves keyed upon said hubs so as to be movable axially of the hubs and immovable angularly with respect to the hubs, collars having screw-threads for engaging the screw-threads upon the hubs, the ends of said collars abutting against the sides of said transmission member, circular supports surrounding said hubs, and anti-friction bearings interposed between the ends of said sleeves and said supports.

2. The combination with a pair of alined shafts, of a rotary power transmission member having hubs surrounding the adjacent ends of the shafts, interposed gearing between said member and shafts, axially adjustable sleeves upon said hubs, fixed circular supports surrounding said hubs, anti-friction bearings interposed between the ends of said sleeves and said supports, and split collars at either side of said transmission member surrounding and in screw threaded engagement with said sleeves whereby the latter may be locked in any desired axial adjustment.



3. The combination with a pair of alined shafts, of gears fixed to the adjacent ends of said shafts, a rotary power transmission member surrounding said gears and having hubs surrounding the ends of said shafts, circular bearings surrounding said hubs for supporting said member, and a yoke extending around said member and rigidly uniting said bearings, said yoke being divided into two equal parts on a plane passing midway between said gears.

900,858. SAFETY-CATCH FOR LIFTS. ALEXANDER JENKINS, Carlisle, Iowa. Filed Mar. 1, 1907. Serial No. 360,086.

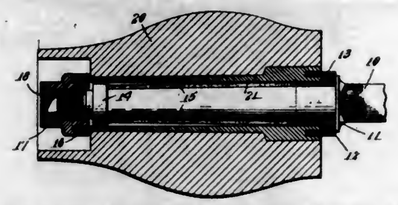


A safety catch for lifts comprising a U shaped framework adapted to be secured to the top beam of the cage and a propelling cable secured thereto; a pair of balanced levers, one provided with a knife and the other with a lug, secured to said frame work, each of said levers being provided with a shoulder and an orifice; a ring mounted on said levers; a wire designed to secure said levers together at their upper extremities; a top plate mounted centrally on the overhead beam of the elevator shaft and an orifice located centrally therein; and an overhead beam provided with an orifice, all arranged and combined substantially as shown and described.

900,859. CARRIAGE-AXLE. ROBERT E. JOHNSON, New York, N. Y., assignor to N. Y. Dash & Axle Mfg. Co., New York, N. Y., a Corporation of New York. Filed June 24, 1905. Serial No. 266,708.

1. In a construction of the class described, the combination of an axle, an axle nut thereon, and a wheel hub having a bearing at its inner end supported by the axle and having a bearing at its outer end on the axle nut, said wheel hub being spaced from the axle between said bearings, and insulation between the axle and said bearings to prevent the flow of electricity between said axle and wheel-hub.

2. In a construction of the class described, the combination of an axle, an axle nut therefor, and a wheel-hub having a bearing at its inner end supported from said axle and having a bearing at its outer end supported from said axle nut, the bore of said wheel-hub being larger than said axle, and said bearings having a diameter greater than that of the axle, whereby said wheel-hub is spaced from the axle at all points between said bearings, and means for insulating one of said bearings from the axle.

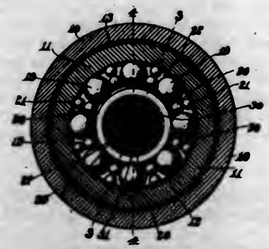


3. In a construction of the class described, the combination of an axle, an axle nut, a wheel hub, a metallic bushing secured in the wheel hub and having an annular or dust-excluding bearing at its inner end on the axle, and having an annular or dust-excluding bearing in the axle nut at its outer end, and a packing of absorbent material wound upon the axle for containing oil near the center of the hub, said bearing on the axle comprising an outside metallic bushing and a non-metallic bushing.

4. In a construction of the class described, the combination of an axle, an axle nut, and a wheel hub having a bearing at its inner end on the axle, and having a bearing at its outer end on the axle nut, whereby an oil chamber will be left at the center of the hub, said bearing on the axle comprising an outside metallic bushing and a fiber bushing.

5. In a construction of the class described, the combination of an axle having a bearing thereon consisting of a fiber bushing and an outside metallic bushing, said metallic bushing having an annular groove therein, an axle nut having an annular groove therein, a wheel hub, and an axle bushing secured on the wheel hub, one end of said bushing entering a bearing in the annular groove in the axle nut and the other end having an annular dust-excluding channel fitting the outer wall of said groove in the metallic bushing, said axle bushing being spaced from the axle throughout its length.

900,860. ANTIFRICTION-BEARING. ERNEST C. KETCHUM, Boston, Mass. Filed Aug. 28, 1907. Serial No. 390,479.



1. In a roller bearing, the combination of two rings movable relatively to each other and provided on adjacent circumferential walls with paths for anti-friction members; a plurality of anti-friction members interposed between said rings and adapted to revolve in contact with said paths; a separator between each pair of anti-friction members; and a revoluble member contacting with and interposed between each separator and the outer roller path, the axes of each separator and its coöperating revoluble member being radial to the axis of said roller bearing.

2. In a roller bearing, the combination of two rings movable relatively to each other and provided on adjacent circumferential walls with paths for anti-friction members; a plurality of anti-friction members interposed between said rings and adapted to revolve in contact with said paths; a separator between each pair of anti-friction members; a revoluble member contacting with and interposed between each separator and the outer roller path, the centers of each pair of separators and revoluble members being in a line radial to the axis of said roller bearing; and means for retaining in proper relative position said separators and revoluble members.

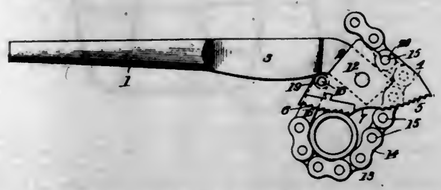
3. In a roller bearing, the combination of two rings movable relatively to each other and provided on adjacent circumferential walls with paths for anti-friction members; a plurality of anti-friction members interposed between said rings and adapted to revolve in contact with said paths; a separator between each pair of anti-friction members; a revoluble member contacting with and interposed between each separator and the outer roller path, the centers of each pair of separators and revoluble members being in a line radial to the axis of said roller bearing; and means for retaining in proper relative position said separators and revoluble members.

4. In a roller bearing, the combination of two rings movable relatively to each other and provided on adjacent circumferential walls with paths for anti-friction members; a plurality of anti-friction members interposed between said rings and adapted to revolve in contact with said paths; a separator between each pair of anti-friction members; a revoluble member interposed between each separator and the outer roller path; and annular members interposed between said rings and at either side of said anti-friction members and provided with means for retaining in proper relative position said separators and revoluble members.

5. In a roller bearing, the combination of two rings movable relatively to each other and provided on adjacent circumferential walls with paths for anti-friction members; a plurality of anti-friction members interposed between said rings and adapted to revolve in contact with said paths; a separator between each pair of anti-friction members; a revoluble member interposed between each separator and the outer roller path; and annular members interposed between said rings and at either side of said anti-friction members provided with pockets for said separators and revoluble members.

[Claims 6 to 11 not printed in the Gazette.]

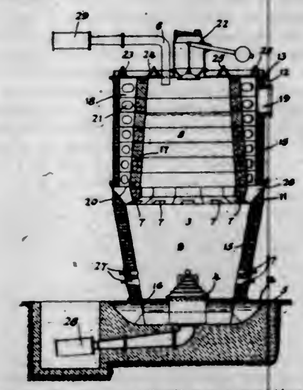
900,861. WRENCH. MAHLON E. LAYNE and SAMUEL N. HALL, Houston, Tex. Filed July 30, 1906. Serial No. 328,497.



1. A wrench comprising a handle and a pair of jaw plates embracing and secured to one end of the handle and provided with oppositely acting faces located at one and the same side of the handle, said handle being flattened and extended laterally in rear of the jaw plates and upon the same side of the handle as the oppositely acting faces, to form a hand grip.

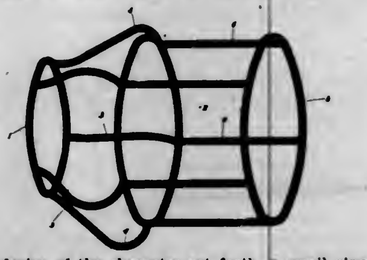
2. A wrench comprising a handle, a pair of jaw plates embracing and secured to one end of the handle and provided with oppositely acting faces at one and the same side of the handle, and a chain to coöperate with the jaw faces with one end secured to and between corresponding ends of the plates and its free end having a detachable engagement with and between the other corresponding ends of the plates, the handle being flattened and extended laterally in rear of the jaw plates and upon the same side of the handle as the oppositely acting faces, to form a hand grip.

900,862. GAS-PRODUCER. HENRY I. LEA, Pittsburg, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Mar. 14, 1906. Serial No. 306,008.



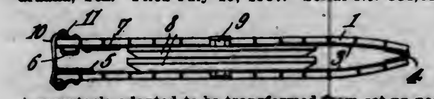
In a gas producer, an updraft gas generating section, a downdraft gas generating section superimposed thereon and having a heat-conducting lining, a plurality of outlet ports located intermediate of said sections, a fixing chamber surrounding said downdraft section, communicating with said outlet ports, and formed by said heat-conducting lining and the outer wall or shell of the producer of the downdraft section and a plurality of wing walls located between the producer shell and the heat-conducting lining, forming independent flues and a gas outlet at the upper end of the fixing chamber and means of communication between said flues and said gas outlet.

900,863. DEVICE FOR THE PREVENTION OF ONANISM IN ANIMALS. WILLIAM LEECH, Marysville, Cal. Filed May 16, 1908. Serial No. 433,272.



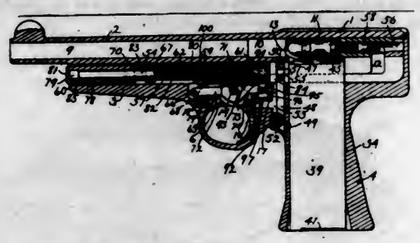
In a device of the character set forth, a small ring, a larger ring spaced therefrom, said rings being connected by a plurality of bars, and a third ring spaced from said larger ring, and connected therewith by a plurality of bars, as set forth.

900,864. COLLAPSIBLE BARREL. SAMUEL LEMLY, Texarkana, Tex. Filed July 19, 1907. Serial No. 384,631.



A receptacle adapted to be transformed from set up position to knocked down position with its side parts inner side out, consisting of sections hinged together, heads hinged to one of said sections at points intermediate the ends thereof, in such manner that the heads may swing toward the outer side of said section and overlap each other against the outer side thereof, the other section being adapted to lie with its outer side toward the overlapped hinged heads when the receptacle is collapsed.

900,865. AUTOMATIC MAGAZINE-FIREARM. CHARLES W. LOUIS, Springfield, Mass., assignor to Edward R. Buck, Windsor, Vt. Filed Mar. 21, 1907. Serial No. 363,568.



1. A recoil-operated firearm comprising a frame, a spring-pressed slide having a bolt mounted above one end thereof, and a slide having a firing-pin mounted above one end thereof and operating through said bolt, said firing-pin slide being spring-pressed independent of the bolt.

2. A recoil-operated firearm, of the class described, comprising with the magazine a spring-pressed slide provided with a bolt above one end and a spring-pressed slide provided with a firing-pin above one end, said firing-pin operating through such bolt, the arrangement of parts being such that said bolt and firing-pin are driven back far enough by the force of the discharge to make room for a fresh cartridge from said magazine.

3. In a recoil-operated firearm, of the class described, a spring-pressed bolt, a slide having a firing-pin at one end and a lug at the other end, a hollow plunger, and a spring within such plunger between its inner end and the inside face of said firing-pin lug, the relation of said firing-pin to said bolt being such that the former is carried with the latter when the latter is forced to the rear, said spring and plunger also being carried in the same direction at the same time.

4. In a recoil-operated firearm, of the class described, a bolt, a firing-pin, a lock-pin, a trigger or lock device mounted on said pin, and a second trigger or lock device having its front end pivotally connected with the front end of said first-mentioned trigger or lock device and cut away to receive said pin, said trigger or lock devices being provided with engaging and releasing members on opposite sides of the pin adapted to be operated alternately to act on said bolt and firing-pin independently.

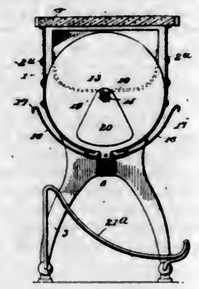
5. In a recoil-operated firearm of the class described, a bolt, a firing-pin, a lock-pin, a trigger or lock device mounted on said pin, and a second trigger or lock device having its front end pivotally connected with the front end of said first-mentioned trigger or lock device and cut away to receive said pin, said trigger or lock devices being provided with engaging and releasing members on opposite sides of the pin adapted to be operated alternately and to act on said bolt and firing-pin at different times.

[Claims 6 to 55 not printed in the Gazette.]

900,866. STRAW HOLDER AND DISPENSER. HARRY C. MAYES, Philadelphia, Pa. Filed Feb. 7, 1908. Serial No. 414,855.

1. An apparatus of the character described, comprising a container formed in its bottom with an opening, a cut-off strip secured below and spaced from said opening and providing therewith two oppositely facing discharge openings, an ejecting device adapted to slide laterally in the space between said cut-off strip and the opening in the bottom of the container, a support for said cut-off device, and actuating rods secured on opposite sides of the container and having connection with said ejecting device.

2. In an apparatus of the character described, the combination of a container provided with a discharge opening, an ejecting device arranged to move across said opening, a support for said ejecting device, the ejecting device being formed with a pocket adapted to register with said opening and with a trough at one side of said pocket, and means for moving said ejecting device.



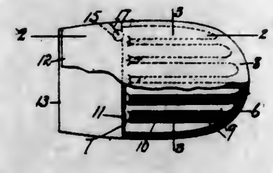
3. In an apparatus of the character described, the combination of a container provided with a discharge opening, an ejecting device arranged to move across said opening, a support for said ejecting device, the ejecting device being formed with a pocket adapted to register with said opening and alongside said pocket with a trough, ribs defining the sides of the trough, and means for moving said ejecting device.

4. In an apparatus of the character described, the combination of a container provided with a discharge opening, an ejecting device adapted to move back and forth across said opening, a support for said ejecting device, the ejecting device being formed with a pocket adapted to register with the said opening and on both sides of said pocket with longitudinally extending troughs and inner and outer ribs defining the sides of said troughs.

5. In an apparatus of the character described, the combination of a container provided with a discharge opening, an ejecting device adapted to move back and forth across said opening, a support for said ejecting device, the ejecting device being formed with a pocket adapted to register with the said opening and on both sides of said pocket with longitudinally extending troughs and inner and outer ribs defining the sides of said troughs, the outermost ribs bearing against the exterior wall of the container.

[Claims 6 and 7 not printed in the Gazette.]

900,867. CUSHION FOR FOOTWEAR. BENJAMIN N. B. MILLER, Hartford, Conn. Filed June 24, 1907. Serial No. 380,471.



1. An article of manufacture to be formed into a cushion for foot-wear including a body part formed of a single piece of flexible material molded to shape and having channels arranged to permit removal of a core and disposed practically throughout the whole of the body part, said cushion having an opening at the end of the structure extending into said channels and arranged to permit removal of a core from all of the channels.

2. An article of manufacture to be formed into a cushion for foot-wear including a body part formed of a single piece of flexible material molded to shape and having channels extending thereacross practically parallel each with the other and disposed practically throughout the whole of the body part, said cushion having an opening at the end of the structure extending into said channels and formed to permit removal of a core from all of the channels.

3. A cushion for foot-wear including a body part formed of a single piece of material and having channels closed at one end and extending lengthwise thereof and with flaps at the opposite end sealed together and closing a mouth extending into said openings.

4. An article produced in the formation of a cushion for foot-wear and including a body part formed of a single piece of material having main channels disposed with separating walls throughout all of the body part and with a communicating channel between the main channels, and an upper and lower lip having a slit or opening therebetween extending into said channels.

5. An article produced in the formation of a cushion for foot-wear and including a body part formed of a single piece of material with main channels extending in the same general direction and a communicating channel therebetween located at the end of the main channels, and upper and lower lips with a slit therebetween extending into said cross channel.

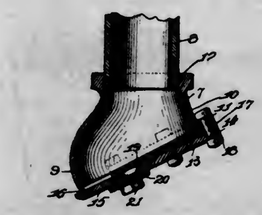
[Claims 6 to 10 not printed in the Gazette.]

900,868. PROCESS OF PREPARING CONCENTRATED HYDRATED MAGNESIA. WINFIELD S. MORRISON, San Francisco, Cal. Filed Jan. 30, 1908. Serial No. 413,436.

1. The process of concentrating hydrated magnesium oxid consisting in subjecting magnesium oxid to prolonged boiling in water whereby its condition is changed and hydrated magnesium oxid is formed, separating the same from the bulk of its free water by repeated straining, then allowing the concentrate to drain for a number of days, afterwards squeezing it through a fine strainer, and finally subjecting it to a temperature of about one hundred degrees F. until sufficiently dry for use, the products being thoroughly stirred while drying.

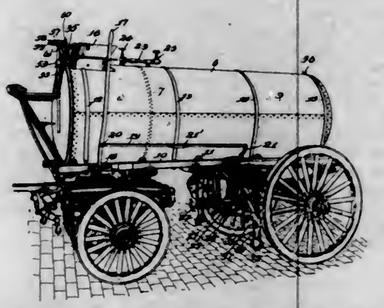
2. The process of concentrating milk of magnesia which consists in passing the milk of magnesia repeatedly through a strainer until it runs clear and the hydrated magnesium oxid remains in the strainer, then let the concentrate drain for about six days after which it is squeezed through a fine strainer, and finally subjected to a temperature of about one hundred degrees F. until sufficiently dry for use, the substance being thoroughly stirred while drying.

900,869. FLUSHING-HEAD. THOMAS M. MURPHY, St. Louis, Mo., assignor to Sanitary Street Cleansing & Sprinkling Machine Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 21, 1905. Serial No. 275,121.



In a flushing head, the combination of a hollow body having an open bottom and provided with a flange extending partly around its edge; a cap plate provided with a flange adapted to register with the first-named flange; a flat removable strip of resilient packing material, adapted to be interposed between said flanges and to register therewith, and to leave a discharge slit between its ends and the cap plate and the lower edge of the body, the angle of discharge of the fluid ejected from the flushing head being regulated by varying the relative front and back thickness of said strip of packing; and bolts for uniting said flanges and holding said strip in place therebetween, substantially as described.

900,870. STREET-WASHING MACHINE. THOMAS M. MURPHY, St. Louis, Mo., assignor to Sanitary Street Cleansing & Sprinkling Machine Company, St. Louis, Mo., a Corporation of Missouri. Filed Oct. 7, 1905. Serial No. 281,863.



1. In a street washing machine a suitable running gear, a tank adapted to contain water under pressure, two oppositely disposed depending revoluble tubes extending from the interior of said tank, nozzles mounted on said tubes, means whereby said tubes may be revolved simultaneously or independently, an air tank, a valve-controlled connection between said tank and the first named tank, whereby the contents of the water tank may be discharged under pressure from the air tank when it is desired to use the machine as a flushing machine, substantially as specified.

2. In a traveling street washing machine, the combination of a tank adapted to contain water under pressure, a plurality of nozzles connected to said tank, and revolubly mounted upon opposite sides of the tank, said nozzles being adapted to discharge cleansing fluid at a sharp angle upon the surface to be cleansed, and be revoluble in a horizontal plane; and a rack and pinion mechanism whereby the nozzles on each side of the machine may be revolved in such horizontal plane simultaneously or independently, and an air tank having a valve-controlled connection with the first named tank and adapted to deliver air under pressure to the first named tank when it is desired to use the machine as a flushing machine, substantially as specified.

900,871. HOE. JEFF D. MCCABE, Kittrell, Tenn., assignor of one-half to J. D. Youree, Readyville, Tenn. Filed Oct. 7, 1907. Serial No. 396,246.

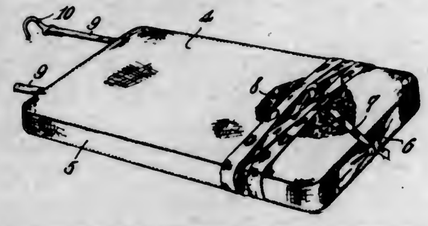


1. The combination of a handle having a socket, a tool head having a shank fitted against the front of the handle, a bar or member fitted against the back of the handle and having an arm extending across the end of the handle and projecting beyond the same to support the tool head, bolts piercing the handle, the shank, and the bar or member and having nuts arranged at the outer face of the latter, and expansible means compressed within the socket of the handle and engaging the bar or member for holding the same tightly against the nuts.

2. The combination of a handle having a socket, a tool head having a shank fitted against the front of the handle, a bar or member fitted against the back of the handle and having an arm extending across the end of the handle and projecting beyond the same to support the tool head, bolts piercing the handle, the shank and the bar or member and having nuts arranged at the outer face of the latter, and a spring arranged within the socket and engaging the bar or member for holding the same tightly against the nuts.

3. The combination of a handle, a blade arranged substantially at right angles to the handle and provided at its outer face with a groove or depression extending outwardly from the handle and terminating short of the outer end of the blade, said blade being also provided with a shank extending along the front of the handle, a substantially L-shaped bar or member composed of an inner longitudinal portion fitted against the back of the handle, and an arm extending across the end of the handle at substantially right angles to the same and projecting beyond the handle and seated in the groove or depression of the blade, and fastening means piercing the handle, the shank, and the bar or member and securing the same together.

900,872. TOILET ARTICLE. MICHAEL MCINNEMY, Iowa City, Iowa. Filed Feb. 15, 1908. Serial No. 416,136.

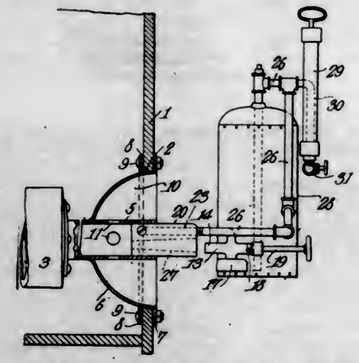


1. A toilet article comprising a flat non-yielding member, a yielding detergent applying and scrubbing surface combined therewith, a sponge, and a flexible member connecting the sponge with the article and serving to secure the former at any desired position upon the surface.

2. A toilet article comprising a flat non-yielding core, a yielding detergent applying and scrubbing surface surrounding the core, an absorbent cleansing member flexibly connected with the article, and means for temporarily attaching the article to a bath tub.

3. A toilet article comprising a flat non-yielding core, a yielding detergent applying and scrubbing surface surrounding the core, an absorbent cleansing member flexibly connected with the article, straps secured to the article, and hooks carried by the straps to engage the rim of a bath tub.

900,873. WATER-HEATER. CARL N. NELSON and NICHOLAS A. LEE, Colfax, Wis. Filed Feb. 4, 1907. Serial No. 355,649.



1. In an apparatus of the class described, the combination of a liquid containing tank, a heating chamber submerged therein, an induction tube provided with an integral hollow, cup-shaped member extending through an opening in the wall of the tank and forming an air chamber communicating with the induction tube, means for securing the member to the wall and forming a water tight joint, and a burner discharging its flame into the induction tube.

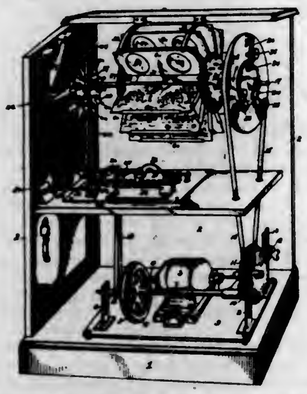
2. In an apparatus of the class described, the combination of a liquid containing tank, a heating device submerged therein, an induction tube connected with the device and provided with an integral cup-shaped member extending through an opening in the wall of the tank and formed with a rim bearing on the outside of the wall, a ring surrounding the member and bearing on the inside of the wall, bolts extending through the said rim and ring and through the wall to secure the parts together, said induction tube being provided with openings communicating with the hollow of the cup-shaped member to receive atmospheric air therefrom, and a burner arranged to direct its flame into the induction tube.

900,874. WHITE NON-STAINING PORTLAND CEMENT AND PROCESS OF MAKING SAME. SPENCER B. NEWBERRY, Sandusky, Ohio. Filed Mar. 13, 1905. Serial No. 249,787.

1. The herein described process of producing a white non-staining Portland cement, which consists in mixing together white limestone, silicious clay as herein defined, and a small percentage of cryolite,—said mixture being substantially free from iron,—and burning the resulting mixture in the usual way, substantially as specified.

2. As a new article of manufacture, a white, non-staining Portland cement formed by burning a mixture of white limestone, silicious clay as herein defined, and a small percentage of cryolite,—said mixture being substantially free from iron, substantially as specified.

900,875. COMBINED PHONOGRAPH AND PICTURE-EXHIBITING MACHINE. ISAAC W. NORCROSS, New York, N. Y., assignor of one-half to Ellsworth A. Hawthorne, Philadelphia, Pa. Filed Dec. 17, 1906. Serial No. 348,239.



1. In a picture-exhibiting machine, a rotatable picture carrier comprising a shaft, disks secured thereto, a plurality of pins on the adjacent faces of the disks, and a plurality of picture-holders pivotally mounted on said disks, each of the lateral edges of each holder extending between a pair of adjacent pins on one of the disks and being free to move between them, substantially as described.

2. In a picture-exhibiting machine, a rotatable picture carrier comprising a shaft, disks secured thereto, a plurality of pins on the adjacent faces of the disks, a plurality of picture-holders pivotally mounted on said disks, each of the lateral edges of each holder extending between a pair of adjacent pins on one of the disks and being free to move between them, and a spring for each holder attached thereto at one end and to the carrier at the other, and a stop mounted stationarily with respect to the carrier and coacting with the holders to regulate the movements thereof, substantially as described.

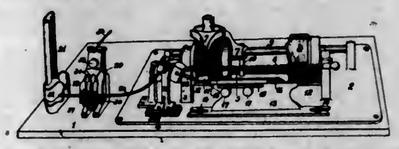
3. In an instrument of the character described, a picture holder comprising a sheet metal plate provided with pivotal means at its upper edge and having, at its lower and side edges, card supporting and retaining flanges and at its upper edge a card supporting and retaining clip.

4. In an instrument of the character described, a picture holder comprising a sheet metal plate provided with pivotal means at its upper edge and having, at its lower edge, a card supporting and retaining flange and at its upper edge a card supporting and retaining clip, and having its lower corners beveled to expose the corners of the card.

5. In an instrument of the character described, a picture holder comprising a sheet metal plate provided with pivotal means at its upper edge and having at its lower edge a card supporting and retaining flange and at its upper edge a card supporting and retaining clip, and having openings formed in it to permit of the grasping of the card between the thumb and fingers.

[Claims 6 to 15 not printed in the Gazette.]

900,876. AUTOMATIC PHONOGRAPH APPARATUS. ISAAC W. NORCROSS, New York, N. Y., assignor of one-half to Ellsworth A. Hawthorne, Philadelphia, Pa. Filed Aug. 9, 1907. Serial No. 387,782.



1. The combination of the reproducer carriage of a phonograph, a return screw therefor, a screw engaging device connected to the carriage, and a rigidly mounted bar for engaging said device and locking the same in engagement with the return screw.

2. The combination of the traveling reproducer carriage of a phonograph, a screw for feeding the same forwardly, a screw for effecting the return movement, screw-engaging devices connected to the carriage, and means for locking one of said devices in engagement with the forward feed during one movement of the carriage and the other in engagement with the return screw during the reverse movement.

3. The combination of the traveling reproducer carriage of a phonograph, a screw for feeding the same forwardly, a screw-engaging device connected to the carriage, a supporting bar for the carriage during the forward movement of the same, and a locking bar between which and said supporting bar a member of the carriage is confined throughout such forward movement.

4. The combination of the traveling carriage of a phonograph, with a locking bar therefor adjustable as to its length.

5. The combination of the traveling carriage of a phonograph, a feed screw therefor, a screw-engaging device connected to the carriage, and a locking bar for said screw-engaging device adjustable as to its length.

[Claims 6 to 17 not printed in the Gazette.]

900,877. SOUND-TUBE. ISAAC W. NORCROSS, New York, N. Y., assignor of one-half to Ellsworth A. Hawthorne, Philadelphia, Pa. Filed Aug. 9, 1907. Serial No. 387,783.

1. A combined talking-machine and picture-exhibiting machine having a sight-opening for viewing the pictures, a pair of sound-tubes on opposite sides of said opening mounted so that their ends are movable toward and away

from each other, said tubes being frictionally held in any position to which they are adjusted, and connections to said tubes for carrying sound thereto, substantially as described.



2. A combined talking-machine and picture-exhibiting machine having a sight-opening for viewing the pictures, a pair of sound-tubes having flaring ends pivotally mounted on opposite sides of said sight-opening so that their ends are movable toward and away from each other, the openings through said tubes passing through said pivotal mounting and said tubes being frictionally held in any position to which they are adjusted, and connections to said tubes for carrying sound thereto, substantially as described.

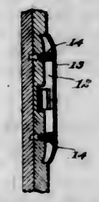
3. A combined talking machine and picture-exhibiting machine having a sight-opening for viewing the pictures, and a pair of sound-tubes disposed substantially vertically and mounted on opposite sides of said sight-opening, said sound-tubes each having a flaring upper end and each being adjustable about two substantially horizontal axes one at substantially a right angle to the other, and said tubes being frictionally held in any position to which they are adjusted, substantially as described.

4. A combined talking-machine and picture-exhibiting machine having a sight opening for viewing the pictures, a support, holders secured thereon, members having openings theretbrough, pivot-pins extending through said members and holders and pivotally supporting the members upon the holders so that they may turn about substantially parallel axes, and sound-tubes carried by said members and communicating with said openings, said sound-tubes being located one on either side of said sight opening, substantially as described.

5. A combined talking-machine and picture-exhibiting machine having a sight opening for viewing the pictures, a support, holders secured thereon, members having openings therethrough, pivot-pins extending through said members and holders and pivotally supporting the members upon the holders so that they may turn about substantially parallel axes, connections to the openings in said members, sound-tubes carried by said members and communicating with the openings therein, and flaring ear-pieces on the ends of said sound-tubes, said sound-tubes being located one on either side of said sight opening, substantially as described.

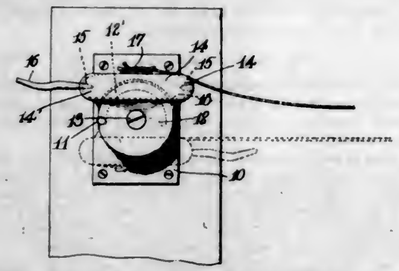
[Claims 6 to 13 not printed in the Gazette.]

900,878. SAFETY-ELEVATOR. JOHN R. NORMAN, Byington, Tenn., assignor of one-fourth to M. E. Emmerson and one-fourth to J. F. Pogue, Byington, Tenn. Filed Apr. 12, 1907. Serial No. 367,775.



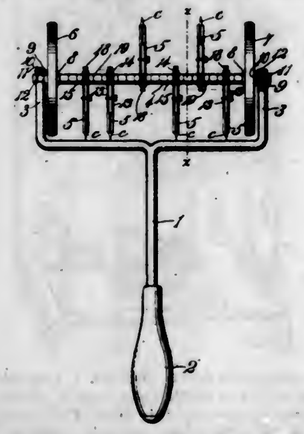
The combination with an elevator shaft and a car mounted to move in said shaft, the car being provided with an opening for passengers and the like to enter and leave the car, of a door mounted to move across and away from said opening, a latch secured to and projecting forwardly from one edge of the door, a plate 12 incased in one of the sills of the shaft and formed with an opening to receive the projecting end of the latch, said plate being provided with a laterally projecting release plate 13, springs bearing upon said release plate, above and below the opening in the plate 12, and a wear strip secured to one side of the car and adapted to contact with the release plate, whereby to push said plate inwardly and release the keeper from the latch.

900,879. CLOTHES-LINE FASTENER. ALFRED OLSON, Ashtabula, Ohio. Filed June 22, 1908. Serial No. 439,825.



In a clothes line fastener, the combination of a base plate, a hub, means to pivotally connect the hub to the base plate, means to limit the rotation of the hub upon the base plate to a portion of the circle, the hub being provided on one side with a boss comprising two oppositely extending lobes, each lobe having a socket and a line groove, a lever to be applied to either of said sockets, and means to attach the end of a line to the upper face of said boss, substantially as set forth.

900,880. DRY-GOODS MARKER. EUNICE PACKER, Hydesville, Cal. Filed Apr. 6, 1908. Serial No. 425,506.



1. A marker comprising a handle having spaced arms at one end, a rod arranged between said arms, supporting wheels, and a marking member longitudinally adjustable upon the rod.

2. A marker comprising a handle having spaced arms at one end, a rod arranged between said arms, supporting wheels, a marking member slidably and rotatably mounted upon the rod and means for securing said member in an adjusted position.

3. A marker comprising a handle having spaced arms at one end, a rod arranged between said arms, supporting wheels, scale graduations upon the rod and marking members adjustably mounted upon the rod.

4. A marker comprising a handle having spaced arms at one end, a rod arranged between said arms, supporting wheels, and a plurality of chalk holders adjustably mounted upon the rod.

5. A marker comprising a handle having spaced arms at one end, a rod arranged between said arms, supporting wheels, a chalk holder having one end slidably and rotatably mounted upon the rod and its other end provided with gripping jaws, means for closing said jaws, and means for securing the holder in an adjusted position upon the rod.

[Claim 6 not printed in the Gazette.]

900,881. SLIPPER FOR BATHERS. EMMA R. PARKER, Cincinnati, Ohio. Filed Jan. 20, 1908. Serial No. 411,577.



1. In a slipper for bathers, a renitent shell adapted to preserve the form of the foot said shell being adapted to retain its renitency when exposed to water, and a lining for the shell composed of subereous material, whereby a cushion is formed for the foot and bulk given to the slipper, substantially as and for the purposes specified.

2. In a slipper for bathers, a renitent shell and a woven inner lining therefor, removably secured therein, said shell being adapted to retain its renitency when exposed to water, and the inner lining being removable for the purpose of drying it, substantially as and for the purposes specified.

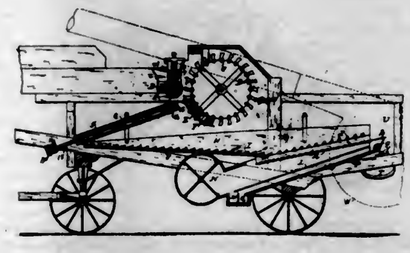
3. In a slipper for bathers, a renitent shell having foot embracing parts, and a woven inner lining for the shell, the foot embracing parts of the shell and the inner lining being provided with coinciding openings through which a tape may be inserted to hold the lining in the shell and to hold the slipper on the foot, substantially as and for the purposes specified.

4. In a slipper for bathers, a renitent shell adapted to preserve its form against the pressure of the foot and to retain its renitency when exposed to water, a lining for the shell impermeable to water and adapted to form a cushion within the shell and to give bulk to the slipper, and an inner lining for the slipper, composed of woven material, said renitent shell having foot embracing parts, and the foot embracing parts of the shell having openings which coincide with openings in the woven inner lining, through which a tape may be inserted to hold the lining in the shell and to hold the slipper on the foot, substantially as and for the purposes specified.

5. In a slipper for bathers, a renitent shell adapted to preserve the form of the forward part of the foot, an outer covering adapted to embrace the shell and the heel of the foot, said shell and said outer covering conforming in outline, a lining extending over the inside of the shell and the heel part of the outer covering, whereby a continuous insole is provided for the slipper and bulk given thereto, and a woven inner lining for the slipper, of outline conforming to the outline of the renitent shell and of the outer covering, said inner lining, renitent shell and outer covering being provided with coinciding openings through which a tape may be inserted to hold the inner lining, the shell and the outer covering together and to hold the slipper on the foot, substantially as and for the purposes specified.

[Claim 6 not printed in the Gazette.]

900,882. CORN HUSKER AND SHREDDER. JEFFREY J. POWER, Madison, Wis., assignor to J. I. Case Threshing Machine Company, Racine, Wis., a Corporation. Filed Aug. 13, 1903, Serial No. 169,308. Renewed Mar. 2, 1907. Serial No. 360,226.



1. In a machine of the described class, a snapping roller provided with a series of longitudinally extending ribs having substantially parallel sides and a series of intermediate ribs having sloping sides.

2. In a machine of the described class, a snapping roller provided with a series of longitudinal ribs having substantially parallel sides and a series of intermediate ribs having sloping sides meeting at an apex with the circle of rotation of the parallel sided ribs.

3. In a machine of the described class, the combination with snapping rollers; of a cylinder and concave arranged for interaction upon the stalks which pass between the snapping rollers; teeth mounted upon the cylinder, and knives mounted upon the concave and arranged for a shear cut through the material carried by the cylinder teeth,—the edges of said knives being curved backwardly in two directions and in different arcs from a point of original contact with the stalks and those portions of the knives adjacent to the outer ends of the cylinder teeth having more abrupt backward curves than the other portions.

4. In a machine of the described class, the combination with snapping rollers; of a cylinder and concave arranged for interaction upon the stalks which pass between the snapping rollers; teeth mounted upon the cylinder, and knives mounted upon the concave and arranged for a shear cut through the material carried by the cylinder teeth,—the edges of said knives being curved backwardly in two directions and in different arcs from a point of original contact with the stalks.

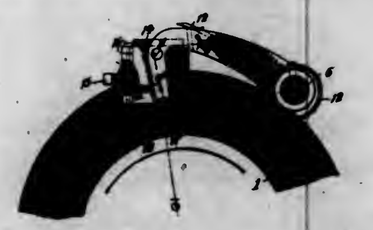
5. In a machine of the described class, a husking roller having channels in its lower ends formed with concave sides converging at the periphery of the roller.

900,883. FOOT-BLOCKING FOR SWITCH-FROGS, GUARD-RAILS, &c. CHARLES RAITER, Breckenridge, Minn. Filed Jan. 2, 1908. Serial No. 409,077.



The combination with diverging rails, of a filling block serving as a foot guard, the said filling block having a beveled or curved upper surface that extends from a point below the tread flange of one of the rails to a point on the tread flange of the other rail, above which the said latter noted tread flange is rounded upward, whereby the rounded upper surface of the rails continues the upward curve of said filling block, substantially as described.

900,884. AUTOMATICALLY-ADJUSTABLE BRUSH-HOLDER. WALTER J. RICHARDS, Milwaukee, Wis., assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed Sept. 10, 1900. Serial No. 29,571.



1. The combination with a reversible motor and its commutator, of a pivoted brush holder, and a brush adjustably arranged in said holder and having two separate contacting surfaces, said holder and its brush being automatically adjustable according to the direction of rotation of the commutator to present one or the other surface on one or the other side of the shifted neutral plane, the body of the brush being arranged substantially radial of the commutator, and the two contacting surfaces having radial directions of feed toward the commutator with their central longitudinal axes, which pass through said contacting surfaces, parallel to each other.

2. A brush comprising, in combination with a reversible motor and its commutator, a pivoted frame, a carbon holder pivoted in such frame, a single carbon arranged in such holder and having different commutating surfaces which are adapted to be fed radially or "end on" to the commutator, said carbon being automatically adjustable according to the direction of rotation of the commutator to present one or the other of such surfaces on one or the other side of the shifted neutral plane but always behind such plane or approximate thereto.

3. A brush comprising, in combination with a commutator a carbon pressing on the commutator, a holder therefor, lugs or stops on the holder, and a frame intermediate of whose length the holder is pivoted, the frame extending between such lugs to limit the relative movements of the holder and frame.

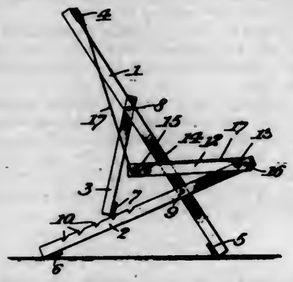
4. A brush comprising in combination with a support, a stud or rod mounted thereon, a frame pivoted on such stud, a carbon holder pivoted to the frame, a carbon arranged in such holder, and having two contacting surfaces from the center outwards and on the same arc of a circle as the commutator, means for securing the carbon in the holder and means for limiting the pivotal movement of the holder in either direction with respect to the frame.

5. A brush comprising, in combination with a support, a stud or rod mounted thereon, a double armed frame pivoted at one end to the stud, a carbon holder pivotally mounted near the free ends of the arms of such frame and provided with pairs of exterior lugs on the sides on which it is pivoted, the extreme free ends of said arms being extended downwardly substantially at right angles below the point on which the holder is pivoted and between the pairs of lugs, and a carbon in the holder.

[Claims 6 to 8 not printed in the Gazette.]

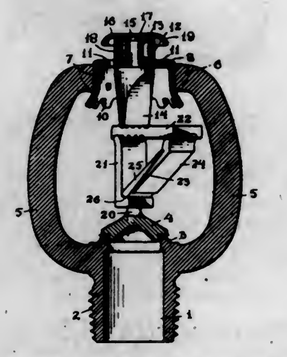
900,885. FOLDING AND ADJUSTABLE CHAIR. THOMAS F. ROBINSON, Harrogate, England. Filed Oct. 8, 1907. Serial No. 396,399.

A folding chair provided with a seat frame pivoted at 16 and provided with a front transverse rod 13 and rear transverse rods 14 and 15, and a flexible sheet which is secured to the front transverse rod 14 and passed backwardly and over and around the rear transverse rod 15 and forwardly and upwardly and around the adjacent rod 14, and then back to and beneath the rod 15 from which it is carried up to and secured to the top of the back frame, said sheet being adapted to form the body portion of the seat and the body portion of the back of the chair, and being adjustable around the rods 14 and 15 so as to raise or



lower the rear portion of the seat, substantially as shown and described.

900,886. AUTOMATIC SPRINKLER. GEORGE I. ROCKWOOD, Worcester, Mass. Filed Oct. 7, 1905. Serial No. 281,864.



1. In an automatic sprinkler, the combination with a water nozzle and a closing cap for said nozzle, arms held by said nozzle, a ring supported by said arms and provided with a screw threaded opening, of a cup shaped diffuser provided with a screw threaded periphery fitting said screw threaded opening, a rotatable member supported by said diffuser, and a cap retaining device interposed between said rotatable member and said closing cap.

2. In an automatic sprinkler, the combination with a water nozzle having a seat for a closing cap, and a cap for closing said nozzle, of arms held by said nozzle, a ring supported by said arms and provided with an opening in alinement with said nozzle and with a diameter equal to the diameter of the diffuser, a diffuser adjustable in said opening, and a cap retaining device interposed between said closing cap and said diffuser.

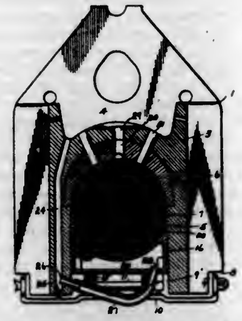
3. In an automatic sprinkler, the combination with a water nozzle and a cap closing said nozzle, of arms held by said nozzle, a ring supported by said arms, a diffuser held in said ring and having a central opening in alinement with the axis of said nozzle, a wedge provided with a shank held in said opening and capable of rotating therein, and a cap retaining device interposed between said wedge and said cap.

4. In an automatic sprinkler, the combination with a nozzle, and a cap closing said nozzle, of arms held by said nozzle, a ring supported by said arms, a diffuser held in said ring and provided with a central opening in alinement with the axis of said nozzle, a wedge provided with a shank journaled in said opening, a washer attached to the end of said shank, a spacing ring between said diffuser and said washer, and means interposed between said wedge and said cap for holding said cap in place.

5. In an automatic sprinkler, the combination with a water nozzle and a closing cap for said nozzle, of a rotatable member supported in alinement with said closing cap, and a cap retaining device between said rotatable member and said closing cap, said cap retaining device arranged to rotate with said rotatable member.

[Claim 6 not printed in the Gazette.]

900,887. LUBRICATING APPARATUS. CHARLES B. ROYAL, Oak Park, Ill. Filed Feb. 11, 1907. Serial No. 356,668.



1. A lubricating apparatus comprising a journal box, a chambered cellar block slidably mounted in said box, a lubricant receptacle, and a conduit connecting said receptacle and the chamber in said cellar block, said conduit being flexible for a portion of its extent.

2. A lubricating apparatus comprising a journal box, a cellar block carried by said box, a lubricant receptacle, a conduit leading from said receptacle, and a flexible tube connecting said conduit and cellar block.

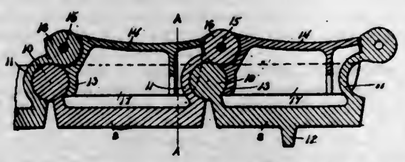
3. A lubricating apparatus comprising a journal box, having a recess opening through the bottom, and a lubricant receptacle at the top, a cellar block slidably mounted in said recess, and yieldingly tensioned upwardly therein, said box being provided with a conduit leading from said receptacle, and a flexible tube leading from said conduit to said cellar block.

4. The combination of a journal box, having a body portion provided with a lubricant receptacle at its upper end, and with a conduit extending downwardly therethrough, an axle journal having a seat in said box, a lubricant cellar block yieldingly supported against the bottom of said journal, and having an interior lubricant chamber, and a flexible tube connecting said chamber and the conduit in said box.

5. The combination of a journal box having a conduit extending therethrough, a plug closing the lower end of said conduit, an axle journal having a seat in said box, a lubricant cellar block supported against the lower side of said journal, and a connection between said block and said conduit, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

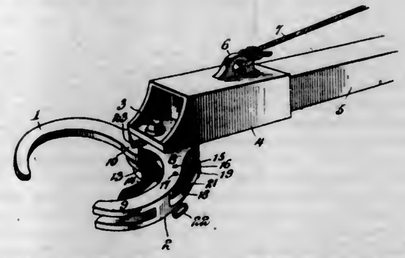
900,888. PNEUMATIC TIRE. ARTHUR C. RUDLAND, Vancouver, British Columbia, Canada. Filed Sept. 20, 1907. Serial No. 393,839.



1. In a pneumatic tire, the combination with an inner inflated tube of an outer casing protecting said tube said casing composed of a tread chain formed of a series of short links each having at one end a cylindrical pin bearing and at the other end a corresponding concave bearing adapted to partially encircle the pin bearing of the next link to it the remainder of the pin bearing being encircled by the heel of a lever member pivotally mounted over the convex bearing and extending toward and over the next link at the same end which lever member is adapted to form the bearing of the inner tube on the tread chain, and side rings of flexible material having wired edges which are pressed into engaging lips secured to the rim of the wheel and to corresponding lips in the links of the tread chain.

2. In a pneumatic tire, the combination with an inner inflated tube, of an outer casing composed of a connected chain of links, side rings of flexible material, a rim, said rim and said links having means for receiving the ends of said side rings, said inner tube when inflated serving to retain the side rings with their ends in engagement with the rim and links respectively, said chain of links comprising links proper and lever members pivotally connected with each of said links to interlock with the next adjacent links.

900,889. HOG-CATCHER. JOHN SCHUSTER, Clay Banks, Wis. Filed Feb. 17, 1908. Serial No. 416,314.



1. An animal catcher of the class described including a pair of pivoted jaws, one of the jaws being provided with ratchet teeth, a trigger mounted on the other jaw for engaging the ratchet teeth to lock the jaws in their open position, and a dog also mounted on the jaw, to which the trigger is pivoted, arranged for engaging the ratchet teeth to lock the jaws in their closed position.

2. An animal catcher of the class described including a pair of pivoted jaws, one of the jaws being provided with ratchet teeth, a trigger mounted on the other jaw and provided with means for engaging the teeth to lock the jaws in their open position, a dog also mounted on the jaw, to which the trigger is pivoted, for engaging the ratchet teeth to lock the jaws in their closed position, and means for automatically closing the jaws when the trigger is disengaged from the ratchet teeth.

3. An animal catcher of the class described comprising a pair of pivoted jaws, one of the jaws having its inner end bifurcated and the other jaw being fitted in the bifurcation and provided with ratchet teeth, a trigger mounted in the bifurcated jaw and having an arm for engaging the ratchet teeth to lock the jaws in their open position, a spring actuated dog mounted in the bifurcated jaw and arranged to engage the ratchet teeth for locking the jaws in their closed position, and an operating device for swinging the dog out of engagement with the ratchet teeth.

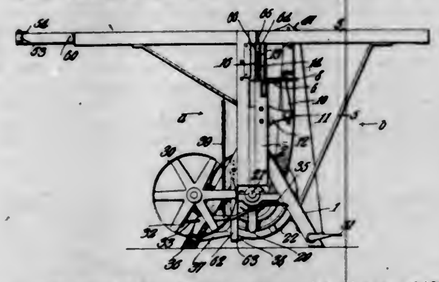
4. An animal catcher of the class described comprising a pair of pivoted jaws, one of the jaws being provided with ratchet teeth, a dog mounted on the other jaw and arranged to engage the ratchet teeth for locking the jaws in their closed position, a spring secured at one end and having its other end interlocked with the dog, and an operating device mounted for rotary movement and having a crank arranged between the dog and the spring for engaging the latter, said operating member being also provided with exterior operating means.

5. An animal catcher of the class described comprising a tubular shank adapted to receive a removable handle

and provided with an ear for the attachment of a line, a pair of jaws pivoted to the shank, one of the jaws being provided with teeth, a trigger mounted on the other jaw for engaging the teeth to lock the jaws in their open position, and a dog also arranged for engaging the teeth to lock the jaws in their closed position, said dog being carried by the jaw on which the trigger is mounted.

[Claims 6 to 8 not printed in the Gazette.]

900,890. MACHINE FOR BENDING BASKET-HANDLES. WALTER S. SMITH, Paducah, Ky. Filed Jan. 2, 1908. Serial No. 408,962.



1. The combination with a holder; of a plunger shiftable into the holder, anti-friction devices at opposite sides of the path of the plunger, and means for shifting blanks under said devices and into the path of the plunger.

2. In a bending machine the combination with a slidable holder and a reciprocating conveying and shaping plunger movable into the holder; of reciprocating means for directing blanks into the path of the plunger.

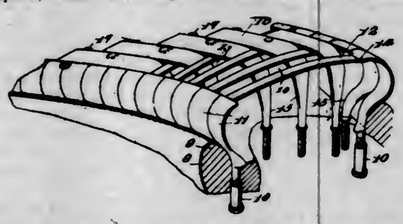
3. The combination with a removable holder and means for imparting intermittent longitudinal movement thereto; of a shaping and conveying plunger movable into the holder between the movements of said holder, and means fixed relative to and coöperating with the plunger for bending blanks upon the plunger.

4. The combination with a removable holding frame, and means for intermittently moving the same longitudinally; of a plunger movable into the holder while stationary, and means fixed relative to and coöperating with the plunger for bending blanks upon the plunger prior to the movement of the plunger into the holder.

5. A holder, shaping means movable thereinto, a feed slide, means for reciprocating the slide to direct blanks into the path of the shaping means, and means fixed relative to and coöperating with the shaping means for bending blanks thereon.

[Claims 6 to 14 not printed in the Gazette.]

900,891. VEHICLE-WHEEL. GEORGE SOMMERS, Minneapolis, Minn. Filed Sept. 11, 1907. Serial No. 392,326.



1. A yieldable tire comprising cross elements of arched form, and circumferential elements of approximately elbow form and having their outer or tread portions passed between cross members and overlapping the same.

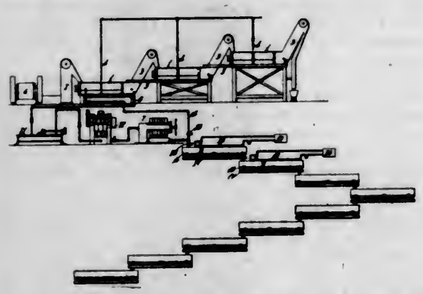
2. A yieldable tire comprising cross members having side portions touching at their longitudinal edges and having their middle portions made narrow to form spaces, and circumferential spring members filling the space transversely between the widened side portions of the cross members and overlapping the narrow middle portions thereof.

3. A yieldable tire comprising cross members, having their middle portions spaced apart and depressed, and circumferential spring elements of approximately elbow form having their tread portions passed between the spaced portions of the cross members and overlapping the same and having their outer surface in line with the outer surface of the widened parts of said cross elements.

4. A yieldable tire comprising cross members having their side portions touching their middle portions made narrow and spaced apart, a circular series of spring elements having their tread portions overlapping the narrow portions of the cross members, and lugs projected from the tread portions of said circumferential members to underlap portions of the adjacent members and the joints formed between the widened portions of the cross members.

5. A yieldable tire comprising a rim, spring cross members secured to said rim and having the longitudinal edges of their side portions touching and their middle portions made narrow and spaced apart and depressed, and a circular series of circumferential spring members of approximately elbow form having their tread portions overlapped and overlapping the middle spaced portions of the aforesaid cross members, and having lateral lugs to underlap adjacent portions of the respective spring elements.

900,892. PROCESS OF TREATING ALKALINE DEPOSITS FOR RECOVERING SODA, &c. JOHN C. W. STANLEY, Los Angeles, Cal., assignor to Pacific Coast Soda Company, Los Angeles, Cal., a Corporation of California. Filed May 22, 1907. Serial No. 375,174.



1. The process for recovery of soluble salines from natural earthy deposits containing sulfate of soda with other salts, which consists in treating the raw material of such deposits with water, removing the solution with suspended mud from the raw material, removing from such liquor the suspended mud, returning the liquor to the raw material, and continuing the operation until a saturated clear solution is obtained, cooling the clear solution to about 44 to 50° F. to cause crystallization of the sulfate of soda, decanting the mother liquor, evaporating to saturation and repeating the crystallization and evaporation until the sulfate of soda is substantially recovered by fractional crystallization.

2. The process for recovery of soluble salines from natural earthy deposits containing sulfate of soda with other salts, which consists in treating the raw material of such deposits with water, removing the solution with suspended mud from the raw material, removing from such liquor the suspended mud, returning the liquor to the raw material, and continuing the operation until a saturated clear solution is obtained, cooling the clear solution to about 44 to 50° F. to cause crystallization of the sulfate of soda, decanting the mother liquor, evaporating to saturation and repeating the crystallization and evaporation until the sulfate of soda is substantially recovered by fractional crystallization, and subsequently evaporating to greater density and separating the carbonate at such greater density and at a temperature of about 33° F., by fractional crystallization.

3. The process for recovery of soluble salines from natural earthy deposits containing sulfate of soda with other salts, which consists in treating the raw material of such deposits with water, removing the solution with suspended mud from the raw material, removing from such liquor the suspended mud, returning the liquor to the raw material, and continuing the operation until a saturated clear solution is obtained, cooling the clear solution to about 44 to 50° F. to cause crystallization of the sulfate of soda, decanting the mother liquor, evaporating to saturation and repeating the crystallization and evaporation until the sulfate of soda is substantially recovered by fractional crystallization, subsequently evaporating to greater density and separating the carbonate at such greater density and at a temperature of about 33° F., by fractional crystallization, and then boiling down the remaining mother liquor to precipitate sodium chlorid.

900,893. WINDOW. WILLIAM J. SUMMERBELL, Chicago, Ill. Filed Jan. 21, 1908. Serial No. 411,891.



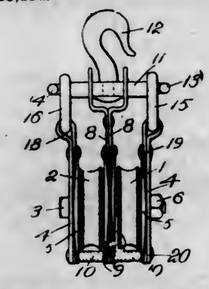
1. A frame constructed of an outer facing of fireproof material, an intermediate layer of the same material, a reinforcing of sheet metal arranged between one of said facings and the intermediate layer, and bolts passing through the facings, intermediate layer and reinforcing of the frame, having nuts threaded thereon, one of which bears directly on the reinforcing and the other arranged on the inside of the frame.

2. In a window, a window frame, an upper and lower sash frame in the window frame, all of said frames being constructed of a plurality of layers of material, with the layer forming one face of the top rail of the lower sash cut out at the edge, the layer forming one face of the window frame being cut out at the edges for a portion of the depth of the upper sash frame and the layer of material forming the opposite face of the window frame being cut out at the edges for the remainder of the depth of the upper sash frame, and the corresponding layers of material of the upper sash being extended to fill the cut-out edges of the window frame and the cut-out edge of the top rail of the lower sash frame.

3. In a window, an upper and lower sash, the frames of which are constructed of a plurality of layers of material, the outer layer of the top rail of the lower sash being beveled off, and the outer layer of the bottom rail of the upper sash being extended below the inner layer and beveled on its inner face to fit the beveled layer of the top rail of the lower sash.

4. A frame comprising an onter facing, an inner facing, a reinforcing between said facings, and bolts passing through the facings and reinforcing having nuts threaded thereon, one of which bears directly on the reinforcing and the other bearing on the inner facing.

900,894. SNATCH-BLOCK. CHARLES M. TALMADGE and PETER M. VEIBELL, Hillman, Wash. Filed Sept. 19, 1906. Serial No. 335,334.



1. In a snatch block of the nature indicated, a steel frame having for its sides, strap pieces 4 bent to form a loop 18, and provided with cheek plates 5 in combination with center straps 8 bent to form a bifurcated member adapted to journal the retaining hook piece 11, said retaining hook piece 11 being provided with retaining hooks 13 and 14 bent substantially at 90 degrees from the axis of the said retaining hook piece 11, the said retaining hook 13 being bent substantially at 180 degrees from the said retaining hook 14.

2. In a snatch block of the nature indicated, a steel frame having for its sides, strap pieces 4 bent to form a loop 18 and provided with cheek plates 5 in combination with center straps 8 bent to form a bifurcated member adapted to journal the retaining hook piece 11, said retaining hook piece 11 being provided with retaining hooks 13 and 14 bent substantially at 90 degrees from the axis of the said retaining hook piece 11, the said retaining hook 13 being bent substantially at 180 degrees from the said retaining hook 14, sheaves 1 supported on a shoulder bolt 3, substantially as and for the purpose set forth.

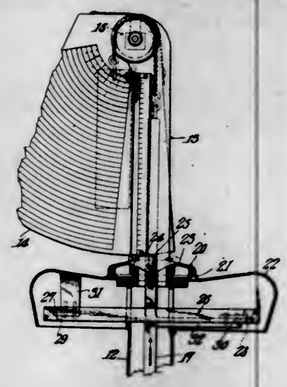
3. In a snatch block of the nature indicated, a steel frame having for its sides strap pieces bent to form a loop 18, and provided with cheek plates 5 in combination with center straps 8 bent to form a bifurcated member adapted to journal the retaining hook piece 11, said retaining hook piece 11 being provided with retaining hooks 13 and 14 bent substantially at 90 degrees from the axis of the said retaining hook pieces 11, the said retaining hook 13 being bent substantially at 180 degrees from the said retaining hook 14, sheaves 1 supported on a shoulder bolt 3, means for maintaining the side straps 4 and side cheeks 5 rigidly in a position which will prevent the said side cheeks 5 from impinging the aforesaid sheaves 1 and means for maintaining the center straps 8 and center cheeks 9 in a central position substantially as and for the purpose set forth.

4. In a snatch block of the nature indicated, a bifurcated member adapted to journal a retaining hook piece 11, means for maintaining the said center strap 8 and center cheeks 9 in a central position relative to the side cheeks 5, the said side cheeks 5 and side straps 4, center cheeks 9 and center straps 8 and shoulder bolt 3 being adapted to journal sheaves 1 and 2 substantially as and for the purpose set forth.

5. In a snatch block of the nature indicated, a retaining hook piece adapted to be journaled in a bifurcated member formed by the center straps 8 and adapted to apply a strain upon the hook 12 to the shoulder bolt 3 and sheaves 1 and 2, means for removing a cable or rope through a space 17 when the strain is removed from the said hook 12, substantially as and for the purpose set forth.

[Claims 6 to 12 not printed in the Gazette.]

900,895. SCALE. WILLIAM G. TEMPLETON, Colorado Springs, Colo. Filed Dec. 16, 1907. Serial No. 406,699.



1. In a scale, the combination with a supporting frame, a load carrier, of a stem revolubly mounted upon the frame and having spaced members, weighing devices carried by the stem and connected with the load carrier, said weighing devices including a sectoral poise consisting of parallel members operating, respectively, in planes between the members of the stem.

2. In a weighing scale, the combination of a supporting frame and load carrier, said frame being provided with a hollow thimble, a stem having a disk revolubly fitted upon the thimble and consisting of spaced members, and a plural member sectoral poise mounted upon the stem to operate between the planes of the members thereof.

3. In a weighing scale, a hollow standard surmounted by a casing; a stem mounted on said casing; a drum mounted in the top of said stem; a sector shaped poise mounted on said drum; a load carrier rod flexibly suspended at its upper end from said drum, and extending downwards through the stem, casing, and standard; and an equalizing device in said casing, consisting of a fixed knife edge mounted on the casing; an arm mounted on the load carrier rod, with a knife edge at its end; and a bar disposed transversely to said rod, with a V at each end engaging the fixed knife edge, and the movable knife edge respectively.

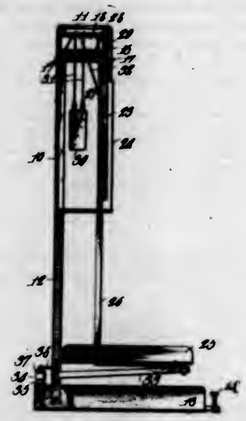
4. In a weighing scale, a hollow standard surmounted by a casing; a stem mounted on said casing, a load carrier rod extending downwards through the stem, casing, and standard; an equalizing device in said casing, consisting of a fixed knife edge mounted on the casing, an arm mounted on the load carrier rod, with a knife edge at its end; and a bar disposed transversely to said rod with a V at each end engaging the fixed knife edge, and the movable knife edge respectively; a hollow base, a scale pan mounted on the base; a vertically movable frame located in the base, and mounted on the load carrier rod, and supporting the scale pan; said frame having knife edges; fixed knife edges mounted in the base; and an oscillating frame having V's which respectively engage the fixed knife edges, and the knife edges on the vertically movable frame.

900,896. SCALE. WILLIAM G. TEMPLETON, Colorado Springs, Colo. Filed Dec. 16, 1907. Serial No. 406,700.

1. In a scale, the combination with a supporting frame, of a knife edge bearing supported thereby, a drum having a V engaging said knife edge, a load receiver flexibly connected with the drum, and counter-balancing devices for the load receiver also connected with the drum.

2. In a scale, the combination with a supporting frame, of a knife edge bearing, a drum having a terminally closed V engaging said knife edge, the extremities of the knife edge being reduced for contact with the boundary walls of the V, a load receiver, and counter-balancing devices connected with the drum.
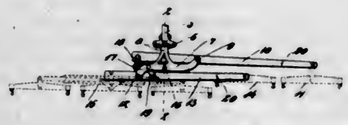
3. In a scale, the combination with a supporting frame, of a knife edge bearing, a drum having a V engaging the knife edge bearing, terminal washers or cap plates closing the extremities of the V, said knife edge being terminally reduced for contact with the washers or cap plates, a load receiver, and counter-balancing devices connected with the drum.



4. In a scale, the combination with a supporting frame, of a knife edge having terminal tongues engaging openings in the frame, and having its bearing edge reduced terminally to points, a drum having a V engaging the knife edge, said V being terminally closed, a load receiver, and counter-balancing devices connected with the drum.

5. In a scale, the combination with a supporting frame, a drum, and a load receiver having flexible connection with the drum, of a guy connected with the load receiver below the plane of the drum and obliquely or spirally coiled upon said drum.

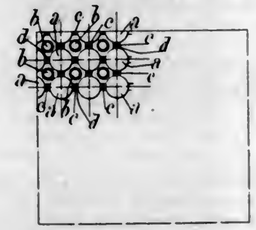
900,897. DRAFT-EVENER. HINRY THIEDEMANN and JURGEN H. THIEDEMANN, Hickman, Nebr. Filed Jan. 3, 1908. Serial No. 409,121.



1. A draft-evener comprising a supporting-frame, a lever pivoted thereto, draft devices carried by the long arm of said lever, an evener-lever pivoted to the frame, a connection between the evener-lever and the short arm of the first mentioned lever, a third lever pivoted to the supporting-frame, draft devices carried by both arms of the last-mentioned lever, and a connection between the long arm of the last-mentioned lever and the evener-lever.

2. A draft-evener comprising a supporting-frame having at one end a rearward extension and at the opposite end a forward extension, a lever pivoted to the rearward extension, draft devices carried by the long arm of said lever, an evener lever pivoted to the frame, a connection between the evener lever and the short arm of the first-mentioned lever, a third lever pivoted to the forward extension, draft devices carried by both arms of the last-mentioned lever, and a connection between the long arm of the last mentioned lever and the evener lever.

900,898. ELECTRIC ACCUMULATOR. MOLIÈRE C. THIELLET and MARIUS J. DENARD, Lyon, France. Filed Apr. 3, 1907. Serial No. 366,240.



In an electric accumulator an electrode comprising in combination with the oxid of lead, gelatin gelatinized in aqueous bichromate of potash, and asbestos fiber emulsified in sulfuric acid and silicate of soda.

900,899. CAR-STAKE. JAY F. TOWNSEND, Pittsburg, Pa. Filed Aug. 19, 1907. Serial No. 389,145.



1. A car-stake having a plurality of telescopic-members comprising a bottom-member having a contracted upper end-portion, and an intermediate-member having a projection adapted to engage the contracted portion of the bottom-member.

2. A car-stake having a plurality of tubular telescopic-members comprising a lower-member formed with a contracted upper end and a seat formed on said contracted portion, and an intermediate-member having a projection adapted to engage the seat.

3. A car-stake comprising a tubular member formed with an annular flange at its lower end.

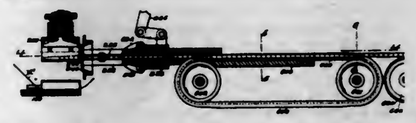
4. A car-stake comprising a plurality of telescopic-members each formed with an annular flange at its lower end.

5. A car-stake comprising a plurality of tubular telescopic-members each formed with an annular flange at its lower end.

[Claims 6 to 15 not printed in the Gazette.]

900,900. MECHANISM FOR FEEDING CONICAL TUBES. BENJAMIN W. TUCKER, Newark, N. J., assignor to The American Tobacco Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 15, 1904. Serial No. 193,486.

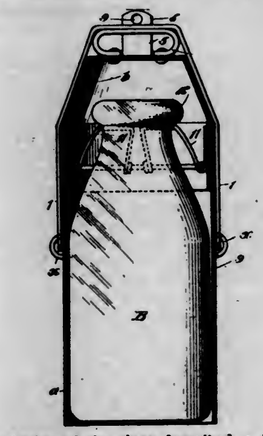
1. The combination of feeding means for advancing a row of nested conical tubes longitudinally formed of an endless flexible band provided in its face with a continuous longitudinal groove adapted to receive the row of tubes and means for bending said band transversely to cause the groove to open to receive and discharge the row of tubes and to close to grip the tubes, means for feeding the row of tubes to said band, and means for supporting the row of tubes as it is advanced from the band, substantially as described.



2. The combination of feeding means for advancing a row of nested conical tubes longitudinally formed of an endless flexible band provided in its face with a continuous longitudinal groove adapted to receive the row of tubes and means for bending said band transversely to cause the groove to open to receive and discharge the row of tubes and to close to grip the tubes, a feeding belt for feeding the row of tubes to said band, said feeding belt moving at a greater speed than said band, and means for supporting the row of tubes as it is advanced from the band, substantially as described.

3. The combination of feeding means for advancing a row of nested conical tubes longitudinally formed of an endless flexible band provided in its face with a continuous longitudinal groove adapted to receive the row of tubes and means for bending the band transversely to cause the groove to open to receive and discharge the row of tubes and to close to grip the tubes and means for driving said band intermittently, a feeding belt for feeding the row of tubes to said band, said feeding belt making a greater movement than said band and moving at a speed not less than the speed of movement of said band, and means for supporting the row of tubes as it is advanced from the band, substantially as described.

900,901. RECEPTACLE. FRANK WEISENBERG, New York, N. Y. Filed Mar. 6, 1908. Serial No. 419,430.



1. In a device of the class described, a holder open at one end thereof, spring retaining means adapted to receive an article inserted in said open end, said means being adapted to permit of the removal of the inserted article only in the direction of its insertion and said holder being adapted to prevent the removal of the article after insertion.

2. In a device of the class described, a holder open at one end and provided with a cover for the opposite end, means adapted to receive an article inserted in the open end of the holder, said means being adapted to permit of the removal of the inserted article only in the direction of its insertion, and said holder being adapted to prevent the

removal of the inserted article in the direction of its insertion.

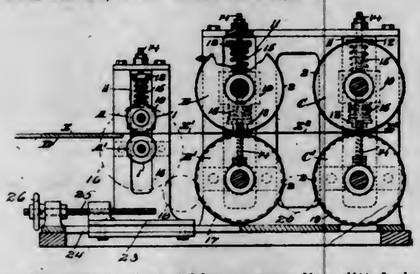
3. In a device of the class described, an open ended holder provided with a cover adapted to close one end, said holder being adapted to receive an article inserted in an open end thereof and to retain said article against removal while the cover is in position.

4. In a device of the class described, a holder comprising a casing open at one end and provided with a cover adapted to close the opposite end, and means carried by the cover adapted to receive an article inserted in the open end of said casing, said holder being adapted to prevent the removal of the inserted article while said cover is in position.

5. In a device of the class described, a holder comprising an open ended casing provided with a cover adapted to close one end, and means carried by the cover adapted to receive an article inserted in the open end of the casing, said holder being adapted to prevent the removal of the inserted article while the cover is in position and said receiving means being adapted to hold the inserted article to effect its removal with the removal of the cover.

[Claims 6 to 14 not printed in the Gazette.]

900,902. METHOD AND MACHINE FOR STRETCHING SLITTED SHEET METAL. FERDINAND J. WENDELL, New York, N. Y., assignor to The Roebling Construction Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 27, 1904. Serial No. 238,503.



1. The method of stretching or expanding slitted sheet metal, which consists in drawing the slitted sheet forward transversely to the slits, and retarding the sheet against the drawing movement so as to produce the resistance required to open the slits to form the mesh while the portion of the sheet to which the resistance is applied moves forward in the direction in which the sheet is drawn.

2. The method of stretching or expanding slitted sheet metal, which consists in drawing the slitted sheet forward by rotating rolls transversely to the slits and holding the sheet against the drawing movement so as to produce the resistance required to open the slits to form the mesh while the portion held moves forward.

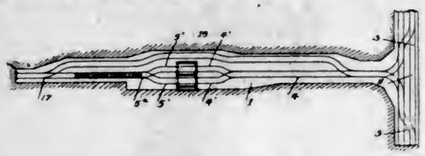
3. The method of stretching or expanding slitted sheet metal, which consists in feeding the slitted sheet forward transversely to the slits by feeding rolls and drawing the sheet from the feeding rolls by stretching rolls rotating at a higher surface speed than the feeding rolls.

4. The method of stretching or expanding slitted sheet metal, which consists in feeding the slitted sheet forward transversely to the slits by feeding rolls, drawing the sheet from the feeding rolls by stretching rolls rotating at a higher surface speed than the feeding rolls, and advancing the stretched sheet from the stretching rolls by rolls rotating at a slightly higher surface speed than the stretching rolls.

5. In a machine for stretching or expanding slitted sheet metal, the combination with means for drawing the slitted sheet forward transversely to the slits, of means for applying to the sheet the resistance to its forward movement required to open the slits to form the mesh while the portion of the sheet to which the resistance is applied moves forward in the direction in which the sheet is drawn.

[Claims 6 to 36 not printed in the Gazette.]

900,903. SYSTEM OF MINE-TRACKAGE. FREEMAN R. WILLSON, Jr., Worthington, Ohio, assignor to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Feb. 3, 1908. Serial No. 414,097.



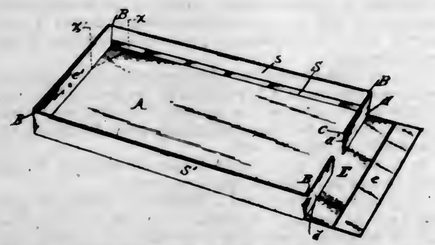
1. A track system for a mine cage room, comprising the loaded car track 4 extending from the room doorway to the mine shaft, and a return track extending from the opposite side of the mine shaft to the said doorway, said return track having a down-grade section 5, an up-grade section 7, and thence a down-grade section to the room doorway, and a car haul mechanism for said up-grade section 7, substantially as set forth.

2. A track system for a mine cage room, comprising the loaded car track 4 extending from the entry tracks to the mine shaft, an upwardly inclined track section 7, on the opposite side of the shaft, a car haul mechanism for moving the cars up said track section 7 and a return trackway extending from said track section 7 to the entry tracks, substantially as set forth.

3. A track system for a mine cage room, comprising the loaded car track on one side of the shaft, the empty car track leading from the other side of the shaft, said empty car track comprising the section 5 graded downwardly from the shaft the oppositely inclined section 7, the down-grade 16, switch-back 17 and down-grade 18, and means for moving the cars up the inclined track section 7, substantially as set forth.

4. A track system for a mine cage room, comprising the loaded car track on one side of the shaft, the empty car track leading from the other side of the shaft, said empty car track comprising the section 5 graded downwardly from the shaft the oppositely inclined section 7, the down-grade 16, switch-back 17 and down-grade 18, and the car haul mechanism 8 for the inclined track section 7, substantially as set forth.

900,904. PAPER BOX. GEORGE R. WYMAN, East Walpole, Mass., assignor to Charles S. Bird, doing business under the name and style of F. W. Bird & Son, East Walpole, Mass. Filed Mar. 18, 1908. Serial No. 421,817.
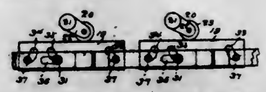


1. A rectangular folding paper box or lid consisting of a single piece of board, cut, scored, folded and secured, to comprise the following members constituting the said box or lid, viz; a bottom piece having bent up sides integral with said bottom at substantially right angles to said bottom, turned in side extensions integral with said sides and having their lower edges contacting along said bottom, said turned in side extensions being at substantially right angles to said sides and also to said bottom, reinforcing strips integral with said sides and said turned in side extensions formed by a single fold of said sides and extensions folded over and secured to said sides and said extensions, two flexible cords each extending along and glued to the inner crease of said folds formed by the said reinforcing strips, adapted to preclude against vertical rupture the edges of the rim and corners of said box or lid, end pieces integral with said bottom and at substantially right angles thereto and having extension flaps adapted to fold over and be secured to the said turned in extensions on the inner side of the box or lid, whereby the said sides and ends including their constituent members are so combined as to preclude movement relatively to each other and likewise to contain within the inner crease of the rim and each of the corners of the box or lid flexible reinforcing cords extending continuously along said rim, around the corners, and into the end folds of the box or lid.

2. A rectangular folding paper box or lid consisting of a single piece of board, cut, scored, folded and secured, to comprise the following members constituting said box or lid, viz: a bottom piece A, bent up sides S, S', integral with said bottom and at substantially right angles thereto, and having inwardly bent reinforcing strips *s*, *s'*, integral therewith and secured to said sides by adhesive, turned in side extensions *d*, *d*, *d*, *d*, integral with said sides and rectangularly disposed thereto and having the lower edges thereof contacting with said bottom and at substantially right angles thereto, turned in reinforcing strips *d'*, *d'*, *d'*, *d'*, integral with said reinforcing strips *s*, *s'*, and integral with and secured by adhesive to said side extensions *d*, *d*, *d*, *d*, two flexible cords C, C', each extending along and glued to the inner crease of said folds formed by the said reinforcing strips *s*, *s'*, *d'*, adapted to preclude against vertical rupture the edges of the rim and corners of said box or lid; also end pieces E, E', integral with and rectangularly disposed to said bottom A and secured by adhesive to said turned in side extensions *d*, *d*, *d*, *d*, and having inwardly and downwardly turned extension flaps *e*, *e'*, likewise secured by adhesive to said inwardly bent reinforcing strips *d'*, *d'*, *d'*, *d'*, whereby the rim of said box or lid along its sides and at its corners is composed of a fold of single board bent into contact with and secured to itself and having secured in the inner crease of said fold a flexible cord, and, at its ends, of two folds of single board, towit, an inner fold thereof bent into contact with and secured to itself, and an inner fold bent over on the inner side of said box or lid into contact with and secured to said inner fold having said flexible cord secured in the inner crease of said inner fold, whereby the said sides and ends, including their constituent members, are so combined by reason of their aforesaid folds and connections as to preclude movement relatively to each other and likewise to contain within the inner crease of the rim and at each of the corners of the box or lid flexible reinforcing cords extending continuously along said rim, around the corners, and into the end folds of the box or lid.

3. A rectangular folding paper box or lid consisting of a single piece of board, cut, scored, folded and secured, to comprise the following members constituting said box or lid, viz: a bottom piece A, bent up sides S, S', integral with said bottom and at substantially right angles thereto, and having inwardly bent reinforcing strips *s*, *s'*, integral therewith and secured to said sides, turned in side extensions *d*, *d*, *d*, *d*, integral with said sides and rectangularly disposed thereto and having the lower edges thereof contacting with said bottom and at substantially right angles thereto, turned in reinforcing strips *d'*, *d'*, *d'*, *d'*, integral with said reinforcing strips *s*, *s'*, and integral with and secured to said side extensions *d*, *d*, *d*, *d*, two flexible cords C, C', each extending along and glued to the inner crease of said folds formed by the said reinforcing strips *s*, *s'*, *d'*, adapted to preclude against vertical rupture the edges of the rim and corners of said box or lid; also end pieces E, E', integral with and rectangularly disposed to said bottom A and secured to said turned in side extensions *d*, *d*, *d*, *d*, and having inwardly and downwardly turned extension flaps *e*, *e'*, likewise secured to said inwardly bent reinforcing strips *d'*, *d'*, *d'*, *d'*, whereby the rim of said box or lid along its sides and at its corners is composed of a fold of single board bent into contact with and secured to itself and having secured in the inner crease of said folds a flexible cord, and, at its ends, of two folds of single board, towit, an inner fold thereof bent into contact with and secured to itself, and an inner fold bent over on the inner side of said box or lid into contact with and secured to said inner fold having said flexible cord secured in the inner crease of said inner fold, whereby the said sides and ends, including their constituent members, are so combined by reason of their aforesaid folds and connections as to preclude movement relatively to each other and likewise to contain within the inner crease of the rim and at each of the corners of the box or lid flexible reinforcing cords extending continuously along said rim, around the corners, and into the end folds of the box or lid.

900,905. INTERLOCKING MEMBER FOR VOTING-MACHINES. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed Mar. 21, 1907. Serial No. 363,572.



1. An interlocking member comprising cam plates, side plates and stud and slot connections between said plates acting to shorten the member when a cam plate is moved laterally.

2. An interlocking member comprising cam plates having oblique slots, side plates having horizontal slots and studs engaging said slots, substantially as described, for the purpose specified.

3. An interlocking member comprising cam plates each having an oblique slot inclined downward toward the right and an oblique slot inclined downward toward the left, side plates having horizontal slots and studs engaging said slots, substantially as described, for the purpose specified.

4. An interlocking member comprising cam plates each having an oblique curved slot inclined downward toward the right and an oblique curved slot inclined downward toward the left, side plates having horizontal slots, and studs engaging said slots and acting to shorten the member when a cam plate is moved laterally.

5. An interlocking member comprising cam plates each having at the right end an oblique slot inclined downward toward the right and at the left end an oblique slot inclined downward toward the left, side plates having horizontal slots and studs engaging said slots and acting to move a cam plate forward when it is forced laterally and to move all cam plates and side plates to the left of the operated cam plate forward twice the distance that the operated cam plate is moved forward.

[Claims 6 to 13 not printed in the Gazette.]

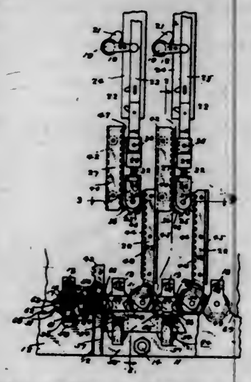
900,906. GROUPING MECHANISM FOR VOTING-MACHINES. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed Dec. 17, 1907. Serial No. 406,841.

1. In a voting machine, the combination with voting members and interlocking members carying gear wheels, of stationary racks and movable racks engaging opposite faces of the gear wheels, rollers carried by the movable racks, grouping rollers intermediate the rollers on the movable racks and a grouping chain passing alternately about the rollers on the movable racks and the grouping rollers.

2. In a voting machine, the combination with voting members and interlocking members carrying gear wheels, of stationary racks and movable racks engaging opposite faces of the gear wheels, rollers carried by the movable racks, grouping rollers intermediate the rollers on the movable racks, a grouping chain passing alternately about the rollers on the movable racks and the grouping rollers, and means for locking the grouping chain to the grouping rollers.

3. In a voting machine, the combination with voting members and interlocking members carrying gear wheels, of stationary racks and movable racks engaging opposite

faces of the gear wheels, rollers carried by the movable racks, grouping rollers intermediate the rollers on the movable racks, a grouping chain passing alternately about the rollers on the movable racks and the grouping rollers, and grouping keys for locking the grouping chain to the grouping rollers.

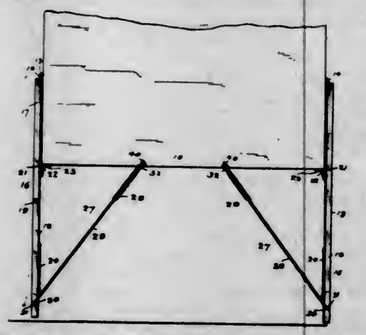


4. In a voting machine, the combination with voting members and interlocking members carrying gear wheels, of stationary racks and movable racks engaging opposite faces of the gear wheels, rollers carried by the movable racks, grouping rollers intermediate the rollers on the movable racks, a grouping chain, grouping keys adapted to engage the chain and lock the chain to the grouping rollers, and means for locking the grouping keys in the locking or unlocking position.

5. In a voting machine, the combination with voting members and interlocking members carrying gear wheels, of stationary racks and movable racks engaging opposite faces of the gear wheels, rollers carried by the movable racks, grouping rollers intermediate the rollers on the movable racks, a grouping chain passing alternately about the rollers on the movable racks and the grouping rollers, grouping keys for locking the grouping chain to the grouping rollers, and key locking slides for locking the grouping keys in the locking or unlocking position.

[Claims 6 to 17 not printed in the Gazette.]

900,907. DETACHABLE LEG FOR VOTING-MACHINES. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed Dec. 30, 1907. Serial No. 408,470.



1. The combination with a voting machine case having a locking plate secured to the end thereof and curved outward to form a socket, the bottom of the case being provided with recesses and a hole, of a leg having a head adapted to enter the socket and provided with a recess to receive the upper end of the plate, an angle plate secured to the leg and having studs to engage the recesses, a brace pivoted to the leg and having a head adapted to enter the hole in the case and means for locking said head to the case.

2. The combination with a voting machine case having a locking plate secured to the end thereof and curved outward to form a socket, the bottom of the case being provided with recesses and a hole, a housing over the hole and a spring-actuated bolt passing through the sides of the housing, of a leg having a head adapted to enter the socket and provided with a recess to receive the upper end of the plate, an angle plate secured to the leg and having studs to engage the recesses and a brace pivoted to the leg and having a head provided with a transverse hole, said head being adapted to enter the hole and the housing in the case and to be locked therein by the bolt.

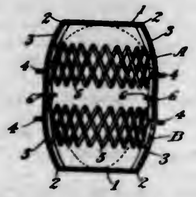
3. The combination with a voting machine case having a locking plate secured to the end thereof, the bottom of the case being provided with recesses and a hole, of a leg having a head adapted to engage the locking plate, an angle plate secured to the leg and having studs to engage the recesses, a brace pivoted to the leg and having a head with a transverse hole and a bolt for detachably securing the head of the brace in the hole in the case.

4. The combination with a voting machine case having a hole in the bottom and a housing over the hole and a leg detachably engaging the case, of a brace pivoted to the leg and a spring-actuated bolt having a U-shaped head lying outside the case, the branches of said bolt passing through the wall of the case, and the shank of the bolt passing through the housing and the head of the brace to lock the latter in place.

5. The combination with a voting machine case having a hole in the bottom and a housing over the hole and a leg detachably engaging the case, of a brace pivoted to the leg, a bolt having a U-shaped head lying outside the case, the branches of said bolt passing through the wall of the case and the shank of the bolt passing through the housing and the head of the brace, a spring acting to retain the bolt in the locking position and a stop to limit the withdrawal of the bolt.

[Claims 6 and 7 not printed in the Gazette.]

900,908. HOT-EGG OPENER AND HOLDER. JESSIE H. BANCROFT, New York, N. Y. Filed Jan. 10, 1907. Serial No. 351,587.

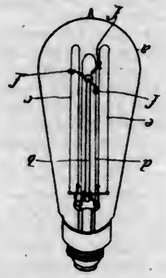


1. A hot egg opener consisting of a holder having a base, supporting walls movably secured to said base and provided with penetrating devices at the ends thereof, and intermediate extensible egg-inclosing means connecting the adjacent sides of said walls.

2. A hot egg opener comprising a supporting base, an approximately U-shaped spring secured at its center to said supporting base and having integral penetrating devices at its upper ends, and side members pivotally connected with said supporting base at their lower ends, and secured at their upper ends to said U-shaped spring, substantially as described.

900,909. ELECTRIC GLOW-LAMP, &c. FRITZ BLAU and HERMANN REMANÉ, Berlin, Germany, assignors to Deutsche Gasglühlicht Aktiengesellschaft, (Auergesellschaft,) Berlin, Germany. Filed Apr. 25, 1906. Serial No. 313,708.

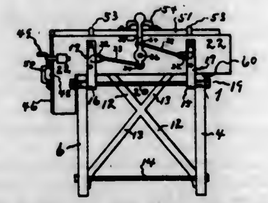
1. The process of making an electric glow lamp having a metallic incandescent body, which consists in providing with in the bulb of said lamp a deposit of a metal, and then exhausting the bulb.



2. The process of making an electric glow lamp having a metallic incandescent body, which consists in providing within the bulb of said lamp a deposit similar to that which the electric current passing through the incandescent body tends to produce, and then exhausting said bulb.

3. The process of making an electric glow lamp having a metallic incandescent body, which consists in providing within the bulb of said lamp a deposit similar to that which in a vapor of hydrogen the electric current passing through the incandescent body tends to produce, and then exhausting said bulb.

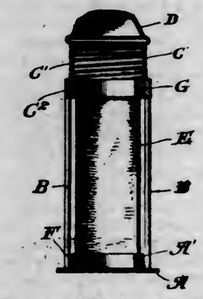
900,910. CEMENT-BLOCK MACHINE. GEORGE W. BUCK, Omaha, Nebr. Filed July 9, 1907. Serial No. 382,913.



1. In a cement block machine, the combination with a supporting frame having a stationary mold-side and provided with rock-levers having a pair of oppositely-disposed arms adapted to have a transverse movement with reference to said stationary mold-side, of an apertured pallet-sustaining-plate upon one of the oppositely-disposed arms of each of said rock-levers; a pallet disposed substantially parallel with and adjacent said apertured pallet-sustaining-plate and having lugs adapted to have a seating within the apertures of said pallet-sustaining-plate; a molding-plate supported upon the other oppositely-disposed arm of each of said rock-levers and adapted to have a seating intermediate said stationary mold-side and said pallet; means between one of the oppositely-disposed arms of each of said rock-levers and the lugs of said pallet to increase the adjacent distance between the apertured pallet-sustaining-plate and said pallet, and means to actuate said rock-levers to remove said molding-plate from a position intermediate said stationary molding-plate and said pallet.

2. In a cement block machine, the combination with a supporting frame having a stationary, L-shaped mold-side, and provided with rock-levers having a pair of oppositely-disposed arms adapted to have a transverse movement with reference to said stationary, L-shaped mold-side, of an apertured, L-shaped pallet-sustaining-plate upon one of the oppositely-disposed arms of each of said rock-levers; an L-shaped, pallet disposed substantially parallel with and adjacent said apertured, L-shaped pallet-sustaining-plate and having lugs adapted to have a seating within the apertures of said L-shaped, pallet-sustaining-plate; a molding-plate supported upon the other oppositely-disposed arm of each of said rock-levers and adapted to have a seating intermediate said stationary, L-shaped mold-side and said L-shaped pallet; a swinging member upon the supporting-frame adapted to make a closure with one of the ends of the molding-plate between a terminal of said stationary, L-shaped mold-side and a terminal of said L-shaped pallet; means between one of the oppositely-disposed arms of each of said rock-levers and the lugs of said L-shaped pallet to increase the adjacent distance between the apertured, L-shaped pallet-sustaining-plate and said L-shaped pallet, and means to actuate said rock-levers to remove said molding-plate from a position intermediate said stationary, L-shaped mold-side and said L-shaped pallet.

900,911. SALT-CELLAR. WILLIAM BUMM, Philadelphia, Pa. Filed Nov. 27, 1907. Serial No. 404,133.

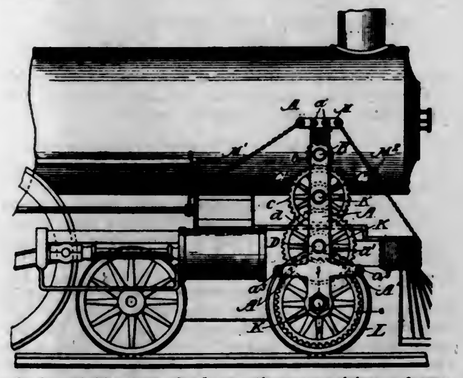


1. A saltcellar comprising a base provided with rods carrying a neck provided with a perforated cap, an annular flange formed on said base, said neck being provided with an annular groove, a flexible body formed of a tube having its upper end arranged in said groove and its lower end arranged over said flange, and means for securing said tube in said groove and over said flange.

2. A saltcellar comprising a base provided with rods carrying a neck, a cap arranged on said neck, a flexible tube connecting said base and neck, and means for securing said tube to said base and neck.

3. A saltcellar comprising a base provided with an annular flange on its top, oppositely disposed rods arranged on said base, a neck secured to the upper end of said rods, a cap fitting within said neck, said neck being provided with an annular groove, a tube made of flexible material connecting said base and neck, the upper end of tube being secured in said groove by a ring and the lower end of said tube being secured over said flange by a ring, for the purpose set forth.

900,912. LOCOMOTIVE-MOVER. JESSE F. CAMERON, Salt Lake City, Utah. Filed Apr. 4, 1908. Serial No. 425,260.



1. A portable mover for locomotives comprising, a frame adapted to be secured to a locomotive, a drive shaft mount-

ed therein, a chuck also mounted on the frame and adapted to engage one of the truck wheels, and gearing connecting the chuck with the drive shaft.

2. A portable mover for locomotives comprising, a frame adapted to be secured to a locomotive, a drive shaft mounted therein, a tubular shaft or carrier mounted on the frame, and geared to the drive shaft, and a chuck removably secured to said tubular shaft or carrier.

3. A portable mover for locomotives comprising, a frame adapted to be secured to a locomotive, a drive shaft carried by the frame, a wheel-driving shaft driven from the drive shaft, and having means for rigidly connecting it with one of the truck wheels to rotate the same.

4. A portable mover for locomotives comprising, a frame adapted to be secured to a locomotive, a drive shaft mounted on the frame, a driven shaft geared thereto, and interchangeable chucks for said driven shaft adapted to engage and drive different types of truck wheels.

5. A portable mover for locomotives, comprising, a frame, a rotary chuck adapted to engage and rotate one of the truck-wheels, means for driving the chuck and chains at the end of the frame opposite the chuck for connecting the frame to the framework of the locomotive.

[Claims 6 to 8 not printed in the Gazette.]

900,913. CASE-SHOT FOR SHOTGUNS. BLAISE CAMET, Lyon, France. Filed Feb. 28, 1907. Serial No. 359,923.

1. A shell, the external shape of whose head is a truncated cone, the front surface of which is absolutely flat and rough while its side wall is polished.



2. Case shot for shot guns, comprising in combination a smooth cylindrical hollow body and a truncated conical nose having a roughened surface the smooth body being coated with a spirit varnish.

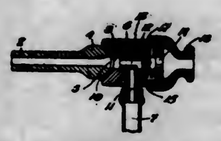
3. A shell, having a head of truncated cone shape, the front surface of which is absolutely flat and rough, a cylindrical body and converging portions connecting the body with the cone shaped head.

4. Case shot for shot guns comprising in combination a cylindrical hollow body, a truncated conical nose, at one end of said body and a removable wad at the other end comprising cylindrical parts of two different diameters, the smaller diameter being less than that of the interior of the hollow body.

5. Case shot for shot guns, comprising in combination a cylindrical hollow body, a truncated conical nose at one end of said body and a removable wad at the other end comprising cylindrical parts of two different diameters, the smaller diameter being less than that of the interior of the hollow body together with a disk of paper having projecting portions and interposed between the wad and body.

[Claim 6 not printed in the Gazette.]

900,914. VALVE MECHANISM FOR GLASS-BLOWING APPARATUS. CHARLES M. CLARKE, Pittsburg, Pa. Filed Mar. 23, 1907. Serial No. 364,081.



1. A glass blower's valve adapted for connection with a source of outside pressure and with a blowing tool respectively, and having a flow-controlling device for regulating said pressure arranged to be actuated from within the mouth when the valve is held therein.

2. A pressure-controlling implement for glass blowers consisting of a casing having means for connection with a source of outside pressure and with a blowing tool respectively, means whereby the implement may be held in the mouth, and a controlling valve capable of operation from within the mouth when so held.

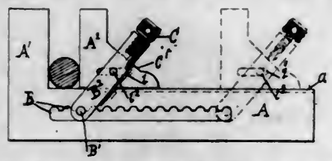
3. A pressure-controlling implement for glass blowers consisting of a casing provided with an inlet and an outlet port adapted to be connected with an outside source of pressure and with a blowing tool respectively, and a slide valve therein adapted to control the flow through said port, said valve being provided with an operating terminal arranged for actuation by the operator when the implement is held in the mouth.

4. A pressure-controlling implement for glass blowers consisting of a casing provided with an inlet and an outlet port adapted to be connected with an outside source of pressure and with a blowing tool respectively, and a slide valve therein adapted to control the flow through said port, said valve having a terminal device for pressing the valve inwardly.

5. A pressure-controlling implement for glass blowers consisting of a casing provided with an inlet and an outlet port adapted to be connected with an outside source of pressure and with a blowing tool respectively, and a slide valve therein adapted to control the flow through said port, said valve having a terminal actuating device, and a holding terminal adapted to be grasped within the mouth of the operator.

[Claims 6 to 12 not printed in the Gazette.]

900,915. CLAMP. MATTHEW S. CUMNER, New York, N. Y. Filed Oct. 22, 1906, Serial No. 339,893. Renewed Apr. 6, 1908. Serial No. 425,447.



1. In a clamp, the combination with a shank, and an integral clamping jaw, of an adjustable jaw, and a clamp co-acting between the shank and the adjustable jaw, and an adjustable pivotal connection between the said latter clamp and the adjustable jaw.

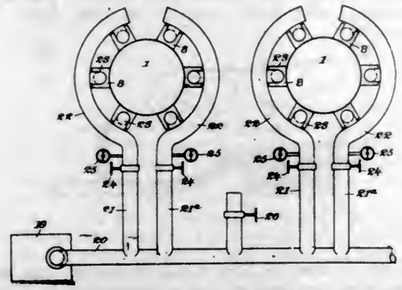
2. In a clamp, the combination with a shank, and an integral clamping jaw, said shank having a longitudinally slotted portion, provided with series of stops, of an adjustable jaw, having a slotted portion, and a clamp co-acting between the slotted portion of the shank and the adjustable jaw, and the slotted portion of the adjustable jaw being pivotally connected to the co-acting clamp.

3. In a clamp, the combination with a rectangular shank, and an integral clamping jaw, having its outer extremity substantially perpendicular to the shank, said shank having a longitudinally slotted portion, provided with a series of stops, of an adjustable jaw, adapted to slide upon the shank, having a slotted portion and a clamp co-acting between the stops in the slotted portion of the shank and the slotted portion of the jaw, and a clamping screw carried by the latter said clamp adapted to engage the adjustable jaw.

4. In a clamp, the combination with a rectangular shank, and an integral rectangular jaw, perpendicularly situated with respect to the shank, said shank having a longitudinally slotted portion provided with a series of stops, of an adjustable jaw slidingly mounted on the shank, having a perpendicular securing face and an angular clamping face and a longitudinal perforation between the two said faces, and a clamp co-acting between the stops, in the slotted portion of the shank and the slotted portion of the jaw and a clamping screw carried by the latter said clamp adapted to engage the angular clamping face of the adjustable jaw.

5. In a clamp, the combination with a rectangular shank, and an integral rectangular jaw, having a free rectangular terminal perpendicularly situated with respect to the shank, said shank having a longitudinally serrated portion, of an adjustable jaw slidingly mounted on the shank, having a perpendicular securing face and a rectangular free terminal lying in the same plane with the rectangular terminal of the integral jaw and an angular clamping face, and a longitudinal perforation between the two said faces and of a clamp co-acting between the serrated stops in the slotted portion of the shank, and the slotted portion of the jaw and a clamping screw carried by the latter said clamp adapted to engage the angular clamping face of the adjustable jaw.

900,916. METALLURGICAL FURNACE. WILLIAM S. DEMPSEY, New York, N. Y. Filed Sept. 7, 1906. Serial No. 333,719.



1. The combination of a furnace, means supplying a blast at different points in the furnace, and a valve for directing the blast either wholly into the furnace or wholly into the atmosphere or partly into the furnace and partly into the atmosphere.

2. The combination of a furnace, and requisite blast connections terminating in twyer boxes at different points in the furnace, the front plate of each of said boxes being removable and provided with a valved outlet to the atmosphere through which the blast may be wholly or partly directed.

3. The combination of a furnace, means supplying a blast at different points in the furnace, an individual controlling means for varying the effective pressure of the blast at each point of application, a controlling means for varying the pressure at more than one point of application, and a common controlling means for uniformly varying the pressure at all points of application.

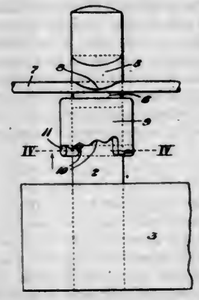
4. The combination of a furnace provided with a series of valved twyers, a source of supply of air under pressure, valve-controlled means connecting the twyers in sets with the source of air supply, and a regulating valve common to the several sets for uniformly varying the pressure.

5. The combination of a furnace, means supplying a blast of constant volume and pressure at different points in the furnace, an individual controlling means for varying the volume and pressure of the blast at each point of application, a controlling means for varying the volume and pressure at more than one point of application, and a common controlling means for uniformly varying the pressure at all points of application.

900,917. INSULATOR. GRANT DOBSON, Pittsburg, Pa., assignor of one-half to Richard A. Ohloff, Pittsburg, Pa. Filed Apr. 1, 1908. Serial No. 424,561.

1. An insulator consisting of a supporting stem provided with an insulating block having a groove, and a ring of insulating material surrounding the stem and arrange to engage the wire when inserted in said block, subetantially as set forth.

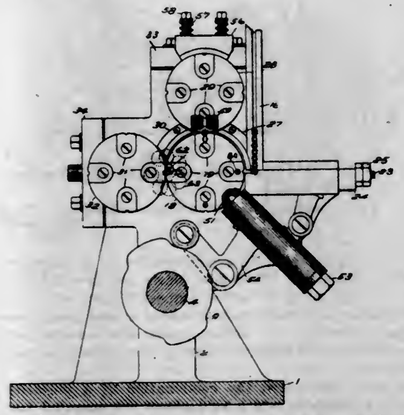
2. An insulator consisting of a supporting stem provided with an insulating block having a groove, and a ring of insulating material surrounding the stem and arranged to engage the wire when inserted in said block, with means for holding the ring in clamping position, substantially as set forth.



3. An insulator consisting of a cylindrical supporting stem having a lateral socket or recess, a block of insulating material set in said recess and provided with a transverse wire receiving groove, and a clamping ring of insulating material embracing the stem and block and provided with means for engaging a fixed locking abutment on the stem, substantially as set forth.

4. In an insulator, the combination of a stem provided with a locking abutment and a recess, an insulating block set in said recess and provided with a transverse wire opening, and a ring of insulating material encircling the stem and block and provided with a series of serrations or shoulders upon its lower edge adapted to engage the locking abutment to clamp against a wire inserted in the opening of the block, substantially as set forth.

900,918. MACHINE FOR MAKING LACING-HOOKS. HARRISON H. EATON and GEORGE GODDU, Winchester, Mass., assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 31, 1903. Serial No. 167,672.



1. A machine for bending lacing hook blanks which comprises a shank portion and a body portion, having, in combination, a plurality of bending mechanisms acting to bend the body portion of a blank to form therein two curvatures angularly disposed with relation to each other, and means for presenting a blank successively to said mechanisms, substantially as described.

2. A machine for bending lacing hook blanks which comprises a shank portion and a body portion, having, in combination, a plurality of bending mechanisms acting to bend the body portion of a blank to form therein two curvatures angularly disposed with relation to each other, and means for presenting different blanks simultaneously

to said mechanisms and for presenting the same blank successively to said mechanisms, substantially as described.

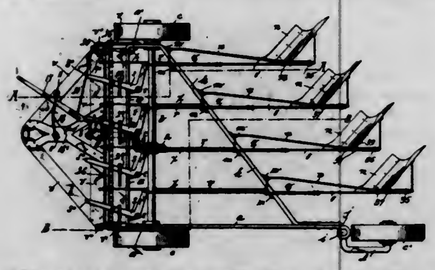
3. A machine for bending lacing hook blanks which comprises a shank portion and a body portion, having, in combination, a rotary carrier, a plurality of bending mechanisms, arranged to act on a blank in said carrier and form two curvatures in the body portion thereof angularly disposed with relation to each other, and means for intermittently actuating the carrier to present a blank successively to said mechanisms, substantially as described.

4. A machine for bending lacing hook blanks which comprises a shank portion and a body portion, having, in combination, a carrier, means for holding a blank therein with its body portion projecting beyond the same, a bending device, means for actuating the same to bend the body portion of the blank at an angle to the shank, mechanism for thereafter bending the body portion of the blank to form therein a curvature angularly disposed with relation to the first curvature, and means for actuating the carrier to present the blank successively to said bending device and bending mechanism, substantially as described.

5. A machine for bending lacing hook blanks which comprises a shank portion and a body portion, having, in combination, a carrier, means for holding a blank therein with its body portion projecting beyond the same, a bending device, means for actuating the same to bend the body portion of the blank at an angle to the shank, a former, a bending device for bending the body portion of the blank around the former to form therein a curvature angularly disposed with relation to the first curvature, means for actuating said last-mentioned bending device, and means for actuating the carrier to present the blank successively to said bending devices, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

900,919. GANG-PLOW. FRANK A. FALK and HENRY C. ANDERSON, Stacyville, Iowa. Filed July 9, 1907. Serial No. 382,938.



1. In a gang plow, the combination of a plurality of plows; a frame in which said plows are mounted free to swing; a plurality of levers connected each with one of said plows; an endless chain mounted in said frame; mechanism for driving said endless chain; and a device carried by said chain and adapted to swing each of said levers successively.

2. In a gang plow, the combination of a plurality of plows; a frame in which said plows are mounted free to swing; a lever for and connected with each of said plows; a mechanically-operated device which engages and then moves past each of said levers in succession for shifting each of said levers successively to swing said plows; and means for moving said device.

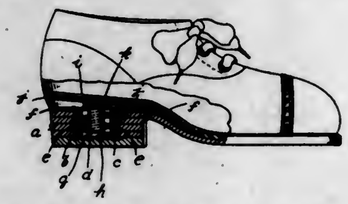
3. In a gang plow, the combination of a plurality of plows; a frame in which said plows are mounted free to swing; a lever for and connected with each of said plows; a mechanically-operated device which engages and then moves past each of said levers in succession for shifting each of said levers successively to swing said plows; and means for throwing said levers out of engagement with said device.

4. In a gang plow, the combination of a plurality of plows; a frame in which said plows are mounted free to swing; a lever for and connected with each of said plows; a mechanically-operated device which engages and then moves past each of said levers successively for shifting each of said levers successively to swing said plows; and means for locking said levers in their thrown position.

5. In a gang plow, the combination of a plurality of plows; a frame in which said plows are mounted free to swing; a lever for and connected with each of said plows; means for throwing each of said levers in succession; and a cam-lug formed with an incline for each of said levers, said cam-lug raising one arm of the lever out of engagement with said means.

[Claims 6 to 17 not printed in the Gazette.]

900,920. HEEL FOR BOOTS AND SHOES. JAMES A. FOSTER, Lowell, Mass. Filed Apr. 25, 1908. Serial No. 429,240.



1. The combination with a heel having an inner sole formed with a chamber, of a plate mounted free to vibrate above said inner sole; a second plate which is mounted at the bottom of said chamber and which lies wholly below and is fastened to said inner sole; and a yielding device mounted in said chamber, the lower end of said device bearing against the last named plate and the upper end of said device bearing against the first named plate.

2. The combination with a heel having an inner sole and formed with a chamber, of a plate mounted free to vibrate above said inner sole; a second plate which forms the bottom of said chamber and which lies wholly below and is fastened to said inner sole; and a coil-spring one end of which bears against the first named plate and the other end of which bears against said second plate.

3. The combination with a heel formed with a chamber and having an inner sole, of a plate mounted free to vibrate above said inner sole; a shell which forms a wall of said chamber and is free from connection with said plate; a second plate which forms the bottom of said chamber and is fastened to said inner sole; and a yielding device one end of which bears against the first named plate and the other end of which bears against the last named plate.

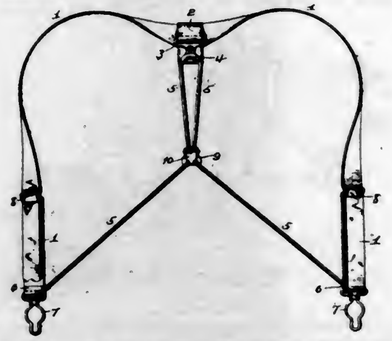
4. The combination with a heel having an inner sole and formed with a chamber, of a plate mounted free to vibrate above said heel; a second plate which forms the bottom of said chamber and is fastened to said inner sole free from connection with the first named plate; and a yielding device mounted in said chamber, one end of which bears against the first named plate and the other end of which bears against the last named plate.

5. The combination with a heel having an inner sole and formed with a chamber, of a plate mounted free to vibrate above said inner sole; a second plate which forms the bottom of said chamber and extends beyond the walls thereof; means for fastening said second plate to said inner sole; and a spring mounted in said chamber and adapted to bear against both of said plates.

[Claims 6 and 7 not printed in the Gazette.]

900,921. SUSPENDERS. WILLIAM FREEMAN, New York, N. Y. Filed Feb. 2, 1907. Serial No. 355,518.

1. In a suspender, the combination with a shoulder member, of a back member connecting the respective ends of the shoulder member and connected with the shoulder member between the ends of the latter, and an adjusting device on said back member between the connection of the latter with the end and intermediate portions of the shoulder member.



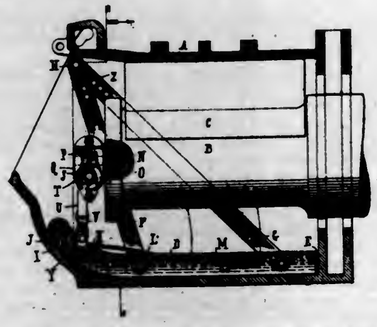
2. In a suspender, the combination with a shoulder member, of a back member connecting the rear portion of the shoulder member with the lower ends of the latter and fixed to said lower ends, means for adjusting the length of the shoulder member, and an adjusting device on the back member between the ends thereof.

3. In a suspender, the combination with a member having two shoulder portions, and a metal loop intermediate of said shoulder portions, of cords connecting said loop with the lower ends of said member, tabs or suspender ends at the lower ends of said member, and an adjusting device connecting said cords.

4. Suspenders comprising a shoulder member, a back member connected with the shoulder member intermediate the ends thereof, the ends of the back member fixed to the free ends of the shoulder member, attaching devices connected with the shoulder member at the junctures of the ends of the back member with the latter, and means for adjusting the shoulder member.

5. In a suspender, the combination with a member having two shoulder portions, and a loop intermediate said shoulder portions, of cords connecting the loop with the ends of said member, and an adjusting clamping slide on said cords.

900,922. LUBRICATING DEVICE FOR SHAFTS, &c. HARRY C. GAMAGE, New York, N. Y. Filed Jan. 25, 1908. Serial No. 412,583.



1. In a shaft lubricator and in combination with the shaft journal, a vessel for holding lubricant, and, in said vessel, a vibrating arm for intermittently throwing said lubricant from said vessel to said shaft journal.

2. The combination of a rotary shaft having longitudinal play in its bearing, a device for applying lubricant to said shaft, and mechanism for transmitting motion from said shaft to actuate said device; the said transmitting mechanism being operated by the rotation of said shaft and constructed to permit longitudinal play of said shaft in both directions and in all positions of said device without transmitting said movement to said device.

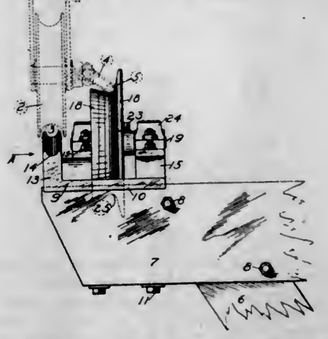
3. The combination of an axle, an axle box, a device in said box for applying lubricant to said axle, and mechanism for transmitting motion from said axle to said device; the said transmitting mechanism being actuated by the rotation of said axle and constructed to permit longitudinal play of said axle in both directions and in all positions of said device without transmitting said movement to said device.

4. In a shaft lubricator, in combination with the shaft journal and a bearing in contact with a part of the journal periphery wherein said shaft rotates and has longitudinal play, a device for applying lubricant to the exposed portion of said shaft journal, mechanism interposed between said device and said shaft for actuating said device by the rotation of said shaft, and, in said interposed transmitting mechanism, a transverse pivot joint for permitting said longitudinal play of said shaft and for preventing transmission of said movement to said device.

5. The combination with a rotary shaft having longitudinal play in its bearing of a vertically vibrating pivoted arm below said shaft for transferring lubricant to said shaft, mechanism for actuating said arm by the rotation of said shaft, and a transverse pivot joint in said mechanism and connected to said arm near the pivot thereof for permitting said longitudinal play of said shaft and preventing transmission thereof to said arm.

[Claims 6 to 18 not printed in the Gazette.]

900,923. TRAMWAY TOWER-SADDLE. WALTER S. GEMMER, St. Louis, Mo., assignor of one-half to Broderick & Bascom Rope Company, St. Louis, Mo., a Corporation of Missouri. Filed June 1, 1908. Serial No. 435,883.



1. In an aerial tramway system, the combination of a tower-cap made of two members and a saddle and a bridge supported upon each of said members.

2. In an aerial tramway system, the combination of a tower-cap made of two members and a saddle and a pair of bridges supported upon each of said members.

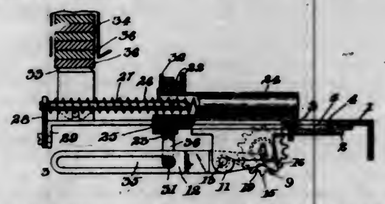
3. In an aerial tramway system, the combination of a tower-cap made of two members and a saddle and a pair of bridges supported upon each of said members, a sheave-supporting shaft being supported by said bridges.

4. In an aerial tramway system, the combination of a tower-cap made of two members and a saddle and a pair of bridges supported upon each of said members, said saddle and said bridges being integrally united together.

5. In an aerial tramway system, the combination of a tower-cap made of two members, a base resting upon said members, and flanges on said base engaging each side of each of said members.

[Claims 6 to 33 not printed in the Gazette.]

900,924. COIN-CONTROLLED VENDING-MACHINE, &c. ALBERT D. GROVER, Malden, Mass. Filed Jan. 10, 1907. Serial No. 351,601.

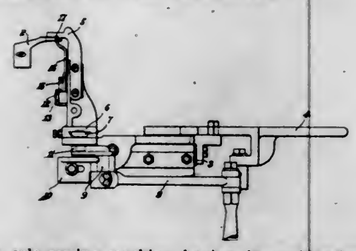


1. In a coin-controlled device, a coin-slide having a coin-opening adapted to receive a coin; a goods-ejector slidably mounted in said coin-slide; and means co-acting with a coin of the proper denomination to position said goods-ejector to eject a package of goods.

2. In a vending machine, a coin-controlled device for ejecting goods, comprising a coin-slide having a coin-opening; a plunger for slidably moving said coin-slide; a goods-ejector mounted on said coin-slide and movable therewith; and a lever for moving said goods-ejector vertically upon said coin-slide to position it to eject a package of goods.

3. A coin-controlled goods-ejector, comprising a coin-slide provided with a coin-opening; a goods-ejector slidably mounted on said coin-slide; a coin-controlled lever slidably connected with said goods-ejector; means co-acting with a coin of a predetermined denomination to operate said coin-controlled lever to cause it to position the goods-ejector to eject goods; a plunger; and means for returning the coin-slide to its normal position.

900,925. WELT-CHANNELING ATTACHMENT FOR SOLE-SEWING MACHINES. MELVIN E. HARADON, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 4, 1907. Serial No. 355,533.

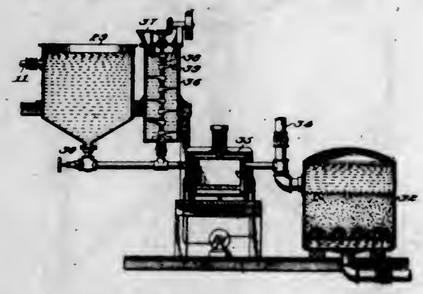


1. A sole sewing machine, having, in combination with the stitch forming devices, a work support, a pivotally mounted knife carrier, a welt channeling knife engaging the work support and secured to the knife carrier so as to be adjustable thereon to vary the depth of cut, and a support for the knife carrier movable with relation to the work support to project the knife.

2. A sole sewing machine, having, in combination with the stitch forming devices, a work support, a pivotally mounted knife carrier, a welt channeling knife consisting of a wire provided at one end with a cutting blade, means for securing the wire in the knife carrier with its blade carrying end in engagement with the work support constructed to permit longitudinal and rotary adjustment of the wire, and a support for the knife carrier movable with relation to the work support to project the knife.

3. A sole sewing machine, having, in combination with the stitch forming devices, a work support, a knife carrier, a welt channeling knife consisting of a wire provided at one end with a cutting blade, and means for securing the wire in the knife carrier with its blade carrying end in engagement with the work support and a support for the knife carrier movable with relation to the work support to project the knife.

900,926. ELECTROLYTIC APPARATUS FOR PURIFYING LIQUIDS. JOHN T. HARRIS, New York, N. Y. Continuation of application Serial No. 162,406, filed June 20, 1903. This application filed Nov. 20, 1906. Serial No. 344,328.



1. An electorlytic apparatus for purifying liquids, comprising a vessel, a magnetized anode of a material which will yield a coagulant, a cathode, and means for separating the impurities from the treated liquid, as set forth.

2. An electrolytic apparatus for purifying liquids, comprising a magnetized anode of a material which will yield a coagulant, a cathode, means for passing a stream of the impure liquid past the electrodes, and means for separating the impurities from the treated liquid, as set forth.

3. An electrolytic apparatus for purifying liquids, comprising a series of electrodes of a material which will yield a coagulant, means for passing a stream of the impure liquid between the electrodes, means for subjecting the electrodes and moving liquid to a magnetic field, and means for separating the impurities from the treated liquid, as set forth.

4. An electrolytic apparatus for purifying liquids, comprising a vessel, a magnetized anode of a material which will yield a coagulant, a cathode, means for injecting a gas into the liquid, and means for separating the impurities from the treated liquid, as set forth.

5. An electrolytic apparatus for purifying liquids, comprising a magnetized anode of a material which will yield a coagulant, a cathode, means for passing a stream of the impure liquid past the electrodes, means for injecting a gas into the liquid, and means for separating the impurities from the treated liquid, as set forth.

[Claims 6 to 23 not printed in the Gazette.]

900,927. OIL-PRESS. JOSEPH L. HIEGEL, Dallas, Tex., assignor of one-half to E. H. Wendtland, Dallas, Tex. Filed Feb. 18, 1908. Serial No. 416,552.

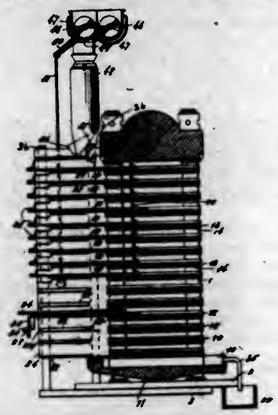
1. An oil press comprising an upright frame, a series of pressing elements operating in said frame, each pressing element consisting of a supporting frame, a grate resting on said frame, and a removable pan resting on grate, means for filling said pans, and means for pressing said pressing elements towards each other.

2. An oil press having a series of pressing elements each consisting of a suspended supporting frame, a grooved grate resting on said frame, and a pan resting on said grate for containing the material to be pressed.

3. An oil press having a series of pressing elements, each consisting of a suspended supporting frame, a drainage grate resting on said frame, a perforated pan resting on said grate, and shields protecting the perforations of said pan.

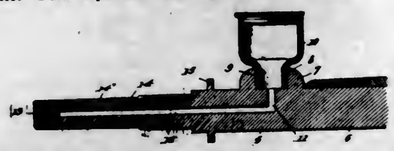
4. An oil press having a series of pressing elements adapted to be pressed partly telescopically on each other and each element consisting of a supporting plate having depending side flanges, a drainage grate resting on said frame, and a pan resting on said grate and provided with upstanding front and rear flanges, and means for pressing said pressing elements towards each other.

5. An oil press having a series of drainage grates, means for supporting each grate, one above the other, a removable containing pan resting on each grate, and means for pressing said pans and grates towards each other.



[Claims 6 to 28 not printed in the Gazette.]

900,928. SPINDLE. CLARENCE R. HONE, Magnetic Springs, Ohio. Filed Apr. 30, 1907. Serial No. 371,195.



A device of the class described comprising a vehicle axle including a spindle therefor having an inner enlarged portion and an outer reduced portion, a skein engaging collar carried by the spindle, a boss carried by the axle and located upon the upper side thereof and disposed inwardly of the collar, the boss having a threaded passage formed therein, the spindle having a longitudinally extending passage opening outwardly at the outer end of the spindle, the spindle having a vertical passage in communication with the longitudinally extending passage and with the passage formed in the boss respectively, the reduced portion and the enlarged portion respectively of the spindle having alining grooves formed in their upper faces, the spindle having a vertical passage communicating with the longitudinally extending passage and with the groove formed in the reduced portion of the spindle respectively, a removable plug disposed in the longitudinally extending passage adjacent to the outer end of the spindle, and a grease cup having a threaded stem engaged in the passage formed in the boss, the grease cup being arranged in communication with the first named vertical passage formed in the spindle.

900,929. PILE-PROTECTOR. WILLIAM HOWE, Seattle, Wash. Filed Jan. 28, 1907. Serial No. 354,584.

1. In a pile preserver of the nature indicated, a pile, an electrode slidably mounted thereon, means whereby said electrode may be substantially insulated from the surrounding water when submerged.

2. In a destroyer of animal growth in submerged wood, electrodes, a dynamo electric apparatus connected thereto, insulation provided thereon to cause the current from said dynamo electric apparatus to pass through and heat the saturated wood.

3. In a teredo destroyer, segmental electrodes insulated from the surrounding water, and a saturated pile forming an electric conductor between said electrodes.

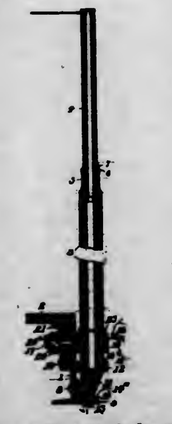
4. In a teredo destroyer, electrodes, means for supplying one of said electrodes with a positive current and means for connecting the other of said electrodes with a negative current, means for insulating one of said electrodes from the other of said electrodes to cause the current to pass through the saturated wood therebetween.



5. In a teredo destroyer, electrodes, means for supplying one of said electrodes with a positive current and means for connecting the other of said electrodes with a negative current, means for insulating one of said electrodes from the other of said electrodes to cause the current to pass through the saturated wood therebetween, and means whereby said electrodes may be moved on said wood.

[Claims 6 to 8 not printed in the Gazette.]

900,930. CAR-STAKE. FRANK S. INGOLDSBY, St. Louis, Mo., and JAY F. TOWNSEND, Pittsburg, Pa.; said Ingoldsby assignor to said Townsend. Filed Oct. 16, 1907. Serial No. 397,707.



1. The combination with a car-body, of a telescopic car-stake, and a swivel-member comprising a shank and a ring-portion for securing the stake to the car-body.

2. The combination with a car-body, of a metallic telescopic stake, and a swivel-member comprising a ring surrounding the stake for securing the stake to the car-body and permitting a partial rotation thereof longitudinally of the car-body.

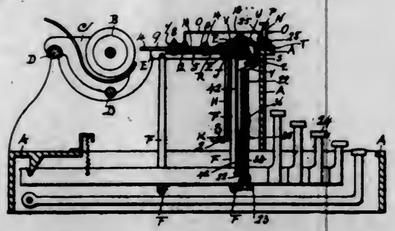
3. The combination with a car-body, of a metallic telescopic car-stake, a bracket support for the stake, and a swivel-member for securing the stake to the car-body.

4. The combination with a car-body, of a metallic telescopic car-stake having its lower-member provided with a supporting-member, a bracket secured to the car-body on which the supporting-member rests, and a swivel-member for securing the stake to the car-body.

5. The combination with a car-body, of a telescopic car-stake, and means for securing the car-stake to the car-body and for permitting the stake to be turned longitudinally of the car from an upright position to a position substantially parallel with the floor of the car comprising a swivel-member and a ring surrounding the stake.

[Claims 6 to 10 not printed in the Gazette.]

900,931. TYPE-WRITING MACHINE. JOSEPH H. JACKSON, Hamilton, Ontario, Canada. Filed Apr. 24, 1907. Serial No. 369,915. Renewed Apr. 1, 1908. Serial No. 424,540.



1. In a typewriting machine a stationary frame, a type arm carrier adapted to horizontal movement on the frame, a transverse plate adjustably connected to the carrier, bent lever arms converging towards each other and fulcrumed to the plate; a stationary cam adapted to adjustment on the frame, beveled recesses in the forward ends of the lever arms and opposite to each other, and the opposite ends of said arms adapted to engage said cam to bring the recessed ends of the arms toward each other.

2. In a typewriting machine, a stationary frame, a type arm carrier adapted to horizontal movement on the frame, lugs on the frame and on the carrier, link motion loosely connected to the lugs, a fulcrum pin extending through and beyond said lugs on the frame, and adapted to horizontal movement in said lugs, equalizing springs on the frame, and in contact with the pin, and adapted to horizontal adjustment on the frame.

3. In a typewriting machine, a stationary frame, a type arm carrier on the frame and adapted to horizontal movement, a stationary cam on the frame, a transverse lever arm adjustably connected to the cam, rods extending from the ends of said lever to the frame and adjustably connected thereto, and means in the cam to allow the movement of the carrier.

4. In a typewriting machine, a stationary frame, a type arm carrier adapted to horizontal movement on the frame, bent levers fulcrumed to the carrier, the ends of said levers converging toward each other, a stationary cam on the frame, a transverse arm adjustably connected to the cam, rods extending from the end parts of the arm and adjustably connected to the frame, means in the cam to allow the movement of the carrier and to retain the cam in definite position with the carrier.

5. In a type writing machine, a stationary frame, a type arm carrier adapted to horizontal movement on the frame, bent lever arms fulcrumed to the carrier, and converging toward each other, the forward inner parts of said arms, having beveled recesses opposite to each other, a cam adapted to adjustment on the frame, means in the cam to allow movement of the carrier, means on the carrier to operate in said means in the cam.

[Claims 6 to 12 not printed in the Gazette.]

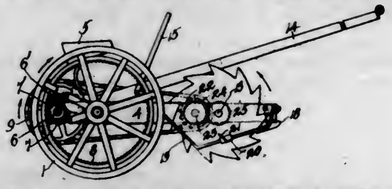
900,932. COLLAR-SUPPORT. GÜNTHER KEITEL, New York, N. Y. Filed May 13, 1908. Serial No. 432,585.

1. As an article of manufacture, a stiffener comprising a stay member formed of a strip of resilient material, and a narrow strip of fabric extending the full length of the stay and provided at its end portions with pockets, the outer ends of such pockets being closed and spaced apart a distance substantially equal to the length of the stay, while the inner opposite ends are open for the insertion of the stay, whereby the stiffener may be attached to a base fabric, with the stay out of contact with said base fabric.



2. As an article of manufacture, a stiffener for attachment to garments comprising a strip of resilient material and a narrow strip of fabric extending the full length of the stay and having each end portion doubled upon itself with the side edges secured together to form spaced pockets open at the inner opposite ends for the insertion of the stay, whereby the stiffener may be attached to a base fabric with the stay out of contact with said base fabric.

900,933. ICE-CUTTER. CHARLES G. KIMBALL, West Derry, N. H. Filed Oct. 24, 1906. Serial No. 340,267.



1. In an ice cutter a pair of driving wheels and a connecting axle, a frame pivoted near its center to said axle, a shaft on one side of said frame, a driving connection between said wheels and shaft, a saw operatively mounted on said frame on the opposite side of said axle, means for driving the saw from the shaft, an independent draft pole connected to said axle, and means connecting said draft pole and frame for adjusting the frame relatively to the draft pole.

2. In an ice cutter, a pair of driving wheels and a connecting axle, gears on said driving wheels, a frame pivoted to said axle and having on one side of said axle a transverse shaft, pinions on said shaft and gearing with the gears on the driving wheels, a saw shaft journaled on said frame on the opposite side of said axle, means for driving the saw shaft from the pinion shaft, an independent draft pole connected to said axle and means on said draft pole for vertically adjusting said saw frame relatively thereto.

900,934. PHONOGRAPHY. ISIDOR KITSEE, Philadelphia, Pa. Filed July 18, 1907. Serial No. 384,299.



1. An original phonographic record consisting of a transparent material and sound waves written thereon with a non-magnetic material opaque to the rays of light.

2. An original sound record comprising a material transparent to the rays of light and undulating lines of non-magnetic material representing sound waves, said lines opaque to said rays of light.

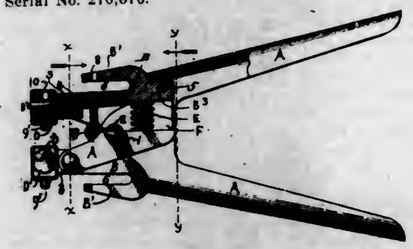
3. An original phonographic record consisting of a plate or sheet of a material transparent to the rays of light and having recorded thereon lines with a non-magnetic material opaque to said rays of light.

4. As a new article of manufacture, a phonographic record comprising the lines of record and the sheet or plate on which said lines are made; the sheet or plate of a material transparent to the rays of light and the lines of record of a non-magnetic material opaque to the rays of light.

5. As a new article of manufacture, a record comprising a flexible transparent sheet having recorded thereon with opaque non-magnetic material phonographic characters.

[Claim 6 not printed in the Gazette.]

900,935. HAND-OPERATING EYELETING-MACHINE. JONATHAN L. KNIGHT, Kansas City, Mo., assignor to A. U. Morse, Kansas City, Mo. Filed July 21, 1905. Serial No. 270,676.

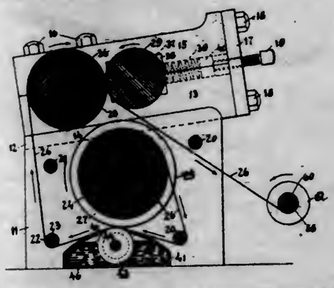


1. A tool of the character described, comprising a pair of crossed levers consisting of handle and bifurcated head portions, and each provided with a lug projecting inwardly from its handle portion, a pivot connecting said levers at their crossing points through said head portions, a pair of longitudinal jaws at opposite sides of the pivot with their front portions fitting in the bifurcated heads of different levers and their rear ends projecting into the hollow handles of the other levers and provided centrally at such ends with flat lugs, a link pivotally connecting the flat lug of one of said jaws with the inwardly projecting lug of the lever in the bifurcated head of which the other jaw is pivoted, a similar link pivotally connecting the flat lug of the other jaw with the flat lug of the other handle, and a spring for holding said jaws yieldingly apart.

2. A tool of the character described, comprising a pair of crossed levers consisting of handle and bifurcated head portions, and each provided with a lug projecting inwardly from its handle portion, a pivot connecting said levers at their crossing points through said head portions, a pair of longitudinal jaws at opposite sides of the pivot with their front portions fitting in the bifurcated heads of different levers and their rear ends projecting into the hollow handles of the other levers and provided centrally at such ends with flat lugs, a link pivotally connecting the flat lug of one of said jaws with the inwardly projecting lug of the lever in the bifurcated head of which the other jaw is pivoted, a similar link pivotally connecting the flat lug of the other jaw with the flat lug of the other handle, and a spring pressing outwardly against said jaws and arranged between the pivot of the levers and said links and prevented by said pivot and links from slipping out of operative position.

3. A tool of the character described, comprising a pair of crossed levers, consisting of handle and bifurcated head portions, a pivot connecting said levers at their crossing points through said head portions, a pair of longitudinal jaws at opposite sides of the pivot, each with its rear end projecting into the bifurcation of one of the levers and its front end fitting in the front end of the bifurcation of the other lever, one jaw having a transverse passage forward of the pivot, an arm rigid with and outward of the jaw provided with a passage and provided with an alined passage or female die, pivots extending through the jaws at the front ends of the levers, flat lugs at the rear ends of the jaws, a pair of transversely extending parallel and overlapping links occupying the bifurcations of the levers and each pivoted at one end to one of said levers and at its opposite end to the flat lug of the jaw pivoted to the other lever, said links being disposed at the outer sides of the lugs, a transverse punch or male die fitting in the passage of said jaw, and a stem rigid with the punch and extending rearwardly through and carried by the pivot of the levers.

900,936. INKING-MACHINE FOR TYPE-WRITER RIBBONS. FRANK E. KOENEKE, Milwaukee, Wis., assignor to Selma Koeneke, Milwaukee, Wis. Filed Mar. 8, 1906. Serial No. 304,870.



1. The process of inking typewriter-ribbons which consists in providing a narrow strip of the width of the ribbon with an excess of ink and thereafter passing the strip between a pair of rolls turning at different peripheral speeds, whereby such ink is distributed evenly over the width of the ribbon.

2. In a ribbon-inking machine, the combination of an ink-roller narrower than the ribbon, means for delivering ink to the periphery thereof, means for passing the ribbon over said roller, and a pair of distributing rollers through which the ribbon is subsequently made to pass and by which the ink is distributed over the width of the ribbon.

3. In a ribbon-inking machine, the combination of an ink-roller narrower than the ribbon, means for delivering ink to the periphery thereof, means for passing the ribbon over said roller, and a pair of distributing-rollers through which the ribbon is subsequently made to pass and by which the ink is distributed over the width of the ribbon, said rollers being caused to move at different peripheral speeds.

4. In an inking-machine, the combination of a pair of rolls one of which has a yielding surface, means for resiliently pressing said rolls together, and means for turning said rolls at different peripheral speeds.

5. In a ribbon-inking machine, the combination of a pair of rolls, sliding-pieces in which one of said rolls is journaled, compression-springs acting upon said sliding-pieces to press the roll mounted therein against the other roll, and means for turning said rolls at different peripheral speeds.

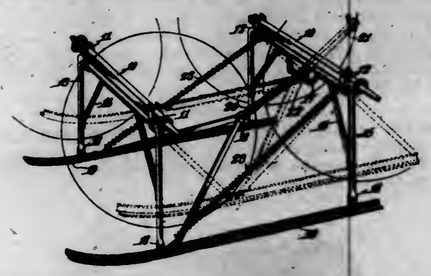
[Claims 6 to 17 not printed in the Gazette.]

900,937. SLEIGH-RUNNER ATTACHMENT FOR VEHICLES. FRANCIS KORFF, Lansing, Mich. Filed Apr. 27, 1908. Serial No. 429,413.

1. In a device of the kind described, a pair of wheeled axles, U-frames carried on said axles, a brace bar on one of said U-frames provided with a downwardly extending median portion, and a bar passing between the downwardly extending portion and the U-frame attached to said axles and provided with a slot therein adapted to engage the downwardly extending portion of the brace bar and hold said U-frame in fixed relation to said axles.

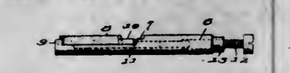
2. In a device of the kind described, a pair of wheeled axles, U-frames carried on said axles, sleigh runners piv-

otally mounted on said U-frames, a brace bar on one of said U-frames provided with a downwardly extending median portion, a Y-bar provided with a notch therein held between said downwardly extending portion of the brace



bar and said U-frame and pivotally connected to said sleigh runners, and springs normally raising said runners from the ground.

900,938. HOLDER FOR EMERY, OILSTONE, AND OTHER ABRADING MATERIALS. GUSTAV KORINEK, Detroit, Mich. Filed Apr. 22, 1908. Serial No. 428,586.



A holder for abrading material comprising a bar having a seat therein for the material, with a fixed jaw at one end of the seat and a longitudinal threaded bore at the other end of the seat, extending to the end of the bar, a sliding jaw in the seat, having a stem rigid therewith and slidable in said bore, and a screw extending into the bore and bearing against the end of the stem, to adjust the jaw.

900,939. SLAG CEMENT AND PROCESS OF MAKING THE SAME. HANS KÜHL, Blankenese, near Hamburg, Germany, assignor, by mesne assignments, to The Atlas Portland Cement Company, New York, N. Y., a Corporation of Pennsylvania. Filed July 3, 1907. Serial No. 381,960.

1. The cement comprising vitreous basic blast furnace slag with which not more than a few per cent. of accelerating material, including sodium sulfate and sodium carbonate and not more than a few per cent. of developing material including calcium hydrate have been incorporated so as to be capable of producing free caustic alkali in connection with the slag material when the cement is moistened for use.

2. The cement comprising vitreous basic blast furnace slag with which not more than a few per cent. of accelerating material including sodium sulfate and sodium carbonate and not more than a few per cent. of developing material including free basic material have been incorporated so as to be capable of producing free caustic alkali in connection with the slag material when the cement is moistened for use.

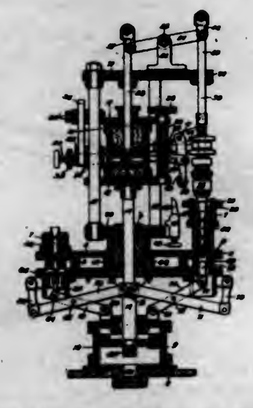
3. The cement comprising vitreous blast furnace slag with which not more than a few per cent. of accelerating material including a sulfate of a caustic alkali and not more than a few per cent. of developing material including free basic material have been incorporated so as to be capable of producing free caustic alkali in connection with the slag material when the cement is moistened for use.

4. The cement comprising vitreous slag material with which not more than a few per cent. of substantially non-hygroscopic accelerating material including caustic alkali salt material and not more than a few per cent. of developing material have been incorporated so as to be capable of producing free caustic alkali in connection with the slag material when the cement is moistened for use.

5. The cement comprising vitreous slag material with which not more than a few per cent. of substantially non-hygroscopic material including caustic alkali material has been incorporated so as to be capable of producing free caustic alkali in connection with the slag material when the cement is moistened for use to accelerate and intensify the setting properties of the cement.

[Claims 6 to 13 not printed in the Gazette.]

900,940. APPARATUS FOR MANUFACTURING GLASS ARTICLES. CORNELIUS KUHLEWIND, Pittsburg, Pa., assignor of five-eighths to Paul Wuesthoff, Pittsburg, Pa. Filed Aug. 22, 1907. Serial No. 389,658.



1. In a glass press, the combination of a vertically rising mold, a lowering plunger and actuating mechanism therefor, a lowering spring plate, spring retracted lever mechanism operatively connected with the spring plate, and a stationary cam arranged to engage a portion of said lever mechanism, substantially as set forth.

2. In a glass press, the combination of a vertically rising mold, a lowering plunger and actuating mechanism therefor with interposed circulating fluid resistance, and a lowering spring plate provided with independent actuating mechanism embodying resisting mechanism.

3. In a glass press, the combination of a vertically rising mold, a lowering plunger and actuating mechanism therefor embodying a circulating fluid providing resisting means, and a lowering spring plate provided with independent actuating mechanism embodying resisting mechanism.

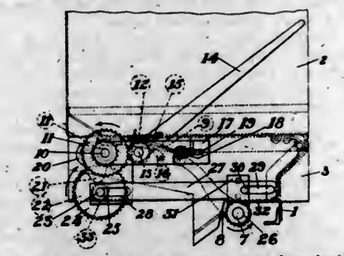
4. The combination with a base and a rotating mold table provided with a series of molds, of means for lifting the molds singly, a plunger and actuating means therefor embodying a circulating fluid providing yielding resistance, a presser plate and independent actuating means therefor embodying yielding resistance, and a motor for actuating said means.

5. The combination with a base and a rotating mold table provided with a series of molds, of means for lifting the molds singly, a plunger and actuating means therefor embodying yielding circulating fluid resistance, a presser plate and independent actuating means therefor embodying yielding resistance, means for discharging the ware, and a motor for actuating said means.

[Claims 6 to 19 not printed in the Gazette.]

900,941. CAR-DOOR GEAR. CHARLES A. LINDSTRÖM, Pittsburg, Pa., assignor to Pressed Steel Car Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Apr. 15, 1908. Serial No. 427,191.

1. In a car door gear, a door, means for closing said door, door supporting means geared to said door closing means to move into door supporting position when the door is closed, and means for operating the mechanism, said gearing comprising a horizontally movable link.



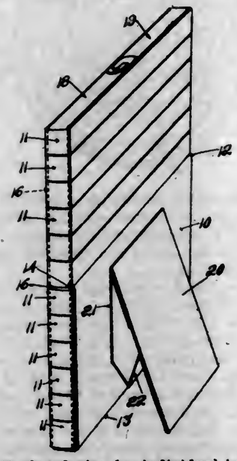
2. In a car door gear, a door, means for closing said door, door supporting means geared to said door closing means to move into door supporting position when the door is closed, and means for operating the mechanism, said gearing comprising a rack bar or link geared to said door closing means and to said door supporting means.

3. In a car door gear, a door, means for closing said door, door supporting means geared to said door closing means to move into door supporting position when the door is closed, and means for operating the mechanism, said gearing comprising a rack bar or link, a gear train connecting said door supporting means with said bar or link and a pinion connecting said bar or link with said door closing means.

4. In a car door gear, a door, means for closing said door, a bodily movable door supporting shaft, a rack bar or link geared thereto and to said door closing means to move said shaft to door supporting position after the door has been closed and means for operating said mechanism.

5. In a car door gear, a door, means for closing said door, a movable door supporting device, a pinion for operating said device, a gear meshing with said pinion, a pinion moving with said gear, a stud on which said last named gear and pinion turn, a slotted rack bar or link engaging the under side of said last named pinion and supported at one end by said stud and a pinion carried by the door closing means, engaging the under side of said rack bar or link and supporting the bar or link at the opposite end.

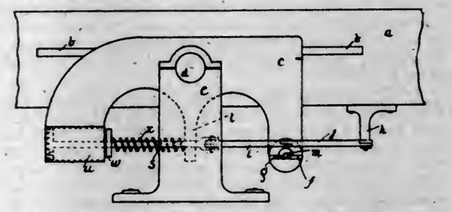
900,942. DISPLAY-HOLDER. FRANK N. LOOK, Northampton, Mass., assignor to The Florence Manufacturing Company, Northampton, Mass., a Corporation of Massachusetts. Filed Jan. 27, 1908. Serial No. 412,705.



1. In the display device for individual boxes the combination with side boxes of a body and a pair of side strips said side strips being of a width less than the thickness of the said boxes and being inserted under the tongues of the said boxes.

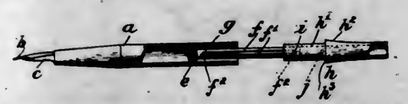
2. The improved display device for individual boxes which comprises a body equal in height to a multiple of the width of one of the individual boxes, and a pair of side strips of a width less than the thickness of the said boxes and capable of being inserted under the tongues of a plurality of the said individual boxes, the said strips being in planes at right angles to the said back.

900,943. GUN-RECOIL BRAKE. ERNEST J. MEAD, Bournemouth, England. Filed Dec. 6, 1907. Serial No. 405,458.



In a gun recoil brake for distributing the thrust of the recoil in other directions than rearward, the combination of a saddle support having grooves on its inner faces to receive side feathers on the gun, and having trunnions outstanding at each side; pedestals to support the said trunnions; slotted projections at each side of forward end of the saddle and at right angles thereto: slides free to move in the slotted projections two hydraulic cylinders at right angles to the axis of the gun; pistons in the said cylinders provided with spring controlled piston rods pivotally attached to the above mentioned slides; two lazy-tong links pivotally attached to the slides and to a bracket depending from the gun; two other lazy-tong links pivotally connecting the slides with the free end of the spring controlled piston rod of the piston of a hydraulic cylinder at the rear of the saddle.

900,944. FOUNTAIN-PEN. JACOB J. MEAD, New York, N. Y., assignor to Mead Fountain Pen Co., a Corporation of New York. Filed Nov. 2, 1907. Serial No. 400,413.



1. In a fountain pen, the combination with a barrel, a feeder and a point, of a piston fitted to and mounted in said barrel, a stem having a longitudinal slot therein and branch slots forming therewith a part of a bayonet joint, whereby said piston may be reciprocated, and a sleeve carrying a pin seated in said longitudinal slot and adapted to enter said branch slots, mounted on said stem and exposed exteriorly of the pen, whereby said sleeve may be reciprocated with said stem or independently thereof.

2. In a fountain pen, the combination with a barrel, a feeder and a point, of a piston fitted to and mounted in said barrel, a stem having a longitudinal slot therein and branch slots forming therewith a part of a bayonet joint, whereby said piston may be reciprocated, a pin passing through said slot and carried by said barrel whereby said stem is guided, and the extent of its reciprocation is limited, and a sleeve carrying a pin seated in said longitudinal slot, and adapted to enter said branch slots, mounted on said sleeve and exposed exteriorly of the pen whereby said sleeve may be reciprocated with said stem or independently thereof.

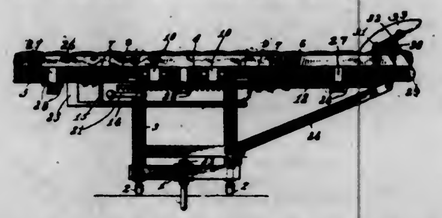
3. In a fountain pen, the combination of a barrel, a feeder and a point, of a piston fitted to and mounted in said barrel, a stem having a longitudinal slot therein, and branch slots forming therewith a part of a bayonet joint, whereby said piston may be reciprocated, a sleeve mounted

on said stem comprising one part of substantially the same dimensions as the bore of said barrel and an enlarged head, whereby a shoulder adapted to engage the end of said barrel is formed, and a pin carried by said sleeve and passing through said slot, whereby said sleeve is capable of being reciprocated with said stem or independently thereof.

4. In a fountain pen, the combination with a barrel, a feeder and a point, of a piston fitted to and mounted in said barrel, a stem having a longitudinal slot therein, and branch slots forming therewith a part of a bayonet joint, whereby said piston may be reciprocated, a pin passing through said slot and carried by said barrel, whereby said stem is guided and the extent of its reciprocation is limited, a sleeve mounted on said stem comprising one part of substantially the same dimensions as the bore of said barrel, and an enlarged head, whereby a shoulder adapted to engage the end of said barrel is formed, and a pin carried by said sleeve and passing through said slot, whereby said sleeve may be reciprocated with said stem or independently thereof.

5. In a fountain pen, the combination with a barrel, a feeder and a point, of a piston fitted to and mounted in said barrel, a stem having a longitudinal slot therein and branch slots forming therewith a part of a bayonet joint, whereby said piston may be reciprocated, a pin passing through said slot and carried by said barrel whereby said stem is guided and the extent of its reciprocation is limited, a sleeve having its outer end open and adapted when the pen is filled to be substantially flush with the end of said stem, mounted on said stem, comprising one part of substantially the same dimensions as the bore of said barrel, and an enlarged head, whereby a shoulder adapted to engage the end of said barrel is formed, and a pin carried by said sleeve and passing through said slot, whereby said sleeve may be reciprocated with said stem or independently thereof.

900,945. RECLINING-CHAIR. JOHN H. MILLS, St. Louis, Mo. Filed Mar. 13, 1907. Serial No. 362,246.



1. In a reclining chair, the combination with legs supporting a seat, a leg rest pivotally mounted at the front of said seat, a back pivotally mounted at the rear of said seat, a rod pivotally connecting said back and leg rest, a guide mounted on the underside of said seat, a rack bar reciprocating in said guide in a horizontal plane and wholly supported thereby, a link pivotally connecting one end of said rack bar with said back, a pinion mounted on the chair and meshing with said rack bar, and means adapted to support said leg rest and back when the chair is adjusted to bring the seat, leg rest, and back into horizontal alinement.

2. In a reclining chair, in combination with legs supporting a seat, a leg-rest pivotally mounted at the front of said seat, a back pivotally mounted at the rear of said seat, a rod pivotally connecting said back and leg rest, a rack-bar mounted on the under side of said seat and movable in a right line horizontally, a link pivotally connecting one end of said rack-bar with the bottom of said back, a pinion mounted on the chair and meshing with said rack-bar, and means for turning said pinion.

3. In a reclining chair, in combination with legs supporting a seat, a leg-rest pivotally mounted at the front of the seat, a back pivotally mounted at the rear of the seat, means for supporting the back in a horizontal position, and supports slidably and loosely mounted in the legs of the chair, each of said supports having a projecting member at its forward end, whereby when the leg-rest is turned to the horizontal position said supports may be pulled outward and turned to bring said projecting members beneath and in contact with the under side of said leg-rest, whereby to support the latter.

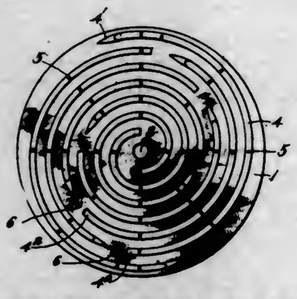
4. A reclining chair comprising a seat, back and leg rest, the two latter members being adapted to be turned to a horizontal position to convert the chair into a couch, a rod pivotally connected to said back and leg rest whereby said parts are adapted to move in unison, a rack bar mounted on the underside of the seat, a link pivotally connecting said rack bar with said back, a pinion mounted on the chair and meshing with said rack bar and leg rest, supporting means slidably mounted on the legs of the chair and adapted to be projected beneath and support the leg-rest, and a back support pivotally connected to the back and adapted to engage a fixed part of the chair, substantially as described.

900,946. CLAMP FOR HORSE-PADS. EDWARD L. MCCLAIN, Greenfield, Ohio, assignor to The American Pad & Textile Company, Greenfield, Ohio, a Corporation of Ohio. Filed Nov. 18, 1904. Serial No. 233,238.



The combination of a sweat pad, clips, each consisting of a bar of metal having eyes for ends, the clips being secured to the edge of the pad by means of the eyes, clamps, each formed from a flat strip of spring metal which is curved in the form of a circle and bent outward upon one side into a journal loop, and each loop journaled upon the bar of metal so that the clamp may be rotated about the clip.

900,947. STONE-POLISHING WHEEL. MICHAEL PEMBROKE, Montpelier, Vt. Filed Apr. 25, 1908. Serial No. 429,117.



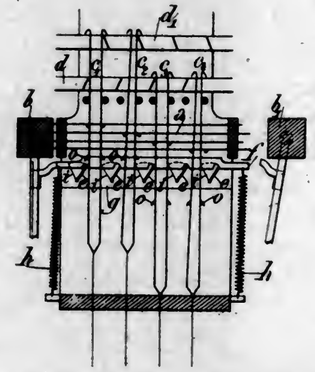
1. A polishing wheel comprising a plate, a plurality of successively arranged flanges spirally disposed around its center, each of said flanges tracking the flange next in advance of it but being spaced apart therefrom the spaces being continuous.

2. A polishing wheel comprising a plate, a plurality of spiral flanges disposed around a center each of said flanges tracking the flange next in advance of it and each of said flanges having a sharpened forward end the spaces between said flanges forming a continuous channel.

3. A polishing wheel comprising a plate, a plurality of spiral flanges disposed around a center and comprising successive flange sections each of said sections tracking the section next in advance of it the spaces between the convolutions of said spiral being continuous.

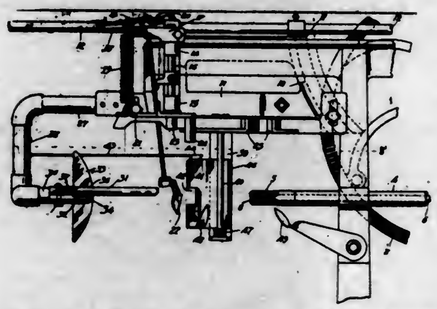
4. A polishing wheel comprising a plate, a plurality of successively arranged flanges spirally disposed about its center each of said flange sections having its forward end slightly overlapping the rear of the section next within it the spaces between said spirally disposed flanges being continuous.

900,948. JACQUARD MECHANISM. MARIE A. PERAIN, Villeurbanne, France. Filed Nov. 20, 1907. Serial No. 403,033.



Jacquard mechanism comprising in combination bifurcated lifting wires, two bars for lifting same, two jacquard card carriers, means for operating said carriers and lifting bars alternately and means comprising a series of oscillatory rods and a ratchet bar engaging said rods, coöperative with the said carriers for engaging those raised wires which have been positioned to be engaged by the lifting bar on the next stroke.

900,949. APPLE QUARTERING AND TRIMMING MACHINE. HENRY J. PINKERTON, Watsonville, Cal., assignor of one-half to W. H. Benteen, Watsonville, Cal. Filed Nov. 13, 1907. Serial No. 401,906.

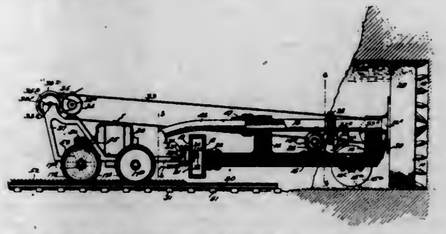


1. In combination with a corer, and means for moving the same to core an apple, means for supporting an apple while being so cored, knives arranged at the rear of said corer, and a gate arranged to swing freely in a direction away from said supporting means, but immovable in the opposite direction to hold said apple stationary, while the corer and knives advance relatively to said gate, substantially as described.

2. In combination with a corer, and means for advancing the same to core an apple, means for supporting an apple while being so cored, knives moving with the corer to quarter the apple, a gate arranged to be interposed in the path of an apple supported upon said corer, and means operated automatically with the reciprocation of the corer, for first withdrawing said gate to permit an apple to be pressed upon the supporting means, and then releasing said gate and moving it into a position to arrest an apple upon the corer when the corer and knives advance, substantially as described.

3. In an apparatus of the character described, the combination of impaling means, means for rotating said impaling means, a corer, means for reciprocating said corer in alinement with said means, knives arranged behind said corer, a gate adapted to be interposed in the path of an apple on said corer to arrest said apple, a trimming knife carried by said gate and arranged to engage a concave portion of an apple on said impaling means, and a spring for normally moving said gate into position to arrest an apple on the corer, and to cause said trimming knife to engage a concave portion of an apple on said impaling means, substantially as described.

900,950. TUNNELING-MACHINE. OLIN S. PROCTOR, Denver, Colo., assignor, by mesne assignments, to The Terry, Tench & Proctor Tunneling Machine Company, a Corporation of New York. Filed Feb. 26, 1907. Serial No. 359,533.



1. In a rotary tunneling machine, the combination of a supporting frame, a tubular shaft revolubly mounted on said frame, a rotary cutter head secured to one end of said tubular shaft, a plurality of operative rock drilling engines arranged to cut the breast area of a circular tunnel, said cutter head having ports leading from said tubular shaft to said rock drilling engines, means including a motor for rotating said tubular shaft and cutter head, means for connecting the opposite end of said tubular shaft to a supply of suitable drilling engine actuating fluid, a muck catching cylinder on said supporting frame surrounding said cutter head, and means for conveying the muck from said cutter head and cylinder to the opposite end of said supporting frame from said cutter head.

2. In a rotary tunneling machine, a supporting frame, a cutter head rotatably mounted on one end of said frame, comprising a hub portion provided with a plurality of arms projecting tangentially from said hub, a row of operative rock drilling engines arranged in the face edge of each of said arms at various predetermined angles to the axis of said cutter head, said cutter head having a plurality of ports leading from said hub portion of said cutter head through said arms to said drilling engines, means for connecting said ports to a supply of compressed air, means for rotating said cutter head, means for feeding said cutter head and supporting frame to operatively drill the breast of a tunnel, a muck catching cylinder secured to said supporting frame and surrounding said cutter head, and a conveyer arranged to convey the muck from said cutter head and cylinder to the opposite end of said supporting frame from said cutter head.

3. In a rotary tunneling machine, the combination of a wheeled supporting frame, a tunnel track for said wheeled frame, a cog rail on said track, means including a motor-operated pinion geared to said cog track for moving said frame in a tunnel along said track, a rotary cutter head mounted on said frame, means including a motor for rotating said cutter head, a plurality of operative rock drilling engines in said cutter head arranged at such angles of inclination to the longitudinal axis of said cutter head and frame as will adapt them to cut out the breast area

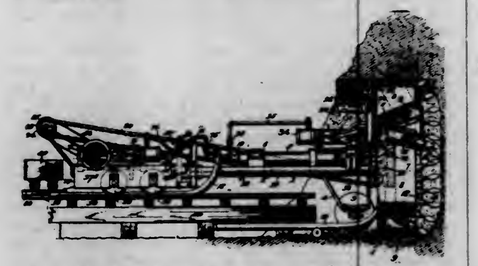
of a circular tunnel of larger diameter than said cutter head, a muck catching cylinder supported by said frame and surrounding said cutter head, and provided with a discharge chute, a conveyer mounted on said frame in muck receiving relation to said cylinder's discharge chute, and adapted to convey the rock muck from said cutter head and cylinder to the opposite end of said frame from said cutter head, and muck scrapers on said cutter head arranged to scrape the muck in said cylinder into its discharge chute.

4. In a rotary tunneling machine, the combination of a supporting frame, means including a motor for feeding said frame to and from the breast of a tunnel, a rotary cutter head provided with a hollow axial shaft rotatably mounted on said supporting frame, a plurality of operative pneumatic rock drilling engines and drill bits operatively arranged in said cutter head to drill and cut away the breast area of a circular tunnel of larger diameter than said cutter head, a muck catching cylinder on said frame surrounding the periphery of said cutter head and provided with a muck discharging aperture, a plurality of muck buckets secured to said cutter head in positions to scrape up and discharge said muck through said discharge aperture, and an endless belt conveyer arranged on said frame to receive the muck from said buckets and discharge aperture and convey it to and discharge it from the opposite ends of said supporting frame from said cutter head.

5. In a tunneling machine, the combination of a two-part wheeled supporting frame, an adjustable joint arranged to connect the two parts in such a manner that one part is adjustable at different angles of inclination to the other part, an operative cutter head attached to the free end of the adjustable part of said frame, a plurality of rock drilling engines operatively supported by said cutter head to drill the breast area of a circular tunnel, means including an endless conveyer belt for conveying the muck from said cutter head to the rear end of said frame, means for rotating said cutter head, and means for feeding said frame and cutter head to operatively drill the breast of a rock tunnel.

[Claims 6 to 14 not printed in the Gazette.]

900,951. TUNNELING-MACHINE. OLIN S. PROCTOR, Denver, Colo., assignor, by mesne assignments, to The Terry, Tench & Proctor Tunneling Machine Company, a Corporation of New York. Filed Feb. 17, 1908. Serial No. 416,374.



1. In a tunneling machine, a supporting carriage, a circular head carrying a plurality of independent drilling machines, and means for rotating said head; a power driven car; an adjustable connection between the head and car; and a conveyer supported on said car and connected to said carriage and arranged to receive muck from said head and adapted to convey the muck from said head to the rear of the machine as it advances.

2. In a tunneling machine, a circular head; a plurality of drilling machines in the head provided with molls which are set at an angle to the axis of the head; a power driven car; a carriage supporting the head; adjustable means connecting the carriage and car; and means connected with the carriage and car for removing the muck as the machine advances.

3. In a tunneling machine, a rotatable head, comprising a circular band, and a plurality of spokes which incline edgewise toward the direction of rotation of the head; a plurality of drilling machines on each of said spokes, provided with molls which incline in accordance with the incline of the spokes, the molls on each spoke also radiating from a common point; a hollow shaft upon which said head is mounted, connected with a source of fluid under pressure; a carriage upon which the shaft is mounted; and means for adjusting the rear end of the carriage both vertically and horizontally; supply pipes connecting the hollow shaft with the drilling machines; means for rotating the head; and means connected with the machine for removing the muck as the machine advances.

4. In a tunneling machine, the combination with a carriage, which is laterally and vertically adjustable at its rear end, of a hollow shaft mounted on said carriage, connected with a source of fluid under pressure; a rotatable head on the shaft, comprising a band and spokes and a hub in which the said shaft is secured; a gear wheel on the head; a power driven pinion in mesh with said gear wheel, for turning the head; a group of fluid actuated drilling engines on each spoke, each of said groups being inclined towards the direction of rotation of the head, while the engines of each group radiate from a common point, and are provided with molls; supply pipes connecting the engines of each group with the hollow shaft; pipes for conveying the exhaust from the engines; and means connected with the machine for removing the muck as the machine advances.

5. In a tunneling machine, the combination with a carriage, laterally and vertically adjustable at its rear end, of a hollow shaft mounted on the carriage, which is connected at one end with a source of fluid under pressure; a rotatable head on the shaft, comprising a band, and a plurality of spokes, which are inclined edgewise, toward the direction of rotation of the head; a group of fluid operated rock drilling engines, on each of said spokes, which incline in accordance with the spokes, the engines of each group radiating from a common point, and being provided with molls; supply pipes connecting the engines of each group with the hollow shaft, and pipes for conveying the exhaust from said engines; a gear wheel on the head; a pinion in mesh with the gear wheel; and an engine on the carriage connected with a source of power for operating the pinion to turn the head; and a power driven endless belt on the carriage, operating in connection with the head, for removing the muck as the machine advances.

[Claims 6 to 17 not printed in the Gazette.]

900,952. CULINARY UTENSIL. LEONARD G. QUACKENBOSS and BARTHOLOMEW J. FARRELL, Chicago, Ill. Filed Sept. 21, 1907. Serial No. 393,898.



1. In a vessel cover, the combination with a body portion, of means thereon for engaging a vessel, a handle pivotally mounted upon said body portion, vessel engaging means rigid upon said handle and movable therewith relative to said body portion, and a locking member for operatively connecting said handle and said body portion.

2. In a vessel cover, the combination with a body portion, of means thereon for engaging a vessel, a handle pivotally mounted upon said body portion, means on said handle for engagement with the vessel, and a locking member for locking said handle to said body portion in position extending laterally from said body portion.

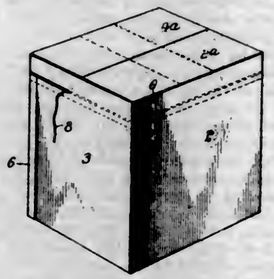
3. In a vessel cover, the combination with a body portion, of means on said body portion for engaging a vessel, a handle pivotally mounted upon said body portion, means on said handle for engagement with the vessel, and a locking member slidable relative to said handle for locking said handle to said vessel.

4. In combination, a vessel cover having a foraminous portion, means thereon for engaging a vessel, a handle pivotally mounted upon said cover, vessel engaging means rigid upon said handle and movable therewith relative to said cover, and means for operatively connecting said handle with said vessel.

5. In combination, a vessel cover having a foraminous portion, means thereon for engaging a vessel, a handle pivotally mounted upon said cover, means on said handle for engagement with the vessel, and a locking member for locking said means in such engaging position.

[Claims 6 to 12 not printed in the Gazette.]

900,953. FOLDING BOX. JOHN G. REBER, Chicago, Ill., assignor to J. W. Sefton Manufacturing Company, Anderson, Ind., a Corporation of Indiana. Filed Aug. 14, 1906. Serial No. 330,535.



1. In a folding box, the combination, with the side walls thereof and with end extensions hinged thereto and secured together to form top and bottom covers, of a strip secured to the inner face of the side walls near one end thereof, and a tape or string interposed between the strip and the side walls and adapted, when pulled, to tear through the body of the side walls and open the box.

2. In a folding box, the combination, with the side walls thereof and with end extensions hinged thereto and secured together to form top and bottom covers, of a strip secured to the inner face of the side walls with its outermost edge substantially flush with the top edge of the side walls, and a tape or string interposed between the strip and the side walls and adapted, when pulled, to tear through the body of the side walls and open the box.

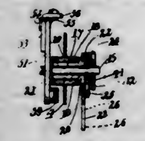
3. In a folding box, the combination, with the side walls thereof and with end extensions hinged thereto and secured together to form top and bottom covers, of a strip secured at its innermost edge to the inner face of the side walls, and a tape or string interposed between the strip and the side walls and adapted, when pulled, to tear through the body of the side walls and open the box.

4. In a folding box, the combination, with the side walls thereof and with end extensions hinged thereto and secured together to form top and bottom covers, of a strip glued at its innermost edge to the inner face of the side walls, and a tape or string interposed between the strip and the side walls and adjacent the pasting line and adapted, when pulled, to tear through the body of the side walls and open the box.

5. In a folding box, the combination, with the four side walls thereof and with end extensions hinged thereto and foldable and secured together to form top and bottom covers, of a strip secured to three of the side walls at one end thereof and to the inner face of the same, and a tape or string interposed between the strip and the said three side walls and adapted, when pulled, to tear through the body of the side walls and open the box.

[Claims 6 to 11 not printed in the Gazette.]

900,954. COUNTING-MACHINE. FRANK B. REDINGTON, Chicago, Ill. Filed Aug. 27, 1906. Serial No. 332,106.



1. A counting machine comprising a digit disk, a gear wheel and a finger, and a hub for said disk and gear wheel, said hub having a reduced portion on which said digit disk and gear wheel are mounted, the outer end of said hub being riveted to hold said disk and gear wheel in place, and additional means for securing said finger, digit disk and gear wheel together.

2. A counting machine comprising a digit disk, a gear wheel and a finger, and a hub for said disk, finger and gear wheel, said hub having a reduced portion on which said digit disk, finger and gear wheel are mounted, the outer end of said reduced portion being riveted, and a rivet passing through said finger, digit disk and gear wheel.

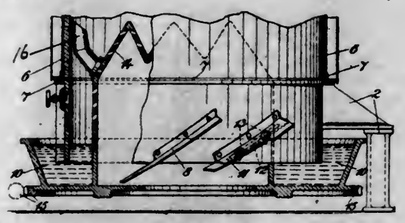
3. A counting machine comprising a casing having an opening therein, a shaft, a split bearing block adapted to receive said shaft and to lie in said opening, and operating members rigidly mounted upon the ends of said shaft, the bearing opening of said block being smaller than said shaft ends.

4. A counting machine comprising a casing having an opening therein, a shaft having angular collars at its ends, a separable bearing block adapted to receive said shaft and to lie in said opening, and operating members rigidly engaging said angular collars.

5. A counting machine comprising a casing having a non-circular opening therein, a shaft having non-circular collars at its ends adapted to pass through said opening, a two-part bearing block adapted to embrace said shaft between said collars, said block being adapted to fit within said opening, and operating members rigidly engaging said collars.

[Claims 6 to 9 not printed in the Gazette.]

900,955. GAS-GENERATOR. HUGO REHMANN, Mülheim-on-the-Ruhr, Germany. Filed May 8, 1907. Serial No. 372,627.



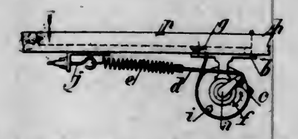
1. In a lower part for gas generators consisting of single fixed segments, removable segments of said wall, a bracket foot on each fixed segment, means for binding the removable segments to the fixed segments, a rotatable ash and clinker tray the bottom of said wall projecting into said tray, means for automatically removing the residue from the combustible, a grate fixed rigidly on said tray, said grate projecting into the interior of the generator, and means for rotating said tray and with it the grate, substantially as set forth.

2. In a lower part for gas generators, the combination of a cylindrical wall, consisting of single fixed segments,

removable segments of said wall, a bracket foot on each fixed segment, means for binding the removable segments to the fixed segments, a rotatable ash and clinker tray, said generator wall projecting into said tray, an oblique plate fixed on the outer circumference of the said wall, said plate being provided with holes, a second oblique plate, said second plate being adjustable and removable on the outer circumference of the said wall, a grate rigidly fixed on said rotatable tray, said grate projecting into the interior of the generator, and means for rotating said tray and with it the grate, substantially as set forth.

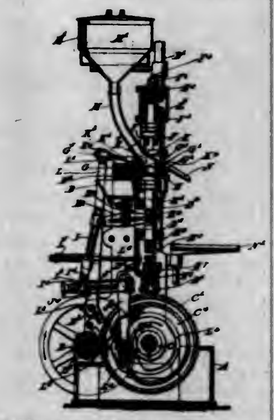
3. In a lower part for gas generators the combination of a cylindrical wall, said cylindrical wall consisting of fixed segments and removable segments, means for supporting the wall of the generator when the removable segments are taken away, a bracket foot on each fixed segment, means for binding the removable segments to the fixed segments, a rotatable ash and clinker tray, said generator wall projecting into said tray, an oblique plate fixed on the outer circumference of the said wall, said plate being provided with holes, a second oblique plate, said second plate being adjustably and removably attached to the outer circumference of said wall, a grate fixed rigidly on said tray, said grate projecting into the interior of the generator, and means for rotating said tray and with it the grate, substantially as set forth.

900,956. AUTOMATIC DOOR-CLOSER. STÉPHANE REMONTET, Lagresle, France. Filed May 27, 1907. Serial No. 375,918.



A door closing device comprising a bracket secured to the door casing, an axle mounted in said bracket, a crank arm on the axle, an adjustable spring connected with the crank arm, a disk on the axle, and a strap having one end connected to said disk and the other end connected to the door, said crank arm being fixed to the axle in such a manner that it affords the greatest leverage when the doors close and the smallest leverage when the doors open.

900,957. TABLET-MACHINE. EMANUEL L. RICHARDS, Philadelphia, Pa., assignor to John Wyeth and Brother, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 23, 1907. Serial No. 369,743.



1. In a tablet compressing machine, a die block having a passage formed in it, an upper plunger movable into and out of the upper ends of said passages, a coöperating lower plunger entering the lower end of said passage, a plunger carrier to which the lower plunger is rigidly secured, adjustable means for giving reciprocating movements of regulated lengths to said carrier, said carrier having rigid laterally extending arms, vertical abutment engaging screws adjustably carried by said arms and extending upwardly therefrom at the sides of said lower plunger, whereby liability of waste material from the compressing operation collecting on the upper ends of said abutment screws is avoided, and abutments carried by the frame work of the machine in position to be engaged by the abutment screws and thereby positively check the upward movement of the lower plunger.

2. In a tablet compressing machine, a die block having passages formed in it, plungers entering the passages of the die block at their lower ends, other plungers movable into and out of the upper ends of said passages, a feed shoe movable across the upper ends of the die block, means for moving said feed shoe into and out of the position in which it extends over said die block, means for moving the lower plungers from the position in which their upper ends are substantially flush with the upper surface of the die block to a lower position while the feed shoe is over the die block to draw material from the feed shoe into said passages, adjustable stops for positively limiting the movement of the said lower plungers in both directions, and means for moving the upper plungers into the passages to compress said material into tablets when the shoe is moved out of said position.

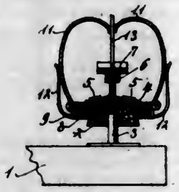
3. In a tablet compressing machine, a die block having passages formed in it, plungers entering the lower ends of the passages of the die block, other plungers movable into and out of the upper ends of said passages, means for feeding material to be compressed into the upper ends of said passages, and means for operating the plungers, the means for operating the lower plungers including a reciprocating plunger holder, an oscillating lever engaging said holder for reciprocating the latter, and means for adjusting the amplitude and limits of the oscillation of said lever, abutment engaging devices for limiting the movements of the holder in both directions, rigidly secured to said holder, and abutments carried by the framework of the machine in position to be engaged by the abutment engaging portions of the holder, said abutments and abutment engaging portions being relatively adjustable to vary the stroke of the holder.

4. In a tablet compressing machine, a die block having passages formed in it, plungers, means for moving said plungers into and out of the upper ends of said passages, other plungers entering the passages of the die block at their lower ends and means for moving said other plungers in said passages, said means including a lever pivoted to the framework of the machine, means for oscillating said lever, operative connections between said lever and said other plungers including a link and a block movably supported on said lever to which the link is pivotally connected, and means for adjusting said block along said lever to carry the block from the position in which the pivotal connection between it and the link has its axis in line with the pivotal axis of the lever to other positions in which the axis of the pivotal connection between the link and the block is at one side of the pivotal connection between the lever and the framework.

5. In a tablet compressing machine, a die block having vertical passages formed in it, plungers entering the passages formed in the die block, at their lower ends, other plungers movable into and out of the ends of said passages, a feed shoe movable across the upper ends of the die block, means for moving the lower plungers from a position in which their upper ends are flush with the upper surfaces of the die block to a lower position for moving the upper plungers into and out of the passages and for giving the to and fro movement to the feed shoe, said means including a shaft transverse to, but in the same plane with the line of movement of the plungers, a driving wheel carried by said shaft and extending in a plane including the line of movement of said plungers, said cam wheel having cams on each side, a cam lever engaging the cams at one side of the wheel for operating the lower plungers, a cam lever engaging the cam at the other side for operating the feed shoe and crank arms carried by said shaft one at each side of the wheel and connections between said crank arms and the upper plungers.

[Claims 6 to 9 not printed in the Gazette.]

900,958. SAFETY APPLIANCE FOR ELECTRIC RAILWAYS. ROBERT K. RICHARDSON, Brooklyn, N. Y., assignor of forty one-hundredths to John D. Gunther and ten one-hundredths to Henry Perkins, Brooklyn, N. Y. Filed Sept. 21, 1907. Serial No. 393,925.



1. The combination of a conductive rail, insulating supports for said rail, shields disposed on said supports extending in parallel to and on either side of said rail and insulated therefrom, said shields overlapping each other underneath the foot and normally abutting yieldingly against each other above the head of said rail and means insulated from said rail for holding said shields in their normal position.

2. The combination of a conductive rail, insulating supports for said rail, shields disposed on said supports extending in parallel to and on either side of said rail and insulated therefrom, said shields overlapping each other underneath the foot and normally abutting yieldingly against each other above the head of said rail and springs fixed on said supports insulated from said rails and adapted to hold said shields in their normal position.

3. The combination of a conductive rail, insulating supports for said rail, shields hinged to said supports extending in parallel to and on either side of said rail and insulated therefrom, said shields overlapping each other underneath the foot and normally abutting yieldingly against each other above the head of said rail and means insulated from said rail for holding said shields in their normal position.

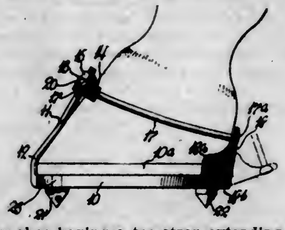
4. The combination of a conductive rail, insulating supports for said rail, shields hinged to said supports extending in parallel to and on either side of said rail and insulated therefrom, said shields overlapping each other underneath the foot and normally abutting against each other above the head of said rail and springs fixed on said supports and insulated from said rail adapted to hold said shields in their normal position.

5. The combination of a conductive rail, insulating supports for said rail, shields hinged to said supports extending in sections of suitable length in parallel to and on either side of said rail and insulated therefrom, normally abutting yieldingly against each other above the head of said rail and overlapping each other underneath the foot of said rail, a contact plow coöperating with said rail having a neck disposed to pass between the abutting ends of said shields, said shield sections having either end suitably rounded to cause said neck to open said shields in passing from one section to the following section.

[Claim 6 not printed in the Gazette.]

900,959. HORSESHOE. JOSEPH W. ROPER, East Orange, N. J. Filed Feb. 10, 1908. Serial No. 415,011.

1. A horse shoe having an upwardly extending toe strap rigid on the shoe, said strap having a screw threaded upper end, a toe piece movable up and down on the toe strap, a nut for fastening the toe piece to the strap, a heel flange arranged to embrace the heel and sides of a hoof, and side straps extending from the heel flange upwardly and forwardly to the toe piece with which they have an adjustable connection.



2. A horse shoe having a toe strap extending upwardly from and rigid on the toe of the shoe, a toe piece slidable up and down on the strap and having a screw and nut adjustment thereon, a relatively low heel flange hinged to the heel of the shoe and embracing the back and sides of the hoof, and side straps connected with the heel flange and extending upward and forward to the toe piece with which they are adjustably connected.

3. A horse shoe having a toe strap rigid thereon and extending upward from the toe of the shoe, said toe strap having a screw threaded upper end, a toe piece having outwardly extending flanges thereon, said toe piece being movable up and down on the toe strap, a fastening nut to secure the toe piece, side straps extending forward and upward from the heel portion of the shoe, said straps entering the aforesaid flanges on the toe piece, and fastening devices to secure the side straps to the toe piece.

900,960. TIE-HOLDER. WILLIAM J. ROSBOROUGH, New York, N. Y. Filed Mar. 20, 1908. Serial No. 422,348.

1. A device of the character described, comprising a handle, a forked end having prongs angularly disposed with respect to the handle and provided with ends formed at an angle to the prongs and adapted to engage the under side of the tie, an adjustable heel secured to the handle, and means for adjusting the heel along the handle.

2. A device of the character described, comprising a handle, a forked end having prongs provided with ends formed at an angle to the prongs and adapted to engage the underside of the tie, an adjustable heel secured to the handle adjacent to the forked end and means for adjusting the heel along the handle.

3. In a device of the character described, the combination with a handle and a forked end adapted to engage a rail tie, of a substantially triangular heel having projections or teats thereon, said handle having recesses for the teats along the under side thereof and provided with a bevel upper part, links secured to the opposite sides of the heel and having openings at the upper end thereof, a bolt having a tapering body portion adapted to engage the bevel part of the handle, and a nut for engaging the bolt for locking the heel adjustably to the handle.

4. In a device of the character described, the combination with a handle and a forked end having prongs adapted to engage a rail tie, of a heel having teats thereon, said handle having recesses for the teats along the under side thereof, links secured to the opposite sides of the heel and having openings at the upper end thereof, and a bolt for locking the heel adjustably to the handle.

3. In a device of the character described, the combination with a handle having two prongs adapted to engage a rail tie, of a substantially triangular heel having teats thereon said handle having recesses for the teats along the under side thereof, links secured to the opposite sides of the heel and having openings at the upper end thereof, and a bolt having a tapering body portion adapted to engage the handle for locking the heel adjustably to the handle.

[Claim 6 not printed in the Gazette.]

900,961. PRODUCTION OF MAGNESIUM BY ELECTROLYSIS. GEORGE O. SEWARD and FRANZ VON KÜGELGEN, Holcombs Rock, Va., assignors to Virginia Laboratory Company, New York, N. Y., a Corporation of New York. Filed Oct. 10, 1905. Serial No. 282,113.

1. The process of producing magnesium, which consists in fusing together magnesium-fluorid and calcium chlorid, with a flux of an alkali fluorid, heating to render the bath anhydrous, then electrolyzing to produce magnesium, the calcium chlorid being changed to calcium fluorid, and reconstituting the bath by adding hydrated magnesium chlorid and heating to dehydrate it, whereby the calcium fluorid and magnesium chlorid react to form magnesium fluorid and calcium chlorid, and resuming the electrolysis.

2. The process of producing magnesium, which consists in electrolyzing a fused mixture of magnesium fluorid and a chlorid of an earth-alkali metal more electro-positive than magnesium.

3. The process of producing magnesium, which consists in electrolyzing a fused mixture of magnesium fluorid and a chlorid of an earth-alkali metal more electro-positive than magnesium, and renewing the magnesium content of the electrolyte by the addition of magnesium salt.

4. The process of producing magnesium, which consists in electrolyzing a fused mixture of magnesium fluorid and a chlorid of an earth-alkali metal more electro-positive than magnesium, with a small percentage of an alkali fluorid as a flux.

5. The process of producing magnesium, which consists in electrolyzing a fused mixture of magnesium fluorid and an earth-alkali-chlorid of a more electro-positive metal than magnesium, and renewing the magnesium content of the electrolyte by addition of magnesium chlorid, which reacts with the earth-alkali fluorid produced by the electrolysis, to form magnesium fluorid.

[Claim 6 not printed in the Gazette.]

900,962. PRODUCTION OF BARIUM AND BARIUM ALLOYS. GEORGE O. SEWARD and FRANZ VON KÜGELGEN, Holcombs Rock, Va., assignors to Virginia Laboratory Company, New York, N. Y., a Corporation of New York. Filed Mar. 28, 1906. Serial No. 308,577.

1. The process which consists in electrolyzing fused barium chlorid with the addition of a barium salt of lower melting point.

2. The process which consists in electrolyzing fused barium chlorid with the addition of barium fluorid.

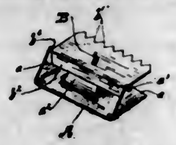
3. The process which consists in electrolysing a barium salt with the addition of a barium salt of lower melting point, by means of a cathode of a metal capable of alloying with barium, whereby to produce an alloy of such metal with barium.

4. The process which consists in electrolyzing a fused mixture of barium chlorid and barium fluorid, by means of a cathode of a metal capable of alloying with barium, whereby to produce an alloy of such metal with barium.

900,963. FASTENER. WALTER E. SMITH, Cleveland, Ohio. Filed Nov. 22, 1906. Serial No. 344,556.

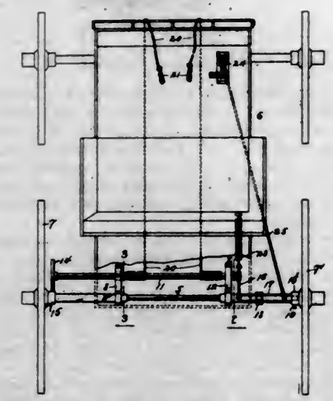
1. In a device of the character described, the combination with a base member comprising a flat plate formed with a hump intermediate between its ends, of a second member pivotally secured at its ends to said base member and comprising a plate formed with teeth along one side of the same, and with a locking element adapted to engage said hump and be held thereby.

2. In a device of the character described, the combination with a base member comprising a flat plate having upturned ends forming ears, and an intermediate hump;



of a second member pivotally mounted at its ends between such ears and comprising a plate formed with teeth disposed longitudinally of the same, and with a locking element adapted to engage said hump and be held thereby.

900,964. HORSE-HITCHING DEVICE. NEWTON C. STOCKER, Cedar Rapids, Iowa. Filed Jan. 23, 1908. Serial No. 412,230.

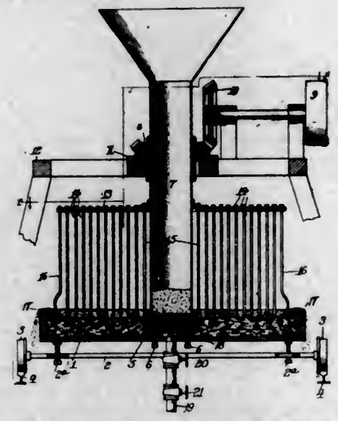


In a device of the type described, the combination with a vehicle, of a bracket-bearing and a guide-bracket carried by the rear axle of said vehicle, a winding-shaft swiveled in the bearing-bracket and extending through the guide-bracket to move freely therein, a friction wheel carried by one end of said winding-shaft to engage the hub of one of the vehicle wheels, hitching-lines attached at one end to said winding-shaft and adapted to wind thereon as the shaft is rotated, a link carried by the other end of said winding shaft, a hanger secured to the rear axle of said vehicle, a lever pivotally hung in said hanger and pivotally connected at its inner end to said link, a locking lever carried by the vehicle body and a rod connecting said locking lever with the lever carried by the axle, said locking lever and rod normally holding the friction wheel out of engagement with said wheel hub, and a spring connected to the other end of said link and to the vehicle body for automatically moving the friction wheel into engagement with the wheel hub when the locking lever is released.

900,965. AMALGAMATOR. FRED STRINGHAM, Manitou, Colo. Filed May 23, 1907. Serial No. 375,230.

1. In an amalgamator, the combination of a pan adapted to contain an open bed of mercury, a block rising from the central portion of the pan and projecting above the surface of the mercury, a feed tube terminating slightly above the block for feeding the material, and mechanical means acting in the space between the tube and block for removing the material therefrom and delivering it laterally onto the open surface of the bed of mercury.

2. In an amalgamator, the combination of a pan adapted to contain a bed of mercury, a block rising from the central portion of the pan and projecting above the surface of the mercury, a feed tube terminating slightly above the block for feeding the material, and means for removing the material from the space between the tube and block and delivering it laterally onto the surface of the bed of mercury, such means comprising a series of teeth rotating in said space.



3. In an amalgamator, the combination of a pan adapted to contain a bed of mercury, a block rising from the central portion of the pan and projecting above the surface of the mercury, a feed tube terminating slightly above the block for feeding the material, a series of revolving teeth extending into said pan, and revolving teeth projecting between said block and said feed tube for removing the material from the space between the tube and block and delivering it laterally onto the open surface of the bed of mercury.

4. In an amalgamator, the combination of a pan adapted to contain an open bed of mercury, a block rising from the central portion of the pan and projecting above the surface of the mercury, means for supporting said block upon said pan a short distance from the bottom of the pan, a feed tube for feeding the material directly upon the block, and mechanical means acting in the space between the tube and block for removing the material therefrom and delivering it laterally onto the open surface of the bed of mercury.

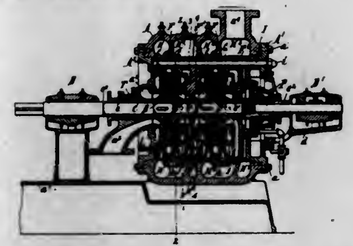
5. In an amalgamator, the combination of a pan adapted to contain an open bed of mercury, a block rising from the central portion of the pan and projecting above the surface of the mercury, screw bolts securing said block in place and holding it supported a distance from the bottom of the pan, a feed tube for feeding the material directly upon the block, and mechanical means acting in the space between the tube and block for removing the material therefrom and delivering it laterally onto the open surface of the bed of mercury.

[Claims 6 to 11 not printed in the Gazette.]

900,966. CENTRIFUGAL PUMP. GEORG SULZER, Buffalo, N. Y., assignor to Buffalo Forge Company, Buffalo, N. Y. Filed Dec. 9, 1905. Serial No. 291,005.

1. In a centrifugal pump, the combination of a pair of rotary impellers arranged oppositely or with their suction inlets at opposite sides, a casing in which the impellers rotate provided with annular chambers surrounding the impellers into which said impellers discharge, and one or more canals leading from the discharge chamber for the first impeller and passing through the discharge chamber for the second impeller, and a wall provided with one or more return passages which connect the discharge ends of said canals with the suction inlet of the second impeller, substantially as set forth.

2. In a centrifugal pump, the combination of a plurality of pairs of rotary impellers arranged with the suction inlets of the impellers of each pair at opposite sides, a casing in which the impellers rotate provided with annular chambers surrounding the impellers into which said impellers discharge, and one or more canals leading from the discharge chamber for the first impeller of each pair and passing through the discharge chamber for the second impeller of the pair, walls located between the pairs of impellers and beside the second impeller of the last pair and having passages which connect the discharge ends of said canals with the suction inlet of the second impeller of each pair, one of said walls also having passages connecting the discharge chamber for the second impeller of the first pair with the suction inlet for the first impeller of the second pair, substantially as set forth.



3. In a centrifugal pump, the combination of a pair of rotary impellers arranged with their suction inlets at the opposite sides of the impellers, a casing in which the impellers rotate provided with annular chambers surrounding the impellers, parts surrounding the impellers between the same and said discharge chambers and having diffusing passages, one or more canals leading from the discharge chamber for the first impeller and passing through the discharge chamber for the second impeller, and a wall provided with one or more return passages which connect the discharge ends of said canals with the suction inlet of the second impeller, substantially as set forth.

4. In a centrifugal pump, the combination of a plurality of pairs of rotary impellers arranged with the suction inlets of the impellers of each pair at opposite sides of the impellers, a casing in which the impellers rotate comprising a shell and walls located between the pairs of impellers and beside the second impeller of the last pair, parts surrounding the impellers within said shell and having diffusing passages, said shell being provided with continuous annular discharge chambers surrounding said diffusing passages and with one or more canals which lead from the discharge chamber for the first impeller of each pair through the discharge chamber for the second impeller of each pair and join passages provided in said walls to connect the discharge chamber for the first impeller of each pair with the suction inlet of the second impeller of the same pair and the discharge chamber for the second impeller of one pair with the suction inlet of the first impeller of the next pair, substantially as set forth.

5. In a centrifugal pump, the combination of a plurality of rotary impellers, a shaft to which the impellers are secured, a casing in which the impellers rotate comprising a shell and a removable head, walls for separating said impellers and providing connecting water passages therefor, said walls being connected to said removable head and said head together with said shaft, impellers and walls being removable as a unit from said shell, substantially as set forth.

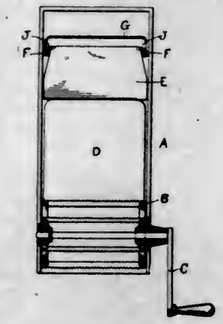
[Claims 6 to 12 not printed in the Gazette.]

900,967. SOAP-POWDERING MACHINE. WALLACE TILLSON, Quincy, Ill., assignor, by mesne assignments, to West Disinfecting Company, a Corporation of New York. Filed May 14, 1907. Serial No. 373,560.

1. In a soap powdering machine, a casing and a weight inside of it having a wedge-shaped space between them and a wedging device lying in the wedge-shaped space.

2. In a soap powdering machine, a casing and a weight inside of it having wedge-shaped spaces between them, and

rollers lying in said spaces, all arranged so that the surfaces of contact between the rollers and the weight and casing are sufficiently rough to cause the rollers to lock the weight against movement upward.

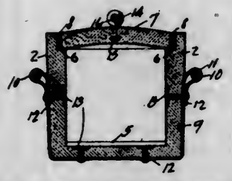


3. In a soap powdering machine, a casing, a tapering weight inside it and a corrugated roller between the weight and casing.

4. In a soap powdering machine, a casing and an interior weight separated by wedge-shaped spaces, rollers in the spaces and a bail attached to the rollers for lifting them, all arranged so that the surfaces of contact between the rollers and the weight and casing are sufficiently rough to lock the weight against movement upward.

5. In a soap powdering machine, a casing and an interior weight separated by wedge shaped spaces, pins on the weight over the spaces, rough rollers under the pins and means for lifting the rollers up against the pins.

900,968. BURIAL-CASE. DAVID WALDIE and GEORGE W. GALWAY, Watertown, N. Y. Filed Apr. 13, 1908. Serial No. 426,691.



1. In a burial case, the combination with a body formed in one part, having an open top recessed to receive a loosely fitting cover, of a series of U-shaped metallic stirrups secured to the bottom and sides of the body, and having integral loops formed on the opposite ends thereof, a detachable handle inserted in the loops on each side of the body, a detachable handle-bar for the cover, and a pair of loop-bolts to support said handle-bar, the said loop-bolts secured to a bar embedded in the cover.

2. In a burial case, the combination with a hollow body formed out of cement having an open top, and a cement cover therefor, of a handle mechanism for the cover, comprising a handle-bar, a pair of loop-bolts and a bar embedded in the cover, a handle disposed on each side of the body, a series of metallic stirrups fitted to the bottom and sides of the body, and having integral loops formed on the opposite ends thereof to receive said handles, and a series of flange bolts embedded in the bottom and sides of the body to hold said supports in place.

900,969. LETTER AND OTHER CHARACTER. JAMES T. WALLACE, New York, N. Y. Filed Jan. 9, 1908. Serial No. 409,912.

1. The combination with a character of the class described of a spring fastener member secured thereto of relatively greater width in a horizontal plane at its free end than at its point of attachment to said character.

2. The combination with a character of the class described of a spring fastener member secured thereto, said member increasing in width from a point adjacent its point of attachment to a point adjacent the top of its free end.



3. The combination with a portable character of a fastener member comprising a tongue portion and a relatively broad return bend spring portion.

4. The combination with a portable character of a fastener member provided with a broadened return bend spring portion and a narrow tongue portion embedded in the material of which the character is formed.

5. The combination with a character formed from plastic celluloid of a fastener member comprising a broadened return bend portion and a narrow tongue portion embedded in the celluloid.

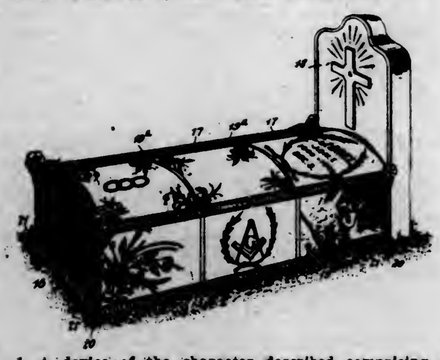
[Claims 6 to 8 not printed in the Gazette.]

900,970. RISER-LINING FOR MOLDING DEVICES. EDWIN C. WASHBURN, Minneapolis, Minn. Filed Mar. 15, 1906. Serial No. 306,117.



The combination with a molding apparatus having a riser or gate opening into the mold, of a disk-like body of non-fusible material which is a poor conductor of heat placed at the bottom of said riser or gate adjacent to the mold, with its flat under surface extended along the upper portion of the mold cavity and constituting a considerable portion of the upper wall of the mold, and forming a thin partition between the top of the mold and the bottom of the riser, the said disk-like body having a central perforation through which the molten metal may be poured into the mold, substantially as described.

900,971. COMBINED COVER AND HOOD FOR CASKETS AND GRAVES. CARL WEBER-ILLIG, Delawanna, N. J. Filed Jan. 8, 1908. Serial No. 409,749.



1. A device of the character described comprising a cover member formed from inner and outer sheets of wire netting spaced apart from each other, said sheets being provided with alined apertures located at one end of the cover member and adapted, when said member is in position over a casket to disclose the face of a corpse therein, and slide members adapted respectively for detachable connection with the respective inner and outer sheets of the cover member to close the apertures therein.

2. A device of the character described comprising a cover member formed of wire netting and transversely divided into a plurality of sections each of which is provided with eyes at its opposite sides, the eyes of the respective sections being alined with each other in the direction of the length of the cover member and detachable fastening devices for holding said sections in relation and comprising rods extended lengthwise along opposite sides of the cover member and passed through the eyes of the respective sections thereof.

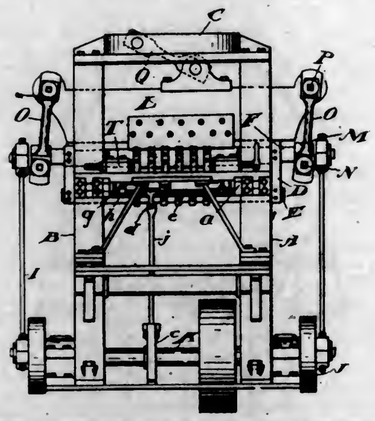
3. A device of the character described comprising a cover member formed of wire netting and transversely divided into a plurality of sections each of which is provided with eyes at its opposite sides, the eyes of the respective sections being alined with each other in the direction of the length of the cover member, a head member extended across one end of the cover member and having an end portion which is adapted to project above the top of the cover member in position to receive an inscription, and detachable fastening devices comprising rods extended lengthwise along opposite sides of the cover member, and passed through the eyes of the sections thereof and through the head member and adapted to hold said head member and the sections of the cover member in relation.

4. A device of the character described comprising a cover member formed of wire netting and transversely divided into a plurality of sections each of which is provided with eyes at its opposite sides, the eyes of the respective sections being alined with each other in the direction of the length of the cover member, and a hood member arranged over and adapted to inclose the cover member, and detachable fastening devices comprising rods extended along the opposite sides of the cover member, and engaged with the eyes of the respective sections thereof for holding the sections of the cover member in connected relation.

5. A device of the character described comprising a cover member formed from wire netting and having at one end an aperture adapted, when said member is in position over a casket, to disclose the face of a corpse therein, and a slide member adapted for detachable connection with said cover member to close said aperture therein.

[Claims 6 to 9 not printed in the Gazette.]

900,972. MACHINE FOR CUTTING BARREL-HEADINGS. ELIJAH WINDSOR, London, Ontario, Canada. Filed July 15, 1907. Serial No. 383,931.



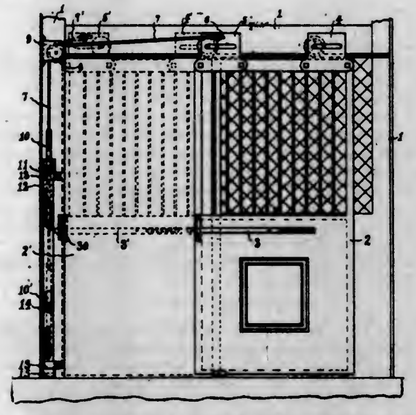
1. The combination in a veneer machine of a frame; a cross head vertically movable therein; a shaft parallel to the cross head; cranks on said shaft; pitmen connecting the cranks and the cross head; a slicing beam vertically and laterally movable in the frame; links pivotally connected with the cross head and the slicing beam, and a link pivotally connected with the slicing beam and the frame to cause a lateral swing of the beam.

2. The combination in a veneer machine of vertical guides; a cross head vertically movable in said guides comprising two cross beams connected by vertical gage bars; a knife suitably connected to said cross head; a horizontal shaft parallel to the cross head; cranks on said shaft; and pitmen journaled on the cranks, and having a pivoted connection with the ends of one of the cross beams.

3. The combination in a veneer machine of vertical guides; a cross head vertically movable in said guides comprising two cross beams connected at their ends by vertical slide blocks and intermediate their ends by vertical gage bars; a knife suitably connected to said cross head; a horizontal shaft parallel to the cross head; cranks on said shaft; and pitmen journaled on the cranks, and having a pivoted connection with the ends of one of the cross beams.

4. The combination in a veneer machine of vertical guides; a cross head vertically movable in said guides comprising two cross beams connected at their ends by vertical slide blocks and intermediate their ends by vertical gage bars bolted to the beams; liners between the gage bars and the beams; a knife suitably connected to said cross head; a horizontal shaft parallel to the cross head; cranks on said shaft; and pitmen journaled on the cranks, and having a pivoted connection with the ends of one of the cross beams.

900,973. DOOR CLOSER AND CHECK. SAMUEL ALSOP, Bellingham, Wash. Filed Jan. 29, 1908. Serial No. 413,202.

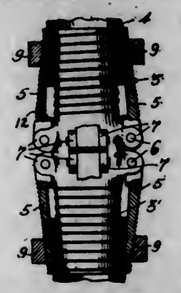


1. In a door closer and check, the combination of a door; a weight; means for attaching said weight to said door; a receptacle containing liquid, said weight and said receptacle being of such relative diameters as to permit the free movement of said liquid by and alongside of said weight when said weight is entering, moving in or leaving said liquid; means whereby said weight enters said liquid only when said door is nearly closed; and means whereby said liquid rises around said weight nearly as rapidly, above its level before said weight entered the same, as said weight descends below said level.

2. In a door closer and check, the combination of a horizontally movable door, a weight having relatively a much greater length than diameter, a flexible connection, between said door and said weight, a sheave over which said flexible connection is passed a liquid containing stand pipe beneath said sheave of such height that said weight

does not leave the same when said door is fully open and of such depth that said weight does not reach its bottom when said door is fully closed, of such internal diameter that said weight hangs loosely in the same, and having an enlarged upper end.

900,974. COUPLING. THOMAS ANDREWS, Rockaway, N. J., assignor to Thomas Andrews Manufacturing Company, Rockaway, N. J., a Corporation of New Jersey. Filed Apr. 18, 1907. Serial No. 368,869.

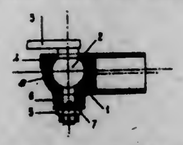


1. A coupling member comprising a tapering nipple provided with a spirally serrated reception-surface, a plurality of clamping members pivotally connected with said nipple, said clamping members being also tapered and pivoted at their supporting ends, and being provided on their interior sides with shoulders near their pivotal ends and with clamp-engaging means on their outer sides, and a clamping ring for engaging the clamping means on said outer sides of said clamping members.

2. A coupling member comprising a corrugated tapering core, a plurality of clamping members pivotally connected with said core, said clamping members being also tapered and pivoted at their thicker ends, and being provided on the inside with shoulders near their thicker ends and with clamp engaging means on their outer sides, and a clamping ring for engaging the clamping means on the outer sides of the said clamping members.

3. A coupling member comprising a body having formed thereon tapering nipples provided with spirally serrated reception-surfaces, a plurality of clamping members pivotally connected with said nipples, said clamping members being also tapered and pivoted at the supporting ends thereof, and being provided on their interior sides with shoulders near their pivotal ends and with clamp-engaging means on their outer sides, and clamping rings for engaging said clamping means on the outer sides of said clamping members.

900,975. STEERING MEANS FOR AUTOMOBILES. ALBERTO BALLOCO, Turin, Italy, assignor to Societe Anonyme "Itala" Fabrica di Automobili, Turin, Italy. Filed Apr. 16, 1907. Serial No. 368,556.



1. A device of the character described comprising a casing having chambers at opposite ends and having a reduced passage extended between said chambers, a rotatory part held to turn in the casing and having a spherical enlargement arranged within the chamber at one end of said casing and having a reduced portion extended through said reduced passage into the chamber at the opposite end of the casing, a spring coiled upon said reduced portion of the rotatory part and housed in the last-mentioned chamber of the casing, a nut on the rotatory part and engaged with said spring at the mouth of the chamber wherein said spring is housed, and an anti-friction lining arranged within the first-mentioned chamber of the casing and having its internal surface formed to correspond with the spherical enlargement of the rotatory part.

2. A device of the character described comprising a casing having a chamber open at one end thereof and provided with a reduced passage at its opposite end, a rotatory part having a spherical portion within said chamber and provided with a reduced stem extended through the reduced passage, a bushing of hardened metal held in the chamber of the casing and having a cavity formed to receive the spherical portion of the rotatory part, a spring coiled on the stem of the rotatory part below the reduced passage through which the same is extended, a nut on the stem and engaged with the spring, said rotatory part having a reduced portion extended from the mouth of the chamber of the casing, and a ring fitted in the mouth of the said chamber at said open end thereof and having a surface adapted for contact upon the spherical enlargement of the rotatory part, said ring being cut away at one side to permit it to be engaged with or disengaged from the adjacent reduced portion of the rotatory part.

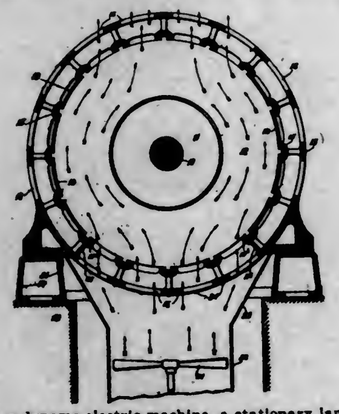
900,976. SHIELD FOR THE POST-HOLES IN PLANING-MACHINE TABLES. WILLIAM N. BAUER, Cincinnati, Ohio. Filed June 5, 1908. Serial No. 436,895.



1. As a new article of manufacture a disk to fit the stop hole in a planing machine, with a spring attached to hold the disk at the upper edge of the hole and adapted to be compressed to permit the insertion of the stop post without removing the disk.

2. In a device of the character specified, in combination with the bed of a planing machine, provided with holes for stop posts, a disk to fit each hole snugly, with a spring attached thereto of a length when expanded to sustain the disk horizontally at the edge of the hole and adapted to be compressed to permit the insertion of the stop post without removing the disk.

900,977 DYNAMO-ELECTRIC MACHINE. BERNARD A. BEHREND, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Mar. 26, 1906. Serial No. 308,131.



1. In a dynamo-electric machine, a stationary laminated core having circumferential ventilating passageways, a supporting frame at the periphery of said core, said frame having ventilating openings at its periphery through which the air from the stator can escape, and removable means for preventing the egress of air from the core to the frame at portions of the periphery of the core.

2. In a dynamo-electric machine, a stationary laminated core having its laminæ arranged in groups spaced apart forming circumferential ventilating passageways open at its inner and outer periphery, a hollow frame surrounding and supporting said core, said frame having ventilating openings whereby the air currents can pass from the outer periphery of the frame into the core and out of the latter at its periphery, and plates for closing the communication between the outer periphery of the core and the frame at portions of the circumference of the core.

3. In a dynamo-electric machine, a rotor, a laminated stationary core having a plurality of parallel circumferential air passageways, a frame surrounding the core and having openings at its bottom and top for the ingress and egress of air respectively, independent means external to the machine for forcing a ventilating blast of air into the machine, and means for conducting the air from said independent means to the opening in the bottom of the frame whereby air from an extraneous source may be conducted into the machine through the opening at the bottom of the frame, upward through the core in parallel paths on both sides of the rotor and out of the machine at the opening at the top of the frame.

4. In a dynamo-electric machine, a rotor, a laminated stationary core having a plurality of parallel circumferential air passageways, a frame supporting and surrounding the core, means for closing the openings between the core and frame except at the bottom and top of the machine, and means separate from the machine and communicating with the opening in the bottom of the frame whereby air may be forced from an extraneous source into the core at the bottom of the machine, through the circumferential passageways of the core in parallel paths, on each side of the machine and out of the core at the top of the machine.

5. In a dynamo-electric machine, a rotor, a laminated stationary core having a plurality of parallel circumferential ventilating passageways arranged throughout the core, a frame supporting and surrounding the core, plates for closing the passageways between the outer periphery of the latter and said frame except at the bottom and top of the core, means external to the machine for forcing air into said machine, and means whereby the air blast may be led into the core through the bottom of the frame, and upward through the parallel circumferential ventilating passageways equally on both sides of the rotor, and out of the core at the top thereof.

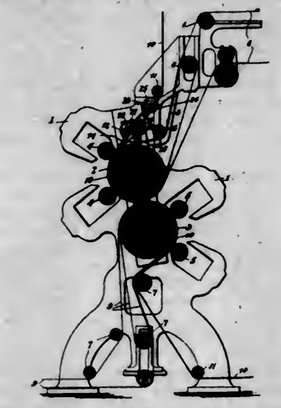
[Claims 6 and 7 not printed in the Gazette.]

900,978. FABRIC-PRINTING MACHINE. GEORGES BERTHET and VICTOR BERTHONNET, St. Julien, near Troyes, France, assignors to Ste. Ame. de Blanchiment, Teintures, Impressions et Apprêts de St. Julien, St. Julien, near Troyes, France. Filed July 19, 1906. Serial No. 326,884.

1. A machine of the character described comprising fabric carrying and printing means in combination with a spreading device comprising adjustably connected parts oppositely arranged for engagement at opposite sides of and adapted to be inclosed within a tubular fabric for spreading the opposite sides of the fabric apart from each other.

2. A machine of the character described comprising fabric carrying and printing means, a spreading device adapted to be inclosed within a tubular fabric to spread the plies thereof, and rollers extended at opposite sides of the path of the tubular fabric and adapted for contact with the plies thereof to move said plies toward each other to maintain the inclosed spreading device in position within the tubular fabric.

3. A machine of the character described comprising fabric carrying and printing means, a spreading device adapted to be inclosed within a tubular fabric and having spaced rollers adapted for contact upon opposite sides of the tubular fabric to spread the plies thereof, away from each other, and supporting means comprising parts arranged for contact with opposite sides of the tubular fabric to move the plies thereof toward each other to maintain the spreading device inclosed in the tubular fabric in position.

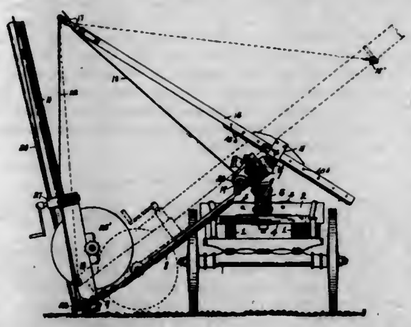


4. A machine of the character described comprising fabric carrying and printing means, a flattened spreading device adapted to be inclosed within a tubular fabric and arranged in relation to said fabric carrying and printing means with opposite edge portions adapted to bear at opposite sides of the fabric to spread the same in two flattened plies, and parts arranged for engagement at the opposite edges of the fabric outside the edge portions of the flattened spreading device to hold the fabric against displacement.

5. A machine of the character described comprising fabric carrying and printing means, a flattened spreading device adapted to be inclosed within a tubular fabric and arranged in relation to said fabric carrying and printing means with opposite edge portions adapted to bear at opposite sides of the fabric to spread the same in two flattened plies, and rollers arranged for engagement at the opposite edges of the fabric outside the edge portions of the flattened spreading device to hold the fabric against displacement.

[Claims 6 to 20 not printed in the Gazette.]

900,979. HOISTING-MACHINE. WILLIAM M. BROWN, Gibsonburg, Ohio. Filed June 6, 1908. Serial No. 437,070.



1. In combination, a portable mount, a frame mounted thereon for both horizontal swivel and vertical oscillatory movements, a mast hinged to said frame, and mechanical

means for effecting a raising or lowering of the mast relative to the frame and bracing the mast when raised.

2. In combination, a portable member, a swivel-frame mounted thereon, a mast associated with the frame and adapted to be elevated or lowered to reclining position thereon, a cable attached to the mast, and rack-bar and pinion mechanism coöperating with the cable to effect a raising of the mast from reclining position.

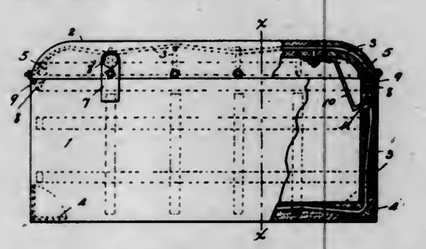
3. In combination, a portable member, a swivel-frame mounted thereon, a mast associated with the frame and adapted to be elevated or placed in reclining position thereon and moved therewith, a windlass carried by the frame, a cable having its opposite ends attached to the windlass and mast, and rack-bar and pinion mechanism coöperating with the cable and windlass to effect a raising of the mast from reclining position.

4. The combination with a portable mount, of a frame mounted thereon for horizontal and vertical swinging movements, a mast hinged at its base to the outer end of said frame, a windlass carried by the frame, rack-pinions carried by said frame, rack-bars coacting with the pinions, cables attached to the mast and windlass and having their intermediate portions in engagement with the upper ends of the rack-bars whereby a shortening of the cables when the bars are elevated and the mast reclining will effect a raising of the mast.

5. In combination a portable mount, a frame mounted thereon for both horizontal swivel and vertical oscillatory movements, a mast base hinged to the outer end of said frame and adjustable relative to the swivel axis thereof, and a mast fixed to said base.

[Claims 6 to 10 not printed in the Gazette.]

900,980. CASKET-PROTECTOR. EUGENE J. CALLAHAN and DANIEL G. FISHER, Reading, Pa. Filed June 6, 1908. Serial No. 437,100.

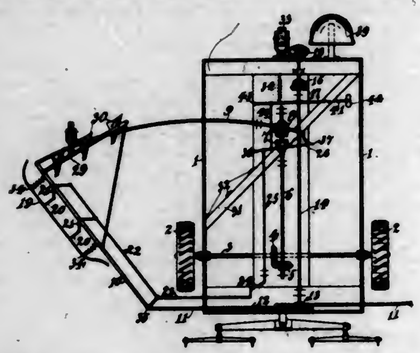


A burial casket protector comprising a body of plastic composition, a reinforcing web embedded therein composed of a series of cross bars, metal corner pieces embedded in said body, said body having a cement receiving groove around its upper edge and a recess in each end in the inner wall thereof, and a cover comprising a body of plastic composition, a reinforcing web embedded therein composed of a series of cross-bars and a frame to which the ends of said bars are secured, a rib adapted to register with the cement groove in the body, spring catches secured to the inside of the cover adapted to engage the recesses in the body and positioning guides whose upper ends are formed into handles.

900,981. PLOW. BENN A. CHILSON, Ukiah, Cal. Filed Jan. 15, 1906. Serial No. 295,996.

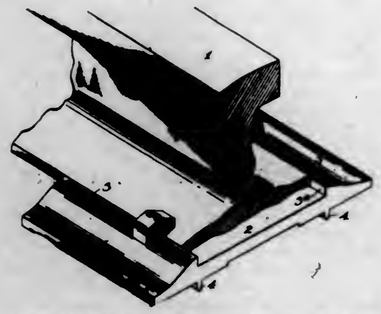
1. In a plowing mechanism, a frame, an arm movably connected to the forward part of the frame, a member attached by hinged joint to the arm, a brace attached to the member, plows carried by the brace and means for moving the plows to or from the frame, substantially as shown.

2. In a plowing mechanism, a frame, a hinged member 10 movably attached to the forward part of the frame, plows connected to the hinged members, a plate 19 movably attached to the hinged member, mechanism connecting the plate 19 to the driving mechanism whereby the



plows are moved to or from the frame, substantially as shown.

900,982. WEAR-PLATE FOR RAILWAY-TIES. SIMON CLARY, Carnegie, Pa. Filed Jan. 11, 1908. Serial No. 410,332.



1. A wear plate for railways having on its upper face one or more transversely extending shoulders each having a spike aperture therethrough and having on its under face one or more transversely extending ribs extending continuously and unbroken across the plate, each rib being provided with a vertically extending surface forming a continuation of one of the faces of the corresponding spike aperture.

2. A wear plate for railways having spike apertures extending therethrough and having a plurality of ribs on its under surface said ribs extending continuously across the plate transverse to the grain of the tie and having a vertically extending outer face forming a continuation of the inner face or wall of said spike aperture.

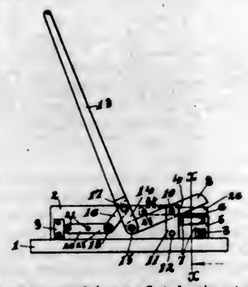
3. A wear plate for railways having a pair of ribs on its under surface and extending transversely thereof, each of said ribs having a vertically extending outer surface along the entire length of the rib said plate having spike holes extending therethrough and each having its inner face in substantial vertical alinement with the vertically extending surface of a rib.

4. A wear plate for railways having on its upper face a pair of transversely extending shoulders, each shoulder having an inner vertical face, a pair of ribs on the under surface of said plate, each rib having an outer vertically extending surface in substantial alinement with the inner vertical face of a shoulder, said plate being provided with a spike hole extending through each shoulder, each spike hole extending through the inner face of a shoulder and having its inner face or wall forming in effect a continuation of the vertical outer surface of the subjacent rib.

5. A wear plate for railways having on its upper face a transversely extending shoulder, said shoulder having an inner vertical face, a rib on the under surface of said plate, said rib having an outer vertically extending surface in substantial alinement with the inner vertical face of said shoulder, said plate being provided with a spike hole extending through said shoulder, said spike hole extending through the inner face of the shoulder and having its inner face or wall forming in effect a continuation of the vertical outer surface of the subjacent rib.

[Claims 6 and 7 not printed in the Gazette.]

900,983. METAL-SHEARS. WALTER H. CLITES, Emerson, Iowa. Filed Apr. 2, 1908. Serial No. 424,774.



A metal shear comprising a flat horizontal base and a vertically disposed flat frame plate secured thereto, in combination with a stationary blade bolted to one side of said plate, a straight blade bar pivotally mounted upon the same side of said plate, a washer of equal thickness with said stationary blade interposed between said straight blade and said plate, a lever having a bifurcated end pivotally connected to the end of said blade bar, and a fulcrum link pivotally connected to said frame plate and to said lever, substantially as described.

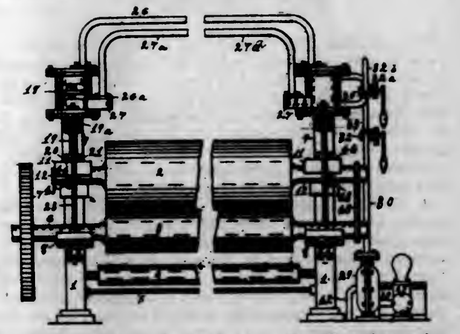
900,984. FAUCET. CLINTON E. COE, New Haven, Conn. Filed Sept. 6, 1905. Serial No. 277,150.



A faucet body having an annular valve seat near its inner end, a handle having its spindle provided with an eccentric, a valve fitted to slide longitudinally in the body portion of the faucet, said valve comprising a head, a stem proper, and an enlarged portion at the end of the stem proper fitted to engage and be guided in its movement by the interior walls of the body portion of the faucet, said enlarged portion being also arranged for engagement with the eccentric, by the movement of which the valve is moved toward or away from its seat, a valve shell at the outer end of the valve, oppositely arranged lugs projecting from the shell and longitudinal grooves in the bore of the faucet body, said grooves being open through the inner end of the faucet body for facilitating the insertion and removal of the valve.

900,985. HYDRAULIC PRESSING DEVICE FOR APPLICATION TO THE PRESS-ROLLS OF PULP OR PAPER MAKING MACHINES. JOHN L. COENEN, Little Chute, Wis. Filed May 8, 1908. Serial No. 431,602.

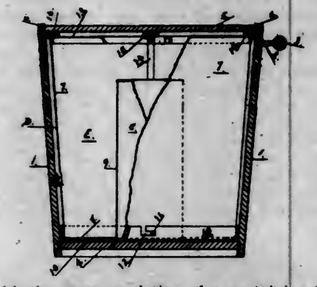
1. In a hydraulic device for a press roll, a frame for supporting a pair of rolls, a standard arranged vertically upon the frame at each end of the rolls, a planed way upon each standard, a journal box above each journal of the pressing roll arranged for a vertical movement along said ways, a loop extending downward from a journal box, around a journal and being secured to said journal box, a water pressure cylinder secured to said standard above each journal box, a piston in each cylinder, a piston rod extending downward from each piston, a connection between the lower end of each rod and a journal box of said roll, a stuffing box upon the lower end of each cylinder through which a piston rod passes, pipes arranged for connecting corresponding water spaces in the upper and lower ends of the cylinders, a suitable pump and source of water supply for producing the required pressure in the cylinders, pipes arranged for delivering water from said pump to a cut off valve, a cut off valve, pipes for directing the water from said pump to each end of one of said cylinders and also, for relieving the end of said cylinder opposite to that in which pressure is being applied, of pressure.



2. In a hydraulic device for a press roll, a frame for supporting the rolls, a standard arranged vertically upon the frame at each end of the rolls, a journal box for the pressing roll arranged for a vertical movement upon the standards and means for causing a journal of said roll to accompany the box in said movement, a water pressure cylinder secured to said standard directly above a journal box at each end of said roll, a piston in each cylinder, a piston rod extending downward from each piston, and a connection between the lower end of each piston rod and a journal box of the roll, a stuffing box upon each cylinder through which a piston rod passes, pipes arranged for connecting corresponding water spaces in the upper and lower ends of the cylinders, a high pressure pump, a low pressure pump, each having a suitable water supply, a pipe leading from each pump to a three way valve, a pipe leading from said three way valve to a cut off, or four way valve, pipes arranged for delivering water from said last named valve to both upper and lower ends of one of said cylinders, and a pipe for relieving the cylinder upon the side of the piston opposite to that upon which pressure is being applied of water, in accordance with the position into which the stem of said valve is turned.

3. In a hydraulic device for a press roll, a frame for supporting a pair of rolls, a journal box above each journal of the pressing roll arranged to slide upon a vertically arranged standard of the frame, means for causing a journal of the pressing roll to rise and fall with its box, a water pressure cylinder secured to each standard above said journal boxes, an arm extending outward from near the lower end of each cylinder, a rod extending downward from each of said arms to the machine frame, adjusting and securing nuts on each end of said rod, a piston in each cylinder arranged for a reciprocation therein, a piston rod extending downward from each piston and being connected with a journal box thereunder, a stuffing box below each cylinder through which the piston rod passes, pipes arranged between said cylinders and communicating with the interior of corresponding ends of said cylinders, and means for producing a water pressure, simultaneously in each cylinder above or below its piston and of relieving the end of the cylinder opposite to that upon which pressure is being applied, of water.

900,986. OYSTER-SHIPPING BUCKET. JOHN H. COX, Fairmount, Md. Filed June 21, 1907. Serial No. 380,077.

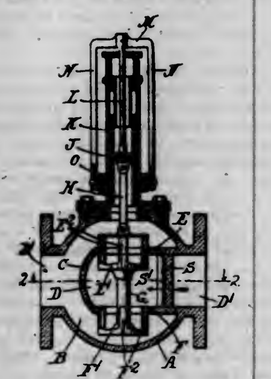


1. A shipping case consisting of a containing bucket, a cover to said containing bucket, an oyster can contained in said containing bucket, a cover to said oyster can, means of securing said cover to said oyster can, an internal compartment in said oyster can having an opening in the bottom thereof, a covering for the said opening in said internal compartment in said oyster can covering loosely the same, and means of securing said covering in place to said oyster can, substantially as described.

2. An oyster shipping case consisting of a containing bucket, an oyster can contained in said containing bucket having an internal compartment, means of introducing a refrigerating substance in the said internal compartment from the bottom consisting of an opening into said compartment, means of retaining said refrigerating substance in said internal compartment consisting of a cover for the opening into said internal compartment, and means of communicating between said internal compartment and said containing bucket consisting of the opening in the said compartment at the bottom of said oyster can and the space between the loosely fitting cover and the said oyster can.

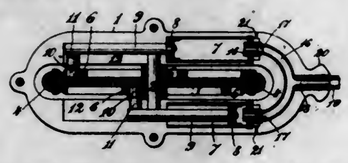
3. An oyster shipping case consisting of a containing bucket, an oyster can contained in said containing bucket, an internal compartment in said oyster can, means for introducing a refrigerating substance in the said internal compartment from the bottom consisting of an opening into said compartment, means for retaining said refrigerating substance in said internal compartment consisting of a cover for the opening into said internal compartment, and means for securing said cover consisting of fastenings on the periphery thereof whereby the same fits loosely.

900,987. VALVE. GEORGE M. DAVIS, Chicago, Ill. Filed Jan. 30, 1908. Serial No. 413,361.



An automatic balanced valve comprising a casing, a cylinder projecting therefrom, a piston in such cylinder, an exterior lever and weight associated with such piston, a valve stem attached to the piston within the case, balanced valves thereon, an inner case with two openings controlled by such balanced valves, an inleading fluid pipe normally discharging against the stem between the valves and a deflector in the path of such fluid to distribute it about the stem, substantially as shown and described.

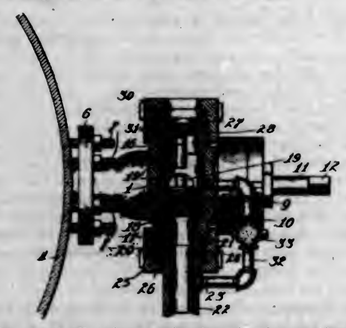
900,988. PUMPING AND COMPRESSING APPARATUS FOR AERIFORM FLUIDS. HONORÉ M. DOMECQ-CAZAUX, Paris, France. Filed June 13, 1906. Serial No. 321,581.



1. An apparatus for the purpose specified, having a frame to support the operative parts, a rotatively mounted wheel in said frame, said wheel having a tire of yielding material and being provided with circular concentric grooves on its respective lateral faces, set 180 degrees apart, two single-acting pumps mounted in the frame on opposite sides, respectively, of said wheel, each pump having a wrist on its rod engaging an eccentric groove in the wheel, valves controlling the induction and eduction apertures of the pump, and a pipe connecting with the eduction sides of both pumps.

2. An apparatus for the purpose specified, having a casing 1 with an aperture 5 in its side, a grooved wheel 3 mounted rotatively in said casing, said wheel having on its respective lateral faces circular eccentric grooves 6, the centers of which are disposed at opposite sides of the center of the wheel, a rubber tire on the wheel, two single acting pumps disposed at opposite sides of the said wheel, said pumps having each a piston, piston-rod, and valves controlling the induction and eduction of the fluid, a wrist bearing an antifriction roller on each piston-rod and engaging the respective eccentric grooves 6, an arched conduit 16 connected at its ends with the eduction sides of the respective pumps, and a pipe or hose 19, connected with the pipe 16, as set forth.

900,989. COMBINED CHECK AND CUT-OFF VALVE FOR LOCOMOTIVES. GEORGE B. EDDY, Chicago, Ill. Filed Aug. 22, 1907. Serial No. 389,611.



1. In a cut-off valve mechanism for locomotive boilers and the like, a valve casing member having its sides interiorly tapered to form a valve seat converging toward the delivery end of the casing, and provided with a removable closure affording access to the larger end of said tapered seat and of the full size of the largest part of the latter, means for attaching the smaller end of said valve casing to a boiler or other vessel under pressure,

a check valve chamber connected to and communicating with the side of said first mentioned valve casing, an elongated, conical, turn-cock valve seated in said valve casing and adjustably held against axial movement by the end closure of said valve casing, said turn-cock valve being provided with a passage entering its smaller end and extending out through a port in its side, adapted to be rotated into and out of register with said check valve casing, a check valve operatively mounted in said check valve chamber, and a feed pipe connected with the latter chamber and delivering thereto through said check valve.

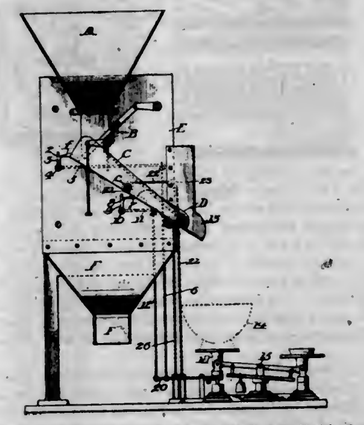
2. In a device of the character described, an elongated tubular valve casing member having its interior tapered conically to form a valve seat which converges toward the delivery end of the chamber, a turn-cock valve fitted within said tapered seat, an end closure removably threaded upon the end of said casing, of a diameter equal to the largest part of said turn-cock valve and adjustably impinging upon the latter to hold it to its seat against pressure, a tubular check valve casing member having its opposite ends of similar construction, secured at right angles and in symmetrical relation to the side of said first mentioned valve casing member, a port being arranged to extend through the connecting wall between the two valve casing members, a check valve sleeve removably inserted in one end of said check valve casing member, a check valve associated with the inner end of said sleeve, a feed pipe detachably connected with one end of said check-valve casing, a removable end closure for the opposite end of said check valve casing, said feed pipe and check valve sleeve and the securing member therefor being transposable with the opposite end closure.

3. In a device of the character described, an elongated tubular valve casing member having its interior tapered conically to form a valve seat which converges toward the delivery end of the chamber, a turn-cock valve fitted within said tapered seat, an end closure removably threaded upon the end of said casing, of a diameter equal to the largest part of said turn-cock valve and adjustably impinging upon the latter to hold it to its seat against pressure, a tubular check valve casing member having its opposite ends of similar construction, secured at right angles and in symmetrical relation to the side of said first mentioned valve casing member, a port being arranged to extend through the connecting wall between the two valve casing members, a check valve sleeve removably inserted in one end of said check valve casing member, a check valve associated with the inner end of said sleeve, a feed pipe detachably connected with one end of said check-valve casing, a removable end closure for the opposite end of said check valve casing, said feed pipe and check valve sleeve and the securing member therefor being transposable with the opposite end closure, and a by-pass pipe having one end communicating with the check valve chamber, its opposite end communicating with the feed pipe and provided between its ends with a turn-cock, one leg of said by-pass being connected with the middle of the check valve casing so that its opposite end is transposable with the feed pipe connections.

900,990. AUTOMATIC WEIGHING APPARATUS. PETRONELLA EDTBAUER, Chicago, Ill. Filed Feb. 6, 1908. Serial No. 414,569.

1. In a machine of the kind specified a suitable hopper, and means for controlling the discharge opening thereof, in combination with an inclined discharge chute, a weighing scale, devices for keeping the heavier end of said discharge chute uppermost, and mechanical means that communicate the motion of said scales to said devices whereby said chute is tilted into an oppositely inclined position at the end of each weighing operation and restored to its normal position at the beginning of the next weighing operation.

2. In a machine of the kind specified a suitable hopper, and means for controlling the discharge opening thereof, in combination with two inclined discharge chutes one of which discharges into the other, a weighing scale, devices for keeping the heavier ends of said chutes uppermost independently of each other, and mechanical means that communicate the downward movement of the weighing platform of said scales to said devices whereby said chutes are successively tilted into oppositely inclined positions and restored to their normal position upon the upward movement of the weighing platform of the scales.



3. In a machine of the kind specified a suitable hopper and means for controlling the discharge opening thereof, in combination with an inclined discharge chute, a weighing scale, devices for keeping the heavier end of said chute uppermost and mechanical means for communicating the motion of said scales to said devices and permitting said chute to tilt into an oppositely inclined position and then removing the opposition to the automatic restoration of the scales to its normal position.

4. In a machine of the kind specified, a suitable hopper, and means for controlling the discharge opening thereof, in combination with two inclined discharge chutes one of which discharges into the other, a weighing scale, devices for keeping the heavier end of said chutes uppermost independently of each other, and mechanical means for successively communicating the downward movement of weighing platform of the scale to said devices and successively permitting said chutes to tilt into oppositely inclined positions and then removing the opposition to the automatic restoration of the scales to its normal position.

5. In a machine of the kind specified a suitable hopper, and means for controlling the discharge opening thereof, in combination with an inclined discharge chute, a weighing scale, devices for keeping the heavier end of said chute uppermost and mechanical means for communicating the motion of said scales to said devices and permitting said chute to tilt into an oppositely inclined position and a chain having one end wound upon the axis of said chute for removing the resistance to the automatic restoration of the scale to its normal position.

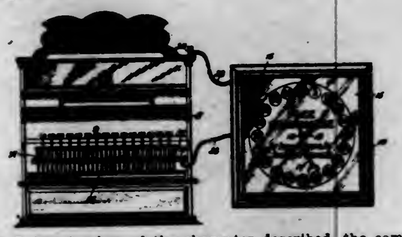
[Claims 6 to 22 not printed in the Gazette.]

900,991. REFUNDING ATTACHMENT FOR CASH-REGISTERS. HENRY T. EMEIS, Salt Lake City, Utah. Filed Nov. 7, 1907. Serial No. 401,153.

1. In mechanism of the character described, the combination with a cash register having a plurality of depressible actuating keys, of an indicator, a motor independent of the register mechanism for operating the indicator, and means for throwing the motor into operation upon each actuation of any key and continuing its operation while such key is depressed.

2. In mechanism of the character described, the combination with a cash register having a plurality of actuating keys, of an indicator, a motor for operating the indicator, and means including a device located in the path of movement of and engaged by the keys for throwing the motor

into operation upon each actuation of any key, said means continuing the operation of the motor while any key is engaged with it.



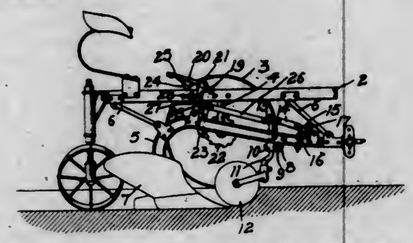
3. In mechanism of the character described, the combination with a cash register having a plurality of keys, of an indicator, and means for actuating the indicator including a device suspended from certain of the keys and disposed in the path of movement of said plurality of keys.

4. In mechanism of the character described, the combination with a cash register having a plurality of keys, of an indicator, and means for actuating the indicator including a device yieldingly suspended from certain of the keys and disposed in the path of movement of said plurality of keys.

5. In mechanism of the character described, the combination with a cash register having a plurality of keys, of an indicator, and means for actuating the indicator including a bar located beneath the keys, and elastic bands suspending said bar from certain of the keys.

[Claims 6 to 23 not printed in the Gazette.]

900,992. ATTACHMENT FOR PLOWS. FRANK EVANS, Minneapolis, Minn. Filed June 6, 1908. Serial No. 437,155.



1. The combination, with a plow beam and plow point carried thereby, of a colter arranged to travel in advance of the plow point and mechanism actuated by contact of the colter with an obstruction, for raising said beam and point.

2. The combination, with a plow beam and plow point carried thereby, of a colter arranged to travel in advance of the plow point, and a toggle mechanism connected with said colter and actuated by contact of the colter with an obstruction for raising said beam and point.

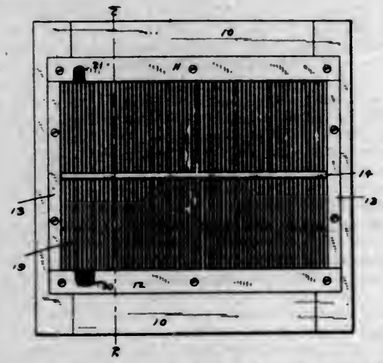
3. The combination, of a plow beam and a plow point carried thereby, of a colter arranged to travel in advance of the plow point, a rod having a rocking bearing on said beam, a toggle mechanism provided in connection with the upper end of said rod and a lifting device rendered operative by the movement of said rod and the interlocking of said toggle mechanism.

4. The combination, with a plow beam and plow carried thereby, of a colter arranged to travel in advance of the plow, a rock shaft journaled on said beam transversely thereto, a rod secured on said shaft and whereon said colter is mounted, toggle links connecting the upper end of said rod with the forward portion of said beam, a beam lift mechanism including a ratchet and dog, and means operatively connecting said rod and toggle mechanism with said dog for moving it into engagement with said ratchet when said colter strikes an obstruction.

5. The combination, with a plow beam and plow carried thereby, of a colter arranged to travel in advance of the plow, a shaft journaled transversely on said beam, a rod secured on said shaft and whereon said colter is mounted, toggle links connecting the upper end of said rod with the forward portion of said beam, a spring for normally holding said toggle links in their locked position, and mechanism arranged to be rendered operative by the oscillation of said rod and the interlocking of said toggle links for raising said beam and plow, substantially as described.

[Claim 6 not printed in the Gazette.]

900,993. RIDDLE FOR FUR-BLOWING MACHINES. HARRY B. FANTON, Danbury, Conn. Filed Jan. 16, 1908. Serial No. 411,088.



1. A riddle, for fur blowing machines, comprising a hinged, inclined frame having sockets, and a series of vertically disposed, independent wire strands loosely fitting the said sockets, and being thus adapted for endwise or longitudinal movements therein.

2. A riddle, for fur blowing machines, comprising a hinged, inclined frame, top and bottom retaining strips secured to the frame and provided with sockets, and vertically disposed strands consisting of independent wires whose ends are loosely seated in the said sockets, the said wires being thus free to move endwise in the sockets; whereby breakage is prevented.

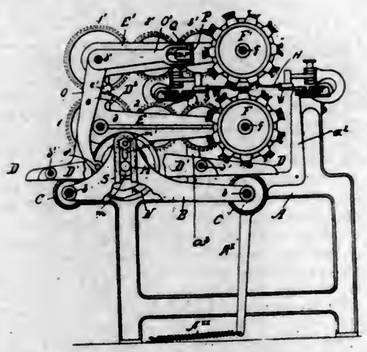
3. A riddle, for fur blowing machines, comprising a hinged, inclined frame having sockets and a cross piece, and a series of vertically disposed wire strands passing loosely through the said cross piece and fitting the said sockets loosely, and being thus adapted for longitudinal or endwise movements therein.

4. In a fur blowing machine, the combination with a knocker, of a hinged, inclined riddle adapted to be vibrated thereby, said riddle being provided with sockets and comprising a series of vertically disposed wire strands loosely engaging said sockets and free to move endwise or longitudinally therein.

900,994. BRUSHING-MACHINE FOR LOOM-HARNESS. MYRON FISH, Central Falls, R. I. Filed June 18, 1906. Serial No. 322,349.

1. In a machine for brushing loom harnesses, paired cylindrical brushes revolving on opposite sides of the harness; a carriage supporting said brushes; a shaft revolubly attached to said carriage and provided with a crank and crank pin; a member rigidly fixed to the frame of the machine and having a slot engaging said crank pin so that the revolution of said shaft by means of said crank, crank pin, and slot, imparts a reciprocating motion to the carriage aforesaid substantially as described.

2. In a harness brushing machine paired cylindrical brushes revolving on opposite sides of the harness, paired arms pivoted at one end and supporting said brushes at the other; quadrant gears integral with said arms and operating to change the distance between said cylindrical brushes; a bell crank pivoted upon the same shaft with the upper pair of said arms, and having one of its ends adjustably attached to said upper pair of arms; and a revoluble cam engaging the other end of said bell crank, all substantially as set forth for the purpose specified.



3. In a harness brushing machine, revolving paired cylindrical brushes arranged one above the other, and provided with a series of strips of bristles parallel to the axes of said cylinders; an upper and a lower pair of horizontal arms supporting the upper and lower cylindrical brushes respectively; an upper and a lower train of gears mounted respectively on said upper, and on said lower arms, and operating the upper and lower cylinder respectively, the two gears in each train farthest from the cylinders being in mesh with each other; and means for driving said gears; the relation of gears, cylinders and strips of bristles being such that a given strip of bristles on one cylinder will always come in contact with the harness at a point between adjacent strips of bristles on the opposite cylinder substantially as described.

4. In a harness brushing machine of the type described, means for adjusting the distance between the cylinders, consisting of a bar connecting the arms supporting the upper cylinder and provided with a slotted lug fixed thereon; a bell crank engaging said bar and Y shaped at its outer end, the space between the ends of the Y being greater than the width of said lug and encircling the same; a bolt or screw passing through the ends of said Y and having a nut thereon provided with opposed radially projecting pins adapted to engage the slot in said lug; said instrumentalities operating to vary at will the respective positions of the bell crank and arms aforesaid substantially as set forth.

5. In a machine for brushing loom harnesses, paired revolving brushes acting on opposite sides of the harness; a pair of horizontal quadrant arms pivoted at one end upon a horizontal shaft and supporting at the opposite end the upper revolving brush; a like pair of horizontal arms supporting the lower brush and pivoted upon a second shaft; each pair of said arms being provided with a quadrant gear integral therewith, said gears meshing with each other; a train of gears supported upon one of said upper arms, and a like train supported by the adjacent lower arm, said gears operating to revolve said brushes and to cause the same to maintain a fixed relation to each other; a bell crank adjustably connected at one end with one pair of said horizontal arms; a cam engaging the other end of said bell crank and causing said brushes to alternately approach and separate from each other; a horizontal reciprocating carriage supporting said arms, bell crank, shafts and brushes; a horizontal driving shaft revolubly mounted on said carriage and having fixed thereon the cam aforesaid and provided with a crank and crank pin; a suitable supporting frame for said carriage, having fixed thereon a member provided with a vertical slot engaging said crank pin, and operating to impart a reciprocating movement to said carriage by the revolution of said driving shaft; and means for adjusting the distance between said paired brushes substantially as described for the purpose specified.

900,995. TRY-SQUARE. JOHN W. FRY and CARMAN W. FISHER, Philadelphia, Pa. Filed Mar. 31, 1908. Serial No. 424,340.



1. A square comprising two arms, one of said arms being provided with a transverse dove-tailed recess in the face thereof, the lower surface of which extends the full width of the arm, and with recesses upon the inner edge of said arm upon opposite sides of said first mentioned recess forming a dove-tailed tenon upon the under side of said arm, a second member having a recessed portion to receive said dove-tailed tenon and having a dove-tailed tenon adapted to fit in the dove-tailed recess of the said first mentioned member.

2. A square comprising two arms, one of said arms being provided with a transverse dove-tailed recess in the face thereof, the lower surface of which extends the full width of the arm, and with recesses upon the inner edge of said arm upon opposite sides of said first mentioned recess forming a dove-tailed tenon upon the under side of said arm, the outer end of said tenon being substantially in alinement with the under edge of said arm, a second member having a recessed portion to receive said dove-tailed tenon and having a dove-tailed tenon adapted to fit in the dove-tailed recess of the said first mentioned member.

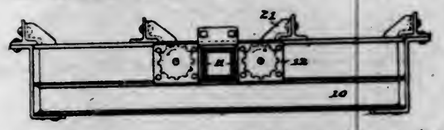
3. A square comprising two arms, one of said arms being provided with a transverse dove-tailed recess in the face thereof, the lower surface of which extends the full width of the arm, and with recesses upon the inner edge of said arm upon opposite sides of said first mentioned recess forming a dove-tailed tenon upon the under side of said arm, a second member having a recessed portion to receive said dove-tailed tenon and having a dove-tailed tenon adapted to fit in the dove-tailed recess of the said first mentioned member, and means to hold said members together.

4. A square comprising two arms, one of said arms being provided with a transverse dove-tailed recess in the face thereof, the lower surface of which extends the full width of the arm, and with recesses upon the inner edge of said arm upon opposite sides of said first mentioned recess forming a dove-tailed tenon upon the under side of said arm, a second member having a recessed portion to receive said dove-tailed tenon and having a dove-tailed tenon adapted to fit in the dove-tailed recess of the said first mentioned member, said first mentioned tenon having a longitudinal slot at the end thereof, and tightening means extending through said slot.

5. A square comprising two arms, one of said arms being provided with a transverse dove-tailed recess in the face thereof, the lower surface of which extends the full width of the arm, and with recesses upon the inner edge of said arm upon opposite sides of said first mentioned recess forming a dove-tailed tenon upon the under side of said arm, a second member having a recessed portion to receive said dove-tailed tenon and having a dove-tailed tenon adapted to fit in the dove-tailed recess of the said first mentioned member, said first mentioned tenon having a longitudinal slot at the end thereof, and a tightening screw extending through said slot and threaded into said second member.

[Claims 6 to 14 not printed in the Gazette.]

900,996. DRAW-BAR-CENTERING DEVICE. FREDERICK S. GALLAGHER, Chicago, Ill., assignor to Forsyth Brothers Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 30, 1905. Serial No. 285,127.



1. A draw-bar centering device comprising a spring mounted with capacity for bodily movement laterally of the draw-bar, and means whereby the lateral outward movement of the draw-bar tensions said spring and the expansion of the latter returns the draw-bar, when freed from its deflecting force, to central or normal coupling position, substantially as described.

2. A draw-bar centering device comprising a support on which the draw-bar rests with capacity for lateral movement, a spring mounted with capacity for bodily movement along said support, and means whereby the lateral outward movement of the draw-bar tensions said spring and the expansion of the latter forces the draw-bar, when freed from its deflecting force, back to central or normal coupling position, substantially as described.

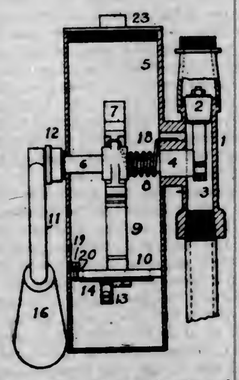
3. A draw-bar centering device comprising a support on which the draw-bar rests with capacity for lateral movement, a housing movable along said support and engaging the side of the draw-bar, a spring mounted in said housing, and means whereby said spring is tensioned during outward movement of said housing under the lateral thrust of the draw-bar and re-acts to force the draw-bar inwardly, when the latter is freed from its deflecting force, substantially as described.

4. A draw-bar centering device comprising a hanger, a spring support, a torsion spring, and means whereby said spring is tensioned during the outward movement of said housing under lateral thrust of the draw-bar and re-acts to force the draw-bar inwardly when the latter is freed from its deflecting force, substantially as described.

5. A draw-bar centering device comprising a hanger, a housing mounted thereon and movable thereover, a torsion spring mounted in said housing, and means whereby said spring is wound up during the outward movement of said housing under the lateral thrust of the draw-bar and re-acts to force the draw-bar inwardly when the latter is freed from its deflecting force, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

900,997. FLUSHING-VALVE. HENRY S. GASKILL, Lansing, Mich. Filed Aug. 27, 1907. Serial No. 390,309.



1. In a flushing valve, the combination of a supply pipe, a valve mounted in said supply pipe and adapted to be closed by the pressure of the water in said supply pipe, a dash pot mounted at the side of said supply pipe, and provided with an opening connecting said supply pipe below said valve with the upper part of said dash pot and means for securing the coöperative action of said valve and the piston of said dash pot, substantially as shown and described.

2. In a flushing valve, the combination of a supply pipe, a valve mounted in said supply pipe and adapted to be closed by the pressure of the water in said supply pipe, a dash pot secured to one side of said supply pipe and provided with an opening connecting said supply pipe below said valve with the upper part of said dash pot, a horizontal shaft passing through the upper part of said dash pot and into said supply pipe below said valve, a toothed segment mounted on said shaft engaging with a rack attached to the piston of said dash pot, means secured to the said shaft within said dash pot for operating said valve, a crank secured to the end of said shaft within said supply pipe, and a connecting rod connecting said valve to said crank, substantially as shown and described.

3. In a flushing valve, the combination of a supply pipe, a valve mounted in said supply pipe and adapted to be closed by the pressure of the water in said supply pipe, a dash pot secured to one side of said supply pipe and provided with an opening connecting said supply pipe below said valve with the upper part of said dash pot, a horizontal shaft passing through the upper part of said dash pot and into said supply pipe below said valve, a toothed segment mounted on said shaft engaging with a rack attached to the piston of said dash pot, a crank secured to the end of said shaft within said supply pipe, and a connecting rod connecting said valve to said crank, substantially as shown and described.

4. In a flushing valve, the combination of a supply pipe, a valve mounted in said supply pipe and adapted to be closed by the pressure of the water in said supply pipe, a dash pot secured to one side of said supply pipe, provided with an adjustable passage connecting the portion of said dash pot below the piston with the portion above and having an opening connecting said supply pipe below said valve with the upper part of said dash pot, a horizontal shaft passing through the upper part of said dash pot and into said supply pipe below said valve, a toothed segment mounted on said shaft engaging with a rack attached to the piston of said dash pot, a crank secured to the end of said shaft within said supply pipe, and a connecting rod connecting said valve to said crank, substantially as shown and described.

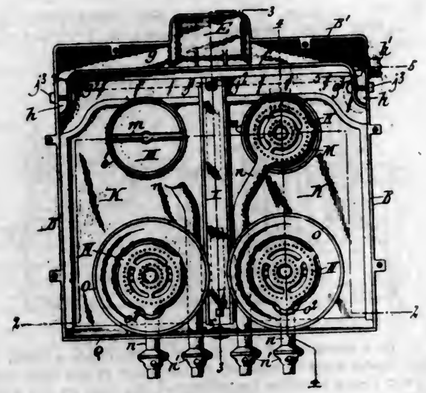
5. In a flushing valve, the combination of a supply pipe, a valve mounted in said supply pipe and adapted to be closed by the pressure of the water in said supply pipe, a dash pot secured to one side of said supply pipe provided with an adjustable passage connecting the portion of said dash pot below the piston with the portion above and having an opening connecting said supply pipe below said valve with the upper part of said dash pot, a horizontal shaft passing through the upper part of said dash pot and into said supply pipe below said valve, a toothed segment mounted on said shaft engaging with a rack attached to the piston of said dash pot, a crank secured to the end of said shaft within said supply pipe, a connecting rod connecting said valve to said crank, and means for revolving said shaft upon its axis, substantially as shown and described.

[Claim 6 not printed in the Gazette.]

900,998. GAS-STOVE. CHARLES F. GRADY and FRANK L. GRADY, Buffalo, N. Y. Filed July 3, 1907. Serial No. 381,964.

1. A stove having a burner chamber provided with an outlet, and a stationary vertical partition arranged transversely within the chamber adjacent to said outlet and terminating at its upper end short of the top of the chamber forming a passage between these parts for the products of combustion, substantially as set forth.

2. A stove having a burner chamber provided with an outlet at its rear, burners arranged in said chamber and a vertical partition arranged within the rear part of said chamber adjacent to the outlet and having one part arranged parallel with the rear wall of the chamber, and an end portion extending parallel with the adjacent side wall of the chamber, substantially as set forth.



3. A stove having a burner chamber provided with an outlet at its rear, burners arranged in said chamber and a vertical partition arranged within the rear part of the chamber adjacent to the outlet and having its central part arranged parallel with the rear wall of the chamber and both of its end parts extended parallel with the side walls of the chamber, substantially as set forth.

4. A stove comprising a body having an outlet at one end and openings in its bottom for communication with an oven, a vertical partition arranged transversely within the body adjacent to the outlet forming a main flue, an oven flue communicating on its underside with said oven openings while one of its ends opens into said main flue, a horizontal partition arranged in said body and dividing the same into an upper burner chamber and a lower air supply chamber and having one or more air inlet openings, and a burner arranged above each of said air inlet openings, substantially as set forth.

5. A stove comprising a body having an outlet at one end and openings in its bottom for communication with an oven, a vertical partition arranged transversely in the body adjacent to the outlet and forming a main flue, an oven flue arranged on said bottom over said oven openings and communicating at one end with said main flue, a horizontal partition arranged in the body and dividing the same into an upper burner chamber and a lower air supply chamber and having air inlet openings, and a burner arranged over each air supply opening, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

900,999. CARBURETING DEVICE. AIMÉ C. GRANEL, St. Cloud, France. Filed May 9, 1906. Serial No. 316,019.

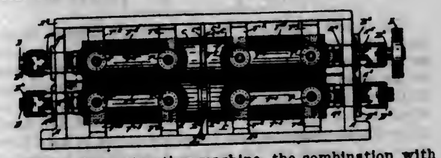
1. A carbureting device comprising a casing with an outlet, a cartridge insertible in the casing aud adapted to be pressed against said outlet and having a passage adapted for communication with the outlet when so pressed, and yielding means carried by the casing and engageable with the cartridge to hold the same pressed against said outlet.

2. A carbureting device comprising a casing having a cap with an outlet, a cartridge insertible in the casing, with one end adapted for insertion within said cap and having a passage adapted for communication with the outlet, and a spring carried by the casing and engageable



with the other end of the cartridge, whereby it is held within the cap and pressed against the outlet therein.

901,000. TOBACCO-STEMMING MACHINE. AARON GRODSKY, Cincinnati, Ohio. Filed Feb. 18, 1907. Serial No. 358,083.



1. In a tobacco treating machine, the combination with a table over which the tobacco leaf is fed, of brush-belts arranged in pairs on each side of the median line of the table and extending transversely the path of the leaf, said brush-belts providing leaf engaging reaches lying in a plane substantially parallel with the plane of the upper surface of the table, means for feeding the leaf, and means for driving the brush-belts whereby the leaf engaging reaches at each side of the table are moved in an outwardly direction from the median line of the leaf.

2. A machine of the character described having two spreaders in the form of traveling belts provided with brushes—one above and the other below the leaf-plane—serving to act upon the leaf in the same direction, and two more spreaders also in the form of traveling belts provided with brushes—one above and the other below the leaf-plane—serving to act upon the leaf in an opposite direction to the action of the first named spreaders, those belts that act upon and above the leaf having flat stretches adjacent to the leaf-plane substantially parallel to said plane and to the stretches of the belts beneath the leaf-plane, substantially as described.

3. In a tobacco treating machine, the combination with a table provided with an opening over which the leaf is fed, of brush-belts arranged in pairs at each side of the table and extending transversely the path of the leaf at said opening, said brush-belts providing leaf engaging reaches between which the leaf is fed, for feeding the leaf, and means for driving the brush-belts whereby the leaf engaging reaches at each side of the table are moved in an outwardly direction from the median line of the leaf.

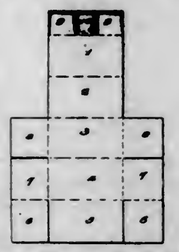
4. In a tobacco stemming machine, the combination with a table over which the leaf is fed, of means for feeding and means for stemming the leaf, pairs of brush-belts arranged adjacent an edge of the table and on each side of the median line thereof, said brush belts extending trans-

versely the path of the leaf and providing leaf engaging reaches between which the leaf is fed, and means for driving the brush-belts whereby the leaf engaging reaches on the respective sides of the table are moved in an outwardly direction from the median line of the leaf.

5. In a tobacco treating machine, the combination with a table over which the tobacco leaf is fed, of brush-belts arranged in pairs on each side of the median line of the table and adjacent an edge thereof, said brush-belts extending transversely the path of the leaf and providing leaf engaging reaches between which the leaf is fed, means for feeding the leaf, and means for driving the brush-belts whereby the leaf engaging reaches at each side of the table are moved in an outwardly direction from the median line of the leaf.

[Claim 6 not printed in the Gazette.]

901,001. SAFETY-ENVELOP. WILLIAM H. HEILIGER, Brazil, Ind. Filed Mar. 13, 1908. Serial No. 420,846.



The herein described safety envelops formed from a single blank of sheet material embodying a connected series of sections 1, 2, 3, 4 and 5, a tongue 10 and tabs 9 at the outer edge of the section 1, flaps 7 at opposite ends of the section 4, flaps 6 at one edge of the flaps 7, and other flaps 8 at opposite ends of the section 3, the flaps 6 being folded upon the flap 7 and the latter in turn folded upon and pasted to the section 4 providing a letter receiving pocket, said section 4 folding upon the section 3 and having the flaps 8 folded thereover and pasted thereto, the section 5 being folded upon the flaps 8 and the section 1 folded thereon and having the tabs 9 pasted to the outer side of the section 2, and the tongue 10 being inserted in the space between the section 3 and the flaps 7 and pasted to each.

901,002. SUIT-HANGER. EDWIN L. HENDERSON, Norwood, Ohio, assignor to The Kemper-Thomas Company, Norwood, Ohio, a Corporation of New Jersey. Filed July 20, 1908. Serial No. 444,433.

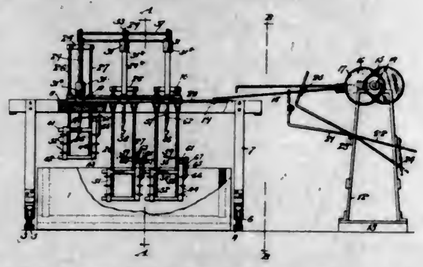


1. In a device of the character specified, a core of wood, comprising beveled plugs secured together at an obtuse angle, and tubes of paper material secured on said plugs to form an angular frame for a coat support, and hook for suspending the hanger mounted in said core.

2. In a device of the character specified, a pair of tubes of paper material, with means for securing said tubes together at an obtuse angle to form a coat supporting frame, and a rod extending between the outer ends of said tubes with hooks secured to said rod and engaging the ends of the tubes to hold the rod in place.

3. In a device of the character specified, a pair of tubes of paper material, means for securing said tubes together at an obtuse angle to form a coat supporting frame, disks secured in the outer ends of said tubes to strengthen and support the tubes, said disks having central eyelets, a rod extending between the outer ends of said tubes and hooks secured to the ends of said rod and engaging the disk eyelets to hold the rod in place.

901,003. DYEING, WASHING, AND STRIPPING MACHINE. HENRY HENNIG, Paterson, N. J. Filed Aug. 10, 1907. Serial No. 387,975.



1. In a machine of the character described, a tank, a yarn frame support movable transversely to the tank and a yarn frame movable lengthwise of the tank on the said support.

2. In a machine of the character described, a plurality of tanks, a yarn frame support movable transversely to the tanks and a yarn frame movable lengthwise of the tanks on the said support.

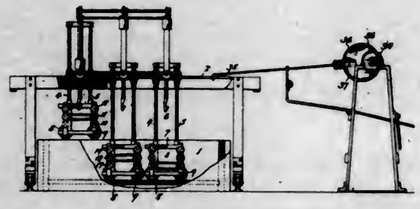
3. In a machine of the character described, a tank, a yarn frame support movable transversely to the tank and a yarn frame having a plurality of skein carrying sections, the said yarn frame being movable lengthwise of the tank on the said support.

4. In a machine of the character described, a plurality of tanks, a yarn frame support movable transversely to the tanks and a yarn frame having a plurality of skein carrying sections, said frame being movable lengthwise of the tanks on the said support.

5. In a machine of the character described, a tank, a yarn frame support movable transversely to the tank, a yarn frame movable lengthwise of the tank on the said support and a yarn frame reciprocating device detachably connected to said yarn frame.

[Claims 6 to 33 not printed in the Gazette.]

901,004. DYEING, WASHING, AND STRIPPING MACHINE. HENRY HENNIG, Paterson, N. J. Filed Jan. 29, 1908. Serial No. 413,176.



1. In a machine of the character described, a tank, a skein carrier arranged to hold the skein in a horizontal position in the liquid within the tank, means for reciprocating the carrier and means for causing the skein to travel in a horizontal direction on its carrier while the skein is moving bodily along within the tank.

2. In a machine of the character described, a tank, a skein carrier arranged to hold the skein in a horizontal position in the liquid within the tank, means for reciprocating the skein carrier and means carried by the skein carrier for causing the skein to travel in a horizontal direction on its carrier while the skein is moving bodily along within the tank.

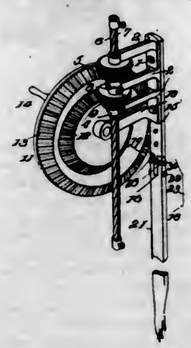
3. In a machine of the character described, a tank, a skein carrier having a traction wheel arranged to travel along in engagement with the tank, means for reciprocating the skein carrier and means driven from the traction wheel for causing the skein to travel on its carrier while moving bodily along the tank.

4. In a machine of the character described, a tank, a skein carrier arranged to hold the skein in a horizontal position and having a traction wheel arranged to travel in engagement with the tank, means for reciprocating the skein carrier and means driven from the traction wheel for causing the skein to travel on its carrier while moving bodily along the tank.

5. In a machine of the character described, a tank, a skein carrier having a traction wheel arranged to travel along in engagement with the tank, means for reciprocating the skein carrier, a pair of skein holding reels on the carrier, one of which is driven from the traction wheel, for causing the skein to travel on its reels while moving bodily along the tank.

[Claims 6 to 10 not printed in the Gazette.]

901,005. DRILL. RICHARD R. HOPKINS, Oskaloosa, Iowa. Filed Sept. 25, 1907. Serial No. 394,531.



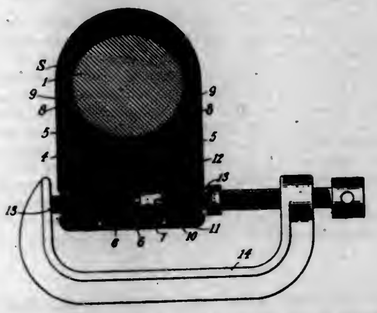
1. In a drill, the combination of a frame provided with bearings formed with hinged portions, a drill shaft, a pair of gear wheels journaled upon the frame and engaging the drill shaft to rotate and feed the same respectively, the latter gear wheel being in sections and formed with collars engaged by the hinged bearings to hold the sections of the gear wheel together, and a drive wheel mounted upon the frame and provided with concentric rows of teeth engaging the gear wheels.

2. In a drill, the combination of a frame provided with bearings formed with hinged portions, a drill shaft, a gear wheel journaled within the bearings and having a threaded engagement with the drill shaft, the said gear wheel being in sections and formed with collars engaged by the hinged portions of the bearings to hold the sections of the gear wheel together, and means for rotating the shaft and gear wheel at a differential speed.

901,006. APPARATUS FOR CURING OR VULCANIZING RUBBER GOODS. ERNEST HOPKINSON, East Orange, N. J., and THOMAS MIDGLEY, Hartford, Conn.; said Hopkinson assignor to The Hartford Rubber Works Company, Hartford, Conn., a Corporation of Connecticut. Filed Dec. 19, 1905. Serial No. 292,443.

1. The combination in apparatus of the character specified, of a core adapted for insertion within a tire shoe or casing, means for clamping the margins of the casing in proper relation to the core while leaving the tread of the shoe or casing exposed, and a wrapping or cover extending over the exposed portion of the tire shoe or casing and the clamping devices.

2. The combination in apparatus of the character specified, of a core adapted for insertion within a tire shoe or casing, means for clamping the margins of the casing in proper relation to the core while leaving the tread of the shoe or casing exposed, a wrapping or cover for the tire shoe or casing of textile fabric, and means for subjecting the cover of textile fabric to lateral tension applied at the side.

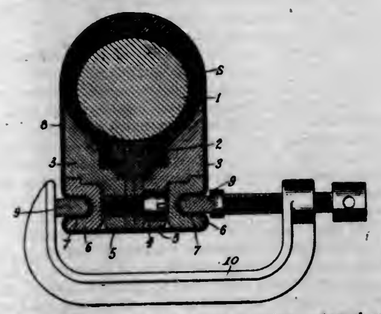


3. The combination in apparatus of the character specified, of a core adapted for insertion within a tire shoe or casing, clamping members for engagement with the margins of the casing and having their outer exposed lateral surfaces tangent to the surface of the casing, a porous wrapping or cover for the tire shoe or casing, and means for securing the wrapping or cover in position.

4. The combination in apparatus of the character specified, of a structure adapted to support and hold a tire shoe or casing and leave the tread surface exposed, said holding structure presenting lateral channels, a porous wrapping or cover for the shoe or casing and the holding and supporting structure, and means for forcing said cover or wrapping into said channels to place the said wrapping or cover under tension.

5. The combination in apparatus of the character specified, of devices for securely holding and supporting a tire shoe or casing in the form to be permanently held thereby, said devices leaving the tread portion of said shoe or casing exposed, a cover of porous material adapted to fit snugly on the exposed portion of the shoe or casing, and means for putting a lateral tension on said cover applied at the sides for the purpose of holding the same in position.

901,007. METHOD OF CURING OR VULCANIZING THE OUTER SHOES OR CASINGS OF PNEUMATIC TIRES. ERNEST HOPKINSON, East Orange, N. J., and THOMAS MIDGLEY, Hartford, Conn.; said Hopkinson assignor to The Hartford Rubber Works Company, Hartford, Conn., a Corporation of Connecticut. Filed Dec. 19, 1905. Serial No. 292,444.

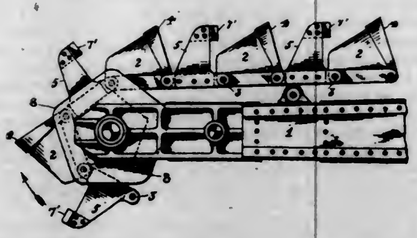


1. The method of vulcanizing or curing outer shoes or casings for pneumatic tires for vehicles which consists in

supporting the shoe or casing upon a core, placing an abutment member between the margins of the shoe or casing, clamping the shoe or casing firmly upon the core and against the abutment member, but leaving the tread portion of the shoe or casing exposed, placing a covering of textile fabric over the exposed tread portion of the shoe or casing and in contact therewith, and in subjecting the shoe or casing so supported and covered to the action of vulcanizing heat.

2. The method of curing or vulcanizing outer shoes or casings for pneumatic tires, which consists in supporting and clamping the shoe or casing so as to hold it in the form which it is intended to retain when vulcanized and leaving the tread portion of the casing above the clamping means exposed, placing a covering of porous material over such exposed portion of the casing and in contact therewith and also over the outer portions at least of the outer sides of the clamping means, subjecting such covering to lateral tension applied at the sides below the peripheries of the clamping means to create a pressure on the shoe or casing, and exposing the shoe or casing so covered and supported to the action of live steam.

901,008. ENDLESS-CHAIN BUCKET EXCAVATOR. GEORGE L. HURST, San Francisco, Cal. Filed Aug. 28, 1906. Serial No. 332,324.



1. An endless chain bucket excavator and elevator, the same including a series of excavating buckets having cutting edges and a series of independent cutting devices having cutting edges arranged to extend directly in advance of and at the same depth as the cutting edge of each excavating bucket, and in the path of travel of said cutting edges of the buckets.

2. An endless chain bucket excavator and elevator, the same including a series of excavating buckets having cutting edges, a plurality of links to connect the buckets, and a series of independent cutting devices secured to the connecting links, said cutting devices having cutting edges extending in advance of and at the same depth as the cutting edges of the buckets, and directly in the path of the travel thereof.

3. In an endless bucket excavator, the combination with a series of elevating buckets, of links for connecting the said series of buckets, of digger plates secured to and projecting from each link in advance of the buckets, and a digger or cutting device secured to and projecting from said digger plates so as to be in line with the travel of the buckets, said cutting device releasing the soil to be removed prior to the same being acted on by the buckets.

4. An endless chain bucket excavator and elevator, the same including a series of excavating buckets connected together and having cutting edges, and cutting devices provided with cutting edges arranged to extend in advance of and at the same depth as the cutting edges of the buckets, and directly in the path of travel thereof.

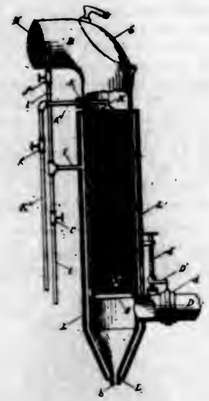
5. An endless chain bucket excavator and elevator, the same including a series of excavating buckets, a plurality of connecting links arranged in pairs between adjacent buckets, a digger plate projecting from each link and a cutting blade clamped between each pair of digger plates.

[Claims 6 to 9 not printed in the Gazette.]

901,009. PROCESS OF MAKING CHLORACETIC ETHER. GEORGES IMBERT, Nuremberg, Germany. Filed May 1, 1907. Serial No. 371,237.

A process for producing chlor-acetic ether from di-chlor-ethoxy-ethylene, which consists in subjecting the latter to the action of water in the proportion of 1:1 gram-molecule.

901,010. CAR-VENTILATING SYSTEM. FRED D. JACOBS, Paw Paw, Mich. Filed Dec. 31, 1907. Serial No. 408,849.



1. In a ventilating system, the combination of a vertical inlet stack, removable vertical cylinders for the reception of charcoal and having perforated bottoms for the exit of water of filtration, a detachable water sprinkling device situated in the upper portion of said stack for the purpose of saturating said charcoal with water, and an outlet at the bottom of said stack for the egress of the water aforesaid, together with the impurities extracted from the air, substantially as shown and described.

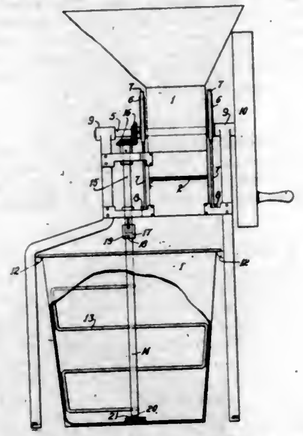
2. In a ventilating system the combination of removable vertical cylinders, an inlet stack, a shoulder encircling the interior of said stack to retain the said cylinders, a detachable water sprinkling device, an outlet at the bottom of said stack, and a steam-jacket surrounding said stack for purposes herein set forth substantially as described.

3. In a ventilating system the combination of an inlet stack, a screened opening at the upper end of said stack to exclude flying matter, a steam radiator placed across the said opening of said stack in juxtaposition to the said screen to melt snow or ice, a vent for the escape of steam from the aforesaid radiator, removable vertical cylinders and a hinged-lid near the top of the said inlet stack to permit of the removal of said cylinders; all as substantially shown and described.

901,011. APPARATUS FOR TREATING VEGETABLES. CHARLES S. KIERSTEAD, Cambridge, Mass. Filed Mar. 31, 1906. Serial No. 309,040.

1. An apparatus for treating vegetables, having, in combination, a hopper, an inclined screen arranged in the lower portion of the hopper, a pivotally mounted plunger operating through the side of the hopper and acting to cut off a portion of the material in the hopper and force it through the screen and provided with a surface to support the material left in the hopper, and mechanism for continuously actuating the plunger.

2. An apparatus for treating vegetables, having, in combination, a hopper, a screen mounted in the hopper, a reciprocating plunger movable towards and from the screen and arranged to cut off a portion of the material in the hopper and force it through the screen and provided with a surface to support the material left in the hopper, a mixing vessel arranged in position to receive the material forced through the screen, a stirrer for the material in the



mixing vessel, and connected mechanism for continuously reciprocating the plunger and rotating the stirrer.

901,012. ELECTRIC BATTERY. ISIDOR KITSEE, Philadelphia, Pa. Filed Oct. 15, 1906. Serial No. 339,095.

1. The method of depolarizing an electrode provided with a catalytic substance, which consists in impinging a jet of fluid thereon when out of contact with the electrolyte, whereby oxygen is imparted to said electrode.

2. The method of depolarizing an electrode impregnated with a catalytic substance, which consists in impinging a jet of fluid thereon when out of contact with the electrolyte, whereby oxygen is imparted to said electrode.

3. The method of depolarizing an electrode provided with a catalytic substance, which consists in impinging a jet of an oxidizing agent thereon when out of contact with the electrolyte, whereby continued catalytic action of said substance is permitted.

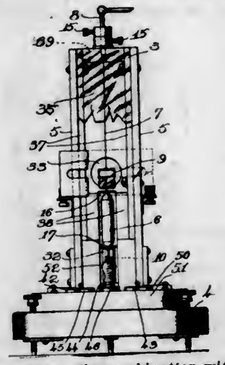
4. The method of depolarizing an electrode provided with a catalytic substance, which consists in impinging a jet of air thereon when out of contact with the electrolyte, whereby continued catalytic action of said substance is permitted.

5. The method of depolarizing an electrode provided with platinum black, which consists in impinging a jet of air thereon when out of contact with the electrolyte, whereby continued catalytic action of said platinum black is permitted.

[Claims 6 and 7 not printed in the Gazette.]

901,013. GALVANOMETER. LOUIS E. KNOTT, Boston, Mass., assignor to L. E. Knott Apparatus Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 24, 1906. Serial No. 344,836.

1. In a galvanometer, the combination with a vertical horseshoe magnet, of a plate overlying one side of said magnet and detachable from the magnet, and a vertically-arranged coil sustained by and removable with the plate and situated between the poles of the magnet.



2. In a galvanometer, the combination with a base, of a vertically-arranged magnet supported thereby, a backing plate overlying one side of the magnet and detachably secured thereto, and a vertically-arranged coil situated between the poles of the magnet and sustained by and removable with said backing plate.

3. In a galvanometer, the combination with a base, of a vertically-arranged magnet permanently sustained thereby, a backing plate detachably secured to the magnet, a coil supported by the backing plate and situated between the poles of the magnet, and a mirror associated with the coil, said backing plate having an opening in line with the mirror.

4. In a galvanometer, the combination with a vertical horseshoe magnet having an open slot in the yoke thereof, of a backing plate overlying one side of said magnet and removably secured thereto, said backing plate having an arm extending over the yoke of the magnet, a suspension ribbon sustained by said arm and extending through said slot, and a coil carried by the ribbon.

5. In a galvanometer, the combination with a base, of a magnet fixedly sustained thereby, a coil, a member detachable from the magnet and the base, means to suspend the coil from said member, a movable device carried by the member for rigidly clamping the coil thereto, said coil and device being removable from the base and magnet with said member.

[Claims 6 to 17 not printed in the Gazette.]

901,014. ALLOY. WILLIAM J. LEDDELL, Summit, N. J. Filed Jan. 29, 1908. Serial No. 413,152.

1. An alloy consisting principally of zinc, and containing substantially equal parts of aluminum and copper respectively, said alloy possessing a relatively low factor of shrinkage and a relatively high resistance to distortion from impact or pressure, and having a dense, homogeneous structure substantially free from segregated masses of crystallized zinc.

2. An alloy containing in excess of eighty-seven and one-half per cent. of zinc, and containing substantially equal parts of aluminum and copper respectively.

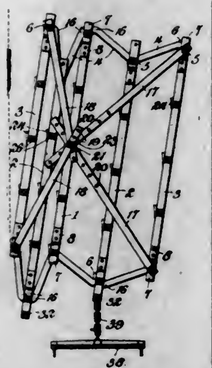
3. An alloy consisting principally of zinc and containing substantially five per cent. of aluminum and five per cent. of copper.

4. An alloy containing substantially ninety per cent. of zinc, five per cent. of aluminum and five per cent. of copper.

901,015. FOLDABLE AND ADJUSTABLE HARROW. ZACHARY M. LINDLEY, Carthage, Mo., assignor to Robert M. Sloan, Carthage, Mo. Filed May 13, 1908. Serial No. 432,714.

1. A harrow including a series of longitudinally disposed tooth carrying bars, means for connecting the tooth carry-

ing bars to permit their lateral adjustment and to maintain them in parallel relation during such lateral adjustment, and longitudinally adjustable diagonal braces extending from the center to the corners of the harrow and rigidly retaining the tooth carrying bars in their adjusted positions.



2. A harrow including a series of longitudinally disposed tooth carrying bars, means for connecting the tooth carrying bars to permit their lateral adjustment and to maintain them in parallel relation during such lateral adjustment, and diagonally disposed braces extending from the center to the corners of the harrow and inclined downwardly toward the said corners to counteract the tendency of the side bars to rise.

3. A harrow including a series of parallel longitudinally disposed tooth carrying bars provided with terminal openings, transversely disposed coupling links pivoted in the openings of the tooth carrying bars and permitting a lateral adjustment of the same and maintaining the tooth carrying bars in parallelism during such lateral adjustment, and diagonally arranged braces pivoted to the corners of the harrow and having overlapped inner ends adjustably secured together at the center of the harrow.

4. A harrow including a series of parallel longitudinally disposed tooth carrying bars provided with terminal openings, transverse coupling links pivoted in the openings of the tooth carrying bars to permit the same to be adjusted laterally and to maintain said bars in parallelism, said links being also provided with elbows to enable the tooth carrying bars to fold flat against each other, and means connected with the tooth carrying bars for rigidly retaining the same in their adjustment.

5. A harrow including a series of tooth carrying bars having terminal openings, links having their terminals arranged in the openings, fastening devices pivoting the links to the tooth carrying bars, and harrow teeth secured to the bars by the said fastening devices.

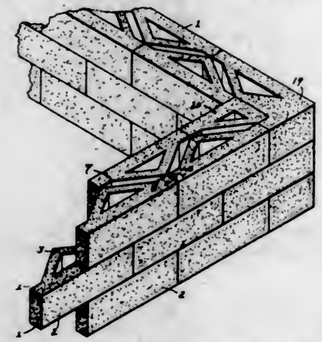
[Claims 6 to 8 not printed in the Gazette.]

901,016. SKINNING IMPLEMENT. ALONZO W. LITTLE, Colesville, N. J. Filed Jan. 28, 1908. Serial No. 413,126.



In a skinning implement of the character described, the combination of a pair of blades pivoted at one end and in the same plane to provide abutting edges, one of said blades having an enlarged bifurcated projection at its free end to embrace the opposing blade when closed, and said edges having a plurality of semicircular recesses provided with unsharpened edges extending the entire thickness of said blades and alined between said blades to form substantially circular openings of different sizes when said blades are closed, substantially as described.

901,017. CONCRETE BUILDING-WALL. MICHAEL G. MANDT, Stoughton, Wis., assignor of one-fifteenth to E. K. Loverud and one-half to Chris Olson, Stoughton, Wis. Filed May 11, 1905. Serial No. 259,998.

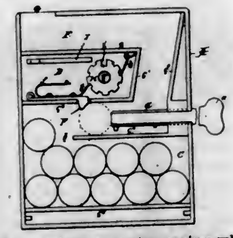


1. A concrete building wall comprising a plurality of blocks laid in courses one above another, the several blocks of such courses having parallel vertical front and rear surfaces and provided with a hollow projection, which projection is connected at its ends with the rear surface of said block at a distance from its respective ends, the projections of one course laid in overlapping and interlocking relation with the projections of the preceding and next succeeding courses, whereby a plurality of registering air passages are formed through the overlapping hollow projections of the front and rear blocks of the successive courses.

2. In a concrete building wall; the combination of a plurality of building blocks each comprising an exterior wall and two rearwardly converging walls each connected with the exterior wall at a distance from its end, the hollow projection of the block in one face of the wall registers with the hollow projection in the overlapping blocks in the opposite face of the wall, an exterior corner block comprising the vertical walls and diagonal wall with an open space; interior corner block comprising the vertical walls and diagonal wall, said blocks being provided with an open space, the angular projections of the blocks of one course being adapted to overlap and interlock with the angular projections of the blocks of the next adjacent course, all substantially as and for the purpose specified.

901,018. TOY SAVINGS-BANK. THEOPHILUS MAYHEW, Detroit, Mich., assignor to American Promoting Company, Detroit, Mich., a Corporation of Arizona. Filed May 18, 1906. Serial No. 317,637.

1. A toy money box comprising an outer casing wholly composed of a front and a back plate hinged together at one edge and spaced apart throughout their whole extent the thickness of a coin, the back plate provided with marginal flanges closing the spaces upon the sides and ends and with interior flanges partitioning the space between the front and back plate into a coin receiving compartment contained in one end of the casing and adapted to hold a limited number of coins in edgewise relation and into a coin passage connecting said coin receiving compartment with a coin slot provided in the opposite end of the casing and forming an indirect path through which coins are adapted to pass edgewise and singly into the coin receiving compartment, coin actuated mechanism for locking the front and back plate together and a push bar in the coin passage for actuating said mechanism.



2. In a toy money box, an outer casing wholly composed of a front and a back plate forming a restricted space between them through which a coin is adapted to pass edgewise only, the front plate being hinged to the back plate and the back plate provided with rim flanges inclosing the space upon the sides and ends, there being a coin slot in one of the flanges, and with interior flanges partitioning the space between the plates into a coin receiving compartment with the coin slot, a coin actuated lever projecting into the coin passage, a push bar for manually actuating the lever and means actuated by said lever to lock and unlock the front plate.

901,019. COUPON-HOLDER. CLAIRE M. MAXON, Walworth, Wis. Filed July 12, 1907. Serial No. 383,392.



1. A ticket-holder comprising a casing having an open front, a cap detachably secured to said casing, said cap having a passageway through which the ticket may be drawn, and a spring tongue extending into said passage way and adapted to frictionally engage the ticket.

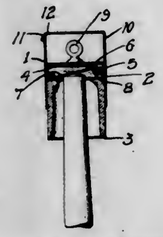
2. A ticket-holder comprising a casing having an open front, a cap adapted to fit over one end of said casing, and provided with a passage-way through which the ticket may be drawn, yielding means detachably interlocking the casing and cap, and means for retarding the withdrawal of the ticket through the cap.

3. In a ticket-holder, the combination with a casing having one side and one end open, a cap detachably connected with the open end of the casing, said cap having a ticket passageway therethrough, and a notch in its front wall and ticket retarding means arranged in said cap.

4. A ticket-holder comprising a casing, spring catches secured to said casing, a cap for said casing, said cap having openings adapted to be engaged by said catches, and means for retarding the withdrawal of a ticket through said cap.

901,020. BILLIARD-CHALK HOLDER. MARTIN MICHAELSON, Fargo, N. D., assignor of one-half to Harry T. Alsop, Fargo, N. D. Filed Sept. 20, 1907. Serial No. 393,761.

1. A holder for billiard chalk, comprising telescoping sections, one of which is formed to hold the chalk and prevent its withdrawal when the sections are together, and a latch for locking the sections together located at the inner end of the chalk holding section and said section being wholly closed except at its ends so that the latch will be inaccessible for actuation except through the open end of the chalk holding section, substantially as described.

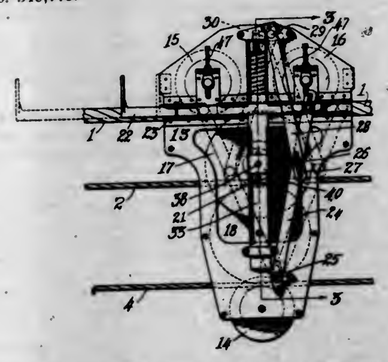


2. A holder for billiard chalk, comprising telescoping shells, the inner shell being adapted to receive the chalk and the outer shell closing in its telescoped position the opening through which the chalk is inserted, a latch provided in one of said shells and adapted to enter a recess in the other shell, a spring for pressing the latch into locking engagement with one shell to lock said shells in their telescoped relation with one another, and means located between said latch and the chalk and in position to be pressed against the latch to retract said latch from its locking position, the chalk holding section being wholly closed except at its ends and said means being inaccessible for actuation except through the chalk-holding end when open.

3. A holder for billiard chalk, comprising a shell having an opening through which the chalk is inserted, a closing means for said opening, a latch provided in said shell, a spring to press the latch into a recess in said closing means, said latch having an inclined surface, and a latch retracting plate pivoted in said shell and arranged to contact with said inclined surface and retract said latch against the tension of its spring when pressure is applied to said plate, as by the end of the cue.

4. A holder for billiard chalk, comprising an inner shell having an opening through which the chalk is inserted, an outer shell adapted to telescope with said inner shell, a sliding latch provided in said inner shell, and adapted to enter a recess in said outer shell, said latch having an inclined surface, a spring to press said latch into locking engagement with the shell, and a latch retracting plate pivoted in said inner shell and arranged to engage said inclined surface, said plate being normally concealed by the chalk but adapted to be operated by pressure, as by the end of the cue.

901,021. CONVEYING APPARATUS. THOMAS S. MILLER, South Orange, N. J. Filed Dec. 28, 1906. Serial No. 349,775.



1. In combination, a cable or trackway, a traction rope, a vehicle fixed to said traction-rope, a second vehicle

forming a traction engagement with said traction-rope by the following instrumentalities, viz: a flanged wheel and a wheel adapted to follow the traction rope into the groove worn by said rope in said flanged wheel.

2. In combination, a cable or trackway, a traction-rope, a vehicle fixed to said traction-rope, a second vehicle forming a traction engagement with said traction-rope by the following instrumentalities, viz: a flanged wheel and a presser wheel of a gage not substantially wider than the diameter of said rope.

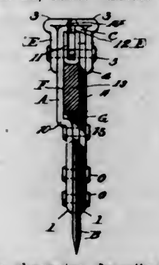
3. In combination, a cable or trackway, a traction-rope, a vehicle fixed to said traction-rope, a second vehicle forming a traction engagement with said traction-rope by the following instrumentalities, viz: two wheels between which the traction rope runs, a yoke spanning the cable and on which one of said wheels is mounted and a spring interposed between an abutment on the frame and said yoke above the cable.

4. In combination, a cable or trackway, a traction-rope, a vehicle fixed to said traction rope, a second vehicle forming a traction engagement with said traction-rope, means actuating said traction engagement and means breaking said traction engagement consisting of the following parts, viz: the buffer, a lever actuated by said buffer and a vertical slide whereby the traction engagement is controlled.

5. In combination, a cable or trackway, a traction-rope, a vehicle fixed to said traction-rope, a second vehicle forming a traction engagement with said traction-rope, means actuating said traction engagement and means breaking said traction engagement consisting of the following parts, viz: a buffer, an arm and lever actuated by said buffer and a vertical slide whereby the traction engagement is controlled.

[Claims 6 to 18 not printed in the Gazette.]

901,022. HATCHET. JOSIAH R. MCCOY, Marshalltown, Iowa. Filed Jan. 14, 1907. Serial No. 352,318.



1. A tool of the character described having the body portion thereof formed of a piece of sheet material which is looped upon itself, the poll of the body portion being provided with a recess, and a detachable cap applied to the said recessed poll of the body portion and coöperating therewith to form a nail puller.

2. A hatchet having the poll thereof recessed, and a cap applied to the poll and provided with side flanges embracing the same, the said cap coöperating with the recessed portion of the poll to form a nail puller.

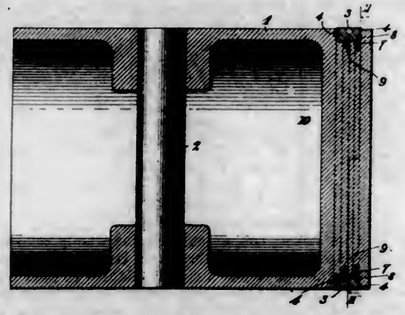
3. A hatchet having the frame thereof formed with a loop, one end of the loop being notched, and a cap applied to the notched end of the loop and coöperating therewith to form a nail puller.

4. A hatchet having the frame thereof formed with a loop, one end of the loop being notched, a recessed filler fitting within the notched end of the loop, and a cap applied to said notched end of the loop and coöperating therewith and with the recessed filler to form a nail puller.

5. A hatchet having the frame thereof formed with a loop and one end of the loop being notched, a U-shaped filler fitting within the notched end of the loop, and a cap applied to the notched end of the loop and coöperating therewith and with the U-shaped filler to form a nail puller.

[Claim 6 not printed in the Gazette.]

901,023. PISTON-PACKING FOR EXPLOSION-ENGINES. JOHN J. MCGEE, New York, N. Y., assignor of one-half to Anthony F. S. Geoghegan, Brooklyn, N. Y. Filed Sept. 5, 1907. Serial No. 391,419.



1. In combination with a piston body having a groove, a packing comprising a packing ring having an interior web or tenon, said groove being recessed at its bottom to receive said web or tenon, and a spring wedge ring with a conical outer edge engaging said packing ring to force the same endwise and outward.

2. In combination with a piston body having a groove, a packing comprising a packing ring having a transverse width to exactly fit the width of said groove, and a spring wedge ring with a conical outer edge engaging said packing ring on an interior surface thereof and entirely within said groove, to force such packing ring endwise and outward.

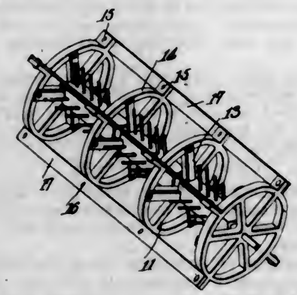
3. In combination with a piston body having a groove, a packing comprising a packing ring having a transverse width to exactly fit the width of said groove, and an expansible wedge ring with a conical outer edge engaging said packing ring at an interior surface thereof within said groove to force the packing ring endwise and outward.

4. A packing for pistons comprising a packing ring, a spring wedge ring with a conical outer edge engaging said packing ring to force the same endwise and outward, and an additional spring ring beneath the packing ring and forcing the same outward.

5. A packing for pistons comprising a packing ring, a spring wedge ring with a conical outer edge engaging said packing ring to force the same endwise and outward, and an additional spring ring beneath the packing ring and forcing the same outward, said last mentioned ring having a rib or tenon engagement with the packing ring to constitute a steam-tight joint therewith.

[Claims 6 to 11 not printed in the Gazette.]

901,024. CONCRETE-MIXER. JAMES E. MCKEON, Wilkes-Barre, Pa. Filed June 12, 1908. Serial No. 438,191.



1. A mixing machine including a casing, a shaft mounted for rotation within the casing, spiders secured to and

mounted for rotation with the shaft, tubular members interposed between the spiders, longitudinally disposed mixing blades carried by the spiders, and agitating devices secured to the tubular members.

2. A mixing machine including a casing, a shaft journaled in said casing, spaced spiders rigidly secured to the shaft and provided with peripheral lugs, longitudinally disposed mixing members connecting the lugs, tubular members interposed between the spiders, agitating pins threaded in the tubular members, and means for rotating the shaft.

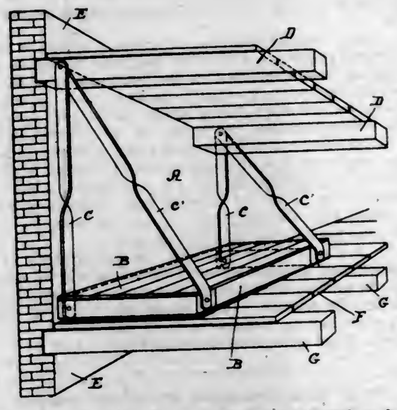
3. A mixing machine including a casing, a shaft journaled in the casing, spaced spiders secured to and mounted for rotation with the shaft, tubular members interposed between the spiders and provided with oppositely disposed arms for attachment to the adjacent spiders, longitudinally disposed mixing blades secured to the peripheral edges of the spiders, and intersecting agitating fingers carried by the tubular members.

4. A mixing machine including a casing, a shaft mounted for rotation within the casing, spaced spiders secured to and mounted for rotation with the shaft, lugs extending laterally from the peripheral edges of the spiders, longitudinally disposed mixing blades secured to the lugs, tubular members interposed between the spiders and provided with angularly disposed arms for attachment to said spiders, there being threaded openings formed in the walls of the tubular members, and agitating pins engaging the threaded walls of the openings.

5. A mixing machine including a casing having a mixing chamber and provided with a hopper communicating with said chamber, a shaft mounted for rotation within the casing, spaced spiders secured to the shaft and mounted for rotation with the latter within the mixing chamber, tubular members surrounding the shaft and interposed between the spiders, a plurality of spaced lugs extending laterally from the peripheral edges of the spiders, longitudinally disposed mixing blades secured to said lugs, and intersecting agitating fingers carried by the tubular members.

[Claim 6 not printed in the Gazette.]
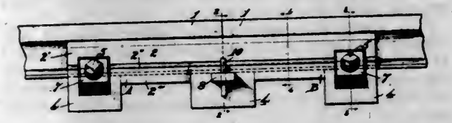
901,025. PLATFORM FOR POWER-MOTORS. ARNOLD NACKE, Philadelphia, Pa., assignor of one-half to Isidor Kitsee, Philadelphia, Pa. Filed May 27, 1905. Serial No. 262,639.



1. A platform for heavy machinery adapted to be arranged adjacent to the floor of a room, in combination with hangers by which said platform is supported from the joists or girders of a floor above, said hangers being connected to said joists or girders adjacent to the point of support of the joists or girders in the wall of the building, and means in the plane of the platform for anchoring the latter to said wall, whereby the transmission of vibration of the machinery to the floor adjacent to which it is placed is prevented, the transmission of such vibration to the floor above being minimized by absorption of the vibration by the hangers and by the attachment thereof near the wall.

2. A platform for heavy machinery adapted to be arranged adjacent to the floor of a room, in combination with hangers by which said platform is supported from the joists or girders of a floor above, said hangers being connected to said joists or girders adjacent to the point of support of the joists or girders in the wall of the building, a rod in the plane of the platform and adapted to be passed through the wall for anchoring the platform to said wall, and means carried by said rod for holding the same in engagement with the wall, whereby the transmission of vibration of the machinery to the floor adjacent to which it is placed is prevented, the transmission of such vibration to the floor above being minimized by absorption of the vibration by the hangers and by the attachment thereof near the wall.

901,026. COMBINED RAIL-JOINT AND ANTI-RAIL-SPREADER. ALFRED H. NEWPHER, Chicago, Ill. Filed June 22, 1907. Serial No. 380,238.



1. In a device of the class described, the combination, with the rails, of a pair of angle irons shaped to conform to the web and foot portions of said rails, a plurality of depending flanges upon each of said angle irons, bolts connecting certain of said flanges for binding said angle irons upon said rails, a rod passing through others of said flanges, and wedges passing through said rod and adapted to press said angle irons, upon said rails, substantially as described.

2. In a device of the class described, the combination with the abutting ends of the rails, of a pair of angle irons shaped to conform to the web and foot portions of said rails, a depending flange at each end of each of said angle irons, said angle irons also having an intermediate depending flange, bolts connecting said end flanges, a flat bar passing through said intermediate flanges close beneath the abutting ends of the flanges and means for securing said bar in place.

3. In a device of the class described, the two rails of a track, in combination with a pair of angle irons upon each said rail and conforming to the shape of the web and foot portions thereof, a plurality of depending flanges upon each of said angle irons, bolts connecting certain of said flanges for binding said angle irons upon said rails, a rod passing through other flanges upon the angle irons on both said rails, and means upon said rod for rigidly spacing said rails apart, said means also serving as additional means for binding said angle irons upon said rails, substantially as described.

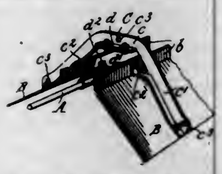
4. In a device of the class described, the combination, with the rails, of a pair of angle irons shaped to conform to the web and foot portions of said rails, depending flanges upon each of said angle irons, curved bolts connecting certain of said flanges for binding said angle irons upon said rails, blocks interposed between said bolts and the foot of said rails, a rod passing through others of said flanges, and wedges passing through said rod and adapted to press said angle irons upon said rails, substantially as described.

5. In a device of the class described, the two rails of a track, in combination with a pair of angle irons upon each of said rails and conforming to the shape of the web and the foot portions thereof, depending flanges upon each of said angle irons, curved bolts connecting certain of said flanges for binding said angle irons upon said rails, blocks interposed between said bolts and the foot of said rails, a rod passing through other flanges upon the angle irons on

both said rails, and means upon said rod for rigidly spacing said rails apart, said means also serving as additional means for binding said angle irons upon said rails, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

901,027. SAFETY-GUARD FOR TROLLEY-WHEELS. FRANK J. NOLAN, Buffalo, N. Y., assignor to The Automatic Trolley Guard Company, Buffalo, N. Y. Filed Sept. 13, 1907. Serial No. 392,633.



1. A guard for trolley wheels having upwardly converging side portions separated by an intervening uncovered opening, means for connecting said side portions, and means for supporting the trolley wire in said intervening opening, substantially as set forth.

2. A guard for trolley wheels having upwardly converging side portions of imperforate material separated by an intervening uncovered opening, means for connecting said side portions, and means for supporting the trolley wire in said intervening opening, substantially as set forth.

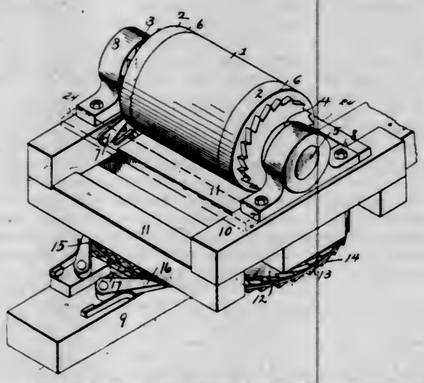
3. A guard for trolley wheels having upwardly converging side portions separated by an intervening uncovered opening, yokes connecting said side portions, and means on said yokes for supporting the trolley wire in said intervening opening, substantially as set forth.

4. A guard for trolley wheels having upwardly converging side portions separated by an intervening uncovered opening, and provided with upturned flanges adjacent to said opening, means for connecting said side portions, and means for supporting the trolley wire in said intervening opening, substantially as set forth.

5. The combination with a trolley wheel and a trolley wire, of a guard for the trolley wheel comprising separated side pieces or wings arranged on opposite sides of the trolley wire lengthwise thereof and converging upwardly toward said wire, means for connecting said side pieces, and means for supporting said wire between the same, substantially as set forth.

[Claim 6 not printed in the Gazette.]

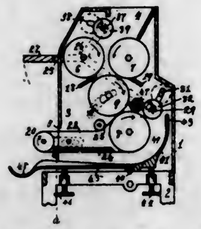
901,028. DOLLY OR SKID ROLLER. ULYSSES M. ORR, Hendersonville, N. C. Filed Jan. 4, 1908. Serial No. 409,347.



1. In a device of the character specified, the combination of a lower frame, an upper frame mounted to turn upon the lower frame about a vertical axis, and provided with a load sustaining roller, a metal ring secured to one of the frames and provided with two sets of ratchet teeth facing in opposite directions, and pawls fitted to the other frame and coöperating with said ratchet teeth to secure the upper frame in an adjusted position.

2. In combination, a lower frame, an upper frame mounted upon the lower frame to turn about a vertical axis and provided with a load sustaining roller, a flat metal ring secured to the underside of the upper frame and provided with two sets of ratchet teeth facing in opposite directions, pawls applied to the lower frame and coöperating with said ratchet teeth, and wear plates secured to the upper side of the lower frame and coming beneath the said flat ring.

901,029. LOAF-FORMING MACHINE. CHARLES H. OVERKAMP, Cincinnati, Ohio, assignor to The Triumph Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Aug. 12, 1907. Serial No. 388,189.



1. In a loaf forming machine, the combination of a feed roller, an apron roller, a pressure roller adjustable concentric therewith and in relation to the feed roller, a forming roller in gravity contact with the apron roller and means for driving said rollers at substantially the same peripheral speed.

2. In a loaf forming machine, the combination of a casing provided with a hopper, a feed roller and an apron roller journaled therein, a gravity forming roller arranged to coöperate with the apron roller, means arranged for controlling the pressure thereof toward the apron roller, and means coöperating with the feed roller for automatically moving the forming roller from the apron roller.

3. A loaf forming machine comprising a casing, a yoke trunnioned thereon, a feed roller journaled in the casing, a tripping roller journaled on the yoke and arranged to coöperate therewith, a gravity forming roller journaled on the yoke, and a weight adjustable on the yoke for partially counterbalancing the weight of the forming roller.

4. A loaf forming machine comprising a driven endless apron, means for forming and delivering thereon a sheet of dough, a yoke trunnioned at a fixed point, a gravity forming roller journaled thereon and coöperating with the apron, and a weight adjustable on the yoke for partially counterbalancing the forming roller.

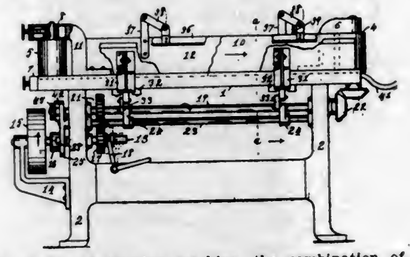
5. In a loaf forming machine, the combination of a tripping roller, a forming roller movable thereby an apron roller, an endless apron carried thereby, a curved guide adjustable in relation to the apron roller, and a mold board adjustable in relation to the apron.

[Claim 6 not printed in the Gazette.]

901,030. LOAF-FORMING MACHINE. CHARLES H. OVERKAMP, Cincinnati, Ohio, assignor to The Triumph Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 28, 1907. Serial No. 399,492.

1. A loaf forming machine comprising an endless apron, means for moving it intermittently, a forming board longitudinally parallel with and laterally inclined in relation to the apron, and means for reciprocating the board in a direction perpendicular to the apron and in unison with its movements.

2. In a loaf forming machine, the combination of a driven shaft, an endless apron, interchangeable means actuated by the shaft for driving the apron either continuously or intermittently a forming board parallel with the apron, and means for reciprocating it in a direction perpendicular thereto.



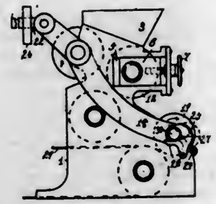
3. In a loaf forming machine, the combination of a table, vertical rollers thereon, an endless apron carried by the rollers, a forming board parallel therewith and adjustable in different vertical angles, and mechanism for simultaneously moving the apron and reciprocating the board in a direction perpendicular thereto.

4. The combination of a table, a forming board movable thereon, a rock shaft provided with an arm, connections between the shaft and the board, a driven shaft, an eccentric thereon and connections therewith adjustably secured on the arm.

5. The combination of a horizontal table, a vertical roller thereon, an endless apron carried by the roller, an inclined forming board mounted on the table parallel with the apron, a gravity board swingingly depending from fixed points and between the apron and said forming board, and adjustable driven mechanism for driving the roller with the apron and simultaneously reciprocating the forming board laterally in a horizontal plane.

[Claims 6 to 9 not printed in the Gazette.]

901,031. LOAF-FORMING MACHINE. CHARLES H. OVERKAMP and FRANK STREICH, Cincinnati, Ohio, assignors to The Triumph Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Feb. 14, 1908. Serial No. 415,834.



1. A loaf forming machine comprising coöperating rollers, the one being movable by gravity toward the other, and automatic means arranged to temporarily check its return movement.

2. A loaf forming machine comprising coöperating rollers, the one being movable by gravity toward the other, means for driving the rollers at different speeds, and means for automatically locking and releasing said movable roller at a predetermined point in its return movement.

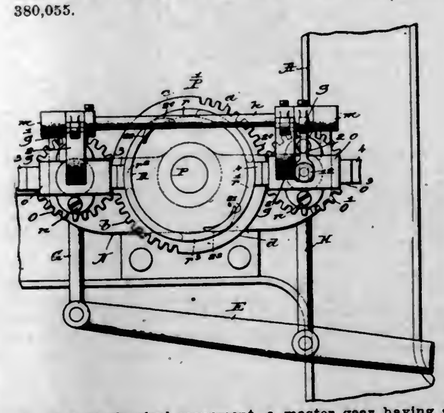
3. A loaf forming machine comprising coöperating rollers, the one being movable by gravity toward the other, means for automatically intercepting the return movement of the movable roller, and means for driving said rollers at different peripheral speeds respectively.

4. A loaf forming machine comprising an apron roller, an endless apron carried thereby, a yoke trunnioned at fixed points, a forming roller supported thereon and adapted to contact by gravity with the apron, a weight adjustable on the yoke for partially counterbalancing the weight of the forming roller, and automatic means for intercepting the movement of the yoke.

5. A loaf forming machine comprising coöperating driven rollers, the one being movable in relation to the other, and a gravity latch arranged to automatically and momentarily retain the said movable roller in a predetermined position.

[Claim 6 not printed in the Gazette.]

901,032. MECHANICAL MOVEMENT. ALONZO R. PATTEN, Fall River, Mass. Filed June 21, 1907. Serial No. 380,055.



1. In a mechanical movement, a master gear having a continuous circular rim projecting from the face thereof, a mutilated pinion and a sliding tooth crossing said pinion in the plane of said rim, the inner side of said tooth coacting with the outer side of said rim and preventing accidental starting of said mutilated pinion.

2. In a mechanical movement, a mutilated pinion having upon one face a transversely arranged sliding bolt, and a master gear provided with a continuous circular rim projecting from the face thereof and slotted at intervals, combined with means to move one end of said bolt into a slot of said rim that the latter may strike said bolt and start the mutilated pinion that it may be thereafter engaged and partially rotated by said master gear, the unslotted portion of said rim serving the purpose of an auxiliary locking device to restrain the rotation of the pinion while a toothed portion of said master gear is moving through an untoothed portion of said pinion.

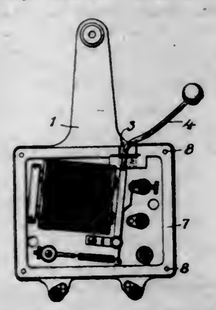
3. In a mechanical movement, a rotatable master gear having at its side a rim provided with a notch, a shaft carrying said master gear, a parallel shaft a mutilated pinion thereon, a sliding bolt revoluble with said pinion, a link device connecting said gear and bolt, and means for moving said link device positively.

4. In a mechanical movement, a rotatable master gear having at its side a rim provided with a notch, a shaft carrying said master gear, a parallel shaft a mutilated pinion thereon, a sliding bolt revoluble with said pinion, a link device connecting said gear and bolt, and means connected with said link device to project one end of said bolt that it may engage a notch of said rim, the latter starting through said tooth the mutilated pinion that its teeth may be engaged by the teeth of the master gear and the mutilated pinion be turned for one-half of a rotation.

5. In a mechanical movement, a rotatable master gear having at its side a rim provided with a space, a shaft upon which said master gear is mounted, a parallel shaft a mutilated pinion thereon, a sliding bolt revoluble with said pinion, and a toggle joint connection between said pinion and bolt, combined with means coacting with said toggle to project one end of said bolt that it may enter the space of the rim connected with said master gear, said rim effecting the starting of the shaft having the mutilated pinion.

[Claims 6 to 13 not printed in the Gazette.]

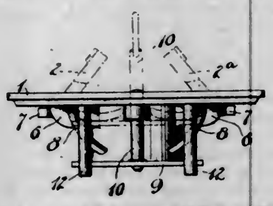
901,033. ELECTRIC BELL. GEORGE L. PATTERSON, New York, N. Y., assignor to Alice C. Patterson, New York, N. Y. Filed Sept. 28, 1907. Serial No. 394,943.



1. In an electric bell, the combination of a base, a cover secured thereto having a slot, a vibrating hammer rod passing through said slot, a bracket below the path of operation of the hammer rod in line with said slot, a shield located between the bracket and said cover, and a stud and slot connection between said bracket and shield.

2. In an electric bell, the combination of a base, a cover secured thereto having a slot, a vibrating hammer rod passing through said slot, a bracket below the path of operation of the hammer rod in line with said slot, a shield arranged between the bracket and said cover, a slot in said bracket, and a stud on the shield standing in said slot.

901,034. STAGE-POCKET. GEORGE L. PATTERSON, New York, N. Y., assignor to Alice C. Patterson, New York, N. Y. Filed Oct. 17, 1907. Serial No. 397,865.



1. In a receptacle, a floor-plate having a passage therethrough, a pair of companion coöperating lids hinged at their opposite outer ends, a pivoted shaft connected with the hub of each lid, a crank on each of said shafts, a movable plate coöperating with both of said cranks, and a plunger for moving said plate, said plunger passing through said floor-plate to one side of said lid for manual engagement.

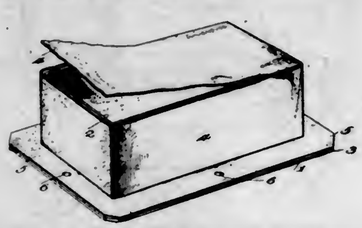
2. In a receptacle, a floor plate having a passage therethrough, a pair of companion coöperating lids hinged at their opposite outer ends, a pivoted shaft connected with the hub of each lid, a crank upon each of said shafts, a movable plate coöperating with both of said cranks, and means for moving said plate, said means passing through said floor plate to one side of said lids for manual engagement.

901,035. ROLLER FOR MAPS, CHARTS, &c. HERBERT W. PATTON, Indianapolis, Ind. Filed Nov. 15, 1906. Serial No. 343,634.



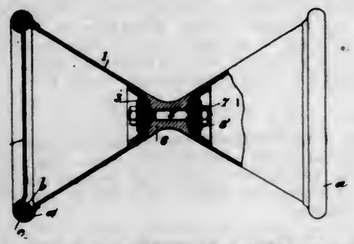
The combination of a metal roller formed of a sheet of metal coiled to make a tube with its edges overlapping each other and pressing against each other when nothing is between them, and a map, chart or the like with its end coiled within said roller and in frictional engagement with the entire inner surface thereof.

901,036. ANTIFRAUD-BOX. MATHIAS PAVELETZ, Canby, Oreg. Filed Apr. 24, 1908. Serial No. 429,032.



A device of the character described, comprising a flat base, a box proper mounted upon the base and embodying sides and a bottom independent of the base and terminating short of the edges thereof to provide an outstanding marginal portion, a cover incasing the box proper and formed at its edge with an outstanding flange abutting against the marginal portion of the base, and means for permanently securing the flange to said marginal portion, as and for the purpose specified.

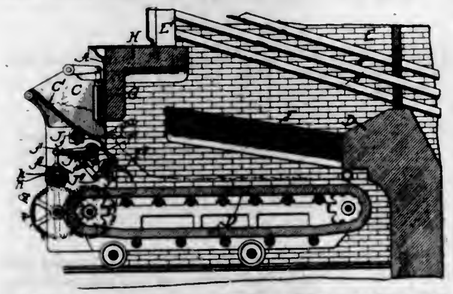
901,037. DOUBLE TOP. GUSTAVE PHILIPPART, Paris, France. Filed June 22, 1906. Serial No. 322,803.



In a double headed spinning top of the character described the combination with a pair of hollow cone members, of a central connecting member having ends designed to conform in shape to and embrace the apices of said cone members, a substantially cup shaped gasket arranged within the apex of each cone member, a through and through connection passing through a bore in the connecting member and having its ends projecting into the cone members, securing means placed on the ends of said connection and tightly seated against the said gaskets to draw the cone members firmly together, a cap for each cone member having a convolute edge adapted to be secured to the wall of the cone member, and an elastic ring held in the annular space formed by the said convolute edge.

901,038. FURNACE. HERMAN A. POPPENHUSEN, Evanston, and JOSEPH HARRINGTON, Chicago, Ill. Filed May 25, 1907. Serial No. 375,587.

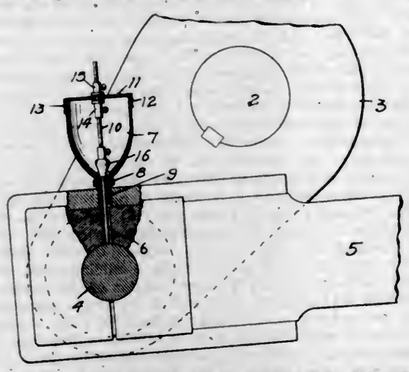
1. In a furnace, the combination of a traveling grate having a substantially horizontal fuel supporting surface, a substantially horizontal deflecting partition extending from the rear end of the furnace forwardly over said grate, to a point near the forward end of the grate, and an inclined, non-aerating fuel support at the forward end of the grate adapted to sustain a layer of fuel during a preliminary coking operation, and for the downward movement of said layer thereover by the action of gravity to the forward end of the grate, said fuel support embracing fuel agitating means adapted to maintain the coal in said layer in a fragmentary condition without stirring or mixing the same during the coking operation.



2. In a furnace, the combination with a traveling grate having a substantially horizontal fuel supporting surface, a deflecting partition extending from the rear end of the furnace forwardly over said grate, and an inclined, non-aerating fuel support at the front of the furnace adapted to sustain thereon a layer of fuel during a preliminary coking operation, and for the downward movement of said layer of fuel thereover by the action of gravity, said support embracing a plurality of vibrating plates forming agitating means by which the coal in said layer is maintained in a fragmentary condition without stirring or mixing the same, during the coking operation.

3. A furnace provided with a traveling grate, a deflecting partition extending from the rear end of the furnace forwardly over said grate and an inclined non-aerating fuel support at the forward end of said grate, said support consisting of a plurality of transverse, horizontal, overlapping, inclined, pivotally supported plates formed to provide transverse ledges or shoulders in said inclined support, and means for giving oscillatory motion to said plates.

901,039. GREASE-CUP. JOHN RANK, Minneapolis, Minn. Filed Apr. 6, 1908. Serial No. 425,296.



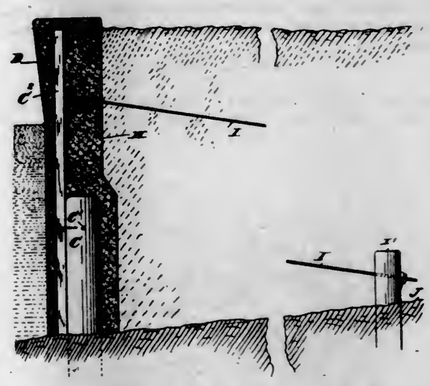
1. The combination, with a movable bearing, of a grease cup mounted thereon and having a suitable cover, a rod arranged within said cup and extending down into said bearing and up through said cover, and means on said rod above and below said cover whereby said rod is held rigid or permitted a limited longitudinal movement in the revolution of the bearing.

2. The combination, with a movable bearing, of a grease cup mounted thereon and having a suitable cover, a rod mounted in said cup and bearing, and collars adjustably mounted on said rod above and below said cover, and whereby said rod is held rigid or permitted to move longitudinally, for the purpose specified.

3. The combination, with a bearing, of a grease cup mounted thereon and having a passage leading to said bearing, a rod arranged within said cup and bearing and having a longitudinal movement, a cone adjustably mounted on said rod and adapted to regulate the feed of the grease through said passage, a cover for said cup through which said rod extends, and a collar adjustably mounted on said rod above said cover, and by means of which the adjustment of said cone and the feed of the grease may be determined.

4. A grease cup, having a cover and a threaded discharge opening in its lower end, an interiorly threaded bushing fitting within said opening and having flattened surfaces for application of a wrench thereto, said bushing being interiorly threaded, a nipple fitting within said bushing and having a lower threaded end to enter a bearing and a rod adapted to slide in said nipple and through an opening in said cover and having a cone to close the passage through said nipple, substantially as described.

901,040. SEA-WALL. FREDERICK O. RAY, Detroit, Mich., assignor of one-half to Andrew Healy, Detroit, Mich. Filed May 29, 1907, Serial No. 376,287. Renewed Sept. 10, 1908. Serial No. 452,451.



1. A sea wall formed of concrete or cement, piles partially driven in a water bed, their projecting ends wholly inclosed within the concrete wall to present a continuous unbroken surface, substantially as described.

2. A sea wall formed of concrete, piles partially driven in a water bed, a reinforcing fabric secured to their projecting ends, the projecting ends of said piles and the fabric being wholly inclosed within the concrete wall so as to present a continuous undivided surface, substantially as described.

3. In a sea wall formed of concrete, piles driven in a water bed their ends projecting above the bottom but below the water level, upstanding timbers secured to the piles, a concrete reinforcing fabric secured to said timbers, the construction being such that the concrete incloses the fabric, their supporting timbers and the projecting ends of the piles, forming a continuous wall, substantially as described.

4. A continuous sea wall formed of concrete, piles driven in a water bed, their projecting ends embedded in the concrete wall, and projecting dowel pins driven in the piles and embedded in the concrete wall, substantially as described.

5. A sea wall formed of concrete, piles driven in a water bed, their projecting ends inclosed within the concrete wall, said wall formed with an abutment adjacent to each pile to inclose the latter, forming a continuous wall, substantially as described.

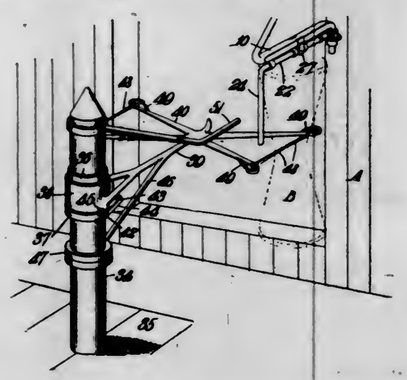
[Claim 6 not printed in the Gazette.]

901,041. OVERLAPPING THE EDGES OF GARMENTS. LOUIS RING, Leesburg, Va. Filed Oct. 9, 1906. Serial No. 338,177.



The herein described cuff for the edges or bottoms of garments, composed of material the free edge of which is twice folded upon itself, with the selvage entirely inclosed and concealed, the material beyond such doubly folded portion being twice folded upon itself, to correspond in thickness with the first mentioned folded portion, one edge of the second mentioned folded portion being close to the inner edge of the first mentioned folded portion, the cuffs so formed being of uniform thickness at every point.

901,042. MAIL-CATCHER. ROBERT R. ROTH, Easton, Md. Filed Feb. 24, 1908. Serial No. 417,449.



1. In a mail catcher the combination with a fork and a support therefor; of oppositely disposed retaining fingers mounted upon the fork, and resilient means for holding the fingers normally in position across one end of the fork.

2. In a mail catcher the combination with a standard; of a fork supported thereby and mounted to swing thereabout, said fork being located constantly in the same plane of rotation, and spring controlled means for initially retarding the movement of the fork.

3. In a mail catcher the combination with a standard; of a fork supported thereby and mounted to swing in a circle therearound, said fork being maintained at all times in the same plane of movement.

4. In a mail catcher the combination with a standard, a sleeve revolubly mounted thereon, and an anti-friction bearing for the sleeve; of a fork connected to and movable with the sleeve, and yieldingly supported means engaging said sleeve for initially retarding the movement of the sleeve and fork.

5. In a mail catcher the combination with a standard and a sleeve revolubly mounted thereon; of an arm extending from the sleeve, a double fork carried by the arm, and spring controlled bag retaining means mounted upon and normally extending across each end of the fork.

[Claims 6 and 7 not printed in the Gazette.]

901,043. SAFETY-GUN. ORLANDO E. SCOTT, Hamilton, Ontario, Canada. Filed July 27, 1907. Serial No. 385,863.



1. In a breech loading safety fire-arm, a locking bolt pivoted at one end to the interior of the gun case, constructed with a projection to lock the trigger, a thumb piece to depress the locking lever, a projection to enter and lock the breech block, and a spring connecting the locking bolt and the case under it, to return the locking bolt to its horizontal position after being depressed by the thumb piece, for the purpose specified.

2. In a breech loading safety fire-arm, a trigger having a rigid up-standing arm and a pivoted locking bolt having a projection thereon to engage said trigger arm and lock the trigger when the locking bolt is depressed and the said projection comes in front of the trigger arm and locks the trigger, to prevent premature explosion of cartridge, as specified.

3. In a breech loading safety fire-arm, a trigger pawl (26) pivotally attached to the trigger frame and connected to the trigger by connecting bars, the said pawl made to engage with a notch in the hammer, until released and a flat spring under the said connecting bars made to impinge on a lug (28) of the trigger to throw the trigger arm (22) backwards to cause the said pawl to engage with a notch (46) of the hammer (C) substantially as and for the purpose specified.

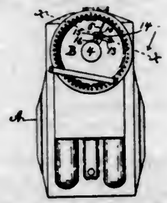
4. In a breech loading safety fire-arm, in combination with the hammer, and breech block, of lugs formed on the breech block, a hooked catch pawl (9) pivotally attached to the lugs, a roller (11) pivotally secured to the said catch pawl, an incline plane formed in the case to receive the said roller and disengage the hook of the pawl from the hammer, and a spring made to impinge on the said catch pawl, substantially as and for the purpose specified.

5. In a breech loading safety fire-arm in combination with an oscillating hammer, an auxiliary tube (32) attached to the stock and barrel, a rear sliding block (31) in the said tube, a pair of horizontal bars (30) pivotally connected to the hammer, and to the said sliding block, a forward sliding block (35) also inclosed in the said tube, a horizontal rod (34) made to connect both front and rear sliding blocks, a stop pin (15) through the said rod at the outer end of it, a spiral main spring (36) made to surround the said rod (34) between the rear sliding block, and the front sliding block, a sliding hand grip (38) made to surround the outer portion of the auxiliary tube (32) and slide on the barrel of the gun, a horizontal slot (40) formed on each side of the tube (32), a screw 37 made to pass through each of said slots and into the forward sliding block (35), so that the sliding block can move back and forth to compress the main spring and oscillate the hammer.

[Claim 6 not printed in the Gazette.]

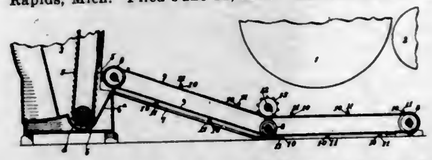
901,044. COIN-CONTROLLED GAS-METER. HAROLD T. SLOPER, New Britain, Conn. Filed July 21, 1908. Serial No. 444,587.

In a coin controlled gas meter, a coin slot plate having a coin slot, a slide movably mounted on the inner side of the said plate for opening and closing the coin slot therein, a finger piece on the outer side of the said plate for operating the said slide, and a keeper fixed on the said plate on that side of the finger piece towards which the finger piece is moved for closing the coin slot, the said finger



piece and keeper being adapted for being locked together to hold the slide in position to close the coin slot.

901,045. CARDING-MACHINE. JAMES STEWART, Grand Rapids, Mich. Filed June 21, 1907. Serial No. 380,083.



1. In combination with a carding machine having cards and a feeder, means for returning the material escaping from the cards to the feeder comprising a continuous surface extending beneath the cards and to the feeder, a conveyer traversing the said surface toward the feeder and thence upward, and thence in an opposite direction at a distance above the said surface and means for operating the conveyer.

2. In combination with a carding machine having cards and a feeder, a continuous surface extending from beneath the cards to the feeder and having therein a screen formed of parallel bars, and a conveyer comprising transversely arranged drags traversing said surface and thence moving upward and thence in an opposite direction at a distance above said surface, and means for operating said drags.

3. In combination with a carding machine having cards and a feeder provided with an apron and a case inclosing the apron and provided with an opening in its side adjacent to the cards, a continuous surface extending from said opening to beneath the cards, drags traversing said surface, sprocket chains attached to the respective ends of said drags and arranged with their lower portions parallel with said surface and close thereto and with their upper portions at a distance therefrom, and means for simultaneously moving the lower parts of said chains toward the feeder.

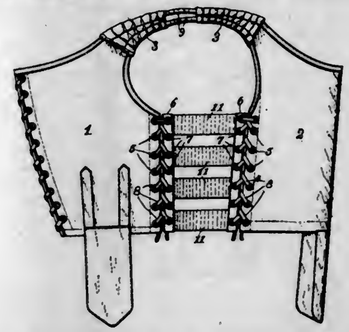
4. In combination with a carding machine, a feeder having an apron and a case having an opening opposite the apron, a screen formed of parallel bars with one end joined to the case at said opening, sprocket chains traversing the respective edges of the screen toward the feeder at their lower portions and extended beneath the carding machine, and drags attached to the chains and traversing close to the screen in one direction and at a distance above the screen in the opposite direction.

5. In combination with a carding machine and a feeder, an inclined screen communicating with the feeder, chains traversing the respective edges of the screen and extending beneath the carding machine, flanged rollers engaging the chains, offset arms on the chains, straps attached to said arms and traversing the screen, and means for simultaneously moving the chains.

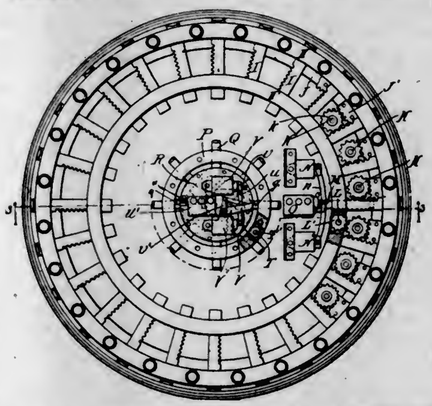
[Claim 6 not printed in the Gazette.]

901,046. UNDERWAIST. ELLEN W. STILES, Grand Rapids, Mich. Filed Sept. 9, 1907. Serial No. 391,945.

In a garment, front and rear portions spaced apart at and beneath the arm-holes, each portion having a series of eyelets in each adjacent edge, lacing strips having corresponding lacing eyelets, lacings for the eyelets to secure the respective strips to the respective edges, the front and rear portions each carrying a socket, a shoulder strap having a projection at each end for engagement in the sockets of the front and rear portions, a covering for said strap, and flexible connections between said lacing strips.



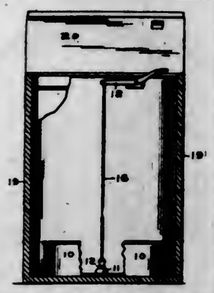
901,047. SAFE OR VAULT DOOR. EMIL A. STRAUSS, Chicago, Ill. Filed Oct. 13, 1905. Serial No. 282,614.



1. The combination with a main safe or vault door provided with an opening in its central part, and locking means therefor embracing bolts, means for casting and retracting the bolts and bolt dogging means, all of said locking means being located upon the marginal part of said door exterior of the said opening, of an emergency door adapted to fit within but which is removable from said opening, and locking means for said emergency door embracing bolts, means for casting and retracting the bolts and bolt dogging means, said locking means being mounted upon said emergency door and being operable independently of the operation of the locking means belonging to the main door.

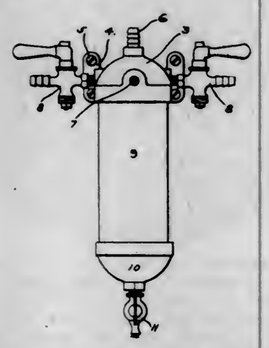
2. The combination with a main safe door of circular form provided with a central, circular opening therein and locking means embracing radially arranged bolts, means for casting and retracting the bolts and bolt dogging means, all located within the annular space between the said central opening and the edge of the main door, of a circular emergency door adapted to fit within and removable from said opening, and locking means for said emergency door embracing locking bolts, means for casting and retracting the bolts, and bolt dogging means, said locking means being mounted on said emergency door and operable independently of the operation of the locking means belonging to the main door.

901,048. DRINKING-FOUNT FOR LIVE STOCK. HARRY B. TALLEY, Farmland, Ind. Filed Oct. 3, 1907. Serial No. 395,766.



A drinking-fount comprising a supply-tank provided with an outflow opening communicating with the drinking-trough, a hollow filling tube communicating with the upper exterior portion of said tank and extending downwardly within and terminating near the bottom of said tank, a drinking-trough arranged near the lower exterior portion of said tank, a vent-pipe communicating with said drinking-trough and extending upwardly within and terminating near the top of said tank, a valve to close the outflow opening between the tank and drinking-trough, a lever pivotally secured to the upper exterior surface of said tank, a rod connecting the valve and lever together, a casing for said tank, and a cover for said casing adapted to actuate the lever and valve when lowered to seal the top of said casing.

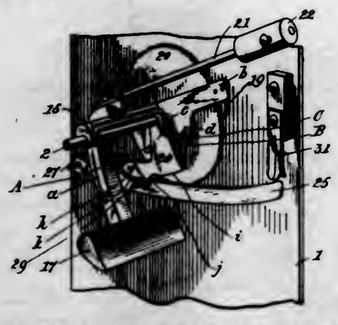
901,049. FLUID-PRESSURE DISTRIBUTER. JOSEPH B. TUOR, St. Paul, Minn. Filed Oct. 4, 1905. Serial No. 281,364.



A fluid pressure distributer comprising a head having means for securing it on the wall and provided with an open threaded lower end and with an upwardly projecting nipple adapted to receive a tube connection, said head having a series of ports in its wall and valves for said ports, a cylinder open at each end and having a threaded upper end removably fitting within the open threaded end of said head and capable of removal therefrom without detaching the head from the wall, a second head mounted on the lower end of said cylinder and closing the same and having a suitable drain cock and removable with said cylinder from said first named head, substantially as described.

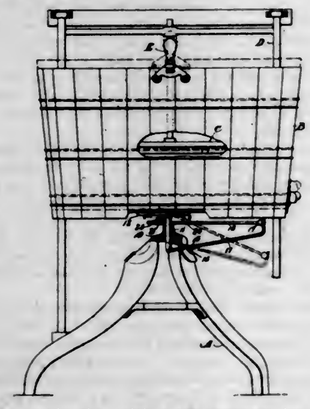
901,050. ELECTRIC CLOCK. CHARLES H. WHITE, Sparrows Point, Md. Filed Apr. 24, 1907. Serial No. 369,928.

1. In an electric clock, the minute arbor thereof provided with a tight ratchet wheel, a rocker which is loose on the arbor having an extended weighted arm and carrying a pawl which engages with the teeth of the ratchet wheel together with a shank bearing an armature, a cam suspended loosely from the arbor, an independent spring-held lever having a notch therein to receive the cam, means to communicate motion from the rocker to the cam and thereby in the vibratory motion of the rocker, throw the cam into and out of the said notch, combined with a magnet and a contact plate for the notched lever, the said magnet notched lever and contact plate being in an electric circuit, substantially as specified.



2. In an electric clock, the minute arbor thereof provided with a tight ratchet wheel, a rocker which is loose on the arbor having an extended weighted arm and carrying a pawl which engages with the teeth of the ratchet wheel together with a shank bearing an armature, a cam suspended loosely from the arbor, an independent spring-held lever having a notch therein to receive the cam, spaced pins on the rocker to communicate motion from the rocker to the cam and thereby in the vibratory motion of the rocker, throw the cam into and out of the said notch, combined with a magnet and a contact plate for the notched lever, the said magnet notched lever and contact plate being in an electric circuit, substantially as specified.

901,051. WASHING-MACHINE. WILLIE DE LANO WHITNEY, Binghamton, N. Y., assignor to The Nineteen Hundred Washer Company, Binghamton, N. Y. Filed Feb. 28, 1906. Serial No. 303,503.



1. The combination with a tub mounted for oscillatory and reciprocatory movements in intersecting planes, of a movable carrier for supporting and conveying reciprocatory motion to said tub, means for supporting and guiding said carrier, and means actuated by the oscillatory movement of said tub for reciprocating the movable carrier.

2. The combination with a tub mounted for oscillatory and vertical reciprocatory movement, of a fulcrumed carrier which supports and is movable in one direction by said tub, means for supporting and guiding said carrier, and a wrist pin and pitman connection between said tub and the carrier.

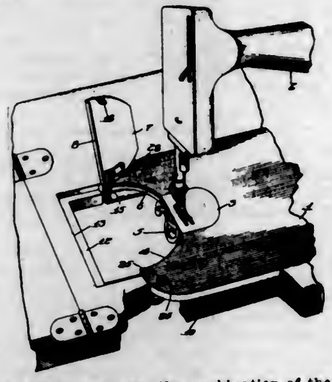
3. The combination in a washing machine, of a tub mounted for oscillatory movement in a horizontal plane, a spindle secured to the tub, a spindle guiding means, a lever on which said spindle is stepped, means for supporting the lever and means for connecting the tub to the lever to effect vertical reciprocatory movement of the spindle as the tub is oscillated.

4. In combination, a lever fulcrumed to swing in a vertical plane, means for supporting the lever, a spindle stepped on one end of the lever, a spindle guiding means a tub carried by the spindle and arranged to oscillate in a horizontal plane, a pin or stud carried by the tub at a short distance from the spindle, a connecting rod extending between the outer end of the lever and the pin or stud, the inner end of said rod being in the form of a ring, of which the stud forms the center, said ring being arranged to encircle the spindle.

5. In a washing machine, a frame including a spider having a fulcrum arm, a pin carried thereby, a lever mounted on the arm and having an opening for the passage of the pin, the inner end of the lever being recessed, and its outer end having an upturned arm, a spindle guided by the spider and having a rounded rear end fitting in the recessed portion of said lever, a tub secured to the upper end of the spindle, a stud carried by the tub and provided with a ball shaped end, a connecting rod extending from the arm at the outer end of the lever to the stud and provided with a socket for the reception of the ball, the inner end of the rod being ring-like in form, and encircling the spindle.

[Claims 6 to 8 not printed in the Gazette.]

901,052. BED-PLATE FOR SEWING-MACHINES. CHRISTOPHER WINKEL, Belvidere, Ill., assignor to National Sewing Machine Company, Belvidere, Ill., a Corporation of Illinois. Filed Feb. 10, 1905. Serial No. 245,042.



1. In a bobbin case cover the combination of the sewing machine bed plate having an aperture, a cover pivoted to the plate for closing said aperture and flush with the top of the plate when closed, a spring secured to the plate at a point eccentric to the pivot of the cover and having an extension bearing against the cover for throwing it open, and means for holding the cover closed against the action of the spring.

2. In a bobbin case cover the combination of the sewing machine bed plate having an aperture, a cover pivoted to the bed plate for closing said aperture, a socket formed in the head lengthwise of the axis of said pivot, a coil spring secured in said socket and having an arm at one end projecting therefrom and bearing against said cover for throwing it open, and means for holding the cover closed against the action of the spring.

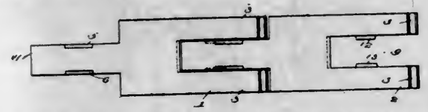
3. In a bobbin case cover the combination of the sewing machine bed plate having an aperture, a cover pivoted to said bed plate for closing said aperture, a socket formed in the bed plate lengthwise of the axis of said pivot, a plug removably secured in said socket, a coil spring situated in said socket and secured at its inner end to said plug and having its outer end provided with an arm bearing against said cover for holding the cover open, and means for holding the cover closed against the action of the spring.

4. In a bobbin case cover the combination of the sewing machine bed plate having an aperture, a pivoted cover for closing said aperture, means tending to throw said cover open when released, a catch pivoted under the bed plate and cover for holding the cover closed, a push button projecting through the head for releasing said catch, and a projection on said catch for holding said push button in place.

5. In a bobbin case cover the combination of the sewing machine bed plate having an aperture, a pivoted cover for closing said aperture, means tending to throw the cover open when released, a boss formed on the under side of the head adjacent to said aperture, a catch pivoted to said boss for holding the cover closed, a spring interposed between the boss and the catch for holding the catch in engagement, an upwardly turned projection on the catch, a push button projecting through the sewing machine head and resting against said projection for releasing said catch, said projection holding said push button against downward displacement, and means on the push button for holding it against upward displacement.

[Claims 6 to 9 not printed in the Gazette.]

901,053. SASH-WEIGHT. WALTER G. WITHERS, Atlanta, Ga. Filed May 19, 1908. Serial No. 433,753.



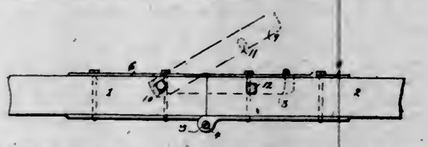
1. In a sash weight, a weight formed of a plurality of units, each unit being provided with a tongue at one end said tongue having its end semi-circular, and a bifurcated portion at the opposite end, a hollowed out portion between the arms of the bifurcation formed upon the arc of a circle, said tongue being formed with journal bearings and ways for permitting the bearing members to be inserted in said journal bearings, and said bifurcated portion being formed with journals extending therefrom and adapted to enter the bearings of the tongue of an adjoining link, the tongue of the adjoining link when inserted into said bifurcation being prevented from accidental removal by the curved bottom of the opening between the arms of the bifurcation.

2. In a sash weight, a weight formed of a plurality of units pivotally secured together, each link being formed of a bifurcated end and a tongue, the tongue of one link being adapted to fit between the furcations of the adjoining link, the hollowed out portion between the respective bifurcated ends, having its bottom formed arc-shaped and the ends of the respective tongues being formed arc-shaped, the arc-shaped construction of the bottom of the opening of the bifurcations preventing the tongue from becoming displaced accidentally.

901,054. VEHICLE-TONGUE. CLARK D. WRIGHT, Palestine, Ill. Filed Dec. 9, 1907. Serial No. 405,830.

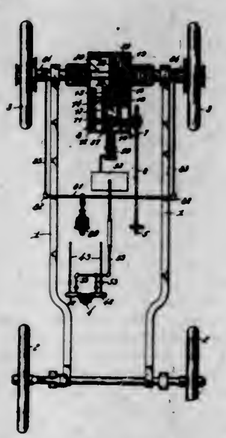
1. The combination of a tongue formed in hinged sections, the said sections being provided with corresponding recesses and one of the recesses having a pin passing transversely across the same, and a locking bar pivotally mounted within the opposite recess and adapted to have an interlocking connection with the pin extending across the first mentioned recess.

2. The combination of a tongue formed in hinged sections, a pin passing transversely through each of the sections, a locking member pivotally mounted upon one of the pins and adapted to engage the opposite pin to hold the two sections in alinement with each other, and a second pin passing transversely through each of the tongue sections immediately in front of the first mentioned pin and arranged transversely with respect thereto so as to reinforce the same and prevent it from pulling out through the end of the tongue section.



3. The combination of a tongue formed in sections, pivotally connected hinge plates secured to one side of the sections, plates secured to the opposite side of the tongue sections and provided with slots, the said slots being in alinement with each other and the portions of the tongue sections under the slots being recessed, and a swinging locking member pivotally mounted within the recess of one of the tongue sections and adapted to be received within the recess of the opposite tongue section and have an interlocking connection with the said opposite tongue section.

901,055. MOTOR-VEHICLE. JOHN D. ALLEN and JOHN A. CONLY, Philadelphia, Pa. Filed Apr. 26, 1906. Serial No. 313,776.



1. In a motor vehicle, the combination with the frame thereof and the rear wheels journaled on said frame, of a divided driving shaft for said wheels, comprising a hollow central section having two gears loose thereon, a clutch movable to connect either gear thereto and clutch members slidably mounted at either end thereof; and two end sections, the reduced inner ends of which are journaled in the ends of said hollow central section, each end section carrying a fixed clutch member coöperating with the corresponding slidable clutch member on the adjacent end of said central section, and means to actuate said slidable clutch members.

2. In a motor vehicle, the combination with the frame thereof and the rear wheels journaled on said frame, of a divided driving shaft for said wheels, comprising a hollow-central section having two gears loose thereon, a clutch movable to connect either gear thereto, and clutch-members slidably mounted at either end thereof, and two end sections, each having its inner end reduced in diameter, journaled in the adjacent end of said hollow central section and held therein by spring pressure, and each having a fixed clutch-member secured thereto in position to coöperate with the adjacent slidable clutch-member on the said hollow central section, and means controlled by the steering-post to actuate said clutches.

3. In a motor vehicle, the combination with the frame thereof and the rear wheels journaled on said frame, of a divided driving-shaft for said wheels, comprising a hollow-central section having two gears loose thereon, a clutch movable to connect either gear thereto, and clutch members slidably mounted at either end thereof, and two end sections each journaled in the end of said hollow, central section and carrying a fixed clutch member coöperating with the adjacent one of said slidable clutch-members, a pneumatic motor operatively connected to each of said slidable clutch-members, a source of air-pressure and connections therefrom to each of said motors including a valve, and means controlled by the movements of the steering-post to actuate said valves.

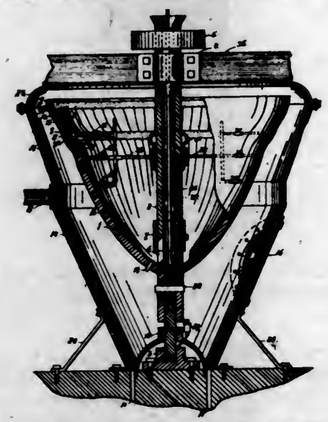
4. In a motor vehicle, the combination with the rear wheels, of a driving-shaft for said wheels comprising two end sections and a central section, clutches to connect said central section to said end-sections, means to drive said central section in either direction, a source of air supply, pneumatic-motors operatively connected to each of said first-mentioned clutches, connections between said source of air-supply and each of said motors, including a valve and means carried by the steering-post to admit air to one or the other of said motors according to the direction in which the steering-post is turned.

5. In a motor vehicle, the combination with the rear wheels thereof, of a driving-shaft for the same, comprising a central section and two end-sections, two gears loosely mounted on said central-section and a clutch to connect either of them thereto, fixed clutch-members on the inner ends of said end-sections and coöperating slidable clutch-members on the outer ends of said central-section, a pneumatic motor operatively connected to each of said slidable clutch-members, means to drive said gears, comprising a primary shaft running at a uniform speed and an intermediate shaft driven therefrom through change gearing and carrying pinions in mesh with said gears, an air-compressor and means on said primary shaft to drive the same, an air-reservoir connected to said compressor and to each of said motors, a valve for each of said motors and means carried by the steering-post to actuate one of said valves when the steering post is turned in one direction and the other when it is turned in the other direction.

901,056. MACHINE FOR SEPARATING SOLIDS FROM LIQUIDS. FRANK K. ATKINS and EARL F. ATKINS, Denver, Colo.; said Earl F. Atkins assignor to said Frank K. Atkins. Filed Jan. 21, 1907. Serial No. 353,269.

1. A centrifugal separator of the class described, comprising a rotary bowl whose diameter increases from the bottom toward the top, provided with a number of interior circumferential grooves adapted to hold a quantity of mercury and expose the mercury surface to the material under treatment, the said mercury surface forming a continuation of the inner surface of the bowl, the lowermost groove being located a sufficient distance above the bottom of the bowl to allow the material under treatment to acquire the rotary speed or velocity of the bowl before it comes in contact with the mercury of the lowermost groove, the inner surface of the bowl consisting of a number of variably curved retarding surfaces alternating with the circumferential grooves.

2. In a centrifugal separator, the combination of a rotary bowl open at the top and having a cone-shaped central part extending upwardly from the bottom thereof a suitable distance, the said bowl increasing in diameter from the bottom toward the top, a shaft passing through the center of the bowl and suitably journaled, the bowl being made fast to the shaft, a hollow feed tube being fast to the upper part of the shaft and open at the top and bottom, the inner surface of the bowl above the bottom being provided with circumferential grooves adapted to contain a quantity of mercury, and forming mercury zones over which the material under treatment passes under the influence of centrifugal force due to the speed of the bowl's rotary movement, the portion of the bowl below the lowermost groove being of sufficient depth to enable the material under treatment to acquire the rotary speed of the bowl before it reaches the lowermost mercury zone, and the inner surface of the bowl being provided with a number of variably curved retarding surfaces alternating with the circumferential grooves.



3. A centrifugal separator comprising a revoluble bowl whose radius increases from the bottom toward the top, the said bowl being provided with a series of circumferential grooves formed in its inner wall, said grooves being adapted to contain liquid mercury, the inner surface of the bowl being provided with a number of variably curved retarding surfaces alternating with the circumferential grooves.

4. A centrifugal separator comprising a revoluble bowl whose radius increases from the bottom toward the top, and provided on its inner surface with a plurality of circumferential grooves suitably separated, said grooves being adapted to contain liquid mercury, the wall of the bowl above the grooves having inward projections provided with rounded surfaces leading upwardly from the bowl proper, the inner wall of the bowl consisting of a number of variably curved retarding surfaces alternating with the circumferential grooves.

5. A centrifugal separator comprising a revoluble bowl whose radius increases from the bottom toward the top, the inner surface of the bowl being provided with circumferential grooves, and having a lip projecting upwardly beyond the bottom of each groove, whereby a quantity of mercury is held in the lower part of the groove when the machine is at rest, the wall of the bowl being provided with an opening through which the amalgam may be drawn off, and a suitable plug or stopper for closing the hole when the machine is in operation, the inner wall of the bowl being provided with a number of variably curved retarding surfaces alternating with the circumferential grooves.

[Claims 6 to 29 not printed in the Gazette.]

901,057. GRAPPLE. WILLIAM AUTENRIETH, Cincinnati, Ohio. Filed Dec. 30, 1907. Serial No. 408,627.

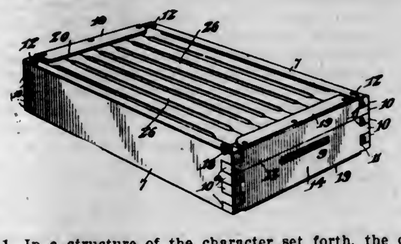
1. A grapple comprising an elongated shank or body portion having an inwardly-turned hook-formation at one end and an eye-formation constructed at right-angles to said hook-formation at its opposite end and an elongated transverse handle pivotally-attached at its central portion to said eye-formation and adapted to be folded or closed lengthwise along said shank.

2. A grapple comprising a stout wire shank having a flared outer end with a hook-arm projecting laterally therefrom and an eye at its opposite end and an elongated open handle having a central inwardly-bent end, such inwardly-bent end of the handle being adapted to engage said eye for swiveling said handle on said shank,



the whole forming a folding grappling-hook adapted to be carried in the pocket and conveniently thrown into position for use substantially as herein set forth.

901,058. SUPER FOR BEEHIVES. CHARLES H. BACHMANN, Guelph, Ontario, Canada. Filed May 13, 1908. Serial No. 432,703.



1. In a structure of the character set forth, the combination with upright side and end walls, of hinge connections between one of the end walls and both side walls, a hinge connection between the other end wall and one of the side walls, a detachable connection between said other end wall, and the other side wall, and hive furniture located within and inclosed by said wall, said furniture being supported solely by said end walls.

2. In a structure of the character set forth, the combination with upright side and end walls having mortise and tenon joints at their meeting ends, of pivots located in certain joints to permit the relative swinging movement of the walls, a detachable pin located in one of the joints for detachably securing together the meeting ends at said joint, said pin having an offset upper end that lies upon the edge of the adjacent wall, said wall having a tool-receiving socket beneath the end and hive furniture located within and inclosed by said wall.

3. In a structure of the character set forth, the combination with upright separable walls, one of said walls comprising relatively movable upper and lower sections and one of said sections being movable when the other section and the walls are in associated relation, of hive furniture located within and inclosed by said wall.

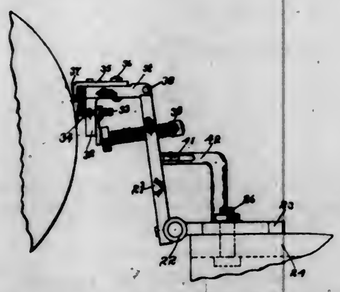
4. In a structure of the character set forth, the combination with upright walls, of hinge and detachable connections between the walls, one of said walls comprising separate relatively swinging sections, and hive furniture located within and inclosed by said walls.

5. In a structure of the character set forth, the combination with upright walls having mortise and tenon joints at their meeting ends, of pivots located in certain of said joints to permit the relative swinging movements of the walls, a detachable pin located in one of the joints for detachably securing together the meeting ends at said

joint, one of the walls comprising upper and lower relatively swinging sections engaged by the detachable pin, and hive furniture located within and inclosed by said walls.

[Claims 6 to 9 not printed in the Gazette.]

901,059. SCYTHE-GRINDER. CHARLES BALL, Alexandria, Ind., assignor to Kelly Axe Mfg. Co., Alexandria, Ind., a Corporation of Indiana. Filed Apr. 25, 1907. Serial No. 370,121.



1. The combination, in a scythe grinder, of a hingedly-mounted standard, a head hingedly mounted on said standard, means for adjusting said head to the proper condition for the work to be performed, means for holding the scythe blade in such head, a lever support, a lever hinged thereto for operating the standard, and anti-friction rollers against which the scythe will bear during the grinding operation.

2. The combination, in a scythe grinder, of a main standard, a base to which said main standard is hinged, said base being provided with means whereby it may be adjusted, a head carried by said standard, a guide roller and anti-friction rollers carried by said head against which the scythe blade rests in operation, and an overhanging member carried by said head and extending over and engaging with the scythe blade and preventing the latter from escaping during the grinding operation.

3. The combination, in a scythe grinder, of a main standard, a head portion hinged thereto and provided with engaging devices for securely holding the scythe blade during the grinding operation, said holding devices being adapted to permit the scythe blade to travel freely longitudinally while preventing its escape laterally, and means for swinging the holding device toward and from the grindstone.

4. The combination, in a scythe grinder, of an adjustable base, a main standard hinged to said adjustable base, a head hinged to said standard, engaging devices on said head for engaging and holding the scythe blade during the grinding operation, and a lever carried by the adjustable base and adapted to force the scythe being ground toward the grindstone.

5. The combination, in a scythe grinder, of a main standard, a head hinged thereto, an adjusting screw carried by the standard for adjusting the relation of said head to said standard, and engaging devices on said head for engaging and holding the scythe blade during the grinding operation.

[Claims 6 to 8 not printed in the Gazette.]

901,060. BACK-BAND AND HOOK ATTACHMENT THEREFOR. WILLIAM O. BARNETT, Americus, Ga. Filed Feb. 23, 1907. Serial No. 358,926.

The combination with a strap or band, of a flat plate secured thereto and provided with a slot having a compound curvature forming a series of tongues projecting laterally toward the respective side edges of the plate, the latter provided with notches at the inner ends of said tongues and communicating with said slot, a hook movable in the slot and having a head confined between the plate and strap or band and engaging both, the headed end of the



hook adapted to engage in any of the notches, and fastening devices securing said tongues against the strap or band.

901,061. PASTE-RECEPTACLE. GILBERT L. BELCHER, Oakland, Cal. Filed Sept. 25, 1906. Serial No. 336,127.



1. The combination with a container having an outlet at one end, and a follower normally closing the opposite end and adapted to expel the contents of the container through said outlet, of a ring surrounding the outside of the container and having a pusher composed of a strip of material bent at its middle portion and extending from the ring through one side of the container and behind the follower, and adapted to operate the latter from the outside.

2. The combination with a holder having a longitudinal slot in one side, a cartridge removably fitted to the holder, said holder having an outlet through which the contents of the cartridge may be discharged, a follower normally closing one end of the cartridge and adapted to expel the contents of the cartridge through the outlet of the holder, a ring surrounding the outside of the holder said ring having a pusher composed of a strip of metal bent at its middle portion and extending from the ring through the slot of the holder and behind the follower, and adapted to operate the latter from the outside.

901,062. SAFETY-RAZOR. THOMAS A. BELL and ELLIS J. UHLE, New York, N. Y. Filed Dec. 21, 1907. Serial No. 407,528.

1. A safety razor blade holder having its guard fingers disposed obliquely to its back, one end of the holder being open and the other end thereof provided with a stop forming a closure therefor.

2. A safety razor blade holder having guard fingers arranged at an angle to its back and provided with oppositely disposed keepers, and a blade stop forming a closure for both keepers at one end of the holder.

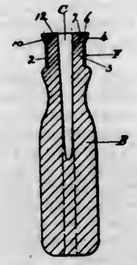
3. A safety razor blade holder having oppositely disposed blade keepers arranged at an angle to each other and that operate by friction to retain a blade in position.

4. As a new article of manufacture, a blade holder for safety razors embodying, a shank, an arm projecting therefrom and constituting a closure for one end of the shank, a keeper disposed at right angles to the length of the shank, a second keeper disposed obliquely to the length of



the shank and embodying guard fingers, and a blade stop at one end of the holder.

901,063. FERRULE FOR HANDLES. JOHN H. BENNETT, Worcester, Mass. Filed June 13, 1908. Serial No. 438,402.



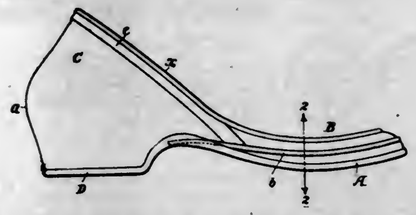
1. A ferrule constructed as described, comprising a cylindrical body outwardly enlarged at its upper end, with a circular interior chamber having a diameter greater than the inner diameter of the body cylinder, the upper end of said ferrule inwardly and downwardly returned to provide an inner downwardly directed circular conoidal lip adapted for cutting into the end of a handle and forcing outward an annular portion at the angle thereof into said chamber, for the purpose set forth.

2. A ferrule for the purpose set forth, comprising a cylindrical body-portion outwardly enlarged at its end and having a narrow inwardly offset annular end portion integrally united with the enlarged portion at its outer periphery, said end portion provided at its inner circle with an integral downward inwardly inclined circular lip, the central opening within the circle of the lip being of greater diameter than the bore of the handle whereon the ferrule is to be used.

3. A ferrule comprising a straight body-cylinder conoidally enlarged at its outer end and terminating in an integral flat annulus approximately perpendicular with the axis, and having an inwardly returned sharp-edged conoidal lip integral with its inner circle, the inner bevel at the edge of said lip being concentric and approximately parallel with the body cylinder.

4. The combination, substantially as described, with a wood handle having a cylindrical ferrule-receiving end and a central bore therein, of a metal ferrule comprising a cylindrical body having an enlarged end with a circular interior chamber therein, a narrow annular end portion integral therewith and provided with a circular conoidal inwardly returned lip of greater diameter than the central bore, said circular lip wedging into the end of the wood near its angle and forcing outward a narrow circular portion thereof, said circular portion being upset into the chamber within the enlarged end of the ferrule beneath the annular end portion and between the outer inclined surface of the lip and inner face of the circular enlargement, for the purpose set forth.

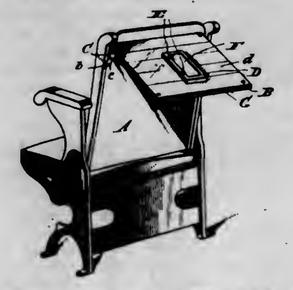
901,064. RUBBER SANDAL. AUGUSTUS O. BOURN, Providence, R. I. Filed Jan. 20, 1906. Serial No. 297,029.



1. The combination in a rubber sandal, of a sole, a low vamp, a high elastic quarter extended forward above the heel and with inclined edges x, and a thickened rib at said edges forming an elastic edge spring extending downward at the lower ends toward the sole across the vamp, substantially as described.

2. The combination in a rubber sandal, of a sole, a low vamp with an internal rib at the sides and tip above the sole, a high elastic quarter extending forward above the heel and with inclined edges x, and a thickened rib at said edges and extending downward across the vamp toward the sole.

901,065. CHAIR ATTACHMENT. HARRY L. BROAD and FREDERICK H. ORCUTT, Alpena, Mich. Filed Mar. 19, 1908. Serial No. 422,048.

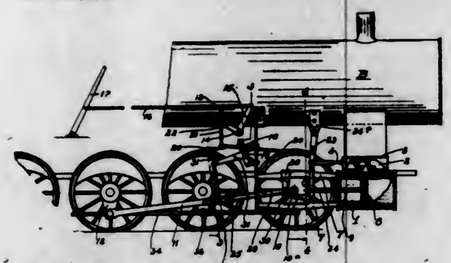


1. The combination of a chair having a back, a platform connected with and arranged to swing vertically on the chair back, and a controller comprising a laterally resilient strip fixed to and extending rearwardly from the chair back and disposed in a vertical plane at one side of the platform, and a body fixed with respect to the said resilient strip and having a side which normally extends inwardly beyond the vertical plane of one side edge of the platform and is tapered in opposite directions, whereby said body is enabled to support the platform and to retain the same in a depending position without interfering with the platform being moved under stress past the body in either direction.

2. The combination of a chair having a back, a platform connected with and arranged to swing vertically on the chair back, and a controller comprising a laterally resilient strip fixed to and extending rearwardly from the chair back and disposed in a vertical plane at one side of the platform, and a globular body fixed on the said resilient strip;

the inner portion of the said globular body normally extending inward beyond the vertical plane of one side edge of the platform, substantially as and for the purpose specified.

901,066. LOCOMOTIVE VALVE-GEAR. WILLIAM S. BROWN, Knoxville, Tenn. Filed Mar. 12, 1908. Serial No. 420,561.

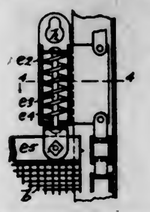


1. In a valve gear for locomotives, the combination of a guide-block journaled to the engine connecting rod, a bar slidable in said guide-block and hinged at a relatively fixed point, a reversing link in operative relation with the distributing valve of the engine, an arm rigid with said link, and a link joining said arm and said bar, substantially as described.

2. In a valve gear for locomotives, the combination of a guide-block journaled to the engine connecting rod, a bar slidable in said guide-block and hinged at a relatively fixed point, a reversing link, an arm rigid with said link, a link joining said arm and said bar, a bar, 20, leading from the reversing link, a link, 23, hinged to a fixed support and coupled to said bar, and a link, 24, coupled to said link, 23, and to the valve stem, substantially as described.

3. In a valve gear for locomotives, the combination of a guide-block journaled to the engine connecting rod, a bar slidable in said guide-block and hinged at a relatively fixed point, a reversing link, an arm rigid with said link, a link joining said arm and said bar, a bar, 20, leading from the reversing link, a link, 23, hinged to a fixed support and coupled to said bar, a link, 24, coupled to said link, 23, and to the valve stem, and a link, 10^a, coupled to the cross-head and to the link, 24, substantially as described.

901,067. WINDOW-SCREEN. MATTHEW CASSON, New York, N. Y. Filed Mar. 21, 1908. Serial No. 422,447.

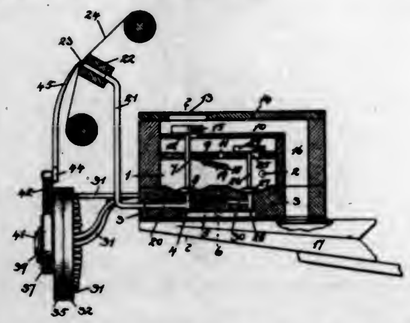


1. A window screen, comprising a roller, a netting thereon, means for insuring the movement of the outer end of said netting in the rotation of said roller comprising endless chains, a tube secured to said chains at each side of said netting, an elastic connection between said tubes and said netting and catches on a movable part of said window and adapted to engage said tubes and move said netting with said movable part.

2. A window screen, comprising a roller, a netting thereon, endless chains for actuating said roller, guide rollers for said chains, a tube secured to each of said chains, and an elastic connection between said tubes and said netting.

3. A window screen, comprising a roller, a netting thereon, endless chains for actuating said roller, guide rollers for said chains, a tube secured to each of said chains, an elastic connection between said tubes and said netting and means for connecting said tubes with a movable part of said window.

901,068. PNEUMATIC ACTION FOR MUSICAL INSTRUMENTS. JAMES P. CAULFIELD, Baltimore, Md. Filed May 16, 1907. Serial No. 373,909.



1. In a pneumatic-action for musical instruments having an air chest and a plurality of intermediate chambers at one side of said chest, in combination with a plurality of striking pneumatics; a valve for controlling communication between the air chest and one of the striking pneumatics; a valve for governing the passages between the air chest and all of the intermediate chambers, and a valve interposed between each intermediate chamber and the air chest.

2. A pneumatic-action for musical instruments having an air chest, a plurality of intermediate chambers, a plurality of striking pneumatics and a plurality of passages one from each intermediate chamber and leading to a striking pneumatic, in combination with a valve interposed between the air chest and all of said intermediate chambers; a valve interposed between each intermediate chamber and each passage leading to a striking pneumatic; a valve interposed between each intermediate chamber and the air chest, and means for operating said latter valves independently of each other.

3. A pneumatic-action for musical instruments having a tracker board; a plurality of striking pneumatics; an air chest; a plurality of intermediate chambers; passages leading from each intermediate chamber to a striking pneumatic; a single valve interposed between the air chest and all of the intermediate chambers; a valve interposed between each intermediate chamber and the corresponding striking pneumatic passage;—said latter valves being actuated from the tracker board; a valve interposed between each intermediate chamber and the air chest and means under the control of the operator for actuating said latter valves independently of each other.

4. In a pneumatic-action for musical instruments, the combination with the air chest and the plurality of chambers connected with said chest by means of ports, of a cut-off valve extending lengthwise of the chest and controlling the passage of air through all of the ports into the said chambers; a separate expression valve for each of said chambers; a controlling device having connection with all of said expression valves and means for operating the controlling device at will to actuate any one of the expression valves.

5. The combination with a tracker board having a plurality of ports, of a perforated music sheet traveling over the tracker board; a striking pneumatic for each note in the action; a valve interposed between each striking pneumatic and one of the ports of the tracker board; an air-chest; a second valve interposed between each striking pneumatic and the air chest; a stationary head having a plurality of passages,—each communicating with the pneumatic of one of said second valves, and a rotary head at the side of the stationary head and having a single port to register with any one of the separate passages of the stationary head,—said rotary head being revoluble by the operator.

[Claim 6 not printed in the Gazette.]

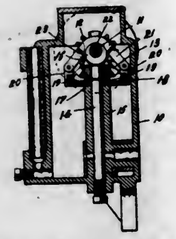
901,069. PIGEON-HOLE SPACER. THEODORE A. CHELSON and HARRY J. BENEDICT, Los Angeles, Cal. Filed Oct. 2, 1907. Serial No. 395,652.



1. A pigeon hole spacer comprising a pair of oppositely bowed springs, a relatively short strip between said springs, circular rings on either side of the bowed springs, and a clasp uniting the bowed springs, strip and rings at the center.

2. A pigeon hole spacer comprising a pair of oppositely bowed springs attached at the center, and means extended on each side of the springs and lying in the concave portions to form intermediate wall portions.

901,070. GEARING. HARRY C. CLAY, Columbus, Ind., assignor to Reeves & Company, Columbus, Ind., a Corporation of Indiana. Filed June 20, 1908. Serial No. 439,528.

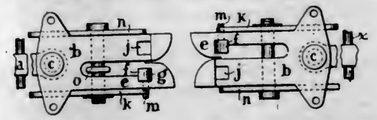


1. The combination, of a pair of shafts lying at an angle to each other, intermediate connecting gears between said shafts rotatively connecting the same, and means for reciprocating one of the shafts axially, said means comprising a ring engaging the shaft in one direction, a cam engaging the shaft in the other direction, and a yoke carried by the ring and straddling the cam.

2. The combination, of a pair of shafts lying at an angle to each other, an eccentric gear carried by one of the shafts, a gear carried by the other shaft and meshing with the eccentric gear, a spherical segment carried by said last mentioned shaft, a ring having a spherical pocket adapted to receive the spherical segment, an eccentric carried by the first mentioned shaft and engaging a portion carried by the second shaft to produce axial reciprocation in one direction, and a yoke straddling said eccentric and connected to the ring, for the purpose set forth.

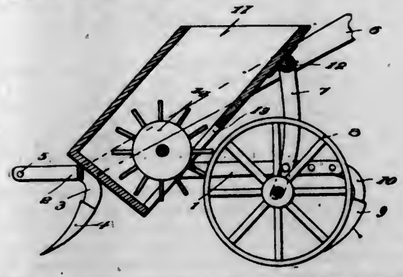
3. The combination, of a pair of shafts lying at an angle to each other, an eccentric gear carried by one of the shafts, a gear carried by the other shaft and meshing with the eccentric gear, a spherical segment carried by said last mentioned shaft, a ring having a spherical pocket adapted to receive the spherical segment, an eccentric carried by the first mentioned shaft and engaging a portion carried by the second shaft to produce axial reciprocation in one direction, a second eccentric carried by said first mentioned shaft but having the same eccentricity as the first eccentric, and a yoke straddling said last mentioned eccentric and connected to the ring, for the purpose set forth.

901,071. AUTOMATIC COUPLING FOR RAILWAY AND OTHER VEHICLES. GEORGE J. COLES, Gateshead, England. Filed Nov. 5, 1907. Serial No. 400,839.



An automatic coupling for railway and other vehicles comprising the combination of a pivoted draw bar, a head part pivoted to said draw bar, oppositely inclined faces on said head, a spring-pressed bolt in said head adapted to project through one such inclined face, said bolt being adapted to engage with a slot in a corresponding head when two heads are forced together, a pin secured to said bolt, said head part being provided with a slot through which said pin projects, a pivoted lever on said head adapted to engage said pin and a second pivoted lever on said head adapted to engage the first named pivoted lever on another head, substantially as set forth.

901,072. COTTON-PLANTER. JOHN W. CRAWFORD, Lagrange, Ga. Filed Jan. 31, 1908. Serial No. 413,668.



1. In a planter, the combination of a frame, a supporting wheel journaled upon the frame, a hopper mounted upon the frame and provided with a discharge opening, and an agitator wheel journaled within the hopper and projecting through the discharge opening into engagement with the supporting wheel.

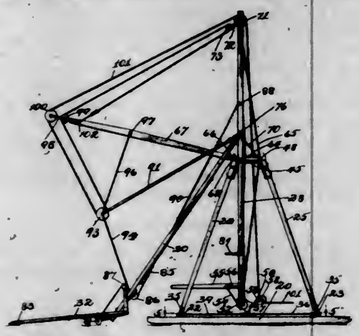
2. In a planter, the combination of a frame, a supporting wheel journaled upon the frame, a hopper pivotally mounted upon the frame above the supporting wheel and normally tending to swing against the latter, and an agitator wheel journaled upon the hopper and normally held in engagement with the supporting wheel from which it receives motion, the said agitator wheel controlling the discharge of seeds from the hopper.

3. In a planter, the combination of a frame, a supporting wheel journaled upon the frame, a hopper pivotally mounted upon the frame and formed with a discharge opening, and an agitator wheel journaled within the hopper and projecting through the discharge opening, the hopper normally tending to swing toward the supporting wheel to hold the agitator wheel in coöperative relation thereto.

4. In a planter, the combination of a frame, handles applied to the frame, a supporting wheel journaled upon the frame, a swinging hopper pivotally mounted upon the handles and provided with a discharge opening, and an agitator mounted within the hopper, the hopper having a tendency to swing toward the supporting wheel to hold the agitator normally in coöperative relation thereto.

5. In a planter, the combination of a frame formed with spaced side pieces, handles inclined upwardly and rearwardly from the forward ends of the side pieces, braces for the handles, a supporting wheel journaled between the spaced side pieces, a hopper pivotally mounted between the handles and normally tending to swing toward the supporting wheel, the said hopper having a discharge opening therein, an agitator wheel journaled within the hopper and provided with teeth projecting through the discharge opening and designed to engage the supporting wheel, a furrow opener at the forward end of the side pieces, and furrow closers at the rear ends of the side pieces.

901,073. HAY-STACKER. JOSEPH DAIN, Ottumwa, Iowa, assignor to Dain Manufacturing Company of Iowa, Ottumwa, Iowa, a Corporation of Iowa. Filed May 14, 1906. Serial No. 316,674.



1. In a hay-stacker, the combination of a boom pivotally mounted to swing vertically, an arm pivotally mounted independently of said boom and arranged to swing vertically about an axis eccentric to the axis of the boom, means for causing said arm and boom to move simultaneously in the same direction but at different rates of speed, and hoisting means.

2. In a hay-stacker, the combination of a boom pivotally mounted to swing vertically, an arm pivotally mounted independently of said boom and arranged to swing vertically about an axis eccentric to the axis of the boom, means connecting said arm and boom and acting to cause them to move simultaneously in the same direction but at different rates of speed, and hoisting means.

3. In a hay-stacker, the combination of a support pivoted to turn on a vertical axis, a boom pivotally mounted on said support to swing vertically, an arm pivotally mounted independently of said boom and arranged to swing vertically about an axis eccentric to the axis of the boom, means for causing said boom to move at a higher rate of speed than said arm, and hoisting means.

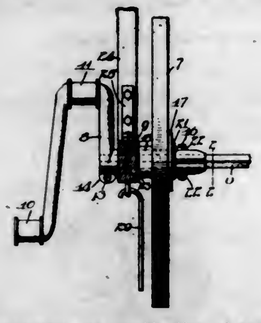
4. In a hay-stacker, the combination of a boom pivotally mounted to swing vertically, an arm pivotally mounted independently of said boom, hoisting mechanism supported by said arm and connected with said boom, and means for moving said boom at a higher rate of speed than said arm.

5. In a hay-stacker, the combination of a boom pivotally mounted to swing vertically, an arm pivotally mounted independently of said boom, hoisting mechanism supported by said arm and connected with said boom, means for moving said boom at a higher rate of speed than said arm, and a support for said boom and arm pivoted to turn on a vertical axis.

[Claims 6 to 24 not printed in the Gazette.]

901,074. HAY-LOADER. JOSEPH DAIN, Ottumwa, Iowa. Filed Jan. 19, 1907. Serial No. 353,102.

1. In a hay-loader, the combination of an axle, cranks at the ends of said axle, said cranks having sleeves fitted upon said axle, wheels mounted on said sleeves, a loader frame connected with said sleeves, raking devices, and pitmen connected with said cranks and with said raking devices.



2. In a hay-loader, the combination of an axle, sleeves fitted upon the ends of said axle and fixedly secured thereto, wheels mounted on said sleeves, a loader frame connected with said sleeves, raking devices, and driving devices connected with said sleeves and with said raking devices for operating the same.

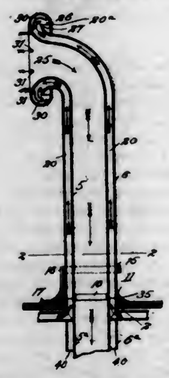
3. In a hay-loader, the combination of an axle, sleeves fitted upon and secured to the ends of said axle, wheels mounted on said sleeves, a loader frame connected with said sleeves, raking devices, and cranks carried by said sleeves and connected with said raking devices for operating the same.

4. In a hay-loader, the combination of an axle, sleeves fitted upon and secured to the ends of said axle, wheels mounted on said sleeves, a loader frame, standards supported by said sleeves and connected with the loader frame, raking devices, and cranks connected with said sleeves and with said raking devices.

5. In a hay-loader, the combination of an axle, cranks at the ends of said axle, said cranks having sleeves fitted upon the ends of said axle, wheels mounted on said sleeves, a loader-frame, standards and side-bars supported by said sleeves and connected with the loader-frame, raking devices, and pitmen connected with said cranks and with said raking devices.

[Claims 6 to 10 not printed in the Gazette.]

901,075. VENTILATOR. ANGUS DARROCH, New York, N. Y. Filed Oct. 22, 1907. Serial No. 398,566.



1. In a ventilator, the combination of a plurality of independent foul air outlet channels leading from the several compartments to be ventilated, means for creating an independent suction exhaust in each channel, and means for supplying fresh air to the compartments from which the independent foul air channels lead.

2. In a ventilator, the combination of a plurality of independent foul air outlet channels leading from the several compartments to be ventilated, means for producing an independent natural draft suction exhaust in each channel, and means for supplying fresh air to the compartments from which the independent foul air channels lead.

3. In a ventilator, the combination of a plurality of independent foul air outlet channels leading from the several compartments to be ventilated, and means for supplying fresh air to the compartments from which the independent foul air channels lead, with an adjustable cowl arranged to create equal independent natural draft suction exhausts in all of said foul air outlet channels.

4. In a ventilator, the combination of a circular series of independent foul air outlet channels leading from the several compartments to be ventilated, a rotatably adjustable cowl having a circular series of channels adapted to register with said foul air outlet channels in all of the positions of adjustment of said cowl, means upon said cowl for creating an independent natural draft suction exhaust in each of said channels, and means for supplying fresh air to the compartments from which the independent foul air channels lead.

5. In a ventilator, the combination of two concentric pipes or stacks of unequal diameter, partitions arranged between said stacks and forming independent foul air channels, independent connections between said foul air channels and the compartments to be ventilated, independent means for creating suction at the outlet of each of said foul air channels, and means supplying fresh air to the inner stack.

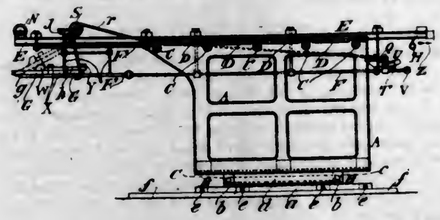
[Claims 6 to 14 not printed in the Gazette.]

901,076. LOOSE-LEAF BINDER. JAMES C. DAWSON, St. Louis, Mo., assignor to Sieber & Trussell Mnfg. Co., a Corporation of Missouri. Filed Mar. 29, 1907. Serial No. 365,214.



In a loose leaf binder, in combination, a recessed back, a pair of pivots fixed within the recess and disposed longitudinally as to the back, a pair of arch members mounted one upon each of the pivots, and a spring mounted upon the pivots and bearing upwardly against the inner ends of the arch members and having down-turned lugs for engaging the bottom of the recess when the arch members are closed.

901,077. MACHINE FOR FILLING BREADSTUFFS INTO OR ON AN OVEN. JOHN DEMPSEY, Belfast, Ireland. Filed Mar. 6, 1908. Serial No. 419,512.



1. A machine for filling breadstuffs into or on an oven having, in combination, a longitudinally movable framework, means for carrying the breadstuffs on the longitudinally moving framework and a rotatable framework for supporting the longitudinally movable framework.

2. A machine for filling breadstuffs into or on an oven having, in combination, a longitudinally movable framework, means for carrying the breadstuffs on the longitudinally movable framework, a rotatable framework for supporting the longitudinally movable framework and a turntable for the rotatable framework.

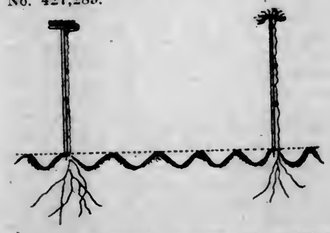
3. A machine for filling breadstuffs into or on an oven having, in combination, a longitudinally movable framework, an adjustable board for carrying the breadstuffs, means for adjusting the board, means for actuating the longitudinally movable framework, a rotatable framework and a turntable therefor.

4. A machine for filling breadstuffs into or on an oven comprising, in combination, a longitudinally movable framework, an adjustable board for carrying the breadstuffs, said board being hinged to said framework, rods connected to the adjustable board, means for raising and lowering the board, a rotatable framework, and a turntable therefor provided with ball bearings.

5. A machine for filling breadstuffs into or on an oven comprising, in combination, a longitudinally movable framework, an adjustable board thereon for carrying the breadstuffs, adjustable rods connected to the board, means for locking the adjustable rods to the movable framework, a guide pulley on the adjustable rods, a flexible wire or cord for raising and lowering the adjustable board and a rotatable framework provided with rollers and guides for supporting the longitudinally movable framework.

[Claims 6 to 11 not printed in the Gazette.]

901,078. METHOD OF TREATING THE SOIL. PORFIRIO DIAZ, Ilijo, Mexico, Mexico. Filed Apr. 15, 1908. Serial No. 427,289.



1. The herein described process of treating fields for the purpose of hastening or intensifying their productive properties, which consists in placing in the field under treatment electrical conductors with terminals buried in the ground, and in also placing in the field a producer of Hertzian waves of high tension and great frequency, and concentrating the waves upon the different conductors.

2. The herein described process of treating fields, which consists in placing on the field under treatment conductors having their terminals buried in the ground, and in also placing upon the field a producer of electric waves of high tension and great frequency, in connection with a parabolic reflector designed to concentrate the waves upon any of the posts.

901,079. BUGGY-TOP BRACE. JOHN E. DISHEROON, Mena, Ark. Filed Oct. 4, 1907. Serial No. 395,952.



1. In combination with a vehicle top, double spring-arms 6, provided at one end with eyes 7, said eyes fitting over the wrists 4, of the shifting-rod 3, further provided at its central portion with bows 9, and at its outer end provided with a socket 11, said socket fitting under the rear bow 12, one arm of the double spring-arm working on one side of said bow, and the other on the opposite side thereof, substantially as shown.

2. In combination with a vehicle top, double spring-arms 6, said arms inclined upwardly from their central portions to the extreme rear ends, to hold the bows 12, of the carriage top in an elevated position, each provided at its front ends with eyes 7, said eyes fitting over the wrists 4, of the shifting-rods 3, of the buggy, bows 9, sockets 11, and saddles 10, said saddles secured to the under surface of said bows, and resting on the props 5, when the said bow is being supported by the said socket, said sockets conforming to and supporting the rear bow 12.

901,080. UNIVERSAL COUPLING. HERMAN DOCK, Wyncote, Pa., assignor to Dock Gas Engine Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 11, 1907. Serial No. 396,884.



1. In a universal coupling, two shaft ends, two sections, one of said sections being hinged to one shaft end the other section having a transverse guide-way to receive the first-mentioned section to permit it to move laterally relatively thereto, and an anti-friction device coöperatively connecting both of said sections.

2. In a universal coupling, two shaft ends, two sections, one of said sections being hinged to one shaft end and carrying an anti-friction ball-like member, the other section being secured to the other shaft end and having a groove therein to receive said anti-friction member between the two walls of said groove whereby a relative lateral movement of said ball-like member and the walls of said groove may be effected as the shaft ends are rotated.

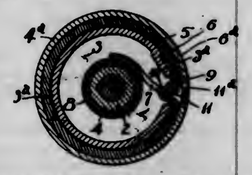
3. In a universal coupling, two shaft ends, two sections, one of said sections being hinged to one shaft end, the other section having a transverse guide-way to receive the first-mentioned section to permit it to move laterally thereof, and two anti-friction devices rotatably and slidably mounted on the first-mentioned section and being operatively connected at all times with the second-mentioned section.

4. In a universal coupling, two shaft ends, a two-arm member hinged to one shaft end, a head secured to the other shaft end having a transverse guide-way therein, the two ends of the two-arm member having a bearing in said guide-way.

5. In a universal coupling for two shafts, a two-arm member hinged to one shaft end, a head secured to the other shaft end and having a transverse guide-way therein, the two ends of the two-arm member having a bearing in said guide-way, said bearing including anti-friction balls arranged to rotate and slide on said ends.

[Claim 6 not printed in the Gazette.]

901,081. CLUTCH MECHANISM. HERMAN DOCK, Westerly, R. I., assignor to Dock Gas Engine Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 9, 1908. Serial No. 410,007.



1. In a clutch, a divided clutch ring, a support and anchorage therefor, means coöperating with both ends of said ring to expand the same, said ring anchorage having an inclined bearing for said ring on that side adjacent to the operating means.

2. In a clutch, a divided clutch ring, a support, an anchorage therefor, means coöperating with both ends of the ring to move the same apart, said ring anchorage having a beveled bearing on that side of said ring adjacent to the operating means to cause the restrained end of the ring to expand radially as both ends of the ring are moved apart.

3. In a clutch, a divided clutch ring, a support therefor, an anchorage near one end of the ring and carried by said support, one side of said anchorage being beveled, means directly engaging both ends of the ring to expand the same, said ring riding up said beveled side of said anchorage during the act of expansion.

4. In a clutch, a divided clutch ring, a support therefor, an anchorage for said ring on said support and near one end of said ring, means to move both ends of said ring apart and comprising two toggle links, adjustable means for one of said links including a screw-controlled wedge, an operating cam for said toggle links.

5. In a clutch, a divided clutch ring, a support therefor, an anchorage for said ring, one side of said anchorage having a square wall at one side and a beveled wall at the opposite side to form an incline up which the adjacent part of the ring may ride, and means to move apart both ends of said ring, said means being adjacent to the inclined wall of said anchorage.

[Claim 6 not printed in the Gazette.]

901,082. SHAVING-MUG. JOHN W. DYER, Detroit, Mich. Filed July 5, 1907. Serial No. 382,143.



1. A shaving cup having a side wall and a bottom, the said bottom being provided with a raised tabular part which extends from one side across the center, and with a cavity which extends partly around the tabular part, the tabular part projecting between the ends of the cavity, substantially as described.

2. In a shaving cup, the combination of a side wall, a handle and a bottom provided with a tabular part and with a curved groove, the tabular part projecting from the side wall between the terminals of the groove, substantially as described.

901,083. INSECTIFUGE. CARLETON ELLIS, Larchmont, N. Y., assignor, by mesne assignments, to Fulton Chemical Company. Filed Nov. 9, 1907. Serial No. 401,517.

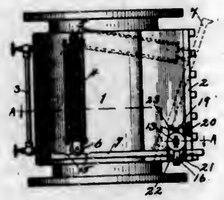
1. An insectifuge comprising granular absorbent material, including sawdust carrying insectifugal material of an oily character including oil of cedar leaf, and insectifugal material of a crystalline character including naphthalene.

2. An insectifuge comprising absorbent organic material, including sawdust, impregnated with oil of cedar leaf, and naphthalene.

3. An insectifuge comprising charred sawdust impregnated with naphthalene and oil of cedar leaf, substantially as described.

4. An insectifuge comprising absorbent organic material, including sawdust in a slightly charred condition, impregnated with essential oil material including oil of cedar leaf, and naphthalene.

901,084. RELIEF-VALVE. JOHN ERWOOD, Chicago, Ill. Filed Oct. 7, 1907. Serial No. 396,235.



1. In a valve, the combination of a suitable valve body provided with a straight passageway therethrough, a disk to close said passageway hinged to swing to one side of said passageway, and a shaft located non-concentric to the hinge of said disk, connected to said disk to operate the same.

2. In a valve, a suitable valve body provided with a passage therethrough, a hinged disk fitted to close said passage, guides on the back of said disk, a pressure shaft mounted in said valve body, and an arm rigidly secured to said shaft having its free end arranged to slide in said guides.

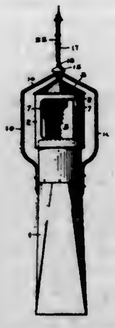
3. In a valve, the combination of a suitable valve body, a hinged valve disk, a pressure shaft extending through said body with one end extending outside of the valve body, means for exerting a constant rotating pressure to the exposed end of said shaft, an arm secured to said shaft having its free end in constant engagement with said disk.

4. In a relief valve, a suitable valve body, a hinged valve disk, a shaft having one end exposed to the exterior of said valve body operatively connected to said disk, means on the exterior of said valve body comprising an adjustable spring and lever for exerting a rotating pressure to said shaft.

5. In a relief valve, a suitable valve body, a hinged disk, a shaft in said valve body having one end extending to the exterior of same operatively connected to said disk, a lever mounted on the exposed end of said shaft arranged with lost motion relative to the shaft, and a spring to exert a constant pressure on said lever whereby the said disk is held to its seat.

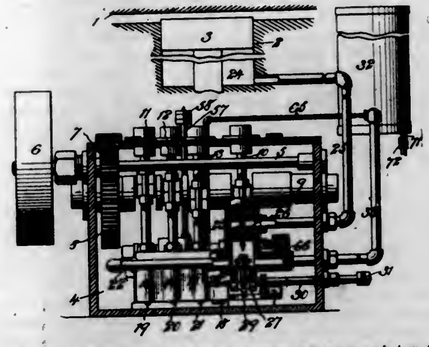
[Claims 6 to 13 not printed in the Gazette.]

901,085. WIND-ACTUATED VENTILATOR. JOSEPH ESCHER, Indianapolis, Ind. Filed Mar. 23, 1908. Serial No. 422,825.



A wind actuated ventilator including the duct, a revoluble hood adapted to take over the upper end of said duct and provided with a laterally disposed discharge opening, a hood supporting means secured to the exterior surface of said duct and provided with an aperture, a bearing-cup provided with a boss to engage the aperture in the hood supporting means, an upper bearing cup adapted to overlie the lower bearing-cup, balls between the said cups, a shaft passing vertically through the cups and into the hood, means on the shaft to limit its insertion, and a locking means adapted to secure the hood to the vertical shaft.

901,086. HYDRAULIC PRESS. JAMES H. FERGUSON, New York, N. Y., assignor to The Lovejoy Company, New York, N. Y., a Corporation of New York. Filed Dec. 24, 1904. Serial No. 238,195.



1. In a hydraulic press, a plunger, an accumulator for supplying pressure thereto, a pump for supplying pressure to the accumulator, a relief valve for the pump, a weighted auxiliary valve operated by pressure in the accumulator and means controlled by the auxiliary valve for opening and closing the pump relief valve for rendering the pump ineffective and effective.

2. In a hydraulic press, a plunger, an accumulator for supplying pressure thereto, a pump for supplying pressure to the accumulator, a relief valve for the pump, a weighted lever attached to the relief valve, a piston attached to the weighted lever and a weighted auxiliary valve for controlling the passage of pressure from the accumulator to the piston to open and close the pump relief valve and thereby render the pump ineffective and effective.

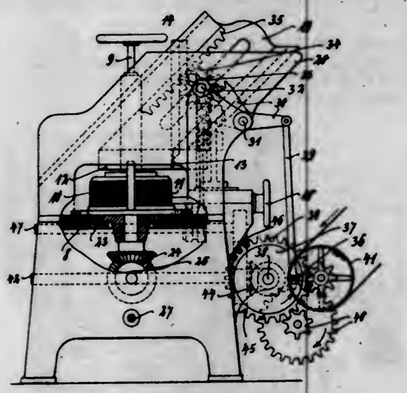
901,087. GRIDDLE. EUGENE L. FLANDREAU, Port Chester, N. Y. Filed May 8, 1907. Serial No. 372,564.



1. A griddle having an imperforate body of a shape and size to correspond with the oblong opening in a stove top, the said body having a flat cooking surface with an elevated border rim around the said cooking surface, and end lugs having shoulders 8 for resting on the top of a stove and handles 9 above the lugs on which the said shoulders are formed, the said lugs extending obliquely upwardly and outwardly from the said elevated rim and then longitudinally outward at their upper ends for supporting the bordered and imperforate cooking surface within the stove below the top thereof and with an open draft space around the border rim of the said imperforate body.

2. A griddle having an imperforate body of a shape to correspond with the oblong opening in a stove top and of a slightly smaller size than the said opening, the said body having a flat cooking surface with an elevated border rim around the said cooking surface, rigid end lugs integral with the said body and rim, the said lugs extending outwardly and upwardly from the said elevated rim and having shoulders 8 for resting on the top of a stove and handles 9 formed on the said lugs at a point above the said shoulders, and laterally extending lugs integral with the said body and rim at the side edges of the body near the middle of its length.

901,088. PAPER-CUTTING MACHINE. GEORG FOMM, Leipsig, Reudnitz, Germany. Filed Nov. 29, 1907. Serial No. 404,311.



1. In a paper cutting machine the combination of a revoluble work table, two knives in inclined paths towards and away from said table in planes at right angles to each other, means for positively operating said knives in quick succession and means for adjusting the table perpendicularly to the plane of movement of one of the knives.

2. In a paper cutting machine the combination of a revoluble work-table, two knives movable in inclined paths towards and away from said table in planes at right angles to each other means for positively operating said knives in quick succession, a fixed guide for one of said knives, means for adjusting the table perpendicularly to the plane of movement of the knife working on said fixed guide, a movable support for the other knife and means for adjusting said movable support perpendicularly to the direction of adjustment of the table.

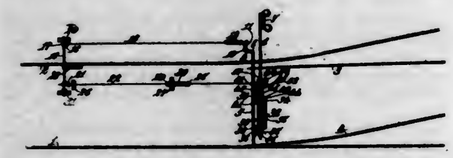
3. In a paper cutting machine the combination of a revoluble work table, two knives movable in inclined paths towards and away from the surface of said table in planes at right angles to each other, means for positively operating said knives successively, whereby one is moved upwards while the other is moved downwards, means for adjusting the table in a direction perpendicular to the plane of one of said knives and means for adjusting the other knife perpendicularly to the direction of adjustment of the table.

4. In a paper cutting machine the combination of an intermittently revoluble work table, two knives movable in inclined paths towards and away from the surface of said table in planes at right angles to each other, slidable rack bars carrying said knives, segment and pinion mechanism for positively reciprocating said bars whereby one is moved upwards while the other is moved downwards, a fixed frame for guiding one of said knife carrying bars, means for adjusting the table in a direction perpendicular to the plane of the knife working in said fixed frame, a movable frame for carrying the other knife carrying bar and means for adjusting said movable frame perpendicularly to the direction of adjustment of the table.

901,089. SWITCH-THROWING MECHANISM. JAMES N. FOWLER, Washington, D. C., assignor of one-half to Joseph Waldo, Washington, D. C. Filed Jan. 8, 1908. Serial No. 409,849.

1. A switch throwing device comprising a normally locked actuating mechanism for a switch throwing bar, a rock shaft, means operated by the rock shaft for releasing said mechanism, and means connected with the rock shaft and extending in the path of the flange of a wheel and adapted when the wheel is traveling at or above a predetermined rate of speed to actuate the rock shaft to an extent to operate the releasing means.

2. A switch throwing device comprising a normally locked actuating mechanism for a switch throwing bar, a rock shaft, means operated by the rock shaft for releasing said mechanism, means connected with the rock shaft and extending in the path of the flange of the wheel and adapted when the wheel is traveling at or above a predetermined rate of speed to actuate the rock shaft to an extent to operate the releasing means, and connections between the rock shaft and the switch throwing bar, whereby the movement of said bar to throw the switch is facilitated when the throwing mechanism is released.



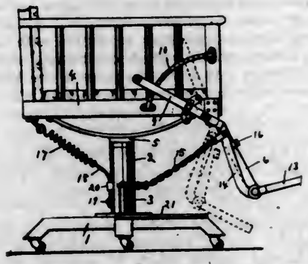
3. A switch throwing device comprising the combination with a switch throwing bar, of an actuating mechanism for said bar embodying an expansive element, said mechanism fixedly connected to the bar and positioned between the rails of the track, locking means for normally maintaining said expansive element under a state of compression, a rock shaft, means operatively connected with said rock shaft and with said locking means for operating the latter when the rock shaft is operated, thereby releasing the expansive element and causing the actuation of said bar, means carried by the rock shaft and adapted to extend in the path of a flange of a wheel and adapted to be engaged and actuated by the flange of the wheel when the latter is traveling at or above a predetermined rate of speed, whereby the rock shaft is moved to an extent to operate the means to release the locking means.

4. A switch throwing device comprising the combination with a switch throwing bar, of an actuating mechanism for said bar embodying an expansive element, said mechanism fixedly connected to the bar and positioned between the rails of the track, locking means for normally maintaining said expansive element under a state of compression, a rock shaft, means operatively connected with said rock shaft and with said locking means for operating the latter when the rock shaft is operated thereby releasing the expansive element and causing the actuation of said bar, means carried by the rock shaft and adapted to extend in the path of a flange of a wheel and adapted to be engaged and actuated by the flange of the wheel when the latter is traveling at or above a predetermined rate of speed whereby the rock shaft is moved to an extent to operate the means to release the locking means, and a pulling mechanism operatively connected with the rock shaft and with said bar to facilitate the shifting movement of the latter to throw the switch when the expansive element is released.

5. A switch throwing mechanism comprising the combination with a switch throwing bar and the switch rails engaged thereby, of a switch throwing lever, a yoke fixed to the bar, a pair of sleeves upon the lever, said yoke slidably mounted upon one of said sleeves and fixed to the other, an expansible spring interposed between the sleeves and surrounding the lever, a shiftable member mounted upon and carried with the lever and adapted to engage one of said sleeves thereby retaining said spring under a state of compression, said sleeve and that sleeve with which it coöperates provided with means whereby said spring can be released, a rock shaft, an actuating connection between the rock shaft and the switch throwing bar, an actuating connection between said member and said shaft, and means carried by the shaft and adapted to be engaged by the flange of the wheel for rocking the shaft.

[Claims 6 to 10 not printed in the Gazette.]

901,090. ROTARY ROCKING-CHAIR. GUSTAVE G. FREY, Floyd, N. Y. Filed Sept. 18, 1907. Serial No. 393,500.



1. The combination, in a chair, of a base, a seat mounted on said base by means of a vertical pivot centrally arranged beneath said seat, pedals supported from the said seat, and connections from the pedals to the said base, whereby the occupant is enabled to rock or swing the said seat back and forth horizontally on the said pivot by alternately operating the said pedals, substantially as set forth.

2. The combination, in a chair, of a base, a seat mounted on said base by means of a vertical pivot centrally disposed beneath said seat, pedals supported from the said seat, connections from the pedals to the said base, and a spring connection between the said seat and base, whereby the occupant, with the aid of said spring connection, is enabled to rock or swing the said seat back and forth horizontally on the said pivot by operating the said pedals, substantially as set forth.

3. The combination, in a chair, of a base, a seat mounted on said base by means of a vertical pivot centrally arranged beneath said seat, pedals supported from the front of the seat, connections from the pedals to the base whereby the occupant is enabled to rock or swing the said seat back and forth in the said pivot by operating the said pedals, and means for folding the pedals under the seat and extending them to operative position, substantially as set forth.

4. The combination, in a chair, of a base, a seat mounted on said base by means of a vertical pivot centrally arranged beneath said seat, pivoted pedals supported from the said seat in a position to be conveniently reached by the occupant's feet and having upwardly extending arms, and connections from the respective arms of the said pedals to points on the base, at opposite sides of the seat pivot, substantially as set forth.

901,091. VENDING-MACHINE FOR MATCHES. JOHN FRITSCHE, Philadelphia, Pa. Filed June 19, 1907. Serial No. 379,695.



1. In a vending machine, the combination with a rotatable member of a package container actuated thereby, an actuating lever, a spring actuated pawl carried thereby, and means for normally maintaining said pawl out of engagement with said member.

2. In a vending machine, the combination with a rotatable member of a rotatable package container actuated thereby, means for rotating said member, and means actuated by said rotating means for preventing improper rotation of said member when the same reaches the forward limit of one of its step by step movement.

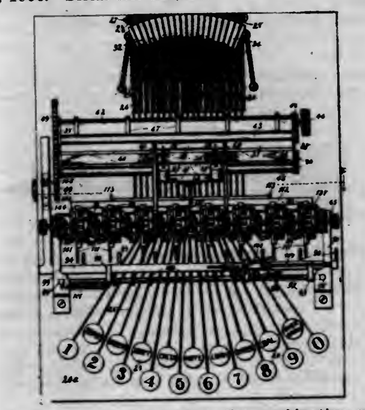
3. In a vending machine, the combination with a rotatable member of an actuating lever, a pawl carried by said lever and adapted to coact with said member, a tension device for said pawl, and a guard for normally maintaining said pawl out of engagement with said member.

4. In a vending machine, the combination with a rotatable member of a package container operatively connected therewith, an actuating lever, a pin carried thereby, a stop pawl pivoted at one end and having its other end adapted to engage said member, said pawl having a cam slot therein and a pin carried by said lever coacting with said cam slot.

5. In a vending machine, the combination with a rotatable member of a package container operatively connected therewith, an actuating lever, a pin carried thereby, a stop pawl pivoted at one end and having its other end adapted to engage said member, said pawl having a cam slot therein, a pin carried by said lever coacting with said cam slot, a second pawl carried by said lever and adapted to coact with said member to rotate the latter, and a tension device for said second pawl.

[Claims 6 and 7 not printed in the Gazette.]

901,092. COMPUTING-MACHINE. FRANK P. GLASNER and JOHNSON J. GLASIER, Springfield, S. D. Filed June 15, 1906. Serial No. 321,837.



1. In a computing apparatus, the combination of typewriting mechanism, numeral keys, operative connection between said keys and the typewriting mechanism, a main shaft, operative connection between said shaft and the keys, a series of primary number wheels mounted upon said shaft, a second shaft arranged parallel to the said main shaft, a series of secondary number wheels mounted upon said second shaft, means for operatively moving both of said series of number wheels simultaneously, and means for reversing the movement of the wheels of both series.

2. In a computing apparatus, the combination of typewriting mechanism, a series of keys, operative connection between said keys and the typewriting mechanism, a main shaft, operative connection between said shaft and the keys, a series of primary number wheels mounted upon said shaft, a second shaft arranged parallel to the main shaft, a series of secondary wheels carried upon said second shaft, means for moving either series of wheels independently of the other series, means for putting said series of wheels into and out of gear with each other, and means for reversing the movement of said primary wheels.

3. In a computing apparatus, the combination of typewriting mechanism, a series of keys, operative connection between said keys and the typewriting mechanism, a main shaft, operative connection between said shaft and the keys, a series of primary number wheels mounted upon said shaft, means for moving said shaft longitudinally, a second shaft arranged parallel with the said main shaft, a series of secondary number wheels carried upon said second shaft, means for shifting the secondary wheels into and out of gear with the primary wheels, and means for locking the said primary wheels.

4. In a computing machine, the combination of typewriting mechanism, numeral and character keys, operative connection between said keys and the typewriting mechanism, a main shaft, operative connection between said shaft and the keys, a series of primary number wheels loosely mounted upon said shaft, means for moving said shaft longitudinally, means for rotating said primary wheels, means for reversing said rotating movement, a second shaft arranged parallel to the shaft of the primary wheels, and means for shifting said second shaft laterally to bring the wheels mounted thereon into gear with the said primary wheels.

5. In a computing machine, the combination of typewriting mechanism, a plurality of numeral and character keys, a main shaft adapted to be shifted longitudinally in its bearings, operative connection between said shaft and said keys, a series of primary number wheels loosely mounted upon said main shaft, means for moving said number wheels alternately in opposite directions, a universal locking member adapted to be moved to engage said primary wheels, a second shaft arranged parallel to said main shaft, a series of secondary number wheels carried upon the second shaft, means for shifting said second shaft laterally, and means for resetting the secondary series of wheels.

[Claims 6 to 18 not printed in the Gazette.]

901,093. MEANS FOR MOLDING HOT-WATER BOTTLES. THOMAS M. GREGORY, Akron, Ohio. Filed Jan. 20, 1908. Serial No. 411,802.



1. A mold for hollow rubber articles comprising two opposite mold members having corresponding cavities on their inside for the article to be molded, in combination with a core consisting of a tubular body and separate substantially semi-circular spreading members having end connections oppositely with said body at one end and with each other at the other end and adapted to occupy the outer portions of said cavities, said members being separately removable.

2. Means for molding rubber bottles comprising external mold members and a core consisting of separate internal parts comprising a body part having a longitudinal bore for the introduction of fluid and separate side parts operatively engaged therewith and shaped to the sides of the bottle internally.

3. In the manufacture of rubber bottles, a two part external mold, and parts to shape the bottle internally adapted to be confined in said external mold and consisting of a body having a central bore and a reduced annular projection corresponding to the neck of the bottle, and two separate side core members curved lengthwise between their ends and separately interlocked with the said body at the inner extremity thereof.

4. In the manufacture of rubber bottles, a core therefor consisting of a substantially tubular body having a longitudinal bore for the introduction of fluid and provided with a head adapted to mold the funnel of the bottle and a projection next beyond said head, and two corresponding spreading parts for the inside of the bottle separably engaged at opposite sides with said projection.

5. In the manufacture of rubber water bottles, a set of outer mold members and inner members consisting of a main part having a central bore and a reduced projection at its inner end, a pair of spreading parts curved between their ends and interlocked with said projection, said spreading parts having slots to engage with said projection and said parts constructed to withdraw said main part bodily and leave said spreading parts in the bottle.

[Claims 6 to 8 not printed in the Gazette.]

901,094. ART OF COLORING WOOD. WILLIAM A. HALL, New York, N. Y., assignor to American Mahogany Company, a Corporation of Maine. Filed Apr. 2, 1906. Serial No. 309,409.

The herein described process of darkening and hardening wood for lumber purposes, consisting in thoroughly cooking boards, logs or blocks of wood for several hours in water to which has been added certain salts or solutions of solid matter which combine with the ingredients of the wood to darken and harden the same, such cooking being effected in a closed receptacle at a temperature or temperatures exceeding 240° F., so as to permanently darken the light parts of the wood by the staining effects resulting from the cooked resinous and gelatinous ingredients thereof augmented by the effects of the chemical salts or solutions added to the cooking water, the said salts or solutions serving to offset or counteract any destructive effects due to cooking at high temperatures and also counteracting a tendency of the wood to warp and crack when dried.

901,095. ART OF COLORING WOOD. WILLIAM A. HALL, New York, N. Y., assignor to American Mahogany Company, a Corporation of Maine. Filed June 29, 1906. Serial No. 324,027.

1. The herein described process of producing imitation of high-priced woods, consisting in cooking a comparatively inexpensive wood in water and at a temperature or temperatures exceeding 240° F. until the same is stained or darkened, then subjecting the wood to a vacuum process so as to suck the water out of the wood so far as possible, and then further coloring or darkening the wood and developing the grain thereof by forcing a liquid coloring matter into the wood by pressure in a closed receptacle.

2. The herein-described process of producing imitation of high-priced woods, consisting in cooking a comparatively inexpensive wood in water and at a temperature or temperatures exceeding 240° F. until the gelatinous and resinous properties thereof are softened and the wood is darkened throughout, then subjecting the wood to a vacuum process for the purpose of sucking the liquid out of the wood so far as possible, and finally impregnating the wood, thus rendered absorbent by the vacuum process, with a liquid coloring matter which is forced into the wood under pressure so that the coloring matter becomes largely deposited in the annular rings and grain cells, thereby intensifying or developing the "grain" of the wood.

901,096. ART OF TREATING WOOD FOR LUMBER. WILLIAM A. HALL, New York, N. Y., assignor to American Mahogany Company, a Corporation of Maine. Filed May 11, 1907. Serial No. 373,152.

1. In the art of treating wood for lumber, that improvement which consists in subjecting dry wood to the action of a vacuum in a closed receptacle for the purpose of removing the air therefrom, then forcing a coloring solution into and throughout the wood by a high pressure, and then boiling the colored wood to diffuse the coloring matter in the wood and thus give the colored product a practically uniform shade throughout.

2. In the art of treating wood for lumber, that improvement which consists in subjecting dry wood to the simultaneous action of a vacuum and a moderate heat in a closed receptacle, for the purpose of removing the air therefrom, then forcing a coloring solution into and throughout the wood by high pressure, and then cooking or boiling the wood to diffuse the coloring matter throughout the body of the same.

3. In the art of treating wood for lumber, that improvement which consists in subjecting dry wood to a vacuum process in a closed tank or receptacle, for the purpose of removing the air therefrom, then introducing a coloring solution into the tank or receptacle and applying a high pressure to the tank or receptacle for the purpose of forcing the coloring material into and partially throughout the wood, and then boiling the wood under considerable pressure and at a high temperature to diffuse the coloring matter throughout the body of the same and darken the shades of color.

4. The herein described artificially colored wood the entire body of which is impregnated with coloring material foreign to the natural wood and which coloring material is spread or uniformly diffused throughout the texture of the wood; thus avoiding streaky appearance and giving the colored wood a uniform shade.

901,097. ARTIFICIALLY GRAINED OR FIGURED WOOD AND PROCESS OF PRODUCING THE SAME. WILLIAM A. HALL, New York, N. Y., assignor to American Mahogany Company, a Corporation of Maine. Filed Oct. 12, 1907. Serial No. 397,212.

1. An artificially grained or figured and stained wood containing pigment-like deposits of a coloring matter in the more porous portions of the wood and having the denser or more solid portions of the wood stained throughout without the pigment deposits.

2. An artificially-grained or figured wood containing pigment-like deposits of a bark coloring matter in the more porous portions of the wood and having the denser or more solid portions of the wood stained throughout without the pigment deposits.

3. The herein-described process of producing an artificially grained or figured wood, consisting in depositing from a single coloring solution and through the effects or agency of substances naturally present in the wood, a pigment-like coloring matter in the more porous portions of the wood, to develop or render more prominent the natural grain figures, and causing the more fluid portions of the coloring solution to permeate the entire body of the wood, so as to stain the denser or more solid portions; thereby artificially coloring the wood throughout but rendering the grain or more porous portions more deeply shaded.

901,098. ART OF COLORING WOOD. WILLIAM A. HALL, New York, N. Y. Filed Feb. 1, 1908. Serial No. 413,762.

1. The herein-described process for coloring wood, consisting in subjecting well-seasoned lumber to the action of a vacuum in a closed chamber or receptacle, to draw the air therefrom and render the same absorbent, then forcing a coloring solution into and throughout the wood, so far as practicable, by high pressure, and subsequently diffusing the coloring matter in the wood by boiling or cooking the latter for a long time in the coloring solution at a temperature not exceeding 212° F.

2. The herein-described process for coloring wood, consisting in heating well-seasoned lumber in a closed chamber or receptacle, then subjecting the same to the action of a vacuum, to draw the air therefrom and render the wood absorbent, then forcing a coloring solution into and throughout the wood, so far as practicable, by high pressure, and subsequently diffusing the coloring matter in the wood by boiling or cooking the latter for a long time in the coloring solution at a temperature not exceeding 212° F.

3. The herein-described process for coloring wood, consisting in subjecting well-seasoned lumber to the action of a vacuum in a closed chamber or receptacle, to draw the air therefrom and render the same absorbent, then forcing a coloring solution into and throughout the wood, so far as practicable, by high pressure, and subsequently diffusing the coloring matter in the wood by boiling or cooking the latter for a long time in the coloring solution in an open vat or receptacle.

4. The herein-described process for coloring wood, consisting in heating well-seasoned lumber in a closed chamber or receptacle, then subjecting the same to the action of a vacuum, to draw the air therefrom and render the wood absorbent, then forcing a coloring solution into and throughout the wood, so far as practicable, by high pressure, and subsequently diffusing the coloring matter in the wood by boiling or cooking the latter for a long time in the coloring solution in an open vat or receptacle.

901,099. ART OF COLORING WOOD. WILLIAM A. HALL, New York, N. Y. Filed Feb. 15, 1908. Serial No. 416,114.

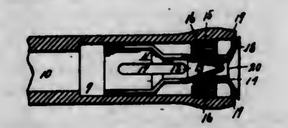
1. The herein described process of coloring wood, consisting in boiling the same at atmospheric pressure and at a temperature of or about 212° F. in a highly penetrating aqueous solution, to darken the body of the wood throughout, then subjecting the wood, while still hot, to the action of a cold coloring solution, so that, by contraction, the last-named solution will be drawn into those portions of the wood near the surfaces thereof to color such portions to any desired shade.

2. The herein described process of coloring wood, consisting in boiling the same at atmospheric pressure and at a temperature of or about 212° F. in a highly penetrating aqueous solution, to darken the body of the wood throughout, then subjecting the wood, while still hot, to the action of a cold coloring solution, so that, by contraction, the last-named solution will be drawn into those portions of the wood near the surfaces thereof to color such portions to any desired shade, and then boiling the wood in the said second coloring solution to cause the wood to be colored throughout to the shade desired.

3. The herein described process of coloring wood, consisting in boiling the same at atmospheric pressure, and at a temperature of or about 212° F., in a ferrous pyrolignite solution, to darken the body of the wood throughout, then subjecting the wood, while still hot, to the action of a cold aqueous alkaline coloring solution, so that, by contraction, the last-named solution will be drawn into those portions of the wood near the surfaces thereof to color such portions to any desired shade.

4. The herein described process of coloring wood, consisting in boiling the same at atmospheric pressure, and at a temperature of or about 212° F., in a ferrous pyrolignite solution, to darken the body of the wood throughout, then subjecting the wood, while still hot, to the action of a cold aqueous alkaline coloring solution, so that, by contraction, the last-named solution will be drawn into those portions of the wood near the surfaces thereof to color such portions to any desired shade, and then boiling the wood in the said second coloring solution to cause the wood to be colored throughout to the shade desired.

901,100. SYRINGE. ARNOLD H. C. HEITMAN, Detroit, Mich. Filed Mar. 16, 1908. Serial No. 421,373.



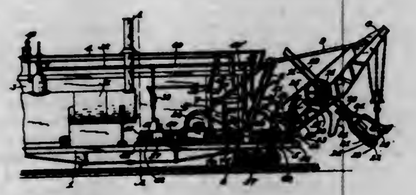
1. In a syringe nozzle, the combination of a tubular conduit, a deflecting plug having a screw threaded portion adapted to engage within a complementary portion of the conduit and a conical terminal portion extending across the end of said conduit, there being a central aperture and a plurality of by-passages extending lengthwise of said conduit through the body of the plug, and a slotted check valve slidably arranged within said conduit, through which the fluid ejected from the syringe passes without change in its direction of flow, said valve when projected to the forward limit of its travel serving as a closure to said central aperture, substantially as described.

2. In the nozzle of a syringe, the combination of a tubular conduit, a deflecting plug having a central passage, in-

serted in the end of said conduit, the body portion of said plug having a plurality of smaller passages arranged about said central passage substantially parallel therewith, and a slotted valve member having a limited path of travel within and with respect to said conduit, through which the fluid introduced into and expelled from the syringe bulb passes, adapted to close said central passage in the deflecting plug, substantially as described.

3. In a syringe, in combination with a conduit member, a valve member slidable therein and through which all fluid passing through the conduit must pass, and a plug member having a central aperture adapted to be closed by the engagement of said valve member thereagainst, a plurality of by-passages arranged thereabout, and a deflector member integral with the apertured portion and extending across one end of said conduit member, being slightly spaced therefrom, substantially as described.

901,101. STEAM-SHOVEL. CHARLES F. HINKLEY, Seelyville, Ind. Filed Mar. 20, 1908. Serial No. 422,203.



1. In a steam shovel, the combination of a platform, a crane pivoted on the platform, an engine mounted on the crane, a starting and stopping device on the engine, and an automatically-adjustable reverse-lever mounted pivotally on the platform and connected with the starting and stopping device, the reverse-lever extending past and near to the axis of the crane-pivot and having an extensible or contractible part.

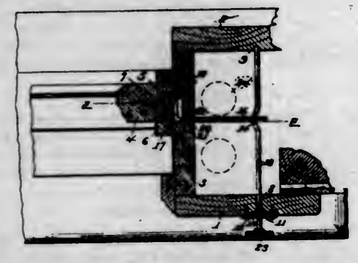
2. In a steam shovel, the combination of a platform, a crane pivoted on the platform, an engine mounted on the crane, reversing gear for the engine mounted thereon, and an automatically-adjustable reverse-lever mounted pivotally on the platform and connected with the reversing gear, the reverse-lever extending past and near to the axis of the crane-pivot and having an extensible or contractible part.

3. In a steam shovel, the combination of a platform, a crane pivoted on the platform, an engine mounted on the crane and comprising controlling apparatus, and an automatically-adjustable reverse-lever mounted pivotally on the platform and extending past and near to the axis of the crane-pivot and having an extensible or contractible part, a coupling-block pivoted to the extensible or contractible part, and a link pivoted to the coupling-block and connected with the controlling apparatus of the engine.

4. In a steam shovel, the combination of a platform, a crane pivoted on the platform, a movable shovel-arm on the crane, a shovel on the shovel-arm, a bottom hinged to the shovel, a latch for the bottom, a cylinder attached to the shovel-arm, a piston movable in the cylinder and having a rod attached thereto and operatively connected with the bottom-latch, a supply-pipe on the crane, a flexible pipe connected to the supply-pipe and also to the cylinder, and a spring normally holding the piston at one end portion of the cylinder.

901,102. SASH-LOCK. CHARLES L. HOBBS, Wheeling, W. Va., assignor of one-half to Walter S. Bryson, Wheeling, W. Va. Filed July 8, 1908. Serial No. 442,492.

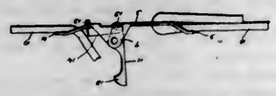
1. In a sash-lock, the combination with a window casing and a sash stile, the latter having a longitudinal plate with a line of perforations therein fixed to its edge, of a rod projected through the inside casing and having its inner end seated in a socket in the outside casing, a crank formed in said rod intermediate its ends, and a locking bolt connected to said crank, said locking bolt comprising a flat body portion which stands edgewise at right angles to said rod, an integral extension which stands at right angles to said body portion, and an integral stud carried by the outer face of said extension, said stud being adapted to be moved into and out of engagement with the perforations in said plate when said rod is rotated.



2. In a sash lock, the combination with a window casing and a sash stile, the latter having a plate with a line of perforations therein secured to its inner edge, of a bolt having a stud adapted for interlocking engagement with the perforations of said plate, said bolt lying in horizontal position within the window casing, and consisting of a flat body portion which stands edgewise between the paths of movement of the window weights, an integral extension which lies at right angles to said body portion, said extension bearing said stud on its outer face, and a rod revolubly mounted in said casing and projecting through an aperture in the body of said bolt, that portion of the rod engaging the bolt being bent into crank shape.

3. In a window-sash locking mechanism, the combination of a sash stile having a longitudinal plate mounted on its inner edge, said plate having a line of perforations therein, a pulley stile having a small vertical slot and a mortise therein, the latter being in its outer face, a bolt projected through said slot from within the window casing and having an angular extension lying in said mortise, a stud on the outer face of said extension for interlocking engagement with perforations in said plate, a rod revolubly mounted in the casing at right angles to said bolt and having a crank formed therein, which crank is in operative engagement with said bolt, said rod being projected outward through the inner casing and having a knob on its end.

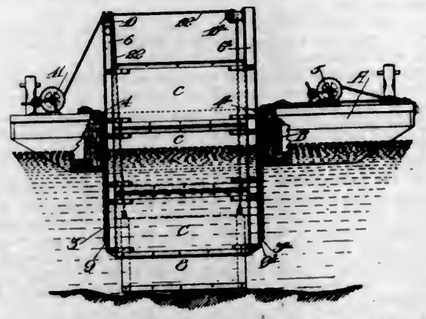
901,103. BUCKLE. CHARLES P. HUTTON, East Hampton, Conn., assignor of one-half to George W. Goff, East Hampton, Conn. Filed Apr. 27, 1908. Serial No. 429,535.



1. A buckle comprising a plate having end bars and upwardly projecting ears, a lever pivoted to said ears and having forwardly extending arms, a clamp pivoted to said arms and having a clamping plate having sliding engagement with the sides of the frame and adapted to be moved toward and from the forward bar, substantially as described.

2. The herein described buckle comprising a frame having end bars and intermediate transverse bars, the end bars arranged in a plane above the intermediate bars, a plate also formed with upwardly extending ears, a lever pivoted in said ears and having forwardly projecting arms, a clamp pivoted to the arms of the lever and formed with a clamping plate having sliding engagement with the sides of the frame and adapted to be moved toward and from the forward bar, substantially as described.

901,104. APPARATUS FOR SUBMARINE OPERATIONS. FRANKLIN H. JACKSON, Berkeley, Cal., assignor to Byron Jackson Iron Works, West Berkeley, Cal., a Corporation. Filed May 8, 1908. Serial No. 431,580.



1. In an apparatus for submarine operations, the combination with a float, of a vertical outer caisson supported by chains or cables secured to the bottom member of said caisson and extending to said float, and a suitable hoisting device.

2. In an apparatus for submarine operations, the combination with a float, of a vertical outer caisson supported by chains or cables secured to the bottom member of said caisson and extending upward to said float, an inner caisson of smaller dimensions and slidable within said outer caisson, and supported by chains or cables extending to the float and suitable hoisting devices.

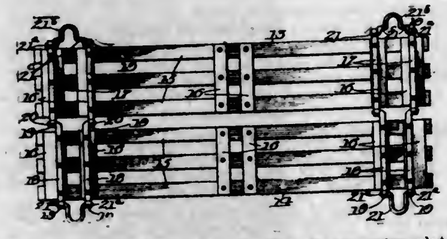
3. In an apparatus for submarine operations, the combination with a float, of a vertical outer caisson supported by chains or cables secured to the bottom member of said caisson, and extending upward to said float, said outer caisson being composed of a plurality of detachable sections adapted to extend from the float to the river bed.

4. In an apparatus for submarine operations, the combination of vertically extendible beams and side sections connecting the same, said beams of sufficient length to receive a plurality of the side sections, said sections being secured to said vertical beams by means of bolts projecting through extending flanges or lugs riveted to said side sections.

5. In an apparatus for submarine operations, the combination of vertically extensible beams and side sections connecting therewith said beams being of sufficient length to receive a plurality of side sections, said sections being detachably secured to said beams, by means of bolts extending through outwardly projecting flanges, and lugs riveted to said side sections.

[Claims 6 to 13 not printed in the Gazette.]

901,105. NON-DETACHABLE SLIDING AND FOLDING UPPER DECK FOR BRICK-DRIER CARS. CHARLES H. JOHNSTON, Rogers Park, Ill. Filed Apr. 20, 1908. Serial No. 428,080.



1. A deck consisting of a plurality of supporting platforms hinged together at their meeting edges, horizontally disposed supporting-members for said platforms, and means on the outer portion of each outer platform to slidably engage said supporting-members.

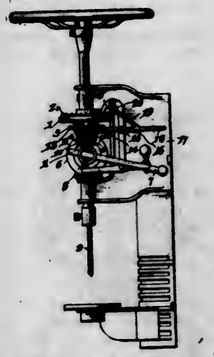
2. A deck consisting of a plurality of supporting platforms hinged together at their meeting edges, horizontally disposed supporting-members for said platforms, and a loop loosely connected to the outer portion of each of the outer platforms near each of its ends and adapted to embrace said supporting-members.

3. A deck consisting of a pair of supporting-platforms, a pair of spaced apart straps transversely secured to each of the platforms near each of their ends, said straps being pivotally connected together at their inner ends in pairs and having their outer ends provided with bearings, horizontally disposed supporting-members for said platforms, and a loop located in the bearings of the outer ends of each pair of said straps and adapted to embrace said supporting-members.

4. A deck consisting of a pair of supporting platforms, a pair of spaced apart straps transversely secured to each of the platforms near each of their ends, said straps being pivotally connected together at their inner ends in pairs, horizontally disposed supporting-members for said platforms, and means loosely connected to the outer portion of each of the platforms near each of its ends and adapted to movably engage said supporting-members.

5. A deck consisting of a pair of supporting platforms, a pair of spaced apart straps transversely secured to each of the platforms near each of their ends, said straps being pivotally connected at their inner ends in pairs and having their outer ends provided with bearings, the members of each pair of straps on one of the platforms being located further apart than the members of each of the pair of straps on the other platform so that the latter pairs may fold between the members of the former pairs, horizontally disposed supporting-members for said platforms, and a loop located in the bearings of the outer ends of each of said straps and adapted to embrace said supporting-members.

901,106. DRILLING-MACHINE. WILLIAM J. KEEGAN, Winthrop, N. Y. Filed Dec. 10, 1907. Serial No. 405,928.



1. The combination with a drilling machine having gearing for operating a drill and provided with feed mechanism including a feed wheel, and a dog or pawl for actuating the same, of a shiftable gear movable into and out of mesh with the said gearing to connect the feed mechanism with the same and to disconnect it therefrom, means for connecting the feed wheel with the shiftable gear, and means movable with the shiftable gear for moving the pawl or dog out of engagement with the feed wheel when the gear is moved into mesh with the said gearing and for engaging the pawl or dog with the feed wheel when the shiftable gear is moved out of mesh with the gearing.

2. The combination with a drilling machine having gearing for operating a drill and provided with feed mechanism including a feed wheel, and a dog or pawl for actu-

ating the same, of a shiftable gear movable into and out of mesh with the said gearing to connect the feed mechanism with the same and to disconnect it therefrom, means for connecting the feed wheel with the shiftable gear, and a lever connected with the pawl or dog and receiving the shiftable gear for simultaneously moving the former when the latter is moved into and out of mesh with the said gearing.

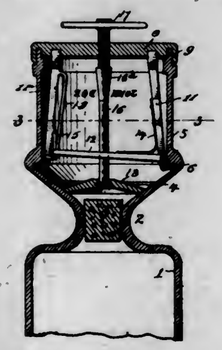
3. The combination with a drilling machine having gearing for operating a drill and provided with feed mechanism including a feed wheel, and a dog or pawl for actuating the same, of a shiftable gear movable into and out of mesh with the said gearing to connect the feed mechanism with the same and to disconnect it therefrom, means for connecting the feed wheel with the shiftable gear, and a lever fulcrumed at an intermediate point and provided with a curved arm receiving the shiftable gear, said lever being also provided with an angularly disposed connecting arm extending to and connected with the pawl or dog.

4. The combination with a drilling machine having gearing for operating a drill and provided with feed mechanism including a feed wheel, and a dog or pawl for actuating the same, of a shiftable gear located beneath the feed wheel and movable into and out of mesh with the said gearing to connect the feed mechanism with the same and to disconnect it therefrom, means for connecting the feed wheel with the shiftable gear, and an approximately horizontal lever fulcrumed at an intermediate point and having its inner arm arranged to receive the shiftable gear, said lever being provided at its outer arm with an inclined connecting arm extending upward and inward beyond the vertical plane of the fulcrum point of the lever to and connected with the pawl or dog.

5. The combination with a drilling machine having gearing for operating the drill and provided with feed mechanism including a feed wheel having a sleeve, a projection carried by the sleeve, and a pawl or dog for engaging the feed wheel, of a shiftable gear slidable on the sleeve to move it into and out of mesh with the said gearing and having a slot for engaging the said projection to interlock it with the sleeve, said gear being also supported out of mesh by the said projection.

[Claims 6 to 9 not printed in the Gazette.]

901,107. ANTIFRAUD-BOTTLE. JACOB KINSEL, Philadelphia, Pa. Filed Feb. 13, 1908. Serial No. 415,709.



1. The combination with a bottle formed in its mouth with a weakened portion, of means for permanently sealing said mouth, and means within the mouth for exerting a tension upon the wall of the bottle above and below the weakened portion.

2. The combination with a bottle formed in its mouth with a weakened portion, of a cap permanently secured to the mouth on one side of the weakened portion and means within the mouth bearing upon the cap and upon the wall of the bottle on the other side of the weakened portion and arranged to exert an outward tension thereon.

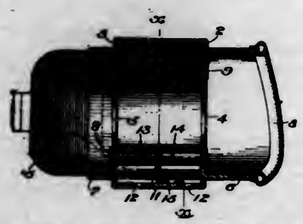
3. The combination with a bottle formed in its mouth with a weakened portion, of a cap permanently secured to the mouth on one side of the weakened portion and an actuating rod having a threaded connection with the cap and arranged to exert a tension on the same and on the weakened portion.

4. The combination with a bottle formed in its mouth with a weakened portion, of a cap permanently secured to the mouth on one side of the weakened portion, an actuating rod having a threaded connection with the cap, and means bearing upon the wall of the bottle on the other side of the weakened portion and arranged to limit the inward movement of the rod whereby to exert an outward tension on the cap and on the weakened portion of the mouth.

5. The combination with a bottle formed in its mouth with a weakened portion, of a cap permanently secured to the mouth above the weakened portion, an actuating rod having a threaded connection with the cap at one end, and a disk swiveled to the other end of the rod and arranged to bear against the wall of the bottle on the other side of the weakened portion and to limit the inward movement of the rod.

[Claims 6 to 9 not printed in the Gazette.]

901,108. MUFFLER FOR TELEPHONE-TRANSMITTERS. GEORGE KRACKER, Philadelphia, Pa. Filed Dec. 28, 1907. Serial No. 408,392.



1. In a device of the character described, a casing having openings therein, a mouth piece of greater diameter than said openings secured to said casing in alinement with said openings, a sound-deadening material in said mouth piece and casing, an auxiliary chamber formed in said casing, an inlet and an outlet for said auxiliary chamber, a longitudinally disposed spiral partition between said inlet and outlet, and means for detachably securing the device to a telephone transmitter.

2. In a device of the character described, a casing having openings therein, a V-shaped mouth piece of greater diameter than said openings secured to said casing in alinement with said openings, a sound-deadening material in said mouth piece and casing, an auxiliary chamber in said casing, an inlet and an outlet for said auxiliary chamber, a longitudinally disposed spiral partition between said inlet and outlet, and means for detachably securing the device to a telephone transmitter.

3. In a device of the character described, a casing having openings therein, a V-shaped mouth piece secured to said casing in alinement with said openings, an auxiliary chamber in said casing, an inlet and an outlet therefor communicating respectively with the interior and exterior of said casing, a longitudinally disposed spiral partition in said chamber, a sound-deadening material forming a lining for said device, and an elastic member for detachably securing the device to a telephone transmitter.

901,109. EMBOSSING-DIE. FREDERICK R. KUHLMANN, Marseilles, Ill., assignor to Howe & Davidson Company, East Orange, N. J., a Corporation of New Jersey. Filed Mar. 24, 1908. Serial No. 423,027.

1. An embossing die comprising a facing layer of thin sheet metal, a layer of cloth secured to the rear face of said facing layer by adhesive material, said layers being embossed to give form to the face of the die, and a backing layer which conforms on its front face to the rear surface of the connected metal and cloth layers and which is secured to the same by an adhesive substance.



2. An embossing die comprising a facing layer of thin sheet metal, a layer of cloth secured to the rear face of said facing layer by adhesive material, said layers being embossed to give form to the face of the die, and a backing layer of fibrous material.

3. An embossing die comprising a facing layer of thin sheet metal, a layer of cloth secured to the rear face of said facing layer by adhesive material, said layers being embossed to give form to the face of the die, and a backing layer the front face of which conforms to the rear surface of the connected metal and cloth layers, and which is secured to the same by an adhesive substance, said backing layer being tapered to thin edges at its margins.

4. The process of making a thin, flexible embossing die which consists in embossing a layer of thin sheet metal, forming a layer of fibrous material by pressure in a die to conform on its front face to the rear surface of the embossed sheet metal layer, and securing said layers together by adhesive material.

5. The process of making a thin, flexible embossing die which consists in securing to the rear surface of a piece of thin sheet metal a layer of cloth, embossing the connected layers of sheet metal and cloth to give form to the face of the die, forming a layer of fibrous material by pressure in a die to conform on its front face to the rear surface of the connected metal and cloth layers, and securing said layer of fibrous material to the connected metal and cloth layers by an adhesive substance.

901,110. REGISTER-HOOK. ANDREW KYLE, Philadelphia, Pa., assignor to John Kyle, Philadelphia, Pa. Filed Feb. 15, 1908. Serial No. 416,026.



1. In a device of the character described, a body portion, a slide, a hook rotatably mounted thereon, a follower movably mounted in said slide and guided on opposite sides by the walls of said slide, a cam groove and pin common to said body portion and said follower for moving said follower laterally and with it, said slide.

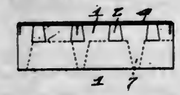
2. In a device of the character described, a body portion, the slide suitably guided in said body portion, a hook rotatably mounted on said slide, a follower adapted to be raised and lowered in said slide and guided on opposite sides by the walls of said slide, cam grooves and pins common to said follower and said body portion, for moving the said follower and slide laterally, and means for raising and lowering said follower.

3. In a device of the character described, a body portion, a slide suitably guided in said body portion, a hook rotatably mounted on said slide, a follower adapted to be raised and lowered in said slide and guided on opposite sides by the walls of said slide, cam grooves and pins common to said body and said follower, and a screw for raising and lowering said follower whereby the slide and follower are moved forward and backward.

4. In a device of the character described, a body portion having grooves on its inner walls, a slide movably mounted on said body portion, a hook rotatably mounted on said slide, a follower mounted on said screw and guided on opposite sides by the walls of said slide, and pins carried by said follower and seated in said grooves, whereby the slide and follower are moved laterally when said follower is raised or lowered.

5. In a device of the character described, a body portion, grooves in the side walls thereof, a track carried by said side walls, a slide guided by said track, a hook rotatably mounted on said slide, a screw carried by said slide, a follower movably mounted on said screw and suitably actuated thereby and guided on opposite sides by the walls of said slide, and pins carried by said follower and movable in said grooves, whereby the slide and follower are moved laterally when said follower is raised and lowered.

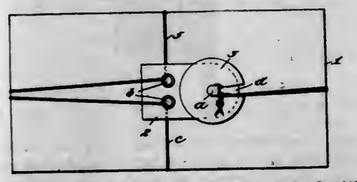
901,111. METHOD OF PRODUCING STEREOTYPE-BASES. JAMES L. LEE, Pasadena, Cal. Filed Nov. 24, 1905. Serial No. 288,946.



1. The herein described method of securing soft nailing strips or portions in metallic stereotype bases, which consists in placing the said portions against that side of the mold intended to define the face of the base, then resting a removable member of the mold against said portions to hold them in place in the mold, and finally filling the mold while said portions are thus held.

2. The herein described method of securing soft nailing strips or portions in metallic stereotype bases, which consists in first securing said portions to a thin sheet of suitable material, placing the said sheet with the portions attached in the bottom of the mold, then resting a removable member of the mold against said portions to hold them in place, and finally filling the mold while said portions are thus held.

901,112. PACKAGE-TIE. THOMAS E. LEWIS, Vicksburg, Miss. Filed Aug. 16, 1907. Serial No. 388,751.

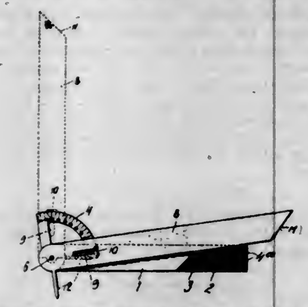


In a package tie, a foundation board provided with two eyeleted holes, a notched disk, and a hooked eyelet which serves as means for securing the disk to the foundation board, combined with a loose cord the ends of which are inserted through the eyeleted holes from the underside of the foundation board and secured together, the doubled cord being adapted to be passed over the hooked eyelet, then carried around the eyelet between the disk and foundation board, and then locked by being carried under another portion of the cord, substantially as specified.

901,113. PROTRACTOR. HENRY O. LOSCH, McKees Rocks, Pa. Filed Jan. 11, 1908. Serial No. 410,377.

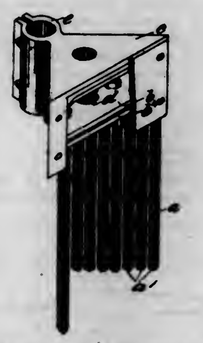
1. An instrument of the type described comprising a blade body, a spacing block in said body having an inclined face, a protractor carried by said body, a blade adjustably mounted in said body and adapted when folded to rest on the inclined face of said spacing block, said blade having a slot formed therein providing a pointer adapted to register with the graduations of said protractor, and a pointer carried by said blade and adapted to move into engagement with said protractor when the first mentioned pointer moves out of engagement therewith.

2. An instrument of the type described comprising a body, a blade adjustably mounted therein and adapted to fold partially within said body, a protractor carried by said body, said blade having a pointer to register with said



protractor, and another pointer carried by said blade and adapted to move into engagement with said protractor as the first mentioned pointer moves out of engagement therewith.

901,114. OBSTACLE-REMOVING DEVICE FOR VEHICLES. TOM LOVELESS, Upwey, and WILLIAM J. SAMWAYS, Weymouth, England. Filed Nov. 26, 1906. Serial No. 345,224.



1. The combination, with a supporting rod, of an outer casing secured to the said rod and projecting on one side thereof, a brush having a stock which is slidable in the said casing and having its wires or bristles arranged in V-shaped form with the apex pointing towards the axis of the said rod, and a spring which presses the said brush downwardly in the said casing.

2. The improved attachment for vehicles consisting of the combination of a wire brush, having a triangular stock said brush having its wires or bristles arranged in V-shaped form to shed the dirt at each side thereof; an outer casing in which such stock is adapted to vertically slide; a spring interposed between the stock aforesaid and the outer casing, to control the sliding movement; and a clamping device carried by the outer casing, substantially as specified.

3. The improved attachment for vehicles consisting of the combination of a wire brush, having a triangular stock; an outer casing in which such stock is adapted to vertically slide; a spring interposed between the stock aforesaid and the outer casing, to control the sliding movement; a clamping device carried by the outer casing; a cranked rod, upon which the device is clamped; a vertical projection on the axle of the vehicle, upon which said cranked rod is hinged at one end; and a vertical projection on the steering rod of the vehicle with which said cranked rod is engaged, substantially as specified.

901,115. METHOD OF SECURING BLADES OF TURBINES, &c. JOHN F. METTEN, Philadelphia, Pa. Filed Feb. 11, 1907. Serial No. 356,830.



1. The method of securing the blades of turbines which consists of aperturing a disk, inserting in said apertures the ends of the blades and uniting the blades and disks by electrolytically deposited metal.

2. The method of securing the blades of turbines which consists of aperturing the disk members, reducing one end of the blades and inserting said ends in the apertures, and then uniting the blades and disk members by electrolytically deposited metal.

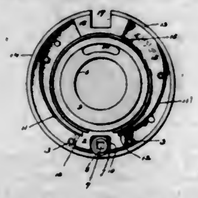
3. The method of securing the blades of turbines which consists of aperturing a disk and nicking the same adjacent the apertures, inserting in said apertures the ends of the blades, and causing them to engage said nicks, and then uniting the blades and disk by electrolytically deposited metal.

4. The method of securing blades of turbines which consists of forming a ring member, aperturing said ring member, inserting one end of the blades in said apertures, and uniting the blades to the ring by electrolytically deposited metal.

5. The method of securing blades of turbines which consists of forming a ring section by bending a bar of metal to the required contour, aperturing such section at predetermined intervals, temporarily securing the blades in place, and then subjecting the contiguous portion of the blade and ring to the electrolyte until a desired thickness thereof is deposited.

[Claims 6 to 8 not printed in the Gazette.]

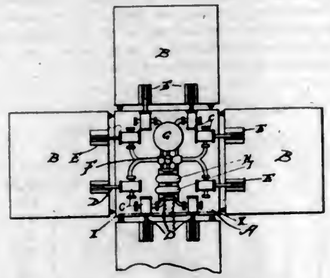
901,116. PERMUTATION WHEEL-TUMBLER FOR LOCKS. JAMES J. MURPHY, Terryville, Conn., assignor to Eagle Lock Co., Terryville, Conn., a Corporation. Filed Apr. 6, 1908. Serial No. 425,465.



1. In a permutation wheel-tumbler for permutation locks, the combination with an annular chambered body, of an annular bearing-center located therein and having its periphery toothed, a radially arranged dog mounted in the body in position to engage with the teeth of the said bearing-center, a hub mounted in the said body and formed with a clearance face, and springs located within the chambered body and engaging with the dog for moving the same radially outward to release the bearing-center when the clearance face of the hub is brought into its clearance position.

2. In a permutation wheel-tumbler for permutation locks, the combination with an annular chambered body, of an annular bearing-center located therein and having its periphery toothed, a radially arranged dog mounted in the said body in position to engage with the teeth of the said bearing-center, a hub mounted in the said body, located within the said notch in the dog and formed with a clearance-face, springs engaging with the ends of the dog for moving the same radially outward to release the bearing-center when the clearance-face of the hub is brought into opposition with the bottom of the said notch in the dog, and means for guiding the dog in its radial movement.

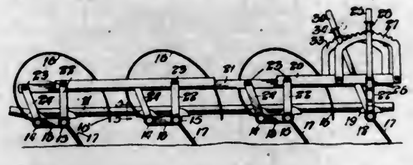
901,117. WAVE-MOTOR. JOHN A. MCMANUS, Philadelphia, Pa. Filed Dec. 28, 1906. Serial No. 349,768.



1. In a wave motor of the character described, a central float, a series of secondary floats hinged thereto, pumps located upon the central float, the piston rods of which are connected with the secondary floats, a water motor also located upon the central float, pipes for leading water from the pump cylinders to the motor and an electric generator adapted to be operated by the water motor, as and for the purpose set forth.

2. In a water motor of the character described, a central float, a series of secondary floats hinged thereto, a series of pivoted cylinders located upon the central float, a series of blocks located upon the secondary floats to which the piston rods of the cylinders are attached, a main pipe connected with all of the cylinders to receive water pumped therefrom, an air dome connected with said pipe for equalizing pressure upon the water, a turbine also connected with said pipe by which it is supplied with water and an electric generator coupled to the turbine for converting the water power into electrical power, as specified.

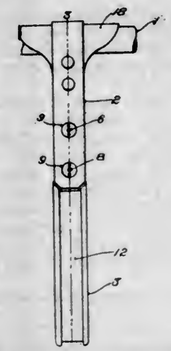
901,118. COMBINED SPRING AND SPIKE TOOTH HARROW. JONATHAN R. NAYLOR, La Grange, Ill. Filed Apr. 26, 1907. Serial No. 370,486.



1. A harrow comprising a frame, a plurality of rocking bars extending across the frame and mounted in bearings carried by the side members of the frame, said bars being arranged in sets, one set bearing spring teeth and the other set bearing spike teeth, means acting on the spike teeth bearing bars for adjusting the spike teeth to the soil, and means acting on the spring teeth bearing bars for adjusting the spring teeth to the soil, said adjusting means permitting the two sets of teeth to be adjusted for simultaneous or independent use, and to penetrate the soil at varying depths, either when used singly or combined.

2. A harrow comprising a frame, a plurality of parallel closely spaced rocking bars mounted in bearings carried by the side members of said frame, said bars being arranged in sets, one set bearing spring teeth and the other set bearing spike teeth, the bars of each set being arranged alternately to the bars of the other set, adjusting means connected with all of the bars of one set for rocking them in unison, and separate adjusting means likewise connected with all of the bars of the other set, whereby the two sets of teeth may be adjusted for simultaneous or independent use, and to penetrate the soil either when used singly or together at varying depths.

901,119. HANGER-STRAP OR HANDHOLD FOR CARS, &c. JOHN F. NEWTON, Jr., Boston, Mass. Filed Jan. 24, 1908. Serial No. 412,367.



1. A hanger-strap or hand-hold comprising a lower loop or hand-grasp having its end-portions adjacent each other a key engaging with such end-portions and provided with an upwardly-extending stem, and a suspension-loop having the said stem entered between the side-portions thereof and the latter attached thereto.

2. A hanger-strap or hand-hold comprising the lower loop or hand-grasp composed of sheet-material with inturned side-flanges and having its end-portions adjacent each other, a key connecting said end-portions and holding them in position and provided with an upwardly-extending stem, an upper or suspension loop, and means to fasten the latter loop and the said extension together.

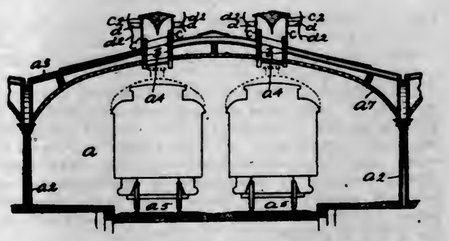
3. A hanger-strap or hand-hold comprising the lower loop or hand-grasp having its end-portions adjacent each other, a Y-shaped key having its wings respectively engaged with the respective end-portions, and a suspension-loop having its side-portions at opposite sides of the stem of said key and fastened thereto.

4. A hanger-strap or hand-hold comprising the lower loop or hand-grasp having the body-portion formed with inturned side-flanges, a strip confined in place by the said flanges, and a suspension-loop having side-portions which overlap by their extremities the ends of said strip and cover and protect such ends.

5. A hanger-strap or hand-hold comprising the lower loop or hand-grasp having the body-portion thereof formed with inturned side-flanges, a strip confined in place by the said flanges, and a suspension-loop which by the free extremities of its side-portions overlaps and covers the upper end of the said lower loop or hand-grasp and also covers and protects the ends of the said strip.

[Claims 6 to 15 not printed in the Gazette.]

901,120. SHED-VENTILATOR. FRANK J. NIES, East Orange, N. J. Filed May 6, 1908. Serial No. 431,139.



1. In a shed, the combination of girders, a roof thereon, aprons extending through said roof and forming an air duct, and a cover arranged over said air duct.

2. In a shed, the combination of girders, a roof thereon, aprons extending longitudinally through said roof and forming an air duct and a longitudinally arranged cover above said air duct.

3. In a shed, the combination of girders, a roof thereon, aprons extending through said roof and forming an air duct, a cover over said air duct and members connected with said cover outwardly flared to direct gases from said shed through said air duct.

4. In a shed, the combination of girders, a roof thereon and provided with a longitudinally arranged opening therethrough, a cover arranged at a predetermined distance above said opening forming side openings for the upward and outward passage of gases, and wind deflectors arranged at a distance from said side openings.

5. In a shed, the combination of girders, a roof thereon, provided with a longitudinally arranged opening therethrough, vertical aprons at each side of said opening and a cover for said opening carried by said aprons at a distance thereover.

[Claims 6 to 13 not printed in the Gazette.]

901,121. DUPLICATING-MACHINE. KATHERINE O'KANE, Philadelphia, Pa. Filed May 28, 1908. Serial No. 435,497.



1. In a duplicating machine, the combination with a rotary printing drum having a plurality of undercut channels in its periphery; of type having flanges fitted in said channels; and, an underscore strip held between said flanged type, independently of said drum.

2. In a duplicating machine, the combination with a rotary printing drum having a plurality of undercut channels extending parallel with its axis in its periphery; of type fitted in said channels; and, an underscore strip held by and between the type, independently of said drum.

3. In a duplicating machine, the combination with a rotary printing drum having a plurality of undercut channels extending parallel with its axis in its periphery; of type having flanges fitted in said channels in single spaced relation; and an underscore rule strip held between said flanged type, independently of said drum.

4. In a duplicating machine, the combination with a rotary printing drum; having a plurality of undercut channels extending parallel with its axis in its periphery; of type having flanges fitted in said channels in single spaced relation; and, a flexible resilient underscore rule strip held by and between said flanged type, independently of said drum.

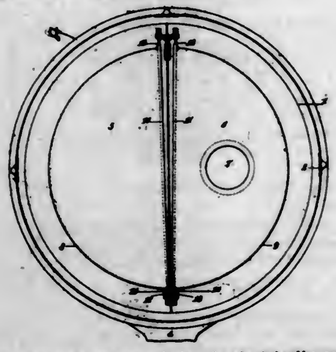
5. In a duplicating machine, the combination with a rotary printing drum; of type carried by said drum; an underscore rule strip held by and between said type; and, means distinct from said type maintaining said rule type high.

[Claims 6 and 7 not printed in the Gazette.]

901,122. SYSTEM OF ELECTRICALLY-CONTROLLED SIGNALS FOR RAILWAYS. JEAN PAUL and THÉOPHILE DUCOUSSO, Paris, France. Filed Apr. 13, 1907. Serial No. 368,127.

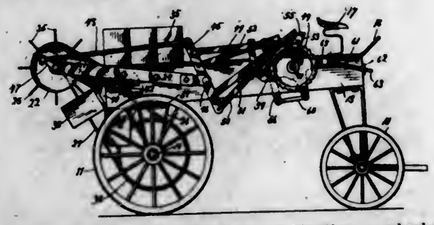
1. An improved system of signal electrically controlled for railways, comprising a transparent casing fixed on a suitable support, a movable signal in the said casing, the said signal consisting of two similar parts, two shafts by which said parts are pivotally mounted, disks eccentrically mounted on said shafts, an electro-magnet, an armature, connection from the armature to the disks, and means whereby the signal will be set automatically by the action of gravity.

2. An improved system of signal electrically controlled for railways, comprising a transparent casing fixed on a suitable support, a movable signal in the said casing, the said signal consisting of two similar parts, shafts by which said parts are pivotally mounted, each one of said shafts being slightly inclined in the vertical direction, a disk eccentrically mounted on each shaft, an electric magnet, an armature, connections from the armature to the disks for bringing the two parts of the signal together when the magnet is energized, said parts being returned to set position by the action of gravity.



3. An improved system of signals electrically controlled for railways, comprising a transparent casing fixed on a suitable support, a movable signal in the said casing, the said signal consisting of two similar parts, shafts by which said parts are pivotally mounted, one of said parts being provided with a colored glass, and each one of said shafts having an eccentric point, an electro-magnet, an armature, connections from the armature to said points, the weight of said parts themselves insuring the automatic displaying of said part when the energizing of the electro-magnet is interrupted.

901,123. FERTILIZER-DISTRIBUTER. JOHN C. POPE and WILLIAM J. POPE, Piano, Ill. Filed Apr. 6, 1908. Serial No. 425,488.

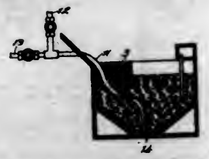


1. In a fertilizer distributer in combination, a wheeled frame, a pair of sprocket wheels journaled in the frame, an endless belt turning over the sprocket wheels including a sectional hopper comprising a plurality of bottom boards flexibly connected edge to edge and having upturned ends forming sides for the hopper, and a distributing drum mounted in the frame adjacent one of the sprocket wheels, the arrangement being such that as a section of the belt turns over the sprocket the upturned ends of the section pass the ends of the drum.

2. In a fertilizer distributer in combination a wheeled frame, a pair of sprocket wheels journaled in the frame, an endless belt turning over the sprocket wheels including a sectional hopper comprising a plurality of bottom boards flexibly connected edge to edge and having upturned ends forming sides for the hopper, and a distributing drum mounted in the frame adjacent one of the sprocket wheels, the arrangement being such that as each section of the hopper turns over the sprocket it is tilted to present its load to the drum and its ends pass the ends of the drum.

3. In a fertilizer distributer in combination, a reciprocable load carrying member, a shaft for imparting movement to such member in either direction, a pair of ratchet wheels mounted on the shaft having oppositely directed ratchet teeth, a pawl coöperating with each of the ratchet wheels, an oscillatable pawl lifter operable upon the pawls in alternation and means for shifting the pawl lifter including a trip engageable by the load carrying member at the limit of its movement in each direction to release the pawl lifter from one of its extreme positions and a reversible spring acting on the pawl lifter to move it to the other extreme position when released by the trip.

901,124. RECOVERING SILVER FROM SOLUTION. THOMAS A. ROSS, Selby, Cal. Filed Mar. 30, 1908. Serial No. 424,243.



1. Means for agitating value bearing solutions, said means comprising a stirrer-member and a flexible pipe having its lower end carried by the stirrer-member and freely movable thereby and adapted to inject a compressed fluid into the body of the solution.

2. In an apparatus for recovering values from their solution, a dissolving tank, means for circulating the solution to and from a precipitating tank, and a freely movable device within the tank for injecting a compressed fluid into the solution and agitating the solution within the dissolving tank.

3. In an apparatus for recovering values from solutions, a dissolving tank, a settler and a precipitating tank in series, means for conveying the solution through said tanks, means for returning the solution from which the value has been precipitated, to the dissolving tank, and means for continuously agitating the solution within said tank, said means comprising a stirrer-member and a pipe coiled thereabout and having its lower end perforated and capable of being moved about within the solution, said end adapted to discharge a fluid under pressure into the body of the solution.

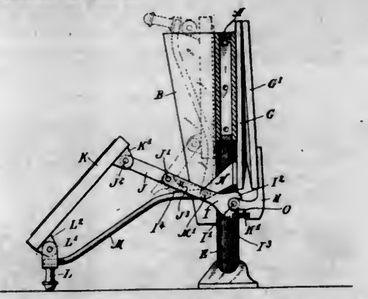
4. In an apparatus for recovering values from their solution, a dissolving tank, a settler and a precipitating tank through which the solution is caused to pass, means for returning the depleted solution from the precipitating tank, said means consisting of an injector, and a conductor by which the solution is returned to the dissolving tank, an agitator consisting of a stirrer-member and a flexible pipe coiled about the same and having its lower end extending into the bottom of the dissolving tank and movably mounted and having perforations, said pipe being adapted to discharge jets of fluid under compression through the solution.

901,125. PEDAL FOR AUTOMATICALLY-OPERATED PIANOS. JOSE SAMPERE, New York, N. Y., assignor to The Regina Company, Rahway, N. J., a Corporation of New Jersey. Filed June 15, 1907. Serial No. 379,117.

1. The combination of the bellows, pedals for operating said bellows, two members pivotally connected with each other and pivotally connected with the bellows and pedals respectively and means for maintaining the two members in rigid relation to each other when the pedals are operated.

2. The combination of the bellows, the pedal, the link, one end of which is pivoted to the movable member of the bellows, the lever one end of which is pivoted to the pedal, the other ends of said link and lever being connected pivotally with each other, a stop for preventing the link from turning relatively to the lever in one direction in their bellows-operating position and a spring having a tendency to keep the link and lever in said position.

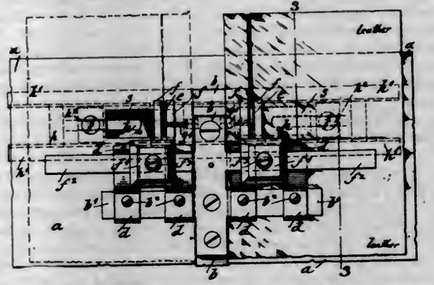
3. The combination of the bellows, a link pivotally connected therewith, a lever connected with said link, a pedal pivotally connected with said lever and means for preventing said link and lever from being flexed during the operation of the pedal.



4. The combination of the bellows, a forwardly projecting member secured thereto, a link pivoted to said member, a projection on said link, a lever pivoted at one end to said link, and provided with an extension arranged to engage said projection, a pedal pivotally connected with the other end of said lever and a spring interposed between said member and said link for maintaining said link and lever in rigid relation with each other.

5. The combination of the bellows, a pedal, a flexible connection between the bellows and the pedal comprising two members pivotally connected with each other and pivotally connected with the pedal and bellows respectively, means for preventing said connection from bending in one direction and yielding means for maintaining the two members of said connection substantially in alinement with each other during the operation of the pedal.

901,126. MACHINE FOR CUTTING LEATHER. AUGUST W. SCHAEFER, New York, N. Y. Filed Mar. 18, 1908. Serial No. 421,809.



1. In a machine for cutting leather into strips, the combination, with a table, of a gage on the same, an upright cutting knife extending above and below the table, and means for adjustably supporting said knife at its upper and lower ends.

2. In a leather cutting machine, the combination, with a table having a slot, of a gage on the table, and a knife extending through said slot and adjustably supported at its ends for movement toward and away from the gage.

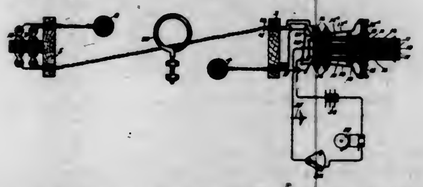
3. In a leather cutting machine, the combination, with a table having a slot, of a gage applied to the upper surface of the table at right angles to said slot, and an upright knife extending through said slot parallel to the gage and adjustable longitudinally in said slot.

4. In a machine for cutting leather into strips, the combination, with a table having a gage applied to the upper surface thereof and a slot extending at right angles to the gage, of a knife extending through said slot parallel to the gage, and means for adjustably supporting said knife at its upper and lower ends so that it may be adjusted lengthwise of said slot and toward and away from said gage.

5. In a machine for cutting leather into strips, the combination of a table, a gage applied to the table and having a cross-bar extending therefrom, an adjustable block on said cross-bar, a knife secured to said block and extending through the table, and means for supporting said knife beneath the table.

[Claims 6 to 9 not printed in the Gazette.]

901,127. APPARATUS FOR TELEPHONE INSTALLATIONS. CHARLES A. SIMPSON, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 15, 1904. Serial No. 236,948.



1. In a telephone installation, the combination with a mounting plate, of sets of arrester springs mounted on each side of said plate opposite one another, the opposed sets serving the respective sides of the same telephone line, terminals for the springs to enable the same to be connected in the electric circuits, auxiliary terminals on each side of the said plate, and exposed cross-connecting conductors leading from said auxiliary terminals to springs of the opposite set, substantially as described.

2. In a telephone installation, the combination with a mounting plate, of bunched sets of arrester holding spring strips mounted upon the opposite sides of the plate, the opposed sets being used in the respective sides of the same line, an auxiliary or dead strip included in each set on one side of the plate, said springs and auxiliary strips having projecting terminals to which the wires of the circuits may be connected, the projecting terminal of said auxiliary strip in each set being electrically connected to the desired spring of the opposite set, whereby the similar circuit connections with springs of the opposite sets may be made on the same side of the plate as said auxiliary strips, substantially as described.

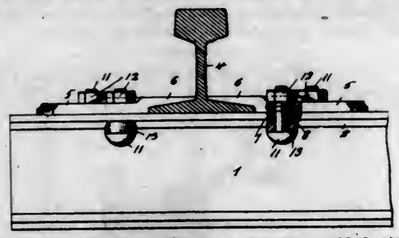
3. In apparatus for a telephone installation, the combination with a mounting plate, of bunched sets of arrester-holding springs mounted upon opposite sides of the said plate, the sets that are opposite being for the respective sides of the same line, said springs having projecting terminals to which the wires of the circuits are adapted to be connected, an auxiliary strip in each set on one side of the plate, said auxiliary strip also having a projecting terminal, and a wire or like conductor connected between said auxiliary strip and a spring of the opposite set, whereby to permit the ready connection of the latter spring, on the other side of the mounting plate, substantially as described.

4. In a telephone installation, the combination with a mounting plate, of sets of arrester springs on opposite sides of said plate, the opposite springs serving the different sides of the same telephone line, an auxiliary terminal mounted upon one side of said plate and having a conductor cross-connected to the terminal of an arrester spring on the opposite side of said plate, whereby the two limbs of the telephone line may be connected with on the same side of said mounting plate, said cross-connecting conductor being exposed and unassociated with the means for retaining said springs in position, substantially as described.

5. In a telephone installation, the combination with a mounting plate, of sets of arrester springs on opposite sides of said plate, the opposite springs serving different sides of the same telephone line, auxiliary terminals mounted upon the opposite sides of said plate and having conductors cross-connected to the terminals of arrester springs on the opposite sides of said plate, whereby the two limbs of the telephone line may be connected with on the same side of said mounting plate, said cross-connecting conductors being exposed and unassociated with the means for retaining said springs in position, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

901,128. RAIL-FASTENER. DAVID H. TURNBAUGH, Altoona, Pa. Filed Sept. 11, 1907. Serial No. 392,290.



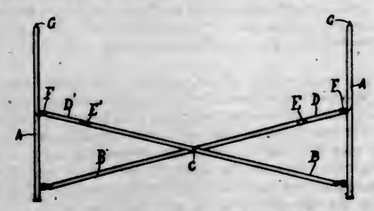
1. The combination with a metallic tie provided with a beveled flange formed with openings of a rail resting on said tie, a clamping plate overlying the base flange of the rail and formed with bolt holes and depending beveled collars, bolts and nuts for securing said clamping plate in place, and beveled washers interposed between the heads of the bolts and the under surfaces of the flange of the tie.

2. The combination with a metallic tie provided with a beveled flange formed with openings, of a rail resting on said tie, oppositely-disposed clamping plates beveled on their under surfaces to overlie the base flange of the rail, and formed with bolt-holes having beveled collars depending therefrom, said collars fitting within the openings in the tie flange, bolts extending through said bolt holes, nuts for securing said bolts, and beveled washers interposed between the heads of the bolts and the beveled surfaces of the tie flange.

3. The combination with a metallic tie provided with a beveled flange formed with openings, of a rail resting on said tie, oppositely-disposed clamping plates beveled on their under surfaces to overlie the base flange of the rail, and formed with bolt holes having beveled collars depending therefrom, said collars fitting within the openings in the flange, bolts extending through said bolt-holes, nuts for securing said bolts, beveled washers interposed between the heads of the bolts and the beveled surfaces of the tie flange, and reinforcing braces fitting under the tread of the rail and resting on said clamping plates.

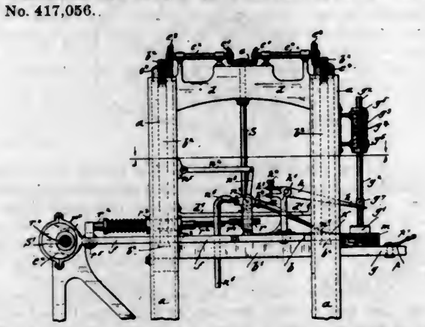
4. The combination with a metallic tie provided with a beveled flange formed with openings, of a rail resting on said tie oppositely-disposed clamping plates beveled on their under surfaces to overlie the base of the rail, and formed with bolt holes having beveled collars depending therefrom, said collars fitting within the opening in the tie flange, bolts extending through said bolt holes, nuts for securing said bolts, beveled washers interposed between the heads of the bolts and the beveled surfaces of the tie flange, and reinforcing braces fitting under the tread of the rail and resting on said clamping plates, said braces being of concavo-convex form, and provided with depending pins fitting openings formed in said clamping plates.

901,129. FOLDING STAND. JOSEPH F. VAN HORN, Philadelphia, Pa. Filed Sept. 13, 1907. Serial No. 392,639.



A folding stand consisting of two leg frames, each made of a metal rod bent in the form of an X, two cross bars each pivoted to one of the leg frames, said bars being pivoted to each other, two links each pivoted to one of the leg frames, thumb screws connecting the links with the cross bars and points projecting from the top rails of the leg frames, as specified.

901,130. MACHINE FOR SPLITTING MICA. BERNHARD WALCHNER, New York, N. Y. Filed Feb. 21, 1908. Serial No. 417,056.



1. In a machine for splitting mica, the combination of a reciprocating table, a splitting knife fulcrumed to said table, means for imparting laterally oscillating motion to said splitting knife, means for supporting a mica-block adjacent to the feed-table, means for clamping said block in position, means for supplying a blast of air under the layer or lamina of mica split off by the knife, and means for releasing the clamping device simultaneously with the splitting action of the knife.

2. In a machine for splitting mica, the combination of a reciprocating feed-table, a splitting knife fulcrumed to said table, means for oscillating said splitting knife at the end of the forward motion of the table, a nozzle adjacent to the knife, means for supplying a current of air under pressure through the nozzle during the oscillation of the knife, means for supporting a block of mica in line with the splitting knife, and means for lowering the feed-table after each actuation of the knife and air-blast.

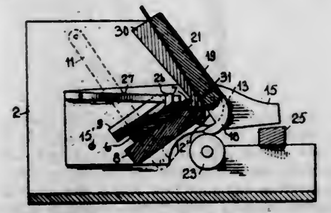
3. In a machine for splitting mica, the combination of a horizontally-reciprocating feed-table, a splitting knife fulcrumed to the same, means for oscillating said knife at the end of the forward movement of the feed-table, a nozzle located adjacent to the edge of said knife, means for supplying a current of air under pressure to said nozzle simultaneously with the splitting action of the knife, means for supporting a block of mica in line with said knife, a spring-actuated follower for holding said block of mica in position, and a spring-actuated lever adapted to engage the stem of the follower for moving it away from the mica block simultaneously with the splitting action of the knife and the action of the air-blast so as to permit the blowing off of the layer or lamina split off from the block of mica.

4. In a machine for splitting mica, the combination of a horizontal feed-table, means for reciprocating the same, a splitting knife fulcrumed to said table, means for imparting oscillation motion to said splitting knife when the same arrives at the end of its forward motion, an air-supply nozzle located adjacent to the edge of the knife, means for supplying a current of air under pressure to said nozzle during the splitting action of the knife, means for supporting a block of mica in line with the splitting knife, a spring-actuated follower for holding the block in position, means for releasing the follower from the mica block for permitting the blowing off of the sheet or lamina split off after each actuation of the splitting knife and air-supply mechanism, and means for intermittently lowering the feed-table with the knife, nozzle and follower-releasing mechanism after a sheet or lamina of mica has been split and blown off.

5. In a machine for splitting mica, the combination of a reciprocating feed-table, a splitting knife fulcrumed thereto, means for oscillating the splitting knife at the end of each forward motion of the table, means for supporting a block of mica in line with the knife, a spring-actuated follower for holding the block of mica in position, and a forked lever engaging the stem of the follower for releasing the block during the splitting action of the knife.

[Claim 6 not printed in the Gazette.]

901,131. METAL-CRIMPING MACHINE. JOHN J. WALTER, New Albany, Ind. Filed Aug. 5, 1907. Serial No. 387,150.



1. In a metal crimping machine, the combination of a supporting frame, an obliquely disposed mandrel mounted in said frame and having its lower edge beveled on the rear face thereof, said beveled face terminating in a forwardly extending lateral flange, an obliquely disposed plunger mounted to move at right angles to the rear face of said mandrel and slidable over the flange thereof, and a folding member mounted to coöperate with the front edge of said mandrel to form one bend in the metal sheet, being operated on and connected to operate said plunger in forming another bend.

2. In a metal crimping machine, the combination of a supporting frame, an obliquely disposed mandrel mounted in said frame and having its lower edge beveled on the rear face thereof, said beveled face terminating in a forwardly extending lateral flange having a downwardly inclined lower face, an obliquely disposed plunger mounted to move at right angles to the rear face of said mandrel and slidable over the flange thereof, a folding member mounted to coöperate with the front edge of said mandrel to form one bend in the metal sheet, being operated on and connected to operate said plunger in forming another bend, and a slot formed in one side of the frame to permit the removal of the metal sheet longitudinally therethrough after crimping thereof.

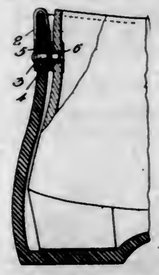
3. In a metal crimping machine, the combination of spaced end supports having downwardly and rearwardly inclined obliquely arranged slots, a plunger arranged to move between said supports and having studs projecting through said slots, levers pivoted at one end to the outer faces of said supports and connected with said studs, a folding member journaled in said supports, links connected at one end to the front ends of said levers and at the other end with said folding member, and a mandrel arranged above and between said folding member and plunger.

4. In a metal crimping machine, the combination of spaced end supports, a plunger mounted to slide obliquely between said supports, levers pivoted at one end to said supports with their free ends bearing on said plunger, a spring member secured intermediately of its ends to said plunger and bearing on the free ends of said levers, a mandrel arranged above and adjacent to the upper edge of said plunger, a vertically movable folding member arranged to coöperate with said mandrel in forming a bend in the metal to be crimped, and means connecting said folding member and plunger.

901,132. OVERSHOE-CLAMP. EZRA W. WALTZ, Newberry, Pa. Filed Apr. 16, 1908. Serial No. 427,517.

1. An overshoe clamp comprising an overshoe member and an inner shoe member, said overshoe member comprising a plate bent upon itself to engage said overshoe, and a

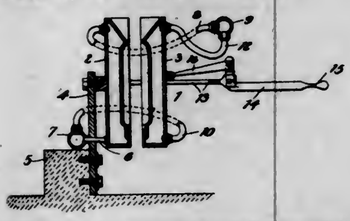
grooved stud adapted to fasten said plate to the overshoe and to engage the member in said inner shoe whereby the overshoe is held in place.



2. An overshoe clamp comprising a plate bent upon itself midway between its ends, a stud arranged on the inner side of one end of said plate, said stud being adapted to be inserted through the heel portion of an overshoe and to be engaged by the apertured end of the opposite section of the plate, thereby locking the clamp to the overshoe, and means whereby said stud is engaged with the inner shoe when the overshoe is placed thereon, substantially as described.

3. In an overshoe clamp, a plate bent or folded upon itself and adapted to be engaged with the upper edge of the heel portion of the overshoe, a stud secured to the inner side of the outer section of said plate, said stud having formed therein an annular groove adapted to be engaged by the apertured end of the inner section of the plate after said stud has been passed through the overshoe, and an eyelet arranged in the heel of the inner shoe in position to receive the projecting end or head of said stud when the overshoe is placed on the outer shoe, substantially as described.

901,133. MOLD. WALTER N. WAYMAN, Staunton, Va. Filed Mar. 9, 1908. Serial No. 420,919.

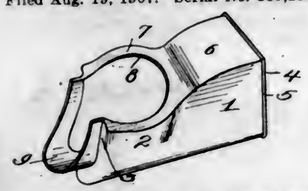


1. A mold of the character described comprising hollow sections adapted to be moved into and out of engagement with each other, a main water supply pipe, a main overflow pipe, and branch supply and overflow pipes to connect said sections of the mold with said main supply and overflow pipes, substantially as described.

2. A mold comprising a plurality of hollow sections, means to hold one of said sections stationary, a water supply pipe, an inlet pipe connecting said supply pipe with said stationary section of the mold, a flexible supply pipe adapted to connect said movable section with said main supply pipe, a main overflow pipe, a branch overflow pipe adapted to connect the upper end of said stationary section of the mold with said main overflow pipe, a flexible overflow pipe adapted to connect the other section of the mold with said main overflow pipe, and means whereby the movable section of the mold is moved into and out of engagement with the stationary section, substantially as described.

3. A mold of the character described comprising a pair of hollow sections, one of which is held stationary, water supply and discharge pipes connected to said sections, supporting arms fixedly mounted on one of said sections and slidably engaged with the opposite section, a bell-crank lever in the outer end of said arm, and a link to connect said lever with said movable section whereby the latter is moved into and out of engagement with the stationary section to close and open the mold, substantially as described.

901,134. HAND-BIDET. FRANZ WEIDL, Dresden, Germany. Filed Aug. 19, 1907. Serial No. 389,152.



1. A bidet comprising a body portion having its forward end open and further provided at said forward end with an inwardly extending flange, a U-shaped lip formed integral with said flange and extending in the direction of the length of the body portion, said lip having its base arranged above the plane of the base of said inwardly extending flange.

2. A bidet comprising a body portion having its forward end open and further provided at said forward end with an inwardly extending flange, a U-shaped lip formed integral with said flange and extending in the direction of the length of the body portion, said lip having its base arranged above the plane of the base of said inwardly extending flange, said body portion gradually decreasing in height toward its forward end.

3. A bidet comprising a body portion having its forward end open and further provided at said forward end with an inwardly extending flange, a U-shaped lip formed integral with said flange and extending in the direction of the length of the body portion, said lip having its base arranged above the plane of the base of said inwardly extending flange, and said body portion further having its forward part bulged and its top cut away to form an opening at the bulged portion.

4. A bidet comprising a body portion having its forward end open and its rear end closed, said body portion having its rear part thereof angularly disposed with respect to its forward part, said body portion further having its forward end formed with an inwardly extending flange and its top cut away to provide an opening, and a lip formed integral with said flange, said lip being substantially U-shape in contour.

5. A bidet comprising a body portion having its forward end open and formed with an inwardly extending flange, and a substantially U-shaped lip formed integral with said flange, said lip gradually decreasing in width at each side upwardly, the base of the flange arranged above the base of the body portion.

[Claim 6 not printed in the Gazette.]

901,135. SLED-KNEE. ROBERT S. WELLS, Lansing, Mich., assignor to E. Bement's Sons, Lansing, Mich., a Corporation. Filed July 30, 1904. Serial No. 218,878.



1. The combination in a sled knee of a metallic body and stiffening flanges, substantially at right angles thereto, said flanges being offset adjacent their upper ends to form a beam supporting ledge, substantially as described.

2. The combination in a sled knee of a metallic body and stiffening flanges, substantially at right angles thereto having portions thereof offset to form a beam supporting ledge and supporting feet, substantially as described.

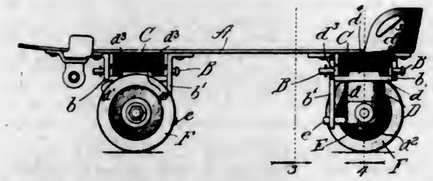
3. The combination in a sled knee of a metallic body, stiffening flanges, substantially at right angles thereto, an offset portion forming a beam supporting ledge having supporting feet, and means for securing said knee to a sled runner or beam, substantially as described.

4. A sled knee formed of an integral structure comprising an upright body portion and stiffening flanges extending longitudinally thereof at substantially right angles, the flanges having offset portions adjacent their upper ends constituting a beam supporting ledge.

5. A sled knee formed of an integral structure comprising an upright body portion and oppositely disposed stiffening flanges extending longitudinally of the edges thereof at substantially right angles thereto, the flanges having offset portions adjacent their upper ends constituting a beam supporting ledge, and offset portions at their lower ends constituting supporting feet.

[Claim 6 not printed in the Gazette.]

901,136. ROLLER-SKATE. EDWARD W. WHITE, Chicago, Ill. Filed Mar. 14, 1908. Serial No. 421,142.



1. The combination with a base-plate and axles carrying rollers and adapted to support the base-plate, of a resilient support interposed between the axles and the base-plate and arranged to carry the entire weight thrown upon the base-plate, and means whereby the oscillation of the base-plate with respect to the plane of the axles will rotate said axles in opposite directions for steering purposes.

2. The combination with a base plate of two longitudinally extending pivots substantially parallel to the base-plate and bodily movable in a vertical direction with respect thereto, resilient cushions interposed between said pivots and the base-plate and arranged to support the entire weight thrown upon the base-plate, swivel-heads pivoted to said pivots and oscillatable laterally about the same centers, axles pivotally supported by the swivel-heads and carrying rollers at their ends, and means whereby the lateral oscillation of the swivel-heads shall rotate the axles in opposite directions.

3. The combination with a base-plate, of two pairs of vertically slotted brackets secured to and projecting downward from the base-plate, the rear bracket of the front pair and the front bracket of the rear pair having openings near their lower ends, shafts supported in the slots of said brackets and extending longitudinally of the base-plate and vertically movable with respect thereto, resilient cushions interposed between the said shafts and base-plate, swivel-heads pivoted to said shafts and having a bearing upon the resilient cushions whereby they are normally held in central position, axles journaled to the swivel-heads and carrying rollers at their ends, and a rearward projection on the front axle and a forward projection on the rear axle engaging openings in the corresponding brackets, whereby oscillation of the base-plate with respect to the plane of the axles will rotate the axles to steer the skate.

901,137. PLANT-MARKER. LELAND WILLIS, Grenloch, N. J., assignor to Bateman Manufacturing Company, Grenloch, N. J., a Corporation of New Jersey. Filed Jan. 29, 1908. Serial No. 413,317.

1. A plant marker consisting of a frame having an inwardly projecting bearing flange in front and projecting ears at the rear, and a stake projecting below said frame and having a portion for engagement with said ears.

2. A plant marker consisting of a frame having an inwardly projecting bearing flange in front and projecting ears at the rear, and a stake projecting below said frame and having a flattened portion for engagement with said ears.



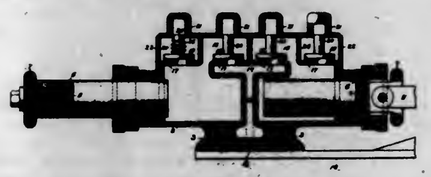
3. A plant marker consisting of a frame having an inwardly projecting bearing flange in front and slotted ears in the rear, and a stake projecting below said frame and having a portion for passing through said slotted ears.

4. A plant marker comprising a frame having an inwardly projecting bearing flange at the front, and projecting ears at the rear, a backing plate, a stake projecting below said frame and having a portion for engaging said ears of the frame, and a spring interposed between the backing plate and the stake.

5. A plant marker comprising a frame having an inwardly projecting bearing flange at the front and projecting slotted ears at the rear, a backing plate with elastic strip thereon, and a stake projecting below said frame and having a portion passing through said ears of the frame and bearing upon said elastic strip of the backing plate.

[Claims 6 and 7 not printed in the Gazette.]

901,138. DUPLEX PUMP. LELAND WILLIS, Grenloch, N. J., assignor to Bateman Manufacturing Company, Grenloch, N. J., a Corporation of New Jersey. Filed May 4, 1908. Serial No. 430,756.



1. A duplex pump having pump barrels disposed end to end with an inlet passage between them and common to both, said inlet passage being expanded at one end, externally connected and valveless plungers operating in said pump barrels, a valve chest located at one side of the pump barrels and containing induction and eduction chambers, said valve chest also having valved passages which provide communication between the pump barrels and the eduction chambers and between the induction chambers and the expanded end of the inlet passage.

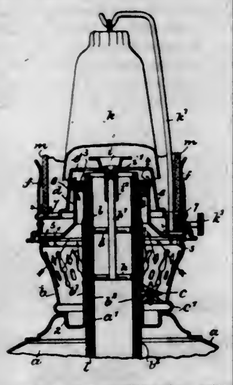
2. A duplex pump having pump barrels with externally connected pistons operating therein, said pump barrels being disposed end to end with inlet passage between them, said inlet passage communicating directly with the induction chambers of the pump barrels and said induction chambers being disposed end to end in a chest on the pump barrel structure, which chest has eduction passages arranged in line with and at the ends of the induction chambers.

3. A duplex pump having pump barrels and externally connected pistons operating therein, and a valve chest at the top of said pump barrel structure having induction and eduction chambers arranged in line with one another and each containing a vertically movable valve guided in a hollow removable cap secured to the valve chest in line with its respective chamber.

4. A duplex pump having induction and eduction valves, pump barrels with externally connected and valveless plungers operating therein, said pump barrels being disposed end to end with a passage between them and common to both, a valve chest at the top of said pump barrel structure, said valve chest having, at its opposite ends, eduction passages for its respective pump barrels and between said eduction passages a pair of induction passages, each communicating through a valved induction passage with an expanded portion of the inlet passage, both the induction and eduction passages containing vertically movable valves guided in hollow removable caps on the valve chest.

5. A duplex pump having pump barrels with externally connected and valveless plungers operating therein, and free from contact with the walls thereof except at the outer end of each barrel, said pump barrels being disposed end to end with an inlet passage between them, said inlet passage having an expanded chamber at one end communicating with adjoining induction chambers of the pump, each induction chamber having longitudinally beyond it an eduction chamber and all of said chambers being formed in a valve chest on the pump barrel structure.

901,139. LAMP-BURNER. CHARLES E. WIRTH, Waterbury, Conn., assignor to The Plume & Atwood Mfg. Co., Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 10, 1908. Serial No. 426,174.



1. In a lamp burner the combination with an outer wick tube, of a flanged ring surrounding the same at the upper end, an inner deflector having an in-turned flange at the upper end in the same plane as the flanged ring of the wick tube and slightly spaced apart therefrom so as to leave between the parts a narrow annular aperture.

2. In a lamp burner the combination with an outer wick tube, of a flanged ring surrounding the same at the upper end, an inner deflector having an in-turned flange at the upper end in the same plane as the flanged ring of the wick tube and slightly spaced apart therefrom so as to leave between the parts a narrow annular aperture, and a series of perforations in the upper part of the inner deflector below the in-turned flange thereof.

3. In a lamp burner the combination with an outer wick tube, of a flanged ring surrounding the same at the upper end, an inner deflector having an in-turned flange at the upper end in the same plane as the flanged ring of the wick tube and slightly spaced apart therefrom so as to leave between the parts a narrow annular aperture, said internal deflector having a flat outer portion, a series of perforations therein and constructed with a flanged periphery for support and stiffness.

4. In a lamp burner the combination with an outer wick tube, of a flanged ring surrounding the same at the upper end, an inner deflector having an in-turned flange at the upper end in the same plane as the flanged ring of the wick tube and slightly spaced apart therefrom so as to leave between the parts a narrow annular aperture, and an outer conical deflector member surrounding and spaced apart from the inner deflector and having an in-turned flange at the upper end, the opening of which agrees substantially in diameter with the diameter of the wick tube and spaced above the upper end of the wick tube and its flanged ring.

5. In a lamp burner the combination with an outer wick tube, of a flanged ring surrounding the same at the upper end, an inner deflector having an in-turned flange at the upper end in the same plane as the flanged ring of the wick tube and slightly spaced apart therefrom so as to leave between the parts a narrow annular aperture, and a series of perforations in the upper part of the inner deflector below the in-turned flange thereof, and an outer conical deflector member surrounding and spaced apart from the inner deflector and having an in-turned flange at the upper end, the opening of which agrees substantially in diameter with the diameter of the wick tube and spaced above the upper end of the wick tube and its flanged ring.

[Claims 6 to 8 not printed in the Gazette.]

901,140. JOURNAL-BEARING. EDGERLY R. BAILEY, Clarinda, Iowa. Filed Aug. 30, 1907. Serial No. 390,697.

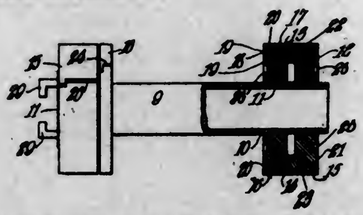


1. In a shaft bearing the combination of a bearing sleeve to engage with a shaft, an inverted cup the bottom of which is apertured, means for detachably connecting said cup bottom and said bearing sleeve, the lower end of said inverted cup being internally screw threaded, an adjusting nut operatively engaging said screw threaded portion and provided with a tubular extension, means for rotating said tubular extension, a nut and a spring arranged between said nut and the bearing sleeve.

2. In a shaft bearing, a bearing sleeve adapted to engage with a shaft and provided with a grooved flange, an inverted cup, the bottom of which is apertured and provided with an annular rib adjacent to said aperture, and the lower end of said cup being interiorly screw-threaded, an adjusting nut in said lower end provided with a hollow extension, means on the extension for rotating it and the nut, and a spring between said nut and said flange.

901,141. STEAM-VALVE. WILFRED BAKER, Aberdeen, S. D. Filed Jan. 27, 1908. Serial No. 412,849.

1. A piston including a threaded stem, spaced heads engaging the threads on the stem and adjustable longitudinally of the latter, over-lapping main and auxiliary split rings carried by each head and each provided with an inwardly extending shoulder, and split retaining rings bearing against the shoulders.



2. A piston including a threaded stem, spaced heads engaging the threads on the stem and adjustable longitudinally of the latter, main and auxiliary packing rings surrounding each head and each provided with an inwardly extending shoulder, said rings being of different widths and split transversely, and split retaining rings bearing against the shoulders.

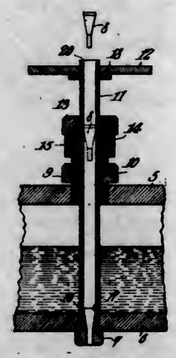
3. A piston including a stem, spaced heads mounted on the stem and adjustable longitudinally of the latter, each head being formed of co-acting clamping members, a spacing collar interposed between the clamping members of each head, and transversely split packing rings surrounding each head, said rings being of different widths and each provided with an inwardly extending shoulder bearing against the adjacent clamping member.

4. A piston including a stem, spaced heads mounted on the stem and adjustable longitudinally of the latter, said heads being each formed with co-acting clamping members, a spacing collar interposed between each set of clamping members, main and auxiliary packing rings surrounding the clamping members and each provided with an internal shoulder, said packing rings being of different widths and split transversely with the end of one ring overlapping the end of an adjacent ring, and split retaining rings surrounding the clamping members and bearing against the adjacent shoulders.

5. A piston including a stem having external threads, a head mounted on the stem and including spaced clamping members engaging the threads on said stem, a collar interposed between the clamping members, main and auxiliary packing rings of different widths surrounding the clamping member and each provided with an internal shoulder, an expansible retaining ring interposed between one of the shoulders and the adjacent clamping ring, and a similar retaining ring interposed between the collar and the other shoulder.

[Claims 6 and 7 not printed in the Gazette.]

901,142. SOFT-PLUG VALVE. WILFRED BAKER, Aberdeen, S. D. Filed June 1, 1908. Serial No. 436,110.



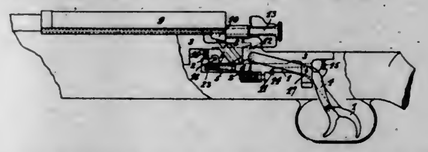
1. The combination with a boiler having a crown sheet, of a bushing carried by the crown sheet and adapted to receive a fusible plug, a vertically adjustable exteriorly threaded open ended tube extending through one wall of the boiler and having its interior walls at the opposite ends of the tube beveled, the lower beveled end of the tube forming a seat for engagement with the adjacent end of the bushing when said tube is in lowered position, and a cap engaging the exterior threads on the tube for forming a closure for the upper beveled end of said tube when the latter is in elevated position.

2. The combination with a boiler having a crown sheet, of a bushing carried by the crown sheet and adapted to receive a fusible plug, an open ended exteriorly threaded tube extending through one wall of the boiler, said tube being adjustable vertically and having its opposite end inclined or beveled, an operating handle having a threaded perforation formed therein for the reception of the tube, a cap threaded on the upper end of the tube and arranged to bear against the upper surface of the handle to form a closure for said tube when the latter is in elevated position, and a clamping nut also threaded on the tube and bearing against the lower face of the operating handle.

3. The combination with a boiler having a crown sheet provided with an opening adapted to receive a fusible plug, a bushing extending through the walls of the boiler and having its interior walls threaded and provided with a concaved face, a tube having exterior threads for engagement with the interior threads of the bushing, a packing resting on the concaved face of said bushing, a stuffing box engaging the threads on the tube and bushing, respectively, and bearing against said packing a handle for rotating the tube to effect the adjustment of the latter, and a cap arranged to bear against the handle and forming a closure for the upper end of the tube when the latter is in elevated position.

4. The combination with a boiler having a crown sheet, of a bushing threaded in the crown sheet and adapted to receive a fusible plug, a bushing extended through one wall of the boiler and having its interior walls threaded, said boiler bushing being provided with a concave face and having an exteriorly threaded extension, an open ended tube engaging the interior threads of the boiler bushing, the opposite ends of said tube being beveled and the lower beveled end of the tube arranged to bear against the face of the plug carrying bushing, a stuffing box engaging the threads on the tube and the extension of the boiler bushing, respectively, a packing interposed between the concaved face of the bushing and said stuffing box, a handle carried by the tube and spaced from the upper end of the latter to produce an extension, and a cap engaging the threads on said extension and arranged to bear against the handle to form a closure for the upper end of the tube when the latter is in elevated position.

901,143. DEVICE FOR AUTOMATIC FIRING OF SELF-LOADING ARMS. SÖREN H. BANG, Copenhagen, Denmark. Filed Apr. 20, 1907. Serial No. 369,388.



1. In self loading fire arms, the combination with the breech bolt, and a cover sliding on the breech frame or receiver for protecting and working the breech bolt, the said cover being provided with a shoulder, of a movable stud acted on by the said shoulder on the cover being closed, a sear, a wedge piece having a sliding connection with the sear, and capable when in active position of being acted upon by said movable stud to move the sear, and a trigger for placing said wedge piece in operative position, or setting it out of operation.

2. In self loading fire arms, the combination with the forward and backward movable breech bolt having a shoul-

der on one of its parts, of a movable stud adapted to be acted on by said shoulder when the mechanism is being closed, a hammer, a sear provided with a stud for engaging with the hammer, a trigger, and means controlled by said trigger for transferring the action of the movable stud to said sear to move the latter to release the hammer.

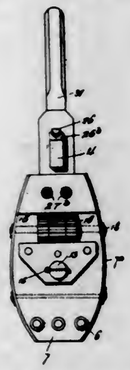
3. In self loading fire arms, the combination with a movable breech bolt provided with a shoulder, a hammer, a sear provided with means for engaging said hammer, and a trigger for moving the sear for firing a single shot, of a movable device interposed between the breech and the sear and adapted to be engaged and moved by said shoulder, a second trigger adapted when pulled to carry along with it the trigger for firing single shots, and means controlled by said second trigger for transferring the action of said movable device to said sear to move the same to release the hammer.

4. In self loading fire arms, the combination with the hammer, the sear provided on its top with a stud for engaging the hammer, and the trigger for acting on the sear to fire single shots, of a body located at one side of the sear and having an axial perforation, a stud movable in the perforation of said body and having a projecting portion terminating in a wedge piece having an upper oblique face, a spring for forcing the stud and wedge piece rearwardly, an axially movable stud extending through a perforated projection on the breech box of the fire arm, and resting at its lower end on the oblique face of the said wedge piece, and a trigger having a member adapted when the trigger is pulled to engage the wedge piece and press it forwardly against the tension of its spring, thereby moving the axially movable stud slightly upwards, and means for engaging the upper end of said stud to depress the same and move the sear to release the hammer.

5. In self loading fire arms, the combination with the hammer, the sear for engaging the hammer, and the trigger for acting on the sear to fire single shots, of an axially movable stud, means for moving the stud axially, and means for causing the stud when moved to act on the sear to move the same to release the hammer.

[Claim 6 not printed in the Gazette.]

901,144. SHEAVE-BLOCK. JOHN BASS, McKees Rocks, Pa. Filed Apr. 7, 1908. Serial No. 425,752.



1. In a double sheave block, two oppositely disposed U-shaped shell plates, said shell plates terminating in cylindrical shanks, a gate block supported by said shanks and having tapering ends, cheek pieces embracing the outer walls of said shell plates, spacer blocks arranged in the lower ends of said shell plates, and connected to said cheek pieces, oppositely disposed arms, pivot pins arranged transversely of said cheek pieces for pivotally connecting said arms to the outer walls of said shell plates, said arms having their upper ends provided with openings to receive the tapering ends of said gate block, a spring pressed latch arranged in each end of said gate block for engaging the upper end of each arm, substantially as described.

2. A sheave block comprising a metallic shell, perforated lugs carried thereby, an arm pivotally secured between said lugs and provided near its upper end with an opening, a gate secured to said arm, a block supported on said shell and having its end received in the opening in said arm and projecting beyond the same, the said gate block provided in the upper face of said projecting portion with a recess, and a spring-pressed latch arranged in said recess and adapted to engage the outer face of said arm.

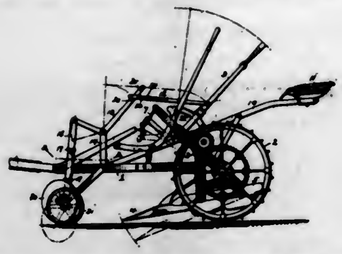
3. A sheave block comprising a U-shaped shell, an arm pivotally secured thereto and provided near its upper end with an opening, a gate block secured to said shell and having one end extending through the opening in said arm and projecting beyond the same, said block having a recess formed in the upper face of said projecting portion, a spring-pressed latch arranged in said recess and adapted to engage the outer face of said arm, and a swivel hook carried by said gate block.

4. A sheave block comprising a U-shaped shell, a gate block supported by one wall of said shell, lugs carried by the other wall of the shell at its upper end, an arm pivotally secured to said lugs and provided near its upper end with an opening to receive one end of said gate block, said gate block projecting beyond said arm and provided in the upper face of the end projecting beyond said arm with a recess, a spring-pressed latch arranged in said recess and engaging the outer face of said arm when the latter is in closed position, a U-shaped spacer-block between the walls of said shell at the lower end thereof, cheek pieces embracing the walls of said shell, and a hook carried by said gate block.

5. A sheave block comprising a substantially U-shaped shell having a long and a short wall, a gate block supported by the longer wall, an arm hinged to the shorter wall and provided near its upper end with an opening to receive one end of the gate block, means carried by the gate block for securing said hinged arm in engagement therewith, and a U-shaped spacer-block mounted between the walls of the shell at the lower ends thereof.

[Claim 6 not printed in the Gazette.]

901,145. POTATO-DIGGING MACHINE. FRANK BATEMAN, Grenloch, N. J., assignor to Bateman Manufacturing Company, Grenloch, N. J., a Corporation of New Jersey. Filed July 3, 1906. Serial No. 324,569.



1. The combination, in a potato digging machine, of a vertically adjustable digging plow, a pair of vertically adjustable vine cutters mounted in advance of said plow, one on each side of the same, and mechanism for simultaneously raising and lowering the plow and the cutters, said mechanism including an adjustable element whereby movement of the cutters independently of the plow is permitted.

2. The combination, in a potato digging machine, of the digging mechanism, a pair of vertically adjustable vine cutters mounted in advance of said mechanism, one on each side of the same, a lever for adjusting said vine cutters, and a lost motion connection between said lever and the vine cutters.

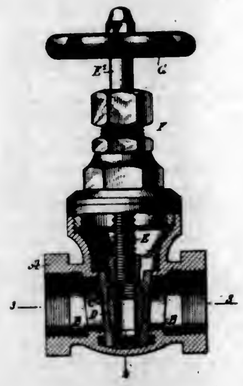
3. The combination, in a potato digging machine, of the digging mechanism, a pair of vertically adjustable vine cutters mounted in advance of said mechanism, one on each side of the same, a lever for adjusting said vine cutters, a lost motion connection between said lever and the vine cutters, and means for varying the extent of said lost motion.

4. The combination, in a potato digging machine, of the digging mechanism having a vertically adjustable digging plow a pair of vertically adjustable vine cutters in advance of said digging mechanism, one on each side of the same, a plow-and-cutter-adjusting lever, and a variable lost motion connection between said lever and the cutters.

5. The combination, in a potato digging machine, of the digging mechanisms, a pair of vertically adjustable vine cutters mounted in advance of said digging mechanisms, one on each side of the same, an operating lever for said cutters, a transmitting lever located between the operating lever and the cutters and having projecting pins, one or more links connecting the two levers, and passing between said pins, and stops between which the transmitting lever plays, one of said stops being adjustable.

[Claim 6 not printed in the Gazette.]

901,146. GATE-VALVE. GEORGE H. BENTON, Metuchen, N. J. Filed May 1, 1907. Serial No. 371,212.



1. A gate valve, comprising a casing having oppositely disposed seats, gates having sliding and guided movement in the casing and adapted to be seated on the said seats, said gates having dished and tapering recesses in their opposing faces and inwardly extending flanges at the top and bottom of the said recesses, and a spindle plug having its body fitting in the recesses of the gates and provided with a reduced shank for the attachment of the spindle thereto, the said body being of greater width than thickness and tapering from its upper to its lower end, the faces of the body being convex, the horizontal curvature of the faces from the top to about the middle being greater than from the middle to the lower end.

2. A gate valve, comprising a casing having oppositely disposed tapering seats and vertical guideways at right angles to the seats, gates adapted to be seated on said seats and having dished and tapering recesses in their opposing faces, inwardly extending flanges at the top and bottom of the recesses, and wings on opposite sides and fitting in the guideways of the casing, and a spindle plug provided with a reduced shank for the attachment of the spindle thereto and having its body fitting in the recesses of the gates, said body being of greater width than thickness, tapering from its upper to its lower end and having convex faces.

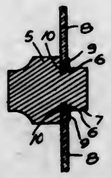
901,147. PROCESS FOR THE PURIFICATION OF SUGAR-JUICES. CHARLES H. BERTELS, Brussels, Belgium, assignor to Standard Sugar Process Company, Limited, London, England. Filed Oct. 4, 1905. Serial No. 281,327.

1. The herein described process for purifying sugar juices, which consists in diluting such juices, adding hydrofluosilicic acid to the diluted juices for precipitating the alkaline salts therefrom, separating the liquor from said precipitate, adding milk of lime to the liquor, heating said liquor and milk of lime, and filtering off the clear solution.

2. The herein described process for purifying sugar juices, which consists in diluting such juices, adding hydrofluosilicic acid to the diluted juices at a temperature approximately 9° C. for precipitating the alkaline salts therefrom, separating the liquor from said precipitate, adding milk of lime to the liquor, heating said liquor and milk of lime initially to approximately 60° C. and subsequently increasing the temperature to approximately 95° C. to 98° C., and filtering off the clear solution.

3. The herein described process for purifying sugar juices, which consists in diluting such juices to a density of substantially 22° Baumé, adding an excess of hydrofluosilicic acid to the diluted juices at a temperature not above 9° C. for precipitating the alkaline salts therefrom, decanting the liquor from said precipitate, adding milk of lime to the liquor, heating said liquor and milk of lime initially to approximately 60° C. and subsequently increasing the temperature to approximately 95° C. to 98° C., and filtering off the clear solution.

901,148. WINDOW-PANE FASTENER. ANDREW BILLINGS, Cudahy, Wis. Filed Sept. 10, 1907. Serial No. 392,199.



1. The combination of a window-sash provided with a continuous rabbet; a pane of glass having its inner face disposed directly against one wall of the rabbet, the other wall of which has a continuous longitudinal groove formed therein; and a metal locking strip bent longitudinally upon itself to provide offset inner and outer portions and a central portion connecting the first-mentioned portions, the inner portion of the strip being inserted in said groove, and the outer portion thereof bearing directly against the outer face of the glass, the portion of the strip connecting said inner and outer portions being disposed against the edge face of the glass.

2. The combination of a window-sash provided with a continuous rabbet; a pane of glass having its inner face disposed directly against one wall of the rabbet, the other wall of which has a continuous longitudinal groove formed therein; and a metal locking strip bent longitudinally upon itself to provide inner and outer offset portions arranged parallel with each other, and a central portion connecting the first-mentioned portions, the inner portion of the strip being inserted in said groove, and the outer portion thereof bearing directly against the outer face of the glass, the central portion of said strip being disposed against the edge face of the glass, and extending the whole width of said edge face.

3. The combination, of a window-sash provided with a continuous rabbet; a pane of glass having its inner face disposed directly against one wall of the rabbet, the outer wall of which has a continuous longitudinal groove formed therein, the inner wall of the groove coinciding with the first-mentioned wall of the rabbet; and a metal locking strip bent longitudinally upon itself, to provide

offset inner and outer portions, and a central portion connecting the first-mentioned portions, the inner portion of the strip being inserted in said groove, and the outer portion thereof bearing directly against the outer face of the glass, the entire edge face of the glass fitting directly against the connecting portion of said strip.

4. The combination of a window-sash provided with a continuous rabbet; a pane of glass having its inner face disposed directly against one wall of the rabbet, the other wall of which has a continuous longitudinal groove formed therein, the inner wall of the groove coinciding with the first-mentioned wall of the rabbet, the width of said groove being less than the thickness of the glass; and a soft metal locking strip bent longitudinally upon itself, to provide offset inner and outer portions and a central portion connecting the first-mentioned portions, the inner portion of the strip having a thickness equal to the width of said groove and being inserted therein, and the outer portion thereof bearing directly against the outer face of the glass, the entire edge face of the glass fitting directly against the connecting portion of said strip, said connecting portion having a thickness equal to that of the outer portion, to permit the glass to be removed from the sash when said outer portion is bent backwards against the grooved wall of the rabbet.

5. The combination, with a window-sash provided with a rabbet having its walls lying, respectively, opposite the edge face and the inner face of a pane of glass, the wall of the rabbet that lies opposite said edge face having a longitudinal groove formed therein directly adjacent to the other wall of the rabbet; a pane of glass disposed in the sash, with its edge face overlying the groove; and a lock-plate engaged in the groove and extending outwardly between the edge face of the glass and that wall of the rabbet in which said groove is formed, and then upwardly against the outer face of the glass.

901,149. CENTRIFUGAL LIQUID-SEPARATOR. GEORGE J. BRAGG, Philadelphia, Pa. Filed Dec. 5, 1907. Serial No. 405,186.



1. A skimming device for separators, comprising a plurality of upwardly-tapering bodies, open at the top, and secured together and spaced apart by curved wings constituting vanes to reduce slip between liquid and the rotating skimming device.

2. A skimming device for separators, comprising a plurality of upwardly-tapering bodies, open at the top, and curved wings between adjacent bodies spacing said bodies apart and connecting them so as to make a unitary structure, said wings constituting vanes to reduce slip between liquid and the rotating skimming device.

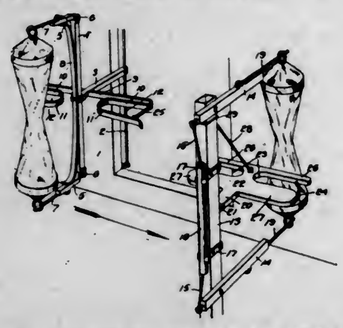
3. A skimming device for separators, comprising a plurality of upwardly-tapering bodies, open at the top, and wings between adjacent bodies spacing said bodies apart and provided with lugs interlocked with said adjacent bodies and so fastening them together into a unitary structure.

4. A skimming device for separators, comprising a plurality of upwardly-tapering conical bodies, open at the top, and curved vanes between and securing adjacent bodies together and arranged to rotate therewith to reduce slip between liquid and the rotating skimming device.

5. In a separator, the combination, with a rotatable bowl, of a skimming device therefor comprising a plurality of cones within said bowl and at the bottom of each cone fitting closely to the sides of said bowl, said cones being perforated, and curved vanes between and securing together said cones and arranged to rotate therewith and thereby to reduce slip of the liquid.

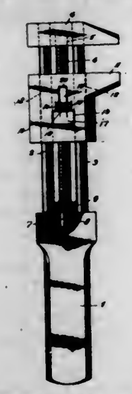
[Claims 6 and 7 not printed in the Gazette.]

901,150. MAIL-BAG CATCHING AND DELIVERING APPARATUS. HENRY W. BROWN, Richardson, Miss. Filed July 29, 1908. Serial No. 445,941.



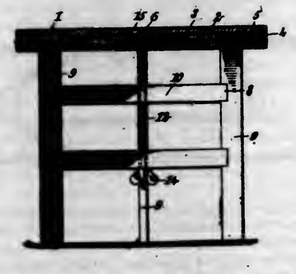
A mail bag catching and delivering apparatus comprising, in combination, a vertical supporting member; upper and lower arms pivoted thereto and arranged for swinging movement in a common vertical plane; a rod carried by each arm and projecting beyond the front end thereof, the projecting ends of said rods being arranged for engagement with the rings of a mail bag; a spring having its opposite ends connected with said arms, for normally forcing the same, and said rods away from each other, to hold the mail bag against displacement from said rods; and a horizontally-disposed catcher secured to said supporting member between said arms and extending at right angles to the latter, and to said member, each end of said catcher being provided with a bag-receiving seat and with a member for retaining a delivered bag in place therein.

901,151. WRENCH. THOMAS A. CASEY, Pittsburg, Pa. Filed Nov. 1, 1907. Serial No. 400,192.



A wrench comprising a handle, vertically extending rods formed integral with the upper end of the handle and arranged in parallelism with respect to each other, a fixed jaw carried by the upper ends of said rods, a rotatable threaded bar interposed between said rods and journaled at its ends in the jaw and handle, a slide having an elongated longitudinal opening, said opening having rounded end walls, said slide mounted upon the rods and bar and said rods positioned in close proximity to the rounded end walls of said opening, said slide further provided with a rectangular opening in each side communicating with said longitudinal opening and said slide further having in the outer face of each side a vertically extending recess terminating at its lower end in a rectangular opening, the upper end of said slide constituting a jaw and said slide further provided at each side of a recess at the lower end thereof with an apertured lug, rectangular clamping jaws mounted in said rectangular openings and extending in said longitudinal opening and having the inner face thereof provided with a semicircular groove with the wall thereof threaded to engage said bar, a shank having its lower end formed integral with each of the jaws approximately centrally thereof at one side, said shanks having the major portions thereof extending in different planes from that in which the jaws extend, each of said shanks at its lower end formed with an apertured offset registering with a pair of lugs projecting from the slide, means for pivotally connecting the offsets of the shanks to the said lugs, and springs having their lower ends fixed to the inner walls of said recesses and their upper ends engaging the upper ends of the shanks.

901,152. FURNITURE. FRANCIS N. CHURCHILL, Spokane, Wash. Filed Oct. 9, 1907. Serial No. 396,567.



1. A folding table, comprising a top, bars attached to and extending downwardly from said top, the inner edges of said bars being positioned so as to form the sides of a rectangle, two pairs of rigidly connected legs, said pairs being pivoted together to swing in horizontal planes on a pivot connection which extends through each pair at a point midway between its sides, a bar or bridge attached to said downwardly extending bars at the middle points of two opposite sides of said rectangle and extending across said rectangle and spaced from the top, and a lateral extension on the upper end of said pivotal connection adapted to engage over said bar or bridge, and each leg adapted to engage said downwardly extending bars at a corner of the rectangle, whereby the top and legs are detachably held together in position for use.

2. A folding table, comprising a top having a rectangular recess on its under side and a bar extending across the said recess at the center of the top, and pairs of legs pivoted together and having their upper ends engaging the corners of the recess of the top, the legs being formed of uprights, cross bars connecting the uprights intermediate of their ends, a pivot rod passing through the cross bars of the pairs of legs and having a lateral extension at its upper end for engaging the cross bar of the top, and a nut on its lower end.

3. A folding table, comprising a top having a rectangular recess on its under side, and pairs of legs pivoted together and having their upper ends engaging the corners of the recess of the top, the legs being formed of pairs of uprights, bars connecting the pairs of uprights intermediate of their ends and crossing one another, and a pivot rod passing through the connecting bars of the uprights and having a nut on its lower end, and means at its upper end coacting with means on the under side of the top, whereby the top is locked to the legs.

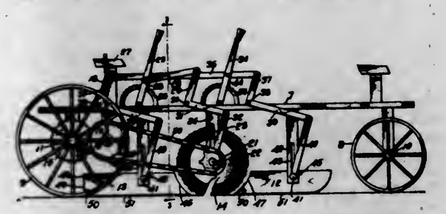
901,153. INCUBATOR. ALBERT A. CLODI, Union Hill, Ill. Filed June 4, 1908. Serial No. 436,660.



1. An incubator comprising a hot-water container and an egg supporting member disposed within the container and constructed and arranged to rise and fall with the level of the water within the container the said member being floated upon the surface of the water.

2. An incubator comprising a heater, a hot-water container arranged within the heater, and an egg supporting float received in the container.

901,154. STREET-SWEEPER. LESTER A. CROZIER, Lynn, Mass. Filed Oct. 24, 1907. Serial No. 399,001.



1. In a street sweeping machine, the combination, with a brush and means for rotating the same, of a pair of tiltable pans disposed upon opposite sides of the brush, means for bodily raising or lowering the pans simultaneously, and means carried by each pan for limiting its tilting movement.

2. In a street sweeping machine, the combination, with the frame, of a brush and means for rotating the same, a pair of vertically movable pans disposed upon opposite sides of the brush, a rock-shaft mounted upon the frame above each pan, each rock-shaft having an angle lever at its opposite ends, a link connection between the lower arm of each angle lever and the adjacent side of the corresponding pan, a rod connecting the upper arms of the angle levers at each side of the machine, and a lever pivoted to one of said rods and to the frame for bodily raising or lowering the pans simultaneously.

3. In a street sweeping machine, in combination, a frame, a brush supported therefrom, means for rotating the brush, longitudinally-slotted depending hangers secured to the frame at one side of the brush, a tiltable pan carried by said hangers and provided with pins projecting through the slots therein, means for bodily raising or lowering the pan, and means carried by the pan and movable therewith into contact with the hangers during the upward movement of the pan, for limiting its tilting movement.

4. In a street sweeping machine, in combination, a frame, front and rear pairs of longitudinally-slotted depending hangers secured to the frame, a tiltable pan carried by each pair of hangers and provided with pins projecting through the slots therein, a brush disposed between said pans, means for rotating the brush, and means carried by each pan and movable therewith into contact with the corresponding hangers during the upward movement of the pan, for limiting its tilting movement.

5. In a street sweeping machine, in combination, a frame, front and rear pairs of longitudinally-slotted depending hangers secured to the frame, a tiltable pan car-

ried by each pair of hangers and provided with pins projecting through the slots therein, a brush disposed between said pans, means for rotating the brush, means carried by each pan and movable therewith into contact with the corresponding hangers during the upward movement of the pan, for limiting its tilting movement, and separate means for raising and lowering the brush.

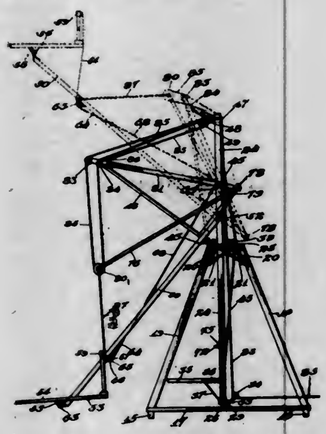
901,155. STOCKING-SUSPENDER. HUGO DAHMS, Berlin, Germany. Filed Jan. 20, 1908. Serial No. 411,796.



1. A stocking suspender, comprising in combination, a band, a string sewn to the band, a button at the end of the string, a second string attached to said band, an eye at the end of said second string, a loop formed at the end of said second string, said loop adapted to fit over the button, substantially as described and shown and for the purpose set forth.

2. A stocking suspender, comprising in combination, a band, a string sewn to said band, a button at the end of said string, a second string attached to said band having an eye at the end thereof, an india rubber ring around said second string, a loop formed at the end of said second string, said loop adapted to fit over the button, substantially as described and shown and for the purpose set forth.

901,156. HAY-STACKER. JOSEPH DAIN, Ottumwa, Iowa, assignor to Dain Manufacturing Company of Iowa, Ottumwa, Iowa, a Corporation of Iowa. Filed Nov. 6, 1905. Serial No. 286,092.



1. In a hay-stacker, the combination of a base, a rotary mast, a boom pivotally mounted on the mast, a fork mounted on the boom, a jib connected at one end portion with the inner end of the boom, and connecting rods connecting the opposite end portion of said jib with the outer portion of the boom.

2. In a hay-stacker, the combination of a base, a mast rotatably mounted upon said base, a boom pivotally mounted on the mast and extending beyond its pivotal connection, a fork mounted on the boom, a jib connected with the extended end of the boom, and connecting rods connecting said jib with the outer portion of the boom.

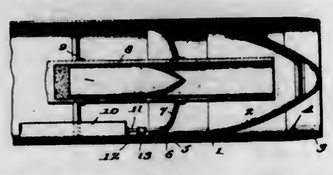
3. In a hay-stacker, the combination of a base, a rotary mast, a boom pivotally mounted on the mast and extending outwardly therefrom, a fork carried by the boom, a plurality of jibs rotatable with the mast, one of said jibs being pivotally connected with the boom, and hoisting means connected with said jibs.

4. In a hay-stacker, the combination of a base, a rotary mast, a boom pivotally mounted on the mast and extending outwardly therefrom, a fork carried by the boom, a plurality of jibs rotatable with the mast, and means connecting the outer portion of one of said jibs with the boom.

5. In a hay-stacker, the combination of a base, a rotary mast, a boom pivotally mounted on the mast and extending outwardly therefrom, a plurality of jibs mounted to rotate with said mast, and hoisting mechanism connected with said jibs and with the mast.

[Claims 6 to 37 not printed in the Gazette.]

901,157. SHELL OR CASING FOR STANDARD TORPEDOES. CLELAND DAVIS, U. S. Navy, assignor, by mesne assignments, to National Torpedo Company, New York, N. Y., a Corporation of Maine. Filed Dec. 5, 1907. Serial No. 405,263.



1. A torpedo casing provided with a sliding telescoping head adapted to be completely housed in said casing, and means to extend the same, substantially as described.

2. A torpedo shell of standard length provided with a telescoping head adapted to be completely housed within said shell, substantially as described.

3. A torpedo shell of standard length provided with a head adapted to slide and to be completely housed therein, and means to force said head outward into its firing position, substantially as described.

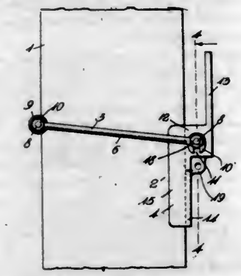
4. A torpedo shell of standard length tapered at its forward end, and provided with a telescoping head adapted to be housed inside said shell and to slide outward and form a continuous curve with the tapered portion of said shell, substantially as described.

5. A torpedo shell of standard length provided with a tapered portion and a shoulder at its forward end, in combination with a telescoping head provided with an annular shoulder 5, adapted to contact with said shoulder 4, and to have its contour form a continuous curve with the tapered portion of said shell, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

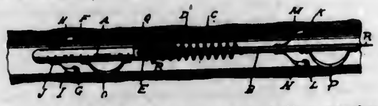
901,158. SELF-CLAMPING SCAFFOLD-BRACKET. FRED H. DETTMANN, Kaukauna, Wis., assignor of one-half to Gustav Bear. Filed Oct. 24, 1907. Serial No. 398,988.

In combination with a bracket support, a stirrup and a putlog holder, the latter comprising a depending clamping portion formed with inwardly extending side flanges designed to embrace opposite faces of the support and the stirrup being formed of an approximately U-shaped and straight stirrup section, respectively, one arm of the former of which is formed at its outer end with a shoulder designed to engage the adjacent face of the support and of a thickness to correspond with the adjacent flange of the putlog holder, and the latter of which is pivoted at one end to the former, the straight section and the body of the U-shaped section comprising the side pieces of the



stirrup and being adapted to position on opposite faces of the support.

901,159. CONDUIT-THREADER. JOHN C. DIETER, Anderson, and SAMUEL BOWSHER, Indianapolis, Ind., and ENZLEY DAVIS, Toledo, Ohio. Filed Mar. 11, 1907. Serial No. 361,817.



In a conduit threader two telescopic hollow members the rear end of the outer one having a reduced member to fit the inner member and the inner end of the inner one having a collar to fit the interior of said outer member, a coil spring surrounding and secured at its ends to said members, supporting shoes for each member, rearwardly extending flexible arms on said members, rollers mounted on said arms and having frictional engaging surfaces, a ratchet wheel on each of said rollers, a pawl for engaging said ratchet wheel to prevent retrograde movement of said rollers, and means for moving said members against the tension of the spring.

901,160. BOTTLE-WASHER. ISAAC DUPUIS, Vancouver, British Columbia, Canada. Filed Feb. 18, 1908. Serial No. 416,580.

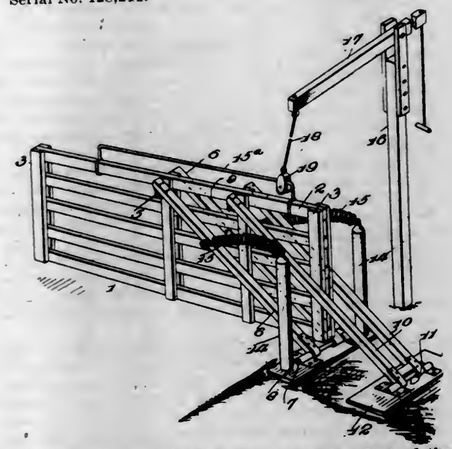


1. A bottle washer comprising a conical casing, an axial shaft rotatably mounted therein, a water wheel affixed to said shaft near the base of said conical casing, an inlet tube for conveying water to said wheel, a rod adjustably mounted in said shaft, means to secure said rod in adjusted relation within said shaft, a brush on the outer end of said rod, and a conical nozzle fitted tightly but removably on the open end of said casing to conduct the waste water to the bottle to be cleaned.

2. A bottle washer comprising a conical casing having a flat closed base and open at the frustum end, a hollow shaft axially disposed within the said casing and projecting from its open end, a water wheel fixed to said shaft near the base of the casing, a tube for conveying water to said casing, and arranged to strike tangentially against the arms of said water wheel, a rod adjustably mounted in said shaft and having a cleaner on one end adapted to enter the mouth of the bottle to be cleaned, and a conical nozzle fitted tightly but removably on the open end of said casing to conduct the waste water to the bottle to be cleaned.

3. In a device of the kind described, a frusto-conical casing having an opening in the small end, a shaft composed of two parts adjustably mounted one within the other, a set screw held in the outer part and adapted to press against the inner part and lock said part in the desired relation, said shaft projecting from the smaller end of said casing, and of less diameter than the opening, a brush carried on the projecting part of said shaft, means to rotate the shaft and brush, and a conical nozzle fitted tightly but removably on the open end of said casing to conduct the waste water to the bottle to be cleaned.

901,161. FARM-GATE. ALBERT G. EDDY and GEORGE J. HOBSON, Mount Vernon, Wash. Filed Apr. 20, 1908. Serial No. 428,211.



1. In combination, a gate, bearings independent of the gate, normally inclined levers pivoted at their upper ends to the gate, and their lower ends in the bearings, posts adjacent the gate, coiled springs connecting the posts and the normally inclined levers, said springs being under tension when the gate is in its open or closed position, a track carried by the gate, said track being parallel with the gate, a pivoted operating lever mounted above the plane of the top of the gate, a connection suspended from the operating gate, and a sheave carried by the connection and engaging under the track, said track moving freely over the sheave when the operating lever is tilted.

2. In combination, a gate, tilting levers supporting the gate, a track secured to the top of the gate, said track being almost the length of the gate, a pulley engaging the underside of the track, and operating means connected to the pulley to elevate the gate on the tilting levers to open and close said gate, the latter always remaining in a horizontal position during the opening and closing operation, the track passing freely over the pulley during operation of the gate.

901,162. SPRING-SUPPORT. THOMAS J. FAY, New York, N. Y., and JOHN M. ELLSWORTH, Bernardsville, N. J. Filed Dec. 5, 1906. Serial No. 346,415.



1. A support for a spring, comprising a member having a top plate, side plates adapted to engage with the sides of a spring and a reinforcing flange extending across the side and top plates, each end of said flange terminating in a

bolt extending beyond the edge of the respective side plates, one of said plates having an inwardly directed flange for engagement in a corresponding recess in the spring to hold said spring against longitudinal movement, and means adapted to be rigidly secured to said bolts to hold the spring in engagement with said member.

2. A support for springs, comprising a member having a top plate, parallel side plates adapted to engage with the sides of the spring, and reinforcing flanges extending across the side and top plates adjacent each end thereof, each end of each flange terminating in a bolt extending beyond the edge of the respective side plates, said top and side plates, reinforcing flanges and bolts being formed of a single piece of metal, and means adapted to be rigidly secured to said bolts to hold the spring in engagement with said member.

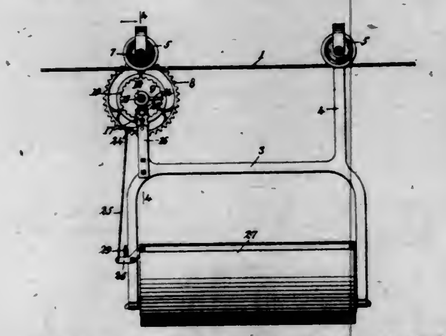
3. A support for springs, comprising a member having a top plate, parallel side plates integral therewith and adapted to engage with the sides of the spring, reinforcing flanges extending across the side and top plates adjacent each end thereof, a curved flange upon the inner side of one of said plates and adapted to enter a corresponding groove in the spring to prevent longitudinal movement of the latter, and means for holding the spring between said side plates.

4. A support for springs, comprising a member having a top plate, parallel side plates adapted to engage with the sides of the spring, and reinforcing flanges extending across the side and top plates adjacent each end thereof, each end of each flange terminating in a bolt extending at right angles to the top plates and beyond the edge of the respective side plates, one of said side plates being provided with a flange on its inner side adapted to engage with a corresponding groove in the spring to prevent longitudinal movement of the latter.

5. In combination, an elliptical spring having the ends thereof rigidly secured together, supports for said spring intermediate the ends thereof, each of said supports comprising a top plate, parallel side plates adapted to engage with the sides of the spring, one of said side plates being provided with a flange and the spring being provided with a corresponding groove, whereby longitudinal movement of the spring is prevented, and reinforcing flanges extending across each end of the top plate and side plates and terminating in bolts, said bolts, flanges, side plates and top plate being formed of a single piece of metal.

[Claim 6 not printed in the Gazette.]

901,163. AUTOMATIC TRIP FOR CONVEYERS. CHRISTIAN FREDRICKSON, Cameron, Wis. Filed June 16, 1908. Serial No. 438,753.



1. In a conveyer, a trip which is adapted to permit the conveyer to deposit its load automatically, a supporting wheel, and means connected with the supporting wheel and which are operated thereby which are adapted to actuate the trip at a predetermined time.

2. In a conveyer, a hopper, a trip which is adapted to permit the hopper to deposit its load automatically, a supporting wheel for the hopper, adjustable means connected with the supporting wheel and which are operated thereby which are adapted to actuate the trip, and means to secure the said adjustable means so that the trip will be actuated at a predetermined time.

3. In a conveyer, a trip, a supporting wheel, a member, means by which the supporting wheel is adapted to rotate the said member, means which are adjustable with reference to the said member, means to secure the said means to the said member so it will be operated thereby, and means which are adapted to be operated by the means adjustable with reference to the said member, the last named means being adapted to actuate the trip.

4. In a conveyer, a trip, a supporting wheel, a wheel, means by which the supporting wheel is adapted to rotate the said wheel, a cam wheel which is adjustable with reference to the said wheel, means to secure the cam wheel in a predetermined relationship with reference to the said wheel, a gear wheel which is adapted to be operated by the said cam wheel, and means connected with the gear wheel which are adapted to actuate the trip.

5. In a conveyer, a trip, a supporting wheel, a wheel, means by which the supporting wheel is adapted to rotate the said wheel, means which are adjustable with reference to the said wheel, means to secure the said means in a predetermined relationship with reference to the said wheel, means to operate the trip, the said means being adapted to be operated by the means adjustable with reference to the said wheel, and means to hold yieldingly together the means which are adjustable with reference to the said wheel and the means which are adapted to operate the trip.

[Claims 6 to 17 not printed in the Gazette.]

901,164. DRESS-FASTENER. CARLOS A. GARDINER, U. S. Navy. Filed Dec. 26, 1907. Serial No. 408,108.

1. In a dress fastener, the combination of two main parts adapted to be fastened to the flaps of an opening; and one of said parts provided with a locking tongue extending substantially throughout its length, and the other of said parts provided with an oblong opening which said tongue is adapted to enter; and means adapted to slide along said parts and thereby force the tongue into locking engagement with the opening, substantially as described.

2. In a dress fastener, the combination of two main parts adapted to be fastened to the respective flaps of an opening, comprising, an oblong tongue and slot extending substantially the entire length of said parts and provided with inclined inter-engaging means; and a means adapted to slide longitudinally of said tongue and slot to force the same into, and out of locking engagement, substantially as described.

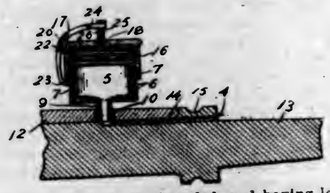
3. In a dress fastener, the combination of a flat oblong main part provided with a locking tongue; a second oblong main part triangular in cross section provided with an oblong opening adapted to receive said tongue, and with oblong flanges adapted to contact with the flat surface of said first main part; and slidable means adapted to force said main parts into and out of locking engagement, substantially as described.

4. In a dress fastener, the combination of two oblong main parts adapted to be fastened to the flaps of a dress, and provided with inter-engaging parts; and a pair of sliding clamps adapted to force said parts into locking engagement, and provided with a bail adapted to force said parts out of locking engagement, substantially as described.

5. In a dress fastener, the combination of two oblong main parts adapted to be fastened to the flaps of an opening, one provided with an oblong locking tongue having a beveled end, and the other with a recess to receive said tongue; a pair of sliding clamps to force said parts into locking engagement; and a bail spanning and connecting said clamps adapted to ride down said beveled end, and force the said parts out of locking engagement, substantially as described.

[Claim 6 not printed in the Gazette.]

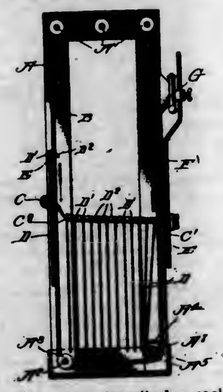
901,165. AXLE-LUBRICATOR. HENRY GEARMAN, Marietta, Minn. Filed Mar. 27, 1908. Serial No. 423,584.



1. An oil cup exteriorly threaded, and having longitudinally disposed slots, equidistant from one another, an interiorly threaded cap having a supporting ear and a socket, a curved lever pivoted to said ear and having its lower end working upon said slotted threaded cup, the upper end being proximal to said socket, and a spring within said socket and working against said lever, all arranged as set forth.

2. An oil cup exteriorly threaded, and having longitudinally disposed slots, an interiorly threaded cap having a supporting ear and a socket, a curved lever pivotally connected to said ear having its lower end upon said slotted threaded cup, the upper end being proximal to said socket, and a spring within said socket and working against said lever, as set forth.

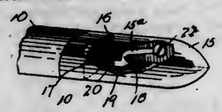
901,166. ADVERTISING DEVICE. WILLIAM F. GILL and JOHN M. BARRY, Brooklyn, N. Y., assignors of one-third to said John M. Barry, Brooklyn, N. Y., and two-thirds to Richard W. Bell, East Liverpool, Ohio. Filed Apr. 2, 1907. Serial No. 365,933.



In a device of the kind described a casing, a U-shaped frame having its side members curving abruptly downward and then inclining slightly downwardly and toward the rear side of the casing, a plurality of mats depending from said frame and resting within the frame, and means for successively lifting said mats from the rear end of the frame, bringing them forward in a horizontal plane above the frame and returning them to the front of the frame, as and for the purpose set forth.

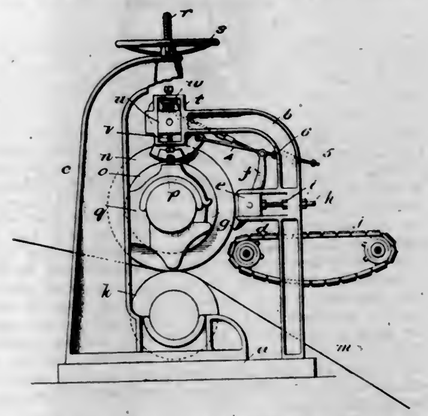
901,167. STAIR-CARPET FASTENER. ELMER E. GREENE, Altoona, Pa., assignor of one-half to Charles Houston, Altoona, Pa. Filed May 11, 1908. Serial No. 432,013.

A fastening device for stair rods comprising the rod, fastener screws carried by the stair, and end caps telescoping over the ends of the rod and provided with an enlarged entrance opening for the screw fasteners and from which extends an inclined wedging slot, whereby



when the said caps are slid along said fastener screws and onto the ends of the rod, the same will be drawn downwardly.

901,168. PULP-MACHINE. MARTIN HANSON, Marinette, Wis. Filed Mar. 30, 1908. Serial No. 424,125.



1. In a pulp machine, the combination of a supporting frame, rolls mounted therein, one above the other, means for conveying pulp between said rolls, a pivotally mounted knife edged doctor, adjustable bearings for said doctor, and means for automatically bringing said doctor into contact with one of said rolls when the layer of pulp on said roll has attained the desired thickness, including a rocking cam and adjustable connections between said cam and said doctor, substantially as described.

2. In a pulp machine, the combination of a supporting frame, vertically arranged rolls therein, movable bearings supporting the upper roll, means for conducting pulp between said rolls, a pivotally mounted knife edged doctor, adjustable bearings for said doctor, a swinging, weighted cam adapted to be moved by the upper roll when the layer of pulp thereon has attained the desired thickness, adjustable connections between said cam and said doctor, and means for securing said cam out of operative relation with said roll, substantially as described.

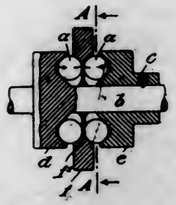
3. In a pulp machine, the combination of a supporting frame, vertically arranged rolls therein, movable bearings supporting the upper roll, a secondary frame bent at right angles, movable bearings in said second named frame, a pivoted cam mounted on said bearings, a pivotally mounted knife-edged doctor, adjustable bearings for said doctor in said second named frame, and adjustable connections between said cam and said doctor, substantially as described.

4. In a pulp machine, the combination of a supporting frame, vertically arranged rolls therein, movable bearings supporting the upper roll, means for conducting pulp between said rolls, a pivotally mounted knife edged doctor, a cam adapted to be struck and operated by the upper roll when the layer of pulp thereon has attained the desired thickness, a connection between said cam and said doctor, and yielding bearings supporting said cam to prevent breakage in case of unusual strain, substantially as described.

5. In a pulp machine, the combination of means for collecting a layer of pulp on a roll, means for stripping said layer from said roll, a conveyer, means for separating the layers of pulp from the conveyer, and a pivoted collecting table, substantially as described.

[Claim 6 not printed in the Gazette.]

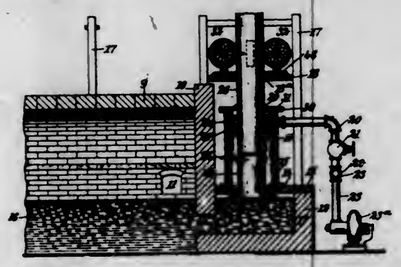
901,169. BALL-BEARING. LUDWIG HERRMANN, Nuremberg, Germany. Filed Mar. 20, 1908. Serial No. 422,268.



1. A ball bearing comprising three parts, two of which are each provided with a race wall and race, two rows of balls located in said race and forming a saddle between the rows of balls, each row of balls being separated from the other, a bearing part having a knife edge entering said saddle between the two rows of balls and engaging the same, each race wall of the two first mentioned parts providing two bearing surfaces for its row of balls, the knife edge of the last mentioned bearing part providing bearing surfaces for both rows of balls near the inner edge of said knife edge, the said two bearing surfaces in each of the race walls and the bearing surfaces on the knife edge being disposed relatively to the axis of the main bearing in such manner that the said balls turn on axes lying at right angles to the main axis of the bearing.

2. A ball bearing comprising three parts, two of which are each provided with a race wall and race, a row of balls arranged in each race, an outer bearing part having a knife edge engaging both rows of balls, each ball race providing two bearing surfaces for its row of balls, the knife edge of said outer bearing part providing a bearing surface for both rows of balls near the inner edge of said knife edge, the said bearing surfaces in each race wall and on the knife edge being disposed relatively to the main axis of the bearing in such manner that the balls turn on axes lying at right angles to the main axis of the bearing.

901,170. CONTINUOUS-DRAW VACUUM WINDOW-GLASS MACHINE. HARRY D. HERSHEY, Latrobe, Pa. Filed Jan. 22, 1908. Serial No. 412,104.



1. The combination of a vacuum chamber, a valve connected therewith, a receptacle for holding molten glass, a bait tube provided with a portion for entering said receptacle, said bait tube engaging said valve, and means for maintaining in said vacuum chamber a pressure differing from atmospheric pressure as said bait is raised.

2. The combination of a receptacle for holding molten glass, a vacuum chamber disposed adjacent to said receptacle and provided with a valve, means for drawing from said molten glass a member adapted to engage said valve for the purpose of forming a substantially airtight connection therebetween, and means for varying atmospheric pressure within said vacuum chamber.

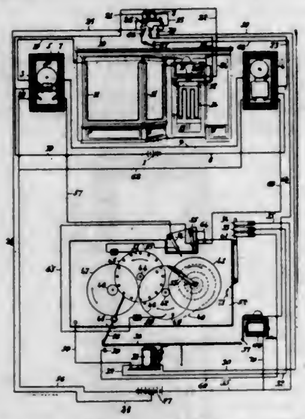
3. The combination of a receptacle for holding molten glass, a vacuum chamber disposed over said receptacle and provided with a valve, means for causing a partial vacuum within said vacuum chamber, and a bait for drawing out a column of glass and bringing the same into substantially airtight engagement with said valve.

4. The combination of a receptacle for holding molten glass, a vacuum chamber disposed adjacent to said receptacle, a valve mounted upon said vacuum chamber and adapted to engage directly the surface of a member of glass drawn out from said molten glass and passing through said vacuum chamber, and means for removing air from said vacuum chamber.

5. The combination of a receptacle for holding molten glass, a vacuum chamber disposed adjacent to said receptacle, means for passing through said vacuum chamber a longitudinal member of glass drawn out from said molten glass, means for preventing ingress of air into said vacuum chamber, and mechanism for removing air from said vacuum chamber.

[Claims 6 to 8 not printed in the Gazette.]

901,171. ELECTRIC BURGLAR-ALARM. SIMON B. HESS, New York, N. Y. Filed May 27, 1907. Serial No. 375,891.



1. In an alarm system, a closed protecting circuit including a protecting casing for an alarm signal and an electro-magnet outside of said casing, an open shunt around said electro-magnet including a second casing inclosing said alarm signal but spaced from the first-mentioned casing, and an alarm circuit controlled by said magnet and including the alarm signal within said casings and a source of electrical energy outside of said casings.

2. In an alarm system, an alarm signal, two concentric protecting casings inclosing solely said signal and spaced apart, a closed protecting circuit including an electro-magnet outside of said casings, said circuit being connected to said casings at opposite sides of the magnet, respectively, and an alarm circuit controlled by said magnet, including a suitable source of electrical energy outside of the casings, said signal within the casings and conductors extending through both casings but insulated therefrom.

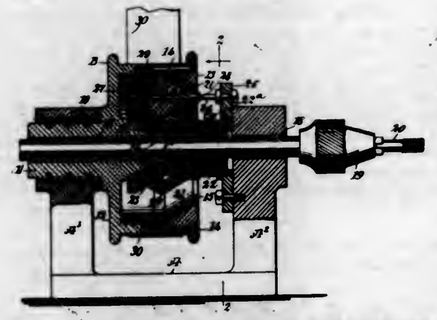
3. In combination, an alarm circuit, including an alarm signal and a switch, and a mechanical motor including means for repeatedly making and breaking said circuit independently of the switch to operate the signal intermittently, and means independent of said last-mentioned means for throwing said switch after said alarm has been operated intermittently for a predetermined length of time.

4. In an alarm system, a protecting circuit, an alarm circuit controlled thereby including an alarm signal, a motor operating to limit the time of operation of the signal, means for releasing said motor upon the instantaneous breaking of the protecting circuit, and means including an electro-magnet for stopping said motor at will.

5. In an alarm system, a protecting circuit, an alarm circuit including an alarm signal, a motor, means controlled by the protecting circuit for closing said alarm circuit and releasing said motor, means operated by the motor for repeatedly interrupting the alarm signal, means for holding said alarm circuit closed, and an electro-magnet for releasing said holding means.

[Claims 6 to 12 not printed in the Gazette.]

901,172. REVERSING MECHANISM. THOMAS H. HOLGAN and JAMES E. HOLGAN, New York, N. Y. Filed Oct. 12, 1907. Serial No. 397,098.



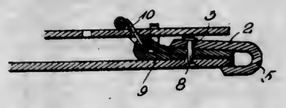
1. In a reversing mechanism, a hollow driving pulley having an interior conical projection at its hub, and an opposing interior peripheral conical face, a double cone-faced roller, mounted to revolve within the pulley, one of whose cone faces is adapted to engage with the peripheral cone face of the pulley, a shaft slidable in the pulley, an annular projection fixedly secured to the shaft, said projection being interiorly and exteriorly conical, which projection extends between the hub cone of the pulley and opposing cone of the roller, the said shaft projection being adapted for engagement either with the said roller or the said hub cone according to the direction in which the shaft is moved.

2. In a reversing mechanism, a driving pulley having opposing inner cone faces, one at the hub and the other at the periphery, a shaft slidable in said pulley, a double cone-faced roller slidably and rotatably mounted in said pulley, being independent thereof and adapted for engagement with the peripheral cone face of the pulley, and an annular projection fixedly secured to the shaft, said projection being interiorly and exteriorly conical, interposed between the hub cone of the pulley and a cone face of said roller, and adapted for engagement with either of said faces according to the direction in which the shaft is moved.

3. In a reversing mechanism, a driving pulley having a cone projection at its hub and an interior conical face at its periphery, a double faced cone mounted on a fixed support and projecting into the pulley, a shaft slidable in the pulley, and a collar fixed on the shaft and having a flaring end, cone-shaped interiorly and exteriorly, the inner cone face of the collar being adapted for engagement with the cone projection of the hub and the exterior face with the double cone.

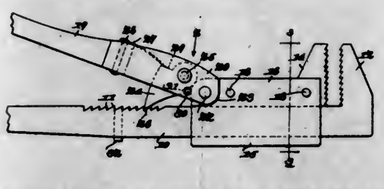
4. In a reversing mechanism, a support, a driving pulley mounted at one end in the support and having a cone projection on its hub and an interior conical face on its periphery, spindles mounted at one end in the support and projecting into the pulley, double faced cones on the spindles and adapted to engage with the peripheral conical face of the pulley, a shaft slidably mounted in the pulley and support, and a collar fixedly secured to the shaft and having a flaring end, cone-shaped exteriorly and interiorly, the inner cone face of the collar being adapted to engage with the cone hub projection and the outer cone face with the double cone.

901,173. CLIP-HOOK. HENRY JOHNSON, Edgerton, Mo. Filed Feb. 7, 1907. Serial No. 356,190.



In combination with a strap, a clip hook therefor comprising a flat body portion riveted to said strap on one side only, a rearwardly bent hook integral with said flat body portion and having its terminal extending to the opposite side of the strap and overlying the end of the latter and free from connection therewith so as to have relative lateral movement, a flexible buckle loop having its inner end portion secured between the body portion of said end hook and the strap, and a buckle carried by said loop.

901,174. WRENCH. JAMES P. JOHNSON, Kensal, N. D. Filed Oct. 26, 1905. Serial No. 284,501.



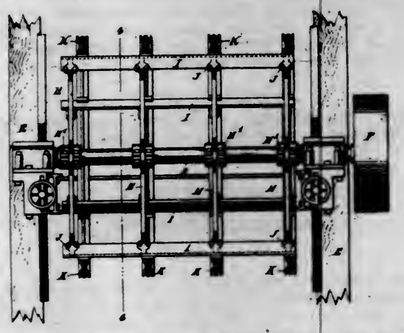
A wrench having a stationary jaw provided with an extended shank member equipped with a plurality of teeth or serrations upon one surface thereof, a slidable keeper equipped with a jaw relatively fixed to said keeper, said keeper having cut away upper rear corners forming shoulders, and a lever member pivoted in said recesses having inner edges corresponding to the faces of the shoulders formed in said recesses and adapted to abut said faces, said lever carrying a spring pressed detent effective for engagement with said serrations or teeth, said detent having its effective action opposed to the sliding movement of said keeper and its jaw, said lever also having a stop for engagement with said detent for its retention in initial position when said lever is lifted out of engagement with said teeth, said stationary jaw member passing through said keeper and having a shank flush with the lower surface of the shank of the keeper jaw.

901,175. STONE-SAWING MACHINE. ARELI JONES, Oolitic, Ind. Filed Feb. 6, 1908. Serial No. 414,469.

1. A drum for a sawing machine, comprising a shaft, a plurality of centers attached to the said shaft, rails ranging in the direction of the axis of the drum and secured to the peripheral faces of the said centers, sundry of the rails being arranged in pairs to form a slot, the pairs being disposed diametrically opposite each other, a rim made in sections fastened together, and clamping bolts engaging the said pairs of rails and the rim to adjustably secure the latter on the rails.

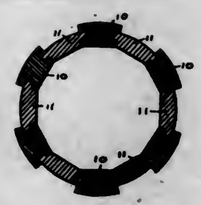
2. A drum for a sawing machine, provided with longitudinal rails, sundry of the rails being arranged in pairs, to form a slot, the pairs being diametrically opposite each other, a rim made in sections fastened together, and clamping bolts engaging the said pairs of rails and the rim, to adjustably secure the latter on the rails.

3. A drum for a sawing machine, provided with longitudinal grooves, a rim made in sections fastened together,



and clamping bolts engaging the grooves, and the rim, to adjustably secure the latter on the drum.

901,176. WOODEN COLUMN. OSCAR A. JOSH and STEPHEN ANDERSON, Indianapolis, Ind. Filed Nov. 27, 1907. Serial No. 404,060.



1. As a new article of manufacture, a hollow wooden column consisting of a plurality of circumferentially arranged interlocked sections of two different thicknesses, each alternate section formed on a taper and provided on opposite edges with a tongue having sides running in parallel planes, each intermediate section, between the antecedently mentioned sections, having a uniform width throughout its length and provided with a longitudinal groove in each edge to receive the tongue of the engaging section, the overlapping of the sections adapted to conceal the joint at the ends of the tongues.

2. As a new article of manufacture, a hollow wooden column consisting of a plurality of circumferentially arranged interlocked sections of two different thicknesses, each alternate section formed on a taper and provided on opposite edges with obliquely projecting tongues the sides of which are cut on parallel planes, each section, intermediate the alternate sections, formed substantially the same width throughout its length and provided in opposite edges with longitudinal grooves cut to correspond with and to receive the tongues on the engaging sections, the overlapping of the sections adapted to conceal the joint at the ends of the tongues.

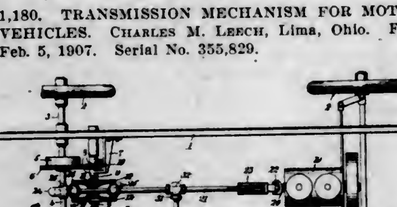
901,177. RADIO-ACTIVE COMPOSITION. RICHARD KEIL, Elsleben, Germany. Filed Sept. 11, 1907. Serial No. 392,339. (Specimens.)

1. An article of manufacture consisting of a radio active core or center and a coating of pulverized material nearly impervious to the rays emitted from said center, and compressed around said core or center, substantially as described.

2. An article of manufacture, consisting of a radio-active core or center, and a coating of material nearly impervious to the emitted rays, said coating consisting of successive layers applied under increasing pressure to said core, substantially as described.

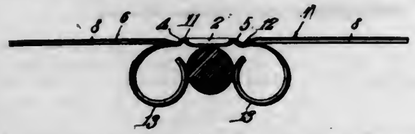
3. An article of manufacture, consisting of a core of radio-active material, a coating therefor of material nearly impervious to the emitted rays and composed of successive layers of said material, each layer being pressed upon the core or the preceding layer under increasing pressures, and an outer coating impervious to said rays, substantially as described.

901,178. WINDOW-LOCK. GUY O. KELLER, Buena Vista, Va. Filed Oct. 8, 1907. Serial No. 396,486.



A fastening device of the class described, comprising in combination with the meeting rails of sash members, of a member having a raised lateral projection and mounted upon one of the rails, a latch pivotally connected to the lateral projection and having an upstanding lug at one end, said member having a beveled recessed side to allow free movement of the pivotal latch, a keeper mounted on the remaining rail and having a boss on its upper face and terminating laterally in a lug, and a spring seated in said recess and acting directly on the latch to normally hold its lug in engagement with the lug on the keeper.

901,179. BROOM-HOLDER. AUGUST KUNKEL, Johnstown, Pa. Filed Feb. 28, 1908. Serial No. 418,323.



A device for holding brooms, brushes and the like comprising a holder having opposed spring arms, a flattened central portion, forwardly projecting flanges at the top and bottom of said central portion, and rearwardly projecting ribs at the sides of the central portion, in combination with a supporting plate having a central portion provided with forwardly projecting flanges arranged to embrace the flanges on the holder, channels formed to receive the ribs of the holder, and outwardly projecting arms provided with wall engaging flanges thereon.

901,180. TRANSMISSION MECHANISM FOR MOTOR-VEHICLES. CHARLES M. LEECH, Lima, Ohio. Filed Feb. 5, 1907. Serial No. 355,829.

1. The combination of a driving shaft, shafts having opposed bevel wheels at the opposite sides of the driving shaft, means providing for a lateral, yielding movement

of said shafts, opposed bevel wheels fixed to the driving shaft between said first-named wheels, and means for reciprocating the driving shaft.

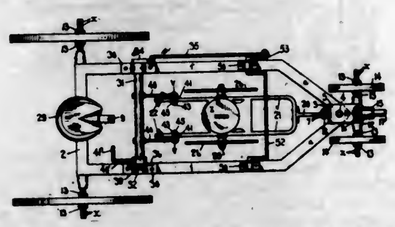
2. The combination of a driving shaft, shafts having opposed bevel friction wheels at the opposite sides of the driving shaft, means providing for the lateral, yielding separation of said friction wheels and shafts, opposed bevel friction wheels fixed to the driving shaft between said first-named friction wheels, and means for reciprocating the driving shaft.

3. The combination of a driving shaft, shafts having opposed bevel friction wheels provided with opposed bevel pinions centrally arranged, opposed bevel friction wheels fixed to the driving shaft between said first-named friction wheels, and a bevel pinion fixed to the driving shaft adapted to intermesh with said first-named pinions.

4. The combination of a driving shaft, shafts having opposed bevel friction wheels provided with opposed bevel pinions centrally arranged, means providing for the lateral, yielding separation of said friction wheels and pinions, opposed bevel friction wheels fixed to the driving shaft between said first-named friction wheels, and a bevel pinion fixed to the driving shaft adapted to intermesh with said first-named pinions.

5. A transmission gearing including a slidingly mounted driving shaft, a laterally yielding driven shaft arranged at an angle to the driving shaft, and means controlled by the sliding movement of the driving shaft to successively frictionally and positively drive said driven shaft from the driving shaft.

901,181. RIDING ATTACHMENT FOR CORN-PLANTERS. JOSEPH F. MAIER, Broughton, Kans. Filed Mar. 12, 1908. Serial No. 420,718.



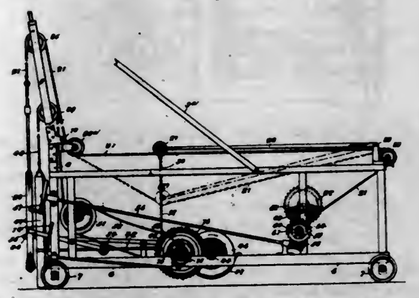
1. The combination with a supporting frame, of a wheel axle secured to the rear end of said frame, a vertical shaft carried at the forward end of said frame, a stub axle secured to said shaft supporting two wheels, a tongue secured to said shaft, a lever provided crank shaft, means to lock said lever, supporting arms extending from said crank shaft, a frame secured at its forward end to the forward end of said supporting frame, and connecting links extending from the shovel beams of said frame to said supporting arms.

2. The combination with a supporting frame, comprising two side bars bent inward and united at their forward ends, of a wheel supporting axle secured to the rear end of said side bars, a vertical shaft carried at the forward end of said frame, a stub axle secured to said shaft supporting two caster wheels, a tongue secured to said shaft, a horizontal crank shaft, a lever secured to said crank shaft, means to lock said lever, supporting arms fixed to said crank shaft, and a seed frame secured at its forward end to the forward end of said supporting frame, and connecting links extending from the shovel beams of said frame to said supporting arms.

3. The combination in a device of the character described of the following instrumentalities, to wit, a wheel supported frame, a crank shaft having two projecting supporting arms, means to adjustably secure said crank shaft, a foot lever extending from said crank shaft, a duplex crank shaft, a connecting rod connecting said two crank shafts, and a seed dropping mechanism carried by said supporting frame and supporting arms, the operating disks of which are adapted to be engaged by said duplex crank shaft.

4. The combination in a device of the character described, of a supporting axle, side bars secured to said axle and united at their forward ends, a caster wheel secured to the forward end of said bars, a tongue secured to said caster wheel, a transverse crank-shaft secured to said side bars near their rear ends, a trip lever secured to said crank shaft, two supporting arms fixed to said crank shaft, supporting links carried by said arms, a duplex crank shaft secured near the forward ends of said side bars, a rod connecting said two crank shafts, and a seed drill of that type having a furrow opener, two shovel beams and operating wheels, said drill at its forward end being secured to the forward ends of said side bars, said shovel beams being carried by said links, said duplex crank shaft being arranged to be brought into engagement with said operating wheels, all arranged substantially as and for the purpose set forth.

901,182. WELL-DRILLING APPARATUS. RICHARD D. MOON, San Angelo, Tex. Filed Apr. 13, 1908. Serial No. 426,834.



1. In a drilling apparatus, the combination with the drill rope, of a shaft and means to drive the same, a pulley loose on the shaft, a strap connected at one end thereto a swinging pulley at the other end of the strap arranged to engage the rope and take up the same, a clutch device on the shaft engageable wih the loose pulley to take up the rope, and means to release the clutch, the loose pulley being free to turn back after the clutch is released.

2. In a drilling apparatus, the combination with the drill rope, of a shaft and means to drive the same, a pulley loose on the shaft, a strap connected thereto, a swinging pulley connected to the strap and under which the rope passes to pull the rope when the first named pulley is revolved, the loose pulley having a projection, a clutch fast on the shaft beside the crank and having a movable member arranged to strike the projection when advanced and turn the first named pulley and take up the rope, and means to advance and retract said member, the first named pulley being free to turn back and slack the rope after release of the clutch.

3. In a well drilling apparatus, the combination of a frame, a rope drum at the rear end thereof and guide pulley at the front end thereof, with a drill rope extending between the same, a shaft located on the frame between said drum and pulley and having driving means, a pulley loose on the shaft, a strap connected therewith, a swinging pulley connected with the same and engaged with the rope, and a clutch device on the shaft, automatically engageable and disengageable with the loose pulley to alternately take up and let off the rope.

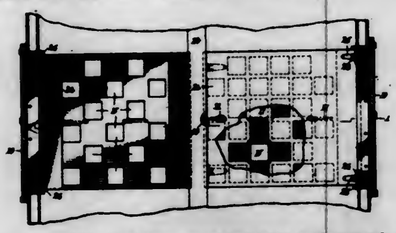
4. In a well drilling apparatus, the combination of a frame, a rope drum at the rear end thereof, a guide pulley at the front end thereof, a drill rope extending between the same, a vertically swinging arm hinged to the frame and having a pulley at the free end thereof resting upon the rope, and means to intermittently pull down the pulley and arm to alternately take up and let off the rope

said means comprising a strap connected with the pulley, a shaft, a pulley loose on the shaft and connected with the strap, and means for connecting and disconnecting said pulley and the shaft.

5. In a well drilling apparatus, a take up mechanism for the rope comprising in combination a shaft, a pulley loose thereon and having an inward projection on the rim, a clutch drum fast on the shaft, a yielding bar carried by the drum and slidable radially therein and normally projecting at its outer end beyond the periphery of the drum, in position to engage the projection and turn the pulley, a stationary cam located beside the drum and engageable with the bar to retract the same, and connections between the pulley and drill rope to take up the latter.

[Claim 6 not printed in the Gazette.]

901,183. GRAIN-CAR. JAMES T. MCNALLY, Chicago, Ill. Filed Dec. 21, 1907. Serial No. 407,533.



1. A car having a floor provided with a depressed portion arranged above the under side of the floor sills, a double bottom in said depressed portion, each having openings, means for lineally sliding one of said bottoms to move the openings into and out of register with the openings in the other bottom, and a door for filling the depression in the car floor and covering said openings.

2. A car having a floor provided with a depressed portion arranged above the under side of the floor sills, a double bottom in said depressed portion, each bottom having openings, means for sliding one of said bottoms transversely of the car to move the openings into and out of register with the openings in the other bottom, said car having a door opening adjacent to the depression in the floor, and a door movable either to fill the depression in the car floor and cover said bottom, or to cover the door opening.

3. A car having two perforated members in the floor thereof arranged above the floor sills and located one above the other and with one of said members lineally movable with respect to the other to carry the perforations into and out of register, said car having a door-way located adjacent to said members, and a door adapted to form a portion of the floor and cover said members, or cover the door opening.

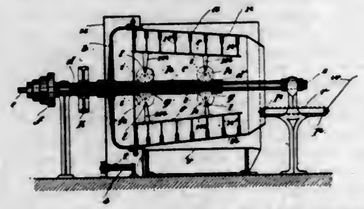
4. A car having a door opening, a door adapted to form either a portion of the floor of the car or cover said door opening and having a movable leaf, and a latch adapted either to lock the leaf in a plane with the door or lock the free edge of the door in the car floor.

5. A car having a door opening and provided with a depression in the floor thereof adjacent to said door opening, a door adapted to be either seated in said depression and form a part of the floor, or be moved to an upright position to cover the door opening, a hinged leaf forming an extension of the car door, adapted to be folded upon the inner face thereof, and a lever fixed to the inside of the door forming a continuation of the hinged leaf when the door is seated in the car floor.

[Claims 6 to 14 not printed in the Gazette.]

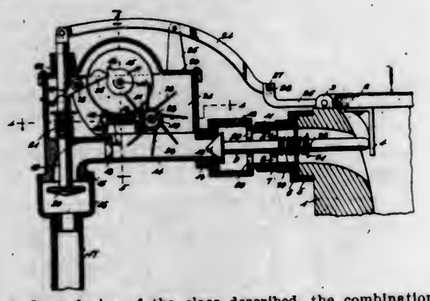
901,184. CENTRIFUGAL DRYING APPARATUS. ARNO NEEF, Kattowitz, Germany. Filed Apr. 30, 1908. Serial No. 430,188.

1. In centrifugal drying apparatus, the combination with a centrifugal perforated drum of scrapers and means for moving said scrapers radially to and also longitudinally parallel to the surface of the drum.



2. In centrifugal drying apparatus, the combination with a centrifugal perforated drum and hollow shaft connected to revolve therewith, of arms on said shaft, worm-wheels carried by said arms, crank pins on said worm-wheels, frames comprising a plurality of scrapers carried by said pins, a central shaft and worms on said central shaft engaging said worm-wheels.

901,185. FLUSHING APPARATUS FOR WATER-CLOSETS. FREDERICK C. NICKOL, Dayton, Ohio. Filed Apr. 2, 1908. Serial No. 424,730.



1. In a device of the class described, the combination with a closet bowl, of a seat therefor, a suitable source of water supply for flushing said bowl, an inlet valve, an outlet valve, means simultaneously controlled by the seat for closing the outlet valve and opening the inlet valve and for raising the seat to normal, means for holding the inlet valve in an open position, and means controlled by the flow of water for releasing said holding means.

2. In a device of the class described, the combination with a closet bowl, of a suitable source of water supply for flushing the same, an inlet valve, an outlet valve, means actuated by the seat for closing said outlet valve, a lever actuated by the seat for opening said inlet valve simultaneously with the closing of the outlet valve, a pawl for holding the inlet valve open, means for opening said outlet valve after the seat has been released, and means controlled by the water flow for releasing said pawl.

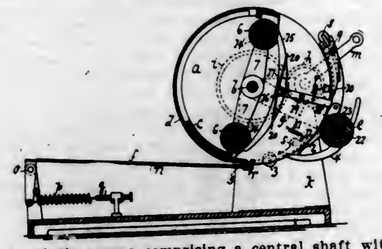
3. In a device of the class described, the combination with a closet bowl, of a suitable source of water supply for flushing the same, an inlet valve, an outlet valve, a seat pivoted to the bowl, means on said seat for actuating the outlet valve to close the same, an arm carried by the seat, means actuated by said arm for opening the inlet valve, a spring for opening the outlet valve when the seat is released, a pawl for holding the inlet valve in open position, means for releasing said pawl at a predetermined time, and a spring for closing said inlet valve.

4. In a device of the class described, the combination with a closet bowl, of a water supply pipe connected thereto, an outlet valve adapted to close said pipe to the bowl, a seat pivoted on the bowl, an arm carried by said seat for closing the outlet valve upon depression of the seat, an inlet valve for controlling the supply pipe, means controlled by the seat for opening said inlet valve simultaneously with the closing of the outlet valve, means for holding said inlet valve open after the seat has been released, and the outlet valve is open so as to allow a free passage of water to the bowl, a water wheel actuated by the flow of water through the supply pipe, and means controlled by said water wheel for actuating said holding means.

5. In a device of the class described, the combination with a closet bowl, of a water supply pipe connected thereto, an outlet valve adapted to close said pipe to the bowl, a seat pivoted on the bowl, an arm carried by said seat for closing the outlet valve upon depression of the seat, an inlet valve for controlling the supply pipe, means controlled by the seat for opening said inlet valve simultaneously with the closing of the outlet valve, means for holding said inlet valve open after the seat has been released, and the outlet valve is open so as to allow a free passage of water to the bowl, a water wheel actuated by the flow of water through the supply pipe to the bowl, and a cam operated by the water wheel for releasing said holding means.

[Claims 6 and 7 not printed in the Gazette.]

901,186. PRINTING-PRESS. WILLIAM P. QUENTELL, New York, N. Y. Filed Feb. 5, 1908. Serial No. 414,369.



1. A printing press comprising a central shaft with a stationary circular type holder, a platen having its axis of rotation at a practically fixed distance from the center of said type holder, and a rotary frame for maintaining said platen at said fixed distance.

2. A printing press comprising a central shaft with a circular type holder, a rotary frame non-shiftably mounted on the shaft, and a platen having its axis of rotation in the frame at a practically fixed distance from the shaft so that the platen can remain in contact with the circular type holder during its entire rotation, the exterior of the type holder being left free or unobstructed.

3. A stationary type holder with stationary central shaft for such holder, radially extended arms fixed on the shaft and made to form a ribbon holder, and a rotary platen made to travel about the type holder.

4. A printing press comprising a cylindrical type holder, ink ribbon spools for holding a ribbon about the type on the type holder, a stop for clamping a sheet to the holder, a guide for feeding the sheet to the stop, and a platen with means for actuating the stop and guide.

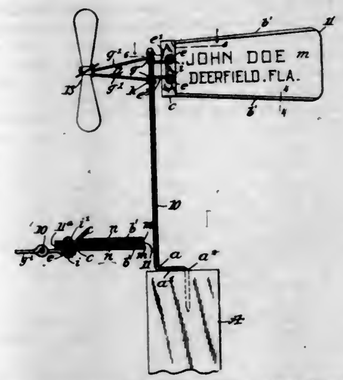
5. A printing press comprising a cylindrical type holder, ink ribbon spools for holding a ribbon about the type on the holder, a stop for clamping a sheet to the holder, a guide for feeding the sheet to the stop, and a platen with means for actuating the stop and guide, the stop and guide having comb like portions to allow of passing one another.

[Claims 6 to 14 not printed in the Gazette.]

901,187. WIND-ACTUATED ADVERTISING DEVICE. ROWAN RAY, Carrollton, Mo. Filed Oct. 12, 1907. Serial No. 397,103.

1. The combination with a supported standard, and a carrier frame loosely mounted thereon, of a holder shoe detachably mounted on an end of the carrier frame, and a sign blade projected from the shoe.

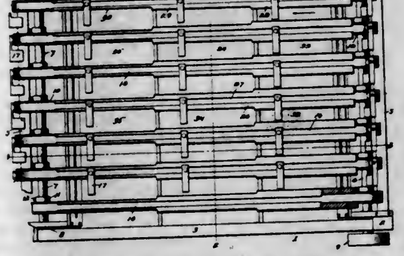
2. The combination with a supported standard, a skeleton carrier frame loosely mounted thereon, and a counterbalance on one end of said frame, of a holder shoe detachably mounted on the opposite end of the carrier frame, and a sign blade projected from the shoe.



3. The combination with a carrier frame formed of a wire rod bent into shape, of a holder shoe formed of plate metal return bent and having two spaced parallel walls, said frame having spaced wire coils that contact with one side of the holder shoe, and means for securing said coils thereon.

4. In a device of the character described, the carrier frame, comprising a wire rod bent near its center of length forming two spaced coils thereon, a frame member extending from each coil and spaced from each other, a coiled ring formed on the extended end of each of said frame members, and from said rings arm-like members extend for engagement with a counterbalance.

901,188. FRUIT-SIZER. RUFUS P. REDMOND, Lewiston, N. Y. Filed Nov. 5, 1907. Serial No. 400,776.



1. A fruit sizer having laterally adjustable grading bars forming run-ways between them, shafts at the ends of such run-ways, pulleys on such shafts adjustable thereon to aline with such grading bars, and endless carriers operated by said pulleys and provided with arms extending transversely on such run-ways, the arms of each endless carrier being disconnected from and independent of the arms of any other endless carrier.

2. A fruit sizer having a main frame provided with cross bars having slots extending longitudinally of such cross bars, grading bars supported by such cross bars, adjusting bolts connecting such grading bars to such cross bars and operating in slots of the latter, shafts beyond the ends of the grading bars, pulleys on such shafts and adjustable thereon to aline with such grading bars and endless carriers operated by such pulleys and provided with arms projecting transversely from such carriers.

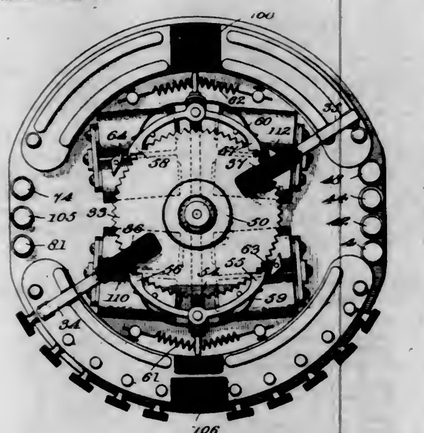
3. A fruit sizer having grading bars provided in their upper sides with guide-ways, endless carriers having their

effective leads operating in such guide-ways, the latter supporting such leads and also initially supporting the fruit, and arms extending transversely from such endless carriers.

4. In a fruit sizer having endless carriers provided with transversely disposed arms to move the fruit, grading bars having guide-ways for the effective leads of such carriers and provided with flanges overhanging the edges of such carriers, such guideways supporting such leads of the carriers and also initially supporting the fruit.

5. In a machine of the class described, grading bars having guide bars on their upper sides extending laterally therefrom and provided with steps or shoulders forming runways between such grading bars, such runways widening in one direction, said guide bars having guide-ways in their upper sides, endless carriers having their effective leads operating in such guide-ways and supported by such guide bars and arms attached to such endless carriers and extending transversely of such run-ways.

901,189. MOTOR-CONTROLLING APPARATUS. MICHAEL C. REGAN, U. S. Army. Filed Feb. 4, 1908. Serial No. 414,273.



1. In a motor controlling apparatus, the combination of a series of contacts; a resistance joined in multiple therewith; an elongated contact; a finger adapted to close circuit between said latter contact and each of said first mentioned contacts; a second and a third elongated contact; a second finger adapted to close circuit between said latter pair of contacts; a disk supporting said fingers; a pawl to actuate said disk; a magnet to actuate said pawl; a momentum stop for said pawl; a switch controller located at a distant point, and connections whereby the same is adapted to energize said magnet and to thereupon cause said fingers to close a circuit through said motor, substantially as described.

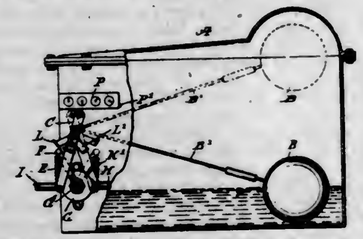
2. In a motor controlling apparatus, the combination of two series of contacts; a resistance joined in multiple with each contact in each series; an elongated contact for each series; a finger adapted to close circuit between each contact and its corresponding elongated contact; two pairs of other elongated contacts, one for each series; a second finger adapted to close circuit between the elongated contacts in each pair; insulating supports for each of said fingers; and magnetic means whereby said fingers may be made to traverse their respective contacts from a distant point, substantially as described.

3. In a motor controlling apparatus, the combination of two series of contacts; a resistance joined in multiple with each contact in each series; an elongated contact for each series; a finger adapted to close circuit between each contact and its corresponding elongated contact; two pairs of other elongated contacts, one for each series; a second finger adapted to close circuit between the elongated contacts in each pair; insulating supports for each of said fingers; a set of magnets; an armature for the same; pawls carried by the armature; a ratchet carrying said supports operated by said pawls, momentum stops for said pawls and ratchet; a controller located at a distant point; and suitable connections between said controller and said magnets, substantially as described.

4. In a motor controlling apparatus, the combination of two series of contacts; a resistance joined in multiple with each contact in each series; an elongated contact for each series; a finger adapted to close circuit between each contact and its corresponding elongated contact; two pairs of other elongated contacts, one for each series; a second finger adapted to close circuit between the elongated contacts in each pair; insulating supports for each of said fingers; two sets of magnets; a common armature lever for both sets; pawls carried by said lever; a ratchet carrying said supports and operated by said pawls; momentum stops for said pawls and ratchet; a controller provided with an arm 85; contact strips 92 and 93, carried by said arm; contacts 78, with which said strips are adapted to engage one at a time; and suitable connections between said magnets and said controller, whereby said arm 85, may be operated at will, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

901,190. STEAM-TRAP. ALFRED L. RIGGS, Ebensburg, Pa. Filed Jan. 9, 1908. Serial No. 409,930.



1. A steam trap provided with a receptacle, a valve for controlling the inflow and outflow of the water to and from the said receptacle, a float-controlled lever, and a locking device carried by the lever for temporarily locking the valve against movement until the desired amount of water has accumulated in the receptacle or the quantity of water has been discharged from the receptacle.

2. A steam trap, comprising a vessel, a valve for controlling the flow of the water to and from the said vessel, an arm on the said valve for operating the same, a float-controlled lever connected with the said arm and provided with locking arms adapted to engage the said valve arm to hold the latter locked in either of two positions.

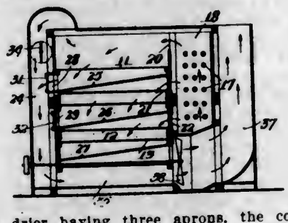
3. A steam trap, comprising a vessel, a valve for controlling the flow of the water to and from the said vessel, an arm on the said valve for operating the same provided with a stop pin, a float-controlled lever, a spring connecting the said float-controlled lever with the said valve arm, and locking arms attached to the said float-controlled lever and adapted to alternately engage the said stop pin.

4. A steam trap, comprising a vessel, and a float-controlled valve having a valve casing provided with a valve seat having a water inlet port, a water discharge port, and a connecting port connected with the interior of the vessel, and a disk valve oscillating on the said valve seat and having a water inlet port, a filling port and a cavity on its underside, the said water inlet port registering at all times with the water inlet port in the valve seat, the said filling port being adapted to register with the said port leading to the vessel and the said cavity being adapted to connect the said water discharge port with the said port leading to the vessel.

5. A steam trap, comprising a vessel, a float rising and falling with the water in the said vessel, a lever controlled by the said float, a spring connected with the said lever, and a valve having a valve casing provided with a valve seat having an inlet port for the water of condensation, a water outlet port, and a connecting port leading to the vessel, a disk valve on the said valve seat having ports for register with the said inlet port and the said vessel-connecting port, and a cavity for connecting the said vessel port with the outlet port, and an arm on the stem of the said valve connected with the said spring.

[Claims 6 and 7 not printed in the Gazette.]

901,191. DRIER. FREDERICK G. SARGENT, Westford, Mass., assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass., a Corporation of Massachusetts. Filed Mar. 16, 1908. Serial No. 421,397.



1. In a drier having three aprons, the combination with steam coils, of means for circulating air alternately around said steam coils and through the aprons, means for drawing the air from the drier, and means between the strands of the top and second aprons for directing the currents of air across and along the drier between said strands.

2. A drier comprising an apron, steam coils located adjacent thereto, an opening from the steam coils to the top of the apron located above the apron, an inclined partition extending across the space below the apron, a discharge opening above the lower side of said partition, and a passage with which said discharge opening communicates.

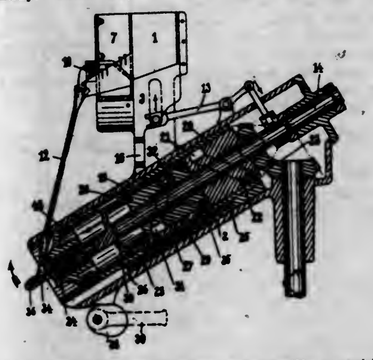
3. A drier comprising an endless apron, steam coils located adjacent thereto, an inclined partition extending across the space between the strands of the apron, a discharge opening above the lower side of said partition and below the edge of said apron opposite the steam coils, and an opening below the partition on the other side communicating with the steam coils.

4. In a drier, the combination with an endless apron, of steam coils, means for circulating air through the apron and steam coils, means for drawing the air from the drier, an inclined partition extending entirely across the space between the strands of the apron, an opening above the lower side of said partition, a passage with which said opening communicates, and means for closing said opening.

5. In a drier, the combination of a drying chamber, an apron therein, means for causing air to circulate through said drying chamber to pass through stock on the apron, an outlet opening from the top of said chamber extending downwardly therefrom and entering the chamber below the apron, a partition under the apron extending across the drying chamber, the chamber having an opening from above said partition into said downward extension, and means for controlling said opening, whereby the air may be caused to flow directly into the downward extension or upwardly through said outlet.

[Claims 6 to 9 not printed in the Gazette.]

901,192. AUTOMATIC NAILING DEVICE FOR NAILING-MACHINES. CARL SATTLER, Steglitz, near Berlin, Germany. Filed May 25, 1907. Serial No. 375,608.

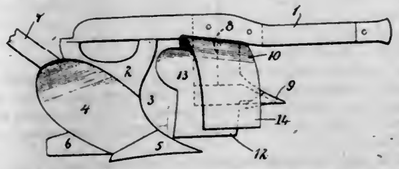


1. In an automatic nailing device for nailing machines, a shaft, a nail guide, a hammer, a cam on said shaft constructed and arranged to move the nail guide into contact with the work, a second cam longitudinally movable on said shaft and connected with the nail tube to be moved therewith, the second cam being provided with a cam groove constructed and arranged to move the hammer to drive the nail after the nail guide has come to rest, and a detent to lock the nail guide against backward movement during the driving of the nail.

2. In an automatic nailing device, a shaft, a nail guide, a cam on said shaft constructed and arranged to move the guide axially of said shaft, a member, adapted to slide loosely in said guide and to be moved by said cam, a pin connected to said member and guided in the nail guide and a spring on said pin between the nail guide and member to provide an elastic connection between said parts.

3. In an automatic nailing device, a casing, a movable tubular member in said casing, a nail guide movably mounted in said member and having an inclined surface, a slotted expansible ring mounted in said casing, against the walls thereof, a pin slidingly mounted in said tubular member and having an inclined surface adapted to engage with the inclined surface of the nail guide, and having an end adapted to enter the slot of the slotted ring, whereby, when the nail guide is pressed against the work, the ring is expanded against the walls of the casing to lock the tubular member and the nail guide, and a spring on said pin, adapted to return the pin and nail guide to their initial positions.

901,193. PLOW. THOMAS SAWATZKY, Herbert, Saskatchewan, Canada. Filed July 24, 1908. Serial No. 445,108.

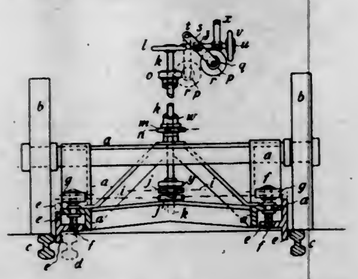


1. In combination, a plow beam having a rear plow adapted to raise the sub-soil, and a forward plow adapted

to raise the surface soil, said forward plow having a mold-board with a guide wing projecting downward and offset from the land-side of said forward plow and lying adjacent to the inner side of the furrow lying at the right of the plow, said mold-board having an upwardly and outwardly bent horn, the extremity whereof lies adjacent to the outer side of the said furrow at the right of the plow.

2. In combination, a plow beam having a rear plow adapted to raise and turn the sub-soil, and a forward plow, having a mold-board formed with a curved plate, said plate having its lower portion offset laterally from the land-side thereof and extending downward to form a fin running on the face of the furrow at the side of the plow, said mold-board having an outwardly curved horn extending downwardly and running on the outer side of the said furrow at the side of the plow.

901,194. VEHICLE FOR RAILWAYS AND ROADS. ROBERT C. SAYER, Redland, Bristol, England. Filed Aug. 1, 1907. Serial No. 386,647.



In a device of the class described, a supporting frame, traction wheels carried thereby, a pair of rails upon which the traction wheels are adapted to run, screws journaled in said frame, flanges carried by said screws for engaging the rails to hold the wheels thereon, pinions carried by said screws, rotating means, and flexible connections between the rotating means and the disks for turning said pinions to raise or lower the flanges upon the screws.

901,195. SINK-STOPPLE. WILLIAM F. SCHACHT, Goshen, Ind. Filed Dec. 13, 1907. Serial No. 406,359.

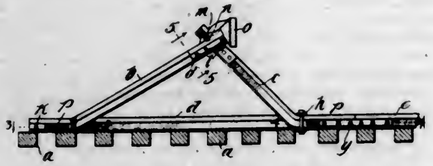


1. A non-metallic rubber stopple comprising a disk of rubber having an integral knob and stem connected centrally to one side thereof and having a piece of fabric embedded in its central portion, said fabric extending into the stem.

2. A stopple comprising a disk of rubber having an integral knob on one side and centrally thereof, and having a sheet of fabric in its central portion embedded in the rubber, said fabric extending into the knob and said disk having a marginal portion of pure rubber projecting beyond the edges of the sheet.

3. A rubber stopple composed of upper and lower sheets of rubber, an interposed disk of fabric, the sheets of rubber projecting beyond the edges of the disk to form a flexible marginal portion of pure rubber, and the fabric and rubber sheets being formed into a central knob on one side, and at the center of the stopple, the sheets and disk being vulcanized, substantially as described.

901,196. BUMPING-POST. AUGUST E. SCHULTZ, Chicago, Ill. Filed May 28, 1908. Serial No. 435,403.



1. A railway bumping post including base rails *d d*, the upwardly and rearwardly inclined rail sections *c c*, the upwardly and forwardly inclined rail sections *b b*, the rail section *c c* converging upwardly and the rail sections *b b* converging upwardly, traction rails *e e* continued from the rail sections *c c*, filler blocks *f* interposed between the webs of the rail sections *d d* and the alined webs of the rail elements *c c*, *e e*, bolts *g* passing through said filler blocks, filler blocks *i* interposed between the base portions of the rail sections *b b* and the rail sections *d d*, bolts *k* passing through said filler blocks and webs, key plates *p p* passing through the webs of the rail portions united by the bolts *g* and *k*, shelves *l* for engaging the upper ends of the rail sections *b* and carried by the rail sections *c*, a rod *m* carried by the rail section *c* and extending over the rail sections *b* to limit the upward movement of the rail sections *b*, and a bumping block *o* provided upon the upper ends of the rail sections *b*.

2. A railway bumping post including base rails *d d*, the upwardly converging and rearwardly inclined rail sections *c c*, the upwardly converging and forwardly inclined rail sections *b b*, the base rail sections *d d* being united with the bases of the rail sections *b c*, a bumping block *o* carried by the rail sections *b b*, and a key plate passing through openings in the rail sections *d b*.

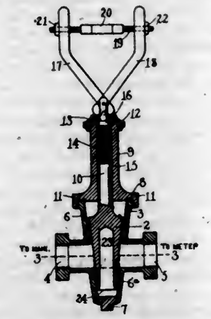
3. A railway bumping post including base rails *d d*, the upwardly converging and rearwardly inclined rail sections *c c*, the upwardly converging and forwardly inclined rail sections *b b*, the base rail sections *d d* being united with the bases of the rail sections *b c*, a bumping block *o* carried by the rail sections *b b*, means for restricting the relative motion between the rail sections *b* and the rail sections *c*, and a key plate passing through openings in the rail sections *d b*.

4. A railway bumping post including base rails *d d*, the upwardly converging and rearwardly inclined rail sections *c c*, the upwardly converging and forwardly inclined rail sections *b b*, the base rail sections *d d* being united with the bases of the rail sections *b c*, the rail sections *b* crossing the rail sections *c* at their upper ends, a bumping block *o* carried by the rail sections *b b*, and a key plate passing through openings in the rail sections *d b*.

5. A railway bumping post including base rails *d d*, the upwardly converging and rearwardly inclined rail sections *c c*, the upwardly converging and forwardly inclined rail sections *b b*, the base rail sections *d d* being united with the bases of the rail sections *b c*, the rail sections *b* crossing the rail sections *c* at their upper ends, a bumping block *o* carried by the rail sections *b b*, means for restricting the relative motion between the rail sections *b* and the rail sections *c*, and a key plate passing through openings in the rail sections *d b*.

[Claims 6 to 12 not printed in the Gazette.]

901,197. THERMAL GAS-CUT-OFF DEVICE. AUGUST C. SCHWAGER, New York, N. Y., assignor of one-half to Julius Hollander, Boston, Mass. Filed Apr. 13, 1908. Serial No. 426,632.



1. A thermal gas cut-off device, embodying a valve-casing connected with a source of supply of illuminating gas and having a ground tapered seat, a long ground tapered plug gas valve in said casing, a valve-stem projecting from said valve, guiding means in which said stem is positively guided and freely movable throughout the movement of the valve from its open to its closed position, a power device normally tending to close said valve, and means for normally holding said valve open, said means embodying a fusible element clear of said valve-stem and having substantially all of its surfaces directly exposed and also having a low melting point.

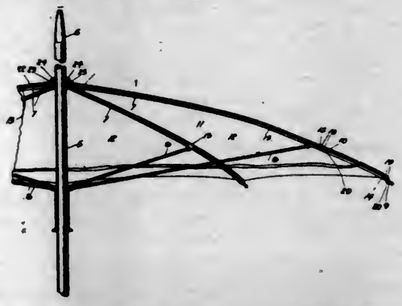
2. A thermal gas cut-off device, embodying a valve-casing connected with a source of supply of illuminating gas and having a ground tapered seat and also having a cleaning opening at the bottom of the casing, a removable plug tightly fitting said opening for permitting cleaning of the valve-casing, a ground tapered plug gas valve in said casing having at its small end an opening forming a knife-edge around said end of the valve, a power device normally tending to close said valve by movement in the direction of the valve-axis, and means for normally holding said valve open, said means embodying a fusible element having a low melting point.

3. A thermal gas cut-off device, embodying a valve-casing connected with a source of supply of illuminating gas and having a ground tapered seat, a long ground tapered plug gas valve and a valve-stem formed in one piece and one forming a continuation of the other, means for guiding said valve-stem at opposite ends thereof, a spring surrounding said stem and normally tending to close said valve and hold it to its seat, and means for normally holding said valve open, said means embodying a fusible element clear of said valve-stem and having substantially all of its surfaces directly exposed and also having a low melting point.

4. A thermal gas cut-off device, embodying a valve-casing connected with a source of supply of illuminating gas and having a ground tapered seat, a long ground tapered plug gas valve and a valve-stem formed in one piece and one forming a continuation of the other, means for guiding said valve-stem at opposite ends thereof, a spring surrounding said stem and normally tending to close said valve and hold it to its seat, means including a pair of pivoted handles connected to said valve stem for moving the valve away from its seat in opposition to the power of the spring, and connecting means joining said handles for normally holding said valve open, said means embodying a fusible element having a low melting point.

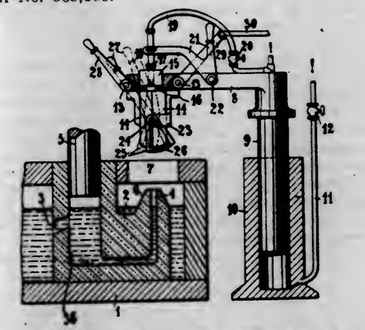
901,198. UMBRELLA-COVER. ELIZABETH SCOTT, Westmoreland, Kans. Filed Nov. 16, 1907. Serial No. 402,560.

1. The combination with a perforated ribbed umbrella frame having a staff, of a cover formed of a plurality of triangular-shaped sections having overlapping adjacent edges stitched to each other, said cover having a central opening receiving the staff, a facing circumferentially of the opening, a draw string between the facing and the cover to secure the latter on the staff, and resilient hooks engaging the perforations in the ribs and having flattened bases secured to the overlapped edges of the cover to detachably secure the same on the frame.



2. The combination with a perforated ribbed umbrella frame and a removable cover, of hooks each comprising a perforated flat portion adapted to be secured to the cover and a resilient bill bent downwardly and rearwardly on itself and adapted to engage the perforation in the rib, whereby the cover can be detachably connected to the umbrella frame.

901,199. APPARATUS FOR MANUFACTURING HOLLOW GLASS ARTICLES, SUCH AS BOTTLES. HEINRICH SEVERIN, Achern, Germany. Filed Mar. 28, 1907. Serial No. 365,168.



1. In an apparatus of the character described, a furnace, a receiver mounted therein, a table, a casing, a piston in said casing, a plurality of arms carried by said piston, molds on said arms, a corresponding number of finishing molds on said table, means for forcing the molten glass out of said receiver into the molds, and means for rotating and vertically adjusting said piston with respect to the receiver and finishing molds.

2. In an apparatus of the character described, the combination of a furnace, a receiver in said furnace, said receiver having an inlet and an outlet within said furnace, means surrounding the outlet for preventing backflow of the molten glass into the receiver, molding means adapted to be moved to and from said outlet, and means for forcing the molten glass out of the receiver into the molds.

3. In an apparatus of the character described, the combination of a furnace, a receiver in said furnace, said receiver having an inlet and an outlet, a conical wall surrounding said outlet, molding means adapted to be moved to and from said outlet, and means for forcing the molten glass out of the receiver into the molds.

4. In an apparatus of the character described, the combination with a furnace having a receiver therein, said

receiver having an inlet and an outlet within said furnace, of a plurality of vertically adjustable and rotatively mounted molds in operative relation to said receiver, said molds comprising pivotally mounted sections, means for opening and closing said sections, and a piston for forcing the molten glass out of the receiver into the molds.

5. In an apparatus of the character described, the combination of a furnace, a receiver therein, said receiver having an inlet and outlet within said furnace, a plurality of vertically adjustable and rotatively mounted molds in operative relation to said receiver, said molds comprising pivotally mounted sections, one independently of the other, means for opening and closing said sections, and means for forcing the molten glass out of the receiver into the mold.

[Claims 6 to 10 not printed in the Gazette.]

901,200. PACKING-BOX FOR PHOTOGRAPHIC PLATES. AULEY B. SHEPPARD, Pittsburg, Pa. Filed Nov. 14, 1907. Serial No. 402,110.



1. The combination of a plate package having slots through opposite walls for the passage of a slide, and a slide inserted through the slot in one wall and entered in the slot in the opposite wall for withdrawing through the latter.

2. The combination of a plate package having a slot through one wall for the entrance of a slide and a slot through the opposite wall for the withdrawal of the slide, the entrance slot being deeper than the withdrawal slot, and a slide inserted through the entrance slot and entered in the withdrawal slot, the slide having a thickened end which when the slide is in place fills the entrance slot.

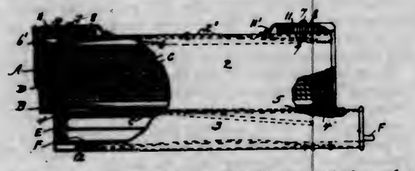
3. The combination of a plate package having an entrance slot through one wall thereof and a withdrawal slot through the opposite wall, the outer portion of the withdrawal slot corresponding in depth to the thickness of the main portion of the slide and the inner portion of said slot and the entrance slot being relatively deep, and a slide extended through the entrance slot and into the withdrawal slot, the slide having a thickened end which when the slide is in place fills the relatively deep entrance slot and which thickened end fills the inner and deeper portion of the withdrawal slot when the slide is drawn outward.

4. The combination of a plate package having an entrance slot and a withdrawal slot in opposite walls thereof, and a slide inserted through the entrance slot and withdrawn through the withdrawal slot, the slide having thickened portions which close the slots against the admission of light.

5. The combination of a plate package having a slot for the passage of a slide, and a slide crimped to increase its thickness for filling the slot.

[Claims 6 to 14 not printed in the Gazette.]

901,201. DEVICE FOR TRANSFERRING PHOTOGRAPHIC PLATES. AULEY B. SHEPPARD, Pittsburg, Pa. Filed Dec. 5, 1907. Serial No. 405,183.



1. A device of the character described consisting of a holder having two compartments communicating with each other, each compartment adapted to receive a plate-package having a face open for the passage of a plate, and means for pressing the containers toward and in light excluding communication with each other through the passage connecting the compartments.

2. A device of the character described consisting of a holder having two compartments arranged side by side and communicating through their adjacent sides, each compartment adapted to receive a plate-container having a face open for the passage of a plate, and means engaging the outer faces of the containers for holding their plate-passage faces in light excluding communication with each other through the passage connecting the compartments.

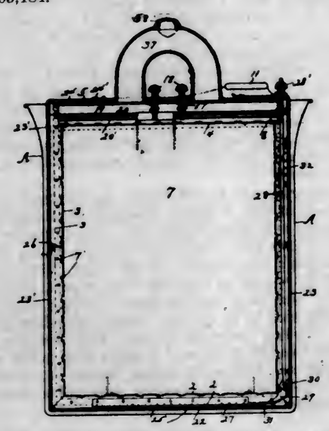
3. A device of the character described consisting of a holder having two compartments arranged side by side and communicating with each other through their adjacent sides, each compartment adapted to receive a plate-container having a face open for the passage of a plate, and inwardly pressing spring devices within the compartments at the outer faces thereof for forcing the containers toward each other and in light excluding communication through the passage connecting the compartments.

4. A device of the character described consisting of a holder having two compartments communicating with each other through a plate-passage, each compartment adapted to receive a plate-container having a face open for the passage of a plate with the open faces of the containers in light excluded communication with each other, and adjustable means at the outer face of one of the compartments for exerting variable inward pressure on the container within that compartment.

5. A device of the character described consisting of a holder having compartments in communication through a plate-passage, each compartment adapted to receive a plate container having a face open for the passage of a plate, the open faces of the containers adapted to make light excluding connection with each other, clamping means within one of the compartments exerting pressure on the container within that compartment for maintaining such light excluding connection, and adjustable mechanism for the clamping means consisting of a threaded stem and a thumb nut at the exterior of the holder.

[Claims 6 to 8 not printed in the Gazette.]

901,202. DEVELOPING-PLATE HOLDER. AULEY B. SHEPPARD, Pittsburg, Pa. Filed Dec. 5, 1907. Serial No. 405,184.



1. A plate holder consisting of a frame, and fluid channels extending along the edges of the frame with openings at different points along the channels for the passage of liquid into and out of the channels.

2. A plate holder consisting of a frame, channels extending along the side edges of the frame with openings at various points for passing liquid from the channels to the interior of the frame and vice versa, and a channel at the bottom edge of the holder with which the side channels communicate.

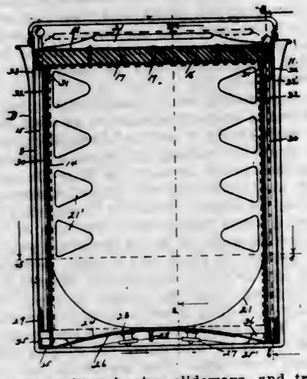
3. A plate holder consisting of a frame, channels extending along the side edges of the frame, and a channel at the bottom edge of the frame communicating with the side channels with perforated walls separating said channels from the interior of the frame.

4. A plate-holder consisting of a frame, a horizontal channel at the lower end thereof and vertical channels at opposite edges thereof open to the horizontal channel with communication between the channels and the plate-holding cavity, and means for admitting fluid to said channels.

5. A plate-holder consisting of a frame having a channel extending along the lower edge thereof, the channel communicating with the plate-confining cavity and having openings through which fluid may enter, a closure for the inlet openings, and operating means for the last mentioned closure extending to the upper portion of the holder.

[Claims 6 to 21 not printed in the Gazette.]

901,203. DEVELOPING-PACKAGE FOR PHOTOGRAPHIC PLATES. AULEY B. SHEPPARD, Pittsburg, Pa. Filed Dec. 28, 1907. Serial No. 408,347.



1. A plate package having slideways, and transversely curved plate-separating slides.

2. A plate package having slideways also fluid admitting passages, closures for the passages, and transversely curved slides.

3. A plate package having slideways and fluid admitting passages, closures for the passages, and slides formed to place the slide-defined plate spaces in direct communication.

4. A plate package having slideways and fluid admitting passages, closures for the passages, and slides having fluid passages through which fluid may pass from one plate space to another.

5. A plate package having slideways and fluid admitting passages, closures for the passages, and slides having narrowed lower ends to place adjacent plate spaces in communication.

[Claims 6 to 23 not printed in the Gazette.]

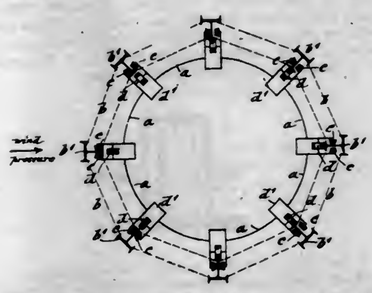
901,204. SOAP COMPOSITION. JOSÉ SIERRA V., San Francisco, Cal. Filed Mar. 11, 1908. Serial No. 420,383.

1. A soap composition consisting of soap, glycerin, fine table salt, caustic soda and the pulp of the alligator pear.

2. A soap composition consisting of olive oil fifty per cent. and caustic soda twenty per cent. mixed and heated to form soap and glycerin with an excess of caustic soda, fine table salt five per cent., and the pulp of the alligator pear twenty-five per cent.

3. A soap composition consisting of the combination with soap of the pulp of the alligator pear.

901,205. GUIDE-FRAME FOR GAS-HOLDERS. HENRY J. STOFFELS, Norwood, Ohio. Filed Jan. 15, 1908. Serial No. 410,905.



1. The combination, with a gas-holder and the guide-frame for the same composed of a plurality of upright guide-columns, of radial rollers moving over the inner face-sides of said guide-columns, and radial rollers moving over the outside of the guide-columns and acting oppositely to said first-named radial rollers.

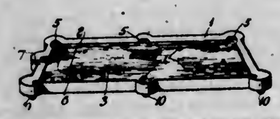
2. The combination, with a gas-holder and the guide-frame for the same composed of a plurality of guide-columns, of radial rollers moving over the inner face-sides of the columns, tangential rollers moving over the outer rear-ends of the columns, and radial rollers moving over the outsides of the columns and acting oppositely to said first-named radial rollers.

3. The combination, with a gas-holder and a guide-column therefor having inner and outer guide-surfaces, of a roller on the gas-holder traveling on the inner guide-surface, and means on the gas-holder acting oppositely to said roller and coöperating with the outer guide-surface.

4. The combination, with a gas-holder and a guide-column therefor comprising an I-beam, of a radial roller mounted on the gas-holder and traveling on the inner face of one flange of said I-beam, and radial rollers on said gas-holder having their axes parallel to that of said first-named roller and traveling on the outer face of said flange at opposite sides of the web.

5. The combination, with a gas-holder and a guide-column therefor composed of inner and outer I-beams arranged at right angles to each other, of a radial roller on the gas-holder traveling on one of the flanges of the inner I-beam, a pair of radial rollers on the gas-holder traveling on the opposite face of said flange at opposite sides of the web, and tangential rollers on the gas-holder traveling on the flanges of the outer I-beam.

901,206. GAME APPARATUS. ARNOLD A. STOREY, Leicester, England. Filed Nov. 4, 1907. Serial No. 400,679.

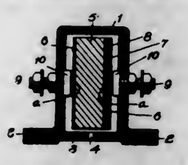


A game apparatus consisting of a flat angular hermetically sealed transparent vessel nearly filled with liquid so as to leave an air bubble therein, said vessel having fixed bosses located on the interior bottom, and pockets on its inner sides and corners whereby when the vessel is tilted the bubble is caused to contact with or pass between the bosses and enter one of the pockets.

901,207. LIGHTNING-ARRESTER. JACOB B. STRUBLE, Wilkinsburg, Pa. Filed Dec. 10, 1906. Serial No. 347,092.

1. A lightning arrester having in combination means for forming a spark gap and means for damping an arc,

provided with resilient contact portions, a case formed of insulating material and constructed to inclose the arrester elements and provided with an opening for the insertion of the arrester elements, terminals extending through the walls of the case and having portions adapted to bear on the contact portions of the arrester, and constructed to hold the arrester in position in the case and a lid or cover for the opening of the case.



2. A lightning arrester having in combination a case formed of insulating material, separable arrester elements arranged in the case, terminals one of which is adjustable extending through the walls of the case and adapted to electrically contact with the arrester elements and hold the latter in operative relation with each other.

901,208. SLIDING WINDOW. JOHANNES STUMPF, Balz, near Vietz, Germany. Filed Feb. 25, 1907. Serial No. 359,184.



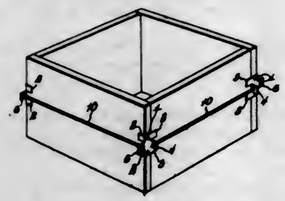
1. The combination with a sash frame provided with grooves 5 and 6, converging into one near their lower ends, upper and lower sashes, weights for balancing the sashes, studs located only near the lower ends of each sash, said studs operating in the grooves, beads against which the outer sides of the two sashes abut when in closed position, beads parallel with the upper portions of grooves 5 and 6, and terminating above the lower sash to form guides for said lower sash when raised from normal position, a movable device below the guiding beads and adjacent the upper end of the lower sash for directing the lower sash when tilted in the guides, said device when withdrawn permitting of either the upper or lower sash being turned horizontally on the studs in the sash frame, and means for preventing the weights raising the sashes when their upper ends are tilted past the movable device.

2. In combination, a window frame, inwardly extending beads on the outside of the frame, inwardly extending beads on the inside of the frame, said latter beads extending downwardly to a point substantially above the upper rail of the lower sash, beads on the upper portions of the frame intermediate the outer and inner beads to provide sash guides, the sides of the frame in the guides having grooves 5 and 6, grooves 6 communicating near the bottom with grooves 5, the beads on the inside of the frame and the intermediate beads being parallel with the upper portions of the grooves 5 and 6, upper and lower sashes, weights for balancing the sashes, the upper sash adapted to fit in the guides adjacent the outside beads and the intermediate beads when in closed position, studs near the lower ends of the sashes and operating in the grooves 5 and 6, the studs and the guides serving to direct the sashes in the proper path of movement, an extension on the lower sash for holding the upper sash against the outside bead, a locking device for holding the lower sash in closed position, a sliding bolt located below the inside and intermediate beads to guide the upper end of the lower sash when tilted in the guides formed between the intermediate beads and the inside beads to direct the studs on said sash in grooves 6, when raising it, said bolt when withdrawn also permitting of horizontal turning of either sash in the frame, and means preventing the weights raising either sash when its upper end is tilted past the withdrawn bolt.

3. The combination with a sash frame provided with grooves 5 and 6, converging into one near their lower ends, an upper sash, a lower sash, weights to balance the sashes, studs near the lower ends of the upper and lower sashes adapted to slide in said grooves, outer and intermediate beads on the frame above the lower sash for forming a guide for the upper sash, said latter beads being parallel with the upper portions of the grooves 5 and 6, the intermediate beads terminating above the upper end of the lower sash, inner beads forming with the intermediate beads guides for the lower sash when raised in grooves 6, the inner beads extending from the top of the frame to a point above the upper end of the lower sash, a sliding bolt to direct the lower sash when tilted in the latter guides, said bolt being located so that when withdrawn the lower sash may be turned outwardly on its studs, and means for preventing the weights raising the sashes when their upper ends are tilted past the withdrawn sliding bolt.

4. The combination with a sash frame provided with grooves 5 and 6, converging into one at their lower ends, an upper sash having a seat and comprising two hinged members, means for locking the two members together, a lower sash having an extension to fit in the seat of the upper sash and comprising two hinged members, weights for balancing the sashes, means for locking said two members together, studs located near the ends of the upper and lower sashes which fit in the grooves, a guide parallel with the grooves 6 above the normal position of the lower sash and in which said sash is adapted to slide, a bolt in alinement with the guides to direct the lower sash thereto when it is tilted, said bolt when withdrawn permitting of the sashes being turned horizontally in the frame, and means for preventing the weights raising the sashes when their upper ends are tilted past the withdrawn bolt.

901,209. FASTENING DEVICE FOR MOLDS. JOHN H. SULLIVAN, Grand Rapids, Mich. Filed Oct. 28, 1907. Serial No. 399,498.



1. A fastening member of the class described, comprising a body portion and bearing flanges, a pair of said flanges being arranged in a plane at right angles to the plane of another pair, and a pair of auxiliary flanges projecting from opposite sides of said body portion in planes at right angles to each other.

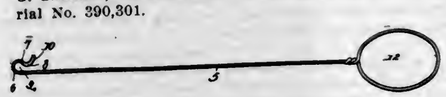
2. A fastening member of the type described comprising a body portion having bearing flanges extending from opposite sides thereof, a pair of said flanges extending from one side of said body at opposite ends thereof and having a flange projecting between them in a plane at right angles thereto, and with a flange extending from the opposite side of said body intermediately of its ends and in the same plane therewith.

3. A fastening member of the class described comprising a body portion having bearing flanges extending from opposite sides thereof, a pair of said flanges extending from one side of said body at opposite ends thereof in a plane at right angles to the body portion and having an intermediate flange projecting between them, and a pair of said flanges arranged at opposite ends on the other side of said body and having an intermediate flange projecting between them and at right angles to the other intermediate flange.

4. A fastening member of the class described comprising a body portion having a plurality of bearing flanges extending from opposite sides thereof, a pair of said flanges extending from one side of said body at opposite ends thereof in a plane at right angles to the body portion and having an intermediate flange projecting between them in the same plane as said body portion, a pair of flanges extending from the opposite side of said body portion at its opposite ends and in the same plane as said body portion, and an intermediate flange projecting between said last mentioned pair of flanges in a plane at right angles thereto.

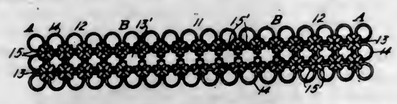
5. A fastening member of the class described comprising a body portion having a plurality of bearing flanges extending from opposite sides thereof, a pair of said flanges extending from one side of said body at opposite ends thereof in a plane at right angles to the body portion and having an intermediate flange projecting between them in the same plane as said body portion, a pair of flanges extending from the opposite side of said body portion at its opposite ends and in the same plane as said body portion, and an intermediate flange projecting between said last mentioned pair of flanges in a plane at right angles thereto, and in an opposite direction to said pair of flanges on the opposite side of the body portion and in a plane parallel therewith.

901,210. ANIMAL AND FOWL CATCHER. WILLIAM G. TARRANT, Versailles, Ill. Filed Aug. 27, 1907. Serial No. 390,301.



As an article of manufacture, a catching device comprising a metallic rod bent upon itself at one end to form a leg engaging hook, said rod having its opposite end portion bent to form an elongated longitudinally extending loop arranged for engagement at times with the neck of an animal and at times to receive therethrough the arm of the user of the device to facilitate the manipulation thereof.

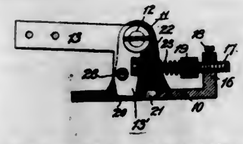
901,211. PNEUMATIC TIRE. FREDERICK W. TAYLOR, Ashland, Va. Filed Sept. 14, 1907. Serial No. 392,873.



1. A protective fabric for pneumatic tires, comprising a plurality of plates each provided with a hook, a ring interlocking with said hooks, and another plate provided with a plurality of hooks interlocking with said ring between said first-named hooks.

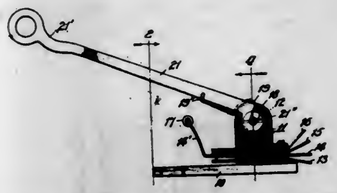
2. A protective fabric for pneumatic tires, comprising a plurality of plates, a ring pivotally connected to said plates, and another plate extending across the space surrounded by said ring and pivotally connected to said ring between the points of connection of said first plates with said ring.

901,212. TELEPHONE HOOK-SWITCH. HENRY TIDEMAN, Menominee, Mich. Filed July 6, 1907. Serial No. 382,426.



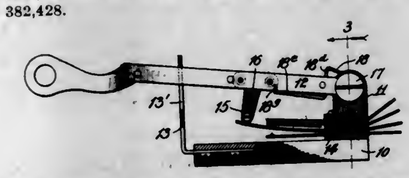
In a telephone hook switch, a base, a lug upon said base, a pivoted hook lever upon said lug, an adjusting screw threaded into said base, a compression spring between said adjusting screw and said lever, and locking means for said adjusting screw, substantially as described.

901,213. TELEPHONE HOOK-SWITCH. HENRY TIDEMAN, Menominee, Mich. Filed July 6, 1907. Serial No. 382,427.



In a telephone hook switch, a base having a vertical lug, a pivot screw in said lug, a lock nut for said pivot screw having a section of reduced diameter in that portion of the lock nut adjacent to said lug, a hook lever, and a hook lever tension spring, said tension spring being supported and retained by and upon said lock nut in its portion of reduced diameter, substantially as described.

901,214. TELEPHONE HOOK-SWITCH. HENRY TIDEMAN, Menominee, Mich. Filed July 6, 1907. Serial No. 382,428.



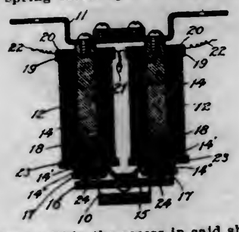
In a telephone hook switch, a base part, a switch group mounted upon said base part, a tension spring mounted upon said base part by a shouldered screw, said shouldered screw being threaded into a lug upon said base part and projecting through said lug, a shouldered threaded lock nut for said screw, and a hook lever adapted to be held by said lock nut and adapted to operate said switch group, said tension spring being adapted to engage and actuate said hook lever, substantially as described.

901,215. TELEPHONE-RINGER. HENRY TIDEMAN, Menominee, Mich. Filed July 6, 1907. Serial No. 382,430.

1. In a telephone ringer, a core drilled and threaded internally at its armature end, a core head for said core having a shank screw-threaded to engage the internal threads of said core, the shank of said core head being axially drilled and longitudinally slotted, and means located within said shank for separating said shank whereby an increased friction of the screw threads of said shank with the internal screw threads of said core may be attained, substantially as described.

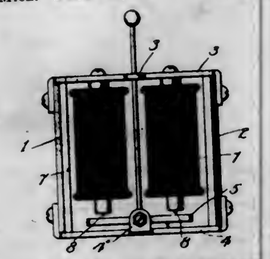
2. In a telephone ringer, a core drilled and threaded internally at its armature end, a core head for said core

having a shank screw threaded to engage the internal threads of said core, the shank of said core head being axially drilled and longitudinally slotted, and a cylindrical ping of spring metal split through a portion of its



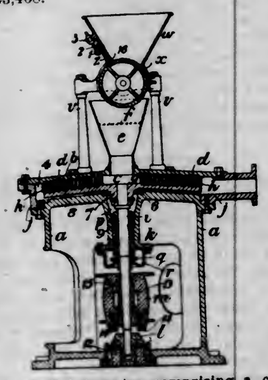
length and placed within the recess in said shank, whereby said shank may be spread under elastic tension to engage frictionally the threaded walls of said core end, substantially as described.

901,216. TELEPHONE-RINGER. HENRY TIDEMAN, Menominee, Mich. Filed July 6, 1907. Serial No. 382,431.



In a telephone ringer, a frame comprising two parallel permanent magnets joined by two magnetic yokes, the cores and helices of the ringer being mounted within said frame and carried by one of said magnetic yokes, and the armature being pivoted upon the other of said magnetic yokes, said magnetic yokes being adjustable with relation to each other, said yokes being homologous in body and end portions and each having ears upon the median portion, the ears of one yoke being adapted to receive mounting screws for attaching the ringer, and the ears of the other yoke being adapted to support the armature of the ringer, substantially as described.

901,217. CENTRIFUGAL DISINTEGRATOR. JEAN B. TOUYA, Jr., Tarbes, France. Filed Sept. 6, 1906. Serial No. 333,468.



A centrifugal disintegrator comprising a convex disk, the inclination of which is considerably less than thirty degrees, means for rotating said disk, an upper stationary disk having a concavity conforming to the convexity of the first mentioned disk so that the faces of said disks are parallel, means for supporting the stationary disk a suitable distance from the convex disk, means for feeding material into the inclined space between the disks, concentric rows of upstanding pins on the convex disk, and concentric rows of depending pins on the concave disk alternating with those on the convex disk, all the pins of the same length and the pins of the rows being closer together near the periphery of the disks than the pins of the rows near the center, whereby the fineness of pulverization of the material is increased from the center towards the periphery.

901,218. PROCESS OF PRODUCING PICTURES AND PHOTOGRAPHIC-PRINTING PLATES. WILHELM TRIEPEL, Berlin, Germany. Filed Sept. 3, 1907. Serial No. 391,266.

1. A process of producing pictures, photographic printing plates and the like from colloidal films, consisting in impregnating a colloidal pigmented film with a solution containing haloid salts, ferricyanids, bichromates and in addition substances which act catalytically, in pressing a metallic picture formed by direct exposure which is to be pigmented on to the impregnated colloidal film, in separating the picture and the film and in washing them.

2. A process of producing pictures, photographic printing plates and the like from colloidal films, consisting in impregnating a colloidal pigmented film with a solution containing alkali salts of such acids the silver salts of which are insoluble in acids, ferricyanids, bichromates and in addition substances which act catalytically, in pressing a metallic picture formed by development which is to be pigmented on to the impregnated colloidal film, in separating the picture and the film and in washing them.

3. A process of producing pictures, photographic printing plates and the like from colloidal films, consisting in impregnating a colloidal pigmented film with a solution containing haloid salts, ferricyanids, bichromates and in addition substances which act catalytically, in softening in a liquid which contains glycerin a metallic picture which is to be pigmented, in pressing the softened picture on to the impregnated colloidal film, in separating the picture and the film and in washing them.

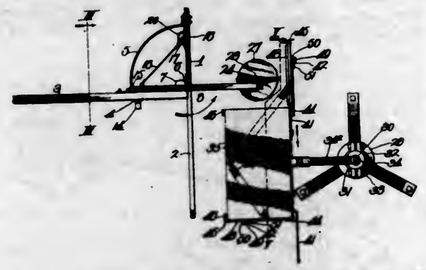
4. A process of producing pictures, photographic printing plates and the like from colloidal films in the case of unfixed silver copies still containing soluble silver salts, consisting in impregnating a colloidal pigmented film with a solution containing haloid salts, ferricyanids, bichromates and in addition substances which act catalytically, in softening in a liquid which contains a salt which precipitates silver a metallic picture which is to be pigmented, in pressing the softened picture on to the impregnated colloidal film, in separating the picture and the film and in washing them.

5. A process of producing pictures, photographic printing plates and the like from colloidal films, consisting in impregnating a colloidal pigmented film with a solution containing haloid salts, ferricyanids, bichromates and in addition substances which act catalytically, in soaking in a liquid which contains glycerin and alcohol a metallic picture which is to be pigmented, in pressing the soaked picture on to the impregnated colloidal film, in separating the picture and the film and in washing them.

[Claims 6 to 8 not printed in the Gazette.]

901,219. APPARATUS FOR TRANSFERRING MAIL-BAGS FROM A MOVING TRAIN TO A STATION. NEWEL F. VALENTINE, Kansas City, Mo. Filed Nov. 18, 1907. Serial No. 402,622.

1. In an apparatus of the character described, a car having a door-opening and provided with a hinged frame adapted to swing through said door-opening, a rigid bar, a curved track connecting the bar with the car-wall pierced by the door-opening, a roller carried by the swing frame and engaging said track, and a catch-mechanism securing the hinged frame with its outer end protruding through the door-opening.



2. In an apparatus of the character described, a car having a door-opening and provided with a hinged frame adapted to swing through said door-opening, a rigid bar, a curved track connecting the bar with the car-wall pierced by the door-opening, a roller carried by the swing frame and engaging said track, a catch-mechanism securing the hinged frame with its outer end protruding through the door-opening, a weight guided to move vertically, a swiveled sheave above the weight, and a cable connecting the swing-frame and weight and engaging said sheave.

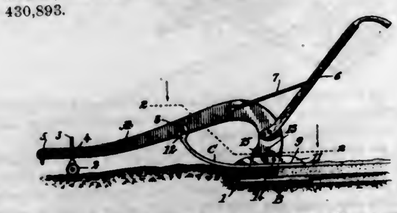
3. In an apparatus of the character described, a car having a door-opening and provided with a hinged frame adapted to swing through said door-opening, a rigid bar, a curved track connecting the bar with the car-wall pierced by the door-opening, a roller carried by the swing frame and engaging said track, a catch-mechanism securing the hinged frame with its outer end protruding through the door-opening, a vertical casing secured within the car, a slidable weight therein, a swiveled sheave above the casing, a cable connecting the frame and weight and engaging said sheave, and a resilient cushion interposed between the weight and the top of the casing.

4. In an apparatus of the character described, a box arranged substantially horizontally, a movable plate therein, yielding means for pressing the plate toward the open end of the box, a door to close the said open end, and means controlled by the movable plate, for locking the door open and for freeing it.

5. In an apparatus of the character described, a box arranged substantially horizontally, a movable plate therein, yielding means for pressing the plate toward the open end of the box, a door to close the said open end, means controlled by the movable plate for locking the door open and for freeing it, and yielding means to close the door as it is freed.

[Claims 6 to 9 not printed in the Gazette.]

901,220. PLOW. SAMUEL F. VOSE and CARREL R. HARRYMAN, Shawnee, Okla. Filed May 5, 1908. Serial No. 430,893.

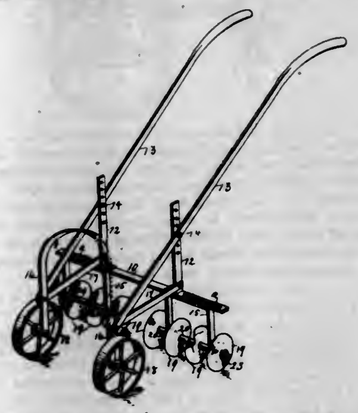


1. In an irrigating plow, or a plow for similar purposes, a beam, a share carried by said beam adapted as a subsoil share, producing in operation a conduit in the ground, and a shield adapted for engagement with the surface of the ground, and said shield having an upwardly curved forward end pivoted to the beam and provided with a slotted rear end to receive the heel of the beam and to which it is secured.

2. An irrigating plow, comprising a beam, a draft device therefor, means for supporting the forward portion of the beam, a share in the form of a cylinder secured to the heel portion of the beam, adapted to travel wholly below the surface of the ground, which share is provided with a forward cutting surface, and a shield adjustably pivoted to the said beam and adjustably secured to the heel thereof, which shield is adapted to engage with the surface of the ground over the said share, and is likewise adapted to straddle the said beam.

3. A plow shield, comprising a body having an upwardly curved and forked forward end, the members of which are apertured and provided with a longitudinal slot at its rear end and with upwardly projecting and apertured flanges at the sides of the slot.

901,221. ADJUSTABLE HAND DISK CULTIVATOR. JOHN W. WATSON, Newton, Iowa. Filed July 5, 1907. Serial No. 382,399.



1. In a disk cultivator, the combination of a cross bar having longitudinal slots in its end portions, parallel standards at the inner ends of the slots and each having a plurality of bolt holes, an arched axle connected with the standards, handles adjustably connected with the standards and pivotally connected with the arched axle, as set forth.

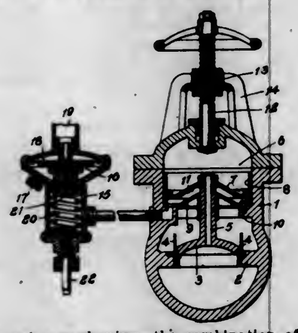
2. In a disk cultivator, the combination of a cross bar having longitudinal slots in its end portions, parallel standards at the inner ends of the slots each having a plurality of bolt holes, an arched axle connected with the standards, handles adjustably connected with the standards and pivotally connected with the arched axle, adjustable disk carriers, axles in the disk carriers and disks on the axles, to operate as set forth.

3. A disk cultivator comprising a frame composed of a cross bar having slots in its end portions and standards having coinciding bolt holes, an arched axle carrying wheels, bars connecting the arched axle with the standards on the cross bar, handles connected with the standards and the arched axle, disk carriers connected with slotted ends of the cross bar, axles in the disk carriers and disks rotatably mounted on said axles in the disk carriers, arranged and combined to operate as set forth for the purposes stated.

901,222. VALVE. EDWARD V. ANDERSON, Monessen, Pa. Filed Dec. 23, 1907. Serial No. 407,828.

1. In a valve mechanism, the combination of a casing having a passage therethrough, a valve controlling said passage, a cylinder, a piston arranged in said cylinder, a port or passage through the piston for conducting fluid under pressure to that side of the piston where it will operate to shift the valve to closed position.

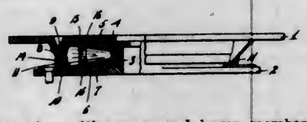
2. In a valve mechanism, the combination of a casing having a passage therethrough, a valve controlling said passage, a cylinder, a piston arranged in said cylinder, a port or passage for conducting fluid under pressure to that side of the piston where it will operate to shift the valve to closed position, means for permitting the flow of fluid to the opposite side of the piston, and a normally closed escape from the cylinder on the side of the piston opposite that on which fluid pressure is introduced.



3. In a valve mechanism, the combination of a casing having a passage therethrough, a valve seating against pressure and controlling the flow of fluid through such passage, a cylinder, a piston connected to the valve, a port or passage for conducting fluid to the side of the piston where it will operate to close the valve, a port for the escape of fluid to the opposite side of the piston, an outlet on such side of the piston and a valve normally closed by fluid pressure controlling such outlet.

4. In a valve mechanism, the combination of a casing having a diaphragm with an opening therethrough, a cylinder having its axis in line with the center of the opening in the diaphragm a valve seating against pressure to close such opening and provided with a hollow stem for the passage of fluid into the cylinder, a piston connected to the stem, a port for the flow of fluid to the under side of the piston, an outlet port from the lower end of the cylinder, and a valve normally closed by fluid pressure controlling such outlet.

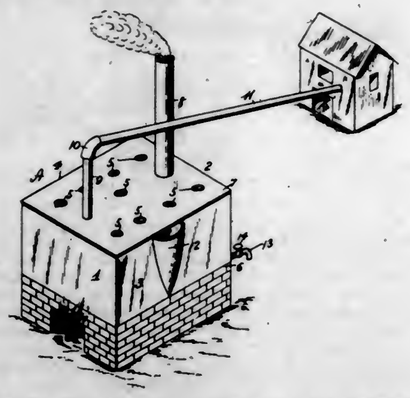
901,223. ANTIFRICTION CENTER BEARING FOR CARS. JOHN C. BARBER, Chicago, Ill. Filed June 11, 1906. Serial No. 321,154.



The combination with upper and lower members of a center bearing, said members having telescoping hub flanges and concentric outer roller retaining flanges, of conical rollers interposed between the conical bearing surfaces of said two members and interlocked with one of said bearing members but free to rotate and travel in respect to both of said bearing members, substantially as described.

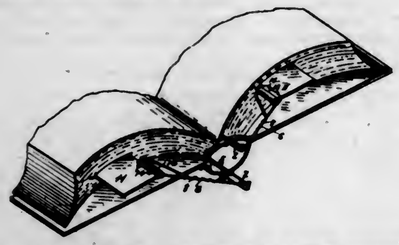
901,224. DEVICE FOR STEAMING TOBACCO. JOHN A. BELL, Bagleys Mills, Va. Filed Apr. 30, 1907. Serial No. 371,112.

1. A box A, having perforations through its top and bottom walls; tubes 5, passing vertically through the smaller perforations, and secured water tight therein, their lower ends extending a little below the bottom wall 6; a smoke flue 8, passing through the larger perforations, its lower end extending a little below the bottom wall, secured water-tight therein, its upper end extending above the top wall, and secured water-tight therein; a steam-pipe 9, secured water-tight to an opening in the upper wall of said box; a coupling 10, secured on the upper end of said pipe; a pipe 11, having one end secured in said coupling and the other running off to a drying-room, and a water-receiver 12, secured to said box, through which said box is filled with water, substantially as shown and described and for the purposes set forth.



2. A tobacco steamer, consisting of a box, preferably made of sheet metal, having in its upper and lower walls perforations; tubes, passing vertically through said box and said perforations, and secured water-tight therein; a smoke flue passing vertically through said box and the two larger perforations, and secured water-tight therein, the lower ends of said tubes and flue extending below the lower wall of said box, thus preventing the heat arising from the furnace from passing too rapidly through said flue and tubes; a steam-pipe secured water-tight over a perforation through the top wall of said box; a coupling, secured on the top of said steam-pipe; a pipe, one end secured to said coupling and the other passing off to a drying-room, and a water-receiver secured to said box, substantially as shown and described and for the purposes set forth.

901,225. BOOK-MARK. WILLIAM F. BROCKETT, Anthony, and NORMAN H. BEEBE, Wichita, Kans. Filed Mar. 16, 1907. Serial No. 362,761.



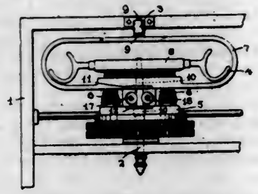
1. As an article of manufacture, a book mark comprising a spring clasp, a radius rod hinged directly to the clasp and a card hinged to the outer end of the radius rod.

2. As an article of manufacture, a book mark, comprising a clasp bent at one end into oblong or rectangular form, then coiled or wound upon itself and terminating in jaws, a radius rod composed of wire, a portion of which is coiled upon itself and the ends of which are pivoted to the oblong or rectangular portion of the clasp, and a holder comprising a metal piece folded or doubled to loosely embrace the outer end of the radius rod and a reference slip or card held by the holder.

3. A device as described, comprising a clasp, a holder for the purpose stated, and connecting means between said clasp and said holder, consisting of a radius-rod having a loop at one end, with a portion bent at a right angle and then returned and twisted upon itself and deflected therefrom diagonally and terminated at a point opposed to the outer end of said radius-rod, for effecting pivotal connection with said clasp, and holder.

4. A device of the character described, comprising a holder for the purpose stated having opposed plate portions terminating in a tubular formation, one of said plate-portions provided oppositely to said tubular formation with downward extended lugs abutting the corresponding edge of the other plate-portion means for attachment to the back of a book and connecting means between said holder and said book back attaching means.

901,226. FLIER FOR SPINNING AND TWISTING MACHINES. GEORGE L. BROWNELL, Worcester, Mass. Filed Apr. 6, 1905. Serial No. 254,081.



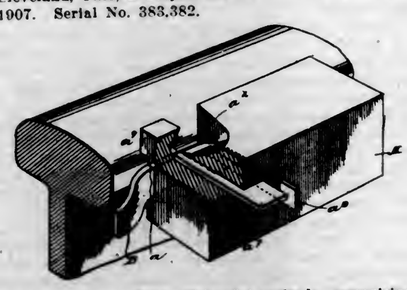
1. In a machine of the class described, the combination with a rotating flier spindle provided with an integral cross bar, of a flier frame provided with a recess to receive said cross bar, and means for attaching said frame and cross bar.

2. In a machine of the class described, the combination of a rotating flier spindle having a pair of cross bars integral with said spindle, connecting plates between said cross bars, a flier frame interlocked with one of said cross bars, and a bar interlocked with the other of said cross bars.

3. The combination of a rotating flier spindle having a pair of parallel cross bars connected by plates, said cross bars and plates being integral with said spindle, a flier frame attached to one of said cross bars and a bar attached to the other of said cross bars, a pair of stretching drums journaled between said bar and frame, and a winding mechanism inclosed in said frame.

4. In a machine of the class described, the combination of a rotating flier spindle provided with a cross bar integral with said spindle, a flier frame provided with a member parallel with said cross bar, and means for interlocking said cross bar and said parallel member.

901,227. MOLD FOR CASTING RAIL-BOND TERMINALS. WILLIAM B. CLEVELAND, Cleveland, Ohio, assignor to The Electric Railway Improvement Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 12, 1907. Serial No. 383,382.



1. Means for casting rail-bond terminals, comprising a mold part provided with a recess for receiving the end of the conductor forming the bond and a second recess adjacent to such first recess for forming the bond terminal; and means movable in said mold part adapted to trim such terminal.

2. Means for casting rail-bond terminals, comprising a mold part provided with a recess for receiving the end of the conductor forming the bond and a second recess adjacent to such first recess for forming the bond terminal; and movable means adapted to intersect such second recess to trim such terminal.

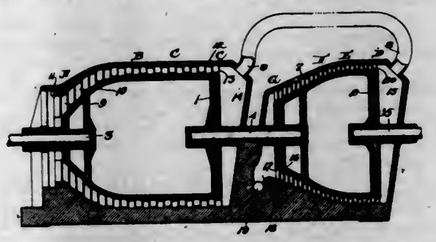
3. Means for casting rail-bond terminals, comprising a mold part provided with a recess for receiving the end of the conductor forming the bond and a second recess adjacent thereto for forming the bond terminal, said mold part being further provided with a sprue communicating with such last named recess; and a member movable in said mold part and adapted to be interposed between such sprue and recess.

4. Means for casting rail-bond terminals, comprising a mold part provided with a recess for receiving the end of the conductor forming the bond and a second recess adjacent thereto for forming the bond terminal, said mold part being further provided with ingress and egress sprues communicating with such last named recess; and movable members mounted in said mold part and adapted to be interposed between such recess and the respective sprues.

5. Means for casting rail-bond terminals, comprising a mold part provided with a recess for receiving the end of the conductor forming the bond and a second recess adjacent thereto for forming the bond terminal, said mold part being further provided with ingress and egress sprues communicating with such last named recess; a reservoir connected with the egress sprue of said mold part; and a member movable in said mold part and adapted to be interposed in such egress sprue to sever the metal in such recess from that in said reservoir.

[Claims 6 to 11 not printed in the Gazette.]

901,228. TURBO-PUMP. GUY B. COLLIER, Kinderhook, N. Y. Filed Jan. 28, 1907. Serial No. 354,363.



1. A turbo-pump provided at its inlet end with radially extending rotor and stator blades arranged in successive series axially, the rotor blades being so arranged that the axial clear cross sectional area between the blades in each stage varies and the outlet angles decrease in successive stages to progressively increase the velocity and pressure of the entering fluid in the successive stages, substantially as described.

2. A turbo-pump provided at its inlet end with radially extending stator blades and intermediate radially extending rotor blades arranged in successive series axially and at progressively increasing radial distances from the axis of the rotor, and with non-increasing inlet and decreasing outlet rotor blade angles in its successive stages, substantially as described.

3. A turbo pump comprising a rotor having at its inlet end a periphery of increasing diameter, radial blades on the rotor arranged in successive series axially and with non-increasing inlet and decreasing outlet blade angles in successive series, and a stator provided with intermediate series of blades, substantially as described.

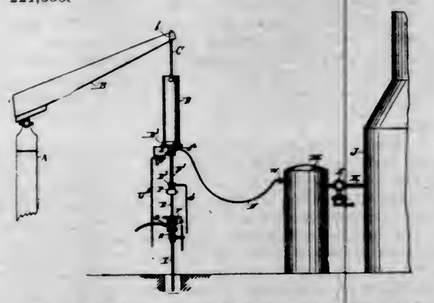
4. A turbo-pump provided at its inlet end with series of rotor blades having increasing velocities in successive

stages, the blades in each stage being so arranged that the passages between adjacent blades decrease in axial clear across sectional area from entrance to exit, and a stator provided with intermediate blades, the blades in each stage being so arranged that the passage between adjacent blades is substantially uniform in cross sectional area at right angles to the flow, substantially as described.

5. A turbo-pump provided at its inlet end with series of rotor blades having increasing velocities in the successive stages, and series of rotor blades having uniform velocity in successive stages, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

901,229. WELL-DRILLING APPARATUS. JOHN CONLAN, Newark, N. J. Filed Aug. 19, 1904. Serial No. 221,336.



1. In a well rig the combination of a walking beam, a hanger suspended from said beam, a feed cylinder suspended from the hanger, a buffer at each end of the cylinder, a piston in the feed cylinder, drilling tools supported by the piston, a reservoir for fluid of requisite pressure, piping connecting the reservoir with the feed cylinder below the piston.

2. In a well rig the combination of a walking beam, a hanger suspended from the beam, a feed cylinder suspended from the hanger, a spring buffer at each end of the feed cylinder a piston in the feed cylinder, a drill cable and drilling tools supported by the piston, a boiler, a reservoir, piping connecting the boiler and reservoir, a pressure regulating valve in the piping, and piping leading from the reservoir to the feed cylinder under the piston thereof.

3. In a well rig the combination of a cylinder, a piston suspended therein by a fluid, a hollow piston rod extending from the piston, a temper screw adjustably clamped within the piston rod, clamps suspended from the temper screw, a drilling cable held by the clamps, and drilling tools held by the cable.

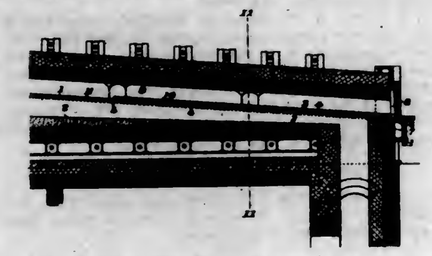
4. In a well rig the combination of a cylinder, a piston suspended therein by steam pressure, a hollow piston rod extending from the piston, a temper screw adjustably clamped within the piston rod, rope clamps suspended from the temper screw, a drilling cable held by the clamps, and drilling tools held by the cable.

901,230. CONTINUOUS HEATING-FURNACE. DAVID DAVIS, Cleveland, Ohio, assignor to American Steel & Wire Company, Chicago, Ill., a Corporation of New Jersey. Filed Mar. 7, 1908. Serial No. 419,710.

1. A heating furnace having longitudinally extending skid pipes, and shields therefor, consisting of inverted V-shaped metal pieces placed over said pipes, said shields extending less than the full length of the pipes; substantially as described.

2. A heating furnace, having longitudinally extending skid pipes, an inverted V-shaped metal shield placed over the said pipes, and having lateral supporting lugs; substantially as described.

3. A continuous heating furnace, skid pipes having shields thereover which present a contact surface for the billets, said shields having supporting side lugs and securing end lugs; substantially as described.



4. A continuous furnace having longitudinally extending piers, skid pipes supported on the piers, and shields for said pipes, said shields having supports on the piers and secured at their ends against undue endwise movement; substantially as described.

5. A continuous furnace having longitudinally extending piers, skid pipes supported on the piers, and shields for said pipes, said shields having supports on the piers and having securing lugs at their ends; substantially as described.

901,231. CARPET-STRETCHER. JECHONIAS M. EBY, Williston, N. D. Filed Mar. 27, 1908. Serial No. 423,742.



A carpet stretcher having in combination an outer tube slotted at one end and exteriorly threaded at the other end, an interiorly threaded collar screwed to the threaded end of said tube, a clamp collar secured to the slotted end of said tube, a coupling in said threaded collar, a stretcher head having curved arms secured to said coupling, a link pivotally carried by said clamp collar, an operating lever secured to said link having a curved nosing extending into said slot, a rack tube telescoping into said outer tube, said outer tube having a second slot intermediate of its ends, a pin carried by said rack tube projecting through said intermediate slot, a stretcher head having curved arms secured to said rack tube, a collar secured midlength to said outer tube, and a dog secured to said collar engaging said rack tube, all arranged as set forth.

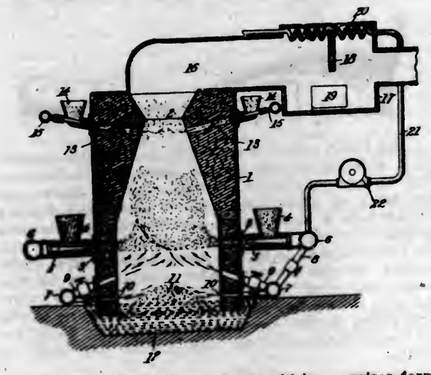
901,232. PROCESS OF PRODUCING GAS. BYRON E. ELDRED, Bronxville, N. Y. Filed May 7, 1908. Serial No. 431,301.

1. The process of producing gas which comprises forming a flame of finely divided suspended fuel in the presence of substantially enough air to cause complete combustion, and subsequently distributing a further supply of finely divided fuel in the hot flame gases.

2. The process of producing gas which comprises forming a flame of finely divided suspended fuel in the presence of substantially enough air to cause complete combustion, and subsequently distributing sufficient fine fuel through the hot flame gases to cause a reduction of the carbon dioxid to monoxid.

3. The process of producing gas which comprises forming a jet flame of finely divided fuel in an inclosed chamber, introducing sufficient air in proximity to said flame to cause combustion, and subsequently distributing finely divided fuel through the hot flame gases.

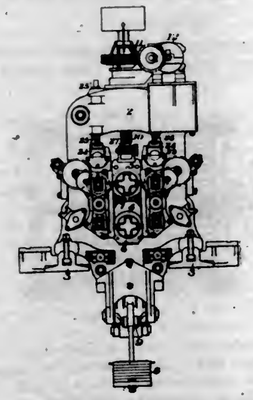
4. The process of producing gas which comprises forming a jet flame of finely divided fuel in an inclosed chamber, said fuel being in aerial suspension, introducing sufficient air to complete the combustion immediately below said jet flame and subsequently distributing finely divided fuel through the hot gases coming from such flame.



5. The process of producing gas which comprises forming a plurality of coöperating jet flames of finely divided suspended fuel in a closed chamber, introducing sufficient air to complete the combustion in such manner as to aid in maintaining the suspension of such fuel, and subsequently distributing finely divided fuel through the hot gases coming from such flame.

[Claims 6 to 10 not printed in the Gazette.]

901,233. UNIVERSAL ROLLING-MILL. FRANK I. ELLIS, Pittsburg, Pa., assignor to United Engineering & Foundry Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed May 4, 1908. Serial No. 430,674.

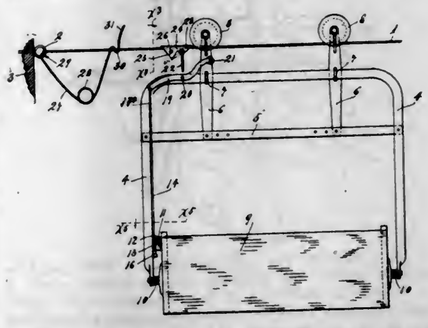


1. A universal mill having closed top housings provided with windows for the horizontal rolls, a horizontal driving shaft for the vertical rolls, and bearings for said driving shaft located in said windows, substantially as described.

2. A universal mill having closed top housings provided with windows for the horizontal rolls, a horizontal driving shaft for the vertical rolls, bearings provided with caps for said shaft and located in said windows, said bearings supported on the underside by a portion of the housing which defines the windows, and means extending downward from each housing into securing engagement with the corresponding cap, the portions of the frame adapted to support the bearings constructed and arranged to permit of lateral movement of the horizontal shaft toward the center of the windows when the cap-securing means is in disengaged position, substantially as described.

3. A universal mill having closed top housings provided with windows for the horizontal rolls, horizontal driving shafts for the vertical rolls, and bearings for said shafts, the said windows being extended laterally and vertically to receive said bearings and to permit said shafts to be removed through said windows, substantially as described.

901,234. CARRIER. GEORGE FINK, Northfield, Minn. Filed Dec. 7, 1907. Serial No. 405,467.



1. The combination with an overhead track, of a carrier frame having wheels arranged to travel on said track, a bucket pivotally mounted on said carrier frame, a yielding latch bar applied to one end of said bucket, a latch bolt slidably mounted on said carrier frame and provided with a beveled tripping head, which bolt is engageable with said latch bar to lock said bucket, and which tripping head is engageable with said latch bar, to release the same from said latch bolt and to temporarily hold said latch bolt in an inoperative position, and means for automatically raising said latch bolt when said carrier reaches a predetermined position on said track, substantially as described.

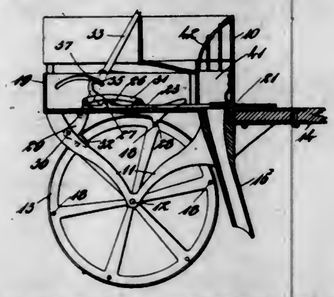
2. The combination with an overhead track, of a carrier frame having truck wheels arranged to travel on said track, a bucket pivotally mounted on said carrier frame, a spring latch bar 11 attached at its ends to one end of said bucket and having an intermediate lock notch 12^a, a latch bolt 13 slidably mounted on said carrier frame and automatically engageable with said lock notch 12^a, said latch bolt having a beveled trip head 16 for action on the intermediate portion of said latch bar, to release the latter from said latch bolt and to hold said latch bolt raised until said bucket is pivotally moved, a trip lever carried by said truck frame and connected to said latch bolt, and a tripping abutment on said track, operative on said trip lever to raise said latch bolt, substantially as described.

3. In a device of the kind described, the combination with a track wire or cable, of a tripping device comprising a sheath formed from sheet metal bent upon itself and embracing said track, and a tripping arm pivoted to depending flanges of said sheath, the said sheath having depending ears with outturned ends affording a stop to said tripping arm, substantially as described.

4. The combination with a track wire or cable, of a carrier truck having wheels arranged to run on said track, a bucket pivoted to the frame of said truck, a latch for said bucket, a tripping device comprising a sheath formed from sheet metal bent upon itself and embracing said track, and arranged to slide freely thereon, a tripping arm pivoted to depending flanges of said sheath for engagement with said latch, the parts being so related that when the tripping arm is acting on the said latch, one of the truck wheels will be bearing upon said sheath, substantially as described.

5. In a device of the kind described, the combination with an overhead track, cable, or wire, of a buffer spring made from a single piece of spring wire, one arm of which is anchored and the other arm of which is bent around said track to form a loop and has an upwardly projecting arm adapted to engage a wheel of the carrier truck, substantially as described.

901,235. PLANTER. SOUVERAN P. FORCIER, Detroit, Mich. Filed Mar. 19, 1908. Serial No. 422,170.



1. In a planter, the combination of a seed box supported on rollers and provided with a feeding spout, a shoe slidable up and down on the lower end of the spout, means including a pawl actuated by a roller to feed seed from the box to the spout, and means to simultaneously render said means inoperative and to lift the shoe from the ground comprising a lever connected to the shoe and having a projection engageable with the pawl to move the same to inoperative position.

2. In a planter, the combination of a seed box and frame, rollers supporting the same, one of the rollers having projecting pins, a feeding spout leading from the box to the ground, a cutter movable back and forth across the top of the spout, and alternately-acting pawls connected to the cutter and projecting into the path of the pins, one pawl being constructed to advance the cutter when struck by the pins and the other to retract the same.

3. In a planter, the combination of a frame and seed box and a feeding spout extending downwardly therefrom and rollers on which the box is supported, one of the rollers having projections, a reciprocating cutter working across the top of the spout, a pawl to advance the cutter pivotally connected thereto and having a projection depending into the path of the projections on the roller, and a pawl to retract the cutter, pivoted on the frame and connected to the cutter and having a projection which extends into the path of the projections on the roller when the cutter is advanced, said pawls being arranged to operate in alternation.

4. In a planter, the combination of a seed box having an opening in the bottom and a feeding spout leading therefrom, a reciprocating cutter over the top of the spout, a vibrating feed plate located under said opening and over the cutter and arranged to vibrate laterally with respect to the cutter, a cutoff movable above the plate to produce an intermittent feed, and operating connections between the cutter, the feed plate and the cut off.

5. In a planter, the combination of the frame, seed box and spout leading therefrom, a roller supporting the box and having projecting pins, a reciprocating cutter movable across the top of the spout and having an opening through which the seed falls from the box into the spout as the cutter is reciprocated, an advancing pawl pivoted to the cutter and depending at its front end into the path of the pins and having an upturned tail, a retracting pawl pivoted on the frame and having a projection which extends into the path of the pins when the cutter is advanced, and a lever having an arm arranged to strike the said tail of the pawl and lift the pawl from the path of the pins and to retract the cutter.

[Claim 6 not printed in the Gazette.]

901,236. PNEUMATIC-CUSHION INSOLE. WILLIAM L. GORDON, Deal, N. J., assignor to Pneumatic Heel Cushion Company, Asbury Park, N. J., a Corporation of New Jersey. Filed Oct. 22, 1907. Serial No. 398,541.

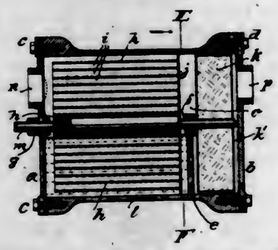


1. An insole having a pneumatic heel cushion presenting a plurality of ribs on the under side thereof conforming substantially to the outline of the insole, said ribs being of substantially equal height and forming therebetween a plurality of horseshoe-shaped channels opening forwardly on the under side of said insole, said ribs being adapted to expand under pressure from above, whereby the said channels under pressure from the foot become contracted progressively from the rear forwardly and force the air forwardly therefrom, said insole having perforations in the forward portion through which the air forced forwardly from said cushion may pass upwardly.

2. An insole having a pneumatic cushion under the heel thereof, said cushion presenting a plurality of ribs of substantially horseshoe form, of progressively increasing dimension whereby a plurality of channels are formed opening forwardly, said ribs having their axes of cross section inclined inwardly below whereby they tend to collapse inwardly under pressure, thereby compressing the air in said channels, and forcing the same forwardly.

3. An insole consisting of a cork layer, a pneumatic heel cushion attached to the under side thereof at the heel and having a plurality of ribs extending in a front and rear direction with channels between said ribs adapted to force air forwardly under said layer when said ribs are compressed, said layer having perforations forwardly therein, and a layer of fabric covering said perforations through which the air may pass upwardly.

901,237. CARBURETER. ALEXANDER GRAUMÜLLER, Dresden, Germany. Filed Nov. 26, 1906. Serial No. 345,071.



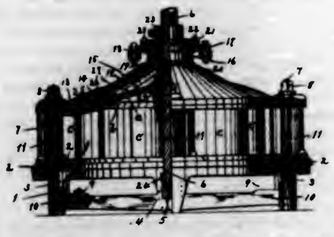
1. A carbureter comprising a fixed drum with an air inlet at one end and a gas outlet at the opposite end, a rotatable shaft journaled in the axis of said drum, and a series of concentric cylinders of progressing sizes mounted on said shaft, each covered with absorbent material, open at their inlet ends and provided with outlets at their exit ends, substantially as described.

2. A carbureter comprising a fixed drum with an air inlet at one end and a gas outlet at the opposite end, a rotatable shaft journaled in the axis of said drum, and a series of concentric cylinders of progressing sizes mounted on said shaft, each covered with absorbent material, open at their inlet ends and partially closed at their outlet ends by a perforated disk, substantially as described.

3. A carbureter comprising a fixed drum with an air inlet at one end and a gas outlet at the opposite end, a rotatable shaft journaled in the axis of said drum, a series of concentric cylinders of progressing sizes mounted on said shaft, each covered with absorbent material, open at their inlet ends and provided with outlets at their exit ends, and a drum having perforated ends mounted on a shaft near the exit end of the fixed drum and filled with fibrous material, substantially as described.

4. The herein described carbureter comprising a fixed horizontal drum having an air inlet at one end and a gas exit in the other, a transverse partition therein extending from the bottom to slightly over the center thereof, a shaft centrally journaled in the inlet head of the drum and in the partition and extended to near the exit end, a series of concentric unbroken cylinders of progressively increasing sizes mounted on said shaft between the inlet end and the partition, each cylinder being covered with absorbent material and being open at its inlet end, a perforated disk on the exit end of said cylinders, and a drum of perforated material mounted on the shaft between the partition and the exit end and filled with fibrous material, substantially as described.

901,238. WATER-ELEVATOR. FRANK A. GRUNOW, New Orleans, La. Filed Jan. 17, 1908. Serial No. 411,319.



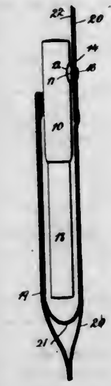
1. The combination in a running-wheel for water-elevators, of an annular ring, a central hub and curved arms connecting the ring and hub, the convex side of each arm being sharp along its upper edge and the concave side sharp at its lower edge, and water-cutting and expelling blades connected with the annular ring and projecting therefrom in lines preferably parallel with the driving shaft of the wheel, and tangential to the inner circle of the ring.

2. The combination in a running-wheel for water-elevators, of an annular ring, a central hub and curved arms connecting the ring and hub, the convex side of each arm being sharp along its upper edge and the concave side sharp at its lower edge, a series of cutting blades connected with the annular ring and projecting therefrom in lines preferably parallel with the driving shaft, the said cutting blades having flat surfaces tapered inwardly to a sharp cutting edge, and tangential to the inner circle of the ring, the outer ends of the blades being rearwardly curved and having their outer corners connected with an annular ring, as set forth.

3. The combination in a water-elevator having a dome-shaped cover provided at its top with a vertical opening having a valve seat therein and a ball valve adapted to operate thereon, a stuffing box and a vertically divided cover therefor; a driving shaft and a running-wheel comprising a central hub, an annular ring and curved arms connecting the hub and rim, with water-cutting and expelling blades projecting from the annular ring, as set forth.

4. In a water elevator, the combination of a lower cylindrical section having an open bottom and a flanged top, said section being provided with a series of vertical guides; a series of deflectors supported upon the flanged top of the cylindrical section, each deflector having curved surfaces terminating in sharp edges and provided with a rod-hole, as described, a dome-shaped cover mounted upon the deflectors and provided at its apex with a stuffing-box, having an opening in which is seated a valve; rods vertically movable in the deflectors; a frame movable in said guide and attached to the lower ends of said rods and a step connected with the center of said frame; a vertical shaft journaled in the stuffing-box and step; a running-wheel provided with water-cutting blades mounted on the shaft, and means for elevating and adjusting the position of the frame and wheel.

901,239. PENHOLDER. JOHN H. HAGAN, Elizabeth, N. J. Filed Oct. 1, 1907. Serial No. 395,326.



1. The combination with the ink tube and cap of a fountain pen and the latter having an aperture therein nearest the closed end, of a socket member of a snap fastener received in said aperture and turned down over the edge thereof, and a stud member having means adapting the same to be secured in the cloth of a garment adjacent to a pocket therein so that when the pen is placed in the pocket the said members may be brought into engagement to maintain the pen in position.

2. The combination with the ink tube and cap of a fountain pen and the latter having an aperture therein nearest the closed end, of a socket member of a snap fastener received in said aperture and turned down over the edge thereof, and a stud member comprising a sleeve, a flange, a head of resilient arms, a screw stem and head secured to the cloth of a garment adjacent to a pocket therein so that when the pen is placed in the pocket the said members may be brought into engagement to maintain the pen in position.

901,240. DEVICE FOR SECURING FOUNTAIN-PENS, &c., TO GARMENTS. JOHN H. HAGAN, Elizabeth, N. J. Filed Oct. 21, 1907. Serial No. 398,331.



1. A device for securing a fountain pen, pencil etc. to a garment, comprising a spring clamp to frictionally embrace the stem of the pen or pencil and a socket member secured to the said spring clamp, a stud member, and

means connecting therewith and adapted to engage the cloth of a garment, whereby, when the socket and stud members are in engagement the pen or pencil is held securely.

2. A device for securing a fountain pen, pencil etc. to a garment, comprising a spring clamp to frictionally embrace the stem of the pen or pencil and a socket member secured to the said spring clamp, a stud member, and a screw stem headed and adapted to pass from within out through the cloth of a garment and to engage the stud member on the outside, whereby, when the socket and stud members are in engagement the pen or pencil is held securely.

901,241. METAL PILING. JAMES J. HAROLD, Jersey City, N. J., assignor, by mesne assignments, to Edward A. Bern, Chicago, Ill. Filed Nov. 6, 1903. Serial No. 180,093.



1. In sheet piling a coupling for rolled shapes having a web or connecting member and oppositely arranged hook-engaging members.

2. In combination I beams and a coupling bar or beam having a web portion between the I beams and hooks engaging the flanges of such beams.

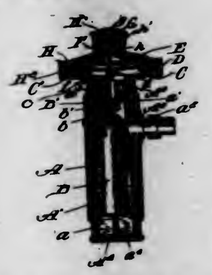
3. Sheet metal piling comprising shapes having flanges extending at an angle thereto and a continuous interlocking rolled shape extending between the flanged shapes and having oppositely extending hooked flanges arranged to engage the adjacent flanged portions of the other shapes substantially throughout their length and lock them together substantially as described.

4. Sheet metal piling comprising shapes having flanges extending at an angle thereto and an interlocking shape extending between the flanged shapes and having base flanges and hook-shaped outer flanges arranged to engage the flanges of the other and lock them together substantially as described.

5. Sheet metal piling comprising shapes having flanges extending at an angle thereto and an interlocking shape of general I beam form extending between the flanged shapes with the outer flanges bent in to engage the flanges of the outer shapes and lock them together substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

901,242. AIR-VENT VALVE. GEORGE D. HOFFMAN, Western Springs, Ill., assignor to Norwall Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 16, 1906. Serial No. 330,769.



1. A valve for steam heating systems comprising a diaphragm having a port therethrough, means for supporting said diaphragm in position to expose one surface thereof to pressure in the system, and the other side thereof to atmospheric pressure, a valve coöperating with said port to open and close the same, and means extending through said port for supporting said valve in position to be engaged and disengaged by the diaphragm.

2. A valve for steam heating systems comprising a diaphragm having a port therethrough, a base plate upon which said diaphragm is mounted and through which one surface of said diaphragm is exposed to pressure in the system, a cover supported upon said base-plate and inclosing the opposite side of the diaphragm, said opposite side of the diaphragm being exposed to the atmosphere, a valve coöperating with said port to open and close the same, and means supported by said cover and extending through the port in said diaphragm for supporting said valve in position to be engaged and disengaged by the diaphragm.

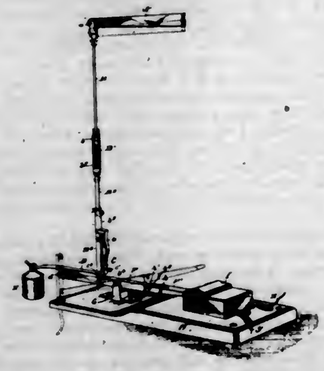
3. A valve for steam heating systems comprising a diaphragm one surface of which is concave and the other surface of which is convex, said diaphragm having a port therethrough, means for supporting said diaphragm in position to expose its convex surface to pressure in the system and its concave surface to pressure of the atmosphere, a valve coöperating with said port to open and close the same, a stop plate supported above said diaphragm to limit its movement, and means extending through said stop plate and said port for supporting said valve in position to be engaged and disengaged by the diaphragm.

4. A valve for steam heating systems comprising a concavo-convex diaphragm having a port therethrough, the concave surface of said diaphragm being exposed to the atmosphere, a base-plate upon which said diaphragm is mounted and through which its convex surface is exposed to pressure in the system, a stop plate located in position to limit the movement of said diaphragm, a cover supported upon said base plate and inclosing said stop plate, a valve coöperating with said port to open and close the same, and means supported by said cover and extending through said stop plate and said port for supporting said valve in position to be engaged and disengaged by the diaphragm.

5. A valve for steam heating systems comprising a diaphragm having a port therethrough, means for supporting said diaphragm in position to expose one surface thereof to pressure in the system and the other surface thereof to atmospheric pressure, a valve coöperating with said port to open and close the same, and means extending through said port for supporting said valve in position to be engaged and disengaged by the diaphragm.

[Claims 6 to 8 not printed in the Gazette.]

901,243. AUTOMATIC FIRE-ALARM TRIP. FRANK A. KEHL and ARMOND F. WRIGHT, Tacoma, Wash. Filed Nov. 30, 1907. Serial No. 404,507.



1. A trip device for operating a fire alarm, comprising a pull bar, a trip lever connected to the pull bar and having at one end an electro-magnetic stop device arranged to be released by a current impulse and having at the other end a weight with means for relieving the lever of the strain of the weight by the tilting of said lever.

2. A trip device for operating a fire alarm, comprising a pull bar having in its length a slip extension for the independent movement of the upper end of the pull bar, a trip lever connected to the bottom of the pull bar and having at one end an electro-magnetic stop device arranged to be released by a current impulse and having at the other end a weight with means for relieving the lever of the strain of the weight by the tilting of said lever.

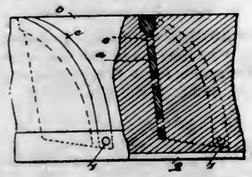
3. A trip device for operating a fire alarm, comprising a pull bar made longitudinally adjustable, a trip lever connected to the pull bar and having at one end an electro-magnetic stop device arranged to be released by a current impulse and having at the other end a weight with means for relieving the lever of the strain of the weight by the tilting of said lever.

4. A trip device for operating a fire alarm, comprising a pull bar, a trip lever connected to the pull bar and having at one end an electro-magnetic stop device arranged to be released by a current impulse and having at the other end a secondary tilting support, a weight arranged thereon, and a detent for holding the said support until the trip lever is tilted.

5. A trip device for operating a fire alarm, comprising a pull bar, a trip lever connected to the pull bar and having at one end a knuckle extension arranged to be deflected in one direction and to be rigid in the other direction, an electro-magnetic stop device engaging therewith, and arranged to be released by a current impulse, and a weight arranged on the other end of the trip lever.

[Claims 6 and 7 not printed in the Gazette.]

901,244. TIRE FOR VEHICLE-WHEELS. ELEAZER KEMPSHALL, London, England, assignor to Kempshall Tyre Company, of Europe, Limited, London, England. Filed Apr. 3, 1907. Serial No. 366,089.



1. In an elastic tire, a number of metallic sections embedded in the tire, and presenting anti-skidding edges at the tread surface thereof, said metallic sections being pivoted to the rim, substantially as, and for the purposes, hereinbefore set forth.

2. In an elastic tire, a number of metal sections having angularly disposed wings embedded in the tire, the edge of each of the wings being of the same shape as the outer opposite longitudinal surfaces of the tire to form anti-skidding surfaces.

3. In an elastic tire for vehicle wheels, a number of non-radial metallic sections embedded in the tire and presenting V-shaped anti-skidding edges at the tread surface.

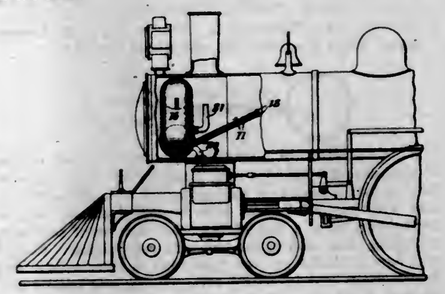
4. In an elastic tire for vehicle wheels, a number of non-radial metallic sections, embedded in the tire and presenting V-shaped anti-skidding edges at the tread surface, said sections being pivoted to the rim.

5. An elastic tire for vehicle wheels, comprising alternate elastic and non-elastic sections, and a number of pivotally mounted metallic sections presenting angular edges at the tread surface.

[Claims 6 to 10 not printed in the Gazette.]

901,245. FEED-WATER HEATER. JAMES H. KIDWELL, Staunton, Va. Filed Mar. 27, 1908. Serial No. 423,543.

1. A water heater for locomotives, comprising an annular shell having a water inlet at one end and a water outlet to the boiler at the other end, steam tubes extending around lengthwise within said shell and connected at one end to the exhaust pipe from the cylinders and at the other end to the exhaust nozzle, and a brace plate extending across the shell intermediate the ends of the tubes and having holes through which said pipes extend, said brace plate having openings for the circulation of water in the shell.



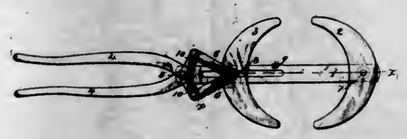
2. A water heater for locomotives, comprising an annular shell, said shell being provided with heads spaced apart from each other to form a chamber, an inclined partition dividing said chamber into two portions, one of said portions being connected with the exhaust of the locomotive and the other opening into the stack, steam tubes extending lengthwise within the shell and opening into the chamber, and a brace plate extending across the shell intermediate the ends of the tubes and having holes within which said pipes extend, said plates having openings for the circulation of water within the shell.

901,246. EMBROIDERY-FRAME. GEORGE B. LYON, Ithaca, N. Y. Filed Feb. 29, 1908. Serial No. 418,434.



The improved clamping device for embroidery frames comprising a divided band which is formed of elastic metal and corrugated transversely, and a fastening consisting of a loop lever having transverse portions around which the ends of the band are doubled, one end portion 6 being plain and extended beyond its loop, and the other provided with a stiffening piece and curved outwardly, as shown and described.

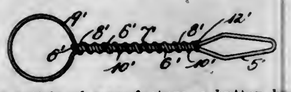
901,247. JAR-WRENCH. KENNEDY LYONS, New Rumley, Ohio. Filed Dec. 3, 1907. Serial No. 404,912.



A jar wrench comprising a support having a longitudinal slot near one end, a curved jaw arranged transversely of the support and pivoted at its middle point thereto, a companion jaw similarly arranged with reference to the support as the first mentioned jaw, a pivot fastening connecting the second jaw to the support and mounted to

slide in the longitudinal slot thereof, handle members crossed near their inner ends and pivoted to each other and to the said support, said inner ends of the handle members projecting in opposite directions, and links connecting the inner extremities of the handle members with the pivot fastening connecting the sliding jaw with the support.

901,248. BUTTON-HOOK. JOSEPH MELNICK, Boston, Mass. Filed Jan. 20, 1908. Serial No. 411,593.



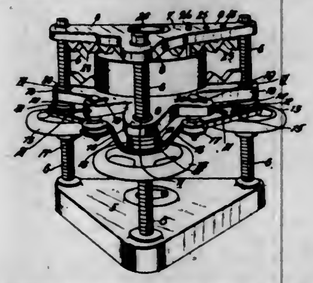
1. As an article of manufacture, a button hook formed of a single piece of wire bent intermediate of its ends to form a loop adapted to engage a button, one portion of said wire extending from said button engaging loop to form a portion of a handle, the other portion of said wire extending from said button engaging loop adjacent to said first named handle portion, then bent to form a loop, and subsequently bent in helical form around said handle portions.

2. As an article of manufacture, a button hook formed of a single piece of wire bent intermediate of its ends to form a loop adapted to engage a button, one portion of said wire extending from said button engaging loop to form a portion of a handle, the other portion of said wire extending from said button engaging loop adjacent to said first named handle portion, then bent to form a loop, subsequently bent in helical form around said handle portions, and finally bent therearound adjacent to said button engaging loop to form a guard.

3. As an article of manufacture, a button hook formed of a single piece of wire bent intermediate of its ends to form a loop adapted to engage a button, one portion of said wire bent in helical form, extending from said button engaging loop to form a portion of a handle, the other portion of said wire bent in helical form, extending from said button engaging loop adjacent to and intertwined with said first named handle portion, then bent to form a loop and subsequently bent in helical form around said handle portions.

4. As an article of manufacture, a button hook formed of a single piece of wire bent intermediate of its ends to form a loop adapted to engage a button, one portion of said wire bent in helical form, extending from said button engaging loop to form a portion of a handle, the other portion of said wire bent in helical form, extending from said button engaging loop adjacent to and intertwined with said first named handle portion, then bent to form a loop, subsequently bent in helical form around said handle portions, and finally bent therearound adjacent to said button engaging loop to form a guard.

901,249. CENTERING-CHUCK. ROBERT MILNE, Rockford, Ill., assignor to B. F. Barnes Company, a Corporation of Illinois. Filed Nov. 21, 1907. Serial No. 403,219.



1. In a centering chuck, the combination of a bed plate, a fixed jaw head, fixed screw posts connecting the bed plate with the jaw head, a movable jaw head adjustably guided by the fixed screw posts, a hand wheel screw-threaded onto one of the screw posts, sprocket teeth on said hand wheel, sprocket wheels on the other screw posts, an endless chain meshing with all of the sprocket teeth, for imparting uniform adjustment of the movable jaw head along the several screw posts, and means on the fixed and movable jaws for centering the work, substantially as described.

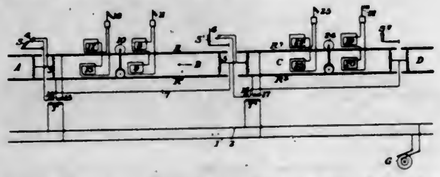
2. In a centering chuck, the combination of a bed plate, three screw posts entered into the bed plate at points equidistant from one another, a fixed jaw head into which the upper ends of the screw posts are entered, a movable jaw head provided with bores through which the screw posts pass, three hubs screw-threaded onto the threads of the screw posts, the upper ends of the hubs being entered through and revoluble within the bores in the movable jaw, sprocket teeth on the three hubs, a hand wheel on one of the hubs, an endless chain engaging the sprocket teeth, and means on the fixed and movable jaws for centering the work, substantially as described.

3. In a centering chuck, the combination of a fixed jaw head and a movable jaw head, and teeth on the fixed and movable jaw heads, said teeth having sloping flat sides converging towards the center of the chuck, the teeth on the two jaws having their apices in register with one another, and means for adjusting the movable jaw, substantially as described.

4. In a centering chuck, the combination of a fixed jaw head and a movable jaw head, and sloping surfaces on the two jaws, said surfaces being beveled in register with one another and sloping in opposite directions, and means for adjusting the movable jaw head, substantially as described.

5. A centering chuck comprising a fixed jaw head and a movable jaw head, oppositely disposed teeth arranged in radial lines on the two jaw heads and having their apices in alinement with one another and their sides beveled in register with one another and sloping in opposite directions, and means for adjusting the movable jaw head, substantially as described.

901,250. CAB SIGNAL SYSTEM. DANIEL J. MCCARTHY, Wilkinsburg, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed May 19, 1908. Serial No. 433,645.



1. In a cab signaling system, sectional track rails, track signals, means for supplying current to the track rails controlled by the movement of the track signals, an inductor carried by the vehicle and arranged to have a circuit induced therein by current flowing in the track circuit and a signal device on the vehicle which is responsive to current generated by the inductor; substantially as described.

2. In a cab signaling system, sectional track rails, track signals, means for supplying current to the track rails controlled by the movement of the track signals, an inductor carried by the vehicle and arranged in inductive relation to an axle thereof, and a signal device on the vehicle responsive to current generated by the inductor; substantially as described.

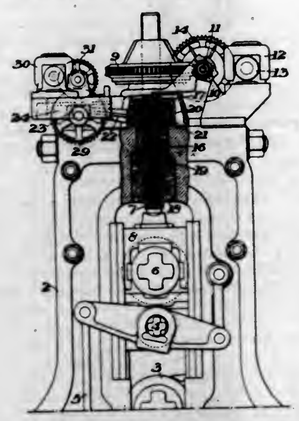
3. In a cab signaling system, an indicator in the cab or other vehicle for indicating the condition of an advance track signal, a second indicator for indicating the condition of the track of that block irrespective of the position of the track signals, track circuits, and means carried by the vehicle and operated from the track circuits for operating said indicators; substantially as described.

4. In a cab signaling system, sectional track rails, track signals, means for supplying current to the track rails controlled by the movement of the track signals, an indicator on the cab or other vehicle arranged to be operated by the current controlled by the movement of the track signals, a second indicator on the cab or other vehicle and a second track circuit for operating the last-named indicator; substantially as described.

5. In a cab signaling system, sectional track rails, transformers for supplying currents to the track rails, each of said transformers having two secondary coils or windings connected to the track rails, track signals, circuit breakers controlled by the track signals for controlling the supply of current from one of the transformer secondaries, indicating means on the cab or other vehicle and inductors carried by the vehicle and arranged to have current induced in them by currents flowing in the track circuits for operating the indicator; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

901,251. SCREW-DOWN MECHANISM FOR ROLLING-MILLS. EDWIN J. MCILVAIED, Pittsburg, Pa., assignor to United Engineering & Foundry Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Aug. 8, 1907. Serial No. 387,622.



1. In a rolling mill, the combination of screw-down mechanism for the upper roll, and having vertically movable boxes or nuts for the holding-down screws, a motive device, and connections between the motive device and the nuts for actuating the same and thereby the screws independently of their usual actuating mechanism, substantially as described.

2. In a rolling mill, a holding-down screw, a box or nut therefor having a threaded bearing in the housing of the mill, a motive device, and connections between the motive device and the nut for rotating the latter on its threaded bearing, substantially as described.

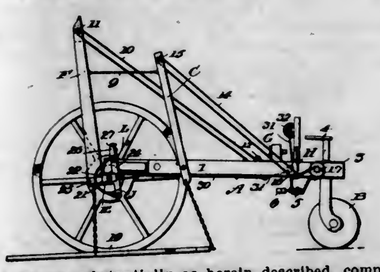
3. In screw-down mechanism for rolling mills, a holding-down screw, and a vertically movable box or nut therefor having a helicoidal surface thereon, the roll housing in which the box or nut is seated having a bearing surface of complementary form, a motive device, and operating connections between the motive device and the box or nut for rotating the latter, substantially as described.

4. In screw-down mechanism for rolling mills, a holding-down screw, a vertically movable box or nut therefor having a helicoidal bearing in the roll housing in which it is seated, a wrench arm attached to the box or nut, a motive device, and actuating connections between the motive device and the wrench arm; substantially as described.

5. In a rolling mill, a pair of holding-down screws, nuts or boxes for said screws arranged to have a vertical and rotary movement in the roll housings, wrench arms connected to the boxes or nuts, connected slides engaging said arms, and a motive device for actuating the slides; substantially as described.

[Claim 6 not printed in the Gazette].

901,252. DRAY-WAGON. GUY R. MCLERAN, North Yakima, Wash. Filed July 13, 1907. Serial No. 383,600.



1. A wagon substantially as herein described, comprising a main beam having front and rear sections slidably connected and having the front section provided with a cross-beam, a steering wheel mounted in the rear section, an axle having a swinging connection with the cross-beam, a lever connected with the axle and adapted to be operated to swing the same relatively to the cross-beam, a securing device on the front section of the main beam for securing said lever in one position, means for suspending the load from the swinging axle, wheels on the swinging axle, a lever connected with the rear section of the main beam, means for suspending a load from said lever, connections between said lever and the lever on the axle, tackle for operating said levers for raising the load, and means on the rear section of the main beam for securing the lever of said beam when said lever is adjusted to position to support a load, substantially as set forth.

2. A wagon comprising a main beam having front and rear sections, an axle swinging in connection with the front section and having means for supporting a load, a lever carried by the rear section and having means for supporting the load, and means whereby said lever may be operated to raise the load, substantially as set forth.

3. A wagon having a main beam composed of a rear section provided with a steering wheel, and a front section having a cross-beam, an axle having a swinging connection with the cross-beam and provided with a projecting lever whereby it may swing on its connection with the cross-beam, and intermediate devices between the said lever and the main beam whereby the lever may be swung to lift the load suspended from the axle, substantially as set forth.

4. A wagon having a main beam composed of front and rear sections, load supporting devices including levers swinging approximately parallel with each other, and means on the front and rear sections for supporting their respective levers when adjusted to lift a load, substantially as set forth.

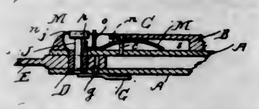
5. The combination in a wagon of a main beam, front and rear levers swinging approximately parallel with each other and arranged for operation to lift a load, and tackle between said levers and the main beam whereby they may be operated to raise a load, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

901,253. POCKET-KNIFE. GEORGE L. MCVEY, Walden, N. Y., assignor to The Press Button Knife Company, Walden, N. Y., a Corporation of West Virginia. Filed Apr. 30, 1908. Serial No. 430,138.

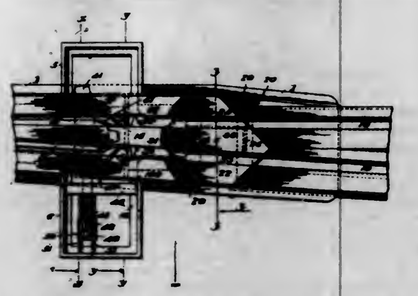
The combination, with a pocket-knife provided with automatic blade-opening mechanism having a finger-button for operating it, of a safety locking-plate slidable longitudinally between the inner and outer side-plates of the knife-handle, said locking-plate being provided with a

laterally projecting stop at one extreme end which engages with the said finger-button and having also a projection of greater length than the said stop which



projects through the same opening in the outer side-plate as the said finger-button and which affords a means for sliding the said locking-plate back and forth.

901,254. RAILWAY-SWITCH. HENRY B. NICHOLS, Philadelphia, Pa. Filed Sept. 12, 1906, Serial No. 334,335. Renewed Dec. 18, 1907. Serial No. 407,044.



1. In a railway switch, a body, a pinless tongue having a concave heel, and a bearing or heel plate secured upon the body and provided with a convex surface to receive the heel of the tongue.

2. In a railway switch, a body, convergent rail ends, a pinless tongue in operative relation therewith, said tongue having a bearing surface upon its heel, and a convex abutment or supporting bearing for said heel on the body.

3. In a tongue switch, a body structure, a tongue seated thereon and having a concaved heel end, a convex abutment for said end also having a holding down action thereon, and combined holding down and holding back means engaging the tongue intermediate of its ends; substantially as described.

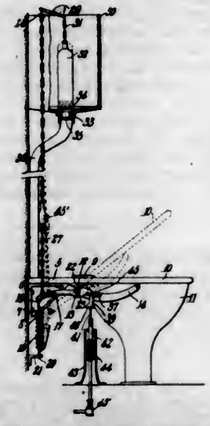
4. In a tongue switch, a body structure, a pinless tongue seated therein and having a centering bearing at its extreme rear end, said tongue also having a lateral projection forward of said bearing, and rigid means engaging such projection to hold the tongue in operative position in the structure, substantially as described.

5. In a railway switch, a body, convergent rail ends, a tongue in operative relation therewith, said tongue having a bearing surface upon its heel, and an abutment or supporting bearing for said heel on the body, together with means to hold down the tongue comprising an overhang or undercut portion on the abutment, and side blocks engaging the tongue in opposition thereto.

[Claims 6 to 18 not printed in the Gazette.]

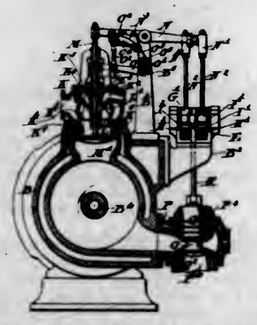
901,255. ANTIFREEZING CLOSET. NILS PETERSON, Moscow, Idaho, assignor of one-third to Charles L. Thompson, Moscow, Idaho. Filed Aug. 3, 1907. Serial No. 386,930.

The combination with a supporting frame, of a bowl, a seat pivotally mounted on the frame and normally and yieldably supported in elevated position above the bowl, a pivoted lever mounted on the frame and having an elongated slot formed therein, one end of said lever being provided with a terminal roller adapted to bear against the adjacent face of the seat, a spring operatively connected with the opposite end of the lever, an over-head tank, a cut off valve disposed within the tank, a connection between the cut off valve and adjacent end of the lever, an actuating member having spaced ears embracing the cut off lever and provided with a bearing face, a fastening device extending through the slot for engagement with the



ears of the actuating member for locking said member in adjusted position, and a supply valve disposed beneath the actuating member and movable to open position by engagement with said actuating member when the seat is depressed.

901,256. ADMISSION-VALVE FOR GAS-ENGINES. GUSTAV B. PETSCHE, Philadelphia, Pa., assignor to Southwark Foundry and Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Original application filed Dec. 30, 1904, Serial No. 238,917. Divided and this application filed Mar. 7, 1906. Serial No. 304,627.

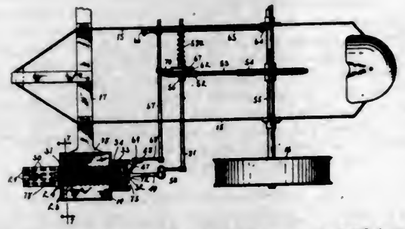


1. In a gas engine, an inlet valve M', and means operating to open and close said valve in fixed and positive relation to the movements of the engine, in combination with throttle valves acting on the air and gas ports, an adjustable connection from the means actuating valve M', to the throttle valves for opening and closing the same, and means actuated by the governor of the engine and acting to adjust said connection to vary the motion of the throttle valves with reference to valve M'.

2. In a gas engine, an inlet valve M', having a stem M, and means for actuating the valve through said stem in fixed relation to the movements of the engine, in combination with a sleeve stem L, movable on stem M, and positively coupled to the actuating mechanism of said stem by adjustable connections, means actuated by the engine governor for shifting said adjustable connections, and throttle valves for the air and gas supply, connected to stem L, as specified.

3. In a gas engine, an inlet valve, a pivoted operating lever for the valve, means for turning said lever about its fulcrum in definite relation to the movements of the engine to open and close said inlet valve, a mixture controlling valve, a governor, and means controlled by the governor for positively coupling said mixing valve to said lever at varying distances from the lever fulcrum in response to variations in the speed of the engine.

901,257. CORN-PLANTER. AUGUST E. PETERSON, Moline, Ill. Filed Mar. 23, 1908. Serial No. 422,597.



1. In a seed-planter, the combination of a seed box, a slotted bottom therefor, a seed plate having apertures, a series of projections on said plate arranged in alinement with said apertures, and yielding fingers normally in engagement with said plate.

2. In a seed-planter, the combination of a seed box, a slotted bottom therefor, a seed plate having apertures therein, a series of projections on said plate arranged in alinement with said apertures, yielding fingers normally in engagement with said plate and arranged in alinement with said projections, and a stop-plate removably arranged within the seed box.

3. In a seed planter, the combination of a seed box, a slotted bottom therefor, a seed plate having apertures therein, a series of projections on said plate arranged in alinement with said apertures, yielding fingers normally in engagement with said plate and arranged in alinement with said projections a stop-plate removably arranged within the seed box, and a feed regulating slide arranged beneath the seed plate.

4. In a seed planter, the combination of a seed box, a slotted bottom therefor, a seed plate having apertures therein, a series of projections on said plate arranged in alinement with said apertures, yielding fingers normally in engagement with said plate and arranged in alinement with said projections, a stop-plate adapted to cover a portion of the slotted bottom, a feed regulating slide beneath the seed plate, and means for operating said slide.

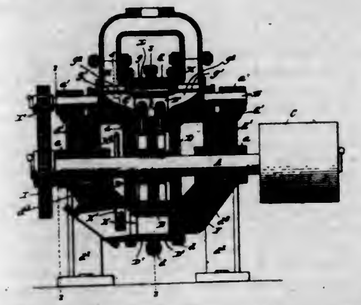
5. In a seed planter, the combination with a main frame, and an axle, of a seed chute, a valve in said chute, a counter-shaft connected with the axle, a rock-shaft, means connected with said rock-shaft for operating said valve, and means for stopping the movement of said counter-shaft when the rock-shaft is operated to close said valve.

[Claims 6 to 10 not printed in the Gazette.]

901,258. ELASTIC-FLUID MOTOR. VICTOR PINGRET, Rio Grande do Sul, Brazil. Filed Nov. 14, 1907. Serial No. 402,198.

1. An elastic fluid motor embodying a rotor having a piston thereon, a casing forming a cylinder for the piston, a rotary abutment having a recess for the passage of the piston and inlet passages leading into said recess from both ends of the abutment whereby pressure on the abutment is equalized and means coöperating with said inlet passages to form a valve controlling the admission of elastic fluid.

2. An elastic fluid motor embodying a rotor having a piston thereon, a casing forming a cylinder for the piston, a rotary abutment having a recess for the passage of the piston, and axial projections on each end of the abutment with inlet passages leading from the recess through both the axial extensions and means coöperating with said axial extensions to form valves controlling the admission of elastic fluid.



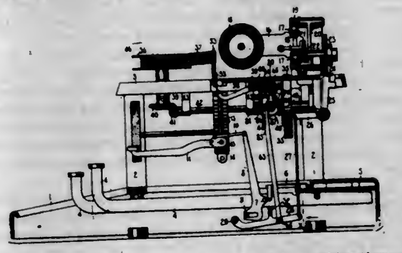
3. An elastic fluid motor embodying a rotor having a piston thereon, a casing forming a cylinder for the piston, a rotary abutment having a recess for the passage of the piston, axial projections on each end of the abutment and inlet passages of increasing cross sectional area leading through the extensions and into the recess at opposite ends of the abutment and means coöperating with the extensions to form valves controlling the admission of elastic fluid.

4. In an elastic fluid motor, the combination with the rotor, of a stator or casing formed of two inner and two outer sections assembled axially of the rotor and connected by peripheral flanges, a shaft for the rotor, bearings for the shaft located in the outer sections only of the stator, and a rotary abutment also journaled in said outer sections parallel with the rotor axis.

5. In an elastic fluid motor the combination with the rotor, of a stator or casing formed of two inner and two outer sections, the inner sections having the cylinder formed in their proximate sides and all of said sections being connected by peripheral flanges, a shaft for the rotor, bearings for the shaft located in the outer sections, a rotary abutment having reduced axial extensions forming a shaft, bearings for the abutment shaft also located in said outer sections and webs connecting the shaft bearings with the bodies of the outer sections, whereby said bearings are rigid with but remote from the cylinder.

[Claims 6 to 8 not printed in the Gazette.]

901,259. TYPE-WRITING MACHINE. MORRIS W. POOL, New York, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 15, 1905. Serial No. 250,212.



1. In a visible writing machine, the combination of means for feeding a ribbon longitudinally, means for reversing the longitudinal feed of the ribbon, means including a ribbon vibrator operatively controlled by the ribbon-reversing means for shifting the ribbon widthwise, and means for rendering said ribbon shifting means inoperative when actuated.

2. In a visible writing machine, the combination of a ribbon normally removed from the printing point, means

for feeding the ribbon longitudinally, means for reversing the longitudinal feed of the ribbon, means operatively controlled by the ribbon reversing means for shifting the ribbon widthwise, and means for rendering said widthwise shifting means inoperative when actuated.

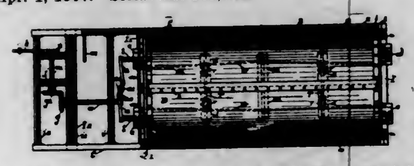
3. In a visible writing machine, the combination of a ribbon, a ribbon winding mechanism, means for reversing the ribbon winding mechanism, means for holding the ribbon normally away from the printing point, means for moving the ribbon automatically to cover the printing point, means operated by the ribbon reversing means for altering the extent of said automatic movement, and means for rendering said altering means inoperative.

4. In a visible writing machine, the combination of a pair of ribbon spools, turning means therefor, means for reversing said turning means, a ribbon carrier arranged normally away from the printing point, means for moving said carrier to and from the printing point, means operatively controlled by said ribbon-reversing means for altering the extent of movement of said carrier, and means for rendering said altering means inoperative when actuated.

5. In a visible writing machine, the combination of a pair of ribbon spools arranged one at either side of the printing point, winding means for said spool, means for reversing said winding means, a ribbon carrier arranged between the spools and normally away from the printing point, means for moving the carrier independently of the spools to and from the printing point, means operative by the said reversing means for altering the extent of movement of the carrier, and means for rendering said altering means inoperative.

[Claims 6 to 29 not printed in the Gazette.]

901,260. DUMPING-WAGON. ALBERT N. PUTNEY, Palmyra, N. Y., assignor of one-fourth to Ira M. Ludington, Rochester, N. Y., and one-fourth to William L. Knapp and one-fourth to Edward C. North, Palmyra, N. Y. Filed Apr. 1, 1907. Serial No. 365,635.



1. In a dump wagon; two similar sections pivotally supported with their axes of rotation fixed and disposed longitudinally of the wagon, each section having its side wall formed to an uninterrupted and practically uniform curvature, such sections each conformed relatively to its axis of support to approximately balance the lateral thrust or wedging action of the load, such sections so conformed relative to their axes of rotation that their centers of gravity when loaded fall between such axes of rotation and outside of such axes of rotation when empty.

2. In a dump wagon; two quadrantal sections adapted when closed to form a semi cylinder, each one of such sections pivotally supported to swing upon a fixed axis; cooperating tracks and rollers for supporting such sections, each one of such tracks presenting to the coöperating roller a segmental surface arranged concentrically with the axis of the pivotal support for the corresponding section.

3. In a dump wagon; two similar sections pivotally supported with their axes of rotation disposed longitudinally of the wagon, each section having its side wall formed to an uninterrupted and practically uniform curvature, such sections each conformed relatively to its axis of support to approximately balance the lateral thrust or wedging action of the load, such sections so supported that there is a normal tendency of the same when loaded to open and when empty to close and a lever secured to a pivotal support for each section and means for operating such levers simultaneously to open and close the wagon.

4. In a dump wagon; two quadrantal sections adapted when closed to form a semi cylinder, each one of such sections pivotally supported at each end upon a fixed axis of rotation to normally close when empty and to open when loaded; a lever secured to a pivotal support for each section; a shaft revolubly supported parallel with the axis of the pivotal supports for such sections and having a crank arm thereon; an independent connecting link between each lever connected to a pivotal support and the lever on such shaft; a second shaft arranged transversely of the wagon; coöperating gear connections between such first and second shafts; an operating handle connected to such second shaft and means for holding such sections in closed positions.

5. In a dump wagon; two quadrantal sections adapted when closed to form a semi cylinder, each one of such sections pivotally supported to swing upon a fixed axis; cooperating tracks and rollers for supporting such quadrantal sections, each one of such tracks presenting to the coöperating roller a segmental surface arranged concentrically with the axis of the pivotal support for the corresponding section; a lever secured to a pivotal support for each section and means for operating such levers simultaneously to open and close the wagon.

[Claims 6 to 8 not printed in the Gazette.]

901,261. SAFETY-FUSE. FRANK D. REYNOLDS and JOSEPH SACHS, Hartford, Conn., assignors to The Sachs Company, Hartford, Conn., a Corporation of Connecticut. Filed Apr. 17, 1906. Serial No. 312,098.



1. A safety fuse comprising terminals, and a fuse strip having a rupture portion and adjacent portions of substantially the same cross section as and of greater heat radiating surface than the said rupture portion.

2. A safety fuse comprising a tube, terminals therefor, and a fuse strip electrically connected to said terminals and having a central rupture portion and adjacent portions of the same cross section as and greater heat radiating surface than the said central rupture portion.

3. A safety fuse comprising a tube, end caps therefor, and a fuse strip electrically connected to said end caps and having a central rupture portion and adjacent portions of the same cross section as and greater heat radiating surface than the said central rupture portion.

4. As a new article a fuse strip having a central portion of circular section and adjacent portions of flat section.

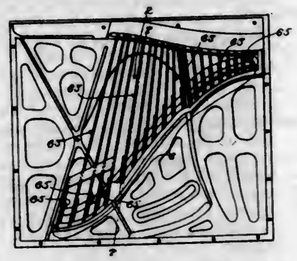
5. As a new article a fuse strip having a central rupture portion of circular section, and adjacent portions of flat section both sections being of substantially the same sectional area.

[Claims 6 and 7 not printed in the Gazette.]

901,262. DEVICE FOR USE IN OBTAINING BRIDGE-BEARINGS IN CONSTRUCTING PIANOS. EDWARD C. SAGER, Boston, Mass., assignor to Chickering & Sons, New York. N. Y., a Corporation of New York. Filed Oct. 10, 1902. Serial No. 126,672.

1. The compound gage to enable a series of indicating cuts or kerfs to be produced in the surface of a body to guide in removing the material at said surface to reduce or trim the latter to the required contour, comprising an organized series of saw-guides corresponding in plan with the area to be shaped and in arrangement with the respective features of such contour, the said saw-guides controlling the positions of the respective saw-cuts or kerfs and being provided with gages to control the depth thereof the said gages having adjusting means to vary the inclination of the bottoms of the respective cuts or kerfs.

2. The compound gage to enable a series of indicating cuts or kerfs to be produced in the surface of a body to guide in removing the material at said surface to reduce or trim the latter to the required contour, comprising an organized series of saw-guides corresponding in plan with the area to be shaped and in arrangement with the respective features of such contour, the said saw-guides controlling the positions of the respective saw-cuts or kerfs and being provided with gages to control the depth thereof the said gages having adjusting means to vary the depths of the respective cuts or kerfs.



3. The compound gage to enable a series of indicating cuts or kerfs to be produced in the surface of a body to guide in removing the material at said surface to reduce or trim the latter to the required contour, comprising an organized series of saw-guides corresponding in plan with the area to be shaped and in arrangement with the respective features of such contour, the said saw-guides controlling the positions of the respective saw-cuts or kerfs and being provided with gages to control the depth thereof the said gages having adjusting means to vary the depths of the respective cuts or kerfs and the inclinations of the bottoms thereof.

4. The device for use in obtaining the bridge-bearing of a piano, comprising, essentially, a series of saw-guides conforming to the contour of the bridge of a piano, arranged adjacent one another in positions corresponding with predetermined portions of the bridge, having means to control the positions of the bottoms of the indicating saw-cuts or kerfs which are made in the bridge to guide in the subsequent reduction and trimming of the same, and also having adjusting means to enable the depths of the cuts or kerfs to be varied.

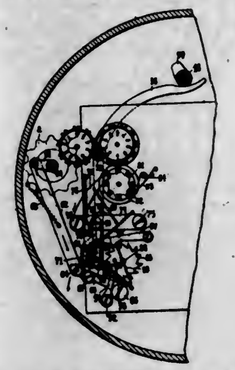
5. The device for use in obtaining the bridge-bearing of a piano, comprising, essentially, a series of saw-guides conforming to the contour of the bridge of a piano, arranged adjacent one another in positions corresponding with predetermined portions of the bridge, having means to control the positions of the bottoms of the indicating saw-cuts or kerfs which are made in the bridge to guide in the subsequent reduction and trimming of the same, and also having adjusting means to enable the inclination of the bottoms of the cuts or kerfs to be varied.

[Claims 6 to 13 not printed in the Gazette.]

901,263. FARE-INDICATOR. BERTHOLD SCHNEIDER, Berlin, Germany. Original application filed Sept. 12, 1906, Serial No. 334,312. Divided and this application filed May 23, 1907. Serial No. 375,353.

1. In a fare indicator, in combination, two indicating means, each including a ratchet wheel and means for operating the ratchet wheels in unison comprising a lever pivotally disposed between the ratchet wheels, oppositely extending spring held pivoted pawls carried by the lever for engagement with the correspondingly located ratchet wheels, means for moving the lever in one direction to set the pawls upon the ratchet wheels and means acting automatically to return the lever to normal position and at the same time to move the pawls therewith and actuate the ratchet wheels.

2. A fare-indicator comprising an extra-fare-indicating means consisting of an indicating disk, a ratchet-wheel connected therewith for rotating it, a spring-controlled pawl 78 adapted to engage with said ratchet-wheel for actuating it, a spring-controlled oscillatory lever 74 for shifting the pawl to operative engagement with the ratchet-wheel, a spring-controlled pawl 70 depending from said lever and provided with a projection, an oscillatory lever 65, a pawl carried thereby and adapted to engage with said projection for imparting motion to the lever 74 when the lever 65 is actuated, and a manually operated means for actuating the lever 65.



3. A fare-indicator comprising an indicating disk for extra fares, an indicating disk for checking the extra fares, a ratchet-wheel 81 connected with the disk for extra fares, a ratchet-wheel 85 connected with the disk for checking the extra fares, a spring-controlled pawl 78 adapted to engage with the ratchet wheel 81 for actuating it, an oscillatory lever 74 for actuating the pawl 78, a pawl 70 depending from the lever 74 and adapted to engage with the ratchet-wheel 85 for actuating it, said pawl 70 provided with a projection, an oscillatory lever 65, a pawl 68 carried by said oscillatory lever 65 and adapted to engage with said projection when the lever 65 is oscillated causing thereby the oscillation of the lever 74 in one direction and the actuation of the ratchet-wheels 81 and 85, and a manually operated means for operating the lever 65.

4. In a fare indicator, in combination, indicating means including a ratchet wheel and means for operating the ratchet wheel, comprising a pivoted lever, a pawl carried by the lever for engagement with the ratchet wheel, means for moving the lever in one direction to set the pawl upon the ratchet wheel, means for holding said lever against retrograde movement, means operable at the termination of the aforesaid movement of the lever to disengage said holding means, and means acting automatically to return the lever to normal position and at the same time to move the pawl therewith and actuate the ratchet wheel.

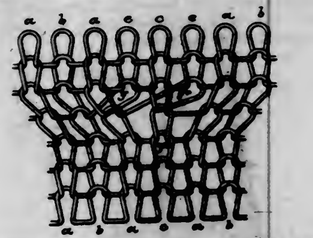
5. In a fare indicator, in combination, indicating means including a ratchet wheel, a pivoted operating lever, a pawl carried by the operating lever for engagement with the ratchet wheel, a detent constructed to engage and hold the ratchet wheel from backward movement and at the same time to engage and hold the pawl from movement out of engagement with the ratchet wheel, means operable to engage the pawl and move the same from its engagement with the ratchet wheel and at the same time to move the detent from engagement with the ratchet wheel and to permit of the aforesaid movement of the pawl, and means operable upon the disengagement of the pawl for returning the ratchet wheel to its normal position.

[Claim 6 not printed in the Gazette.]

901,264. KNITTED FABRIC AND MODE OF MAKING SAME. ROBERT W. SCOTT, Leeds Point, N. J., assignor of one-half to Louis N. D. Williams, Ogontz, Pa. Filed Oct. 30, 1905. Serial No. 285,160.

1. A knitted fabric comprising two ribbed webs, one with a greater number of wales than the other, the introduced wales in the latter web having their initial stitches drawn across wales in the other face of the web.

2. A knitted fabric comprising two ribbed webs, one with a greater number of wales than the other, the introduced wales being in pairs, one in each face and having their initial stitches crossed.



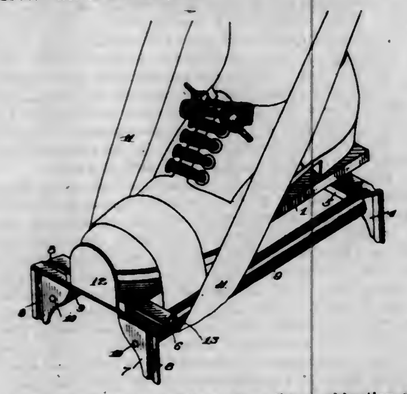
3. A knitted fabric comprising two ribbed webs, and having a continuous yarn common to both, one of the webs having a greater number of wales than the other, and the introduced wales in the latter web having their initial stitches drawn across wales in the other face of the web.

4. A knitted fabric comprising two ribbed webs and having a continuous yarn common to both, one of the webs having a greater number of wales than the other, the introduced wales being in pairs, one in each face and having their initial stitches crossed.

5. The mode herein described of producing a knitted fabric comprising two webs ribbed throughout but with more wales in one than in the other, said mode consisting in knitting upon two sets of needles the web having the lesser number of wales, introducing needles of one set between needles of the other set different from those between which they normally operate, forming initial stitches upon said introduced needles while they are in such abnormal position, and then restoring them to their normal operative position and continuing the formation of stitches.

[Claim 6 not printed in the Gazette.]

901,265. SHOE-POLISHING APPARATUS. EDGAR M. SCRANTON, Rochester, N. Y., assignor of one-half to Clarence W. McKay, Rochester, N. Y. Filed Aug. 14, 1907. Serial No. 388,462.



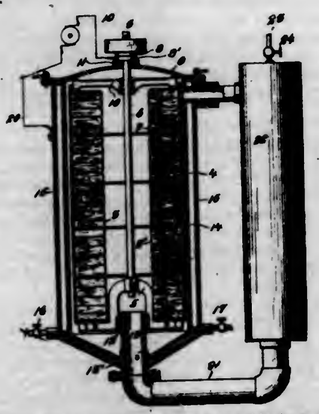
1. In a shoe polishing apparatus, the combination with a platform upon which the shoe is adapted to rest and a support therefor, of rollers extending longitudinally of the platform upon both sides thereof and journaled in the support and a laterally extending abutment arranged at one end of the platform to project over one of the rollers at a point removed from its journal bearing for limiting the movement of a polishing cloth extending beneath the rollers and over the shoe and preventing it from passing beyond the end of the latter.

2. In a shoe polishing apparatus, the combination with a platform and rollers extending longitudinally thereof, of a support arranged at one end of the platform comprising a plate secured to the latter and having downwardly extending members forming legs and an upwardly projecting portion on the plate located intermediately of the legs forming a guard arranged above the surface of the platform.

3. In a shoe polishing apparatus, the combination with a platform and rollers extending longitudinally thereof, of a support arranged at one end of the platform comprising a plate secured thereto, having downwardly extending portions on its outerside forming legs, an upwardly projecting portion intermediate the latter forming a guard arranged to extend above the surface of the platform, and a flanged portion at its inner edge forming an abutment extending laterally of the platform in rear of the guard.

4. In a shoe polishing apparatus, the combination with a platform and rollers extending longitudinally thereof, of a support arranged at one end of the platform comprising a plate having downwardly extending portions forming legs at one edge thereof, the opposite or inner edge being flanged forming a rounded abutment for limiting the movement of a polishing cloth extending under the rollers and on the platform.

901,266. PROCESS OF PREPARING MERCHANTABLE IRON FROM TIN-PLATE SCRAP. ELMER A. SPERRY, Brooklyn, N. Y. Filed Mar. 13, 1908. Serial No. 420,946.



1. The process of preparing merchantable iron from tin plate scrap which consists in treating the scrap with a suitable reagent for removing the tin and treating the resulting black scrap with hydrogen for removing the residuary reagent or reaction products therefrom.

2. The process of preparing merchantable iron from tin plate scrap which consists in treating the scrap with a suitable reagent for removing the tin, and treating the resulting black scrap with nascent hydrogen for removing the residuary reagent or reaction products therefrom.

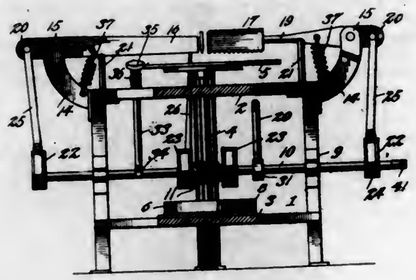
3. The process of preparing merchantable iron from tin plate scrap which consists in treating the scrap with a suitable reagent for removing the tin, and treating the resulting black scrap with electric current in an electrolyte suitable for removing the residuary reagent or reaction products therefrom.

4. The process of preparing merchantable iron from tin plate scrap which consists in treating the scrap with a suitable reagent for removing the tin, and treating the resulting black scrap with an electric current coupled as cathode in an alkaline electrolyte.

5. The process of preparing merchantable iron from tin plate scrap which consists in treating the scrap with a suitable reagent for removing the tin, treating the resulting black scrap with an electric current in a suitable electrolyte, rinsing and drying.

[Claims 6 to 21 not printed in the Gazette.]

901,267. MEAT CHOPPING AND POUNDING MACHINE. ORANGE TALTON, Krebs, Okla. Filed Feb. 1, 1907. Serial No. 355,228.



1. A machine of the class described comprising a main frame, a motor supported thereby, a table revolved by the motor, a series of meat treating implements supported by the frame and operative above the table, said implements being arranged respectively at right angles to each other, a single means for simultaneously operating said implements in one direction by the motor, and means for independently operating said implements in the opposite direction.

2. A machine of the class described comprising a main frame, a motor supported thereby, a table revolved by the motor, a series of meat treating implements supported by the frame and operative above the table, means for simultaneously operating said implements in one direction, means for independently operating said implements in the opposite direction, and means for limiting the movements of said implements toward the table.

3. A machine of the class described comprising a main frame, a motor carried thereby, a main shaft supported in the frame and operated by the motor, a table secured upon the shaft, an auxiliary shaft driven by the main shaft, a series of independent meat treating implements supported by the frame and operative above the table, said implements being arranged at respective right angles with relation to each other, means actuated by the auxiliary shaft for simultaneously operating all of said implements in one direction, means for independently operating each of said implements in the opposite direction, and pins carried by the main frame and arranged to limit the movement of the implements toward the table.

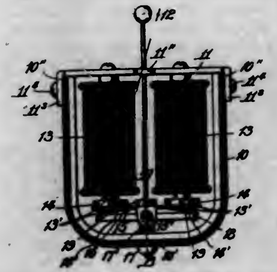
4. A machine of the class described comprising a main frame, a motor carried thereby, a main shaft supported in the frame and operated by the motor, a table secured upon said shaft, a series of independent meat treating implements supported by the frame and operative above the table, said implements being arranged at respective right angles with relation to each other, means actuated by the auxiliary shaft for simultaneously operating all of said implements in one direction, means for independently operating said implements in the opposite direction, and a braking means for the auxiliary shaft.

5. A machine of the class described comprising a main frame, a main shaft mounted thereon, a motor carried by the frame and arranged to carry the shaft, a table carried by the main shaft, a plurality of independently mounted knives carried by the main frame and overlying the table, a pounder supported by the main frame and overlying the table, each of said knives and the pounder being arranged at right angles to each other, means for simultaneously operating said knives and pounder in one direction in the operation of the motor, and means for operating the knives and pounder in the opposite direction.

901,268. INSECTICIDE. HENRI TERRISSE, Vernier, near Geneva, Switzerland, assignor to The Société Anonyme de la Thyoleine, Vernier, near Geneva, Switzerland. Filed Aug. 7, 1906. Serial No. 329,599.

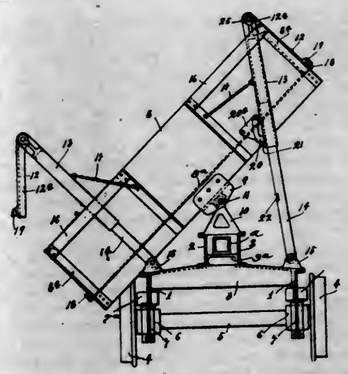
An insecticide consisting of ten (10) parts of ichthyol sulfonic acid, three (3) parts of glycerin and ten (10) parts of soap.

901,269. TELEPHONE-RINGER. HENRY TIDEMAN, Menominee, Mich. Filed July 6, 1907. Serial No. 382,429.



In a telephone ringer, a U-shaped permanent magnet; a magnetic yoke having its ends bent at right angles and extending parallel to the ends of said U-shaped magnet for attachment thereto; electromagnets mounted upon said yoke and lying within the U of said permanent magnet; a non-magnetic yoke rigidly attached at its ends to the free ends of the cores of said electromagnets and bearing trunnions at its median part; an armature carried by said trunnions; a tapper rod secured to said armature and passing through said magnetic yoke; and an adjusting screw passing through the center of said permanent magnet and adapted to flex said non-magnetic yoke whereby the adjustment of said armature to the ends of said cores may be determined, substantially as described.

901,270. DUMPING-CAR. EDWIN C. WASHBURN, Minneapolis, Minn. Filed Aug. 19, 1907. Serial No. 389,197.



1. The combination with a truck and a box centrally hinged thereto for lateral dumping movements, said box having displaceable sides, of extensible legs pivotally connected to the frame of said truck and to said displaceable sides, and means for locking said box to one or more of the sections of said extensible legs, substantially as described.

2. The combination with a truck and a box centrally hinged thereto for lateral dumping movements, said box

having displaceable sides, of oppositely disposed extensible legs having their lower sections pivoted to the frame of said truck and having their upper sections connected to the adjacent displaceable sides of said box, and means for locking said box against movement with respect to said lower leg sections and the coöperating leg sections against movement with respect to each other, substantially as described.

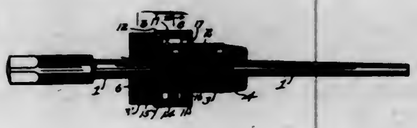
3. The combination with a truck and a box centrally hinged thereto for lateral dumping movements, said box having displaceable sides and interlocking devices for securing said sides in closed positions when said box is in normal position, of telescopic leg sections connecting the frame of said truck to said displaceable sides and arranged to lift the same from operative positions, and lock devices on said box engageable with lock seats in the coöperating sections of certain of the said telescopic legs to lock said box in normal position and the said leg sections against telescopic movement, substantially as described.

4. A car having a rocking body provided with a movable door, and a telescopic direct connection between said door and the frame of the truck arranged to hold said door away from the load, substantially as described.

5. A car having a rocking body provided with side doors and telescopic door actuating legs directly connected thereto and arranged to hold said doors away from the load in the dumping action, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

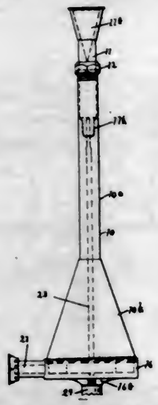
901,271. TUBE-EXPANDER. GUSTAV WIEDEKE, Sr., Dayton, Ohio, assignor of one-third to Otto Wiedeke, one-third to Gustav Wiedeke, Jr., and one-third to himself, Dayton, Ohio. Filed May 4, 1908. Serial No. 430,631.



1. In a tube expander, the combination with a roller cage having an enlargement at one end thereof providing two inwardly-lying annular shoulders, a series of expanding rollers mounted in slots in said roller cage, and a mandrel projected through a longitudinal bore in the roller cage and adapted to expand the rollers, of a reversible gage collar surrounding the roller cage adjacent to the enlarged end thereof, said gage collar having at one end an inwardly-lying annular flange flush with that end of said collar and adapted to be reversed in its position on the roller cage and to engage either of the inwardly-lying annular shoulders on the enlarged end of the roller cage.

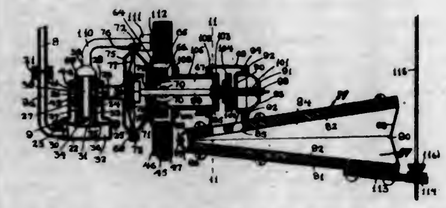
2. In a tube expander, the combination with a roller cage having a series of expanding rollers mounted therein and one end thereof having two inwardly-lying annular shoulders, and a mandrel projected through the longitudinal bore of the roller cage, of a reversible gage collar, one end of which terminates in an inwardly-lying annular flange flush with that end of said collar, the end of the collar having said flange being adapted to abut against the innermost annular shoulder on the roller cage in one of the positions of said collar, and the other end of said collar being adapted to abut against the outermost annular shoulder on the roller cage and to rest against the outer face of the inner shoulder in the other position of said collar, and whereby means are provided for utilizing a single tool in expanding tubes whose ends are projected different distances through the orifices in a tube sheet, substantially as specified.

901,272. CLEANING DEVICE. JOHN C. WILLIS, Herkimer, N. Y. Filed Jan. 10, 1908. Serial No. 410,253.



The combination in a device of the character described of a hollow body, a rotatable nozzle, a motor connected with and serving to rotate the nozzle, a porous bulb provided on the discharge end of the nozzle and means for supplying air or fluid through the motor and the body to the nozzle, substantially as set forth.

901,273. PNEUMATIC ACTION FOR MUSICAL INSTRUMENTS. MORRIS S. WRIGHT, Worcester, Mass. Filed Oct. 31, 1904. Serial No. 230,657.



1. In a pneumatic action and in combination, a supporting frame, a tracker board mounted on the frame, a pneumatic a pipe connected at one end to a duct of the tracker board, a pipe connected at one end to said pneumatic, the opposite ends of the pipes having complementary flanges means for holding one flange in fixed position, a plate overlapping the other flange, and means mounted upon the said frame for compressing said plate against the flange.

2. In a pneumatic action, the combination of a series of air conducting pipes each formed in sections, flanges on the opposing ends of said sections, a block abutting the flanges on one section of said pipes, said block being mounted on a stationary part of the instrument whereby the same is supported in proper relation thereto, intervening gaskets between said flanges, a plate having transverse slots extending partially across the plate forming a series of elastic sections having their free ends overlapping the flanges on the other sections of said pipes, and screws held in said block for compressing said elastic plates on said flanges.

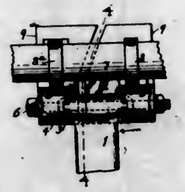
3. In a pneumatic action, the combination with a series of pneumatics, of a single vacuum chamber for said pneumatics, consisting of oppositely disposed trays having overlapping flanges, and provided with a series of holes in the opposite walls in alinement, and communicating with said pneumatics.

4. In a pneumatic action, the combination with a series of pneumatics, of a common vacuum chamber for said pneumatics consisting of a covered pan or tray having alined holes in its opposite walls for said pneumatics, and a series of spacing rings inclosed in said chamber.

5. In a pneumatic action, the combination with a series of pneumatics, of a common vacuum chamber communicating with said pneumatics, and consisting of a covered pan or tray having alined holes in its opposite walls, with the walls of said chamber offset concentrically with said holes.

[Claims 6 to 107 not printed in the Gazette.]

901,274. THILL-COUPLING. JOHN S. ALDEN, Nickleville, Pa., assignor of one-half to Mary E. Fichte, Nickleville, Pa. Filed Oct. 12, 1907. Serial No. 397,220.



The combination with the axle and thill of a vehicle, of two axle clips mounted on the axle and axle clip ties, each of which is formed with a draft lug, a thill head provided with trunnions journaled in said draft lugs, the clip ties being formed with angularly opposing edges, one tie widening at the front side of the axle and the other tie being widened at the rear side of the axle, and each tie being formed in its wider portion with a laterally elongated opening to receive one member of a clip and being also formed in its other portion with an opening to receive the other member of a clip the draft lugs being formed with threaded apertures and a tie bolt working in said apertures, as and for the purpose set forth.

901,275. MUSIC-ROLL AND APPARATUS TO BE USED IN CONNECTION THEREWITH. HENRY P. BALL, New York, N. Y., assignor of one-half to Samuel Insull, Chicago, Ill. Filed Jan. 22, 1907. Serial No. 353,470.



1. A music roll having a clutch member at each end.

2. A music roll having a winged driving spindle at each end.

3. A music roll spool having a wing pin at each end.

4. A music spool having a pin at each end and wings on said pins which gradually taper off to nothing at the end of the pin.

5. A bearing for a music roll consisting of a member having a tapered recess, and another member having a wing pin with tapered wings.

[Claim 6 not printed in the Gazette.]

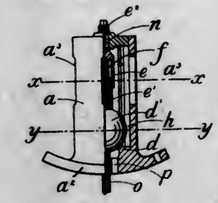
901,276. DENTAL PLUGGER. JOHN C. BETTS, Philadelphia, Pa. Filed Apr. 18, 1907. Serial No. 368,839.

1. In a dental tool, a casing formed with two compartments separated by an apertured mid wall, the compartments having relatively opposite open ends a cylindrical body disposed in one compartment, said body being formed with a cam groove, a handle secured to said casing and to hold said body against longitudinal movement, said body carrying a spindle for attachment to an engine shaft, a tool holder disposed in the other compartment for longitudinal reciprocating movement and a pin projecting laterally from the inner end of said holder through the opening in the mid wall, said pin having its end engaged in the cam groove.



2. In a dental tool, a casing formed with two compartments, separated by an apertured mid wall, the compartments having relatively opposite open ends, a tubular handle engaged in the open end of one compartment, a sleeve engaged in the open end of the other compartment, a cylindrical body disposed for rotation in the first compartment, said body being formed with a cam groove, a tool holder mounted to slide in said sleeve and in the second compartment, a tool secured in said holder to move therewith and projecting beyond the sleeve, and a pin projecting laterally from the inner end of the tool holder through the aperture in the mid wall and into the cam groove of said cylindrical body.

901,277. VALVE FOR INTERNAL-COMBUSTION ENGINES. JOHN C. BOURNE and GEORGE H. REES, London, England. Original application filed Mar. 4, 1907, Serial No. 360,300. Divided and this application filed Apr. 24, 1908. Serial No. 429,051.



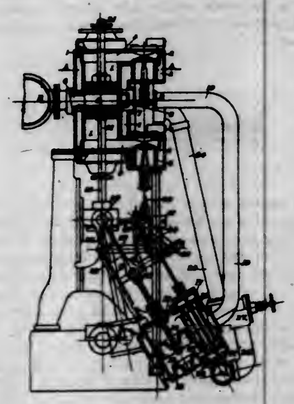
An exhaust valve for internal combustion engines, comprising a casing, a seating formed in said casing, guide ribs formed in said casing, a ball located in said casing, a spring urged plunger adapted to force the ball on to the said seating, and an adjustable guide socket for said spring-urged plunger, and a rod adapted to lift said ball off said seating.

901,278. INTERNAL-COMBUSTION ENGINE. JOHN CLAY, Rock Ferry, England, assignor to The Empire Oil Engine Syndicate Limited, London, England. Filed Mar. 27, 1905. Serial No. 252,395.

1. In an internal combustion engine, a cylinder, a piston working therein, a mechanically operated valve for regulating and admitting combustible mixture to the cylinder, a fluid pressure reservoir, a separate reversing valve, communicating with the cylinder and the said reservoir by passages, and adapted to act as a combined inlet and exhaust valve, a link and double eccentric motion for operating said valve, variable throw lever mechanism connected with the combustible mixture supply controlling valve for varying the stroke of the same.

2. In an internal combustion engine, a cylinder 1, a piston 5 working in it, a mechanically worked valve 11 for distributing and controlling the supply of combustible mixture to the cylinder, a pump 20 for supplying the combustible mixture, the distribution and flow of which is controlled by said valve, a mechanically moved valve 8 for distributing and controlling the supply of air to the cylin-

der, and an air pump 15 for supplying air to the cylinder, the distribution and flow of which is controlled by said valve 8.



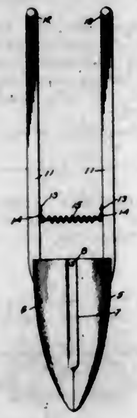
3. In an internal combustion engine, the combination of cylinder 1; a piston 5; said cylinder having fluid inlet conduits at the ends thereof, and an exhaust port 6 at the center thereof; an automatic non-return valve 2 in each inlet conduit; a valve chest 3 below the valve 2; a valve 8 for controlling and distributing the supply of air; a valve casing 7; pipes 9 communicating between the valve casing 7 and the valve casing 3; a valve 11 for regulating and controlling the supply of combustible fluid; a casing 10 in which the valve 11 works; and pipes 12 communicating between the valve casing 10 and the valve casings 3 at each end; substantially as set forth.

4. In an internal combustion engine, the combination of cylinder 1, a piston 5; said cylinder having fluid inlet conduits at the ends thereof, and an exhaust port 6 at the center thereof; an automatic non-return valve 2 in each of the ports 4; a valve chest 3 below the valves 2; a valve 8 for controlling and distributing the supply of air; a valve casing 7; pipes 9 communicating between the valve casing 7 and the valve casing 3; a valve 11 for regulating and controlling the supply of combustible fluid; a casing 10 in which the valve 11 works; pipes 12 communicating between the valve casing 10 and the valve casings 3; an air pump 15 operated from the engine; a conduit 19 connecting the air pump delivery with the valve casing 7; a combustible mixture pump 20 operated by the engine; and a conduit 24 connecting the combustion pump delivery with the valve casing 10; substantially as set forth.

5. In an internal combustion engine, the combination of cylinder 1, a piston 5; said cylinder having fluid inlet conduits at the ends thereof, and an exhaust port 6 at the center thereof; an automatic non-return valve 2 in each of the ports 4; a valve chest 3 below the valve 2; a valve 8 for controlling and distributing the supply of air; a valve casing 7; pipes 9 communicating between the valve casing 7 and the valve casing 3; a valve 11 for regulating and controlling the supply of combustible fluid; a casing 10 in which the valve 11 works; pipes 12 communicating between the valve casing 10 and the valve casings 3 at each end; and a reversing valve 58.

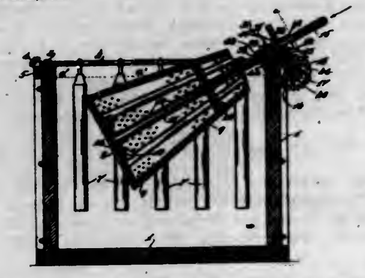
901,279. TOBACCO-PLANTER. JOHN T. CRENSHAW, Jetersville, Va., assignor of one-half to Joseph McCarthy, Appleton, Wis. Filed Feb. 18, 1907. Serial No. 357,907.

An implement of the class described comprising pivoted bowl forming members, each of the said members being formed with a major concavity for receiving a plant and a minor concavity for receiving the roots of the plant, the portions of the walls in which the minor concavities are formed being of considerably greater thickness than the



portions of the walls in which the major concavities are formed.

901,280. ELECTROPLATING APPARATUS. JOHN T. DANIELS, Newark, N. J., assignor of one-half to The Hanson & Van Winkle Company, Newark, N. J., a Corporation of New Jersey. Filed May 11, 1908. Serial No. 432,071.



1. An electroplating apparatus comprising a stationary tank containing an electrolytic solution, a permeable container suspended from one side in said solution and rotatable therein on an axis at an angle to the level of the surface of said solution, means to rotate said container on said axis, an anode in said solution outside of said container, and a cathode within said container.

2. An electroplating apparatus comprising a stationary tank containing an electrolytic solution, a permeable container suspended from one side in said solution and rotatable on an axis at an oblique angle to the level of the surface of said solution, means to rotate said container on said axis, an anode in said solution outside of said container, and a cathode within said container.

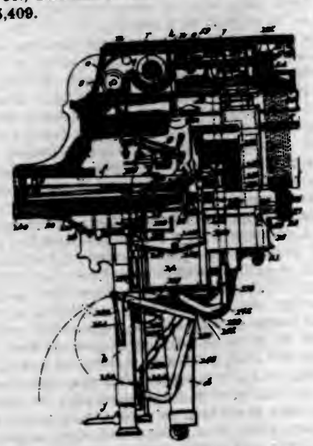
3. An electroplating apparatus comprising a stationary tank containing an electrolytic solution, a permeable container suspended from one side in said solution and rotatable on an axis at an angle to the level of the surface of said solution, means to rotate said container on said axis, an anode in said solution outside of said container, and within said container a cathode concentric with said axis and extending radially in a plurality of directions therefrom.

4. An electroplating apparatus comprising a stationary tank containing an electrolytic solution, a permeable container suspended from one side in said solution and rotatable on an axis at an angle to the level of the surface of said solution, means to rotate said container on said axis, a stationary anode in said solution outside of said container, and within and constituting part of the inner surface of said container a cathode concentric with said axis and extending radially in a plurality of directions therefrom.

5. An electroplating apparatus comprising a stationary tank containing an electrolytic solution, a permeable container suspended from one side in said solution and rotatable on an axis at an angle to the level of the surface of said solution, means to rotate said container on said axis, an anode in said solution outside of said container, and within and at the bottom of said container, a cathode extending radially from said axis.

[Claims 6 to 14 not printed in the Gazette.]

901,281. SELF-PLAYING GRAND PIANO. JOHN W. DARLEY, Jr., Baltimore, Md., assignor to Ernest J. Knabe, Jr., Baltimore, Md. Filed July 9, 1906. Serial No. 325,409.



1. In a self-playing grand piano, the combination with the frame, horizontal sounding board, key bed, and keys thereof, pumping mechanism secured and supported upon the frame above the sounding board, a casing above the key bed a pneumatic motor for actuating the music rolls secured in said casing and provided with a controlling valve mechanism, pneumatic connections for the said motor, and a tempo lever secured to said casing and connected to actuate said valve mechanism, substantially as described.

2. In a self-playing grand piano, the combination with the frame, horizontal sounding board, key-board, and keys thereof, pumping mechanism secured and supported upon the frame above the sounding board, a casing above the key bed a pneumatic motor for actuating the music rolls secured in said casing, and provided with a controlling valve mechanism, pneumatic connections for the said motor, and means for alternating the music roll actuating connections of the said motor, and a controlling handle therefor mounted in said casing, substantially as described.

3. A self-playing grand piano, having in combination with the string frame and piano keys thereof, a tracker board and music roll mechanism a movable casing in which said mechanism is mounted, located above the said string frame, an actuating motor therefor, and controlling mechanism therefor, including a tempo lever mounted in said casing, substantially as described.

4. A self-playing grand piano, having in combination with a string frame and piano keys thereof, a tracker board and music roll mechanism a movable casing in which said mechanism is mounted, located above the said string frame, an actuating motor therefor, controlling mechanism therefor, and means for reversing the movement of the rolls including a lever mounted in said casing, substantially as described.

5. A self-playing grand piano, having in combination with the string frame a motor for actuating the music rolls, a movable casing in which said rolls are mounted, located above the said string frame, and controlling mechanism for the said motor mounted in said casing, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

901,282. PUMP FOR OIL-WELLS. CHARLES DICKINSON, Maricopa, Cal. Filed Dec. 20, 1907. Serial No. 407,449.



1. In a pump for oil wells, a working barrel adapted to be removably seated at its upper end by frictional contact at the lower end of the casing, a perforated plug removably secured in the lower end of said barrel having a shoulder at its lower end for engaging with the lower end of said barrel and provided with a valve seat at the upper end of said perforation, and reciprocatory pumping mechanism connected with said plug so as to remove the latter by unseating said upper end when the pumping mechanism is drawn upward beyond its normal limit.

2. In a pump for oil wells, a working barrel adapted to be removably seated at its upper end by frictional contact at the lower end of the casing, a shouldered perforated plug secured in the lower end of said barrel and having a valve seat at its upper end, one of said shoulders engaging with the lower end of the working barrel, a cage engaging with the other shoulder, a rod connected with said cage having its upper end provided with a head, and a valved reciprocatory plunger within the working barrel having its lower end provided with shoulders which are adapted to engage with said head and lift the valve seat and unseat said working barrel when the plunger is drawn upward.

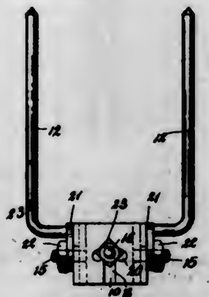
3. In a pump for oil wells, a casing provided with a tapering seat at its lower end, a yielding metallic packing within said seat having an upwardly expanded bore, a working barrel therein having its upper end enlarged externally and detachably engaging with said packing by frictional contact, and a reciprocatory pumping plunger within the working barrel and of considerably less internal diameter than the casing and connected with the working barrel at its lower end, whereby the latter may be unseated and drawn upward when the pumping plunger is drawn upward.

4. In a pump for oil wells, a casing provided with a tapering valve seat in its lower end, a working barrel therein having an enlarged tapering upper end to fit said seat and be secured therein by frictional contact, a standing valve secured to the lower end of said working barrel, and provided with a headed rod, a hollow plunger reciprocally mounted in the barrel provided with a valve at

its upper end and with a shoulder at its lower end adapted to engage said head, a stem secured to the upper end of said plunger, and a sinker secured to the upper end of said stem of greater diameter at its lower end than the top of the working barrel and adapted to engage with the upper end of the working barrel and drive it into its seat, the length of said stem being such that the lower end of the plunger will be at a distance above the standing valve when the sinker is in contact with the top of the working barrel.

5. In a pump for oil wells, a casing, a shoe secured to the lower end of the casing having a sharp cutting edge at its lower end, a shoulder at its upper end for engaging with the end of the casing, and a tapering bore, a yielding metallic packing in said bore having an upwardly expanding bore, a working barrel having its upper end enlarged externally to engage with said packing, a valve secured in the lower end of said barrel, reciprocatory pumping mechanism within said barrel connected with said valve and adapted to remove the barrel by withdrawing said mechanism, and means connected with said mechanism for engaging with the upper end of the barrel and forcing the same into said packing.

901,283. SWITCH-LAMP HOLDER. FRANK W. EDMUNDS, West Nyack, N. Y. Filed Jan. 22, 1908. Serial No. 412,189.

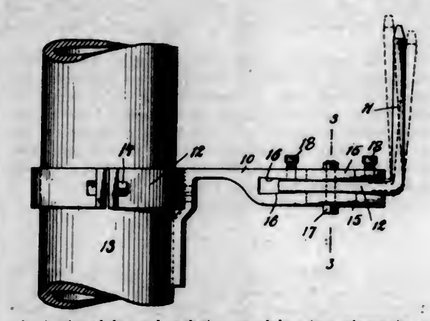


1. A switch lamp holder comprising a central hub or supporting member, a frame piece carried thereby and a lamp carrying device in engagement with said frame piece, the said holder being provided with means for adjusting the frame piece with respect to the hub in a vertical plane and with means for adjusting the lamp carrying device with respect to the frame piece in a vertical plane at right angles to the first said plane of adjustment.

2. A switch lamp holder comprising a central hub having two pairs of oppositely arranged studs projecting therefrom, a frame piece fitted around the said hub and provided with openings for receiving the said studs, a lamp carrying device pivotally mounted upon one pair of the said oppositely disposed studs, nuts upon the last said studs for securing the said lamp carrying device against the frame piece and nuts upon the other pair of studs for locking the frame piece to the central hub.

3. In a switch lamp holder, the combination with a central hub having a recess for receiving the end of a switch post and provided with a pair of oppositely arranged bosses and studs extending therefrom, and with another pair of studs extending from the said central hub at right angles with the first said studs, of a frame piece arranged to surround the said central hub and provided with openings for receiving the said studs, the openings for receiving the first pair of studs having enlarged upper ends to permit lateral movements in one direction of the said hub within the said frame piece, a lamp carrying device comprising disk portions and uprising arms, the disk portions being adapted to be mounted upon the second pair of said studs, and nuts upon both said pairs of studs for permitting adjustments of the various parts and for securing them in their adjusted positions.

901,284. SIGNAL-LAMP BRACKET. FRANK W. EDMUNDS, West Nyack, N. Y. Filed Jan. 22, 1908. Serial No. 412,190.



1. A signal lamp bracket comprising two elements, one adapted to be secured to a signal post and the other arranged to support a signal lamp, said elements having co-acting faces one of which is crowned with respect to the other, whereby a rocking connection is formed between them, a pivotal bolt securing the two said elements together, the axis of said bolt being arranged at substantially right angles to the said co-acting faces, and adjusting means including another bolt for adjusting the said parts in a direction transverse with respect to their co-acting faces, said bolt also constituting in part a means for locking the parts in their adjusted position.

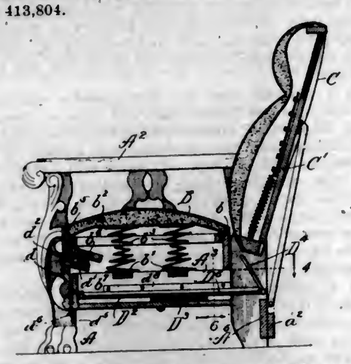
2. A signal lamp bracket comprising two elements, one adapted to be secured to a signal post and the other arranged to support a signal lamp, the said elements provided with co-acting portions constituting a rocking connection, whereby relative rocking movements may be obtained between the two said parts, and bolts upon either side of the center of such rocking connection, the relative adjustment of which is adapted to produce such rocking movements, the said bolts also serving as locking means for securing the parts together after they have been thus adjusted, but having such engagement with the parts as to permit the said parts to have pivotal movements with respect to each other in a direction at right angles to the direction of the said rocking movements.

3. In a signal lamp bracket the combination with a supporting element adapted to be secured to a signal post, the said supporting element provided with an arm having a convex portion thereon, of a bracket arm having a plane portion arranged to engage said convex portion and pivoted to the supporting element about an axis at right angles to the face of such convex portion, and means for maintaining the parts in the positions to which they may be adjusted.

4. A signal lamp bracket comprising two elements, one adapted to be secured to a signal post and the other arranged to support a signal lamp, one of the said elements provided with a crowned portion or fulcrum, and the other with a portion having a substantially plane face which engages the same, and bolts located upon opposite sides of the said point of engagement for adjusting the relative position of the elements with respect to the said fulcrum, the said bolts having such engagement with the said elements as to permit the same to have a swinging movement with respect to each other parallel with the said plane face.

5. A signal lamp bracket comprising two elements, one adapted to be secured to a signal post and the other arranged to support a signal lamp, one of the said elements provided with a crowned portion or fulcrum and the other with a portion having a substantially plane face which engages the same, a pivotal bolt which passes through the two said elements and about which the said elements are permitted pivotal movements in a plane parallel with the said plane face, and a bolt which is adjustably mounted in one of the said elements and bears against the other said element in abutting relation substantially as set forth.

901,285. CHAIR. ANTON G. EYLES, Cedar Rapids, Iowa. Original application filed Apr. 5, 1907, Serial No. 366,531. Divided and this application filed Feb. 1, 1908. Serial No. 413,804.



1. The combination with a chair, of a slide, an actuating lever connected with said slide, a foot-rest movably connected with said slide, a cam connected with the foot-rest, and a cam connected with the main frame and co-acting with said first-named cam, whereby the foot-rest is tilted during the projection of the slide and is righted during the retraction of the slide.

2. The combination with a chair, of a slide, actuating means connected with the slide, a foot-rest pivotally connected with the slide and adapted to tilt with relation thereto, a cam connected with the foot-rest, and a cam connected with the frame of the chair and coacting with said first-named cam, whereby the foot-rest is automatically tilted during the projection of the slide through the medium of its actuating means.

3. The combination with a chair having a seat with a space beneath its front portion for housing a foot-rest, a slide, actuating means for said slide, a foot-rest pivotally connected with said slide and having a portion depending beneath its pivot and equipped with a cam, and a cam connected with the frame of the chair and coacting with said first-named cam, whereby the foot-rest is tilted with relation to the slide during the projection of the slide through the medium of its actuating means.

4. In a chair, the combination of a main frame, a seat supported therein and formed at its front portion with a recess for receiving a foot-rest, a slide connected with the main frame, slide-actuating means, and a foot-rest having a normally vertical portion pivotally connected with said slide and having a normally rearwardly-declining upper portion housed within said recess.

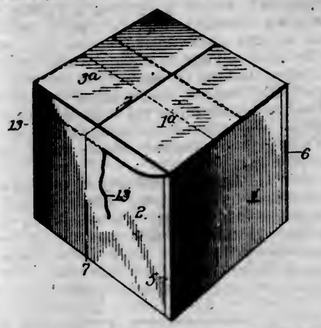
5. In a chair, the combination of a main frame, a seat supported therein and having its front portion provided with a recess, a slide, actuating means for said slide, a foot-rest having a vertical portion pivotally connected at an intermediate point with said slide and having a rearwardly-declining portion housed within said recess, and cam connections between the lower portion of the vertical member of the foot-rest and the front portion of the main frame.

[Claim 6 not printed in the Gazette.]

901,286. PAPER BOX. JEFFREY T. FERRES and WALTER H. FAIRCHILD, Anderson, Ind., assignors of one-half to J. W. Sefton Manufacturing Company, Anderson, Ind., a Corporation of Indiana. Filed Aug. 9, 1906. Serial No. 329,893.

1. In a paper box, the combination, with the two ply side walls and ends thereof, of a tape or string positioned at the inner surface of a plurality of the outer set of side walls whereby upon pulling the tape such walls are severed and the box thereby opened.

2. In a paper box, the combination, with the two ply side walls and ends thereof, of a tape or string secured to the inner surface of a plurality of the outer set of side walls and having an end extending extraneous of the box, whereby upon pulling the tape such walls are severed and the box thereby opened.



3. In a paper box, the combination, with the side walls and ends thereof, of a tape or string glued along its length to the inner surface of a plurality of the side walls and having an end extending extraneous of the box, whereby upon pulling the tape such walls are severed and the box thereby opened.

4. In a paper box, the combination of the side walls and end extensions which are secured together to form the ends of the box and to seal the same, and a tape or string positioned at the inner surface of a plurality of the side walls near one end of the box and adapted to be pulled to sever such side walls whereby the box is opened and whereby said end may still serve as a cover in connection with the upper portion of the box so severed.

5. In a paper box, the combination of the side walls and end extensions which are secured together to form the ends of the box and to seal the same, and a tape or string arranged on the inner surface of three of the side walls near one end thereof and adapted to be pulled to sever such side walls, whereby the box is opened and whereby said end together with the upper portion of the box so severed may serve as a lid hinged on the remaining side wall of the box.

[Claims 6 to 12 not printed in the Gazette.]

901,287. DEVICE FOR CLEANING OIL-WELLS. FRANCIS A. FLANEGIN, Chautauqua, N. Y. Filed Sept. 30, 1907. Serial No. 395,058.



1. An oil well cleaner comprising a tubular reservoir for fluid and means for filling the same, a valve in the lower end of said reservoir, and a tubular nozzle attached to said valve having an extension to form a trip.

2. An oil well cleaner comprising a tubular reservoir for fluid and means for filling the same, a tubular valve in the lower end of said reservoir and means for opening the same, and a nozzle attached to said valve.

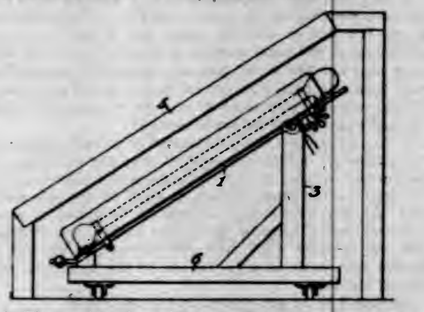
3. An oil well cleaner comprising a tubular reservoir and means for filling the same, an egress valve at the lower end of said reservoir and means for opening the same at the lower end of a well, and a nozzle on said egress valve having a plurality of openings for the fluid.

4. An oil well cleaner comprising a tubular reservoir for fluid and means for filling the same, a tubular valve in the lower end of said reservoir, spring catches on said reservoir to hold said valve in the raised position, and a nozzle attached to said valve.

5. An oil well cleaner comprising a tubular reservoir for fluid and means for filling the same, a tubular valve in the lower end of said reservoir, a projection on said tubular valve, spring catches on said reservoir to spring over said projection and hold said valve, and a nozzle on said valve having egress openings for said fluid.

[Claims 6 to 9 not printed in the Gazette.]

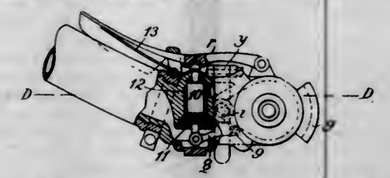
901,288. ADJUSTABLE SUPPORT FOR VAPOR-LAMPS. STANWOOD E. FLICHTNER, Englewood, N. J., assignor to Cooper Hewitt Electric Company, New York, N. Y., a Corporation of New York. Original application filed July 28, 1904, Serial No. 218,473. Divided and this application filed Jan. 9, 1905. Serial No. 240,274.



1. The combination with an inclined frame and a vapor electric lamp supported thereby, of a carriage supporting the frame and means for tilting the frame upon its carriage for starting purposes.

2. The combination with an inclined frame, of a vapor electric lamp supported thereby, a carriage supporting the frame, the lamp being pivoted to the frame near the bottom thereof and means whereby the lamp can be let down at the opposite end for starting purposes.

901,289. COUPLING FOR FLUID-PRESSURE CONDUITS. PETER FURTNER, Rosenheim, Germany. Filed May 7, 1908. Serial No. 431,465.



1. The combination, with a coupling head for fluid pressure conduits, of a valve stop and a releasing lever therefor pivoted on the coupling head and having its free end yieldingly pressed away from said coupling head and extending to a point where the said coupling head will be grasped when manipulating the same.

2. In a coupling-head for fluid pressure conduits, a valve-seat arranged across the fluid channel thereof, a coupling claw g' extending alongside the coupling head casing and opposite the valve-seat, and a spring pressed valve adapted to bear upon said valve-seat and provided with a stem extending outside the coupling head casing, in combination with a push-plate mounted on the side of the casing between the valve and the coupling claw and adapted to be pressed against the projecting end of the valve-stem.

3. In a coupling head for fluid pressure conduits, a valve seat arranged across the fluid channel thereof, a coupling claw, as g', extending outside the coupling head casing and opposite the valve-seat, and a spring-pressed valve adapted to bear upon said valve seat and provided with a stem extending outside the coupling head casing, in combination with a push-plate mounted on the outside of the casing between the valve and the coupling claw adapted to be pressed against the projecting end of the valve stem, the axes of the valve-seat and of the valve stem being transverse to the axis of the fluid channel.

4. In a coupling head for fluid pressure conduits, a valve seat arranged across the fluid channel thereof and having its axis transverse to the axis of the fluid channel, a coupling claw, as g', extending outside the coupling head casing and opposite the valve seat, and a spring-pressed valve adapted to rest upon said valve seat and provided with a stem transverse to the axis of the fluid conduit and extending outside the coupling head casing, in combination with a push-plate mounted on the outside of the casing between the valve and the coupling claw, and adapted to be pressed against the projecting end of the valve stem, means for locking said valve when it has been opened by the push-plate, and means for tripping the locking means.

5. In a coupling head for fluid pressure conduits, a closure valve, means for yieldingly closing the same, and a movable stop for holding said closure valve open, in combination with pressure actuated means arranged transversely of the fluid channel for holding said stop in engagement with the valve, and means for acting in opposition to said pressure actuated means and to trip the stop.

[Claims 6 to 8 not printed in the Gazette.]

901,290. HORSE RASP OR FOOT LEVELER. FRANK B. GARDNER, Lima, Ohio, assignor of one-half to Daniel H. Etling, Lima, Ohio. Filed May 25, 1908. Serial No. 434,904.



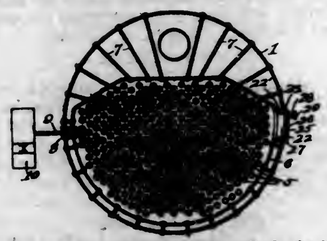
1. As a new article, an implement for the purposes described that comprises a head formed of a number of parallelly disposed bars, cross bolts that extend therethrough, the said bars having their edges toothed, the outermost and the central one of the said bars being extended at one end and the outer ones bent inwardly against the central extension whereby to form a tang for receiving the handle.

2. An implement of the character described that comprises a head formed of a series of parallelly disposed and fixedly held toothed bars, transversely disposed means for clamping the bars together, the center one of the said bars being extended at one end to form a tang, the corresponding ends of the outermost bars being bent inwardly and secured to the central extension.

3. As a new article an implement for the purposes described, comprising a head formed of a number of parallelly disposed bars, cross bolts that extend therethrough, washers on the bolts between the bars, said bars having their opposite edge toothed, the teeth having one edge at right angles to the body, the outer ones and the central one of the bars being extended at one end, and the outer ones being bent inwardly against the central extension whereby to form a tang for receiving a handle.

4. The combination of the series of bars, each having their opposite edges toothed, the teeth on one edge being of greater number than those on the other edge, the teeth on the several bars being alternately disposed in transverse direction, one edge of the teeth being at right angles to the bars, the other edge being at an angle thereto, the cross brace bolts, the spacing washers thereon, the outer most ones and the central one of the bars being extended, the outer extensions being bent inwardly against the central extension so as to form a tang and a handle fixed on the tang.

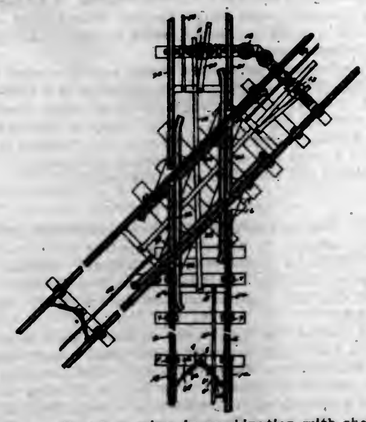
901,291. SMOKE-CONSUMER. WILLIAM M. GRANT, Richmond, Va., assignor of one-half to Michael J. O'Neil, Manchester, Va. Filed Oct. 15, 1907. Serial No. 397,545.



1. In an apparatus of the class described, the combination of a boiler provided with a secondary combustion chamber, formed near its center, said combustion chamber provided with openings opening into the outer atmosphere in the same horizontal plane and upon opposite sides, means for closing one of said openings, means for directing a forced draft through the other opening, and means for partly closing said last-mentioned opening.

2. In an apparatus of the class described, the combination of a boiler provided with a centrally-arranged combustion chamber and with flues extending longitudinally of said boiler and positioned at opposite sides of said combustion chamber, said combustion chamber provided with diametrically-arranged side-openings positioned near the center of the sides of the boiler, a pipe positioned in the center of one of the side-openings and having its inner end discharging into the combustion chamber, and valve means for closing around the pipe and preventing air from entering the combustion chamber only through said pipe, and the other side opening provided with valve means for regulating the flow of air into the combustion chamber in the same horizontal plane with the inner discharge end of the pipe.

901,292. RAILROAD-CROSSING. JESSE H. HAND, Ann Arbor, Mich., assignor of one-third to John L. Duffy and one-third to Alfred J. Paul, Ann Arbor, Mich. Filed Apr. 28, 1908. Serial No. 428,791.



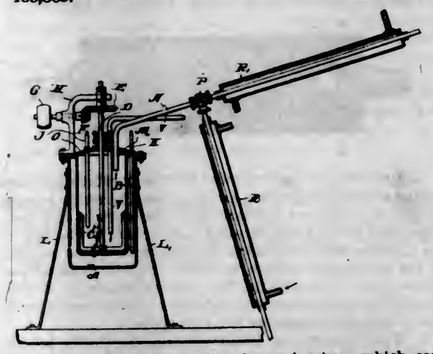
1. In a railroad crossing, in combination with short sections in fixed relation to the crossing main tracks, sections adapted to shift endwise into contact with the short sections, said shifting sections having scarfed ends adapted to engage the fixed rails of the main line, and an adjustable spreading lever by whose rigidity the scarfed ends are held in contact during the shifting operation, substantially as described.

2. In a railroad crossing, in combination with a fixed main line section, a movable rail section having scarfed ends adapted to engage the same, means for imparting lengthwise shifting movement thereto, whereby they are moved into contact with and away from said fixed section, a spreading lever capable of adjustment as to its path of travel, whereby it rigidly engages with uniform degree of pressure against the point of contact of the fixed section and the movable section, and means actuated from the same source as the movable section for simultaneously imparting actuation thereto, substantially as described.

3. In a railroad crossing, in combination with shifting rail provided with scarfed off ends adapted to remain in alinement with fixed main rails also provided with scarfed off ends, a spreading lever having telescoping members which are adjustable to produce a rigid member simultaneously with the contact of the fixed crossing rail and the shifting section of the main line, substantially as described.

4. In combination with a fixed main rail, a shifting rail provided with a scarfed end and an abutting end adapted to shift lengthwise of its axis with abutting engagement with the main rail, and adjustable means for maintaining the scarfed ends rigidly in engagement.

901,293. PROCESS FOR THE PREPARATION OF BORNEOL ESTERS FROM TURPENTINE. JOSEF HERTKORN, Berlin, Germany. Filed June 1, 1908. Serial No. 435,889.



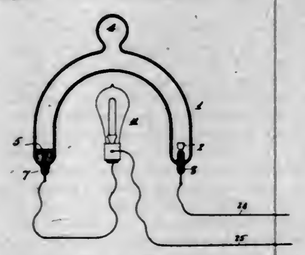
1. The process of preparing borneol esters, which consists in heating a mixture of oil of turpentine with an alcohol and an acid anhydrid at from 120° to 140° C. for several hours, distilling off the uncombined alcohol and water formed by the reaction, then heating the mixture to from 170° to 180° C. and purifying the product, substantially as described.

2. The process of preparing borneol esters, which consists in mixing oil of turpentine with alcohol and boric acid anhydrid, heating the same until the alcohol has become esterified, distilling off the water and uncombined alcohol, slowly heating up to about 135° C., and allowing the volatile products to escape, finally heating the mass up to 176° C. and purifying the residual product containing borneol esters, substantially as described.

901,294. APPARATUS FOR ELECTRIC LIGHTING. PETER C. HEWITT, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, a Corporation of New York. Original application filed Apr. 5, 1900, Serial No. 11,608. Divided and this application filed May 3, 1902, Serial No. 105,723. Renewed Apr. 15, 1908. Serial No. 427,208.

1. The combination with a U-shaped vapor lamp having electrodes, at least one of which is vaporizable, the oper-

ating position of the said lamp being one in which the arms of the U are lower than the bend, of a cooling chamber located above the bend and a neck or constricted portion connecting the cooling chamber and the main body of the lamp.



2. In combination, a vapor lamp in the shape of an arc or arch, the said lamp being adapted to give a definite spectrum, and a lamp adapted to give a different spectrum, the last named lamp being located within the arc or arch of the other lamp.

3. In combination, a mercury vapor lamp, in the shape of an arc or arch, and an incandescent lamp in series therewith, the said incandescent lamp being located within the arc or arch of the mercury vapor lamp.

901,295. PRINTING OR PLATE CYLINDER FOR ROTARY PRINTING-PRESSES. WILLIS K. HODGMAN, Taunton, Mass., assignor to Huber-Hodgman Printing Press Company, Taunton, Mass., a Corporation of Massachusetts. Filed Apr. 18, 1907. Serial No. 368,810.



1. A printing or plate cylinder for rotary printing presses having a series of parallel, arcuate, metallic strips secured thereto at their end portions and intermediate such portions, said strips being disposed non-parallel to the axis of the cylinder and conforming in curvature to that portion of the cylindrical surface to which they are applied and spaced apart to provide holding grooves adapted to receive therein securing means for printing or other plates to be fastened to the surface of the said strips.

2. A printing or plate cylinder for rotary printing presses having a series of parallel, metallic strips fixedly secured to the surface of said cylinder at their end portions and also intermediate such portions, said strips conforming in shape to that portion of the cylinder to which they are applied and spaced apart to provide holding grooves adapted to receive therein securing means for printing or other plates to be fastened to the surface of said strips.

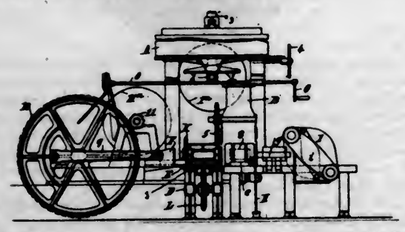
3. A printing or plate cylinder for rotary printing presses having a series of parallel, metallic, strips fixedly positioned upon said cylinder, said strips conforming in curvature to and contacting throughout their length with that portion of the curved surface of the cylinder to which they are applied, said strips being secured to such surface at their ends and at intermediate points in their length, and spaced apart to provide holding grooves, the edges of said strips being shaped to receive and retain from outward movement securing means for printing or other plates to be fastened to the surface of the said strips.

4. A printing or plate cylinder for rotary printing presses having a series of parallel, metallic strips fixedly secured thereto, said strips being spaced slightly apart to provide holding grooves, each strip conforming in curvature to and contacting at its ends and at one or more intermediate points with the curved surface of the cylinder and provided with means to secure it to the cylinder at its ends and at such intermediate point or points, and of reduced dimension in cross section at or toward its lower face, whereby said grooves are enlarged toward their bases and are adapted to receive for longitudinal movement therein but to retain from outward movement securing means for printing or other plates to be fastened to the surface of the said strips.

5. A printing or plate cylinder for rotary printing presses having elongated, metallic, helically shaped strips secured thereto and spaced apart to provide grooves disposed non-parallel to the axis of the cylinder, said grooves being adapted to receive therein securing means for printing or other plates to be secured to the surface of the strips.

[Claims 6 to 8 not printed in the Gazette.]

901,296. MACHINE FOR MAKING BLOCKS, PLATES, &c., FROM PLASTIC MATERIALS. CHARLES M. C. HUGHES and THOMAS H. QUINLAN, London, and ROBERT MIDDLETON, Leeds, England, assignors to Cork Asphalt Limited, London, England, a Company of Great Britain. Filed Oct. 15, 1906. Serial No. 339,143.



1. In a machine for making blocks or other articles from plastic materials the combination of a hopper, a mixing chamber, a mold filling plunger, molds, transverse mold shifting mechanism, and an endless chain mechanism for supplying the molds, with means for moving the molds from the mold filling aperture to a mold clamping arrangement.

2. In a machine for making blocks, plates or other articles from plastic materials, a mold clamping mechanism, consisting of a reciprocating plunger and a thrust block adapted to receive a mold clamp.

3. In a machine for making blocks, plates or other articles from plastic materials the combination of a hopper, a mixing chamber a mold filling plunger transverse chain operated mold shifting mechanism, a mold clamping plunger arrangement and hydraulic mechanism for transversely shifting a set of molds.

4. In a machine for making blocks, plates or other articles from plastic materials, the combination of a hopper a mixing chamber, mold filling devices, molds, chain operated mold shifting mechanism, mold clamping mechanism and a hydraulic press.

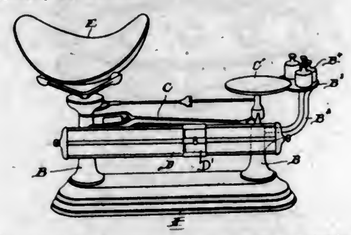
5. In a machine for making blocks, plates or other articles from plastic materials, the combination of a hopper, a mixing chamber mold filling mechanism, chain operated mold shifting mechanism, mold clamping mechanism, means for transferring the molds from the clamping mechanism to a press and mold compressing mechanism.

[Claims 6 and 7 not printed in the Gazette.]

901,297. WEIGHING-SCALE. LOUIS JAENICHEN, Detroit, Mich., assignor to Standard Computing Scale Co., Detroit, Mich., a Corporation of Michigan. Original application filed Dec. 24, 1904, Serial No. 238,200. Divided and this application filed Apr. 2, 1907. Serial No. 366,041.

1. In a scale, the combination of the frame, the weighing-beam and weight-pan, and the crescent shaped weight-shelf supported on a line with the weight-pan, whereby the weight may be transferred from the weight-shelf to the pan by a sliding manual operation, substantially as described.

2. In a scale, the combination of the frame, the weighing beam and weight pan, a post rising from the frame, and provided with a weight-shelf on a line with the weight pan, whereby the weight may be transferred from the weight-shelf to the pan by a sliding manual operation, substantially as described.



3. In a scale, the combination with the weighing beam and weight pan, of a weight shelf partially surrounding the weight pan and in the same horizontal plane therewith when the beam and pan are in equipoise, whereby the weights may be transferred to the weight pan by a sliding manual operation.

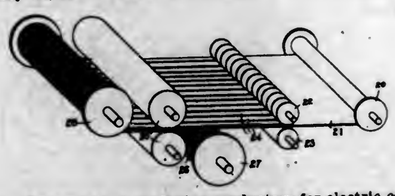
4. In a scale, the combination with the beam and weight pan, of a weight shelf arranged adjacent to the weight pan and in the same horizontal plane therewith when said pan and beam are in equipoise, whereby the weights may be transferred to the weight pan by a sliding manual operation.

901,298. PROCESS OF PRODUCING DIFORMIN. SIGMUND VON KAPFF, Boxgraben-Aachen, Germany. Filed Dec. 23, 1907. Serial No. 407,833.

1. A method of producing diformin consisting in subjecting glycerin to the direct action of formic acid in the presence of a large excess of formic acid, to act as a condensing agent and in distilling away formic acid and water.

2. In the process of producing diformin, the subjection of glycerin to the direct action of formic acid in the presence of a large excess of formic acid to act as a condensing agent, substantially as described.

901,299. METHOD OF PRODUCING ELECTRIC COILS AND CONDUCTORS THEREFOR. ISIDOR KITSEE, Philadelphia, Pa. Original application filed Feb. 11, 1907, Serial No. 356,795. Divided and this application filed May 31, 1907. Serial No. 376,637.



1. The method of producing conductors for electric coils, which consists in slitting a sheet of conducting material to divide the same into a plurality of strips, and then insulating the strips to adapt the same as independent windings.

2. The method of producing conductors for electric coils, which consists in slitting a sheet of conducting material to divide the same into a plurality of strips the ends of which remain connected to preserve the relative arrangement of the strips, and then insulating the strips to adapt the same as independent windings.

3. The method of producing conductors for electric coils, which consists in slitting a sheet of conducting material to divide the same into a plurality of strips, and applying a web of insulation to one face of the strips to adapt the same as independent windings.

4. The method of producing conductors for electric coils, which consists in slitting a sheet of conducting material to divide the same into a plurality of strips, and insulating the strips under pressure to adapt the same as independent windings.

5. The method of producing conductors for electric coils, which consists in slitting a sheet of conducting material to divide the same into a plurality of strips, applying a web of insulation to one face of the strips to adapt the same as independent windings, and subjecting said strips and the web of insulation to pressure to cause the web to adhere to the strips.

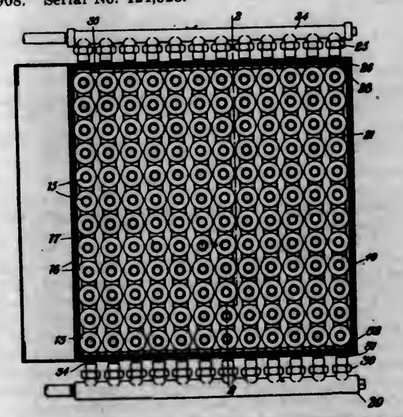
[Claim 6 not printed in the Gazette.]

901,300. ARMORED COVER FOR THE PROTECTION OF RUBBER TIRES. PIETRO L. D. ROVERE, Bagnaia, near Viterbo, Italy. Filed Feb. 27, 1906. Serial No. 303,320.



An armored cover for the protection of rubber tires consisting of a succession of leather elements, each comprising a group of sections limited by means of V-shaped notches made in the edges thereof, and with narrow strips connecting the sections, a locking ring, screw rods adjustably connected with said ring, springs connecting said adjustable screw rods to said strips, the cover elements being protected by zones of leather furnished with rivets whose heads project radially therefrom.

901,301. STEAM-BOILER. JOHN N. LEACH, Melrose, Mass., assignor of one-half to Judson L. Thomson M'f'g Company, a Corporation of Maine. Filed Apr. 1, 1908. Serial No. 424,523.



1. A steam boiler comprising in its construction a plurality of units, each of said units comprising an outer tube and an inner tube, means connecting said units together to form a series of sections, a header, and a plurality of union couplings connecting said sections, respectively, to said header.

2. A steam boiler comprising in its construction a plurality of units, each of said units comprising an inner and an outer tube, a plurality of tubular nipples connecting said units together to form a series of sections, a header, and a plurality of union couplings connecting said sections, respectively, to said header.

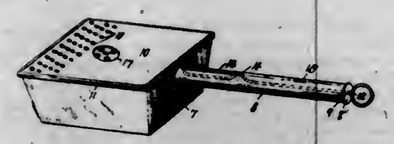
3. A steam boiler comprising in its construction a plurality of units, a plurality of tubular nipples connecting said units together to form a series of sections, a header, and a plurality of union couplings connecting said sections, respectively, to said header.

4. A steam boiler comprising in its construction a plurality of units, a plurality of tubular nipples connecting said units together adjacent to opposite ends, respectively, thereof to form a series of sections, two headers located adjacent to opposite ends, respectively, of said units, and a plurality of union couplings connecting said sections, respectively, to said headers.

5. A steam boiler comprising in its construction a plurality of units, a plurality of tubular nipples connecting said units together to form a series of sections, a header, and a plurality of union couplings connecting said sections, respectively, to said header, said sections being independent of each other except through their connection with said header.

[Claims 6 to 8 not printed in the Gazette.]

901,302. CORN-POPPER. HENRY L. LEILICH, Delphos, Ohio, assignor to The Delphos Manufacturing Company, Delphos, Ohio, a Corporation of Ohio. Filed May 29, 1908. Serial No. 435,627.



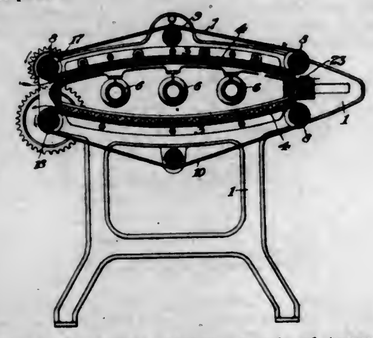
1. In a popper, a receptacle having a hollow handle at one end, said handle being provided with longitudinally spaced openings, a cover slidingly mounted on the receptacle, and a rod attached to the cover and having a portion disposed within the hollow of the handle and formed with an offset adapted to coöperate with the openings in the handle to yieldingly maintain the cover in adjusted position.

2. In a popper, a receptacle having a hollow handle provided with spaced openings, a cover slidingly mounted on the receptacle, and a spring rod projecting beyond the outer end of the handle and having its inner end projected outwardly through one of its said openings and engaging the cover, said rod being crimped within the handle to form a spring detent which coöperates with said openings to normally retain the cover in adjusted position.

901,303. BLUE-PRINTING MACHINE. CHARLES DE LUKACSEVICS, New York, N. Y. Filed July 5, 1907. Serial No. 382,169.

1. In a blueprinting machine, a pair of transparent plates arranged opposite each other, a source of light between the said plates, a pair of aprons, one coöperating with each plate for carrying the materials for printing across the surface thereof, and means for causing the aprons to travel in opposite directions across the plates to make a continuous circuit for the said materials and means for shifting the connection so as to cause the aprons to travel in the same direction across the plates.

2. In a blueprinting machine, a plurality of transparent plates, a plurality of aprons, one coöperating with each plate for carrying the materials for printing across the surface thereof, means for causing the aprons to travel in pairs in opposite directions across two opposite plates to make a continuous circuit for the said materials, and means for shifting the connections so as to cause the aprons to travel in the same direction across the surface of the plates.



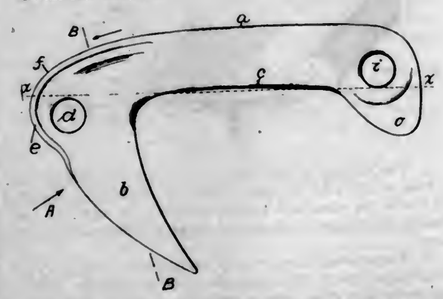
3. In a blueprinting machine, a pair of transparent plates arranged opposite each other, a source of light between the said plates, a pair of aprons, one coöperating with each plate for carrying the materials for printing across the surface thereof, means for causing the aprons to travel in opposite directions across the plates to make a continuous circuit for the said materials, means for shifting the connection so as to cause the apron to travel in the same direction across the plates and means for interrupting the original continuous circuit and providing a new exit for the materials.

4. In a blueprinting machine, a pair of transparent plates arranged opposite each other and a common source of light for illuminating the said plates, in combination with aprons, one coöperating with each plate for carrying the materials for printing across the surface thereof, and devices operated by the same source of power whereby the aprons can be moved across the plates at the same or different speeds or velocities.

5. In a blue printing machine, a pair of illuminated, transparent surfaces, means for carrying materials for printing in a continuous circuit over both said surfaces, and means whereby, when desired, the said materials may be caused to leave the machine after having been carried over one of said surfaces only.

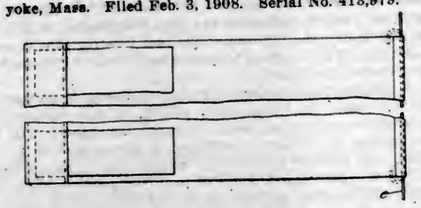
[Claim 6 not printed in the Gazette.]

901,304. LOG-GRAB. DENNIS W. MURPHY, Warren, Pa., assignor to Warren Axe and Tool Company, Warren, Pa., a Corporation of Pennsylvania. Filed July 11, 1908. Serial No. 443,041.



A log grab consisting of a shank and a driving tooth integral therewith; said tooth being formed with an eye which lies below the rear end of said shank and within the rear edge portion of said tooth; said rear edge portion joining the rear end of said shank without the formation of an ear at the point of junction and serving as a brace; the back of said rear end above said tooth lying below the plane of the back of the body portion of said shank and inclining downwardly and rearwardly towards said tooth to shield the wall of said eye from the blows of the maul; and the rear end of said shank being free from an ear extending in rear of the rear edge portion of said tooth.

901,305. MAILING-TUBE. JAMES A. MURPHY, Holyoke, Mass., assignor of one-half to George Nightingale, Holyoke, Mass. Filed Feb. 3, 1908. Serial No. 413,979.

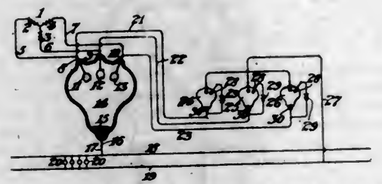


1. A mailing tube having a slit therein extending from end to end of the tube parallel with its axis, a wrapper to inclose the tube affixed by one end to the latter, and a metallic strip extending across the free end of the wrapper and secured thereto, the ends of said strip extending beyond the ends of the tube when the latter is inclosed therein, and adapted to be folded into the ends of the tube to secure the free end of the wrapper thereto.

2. A mailing tube having a slit therein extending from end to end of the tube parallel with its axis, the wall of the tube at each end of said slit being cut away to constitute a flaring entrance to said slit, and a wrapper to inclose the tube affixed by one end to the latter and provided with means on the free end thereof to secure said end to the inclosed tube.

3. An article of manufacture comprising a longitudinally slit tube with a flaring entrance portion, a wrapper permanently secured by one of its ends to the external surface of the tube, the other or free end of the wrapper being provided with means for securing the end of the wrapper to the tube when the wrapper is rolled around the tube, as described.

901,306. SYSTEM OF ELECTRIC DISTRIBUTION. PERCY H. THOMAS, Pittsburg, Pa., assignor to Cooper Hewitt Electric Company, a Corporation of New York. Filed Jan. 21, 1903, Serial No. 139,875. Renewed Feb. 21, 1907. Serial No. 358,727.



1. The combination with a source of alternating electric currents, of an inclosed gas or vapor, a work circuit, multiple positive electrodes and a single negative electrode, connections from the several positive electrodes with the respective alternating current leads, a connection from the negative electrode to one side of a work circuit, multiple devices containing an inclosed gas or vapor each having one electrode connected with the negative side of the work circuit and the remaining electrodes connected with the respective alternating current leads, and means for providing a continuous flow of current in a given direction through each of said devices.

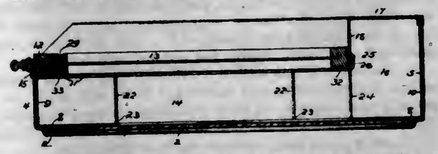
2. The combination with a source of three-phase alternating currents, of a work circuit, an inclosed gas or vapor, three positive electrodes and a single negative electrode therein, connections from the several positive electrodes with the respective alternating current leads, a connection from the negative electrode to one side of said work circuit, with multiple devices each including an inclosed gas or vapor and each having one electrode connected with the other side of the work circuit and another electrode connected with one of the alternating current leads, together with means for providing a continuous flow of current in a given direction through each of said devices.

901,307. HYDROCARBON-TORCH. FRANCIS B. CARLETON, Salem, Mass. Filed Nov. 16, 1907. Serial No. 402,404.



A torch consisting of a reservoir, a tubular bent retort extending upwardly therefrom having a series of transversely disposed indentations on its under side at the bend, which extends from side to side of the retort, and which contracts the passage through the retort at the bend and increases the heating area along the under side of the contracted passage, and also provides external ribs which obstruct the upward tendency of a flame, a wick contained in said retort which extends along its contracted portion and down into the reservoir, and a burner arranged at the extremity of said retort, substantially as described.

901,308. PHOTOGRAPHIC APPARATUS. FREDERICK C. BRADBURN, Rochester, N. Y., assignor to Daylight Photo Specialty Company, Rochester, N. Y. Filed Feb. 23, 1907. Serial No. 358,863.



1. A day-light developer, comprising a tray having a transparent non-actinic bottom, and a removable transfer device embraced by the side walls of the tray and comprising a transparent non-actinic slide constituting the top of the developing chamber, and a removable holder for said slide, said slide and its holder disposed below the upper edges of the side walls of the tray.

2. A day-light developer comprising a tray having a transparent, non-actinic bottom, ledges within said tray at the top of the developing chamber and below the upper edges of the walls of the tray, a removable frame mounted on said ledges and disposed below the upper edges of the side walls of the tray, and a transparent non-actinic slide mounted in and carried by said removable frame and constituting the top of the developing chamber.

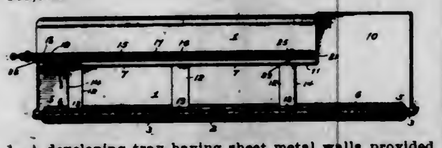
3. A day-light developer comprising a tray having a developing chamber, and a fluid chamber communicating therewith, and having walls projecting above the top of the developing chamber, a removable frame disposed within the space bounded by said walls, and a transparent slide of non-actinic material carried by said frame and removable therewith.

4. A day-light developer comprising a tray provided with a transparent non-actinic bottom, said tray having a developing chamber and a fluid chamber in free communication with the developing chamber, a ledge around the top of the developing chamber, posts under the side members of said ledge and lugs or toes at the lower ends of the posts for supporting a plate above the bottom of the tray, and a slide of transparent non-actinic material supported by said ledge.

5. A day-light developer, comprising a tray provided with a transparent non-actinic bottom and having a developing chamber, a transfer frame, a transparent non-actinic slide carried by said frame, and a lip projecting upwardly from one end of said frame.

[Claims 6 to 12 not printed in the Gazette.]

901,309. PHOTOGRAPHIC APPARATUS. FREDERICK C. BRADBURN, JOHN H. TYLER, and JESSE B. LOW, Rochester, N. Y., assignors to Daylight Photo Specialty Company, Rochester, N. Y. Filed Apr. 22, 1907. Serial No. 369,531.



1. A developing tray having sheet metal walls provided with grooves forming guide-ways and a transfer frame disposed between said walls below the upper edges thereof and movable in said grooves in the sheet metal walls of the tray, and a slide movable in said frame.

2. A developing tray having sheet metal walls provided with grooves and having a non-actinic bottom, and a movable transfer frame disposed between said side walls below the upper edges thereof and movable in the grooves in said walls, a non-actinic slide movable in said frame, and a stop preventing the complete removal of said slide.

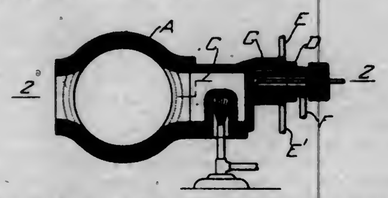
3. The combination with a developing tray provided with a non-actinic bottom and with guide-ways in its side walls below the upper edges thereof, of a metallic transfer frame having its side edges movable in said guide-ways and a non-actinic slide movable in said frame.

4. The combination with a tray provided with a non-actinic bottom and having guide-ways in its side walls, of a metallic frame movable in said guideways and provided interiorly with guideways, a non-actinic slide movable in the guide-ways in said frame, and a stop secured to said slide and adapted to engage the ends of said frame.

5. The combination with a developing tray having a non-actinic bottom and having guideways in its side walls, of a metal frame movable in said guideways, a stop depending from said frame and adapted to engage an end wall of the tray, and a non-actinic slide movable in said frame.

[Claims 6 to 8 not printed in the Gazette.]

901,310. METHOD OF SUPPLYING ENERGY TO ENGINES. EDWARD T. YOUNG, Boston, Mass. Filed June 2, 1906. Serial No. 319,961.



1. An improved method of supplying energy to an engine which consists in confining a body of non-combustible combustion-sustaining gas, preferably atmospheric air, in a chamber under a pressure insufficient to ignite the fuel to be used, heating to a fuel-igniting temperature a sufficient amount of said combustion-sustaining gas to ignite a fuel charge by external means, and injecting fuel into it, whereby said fuel will be ignited, as described.

2. An improved method of supplying energy to an engine which consists in compressing a body of non-combustible combustion-sustaining gas, preferably atmospheric air, in a chamber to a degree insufficient to ignite the fuel to be used, and heating by external means a sufficient amount of said combustion-sustaining gas to a temperature sufficient to accomplish the ignition of the fuel injected into it, and injecting such fuel into it whereby said fuel will be ignited and burned, as described.

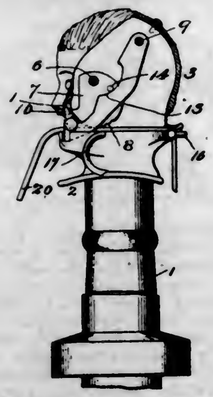
3. An improved method of supplying energy to an engine which consist in compressing a body of non-combustible combustion-sustaining gas, preferably atmospheric air, in a chamber, to a degree insufficient to ignite the fuel to be used, and heating by external means to an igniting temperature a sufficient amount of said combustion-sustaining gas to accomplish the ignition of the fuel injected into it, and injecting such fuel into it whereby said fuel will be ignited and burned, as described.

4. An improved method of supplying energy in the form of pressure to an engine, which consists in heating a body of combustion-sustaining gas, preferably atmospheric air, in a chamber connected to an engine, said gas being under pressure, the temperature of compression being insufficient to ignite the fuel, said chamber being heated sufficiently to impart to air therein contained heat to a degree sufficient to ignite fuel, and then injecting fuel into said heated air, as described.

5. An improved method of supplying energy in the form of pressure to an engine, which consists in heating a body of combustion-sustaining gas, preferably atmospheric air, in a chamber connected to an internal combustion engine, said gas being under pressure, the temperature of compression being insufficient to ignite the fuel, said chamber being heated sufficiently to impart to air therein contained, heat to a degree sufficient to ignite fuel, and then injecting fuel into said heated air, as described.

[Claim 6 not printed in the Gazette.]

901,311. HITCHING-POST. CHARLES F. MALMROSE, Rock Island, Ill., assignor of one-half to Nels A. Larson, Rock Island, Ill. Filed Sept. 17, 1907. Serial No. 393,274.



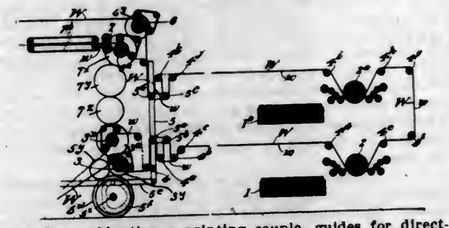
1. In a hitching device the combination of a body having a slot, a cam pivoted in the body and adapted to clamp a strap against one side of the slot, and a pivoted guard serving to raise the cam and to form a side closure for the slot when in normal position.

2. In a hitching device the combination of a head slotted from each side toward the center, a cam pivoted in each side of the head and adapted to engage a strap between it and the lower surface of the corresponding slot and resisting movement of the strap toward the front of the head, a guard for each cam pivoted in the head, having a member engaging the cam and serving to raise it when the guard is raised, the front end of the guard engaging vertical slots in the head, and knobs on the guards.

3. In a hitching device the combination of a slotted head, a clamping cam pivoted therein and a clip at the back of the head adapted to hold a strap passing through the slot.

4. In a hitching device, the combination of a slotted head, a clamping cam pivoted therein, a movable guard arranged to raise the cam and to form a side closure for the slot when in normal position, and a clip at the back of the head adapted to hold a strap passing through the slot.

901,312. PRINTING-PRESS. ARTHUR E. DOWELL, Washington, D. C., assignor to Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed Jan. 24, 1907. Serial No. 353,922.



1. In combination a printing couple, guides for directing two parallel webs through the printing couple side by side, and means for feeding and delivering said webs at relatively different speeds and a single looping mechanism for both webs.

2. In combination a printing couple, and means for feeding a plurality of webs side by side through said couple, and means for moving one web forward faster than the other and a single looping mechanism for both webs.

3. In a web printing press, the combination of a bed, and a cylinder co-acting therewith; and means for feeding two webs at different speeds between the bed and cylinder and a single looping mechanism for both webs.

4. The combination of a bed and cylinder printing couple, guides for directing two parallel webs between the printing couple side by side, and means for feeding said webs through the press at different speeds and a single looping mechanism for both webs.

5. In combination with a bed and cylinder printing couple, means for feeding two webs side by side between the bed and cylinder, and a single looping means for moving a greater length of one web than of the other between the bed and cylinder after impressions.

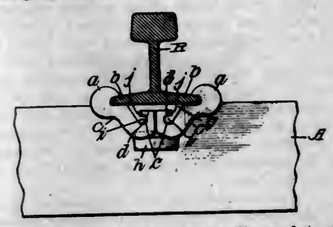
[Claims 6 to 13 not printed in the Gazette.]

REISSUES.

12,862. RAILWAY-RAIL STAY. SIMON R. BRYAN, Racine, Wis., assignor, by mesne assignments, to Otto R. Barnett, Chicago, Ill. Filed Oct. 3, 1907. Serial No. 395,720½. Original No. 800,980, dated Oct. 3, 1905, Serial No. 268,464.

1. A rail-stay consisting of jaws disposed to grip opposite sides of the rail, wedges sustained on said jaws, a stationary member adapted to abut against a cross tie, and means sustained on said stationary member and actuating the aforesaid wedges.

2. A rail-stay consisting of independently movable jaws disposed to grip the rail between them and said jaws formed with wedges beveled toward each other lengthwise of the rail, and an arm adapted to abut against a cross-tie and provided with means for engaging said wedges to automatically tighten the grip of the jaws by resistance of the creeping of the rail.



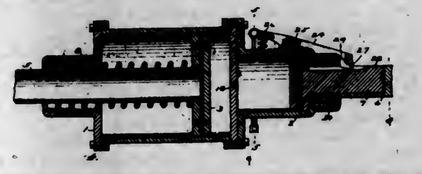
3. A rail-stay consisting of jaws disposed to grip the rail between them and formed with wedges beveled toward each other and disposed under the rail, and an arm adapted to abut against a cross-tie and formed with ways compressing the wedges between them to tighten the grip of the jaws on the rail.

4. A rail-stay consisting of jaws disposed to grip the rail between them and formed with downward extensions terminating in wedge-shaped flanges beveled toward each other, and an arm adapted to abut against a cross-tie and formed with ways receiving the wedges between them and inclined correspondingly as set forth.

5. A rail-stay consisting of jaws disposed to grip the rail between them and formed with downward extensions terminating in wedge-shaped flanges beveled toward each other lengthwise of the rail and grooved longitudinally under the wedges, and an arm disposed longitudinally under the rail adapted to abut against a cross-tie and provided with undercut ways receiving between them the aforesaid wedges substantially as set forth and shown.

[Claims 6 to 20 not printed in the Gazette.]

12,863. AIR-BRAKE. THE WESTINGHOUSE AIR BRAKE Co., Pittsburg, Pa., assignee of Kathleen Eddy Mundy, administratrix of William O. Mundy, deceased. Filed Nov. 10, 1906. Serial No. 342,919. Original No. 763,310, dated June 21, 1904, Serial No. 157,711.



1. In a brake mechanism, a small cylinder and piston for imparting initial movement to the brake shoes, a large cylinder and piston for exerting the final pressure on the shoes, and a valve mechanism controlling the passage of air from the small into the large cylinder through a port that forms a communication between said cylinders, substantially as set forth.

2. In a brake mechanism, the combination of a small cylinder and piston for imparting initial movement to the shoes, a large cylinder and piston for exerting the final pressure on the shoes, a valve mechanism for controlling the passage of air from the small to the large cylinder, and mechanism for automatically opening said valve when the small piston has been moved to its outer position, substantially as set forth.

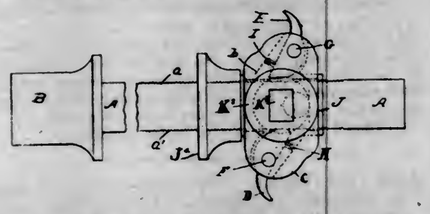
3. In a brake mechanism, the combination of a small cylinder and piston for imparting initial movement to the shoes, a large cylinder and piston for exerting the final pressure on the shoes, a valve controlling the passage of air from the small to the large cylinder, and means for opening said valve, consisting of a pivoted lever, the outer end of which is adapted to engage a notch in the stem of the small piston and which is at its other end provided with means for lifting said valve, substantially as set forth.

4. In a brake mechanism, the combination of a small cylinder and piston for imparting initial movement to the brake shoes, a large cylinder and piston for exerting the final pressure on the brake shoes, a valve controlling the passage of air from the small to the large cylinder, a stem located beneath said valve, a pivoted lever, and a rod connecting said stem to one end of said lever; the stem of the small piston being formed in two members, the inner one of which telescopes the outer one and is provided with a projection having an inclined face, and the outer one of which is provided with a notch to receive the outer end of said lever when the small piston has reached the limit of its outward movement, substantially as and for the purpose set forth.

5. In a brake mechanism, the combination of a small cylinder and piston for imparting the initial movement to the brake shoes, a large cylinder and piston for exerting the final pressure on the shoes, a valve mechanism for controlling the passage of air from the small to the large cylinder, and means for retarding the backward movement of the small piston while the air is exhausting from behind the large piston, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

12,864. CLAMP. JOSEPH H. MILLS, Richmond, Ind. Filed Sept. 12, 1908. Serial No. 452,804. Original No. 888,834, dated May 26, 1908, Serial No. 397,659.

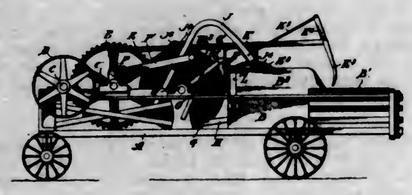


1. A clamp comprising a bar, a head attached to the bar, a clutch-casing slidable on the bar, means for automatically securing the clutch-casing from movement opposite to said head, means for releasing the securing means, a second head having a shank slidable in the clutch-casing parallel with said bar, an eccentric mechanism for operating the second head independent of the clutch-casing and by which it will be locked when it is located at either extreme of its movements, all substantially as shown and described and for the purposes set forth.

2. A clamp comprising a bar having a series of serrations across one edge thereof, a clutch slidable on the bar, a dog D pivoted in the clutch and having means for its engagement with said serrations of the bar when the clutch (or bar) is moved in one direction, a spring for normally retaining said dog in contact with the bar, a shank having a series of serrations across one edge thereof and adapted to slide endwise through said clutch, a head formed on one end of said shank, a dog E pivoted in the clutch and having means for its engagement with said serrations of the shank when the shank is moved in one direction, a spring for normally retaining said dog E in contact with the shank, means whereby either of said dogs may be released by hand, a permanent head on one end of said bar to which the head of said shank is oppositely disposed, an eccentric located in the clutch by means of which said shank and its head may be operated independent of the movements of the clutch along said bar.

12,865. BALING-PRESS. CHARLES E. WEHRENBERG, Mound City, Ill., assignor to Belleville Baler Company, Belleville, Ill., a Corporation of Illinois. Filed Mar. 20, 1908. Serial No. 422,372. Original No. 844,068, dated Feb. 12, 1907, Serial No. 315,613.

1. A baling press comprising a disk, means for alternately giving a partial rotation to the disk in opposite directions, a plunger, a plunger rod pivoted to the plunger and to the disk, a feeder arm pivotally conected to the said disk, a spring connected to said disk and to the feeder arm, a block holder, a lever adapted to bear upon the block held in the block holder, a lug formed on the disk adapted to engage said lever, and means for throwing the lever into the path of said lug; substantially as described.



2. A baling press comprising a plunger, a disk, a plunger rod pivotally connected to the plunger and to the disk, a feeder arm pivotally connected to the disk, means for automatically bringing material to be baled into position to be operated upon by the feeder arm, a divisional block holder, means for discharging the block from the holder, means carried by the said disk for operating the block discharging means, and means for alternately giving a partial rotation to the disk in opposite directions; substantially as described.

3. A baling press comprising means for compressing material, a hopper located adjacent said compressing means, means for feeding material from said hopper to said compressing means, a platform located some distance from the hopper onto which the material is deposited, and means for delivering the material from said platform to the hopper so that it can be acted upon by said feeding means; substantially as described.

4. A baling press provided with compressing means, a platform onto which the material to be baled is thrown, a feeding member, a support on which said feeding member is pivotally mounted, means for reciprocating said support and rocking said feeding member so as to cause said member to engage the material on the platform and feed it toward the compressing means, and means independent of said feeding member for forcing the material into the path of movement of the compressing means; substantially as described.

5. A baling press provided with compressing means, a platform on which the material to be baled is thrown, a rock arm, a member pivotally connected to said arm, a feeding device carried by said member for moving the material from said platform towards the compressing means, means for reciprocating said member, and means independent of said feeding device for forcing the material into position to be operated on by said compressing means; substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

DESIGNS.

39,613. BADGE. JOHN P. MULLALLY, Indianapolis, Ind. Filed Aug. 24, 1908. Serial No. 450,120. Term of patent 7 years.



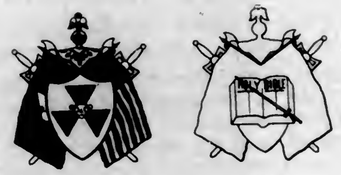
The ornamental design for a badge, as shown.

39,614. BADGE. BURTON THOMPSON, New York, N. Y. Filed Aug. 27, 1908. Serial No. 450,596. Term of patent 3½ years.



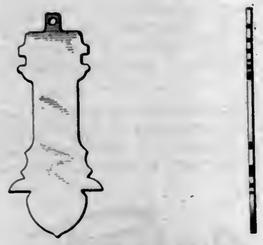
The ornamental design for a badge as shown and described.

39,615. BADGE OR SIMILAR ARTICLE. OSCAR W. GRAY, Cambridge, Mass., assignor to Joseph Cowan, Boston, Mass. Filed Aug. 1, 1908. Serial No. 446,499. Term of patent 7 years.



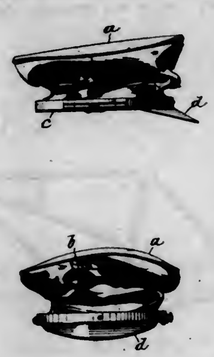
The ornamental design for a badge or similar article as shown.

39,616. WATCH-CHARM OR SIMILAR ARTICLE. MAURICE J. WOHL, New York, N. Y., assignor to Economy Electric Company, a Corporation of New York. Filed June 16, 1908. Serial No. 438,867. Term of patent 14 years.



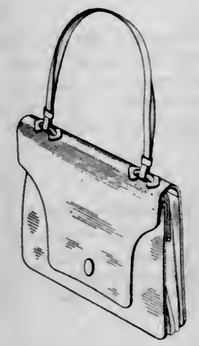
The ornamental design for a watch charm, or similar article, as shown and described.

39,617. PURSE. MYRON W. WILKINS, Gloversville, N. Y. Filed Mar. 10, 1906. Serial No. 305,409. Term of patent 3½ years.



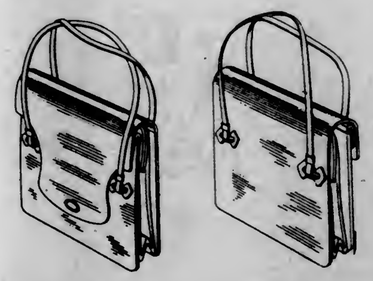
The ornamental design for a purse, as shown and described.

39,618. HAND-BAG. LOUIS MERZBACH, New York, N. Y. Filed July 9, 1908. Serial No. 442,795. Term of patent 3½ years.



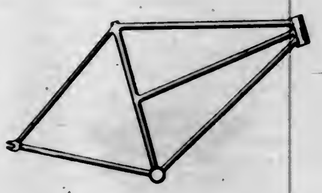
The ornamental design for a handbag as shown.

39,619. HAND-BAG. LOUIS MERZBACH, New York, N. Y. Filed July 9, 1908. Serial No. 442,796. Term of patent 3½ years.



The ornamental design for a hand bag as shown.

39,620. BICYCLE-FRAME. FREDERICK C. GILBERT, Hartford, Conn., assignor to Pope Manufacturing Company, Hartford, Conn., a Corporation of New Jersey. Filed Feb. 25, 1907. Serial No. 359,399. Term of patent 7 years.



The ornamental design for a bicycle frame as shown.

39,621. CHIMNEY-TOP. EMORY MCCLUNG, Clarksburg, W. Va., assignor of one-half to C. M. Ernst, Clarksburg, W. Va. Filed Apr. 22, 1908. Serial No. 428,853. Term of patent 7 years.



The ornamental design for a chimney-top, as shown and described.

TRADE-MARKS

PUBLISHED OCTOBER 13, 1908

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 12,849. (CLASS 12. MASONRY MATERIALS.) THE BARBER ASPHALT PAVING COMPANY, Philadelphia, Pa. Filed Sept. 21, 1905.

GENASCO

Particular description of goods.—Asphaltic Paving Compounds, Bituminous Paving-Cements, Bituminous Paving Mixtures, Bituminous Wearing-Surfaces for Pavements, Sheet-Pavements, Compounds for Macadam Roadways, Bituminous Block-Fillers, Bituminous Roofing, Roofing-Felt, Roofing-Cement, Waterproofing-Felt, Bituminous Waterproofing Fabric for Sheathing, Waterproofing-Cement, Mineral Rubber, Bituminous Pipe-Coating, and Bituminous Compounds for Heat Insulation.

Ser. No. 19,984. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE A. SWARTWOUT, Baltimore, Md., assignor to Pyro Chemical Company, a Corporation of Delaware. Filed June 1, 1906.

Pyrodento

Particular description of goods.—Tooth-Paste and Tooth-Wash.

Ser. No. 23,414. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GOPHER STATE MILLING COMPANY, Morrison, Minn. Filed Nov. 16, 1906.

GOPHER STATE MILLING CO.

FLOUR

MINNEAPOLIS.

Particular description of goods.—Wheat-Flour.

Ser. No. 27,600. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. F. HEMINGWAY & Co., Baltimore, Md. Filed May 23, 1907.



Particular description of goods.—Baked Beans and Sauer-Kraut, Canned Fruits and Vegetables.

Ser. No. 28,780. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIS J. ELDRIDGE, Aurora, Ohio. Filed July 13, 1907. Used ten years.

GOSHEN CHEESE

Particular description of goods.—Cream-Cheese.

Ser. No. 28,783. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIS J. ELDRIDGE, Aurora, Ohio. Filed July 13, 1907. Used ten years.

CLOVER HILL FACTORY BRAND

Particular description of goods.—Cream-Cheese.

Ser. No. 30,044. (CLASS 17. TOBACCO PRODUCTS.) ADAM SENDELBACH, Cincinnati, Ohio. Filed Sept. 18, 1907.

Nue Ribbon

Particular description of goods.—Cigars.

Ser. No. 31,123. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CLARA M. LEWIS, Brooklyn, N. Y. Filed Nov. 11, 1907.

BODAX

Particular description of goods.—Breath-Purifying Tablets.

Ser. No. 31,927. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MADAM WATERS Co., Dallas, Tex. Filed Dec. 26, 1907.



Particular description of goods.—A Face-Cream.

Ser. No. 32,435. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE HAMPDEN WATCH CO., Canton, Ohio. Filed Jan. 25, 1908.

Hm Co Hudson

Particular description of goods.—Watches and Watch-Movements and Parts Thereof.

Ser. No. 32,542. (CLASS 39. CLOTHING.) LAMBERTVILLE RUBBER CO., Lambertville, N. J. Filed Feb. 3, 1908.



Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 32,689. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GENERAL COMPOSING COMPANY, GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Berlin, Germany. Filed Feb. 10, 1908.

Duplotype

Particular description of goods.—Type Setting and Casting Machines and Parts Thereof, Type-Distributers, Adjusting and Correcting Tools for Use with Type Setting and Casting Machines, Matrix-Bars, Matrix-Bar-Storing Magazines for Attachment to the Machines.

Ser. No. 32,719. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE BELFAST LINEN HANDKERCHIEF CO. LTD., Belfast, Ireland, and New York, N. Y. Filed Feb. 12, 1908.

ARDINNES

Particular description of goods.—Linen and Cambric Handkerchiefs Not in the Piece.

Ser. No. 33,142. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) VONHIFF BROS., Baltimore, Md. Filed Mar. 3, 1908.

ALLERTON

Particular description of goods.—Rye Whisky and Cocktails.

Ser. No. 33,576. (CLASS 39. CLOTHING.) NATIONAL SHOEMAKERS, Lewiston, Me. Filed Mar. 24, 1908.

Triplefit

Particular description of goods.—Cloth, Leather, and Rubber Shoes.

Ser. No. 33,582. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) R. HUDNUT'S PHARMACY, New York, N. Y. Filed Mar. 24, 1908.



Consists of a design comprising green leaves and stems and violet flowers displayed on a yellow background.
Particular description of goods.—Talcum Powder.

Ser. No. 33,716. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JOSEPH REINSTINE, New York, N. Y. Filed Mar. 28, 1908.

Courage

Jos. Reinstine & Co.

Particular description of goods.—Rye Whisky Blended with Pure Straight Whiskies.

Ser. No. 33,775. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) BEST MANUFACTURING Co., Pittsburg, Pa. Filed Apr. 1, 1908. Used ten years.

BEST

Particular description of goods.—Gate-Valves, Globe-Valves, Angle-Valves, Flanged Fittings, Flanges, Pipe Bends, Unions, and Joints.

Ser. No. 33,813. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BRISTOL-MYERS COMPANY, New York, N. Y. Filed Jan. 31, 1908.

ALKA-TONE

Particular description of goods.—A Medicine for the Treatment of Disturbances of the Digestive Functions.

Ser. No. 33,903. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE HICKORY BARK REMEDY COMPANY, Salem, Oreg. Filed Apr. 6, 1908. Used ten years.

HICKORY BARK

Particular description of goods.—A Cough Remedy.

Ser. No. 34,062. (CLASS 39. CLOTHING.) ROBERTS, JOHNSON & RAND SHOE COMPANY, St. Louis, Mo. Filed Apr. 13, 1908.

STRONGER THAN THE LAW

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 34,194. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE POMPEIAN COMPANY, Washington, D. C. Filed Apr. 17, 1908.

CARMEL

Particular description of goods.—Olives, Figs, Macaroni, Tomato-Paste, Nut-Mix, (a Food Composed of Nuts and Honey,) Salad-Oil, Olive-Oil, Halva, (a Turkish Food Composed of Flour, Nuts, Sesame, and Sugar,) Dates, and Coffee.

Ser. No. 34,400. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) CLARKE SALES COMPANY, New York, N. Y. Filed Apr. 27, 1908.

PLAKO

Particular description of goods.—Separable Fasteners for Garment-Closures.

Ser. No. 34,429. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE NEUMAN & SCHWIERS CO., New York, N. Y. Filed Apr. 27, 1908.

LALANCE BRAND

Particular description of goods.—French Olive-Oil and Macaroni, Canned Mushrooms, French String-Beans, French Peas, Mixed Vegetables, and Spinach.

Ser. No. 34,631. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ENGELBERT BACH, Taylorville, Ill. Filed May 7, 1908.



KING OF OILS

Particular description of goods.—Liniment.

Ser. No. 34,632. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ENGELBERT BACH, Taylorville, Ill. Filed May 7, 1908.



Particular description of goods.—Liniment.

Ser. No. 34,643. (CLASS 5. ADHESIVES.) ASPHALTUM PRODUCTS COMPANY, Seattle, Wash. Filed May 8, 1908.



Particular description of goods.—Marine Glue.

Ser. No. 34,796. (CLASS 17. TOBACCO PRODUCTS.) CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y., and Caguas, Porto Rico. Filed May 16, 1908.



Particular description of goods.—Cigars, Cheroots, and Cigarettes.

Ser. No. 34,802. (CLASS 12. MASONRY MATERIALS.) VIRGINIA LIME COMPANY, INC., Richmond, Va. Filed May 18, 1908.

GEM
LUMP
LIME

Particular description of goods.—Lime.

Ser. No. 34,972. (CLASS 39. CLOTHING.) UTICA KNITTING COMPANY, Utica, N. Y. Filed May 27, 1908.



Particular description of goods.—Children's Knitted Combination Underwaists, Undershirts, and Union Suits and Ladies' Knitted Vests, Undershirts, and Union Suits.

Ser. No. 34,975. (CLASS 39. CLOTHING.) SOUTHERN MANUFACTURING COMPANY, Chester, S. C. Filed May 27, 1908.



Particular description of goods.—Pants to be Worn by Men and Boys, Coats, Overalls, Jackets, or Jumpers, All Made of Cotton Fabrics.

Ser. No. 34,990. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) EDWARD H. GALLIGAN, Providence, R. I.; New York, N. Y., and Chicago, Ill. Filed May 27, 1908.



Particular description of goods.—Waterproof Oil Blacking and Dressing for Boots and Shoes, Patent-Leather, Rubbers, Harness, &c.

Ser. No. 35,064. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) SHEBOYGAN MINERAL WATER CO., Sheboygan, Wis. Filed June 1, 1908.



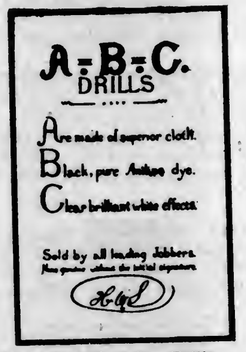
Particular description of goods.—Natural Mineral Water, Natural Mineral Water Carbonated, Ginger-Ale, Root-Beer, Sarsaparilla, Lemon-Soda, and Cream-Soda.

Ser. No. 35,151. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HORNBY COMPANY, New York, N. Y. Filed June 4, 1908.

HORNBY'S

Particular description of goods.—Toffee, Butter-Scotch, and Fruit Tablets.

Ser. No. 35,194. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HELLER & LONG, New York, N. Y. Filed June 6, 1908.



Particular description of goods.—Drills.

Ser. No. 35,236. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CASCADE CARPET COMPANY, Little Falls, N. J. Filed June 9, 1908.



The inner diamond-shaped field and the outer diamond-shaped border being red.

Particular description of goods.—Carpets and Rugs.

Ser. No. 35,260. (CLASS 39. CLOTHING.) FRANK M. STRAHL, Erie, Pa. Filed June 10, 1908.



Particular description of goods.—Molders' Shoes.

Ser. No. 35,295. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOSEPH NATHAN & CO., LIMITED, London, England. Filed June 11, 1908.

Glaxo

Particular description of goods.—A Milk Food for Infants and Invalids.

Ser. No. 35,315. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NICHOLSON FILE COMPANY, Providence, R. I. Filed June 13, 1908. Used ten years.



Particular description of goods.—Files.

Ser. No. 35,321. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HERMAN DUBLER, New York, N. Y. Filed June 13, 1908.



Particular description of goods.—Canned Fresh Cape Lobster.

Ser. No. 35,338. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) JAMES HENDRY, Glasgow, Scotland. Filed June 13, 1908.



Particular description of goods.—Leather Machinery Belting.

Ser. No. 35,371. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) A. J. REACH COMPANY, Philadelphia, Pa. Filed June 15, 1908.



Particular description of goods.—Base-Balls, Bats, Bat-Bags, Masks, Base-Ball Mitts, Base-Ball Gloves and Protectors, Lawn-Tennis Rackets, Racket-Covers, and Tennis-Balls, Boxing-Gloves, Striking-Bags, Striking-Bag Gloves, Striking-Bag Swivels, and Striking-Bag Platforms, Foot-Balls, Foot-Ball Bladders, Foot-Ball Shin-Guards, Foot-Ball Head-Harness, Foot-Ball Nose-Masks, Foot-Ball Pads, Basket-Balls, Medicine-Balls, Hand-Balls, Hand-Ball Gloves, Fencing-Gloves, and Plastrons, Golf-Balls and Golf-Sticks, and Uniform-Bags, Bases, Recreation-Balls, Scoring-Tablets, Umpire-Indicators, Score-Books, Basket-Ball Goals, Polo and Hockey Guards, Hockey and Lacrosse Gloves, Striking-Bag, Basket and Volley Ball Bladders.

Ser. No. 35,400. (CLASS 10. FERTILIZERS.) WILSON & TOOMER FERTILIZER CO., Jacksonville, Fla. Filed June 15, 1908. Used ten years.

Seminole

Particular description of goods.—Plant-Fertilizing Materials.

Ser. No. 35,418. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) R. M. ROSE CO., Chattanooga, Tenn. Filed June 16, 1908.



Particular description of goods.—A Blend of Corn Whisky.

Ser. No. 35,635. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE FRANCO-AMERICAN FERMENT COMPANY, New York, N. Y. Filed June 20, 1908.



Particular description of goods.—Medicines for Treatment of the Different Varieties of Enteritis, Typhoid Fever, Cholera, Dysentery, Diarrhea, Liver and Kidney Troubles, Albuminuria, Colic, Gout, Gravel, and Skin Troubles.

Ser. No. 35,667. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DANIEL E. SHEPHERD, Enfield, Ill. Filed June 22, 1908.



Particular description of goods.—A Hair-Tonic.

Ser. No. 35,688. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE CHESAPEAKE & OHIO COAL & COKE COMPANY, Thurmond, W. Va., and New York, N. Y. Filed June 23, 1908.



Particular description of goods.—Semibituminous Coal.

Ser. No. 35,724. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE MILLVILLE MANUFACTURING COMPANY, Philadelphia, Pa. Filed June 24, 1908.



Particular description of goods.—Dyed Cotton Piece Goods.

Ser. No. 35,760. (CLASS 48. MALT EXTRACTS AND LIQUORS.) KOPPITZ-MELCHERS BREWING CO., Detroit, Mich. Filed June 25, 1908. Used ten years.



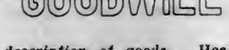
Particular description of goods.—Beer.

Ser. No. 35,811. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ORR BROS., Clay Center, Nebr. Filed June 26, 1908. Used ten years.



Particular description of goods.—Wheat-Flour.

Ser. No. 35,817. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) FRANK A. KLAINE, Cincinnati, Ohio. Filed June 27, 1908.



Particular description of goods.—Heating and Cook Stoves.

Ser. No. 35,837. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THOS. TOMLINSON, Tate Springs, Tenn. Filed June 29, 1908. Used ten years.



Particular description of goods.—Natural Mineral Water.

Ser. No. 35,880. (CLASS 39. CLOTHING.) THE PARAGON COMPANY, New York, N. Y. Filed June 30, 1908.



Particular description of goods.—Night-Shirts, Pajamas, and Smoking-Jackets.

Ser. No. 35,900. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAMES VAN DYK COMPANY, New York, N. Y. Filed July 1, 1908.



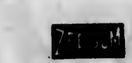
Particular description of goods.—Tea.

Ser. No. 35,926. (CLASS 48. MALT EXTRACTS AND LIQUORS.) EDWARD & JOHN BURKE, LIMITED, Dublin, Ireland, and New York, N. Y. Filed July 3, 1908.



Particular description of goods.—Stout and Ale.

Ser. No. 35,949. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILMOT A. VANDERCOOK, Los Angeles, Cal. Filed July 6, 1908.



Particular description of goods.—Chewing-Gum.

Ser. No. 35,958. (CLASS 39. CLOTHING.) ROBERT REIS & Co., New York, N. Y. Filed July 6, 1908.



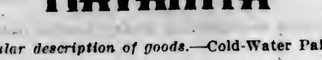
Particular description of goods.—Men's Drawers and Undershirts.

Ser. No. 35,959. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OAKFORD & FAHNESTOCK, Peoria, Ill. Filed July 6, 1908.



Particular description of goods.—Coffee.

Ser. No. 35,960. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) N. Z. GRAVES COMPANY, Philadelphia, Pa. Filed July 6, 1908.



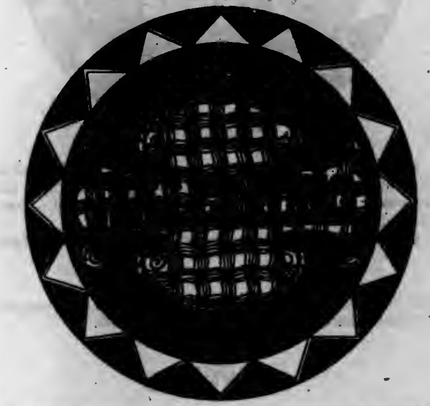
Particular description of goods.—Cold-Water Paints.

Ser. No. 35,965. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY BURGESS, St. Louis, Mo. Filed July 6, 1908.



Particular description of goods.—A Sweeping Compound.

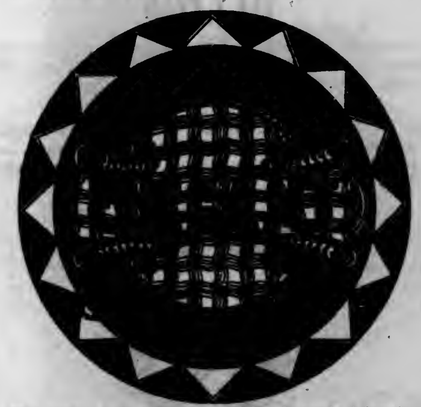
Ser. No. 35,981. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE W. H. GARDNER GRAIN & MILL Co., Bellevue, Ohio. Filed July 6, 1908.



The outer circle being printed in alternate triangles of black and green, the second circle in circular pale-green lines, and the center edged by scrolls printed in red with horizontal and vertical waving white lines.

Particular description of goods.—Flour Made of Wheat.

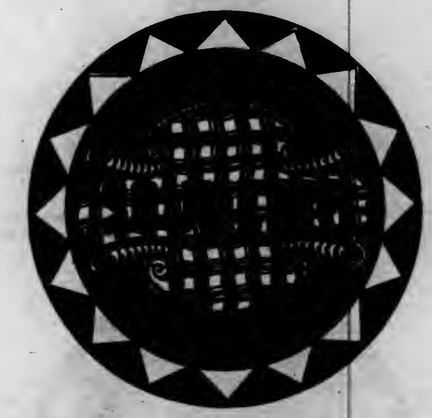
Ser. No. 35,982. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE W. H. GARDNER GRAIN & MILL Co., Bellevue, Ohio. Filed July 6, 1908.



The outer circle being printed in alternate triangles of black and green, the second circle in circular pale-green lines, and the center printed in red with horizontal and vertical waving white lines edged by scrolls.

Particular description of goods.—Flour Made of Wheat.

Ser. No. 35,983. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE W. H. GARDNER GRAIN & MILL CO., Bellevue, Ohio. Filed July 6, 1908.



The outer circle being printed in alternate triangles of black and blue, the second circle in circular blue lines, and the center in yellow with horizontal and vertical waving white lines and edged by scrolls.

Particular description of goods.—Flour Made of Wheat.

Ser. No. 36,001. (CLASS 39. CLOTHING.) FREDERIC CONDÉ, Oswego, N. Y. Filed July 8, 1908.

CONDÉNETTE

Particular description of goods.—Undershirts and Drawers.

Ser. No. 36,012. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE HEPWORTH M'F'G. CO., LTD., London, England. Filed July 8, 1908.

HEPWIX

Particular description of goods.—Cinematograph Films Ready for Use in Cinematograph or Animated-Picture Machines.

Ser. No. 36,024. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 9, 1908. Used ten years.



Particular description of goods.—Biscuit and Crackers.

Ser. No. 36,025. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 9, 1908. Used ten years.



Particular description of goods.—Biscuit and Crackers.

Ser. No. 36,026. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 9, 1908. Used ten years.



Particular description of goods.—Biscuit and Crackers.

Ser. No. 36,029. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE OHIO DAIRY CO., Toledo, Ohio. Filed July 9, 1908.



Particular description of goods.—Creamery Butter.

Ser. No. 36,073. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PETER C. CLEMENSEN, Chicago, Ill. Filed July 11, 1908.

Shamporine

Particular description of goods.—A Remedy for Dandruff and Itching Scalp.

Ser. No. 36,118. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) D. ANTOLINI & CO., New York, N. Y. Filed July 14, 1908.



Particular description of goods.—Canned Italian Tomatoes.

Ser. No. 36,170. (CLASS 39. CLOTHING.) JESSE V. PALMER CO., Greenwich, N. Y. Filed July 17, 1908.

REMLAP

Particular description of goods.—Men's, Women's, and Children's Drawers and Undervests.

Ser. No. 36,202. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MILTON C. PETERS, Omaha, Nebr. Filed July 18, 1908.

ALFALFA QUEEN

Particular description of goods.—Ground Hay or Alfalfa-Meal Used as a Stock and Poultry Food.

Ser. No. 36,213. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GLOBE PACKING COMPANY, Lubeck and Eastport, Me. Filed July 20, 1908.

NANON

Particular description of goods.—American Sardines in Mustard Sauce.

Ser. No. 36,230. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES HENDERSON RUSH, Lincoln, Nebr. Filed July 20, 1908.

MANGA-ZYME RUSH

Particular description of goods.—A Tonic, Restorative, Corrective, and Digestive Medicine.

Ser. No. 36,231. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES HENDERSON RUSH, Lincoln, Nebr. Filed July 20, 1908.

Chio-Tone

Particular description of goods.—A Tonic, Restorative, Corrective, and Digestive Medicine.

Ser. No. 36,232. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES HENDERSON RUSH, Lincoln, Nebr. Filed July 20, 1908.

GENALL
TWO VIBURNUM COMPOUND RUSH

Particular description of goods.—A Tonic, Restorative, Corrective, and Digestive Medicine.

Ser. No. 36,262. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COMMONWEALTH FEED MILLS CO., St. Louis, Mo. Filed July 22, 1908.

ACTION



Particular description of goods.—Alfalfa Horse Feed.

Ser. No. 36,277. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TOLEDO CHEWING GUM COMPANY, Toledo, Ohio. Filed July 23, 1908.



LION

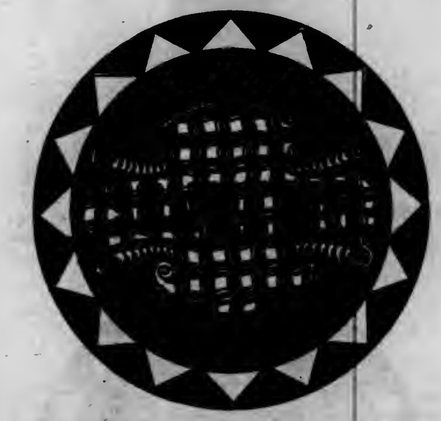
Particular description of goods.—Chewing-Gum.

Ser. No. 36,299. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) COLE MANUFACTURING COMPANY, Chicago, Ill., and Council Bluffs, Iowa. Filed July 24, 1908.

COLES

Particular description of goods.—Stoves, Furnaces, and Ranges.

Ser. No. 35,983. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE W. H. GARDNER GRAIN & MILL CO., Bellevue, Ohio. Filed July 6, 1908.



The outer circle being printed in alternate triangles of black and blue, the second circle in circular blue lines, and the center in yellow with horizontal and vertical waving white lines and edged by scrolls.

Particular description of goods.—Flour Made of Wheat.

Ser. No. 36,001. (CLASS 39. CLOTHING.) FREDERIC CONDÉ, Oswego, N. Y. Filed July 8, 1908.

CONDÉNETTE

Particular description of goods.—Undershirts and Drawers.

Ser. No. 36,012. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE HEPWORTH M'F'G. CO., LTD., London, England. Filed July 8, 1908.

HEPWIX

Particular description of goods.—Cinematograph Films Ready for Use in Cinematograph or Animated-Picture Machines.

Ser. No. 36,024. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 9, 1908. Used ten years.



Particular description of goods.—Biscuit and Crackers.

Ser. No. 36,025. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 9, 1908. Used ten years.



Particular description of goods.—Biscuit and Crackers.

Ser. No. 36,026. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 9, 1908. Used ten years.



Particular description of goods.—Biscuit and Crackers.

Ser. No. 36,029. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE OHIO DAIRY CO., Toledo, Ohio. Filed July 9, 1908.



Particular description of goods.—Creamery Butter.

Ser. No. 36,073. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PETER C. CLEMENSEN, Chicago, Ill. Filed July 11, 1908.

Shamporine

Particular description of goods.—A Remedy for Dandruff and Itching Scalp.

Ser. No. 36,118. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) D. ANTOLINI & CO., New York, N. Y. Filed July 14, 1908.



Particular description of goods.—Canned Italian Tomatoes.

Ser. No. 36,170. (CLASS 39. CLOTHING.) JESSE V. PALMER CO., Greenwich, N. Y. Filed July 17, 1908.

REMLAP

Particular description of goods.—Men's, Women's, and Children's Drawers and Undervests.

Ser. No. 36,202. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MILTON C. PETERS, Omaha, Nebr. Filed July 18, 1908.

ALFALFA QUEEN

Particular description of goods.—Ground Hay or Alfalfa-Meal Used as a Stock and Poultry Food.

Ser. No. 36,213. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GLOBE PACKING COMPANY, Lubeck and Eastport, Me. Filed July 20, 1908.

NANON

Particular description of goods.—American Sardines in Mustard Sauce.

Ser. No. 36,230. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES HENDERSON RUSH, Lincoln, Nebr. Filed July 20, 1908.

MANGA-ZYME RUSH

Particular description of goods.—A Tonic, Restorative, Corrective, and Digestive Medicine.

Ser. No. 36,231. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES HENDERSON RUSH, Lincoln, Nebr. Filed July 20, 1908.

Rhio-Tone

Particular description of goods.—A Tonic, Restorative, Corrective, and Digestive Medicine.

Ser. No. 36,232. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES HENDERSON RUSH, Lincoln, Nebr. Filed July 20, 1908.

GENALL
TWO VOURMLIN COMPOUND RUSH

Particular description of goods.—A Tonic, Restorative, Corrective, and Digestive Medicine.

Ser. No. 36,262. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COMMONWEALTH FEED MILLS CO., St. Louis, Mo. Filed July 22, 1908.

ACTION



Particular description of goods.—Alfalfa Horse Feed.

Ser. No. 36,277. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TOLEDO CHEWING GUM COMPANY, Toledo, Ohio. Filed July 23, 1908.



LION

Particular description of goods.—Chewing-Gum.

Ser. No. 36,299. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) COLE MANUFACTURING COMPANY, Chicago, Ill., and Council Bluffs, Iowa. Filed July 24, 1908.



Particular description of goods.—Stoves, Furnaces, and Ranges.

Ser. No. 36,315. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) FIGGE-DOYLE CO., Milwaukee, Wis. Filed July 24, 1908.

TURNPIKE

Particular description of goods.—Bourbon and Rye Whisky, Blended Whisky, and a Blend of Bourbon Whiskies.

Ser. No. 36,375. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. W. COLTON COMPANY, Springfield, Mass. Filed July 28, 1908. Used ten years.

COLTON'S SELECT FLAVORS

Particular description of goods.—Flavoring Extracts.

Ser. No. 36,380. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SOAPLAKE SOAP & MF'G CO., Seattle, Wash. Filed July 29, 1908.

SOAPLAKE

Particular description of goods.—Soap.

Ser. No. 36,386. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) FRITZ HANDRICH & SONS, New York, N. Y. Filed July 29, 1908. Used ten years.

VIRGINIA MOUNTAIN DEW

Particular description of goods.—A Blend of Straight Rye Whiskies.

Ser. No. 36,414. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) FIGGE-DOYLE CO., Milwaukee, Wis. Filed July 31, 1908.

SWASTIKA

Particular description of goods.—Brandy Compound, Rum, Straight and Compound, and Gin Compound.

Ser. No. 36,418. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) AMERICAN CONCRETE-STEEL COMPANY, Newark, N. J. Filed July 31, 1908.

AMERICAN CONCRETE-STEEL COMPANY. NEWARK, N. J.

Particular description of goods.—Metal Reinforcing Devices or Materials for Use in Concrete Constructions.

Ser. No. 36,421. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL STARCH COMPANY, New York, N. Y. Filed Aug. 1, 1908.



Particular description of goods.—Corn-Starch.

Ser. No. 36,431. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE AUTOPIANO CO., New York, N. Y. Filed Aug. 1, 1908.

Universal.

Particular description of goods.—Pianos, Player-Pianos, and Player-Piano Actions.

Ser. No. 36,478. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) HARTNETT VULCOGRAPH COMPANY, Baltimore, Md. Filed Aug. 5, 1908.

VULCOGRAPH

Particular description of goods.—For Relief and Intaglio Plates for Printing and Embossing.

Ser. No. 36,513. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CLARENCE A. MYERS, Chicago, Ill. Filed Aug. 6, 1908.

The Awl For All

Particular description of goods.—Sewing-Awls.

Ser. No. 36,524. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN H. FELTMAN, Ansonia, Ohio. Filed Aug. 7, 1908.

GOLD FINISH

Particular description of goods.—Wheat-Flour.

Ser. No. 36,556. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) DURANT-DORT CARRIAGE COMPANY, Flint, Mich. Filed Aug. 8, 1908.

BLUE RIBBON

Particular description of goods.—Bike-Wagons, Buckboards, Buggies, Road-Carts, Concord Wagons, Delivery-Wagons, Driving-Wagons, Road-Wagons, Spring-Wagons, Stanhopes, Phaetons, and Surreys.

Ser. No. 36,570. (CLASS 32. FURNITURE AND UPHOLSTERY.) VIRGINIA DISMUKES BURNAM, Huntsville, Ala. Filed Aug. 8, 1908.



Particular description of goods.—An Article of Furniture in the Nature of a Settee, Including a Seat Portion and a Cabinet at the End or Ends Thereof.

Ser. No. 36,591. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) J. T. KENNY & CO., St. Paul, Minn. Filed Aug. 10, 1908.

ARGOSY

Particular description of goods.—Soap Chips.

Ser. No. 36,600. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) THE CORNISH EUREKA GOLD SIZE CO., San Francisco, Cal. Filed Aug. 11, 1908. Used ten years.

CORNISH EUREKA

Particular description of goods.—Gold Size.

Ser. No. 36,613. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) S. B. BIGGS & CO., Williamston, N. C. Filed Aug. 12, 1908.

TONOPHOS

Particular description of goods.—A Syrup to be Used in Making a Non-Alcoholic Beverage.

Ser. No. 36,619. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ANDREW B. MURRAY, Charleston, S. C. Filed Aug. 12, 1908.

BRM

Particular description of goods.—Rice, Rice-Flour, and Rice-Meal.

Ser. No. 36,621. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DAWSON & SHAVER, New York, N. Y. Filed Aug. 12, 1908.

BIG STICK

Particular description of goods.—Wheat-Flour.

Ser. No. 36,625. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DETROIT MILLING COMPANY, Adrian, Mich. Filed Aug. 12, 1908.

BUTTERCUP

Particular description of goods.—Wheat-Flour.

Ser. No. 36,639. (CLASS 37. PAPER AND STATIONERY.) L. E. WATERMAN COMPANY, New York, N. Y. Filed Aug. 13, 1908.

IDEAL

Particular description of goods.—Safety-Clips for Fountain-Pens and Pencils.

Ser. No. 36,645. (CLASS 39. CLOTHING.) NATIONAL HOSIERY & YARN CO., Nashville, Tenn. Filed Aug. 13, 1908.



Particular description of goods.—Hosiery.

Ser. No. 36,649. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

ANCHOR BRAND



Particular description of goods.—Canned Salmon.

Ser. No. 36,651. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

ARCTIC

Particular description of goods.—Canned Salmon.

Ser. No. 36,652. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

ANCON BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 36,653. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

Bass Brand

Particular description of goods.—Canned Salmon.

Ser. No. 36,654. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

BOUNDARY LINE BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 36,656. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,657. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

Capstan BRAND



Particular description of goods.—Canned Salmon.

Ser. No. 36,658. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

Coleman Flag Brand



Particular description of goods.—Canned Salmon.

Ser. No. 36,660. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

COMET



Particular description of goods.—Canned Salmon.

Ser. No. 36,661. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

CRUISER BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 36,663. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,665. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,666. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,667. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,668. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,669. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,670. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,671. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,672. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

GOLD COIN BRAND



Particular description of goods.—Canned Salmon.

Ser. No. 36,673. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

Glacier Brand

Particular description of goods.—Canned Salmon.

Ser. No. 36,675. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,677. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,678. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

Hatchery BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 36,680. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,681. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,682. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,684. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

ICEBERG BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 36,685. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,686. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

KODIAK BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 36,687. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

KEARSARGE BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 36,688. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

LION BRAND



Particular description of goods.—Canned Salmon.

Ser. No. 36,689. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,690. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,691. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

MOOSE HEAD



Particular description of goods.—Canned Salmon.

Ser. No. 36,692. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

MOUNT WRANGEL



Particular description of goods.—Canned Salmon.

Ser. No. 36,693. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

METEOR BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 36,694. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

MOON BRAND



Particular description of goods.—Canned Salmon.

Ser. No. 36,696. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,697. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,699. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

NAUTILUS Brand

Particular description of goods.—Canned Salmon.

Ser. No. 36,701. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,702. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

Premier

BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 36,703. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

POLAR BEAR



Particular description of goods.—Canned Salmon.

Ser. No. 36,704. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,708. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,709. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,710. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,711. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,712. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,713. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods—Canned Salmon.

Ser. No. 36,714. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,715. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,716. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

TALLY-HO BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 36,717. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



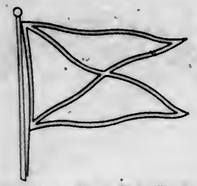
Particular description of goods.—Canned Salmon.

Ser. No. 36,718. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,719. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,722. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

WALRUS BRAND



Particular description of goods.—Canned Salmon.

Ser. No. 36,723. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,756. (CLASS 17. TOBACCO PRODUCTS.) STROHMEYER & ARPE COMPANY, New York, N. Y. Filed Aug. 15, 1908.

VIKING SHIP

Particular description of goods.—Snuff.

Ser. No. 36,809. (CLASS 17. TOBACCO PRODUCTS.) SANTIAGO UMPIERRE & CO., Comerio, Porto Rico. Filed Aug. 18, 1908.



Particular description of goods.—Cigars.

Ser. No. 36,813. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) McNEELY & PRICE, Philadelphia, Pa. Filed Aug. 18, 1908.

TWENTIETH CENTURY KID

Particular description of goods.—Glazed Kid.

Ser. No. 36,819. (CLASS 12. MASONRY MATERIALS.) RUDOLPH S. BLOME COMPANY, Chicago, Ill., and New York, N. Y. Filed Aug. 18, 1908.

GRANOCRETE

Particular description of goods.—Concrete Pavements.

Ser. No. 36,876. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) IOWA TONIC COMPANY, Sioux City, Iowa. Filed Aug. 21, 1908.

Split Rock

Particular description of goods.—Distilled Water, Bottled Soda-Water, Root-Beer, Birch-Beer, Ginger-Ale, Lemon-Sour, and Cherry-Phosphate.

Ser. No. 36,880. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HANS STRAUS, New York, N. Y. Filed Aug. 21, 1908.

THE ALLWON

Particular description of goods.—Finger-Nail Polishers.

Ser. No. 36,888. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) AJAX-GRIEB RUBBER COMPANY, Trenton, N. J. Filed Aug. 22, 1908.

AJAX

Particular description of goods.—Automobile and Bicycle Tires of Rubber and Fabric.

Ser. No. 36,918. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE HENRY B. GILPIN COMPANY, Baltimore, Md. Filed Aug. 24, 1908.

TALCOLETTE

Particular description of goods.—Toilet Powder.

Ser. No. 36,938. (CLASS 12. MASONRY MATERIALS.) CADEN STONE CO., Evansville, Ind., and Hadley, Ky. Filed Aug. 25, 1908. Used ten years.

GREEN RIVER STONE

Particular description of goods.—Rough and Cut Stone.

Ser. No. 36,956. (CLASS 17. TOBACCO PRODUCTS.) M. MARSH & SON, Wheeling, W. Va. Filed Aug. 26, 1908.

Particular description of goods.—Stogies.

Ser. No. 37,008. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE CLEVELAND & SANDUSKY BREWING CO., Cleveland, Ohio. Filed Aug. 28, 1908.

FRIEDEN

Particular description of goods.—Beer.

Ser. No. 37,068. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) STANDARD SANITARY MFG. CO., Pittsburg, Pa. Filed Aug. 31, 1908.

Vitrite

Particular description of goods.—Bath-Tubs, Lavatories, and Closets.

Ser. No. 37,079. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE AMERICAN COMMERCIAL COMPANY, LTD., Los Angeles, Cal. Filed Sept. 1, 1908.

USE-IT

Particular description of goods.—Scouring Soap Powders.

Ser. No. 37,089. (CLASS 17. TOBACCO PRODUCTS.) JOHN R. RIGGLES, Washington, D. C. Filed Sept. 1, 1908.

HOUR DAY CIGAR

Particular description of goods.—Cigars.

Ser. No. 37,099. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE AMERICAN AXE & TOOL CO., Glassport, Pa. Filed Sept. 2, 1908.

VICTORIA

Particular description of goods.—Axes, Hatchets, Broad-axes, Scythes, Grass-Hooks, Corn-Knives, Adzes, Picks, Mattocks, Grub-Hoes, Sledges, Brush-Hooks, Hay-Knives, Hedge-Trimmers, and Machetes.

Ser. No. 37,123. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GRAEF & SCHMIDT, New York, N. Y. Filed Sept. 2, 1908. Used ten years.

COLUMBUS

Particular description of goods.—Razors, Pocket-Knives, and Scissors.

Ser. No. 37,131. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH WILLIAMS CO., Sharpsburg, Pa. Filed Sept. 2, 1908.

NORMALENE

Particular description of goods.—Chemicals Used for Removing and Preventing the Formation of Scale and Incrustation in Boilers, Tubes, Coils, Condensers, and Heaters, &c., for Softening and Purifying Waters, for Neutralizing and Bringing to a Normal Condition Waters That Are Impregnated With Sulfur, Acids, Mineral and Organic Substances, &c., and to Prevent Corrosion of Boilers, Tubes, Coils, Condensers, Heaters, and Similar Metallic Structures.

Ser. No. 37,180. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HELVETIA MILK CONDENSING COMPANY, Highland, Ill. Filed Sept. 3, 1908.

TULIP BRAND

Particular description of goods.—Evaporated Milk.

Ser. No. 37,190. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MATILDA SPENCER, Waterloo, Iowa. Filed Sept. 3, 1908.

I'M IT

Particular description of goods.—Soap.

Ser. No. 37,193. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MASON CASE, Corning, Cal. Filed Sept. 3, 1908.

PINK MALARIA CAPSULES

Particular description of goods.—Remedy for Malaria.

Ser. No. 37,254. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) FRANK E. CHESTER, Providence, R. I. Filed Sept. 8, 1908.

Chester TRADE MARK

Particular description of goods.—Fishing-Tackle, Comprising Hooks, Rods, Lines, Floats, Sinkers, and Reels.

TRADE-MARKS

REGISTERED OCTOBER 13, 1908.

70,841. TOILET CREAM. A. A. VANTINE & CO., New York, N. Y.
Filed April 6, 1908. Serial No. 33,896. PUBLISHED AUGUST 11, 1908.

70,842. REMEDY FOR CERTAIN DISEASES. CHARLES W. BRAUNLICH, Cleveland, Ohio.
Filed December 9, 1907. Serial No. 31,629. PUBLISHED MAY 19, 1908.

70,843. PEROXID CREAM FOR MASSAGE PURPOSES. FOREST CITY CHEMICAL CO., Cleveland, Ohio.
Filed June 5, 1908. Serial No. 35,174. PUBLISHED AUGUST 11, 1908.

70,844. CAPSULES. ROBERT J. GATES, New York, N. Y.
Filed June 26, 1908. Serial No. 35,809. PUBLISHED AUGUST 11, 1908.

70,845. LAUNDRY BLUE. J. & J. COLMAN, LIMITED, London, England.
Filed May 6, 1908. Serial No. 34,598. PUBLISHED AUGUST 11, 1908.

70,846. LIQUID REMEDY USED INTERNALLY. OTTILIA M. OTTO, Columbus, Ohio.
Filed June 10, 1908. Serial No. 35,256. PUBLISHED AUGUST 11, 1908.

70,847. REMEDY FOR CERTAIN DISEASES. THOMAS M. SAYMAN, St. Louis, Mo.
Filed June 23, 1908. Serial No. 35,698. PUBLISHED AUGUST 11, 1908.

70,848. REMEDY IN LIQUID FORM FOR THE CURE OF INFLAMMATION AND GRANULATION OF THE EYES. JOHN W. STOVER, Grand Rapids, Mich.
Filed December 4, 1905. Serial No. 15,195. PUBLISHED APRIL 23, 1907.

70,849. FOOT-POWDERS. JOHN HENRY WURTHMANN, New York, N. Y.
Filed June 17, 1908. Serial No. 35,453. PUBLISHED AUGUST 11, 1908.

70,850. MEDICINAL COMPOUND. THE ALKALOL COMPANY, Taunton, Mass.
Filed May 23, 1908. Serial No. 34,898. PUBLISHED AUGUST 11, 1908.

70,851. CERTAIN SHEET-METAL WARE. ATLANTIC STAMPING COMPANY, Rochester, N. Y.
Filed December 23, 1907. Serial No. 31,898. PUBLISHED AUGUST 11, 1908.

70,852. REMEDY FOR CERTAIN DISEASES. RICHARD RAY, Kansas City, Mo.
Filed March 25, 1908. Serial No. 33,616. PUBLISHED APRIL 28, 1908.

70,853. PERFUMED TOILET SOAP. A. & F. PEARS LIMITED, London, England.
Filed June 8, 1908. Serial No. 35,206. PUBLISHED AUGUST 11, 1908.

70,854. HAND AND HOUSEHOLD SOAP IN PASTE FORM. BARTELS MANUFACTURING COMPANY, New York, N. Y.
Filed April 15, 1908. Serial No. 34,126. PUBLISHED AUGUST 11, 1908.

70,855. RAZORS. DURHAM SAFETY RAZOR CO., New York, N. Y.
Filed May 19, 1908. Serial No. 34,833. PUBLISHED AUGUST 11, 1908.

70,856. RAZORS AND RAZOR-BLADES. GILLETTE SAFETY RAZOR CO., Boston, Mass.
Filed May 27, 1908. Serial No. 34,984. PUBLISHED AUGUST 11, 1908.

70,857. SCREW-DRIVERS. HENRY DISSTON & SONS, INCORPORATED, Philadelphia, Pa.
Filed June 3, 1908. Serial No. 35,113. PUBLISHED AUGUST 11 1908.

70,858. SAWS. HENRY DISSTON & SONS, INCORPORATED, Philadelphia, Pa.
Filed June 24, 1908. Serial No. 35,700. PUBLISHED AUGUST 11, 1908.

70,859. POST-HOLE DIGGERS. HENRY DISSTON & SONS, INCORPORATED, Philadelphia, Pa.
Filed June 24, 1908. Serial No. 35,701. PUBLISHED AUGUST 11, 1908.

70,860. SAWS. HENRY DISSTON & SONS, INCORPORATED, Philadelphia, Pa.
Filed June 24, 1908. Serial No. 35,702. PUBLISHED AUGUST 11, 1908.

70,861. SAWS. HENRY DISSTON & SONS, INCORPORATED, Philadelphia, Pa.
Filed June 24, 1908. Serial No. 35,704. PUBLISHED AUGUST 11, 1908.

70,862. SAW-SETS. HENRY DISSTON & SONS, INCORPORATED, Philadelphia, Pa.
Filed June 24, 1908. Serial No. 35,705. PUBLISHED AUGUST 11, 1908.

70,863. SAWS. HENRY DISSTON & SONS, INCORPORATED, Philadelphia, Pa.
Filed June 24, 1908. Serial No. 35,707. PUBLISHED AUGUST 11, 1908.

70,864. CERTAIN EDGE-TOOLS. SCHWABACHER HARDWARE CO., Seattle, Wash.
Filed May 4, 1908. Serial No. 34,575. PUBLISHED JUNE 30, 1908.

70,865. METAL-POLISHING COMPOUND. O. & E. SIERSEMA, New York, N. Y.
Filed June 26, 1908. Serial No. 35,806. PUBLISHED AUGUST 11, 1908.

70,866. CERTAIN TOILET PREPARATIONS. GEORGE F. SMITH, Woodsboro, Md.
Filed March 20, 1908. Serial No. 33,486. PUBLISHED MAY 5, 1908.

70,867. SOAP. W. M. GRIFFIN COMPANY, Fort Wayne, Ind.
Filed July 1, 1908. Serial No. 35,883. PUBLISHED AUGUST 11, 1908.

70,868. BOILER-CLEANING COMPOUNDS. HYMAN D. WOLCOTT, Averyville and Peoria, Ill.
Filed April 18, 1908. Serial No. 34,212. PUBLISHED AUGUST 11, 1908.

70,869. HOSIERY. A. B. ANDREWS COMPANY, New York, N. Y.
Filed May 27, 1908. Serial No. 34,993. PUBLISHED AUGUST 11, 1908.

70,870. LIQUID PAINT AND VARNISH REMOVER. ANTHRACITE MFG. CO., Wilkes-Barre, Pa.
Filed May 29, 1908. Serial No. 35,030. PUBLISHED AUGUST 11, 1908.

70,871. TWINE. ASHAWAY LINE & TWINE MANUF'G CO., Ashaway, R. I.
Filed July 7, 1908. Serial No. 35,993. PUBLISHED AUGUST 11, 1908.

70,872. CERTAIN RECEPTACLES. ATLANTIC STAMPING COMPANY, Rochester, N. Y.
Filed December 23, 1907. Serial No. 31,899. PUBLISHED AUGUST 11, 1908.

70,873. COTTON TEXTILE FABRICS. COVENTRY COMPANY, Providence, R. I.
Filed January 6, 1908. Serial No. 32,061. PUBLISHED APRIL 14, 1908.

70,874. HOSIERY. DAVIS HOSIERY MILLS, Chattanooga, Tenn.
Filed April 20, 1908. Serial No. 34,222. PUBLISHED AUGUST 11, 1908.

70,875. HOSIERY. DAVIS HOSIERY MILLS, Chattanooga, Tenn.
Filed April 20, 1908. Serial No. 34,223. PUBLISHED AUGUST 11, 1908.

70,876. BLEACHED COTTON GOODS IN THE PIECE. DEERING MILLIKEN & Co., New York, N. Y.
Filed May 25, 1908. Serial No. 34,934. PUBLISHED AUGUST 11, 1908.

70,877. BLEACHED COTTON GOODS IN THE PIECE. DEERING MILLIKEN & Co., New York, N. Y.
Filed May 29, 1908. Serial No. 35,027. PUBLISHED AUGUST 11, 1908.

70,878. ILLUMINATING AND LUBRICATING OILS AND GREASES. GALENA SIGNAL OIL COMPANY, Franklin, Pa.
Filed June 22, 1908. Serial No. 35,665. PUBLISHED AUGUST 11, 1908.

70,879. LIQUID WATERPROOF DRESSING FOR APPLICATION TO THE INTERIOR OF DRY-KILNS TO EXCLUDE MOISTURE. GRAND RAPIDS VENEER WORKS, Grand Rapids, Mich.
Filed May 16, 1908. Serial No. 34,778. PUBLISHED AUGUST 11, 1908.

70,880. WASHING-MACHINES. THE HORTON MANUFACTURING COMPANY, Fort Wayne, Ind.
Filed January 22, 1908. Serial No. 32,373. PUBLISHED AUGUST 11, 1908.

70,881. CERTAIN HEATING APPARATUS. ILLINOIS MALLEABLE IRON CO., Chicago, Ill.
Filed April 15, 1908. Serial No. 34,118. PUBLISHED AUGUST 11, 1908.

70,882. HANDKERCHIEFS. THE INTERNATIONAL MANUFACTURING CO., New York, N. Y.
Filed May 29, 1908. Serial No. 35,021. PUBLISHED AUGUST 11, 1908.

70,883. HANDKERCHIEFS. THE INTERNATIONAL MANUFACTURING CO., New York, N. Y.
Filed May 29, 1908. Serial No. 35,022. PUBLISHED AUGUST 11, 1908.

70,884. HANDKERCHIEFS. THE INTERNATIONAL MANUFACTURING CO., New York, N. Y.
Filed May 29, 1908. Serial No. 35,023. PUBLISHED AUGUST 11, 1908.

70,885. HANDKERCHIEFS. THE INTERNATIONAL MANUFACTURING CO., New York, N. Y.
Filed May 29, 1908. Serial No. 35,024. PUBLISHED AUGUST 11, 1908.

70,886. HANDKERCHIEFS. THE INTERNATIONAL MANUFACTURING CO., New York, N. Y.
Filed May 29, 1908. Serial No. 35,025. PUBLISHED AUGUST 11, 1908.

70,887. SHEETINGS. JACKSON MILLS, Iva, S. C.
Filed May 20, 1908. Serial No. 34,850. PUBLISHED AUGUST 11, 1908.

70,888. [WITHDRAWN.]

70,889. CARPETS AND RUGS. LISTER AND COMPANY LIMITED, Bradford, Yorkshire, England.
Filed May 28, 1908. Serial No. 35,008. PUBLISHED AUGUST 11, 1908.

70,890. LIME FOR FERTILIZING. M. J. GROVE LIME CO., Lime Kiln, Md.
Filed June 11, 1908. Serial No. 35,283. PUBLISHED AUGUST 11, 1908.

70,891. WINDOW-CURTAINS, AND LACE AND MUSLIN FOR MAKING CURTAINS. MARTIN MANUFACTURING COMPANY, Newton, Mass.
Filed April 17, 1908. Serial No. 34,188. PUBLISHED AUGUST 11, 1908.

70,892. WINDOW-CURTAINS, AND LACE AND MUSLIN FOR MAKING CURTAINS. MARTIN MANUFACTURING COMPANY, Newton, Mass.
Filed April 17, 1908. Serial No. 34,189. PUBLISHED AUGUST 11, 1908.

70,893. WINDOW CURTAINS, AND LACE AND MUSLIN FOR MAKING CURTAINS. MARTIN MANUFACTURING COMPANY, Newton, Mass.
Filed April 17, 1908. Serial No. 34,190. PUBLISHED AUGUST 11, 1908.

70,894. PAINTS. MINNESOTA LINSEED OIL PAINT COMPANY, Minneapolis, Minn.
Filed February 20, 1908. Serial No. 32,904. PUBLISHED AUGUST 11, 1908.

70,895. LINSEED-OIL. MINNESOTA LINSEED OIL PAINT COMPANY, Minneapolis, Minn.
Filed February 20, 1908. Serial No. 32,905. PUBLISHED AUGUST 11, 1908.

70,896. RUBBER HOSE. PENNSYLVANIA RUBBER COMPANY, Jeanette, Pa
Filed April 23, 1908. Serial No. 34,290. PUBLISHED AUGUST 11, 1908.

70,897. SUBSTITUTE FOR TURPENTINE. THE PAINTERS PRODUCTS COMPANY, Philadelphia, Pa.
Filed May 11, 1908. Serial No. 34,683. PUBLISHED AUGUST 11, 1908.

70,898. REMEDY FOR CERTAIN DISEASES. PHILLIPS DRUG COMPANY, Warren, Pa.
Filed March 16, 1908. Serial No. 33,414. PUBLISHED MAY 12, 1908.

70,899. STOVES, FURNACES, AND HOT-AIR HEATERS. ISAAC A. SHEPPARD & Co., Philadelphia, Pa.
Filed June 1, 1908. Serial No. 35,059. PUBLISHED AUGUST 11, 1908.

70,900. SILK PIECE GOODS. L. & E. STIRN, New York, N. Y.
Filed May 21, 1908. Serial No. 34,868. PUBLISHED AUGUST 11, 1908.

70,901. NAPHTHA AND BENZIN AND GASOLENE. THE TEXAS COMPANY, Beaumont and Houston, Tex.
Filed May 20, 1908. Serial No. 34,842. PUBLISHED AUGUST 11, 1908.

70,902. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed March 6, 1906. Serial No. 17,597. PUBLISHED AUGUST 11, 1908.

70,903. LEATHER BOOTS AND SHOES. WILLIAMS, HOYT AND CO., Rochester, N. Y.
Filed May 16, 1908. Serial No. 34,777. PUBLISHED AUGUST 11, 1908.

70,904. CERTAIN ELECTRICAL SUPPLIES. AJAX LINE MATERIAL CO., Chicago, Ill.
Filed November 2, 1907. Serial No. 30,963. PUBLISHED AUGUST 11, 1908.

70,905. BEER, ALE, AND PORTER. BACHMANN-BECHTEL BREWING COMPANY, Rosebank, N. Y.
Filed May 23, 1908. Serial No. 34,914. PUBLISHED AUGUST 11, 1908.

70,906. SOFT, WHITE, SWEET, CREAM MIXTURE TO BE USED IN MANUFACTURING CANDIES. VINCENT F. BARBARO, Springfield, Ill.
Filed May 7, 1908. Serial No. 34,641. PUBLISHED AUGUST 11, 1908.

70,907. STRAIGHT WHISKY. ALEX BLOOM, Chicago, Ill.
Filed January 27, 1908. Serial No. 32,454. PUBLISHED MARCH 17, 1908.

70,908. REDUCING-SPIRITS OR THINNER FOR PAINTS, VARNISHES, JAPANS, ENAMELS, FILLERS, AND STAINS. THE CHAS. H. MOORE OIL CO., Cincinnati, Ohio.
Filed April 1, 1908. Serial No. 33,783. PUBLISHED AUGUST 11, 1908.

70,909. PANCAKE-FLOUR. E. R. PAHL & Co., Milwaukee, Wis.
Filed April 19, 1907. Serial No. 26,789. PUBLISHED AUGUST 20, 1907.

70,910. WHEAT-FLOUR. HOGAN MILLING COMPANY, Junction City, Kans.
Filed September 19, 1907. Serial No. 30,072. PUBLISHED AUGUST 11, 1908.

70,911. COTTON-SEED OIL. MCCAW MANUFACTURING CO., Macon, Ga.
Filed April 3, 1908. Serial No. 33,843. PUBLISHED AUGUST 11, 1908.

70,912. COTTON-SEED OIL. MCCAW MANUFACTURING CO., Macon, Ga.
Filed April 3, 1908. Serial No. 33,844. PUBLISHED AUGUST 11, 1908.

70,913. ELECTRIC BATTERIES. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed June 15, 1908. Serial No. 35,397. PUBLISHED AUGUST 11, 1908.

70,914. INCANDESCENT ELECTRIC LAMPS. NOVELTY INCANDESCENT LAMP CO., Emporium, Pa.
Filed June 19, 1908. Serial No. 35,622. PUBLISHED AUGUST 11, 1908.

70,915. ITALIAN OLIVE-OIL. ERNEST RUSSO, New York, N. Y.
Filed April 23, 1908. Serial No. 34,282. PUBLISHED JULY 14, 1908.

70,916. POTATO-FLOUR. SCANDINAVIAN IMPORTING COMPANY, Kittery, Me., and Boston, Mass.
Filed May 27, 1908. Serial No. 34,977. PUBLISHED AUGUST 11, 1908.

70,917. CIGARS. AHREND H. SPRUNG, New York, N. Y.
Filed June 1, 1908. Serial No. 35,052. PUBLISHED AUGUST 11, 1908.

70,918. CHOCOLATE NOUGAT-BARS. FENN BROS. INC., Sioux Falls, S. D.
Filed March 9, 1908. Serial No. 33,272. PUBLISHED AUGUST 11, 1908.

70,919. FLAVORING-SYRUPS FOR NON-ALCOHOLIC BEVERAGES. THE TO-KO COMPANY, Hagerstown, Md.
Filed May 9, 1908. Serial No. 34,658. PUBLISHED JULY 28, 1908.

70,920. ARTIFICIAL MINERAL WATERS. W. T. WAGNER'S SONS, Cincinnati, Ohio.
Filed March 5, 1908. Serial No. 33,191. PUBLISHED AUGUST 11, 1908.

70,921. BLACK SILK TAFFETA IN THE PIECE. THE HOLMES SILK COMPANY, New York, N. Y., and Paterson, N. J.
Filed May 6, 1908. Serial No. 34,612. PUBLISHED AUGUST 11, 1908.

70,922. BEER, STOUT, AND MALT EXTRACT. THE STROH BREWERY COMPANY, Detroit, Mich.
Filed October 22, 1907. Serial No. 30,720. PUBLISHED JULY 21, 1908.

LABELS

REGISTERED OCTOBER 13, 1908.

14,394.—*Title:* "CARACOL." (For Cigars.) F. GARCIA AND BROS., New York, N. Y. Filed September 16, 1908.

14,395.—*Title:* "GEN. HAZEN." (For Cigars.) AUGUST VALDES, Chicago, Ill. Filed September 9, 1908.

14,396.—*Title:* "SELF CLOSING." (For Cigarettes.) E. A. CONDAX & Co., New York, N. Y. Filed July 3, 1908.

14,397.—*Title:* "AMERICAN BREAKFAST COCOA." (For Cocoa.) JOHN SATLEIN, New York, N. Y. Filed August 28, 1908.

14,398.—*Title:* "DR. I. H. LEWKOWICZ'S ANTISEPTIC TOOTH POWDER." (For Tooth-Powder.) I. H. LEWKOWICZ, Sharon, Pa. Filed August 26, 1908.

14,399.—*Title:* "DR. I. H. LEWKOWICZ'S ANTISEPTIC TOOTH BRUSH." (For Tooth-Brush.) I. H. LEWKOWICZ, Sharon, Pa. Filed August 26, 1908.

14,400.—*Title:* "FROST QUEEN SKIN BALM." (For Skin-Balm.) WILLIAM BICKMEIER, Cincinnati, Ohio. Filed July 24, 1908.

14,401.—*Title:* "MILNE'S CARO-BALSAM HAIR RESTORER." (For Hair-Restorer.) HENRY MILNE, New York, N. Y. Filed July 11, 1908.

14,402.—*Title:* "MACRUM'S CELEBRATED LINIMENT." (For a Liniment for Man and Beast.) CLYDE RITTER, Angola, Ind. Filed August 6, 1908.

14,403.—*Title:* "OXYDASE." (For Oxidized Essential Oils and Carbohydrates.) EDWARD C. GETSINGER, Washington, D. C. Filed July 27, 1908.

14,404.—*Title:* "COLD WATER GLUE." (For Cold-Water Glue.) JOHN PONTON, Jersey City, N. J. Filed August 22 1908.

14,405.—*Title:* "THE JIG-SAW PUZZLE PICTURE." (For Picture-Puzzles.) MORRIS RUBENS, New York, N. Y. Filed September 1, 1908.

14,406.—*Title:* "NIGHT" "MORNING" "DAY." (For Ladies' Hair-Wavers.) STRATE-FOLD MANUFACTURING CO., New York, N. Y. Filed August 13, 1908.

14,407.—*Title:* "KUMFORT." (For Corset-Laces.) HENRY GITTERMAN & Co., New York, N. Y. Filed August 13, 1908.

14,408.—*Title:* "SURE PROOF." (For Hosiery.) L. S. PLAUT & Co., Newark, N. J. Filed July 15, 1908.

PRINTS

REGISTERED OCTOBER 13, 1908.

2,357.—*Title:* "CARVEL WHISKEY." (For a Blend of Straight Rye Whiskies.) J. A. BOKEL CO. OF BALTIMORE CITY, Baltimore, Md. Filed September 15, 1908.

2,358.—*Title:* "DON'T SAY FLOUR." (For Flour.) WASHBURN CROSBY COMPANY, Minneapolis, Minn. Filed September 8, 1908.

2,359.—*Title:* "DOUBLE SERVICE SUITS." (For Suits of Boys' Clothing.) L. S. PLAUT & Co., Newark, N. J. Filed September 1, 1908.

2,360.—*Title:* "B. V. D. LOOSE FITTING SLEEPING SUITS." (For Men's Sleeping Garments.) THE B. V. D. COMPANY, New York, N. Y. Filed August 29, 1908.

2,361.—*Title:* "THE GODIVA." (For Ladies' Riding Habits and Skirts.) S & S GOLDBERG, New York, N. Y. Filed June 4, 1908.

2,362.—*Title:* "FLIRTATION AND FORTUNA BACKS, CONGRESS PLAYING CARDS." (For Playing-Cards.) THE UNITED STATES PLAYING CARD COMPANY, Norwood, Ohio. Filed June 30, 1908.

2,363.—*Title:* "U. S. A. PENCIL CASE, USEFUL SCHOOL ARTICLE." (For Pencil-Case.) EUGENE PEARL, New York, N. Y. Filed September 16, 1908.

2,364.—*Title:* "AUTOMATIC-NICKEL-IN-THE-SLOT SHOE SHINING MACHINES." (For Shoe-Shining Machines.) INTERNATIONAL MACHINE CORPORATION, Richmond, Va. Filed August 8, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

CASE *v.* QUIRK.

TRADE-MARK INTERFERENCE.

Decided July 29, 1908.

TRADE-MARK—CANCELATION—SECTION 13 OF THE TRADE-MARK ACT.

The Commissioner has no authority to cancel a certificate of registration of a trade-mark except in accordance with the provisions of section 13 of the Trade-Mark Act of February 20, 1905.

PETITION for cancelation.

TRADE-MARK FOR WHEAT-FLOUR.

Messrs. McGowan, Serven & Mohun for Case.

Messrs. Paul & Paul for Quirk.

MOORE, *Commissioner:*

This is a petition by Clarence O. Case for the cancelation of certificate of registration No. 32,504, granted to James Quirk May 26, 1908, covering a trade-mark for wheat-flour, comprising the word "Evangeline."

The application of James Quirk was filed January 30, 1908. An application for registration claiming the same mark for the same goods was filed by petitioner on February 17, 1908. Although both cases were pending at the same time, a certificate was granted to Quirk without an interference having been first declared, evidently through an oversight by the Office. On June 16, 1908, an interference was declared between the application and the registration, times for taking testimony have been set, and final hearing has been fixed for January 4, 1909.

Petitioner sets forth that immediately after registration was granted the owners of the registered mark began to send out threatening letters to the trade, and particularly to the customers in whom petitioner is interested, notifying them of the registration and warning them against the use of the brand "Evangeline," wherefore petitioner has suffered and is suffering great damage. The allegation that such letters have been sent to the trade has not been denied.

Petitioner urges that inasmuch as this mark was registered through mistake operating to his injury the Office should correct such mistake by canceling the registration. Section 13 of the Trade-Mark Act of February 20, 1905, provides that the Commissioner may cancel a registered mark, but specifies certain procedure to be followed. Petitioner recognizes the fact that the relief prayed for cannot be granted under this section of the statute upon the present petition, as he has not complied with its provisions, but urges that under section 26 of the act—

> the Commissioner of Patents is authorized to make rules and regulations not inconsistent with law, for the conduct of proceedings in reference to the registration of trade-marks provided for by this act—

and that under this power to make rules and regulations he has power to order a cancelation of a registered mark; but this section of the statute is limited to the making of rules and regulations with reference to the "registration" of trade-marks. The cancelation of a registered mark certainly cannot be considered an act in reference to the registration of a mark, but is an act in reference to a mark which has already been registered. I am of the opinion that the terms of the statute indicate clearly not only that the Commissioner's power is limited to rules relating to procedure, but that it is limited to questions arising before the grant of a certificate of registration, and not to any question arising in connection with a mark that has been registered in accordance with the law.

The petition is denied.

EX PARTE TALIAFERRO.

Decided September 28, 1908.

1. ASSIGNMENT OR LICENSE—RESERVATION—LICENSE.

An instrument purporting to convey "an undivided one-sixth of all right, title and interest" in an invention, but reserving to the assignor the sole right to manufacture and sell the invention and providing that the assignee "shall not so manufacture and sell" except by assignor's consent, conveys nothing more than a right to use the invention. It is a mere license and not an assignment and is not such an interest as would warrant the issuance of the patent to the grantee, notwithstanding the request in such instrument that the patent so issue.

2. PATENT SHOULD NOT ISSUE TO A MERE LICENSEE.

The Patent Office should not issue a patent to an alleged assignee where the inventor has reserved to himself the exclusive right to make or use or sell the invention covered by his application or any combination of these elements which limits the interests of the alleged assignee to an interest in the invention less than that defined as an assignment by the Supreme Court of the United States in the decision *Waterman* v. *McKenzie*, (138 U. S., 252,) which defined an assignment to be either (1) the whole patent, comprising the exclusive right to make, use, and vend the invention throughout the United States, or (2) an undivided part or share of that exclusive right, or (3) the exclusive right under the patent within and throughout a specified part of the United States.

BLACKING-MACHINE.

Messrs. Munn & Co. for the applicant.

MOORE, *Commissioner:*

This case comes before me on reference by the Chief of the Assignment Division for instructions whether to issue a patent jointly to the applicant and his alleged assignee or to the applicant alone.

There is upon the assignment records of this Office an assignment by Taliaferro purporting to convey to Harry Spinglar—

an undivided one-sixth of all right, title and interest in said invention and any improvements thereafter made by him thereon, for the United States. Letters Patent to issue in accordance herewith. The parties hereto agree that Taliaferro shall have sole right to manufacture and sell said invention and said improvements, as an article of merchandise; that Spinglar shall not so manufacture and sell except by Taliaferro's written consent, and that Spinglar shall have right to sell the whole or any part of his interest without Taliaferro's consent.

The Chief of the Assignment Division is of the opinion that this alleged assignment comprises nothing more than a license and does not convey such interest in the invention as to warrant the issuance of the patent to Taliaferro and Spinglar in the manner requested in said assignment. He is, however, of the opinion that he is controlled by the decision in *ex parte Rowand* (114 O. G., 2091) to advise the issuance of the patent in the manner requested.

Section 4895, Revised Statutes, provides in part that—

Patents may be granted and issued or reissued to the assignee of the inventor or discoverer; but the assignment must first be entered of record in the Patent Office—

upon compliance with certain stated conditions. In the case of *Waterman* v. *McKenzie et al.* (138 U. S., 252) the Supreme Court of the United States defined the extent of interest required to be conveyed by an assignment in the following language:

The patentee or his assigns may, by instrument in writing, assign, grant, and convey either (1) the whole patent, comprising the exclusive right to make, use, and vend the invention throughout the United States; or (2) an undivided part or share of that exclusive right; or (3) the exclusive right under the patent within and throughout a specified part of the United States. (*Id.*, sec. 4898.) A transfer of either of these three kinds of interests is an assignment, properly speaking, and vests in the assignee a title in so much of the patent itself, with a right to sue infringers—in the second case, jointly with the assignor; in the first and third cases, in the name of the assignee alone. Any assignment or transfer, short of one of these, is a mere license, giving the licensee no title in the patent and no right to sue at law in his own name for an infringement. (*Id.*, sec. 4919; *Gayler* v. *Wilder*, 10 How., 477, 494, 495; *Moore* v. *Marsh*, 7 Wall., 515.)

It is obvious that the instrument above quoted, which not only reserves to Taliaferro the "sole right to manufacture and sell the invention," but expressly provides that—

Spinglar shall not so manufacture and sell except by Taliaferro's written consent—

conveys nothing more than the right to use the invention. It does not vest in the alleged assignee any one of the three kinds of interest which are essential to an assignment as defined by the Supreme Court of the United States in the decision above quoted and does not therefore constitute such an interest as would warrant the issuance of the patent in accordance with the request contained in such instrument.

In the case of *ex parte Rowand* it appears that the reservation comprised merely the privilege of the assignor to make, use, and sell the device described in the application for patent or in the patent issued thereon for a particular stated purpose and did not reserve the exclusive right to make, use, or sell the invention. The present case differs from *ex parte Rowand* in that Taliaferro has reserved the exclusive right to make and sell the invention. The circumstances of this case are more nearly analogous to those in the case of *ex parte Rosback*, (89 O. G., 705,) in which former Commissioner Duell held that where in two instruments which purported to be assignments Rosback reserved to himself the exclusive right to use the invention in the manufacture of book-stitching machines, the instrument amounted to nothing more than a license and did not convey such an interest in the invention and the patent as would authorize the Commissioner to issue the patent to the alleged assignee. It is believed that under the authorities above cited the Office should not issue a patent to an alleged assignee where the inventor has reserved to himself the exclusive right to make or use or sell the invention covered by his application or any combination of these elements which limits the interest of the alleged assignee to an interest in the invention less than that defined as an assignment by the Supreme Court of the United States in the decision *Waterman* v. *McKenzie et al.* above quoted.

It is directed that the patent in this case be issued to Taliaferro, the inventor.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

KINSMAN v. KINTNER.

Decided May 5, 1908.

1. INTERFERENCE—REDUCTION TO PRACTICE—LACK OF DILIGENCE.

Where it appears that Kinsman installed mechanism embracing part of the issue in 1890 which was experimental in its nature and found to be unsuccessful, and immediately thereafter unsuccessfully tested a second experimental device, and in 1892 and 1893 installed a system embodying the invention which after being used for several months was taken out and discarded, and no further evidence of activity on the part of Kinsman was shown prior to the filing of his application in December, 1903 which was subsequent to the time Kintner entered the field and reduced the invention to practice, and during this time Kinsman was active in experimenting with other forms of invention, *Held* that he was lacking in diligence.

2. SAME—SAME—SAME.

The object of the patent laws is to foster and protect invention for the universal benefit of mankind, and while every presumption will be resolved in favor of the inventor who delays filing an application until he has perfected his invention the object of the law would be lost to view should we permit the displacement of an inventor who has given the world the benefit of his discovery by one who has permitted his invention to lie dormant for a decade.

Mr. Chas. S. Champion and *Mr. J. F. Hefferman* for the appellant.

Mr. S. T. Fisher and *Mr. Ernest Wilkinson* for the appellee.

ROBB, *J.:*

This is an interference proceeding involving improvements in block-system safety appliances for railways, in which an automatic power-controlling device carried by the vehicle is adapted to be actuated by a device upon a line of way when the track is obstructed to cut off the power and apply the brakes, and is expressed in the following counts:

1. The combination with a line of way having a normally closed electrical controlling-circuit, of a vehicle movable along said line of way, an automatic controller governing the movement of said vehicle, a trip on the line of way and movable into the path of said controller, and electrical trip-operating means on said line of way and included in said controlling-circuit and operative for normally holding said trip out of action.

2. The combination with a line of way and with a vehicle movable therealong, of an automatic controller governing the movement of said vehicle, a trip on the line of way and movable into the path of said controller, and a solenoid connected with said trip and electrically operative for normally holding said trip out of action.

3. The combination with a line of way and with a vehicle movable therealong, of an automatic controller governing the movement of said vehicle, a trip on the line of way and movable into the path of said controller, electrical trip-operating means on said line of way and operative for normally holding said trip out of action, and a power device of another character for shifting said trip into action.

4. The combination with a line of way and with a vehicle movable therealong, of an electrical controlling-circuit, an automatic controller governing the movement of said vehicle, a trip on the line of way and movable into the path of said controller, a signal device, and electrical means on said line of way and governed by said controlling-circuit for operating said trip and signal device in harmony.

5. In a system for controlling the movements of electrically-operated railway-vehicles, the combination with the power-circuit, of a normally closed controlling-circuit governed by the power-circuit, and means for deënergizing said controlling-circuit and automatically breaking the power-circuit on the vehicle and applying a brake.

6. In a system for controlling the movements of electrically-operated railway-vehicles, the combination with the power-circuit, of a normally closed controlling-circuit governed by the power-circuit, a track-signal governed by the controlling-circuit, and means for deënergizing said controlling-circuit and automatically stopping the vehicle.

The Examiner of Interferences and a majority of the Examiners-in-Chief and the Commissioner in their decisions awarded priority to Kintner, the senior party, who relied solely upon his filing date as his date of conception and reduction to practice.

In his original preliminary statement filed April 25, 1905, Kinsman, the junior party, alleges that he conceived the invention of the issue in the summer of 1890 and that he made drawings and disclosed the invention to others during that year and 1893. He does not claim that he ever made a model of the invention. His preliminary statement also contains the admission—

that he has never embodied the whole of the invention constituting the subject-matter of this interference in a full-sized apparatus, but that he has embodied parts of the same in automatic train-stopping systems which have been successfully reduced to practice and used for long periods of time, such a system having been installed by him in the summer of the year 1890 on the Fitchburg Railroad in Massachusetts and used on said road for a considerable period of time.

It appears that Kinsman installed mechanism embracing parts of the subject-matter of counts 1, 2 and 3 of the issue upon the Fitchburg Railroad at Ayer Junction, Mass., about 1890. This device, which was experimental in its nature, was found to be unsuccessful and was discarded. Immediately thereafter a second device was installed which embodied the subject-matter of counts 1, 2 and 3 of this interference and of count 4 except the signaling device. This second device was experimentally tested and was found to be subject to objections. Kinsman testified that he did not consider it a good type of automatic train-stopping device for open country for several stated reasons. This device followed the fate of the first and was superseded by a third experimental system, which, however, did not involve the subject-matter of counts 1, 2, 3 and 4 of the issue. Kinsman testified that at the termination of his experiments on the Fitchburg Railroad at Ayer Junction all equipment which he installed in connection with those experiments "was removed and the larger part of it put into junk." Nothing further was ever done by Kinsman toward installing either the first or the second experimental equipments. He did, however, in 1892 and 1893 equip a few miles of the Chicago & Evanston division of the Chicago, Milwaukee & St. Paul Railroad with an automatic stopping system of the fixed-contact type last adopted at Ayer Junction, which system was used in regular service for several months when it was taken out and discarded. The next evidence of activity on the part of Kinsman was the filing of his application herein on December 1, 1903, which, it will be noted, was ten years after the experiments which it must be held he permitted to become abandoned. The evidence shows that during this time he was active in experimenting with other forms of inventions, and that he took out several patents during the interval between 1893 and the date of the filing of his application herein. It further appears that many thousands of dollars were expended during this period in exploiting his inventions.

The Examiner of Interferences in referring to his lack of diligence said:

If, however, it be granted that Kinsman had conceived the invention in 1893, which it is not, there is no sufficient showing of diligence in reducing such conception to practice. He was admittedly active in experimenting with other forms of invention along the same line, and took out several patents in the interval between 1893 and December, 1903. * * * In the present case the delay covers a period of more than ten years, during which time several patents were granted to Kinsman upon allied inventions while there appears to have been no special effort to either actually or constructively reduce the invention stated in counts 5 and 6 of the issue to practice. He was not active at the time Kintner entered the field, April 14, 1903, and did not become active until about the time he filed his application, December 1, 1903. It must, therefore, be held that Kinsman was also lacking in diligence in reducing to practice the invention defined in counts 5 and 6.

The Examiners-in-Chief in their opinion, in discussing Kinsman's lack of diligence, said:

There is absolutely no evidence upon which to found a holding that Kinsman was diligent. While he filed his application less than eight months after Kintner he was doing nothing with this invention when Kintner filed, and had been doing nothing for ten years.

The Commissioner in his decision also finds Kinsman lacking in diligence.

It is alleged that the state of Kinsman's health and his financial condition were such as to excuse his delay. It does not appear that either of these was the cause of his failure to do anything with this invention after the work at Ayer Junction. He was very busy about other forms of his invention and a small part of the money which he expended thereon would have enabled him to have reduced the invention to practice, at least constructively.

As has many times been said, the object of the patent laws is to foster and protect invention for the universal benefit of mankind, and, while every presumption will be resolved in favor of the inventor who delays filing an application until he has perfected his invention, the object of the law would be lost to view should we permit the displacement of an inventor who has given the world the benefit of his discovery by one who has permitted his invention to lie dormant for a decade.

The decision of the Commissioner of Patents is affirmed, and the clerk of the court will certify this opinion and the proceedings in this court to the Commissioner of Patents, as required by law. Affirmed.

Court of Appeals of the District of Columbia.

EHRET v. STAR BREWERY COMPANY.

Decided June 2, 1908.

TRADE-MARKS—INTERFERENCE—MARKS INCLUDING STAR AS PRINCIPAL FEATURE.

Held that a trade-mark consisting of a six-pointed star with the letters "G E" inscribed in monogram in the center so nearly resembles the trade-mark consisting of a six-pointed star surrounded by two circles, having inscribed between the inner and outer circles the words "The Celebrated Star Lager Beer," as to cause confusion in the mind of the public and deceive purchasers.

Mr. Wallace Green and *Mr. Melville Church* for the appellant.

Mr. F. B. Brock for the appellee.

VAN ORSDEL, *J.*:

This is an appeal from a decision of the Commissioner of Patents in an interference proceeding involving the right of appellant to register, as a trade-mark, "the representation of a star for lager beer." It appears that on June 9, 1896, appellant Ehret registered a trade-mark for lager-beer consisting of a six-pointed star, with the letters "G E" inscribed in monogram in the center. On April 19, 1905, he applied for the registration of the same mark under the present law. Appellee, the Star Brewery Company, on September 5, 1893, registered a trade-mark consisting of a six-pointed star surrounded by two circles having inscribed between the inner and outer circle the words, "The Celebrated Star Lager Beer."

It was held by the Examiner of Interferences, and affirmed by the Commissioner, that Ehret was not entitled to reregistration, for the reason that his mark so nearly resembled the mark of appellee as to be likely to cause confusion in the mind of the public. Section 5 of the act of Congress approved February 20, 1905, among other things, provides—

that trade-marks which are identical with a registered or known trade-mark owned or in use by another, and appropriated to merchandise of the same descriptive properties, or which so nearly resemble a registered or known trade-mark, owned or in use by another and appropriated to merchandise of the same descriptive properties as to be likely to cause confusion or mistake in the minds of the public or to deceive purchasers shall not be registered.

The mark of appellee and the one here sought to be registered by Ehret are intended to be used on merchandise of the same descriptive properties, namely lager-beer.

The dominant feature of the above marks is the six-pointed star, and, while the two marks show a difference in details, we are of the opinion that the main feature of each is such as, of necessity, to designate the goods on which they are used as Star Brand lager-beer. This being true, under the former decisions of this court, we will have to hold that the use of the mark sought to be registered by Ehret on lager-beer would tend to confuse the mind of the public with that of the registered mark of the appellee. (*In re Indian Portland Cement Co.*, App. D. C., present term.)

The decision of the Commissioner of Patents is affirmed, and the clerk will certify these proceedings as required by law. Affirmed.

Court of Appeals of the District of Columbia

MELL *v.* MIDGLEY.

Decided June 9, 1908.

1. RULES OF PRACTICE—BINDING FORCE OF.

The Rules of Practice in the Patent Office when not in conflict with law have the full force and effect of statutes. As the approval of such rules by the Secretary of the Interior is necessary to the adoption and establishment of such rules, the contrary is true that where a rule of procedure is in force it can only be repealed, modified, or suspended by the Commissioner with the approval of the Secretary of the Interior.

2. INTERFERENCE—APPEAL TO COURT ON PRIORITY—PATENTABILITY NOT CONSIDERED.

The question of the patentability of an invention is not one for determination by the court of appeals upon an appeal from a decision on priority.

3. SAME—SAME—REGULARITY OF COMMISSIONER'S ACTION.

After an adverse decision by the Primary Examiner upon a motion to dissolve decisions on priority were rendered by the Examiner of Interferences and the Examiners-in-Chief and appeal was taken to the Commissioner of Patents from the latter decision. Pending this appeal a successor of the Primary Examiner requested jurisdiction of the interference for the purpose of considering the patentability of the issue. Such request was granted, and the Primary Examiner dissolved the interference upon the ground that the issue was not patentable. Upon petition to the Commissioner the decision of the Primary Examiner was set aside and the interference was restored to its prior condition of appeal to the Commissioner on priority. On appeal to the court of appeals from the decision of the Commissioner, *Held* that the regularity of the action of the Commissioner in setting aside the decision of the Primary Examiner dissolving the interference is not a question for the consideration of the court.

Mr. William E. Dyre for the appellant.

Mr. W. B. Corwin for the appellee.

VAN ORSDEL, *J.*:

This is an appeal from a decision of the Commissioner of Patents in an interference proceeding. The issue is involved in the following counts:

1. In a vehicle-wheel, the combination with a main rim member and a removable side flange, said main rim member having a bead or rib extending toward the center of the wheel and a removable side flange having a similar bead or rib, of an expanding locking-ring engaging both of said ribs or beads.

2. The combination with a wheel-rim, of a ring having an outwardly-extending and inwardly-turned flange at one edge to engage the tire, and extending across and secured to the outer surface of the rim, a ring having an outwardly-extending and inwardly-turned flange to engage the tire at the other side, flanges on the adjacent edges of said rings extending inward therefrom parallel with one side of the rim, and a severed ring engaging said flanges to secure the rings together.

The appellant, Tod J. Mell, filed his application for Letters Patent on December 19, 1905, and the appellee, Thomas Midgley filed his application on April 29, 1905. The interference was declared October 23, 1906. In his preliminary statement, Mell alleged dates subsequent to the filing date of Midgley. On the face of the record, Midgley was entitled to a judgment of priority. Confronted with this embarrassing situation, Mell filed a motion to dissolve the interference on the ground of the non-patentability of the invention in view of certain prior patents. This motion was denied by the Primary Examiner. The interference came on for hearing before the Examiner of Interferences, and a judgment of priority was rendered in favor of Midgley. Mell appealed to the Board of Examiners-in-Chief, where the decision of the Examiner of Interferences was affirmed. Mell then appealed to the Commissioner of Patents, where the case was set for hearing on October 1, 1907.

It may be stated that on each appeal, Mell was insisting upon the non-patentability of the invention in issue, in view of the prior patent to one Harris, to which he referred specifically in his motion to dissolve the interference before the Primary Examiner.

On August 30, 1907, the Primary Examiner of Division No. 41 requested that further proceedings in the interference be suspended and jurisdiction be restored to him to consider the patentability of the issue. This request was granted by the Commissioner, and, on September 12, 1907, the Examiner decided the invention involved in the issue unpatentable. This decision was based entirely upon the Harris patent, which had been considered by his predecessor on the motion to dissolve by the Examiner of Interferences and by the Examiners-in-Chief, and which was suggested by Mell in the appeal to the Commissioner.

Midgley then filed a petition on September 24, 1907, praying the Commissioner—

that all proceedings in the above-entitled case subsequent to the appeal to your honor on the merits, which was set for hearing Oct. 1, 1907, be set aside, and the interference restored to the condition it was in on the 15th day of August, 1907. And further that proceedings in the interference be suspended pending the determination of this petition.

The petition was granted by the Commissioner, and the case on appeal came on for final hearing. On December 6, 1907, the Commissioner affirmed the decision of the Examiners-in-Chief. Mell filed a motion for a rehearing, urging that the Commissioner had exceeded his jurisdiction in granting the petition of Midgley and setting aside the decision of the Primary Examiner of Division 41. This motion was denied, and, thereupon, this appeal was taken.

It is contended by counsel for appellant that the case is not properly before this court, and should be remanded, with instructions to the Commissioner to proceed with the case in accordance with the rules regulating procedure in the Patent Office. The interference was suspended by the Commissioner, and the matter referred to the Primary Examiner, under Rule 128, which is as follows:

If, during the pendency of an interference, a reference be found, the interference may be suspended at the request of the Primary Examiner until the final determination of the pertinency and effect of the reference and interference shall then be dissolved, or continued, as the result of such determination. The consideration of such reference shall be *inter partes*.

It is insisted that, when the Primary Examiner declared the issue non-patentable, there was but one course of procedure left for appellee, which is set forth in Rule 124 as follows:

Where, on motion for dissolutions, the Primary Examiner renders an adverse decision upon the merits of a party's case, as when he holds that the issue is not patentable, or that a party has no right to make a claim, or that the counts of the issue have different meanings in the cases of different parties, he shall at once reject such claims as may be affected, and shall set a time for reconsideration; after reconsideration, if he adheres to his original conclusion, he will make the previous rejection final and fix a limit of appeal. The appeal must go to the Examiners-in-Chief in the first instance, and will be heard *inter partes*.

It is well settled that the rules of procedure in the Patent Office, when not in conflict with any provision of law, have the full force and effect of statutes. These rules are made and promulgated by the Commissioner, by and with the approval of the Secretary of the Interior. The approval of the Secretary of the Interior being necessary to the adoption and establishment of a rule, we think the contrary would be true, that, where a rule of procedure is in force, it can only be repealed, modified, or suspended by the Commissioner with the approval of the Secretary of the Interior.

The real question before us, however, is not the effect of the rules of procedure in the Patent Office, but whether appellant is in a position to assail the action of the Commissioner. The position of counsel for appellant is an anomalous one. After invoking the jurisdiction of this court on appeal from a judgment of priority by the Commissioner of Patents, it is now insisted that that question is not properly before us for consideration. Appellant, after pursuing the issue of priority to defeat, apparently is seeking to rob his adversary of the fruits of his victory by having the invention in issue declared unpatentable. This result is sought to be obtained by here attacking the methods employed by the Commissioner in arriving at his decision.

We are not required to pass upon the regularity of the action of the Commissioner in this proceeding. That question is not before us for consideration. The patentability of an invention is a question to be determined by the Patent Office and not by this court upon appeal in an interference proceeding. There are two reasons why Mell cannot be heard to complain of the order of the Commissioner; first, because it was his appeal that was reinstated, and the order reinstating the appeal must be presumed to have been for his benefit, and, second, because he is not in a position to raise the question here presented. At the time the Commissioner made the order complained of, Midgley had a judgment of priority in his favor. Mell, in the face of that judgment, was in no better position to raise the question of patentability than that of a disinterested party. It is well settled that a disinterested party is never in a position to raise such a question. The Commissioner is charged with the duty of representing the public interests in the issuance of a patent, and, when he has declared an invention patentable, a mere disinterested party cannot question his judgment. This being true, the reference of the question of patentability to the Primary Examiner, so far as Mell is concerned, amounted to nothing more than a discretionary move on the part of the Commissioner, presumably for the purpose of gaining further information, and, when he again took up the matter of the appeal from the Board of Examiners-in-Chief, whether regular or irregular, a question upon which we express no opinion, he simply resumed consideration of the only issue before him in which Mell was entitled to be heard, namely, the priority of invention. Upon that question alone he passed, and that is the only matter before us for consideration.

All the tribunals of the Patent Office found in favor of Midgley. Mell failed to establish any date prior to Midgley's filing date, and there is no hypothesis upon which a judgment in his favor could be based. We find no reason to disturb the decision of the Commissioner of Patents. The judgment is, therefore, affirmed, and the clerk is directed to certify these proceedings, as by law required. Affirmed.

Court of Appeals of the District of Columbia.

MOORE *v.* HEWITT.

Decided June 9, 1908.

INTERFERENCE—ALLEGED REDUCTION TO PRACTICE—DELAY—EVIDENCE OF ABANDONED EXPERIMENT.

A delay of seven years by an inventor after an alleged reduction to practice, during which time he was active in developing a large number of other inventions, constitutes convincing evidence that the alleged reduction to practice amounted only to an abandoned experiment.

Mr. Joseph R. Edson for the appellant.

Mr. Charles A. Terry for the appellee.

ROBB, *J.*:

This is an appeal from the decision of the Commissioner of Patents in an interference case awarding priority of invention to Hewitt, the senior party. The issue is defined in the following counts:

1. The combination with an electrical translating device and a resistance device in series therewith, of a shunt across the circuit between the translating device and the reactance device, and a snap or quick-break switch in said shunt, the reactance device being placed in operative relation to the switch, so as to operate the same when the main circuit is closed.

2. The combination with an electric gas-lamp, of an electromagnetically-actuated circuit-interrupter having its contacts in

multiple with the lamp and its magnet or coils in the supply-circuit with the lamp and adapted to hold the interrupter-contacts open by the current flowing through the lamp while the lamp is in action.

3. The combination with an electric gas-lamp connected with a low-potential source of energy through a circuit of self-induction of sufficient value to furnish a high-potential current proper for starting said lamp, an interrupter for said circuit of induction having its contact in multiple with the lamp, and an electromagnet for actuating said interrupter, said electromagnet having its coils connected to the supply-circuit and adapted to hold the interrupter-contacts open by the current flowing through the lamp while the lamp is in action.

The Commissioner thus describes the invention:

The purpose of the invention is to afford means to overcome the negative-electrode resistance of electric gas-lamps. These lamps consist of a glass vessel containing air at low pressure or other gases. Within the glass vessel are two electrodes connected to the source of electrical current. Lamps of this character oppose a high resistance to the passage of the electrical current. The familiar Geissler tubes are operated by means of the intermittent high-potential discharge obtained by placing them in the secondary circuit of an induction-coil, the primary circuit being provided with the usual interrupter. While the resistance of lamps of this character cannot be overcome by a current of low potential, it has been found that such a current will form an arc between the electrodes if the initial resistance is momentarily broken down by a discharge of high potential.

Each of the three tribunals of the Patent Office has carefully reviewed the testimony in this case, and each has reached the conclusion that Hewitt is entitled to a judgment of priority.

The Examiner of Interferences after reviewing Moore's testimony reached the following conclusion:

That while developing his system of lighting by means of sparks or flashes produced by a rapidly interrupted current, some of the tubes accidentally arced. That Moore at first regarded this as a detriment, since it quickly destroyed the electrodes, and he proceeded to adjust the magnet to prevent it. That he conceived the possibility and desirability of producing a light on that principle, and later made experiments in that direction. That he met with poor success and probably had little faith of perfecting such a system, for none of his tubes prior to 1902 were much, if any, more successful than the first, where the arcing occurred accidentally. That Moore met with much better success along other lines of electric lighting, and beyond a few desultory experiments, did little with this system until after he became aware of the progress made by Hewitt in this line. * * * If it be assumed that Moore had a conception of the invention prior to his opponents, in the absence of a prior reduction to practice it can avail him only in case he shows due diligence at and subsequent to the appearance of his opponents in the field. As shown by the analysis of the testimony, heretofore noted, Moore did little and appears to have made no advance from the time of his 1897 experiments with the apparatus introduced in evidence until the filing of his application in 1902, after he had become aware of the efforts of Hewitt along the same line. * * * Moore has failed to show the necessary diligence, and in either case the award of priority must be against him.

The Examiners-in-Chief found that there was sufficient testimony to prove reduction to practice by Moore in 1897 or 1898. The Board held, however, that Moore was clearly lacking in diligence, and that his conduct—

shows a deliberate concealment of the invention of such a character as to prevent him from availing himself of his early reduction to practice.

The Board further said:

After the experiments in 1897 and 1898 which have been referred to Moore devoted his attention to other forms of devices and did nothing further with this invention until 1902 when he filed his present application and after he had seen some of Hewitt's devices in operation.

The Commissioner's review of the testimony is a very thorough and impartial one, and his conclusions are adverse to Moore, both on the question of reduction to practice and of priority of invention. The Commissioner states:

During the period between 1895, when Moore claimed to have made the invention in issue and May 6, 1902, when he filed the application involved in this interference, he filed forty-two applications which matured into patents. The invention here in issue is not described in any of these patents—

and that on April 12, 1901, Moore witnessed an exhibition by Hewitt, the appellee herein, of lamps of the character involved in this issue. The Commissioner finally concludes:

The imperfect operation of the lamps made by Moore, and the fact that he did not file his application until seven years after the date when he claims to have made the invention, during which period he was active in developing other inventions, lead to the conclusion that his operations amounted to nothing more than abandoned experiments, and that he is entitled to no date of invention prior to the filing of his application.

We do not deem it necessary to again review the testimony in this case. It is sufficient to say that we have examined the record with care, and fully concur in the conclusion reached by the Commissioner. If Moore reduced this invention to practice in 1897, as he now contends, his delay until May, 1902, in filing his application, after he had seen a successful exhibition of the invention by his opponent, is inexcusable. (*Paul* v. *Hess*, 24 App. D. C., 462; *Seeberger* v. *Dodge*, 24 App. D. C., 476.) The fact that during this interval he filed forty-two applications which matured into patents lends itself to the conclusion reached by the Commissioner that he had not conceived the invention when he saw it publicly exhibited by Hewitt.

The decision of the Commissioner was clearly right, and, therefore, is affirmed. The clerk of the court will certify this opinion and the proceedings in this court to the Commissioner of Patents, in accordance with law.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 19, 1908.

Koster & Bial, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Hugo Goldschmidt, of 306 South Main street, Los Angeles, Cal., for registration of a trade-mark and a trade-mark registered to Koster & Bial, of 110 West Twenty-fourth street, New York, N. Y., and the notice of said declaration sent by registered mail to the said Koster & Bial having been returned undelivered, notice is hereby given to the said Koster & Bial, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 5, 1908.

William M. Marcus, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the J. G. Haas Soap Company, of Prairie avenue and Benedict street, St. Louis, Mo., for registration of a trade-mark and a trade-mark registered to William M. Marcus, of Talladega, Ala., and the notice of said declaration sent by registered mail to the said William M. Marcus having been returned undelivered, notice is hereby given to the said William M. Marcus, his assigns or legal representatives, that if he or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

VOL. 136—No. 8. TUESDAY, OCTOBER 20, 1908. PRICE—$5 per year.

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Patents	626	No. 901,313 to No. 901,938, inclusive.
Designs	10	No. 39,622 to No. 39,631, inclusive.
Trade-Marks	83	No. 70,923 to No. 71,005, inclusive.
Labels	16	No. 14,409 to No. 14,424, inclusive.
Prints	1	No. 2,365.
Reissues	3	No. 12,866 to No. 12,868, inclusive.
Total	739	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	.....	New Hampshire	5	1
Alaska, District of	.....	.....	New Jersey	25	4
Arizona Territory	.....	.....	New Mexico Ter'y	1	.....
Arkansas	5	.....	New York	93	30
California	18	3	North Carolina	2	.....
Colorado	14	.....	North Dakota	3	.....
Connecticut	14	3	Ohio	29	3
Delaware	.....	.....	Oklahoma	2	.....
District of Columbia	4	1	Oregon	7	.....
Florida	.....	2	Panama	.....	.....
Georgia	2	.....	Pennsylvania	67	5
Hawaii Territory	1	.....	Philippine Islands	.....	.....
Idaho	.....	.....	Rhode Island	5	2
Illinois	55	11	South Carolina	.....	.....
Indiana	19	2	South Dakota	3	.....
Iowa	9	2	Tennessee	4	.....
Kansas	11	.....	Texas	5	.....
Kentucky	5	.....	Utah	.....	1
Louisiana	3	.....	Vermont	2	.....
Maine	2	1	Virginia	5	.....
Maryland	7	1	Washington	9	.....
Massachusetts	41	9	West Virginia	9	1
Michigan	21	2	Wisconsin	19	.....
Minnesota	17	1	Wyoming	.....	.....
Mississippi	1	.....	U. S. Army	.....	.....
Missouri	24	3	U. S. Navy	.....	.....
Montana	2	.....	Total to citizens of the United States	575	88
Nebraska	4	.....			
Nevada	.....	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Algeria	.....	.....	Natal	.....	.....
Austria-Hungary	.....	1	Netherlands	1	.....
Belgium	2	1	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	3	.....
British West Indies	.....	.....	New Zealand	3	.....
Canada	4	1	Norway	1	.....
Cape Colony	.....	.....	Persia	.....	.....
Chile	1	.....	Queensland	.....	.....
China	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	1	.....
Cuba	.....	.....	Scotland	1	.....
Denmark	.....	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	1	.....
England	7	7	Sweden	3	.....
France	7	.....	Switzerland	3	.....
Germany	21	2	Transvaal, South Africa	.....	.....
Haiti	.....	.....	Victoria	.....	.....
Ireland	.....	.....	Western Australia	.....	.....
Italy	1	.....	Total to citizens of foreign countries	61	12
Japan	.....	.....			
Java	.....	.....			
Mexico	1	.....			

NOTICES.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 30, 1908.

Attention is called to the amendment on the 23d instant (136 O. G., 853) of the third paragraph of Rule 47, which amendment requires that ALL application papers filed on and after December 1, 1908, must be attached together and a ribbon or tape passed one or more times through all the sheets of the application and the ends of said ribbon or tape brought together under the seal before the latter is affixed or impressed, or each sheet must be impressed with the official seal of the officer before whom the oath was taken, or if he is not provided with a seal then each sheet must be initialed by him.

EDWARD B. MOORE,
Commissioner.

In compliance with a decree of the Circuit Court of the United States for the Western District of North Carolina, entered at the October term, 1908, in a cause in equity entitled United States of America *ex rel.* Planters Compress Company, complainant, *v.* William L. Spoon, respondent, which decree is recorded in liber Q 79, page 482, of the assignment records of the United States Patent Office, Letters Patent No. 776,956, granted to William L. Spoon, December 6, 1904, were canceled October 10, 1908.

Money by Mail.

Money sent by mail to the Patent Office will be at the risk of the sender. Letters containing money should be registered.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business October 13, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Sept. 29	June 18	778
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Sept. 24	July 6	399
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Sept. 21	Aug. 8	343
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Sept. 19	Sept. 14	168
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Sept. 17	July 14	544
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Sept. 15	Aug. 4	261
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Sept. 14	July 21	288
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Masonry and Concrete Structures; Tents, Canopies, Umbrellas, and Canes.	Sept. 14	July 11	458
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Sept. 12	Aug. 18	243
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Sept. 4	June 11	353
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Sept. 3	July 30	434
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Sept. 3	July 21	655
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Sept. 3	July 8	299
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Sept. 2	May 23	649
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Aug. 26	July 11	433
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Aug. 25	May 4	708
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Aug. 24	July 27	684
125	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Aug. 24	May 13	732
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Aug. 20	July 3	467
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Aug. 19	July 29	227
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Aug. 18	July 27	565
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Aug. 18	July 2	390
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Aug. 17	Aug. 10	719
238	XIX. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Aug. 16	Aug. 10	407
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packing Liquids; Refrigeration.	Aug. 15	May 14	633
332	X. Carriages and Wagons	Aug. 8	July 17	620
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Aug. 7	July 7	528
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Aug. 7	June 8	645
167	V. Bookbinding; Harvesters; Jewelry; Music.	Aug. 7	May 22	452
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Aug. 4	July 31	569
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	Aug. 4	July 8	539
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Aug. 3	July 23	376
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	Aug. 1	June 12	623
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	July 23	July 16	465
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	July 22	Apr. 13	729
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	July 16	May 29	553
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	July 15	May 18	563
321	XXXIX. Baths and Closets; Water Distribution.	July 2	Apr. 27	684
109	XVI. Telegraphy; Telephony	June 22	June 4	465
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	June 19	May 4	689
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	June 9	Mar. 21	436

Total number of applications awaiting action 20,761

161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.				
	Trade-Marks	Oct.	5	Sept. 9	559
	Designs	Oct.	2	Aug. 20	141
	Labels and Prints	Oct.	9	Oct. 8	29

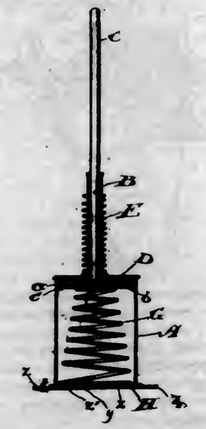
Examiners' Letters and Amendments.

Examiners are directed to recite in each letter in an application the date of the action by the applicant to which it is a reply, and applicants are requested to indicate in their actions on an application the date of the last Office letter.

PATENTS

GRANTED OCTOBER 20, 1908.

901,313. APPARATUS FOR WASHING CLOTHES. MANUEL J. BAKER, Buffalo, N. Y. Filed July 5, 1907. Serial No. 382,354.

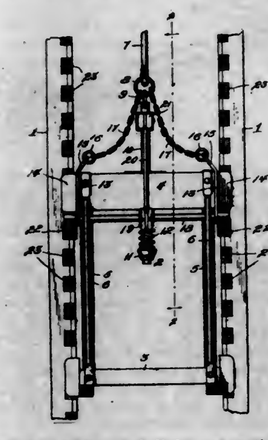


1. In apparatus of the class described the combination of a cylinder open at one end; a piston working therein; a handle secured to the piston; a spring tending to raise the piston; an outwardly extending annular flange formed at the lower edge of the cylinder with a series of openings formed therein; and corrugations between each of the openings in the flange and the inner opening.

2. In apparatus of the class described the combination of a cylinder open at one end; a piston working therein; a handle secured to the piston; a spring tending to raise the piston; an outwardly extending annular flange formed at the lower edge of the cylinder with a series of openings formed therein; corrugations between each of the openings in the flange and the inner opening; and radial cross-bars crossing the inner opening.

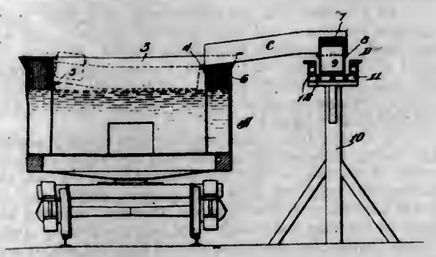
901,314. SAFETY-BRAKE FOR ELEVATORS AND MINE-CAGES. AUGUSTE BARBIEUX, Mecca, Ind. Filed Dec. 6, 1907. Serial No. 405,433.

In a safety brake mechanism for elevators, the combination of guides provided upon the opposite sides thereof with clutch teeth, a car having a head beam, bearing plates vertically mounted upon the ends of the head beam and provided with outwardly extending vertical flanges forming guides, depending bearing portions projecting below the head beam and ears projecting above the head beam, a vertically sliding bar mounted upon the head beam and adapted to be connected with the hoisting cable, spring means for resisting the upward movement of said bar and drawing the same downward when the cable breaks, stay connections between the upper end of the bar and the ears of the bearing plates, rock shafts extending across the car in parallel relation below and on opposite sides of the head beam and journaled in the depending bearings of the bearing plates, dogs upon the outer ends of said shafts to engage the clutch teeth of the guides, a cross head upon the upper end of the bar, crank arms upon the intermediate



portions of the shafts, and links connecting said crank arms with the cross head.

901,315. WATER-SCOOP FOR LOCOMOTIVE-TENDERS. ARTHUR BENNETT, Raquette Lake, N. Y. Filed May 26, 1908. Serial No. 435,064.



1. The combination of a water trough elevated above and at one side of a track, with a locomotive tender, a water scooping device mounted on the tender, and means for projecting the device into coöperative relation with the trough and for retracting said device.

2. The combination of a locomotive tender having an opening, a water scooping device normally closing the opening, and means for projecting the device from the side of the tender.

3. The combination of a locomotive tender, a water scooping device hingedly mounted on the tender to be projected from one side thereof, and means for projecting and retracting the said device.

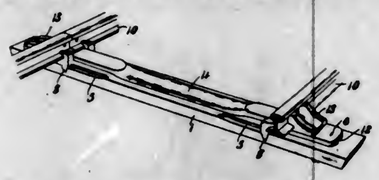
4. The combination of a locomotive tender having an opening and a recess adjacent the opening, a water scoop-

ing device disposed in the recess when in projected position and arranged to discharge water into the opening, and means for projecting and retracting the device.

5. The combination of a tender, a duct hingedly mounted at one side thereof and adapted to swing in a plane transverse to the direction of travel, said duct having an opening in its front, and a scoop carried on the outer end of the duct and arranged to conduct water into the opening, with a water trough mounted above and at one side of the track on which the tender travels and into which the scoop is adapted to run.

[Claim 6 not printed in the Gazette.]

901,316. RAILWAY-TIE. JOHN A. BERGQUIST, Mason, Wis. Filed Apr. 27, 1908. Serial No. 429,502.



1. In a rail-tie, the combination of a base, a rail-chair provided with jaws to engage over the foot of the rail upon one side, interlocking means between the rail-chair and base, a tie-bar overlapping the rail-chair and provided with a jaw to engage over the foot of the rail upon the opposite side, and interlocking means between the rail and jaw to prevent displacement of the parts.

2. In a railway tie, the combination of a base, a rail-chair mounted upon the base and provided with spaced jaws to engage over the foot of the rail upon one side thereof, interlocking means between the rail-chair and base, and a tie-bar overlapping the rail-chair and passed between the spaced jaws thereof and receiving the rail and provided with a jaw to engage over the foot of the rail upon the opposite side thereof.

3. In a railway tie, the combination of a base, a rail-chair mounted upon the base and adapted to move longitudinally thereon and provided with rail engaging jaws and with a pendent projection adapted to interlock with the base, and a tie-bar overlapping the rail-chair and adapted to receive the rail and provided with a rail engaging jaw to act in conjunction with the jaws of the rail-chair and secure the rail.

4. In a railway tie, the combination of a base having opposite notches, a rail-chair mounted upon the base and provided with pendent projections adapted to enter the notches of the base and secure the rail-chair in proper position, said rail-chair having rail engaging jaws, and a tie-bar overlapping the rail-chair and provided with a co-operating rail-engaging jaw.

5. In combination, a base provided with opposite notches and having rabbets leading from said notches towards the center of the base, a rail-chair mounted upon the base and having rail engaging jaws and pendent projections, the latter adapted to travel upon the aforesaid rabbeted portions of the base and to enter the notches thereof, and a tie-bar overlapping the rail-chair and provided with a rail-engaging jaw coöperating with the jaws of the rail-chair to secure the rail in proper position.

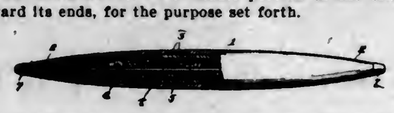
[Claims 6 to 8 not printed in the Gazette.]

901,317. FIRE-CRACKER. ISAAC M. BOND, North Tazewell, Va. Filed Sept. 30, 1907. Serial No. 395,176.

1. A firecracker comprising a body having a powder-chamber, a fuse extending therethrough and exposed at both ends, and an ignitible composition carried on each end of the body in touch with the fuse.

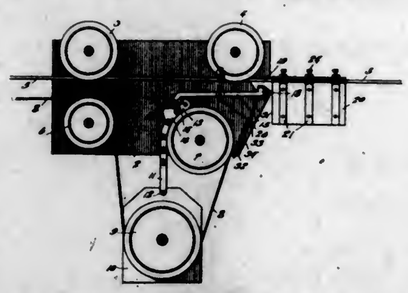
2. A firecracker comprising a body, exposed abrasive material on said body, a fuse running through said body and exposed at both ends, and ignitible material carried by the body in engagement with the fuse.

3. In a fire-cracker, an explosive containing cell having an elongated form and decreasing in diameter from its center towards its end, the inclosing wall of said cell varying in thickness from the middle portion of the cracker toward its ends, for the purpose set forth.



4. A hollow firecracker body, tapering from its center toward its ends, the material of said body decreasing in thickness in the direction of taper, and a firing fuse.

901,318. CARRIER. LEWIS C. BROWNING, Lawrence, Kans. Filed Mar. 17, 1908. Serial No. 421,727.



1. The combination with a supporting cable, of a catch thereon, and a carrier comprising a frame, supporting wheels engaging said cable, a hoist block, an operating cable for said block, guiding sheaves on the carrier frame over which the operating cable runs, a latch on the carrier adapted to engage said catch, and a flexible trip and catch connected to the end of the operating cable and coöperating with the latch.

2. The combination with a supporting cable, of a catch block, means for fastening the block to the cable, a catch shoulder on said block, and a carrier comprising a frame, supporting wheels engaging said cable, a hoist block, an operating cable for said block, guiding sheaves on the carrier frame over which the operating cable runs, a latch on the carrier adapted to engage the shoulder on the catch block, means for adjusting the fulcrum of the latch, and means controlled by the operating cable operating to trip the latch.

3. The combination with a supporting cable, of a catch block, means for fastening the block to the cable, a catch shoulder on said block, and a carrier comprising a frame, supporting wheels engaging the said cable, a hoist block, an operating cable for said block, guiding sheaves on the carrier frame over which the operating cable runs, a latch on the carrier adapted to engage the shoulder on the catch block, adjustable hangers in which the latch is fulcrumed, and means controlled by the operating cable operating to trip the latch.

4. The combination with a supporting cable, of a catch block, means for fastening the block to the cable, a catch shoulder on said block, and a carrier comprising a frame, supporting wheels engaged by said cable, a hoist block, an operating cable for said block, guiding sheaves on the carrier frame over which the operating cable runs, a latch on the carrier adapted to engage the shoulder of the catch block, and a flexible trip and catch connected to one end of the operating cable and coöperating with the latch.

901,319. DEVICE FOR PRODUCING THE REPRESENTATION OF A SNOW-STORM. EDWIN C. BRUEN, Brooklyn, N. Y. Filed Oct. 19, 1907. Serial No. 398,173.

1. In a device for producing the representation of a snow storm a receptacle provided with a perforated bottom and containing particles of material representing snow flakes a vertical shaft mounted in said receptacle, a plurality of fixed projections on said shaft, and means for automatically rocking said shaft first in one direction and then in the opposite direction, substantially as described.

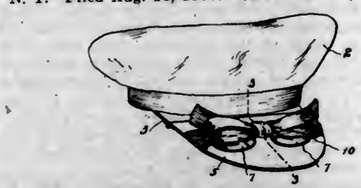


2. In a device for producing the representation of a snow storm a receptacle for material representing snow flakes, a sieve like bottom for said receptacle, a vertical shaft mounted in said receptacle, a plurality of fixed projections on said shaft, a fixed rod extending from said shaft, an air bellows in contact with said rod, means for expanding said bellows to impart motion to said shaft in one direction and a spring to move said shaft in the opposite direction, substantially as described.

3. In a device for producing the representation of a snow storm a receptacle for material representing snow flakes, a sieve like bottom for said receptacle, a hollow vertical shaft mounted in said receptacle and having a series of perforations in its lower end, a plurality of fixed projections on said shaft, a fixed rod extending from said shaft, an air bellows in contact with said rod, means for forcing an air current through said bellows to expand the same thereby imparting motion to said shaft in one direction and a spring to move said shaft in the opposite direction when said bellows collapses, the said air current passing outwardly through the perforations in the end of said shaft, substantially as described.

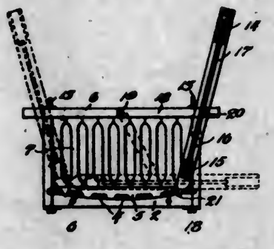
4. In a device for producing the representation of a snow storm a receptacle provided with a sieve-like bottom and containing paper particles, a supporting standard for said receptacle, a vertical shaft mounted in said receptacle, a plurality of projections extending from said shaft and means for automatically rocking said shaft first in one direction and then in the opposite direction, substantially as described.

901,320. HEAD-COVERING FOR AUTOMOBILISTS AND CHAUFFEURS. CARLOS N. BRUZAUD, Peekskill, N. Y. Filed Aug. 14, 1907. Serial No. 388,516.



The combination with a cap, of a vizor consisting of a relatively stationary and a relatively movable section, said movable section being provided with openings and hingedly mounted upon the stationary section, lenses mounted in the openings, flexible members, each of which has one of its ends secured to the movable section in longitudinal alinement with the lenses, whereby when the members are passed about the head of the wearer to secure the vizor in eye shielding position they form shields for the eyes of the wearer, and a latch member pivotally mounted upon the stationary section and adapted to secure the movable section in normal position.

901,321. CHAIR OR SWING SEAT. LEWIS C. BULLOCK, Jr., Milesburg, Pa. Filed Apr. 10, 1907. Serial No. 367,400.



1. In a chair or swing seat, the combination of oppositely arranged arm rests having bottom rails and bottom frame supporting corner plates, a bottom frame mounted between the arms and having end bars in contact with the bottom rails of the arms, clamping bolts removably inserted through said end bars and bottom rails, and a back mounted between the arm rests.

2. A chair or swing seat comprising a bottom frame, arm rests at opposite ends thereof carrying supporting corner plates for the bottom frame, a back mounted between the arms, and eye bolts extending entirely through the arms from top to bottom thereof, said bolts also passing through said corner plates.

3. A reversible chair or swing seat comprising a seat frame provided with side bars having dished surfaces, slats secured to said bars and resting upon said surfaces, arms at the sides of the seat frame having bottom bars detachably fastened to and arranged upon the outer sides of the side bars of the seat frame, a reversible back arranged between the arms, and links connecting the back with the arms, the lower edge of the back being provided with means to enter and interlock with the spaces between adjacent slats at the front and rear of the seat frame.

4. A chair or swing seat comprising a bottom having parallel slats, side bars for supporting said slats, said side bars being dished upon their upper edges, arm rests extending upward from the sides of the seat bottom, a reversible back comprising side bars and interposed rungs or stanchions, said side bars each having a tongue formed upon its lower end for insertion between the slats of the seat bottom, and pivotal links or braces connecting the reversible back with the arm rests.

5. A chair or swing seat comprising a bottom frame having side rails and end rails, arm rests provided with bottom rails secured to and arranged on the outer sides of said end rails and connected to uprights, corner plates fastened to the bottom rails and uprights and projecting beneath the end and side rails at the corners of the frame, and a back mounted between the arm rests.

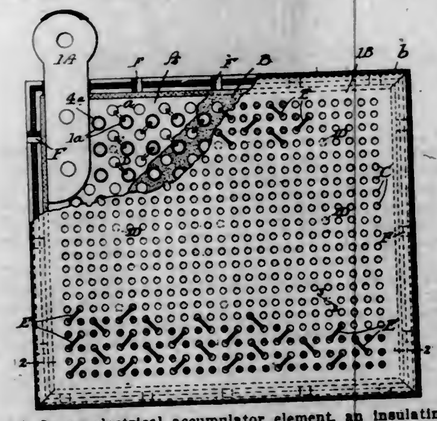
[Claims 6 to 8 not printed in the Gazette.]

901,322. ELECTRICAL ACCUMULATOR. CHARLES J. BUSCH, New York, N. Y. Filed July 15, 1908. Serial No. 443,644.

1. In an electrical accumulator element, a perforated electrode, a paste upon the surface of the electrode, a sectional casing for the electrode, perforations in the casing and an elastic binder strung through the perforations of the casing and the perforations of the electrode to maintain the sections in contact with the electrode.

2. In an electrical accumulator element, an electrode, perforations in the electrode, burs formed around the perforations alternately on opposite sides of the electrode, the active material carried by the electrode and anchored by the said burs to the said electrode, a sectional casing for the electrode, perforations in the casing and an elastic lacing strung through the perforations of the casing and the perforations of the electrode to maintain the section of the active material in contact with the electrode.

3. In an electrical accumulator element, an electrode, perforations in the electrode, burs formed around the perforations alternately on opposite sides of the electrode, active material carried by the electrode and anchored by the said burs to the said electrode, a sectional casing for the electrode provided with centering studs, perforations in the casing and an elastic lacing strung through the perforations of the casing and the perforations of the electrode to maintain the sections in contact with the electrode.

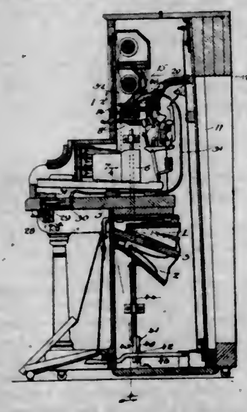


4. In an electrical accumulator element, an insulating envelop or casing comprising a pair of laterally adjustable perforated insulating separators each being provided with a marginal frame and adapted to match each other and an elastic lacing strung inwardly between the two.

5. In an electrical accumulator element, an insulating envelop or casing comprising a pair of laterally adjustable perforated insulating separators each being provided with a marginal perforated frame and adapted to match each other and an elastic lacing carried by each and strung inwardly between the two and adapted to pull them together between the perforations.

[Claim 6 not printed in the Gazette.]

901,323. AUTOMATIC PIANO. MELVILLE CLARK, Chicago, Ill. Filed May 22, 1907. Serial No. 375,004.



1. In an automatic piano, in combination with the sounding devices, a tone-modifier constructed for operating simultaneously with respect to an extended group of consecutive sounding devices; auto-pneumatic playing devices comprising a tracker and a traveling controlling sheet, the tone modifier being adapted when the auto-pneumatic playing devices are out of service to assume a certain position with respect to the sounding devices; a motor pneumatic and connections by which when the auto-pneumatic playing devices are in service it holds the tone-modifier at a different position; a primary pneumatic for controlling such motor pneumatic; said tracker board and controlling sheet having respectively a supplemental duct and short supplemental apertures coöperating therewith for causing action of the motor pneumatic to momentarily release the tone-modifier controlling said primary pneumatic, such supplemental apertures and the commencement of the apertures for the notes to be affected by the release of the tone-modifier being cut out of time with the other apertures in their respective chords.

2. In an automatic piano, in combination with the sounding devices, a tone-modifier constructed for operating simultaneously upon an extended group of consecutive sounding devices; auto-pneumatic playing devices comprising a tracker and traveling controlling sheet; a motor pneumatic and connections by which when the auto-pneumatic playing devices are in service it holds the tone-modifier normally at a position for softening the tone, said tone-modifier being adapted when released from said motor pneumatic to assume a position for intensified tone; a primary pneumatic for controlling such motor pneumatic, the tracker board and controlling sheet having respectively a supplemental duct and supplemental apertures coöperating therewith for controlling such primary pneumatic, such supplemental apertures and the commencement of the apertures for the notes to be affected by the release of the tone-modifier being cut out of time with the other apertures in their respective chords.

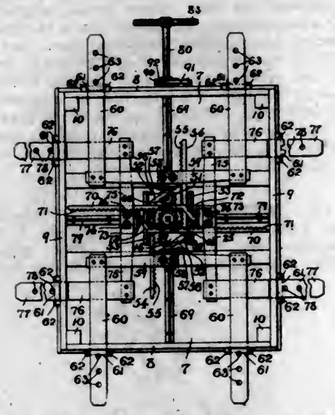
3. In an automatic piano, in combination with sounding devices, a tone-modifier constructed for operating simultaneously upon an extended group of consecutive sounding devices; auto-pneumatic playing devices comprising a tracker and a traveling controlling sheet; a motor pneumatic and connections by which when collapsed it holds the tone modifier at tone-softening position, said tone-modifier being adapted to assume a tone-intensifying position when free from the action of said motor pneumatic; a primary pneumatic and valve connections by which it causes the motor pneumatic to be collapsed when said primary pneumatic is collapsed and expanded when the primary pneumatic is expanded, the tracker board and controlling sheet having respectively a supplemental duct and supplemental apertures coöperating therewith for controlling said primary pneumatic, such supplemental apertures and the commencement of the special apertures for notes to be affected being cut out of time with the other apertures in their respective chords.

4. In an auto-pneumatic piano, in combination with the piano action comprising tone-modifying devices, automatic playing devices comprising a tracker and a traveling perforated controller sheet; pneumatically-operated and controlled means for operating the tone-modifying devices, comprising a supplemental tracker duct and supplemental apertures in the controller sheet coöperating with such duct, the tracker and the traveling sheet being mounted for change of relative position transversely with respect to the direction of travel of the sheet, the supplemental tracker duct being formed in a part which is mounted for preserving unchanged its position relative to the controller sheet in such change of relative transverse position of the tracker and sheet.

5. In an automatic piano, in combination with the tone-modifying devices of the piano action, automatic playing devices pneumatically operated and controlled; means for operating the tone-modifying devices, said means comprising a supplemental tracker duct and supplemental apertures in the controller sheet coöperating therewith, the tracker board being mounted for movement transverse of the direction of travel of the controller sheet, the supplemental tracker duct being formed in a part which is mounted for preserving its position unchanged in such transverse movement of the tracker board.

[Claims 6 and 7 not printed in the Gazette.]

901,324. APPARATUS OR MACHINE FOR STRETCHING LEATHER, HIDES, OR SKINS. ARTHUR CLEVELAND, Newark, N. J. Filed Dec. 21, 1907. Serial No. 407,601.



1. In a leather-stretching apparatus, the combination with a body forming a table for the support thereon of the skin or hide which is to be stretched, of differentially moving racks, and stretching members extending from the sides of the apparatus and actuated by means of said racks.

2. In a leather-stretching apparatus, the combination with a body forming a table for the support thereon of the skin or hide which is to be stretched, of differentially moving racks, gear-wheels in mesh with the teeth of said racks, and stretching members extending from the sides of the apparatus and actuated by means of said racks.

3. In a leather-stretching apparatus, the combination with a body forming a table for the support thereon of the skin or hide which is to be stretched, of differentially moving racks, gear-wheels in mesh with the teeth of said racks, and stretching members extending from the sides of the apparatus and actuated by means of said racks, a pinion in mesh with one of said gear-wheels, and means for actuating said pinion, substantially as and for the purposes set forth.

4. In a leather-stretching apparatus, the combination with a body forming a table for the support thereon of the skin or hide which is to be stretched, of differentially moving racks, gear-wheels in mesh with the teeth of said racks, and stretching members extending from the sides of the apparatus and actuated by means of said racks, a pinion in mesh with one of said gear-wheels, and means for actuating said pinion, consisting of a shaft provided with means for operating the same, a gear-wheel on said shaft, a second shaft, a gear-wheel on said second shaft with which the gear-wheel of the first-mentioned shaft engages, a bevel-gear on said second shaft, and a second bevel-gear arranged upon the spindle of said pinion and in mesh with said first-mentioned bevel-gear, substantially as and for the purposes set forth.

5. In a leather-stretching apparatus, the combination with a body forming a table for the support thereon of the skin or hide which is to be stretched, of a series of cross-bars, differentially moving racks connected with said cross-bars, and stretching members extending from each cross-bar and from the sides of the apparatus.

[Claims 6 to 20 not printed in the Gazette.]

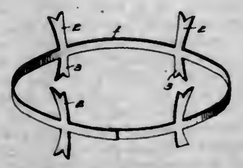
901,325. TICK-TACK. WILLIAM H. DAVIS, Federalsburg, Md. Filed Apr. 3, 1908. Serial No. 424,963.

1. A toy of the class described comprising a handle made of wire bent to form a hand-hold, a guide element at the inner end of said hand-hold and a pair of arms at said inner end of the hand-hold and provided with inwardly extending hooks, a drum having a bore receiving said hooks and further provided with roughened peripheral portions, a spring in said bore engaged with said hooks and connected at an intermediate portion to said drum, said spring being coiled when the drum is rotated in one direction and a cord passed through the guide element of the handle, attached to said drum and wound on said drum in the required direction to cause said drum to coil said spring when said cord is uncoiled or unreeled from said drum.



2. A toy of the class described comprising a handle having a pair of arms provided with inwardly extending hooks, a drum having a bore receiving said hooks and further provided with roughened peripheral portions, a spring in said bore engaged with said hooks and connected at an intermediate portion to said drum, said spring being coiled when the drum is rotated in one direction and a cord attached to said drum and wound thereon in the required direction to cause said drum to coil said spring when said cord is uncoiled or unreeled from said drum.

901,326. SKILLET-SUPPORT. HANNAH C. EBERT, Los Angeles, Cal. Filed June 13, 1907. Serial No. 378,840.



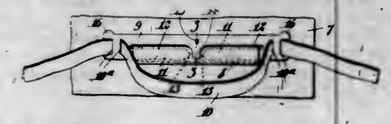
A support for cooking vessels comprising a ring or band to encircle a vessel at the base thereof, said ring or band being provided with upwardly extending arms having a gradually increasing upward and outward curve or flare to bear against the outer side of such vessel and having their upper ends widened and notched to provide fingers adapted to be bent over into engagement with the rim edge of the vessel, and said ring or band also being provided with integral depending legs having a gradually increasing downward and outward curve or flare and widened and notched at their lower ends to points to form spurs to prevent slippage of the band upon a supporting surface.

901,327. SKIRT-SUPPORTER. NORA C. EDWARDS, Buffalo, N. Y. Filed June 26, 1907. Serial No. 380,971.

1. A skirt-supporter comprising a plate provided with a pair of opposed retaining-arms having their free ends separated by a guard extending from the body of the plate.

2. A skirt-supporter comprising a plate provided with substantially L-shaped openings forming a pair of oppositely directed retaining-arms and a guard between the

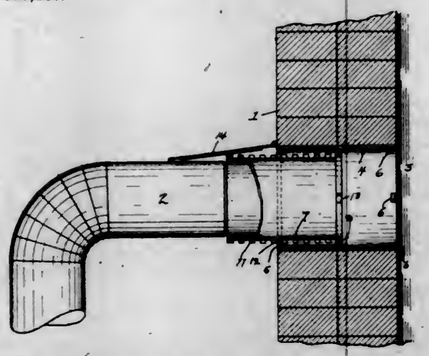
free ends of said arms, and a waist belt to which said plate is attached and which is adapted to lie over said guard and arms and encircle the waist of a person.



3. A skirt-supporter comprising a plate provided with a pair of opposed retaining-arms and a guard between the free ends of said arms, and a waist-belt applied to said plate and adapted to encircle the waist of a person.

4. The combination with a waist provided with a pocket, of a plate provided with a pair of opposed retaining-arms adapted to enter said pocket and a guard between the free ends of said arms.

901,328. SMOKE-PIPE HOLDER. GEORGE C. EHLERS, Milwaukee, Wis. Filed Oct. 28, 1907. Serial No. 399,467.



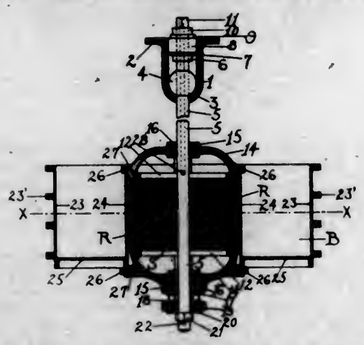
1. The combination with a chimney provided with a smoke pipe aperture, of a fixed sleeve leading through the wall thereof to the interior smoke flue, with its respective ends terminating at the inner and outer wall surfaces, and a longitudinally adjustable sleeve therein arranged to normally project from the first mentioned sleeve outwardly from the chimney and formed to receive a smoke pipe at a point distant from the chimney, together with a cover hinged to the outer end of the outer sleeve, and adapted to close the end of the inner sleeve when the latter is in retracted position.

2. The combination with a chimney, provided with a smoke pipe aperture, of a fixed sleeve leading through the wall thereof to the interior smoke flue, with its respective ends terminating at the inner and outer wall surfaces, and a longitudinally adjustable sleeve therein, arranged to normally project from the first mentioned sleeve outwardly from the chimney and formed to receive a smoke pipe at a point distant from the chimney, the front end of the fixed sleeve having an inwardly projecting flange and the inner end of the movable sleeve having an outwardly projecting flange.

3. The combination with a chimney provided with a smoke pipe aperture, of a fixed sleeve leading through the wall thereof to the interior smoke flue, with its respective ends terminating at the inner and outer wall surfaces, and a longitudinally adjustable sleeve therein, arranged to project from the first mentioned sleeve outwardly from the chimney and formed to receive a smoke pipe at a point distant from the chimney, the movable sleeve being provided with outwardly extending projections and the fixed sleeve having an inwardly projecting flange at its front end, recessed to permit the passage of the projections when in registry therewith, together with a cover hinged to the outer end of the outer sleeve and adapted to close the end of the inner sleeve when the latter is adjusted to a position substantially within the outer sleeve.

4. The combination with a chimney, of a fixed sleeve leading through the wall thereof to the interior smoke flue, and a longitudinally adjustable sleeve therein, adapted to project from the first mentioned sleeve and formed to receive a smoke pipe at a point distant from the chimney, an annular space being formed between the said sleeves and each sleeve having an annular flange crossing said space, the flange on the inner sleeve being notched and the fixed sleeve having inwardly projecting stops adapted to be received in the notches when in registry therewith.

901,329. CENTRIFUGAL MACHINE. CORNELIUS D. EHRET, Ardmore, Pa., assignor to William L. D'Olier, Philadelphia, Pa. Filed Nov. 1, 1904, Serial No. 230,923. Renewed Nov. 6, 1906. Serial No. 342,294.



1. In combination, a centrifugal basket, and an electric driving motor therefor, the rotatable element of said motor being substantially entirely surrounded by said basket.

2. In combination, a centrifugal basket, and an electric motor for driving the same, said motor being substantially entirely surrounded by said basket.

3. In combination, a centrifugal basket, and an electric driving motor therefor, the rotatable element of said motor being substantially entirely surrounded by and secured to said basket.

4. In combination, a centrifugal basket, comprising concentric cylinders of different diameters, and a driving motor therefor located within the cylinder of lesser diameter.

5. In combination, a centrifugal basket comprising outer and inner walls, and a driving motor therefor located in the space surrounded by said inner wall.

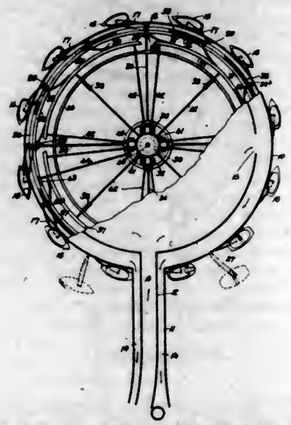
[Claims 6 to 20 not printed in the Gazette.]

901,330. AMUSEMENT DEVICE. CLIFFORD I. ENOCHS, New York, N. Y. Filed Dec. 2, 1907. Serial No. 404,755.

1. In an amusement device, the combination of a platform having a water course surrounding the same, a movable element associated with the platform, movable devices connected with the element, boats carried by the devices and adapted to move the latter by the resistance of the water acting on the boats, and means coöperating with the devices to lock the boats close to the platform when the amusement device is idle.

2. In an amusement device, the combination with a circular stationary platform surrounded by water, of a supporting rail beneath the same, a moving frame carried by the rail, pivoted arms on the frame and adapted to swing outwardly from the latter, boats arranged on the arms to cause the water resistance acting on the boats to swing the arms outwardly, and means for limiting the outward movement of the arms.

3. In an amusement device, the combination with a stationary platform surrounded by water, of a moving frame beneath the platform, pivoted arms carried by the frame, boats at the ends of the arms means for rotating the frame and means for locking the boats when at rest against the sides of the platform.

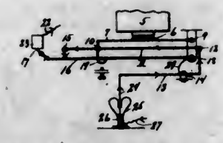


4. In an amusement device, the combination with a circular stationary platform, of a circular rotating frame beneath the platform, a rail supporting the frame, motors adapted to rotate the frame, arms pivoted on the frame, means mounting the boats on the ends of the arms and means for retaining the boats against the sides of the platform when at rest or releasing them to fly outward when the frame is rotated.

5. In an amusement device, the combination with a circular platform surrounded by water, of a rail beneath same, a rotating frame on the rail, pivoted vertical bars carried by the frame, arms at the lower ends of the bars, boats carried by the outer ends of the arms, levers at the upper ends of the bars, and means adapted to control the levers to hold the boats against the sides of the platform or release them to move outward.

[Claims 6 to 13 not printed in the Gazette.]

901,331. ELECTRIC RAILWAY-SIGNAL. EDWARD A. EVERETT, Detroit, Mich. Filed June 27, 1906. Serial No. 323,657.



1. In a signaling apparatus, the combination with an electro-magnet, of an armature carrying a contact, a signal circuit in which said contact is included, an auxiliary circuit opener and closer also included in said circuit, said auxiliary opener and closer consisting of a body of mercury, and a contact movably associated therewith, a cup of insulating material in which said mercury is confined, said cup being of such shape as to prevent the escape of the mercury should it become overturned, and means connected with the armature for actuating the auxiliary circuit opener and closer should the armature contact fail to open.

2. In a signaling apparatus, the combination with an electro-magnet, of an armature carrying a contact, a signal circuit in which said contact is included, an auxiliary circuit opener and closer also included in said circuit, said auxiliary opener and closer consisting of mercury and a contact movably associated, and means connected with the armature for actuating the auxiliary circuit opener and closer without movement of the armature contact parts, should the armature contact fail to open.

3. The combination with a relay magnet, of a movable armature, a signal circuit, a mercury circuit breaker in the signal circuit consisting of an insulating cup holding a body of mercury, and a contact movably associated therewith, said cup being shaped to prevent the escape of the mercury should it be overturned, and having a mercury receiving space of sufficient size to accommodate the body of mercury when inclined or in a horizontal position, the mercury when filling said space being free from said movable contact, and means for connecting the movable contact with said armature.

4. The combination with a relay magnet, of a movable armature, a signal circuit, a platinum contact carried by the armature to close said circuit, an auxiliary circuit breaker included in said circuit, said circuit breaker consisting of a body of mercury, and a contact movably associated therewith and movable parts connecting the movable contact of the auxiliary circuit breaker to the armature to cause an actuation of the auxiliary circuit breaker upon a movement of the armature.

5. In a signaling apparatus, the combination of a relay magnet, a movable armature, a signal circuit, a platinum contact carried by the armature to close said circuit, an auxiliary circuit breaker in said circuit consisting of a body of mercury and a movable contact operatively associated, and a movable member connecting said movable contact to the armature to break the signal circuit should the platinum contact become fused.

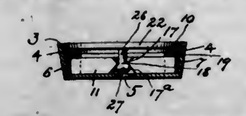
[Claim 6 not printed in the Gazette.]

901,332. INSULATING MATERIAL. WILLIS E. EVERETTE, Tacoma, Wash. Filed May 17, 1906. Serial No. 317,348.

1. An insulating material formed of insoluble, tenacious, flexible, fireproof, filamentary threads, composed solely of a combination of calcium, aluminum, silicon, and oxygen.

2. An insulating material formed of insoluble tenacious, flexible, filamentary threads and filaments, composed of bi-silicate of calcium and aluminum, and coated with a solution of muscovite.

901,333. FINGER-RING. JOHN E. FITZGERALD, Providence, R. I. Filed May 2, 1908. Serial No. 430,573.



1. In a finger ring, the combination of a box or head; a signet plate having a central post with a ball at the extremity of said post; and two resilient locking bars extending in contact and parallel with each other, having central semi-circular locking seats, respectively, which register with each other, through which registering locking seats said ball is movable by pressure applied to the signet plate to confine said signet plate in a position flush with the outer rim of said box or head.

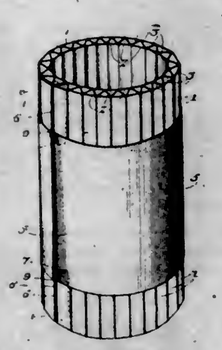
2. In a finger ring, the combination of a box having a bezel; a signet plate engageable with said bezel; a post extending centrally from the signet plate; a ball fastened on the end of the post; and two resilient locking bars mounted at their ends in the box parallel with each other, each having a central semi-circular bow, beveled on its inner edge, and together forming, when in registration, a central circular locking aperture provided with conically directed inner edges which are adapted to engage said ball and post.

3. In a finger ring, the combination of a box; a signet plate adapted to cover said box at its outer end; two blocks secured at the opposite sides of said box and each having a slot; two parallel, resilient locking bars mounted at their ends in said slots, respectively; and a post on the signet plate terminating with a ball, which locking bars are provided with locking means for the engagement of said post and ball between them.

4. In a finger ring, the combination of a box; a signet plate; a post on the signet plate terminating with a ball; two blocks secured within the box at one end and each provided with a slot, one of said blocks having the upper side of its slot closed; which slots are in alinement with each other; two studs on the top of the other of said blocks; a rivet plate having two rivet holes with which said studs respectively register; two parallel, resilient locking bars, secured in the box by the engagement of their ends with said slots, respectively; and locking devices on said bars adapted to engage the post and ball of the signet plate.

5. In a finger ring, the combination of a box; two parallel resilient locking bars secured at their ends within the box and each having a locking device comprising a central semi-circular portion with a beveled or tapering concentric semi-circular seat on its upper side and also with a beveled or tapering concentric semi-circular seat on its lower side, which seats are axially in alinement, in communication with each other, and together constituting a circular locking device having an intermediate concentric annular ridge; a signet plate; a post on said plate; and a ball on the post movable through said seats and held in position by the engagement of said post with said locking devices.

901,334. PACKING-PAD. LOUIS F. FLIPSE, Sheboygan, Wis. Filed Nov. 4, 1907. Serial No. 400,545.



1. A packing pad comprising a strip of stout flexible material bent or corrugated to form a series of cushioning members which are arranged in contact on at least one side of the pad.

2. A packing pad comprising a strip of flexible material bent or corrugated to form a series of cushioning members which are arranged in contact at the outer side of the pad and are slightly spaced apart at the opposite side of the pad to permit said pad to be bent about the article to be protected.

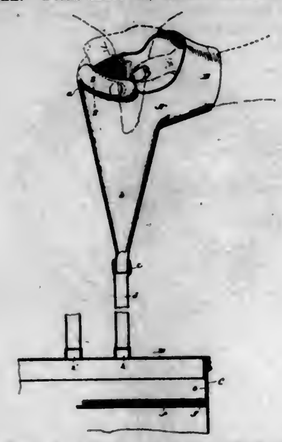
3. A packing pad comprising a strip of stout flexible material bent or corrugated to form a series of cushioning members which are arranged in contact on at least one side of the pad, and a sheet of flexible material extending across and joining the cushioning members of the pad.

4. A packing pad comprising a strip of stout paper stock bent or corrugated to form a series of cushioning members which are arranged in contact on at least one side of the pad, said pad being provided at one end with a flexible flap arranged to interlock with the opposite terminal of the pad.

5. A packing pad comprising a strip of stout flexible material bent or corrugated to form a series of cushioning members which are arranged in contact on at least one side of the pad, one end of said pad being provided with laterally projecting tongues and the other end of said pad being provided with slots or openings to receive said tongues.

[Claim 6 not printed in the Gazette.]

901,335. MILKING DEVICE. JARED A. GALLUP, Voluntown, Conn. Filed Mar. 24, 1908. Serial No. 422,930.

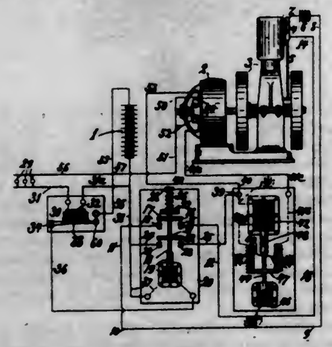


1. A device of the character described, including a glove-shaped hood for substantially inclosing the hand and fitting closely thereto, means for supporting the same on the hand comprising an integral, flat, wrist-encircling band, and a tube leading from the glove-shaped hood.

2. A device of the character described, including a glove-shaped hood for substantially inclosing the hand and fitting closely thereto, a teat-receiving opening in the top of the hood, an integral, flat, wrist-encircling band adjacent said opening, a pocket formed in the edge of the hood at a point opposite the wrist-encircling band, and a tube leading from said glove-shaped hood.

3. A device of the character described including a glove-shaped hood for substantially inclosing the hand and fitting closely thereto, openings in the hood for the thumb, first, third and fourth fingers, a teat-receiving opening in the top of the hood, an integral, flat, wrist-encircling band adjacent said opening, a pocket formed in the edge of the hood at a point opposite the wrist-encircling band, and a tube leading from the glove-shaped hood.

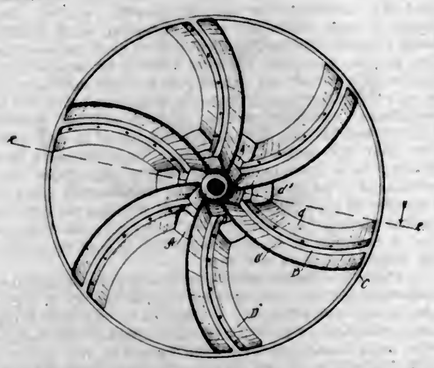
901,336. AUTOMATIC ELECTRIC LIGHTING SYSTEM. CARL J. GARDEEN, Columbus township, Anoka county, Minn. Filed Dec. 5, 1907. Serial No. 405,213.



1. In an electrical lighting plant or system, the combination of an explosive engine having an igniter, an electric battery arranged to produce sparks in the igniter, means operated by the engine for regulating the operation of the igniter, a switch inserted in the circuit connecting the battery with the igniter, a dynamo operated by the engine and being convertible into an electric motor by reversing the current over its armature, a storage battery wired to the field and to the armature of the dynamo, a switch inserted in the circuit between the battery and the dynamo, an electromagnetic device operating said switch and also the switch of the circuit to the igniter, a circuit from the battery to the electromagnetic device, a relay inserted in the latter circuit, a lighting circuit connected with the battery and operating the relay, electric lamps inserted in said lighting circuit and adapted to close the same when lighted and break it when put out, and means for opening the switches when the relay breaks the circuit that energizes the electromagnetic device.

2. In an electrical lighting plant or system, the combination of an explosive engine having an igniter, an electric battery arranged to produce sparks in the igniter, means operated by the engine for regulating the operation of the igniter, a switch inserted in the circuit connecting the battery with the igniter, a dynamo operated by the engine and being convertible into an electric motor by reversing the current over its armature, a storage battery wired to the field and to the armature of the dynamo, a switch inserted in the circuit between the battery and the dynamo, an electromagnetic device operating said switch and also the switch of the circuit to the igniter, a circuit from the battery to the electromagnetic device, a relay inserted in the latter circuit, a lighting circuit connected with the battery and operating the relay, electric lamps inserted in said lighting circuit and adapted to close the same when lighted and break it when put out, and means for opening the switches when the relay breaks the circuit that energizes the electromagnetic device; a rheostat inserted in the branch of the circuit that carries electricity from the battery to the armature, a solenoid having its magnet operated by said branch and operating the rheostat, and means for retarding the action of the solenoid on the rheostat, for the purpose set forth.

901,337. DISK VENTILATING-FAN. DANIEL P. GOSLINE, Boston, Mass. Filed Aug. 24, 1905. Serial No. 275,650.



1. A ventilating fan comprising a hub, a rim and a series of blades attached to said hub and rim at an angle to the axis of the hub and midway between the outer corners of the blade, said outer corners being turned in opposite directions and attached to the rim, as described.

2. A ventilating fan comprising a hub, a rim and a series of blades attached to said hub and rim at an angle to the axis of the hub, said hub being conical, its greatest diameter being less than half the diameter of the fan whereby the tendency of the air to pass forward through said wheel is not checked while the tendency of the air to pass back through said wheel at the center is prevented, as described.

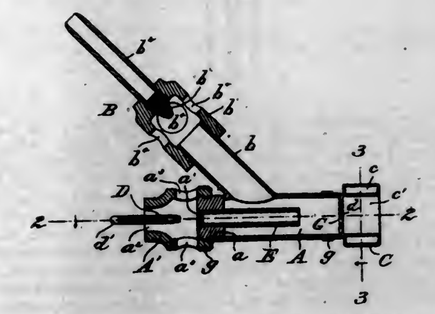
3. A ventilating fan comprising a hub, a rim and a series of blades attached to said hub and said rim at an angle to the axis of the hub, said blades being of substantially equal width throughout their length and being longer than the radial distance from the hub to the rim, as set forth.

4. A ventilating fan of the kind described, having a hub, a series of ribs, a rim, and a series of blades attached to said rim, said hub being provided with means by which said ribs may be attached thereto in a manner whereby the surface of the hub may be smooth and unbroken so as to present no obstruction to the passage of air through the fan.

5. In a ventilating fan in combination with a rim and blades, a hub formed of two parts, one carrying the ribs and the other comprising a sleeve to which said first part is attached, and having a peripheral surface forming a continuation of the peripheral surface of said first part said ribs supporting the rim upon said hub and having the blades attached thereto, as described.

[Claims 6 to 8 not printed in the Gazette.]

901,338. MEANS FOR GENERATING HEAT. HANS E. GRABAU, Weehawken, N. J. Filed June 4, 1907. Serial No. 377,156.



1. In an apparatus of the class described, means for entraining air by a jet under pressure of a fixed gaseous fuel, means forming a part of the apparatus for generating and superheating steam, means for entraining air by a jet of the superheated steam, and means whereby the steam and air are combined with the fuel mixture.

2. A portable burner provided with means for producing a mixture of air and a fixed gaseous fuel, a generator and superheater, a nozzle communicating with said generator and superheater and arranged as described to entrain air by a jet of superheated steam, and flexible connections for supplying gas and water to the burner.

3. In a portable apparatus of the character described, the combination of a bunsen for mixing air and a combustible fixed gas by the action of a jet of the latter, a steam generator and superheater arranged to be heated by the burning gases of the apparatus, and means for injecting air into the said mixture by a jet of the superheated steam thus produced.

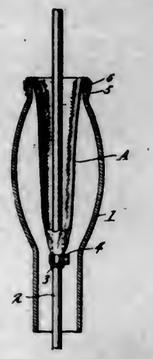
4. The combination in a burner, of a casing containing a mixing chamber and provided with air inlets, a bunsen for mixing air and a combustible fixed gas by the action of a jet of the latter the casing of which communicates with said chamber, a steam generator and superheater carried by and adjacent to the casing and arranged to be heated by ignited gases passing from said casing, and a steam nozzle communicating with the superheater and arranged adjacent to the air inlets to entrain air and inject it into said chamber.

5. The combination of a casing containing a mixing chamber and provided with air inlets, a bunsen having a casing connected at an angle with the aforesaid casing, a nozzle for injecting a fixed gas under pressure into the bunsen casing, a nozzle at the rear of the mixing chamber adjacent to the air inlets, a generator and superheater adjacent to the casing containing the mixing chamber, and means for supplying said last mentioned

nozzle with superheated steam from the generator and superheater, the superheater and generator arranged to be heated by the flame of the mixed gases passing from the mixing chamber.

[Claim 6 not printed in the Gazette.]

901,339. PACKING. JACK GRANT, Forestburg, Tex. Filed May 2, 1908. Serial No. 430,578.



The combination of a casing, a reciprocatory rod extending longitudinally therethrough, a flexible hollow packing within the casing tapering in one direction and having an opening at its smaller end to fit the rod, a ring embracing the smaller end of the packing to clamp the same rigidly to the rod, said casing having an opening in which the larger end of the packing fits and the said larger end being bent outwardly and backwardly on itself to embrace the outside of the casing adjacent the opening thereof, and a ring fitted around the doubled-back part of the packing for clamping the latter to the casing.

901,340. CONCRETE-MIXER. ANSON R. HANNAFORD, Traverse City, Mich. Filed Nov. 26, 1907. Serial No. 403,926.



1. In a mixing machine, the combination of a drum mounted for revolution and having interior cleats, a scraper within the drum, supporting means for the scraper, said supporting means adapting the scraper to be moved toward and from the interior surface of the drum, a spring to move the scraper outwardly and engage the same with the inner surface of the drum between cleats, and means to intermittently move the scraper inwardly to cause the same to successively clear the cleats.

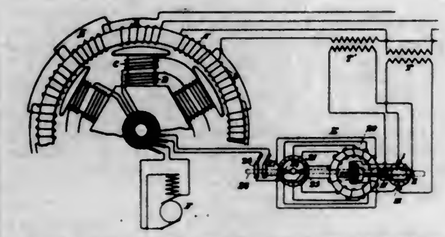
2. A mixing machine comprising a drum having interior cleats, a shaft extending axially through the drum, draft means connected with the shaft, a radially movable scraper connected with and supported by the shaft, and means for moving the scraper toward and from the shaft to clear the cleats.

3. A mixing machine comprising a drum having interior cleats, a shaft extending axially through the drum, draft means connected with the shaft, arms extending radially from the latter, spring actuated brackets slidably connected with the arms and having laterally extending cams, a scraper carried by the brackets, and cam engaging contact members supported interiorly upon the heads of the drum.

4. A mixing machine comprising a drum having interior cleats, a shaft extending radially through the drum, hubs secured adjustably upon the shaft and having radially extending arms, scraper carrying brackets having sockets slidably engaging the arms, springs coiled upon the latter and engaging the brackets, cams extending laterally from the brackets, and cam engaging rollers upon the heads of the drum.

5. A mixing machine comprising a drum having interior cleats, a tubular shaft extending axially through the drum and having apertures, radial arms connected with the shaft, scraper carrying spring actuated brackets slidably engaging the radial arms, means in radial alinement with the cleats for forcing the scraper carrying brackets against the tension of the springs, draft means connected with the shaft, a tank supported upon the draft means, and a valve pipe connecting the tank with the tubular shaft.

901,341. ALTERNATING-ELECTRIC-CURRENT MACHINERY. ALEXANDER HEYLAND, Brussels, Belgium. Filed May 2, 1903. Serial No. 155,422.



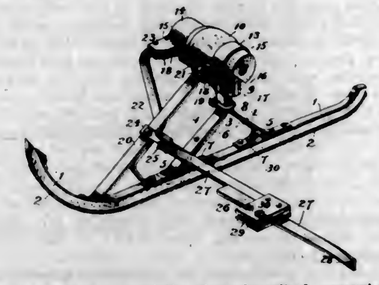
1. Means for compounding alternating current machines comprising a conductor carrying the main current or a current proportional thereto, a commutator for simultaneously commutating and decomposing current, connected to said conductor, a field winding, said winding being connected to said commutator in such manner that two groups of circuits, differing between themselves by a quarter of a period, are formed whereby said main current or current proportional thereto, is decomposed into its two components, the watt current and the wattless current, and brushes bearing upon said commutator in such position that the wattless component traverses said field winding in a given constant direction, while the watt component is led away through the circuits that differ by a quarter of a period from said field winding, or traverse various parts of the pole winding in opposite directions so that it exercises no magnetizing effect in said field winding, substantially as described.

2. Means for compounding alternating current machines comprising a conductor carrying a main current or a current proportional thereto, a commutator for simultaneously commutating and decomposing current, said commutator being associated with said conductor, two separate main field windings, two groups of circuits connected with said commutator, said circuits differing between themselves by a one-quarter of a period whereby said main current or a current proportional thereto is decomposed into its two components, the watt current and the wattless current, and brushes bearing upon said commutator in such position that the wattless component traverses one of said groups of circuits in a given constant direction while the watt component is led away through the other circuits that differ by a one quarter of a period therefrom or traverse various parts of the said one group of circuits in opposite directions so that it exercises no magnetizing effect therein, and a source of unidirectional current connected to one of said main field windings, the other one of said main field windings being associated with the said circuits connected to said commutator, to be energized in proportion to the said wattless current.

3. A means for compounding alternating current machines comprising a conductor carrying the main current or a current proportional thereto, a commutator simultaneously commutating and decomposing current, connected to said conductor, a field winding, a uni-directional current generator connected to said field winding, said generator comprising a field winding, said generator field winding being so connected to said commutator that two groups of circuits differing between themselves by a quarter of a period are formed, and brushes bearing upon said commutator in such position that the wattless component traverses said generator field winding in a given constant direction while the watt component is led away through the circuits that differ by a quarter of a period relatively to said field winding or traverse various parts of said field winding in opposite directions so that it exercises no magnetizing effect in the field winding, substantially as described.

4. Means for compounding alternating current machines comprising a conductor carrying the main current or a current proportional thereto, a field winding, a commutator and brushes, said commutator and brushes being relatively movable, said conductor being connected to said field winding through said commutator and brushes in such manner that circuits removed one-quarter of a period from said field winding are formed whereby the current from said conductor is commutated and decomposed into watt and wattless current, said brushes and commutator being so related that the wattless current traverses said field winding in a given constant direction, while the watt current traverses the circuits that differ by one-quarter of a period from said field winding or traverses various parts of said field winding in such manner that it exercises no magnetizing effect therein, substantially as described.

901,342. ATTACHABLE SLEIGH-RUNNER. JOHN E. HOBBS, North Berwick, Me. Filed Dec. 20, 1905, Serial No. 292,619. Renewed May 29, 1908. Serial No. 435,800.



1. A sleigh runner of the class described, comprising a runner proper, a truss carried thereby and extending upwardly therefrom, a supporting iron carried by said truss, a hub mounted upon said truss and said supporting iron and provided with a groove for the reception of said truss and supporting iron, and means for holding the hub upon the truss and the supporting iron.

2. A sleigh runner of the class described, comprising a runner proper, a truss carried thereby and extending upwardly therefrom, said truss having its upper end bent outwardly at slightly acute angles to its body portion, a supporting iron carried by the bent upper end of the truss, a hub mounted upon said truss and said supporting iron and provided with a groove for the reception of said truss and supporting iron, and means for holding the hub upon the truss and the supporting iron.

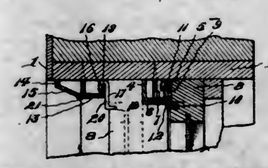
3. A sleigh runner of the class described, comprising a runner proper, a truss carried thereby and extending upwardly therefrom, said truss comprising oppositely-arranged members the upper ends of which are bent outwardly at slightly acute angles to the body of the truss, a supporting iron arranged between the bent upper ends of the members of the truss, a hub mounted upon said truss and said supporting iron and provided with a groove for the reception of said truss and supporting iron, and means for holding the hub upon the truss and supporting iron.

4. A sleigh runner of the class described, comprising a runner proper, a truss carried thereby and extending upwardly therefrom, a supporting iron carried by said truss, a hub mounted upon said truss and said supporting iron and provided with a groove for the reception of said truss and supporting iron, and bands surrounding the ends of the hub and connected to the supporting iron for holding the hub upon the latter and the truss.

5. A sleigh runner of the class described, comprising a runner proper, a truss carried thereby and extending upwardly therefrom, said truss having its upper end bent outwardly at slightly acute angles to its body portion, a supporting iron carried by the bent upper end of the truss, a hub mounted upon said truss and said supporting iron and provided with a groove for the reception of said truss and supporting iron, and bands surrounding the ends of the hub and connected to the supporting iron for holding the hub upon the latter and the truss.

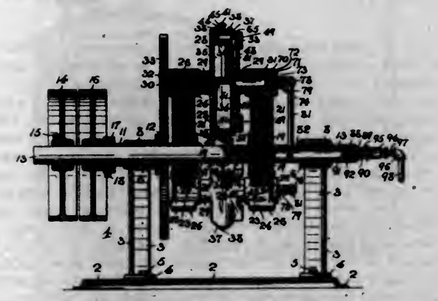
[Claims 6 to 12 not printed in the Gazette.]

901,343. WINDOW-SASH. MILO F. HOLBROOK, Longview, Tex. Filed Oct. 23, 1907. Serial No. 398,804.



A window sash provided with a guide strip having a flange seated in a recess in the sash, and a hook at the opposite edge thereof, in combination with a guide having a lip engaging the hook, and means for adjusting said lip relatively to the hook for the purpose described.

901,344. AIR-COMPRESSOR. HENRY J. HOBSTMANN, Fort Wayne, Ind. Filed Dec. 14, 1907. Serial No. 406,468.



1. An air-compressor comprising a main shaft, and a plurality of cylinders revolving with said shaft, and each cylinder having a revolving action on an axis extending laterally across the cylinder between the ends thereof, and independent of the revolving action about said shaft, substantially as and for the purposes set forth.

2. An air-compressor comprising a main shaft, and a plurality of cylinders revolving with said shaft, and each cylinder having a revolving action on an axis extending laterally across the cylinder between the ends thereof, and independent of the revolving action about said shaft, and a reciprocatory piston in each cylinder, substantially as and for the purposes set forth.

3. An air-compressor comprising a main shaft, and a plurality of cylinders revolving with said shaft, and each

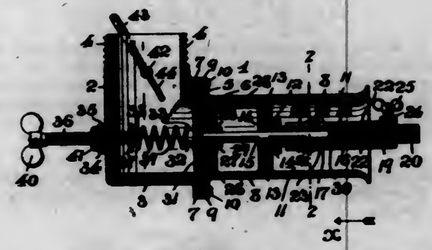
cylinder having a revolving action on an axis extending laterally across the cylinder between the ends thereof, and independent of the revolving action about said shaft, and a reciprocatory piston in each cylinder, and means connected with each cylinder for conveying the compressed air from said cylinders, substantially as and for the purposes set forth.

4. An air-compressor comprising a main shaft, and a plurality of cylinders revolving with said shaft, and each cylinder having a revolving action on an axis extending laterally across the cylinder between the ends thereof, and independent of the revolving action about said shaft, said main shaft being provided with a tubular air-receiving portion, and means connected with each cylinder for conveying the compressed air from each cylinder into the air-receiving portion of the main shaft, substantially as and for the purposes set forth.

5. An air-compressor comprising a main shaft, and a plurality of cylinders revolving with said shaft, and each cylinder having a revolving action on an axis extending laterally across the cylinder between the ends thereof, and independent of the revolving action about said shaft, and a reciprocatory piston in each cylinder, said main shaft being provided with a tubular air-receiving portion, and means connected with each cylinder for conveying the compressed air from each cylinder into the air-receiving portion of the main shaft, substantially as and for the purposes set forth.

[Claims 6 to 36 not printed in the Gazette.]

901,345. CARBURETER. THOMSON HOWELL, Newark, N. J. Filed Mar. 5, 1908. Serial No. 419,318.



1. A carbureter for explosive gas-engines comprising a main tubular body provided with an air-intake, and an outlet, a pair of arms extending diametrically across the interior of said main body, one of the said sets of arms being provided with an internally screw-threaded hub, and the other set of said arms having a hub formed with a hole, providing a guide, a tubular gasolene-conveyer extending into the mixing chamber of said body and being provided with a screw-threaded portion screwed into said screw-threaded hub, said conveyer being provided with a plurality of perforations or holes, and a valve-seat within said conveyer, a spindle movably arranged in the hole of said one set of arms, said spindle having a portion movably arranged within said conveyer and being provided with a cone-shaped end adapted to normally rest upon said valve-seat, and means connected with said spindle adapted to be actuated by suction for removing said cone-shaped end from the valve-seat and thereby opening one or more of said perforations of the gasolene-conveyer.

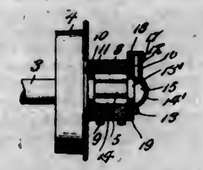
2. A carbureter for explosive gas-engines comprising a main tubular body provided with an air-intake, and an outlet, a pair of arms extending diametrically across the interior of said main body, one of the said sets of arms being provided with an internally screw-threaded hub, and the other set of said arms having a hub formed with a hole, providing a guide, a tubular gasolene-conveyer extending into the mixing chamber of said body and being provided with a screw-threaded portion screwed into said screw-threaded hub, said conveyer being provided with a plurality of perforations or holes, and a valve-seat within said conveyer, a spindle movably arranged in the hole of said one set of arms, said spindle having a portion movably arranged within said conveyer and being provided with a cone-shaped end adapted to normally rest upon said valve-seat, and means connected with said spindle adapted to be actuated by suction for removing said cone-shaped end from the valve-seat and thereby opening one or more of said perforations of the gasolene-conveyer, consisting of a disk arranged upon said spindle, an adjusting screw connected with said main body, and a spring between the end of said screw and said disk, substantially as and for the purposes set forth.

4. A carbureter for explosive gas-engines comprising a main tubular body provided with an air-intake, and an outlet, a pair of arms extending diametrically across the interior of said main body, one of the said sets of arms being provided with an internally screw-threaded hub, and the other set of said arms having a hub formed with a hole, providing a guide, a tubular gasolene-conveyer extending into the mixing chamber of said body and being provided with a screw-threaded portion screwed into said screw-threaded hub, said conveyer being provided with a plurality of perforations or holes, and a valve-seat within said conveyer, a spindle movably arranged in the hole of said one set of arms, said spindle having a portion movably arranged within said conveyer and being provided with a cone-shaped end adapted to normally rest upon said valve-seat, and means connected with said spindle adapted to be actuated by suction for removing said cone-shaped end from the valve-seat and thereby opening one or more of said perforations of the gasolene-conveyer, combined with a throttle for regulating the degree of suction, substantially as and for the purposes set forth.

5. A carbureter for explosive gas-engines comprising a main tubular body provided with an air-intake, and an outlet, a pair of arms extending diametrically across the interior of said main body, one of the said sets of arms being provided with an internally screw-threaded hub, and the other set of said arms having a hub formed with a hole, providing a guide, a tubular gasolene-conveyer extending into the mixing chamber of said body and being provided with a screw-threaded portion screwed into said screw-threaded hub, said conveyer being provided with a plurality of perforations or holes, and a valve-seat within said conveyer, a spindle movably arranged in the hole of said one set of arms, said spindle having a portion movably arranged within said conveyer and being provided with a cone-shaped end adapted to normally rest upon said valve-seat, and a spring-controlled means connected with said spindle adapted to be actuated by suction for removing said cone-shaped end from the valve-seat and thereby opening one or more of said perforations of the gasolene-conveyer, combined with a throttle for regulating the degree of suction, substantially as and for the purposes set forth.
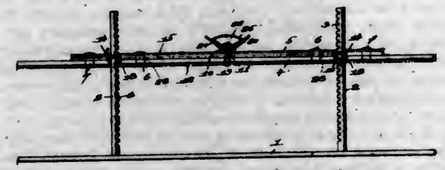
[Claims 6 to 11 not printed in the Gazette.]

901,346. JOURNAL-BOX. JEFFERSON D. JONES, Temple, Tex. Filed Mar. 29, 1907. Serial No. 365,373.



In a journal bearing for axles, the combination of a journal box comprising a horizontally divided body embodying upper and lower sections forming a bearing chamber, vertical tie-bolts connecting said sections on opposite sides of said chamber, a cover plate closing the outer side of the bearing chamber and formed with an opening and an integral central vertical exterior enlargement providing an oil chamber communicating through said opening with the bearing chamber, said enlargement being formed in its upper end with a filling passage communicating at its lower end with the oil chamber and projecting at its upper end above the box, a screw cap engaging and closing the projecting upper end of said passage, a cover plate closing the inner side of the bearing chamber and having an opening therein, horizontal tie bolts connecting and fastening said cover plates to the body of the box, an axle provided with a journal extending into said bearing chamber through the opening in the inner cover plate and having a head projecting into and partially closing the opening in the outer cover plate to provide a restricted annular feed duct between it and the wall of the opening, and rollers about the axle having their outer ends arranged to partially close said feed duct to secure a restricted feed of oil therethrough and having their inner ends arranged to partially close the joint between the axle and wall of the opening in the inner cover plate.

901,347. LOOSE-LEAF BINDER. FRED B. JORDAN, Winchester, Mass. Filed Feb. 17, 1908. Serial No. 416,179.



1. The combination with a base member having attached upright rods notched on their inner sides, of a binder member having transverse slots to receive the rods, longitudinally slidable locking bars mounted on the binder member and having their free ends movable into the slots thereof to engage the notched rods, the inner ends of the locking bars lying side by side, upturned retracting handles having a common fulcrum on the binder member and having depending extensions pivotally connected with the adjacent inner ends of the locking bars, to operate the latter, and a spring to separate the handles and through their depending extensions to force the bars into locking position.

2. The combination with a base member having rigidly attached upright rods notched on their inner sides, of a binder member having transverse slots leading inward from one of its edges, to receive the rods, oppositely movable locking bars mounted on the binder member and having their free ends movable into the slots to engage the notched rods, the inner ends of the bars being cut out to form apertured tongues lying side by side, compressible handles having a common fulcrum on the binder member and having depending extensions extended loosely into the apertures in the tongues of the locking bars to operate the same in opposite directions, and a spring to normally separate the handles and cause their extension to force the bars into locking position.

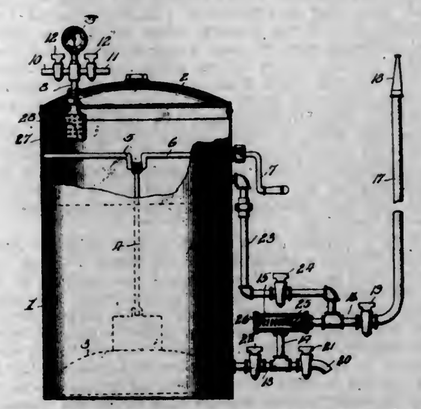
3. The combination with a base member having rigidly attached upright rods notched on their inner sides, of a binder member having transverse slots leading inward from one of its edges, to receive the rods, oppositely movable locking bars mounted on the binder member and having their free ends movable into the slots to engage the notched rods, actuating handles operatively connected with the locking bars, a spring acting through the handles to move said bars into locking position, and a device coöperating with said handles to maintain them in either locked or unlocked position.

4. The combination with a base member having rigidly attached upright rods notched on their inner sides, of a binder member having openings to receive the rods, bars movably mounted on the binder member to enter said openings and operatively engage the rods, handles movable toward and from each other and operatively connected with said bars, to move the latter out of and into position to engage the rods, a spring coöperating with the handles to separate them and move the bars into engaging position, and a device to positively retain the handles in one or the other of their positions.

5. The combination with a base member having rigidly attached upright rods notched on their inner sides, of a binder member having transverse slots leading inward from one of its edges, to receive the rods, oppositely movable locking bars mounted on the binder member and having their free ends movable into the slots to engage the notched rods, actuating handles operatively connected with said bars, a spring to normally separate the handles and move the bars into locking position, and a catch mounted on one of the handles to engage the other handle and positively hold said handles in either open or closed position until released.

[Claims 6 to 8 not printed in the Gazette.]

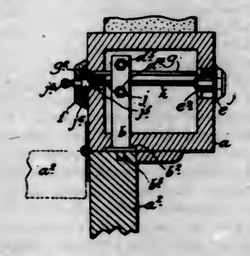
901,348. INSECT-DESTROYER. ELI F. KAUFFMAN, York, Pa. Filed Jan. 26, 1907. Serial No. 354,340.



In a spraying apparatus, the combination of a gas-tight vessel adapted to contain a germicide liquid, means above the normal level of the liquid for supplying gas under pressure thereto for forcing liquid from the vessel during the spraying operation, an agitating means within the vessel, a pipe connected with the vessel adjacent the bottom thereof to receive liquid, a cut-off valve in the pipe, a drain valve connected with the pipe, a casing connected with the pipe at a point intermediate the valves, a strainer in the casing, a pipe connected with the casing to receive strained liquid therefrom, a cut-off valve in the last-mentioned pipe, a spraying device connected with the last-mentioned valve, a conduit con-

nected with the vessel at a point above the normal liquid level and with the second-mentioned pipe at a point between the second cut-off valve and said casing, a valve in the said conduit for admitting gas through the casing in reverse direction to the flow of liquid when the cut-off valves are closed and the drain valve is open.

901,349. BURGLAR-ALARM. PATRICK T. KEEFE, New York, N. Y. Filed Jan. 18, 1908. Serial No. 411,487.



1. In a burglar alarm device, the combination with a door frame and door hinged thereon, of a casing set into the frame and provided with a spring operated bolt adapted to be forced inwardly when the door is closed and outwardly when the door is opened, an electric alarm device, contact devices within said casing, wires connecting said alarm device with said contact devices, devices in operative connection with said bolt and adapted to close an open circuit through said wires when said bolt is forced inwardly, comprising a dog pivoted to said shaft, a lever adapted to be operated by said dog and to throw said contact devices into connection, a shaft passing through said frame and through said casing and provided with means for throwing said dog into and out of connection with said lever, and means for operating said shaft from either end thereof.

2. In a burglar alarm device, the combination with a door frame and door hinged thereto, of a casing set into said frame and provided with a spring operated bolt adapted to be forced inwardly when the door is closed and outwardly when the door is opened, an electric alarm device, electric contact devices within said casing, wires connecting said alarm device with said contact devices, a lever adapted to throw said contact devices into connection, a dog pivoted to said bolt and adapted to operate said lever, a shaft passing through the frame, means for operating said shaft from either end thereof, an arm loosely mounted on said shaft and adapted to operate said dog to throw it into and out of engagement with said lever, and means connected with said shaft to operate said arm.

3. In a burglar alarm device, a door frame, a door hinged thereto, a casing set into the frame, a spring operated bolt mounted in said casing and adapted to be forced inwardly when the door is closed and outwardly when the door is opened, electric contact devices within said casing, an alarm device in electric connection with said contact devices, a lever mounted in said casing and adapted to force said contact devices into connection, a dog pivoted to said bolt and adapted to operate said lever, a shaft passing through said frame and through said casing and composed of separate parts one of which is adapted to be operated from the inside of the door and the other from the outside thereof, an arm rotatably mounted on one part of said shaft and adapted to operate said dog so as to throw it out of connection with said lever, and devices connected with both parts of said shaft for operating said arm.

4. In a burglar alarm device, a door frame, a door hinged thereto, a casing secured in the door frame and provided with a spring operated bolt adapted to be forced inwardly when the door is closed and outwardly when the door is opened, an electric alarm device, contact devices within said casing and in electrical connection with said alarm device, a lever pivoted in said casing and adapted in one position to throw said contact devices into connection, a dog pivoted to said bolt and adapted to operate said lever in one direction, a Yale lock secured in the door frame on the outside of the door, a shaft connected with the cylinder of said lock and passing through the door frame and through said casing, devices connected with said shaft for operating said dog so as to throw it out of connection with said lever, and devices on the inner side of the door frame for operating said shaft, said shaft being also adapted to be operated by a key inserted into said lock.

901,350. LOCKING DEVICE FOR LASTS. EUGENE L. KEYES, Boston, Mass., assignor to United Shoe Machinery Company of Paterson, New Jersey, a Corporation of New Jersey. Filed Dec. 20, 1906. Serial No. 348,743.



1. The combination with a hinged multipart last, having a V-shaped recess upon one side of the hinge, of a locking device inserted in the recess and having roughened gripping surfaces of substantially the same relative inclination as the sides of the recess, said locking device being adapted to be held in the recess by the gripping action of the roughened surfaces upon the sides of the recess.

2. The combination with a hinged multipart last having a V-shaped recess on one side of the hinge, of a locking device inserted in the recess and comprising members movable relatively to expand said device to engage the sides of said recess and extend said last, said device presenting roughened engaging surfaces having substantially the same relative inclination as the sides of the recess.

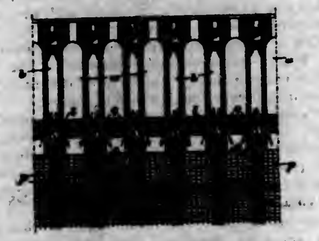
3. The combination with a hinged two-part last, having a recess between the parts upon one side of the hinge, of means for holding said parts in fixed position relative to each other, comprising relatively movable members provided with oppositely facing engaging surfaces extending substantially parallel to and adapted to engage opposing faces of the last parts respectively within said recess, and means for causing a relative movement of said members into operative engagement with said last parts.

4. In a locking device for a hinged multipart last having a recess on one side of the hinge, the combination with a member having at one end an engaging surface extending when in operative position substantially parallel to one side of the recess between the last parts, of a second member having at one end an engaging surface bearing a similar relation to the other side of said recess, and means for simultaneously locking said members in engagement with the respective sides of said recess.

5. The combination with a hinged two-part last, having a V-shaped recess between the parts, of a locking device for holding the last parts in extended position comprising a member having at one end an engaging surface extending when in operative position substantially parallel to one side of the recess between the last parts, a second member having at one end an engaging surface bearing a similar relation to the other side of said recess, and means for simultaneously locking said members in engagement with the respective sides of said recess.

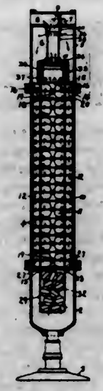
901,351. GAS-FURNACE OR COKE-OVEN. HEINRICH KOPPERS, Essen-on-the-Ruhr, Germany. Filed Jan. 10, 1908. Serial No. 410,100.

In a coke oven, a series of heating chambers, and coking chambers intermediate the heating chambers, combined with a series of regenerators below and parallel to the heating chambers, and means for causing the heating



gases to flow in opposite directions in adjoining heating chambers, substantially as specified.

901,352. WATER-PURIFIER. HENRY KORTEN, Chicago, Ill., assignor to Frederick Y. Nichols, Chicago, Ill. Filed May 23, 1907. Serial No. 375,194.



1. In an apparatus of the class described, a suitable casing, means therein for electrically decomposing the scale forming impurities held in solution and for causing the impurities held in suspension to cohere in masses, a sediment chamber to receive the heavier portions of said masses and a mercury filter at the top of said casing for removing the lighter impurities, substantially as described.

2. In an apparatus of the class described the combination with an outer casing of inlet and outlet ports at the top of said casing, a vertical series of perforated electroplates extending downwardly in said casing, interlocking rings on said electroplates forming outer and inner vertical passages, a sediment chamber at the bottom of said casing, and means for conducting water from the inlet in a circuitous course downwardly through one vertical passage and upward in a circuitous course through the other vertical passage to the outlet.

3. In an apparatus of the class described the combination with an outer casing of a series of electroplates in said casing, and a perforated metallic basket containing interlocking disks at the bottom of said series of electroplates.

4. In an apparatus of the class described, the combination with an outer casing of a series of electroplates having projections and perforations and interlocking rings to form outer and inner circuitous passages vertically in said casing, and means for conducting water downwardly through the outer passage and upwardly through the inner passage.

5. In an apparatus of the class described, the combination of relatively electro-positive and electro-negative electrodes with a mercury filter for removing impurities held in suspension and also adapted to act as a supplementary electrode substantially as described.

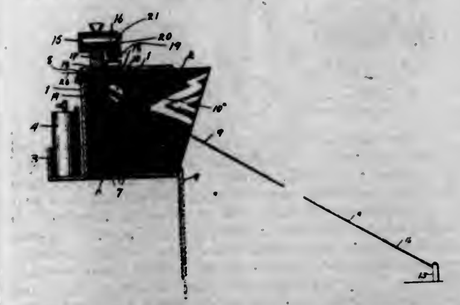
[Claims 6 and 7 not printed in the Gazette.]

901,353. SHOE. EDMOND J. LAFOND, Bristol, N. H. Filed Feb. 18, 1908. Serial No. 416,491.



A shoe having its quarter provided with V-shaped slits upon each side of the front of the quarter, reinforcing members for the edges provided by the V-shaped slits and extending rearwardly and secured to the vamp and quarter, eyelets for the reinforcements and edges provided by the V-shaped slits, and a tongue secured to the vamp and adapted to cover the spaces provided by the slits.

901,354. SCENIC EFFECT. DE WITT H. LEAS, Delaware, Ohio. Filed Jan. 8, 1908. Serial No. 409,799.



1. In a mechanism of the character described, the combination with a wire having its ends secured at points one above the other, of a body slidably mounted on said wire and normally supported in the upper portion thereof, a covering for said body comprising an absorbent and non-inflammable material, means for supplying an inflammable substance to said covering, means for igniting said substance, and means for releasing said body from its normal position whereby it is permitted to slide downward on the wire.

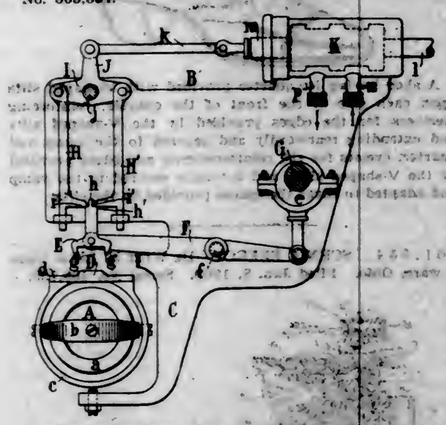
2. In a mechanism of the character described, the combination with a wire having its ends secured at points one above the other, a body slidably mounted on said wire and having a covering of absorbent non-inflammable material, means for supplying an inflammable substance to said covering, a support for said ball composed of inflammable material, and means for igniting the said inflammable substance.

3. In a mechanism of the character described, the combination with a normally coiled wire, means for supporting said wire in a straight line between upper and lower fastening points and a section of inflammable cord interposed in said line, of a body adapted to receive an inflammable substance mounted to slide on said wire, means for supplying an inflammable substance to said body, an inflammable cord normally holding said body on the upper portion of the wire, and means for igniting said inflammable substance.

4. In a mechanism of the character described, the combination with a wire having its ends secured at points one

above the other, means for supporting said wire in a straight line between upper and lower fastening points and a section of inflammable cord interposed in said line, of a fuel receiving body, said body mounted to slide on said wire, readily destructible means for normally supporting said body in the upper portion of said wire, means for supplying an inflammable fluid to said body, and means for creating an electric spark adjacent to said body.

901,355. CONTROL MECHANISM FOR STEERING APPARATUS. FRANK M. LEAVITT, New York, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed Mar. 20, 1907. Serial No. 363,394.



1. The combination with a controlling or pilot part, and a controlled part or mechanism, of a feeler and power-driven means for reciprocating it rapidly toward and from the pilot part, said feeler adapted on touching said part to be positioned thereby, and on receding therefrom to communicate movement according to its position to said controlled part, the latter and the feeler having relatively-arranged shoulders adapted in the middle position of the feeler to bring the controlled part to mid-position, and in either deflected position of the feeler to displace the controlled part in the corresponding direction.

2. The combination with a controlling or pilot part, and a controlled mechanism, of a feeler and power-driven means for reciprocating it rapidly toward and from the pilot part, said feeler adapted on touching said part to be positioned thereby, and on receding therefrom to communicate movement according to its position to said controlled mechanism, the latter comprising oppositely-acting tappets, and the tappets and feeler having coacting shoulders relatively arranged to engage in the middle position of the feeler to bring the tappets to mid-position, and in either deflected position of the feeler to displace the tappets in opposite directions.

3. The combination with a controlling or pilot part, and a controlled mechanism, of a feeler and power-driven means for reciprocating it rapidly toward and from the pilot part, said feeler adapted on touching said part to be positioned thereby, and on receding therefrom to communicate movement according to its position to said controlled mechanism, the latter comprising tappet rods and a lever connecting them, the tappet rods and feeler having coacting shoulders relatively arranged to engage in the middle position of the feeler to bring the tappets to mid-position, and in either deflected position of the feeler to displace the tappets in opposite directions.

4. The combination with a controlling or pilot part, and a controlled mechanism, of a feeler and power-driven means for reciprocating it rapidly toward and from the pilot part, said feeler adapted on touching said part to be positioned thereby, and on receding therefrom to communicate movement according to its position to said controlled mechanism, the latter comprising oppositely-acting tappets, and the tappets and feeler having coacting shoulders which are single on the one part and double on the other, relatively arranged to adapt the feeler in its middle position to engage both tappets and bring them to mid-position, and in either deflected position of the feeler to engage the corresponding tappet by a different shoulder to displace the tappets from the mid-position.

5. The combination, to form a steering apparatus of a controlling or pilot part, a controlled part, a feeler, and power-driven means for reciprocating it rapidly toward and from the pilot part, said feeler adapted on touching said part to be positioned thereby, and on receding therefrom to communicate movement according to its position to said controlled part, the latter and the feeler having relatively arranged shoulders adapted in the middle position of the feeler to bring the controlled part to mid-position, and in either deflected position of the feeler to displace the controlled part in the corresponding direction, and an operative connection between said controlled part and the rudder.

901,356. PLATFORM-SCALE. DAVID LENNOX, Marshalltown, Iowa. Filed May 11, 1907. Serial No. 373,034.



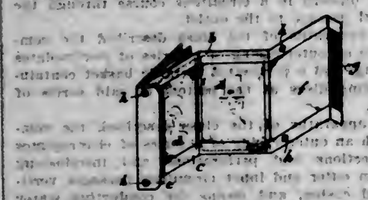
1. In a weighing scale of the type set forth, the combination with a frame and a rock shaft, of a stud secured to the frame, a grooved ring carried by said stud, a link having its upper end engaged about said ring, and a second grooved ring seated in the lower end of said link and rotatable with relation thereto, said shaft having a bearing end for engagement in said second ring.

2. In a weighing scale of the type set forth, the combination with a frame and a rock shaft, of a link suspended for oscillating movement, and a grooved ring seated in the lower end of said link and rotatable with relation thereto, said shaft having a bearing end for engagement in said ring.

3. In a weighing scale of the type set forth, the combination with a frame and a rock shaft, of a stud secured to the frame, a grooved ring carried by said stud, a link having its upper end conformably engaged about said stud, and a second grooved ring conformably engaged in the lower end of said link, said shaft having a bearing end for engagement in said second ring.

4. In a weighing scale of the type set forth, the combination with a frame and a rock shaft, of a stud, a grooved ring carried thereby, and a link having its upper end conformably engaged about said ring, said link being capable of oscillating movement with relation to said ring and supporting one end of said shaft.

901,357. ENVELOP. OLIVER E. LEWIS, Milwaukee, Wis., assignor to John G. Manz Co., Milwaukee, Wis., a Firm. Filed Feb. 3, 1908. Serial No. 414,020.

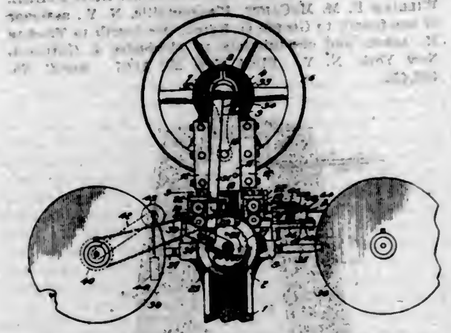


1. A card mailing and display envelop consisting of a single oblong sheet of pliable material having its longitudinal edges inturned to form upper and lower narrow continuous folds, and means fastening each fold to the body of the sheet adjacent to the ends of same, said sheet and its folds being transversely creased at intervals of its length to provide for folding between card-spaces into which it is divided by the creasing.

2. A card mailing and display envelop consisting of a single oblong sheet of pliable material having its longitudinal edges inturned to form upper and lower narrow continuous folds, and eyelets fastening each fold to the body of the sheet adjacent to the ends of same for the engagement of suspension devices, said sheet and its folds being transversely creased at intervals of its length to provide for folding between card-spaces into which it is divided by the creasing.

3. A card mailing and display envelop consisting of a single oblong sheet of pliable material having its longitudinal edges inturned to form upper and lower narrow continuous folds, means fastening each fold to the body of the sheet adjacent to its ends, said sheet and its folds being transversely creased at intervals of its length to provide for folding between card-spaces and flaps into which it is divided, and means for fastening the packet formed by said folding without closing said packet against postal inspection, said flaps being disposed to overlap packet-folds between the card-spaces aforesaid.

9,01,358. MACHINE FOR PUNCHING AND TRIMMING METAL STAY-STRIPS FOR BOXES. ROBERT B. LEWIS, Philadelphia, Pa., assignor to American Metal Edge Box Company, Philadelphia, Pa., a Corporation of New Jersey. Filed May 15, 1905. Serial No. 260,412.



1. In a machine of the character described, a die mechanism for trimming and punching a metal strip, a supply reel and a take-up reel for the strip arranged respectively on opposite sides of the die mechanism, feed rolls to either side of said dies for drawing the strip from the supply reel and presenting the same to the die mechanism, said feed rolls being inter-geared whereby to hold the strip rigid upon the die mechanism, a means for retarding and guiding the strip to said feed rolls, means for intermittently driving said rolls, and means for intermittently driving said take-up reel.

2. In a machine of the character described, a die mechanism for trimming and punching a metal strip, a supply reel and a take-up reel for the strip arranged respectively on opposite sides of the die mechanism, feed rolls for drawing the strip from the supply reel and presenting the same to the die mechanism, means for intermittently driving said rolls, and connections between said rolls and reel whereby they are rotated simultaneously.

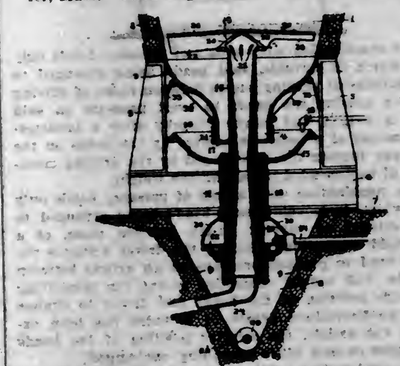
3. In a machine of the character described, a die mechanism for trimming and punching a metal strip, a supply reel and a take-up reel for the strip arranged respectively on opposite sides of the die mechanism, feed rolls for drawing the strip from the supply reel and presenting the same to the die mechanism, and means for intermittently and simultaneously driving said rolls and take-up reel.

4. In a machine of the character described, a die mechanism for trimming and punching a metal strip, a supply reel and a take-up reel for the strip arranged on opposite sides of the die mechanism, feed rolls for drawing the strip from the supply roll and presenting it to the die mechanism, said feed rolls and take-up reel being inter-geared to operate in unison, and adjustable means in the line of feed of the strip for guiding and tensioning the same to the rolls.

5. In a machine of the character described, a die mechanism for trimming and punching a metal strip, feed rolls for tensioning said strip upon the die mechanism, a supply reel and a take-up reel for the strip arranged on opposite sides of the die mechanism, and adjustable means in the line of feed of the strip for guiding the same to the rolls, said means being adjustable transversely of the line of feed.

[Claims 6 to 13 not printed in the Gazette.]

901,359. GAS-PRODUCER. RALPH L. MORGAN, Worcester, Mass. Filed Aug. 7, 1905. Serial No. 272,962.



1. The combination with a combustion chamber, of a rotating spindle coaxial with said chamber, and a radial blade carried by said spindle, said blade consisting of an oblique section on its advancing side and a narrow depending lip on the retreating side of the blade.

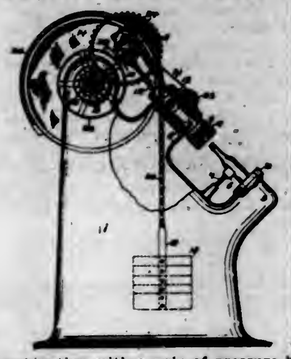
2. In a gas producer, the combination with an ash receptacle, of a rotating spindle extending above said ash receptacle, a blade carried by said spindle approximately at right angles thereto, said blade provided with a flange depending from the blade at an oblique angle thereto upon its forward side and a vertical depending flange upon the rear side of said blade, and means for rotating said spindle.

3. In a gas producer, the combination with a combustion chamber, of a rotating vertical spindle extending into the zone of combustion in said chamber, and an inverted trough shaped blade carried by said spindle approximately horizontal and transverse to said chamber, whereby the incandescent coal in said chamber is given a vertical movement as the blade rotates.

4. In a gas producer, the combination with a combustion chamber, of a hollow vertical rotating spindle extending into the zone of combustion in said chamber, an angular blade approximately horizontal, whereby the incandescent coal in said chamber is given a vertical movement, and means for supplying air through said spindle beneath said blade, arranged to contact with the coal as it drops from said blade.

5. In a gas producer, the combination with a combustion chamber, of a rotating vertical hollow spindle extending into the zone of combustion having openings at its top for the escape of air, a hood carried by said spindle arranged to cause the horizontal movement of the air from said spindle, and an approximately horizontal blade carried by said hood and extending from its periphery transversely through the incandescent coal in said chamber.

901,360. EQUALIZING MECHANISM. FELIX MUELLER, New York, N. Y., assignor to Standard Stopper Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 14, 1905. Serial No. 241,135.



1. The combination with a pair of pressure heads only one of which is movable, said heads being arranged to receive articles of varying length between them, of driving means for causing the heads to exert pressure on said articles, a weight, and means whereby after a predetermined amount of pressure is exerted by the heads on the article, any further force developed by the driving mechanism will be expended in raising the weight.

2. The combination with a pair of pressure heads only one of which is movable, said heads being arranged to receive articles of varying length between them, of a driver, rigid connections whereby the driver actuates the movable head to produce pressure on an article between the heads, and weight controlled means for permitting the relative position of the heads and driver to change when a predetermined degree of pressure has been exerted on the article, the relative position of the heads with respect to each other remaining unchanged.

3. The combination with a pair of pressure heads, one of which is movable, said heads being arranged to receive articles of varying length between them, a driver, rigid connections whereby the driver actuates the movable head to produce pressure on an article between the heads, and weight controlled means for permitting the driver to change its relative position with respect to the heads when a predetermined degree of pressure has been exerted on the article by the heads.

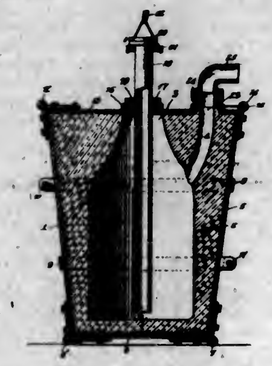
4. The combination with a pair of pressure heads only one of which is movable, said heads being arranged to receive articles of varying length between them, of a driving shaft, connections whereby the shaft actuates the movable head to produce pressure on an article between the heads, and weight controlled means for permitting the relative position of the heads and shaft to change when a predetermined degree of pressure has been exerted on the article, the relative position of heads with respect to each other remaining unchanged.

5. The combination with a pair of pressure heads, one of which is movable, said heads being arranged to receive articles of varying length between them, of a driving shaft, connections whereby the shaft actuates the movable head to produce pressure on an article between the heads, and weight controlled means for permitting the shaft to change its position with respect to the heads when a predetermined degree of pressure has been exerted on the article, the relative position of the heads with respect to each other remaining unchanged.

[Claims 6 to 12 not printed in the Gazette.]

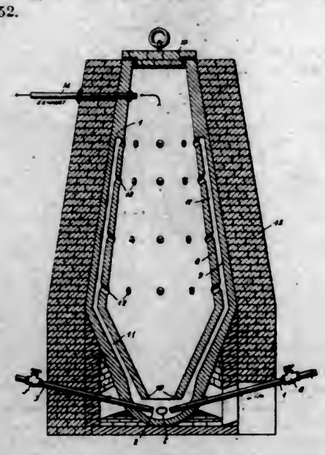
901,361. MOLDING PROCESS. WILLIAM F. M. MCCARTY, Pleasantville, N. Y., assignor of one fourth to George O. Eaton, one-fourth to Thomas M. Acken, and one-thirtieth to Alexander J. Guttman, New York, N. Y. Filed Aug. 2, 1907. Serial No. 386,742.

1. The hereindescribed process which consists in continuously discharging molten metal, into a hermetically sealed mold, at or near the surface of the metal introduced, until said mold is filled and simultaneously withdrawing air from said mold.



2. The hereindescribed process which consists in introducing molten metal into a substantially hermetically sealed mold through a movable conduit, the discharge end of which is maintained at or near the surface of the metal, until the mold is filled and simultaneously withdrawing air from said mold.

901,362. PROCESS OF TREATING IRON AND STEEL. WILLIAM F. M. MCCARTY, Pleasantville, N. Y., assignor of one-fourth to George O. Eaton, one-fourth to Thomas M. Acken, and one-thirtieth to Alexander J. Guttman, New York, N. Y. Filed Nov. 23, 1907. Serial No. 403,452.



1. A process of purifying iron and steel which consists in incorporating a chlorid therein and subjecting the metal, in a molten state, to the action of superheated steam.

2. A process of purifying iron and steel which consists in incorporating sodium chlorid therein and subjecting the metal, in a molten state, to the action of superheated steam.

3. A process of purifying iron and steel which consists in incorporating a chlorid therein, and subjecting the metal, in a molten state, to the action of superheated steam and a vacuum.

4. A process of purifying iron and steel which consists in incorporating a chlorid therein and subjecting the metal, in a molten state, to the action of superheated steam, in intermittent jets or impulses and to the action of a vacuum.

5. A process of purifying iron and steel which consists in incorporating sodium chlorid therein and subjecting the metal, in a molten state, to the action of superheated steam and a vacuum.

[Claims 6 to 9 not printed in the Gazette.]

901,363. METALLURGICAL FURNACE. WILLIAM F. M. MCCARTY, Pleasantville, N. Y., assignor of one-fourth to George O. Eaton, one-fourth to Thomas M. Acken, and one-thirtieth to Alexander J. Guttman, New York, N. Y. Filed Dec. 14, 1907. Serial No. 406,198.



1. A furnace of the character described comprising a body portion to receive the charge, a crucible to receive the reduced metal, means for supplying air under pressure to the charge in said body portion, means for supplying steam to the metal in the said crucible, said body portion being in communication with said crucible through an opening provided in the lower portion of the former and through a flue or duct leading from said crucible to the upper part of said body portion, substantially as described.

2. A furnace of the character described comprising a bosh and a crucible, the lower end of said bosh extending downward into the said crucible, said bosh being provided at its lower extremity with means of communication with said crucible and said furnace being provided with means of communication between said crucible, and the main portion of the furnace, above said bosh, substantially as described.

3. A furnace of the character described comprising a bosh and a crucible, said bosh extending downward into said crucible below the upper edge of the sides thereof, said crucible being in communication with said bosh through the lower end thereof, substantially as described.

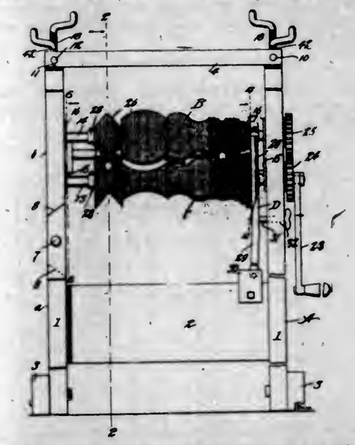
4. A furnace of the character described comprising a crucible, means for supplying steam to different portions of said crucible and means for localizing the agitation or disturbance of metal in said crucible produced by the injection of said steam, substantially as described.

5. A furnace of the character described comprising a crucible having partitions therein adapted to separate portions of the contents from each other and means for supplying steam under pressure to said portions, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

901,364. CORNICE-MAKING MACHINE. EDWARD MCMAHON, Springfield, Ill. Filed Jan. 14, 1908. Serial No. 410,809.

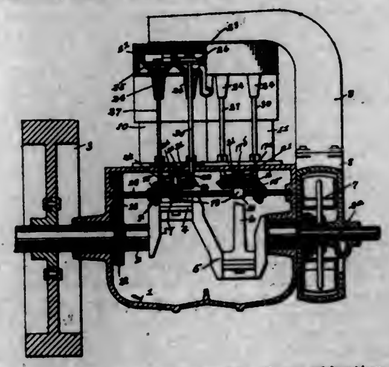
1. In a machine of the class described, the combination of a frame including a pair of uprights each having longitudinal slots and one having a movable part, a pair of relatively-movable bearings in one slot of each upright, one pair of bearings being carried by and movable with said part, means for adjusting the said bearings, roll-carrying shafts mounted on the bearings, bearings in each of the other slots and provided with frames forming guideways, one of the frame-carrying bearings being mounted on the said part to move therewith, means for adjusting the last-mentioned bearings, bearing blocks, means for adjusting the bearing blocks, a shaft rotatably mounted in the said blocks, and curving devices mounted on the said shaft.



2. In a machine of the class described, the combination of a frame having spaced supporting members, means for hingedly mounting one of the members, a cross-bar extending from one member to the other and holding the latter in normal position, relatively-adjustable roll-carrying shafts mounted on the members, a plurality of disks removably mounted on the shafts for forming the rolls, and means for driving the shafts.

3. In a machine of the class described, the combination of a pair of uprights, one of which is composed of hingedly connected sections, members extending from one upright to the other for holding the movable section in fixed relation with respect to the other upright, roll-carrying shafts, bearings for the shafts arranged in the movable section of the one upright and also in the other upright, means for adjusting the bearings of one of the shafts, and rolls on the shafts comprising disks of various diameters and contours, the disks of each roll bearing directly on each other.

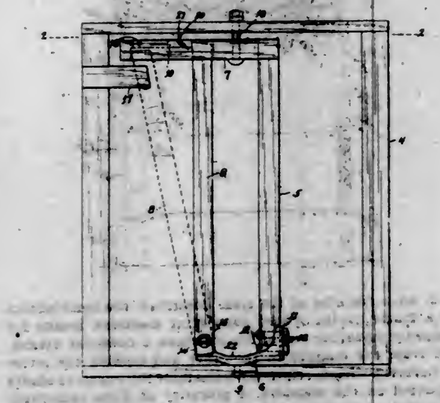
901,365. VALVE-CONTROLLING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. HARRY M. NEER, Columbus, Ohio. Filed Feb. 13, 1908. Serial No. 415,631.



In an internal combustion engine, the combination with a crank case, a crank shaft therein, connecting rod oper-

ating cranks on said crank shaft, pistons containing cylinders, exhaust and inlet valve castings, valves in said castings and valve rods extending therefrom into said crank case, and a roller pivoted in each of said valve rods, of a shaft within the crank case rotated by the crank shaft, a pinion carried on said shaft, a gear wheel meshing with said pinion, a cam segment on the upper side of said gear wheel, and a plate supported above said gear wheel and having a depressed portion, said valve rod rollers adapted to bear on said gear wheel and its cam projection and the lower ends of said rods adapted to engage the underside of said plate.

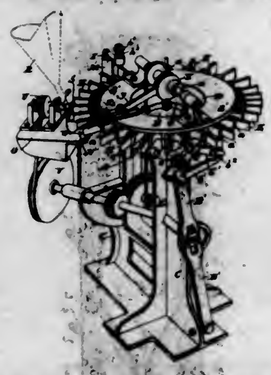
901,366. CATTLE-STANCHION. FERDINAND NEUMEISTER and HERMAN C. BURHOP, Howards Grove, Wis. Filed Feb. 14, 1907. Serial No. 357,274.



1. In a cattle stanchion, the combination with a frame, of a stanchion pivoted to the frame, and consisting of a stanchion post, upper and lower arms extending from the stanchion post, the upper arm being longitudinally slotted, and also having a notch or recess in its upper edge, and a stanchion bar pivoted to the lower arm and adapted to be swung toward and away from the stanchion post, the upper end of said bar extending into the slot of the upper arm, of a latch disposed in the slot of the upper arm and pivoted within said slot at the end of said slot which is farthest removed from the stanchion post, the opposite or free end of said latch provided with a laterally extending projection adapted to be normally seated in the notch or recess in the upper edge of the upper arm, to thereby limit the extent of the down movement of the free end of the latch, the said projection also serving as a handle for lifting the latch, and a catch constructed, when the stanchion bar is turned in a direction away from the stanchion post, for holding the stanchion against turning, said stanchion bar, however, when swung toward the stanchion post adapted to bear against the under side of the pivoted latch and raise said latch, the bar when swung to its full extent toward said post passing in advance of the free end of the latch, and thereby permitting said latch to drop and act to lock the bar until the latch is moved upwardly on its pivot by an upward pull on the projection.

2. In a cattle stanchion, the combination with a frame, of a stanchion consisting of a stanchion post, upper and lower arms extending from the stanchion post, the upper arm provided with a pivot extending upwardly into the frame, and said lower arm being of metal, and provided at one end with an upwardly extending end wall and with upwardly extending side walls forming a socket into which the lower end of the stanchion post is fitted, and provided at its opposite end with upwardly extending ears, and having the portion thereof between its ends downwardly depressed or curved, and the under side of said arm provided with a central pivot pintle extending into the frame, horizontal bolts passing through the lower end of the stanchion post and through the end wall of the socket, a stanchion bar having its lower end passing between the ears at one end of the lower arm, and a pivot pin passing through said ears and through the stanchion bar.

901,367. BOX-SANDING MACHINE. THOMAS A. PALMER, Akron, and CARL A. CARLSON, Barberton, Ohio, assignors to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 19, 1899. Serial No. 734,062.



1. In a box-sanding machine, the combination of sanding mechanism, a rotary head with a horizontal series of fingers upon which box shucks are thrust, and an ejector for removing shucks from said fingers comprising a reciprocating bar having a shuck engaging finger, substantially as described.

2. In a box-sanding machine, the combination of a ring-form head having a series of box-part holders, a bearing for said head having a flange overlapping the same, and a reciprocating box-part ejector mounted on said flange, substantially as described.

3. In a box-sanding machine, the combination of a ring-form head, having a series of box-part holders, a table having a journal for the head, and a flange overlapping the head, gluing and sanding mechanisms, and an ejector mounted on said flange, substantially as described.

4. In a machine to sand boxes, the combination of glue-applying mechanism, and a box-part holder having a recess opposite the glue-applying device, substantially as described.

5. In a machine to sand boxes, the combination of a glue-applying bar, and a box-part holder having a recess opposite the bar, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

901,368. APPARATUS FOR MAGNETIC SEPARATION. CLARENCE Q. PAYNE, Stamford, Conn., assignor to The International Separator Company, a Corporation of New Jersey. Filed Oct. 3, 1903. Serial No. 175,598.



1. In a magnetic separator, a transversely laminated separating-cylinder provided with a plurality of magnetizable laminæ having edge projections, placed alternately and contacting with respect to a plurality of non-magnetizable laminæ, in combination with two opposing pole-pieces between which a magnetic field is formed, and between which said cylinder is arranged to revolve, substantially as described.

2. In a magnetic separator, a transversely laminated separating-cylinder provided with a plurality of magnetizable circular disks having edge projections, placed alternately and contacting with respect to a plurality of non-magnetizable disks, in combination with two opposing pole-pieces, between which a magnetic field is formed, and between which said cylinder is arranged to revolve, substantially as described.

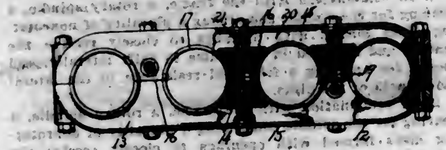
3. In a magnetic separator, the combination of a transversely laminated separating-cylinder provided with a plurality of magnetizable laminæ having edge projections, placed alternately and contacting with respect to a plurality of non-magnetizable laminæ; means for magnetizing said cylinder, and means for retaining the material undergoing separation in close proximity to said cylinder along a considerable segment thereof below its horizontal diameter, substantially as described.

4. In a magnetic separator, the combination of a transversely laminated separating-cylinder provided with a plurality of magnetizable circular disks having edge projections, placed alternately and contacting with respect to a plurality of non-magnetizable disks; means for magnetizing said cylinder, and means for retaining the material undergoing separation in close proximity to said cylinder, substantially as described.

5. In a magnetic separator, the combination of a transversely laminated separating-cylinder provided with a plurality of magnetizable laminæ having edge projections, placed alternately and contacting with respect to a plurality of non-magnetizable laminæ; two opposing pole-pieces, between which said cylinder is arranged to revolve, and a guide-plate formed partly by one of said pole-pieces and partly by an upward extension added thereto, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

901,369. JACKET FOR CYLINDERS. GEORGE B. PICKOP and JOSEPH W. MILLS, New Britain, Conn. Filed Dec. 28, 1907. Serial No. 408,399.



1. A jacket for cylinders composed of half sections, each having a chamber with inclosing walls complete therein and with the outer face of its wall having a recess for the reception of a portion of a cylinder.

2. A jacket for cylinders composed of half sections, each having a chamber with inclosing walls complete therein and with the outer face of its wall having a recess for the reception of a portion of a cylinder, the dividing line between the sections being on a plane passing lengthwise through the recess formed by the joined half sections.

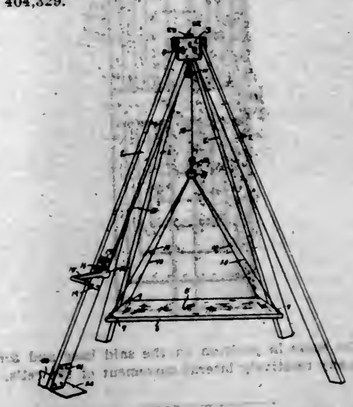
3. A jacket for cylinders composed of half sections duplicates each of the other, each half having a chamber with inclosing walls complete therein and with the outer face of its wall having a recess for the reception of a portion of a cylinder.

4. A jacket for cylinders composed of half sections, each section having a chamber with inclosing walls complete therein and one wall of which is formed to fit the wall of an opposite section, said wall having a recess to fit and receive a portion of a cylinder, and means for securing the halves together.

5. A jacket for cylinders composed of half sections, each having a chamber one wall of which is formed to fit the wall upon the opposite section, said wall also having a recess for the reception of a portion of a cylinder, communicating ports between the chambers in the half sections, and means for securing the sections together.

[Claims 6 to 11 not printed in the Gazette.]

901,370. DEVICE FOR RAISING INVALIDS. LILLIAN POPPERT, Milwaukee, Wis. Filed Nov. 29, 1907. Serial No. 404,329.



In a device for raising and supporting invalids, the combination of a plurality of supporting standards, means for connecting the upper ends of said standards together, a pulley suspended from the upper ends of said standards, a rectangular frame provided at its respective corners with hooks, a fabric supported from said frame, a plurality of suspension cords connected to said frame by said hooks, a winding shaft revolubly connected to one of said standards, a crank connected with one end of said shaft, an angular foot plate affixed to the lower end of said shaft supporting standard, a lifting cord connected at one end to said shaft, passing from thence over said pulley and connected at its opposite end to the converging ends of said hoisting cords, a pawl and ratchet mechanism connected with said winding shaft and its supporting standard adapted to hold said shaft at any desired point of adjustment, said foot plate being adapted when stood upon by the operator to serve as a means of holding said standard in place and resisting the tendency of the same to be raised by the upward movement of said crank as said shaft is being turned substantially as specified.

901,371. EXHAUST-MUFFLER. JOHN M. PORTER, JOHN F. LAIRD, and ALBERT H. GEILFUSS, Parkersburg, W. Va. Filed Nov. 4, 1907. Serial No. 400,694.

1. A muffler of the character described comprising two plates or sides, a series of cells arranged on each of said plates, each inclosing cell being of a greater height and of a larger diameter than the cell inclosed thereby, means for allowing the exhaust to pass from each inclosed cell to each inclosing cell, and a rod passing through the muffler in engagement with each of said cells for securely tying the same in position upon the said plates, substantially as described.

2. A muffler of the character described comprising a central receiving chamber, a series of cells arranged on two sides of said receiving chamber, each inclosed cell being shorter in length and smaller in diameter than its inclosing cell, means for allowing the exhaust to pass from each inclosed cell to its inclosing cell, substantially as described.

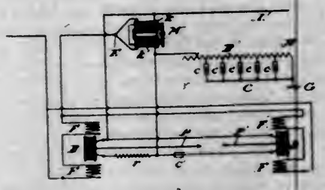
3. A muffler of the character described, comprising a series of cells one arranged within the other, each inclosed cell being shorter in length and smaller in diameter than its inclosing cell, a base for said cells, a rod passing through the interior of each of said cells, passing through

each inclosed cell into its inclosing cell, and means on said rod in engagement with each of said cells for securely



tying the same in position on the said base and for preventing any relatively lateral movement of the cells.

901,372. TELEGRAPHY. LOUIS M. POTTS, Baltimore, Md., assignor to The Rowland Telegraphic Company, Baltimore, Md., a Corporation of New Jersey. Filed Mar. 9, 1907, Serial No. 361,530. Renewed Apr. 10, 1908. Serial No. 426,316.



1. The method of balancing a plurality of electric circuits, which consists in separately indicating the relative effects of the different constants of the circuits, and changing the values of said constants until a balance of each is indicated.

2. The method of balancing a plurality of electric circuits, which consists in segregating the effects of the different constants of the circuits, and changing the values of the constants of one circuit until a balance or equality of the constants in the circuits is indicated.

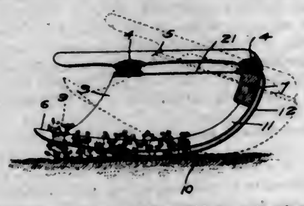
3. The method of balancing a plurality of electric circuits which consists in connecting a plurality of indicating instruments between said circuits, dephasing the currents flowing in said instruments, and adjusting the constants of the circuits until a balance is indicated.

4. The method of balancing a plurality of electric circuits which consists in connecting a plurality of indicating instruments of the electro-dynamic type between said circuits, dephasing the currents flowing in the movable elements of said instruments, and adjusting the constants of the circuits until a balance is indicated.

5. The method of balancing a plurality of electric circuits which consists in affecting a plurality of indicating instruments by currents flowing in said circuits, causing said instruments to respond to different constants of said circuits, and adjusting the constants of one circuit until a balance or equality is indicated by each instrument.

[Claims 6 to 15 not printed in the Gazette.]

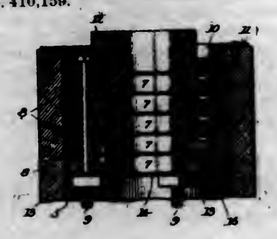
901,373. CRANBERRY-PICKER. DENNIS E. RAYMOND, Plymouth, Mass., assignor of one-half to G. R. Briggs, Plymouth, Mass. Filed Aug. 21, 1907. Serial No. 389,479.



1. A cranberry picker having sides, a tooth-sustaining block situated at the back of the sides adjacent the top thereof, and teeth sustained by said block, said teeth extending downwardly from the block and then forwardly.

2. A cranberry picker having two sides, a cross-piece 4 connecting the sides, a tooth-sustaining block between the sides immediately below the cross piece, and teeth extending forwardly from said block, the lower edges 10 of the sides being convexedly curved and extending below the teeth to form rockers on which the picker may be supported.

901,374. BEARING FOR SHAFTS, SPINDLES, &c. ALBAN H. REID, Philadelphia, Pa. Filed Jan. 10, 1908. Serial No. 410,159.



1. In combination with the frame, a rotary spindle, a bearing for the spindle comprising a plurality of nonrotating disks formed with openings to closely receive the spindle and mounted in the frame to shift laterally, and means for applying a frictional resistance to the lateral movements of the disks.

2. In combination with the frame, a rotary spindle, a bearing for the spindle comprising a plurality of nonrotating disks formed with openings to closely receive the spindle and mounted in the frame to shift laterally independently of each other, and means for applying a frictional resistance to the lateral movements of the disks.

3. In combination with the frame, a vertical rotary spindle, a bearing for the spindle comprising a plurality of nonrotating disks formed with openings to closely receive the spindle, a nonrotating spacing plate between the disks, said parts being so mounted in the frame that the disks may shift laterally with reference to the spacing plate, and means for applying a frictional resistance to the lateral movements of the disks.

4. In combination with the frame, a rotary spindle, a plurality of nonrotating disks formed with openings to receive and afford a bearing for the spindle and shiftable laterally with respect to the frame, nonrotating spacing plates situated between the disks and held by the frame against lateral movement, and means for holding the disks and plates frictionally together.

5. In combination with a frame, a rotary spindle, a laterally shiftable nonrotating disk formed with an opening in which the spindle is rotatably mounted, nonrotating plates sustained by the frame against lateral movement and bearing on the opposite sides of the disk, and unyielding means for clamping the disk between the plates.

[Claims 6 to 11 not printed in the Gazette.]

901,375. SOLDER-CARRYING CAN-CAP. JOHN J. RIORY, New York, N. Y. Filed June 1, 1907. Serial No. 376,875.



1. A can cap having a dependent flange, a body of solder on said flange, and tongues formed integral with said flange at its lower end adapted to support the solder, and bent upward and inward over the solder so as to hold it in position.

2. A can cap having a dependent flange, a body of solder located entirely on the exterior of said flange, and tongues formed integral with said flange at its lower end adapted to support the solder, and bent upward and inward over the solder so as to hold it in position.

3. A can cap having a dependent flange, a body of solder carried by said flange, and means on the flange for supporting and holding the solder at intervals circumferentially but leaving the greater part of the solder exposed.

4. A can cap having a dependent flange, a body of solder located entirely on the exterior of said flange, and means on the flange for supporting and holding the solder at intervals circumferentially but leaving the greater part of the solder exposed.

5. The combination with a can having an aperture surrounded by a groove, of a solder carrying can cap, having integral tongues at intervals circumferentially, supporting and holding a body of solder by being bent upward and inward, the cap resting in the groove aforesaid with its dependent flange abutting against the inner wall of the groove, whereby the solder, when fused, will form an exterior seal between the outer wall of the groove and the dependent flange of the cap.

901,376. MASSAGE AND VIBRATORY DILATOR. HARVEY H. ROBERTS, Lexington, Ky. Filed Sept. 6, 1907. Serial No. 391,666.



1. A massage and vibratory apparatus, comprising a hollow applicator having depressions at one end, a bag conforming to the end of the applicator and received in the depressions and connected at its other end to the applicator.

2. A massage and vibratory apparatus comprising a hollow applicator having depressions therein at one end, a bag connected to the applicator, and the end of the bag adapted to conform to the shape of the end of the applicator, a stem connected to the applicator whereby a vibratory effect may be produced, and means connected to the stem for inflating the bag.

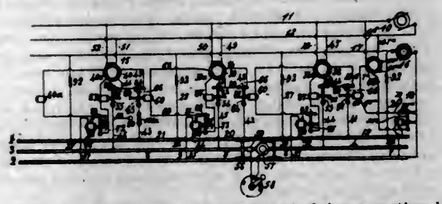
3. A massage and vibratory apparatus comprising a hollow flexible applicator, a bag connected to the applicator, a hollow stem journaled in the applicator, and means connected to the stem for inflating the bag.

4. A massage and vibratory apparatus comprising a hollow flexible applicator, a bag connected to the applicator, a stem journaled in the applicator whereby a vibratory effect may be produced, a tube connected to the stem having a stop-cock therein, and a bulb on the tube for inflating the bag.

5. A massage and vibratory apparatus comprising a hollow applicator, flexible at one end, a bag connected to the flexible end of the applicator, a hollow stem journaled in the applicator whereby the vibratory effect may be produced, and means connected to the stem for inflating the bag.

[Claims 6 and 7 not printed in the Gazette.]

901,377. ELECTRIC-RAILWAY SYSTEM. WILLIAM ROBINSON, Brooklyn, N. Y. Filed Apr. 18, 1905. Serial No. 256,322.



1. In an electric railway system embodying a sectional working or contact conductor, a source of working current supply normally disconnected from said working sections, a car or train, means actuated thereby on entering upon a section or block, for connecting said current supply thereto, means under control of said car or train for automatically opening circuit in the feed connection furnishing working current to a different working section or block, a second electrically propelled car or train, and means under control thereof, connected to said last named section or block, for causing said car or train, on entering thereupon, to close its own motor circuit upon itself.

2. In an electric railway system having sectional working or contact conductors, a source of working current supply normally disconnected from said working sections, means for automatically connecting said current supply to said sections and disconnecting the same therefrom, a car or train occupying one of said sections or blocks, means under control thereof for automatically preventing the accession of working current to a working section or block in the rear of the block occupied by said car or train, a second or following, electrically propelled, car or train, and means under control thereof, on entering upon said rear section or block, for causing said train to close its own motor circuit upon itself.

3. In an electric railway system comprising a sectional working or contact conductor, a high voltage alternating current generator, leaders therefrom, transformers having their primaries connected thereto, the secondaries thereof, respectively, having one terminal arranged for connection to the working sections, but normally disconnected therefrom, and the opposite terminal normally connected to the return for the working current, a car or train, means for connecting said secondaries operatively to said working sections upon the entrance of said car or train thereon, means under control of said car or train on one block for opening circuit in the secondary feeder arranged to supply current to another block or section, a second car or train provided with motors, and means for causing said train, on entering upon the last named section or block, to close circuit between the working and return conductors thereof, thus closing its own motor circuit upon itself.

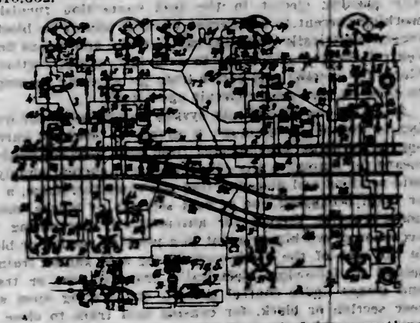
4. In an electric railway system, a sectional working or contact conductor, a source of working current supply normally disconnected from said sections, a plurality of automatic switches for connecting said current supply operatively to said respective working sections and disconnecting the same therefrom, one of said switches being normally open, a car or train operating to close the same on entering upon the section or block with which said switch is connected, and another of said switches normally closed, connected to the same section or block and arranged to be opened by said car or train on entering upon the next section or block in advance, a second or following train provided with a motor circuit, means connected to said first named section or block for depriving said following train of working current, and means for causing said second train to close its own motor circuit upon itself on its en-

trance upon the block in the rear of said first named section or block, and means connected to said rear section or block for causing said second train to automatically prevent the accession of working current to the section or block in its own rear.

5. In an electric railway system having sectional working or contact conductors, a source of working current supply normally disconnected from said sectional conductors, a car or train, means under control thereof for automatically connecting the working current feeder to the working sections in succession on the entering of said train upon said sections, and disconnecting the same therefrom when the train leaves said respective sections, means under control of said train on entering upon one working section, for preventing the accession of working current to another working section, a second electric car or train, and means connected with the latter section or block for causing said second train, on entering thereupon, to close direct circuit between the working section of said block and its return, whereby said train will be caused to close its own motor circuit upon itself.

[Claims 6 to 9 not printed in the Gazette.]

901,378. ELECTRIC-RAILWAY SYSTEM. WILLIAM ROBINSON, Brooklyn, N. Y. Filed Apr. 9, 1900. Serial No. 310,662.



1. In an electric railway system embodying a sectional working or contact conductor, a source of working or propulsion current supply normally disconnected from said working sections, a car or train, means under control thereof for connecting said working current supply to the working sections or blocks occupied by said car or train and disconnecting the same therefrom, a movable portion of track in one of said sections or blocks, mechanical means for locking or securing the same in position, an interlocking electric switch dominated or controlled by the position of said track-locking means, a change of said electric switch from its normal condition operating to secure an open circuit in the feed connection which furnishes working current to a different working section or block from that embodying said movable portion of track, and means for actuating said electric interlocking switch before said track locking means, or the track, can be changed.

2. In an electric railway system embodying a sectional working or contact conductor, a source of working or propulsion current supply normally disconnected from said working sections, a car or train, means actuated thereby for connecting said current supply to the working sections or blocks occupied by said car or train, a movable portion of track within the limits of one of said sections or blocks, means for securing or locking said movable portion of track in position, an electric interlocking device in combination therewith, the reversing or changing of said electrical device from its normal position operating to open circuit in the feed controlling connection which furnishes working current to a different working section or block from that including said movable portion of track, and means whereby the first movement for changing said track locking means, or the track, from its normal position, will operate to reverse said electric interlocking device, said means making it necessary that said movable portion of track, when displaced or unlocked, should be restored to its normal secured position before said electric interlocking device can be restored to its normal condition.

3. In an electric railway system, the combination of a working or contact conductor formed in sections or blocks separated or insulated from one another, a working or propulsion current feeder normally disconnected from said working sections or blocks, a subsidiary feeder carrying current of lower potential than the working current, switch magnets in the circuits of said low potential feeder, said respective switch magnets actuating switches for connecting the propulsion current feeder to the respective sections of said working or contact conductor and disconnecting the same therefrom, a car or train, means under control thereof for actuating said switch magnets, a movable portion of track within the limits of one of said sections or blocks, means for locking the same in position, a circuit controlling device in combination therewith, an electric connection between said circuit controlling device and the switch magnet controlling the accession of working current to a working section or block adjacent to that including said movable portion of track, the changing of said circuit controlling device from its normal position operating to prevent said electric switch from connecting said working current feeder to said adjacent section or block.

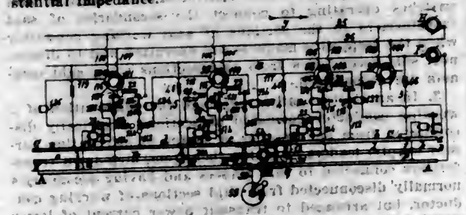
4. In an electric railway system, the combination of a working or contact conductor, formed in sections or blocks separated or insulated from one another, a working or propulsion current feeder normally disconnected from said sections but arranged for connection thereto, a track switch in connection with one of said sections or blocks, mechanical means for securing the same in proper alinement with contiguous portions of the track, an electrical interlocking device in combination with said mechanical locking means, electrically controlled switches controlling the accession of working current to the sections or blocks at opposite ends of the section embodying said track switch, electrical connections between said electrically controlled switches and said electrical interlocking device, whereby the changing of the latter from its normal position will operate said switches to open electrical connection between said working conductor and said working sections or blocks.

5. In an electric railway system having sectional contact or working conductors, a source of working current supply normally disconnected from said working sections or blocks, means for automatically connecting said current supply to said respective sections and disconnecting the same therefrom, a movable portion of track within the limits of one of said sections or blocks, means for locking or securing the same in position, an electric interlocking device dominated by said track-locking or securing means, the releasing or reversing of said electric device operating to secure an open circuit in the feed connections furnishing working current to the sections or blocks at opposite ends of the section or block embodying said movable portion of track before said track locking device can be released or the track moved, whereby trains approaching said movable portion of track, in either direction, will be deprived of working or propulsion current while at a safe distance therefrom.

[Claims 6 to 13 not printed in the Gazette.]

901,379. ELECTRIC-RAILWAY SYSTEM. WILLIAM ROBINSON, Brooklyn, N. Y. Filed Aug. 13, 1907. Serial No. 388,292.

1. In an electric railway system embodying a sectional working or contact conductor, a source of working current supply normally disconnected from said working sections, a car or train, means actuated thereby for connecting said current supply to the working sections occupied by said car or train, means under control of said car or train on one section or block for opening circuit in the feed connection furnishing current to a different working section or block, and means for automatically making direct electrical connection between said last named working section and its return, said electrical connection including a substantial impedance.



2. In an electric railway system having sectional contact or working conductors, a source of working current supply normally disconnected from said working sections, means for automatically connecting said current supply to said respective sections and disconnecting the same therefrom, a car or train, means under control thereof for automatically preventing the delivery of working current to a working section adjacent to the section or block occupied by said car or train, a second or following car or train provided with a motor circuit, and means including an impedance connected with said adjacent section or block for causing the motor circuit of said second car or train to be closed upon itself through said impedance, on the entrance of said train upon said adjacent section or block.

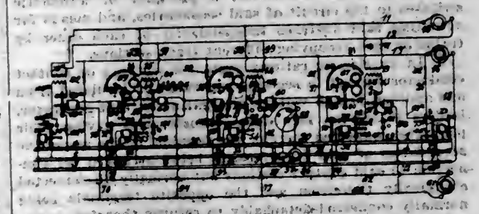
3. In an electric railway system comprising a sectional working or contact conductor, a source of working current supply normally disconnected from said sections, a plurality of automatic switches for connecting said current supply operatively to said respective working sections and disconnecting the same therefrom, one or said switches, connected to each block, being normally open, a car or train operating to close the same on entering upon the section or block with which said switch is connected, another switch connected to a different section or block and normally closed, said train operating to simultaneously open the latter switch on entering upon said first named section or block, another car or train provided with a motor circuit, and means, including an impedance, for causing said train, on entering upon said different block, to close circuit between the working or contact section thereof and its return, said train thus closing its own motor circuit upon itself, through said impedance.

4. In an electric railway system, a working or contact conductor formed in sections separated or insulated from one another, a traction rail formed in corresponding sections separated or insulated from one another, a working current feeder normally disconnected from said working sections, but having one terminal arranged for connection thereto, the opposite terminal being normally connected to the respective sections of said traction rail, a car or train, means under control thereof for connecting said working current feeder to said respective working sections on the entrance of said car or train upon said sections, the respective sections of said traction rail comprising returns for the working current feeders connected thereto, means under control of said train for preventing the accession of working current to a different working section or block, a second electrically propelled car or train, and means, including an impedance, connected with said last named section or block, for causing said car or train, on entering thereupon, to establish direct electrical connection between the working section of said last named block and its return, and thus to close its own motor circuit upon itself through said impedance.

5. In an electric railway system, a working or contact conductor formed in sections separated or insulated from one another, a traction rail formed in corresponding sections separated or insulated from one another, a working current feeder normally disconnected from said working sections, but having one terminal arranged for connection thereto, the opposite terminals being normally connected to the respective sections of said traction rail, a car or train, means actuated or controlled by an independent current under control of said car or train, for connecting said working current feeder to said respective working sections when said car or train enters thereupon, the respective sections of said traction rail forming returns for the working current connected to the respective working or contact sections, an independent motor-driven car or train, means, including an impedance, for closing circuit, through said impedance, between the working or contact section of a different block from that occupied by said first named train, and its traction rail return, whereby said independent train, on entering upon said different section or block, will be caused to close its own motor circuit upon itself while said first named block is occupied by said first named train.

[Claims 6 to 12 not printed in the Gazette.]

901,380. ELECTRIC-RAILWAY SYSTEM. WILLIAM ROBINSON, Brooklyn, N. Y. Filed Mar. 13, 1905, Serial No. 249,762. Renewed Aug. 27, 1907. Serial No. 390,379.



1. An electric railway system comprising a railway track having one of its service rails formed in sections insulated from one another, a source of current supply having one terminal connected to one of said sections near its end, and the other terminal to the opposite service rail, a relay magnet having one terminal connected near the opposite end of said rail section and the other terminal to the opposite service rail, thus forming a closed rail circuit, a sectional working or contact conductor, an alternating current generator, leaders therefrom, the primary of a step down transformer connected to said leaders, the secondary of said transformer having one terminal connected to one of said service rail sections, and the other normally disconnected, electrically, from said sectional contact conductor, a switch under control of said relay, said switch being arranged to connect said secondary to a contact section of said sectional working conductor on the demagnetization of said relay magnet and to disconnect said secondary from said contact section on the magnetization of said relay.

2. An electric railway system comprising a normally closed rail circuit embodying a source of current supply having its opposite terminals connected to the opposite rails of said circuit and a relay magnet having its opposite terminals connected to said opposite rails at a distance from said current supply terminals, a working or contact conductor formed in sections separated or insulated from one another, an alternating current generator, leaders therefrom, the primary of a step down transformer connected to said leaders, the secondary of said transformer being normally disconnected from said working or contact sections, means under control of said relay for connecting said secondary to one of said contact sections and disconnecting the same therefrom, a return for said secondary, and means for controlling the magnetization and demagnetization of said magnet.

3. An electric railway system comprising a railroad track having one rail line formed in sections insulated from one another, a generator having a leader connected in multiple to said track rail sections, the opposite track rail forming a return to said generator, relay magnets having their opposite terminals, respectively, connected to said respective track rail sections and to said return rail, a sectional working or contact conductor, a high voltage alternating current generator, leaders therefrom, transformers having their primaries connected thereto, the secondaries of said transformers, respectively, having one terminal normally connected electrically to said track rail

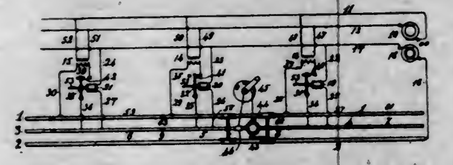
sections, and their opposite terminals normally electrically disconnected from said contact sections, means under control of said relays for completing electrical connection between said working or contact sections and said secondaries, on demagnetizing said respective magnets.

4. An electric railway system comprising a railroad track having one rail line formed in sections insulated or separated from one another, a generator furnishing current in multiple to said track sections, the opposite track rail forming a return to said generator, relay magnets having their opposite terminals, respectively, connected to said rail sections and to said return, a sectional working or contact conductor, a high voltage alternating current generator, leaders therefrom, the primaries of step down transformers connected thereto, the secondaries of said transformers, respectively, having their opposite terminals arranged for connection to said track sections and to said working or contact sections, but normally disconnected electrically from the latter, a plurality of automatic switches in the circuit of said secondaries, and means for actuating said switches independently of each other by trains or cars occupying different track sections.

5. In an electric railway system a working or contact conductor formed in sections separated or insulated from one another, a high voltage alternating current generator, leaders therefrom, step down transformers having their primaries connected thereto, one terminal of the respective secondaries of said transformers being arranged for connection to said contact sections but normally disconnected electrically therefrom and the opposite terminals being normally connected detachably to returns therefor, a plurality of electrically controlled automatic switches in the circuits of said respective secondaries, and means for actuating said switches automatically independently of one another through independent instrumentalities.

[Claims 6 to 16 not printed in the Gazette.]

901,381. ELECTRIC-RAILWAY SYSTEM. WILLIAM ROBINSON, Brooklyn, N. Y. Filed Jan. 26, 1905, Serial No. 242,787. Renewed Mar. 4, 1908. Serial No. 419,196.



1. An eleciric railway system comprising a working conductor formed in sections separated or insulated from one another, a return circuit, an alternating current generator, leaders therefrom, step-down transformers connected to said leaders, the secondaries of said transformers being normally disconnected from said working or contact sections, but arranged to furnish power current thereto, a source of lower potential current than that of said secondaries, a leader therefrom, electro-magnets having, respectively, one terminal connected to said last named leader and their opposite terminals to the respective sections of said working or contact conductor, means for connecting the secondaries of said transformers to the respective sections of said working conductor on the magnetization of said respective magnets, and means for automatically opening the circuits of said secondaries on demagnetizing said respective magnets.

2. An electric railway system comprising a sectional working or contact conductor, a high voltage alternating current generator, leaders therefrom, step-down transformers connected thereto, return circuits, the secondaries of said transformers, respectively, having one terminal connected to said return circuits and their opposite terminals normally disconnected from the sections of said working conductor, but arranged for connection thereto, an independent leader carrying current of lower voltage than that of said secondaries, electro-magnets having their opposite terminals connected to said last named leader and to the respective sections of said working conductor, and switches under control of said magnets, said switches operating to connect the secondaries of said transformers to the sections of said working conductor when the respective magnets are energized and to disconnect said secondaries from said sections when said magnets are deënergized.

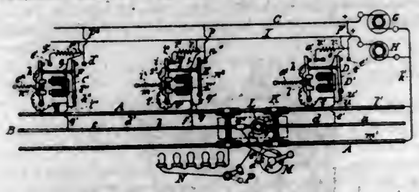
3. In an electric railway system, the combination of a working conductor composed of sections electrically disconnected from one another, a source of alternating current supply, leaders or mains therefrom, step-down transformers connected to said leaders and having secondaries normally disconnected from said sections of working conductor, but arranged to transmit power current of lower voltage thereto, an independent leader carrying current of still lower voltage, electro-magnets having their opposite terminals connected to said last named leader and to the respective sections of said working conductor, the circuit through said magnets being normally open, a return circuit, and switches controlled by said respective magnets, said respective switches being arranged to connect the secondaries of said transformers to the respective sections of said working conductor on the magnetization of said magnets and to disconnect said secondaries from said respective sections on opening the circuits of said respective magnets.

4. In an electric railway system, the combination of a working conductor composed of sections electrically disconnected from one another, a source of alternating current supply, leaders or mains therefrom, step-down transformers connected to said leaders and having secondaries normally disconnected from said sections of working conductor, but arranged to transmit power current of lower voltage thereto, an independent leader carrying current of still lower voltage, electro-magnets having their opposite terminals connected to said last named leader and to the respective sections of said working conductor, the circuit through said magnets being normally open, a return circuit, switches controlled by said respective magnets, said respective switches being arranged to connect the secondaries of said transformers to the respective sections of said working conductor on the magnetization of said magnets and to disconnect said secondaries from said respective sections on opening the circuits of said respective magnets, and a car or locomotive traveling in connection with said sectional conductor and provided with an electric controller, the closing of the circuit of said controller operating to close the circuits of said respective magnets and the opening of the circuit of said controller operating to open the circuit of said respective magnets and of the secondaries controlled thereby.

5. In an electric railway system, the combination of a working conductor comprising electrically disconnected sections, an electric locomotive or car traveling in electrical connection therewith, a return conductor, a generator of alternating current of high voltage, leaders or mains therefrom, step-down transformers connected thereto, and arranged to transmit operative current of lower voltage to said locomotive or car through the sections of said working conductor, the transmission of said current being normally interrupted between said transformers and said working conductor sections, an independent leader carrying current of lower voltage than that utilized for operating said traveling motor, electro-magnets having their opposite terminals connected to said last named leader and to the respective sections of said working conductor, the circuit through said magnets being normally open, switches controlled by said respective magnets and arranged to control the transmission of working current to said traveling motor and to disconnect the same therefrom, said traveling motor being arranged to establish electrical connection, successively, between said working sections and the return conductor, and a traveling car controller arranged to open and close circuit through the motor, the opening and closing of said circuit through the motor operating to simultaneously open and close the switch magnet and working circuits.

[Claims 6 to 9 not printed in the Gazette.]

901,382. ELECTRIC-RAILWAY SYSTEM. WILLIAM ROBINSON, Brooklyn, N. Y. Filed Oct. 27, 1902, Serial No. 128,891. Renewed Apr. 4, 1908. Serial No. 425,168.



1. In an electric railway system, the combination of a working conductor, a feed wire normally disconnected therefrom, a polarized relay between said feed wire and working conductor, a return conductor, and means for closing and opening circuit between said working and return conductors, the closing of said circuit between the working and return conductors actuating said relay and thus connecting said feed wire electrically to the working conductor, the opening of circuit between said working and return conductors causing a reversal of polarity in one of the magnets of said relay, thus simultaneously opening circuit between said feed wire and the working conductor.

2. In an electric railway system, the combination of a working conductor, a feed wire normally disconnected therefrom, a polarized relay between said feed wire and working conductor, a return conductor, and a locomotive or car provided with means for closing and opening circuit between said working and return conductors, the closing of said circuit between said working and return conductors actuating said relay and thus connecting said feed wire electrically to the working conductor, the opening of circuit between said working and return conductors causing a reversal of polarity in one of the magnets of said relay, thus simultaneously opening circuit between said feed wire and the working conductor.

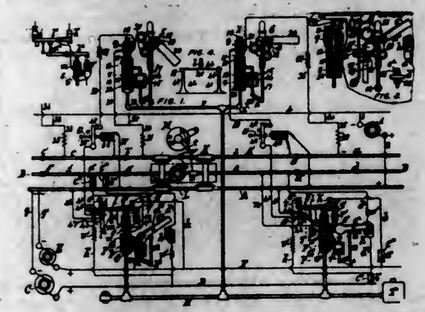
3. In an electric railway system, the combination of a working conductor, a feed wire normally disconnected therefrom, a polarized relay between said feed wire and working conductor, a return conductor, an electric locomotive or car traveling in electrical connection with said working conductor and deriving current therefrom, and an electrical controller or switch, the closing of said switch operating to close circuit through the magnets of said polarized relay, thus connecting said feed wire to the working conductor, and the opening of said switch causing said polarized relay to open circuit between said feed wire and working conductor.

4. In an electric railway system, the combination of a working conductor, a locomotive or car traveling in electrical connection therewith and provided with a motor, a return conductor, an electric generator, a feed wire proceeding therefrom and arranged to transmit operative current to said locomotive or car through said working conductor, the transmission of said current being normally interrupted between said feed wire and working conductor, an additional or independent source of electric supply of lower potential than the working current transmitted to said traveling motor, a feed wire proceeding therefrom, a polarized relay, one magnet of said relay having its opposite terminals connected to said last named feed wire and to said working conductor respectively, the circuit through said magnet being normally open, the other magnet of said relay being connected in shunt with the working circuit and having its poles normally facing dissimilar poles of said first named magnet, thus causing said magnets to attract each other under normal currents, the reversing of the polarity of one of said magnets causing said magnets to repel each other, thus opening the circuit or circuits with which they are connected, and a switch controlled by said magnets, the closing of said switch closing the main circuit between the working conductor and said first named feed wire, thus causing the transmission of working current to said traveling locomotive or car, the opening of said switch causing such transmission of current to cease.

5. In an electric railway system, the combination of a working conductor made in successive sections separated or insulated from each other, an electric locomotive or car traveling in electrical connection therewith and provided with a motor, a return conductor, an electric generator, a feed wire proceeding therefrom and arranged to transmit operative current to said locomotive or car through the sections of said working conductor, the transmission of said current being normally interrupted between said feed wire and working conductor sections, an additional or independent source of electric supply of lower potential than the working current transmitted to said traveling motor, a feed wire proceeding therefrom, polarized relays, one magnet of each of said relays having one terminal connected to said last named feed wire, the opposite terminals of said magnets, respectively, being connected to the respective sections of the working conductor, the circuits through said magnets being normally open, the other magnets of the respective relays being connected in shunt with the working circuit and having their poles normally facing dissimilar poles of said first named magnets, and switches controlled by said respective polarized relays and arranged to control the transmission of working current to said traveling motor, and to disconnect the same therefrom.

[Claims 6 to 13 not printed in the Gazette.]

901,383. ELECTRIC-RAILWAY SYSTEM. WILLIAM ROBINSON, Brooklyn, N. Y. Filed July 20, 1904, Serial No. 217,297. Renewed Apr. 4, 1908. Serial No. 425,169.



1. In an electric railway system, a working conductor formed in sections disconnected or insulated from each other, a working current feeder normally disconnected from said sections, a secondary feeder carrying current of lower potential than that of the working current, electro magnets having one terminal normally connected to said low potential feeder but automatically detachable therefrom, the opposite terminals of the respective magnets being connected to the respective sections of said working conductor, means controlled by said magnets for connecting said working conductor feeder to said working conductor sections and disconnecting the same therefrom, and means for automatically disconnecting said secondary feeder from said respective magnets and reconnecting the same thereto.

2. In an electric railway system a contact or working conductor formed in sections separated or insulated from each other, a feeder normally disconnected from said sections and carrying working current, a secondary feeder carrying current of lower potential than that carried by the working-current feeder, electro-magnets having one terminal connected to said low potential feeder and their opposite terminals, respectively, connected to the respective sections of said working conductor, said magnets operating to connect said working-current feeder to the respective sections of working conductor and to disconnect the same therefrom, and means for automatically disconnecting the low potential feeder from said respective magnets and connecting the high potential feeder thereto.

3. In an electric railway system the combination of a working conductor formed in sections, a feeder normally

disconnected therefrom and carrying working current, an independent feeder carrying current of lower potential, electro-magnets having one terminal connected to said last named feeder and their opposite terminals, respectively, connected to the respective sections of said working conductor, and switches controlled by said respective magnets, said switches being arranged to connect said working-current feeder to the respective sections of working conductor on the magnetization of said respective magnets and to disconnect said feeder from said sections on demagnetizing said magnets, and means for first disconnecting said magnets from said low potential feeder and then connecting them to the working current feeder.

4. In an electric railway system, the combination of a working conductor formed in sections, a source of electric supply, a fluid pressure circuit closer, a valve connected thereto, an electro magnet controlling said valve, and means for connecting said source of electric supply to said sectional working conductor and disconnecting the same therefrom, through the agency of said electro-magnet and circuit closer.

5. In an electric railway system, the combination of a working conductor formed in sections, circuit closers connected to said respective sections and actuated by fluid pressure controlled in its application by electro magnets, a source of working current supply, and means for automatically connecting said source of current supply to said respective sections of working conductor in succession and disconnecting the same therefrom, through the operation of said circuit closers.

[Claims 6 to 16 not printed in the Gazette.]

901,384. WEDGE-CUTTER. LEWIS W. BOULAND, Olivet, Kans. Filed Jan. 21, 1908. Serial No. 412,003.



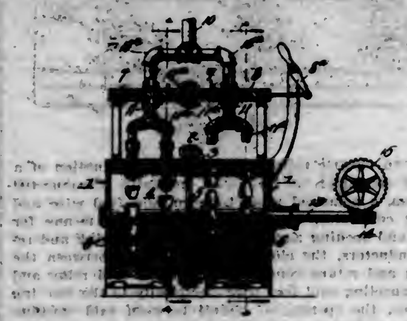
1. A wedge making machine comprising a bed, a guide block secured thereon and formed with a longitudinal channel, a cutter mounted for reciprocatory movement in the channel, means for operating the cutter, bracket plates secured to the bed in spaced relation beyond the guide block, a block carrier pivotally mounted in said plates and formed with a block receiving depression, and means for adjusting one end of the carrier, said means underlying the block receiving depression.

2. A wedge making machine comprising a bed, a guide block secured thereon, a cutter mounted for movement in the guide block, means for operating the cutter, bracket plates secured to the bed in spaced relation beyond the guide block, a block carrier pivotally mounted in said plates and formed with a block receiving depression, and a bolt threaded through the bed and engaging the carrier beneath the block receiving depression, whereby said carrier may be adjusted by operating the bolt.

901,385. TURBINE. ANDREW J. ROWAN and JOHN A. LAUX, Tremont, Pa. Filed Jan. 30, 1908. Serial No. 413,445.

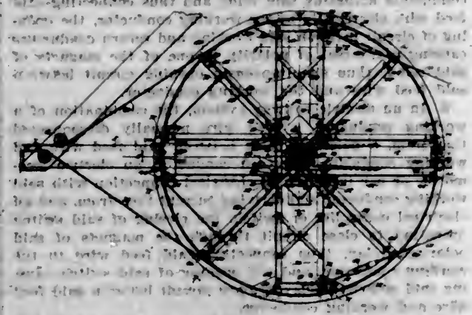
1. A device of the kind described comprising a cylinder, a piston fitting closely therein and extending the full length of the cylinder, pockets formed in sets of two rows each being produced upon the surface of the piston, the said sets being oppositely arranged, the pockets of each set being formed in parallel rows and staggered with respect to each other, means for admitting steam to pockets of both rows of a set at the same time, and means for exhausting steam from said pockets when the piston has made approximately one-eighth of a revolution.

2. A turbine consisting of a cylinder formed in two sections, the said sections being flanged and bolted together, an annular recess being formed in said flanges, a piston fitting in and extending the full length of the cylinder, a rib carried by said piston, said rib fitting in



the recess above mentioned, oppositely arranged pockets formed upon the piston on opposite sides of the rib, and means for admitting steam to and exhausting steam from either set of said pockets.

901,386. DERRICK. ALBERT G. A. SCHMIDT, Chicago, Ill., assignor to The National Equipment Company, Chicago, Ill., a Corporation. Filed Aug. 5, 1908. Serial No. 447,130.



1. A bull wheel for derricks formed of structural metal bars and comprising a rim, two transverse bars connected at their ends to said rim and arranged in the plane of the wheel on opposite sides of a diameter thereof to receive and be secured to the foot of the derrick mast and brace-bars extending between said transverse bars and said rim, substantially as described.

2. A bull wheel for derricks formed of structural metal bars and comprising a rim, two sets of parallel bars arranged at right angles to each other and connected together and to said rim, the bars of each set being arranged on opposite sides of two diameters of the wheel and radial brace-bars extending from the joints between said sets of parallel bars and the wheel rim, substantially as described.

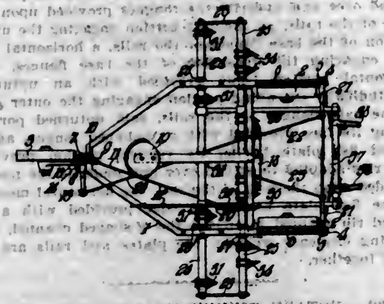
3. A bull wheel for derricks formed of structural metal bars and comprising a rim, two parallel transverse bars connected at their ends to said rim and arranged in the plane of the wheel on opposite sides of a diameter thereof to receive and be secured to the foot of the derrick mast, two pairs of parallel bracing bars arranged at right angles to said transverse bars and connected to the central portions thereof and to said rim, and radial brace-bars connected to said rim and to said parallel transverse and said parallel bracing bars, substantially as described.

4. In a derrick, the combination with the rotatable derrick mast and boom journaled at the foot of said mast, of a bull wheel formed of structural metal bars and comprising a rim, a pair of transverse bars connected at their ends to said rim and arranged in the plane of the wheel on opposite sides of a diameter thereof to receive and be secured to the foot of the derrick mast, brace bars arranged in the plane of the wheel and extending between said transverse bars and said rim and inclined brace-bars extending between said wheel and said mast, substantially as described.

5. In a derrick, the combination with the rotatable derrick mast and boom journaled at the foot of said mast, of a bull wheel formed of structural metal bars and comprising a rim, two sets of parallel bars arranged at right angles to each other in the plane of the wheel and on opposite sides of two diameters thereof, said bars being connected together and to said rim and one pair of said bars being connected to the foot of the derrick mast, radial bracing bars arranged in the plane of the wheel and connecting the joints of said parallel bars and said wheel rim and inclined brace bars connected at their ends to the derrick mast and to said radial brace-bars, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

901,387. BEET-CULTIVATOR. IRVIN SCHUCKMAN, Garden City, Kans. Filed Nov. 30, 1907. Serial No. 404,604.



1. In a device of the kind described, a frame supported on a trinity of caster wheels, steering elements for simultaneously and equally changing the angular relation of said wheels to the frame, digging members mounted adjustably for height on said frame, and means to simultaneously lift said digging members and release one of said wheels from its steering element.

2. In a device of the kind described, a frame supported on a forward pair of caster wheels and a single rear caster wheel, steering elements for simultaneously and equally changing the angular relation of all said wheels to the frame, means for independently adjusting the height of the two front wheels, digging members mounted adjustably for height on said frame, and means to simultaneously lift said digging members and release the rear wheels from said steering elements.

3. In a device of the kind described, a frame, supported on a trinity of caster wheels, steering elements for simultaneously and equally changing the angular relation of said wheels to the frame, a clutch arranged to releasably connect one of said wheels to the steering elements, digging members mounted adjustably for height on said frame, and a latch lever connected to said digging members and the clutch arranged to simultaneously lift the digging members, release the clutch, and free said wheel from said steering elements.

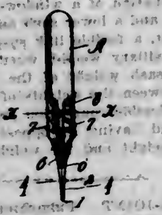
901,388. GLASS RECEPTACLE. WILLIAM C. SCHULZE, Flushing, N. Y. Filed Feb. 16, 1907. Serial No. 357,710.

1. A holder for condiments and the like comprising a plurality of receptacles having opposed faces fitting and in contact with each other, a bead formed on the holder at the edges of the opposed faces and formed half on one receptacle and half on the adjoining receptacle, a band extending about the holder in the plane of the bead and overlapping the same to hold the opposing faces in contact, the ends of the band being bent out parallel to each other and perforated, a handle loop having a perforated attaching portion, and a connection passing through the perforation in said loop portion and the ends of the band to hold the same together and to draw the band tightly about the receptacle.



2. A holder for condiments or the like comprising a plurality of receptacles having opposed faces arranged in contact, a bead extending around the sides and top of the holder and formed half on one receptacle and half on the other, said holder having a groove in its bottom aligning with the bead, a band extending around the holder and having a concave inner surface for embracing both halves of the bead to secure the receptacle together, the band extending across the bottom of the holder and set into the groove, the ends of the band being bent outwardly to form spaced lugs, a handle having an attaching portion, and a fastening securing the attaching portion of the handle to the lugs of the band and holding the band tightly around the holder.

901,389. WRITING-PEN. WILLIAM H. SCHWEIZER, Baltimore, Md. Filed Jan. 31, 1908. Serial No. 413,512.



1. A pen of the character described, comprising a body part provided with perforated integral side wings, the said side wings being pointed on the forward ends thereof and formed into open-ended cylinders beneath the under side of the said body part, with the said points extended well down and under the point of the said body part, substantially as described.

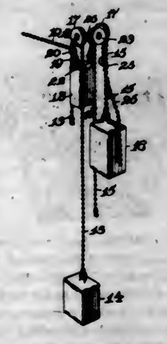
2. A pen of the character described, comprising a body part having perforated integral side wings which are formed into open-ended cylinders beneath the under side of the pen, substantially as described.

3. A pen of the character described, comprising a concaved body part pointed on one end thereof, and having a slit separating the point into nibs and terminating in an orifice provided in the said body part, integral perforated side wings formed into cylinders within the said concaved body part, each of the lower ends of the said wings being tapered to a point, which points are extended well down and under the point provided on the said body part, substantially as described.

901,390. AUTOMATIC CLOSING ATTACHMENT FOR WINDOW-SASHES. GEORGE SCHWING, Newark, N. J. Filed Feb. 5, 1908. Serial No. 414,814.

1. The combination of a window-frame, an upper sliding sash and a lower sliding sash, sash chains and

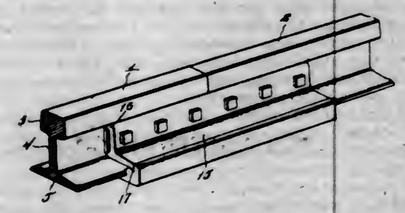
weights on opposite sides of the sashes, with an auxiliary weight suspended on each side of the window-frame over the sash-weight of the upper sash, a flexible connection holding the auxiliary weights, a fusible link in the flexible connection, a transverse pulley on each side of the window-frame, and a flexible connection between each auxiliary weight and the sash-weight of the lower sash.



2. The combination of a window-frame, an upper sliding sash and its weight, a lower sliding sash and its weight, with an auxiliary weight, a fusible link for suspending the auxiliary weight from the window-frame, the auxiliary weight when released adding its weight to the sash weight of the upper sash, and a flexible connection between the auxiliary weight and the sash weight of the lower sash, the flexible connection between the auxiliary weight and the sash weight of the lower sash being slack except when the auxiliary sash or the weight of the lower sash are at their opposite limits of movement.

3. The combination of a window-frame, an upper sash and its weight, and a lower sash and its weight, with an auxiliary weight, a fusible link suspending the auxiliary weight, the auxiliary weight when released adding its weight to the sash weight of the upper sash, a transverse pulley between the weights of the upper and lower sashes, and a flexible connection passing over the transverse pulley and having its opposite ends connected to the auxiliary weight and the weight of the lower sash.

901,391. RAIL-JOINT. FREDERICK J. SHELLY, Philadelphia, Pa. Filed May 9, 1908. Serial No. 431,796.

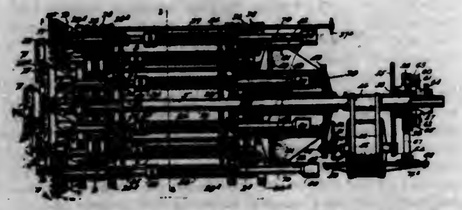


1. The combination of a pair of rails, each of said rails having its end provided with a projecting tongue upon one of the sides of its web, the opposite side of the web being provided with a pocket, a chair for the rail ends, said chair comprising a horizontally straight base portion provided with an overlying and a vertical portion engaging one of the sides of the rail, a vertical longitudinally extending projection upon the opposite end of the base and engaging the end of the base flanges of the rail ends, said extending portion being provided with a V-shaped depression extending its longitudinal length, and an L-shaped fish plate being provided with a V-shaped lug adapted to engage the V-shaped depression of the extended portion of the chair.

2. The combination with the meeting ends of a pair of rails, each of said rail ends being provided with a projecting tongue extending from one side of the web, the opposite side of the web being provided with a pocket, the tongue of one rail end adapted to engage the pocket of the opposite end, a chair member for the rails, said chair member comprising a vertical fish plate having longitudinal ribs adapted to extend over and underlie the tongues, an inclined portion engaging the upper portion of the base flange of the rails, a horizontal portion engaging the under face of the base flanges of the rails, said horizontal portion being provided with an upturned longitudinally extending portion engaging the outer edge of the base flanges of the rails, said upturned portion having its face provided with a V-shaped channel, an L-shaped fish plate having its horizontal member provided with a V-shaped rib adapted to engage the V-shaped channel, and means for securing the elements in locked position.

3. The combination with the meeting ends of a pair of rails, each of said rail ends being provided with a projected tongue projected from one side of the web and the opposite side of the web being provided with a pocket, the tongue of one rail end adapted to engage the pocket of the contiguous end, the base flanges of the rails being provided with horizontal cut away portions, a chair member for the rails, said member comprising a vertical fish plate having longitudinal ribs adapted to extend over and underlie the tongues provided upon the webs of the rails, an inclined portion engaging the upper portion of the base flanges of the rails, a horizontal portion engaging the underface of the base flanges, said horizontal portion being provided with an upturned longitudinally extending portion engaging the outer edge of the base flanges of the rails, said upturned portion having its face provided with a V-shaped tongue, an L-shaped fish plate having its vertical portion provided with ribs adapted to extend over and underlie the tongue provided upon the web of the rail, the horizontal member of the fish plate having its edge provided with a V-shaped rib adapted to engage the V-shaped channel, and securing elements whereby the plates and rails are secured together.

901,392. ROTARY TUNNELING-MACHINE. RUSSEL B. SIGAFOOS, Denver, Colo. Filed May 15, 1907. Serial No. 373,856.



1. In a tunneling machine, a supporting frame, and a plurality of independently reciprocating rock drilling heads mounted in said frame, said heads being provided with means including beveled shouldered portions and horizontally positioned cams for rotating said heads on the rock striking strokes of their reciprocal movement whereby they strike twisting blows against the rock breast of tunnels.

2. In a tunneling machine, a rotating frame, a plurality of independent pairs of supporting wheels pivotally mounted on the periphery of said frame, and means for tilting said wheels obliquely to the rotative plane of said frame.

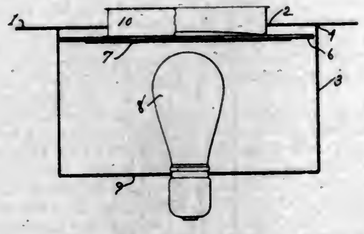
3. In a rotary tunneling machine, a plurality of reciprocating drills, a circular supporting frame in which said drills are reciprocally mounted, circular rows of adjustable foot wheels mounted on said frame and arranged to be moved into angular positions to the longitudinal axis of said machine, means including a motor for rotating said frame and drills, and means including a cam wheel having two concentrically arranged cam surfaces for operatively reciprocating said drills.

4. In a rotary tunneling machine, a plurality of reciprocating rock drilling heads and stems, a rotatable frame arranged to support said heads and stems, a driving shaft mounted on said frame, means including a cam mounted on said driving shaft for reciprocating said heads and stems, and means including a motor supported by said driving shaft for rotating said frame.

5. In a rotary tunneling machine, a plurality of independently reciprocating rock cutting heads and stems, arranged to rotate in a circular path and to cut a circular tunnel, and adapted to operatively drill rock, a wheeled frame arranged to support said rock cutting heads and stems, a driving shaft in the axial center of said frame, a motor supported by said driving shaft, means including said motor for rotatably feeding said frame spirally to and from the breasts of and to operatively drill tunnels.

[Claims 6 to 29 not printed in the Gazette.]

901,393. DEVICE FOR TESTING CANS. CHARLES W. SLEEPER, Lancaster, N. H. Filed Apr. 25, 1908. Serial No. 429,273.



1. In a device of the class described, a plate having an opening adapted to receive a can to be inspected; means for supporting a can within said opening and in such a position that the seam thereof to be inspected will be beneath said plate; and a source of light beneath said plate.

2. In a device of the class described, a plate having an opening adapted to receive a can to be inspected; a screen impervious to light beneath said opening; and a source of light beneath said screen.

3. In a device of the class described, a plate having an opening adapted to receive a can to be inspected; means located beneath said plate for supporting a can within said opening; and in such a position that the seam thereof to be inspected will be beneath said plate and a source of light beneath said plate.

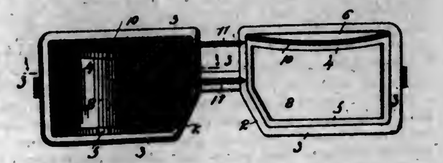
4. In a device of the class described, a plate having an opening adapted to receive a can to be inspected; means located beneath said plate for supporting a can within said opening; a screen beneath the opening in said plate; and a source of light beneath said screen.

5. In a device of the class described, a casing; a top plate therefor having an opening adapted to receive a can to be inspected; means for supporting a can within said opening; and in such a position that the seam thereof to be inspected will be beneath said plate and a lamp within said casing and beneath said can.

[Claims 6 to 9 not printed in the Gazette.]

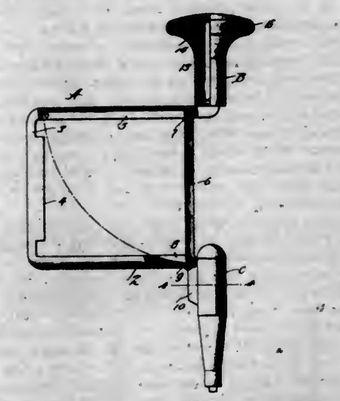
901,394. GOGGLES. FRANK M. SLEVIN, Jersey City, N. J., assignor to Solomon C. Hirschberg, New York, N. Y. Filed June 20, 1906. Serial No. 322,564.

A goggle composed of a frame having eye cups, composed of frame plates 3, outwardly curved bars 4 and 5 which return to substantially the plane of the plates 3, glasses 8 bent to conform to the curve of the bars 4 and



5, said glasses being removable therefrom, and a resilient and flexible connection between said eye cups.

901,395. BRACE. ALFRED E. SMITH, Kelso, Wash. Filed Oct. 24, 1907. Serial No. 399,015.

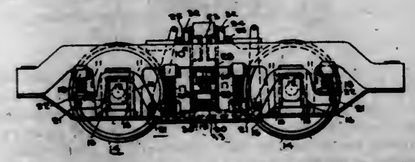


1. A brace comprising a U-shaped shank, a chuck removably secured to one extremity of the shank, a handle connected with the other extremity in line with the chuck, in combination with a tool on the shank, and a removable housing fastened on the shank to inclose the tool and shaped to constitute a handle.

2. A brace comprising a shank, a handle secured to one extremity thereof, and a chuck secured to the other extremity, a tool on the shank, a cylindrical housing composed of two parts arranged to inclose the tool and form a handle for the brace, and means for fastening the two parts of the housing in place.

3. A brace comprising a shank having a slotted portion forming a pocket, a handle connected with one extremity of the shank, and a chuck connected with the other extremity, in combination with a saw blade pivoted at one end in the slot and adapted to swing into and out of the latter, and means for securing the free end of the blade to the shank to extend between the handle and chuck and in parallel relation thereto.

901,396. CAR-TRUCK. RICHARD SMITH, Denver, and PETER CHRISTENSEN, Fort Logan, Colo. Filed Aug. 12, 1907. Serial No. 388,274.



1. In a center bearing truck, in combination a truck frame, journal boxes having a vertical movement thereon,

equalizers suspended from the said boxes and, having longitudinal extensions projecting beyond the same, a truck bolster associated with the said frame to have an oscillatory movement transversely in relation thereto, independent of the equalizers, springs seated upon the latter in engagement with the frame in between the said boxes and springs seated upon the said extensions in engagement with the frame in proximity to its extremities.

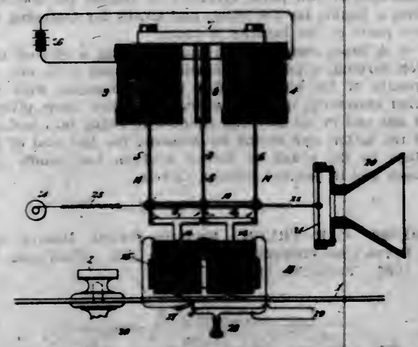
2. In a center bearing truck, in combination, a truck frame including transverse parallel beams, journal boxes having a vertical movement on the frame, equalizers suspended from the said boxes and having longitudinal extensions projecting beyond the same, springs seated upon the equalizers in engagement with the frame in between the said boxes, springs seated upon the said extensions in engagement with the frame in proximity to its extremities, oscillatory hangers suspended from the said beams, a sand board hingedly supported within the said hangers and a truck bolster supported upon the said board.

3. In a center bearing truck, in combination a truck frame including transverse parallel beams, journal boxes having a vertical movement on the frame, equalizers suspended from the said boxes and having longitudinal extensions projecting beyond the same, springs seated upon the equalizers in engagement with the frame in between the said boxes, springs seated upon the said extensions in engagement with the frame in proximity to its extremities, oscillatory hangers suspended from the said beams, a sand board hingedly supported within the said hangers, springs upon the said board and a truck bolster supported upon the said springs.

4. In a center bearing truck, the combination with the truck frame having transverse, parallel beams, of a truck bolster movably supported between the latter and a center plate comprising two superposed members, the lower one of which has an internal annular chamber and a plurality of passages connecting the said chamber with the upper surface of the said member and containing absorbent material engaging the lower surface of the upper member.

5. In a center-bearing truck, the combination with the truck-frame having transverse parallel beams, of oscillatory hangers suspended from the latter, a sand-board movably supported within the said hangers and comprising a channeled plate bent in the form of an arch, and a truck-bolster supported upon the said board.

901,397. APPARATUS FOR RECORDING AND REPRODUCING BY THE TELEGRAPHONE PRINCIPLE. HARVE R. STUART, Wheeling, W. Va. Filed Mar. 2, 1908. Serial No. 418,690.



1. In a telegraphone, the combination of a recording body, a vibratory diaphragm, two magnets of constant force, and means whereby the vibrations of said diaphragm will alternately cause the lines of force of said magnets to traverse the recording body, substantially as described.

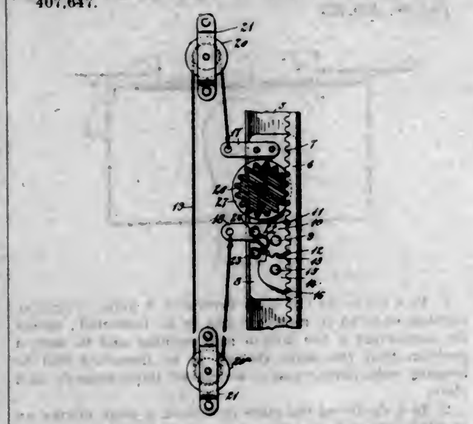
2. In a telegraphone, the combination of a recording body, a vibratory diaphragm, two magnets of constant force whose magnetic circuits are normally exterior to the recording body, and means whereby the vibrations of the diaphragm will cause said magnetic circuits to include the recording body, substantially as described.

3. In a telegraphone, the combination of a recording body, two magnets of constant force, and means whereby the vibrations corresponding to the message or signal will cause said magnets to alternately act upon the recording body.

4. In a telegraphone, the combination of a recording body, two pole pieces resting thereon, two magnets of constant force, a magnetic switching device for alternately directing the field of force of said magnets through said pole pieces, and means whereby the impulses corresponding to the message or signal will actuate said magnetic switching device.

5. In a telegraphone, means for reproducing the record in the recording body, comprising two magnetic circuits independent of that of the record means for alternately augmenting said magnetic circuits by the magnetic circuit of the record, and a vibratory diaphragm influenced alternately by said two magnetic circuits, substantially as described.

901,398. WINDOW-SHADE CARRIER. ALBERT C. VAN ERKA, Chicago, Ill. Filed Dec. 23, 1907. Serial No. 407,647.



1. A shade-roller fixture comprising opposite guides and racks, a slide mounted in one of the guides, a shade-roller spindle journaled at one end in the slide, pinions on opposite ends of the spindle which engage the racks, a pair of operatively connected rack-catches on the slide, and means for operating the catches.

2. A shade-roller fixture comprising opposite guides and racks, a slide mounted in one of the guides, a shade-roller spindle journaled at one end in the slide, pinions on opposite ends of the spindle which engage the racks, a rack-catch carried by the slide, and an operating cord connected at one end to the slide for elevating the same, and at the other end to the catch for simultaneously releasing the same and lowering the slide.

901,399. ELECTROPLATING APPARATUS. ABRAHAM VAN WINKLE and JOHN T. DANIELS, Newark, N. J., assignors to The Hanson & Van Winkle Company, a Corporation of New Jersey. Filed June 7, 1907. Serial No. 377,690.

1. An electroplating apparatus comprising a vat or tank adapted to contain an electroplating solution, and a revoluble support from which the work which is to be plated is suspended and is in rolling engagement with said support, said support being constructed to provide a vibratory action of the work while rolling.

2. An electroplating apparatus comprising a vat or tank adapted to contain an electroplating solution, and a revoluble support from which the work which is to be plated is suspended and is in rolling engagement with said support, said support being constructed to provide a vibratory action of the work while rolling being adapted to be raised from either bearing for the arrangement of the work over an end-portion of the support, substantially as and for the purposes set forth.

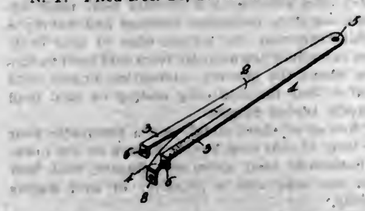
3. An electroplating apparatus comprising a vat or tank adapted to contain an electroplating solution, bearings connected with said vat, said bearings being open upon their upper surfaces, and a revoluble support mounted in said bearings from which the work which is to be plated is suspended and is in rolling engagement, and said support, said support being constructed to provide a vibratory action of the work while rolling being adapted to be raised from either bearing for the arrangement of the work over an end-portion of the support, substantially as and for the purposes set forth.

4. An electroplating apparatus comprising a vat or tank adapted to contain an electroplating solution, bearings connected with said vat, said bearings being open upon their upper surfaces, and a revoluble support mounted in said bearings from which the work which is to be plated is suspended and is in rolling engagement, and said support, said support being constructed to provide a vibratory action of the work while rolling being adapted to be raised from either bearings for the arrangement of the work over an end-portion of the support, combined with another support from which metal anodes are adapted to be suspended, and electric circuits with which said supports are connected, substantially as and for the purposes set forth.

5. An electroplating apparatus comprising a vat or tank adapted to contain an electroplating solution, and a revoluble support from which the work which is to be plated is suspended and is in rolling engagement with said support, said support being of such a cross section that an irregular or vibratory rolling motion of the work will be produced.

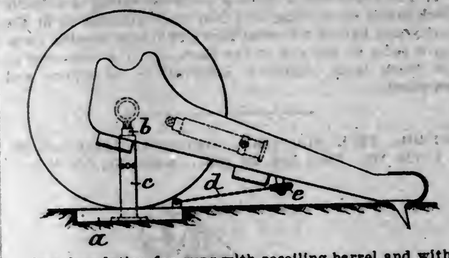
[Claims 6 to 18 not printed in the Gazette.]

901,400. PAN-HANDLE. AUGUSTUS VINCENT, Brooklyn, N. Y. Filed Dec. 24, 1907. Serial No. 407,977.



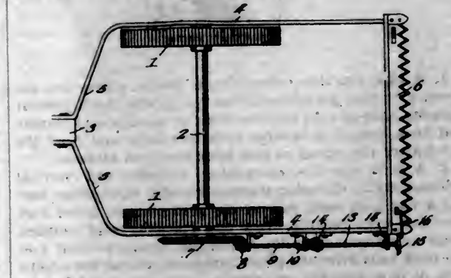
A handle for cooking receptacles comprising a single sheet metal body having a straight flat handle portion, a truss member stamped centrally from the body in line therewith and extending at an angle to the plane of said handle portion, a pair of parallel legs formed in a plane with the handle portion of the body by stamping up the truss member, and depending right-angular lugs on the truss member and legs.

901,401. FOUNDATION FOR GUNS WITH RECOILING BARRELS. KARL VÖLLER, Dusseldorf, Germany, assignor to Rheinische Metallwaren-und Maschinenfabrik, Dusseldorf-Derendorf, Germany. Filed Aug. 2, 1906. Serial No. 328,936.



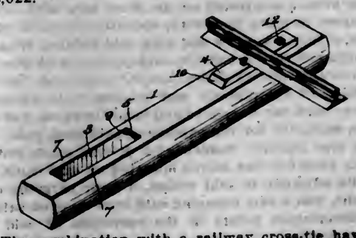
In a foundation for guns with recoiling barrel and with a trail, a bed plate resting loosely on the ground beneath the wheels, a vertical screw spindle arranged midway between the wheels and connecting the carriage axle and bed plate to clamp the wheel to the bed plate, a pulley mounted on the carriage trail, a chain secured at its ends to the bed plate and passing in a substantially horizontal direction to the rear and around the pulley, and a spade carried by the trail extremity in engagement with the ground.

901,402. LAWN-MOWER. JOSEPH WATSON, Obion, Tenn. Filed Feb. 4, 1908. Serial No. 414,227.



A lawn mower comprising an axle and carrying wheels thereon, a handle, a fork secured to the handle and mounted on said axle and made of a width to include the carrying wheels and of a length to project in front of said wheels, a reciprocating cutter supported by the fork arms in advance of the carrying wheels, a driving bevel gear mounted to turn with the adjacent carrying wheel, a transmission shaft journaled on one of the fork arms and geared to said bevel gear, a pitman shaft also journaled on said fork arm and geared to the transmission shaft, and a pitman connecting the pitman shaft with the cutter.

901,403. CONCRETE RAILWAY-TIE. WILLIAM B. WESTBROOK, Cliff, Ky. Filed Nov. 20, 1907. Serial No. 403,022.

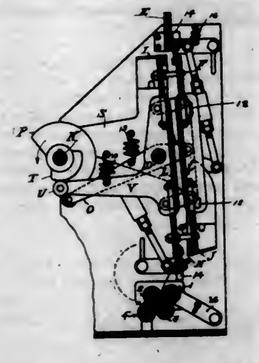


1. The combination with a railway cross-tie having recesses each terminating in a cavity, and rail-blocks having

a beveled face and fitting the recesses and the cavities, of the binding wires embedded in the side walls of the recesses lengthwise such walls and extending crosswise under the top wall of the cavities to support the top wall and to form a bearing for the said beveled face.

2. The combination, with a cross tie having a suitable block-cavity or opening, of a rail block adapted to fit the cavity and having a beveled face and curved bearing forming a point at one end of the block, and the other end of the block being convexed, substantially as shown and described.

901,404. PIPE-MACHINE. GEORGE A. WETTENGEL, St. Louis, Mo. Filed Jan. 22, 1907. Serial No. 353,496.



1. A pipe machine comprising a frame, guides for the sheet, clamping platens opposite the guides, hook bars at opposite ends of said platens, cams to operate said platens and hook bars, and bending rolls to receive and bend the sheet after the action of said hook bars and platens.

2. A pipe machine comprising a frame and vertical guides therein, clamping platens opposite said guides having a notch at each end on opposite platens, panel bars provided with rocking arms and opposing said notches, cams engaging each rocking arm, and means to bend over the hook ends after the panel bars have formed the offsets.

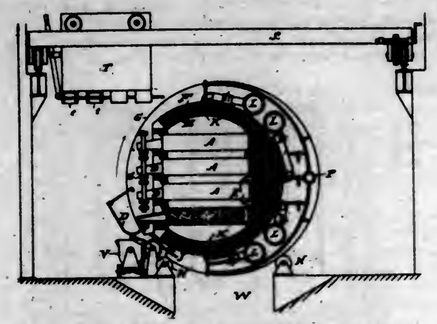
3. A pipe machine comprising a frame provided with vertical guides, a pair of clamping platens having a notch at each end at opposite sides and provided with lever arms for tilting the platens, panel bars mounted on rocking arms, and opposing said notches, means to clamp said platens, operative cams for said lever arms and rocker arms, hook bars adjacent to the ends of said platens to bend the projecting ends of the sheet by the tilting of the platens, and means to throw inward said hook bars to form the hook ends, substantially as described.

4. A pipe machine comprising a frame with vertical guides for the sheet, a pair of tilting platens having lever arms and pivotally mounted beneath said guides, and having a notch at each end on opposing platens, lever and link connections between said platens to effect a clamping action, panel bars opposite said notches provided with rocking arms and pivoted on the same axis with said tilting platens to move therewith, operative cams to tilt said platens, clamp the latter and rock said rocking arms, hook bars adjacent to the ends of said platens and pivoted to said frame, means to throw inward said hook bars after the tilting of the platens, and bending rolls adjacent to the lower hook bar to receive and bend the sheet, and means to open said rolls for the passage of said hook ends.

5. A pipe machine comprising a driving shaft and cams thereon, hook-forming means operated by said cams, bending rolls adjacent to said means, a lever carrying one of said rolls, and a cam engaging said lever to open said rolls at predetermined points in the operation of said hook-forming means.

[Claims 6 to 9 not printed in the Gazette.]

901,405. SMELTING-FURNACE. GEORGE A. WETTENGEL, St. Louis, Mo. Filed Aug. 13, 1907. Serial No. 388,325.



1. A rotatable smelting furnace having a series of retorts transversely placed in a cylindrical drum, and adapted to rotate the open ends of the retorts upward for charging.

2. A rotatable smelting furnace comprising a suitable rotatable casing and a series of retorts transversely mounted therein, whereby said retorts may be turned downward for discharging.

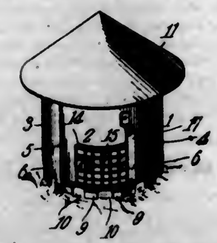
3. A rotatable smelting furnace having retorts adapted to be reversed for self-cleaning, substantially as described.

4. A rotatable smelting furnace having retorts horizontally disposed, and regulated flame openings at the rear and above and below, for securing equal efficiency in either rotated position.

5. A rotatable smelting furnace having retorts in rows adapted to be turned upward for charging, in combination with a traveling hopper having regulated openings matching said retorts, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

901,406. POULTRY-COOP. RALPH L. WIDNEY, La Harpe, Ill. Filed Aug. 9, 1907. Serial No. 387,890.



1. A poultry coop comprising a circular body made entirely of sheet metal in separable sections and having a circumferential bead near the bottom edge of said body, spaced fingers extending downwardly from said bead to support the coop above the ground, alternating fingers bent inwardly, and a floor for said coop resting on said bead and the inwardly turned fingers.

2. A coop formed of sheet metal, and a removable floor therefor, the body of said coop having fingers on the lower edge and a horizontal bead above said fingers, said floor supported on the bead and a plurality of said fingers turned inwardly.

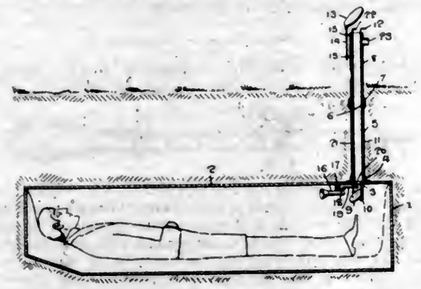
3. A coop formed of sheet metal having an inwardly projecting bead and inwardly turned fingers near its lower end, and a removable floor supported on said bead and fingers.

4. A coop comprising a body, a roof, and hooks secured to and depending from the roof for detachably engaging the upper edge of the body, said hooks constituting means for spacing the roof from the body.

5. A coop comprising a circular sheet metal body, a floor detachably supported within the body, a roof, and combined spacing and supporting means depending from the roof for detachably engaging the upper edge of the body.

[Claim 6 not printed in the Gazette.]

901,407. GRAVE ATTACHMENT. GEORGE H. WILLEMS, Roanoke, Ill. Filed Apr. 28, 1908. Serial No. 429,665.

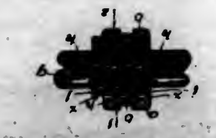


1. In combination with a burial casket, a tube in communication therewith, a mirror mounted within the casket beneath the tube and a mirror carried by the tube extending across the free end thereof.

2. In combination with a burial casket, a tube in communication therewith, a mirror mounted within the casket beneath the tube, a mirror carried by the tube extending across the free end thereof, and means for adjusting the position of the mirror beneath the tube.

3. In combination with a burial casket, a tube in communication therewith, a mirror mounted within the casket beneath the tube, a mirror carried by the tube extending across the free end thereof, an electric lamp within the casket in advance of the mirror mounted therein, a finger projecting from the movable contact of the electric lamp, a link engaging said finger, a rod depending from the tube, said rod terminating in a crank end, said crank end being engaged by the link and means for operating the rod.

901,408. CLUTCH. LUIS WIATZ, Bilston, England. Filed Apr. 11, 1908. Serial No. 426,588.



1. In combination with elements to be coupled, a clutch comprising a slidable carrier provided with two rings of balls forming a coupling medium, one of said rings being constantly in engagement with one of the elements to be coupled, and the other ring of balls being movable into and out of engagement with the other of said elements.

2. In combination with elements to be coupled, a clutch comprising a slidable carrier provided with two rings of balls permanently carried thereby, one of said rings being constantly in engagement with one of the elements to be coupled, and the other ring of balls being movable into engagement with either of said elements.

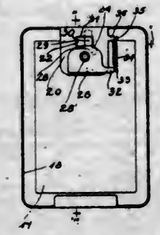
3. In combination with elements to be coupled, and one of which is provided with grooves, a clutch comprising two rings of balls one of which slidably fits the grooves aforesaid and is movable into and out of the grooves mentioned.

4. In combination with elements to be coupled and each provided with grooves, a clutch comprising a slidable carrier having two rings of pockets, and balls permanently fitting within the pockets and slidably fitting the grooves aforesaid.

5. In combination, two shafts to be coupled and each provided with bosses having external longitudinal grooves, with a clutch comprising a sleeve slidable upon said bosses and having two internal rings of pockets and balls permanently fitting within the pockets and slidably fitting the aforesaid grooves of the bosses.

[Claim 6 not printed in the Gazette.]

901,409. LOCKING MECHANISM FOR COIN-RECEPTACLES. WILLIAM H. WOOLUMS, Chicago, Ill., assignor to Home Security Vault and Pocket Bank Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 8, 1907. Serial No. 387,678.



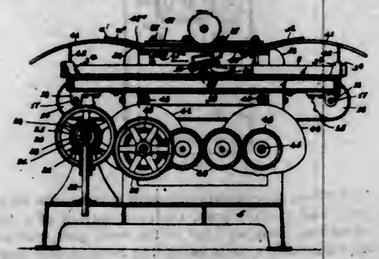
1. In locking mechanism for coin receptacles having a body part and a cover part, the combination of a locking hook extending from an edge of the body part and formed integral therewith, a shelf extending horizontally inwardly from the corresponding edge of the cover part and formed integral therewith; there being an opening through the shelf, a locking plate rotatably pivoted on top of the shelf and having a locking tongue extending normally through and across the opening with its end engaging the under side of the shelf, and a spring tending to hold the plate and tongue in the normal position, said hook on the body part passing through the opening and against the tongue when the receptacle parts are brought together to be closed whereby the locking plate is rotated and eventually returned when the parts are closed to bring the tongue into locking engagement with the hook to thereby lock the receptacle.

2. In locking mechanism for coin receptacles having a body part and a cover part, the combination of a locking hook extending from an edge of the body part, a shelf extending from the corresponding edge of the cover part and having a rectangular opening, a locking member pivoted on top of the shelf and extending downwardly through the opening and then forwardly across part of the opening, spring means tending to hold the locking member in the normal position, and stops for limiting the movement of the locking member, said hook passing through the opening when the parts are brought together and moving aside the locking member, which locking member is brought back to its normal position by the spring means when the parts are closed to engage the hook to lock the parts together.

3. In locking mechanism for coin receptacles having a body part and a cover part, the combination of a hook for extending from one of the parts, a shelf for extending from the other part and having a rectangular opening, a locking plate, a hollow rivet pivoting the locking plate to the shelf, a locking tongue extending from the locking plate across the opening, spring means for resisting rotation of the plate, said hook being adapted for passing through the opening when the receptacle parts are brought together to engage the tongue to cause rotation of the plate, said plate being returned by the spring means when the hook has passed through the opening whereby the locking tongue is brought into locking engagement with the hook, a key for passing through a keyhole in one of the receptacle parts, said key having a pivot point for engaging in the hollow rivet, and an extension on said key for engaging with the tongue to rotate the plate to carry the tongue away from and to release the hook.

4. In locking mechanism for coin receptacles, the combination of a supporting shelf having an opening, a plate pivoted on said shelf, a locking tongue extending from said plate through and across the opening to lie below the shelf, an extension from the plate, said plate, extension and tongue being stamped integral from sheet material, an extension from the shelf, a spring engaging the extensions and tending to hold the tongue in a normal position, and a locking hook adapted to enter the opening to move aside the tongue and to be engaged by the tongue when restored by the spring to be locked against withdrawal from the opening.

901,410. MATCH-MACHINE. JACOB P. WRIGHT, Barberton, Ohio, assignor to The Diamond Match Company, New York, N. Y., a Corporation of Illinois. Filed Dec. 19, 1904. Serial No. 237,528.



1. In a match making machine employing an endless flexible splint carrier, the combination with said carrier, of a composition applying apparatus in the path thereof, including a composition bed, means for effecting a relative movement between said bed and the portion of the carrier over the same, whereby splints in such portion are treated with composition, and intermittently actuating means associated with said composition applying apparatus for thereafter impelling such portion of the carrier.

2. In a match making mechine employing an endless flexible splint carrier, the combination with said carrier, of a composition applying apparatus in the path thereof, including a composition bed, means for raising and lowering the portion of the carrier passing over the same, driving mechanism for engaging said carrier at points in advance and in rear of said apparatus, and supplemental driving mechanism associated with said composition applying apparatus for engaging said carrier at the portion thereof traversing said apparatus, the said carrier having slack portions at the respective ends of the apparatus.

3. In a match making machine employing an endless flexible splint carrier, the combination with said carrier, of a composition applying apparatus in the path thereof including a composition bed, means for moving a portion of the carrier towards and from said bed, yielding supports associated with said carrier-moving means and projecting from the latter to bear the portion of the carrier passing over said apparatus, together with means for actuating the carrier.

4. In a match making machine employing an endless flexible splint carrier, the combination with said carrier, of a composition applying apparatus in the path thereof, including a composition bed, means for supporting a portion of the carrier and moving the same toward and from said bed, whereby the splints are tipped with the composition of the bed, and means carried by said supporting means for impelling such portion of the carrier, said means having a movement with the carrier toward and from the bed.

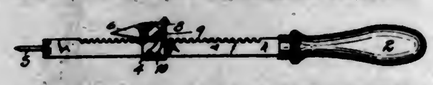
5. In a match making machine employing an endless, flexible splint carrier, the combination with said carrier of a composition applying apparatus in the path thereof, including a composition bed, rails having jointed extensions upon which a portion of the carrier is supported above said bed, means for moving said rails toward and from the bed, and means for impelling the carrier.

[Claims 6 to 20 not printed in the Gazette.]

901,411. PURIFYING PETROLEUM OILS. EDWARD W. WYNNE, Liverpool, England. Filed Jan. 4, 1908. Serial No. 409,337.

The herein described process for purifying petroleum oils, which consists in treating such oils with borax, alum and salt, dissolved in boiling water, in the proportions mentioned then allowing the mixture to stand, then adding thereto sulfuric acid in the proportions mentioned, again allowing the mixture to stand, then agitating the same, and finally treating it to a gentle heat and aeration, substantially as described.

901,412. CAN-OPENER. SHERMAN T. ALLEN, Detroit, Mich. Filed Dec. 23, 1907. Serial No. 407,622.



1. In a can opener, in combination with a toothed bar having a piercing point, a knife casing slidably engaging with its body portion thereabout, means journaled in said casing, and at all times intermeshing with the indentations on said bar, whereby the position of said casing with respect to the bar may be regulated, and whereby the knife may be forcibly projected against the tin wall of a can, and means for locking the casing in position thereon after its movement has ceased, substantially as described.

2. In a can opener, in combination with a toothed bar, a penetrating point thereon, though lying in another plane from its main portion, a casing provided with knife points extending at right angles to one another and slidable therealong, a pinion supported by said casing in position of constant engagement with the teeth of said bar whereby the knife may be projected against the tin wall of a can, and means whereby said pinion and thereby the casing may be locked in position with respect thereto, substantially as described.

3. In a can opener, in combination with a pointed toothed bar, an integral casing and knife adapted to slidably engage the same, a pinion journaled in the casing with its teeth in constant engagement with some part of the serrated portion of the bar, and means whereby the said pinion may be manually actuated in either direction along the bar and the knife may be forcibly projected against the side of a can, substantially as described.

901,413. FREIGHT-CAR. JAMES S. ANDREWS, New York, N. Y. Filed Jan. 24, 1908. Serial No. 412,374.



1. A floor for a railway freight car horisontal at the ends of the car, a central part lower than the ends, reversely inclined parts connecting the central part and the ends, the said central part being inclined reversely and downwardly from the center to the sides of the car.

2. A floor for a railway freight car horisontal at the ends of the car, a central part lower than the ends and inclined reversely and downwardly across the car from the center to the sides of the car, and parts connecting the ends with the central part and inclined reversely and downwardly lengthwise of the car from the ends to the central part and each inclined across the car reversely and downwardly from the center to the sides of the car.

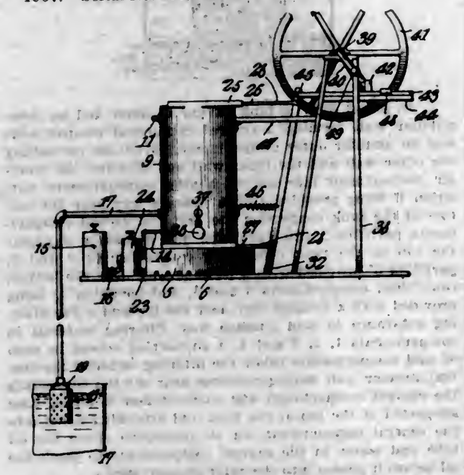
3. In an underframe for railway cars, two side sills each having a central part deeper than its end parts, a center sill depressed between its ends, and a floor supported on the center sill and the side sills and inclined reversely and downwardly from the center sill to the side sills.

4. In an underframe for railway cars, two side sills each having a central part deeper than its end parts, two draw-bar sills lying in a plane with the top of the side sills, a center sill to support the floor and having a depressed central part and upwardly inclined ends to connect with the draw-bar sills, and a floor supported on said sills, said floor being flat at the ends of the car and inclined reversely and downwardly from the center sill to the side sills at the central part of the car.

5. In an underframe for railway cars, two side sills each having a central part deeper than its end parts, two draw-bar sills lying in a plane with the top of the side sills, a center sill to support the floor and having a depressed central part and upwardly inclined ends to connect with the draw-bar sills, and a floor supported on said sills, said floor being flat at the ends of the car and inclined reversely and downwardly from the center sill to the side sills at the central part of the car.

[Claims 6 to 8 not printed in the Gazette.]

901,414. APPARATUS FOR RAISING LIQUIDS. JAMES M. BABB, Elida, N. Mex., assignor of one-fourth to Winfield B. Oldham, one-fourth to Lewis W. Drake, and one-fourth to Joe E. Johnston, Elida, N. Mex. Filed Nov. 1, 1907. Serial No. 400,249.



1. A liquid raising apparatus including an open ended stationary combustion chamber, a water jacket surrounding the same and communicating with the interior of the latter, a conductor connecting the water jacket with a source of liquid supply, a burner disposed within the combustion chamber, and means for closing the opposite ends of said chamber.

2. A liquid raising apparatus including a stationary combustion chamber, a water jacket surrounding the same and communicating therewith, a burner disposed within the combustion chamber, a torch for lighting the burner, a valve slidably mounted on one end of the combustion chamber between the torch and burner, and a conductor connecting the jacket with a source of liquid supply.

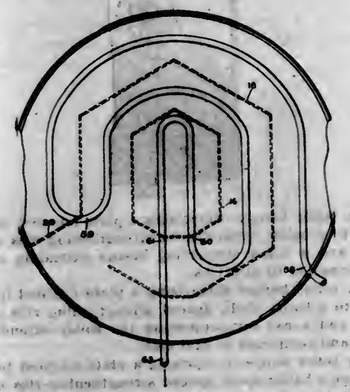
3. A liquid raising apparatus including a stationary combustion chamber, a water jacket surrounding the combustion chamber and extending the entire height of the same, a tube forming a source of communication between the water jacket and the interior of the combustion chamber, a burner disposed within the combustion chamber, and a conductor connecting the water jacket with a source of liquid supply.

4. A liquid raising apparatus including a stationary combustion chamber, a water jacket surrounding the chamber and communicating with the interior of the latter, a burner disposed within the combustion chamber, a torch, a slide valve for separating the burner and torch, respectively, and a conductor connecting the jacket with a source of liquid supply.

5. A liquid raising apparatus including an open ended stationary cylinder constituting a combustion chamber, a jacket surrounding the cylinder and spaced from the latter to form a water receiving compartment extending the entire height of said cylinder and communicating with the interior of the latter, a burner disposed within the combustion chamber, a conductor connecting the water receiving compartment with a source of liquid supply, valves for closing the opposite ends of the cylinder, and means for operating the valves.

[Claims 6 to 14 not printed in the Gazette.]

901,415. HYDROCARBON-BURNER. AUGUSTUS A. BALL, Jr., Lynn, Mass., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Jan. 24, 1902. Serial No. 91,014.



1. In combination, a burner having a chamber divided into independent concentric sections, a vaporizing conduit which extends over a plurality of the sections and substantially along the median lines thereof to convey fuel through the zone of maximum flame of one section after another to vaporize it, and means receiving vapor from said conduit and supplying it to the burner sections.

2. In combination, a burner having a chamber which is divided into a plurality of sections, a continuous vaporizing tube extending over each of the sections and substantially along the median lines thereof, means at the discharge end of the vaporizing tube which supplies fuel to one section, and means receiving fuel from said tube and supplying it to the other sections in successive order.

3. In combination, a burner having a chamber divided into concentric sections, a vaporizing conduit comprising as many portions as there are sections which are connected end to end and are arranged one over each section, the inlet-end of the conduit being so located that fuel is conveyed over one section after another beginning with the outer section, and means for successively cutting the chamber sections into service in an order beginning with the inner section and ending with the outer.

4. In combination, a burner of the chamber type, partitions within the chamber which separate the same into independent sections of which one is adapted to be in continuous operation and the others to be successively cut into service, air carrying tubes in each section, a vaporizer so arranged relatively to the sections that fuel flows successively over the sections beginning at the section adapted to be last cut into service and ending at the section in continuous service, nozzles for discharging vapor from the vaporizer to the sections, and means controlling the sections other than the one in continuous service.

5. The combination of a burner which is provided with a chamber divided into sections and with fuel openings for each of the sections, a vaporizing tube having its whole

length coiled substantially along the median lines of all the sections in successive order, a device which controls the number of sections used during varying conditions of operation and thus correspondingly varies the capacity of the vaporizing tube, and means independent of said device for supplying fuel to one section continuously during operation of the burner.

[Claims 6 to 20 not printed in the Gazette.]

901,416. BOILER-HANGER. THOMAS C. BEAT, Chicago, Ill. Filed Nov. 26, 1906. Serial No. 345,103.



1. A boiler hanger comprising a plate adapted to be secured to a boiler shell, spaced strengthening ribs on said plate, and a boiler supporting means extending between and connected to said ribs.

2. A boiler hanger comprising a plate adapted to be secured to a boiler shell, spaced strengthening ribs on said plate, and a rod for supporting the boiler extending between and connected to said ribs.

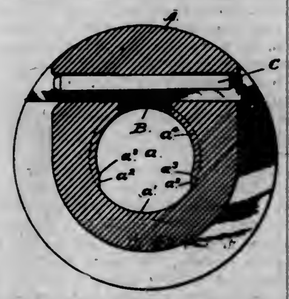
3. A boiler hanger comprising a plate adapted to be secured to a boiler shell, spaced strengthening ribs on said plate, a web connecting said ribs, and a boiler supporting means extending through said web and secured between said ribs.

4. A boiler hanger comprising a plate adapted to be secured to a boiler shell, spaced strengthening ribs on said plate, a transverse web connecting said ribs, and a rod for supporting the boiler extending through said web and secured between said ribs.

5. A boiler hanger comprising an O-shaped flanged plate provided with parallel longitudinal ribs said rib being provided with perforations at one end, a rod detachably mounted in the perforations, and a supporting nut attached to the rod, substantially as described.

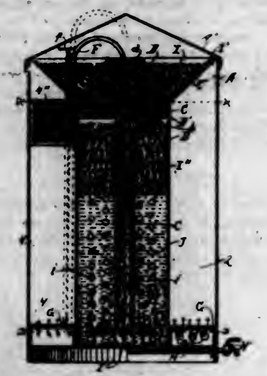
[Claims 6 to 9 not printed in the Gazette.]

901,417. STAMP-MILL TAPPET. MARTIN P. BOAS, San Francisco, Cal. Filed Jan. 12, 1905. Serial No. 240,717.



A stamp mill tappet having a stem bore, and a channel at its side, the end walls of the channel being straight and joining the wall of the bore at points of the separation approximately but slightly less than the length of the diameter of the bore, whereby the stem may be wedged between said end walls the wedging points on the stem being separated approximately but slightly less than the length of the diameter thereof.

901,418. OIL-FILTER. WILLIAM F. BOUSMAN, Grand Rapids, Mich. Filed Feb. 15, 1908. Serial No. 416,115.



1. In an oil filter, a tank having an outer and an inner annular wall forming a central cylindrical compartment and an annular outer compartment, partitions connecting the outer wall and the inner wall and dividing the annular compartment into several smaller compartments, partition 1' being provided with a passage way near the bottom of the tank connecting the first and second compartments, partition 2' being provided with a passage way near the top of the tank connecting compartments 2 and 3, partition 3' provided with a passage way near the bottom connecting compartments 3 and 4, and partition 4' being provided with a passage way near the top and a fine filtering substance in said passage way, filtering material in compartments 1, 2, 3 and 4, a supporting screen in each of said compartments below the filtering material the central annular wall having openings near the top connecting the central compartment and compartment 1, an oil tube supported at the top of the tank and extending down into the central compartment, an oil receptacle above the oil tube and water in the central compartment to wash the oil before it passes into the outer compartments.

2. In an oil filter, annular walls forming an inner cylindrical compartment and an outer annular compartment, partitions connecting said walls and dividing the annular compartment into several smaller compartments, the inner wall having openings connecting the inner compartment and compartment 1, partition 1' having openings near the bottom, 2' having openings near the top, 3' having openings near the bottom, and 4' having an opening near the top, forming an indirect passage way from the central compartment through the outer compartments to compartment 5, a felt screen in the opening in partition 4', screens in the bottom of the first four outer compartments, filtering material in said compartments above the screens, an oil receptacle in the top of the filter, a screen in said receptacle, filtering material in said screen, a screen below said filtering material forming a chamber in the bottom of the receptacle, a central tube extending down from the receptacle into the central compartment, said central compartment being partly filled with water for washing the oil as it passes through.

3. In an oil filter, a tank having annular walls arranged to form a cylindrical central compartment and an annular outer compartment, partitions connecting the walls and dividing the outer compartment into several compartments, partitions 1' having openings near the bottom, 2' having openings near the top, 3' having openings near the bottom

and 4' having an opening near the top, a filtering screen in said opening, said openings forming a passage way from the central compartment through compartments 1, 2, 3, 4 and into 5, screens near the bottoms of compartments 1, 2, 3 and 4 and a filtering substance in said compartments above the screens, an oil receptacle in the top of the filter, a screen and filtering material in said receptacle, a tube extending down from said receptacle into the central compartment, said central compartment partly filled with water, valves in the inner wall for opening passages between the outer and the inner compartments, and a pipe and faucet for draining the several compartments.

4. In an oil filter, a tank formed with two annular walls forming a cylindrical central compartment and an annular outer compartment, partitions connecting the inner and the outer walls dividing the annular compartment into several smaller compartments, the inner wall having openings near the top between the inner compartment and compartment 1, the partitions between the outer compartments having openings alternately at the bottoms and the tops, filtering material in all but one of the outer compartments, the inner compartment partly filled with water, an oil receptacle above the several compartments, a screen and filtering material centrally confined in the oil receptacle, and a tube extending down from the center of the oil receptacle into the water in the central compartment, and valves and pipes for draining the compartments.

5. In an oil filter, a tank formed with annular walls arranged to form a central cylindrical compartment and an annular outer compartment, radiating partitions dividing the annular compartment into several smaller compartments, the inner wall and the several partitions having openings arranged to cause the oil to travel the length of each compartment before entering the next succeeding compartment, an oil receptacle above the compartments, screens centrally located in the receptacle, filtering material confined between said screens, a tube extending down from the receptacle into the central compartment, the central compartment partly filled with water, for washing the oil, screens in the bottom of the outer compartments, valves and pipes for draining the compartments, and a telescoping pump secured to the oil receptacle and extending into one of the outer receptacles for pumping out the oil, all substantially as and for the purpose stated.

901,419. SLIDING-DOOR FASTENER. EDWIN CARLSON, Minneapolis, Minn., assignor of one-half to Carl M. E. Carlson, Minneapolis, Minn. Filed July 27, 1907. Serial No. 385,871.



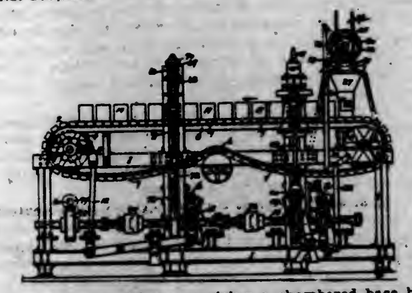
1. The combination with a door and a frame, the latter having a lock seat adjacent to one edge of the door, of a lever hinged to said door, a lock bolt hinged to the intermediate portion of said lever and adapted to interlock with said lock seat when said lever and bolt are folded together, and means for locking said lever and lock bolt together when in their folded position, substantially as described.

2. The combination with a door and a frame, the latter having a lock seat adjacent to one edge of the door, of a lever hinged to said door, a lock bolt hinged to the intermediate portion of said lever and having a hooked end adapted to interlock with said lock seat against endwise removal, when said lever and lock bolt are folded together, and means for locking said lever and lock bolt together when in their folded position, substantially as described.

3. The combination with a door and a frame, the latter having a lock seat adjacent to one edge of the door, of a lever hinged to said door, a lock bolt hinged to the intermediate portion of said lever, and having a hooked end adapted to interlock with said lock seat against endwise removal, when said lever and lock bolt are folded together, alined slots formed in said lever and lock bolt, and a staple secured to said door and arranged to project through said alined slots when the said lever and lock bolt are folded together, substantially as described.

4. The combination with a door and a frame, the latter having a lock seat adjacent to one edge of the door, of a lever hinged to said door, the lock bolt hinged to the intermediate portion of said lever and having a hooked end adapted to interlock with said lock seat against endwise removal when said lever and lock bolt are folded together, alined slots formed in said lever and lock bolt, a staple secured to said door and arranged to project through said alined slots when the said lever and lock bolt are folded together, and means for locking said lever and lock bolt to said staple, substantially as described.

901,420. CAN-FILLING MACHINE. GEORGE E. CHAMBERLAIN, St. Louis, Mo. Filed Sept. 22, 1905. Serial No. 279,594.



1. A filling machine comprising a chambered base having vertical holes therethrough, a slide fitting on said base and having measuring cups open at their bottoms and having float actuated air valves, and mechanism for intermittently shifting said slide to make the openings at the bottoms of the cups register alternately with the respective chambers and holes in the base.

2. A filling machine comprising a chambered base having vertical holes therethrough, a slide fitting on said base and having measuring cups open at their bottoms and having float actuated air valves, and mechanism for intermittently shifting said slide to make the openings at the bottoms of the cups register alternately with the respective chambers and holes in the base, said slide having chambers around the lower portion of said measuring cups arranged to communicate with a source of steam.

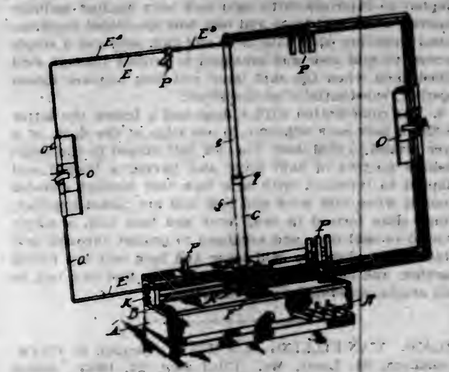
3. A filling machine comprising a chambered base arranged to communicate with a source of liquid supply and said base having holes extending vertically therethrough and an outlet drain and a pipe connecting its chambers to a source of steam, a slide fitting on said base and having measuring cups open at their bottoms and having float actuated air valves, a mechanism for intermittently shifting said slide to make the openings at the bottoms of the cups register alternately with the respective chambers and holes in the base.

4. A can feeding device comprising a horizontal cage open at one side and one end and rotatably mounted, and funnels below said cage, a conveyer below said funnels, and an inclined chute whose end registers with the open end of the cage.

5. A can feeding device comprising a horizontal cage open at one side and one end and rotatably mounted, and funnels below said cage, a conveyer below said funnels, and an inclined chute whose end registers with the open end of the cage, the lower ends of the funnels extending almost to the conveyer and being open on one side to the height of a can.

[Claims 6 to 13 not printed in the Gazette.]

901,421. MUSIC-TURNER. JOHN H. COLLINS, Elsie, Mich. Filed June 2, 1906. Serial No. 319,860.



1. In a music turner, the combination with a tubular casing, of a plurality of concentric shafts nested within said casing and extending out therefrom at opposite ends, arms secured to the opposite ends of said shafts, and projecting laterally therefrom, and connections between said arms for forming an intermediate support to the music sheet.

2. In a music turner a plurality of concentric nested shafts, arms secured to the opposite ends of said shafts, and projecting laterally therefrom, and means whereby said shafts may be extended and contracted in length to vary the distance between said arms.

3. In a music turner the combination with an extensible tubular casing, of a plurality of concentric shafts nested therein, each shaft being formed in two sections longitudinally slidable or rotatively locked to each other, and arms secured to the opposite ends of said shafts and projecting laterally therefrom.

4. In a music turner the combination with a tubular casing, of a plurality of concentric shafts nested therein, and projecting outward from the opposite ends thereof, disks secured to the several shafts at the lower end of said casing, flexible connections peripherally wrapped about said disk and extending laterally therefrom, springs connected to said flexible connections for placing a tension thereon, arms secured to opposite ends of said shafts and projecting laterally therefrom, and dogs for engaging said disks to hold the same from rotation.

5. In a music turner, the combination with a shaft having a pair of parallel arms mounted thereon, of a rod extending between the outer ends of said arms and a clip attached to said rod for engaging the center of the outer edge of the music sheet, said clips comprising complementary plates and one of said plates being relatively long, for the purpose described.

[Claims 6 to 10 not printed in the Gazette.]

901,422. CONNECTOR FOR ELECTRICAL CONDUCTORS. FRANK B. COOK, Chicago, Ill. Filed Apr. 2, 1908. Serial No. 424,734.

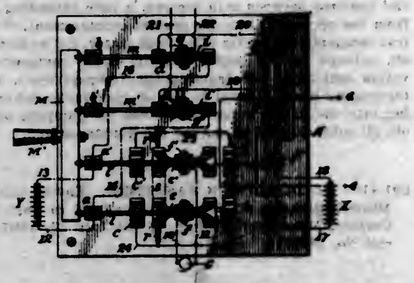


1. A connector of the character described comprising a one-piece sleeve adapted to receive the ends of the strands to be connected, the exterior surface of the sleeve being tapered from the center toward each end and threaded, the sleeve being split longitudinally along one side only, and a nut for each end of the sleeve adapted to be tightened up thereon whereby the sleeve tightly grips the said strands.

2. A connector of the character described comprising a one-piece sleeve adapted to receive the ends of the ropes or cables to be connected, the sleeve being tapered from the middle toward the ends at both the exterior and interior surfaces, a pair of stranded ropes or cables each having wedging means inserted into the end thereof and both being inserted into the opposite ends of the sleeve whereby the said wedging means wedges the strands of each rope or cable outwardly to fit the interior tapered portions of the sleeve, the exterior tapered portions of the sleeve being threaded, the sleeve being split longitudinally along one side only, and a nut for each of the tapered threaded portions adapted to be tightened up thereon whereby the sleeve is caused to tightly grip the enlarged end portions of the ropes or cables to prevent the latter from pulling out of the sleeve.

3. A connector of the character described comprising a one-piece sleeve the interior portion of which is tapered from the center toward the ends, a pair of stranded ropes or cables adapted to be inserted into the opposite ends of the sleeve, wedging means placed between the strands of the ropes or cables whereby the insertion of the latter into the sleeve from the opposite ends thereof forces the said means farther in between the strands of the ropes or cables to enlarge the ends of the latter to fit the tapers in the sleeve, and means for holding the sleeve in place around the ropes or cables for purposes substantially as described.

901,423. SWITCH FOR CHARGING AND DISCHARGING STORAGE BATTERIES. JAMES H. CORMICK, Belleville, N. J., assignor to The Union Switch and Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Feb. 29, 1908. Serial No. 418,485.



1. In a switch for charging storage batteries, the combination with two batteries, of two pivot supports, a pair of knives pivoted on said supports, a generator, wires connecting said generator to the pivot supports, two pairs of charging clips connected respectively to the respective batteries and with which the knife blades coöperate to close a circuit between the generator and the batteries, a pair of clips between the charging clips and the pivoted supports with which said knives are in contact after they are disengaged from the charging clips, and circuits connecting the clips to each other.

2. In a switch for charging storage batteries, the combination with two batteries, of two pairs of charging clips connected respectively to the batteries, two pivot supports intermediate the clips, knives pivoted to the supports to coöperate with the charging clips, a generator, wires connecting the generator to the pivot supports, a series of clips of different heights interposed between the two pairs of charging clips and with which the knives contact when they are disengaged from the charging clips, and circuits connecting said interposed clips to each other.

3. In a switch for charging storage batteries, the combination with two batteries, of two pairs of charging clips connected respectively to the batteries, two pivot supports intermediate the clips, knives pivoted to the supports to coöperate with the charging clips, a generator, wires connecting the generator to the pivot supports, two pairs of clips of greater height than the charging clips interposed between the pivot supports and the respective pairs of charging clips, a pair of clips forming an arch over the pivot supports and of greater height than the said interposed clips, and circuits connecting the interposed clips to each other.

4. In a switch for charging and discharging storage batteries, the combination with two batteries, of two pairs of charging clips connected respectively to the batteries, two pairs of discharging clips arranged adjacent to each other but separated, two pivot supports intermediate the pairs of charging clips, two pivot supports intermediate the pairs of discharging clips, two pairs of knives pivoted on the respective pivot supports to coöperate respectively with the charging and discharging clips, a generator, wires connecting said generator to the pivot supports intermediate the charging clips, a discharging line the wires of which lead from the pivot supports intermediate the discharging clips, wire connections between the batteries and the respective pairs of discharging clips, a series of pairs of clips interposed between the said pairs of charging clips of greater height than the charging clips with which the knives contact when they are disengaged from the charging clips, circuits including resistances connecting the interposed clips to each other, and means for moving the blades simultaneously, and one pair of blades at a point in their movement engaging both pairs of discharging clips.

901,424. ELECTRICALLY-CONTROLLED SWITCH. ARCHIBALD S. CUBITT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 22, 1908. Serial No. 428,528.

1. In a switch, a current carrying coil, a core movable in the field thereof, means for moving said core into the field of said coil, and means operable from a distance for varying the permeability of the magnetic circuit of said coil.

2. In a switch, a current carrying holding coil, a core movable in the field thereof, means for moving said core into the field of said holding coil, and means operable from a distance for varying the permeability of the magnetic circuit through the movable core.

3. In a relay, a current carrying actuating coil, a current carrying holding coil, a core movable in the fields of said coils and arranged to be moved by said actuating coil and held by said holding coil, and means operable from a distance for varying the permeability of the magnetic circuit of the holding coil.

4. In a relay, a current carrying actuating coil, a current carrying holding coil, a core movable in the fields of said coils and arranged to be moved by said actuating coil and held by said holding coil, and means operable from a distance for varying the limit of movement of said core in the field of said holding coil.

5. In a relay, a current carrying actuating coil, a current carrying holding coil, a core movable in the fields of said coils, and arranged to be moved by said actuating coil and held by said holding coil, a fixed core of magnetic material toward which the movable core moves, and means operable from a distance for varying the gap existing between the movable and fixed cores when the movable core has been moved to its extreme position towards said fixed core.

[Claims 6 to 9 not printed in the Gazette.]

901,425. MOUNTING FOR HEAVY VAULT-DOORS. GEORGE L. DAMON, Pittsburg, Pa. Filed Sept. 16, 1907. Serial No. 393,181.



1. The combination with a door and a structure in relation to which the door is movably supported to swing, of a yielding supporting medium interposed between said door and structure, and means for adjusting the position of the supporting medium on said structure.

2. The combination with a doorway and a door, of means for supporting the door in opening and closing relation to the doorway; said door-supporting means comprising a yielding medium by which the entire weight of the door is sustained, and means for adjusting the height of said medium relatively to the doorway.

3. The combination with a doorway and a door, of means for supporting the door in opening and closing relation to the doorway; said means comprising a resilient hinge upon which the door is adapted to turn.

4. In combination with a doorway and a door, of a yielding supporting medium interposed between the door and the doorway; said medium being constructed to automatically adjust itself in its sustaining relation to the door and provided with means for adjusting its position relatively to the doorway.

5. In combination with means for movably supporting a door in relation to a doorway; a yielding medium sustaining the door and continuing its support of the door while permitting the door to shift in its own plane to center it with the doorway, and means for shifting the door to center it.

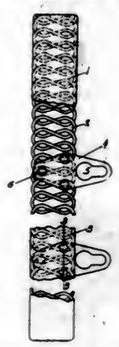
[Claims 6 to 17 not printed in the Gazette.]

901,426. STAY FOR GARMENTS AND THE LIKE. JOHN R. DEAN, Girard, Pa. Filed Dec. 26, 1907. Serial No. 408,153.

1. A stay for garments and the like comprising a frame thin relatively to its width and formed of spring wire; and a plastic material filling the interstices formed by the wire.

2. A stay for garments and the like comprising a frame thin relatively to its width and formed of spring wire; a plastic material filling the interstices formed by the wire and covering the wire.

3. A stay for garments and the like comprising a frame formed of serpentine coils of wire, the frame being thin relatively to its width; and a plastic material filling the interstices formed by the wire.

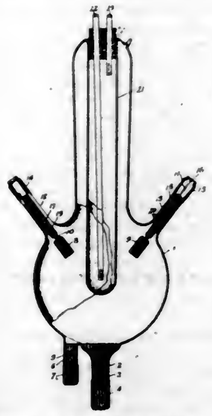


4. A stay for garments and the like comprising a frame thin relatively to its width and formed of spring wire; a plastic material filling the interstices formed by the wire; and fastening devices secured to the wire frame.

5. A stay for garments and the like comprising a frame thin relatively to its width and formed of spring wire; a plastic material filling the interstices formed by the wire and fastening devices secured to the wire frame and embedded in the plastic material.

[Claims 6 to 10 not printed in the Gazette.]

901,427. VAPOR ELECTRIC APPARATUS. LEONARD E. DEMPSTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 31, 1904. Serial No. 230,633.



1. The combination of a conductor, and a protective and radiating sleeve therefor consisting of vitreous material with metal embedded therein.

2. The combination of a conductor, and a protective and radiating sleeve therefor, consisting of vitreous material with wire embedded therein.

3. The combination of a conductor, and a protective and radiating sleeve therefor, consisting of glass with a helix of wire embedded therein.

4. The combination of an envelop or container, an electrode therein, a current conveying conductor for said electrode, and a protecting sleeve for said conductor consisting of vitreous material having metal in an elongated shape embedded therein.

901,428. ELECTRIC-RESISTANCE CONDUCTOR. JOHN T. H. DEMPSTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 4, 1907. Serial No. 400,691.

1. An alloy containing iron, nickel, chromium and a manganese content exceeding 3%, the iron content not exceeding 50%.

2. An alloy containing iron, nickel, chromium, and a manganese content exceeding 3%, the nickel being in excess of the other ingredients.

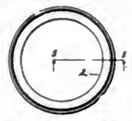
3. An alloy containing iron, nickel, chromium, and a manganese content exceeding 3%, the iron and nickel being severally in excess of the other ingredients.

4. An alloy containing nickel, iron, chromium, and a manganese content of approximately 5%, the iron content not exceeding 50%.

5. An alloy containing nickel, iron, chromium, and a manganese content of approximately 5%, the nickel being in excess of the other ingredients.

[Claims 6 and 7 not printed in the Gazette.]

901,420. TIN CAN. MELVILLE E. DUNKLEY, Kalamazoo, Mich., assignor to The Hermetic Sealing Company, Wilmington, Del. Filed Feb. 23, 1907. Serial No. 358,948.



1. The combination of a tin can body, a cap therefor, the can and cap being flanged, a soft yielding gasket located between said flanges, said flanges being folded in a downturned seam lying close against the can body and a seal of lacquer consisting of copal gum, rosin and benzin, applied to the crevice between the downturned seam and can body.

2. The combination of a tin can body, a cap therefor, the can and the cap being flanged; a soft compressible gasket between the said cap and the can body, the said flanges being folded into a downturned seam which lies close against the can body and a seal of adhesive plastic material applied to the crevice between the downturned seam and the can body.

3. The combination of a tin can body, a cap therefor, the can and the cap being flanged; the said flanges being folded into a downturned close double seam which lies close against the can body and a seal of adhesive plastic material applied to the crevice between the downturned seam and the can body.

901,430. TURBINE BUCKET-WHEEL. WILLIAM L. R. EMMET, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 17, 1908. Serial No. 421,757.



1. In a bucket wheel, the combination of a hub having an annular flange, disks attached to opposite sides of the flange, a row of radial buckets for each disk, a separate base for each row of buckets that is attached to the inner face of its supporting disk, and means for uniting the disks to reduce the tendency to distortion.

2. In a bucket wheel, the combination of a hub having an annular flange, disks attached to opposite sides of the flange, a shoulder between each disk and the flange for transmitting strains from the former to the latter, a row of radial buckets for each disk, bases therefor which engage the inner faces of the disks, a shoulder between each base and its disk to transmit strains from the former to the latter, and axially-extending means that clamp the bases to the disks.

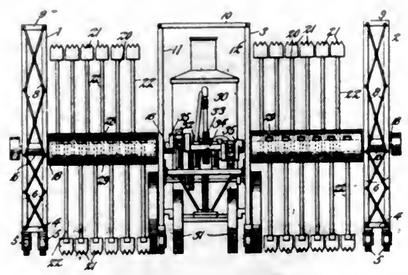
3. In a bucket wheel, the combination of a hub having an annular flange, disks attached to opposite sides thereof, a row of buckets for each disk, bases for the buckets which are attached to the inner faces of the disks, an annular perforated member which separates the disks by a fixed distance near their peripheries, axially-extending devices for holding the disks against said member, and means preventing the said devices from distorting the disks in the course of manufacture.

4. In a bucket wheel, the combination of a hub having an annular flange, radial arms attached thereto which form spacers, disks located on opposite sides of the flange and arms, a shoulder between the flange and each disk to transmit strains from the latter to the former, means clamping the disks to the flange and arms, a row of radial buckets for each disk, a base for each row of buckets that engages the inner face of the disk, an annular shoulder between each base and the inner face of the disk to transmit strains from the former to the latter, means clamping each base to the inner face of the disk, and means for holding the disks at a fixed distance apart near their peripheries.

5. In a bucket wheel, the combination of a cast steel hub having an annular flange and arms radiating therefrom, rolled steel plates of disk form attached to opposite sides of the flange and arms, rivets which pass through the flange, arms and disks to unite them, shoulders between the disks and flange to transmit strains from the former to the latter and reduce shearing strains on the rivets, a row of radial buckets for each disk, separate steel bases in which the inner ends of each row of buckets are anchored, rivets for securing each base to the inner face of its supporting disk, a shoulder between each base and the inner face of each disk to reduce the shearing strains on the rivets, and means separate from the bases for uniting the disks near their peripheries.

[Claims 6 and 7 not printed in the Gazette.]

901,431. EXCAVATOR. THOMAS FENWICK, New York, N. Y. Filed Jan. 14, 1907. Serial No. 352,235.



1. A rotary excavator comprising separated supporting frames, a drive shaft mounted in each frame, and a series of tools secured in the shaft, said tools projecting in diametrically opposed relation from the shaft.

2. A rotary excavator comprising spaced supporting frames, a drive shaft mounted in each frame, a series of tools secured in the shaft and projecting in opposite directions therefrom, and a drum inclosing the shaft and formed with openings for the passage of the tools.

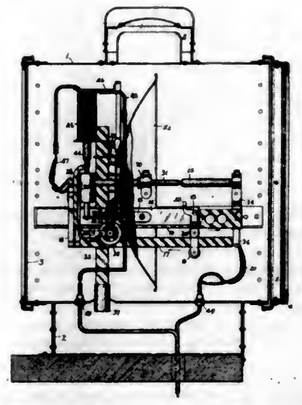
3. A rotary excavator comprising spaced supporting frames, a drive shaft mounted in each frame, a series of tools secured in the shaft and projecting in opposite directions therefrom, and a drum inclosing the shaft and formed with openings for the passage of the tools, said drum being of greater diametrical dimension than the shaft, whereby to brace the tools beyond the shaft.

4. A rotary excavator comprising a drive shaft, end frames for supporting said shaft, said shaft being squared intermediate the frames, a series of tools including tools proper and stems secured thereto, means for securing the stems to the squared portion of the shaft, and a drum inclosing the squared portion of the shaft, and bracing the tool stems beyond the shaft.

5. A rotary excavator comprising a drive shaft, end frames for supporting said shaft, said shaft being squared intermediate the frames, a series of tools including tools proper and stems secured thereto, means for securing the stems to the squared portion of the shaft, and a drum inclosing the squared portion of the shaft, and bracing the tool stems beyond the shaft, said drum being formed with openings to provide access to the stem securing means.

[Claims 6 and 7 not printed in the Gazette.]

901,432. ARC-LAMP HEADLIGHT. RICHARD FLEMING, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 16, 1905. Serial No. 265,512.



1. In a headlight, two horizontally-disposed rack rods, holders for electrodes carried thereby, a shaft to which said rods are geared, a pinion carried by the shaft, a vertically-disposed rack rod meshing therewith, electrically-operated means for rotating the shaft, and a casing inclosing the parts.

2. In a headlight, two horizontally-arranged rack rods, holders for electrodes carried thereby, a shaft to which said rods are geared, a pinion carried by the shaft, a vertically-disposed rack rod meshing therewith, a weight carried by the rod, electrically-operated means for rotating the shaft in one direction, and a casing inclosing the parts.

3. In a headlight, two horizontally-disposed rack rods, holders for electrodes carried thereby, a shaft, a pinion carried thereby in mesh with said rods, a second pinion carried by the shaft, a vertically-disposed weighted rack rod meshing therewith, electrically-operated means for rotating the shaft, and a casing inclosing the parts.

4. In a headlight, two horizontally-disposed rack rods, holders for electrodes carried thereby, a shaft to which said rods are geared, a pinion secured to the shaft, a vertically-disposed weighted rack rod meshing therewith, a magnet and its armature, means actuated thereby for rotating said shaft, and a casing inclosing the parts.

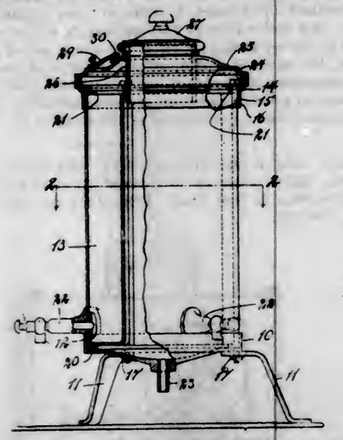
5. In a headlight, two horizontally-disposed rack rods, holders for electrodes carried thereby, a shaft to which said rods are geared, a pinion secured to the shaft, a vertically-disposed rack rod meshing therewith, a toothed wheel also secured to the shaft, electrically controlled means engaging said wheel to cause rotation thereof, and a casing inclosing the parts.

[Claims 6 to 13 not printed in the Gazette.]

901,433. LIQUID-RECEPTACLE. CLARENCE W. FOX, Boston, Mass. Filed Oct. 13, 1905. Serial No. 282,599.

1. A fluid container comprising a plurality of separate and independent receptacles the backs of which are combined to constitute an ice receptacle, and means for holding said receptacles juxtaposed to provide said ice receptacle.

2. A fluid container, comprising a plurality of independent receptacles coöperating to form an intermediate chamber, and means for making a fluid-tight joint at the meeting edges of the receptacles.



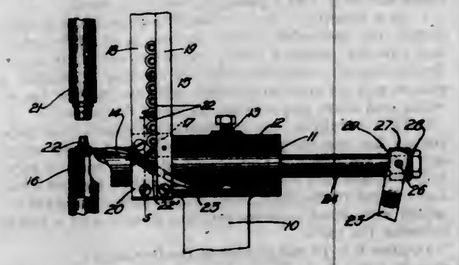
3. A fluid container, comprising a plurality of independent receptacles having abutting edges, each receptacle having a rear wall at an angle to the rear wall of the adjacent receptacles to form an intermediate chamber for the reception of ice or other material, so that the ice may come into direct contact with said rear walls for the effective refrigeration of the substance contained in said receptacles, and means for securing said receptacles in the relation described.

4. A fluid container, comprising a plurality of separable receptacles having abutting edges and coöperating to form an intermediate chamber, means outside of said chamber for holding said receptacles in their coöperating relation, and means for making fluid-tight joints at the abutting edges of said receptacles.

5. The combination with a base, of a plurality of receptacles supported by said base and forming therewith a chamber, and gaskets situated between the receptacles and between the receptacles and the base to render said chamber fluid-tight.

[Claims 6 to 11 not printed in the Gazette.]

901,434. DEVICE FOR FEEDING LACING-HOOKS AND THE LIKE. WARREN F. FRASER, Dorchester, Mass., assignor to Fraser Machine & Manufacturing Co., a Corporation of Massachusetts. Filed Jan. 11, 1908. Serial No. 410,408.



1. A device for feeding lacing hooks or the like comprising a raceway, a carrier adapted to receive a lacing hook, a guideway extending from the foot of said raceway toward said carrier, said guideway provided with a helical groove adapted to guide a lacing hook, and means to move the lacing hook along said helical groove from the foot of said raceway onto said carrier.

2. A device for feeding lacing hooks or the like comprising a vertical raceway, a carrier adapted to receive a lacing hook, a guideway extending from the foot of said raceway to said carrier, said guideway provided with a helical groove adapted to guide a lacing hook and rock the same from a horizontal to a vertical position, and means to move a lacing hook along said helical groove from the foot of said raceway onto said carrier.

3. A device for feeding lacing hooks or the like comprising a raceway, a carrier adapted to receive a lacing hook, a guideway extending from the foot of said raceway toward said carrier, said guideway provided with a helical groove adapted to guide a lacing hook, a finger projecting into said helical groove adapted to engage said lacing hook at the foot of said raceway, and means to move said finger longitudinally of said groove, whereby said lacing hook may be moved along said helical groove from the foot of said raceway onto said carrier.

4. A device for feeding lacing hooks or the like comprising a raceway, a carrier adapted to receive a lacing hook, a tubular guideway extending from the foot of said raceway toward said carrier, said guideway provided with a helical groove adapted to guide a lacing hook, a plunger within said tubular guideway, a finger projecting from said plunger into said groove adapted to engage a lacing hook at the foot of said raceway, and means to impart a reciprocatory movement to said plunger.

5. A device for feeding lacing hooks or the like comprising a raceway, a carrier adapted to receive a lacing hook, a tubular guideway extending from the foot of said raceway toward said carrier, said guideway provided with a helical groove adapted to guide a lacing hook, a plunger within said tubular guideway, a helical shaped finger projecting from said plunger into said groove adapted to engage said lacing hook at the foot of said raceway, and means to impart a reciprocatory movement to said plunger, whereby said lacing hook may be moved along said helical groove from the foot of said raceway onto said carrier.

[Claims 6 to 10 not printed in the Gazette.]

901,435. AMUSEMENT DEVICE. PERCY W. FULLER, Boston, Mass. Filed July 8, 1907. Serial No. 382,608.



1. In an amusement device, the combination with a track, of a car to travel over said track, said car comprising a cylindrical car body adapted to turn bodily about its axis and roll along the track, and automatic means to propel the car up the grades of the track, said means comprising an armature element, of a motor encircling the car body and a field element of a motor located along the track.

2. In an amusement device, the combination with a track, of a car to travel over said track, said car comprising a cylindrical car body adapted to turn bodily about its axis and roll along the track and a non-rotary passenger-receiving compartment situated within said body, and an induction motor to propel the car along the track, said motor comprising an armature element on the exterior of and encircling the car body, a field element extending along the track, and means connected with the non-rotary passenger-receiving compartment to render operative that portion of the armature element which is adjacent to the field element.

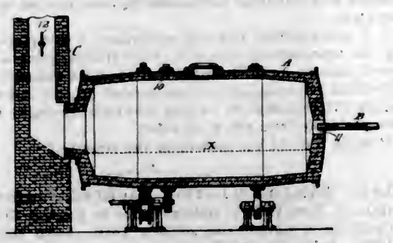
3. In a device of the class described, the combination with a track, of a car to travel thereover, said car comprising a cylindrical car body adapted to turn bodily about its axis and roll along the track and a non rotary member within the car body, and an induction motor to propel the car along the track, said motor comprising an armature element on the exterior of and encircling the car body, a field element extending along the track, and means controlled by the non-rotary member to render operative that portion of the armature element which is adjacent to the field element.

4. In an amusement device, a track, a car body adapted to roll along the track by turning about its own axis, combined with an induction motor to propel the car body along said track, said motor comprising an armature element encircling the car body, a field element extending along the track, and means to render operative that portion of the armature element which is adjacent to the field element.

5. The combination with a track and a field element of an induction motor extending along the same, of a cylindrical car body adapted to turn bodily about its axis and roll along the track, said car body having a passenger-receiving compartment and the armature element of said motor encircling the car body.

[Claims 6 and 7 not printed in the Gazette.]

901,436. PROCESS OF MAKING CHROMATES. WILLIAM T. GIBBS, Buckingham, Quebec, Canada, assignor to The National Electrolytic Company, a Corporation of New York. Filed Sept. 20, 1907. Serial No. 393,819.



1. In a process of making chromates, roasting finely ground chrome iron ore mixed with sufficient alkaline carbonate and at a sufficient temperature to keep the mass fluid and continuously raising the ore from the fluid mass and returning it to the bath to subject it to the oxidizing atmosphere above the bath.

2. In a process of making chromate of soda, roasting finely ground chrome iron ore mixed with sufficient carbonate of soda and at a sufficient temperature to keep the mass fluid, and rotating vertically the furnace chamber containing the ore during the roasting process.

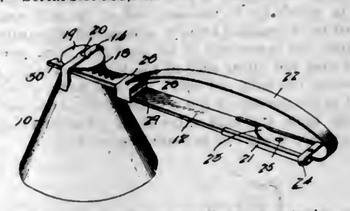
3. The process of simultaneously producing aluminates and chromates, which consists in roasting finely ground chrome iron ore, mixed with sufficient alkaline carbonate and at a sufficient temperature to keep the mass fluid and rotating vertically the furnace chamber containing the ore during the roasting process, and dissolving out the aluminate and chromate.

4. The process of simultaneously producing aluminate and chromate of soda, which consists in roasting finely ground chrome iron ore mixed with sufficient carbonate of soda and at a sufficient temperature to keep the mass fluid and rotating vertically the furnace chamber containing the ore during the roasting process, and dissolving out the aluminate and chromate of soda.

5. In a process for making chromates, roasting finely ground chrome iron ore mixed with sufficient alkaline carbonate and at a sufficient temperature to keep the mass fluid, and agitating said fused mixture while exposing the same to the action of air.

[Claims 6 to 8 not printed in the Gazette.]

901,437. ICE-CREAM DISHER. LORY J. GRAFFORT and PETER L. HOFFMAN, New Carlisle, Ind. Filed Apr. 4, 1907. Serial No. 366,249.



1. A disher comprising a vessel or receptacle provided with a handle; discharging fingers rotatably supported within said vessel or receptacle; a slide mounted to be longitudinally reciprocated upon said handle, and a rack bar carried by said slide for rotating said discharge fingers.

2. A disher comprising a vessel or receptacle provided with a handle; discharging fingers rotatably mounted within said vessel or receptacle; a slide mounted to be reciprocated longitudinally upon said handle, and a rack bar carried by said slide for both retaining and rotating said discharging fingers within the said vessel or receptacle.

3. A disher comprising a vessel or receptacle provided with a handle, discharging fingers rotatably mounted in said vessel or receptacle, a slide embracing the edges of said handle and free to reciprocate longitudinally thereon, means carried by the slide for rotating said fingers, and means for reciprocating said slide.

4. A disher comprising a receptacle provided with a handle, a rack-bar moving longitudinally upon said handle, a spring connecting said rack-bar and said handle to reciprocate said rack-bar upon compression and release in combination with rotating fingers actuated by said rack-bar.

5. A disher comprising a vessel or receptacle; discharging fingers rotatably mounted in said vessel or receptacle; a handle for the vessel or receptacle; a slide mounted on said handle and adapted to be reciprocated thereon; a sheath carried by the rear end of said handle; a bowed spring having one of its ends connected to said sheath and its other end connected to said slide, and means carried by the said slide for rotating the discharging fingers when the said spring is retracted or expanded to reciprocate the slide.

[Claims 6 and 7 not printed in the Gazette.]

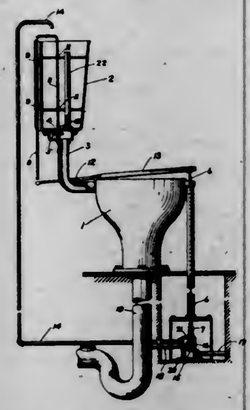
901,438. WATER-CLOSET APPARATUS. WILLIAM U. GRIFFITHS, Philadelphia, Pa. Filed Dec. 21, 1905. Serial No. 292,764.

1. In a water closet apparatus, in combination, a flush tank having a port therein, a water closet hopper having communication with the said flush tank, a water closet seat having an arm, a rod having its lower end so positioned with relation to the said arm that it is adapted to be engaged thereby, and a portion of the said rod extending over the said tank, and a valve connected to the portion of the said rod which extends over the said tank, the said valve being adapted to close the said port in the flush tank.

2. In a water closet apparatus, in combination, a flush tank having a port or opening, a water closet hopper in communication with the said flush tank, a water closet seat having an arm, a rod, the lower end of which is located in proximity to the said arm and is adapted to be engaged thereby when the said arm is moved upwardly, and the upper portion of the said rod being bent laterally and downwardly to a point above the upper surface of the bottom of the tank, and a valve connected to the downwardly bent portion of the said rod within the tank, the said valve being located below the bottom of the tank and being adapted to be moved upwardly by an upward movement of the rod to close the said port.

3. In a water closet apparatus, in combination, a flush tank having a port, a water closet hopper in communication with the said tank, a closet seat having an arm ex-

tending rearwardly therefrom, which arm is adapted to move upwardly when the seat is moved down upon the upper edge of the hopper, a rod, the lower end of which is located in proximity to the rear end of the said arm and is adapted to be engaged thereby and moved upwardly by the said arm, the upper end of the said rod being bent or extended over the upper edge of the tank, means for slidably supporting the said rod upon the said tank, a valve connected to the portion of the said rod which is extended over the said tank, the said valve being adapted to close the said port when the rod is moved upwardly.



4. In a water closet apparatus, in combination, a flush tank having a port, a water closet hopper in communication with the said tank, a water closet seat having an arm, a rod, the lower end of which is located in proximity to the outer end of the said arm and is adapted to be engaged thereby and moved upwardly as the seat is moved into contact with the upper edge of the hopper, the upper portion of the said rod being bent laterally and downwardly into the said flush tank, a valve connected to the downwardly bent portion of the said rod and moving upwardly with the rod to close the port or opening, a water supply pipe for supplying water to the said tank, a valve which normally closes the said pipe, and means intermediate the said valve and the water closet seat whereby when the seat is moved in a position upon the upper edge of the water closet hopper the said last mentioned valve is opened to permit the passage of water into the said tank.

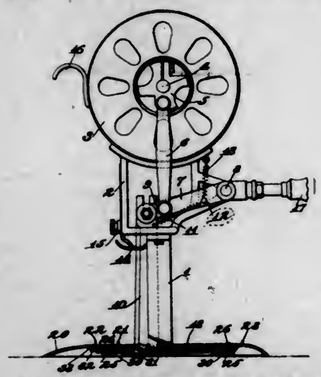
5. In a water closet apparatus, in combination, a flush tank having a port therein, a water closet hopper having communication with the said flush tank, a water closet seat having an arm, a rod having its lower end so positioned with relation to the said arm that it is adapted to be engaged thereby so that the said rod may be raised by an upward movement of the said arm, the said rod being bent and having a portion extended over the top of said tank, and a valve located underneath the bottom of the tank and connected to the portion of the said rod which extends over the said tank, the said valve being adapted to close said port in the flush tank when the rod is raised.

[Claim 6 not printed in the Gazette.]

901,439. BASE FOR CLOTH-CUTTING MACHINES. JOHN B. GURY, St. Louis, Mo. Filed Dec. 30, 1907. Serial No. 408,560.

1. A cloth-cutting machine comprising a foot-plate having an independently-movable cloth-lifting portion which is free from the front part of the body of said foot plate but whose rear end is resiliently mounted on said foot plate, and a cutter and actuating mechanism therefor carried by said foot-plate.

2. A cloth-cutting machine comprising a foot-plate having an independently-movable cloth-lifting portion which is free from the front part of the body of said foot plate but whose rear end is resiliently mounted on said foot plate, a cutter and actuating mechanism therefor carried by said foot-plate, and antifriction devices on said foot-plate arranged to relieve the same from the work-table.



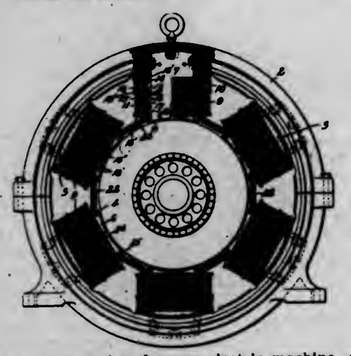
3. A cloth-cutting machine comprising a foot-plate having an integral and resilient cloth-lifting portion, and a cutter and actuating mechanism therefor carried by said foot-plate.

4. A cloth cutting machine comprising a foot-plate having an independently-movable cloth-lifting portion connected thereto by an integral and resilient connection, and a cutter and actuating mechanism therefor carried by said foot-plate.

5. A cloth-cutting machine comprising a foot-plate having an independently-movable cloth-lifting portion connected thereto by an integral and resilient connection, a cutter and actuating mechanism carried by said foot-plate, and antifriction devices on said foot-plate arranged to relieve the same from the work-table.

[Claims 6 to 14 not printed in the Gazette.]

901,440. DYNAMO-ELECTRIC MACHINE. ARTHUR L. HADLEY, Fort Wayne, Ind., assignor to General Electric Company, a Corporation of New York. Filed May 14, 1906. Serial No. 316,601.



1. In a commutating dynamo electric machine, a field pole comprising a central section of laminæ interposed between two side sections of laminæ, the laminæ forming the central section being wider than the laminæ in the side sections.

2. In a commutating dynamo electric machine, field poles each composed of a central bundle of laminæ placed between two other bundles of laminæ, the laminæ forming the central bundle being wider than the other laminæ and arranged so that each side of the central bundle projects by the corresponding edges of the other bundles.

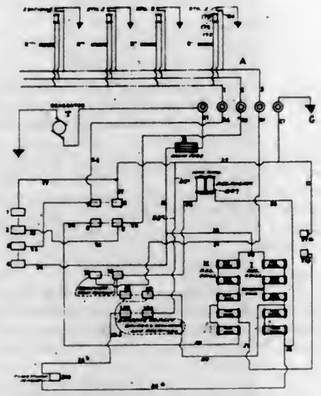
3. In a dynamo electric machine, a winding, and a field pole surrounded thereby, said field pole comprising a central section of laminæ placed between two side sections of laminæ, the laminæ forming the central section being wider than the other laminæ whereby ventilating spaces are formed between the central and side sections and the windings.

4. In a dynamo electric machine, a winding, a field pole surrounding by said winding, said field pole consisting of a central section of laminæ interposed between two side sections, the laminæ forming the central section being wider wider than the other laminæ whereby ventilating spaces are formed between the central and side sections and the winding.

5. In a dynamo electric machine, a field pole composed of a central bundle of laminæ placed between two other bundles of laminæ, the laminæ forming the central bundle being wider than the other laminæ and arranged so that each side edge of the central bundle projects by the corresponding edges of the other bundles, windings on each of said field poles, and a winding support extending between each adjacent pair of field poles, each winding support engaging the central bundle of the corresponding field pole.

[Claims 6 to 8 not printed in the Gazette.]

901,441. SELECTIVE SIGNALING SYSTEM. ORLANDO W. HART, Fall River, Mass. Filed Aug. 10, 1907. Serial No. 388,024.



1. A transmitting device; a distant signal at a station; means controlled by said transmitting device, to set the signal; means whereby the signal becomes locked when the signal is set; means operatively connected with said locking means whereby a sign characteristic of the station may be made when the signal is set and so locked; manual means at the station to restore all of said above mentioned apparatus to normal position.

2. A transmitting device; a distant signal; a rod operatively connected to said signal; means controlled by said transmitting device to cause the signal to become set; a bolt to engage, and means to cause said bolt to engage, said rod when the signal is set; means operatively connected to said bolt, whereby when said bolt engages the rod after the signal is set, electrical impulses characteristic of the station may be sent; means whereby said impulses may be received, and cause signs corresponding to the impulses to be made.

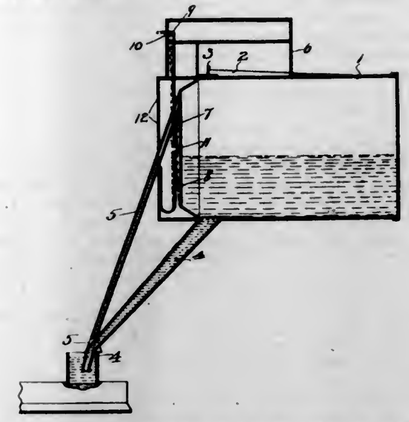
3. A transmitting device; a distant signal; a rod operatively connected to said signal; means controlled by said transmitting device to cause the signal to become set; a locking bolt to engage, and means to cause said bolt to engage, said rod when the signal is set; means operatively connected to said bolt, whereby when said bolt has engaged the said rod after the signal is set, electrical impulses characteristic of the station may be sent; a registering device and connecting means, whereby said impulses may be received, and cause signs corresponding to the impulses to be made.

4. A signal; a rod connected therewith; means to hold the signal in normal position; means to set the signal; means to lock the rod when the signal is set; means whereby a sign characteristic of the station may be made; mechanical means at the station to restore said apparatus to normal position.

5. A signal; a rod connected therewith; means to hold the signal in normal position; means to set the signal; a bolt to lock the rod when the signal is set; means operatively connected to said bolt, whereby a sign characteristic of the station may be made; means to restore said apparatus to normal position.

[Claims 6 to 53 not printed in the Gazette.]

901,442. LIQUID-DISPENSING CAN. SYDNEY P. HASEY, North Belgrade, Me. Filed Nov. 9, 1907. Serial No. 401,457.



1. In a liquid dispensing can, a diaphragm secured in the can and subject to atmospheric pressure, and a rod secured at one end to the can and having its other end extending outside thereof, said rod being substantially parallel with the diaphragm and loosely engaging one of its sides.

2. In a liquid dispensing can, a diaphragm subject to atmospheric pressure secured in the can, and a spring actuated rod secured at one end to the can engaging said diaphragm and having its free end extending outside of the can, said rod being substantially parallel with said diaphragm, substantially as shown and described.

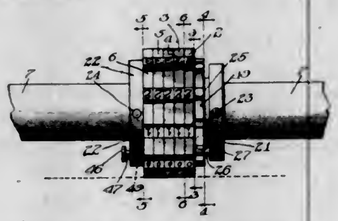
3. In combination with a can having a dispensing spout, and a vent tube, a diaphragm subject to atmospheric pressure secured in the can, and a spring actuated rod secured at one end to the can engaging said diaphragm and having its free end extending outside of the can, said rod being substantially parallel with said diaphragm, substantially as shown and described.

901,443. NUMBERING-MACHINE. IVAR HASSELSTROM, Chicago, Ill. Filed Apr. 15, 1907. Serial No. 368,139.

1. In a numbering machine, a series of number wheels, means for moving same in serial order, and means for rendering each wheel inactive in turn, beginning with the wheel of the highest denomination of the series, after its numbers have been exhausted.

2. In a numbering machine, a series of number wheels mounted to move in serial order, means for revolving said wheels in order, means for rendering inactive the wheel last to be moved after it has made one complete revolution and then rendering the wheel next thereto inactive in the same manner and so on, and means for disconnect-

ing the first wheel of the series from coöperative engagement with the other wheels when the latter have all been rendered inactive.



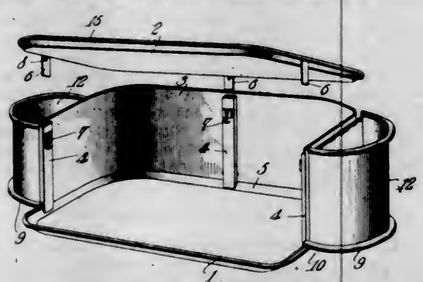
3. In a numbering machine, the combination with a series of number wheels mounted to revolve in serial order, of means for actuating the first wheel of the series, means for actuating the remaining wheels by said first wheel, said last mentioned means consisting of perforations and plungers adapted to engage same, one of said perforations 29 having a counterbore with a hub therein limiting the outward movement of the plunger and providing also a substantial bearing therefor.

4. In a numbering machine, a series of number wheels mounted for movement in serial order, means for revolving the first of said wheels consisting of the suitably actuated pawl and ratchet mechanism, each of the remaining wheels provided with perforations 29; each wheel, save the last, having a perforation with a counterbore 30 and a hub 31, a plunger mounted in said perforation and hub, said plunger provided with a head 33; a spring 34 arranged to bear against said head and thereby keep the plunger normally retracted, and the ball 27 and incline 26′ mounted to actuate said plungers in regular order.

5. In a numbering machine, the combination with a series of number wheels constructed and arranged to move in serial order, of means for moving same, means automatically locking each wheel, in its turn, out of coöperative action with the remaining wheels after its numbers have been exhausted; said means consisting of the hollow spring-pressed plungers 38 mounted in openings 29; the disk 22 having an opening 46 adapted to receive said plunger 38 of the last wheel, and the remaining plungers 38 being movable successively into the spaces previously vacated, as set forth.

[Claim 6 not printed in the Gazette.]

901,444. TRAY. OTTO HEBESTREIT, Colorado Springs, Colo. Filed June 6, 1908. Serial No. 437,166.

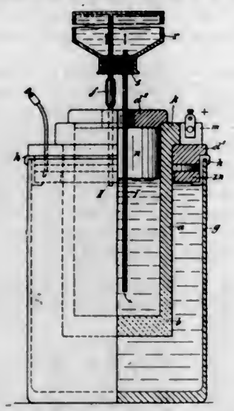


1. A waiter embodying a tray provided with lateral extensions and with an upstanding shield, a compartment supported by the extensions, means for holding the compartments against accidental disconnection from the shield, and a second tray supported by the shield.

2. A waiter embodying a tray provided with lateral extensions and an upstanding shield, compartments supported by the extensions, a second tray supported by the shield, and means for holding the compartments and second tray detachably connected.

3. A waiter embodying a tray provided with lateral extensions and with an upstanding shield, flanges carried by the shield, compartments supported by the extensions and having lips to interlock with the flanges, a second tray supported by the shield, and means for holding the second tray and shield detachably assembled.

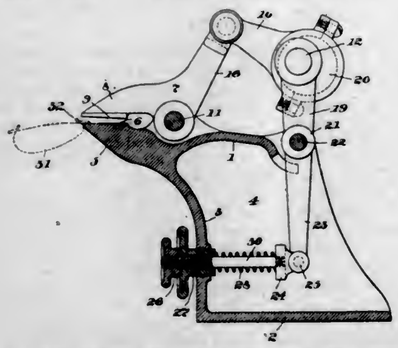
901,445. PRIMARY BATTERY. KARL HEINTZ, Munich, Germany. Filed Dec. 26, 1907. Serial No. 408,128.



1. A galvanic cell of the Bunsen type, containing a mixture consisting of a sulfuric acid solution of about 30% or more and nitric acid, said mixture being separated from the exciting solution by means of a carbon diaphragm.

2. A galvanic cell of the Bunsen type, containing a mixture consisting of a sulfuric acid solution of about 30% and nitric acid, an auxiliary concentrating solution consisting of concentrated sulfuric- and nitric acid, and a separating carbon diaphragm between said mixture and the exciting solution.

901,446. WELT-BEATER. JOHN J. HEYS, Lynn, Mass., assignor, by mesne assignments, to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed Oct. 19, 1905. Serial No. 283,466.



1. A welt beating machine comprising a welt support, a cushioned beater, and a single regulating device for varying the approach stroke of the beater and the cushioning effect of its blows upon the welt.

2. A welt beating machine comprising a welt support, a beater mounted adjacent thereto and coöperating therewith, a rotary member having a movable support connected with and to operate the beater, and means for changing the position of the support of the rotary member to vary the distance between the beater and the welt support.

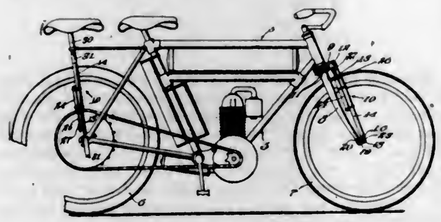
3. A welt beating machine comprising a welt support, a beater coöperatively mounted adjacent thereto, a rotary member connected with and to operate the beater, and means for changing bodily the position of the rotary member to vary the distance between the welt support and the beater, and for varying the cushioning effect of the blows of the beater upon the welt.

4. A welt beating machine comprising a welt support, an oscillatory beater, a rotary member connected with and to operate the beater, pivotal supports for said beater and member respectively, and means for changing the relative positions of the pivotal supports of the rotary member and beater to adjust the beating.

5. A welt beating machine comprising a welt support, a beater, means for operating the beater including a shaft and transmitting means intermediate the shaft and beater, means for operating the shaft, and means for changing the position of said shaft to adjust the distance between the welt support and the beater.

[Claims 6 to 9 not printed in the Gazette.]

901,447. SPRING BICYCLE-FORK. EDWARD W. HOAG and CHARLES R. KITTLE, Los Angeles, Cal. Filed May 5, 1908. Serial No. 430,915.



1. A spring fork for a wheel, comprising a base member, a resilient member affixed at its upper end to said base member and movably connected at its lower end to said base member, the lower end of said resilient member being further connected to the wheel axle at its lower point of connection to said base member.

2. A spring fork for a wheel, comprising a base member, a resilient member affixed at its upper end to said base member and at its lower end to the wheel axle, and a toggle connection between the point of connection to the wheel axle and said base member.

3. A sprnig fork for a wheel, comprising a base member, a spring member affixed to the upper end and movably connected to the lower end of said base members and also connected to the wheel axle at its point of attachment to said base member at the lower end, said spring member composed of a pair of inter-sliding parts, and resilient means to oppose the movements of said parts in both directions.

4. A spring fork for a wheel, comprising a rigid base member, a spring member secured to the upper end of said base member and also movably secured thereto at the lower end, and also connected to the wheel axle at its point of attachment to said base member, at the lower end, said spring member comprising a pair of intersliding members, resilient means to oppose the compression of said intersliding members, and a resilient means of lesser strength to oppose the extension of said inter-sliding members.

901,448. FUSE-HOLDER. BRYSON D. HORTON, Detroit, Mich., assignor to Horton-Massnick Co., Detroit, Mich., a Corporation of Michigan. Filed Aug. 29, 1904. Serial No. 222,565.

1. In a fuse holder, a casing, a fuse therein, a spring secured to the exterior of the casing, and a transverse connection between said spring and the fuse serving to hold the spring in contact with the exterior of the casing while the fuse therein is unbroken.

2. The combination with a fuse holder having a fuse therein, of a flat spring secured to the exterior of the holder, and a wire secured to the free end of the spring and the fuse.



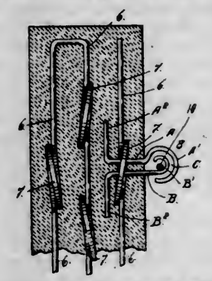
3. The combination with a fuse holder having a fuse therein, of a flat spring secured to the exterior of said holder, the free end of said spring being provided with an insulated portion, and a connection between the fuse and the insulated portion of the spring.

4. The combination with a fuse holder having a fuse therein, of a spring actuated indicator secured to the holder, and a wire provided at one end with a loop encircling the fuse and having its other end secured to the indicator.

5. The combination with a fuse holder having a fuse therein, of a spring actuated indicator secured to the holder, and a wire provided at one end with a plate of insulating material encircling the fuse and having its other end secured to the spring actuated indicator.

[Claims 6 to 18 not printed in the Gazette.]

901,449. METAL-REINFORCED CONCRETE POST. LEMUEL J. HUSTED, Denver, Colo., assignor to The National Rural Route Advertising Company, Denver, Colo. Filed Sept. 9, 1907. Serial No. 391,914.



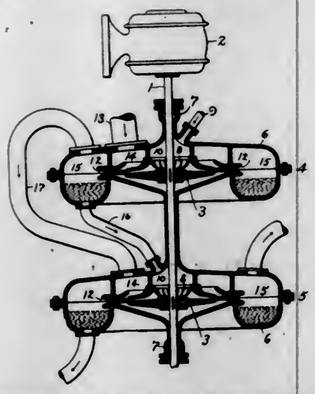
A cement or concrete post, provided with a metal reinforcement provided with coils at suitable intervals forming anchoring loops or eyes, and keepers each consisting of two members having angle portions embedded within the post and passing through an anchoring loop or eye, whereby the said keepers are prevented from being pulled out, the said keeper members having exteriorly protruding hook-shaped parts bent in opposite directions and lying in the same plane, the one being located within the other whereby space is left to permit the passage of the fence wire, substantially as described.

901,450. MULTISTAGE CENTRIFUGAL PUMP. HULDREICH KELLER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Jan. 23, 1907. Serial No. 353,616.

1. In a device of the character described having a series of pumps or stages, the combination of a conduit supplying active fluid to the first pump or stage, a conduit supplying a less dense fluid to said stage to be compressed or condensed by the active fluid, means for passing said active fluid from one stage to the next, means for conducting the fluid acted upon from each stage to the next so that the less dense fluid is successively acted upon by the same body of active fluid, and means for driving the device.

2. A device of the character described having a series of pumps or stages, means for passing the active fluid through the several stages in succession, means for conducting the fluid acted upon from each stage to the next, and means for driving the device.

3. In combination, a shaft, a series of impellers mounted on the shaft, casings for the impellers, devices for supplying active fluid to the impellers to pass through them in succession, chambers in the casings adjacent the impellers for the fluid acted upon, means connecting said chambers in successive order, and means for rotating the shaft and impellers.

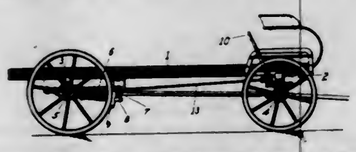


4. A pump having a series of stages and a shaft common to the several stages, each stage comprising an impeller mounted on the shaft, and a chambered casing inclosing the impeller, means for supplying the first stage with active fluid and the fluid to be acted upon, devices for conveying the fluids separately from each stage to the next succeeding stage to permit the successive use of the active fluid in the several stages and a step-by-step compression or condensation therein of the fluid acted upon, and means for driving the shaft and impellers.

5. In combination, a shaft, impeller wheels mounted on the shaft, a casing for each wheel, separate supply chambers in each casing for the active fluid and the fluid to be acted upon, a chamber in each casing receiving the discharge from the wheel and having receptacles in which the two fluids separately collect, means for causing the active fluid to exert an ejector effect upon the other fluid as said active fluid is discharged from the impeller wheel into the receiving chamber, conduits connecting the active fluid receptacle of each casing with the corresponding supply chamber of the next casing so that said fluid is successively employed in the several stages, and conduits connecting the second receptacle of each casing with the corresponding supply chamber of the next casing to effect a step-by-step compression or condensation of fluid acted upon.

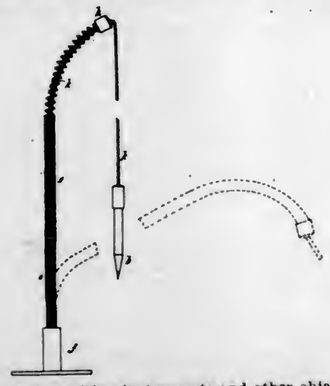
[Claims 6 and 7 not printed in the Gazette.]

901,451. VEHICLE-BRAKE. JAMES K. KENDRICK, Germantown, Cal. Filed Feb. 5, 1908. Serial No. 414,332.



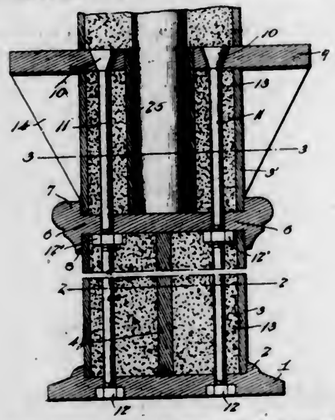
A brake for vehicles comprising the combination of a wagon bed, a freely turnable front and rear wheel truck thereon, forwardly projecting arms disposed on said rear truck and being freely turnable therewith, a brake beam flexibly swung by chains from the ends of said arms, a brake lever secured on said wagon bed, a brake rod operatively connected at one end with said lever, a triangular plate pivotally secured at its apex to the other end of said rod, levers fulcrumed on said projecting arms, links pivotally connected with the corners of said plate and with said levers, links connected with said levers and said brake beam, and turn-buckles in said last named links, as set forth.

901,452. HOLDER FOR WRITING AND SIMILAR INSTRUMENTS OR TOOLS. WALTHER KUNDE, Dresden, Germany. Filed Nov. 4, 1907. Serial No. 400,540.



A holder for writing instruments and other objects comprising in combination a vertically socketed foot piece, a helically wound upright projecting vertically above said foot piece and formed with closely lying convolutions for the greater part of its length and more widely spaced convolutions for the remainder, the latter part being also curved away from the perpendicular, and a flexible member traversing said upright and extending beyond the end thereof for attachment of the article thereto.

901,453. COLUMN. JOHN LALLY, Boston, Mass. Filed Aug. 22, 1907, Serial No. 389,638. Renewed Aug. 4, 1908. Serial No. 446,960.



1. A column comprising a casing, bolts extending lengthwise of the column, and a wrought-iron column cap embodying a crown plate and braces therefor held in place by said bolts.

2. A column comprising a casing, bolts extending lengthwise of the column, and a wrought-iron column cap embodying a crown plate held in place by said bolts, and braces held between the crown plate and the body of the column.

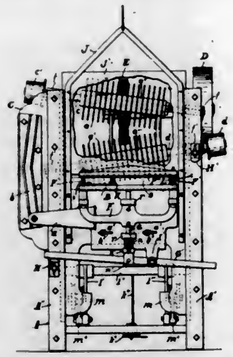
3. A column comprising a casing, a filling therefor, a base on which the casing rests, a superimposed rest, a cruciform core extending from the base to the superimposed rest, and means for tying the base and rest together.

4. A column comprising a casing, a filling therefor, a base, a cap rest mounted on the casing, a cruciform core embedded in the filling and extending from the base to the cap rest, a cap supported on the rest, and bolts extending lengthwise of the column, embedded in the filling and holding the cap anchored on the column.

5. A column comprising a casing, a filling therefor, and a cap supported on the column and embodying a crown plate and brackets for said plate having portions thereof embedded in the filling.

[Claims 6 to 12 not printed in the Gazette.]

901,454. DOVETAILING-MACHINE. AUGUST LASANCE, Cincinnati, Ohio. Filed Sept. 18, 1905. Serial No. 279,028.

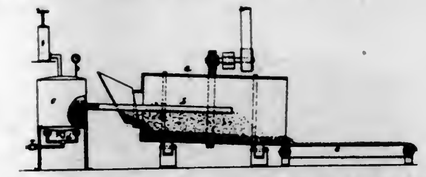


1. A dove tailing machine comprising a reciprocating work-supporting table, cutter shafts arranged in substantially a common plane parallel to the plane of reciprocation of the table, said cutter-shafts inclined toward each other in said plane, and means to guide the table so that the path of its travel shall be normal to one shaft during part of its travel, and normal to the other during another part of its travel, so that the work shall be grooved at one angle by the cutters of one shaft, and at another angle by the cutters of the next shaft.

2. In a dove-tailing machine, the combination of a power shaft, a driven shaft, clutch mechanism mounted on said driven shaft and normally out of mesh, gearing intermediate of said power shaft and clutch mechanism whereby power is communicated to said driven shaft, a lug secured to the frame of the machine and normally registering with said clutch when the latter is out of mesh, but adapted to hold the clutch in operative position for a predetermined period, a feed table reciprocally mounted on the frame of the machine, means intermediate of the driven shaft and feed table whereby the latter is given movement when the clutch is in operative position, means connected with the table and engaging with a slot-way in the frame of the machine whereby the table is made to reciprocate at different angles, with cutters mounted on arbors inclining toward each other but in a common plane adjacent the path of reciprocation.

3. A dove-tailing machine comprising a power shaft, a driven shaft, means intermediate of the power shaft and driven shaft whereby power is communicated to the latter at predetermined intervals, a table mounted in the frame of the machine, mechanism intermediate of said driven shaft and the table whereby the latter is reciprocated, an arm connected with the table and the frame of the machine whereby the table is made to reciprocate at different angles, a lug secured to the frame of the machine and normally registering with the means intermediate of the power shaft and driven shaft but adapted to hold said means in operative position for a predetermined interval, and cutters mounted on arbors arranged at an incline to each other and in a common plane in proximity to the path of reciprocation of the table, in combination with clamping mechanism normally held in proximity to the table-top, and a lever connected with said clamping mechanism and adapted to reciprocate with the table whereby the relation of the clamping mechanism to the table-top may be altered at predetermined periods.

901,455. COATED FLAKES. FRANK LAUHOFF, Detroit, Mich. Filed Jan. 18, 1907. Serial No. 352,875.



1. The herein described process of producing unsaturated, coated thin cereal films or flakes, consisting of spraying the exterior surfaces of thin cereal films or flakes with a finely atomized mist or vapor.

2. In the process of producing thin unsaturated coated cereal films or flakes, agitating the flakes as a flocculent mass, and simultaneously applying a coating substance upon the exterior surfaces of the flakes, the coating substance being applied to the exterior surfaces of the flakes in the form of a thin atomized mist or vapor.

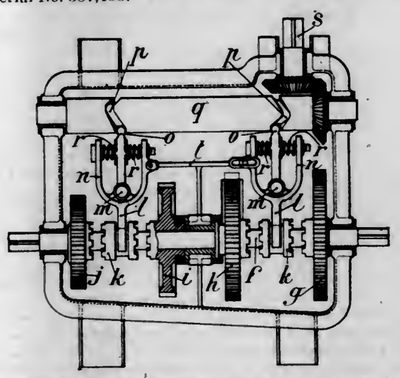
3. The herein described process of treating thin cereal films or flakes consisting of agitating and moving forward the flakes as a flocculent mass, and simultaneously applying a finely atomized mist or vapor to the exterior surface of the flakes while the flakes are being agitated and moved forward, and then slightly compressing the coated flakes into desired form.

4. In the process of coating thin cereal films or flakes agitating and moving forward the flakes in a loose flocculent mass and simultaneously spraying the coating substance upon the exterior surfaces of the flakes, the coating substance being applied to the flakes in the form of a thinly atomized mist or vapor.

5. As an article of manufacture unsaturated exteriorly coated thin cereal films or flakes.

[Claims 6 and 7 not printed in the Gazette.]

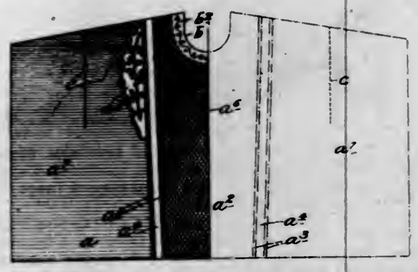
901,456. VARIABLE-SPEED GEARING. ACHILLE LOITRON, Plaine St. Denis, France. Filed Aug. 7, 1907. Serial No. 387,493.



Variable-speed gearing comprising a shaft two series of toothed wheels of progressive diameter, one series being loosely mounted upon the shaft, coupling clutches for coupling the loose toothed wheels with the shaft, forks for operating said clutches having two arms, and a guide arm

for said fork located between said two arms, a pin connecting the ends of the three arms, spiral springs upon said pin between each lateral arm and the guide arm, a connecting rod, connecting the forks of two adjacent clutches being slotted to permit a certain play to the forks and an operating shaft for the forks having guide grooves for the guide arms of said forks substantially as described and shown and for the purpose set forth.

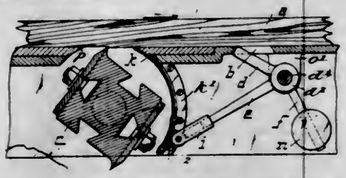
901,457. BURIAL-ROBE. HARRY T. LOOMIS, New York, N. Y., assignor to Morris Frank and Julius J. Lambert, New York, N. Y. Filed Feb. 19, 1908. Serial No. 416,645.



1. A burial robe composed of a sheet of textile material stamped to form a central or bosom portion and two side and body portions, the side and body portions being separated from the central or bosom portion by two parallel score or folding lines separated by a narrow space or strip, and the central or bosom portion being provided with a neck opening.

2. A burial robe composed of a sheet of textile material stamped to form a central or bosom portion and two side and body portions, the side and body portions being separated from the central or bosom portion by two parallel score or folding lines separated by a narrow space or strip, and the central or bosom portion being provided with a neck opening, and the side and body portions being provided with arm openings.

901,458. PROTECTING ARRANGEMENT FOR CUTTERS AND OTHER ROTARY APPARATUS. PER G. C. LUNDBERG, Wärnamo, Sweden. Filed Oct. 21, 1907. Serial No. 398,519.



1. A device of the class described comprising in combination, a work table provided with an opening for a cutting tool and a slot located in advance of said opening, a rotary cutting tool projecting through said opening to engage the work on said table, a circular shield for closing said opening, circular guides for said shield, a socket pivotally mounted on said shield, a shaft mounted beneath said table adjacent said slot, a hub mounted on said shaft and provided with a work actuated arm adapted to project through said slot into the path of said work, said hub having a shield lever longitudinally movable in said socket, and a weighted extension serving to normally throw said shield into a closing position and move said arm into the path of said work.

2. A device of the class described comprising in combination, a work table provided with an opening for a cutting tool and a slot located in advance of said opening, a rotary cutting tool projecting through said opening to engage the work on said table, a circular shield for closing said opening, circular guides for said shield, a socket pivotally mounted on said shield, a shaft mounted beneath said table adjacent said slot, a hub mounted on said shaft and provided with a work actuated arm adapted to project through said slot into the path of the work, said hub having a shield lever longitudinally movable in said socket, and means acting through said hub and serving to normally close said shield and throw said arm into said slot.

3. A device of the class described comprising in combination, a work table provided with an opening for a cutting tool and a slot located in advance of said opening, a movable cutting tool projecting through said opening to engage the work on said table, a shield for completing closing said opening, said shield lying wholly below said table when in an open position, guides for said shield, a socket mounted on said shield, a shield lever movably connected with said socket, a work actuated arm connected with said lever, and means connected with said arm and lever for completely closing said shield and maintaining said arm in the path of the work.

4. A device of the class described comprising in combination, a work table provided with an opening for a cutting tool, a movable cutting tool projecting through said opening to engage the work on said table, a shield for completely closing said opening, means actuated by the work for moving said shield into a position wholly below said table to open said opening, and means serving to normally throw said shield into a position to completely close said opening.

5. A device of the class described comprising in combination, a work table provided with an opening, a movable cutting tool projecting through said opening to engage the work on said table, a shield for completely closing said opening, automatic means serving to normally throw said shield into a position to completely close said opening, and means actuated by the work for throwing said shield into an open position wholly below said table.

901,459. COVER FOR TURBINE-BUCKETS. ALEXANDER F. MACDONALD, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 28, 1907. Serial No. 365,023.



1. An elastic fluid turbine comprising a plurality of buckets and a support therefor, in combination with a ribbon that is wound in layers around the ends of the buckets and forms a cover therefor.

2. An elastic fluid turbine comprising a plurality of buckets and a support therefor, in combination with a metal ribbon that is wound in layers around the ends of the buckets and forms a cover therefor, and means for securing the layers to the buckets.

3. An elastic fluid turbine comprising a plurality of buckets and a support therefor, in combination with a cover for the free ends of the buckets which is wound around the bucket ends in layers one on top of the other, and individual means for securing the cover in place at a plurality of points.

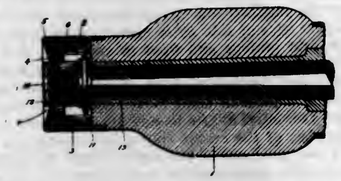
4. An elastic fluid turbine comprising a plurality of buckets and a support therefor, in combination with a cover for the buckets made of thin flexible and perforated material which is wound around the bucket ends, one turn on top of the other with the perforations registering, and securing means therefor which pass through said perforations.

5. An elastic fluid turbine comprising a plurality of buckets and a support therefor, in combination with a cover for the bucket ends made of thin metallic ribbon wound around the bucket ends one turn on top of and resting on the other, the said ribbon being perforated, and

tenons formed integral with the buckets which pass through the perforations, and are riveted over at their ends to secure the cover in place.

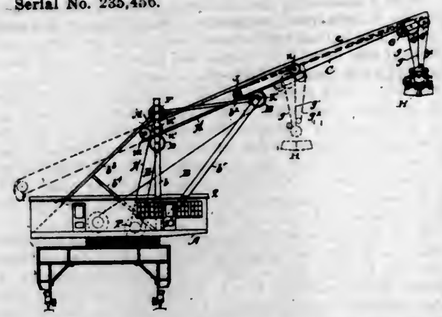
[Claims 6 to 9 not printed in the Gazette.]

901,460. AUTOMATIC OILER FOR VEHICLES. FEDELE T. MUSSO, Bowman, Cal. Filed Apr. 22, 1907. Serial No. 369,672.



A device of the character described comprising a spindle, a hub mounted thereon, a nut mounted on the end of said spindle, said hub having an annular band secured thereto and projecting beyond the outer end thereof, the outer portion of said band being internally screw-threaded and provided with a tightly fitting cap threaded therein and cooperating therewith to form an oil chamber within said band, an annular shoulder upon said cap contacting the outer edge of said band when the same is screwed within the latter, a depression in an outer face of said cap, a wrench engaging means carried by the outer face of said cap and positioned centrally within said depression and lying below the plane of the surrounding cap portion, said cap being provided within said wrench engaging means with an aperture normally closed by a removable screw-threaded plug, a felt washer disposed between the nut and the end of said hub and disposed between said oil chamber and the surface to be lubricated and adapted to retard the flow of lubricant therebetween.

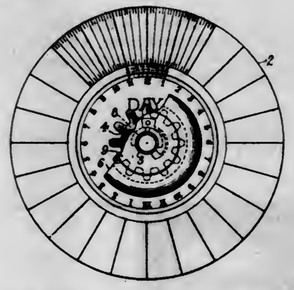
901,461. DERRICK. JOHN MCMYLER, Cleveland, Ohio, assignor to The McMyler Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 5, 1904. Serial No. 235,456.



1. The combination of a derrick frame, a sliding boom mounted thereon, ropes attached to said boom and passing over sheaves on the derrick frame, means for taking in and paying out said ropes, sheaves adapted to receive load supporting ropes at the end of the boom, guiding sheaves for said load-supporting ropes mounted intermediate the ends of the boom, and sheaves on the derrick frame adapted to receive the load-supporting ropes, said last mentioned sheaves being positioned so as to be nearer the outer end of the boom than the aforementioned sheaves which are mounted on the boom between the ends thereof and load-supporting ropes attached to a drum and passing over the sheaves on the derrick frame above mentioned as adapted to receive the same, and reeved about the said sheaves on the boom intermediate the ends thereof, and over and depending from the sheaves at the outer end of the boom, whereby the weight of a load may assist in moving the boom forward.

2. The combination of a derrick frame, a sliding boom mounted thereon, means for moving said boom backward and forward, sheaves at the outer end of the boom, sheaves intermediate the ends of the boom, sheaves on the derrick frame intermediate the above mentioned sets of sheaves, an operating drum, ropes passing over the sheaves on the outer end of the boom and depending directly therefrom and a load supported by said ropes, said ropes passing backward around the sheaves on the boom intermediate the ends thereof and then passing forward and around said sheaves on the derrick to the operating drum.

901,462. WATCHMAN'S TIME-REGISTER. ABRAHAM A. NEWMAN, Chicago, Ill. Filed Dec. 14, 1907. Serial No. 406,423.



1. In a time register, the combination of an engaging member having angular peripheral projections, adapted to be rotated by a clock-driven arbor, a record dial having a central aperture provided with angular indentations corresponding in size and contour to the angular projections on the said engaging member, and means for securing the said dial in position on the engaging member.

2. In a time register, the combination of a supporting member adapted for connection with a clock-driven arbor, an engaging member rigidly secured to the former member and having peripheral projections, adapted to receive a suitably apertured record dial, and removable means for holding the dial in position.

3. In a time-register, the combination of a supporting member adapted for connection with a clock-driven arbor, an engaging member rigidly secured to the former member and having uniform peripheral projections, adapted to receive a suitably apertured record-dial, and means for retaining the dial in position.

4. In a time-register, the combination of a supporting member having a tubular neck adapted to fit over a clock-driven arbor, an engaging member having rigid connection with said neck and concentric therewith, said engaging member being provided with uniform projections from its periphery, and a cap removably seated over said engaging member.

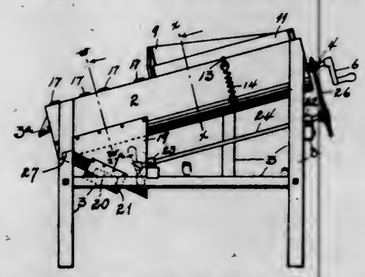
5. In a time register, the combination of a supporting member having a tubular neck adapted to fit a clock-driven arbor, an engaging member in rigid connection with said neck, and a cap covering said engaging member and having a catch yieldingly engaging said neck.

[Claims 6 and 7 not printed in the Gazette.]

901,463. CORN-SHELLER. ALBERT R. LUDINGTON and HENRY K. OLMSTED, Galesburg, Ill. Filed Mar. 23, 1908. Serial No. 422,808.

1. A corn sheller comprising a casing, a toothed cylinder revolubly mounted therein, a longitudinally disposed shelling bar, and a sectional spring-actuated cover adapted for movement within said casing, one edge of the cover sections being flared upwardly.

2. A corn sheller comprising a casing, a toothed cylinder revolubly mounted therein, a longitudinally disposed shelling bar also therein, a sectional cover hinged to one side of the casing, one of its portions adapted to have move-



ment therein, a gate pivoted to the hinged edge of one of the sections of said sectional cover, a hook fixed to the free edge of said section, and a yielding spring fixed to the casing and adapted to engage said hook.

901,464. POSTAL MAILING-CARD. FRANK D. ORMSTON, New York, N. Y. Filed May 14, 1908. Serial No. 432,757.



1. A mailing card comprising a back, end flaps hingedly connected thereto, spaced plates hingedly connected to the end flaps, and a cover to protect said plates when the card is folded.

2. A mailing card comprising a back, end flaps hingedly connected thereto, spaced plates hingedly connected to the end flaps, and a cover hingedly connected to one of the end flaps and adapted to be folded down over the faces of the plates.

3. A mailing card comprising a back, end members hingedly connected thereto and spaced plates hingedly connected to the end members.

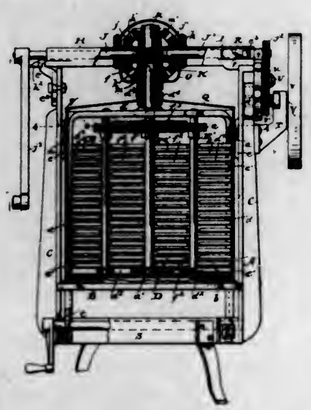
4. A mailing card comprising a back, end members hingedly connected thereto, spaced plates hingedly connected to the end members, said end members having slots between the plates, a strip slidably disposed in said slots, and a figure carried by said strip.

5. A mailing card comprising a back, end members hingedly connected thereto, spaced plates hinged to the end members, said end members having vertical slots between the plates, a strip slidably disposed in said slots, and a figure carried by said strip, said figure being of a height greater than the length of said slots.

901,465. MASHING, MIXING, AND CHURNING MACHINE. ALVIN C. PANCOAST, Cleveland, Ohio, assignor of one-fourth to William G. Pancoast, Cleveland, Ohio. Filed Mar. 14, 1907. Serial No. 362,336.

1. In a machine of the character specified, the combination of a cylindrical receptacle, a beater frame centrally mounted therein upon a vertical axis and comprising top and bottom members and vertical members which lie close to the vertical wall of said receptacle, three vertical beater shafts rotatably mounted in said frame, the axis of one of said beater shafts being coincident with the axis of the beater frame, horizontal beater arms secured to said three shafts, and mechanism for simultaneously rotating the central beater shaft in one direction and the beater frame and the two outer beater shafts in the opposite direction but at different speeds.

2. In a machine of the character specified, the combination of a receptacle having a bearing secured centrally in its bottom, a beater frame rotatably mounted upon said bearing, a vertical shaft mounted in said frame on an axis coincident with the axis of the frame and projecting above said frame, two other vertical shafts mounted in said frame on opposite sides of its axis of rotation, each of said shafts being provided with a plurality of horizontal beater arms having inclined top and bottom faces, pinions fixed to the upper ends of said outer beater shafts, a gear meshing with said pinions and fixed to the upper end of the central shaft,—said gear and pinions being a substantial distance below the top member of said frame, and said shafts being capable of being moved endwise in their bearings, said two outer shafts having stepped bearings in the lower member of the beater frame, and mechanism engaging with the upper end of the central shaft for rotating it, and mechanism engaging said beater frame for rotating it in the opposite direction.



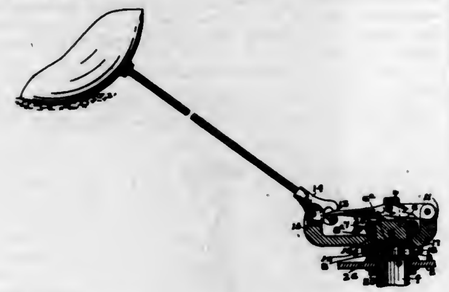
3. In a machine of the character specified, the combination of a cylindrical receptacle, a beater frame rotatable therein and having vertical members which lie close to the vertical side of said receptacle and have their inner faces beveled away from the said side, a vertical shaft rotatably mounted in said frame on an axis coincident with the axis of the frame, two other vertical shafts rotatably mounted in said frame on opposite sides of its axis, each of said three shafts being provided with a plurality of beater arms, a gear secured to the central beater shaft, relatively small pinions secured to the other beater shafts in mesh with said gear, and mechanism for independently rotating the beater frame and said central shaft.

4. In a machine of the character specified, the combination of a cylindrical receptacle having a discharge opening near its bottom, and a cap for closing said opening, a beater frame rotatable in said receptacle and having vertical members which lie close to the vertical side of said receptacle and whose outer faces are beveled away from said side, and having a bottom member which lies close to the bottom of said receptacle and has its lower face beveled away from said bottom but in different directions on opposite sides of the axis of the frame, a vertical shaft rotatably mounted in said frame on an axis coincident with the axis of the frame, two other vertical shafts rotatably mounted in said frame on opposite sides of its axis,—each of said three shafts being provided with a plurality of beater arms,—a gear secured to the central beater shaft, and relatively small pinions secured to the other beater shafts and meshing with said gear, a mechanism by which the beater frame may be rotated in either direction, and the central shaft in the opposite direction.

5. The combination of a vertically movable platform, fixed vertical standards on opposite sides thereof and provided each with a vertical groove, a receptacle resting upon said platform and having laterally extended lugs engaging said groove, a rotatable beater frame within said receptacle and having a boss on its upper member, a shaft mounted in said frame on an axis coincident with the axis of the frame and projecting through said boss, two other vertical shafts mounted in said frame, a plurality of horizontal beater arms secured to each of said shafts, intermeshing gears and pinions secured to said three shafts, mechanism for rotating the central shaft, mechanism for rotating said frame, and mechanism for raising and lowering said platform to cause the engagement and disengagement of said shaft and frame respectively with the two rotating devices by which they are turned.

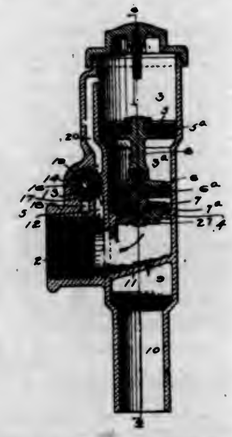
[Claims 6 to 8 not printed in the Gazette.]

901,466. BALL-VALVE FOR WATER-CLOSETS. THOMAS F. PAYNE, Pittsburg, Pa. Filed Nov. 3, 1906. Serial No. 341,832.



The combination of a tank nipple, a loose collar having an umbrella and adapted to carry the valve, the valve lever, and ball lever, and devices for holding the collar loosely on the tank nipple.

901,467. FLUSHING-VALVE. THOMAS F. PAYNE, Pittsburg, Pa. Filed Oct. 3, 1907. Serial No. 395,677.



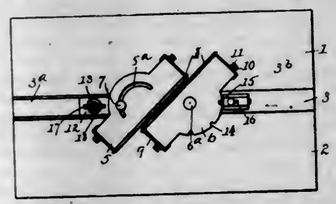
1. In a flushing valve, the combination of a valve chamber having an imperforate side wall, a piston valve having heads of different areas spaced apart, a passage leading to the valve chamber in rear of valve head of greater area, an inlet, an outlet, a plug having a cavity registering in all positions with the passage leading to the valve chamber, and said cavity having a port arranged in one position to partially uncover the inlet and in another position to completely open the outlet.

2. In a flushing valve, the combination of a valve chamber, a piston valve operating therein, a passage leading to the valve chamber, an inlet, an outlet, and a plug having a cavity registering in all positions with said passage, and said cavity having a port arranged in one position to partially uncover the inlet and in another position to completely open the outlet.

3. In a flushing valve, the combination of a valve chamber, a piston valve operating therein, a passage leading to the valve chamber, an inlet, an outlet, and a plug having a cavity registering in all positions with said passage, and said cavity having a port registering in one position with the inlet and in another position with the outlet, and an operating mechanism for manually controlling the opening of said plug, having automatic means for closing said plug and means for adjusting the amount of said closing movement.

4. In a flushing valve, the combination of a valve chamber, a piston valve operating therein, a passage leading to the valve chamber, an inlet, an outlet, and a plug having a cavity registering in all positions with said passage, and said cavity having a port registering in one position with the inlet and in another position with the outlet, and an operating mechanism connected with said plug having means for adjusting the amount of movement of the plug.

901,468. MITER-BOX. JOHN L. PRINGLE, New Britain, Conn. Filed Oct. 27, 1905. Serial No. 284,642.



1. A bed and a back-rest, a saw guide including two separate members each pivotally secured to the upper edge of the rest, means for swinging said members in a horizontal plane, and means for securing them in different positions of adjustment.

2. A bed and a back-rest, a saw guide secured to the upper edge of the rest and including two bases pivotally mounted to swing in a horizontal plane on the rest, and a wing secured to each base and each swinging on a horizontal pivot.

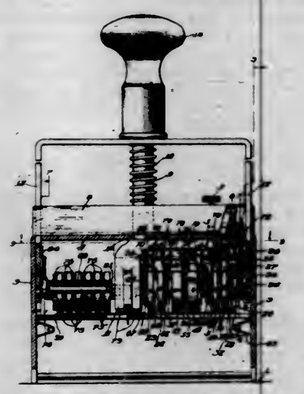
3. A bed and a back-rest, a saw guide including two bases mounted to swing in a horizontal plane on the rest, means for securing said bases in different positions of adjustment, a wing secured to each base and swinging on a horizontal pivot, and means for securing each of the wings in different positions of adjustment.

4. A bed, a back-rest supported thereby, an opening in said back-rest gradually widening from the top downward, a saw guide mounted adjacent to said opening and consisting of two bases pivotally mounted to swing in a horizontal plane on the upper edge of the rest, a wing secured to each base to swing on a horizontal pivot, means for securing the wings in different positions of adjustment, and means for varying the distance between the two members of the guide.

5. A bed, a back-rest supported thereby, an opening depthwise through the back-rest, a saw guide mounted adjacent to said opening and including two bases pivotally mounted on the edge of the back-rest to swing in a horizontal plane, wings secured to the bases to swing on a horizontal pivot, means for sliding the base of a saw guide toward and from the other base, and means for securing said base against sliding movement.

[Claims 6 to 12 not printed in the Gazette.]

901,469. TIME-STAMP. FREDERICK PURDY, Chicago, Ill. Filed Oct. 24, 1904. Serial No. 229,869.



1. The combination in a stamp, of a reciprocating frame, time printing means carried thereby, a motor for automatically varying the character of the impression made by said means, number printing means carried by the reciprocating frame, and automatic means for varying the character of the impression made thereby.

2. The combination in a stamp, of a reciprocating frame, time printing means carried thereby, a motor for automatically varying the character of the impression made thereby, number printing means carried by the reciprocating frame, and means operated by the making of an impression for automatically varying the character of the impression made by said number printing means.

3. The combination in a time stamp, of a reciprocating frame, time printing means carried thereby, a motor for automatically varying the character of the impression made thereby, number printing means carried by the reciprocating frame, means operated by the impression movement of the stamp for automatically varying the character of the impression made by said number printing means, and means for automatically inking said time and number printing means.

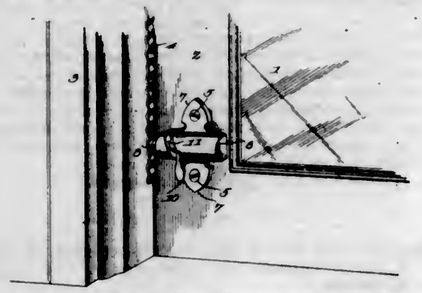
4. The combination in a stamp, of a reciprocating frame, time printing means carried thereby, a motor for automatically varying the character of the impression made thereby, number printing means carried by the reciprocating frame, means for automatically varying the character of the impression made thereby, and pads normally out of engagement with said time and number printing means for automatically inking the same between successive operations of the stamp.

5. The combination in a stamp, of a reciprocating frame, a motor, movable time printing means carried by said reciprocating frame operated by said motor and separable therefrom in making an impression, number printing means carried by said reciprocating frame and movable with said time printing means, and means operated by the impression movement for automatically varying the character of the impression made by said number printing means.

[Claims 6 to 9 not printed in the Gazette.]

901,470. SASH-LOCK. WILLIAM D. RANKINS, Modesto, Cal. Filed June 27, 1904. Serial No. 214,361.

In a device of the kind described, a keeper, a lock comprising a casing provided with a cylindrical recess therein adapted to receive a bolt, and a cam groove extending therethrough and further provided with a T-slot at one end of said cam groove arranged parallel with the axis of said cylindrical recess, a bolt held in said cylindrical recess, a spring in said recess arranged to normally press said bolt outward, a handle attached to said bolt projecting outward from the casing arranged to lie in said slots, said handle being arranged to force said bolt into positive engagement with said keeper by means of said cam slot, to permit spring pressed frictional engagement



of said bolt with said keeper when lying in one end of said T-slot, and to permit the freeing of said bolt from said keeper when drawn into the opposite end of said T-slot.

901,471. MOLDING APPLIANCE. ALFRED T. RASMUSSEN, La Crosse, Wis. Filed Feb. 1, 1908. Serial No. 413,857.

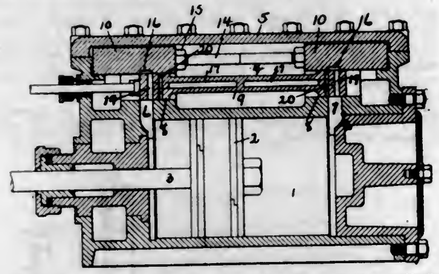


In a molding appliance, the combination with a flask having a mold therein and means to support said flask; of a plate adapted to be seated on said flask, said plate having a bore registering with the mold, an air or steam conveying tube secured to the plate, a valve casing at the upper end of the tube, a seat at the lower end of the valve casing, a valve adapted to coöperate with said seat, a stem extending upwardly from the valve, a stuffing box for the upper end of the casing, a spring surrounding the stem and resting upon the stuffing box, an adjusting nut threaded onto the upper end of said stem adapted to regulate the tension of the spring, means to convey air or steam into the valve casing above the valve, a socket to movably receive the tube and a knob at the upper end of the stem to receive pressure, whereby the plate may be lowered into engagement with the flask and the valve moved from its seat.

901,472. STEAM-ENGINE. GEORGE E. RIBLET, Erie, Pa. Filed Oct. 24, 1906. Serial No. 340,249.

1. In a steam engine the combination of the cylinder; the piston operating therein; a storage chamber; and devices connecting the storage chamber and the cylinder during the exhaust stroke, disconnecting them and again connecting them during the power stroke.

2. In a steam engine the combination of the cylinder; the piston operating therein; a storage chamber; and devices connecting the storage chamber and the cylinder during the exhaust stroke, disconnecting them and again connecting them during the power stroke when the cylinder pressure approximates the storage chamber pressure.



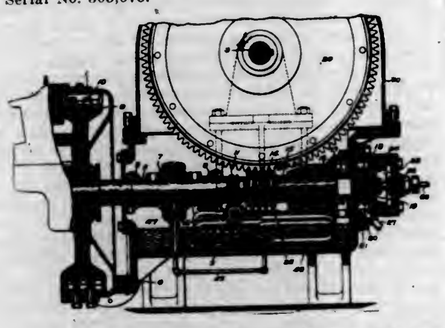
3. In a steam engine the combination of the cylinder arranged to take steam at both ends; a piston operating therein; storage chambers, one for each end of the cylinder; and devices connecting the storage chamber at each end of the cylinder with its end of the cylinder during the exhaust stroke of its end of the cylinder; disconnecting the storage chamber and again connecting the storage chamber during the power stroke of its end of the cylinder.

4. In a steam engine the combination of the cylinder arranged to take steam at both ends; a piston operating therein; storage chambers, one for each end of the cylinder; and devices connecting the storage chamber at each end of the cylinder with its end of the cylinder during the exhaust stroke of its end of the cylinder, disconnecting the storage chamber and again connecting the storage chamber during the power stroke of its end of the cylinder at a point in the power stroke when the cylinder pressure approximates the storage chamber pressure.

5. In a steam engine the combination of the cylinder; a piston operating therein; a storage chamber; and a valve controlling the exhaust from the cylinder, controlling the storage chamber for connecting the same to the cylinder during the exhaust stroke, disconnecting it and again connecting it during the power stroke.

[Claims 6 to 21 not printed in the Gazette.]

901,473. POWER-TRANSMITTING MECHANISM. RICHARD H. RICE, Swampscott, and FREDERIC R. C. BOYD, Lynn, Mass., assignors to General Electric Company, a Corporation of New York. Filed Mar. 9, 1906. Serial No. 305,075.



1. In an apparatus of the character described, the combination of a motor, a shaft driven thereby, a secondary or driven shaft, gearing between the shafts, a bearing for receiving the thrust of the gearing on the motor-driven shaft comprising means for adjusting the gear upon said shaft, and a conduit for introducing fluid under pressure to the thrust bearing and continuously maintaining a fluid film between its blocks.

2. In an apparatus of the character described, the combination of a motor, a shaft driven thereby, a secondary or driven shaft, gearing between the shafts, a means for adjusting the gear on the motor-driven shaft, a thrust bearing for the motor-driven shaft, a conduit for introducing lubricant under pressure to the thrust bearing and continuously maintaining a fluid film between its blocks, one or more conduits for introducing lubricant to the gearing, and means for preventing the lubricant delivered to the gearing and the thrust bearings from mingling.

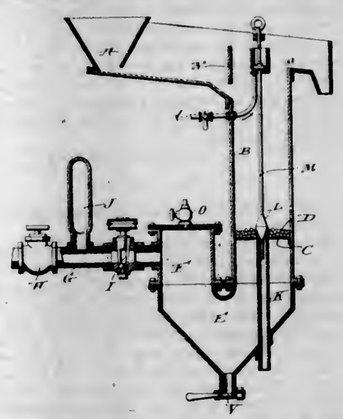
3. In an apparatus of the character described, the combination of a frame or support, a driving shaft, a driven shaft, a gear splined on the driving shaft, a gear on the driven shaft meshing therewith, a sleeve for longitudinally adjusting the gear on the driving shaft, a bearing block carried by the sleeve, an adjustable block carried by the frame or support, and a conduit for introducing fluid under pressure between the blocks and maintaining a fluid film therebetween.

4. In an apparatus of the character described, the combination of a frame or support, a driving shaft mounted thereon, a driven shaft, a gearing for transmitting motion from the driving to the driven shaft, a casing inclosing one of the gears to keep a body of lubricant in contact therewith for lubricating and cooling purposes, there being an opening in the top of the casing through which the other gear projects to mesh with the first gear, a conduit for supplying lubricant to the casing, and means for forcing lubricant through the conduit and casing.

5. In an apparatus of the character described, the combination of a frame or support, a driving shaft, a worm and worm wheel for transmitting motion from the driving to the driven shaft, a shell mounted on the frame which surrounds the shaft and supports one end thereof, a casing or projection carried by the shell which incloses the worm to keep lubricant in contact therewith for lubricating and cooling purposes, there being an opening in the casing for the worm gear to pass through into engagement with the worm, and a conduit for supplying lubricant to the casing or projection.

[Claims 6 to 13 not printed in the Gazette.]

901,474. APPARATUS FOR SEPARATING AND CLASSIFYING MINERALS. ROBERT H. RICHARDS, Boston, Mass. Filed Aug. 2, 1905. Serial No. 272,349.



1. In an apparatus for the treatment of minerals and in combination, a vertically elongated chamber having near its top an inlet for mingled water and mineral substances; a water outlet for said chamber at a higher level than said inlet; a permeable bed in the lower part of said chamber; a chamber below said bed; a water inlet beneath said bed communicating with a source of water under pres-

sure; and means for opening and closing said water inlet with considerable frequency.

2. In an apparatus for the treatment of minerals, the combination of a vertically elongated separating chamber; a porous or permeable bed therein; a chamber beneath the bed; a water pipe delivering under constant head, communicating with the chamber beneath the bed; a valve intermittingly interrupting the delivery of water through said pipe to the chamber; means for opening and closing said valve with frequency; and an air vent or valve located at a point between the water inlet of the chamber and the permeable bed, whereby air accumulating in the chamber may be released.

3. In an apparatus for treating minerals, the combination of a vertically elongated separating chamber; a permeable bed or support therein; a water supply or conduit opening into the space beneath said bed; a valve controlling the delivery of water through said pipe; means for opening and closing said valve with considerable frequency and regularity; and an air chamber communicating with the water pipe at a point between the head or source of supply and the valve, and serving to confine a body of air which becoming compressed by the sudden arrest of the flow of water to the separating chamber serves, when the valve is opened, to hasten the flow of water through said valve and into the separating chamber, and thereby to give to the water column in the separating chamber the requisite suddenness and frequency of pulsation.

4. In combination with a vertically elongated separating chamber provided with a permeable bed or mineral support; a water pipe opening into the space beneath said bed and provided with a valve by which wholly to cut off the water supply; a second valve or cock in said pipe; means for opening and closing the latter valve with frequency and regularity; and an air chamber located on the receiving side of the latter valve, substantially as and for the purpose set forth.

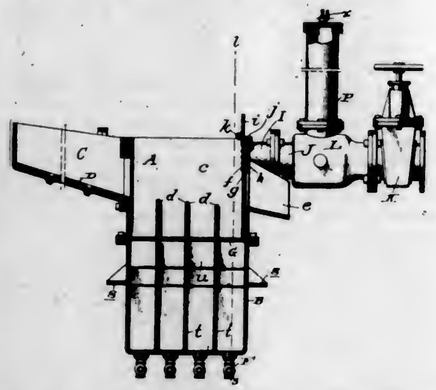
5. In an apparatus for separating and classifying minerals, the combination of a supply hopper; a vertically elongated separating chamber; a guard or baffle-plate between the hopper and the chamber, tending to prevent a rapid cross flow of water over said chamber; a permeable bed in said chamber; a chamber beneath said bed; a chamber above and communicating with said lower chamber to one side of the separating chamber; a water pipe opening into the last-mentioned upper chamber; a valve in said pipe adapted to be rapidly opened and closed; means for thus opening and closing said valve; and an air chamber on the receiving side of said valve communicating with the water pipe, and serving to contain a body of air which, upon the closing of the valve and sudden stoppage of the water, becomes compressed and serves, upon the re-opening of the valve, to hasten the flow of water therethrough, whereby pulsations of requisite frequency to effect proper separation and stratification of particles are produced in the separating chamber.

[Claims 6 to 9 not printed in the Gazette.]

901,475. JIG. ROBERT H. RICHARDS, Boston, Mass. Filed June 13, 1908. Serial No. 438,398.

1. A jig, comprising an upper and a lower section separated by a perforate or foraminous diaphragm, the upper section being provided with a longitudinal upright partition extending nearly, but not quite, to the perforate or foraminous diaphragm, and thereby dividing said upper section into two parallel chambers; a feed hopper delivering into one of said chambers at one end, said chamber being provided with a tailings discharge at the opposite end and the other of said chambers being provided with an outlet opening in its side wall; an adjustable overflow gate controlling the tailings discharge; an adjustable overflow gate for the outlet opening of the second chamber; a water supply pipe communicating with the space beneath the perforate or foraminous diaphragm; a valve controlling said pipe; and means for opening and closing said valve with frequency and regularity, for the purpose of producing a series of upward pulsations through the diaphragm and in the upper chambers, substantially as set forth.

2. A jig, comprising an upper section provided with two chambers arranged side by side and separated by a wall which extends nearly but not quite to the bottom of said chambers, the first chamber being provided with a feed hopper at one end and with a tailings discharge at the opposite end, and the outer wall of the second chamber being provided with an outlet; an overflow gate controlling said outlet; a lower section having a water chamber extending beneath the chambers of the upper section; a perforate or foraminous diaphragm separating the upper and lower sections; and means for producing a series of upward water pulsations through the perforate or foraminous diaphragm without reflux.



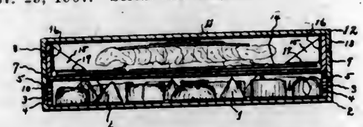
3. A jig, comprising an upper section provided with two main chambers arranged side by side, and separated by a wall or partition which extends nearly but not quite to the bottom of said chambers, the first of said chambers being provided with a feed hopper at one end and with a tailings discharge at the opposite end, and the second chamber being provided with outlets in its outer wall; transverse partitions dividing said chambers into smaller chambers or compartments, the partitions of the first chamber rising to about the level of the delivery end of the hopper; a vertically adjustable overflow gate for the tailings outlet; overflow gates for the outlets of the outer chamber, one for each compartment; a lower section having a water chamber extending beneath the chambers of the upper section and provided with cross partitions in alinement with those of the upper section; a perforate or foraminous diaphragm separating the chambers of the upper from those of the lower section; and means for producing a series of upward impulses of water through the foraminous or perforate diaphragm without reflux.

4. The herein described jig comprising an upper section provided with a longitudinal partition dividing it into two chambers and with transverse partitions dividing said chambers into compartments, the longitudinal partition extending nearly but not quite to the bottom of the section, the first chamber being provided with a feed hopper at one end and with a tailings discharge at the opposite end; a lateral extension at the outer side of the second chamber, the wall separating the second chamber and said extension being provided with outlet openings; an adjustable overflow gate guarding the tailings discharge; vertically adjustable overflow gates guarding the outlet openings between the second chamber and the lateral extension; a lower section provided with a longitudinal partition and with transverse partitions registering with the partitions of the upper section; a perforate or foraminous diaphragm separating the upper and lower sections; a trunk or pipe having branches communicating with the spaces beneath the cross partitions of the lower sections, one with each; a valve controlling the supply of water to said trunk and adapted to be opened and closed with frequency; and an air chamber communicating with the supply pipe on the inlet or receiving side of the valve.

5. In a jig, a walled chamber having a feed hopper at one end and a tailings discharge at the opposite end; a second walled chamber at the side of the first, communicating therewith at the bottom, and having outlet openings, formed in its outer wall; a perforate or foraminous bottom for said chambers; and means for delivering water upward through said bottom in rapid pulsations without reflux.

[Claim 6 not printed in the Gazette.]

901,476. COMBINATION CONFECTIONERY AND VALENTINE BOX. HARRY RICHTER, Omaha, Nebr. Filed Nov. 29, 1907. Serial No. 404,418.



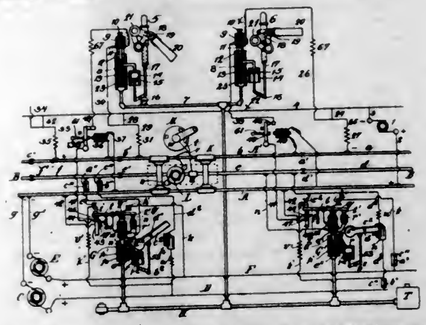
1. A confectionery and valentine box comprising a first rectangularly-formed leaf provided at its edges with an upturned rim and having an inner sustaining-rim secured thereon extended in the plane of said upturned rim to form a lower receptacle; a second rectangularly-formed leaf provided at its edges with an integral upturned rim and having an outer inclosing-rim extended below the plane of said integral upturned rim to form an upper receptacle; flexible holding-wings having flanges secured upon the inner sides of the integral upturned rim of said second rectangularly-formed leaf and adapted to have a movement to a position transverse thereto; said upper receptacle adapted to be seated upon the lower receptacle to cause its integral upturned rim and its outer inclosing-rim to be disposed in alinement, respectively, with the upturned rim and the inner sustaining-rim of said lower receptacle; a cover adapted to have a seating upon the upper receptacle and provided with a down-turned rim disposed in alinement with the inclosing-rim of said upper receptacle, the weight of said upper receptacle resting partly upon the upturned rim of the lower receptacle and partly upon the inner sustaining rim of said lower receptacle.

2. In a combined confectionery and valentine box, the combination with a lower box-like receptacle of an upstanding member which lies within said box-like receptacle and projects above the edge thereof entirely around said receptacle, an upper box like receptacle which rests upon said upstanding member, a vertically disposed member surrounding said upper box-like member and projecting below the lower edge thereof entirely therearound, the lower edge of said vertically disposed member resting upon the upper edge of the lower box-like receptacle the edge of the upper receptacle projecting above said vertically disposed member, a cover having a downturned edge which rests upon the upper edge of the vertically disposed member and flexible wings secured to the inner walls of the upper receptacle and adapted to be bent inwardly over the bottom of said receptacle.

901,477. ELECTRIC-RAILWAY SYSTEM. WILLIAM ROBINSON, Brooklyn, N. Y. Original application filed July 20, 1904, Serial No. 217,297. Divided and this application filed Oct. 5, 1904. Serial No. 227,180.

1. In an electric signal system for railroads, comprising a closed rail circuit, a relay magnet forming a part thereof, a secondary circuit under control of said relay magnet, the combination therewith of an electric railway system comprising a working conductor formed in sections insulated or separated from one another, a power current feeder arranged for connection to, and disconnection from, said sections, and means for opening and closing the signal circuit independently of said relay magnet.

2. The combination, with a railroad signal system comprising a continuously closed rail circuit, a relay magnet connected thereto, and a signal controlled by a magnet included in a circuit under control of said relay, in combination with an electric railway system embodying a working conductor formed in sections insulated or separated from each other, a power current feeder normally disconnected from said sections, means for connecting said feeder automatically to said sections, and means for opening and closing the signal circuit independently of said relay.



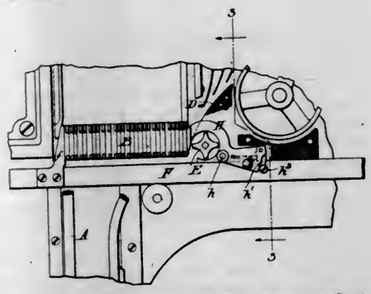
3. The combination with a railroad signal system comprising a continuously closed rail circuit, a relay magnet forming a part thereof, and a signal controlled by a magnet included in a circuit under control of said relay, of an electric railway system embodying a working conductor formed in independent sections, a power current feeder normally disconnected therefrom, means for connecting said feeder to said respective sections, and an additional magnet arranged to open and close the circuit of said signal independently of said relay.

4. The combination, with a signal system for railroads, comprising a continuously closed rail circuit; a relay magnet included therein, and a signal actuated by fluid pressure controlled by a magnet included in a circuit under control of said relay, of means for automatically opening and closing said last named circuit, independently of said relay.

5. An electrically controlled signal system for railroads, embodying a closed track circuit and arranged for operation and control by passing trains, in combination with an electric railway system having sectional working conductors normally disconnected from the source of propulsion current supply, and a return circuit common to the propulsion current and the signal controlling current, means for operating said signal system automatically, and means for preventing the accession of operative propulsion current to the signal controlling magnets.

[Claims 6 to 18 not printed in the Gazette.]

901,478. LINOTYPE-MACHINE. JOHN R. ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Mar. 10, 1908. Serial No. 420,130.



1. In a line-casting machine, the assembling-elevator and the assembler-slide provided with a finger to resist the forward end of the matrix line, in combination with means to limit the advance of the resisting finger, and a movable device adapted to firmly support the rear end of the matrix

line at a predetermined distance from the yielding finger; whereby the operator is enabled to justify the lines by hand to a predetermined length.

2. In a line-casting machine, the assembling-elevator, the assembler-slide provided with a finger *f* to support the front of the line, means to definitely limit the advance of the assembler-slide, and a device mounted on a fixed support and movable at will into position to confine the rear end of the matrix line at a predetermined distance from the finger.

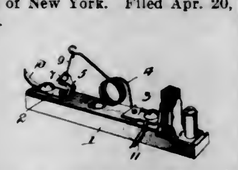
3. In a line-casting machine, in combination with means for assembling the matrices in line, means to confine the line at the forward end, and means movable at will into the path of the incoming matrices at a fixed distance from the front confining means, and adapted to rigidly support the rear end of the line; whereby the expansion of the line is positively limited and the operator enabled to accurately justify the same by hand.

4. In combination with the assembling-slide F having a resistant for the forward end of the matrix line, the star-wheel E, means for delivering matrices between the star-wheel and the resistant, and a pivoted jaw H adapted to be moved to and from the rear end of the matrix line and to give the same rigid support.

5. In combination with the assembler-slide having a finger *f*, the star-wheel E, the matrix-delivery belt C, the matrix-guiding surface D, and the pivoted jaw H adapted when in one position to form a continuation of the surface D, and when in another position to confine the rear end of the matrix line.

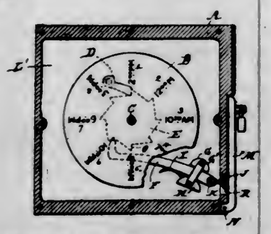
[Claims 6 to 9 not printed in the Gazette.]

901,479. ELECTRIC PROTECTIVE APPARATUS. CHARLES A. ROLFE, Adrian, Mich., assignor, by mesne assignments, to Rolfe Electric Co., Rochester, N. Y., a Corporation of New York. Filed Apr. 20, 1903. Serial No. 153,398.



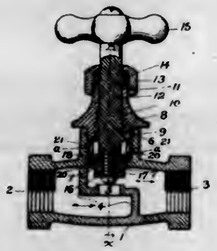
In a device of the class specified, a non-conducting softenable material, comprising wax, rosin, and a powdered conductor, in combination with circuit controlling spring actuated devices, held normally in position by said softenable material, and released when an unduly strong current softens said material.

901,480. MAIL-COLLECTING ANNOUNCER. HUBBARD F. ROSE, Binghamton, N. Y. Filed July 17, 1907. Serial No. 384,146.



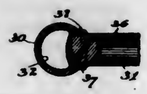
The combination with a mail box having a hinged door, a disk rotatably mounted in said receptacle and having indications thereon visible through an opening in the box, a ratchet connected to said disk, a dog engaging the ratchet to prevent backward rotation of the same, a sliding pawl having its inner end engaged with the ratchet, a link connecting the outer end of the pawl to the hinged door, and guides slidably supporting the pawl and holding the same in engagement with the ratchet, one of said guides being stationary and the other being pivoted, and a sustaining spring forcing the pawl against the pivoted guide and in engagement with the ratchet.

901,481. REVERSIBLE COMPRESSION STOP AND WASTE. WILLIAM G. ROWELL, Bridgeport, Conn. Filed Aug. 13, 1907. Serial No. 388,343.



In a device of the character described, the combination of a stock open at the ends for connection with supply and service pipes and provided with a suitable valve opening whereby communication between said pipes is established, a valve stem carrying a valve adapted to be seated against said opening whereby communication between said pipes is controlled, a casing integral with said stock and within which said valve stem is operatively mounted, said casing having a waterway chamber which is in communication with the service portion of said stock independent of said valve opening and also having diametrically opposite exit nozzles leading direct from said chamber into the outside air, a plug for closing one of said nozzles, a waste collar loose around said valve stem and loosely confined within said waterway chamber, said collar having inlets in its lower portion and outlets in its side, and a washer surmounting said valve and of such shape and dimensions as to entirely cut off communication between said waterway and service portion of the stock when the valve is opened, whereby the depression of said valve will allow the water in the service pipe to enter the waterway chamber and waste out through one of said nozzles.

901,482. METAL BED. OTTO RUDD, Kenosha, Wis., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed Feb. 10, 1908. Serial No. 415,133.



1. In a joint for a metallic bed or the like, the combination of a hollow post or tube having an aperture through its wall, a lining within said tube having a depression or indentation opposite said aperture, a rail or the like having an end inserted through said aperture into the recess formed by said depression, and a body of anchoring metal filling said recess and surrounding the end of said rail, substantially as described.

2. In a joint for a metallic bed or the like, the combination of a hollow post or tube having an aperture through its wall, a lining in said tube having a depression or indentation opposite said aperture, a rail having an undercut portion at its end, said end extending through said aperture into the recess formed by said depression or indentation, and a body of metal in said recess surrounding and coöperating with the under-cut end of said rail, substantially as described.

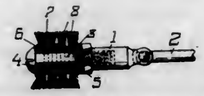
3. In a joint for a metallic bed or the like, the combination of a hollow post or tube having an aperture through its wall, a lining in said tube having a depression or indentation opposite said aperture, a rail having a transverse aperture or hole at its end, said end passing through the aperture of said post into the recess formed in said post by the depression or indentation of said lining, and a body of metal filling said recess and the aperture in the end of said rail, substantially as described.

4. In a joint for a metallic bed or the like, the combination of a hollow post or tube having an aperture through its wall, a lining in said tube having a depression or indentation opposite said aperture, a rail or the like the end of which is of less cross-section than and fits in said aperture and the recess formed by the depression or indentation of said lining, and a body of metal surrounding the end of said rail in said recess and filling the remainder of said aperture, substantially as described.

5. In a joint for a metallic bed or the like, the combination of a hollow post or tube having an aperture through its wall, a lining in said tube having a depression or indentation opposite and larger than said aperture, a rail or the like the end of which is of less cross-section than and fits in said aperture and the recess formed by said depression or indentation, and a body of metal surrounding the end of said rail in said recess and filling the remainder of said aperture, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

901,483. TUBE-CLEANER. KLAS O. SANDSTRÖM, Karlskrona, Sweden, assignor to Emil Nilsson, Husqvarna, Sweden. Filed Nov. 7, 1907. Serial No. 401,123.



1. A flue cleaner comprising in combination a threaded receiver, a threaded bolt adjustably secured to said receiver, a plurality of corrugated washers on said bolt spaced apart from each other, a plurality of rings interposed between said washers, tufts of bristles folded about said rings and extending radially therefrom, and a nut engaging said support and receiver for compressing said washers against said bristles and whereby said receiver may be locked to said support.

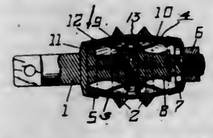
2. A flue cleaner comprising in combination, a threaded shank portion, a headed bolt provided with threads engaging said shank portion, a nut for locking said bolt in an adjusted position, a plurality of rings surrounding said bolt, bristles looped about said rings, said rings and bolt being so proportioned as to effect engagement thereby with said bristles, and corrugated washers interposed between said bristles and serving when said bolt is adjusted to collapse the looped ends thereof and cause the same to meet and form a continuous peripheral brush surface.

3. A flue cleaner comprising in combination, a shank portion, a bristle support adjustably secured thereto, a plurality of rings surrounding said support and effecting engagement of the bristles therewith, bristles looped about said rings, and corrugated washers interposed between said bristles and serving when said support is adjusted to collapse the looped ends of the bristles and cause the same to meet and form a continuous peripheral brush surface.

4. A flue cleaner comprising in combination, a shank portion, a bristle support adjustably secured thereto, a plurality of rings surrounding said support, bristles looped about said rings and corrugated washers interposed between said bristles and adapted to force the ends thereof together when said support is adjusted.

901,484. TUBE-SCRAPER. KLAS O. SANDSTRÖM, Karlskrona, Sweden, assignor to Emil Nilsson, Husqvarna, Sweden. Filed Nov. 9, 1907. Serial No. 401,466.

1. A flue scraper comprising in combination, a spindle provided with peripherally disposed spring seats, springs engaging said seats at their central portions and projecting outwardly at their ends, means engaging said springs at their central portions to hold the same in their seats, an expansible scraper casing provided with scraping members and engaged by the ends of said springs, said spindle being provided with heads engaging said casing, a nut engaging said heads for holding said heads and casing in assembled relation, and means on one of said heads for holding said casing in a non-rotative position.



2. A flue scraper comprising in combination, a spindle provided with peripherally disposed spring seats, and an integrally formed head provided with inclined flanges and a retaining lug, a head adjustably secured to said spindle and provided with an inclined flange, a cylindrical casing comprising two sections provided with annular scraping members and engaging the flanges of said head, and springs centrally anchored in said seats and provided with projecting ends engaging end portions of said casing and maintaining the same in engagement with said flanges.

3. A flue scraper comprising in combination, a spindle provided with a fixed head having inclined casing engaging portions, a cylindrical casing composed of sections adapted to be engaged by said portions, said fixed heads being provided with means preventing rotation of said sections, centrally anchored springs having projecting ends engaging said casing sections near the ends thereof, a head loosely mounted on said spindle and provided with casing engaging portions, and means engaging said loosely mounted heads for adjusting the same to vary the diameter of said casing.

901,485. DAMPER. JOHN C. F. SCHAFER, Mount Pulaski, Ill. Filed Apr. 4, 1904. Serial No. 201,620.



1. The combination of a pipe section adapted to fit within a complemental pipe section, brackets fitting on the end of the first named pipe section and having inside members provided with holes, and one of said brackets having an outside member adapted to support a lever, a damper plate having headed trunnions fitting in the holes of the bracket members inside of the pipe section, and a lever mounted on the outside member of one of the brackets and connected to oscillate the damper plate.

2. The combination of a pipe section adapted to fit within a complemental pipe section, brackets adapted to be supported upon said first named pipe-section and having members adapted to support the brackets on the first named pipe section and members adapted to be bent to lie against the complemental pipe section, an oscillative damper plate mounted on the brackets, and a lever supported on one of the brackets and connected to oscillate the damper plate.

3. The combination of a pipe section adapted to telescope within a complemental pipe section, separately movable brackets adapted to fit over the end of the first named pipe section also adapted to fit around the end of and lie against the wall of said complemental pipe-section, a damper plate supported within the first named pipe section upon said brackets, and a lever adapted to lie between

said first named pipe section and the complemental pipe section and connected to operate the damper plate.

4. A damper attachable to an outer pipe-section and a complemental inner pipe-section; comprising separate brackets adapted to support an oscillative damper-plate and adapted to engage the walls and ends of both of said pipe-sections to prevent movement of said brackets upon either of said pipe-sections, a damper-plate oscillative on said brackets, and a lever mounted on one of said brackets and adapted to lie between the telescoping pipe-sections and connected to oscillate said damper-plate.

5. A damper attachable to an outer pipe-section and a complemental inner pipe-section; comprising separate brackets adapted to fit on the end of the inner pipe-section, said brackets having an inner member adapted to support a damper-plate and outer members adapted to lie between the walls of the telescoping pipe-sections, a damper-plate oscillative on the inner members of said brackets, and a lever mounted on the outer member of one of said brackets and connected to oscillate said damper-plate.

[Claims 6 and 7 not printed in the Gazette.]

901,486. FLYING-MACHINE. HARRY B. SCHILLER, Reading, Pa. Filed June 13, 1907. Serial No. 378,688.



1. In a flying machine, the combination with a triangular aeroplane, of a car depending centrally therefrom, and balloons depending from the said plane upon opposite sides thereof, the uppermost surfaces of said balloons being beneath the under surface of said aeroplane and substantially parallel thereto.

2. In a flying machine, the combination with a horizontal aeroplane, of a car depending centrally therefrom and having a dome extending through an aperture in said plane, and balloons depending from said plane upon opposite sides thereof inclosing a portion of said car.

3. In a flying machine, the combination with a horizontal aeroplane, of a car depending centrally therefrom balloons depending from said plane upon opposite sides thereof, supplementary overlapping aeorplanes pivoted to the first mentioned aeroplane, and means for swinging said supplementary aeroplanes laterally in and out from said first mentioned aeroplane in substantially the same plane therewith.

4. In a flying machine, the combination with a horizontal aeroplane, of a car depending centrally therefrom, balloons depending from said plane upon opposite sides thereof, supplementary aeroplanes pivoted to the first mentioned aeroplane, means for swinging said supplementary aeroplanes laterally in and out from said first mentioned aeroplane in substantially the same plane therewith, said means comprising racks attached to said supplementary aeroplanes, pinions engaging said racks and means to rotate said pinions.

5. In a flying machine, the combination with a horizontal aeroplane, of a car depending centrally therefrom, balloons depending from said plane upon opposite sides thereof, an aeroplane arranged above said first mentioned plane, and a balloon extending longitudinally and centrally upon the under side of said upper aeroplane.

[Claims 6 to 23 not printed in the Gazette.]

901,487. ROLLER FOR WATCHES. JOSEPH SCHOOP, Springfield, Wis. Filed Aug. 14, 1907. Serial No. 388,480.



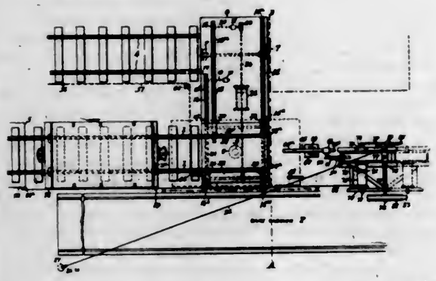
1. A roller having a circular groove in its face, a transverse jewel hole extending into a part of said groove, combined with a ring adapted to seat in said groove, and provided with means to secure a jewel in the jewel hole.

2. A roller having a depression in its face, a transverse jewel hole a portion of which extends into said depression, combined with means for securing a jewel in the jewel hole adapted to seat in the depression.

3. A roller having a circular groove in its face and a jewel hole a portion of which extends into said groove, combined with a ring to fit in said groove and provided with a cam notch in its periphery for engagement with and frictionally securing a jewel in the jewel hole.

4. The combination with a grooved roller, of a ring having a cam notch in its periphery, a jewel hole provided with a curved wall which extends into said groove, and means for turning said ring to frictionally engage the cam notch with the jewel in the jewel hole.

901,488. AUTOMATIC CAR-TRANSFER. EUGENE M. SCOVILLE, Waipahu, Hawaii, assignor of one-half to C. Bosse, Waipahu, Hawaii. Filed Apr. 25, 1907. Serial No. 370,299.



1. An automatic car transfer, comprising a tiltable table, a transfer truck thereon, and means for tilting said table automatically operated by the car transferred.

2. An automatic car transfer, comprising a tiltable table, a transfer truck thereon, means for tilting said table automatically operated by the car transferred, and means for retaining the car on said truck when it runs onto said truck at the receiving end of said table.

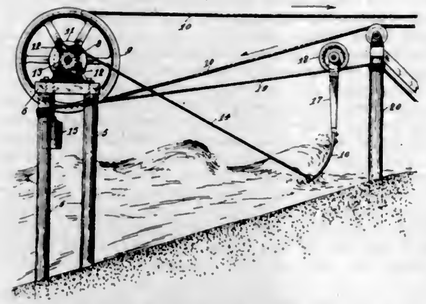
3. An automatic car transfer, comprising a tiltable table, a transfer truck thereon, means for tilting said table automatically operated by the car, and means for retarding the movement of said truck at either end of said table.

4. An automatic car transfer, comprising a tiltable table, a transfer truck thereon, means for tilting said table automatically operated by the car, and means for depressing one end of said truck when carrying said car at the discharging end of said table.

5. An automatic car transfer, comprising a tiltable table, a transfer truck thereon, a fluid pressure motor for operating the tiltable table, means operated by the car moving to position on the truck for admitting pressure to said motor, and means actuated by the car after the transfer has been effected for relieving pressure in the motor.

[Claims 6 to 10 not printed in the Gazette.]

901,489. WAVE-MOTOR. THOMAS H. SETTLE, Los Angeles, Cal. Filed Aug. 3, 1908. Serial No. 446,577.

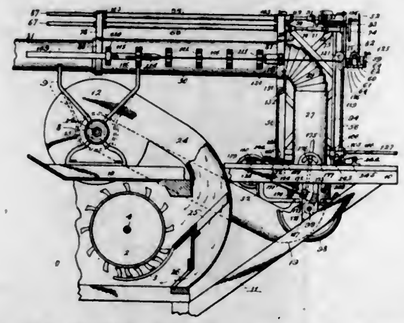


1. A wave motor comprising a power apron; a power shaft; clutch mechanism secured upon said power shaft; cables running over said clutch mechanism and secured to the power apron; means secured to said cables to take up the slack thereof; supporting means for the upper portion of said power aprons, said supporting means being set at an angle to cause the travel of the power apron toward the power shaft; and means to utilize the revolutions of the power shaft.

2. In a wave motor a traveling power apron; a power shaft; means to cause a travel of the power apron toward the power shaft; means connected to the power apron and the power shaft to revolve the power shaft upon the travel of the power apron away from the shaft; and means to utilize the revolutions of the power shaft.

3. In a wave motor a power shaft; means to support said shaft at a distance from the shore; clutch mechanism secured upon said power shaft; cables secured to said power shaft supporting means; means for supporting the other ends of said cables at a higher elevation; a power apron; cables running from the lower edge of said power apron to and around the clutches on the power shaft; counterbalancing weights on the ends of said last cables; supporting arms secured to the ends of said power apron; pulleys mounted in the upper ends of said arms arranged to travel upon the cables running from the power shaft supporting means toward the shore; and means to utilize the revolutions of the power shaft.

901,490. PNEUMATIC FEEDER FOR THRESHING-MACHINES. CORY W. SELLERS, Beloit, Kans. Filed Jan. 19, 1906. Serial No. 296,898.



1. In a pneumatic feeder, in combination, a threshing-machine, an adjustable tube leading to the cylinder end of said threshing-machine, means for creating a blast through said tube so that grain may be carried from a stack to the cylinder end of the threshing-machine, and means for oscillating the tube.

2. In a pneumatic feeder, in combination, a threshing-machine, an adjustable tube leading to the cylinder end of said threshing-machine and communicating therewith through upper and lower openings, a grate communicating with the upper opening, means for creating a blast through said tube so that grain may be carried from a stack to the cylinder end of the threshing-machine, and means for adjusting the tube in a vertical plane.

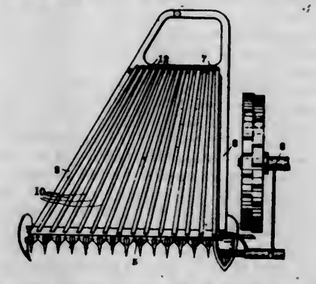
3. A pneumatic feeder for threshing-machines consisting of an adjustable tube leading to the cylinder end of the threshing-machine, means for creating a blast through said tube, a feeder at the mouth of the tube and flexible gearing for actuating said feeder.

4. A pneumatic feeder for threshing-machines consisting of an adjustable tube leading to the cylinder end of the threshing-machine, means for creating a blast through said tube, and a feeder at the mouth of the tube including rearwardly inclined teeth.

5. A pneumatic feeder for threshing-machines consisting of an adjustable tube leading to the cylinder end of the threshing-machine, means for creating a blast through said tube, a feeder at the mouth of the tube, and band-cutters forming part of said feeder.

[Claims 6 to 21 not printed in the Gazette.]

901,491. BOTTOM FOR CLOVER-BUNCHERS. JOSEPH K. SHARPE, Jr., Indianapolis, Ind. Filed Mar. 17, 1902. Serial No. 98,553.



1. A buncher bottom consisting of a frame having its side arms relatively movable with forward ends thereof adapted to be attached to the cutter bar of a mower, and a plurality of slats extending forward from the rear portion of the frame and secured to said rear portion by means permitting the lateral adjustment of the free forward ends of the slats.

2. A buncher bottom consisting of a rear bar 7, a pair of side arms extending forward from said bar 7 and one of said arms being pivotally connected to said bar, and a plurality of slats pivotally connected at their rear ends to the said bar upon substantially vertical pivots and extending forward in the same general direction as the side arms, the said side arms being adapted at their forward ends to be connected to the cutter bar of a mower.

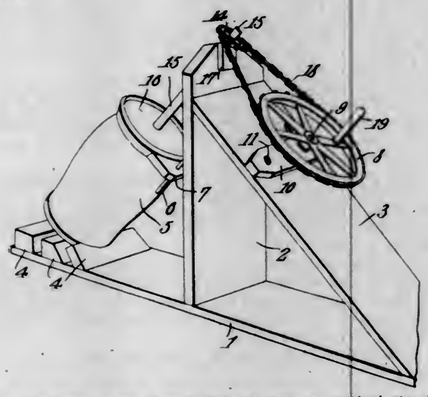
3. A buncher bottom consisting of a frame having relatively movable sides adapted to be attached to the cutter bar of a mower, and a plurality of slats carried by the frame, each upon a substantially vertical pivotal connection at its rear end and extending forward in the same general direction as the relatively movable sides.

901,492. ROTARY CHURN. STANSBURY J. SMITH, Hot Springs, Ark. Filed June 30, 1908. Serial No. 441,096.

1. A churn support embodying a base, a vertical standard secured thereto, a chock on said base provided with a concave face, a bracket carried by said standard having concave face lying in an inclined plane with the concave face of said chock.

2. A churn support embodying a base, a vertical standard secured thereto, a plurality of chocks on said base, one of said chocks being provided with a concave upper face, an

adjustable bracket on said standard having a concave face lying in an inclined plane with the concave face of said chock.



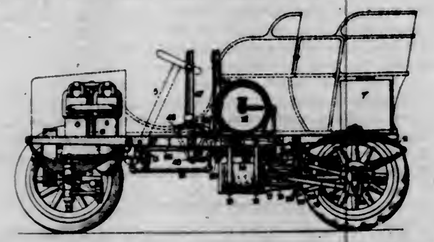
3. A churn support embodying a base, a vertical standard secured thereto, a plurality of chocks on said base, one of said chocks being provided with a concave upper face a strut connecting said standard with said base a pair of guides secured to the opposed face of said standard, a bracket slidingly fitted on said guides said bracket provided with a concave face lying in an inclined plane with the concave face of said chock.

4. The combination with a churn and dasher shaft, of a support having a vertical standard, a strut having one end secured to one face of said standard and its opposite end to said support, a bracket on the opposed face of said standard adapted to support said churn in an inclined position, an actuating mechanism carried by said strut having connection with said dasher shaft, and adapted to rotate the latter in a plane with the axis of said churn.

5. The combination with a churn and dasher shaft of a base plate having chocks adjacent one end forming a support for one end of said churn, a standard secured to said base plate having a bracket on one face thereof forming a support for the opposed end of said churn when the latter is in an inclined position, a strut connecting said standard with said base, an actuating mechanism carried by said strut having connection with said dasher shaft and adapted to rotate the latter in a plane with the axis of said churn.

[Claims 6 and 7 not printed in the Gazette.]

901,493. AUTOMOBILE. FRANK A. STEPHENS, Dunkirk, N. Y. Filed Dec. 9, 1904. Serial No. 236,148.



1. In an automobile, the combination with the driving axle thereof, of a plurality of engines, a gasolene engine adapted to run at uniform speed, and an atmospheric engine adapted to be driven at differing speeds and connected directly to the driving axle of the automobile, an air pump for supplying compressed air to the atmospheric engine and friction mechanism operatively connecting the air pump to the gasolene engine and comprising a clutch member on the shaft of the gasolene engine, an eccentric loosely mounted on said gasolene engine shaft in proximity to said clutch member, an eccentric rod having one end pivoted to the air pump and its opposite end secured to the strap and a collar forming the other clutch member, substantially as set forth.

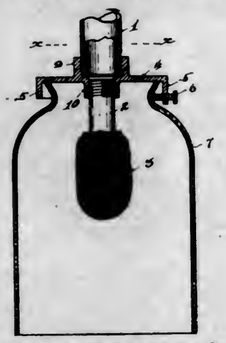
2. In an automobile, the combination with the frame and front and rear axles, of an atmospheric engine having two cylinders hung side by side beneath the frame in front of the rear driving axle and each having direct cranked connection to said driving axle, a compressed air tank having pipe connection to both cylinders of said atmospheric engine to supply compressed air thereto, an air pump supported beneath the frame in front of the atmospheric engine for replenishing the air in said tank, a gasolene engine mounted at the front end of the frame for operating said air pump and a throttle valve mechanism in the pipe connecting the air tank to the atmospheric engine and controlling the speed of both cylinders of the atmospheric engine.

3. In an automobile, the combination with the frame and the driving axle of an atmospheric engine connected directly to the driving axle and having a plurality of cylinders, a compressed air tank having pipe connection to all of the cylinders of said atmospheric engine to supply compressed air thereto, an air pump for replenishing the air in said tank, a gasolene engine for operating the air pump and a single throttle valve mechanism in the pipe connecting the air tank to the atmospheric engine for simultaneously and correspondingly varying the speed of all the cylinders of the atmospheric engine.

4. In an automobile, the combination with the driving axle thereof, of an air pump, a gasolene engine, friction mechanism connecting the gasolene engine to the air pump, a compressed air tank operatively connected to the air pump, an atmospheric engine connected to the driving axle, a throttle valve controlling the speed of the atmospheric engine, a lever within convenient reach of the operator controlling the throttle valve and a second lever also within convenient reach of the operator controlling the friction mechanism whereby the speed of both the air pump and the atmospheric engine may be instantly varied, substantially as set forth.

5. In an automobile, a compressed air reservoir, an atmospheric engine connected to the driving axle of the automobile and having a plurality of cylinders, a pipe connecting the atmospheric engine to the compressed air reservoir, a throttle valve in said pipe controlling the admission of compressed air to the atmospheric engine, cylinder valves controlling the admission of compressed air to the engine cylinders and an operating lever extending to within convenient reach of the operator and controlling both the throttle valve and the cylinder valves.

901,494. INCANDESCENT-LAMP FIXTURE. JOSEPH STUBBERS, Covington, Ky., assignor to The Incandescent Light & Stove Company, Cincinnati, Ohio, a Corporation of Ohio. Filed May 14, 1906. Serial No. 316,861.



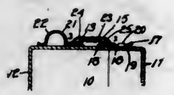
1. In combination with a depending burner tube and mantle, a depending globe around the mantle and mouth

of the tube, and means of attachment closed at the top, whereby the products of combustion escape downwardly from the globe, substantially as described.

2. In combination with a depending burner tube and mantle, a depending globe around the mantle, and a solid bracket for securing said globe to the burner tube closed at the top, whereby the products of combustion escape downwardly from the globe, substantially as described.

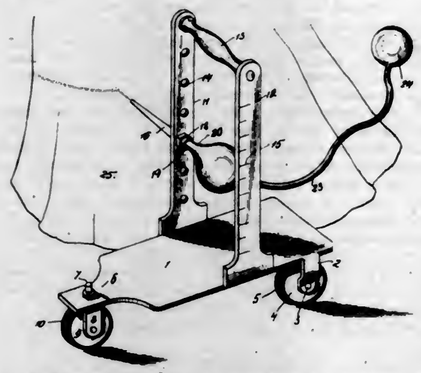
3. In combination with a depending burner tube, mantle and globe, means for suspending the globe around the mantle, and means for closing the top of the globe against the escape of the products of combustion, substantially as described.

901,495. UMBRELLA-HOLDER. ASA A. STUTSMAN, Jacksonville, Ill. Filed Jan. 22, 1908. Serial No. 412,184.



In a combined fastener and holder for suit cases, the combination with a casing, of a clasp having portions mounted in the side walls of the casing for pivotal movement into and out of operative position, the clasp including a portion extending transversely within the casing, an outwardly directed leaf carried by the transversely extending portion, an umbrella holding member carried by the casing and having portions mounted in the side walls of the casing and arranged for pivotal movement, the umbrella holding member also having a portion extending transversely within the casing, a leaf carried by the transversely extending portion of the umbrella holding member, and a spring disposed within the casing with its end portions upon the leaves of the two members, said spring having its central portion bowed upwardly and bearing against the inner face of the top of the casing, said spring being constructed for exertion of its energy against upward movement of its end portions whereby the clasp and the umbrella holding member are normally held in an operative position.

901,496. SKIRT-MARKER. ALICE M. SUTTON, Allegheny, Pa. Filed Dec. 10, 1907. Serial No. 405,865.



1. A skirt marking device comprising a platform, two wheels supporting the rear end of said platform, a swiveled wheel supporting the forward end of said platform, diametrically opposed standards carried by said platform, a handle connecting the upper ends of said standards, a nozzle detachably mounted in one of said standards, a magazine communicating with said nozzle, and an air bulb communicating with said magazine.

2. A skirt marking device comprising a movable carriage, a standard carried thereby, a nozzle detachably connected to said standard, a magazine detachably connected to said nozzle, and an air bulb connecting with said magazine.

3. A skirt marking device comprising a movable carriage, connected standards carried thereby, a nozzle detachably connected to one of said standards, a powder magazine communicating with said nozzle, and means connecting with said magazine for forcing the contents thereof through said nozzle.

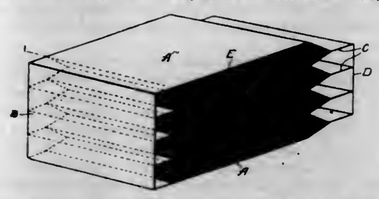
4. In a skirt marking device, a carriage, a standard carried thereby and provided with a plurality of vertically disposed spaced openings, a nozzle adapted to be mounted in any one of said openings, a powder magazine communicating with said nozzle, and means for forcing the contents of said magazine through said nozzle.

901,497. CARBON ELECTRODE. JOSEPH T. SZEK, London, England. Filed Sept. 23, 1907. Serial No. 394,247.



A carbon electrode provided with longitudinal grooves throughout its length, a passage through said electrode and a transverse groove at the base of said electrode said passage and said transverse groove communicating with a plurality of the said longitudinal grooves, substantially as described.

901,498. CONDENSER. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 5, 1904. Serial No. 206,479.



1. In a condenser, a pair of active conductors of opposite polarities, and one or more stress-equalizing conductors between said active conductors and insulated therefrom.

2. In a condenser, a set of active conducting sheets electrically connected together, a second set of active conducting sheets also electrically connected together, adjacent sheets of each set having interposed between them one sheet of the other set, and a number of conducting members located between each sheet of one set and the adjacent sheets of the other set, said conducting members being insulated from each other and from said sheets.

3. In a condenser, a pair of parallel active conductors or sheets of different polarities, and one or more parallel stress-equalizing conductors or sheets located between said active conductors and insulated therefrom.

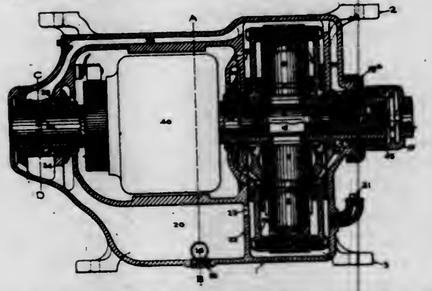
4. In a condenser, a pair of parallel active plates of opposite polarities displaced laterally with respect to each

other, and an equalizing conductor between and parallel to said active conductors, the edges of said equalizing conductor terminating in the surface connecting corresponding edges of the active conductors.

5. In a condenser, a pair of parallel and similar active conductors of different polarities, one or more intermediate equalizing conductors, the edges of the working portions of the active conductors and of the equalizing conductors terminating in the plane forming the sides of a parallelepiped, none of the plane angles of which are right angles.

[Claims 6 to 8 not printed in the Gazette.]

901,499. COMBINED MOTOR AND COMPRESSOR. CHARLES P. TOLMAN, New York, N. Y., assignor, by mesne assignments, to The Roteng Manufacturing Company. Filed Nov. 16, 1905. Serial No. 287,561.



1. A combined motor and compressor consisting of a motor and compressor mounted on a mechanically continuous shaft, a segmental case longitudinally divided and inclosing the motor and compressor, two bearings in said case carrying the shaft and a lubricant circulating system in said case comprising a reservoir, a series of lubricant ducts communicating therewith and a settling chamber.

2. A combined motor and compressor consisting of a motor and a compressor mounted on a mechanically continuous shaft, a case inclosing said motor and compressor, and provided with a lubricant circulating system supplied from a reservoir by the rotation of the compressor, and two bearings in the case for carrying the shaft.

3. In a combined motor and compressor the combination of a stationary casing, a shaft carried by two bearings on said casing, a motor and a rotary compressor mounted on said shaft, a valve in said shaft with which the cylinders of the compressor communicate, and means for lubricating said valve from a reservoir in said casing by the incoming fluid.

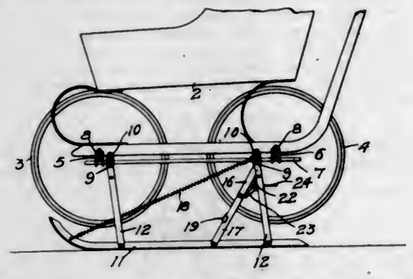
4. A combined motor and compressor consisting of a stationary segmental and longitudinally divided frame, a hollow shaft mounted to turn in two bearings longitudinally movable on said shaft, said bearings having lugs which oppose companion lugs in one segment of the frame for retaining the bearings and shaft in said frame, a rotary compressor rigidly mounted on said shaft, and a motor having its moving parts mounted on said shaft and its stationary parts secured to said frame.

5. A combined motor and compressor consisting of a motor and a rotary compressor mounted on a mechanically continuous shaft, and inclosed in a common segmental case, two bearings carrying the shaft, said bearings being longitudinally movable on said shaft for removal therefrom, means for retaining said bearings in one portion of the case and means for supplying lubricant to said bearings from a reservoir by the rotation of the compressor.

[Claims 6 to 8 not printed in the Gazette.]

901,500. RUNNER FOR CHILDREN'S CARRIAGES. HERBERT B. VAN VLIET, Blackduck, Minn. Filed Oct. 21, 1907. Serial No. 398,400.

1. The combination, with a child's carriage and forward and rear axles and carrying wheels therefor, of rods secured to said axles, links pivotally and adjustably supported on said rods and adapted to swing upwardly beneath said axles or down to a substantially vertical position, and runners carried by said links and adapted when lowered to raise said carrying wheels out of contact with the ground, substantially as described.



2. The combination, in a child's carriage, with the forward and rear axles and carrying wheels therefor, of rods extending lengthwise of the carriage and clamps for securing said rods to said axles, cross rods and means for clamping them to said longitudinal rods, said rods being adjustable upon one another and upon said axles to adapt them for use on carriages of different sizes, and a folding runner mechanism carried by said rods and adapted to swing up under said axles or move down into contact with the ground, substantially as described.

3. In a child's carriage, the combination, with the forward and rear axles and carrying wheels therefor, of parallel rods and means for clamping them on said axles, said means being adjustable to permit the rods to be moved toward or from one another, cross rods adjustably mounted on said first named rods, runners and means for pivotally connecting them with said cross rods and means for locking said runners in their depressed position.

4. The combination, with the forward and rear axles, and carrying wheels therefor, of rods secured to said axles, runners arranged beneath said rods, links pivotally connecting said runners with said rods, toggle links provided between said runners and said rods, springs connecting the forward and rear portions of said runners with said toggle links and normally tending to hold said runners in their elevated position and said springs being put under tension by the depression of said runners and the straightening of said toggle links, and means adapted to be actuated by the foot of the attendant for tripping said toggle links and allowing said springs to return said runners to their elevated position, substantially as described.

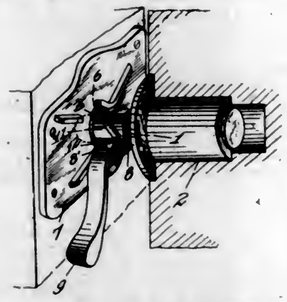
5. The combination, with the forward and rear axles, and carrying wheels therefor, of rods secured to said axles, runners arranged beneath said axles, links pivotally connecting said runners with said rods, links forming toggle joints connecting the rear portions of said runners with said rods, said toggle joints when straightened, locking said runners in their depressed position, spiral springs connecting said toggle links with the forward portions of said runners, a treadle provided beneath the rear axle, and rods secured to said treadle and having ends arranged to engage and trip said toggle links and thereby permit said springs to elevate said runners, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

901,501. LATCH. EUGENE W. VEST, Mulberry Grove, Ill. Filed Apr. 11, 1908. Serial No. 426,578.

1. A latching device comprising a rotatable socket, a longitudinally movable bolt normally engaging in said socket, and means for shifting said bolt by rotation of the socket to free such bolt for lateral movement relatively to the socket.

2. A latching device comprising a rotatable socket flaring outwardly at the receiving end, a longitudinally movable bolt normally engaging in said socket, and coöperating means carried by said parts whereby rotation of the socket rejects the bolt.

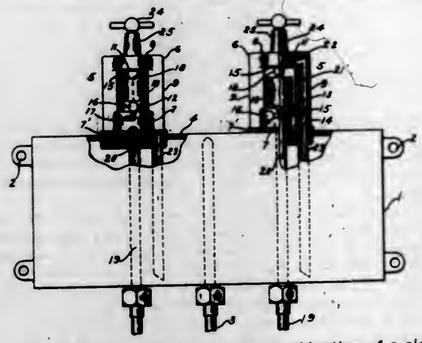


3. A latching device comprising a strike plate, a socket rotatable in said plate having a segmental end extension formed with oppositely inclined outer side surfaces, and a longitudinally movable spring pressed bolt normally engaging in said socket having peripheral shoulders, said shoulders extending forwardly and upwardly above said extension at opposite sides of the bolt.

4. A latching device comprising a strike plate, a socket rotatable in said plate having a segmental end extension formed with oppositely inclined outer side surfaces, the said socket having its outer end surface beveled, and a longitudinally movable spring pressed bolt normally engaging in said socket having peripheral shoulders extending forwardly and upwardly above said extension at opposite sides of the bolt.

5. A latching device comprising a strike plate, a socket rotatable in said plate having its outer end surface beveled inwardly from the face of said plate, a longitudinally movable spring pressed bolt normally engaged in said socket, means to retract said bolt by rotation of said socket, and guides on said plate converging inwardly to said socket.

901,502. LUBRICATOR. JOSEF VOLLMER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed July 3, 1905. Serial No. 268,020.



1. In a sight-feed lubricator, the combination of a sight glass, a support therefor, and a spring-pressed holder forming the sole retainer for the glass and adapted by a single movement away from the support to permit the glass to be instantly removed without subjecting it to stress.

2. In a sight-feed lubricator, the combination of a sight glass, a relatively fixed abutment and a depressible abutment which yieldingly maintains the glass in fixed relation to the first abutment and when depressed permits the glass to be instantly removed without further movement of the abutment and without subjecting the glass to stress.

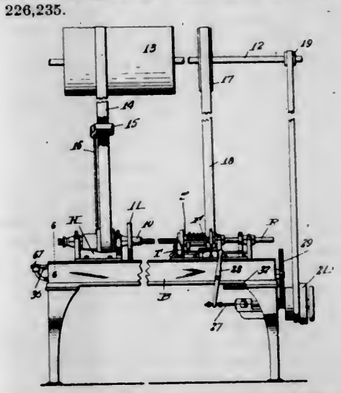
3. In a sight-feed lubricator, the combination of a sight glass, a relatively fixed abutment, a movable abutment which yieldingly maintains the glass in fixed relation to the first abutment, said movable abutment comprising a follower depressible in an axial direction away from the fixed abutment for removing the glass, a packing between the end of the glass and the follower, and an elastic member which urges the follower and the glass towards the fixed abutment and yields when the follower is depressed.

4. In a sight-feed lubricator, the combination of a sight glass, a feed nozzle, a fixed abutment adjacent to the nozzle which engages one end of the glass, a movable abutment which engages the other end, a spring which yieldingly supports the abutment, and operates through the latter to maintain the glass in position, a housing for the spring and movable abutment, and means exterior to the housing which is connected to the movable abutment for permitting it to be depressed against the tension of the spring for removal of the glass.

5. In a sight-feed lubricator, the combination of a sight glass, a feed nozzle, an abutment adjacent thereto which engages one end of the glass, means for holding the said glass against the abutment and adapted to be depressed in a direction away from the fixed abutment, and locking means for holding said means in its depressed position for permitting the glass to be disengaged from the fixed abutment and removed.

[Claims 6 to 10 not printed in the Gazette.]

901,503. WOOD-TURNING LATHE. CHARLES H. WAYMOTH, Fitchburg, Mass. Filed Sept. 27, 1904. Serial No. 226,235.



1. A wood turning lathe comprising a lathe bed, shaping tools fixed in longitudinal position with respect to the lathe bed, a head-stock, means for slidably engaging the head-stock with inwardly overhanging ways on the lathe-bed comprising retaining pieces, bolts for fastening the retaining pieces in place, and adjusting screws having tapering heads for spreading the retaining pieces.

2. A wood turning lathe comprising a roughing tool, shaping tool, and a cutting-off device secured in fixed longitudinal position with respect to the lathe bed, a head stock, means for slidably engaging the head stock in inwardly overhanging ways on the lathe bed, comprising retaining pieces, bolts for fastening the retaining pieces, taper-headed screws for spreading the retaining pieces, a feed mechanism for the lathe-head-stock, a driving belt for the lathe-stock-spindle, and a long over-head driving drum on which the belt is shifted when the head stock is fed.

3. In a lathe, the combination of a lathe-bed, a head-stock, means for feeding the head-stock comprising a shaft, a saw mounted to move transversely with respect to the direction of feed of the head-stock, a tool-holder also mounted to move transversely with respect to the direction of feed of the head stock, and means connected with said shaft for moving said tool-holder and for sliding said saw, said means comprising a partial gear

on the shaft, a pair of rotary toothed members for engaging said gear, each of said members having a crank thereon and links for connecting said cranks with the tool holder and with the sliding saw respectively to operate them.

4. In a lathe, the combination of a lathe bed, a head-stock, means for feeding the head-stock comprising a shaft, a saw mounted to move transversely with respect to the direction of feed of the head-stock, a tool-holder also mounted to move transversely with respect to the direction of feed of the head-stock, and means connected with said shaft for moving said tool-holder and for sliding said saw, said means comprising a gear, a pair of rotary toothed members for engaging said gear, and means for connecting said toothed-members with the tool-holder and with the sliding saw respectively, to operate them.

901,504. METHOD OF PRODUCING HIGH-EXPLOSIVE COMPOUNDS. PLUMER WHEELER, Chester, Pa., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed Aug. 10, 1906. Serial No. 329,958.

1. The process of producing a high explosive of the character described, which consists in mixing ammonium nitrate with an organic nitro compound at a temperature between two hundred and thirty degrees Fahrenheit and the melting point of the ammonium nitrate.

2. The process of producing a high explosive of the character described, which consists in mixing ammonium nitrate with an organic nitro compound at a temperature between two hundred and eighty degrees Fahrenheit and the melting point of the ammonium nitrate.

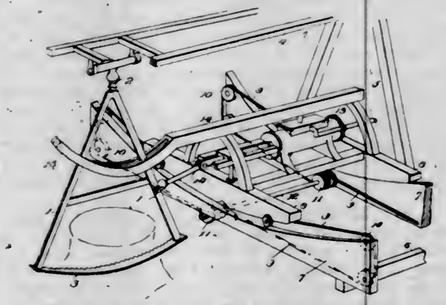
3. The process of producing a high explosive of the character described, which consists in mixing ammonium nitrate with an organic nitro compound at a temperature between two hundred and eighty degrees Fahrenheit and two hundred and ninety degrees Fahrenheit.

4. The process of producing a high explosive of the character described, which consists in adding an organic nitro compound, solid at ordinary temperature, in a fluid condition to ammonium nitrate and mixing the same together at a temperature between two hundred and thirty degrees Fahrenheit and the melting point of the ammonium nitrate.

5. The process of producing a high explosive of the character described, which consists in adding an organic nitro compound, solid at ordinary temperature, in a fluid condition to ammonium nitrate and mixing the same together at a temperature between two hundred and eighty degrees Fahrenheit and the melting point of the ammonium nitrate.

[Claim 6 not printed in the Gazette.]

901,505. SAW FOR REMOVING STUMPS. JOHN M. WHITE, Selma, Oreg. Filed Jan. 31, 1908. Serial No. 413,582.

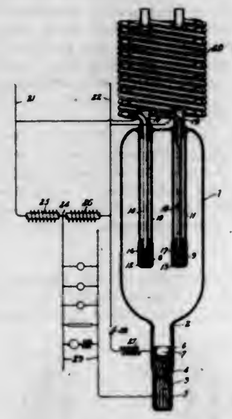


1. In a machine of the character specified, a saw blade formed on the arc of a circle and suspended by means of a universal joint so as to oscillate and move laterally to the plane of oscillation, whereby the saw advances to its work on a curved line corresponding with the curvature of the saw blade, the point of suspension of the saw coinciding with the center of movement thereof in every direction.

2. In a machine of the character specified, the combination of a saw frame provided with an arc-shaped saw, and suspended from a point coinciding with the center of the circle from which the saw blade is struck, a carriage, curved ways for said carriage, means mounted upon the carriage for imparting an oscillatory movement to the saw frame, a guide projected from the carriage to direct the saw frame in its oscillatory movements, and means for moving the carriage on a curved plane corresponding with the path of movement of the said saw blade.

3. In combination, a saw frame suspended by means of a universal joint, curved ways, a carriage mounted to reciprocate upon said curved ways, means mounted upon the carriage for imparting an oscillatory movement to the saw frame, and a guide carried by said carriage and adapted to direct the saw frame in its movement.

901,506. VAPOR ELECTRIC APPARATUS. WILLIS R. WHITNEY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 31, 1904. Serial No. 230,687.



1. In a vapor electric device, a glass member containing mercury, constituting one electrode, and a metal tube sealed about said member in proximity to said mercury and having an exposed portion constituting another electrode.

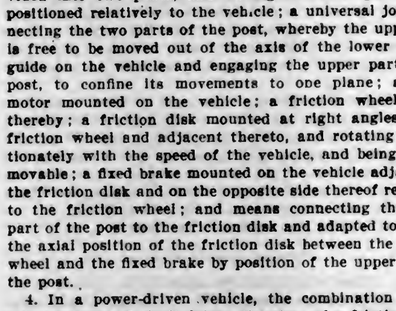
2. In a vapor electric device, a vitreous envelop formed in commuqicating parts, a metal shell tightly clasping the two parts so as to be under tension and so as to connect said parts so as to form an impervious joint therewith, a portion of the metal shell being exposed to form an electrode, and a coöperating electrode located in one of the parts of the envelop.

901,507. ACCOUNT SYSTEM. HENRY WILKE, Seattle, Wash. Filed Mar. 30, 1908. Serial No. 422,268.

1. A group of record cards provided with marginal portions projecting one beyond the other and having edges slanting outwardly from respective cards.

2. A group of record cards provided with marginal extensions projecting one beyond the other along the upper edges of the cards, the projecting portions of said extensions having edges slanting outwardly from respective cards.

3. A group of record cards provided with marginal extensions projecting one beyond the other and terminating in beveled end edges, each of said extensions having a



guiding mark extending substantially parallel with its beveled edge, substantially as and for the purpose specified.

901,508. CONTROLLING MECHANISM FOR POWER-DRIVEN VEHICLES. CHARLES W. WILLETTE, Tacoma, Wash., assignor of one-half to Julian Clough, Tacoma, Wash. Filed Dec. 27, 1907. Serial No. 408,239.



1. In a power-driven vehicle, the combination of a rotating shaft, a movable bearing for the shaft; an outer fixed sleeve for said movable bearing, allowing a longitudinal motion thereof therein; a thrust shoulder on each side of said shaft bearing, whereby said shaft moves along its axis with the bearing; and means for moving said bearing along its axis.

2. In a power-driven vehicle, the combination of a rotating shaft; a movable bearing for the shaft; an outer fixed sleeve for said movable bearing, allowing a spiral motion thereof therein; a thrust shoulder on each side of said shaft bearing, whereby said shaft moves along its axis with the bearing; a spiral guide slot in said fixed sleeve; a pin in said movable bearing and extending through said spiral guide slot; and means engaging said pin to move it in said guide slot, whereby said bearing and shaft are moved along their axis.

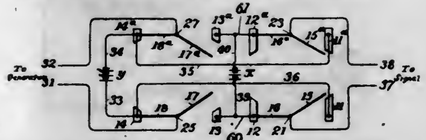
3. In a power-driven vehicle, the combination of a post having a hand wheel mounted on the end thereof, and divided into two parts, and having its lower part fixedly positioned relatively to the vehicle; a universal joint connecting the two parts of the post, whereby the upper part is free to be moved out of the axis of the lower part; a guide on the vehicle and engaging the upper part of the post, to confine its movements to one plane; a prime motor mounted on the vehicle; a friction wheel driven thereby; a friction disk mounted at right angles to the friction wheel and adjacent thereto, and rotating proportionately with the speed of the vehicle, and being axially movable; a fixed brake mounted on the vehicle adjacent to the friction disk and on the opposite side thereof relatively to the friction wheel; and means connecting the upper part of the post to the friction disk and adapted to control the axial position of the friction disk between the friction wheel and the fixed brake by position of the upper part of the post.

4. In a power-driven vehicle, the combination with a prime-motor and shaft driven thereby; of a friction wheel mounted on said shaft; a pair of friction disks rotatively mounted on each side of said friction wheel, and being transversely movable relatively thereto and to each other, and each being rotatively connected to a driving wheel of the vehicle; a movable bearing for each of said friction disks; a thrust shoulder on each side of said bearings, whereby said disks are moved along their axis with their bearings; a post having a hand wheel mounted on the end thereof, and divided into two parts, and having its lower part fixedly positioned relatively to the vehicle; a universal joint connecting the two parts of the post, whereby the upper part is free to be moved out of the axis of the lower part; a guide on the vehicle and engaging the upper part of the post, to confine its movements to one plane; and means connecting said upper part to said movable disk bearings, whereby the position of the upper part controls the positions of the disks relatively to the friction wheel and to each other.

5. In a power-driven vehicle, the combination with a prime-motor and shaft driven thereby; of a friction wheel mounted on said shaft; a pair of friction disks rotatively mounted on each side of said friction wheel, and being transversely movable relatively thereto and to each other, and each being rotatively connected to a driving wheel of the vehicle; a movable bearing for each of said friction disks; an outer fixed sleeve for each of said movable bearings, allowing a spiral motion thereof therein; a thrust shoulder on each side of said movable bearings, whereby said disks are moved along their axis with the bearings; oppositely inclined spiral guide slots in said fixed sleeves; a pin in each of said movable bearings and extending through the spiral guide slot thereof; a post divided into two parts, and having its lower part fixedly positioned relatively to the vehicle; a universal joint connecting the two parts of the post, whereby the upper part is free to be moved out of the axis of the lower part; a guide on the vehicle and engaging the upper part of the post, to confine its movement to one plane; and means connecting said upper part to both of said pins, whereby the position of the upper part controls the positions of the pins, and of the bearings and disks relatively to the friction wheel and to each other.

[Claims 6 and 7 not printed in the Gazette.]

901,509. SWITCH FOR CHARGING AND DISCHARGING STORAGE BATTERIES. ASBURY G. WILSON, Wilkinsburg, Pa., assignor to The Union Switch and Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Feb. 28, 1908. Serial No. 418,213.

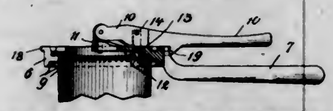


1. In a switch for charging and discharging storage batteries, the combination with a base, of two pairs of discharging knives supported upon the base, two pairs of clip contacts to coöperate respectively with the knives, one clip contact of each pair being connected to a clip contact of the other pair and pivoted on a support mounted on the base, discharging conductors connected to the pivot supports, two batteries connected respectively to the respective pairs of knives, means for rocking the clip contacts and said clip contacts and knives being normally all engaged when the clip contacts are in their middle position.

2. In a switch for charging and discharging storage batteries, the combination with a base, of two pairs of discharging knives supported upon the base, two pairs of charging knives of less height than the discharging knives also supported upon the base, four pairs of clip contacts to coöperate respectively with the respective pairs of knives, one clip contact of each pair being connected to a clip contact of an adjacent pair and pivoted on a support mounted on the base, charging conductors connected to the pivot supports for the charging clip contacts, discharging conductors connected to the pivot supports of the discharging clip contacts, two batteries each having connections with one pair of charging knives and one pair of dis-

charging knives, means for rocking all of the clip contacts simultaneously, and the charging clip contacts being all out of engagement with their respective knives, and the discharging clip contacts being all in engagement with their respective knives when the clip contacts are in their middle position.

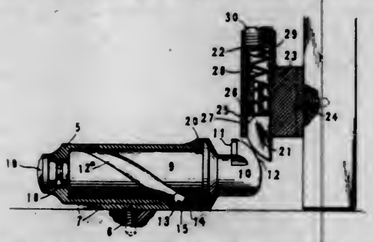
901,510. CAN-OPENER. WILLIAM H. WINFIELD, Richmond Hill, and WILLIAM SENN, New York, N. Y. Filed Dec. 31, 1907. Serial No. 408,780.



1. A can opener comprising two semi-annular gripper members pivoted together and provided with handles by which they may be manipulated, the said members being provided exteriorly with a flange throughout a portion of their circumference only, and a cutter carrying lever pivotally connected to one of said members at a point substantially central therewith, the said lever being provided with a portion adapted to engage and be guided by the said flange.

2. In a can opener, the combination with two semi-annular gripper members pivoted together and provided with handles by which they may be manipulated, the said members having a plurality of concentric gripping faces and provided exteriorly with a flange throughout a portion of their circumference only, a central post rotatively mounted in one of the said gripping members and a cutter carrying lever pivotally mounted upon said central post, the said lever being provided with a portion adapted to engage and be guided by the said flange.

901,511. DOOR-HOLDER. JASPER C. WINN, Brooklyn, N. Y., assignor to Winn Manufacturing Company, New York, N. Y. Filed Jan. 11, 1908. Serial No. 410,402.



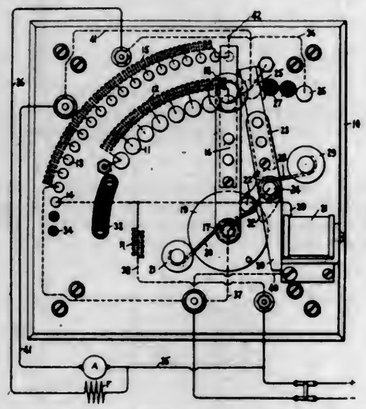
1. A device of the kind described, comprising a fixable member, a member carried thereby and adapted for longitudinal movement with respect thereto, means for causing a rotative movement of the second member while moving longitudinally, means to normally position the members, and means to engage the second member while in normal position.

2. A device of the kind described, comprising a fixable member, a member carried thereby and adapted for longitudinal movement with respect thereto, and which carries a retaining head, a spiral groove carried by one member, and a ball carried by another member whereby the moving member may be rotated during movement, means to normally position the members, and means to engage the retaining head while the latter is in normal position.

3. A device of the kind described, comprising a fixable member, a member carried thereby and adapted for longitudinal movement with respect thereto, and which carries a retaining head, means for causing a rotative movement of the second member while moving longitudinally, means to normally position the members, means to engage the second member while normally positioned, and means to prevent dust and moisture from entering the structure.

4. A device of the kind described, comprising a fixable member, a member carried thereby and adapted for longitudinal movement with respect thereto, means for causing a rotative movement of the second member while moving longitudinally, a buffer between the members, a spring to normally position the members, means to engage the second member while it is normally positioned, and means to secure the fixable member in position.

901,512. RHEOSTAT. PAUL H. ZIMMER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 20, 1907. Serial No. 374,549.



1. A rheostat comprising resistance contacts, a controlling arm therefor spring-pressed towards its initial position, a circuit controlling element independently spring-pressed and arranged to hold the spring pressure from said arm, and a no-voltage magnet for retaining the element in a holding position.

2. A rheostat comprising resistance contacts, circuit controlling elements biased to rotate in opposite directions, a no-voltage magnet for retaining one of said elements in a predetermined position, and means whereby the bias is removed from the other element when the said position is reached.

3. A rheostat comprising resistance contacts, a controlling arm biased to rotate in a predetermined direction, a circuit controlling element biased to rotate in an opposite direction, a no-voltage magnet for retaining said element in a biased position, and means whereby the bias is removed from the controlling arm when said element reaches the biased position.

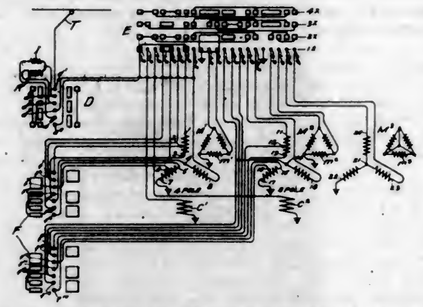
4. A rheostat comprising resistance contacts, a controlling arm therefor, a spring-pressed member arranged to normally engage said arm and bias it towards a predetermined position, a circuit controlling element arranged to hold said member out of engagement with said arm, and a no-voltage magnet for retaining said element in a holding position.

5. A rheostat comprising resistance contacts, a controlling arm biased to rotate in a predetermined direction, a circuit controlling element arranged to be engaged by said arm and rotated in the same direction, means whereby the bias is removed from the controlling arm when said element reaches a predetermined position, and a no-voltage magnet for retaining the element in said position.

[Claims 6 to 15 not printed in the Gazette.]

901,513. INDUCTION-MOTOR CONTROL. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 12, 1906. Serial No. 325,844.

1. In combination with a single-phase source, two polyphase induction motors of different pole-numbers, a load to be driven thereby, means for connecting the primary windings of both motors in parallel, with one phase connected to the source, and means for connecting either motor mechanically to the load.



2. In combination with a single-phase source, two polyphase induction motors of different pole-numbers, a load to be driven, a switch adapted to connect the primary windings of both motors in parallel, with one phase connected to the source, and a magnetic clutch for each motor adapted to connect it mechanically to the load.

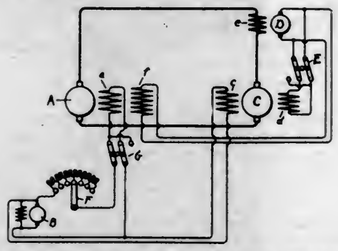
3. In combination with a single phase source, two polyphase induction motors of different pole-numbers, a load to be driven, a starting device, means for connecting the primary winding of the motor with the smaller number of poles to the source through said starting device with its rotor running free to start the motor, means for cutting the starting device out of circuit and connecting the primary winding of the second motor in parallel with the first and connecting its rotor mechanically to the load, and means for disconnecting the rotor of the second motor from the load and connecting the rotor of the first motor thereto.

4. In combination with a source of alternating current, two induction motors of different pole-numbers, a third induction motor, and means for connecting the third motor in cascade with either of the other two motors and for connecting the third motor directly to the source.

5. In combination with a source of alternating current, two motors of different pole-numbers, a third motor having the same number of poles as one of the first two motors, and means for connecting the third motor to the source in cascade with either of the other motors and in parallel with the other motor of the same pole-number.

[Claims 6 to 22 not printed in the Gazette.]

901,514. SYSTEM OF MOTOR CONTROL. HANS ALEXANDER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed May 20, 1907. Serial No. 374,674.



1. In combination, a separately excited generator supplying a motor, means for controlling the field strength of the generator to vary the voltage supplied to said motor, a separately excited field winding on said motor, a series-exciter connected to said field winding, and a field winding on said exciter in series with the supply lines of the motor.

2. In a system of control for reversible motors, a motor having a series field winding, a variable voltage dynamo supplying the motor, and a series-exciter having a field winding connected in the main circuit, the series field winding of the motor being connected to the said exciter and being provided with a reversing switch.

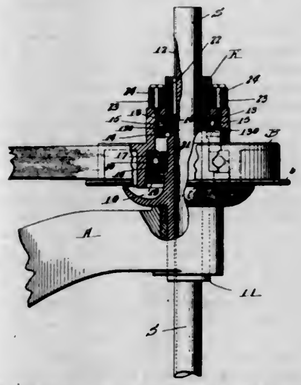
3. In combination, a separately excited generator supplying a separately excited motor having main and auxiliary windings, means for controlling the field strength of the generator to vary the voltage supplied to said motor, and an exciter connected to said auxiliary field winding and having a field winding in series with the supply lines of the motor.

4. In combination, a separately excited generator supplying a separately excited motor having main and auxiliary windings, means for controlling the field strength of the generator to vary the voltage supplied to said motor, and a series exciter having a field winding connected in the main circuit, the auxiliary field winding of the motor being connected to said exciter and being provided with a reversing switch.

5. In combination, a separately excited generator supplying a motor, means for controlling the field strength of the generator to vary the voltage supplied to said motor, a separately excited field winding on said motor, and a series exciter connected to said field winding and having a field winding in series with the supply lines of the motor, said exciter being so constructed and designed that the current flowing in said motor field winding is approximately proportional to the current supplied the motor at all loads.

[Claims 6 to 13 not printed in the Gazette.]

901,515. DRIVING-MECHANISM FOR SPINDLES. HARDING ALLEN, Barre, Mass. Filed Feb. 2, 1906. Serial No. 299,163.



1. In a device for the purpose stated, the combination of a bushing, a driving pulley running thereon, a driving collar, a spindle running through the bushing and engaging the driving collar, and a lost-motion connection between the driving pulley and driving collar.

2. In a device for the purpose stated, the combination of a bushing, a driving pulley running on said bushing, a driving collar on the top of said driving pulley, a spindle fitted in said bushing and said driving collar, said spindle having a key-way cut therein, a key fitted in said driving collar and engaging a key-way of a spindle, and a lost-motion connection between the driving collar and driving pulley.
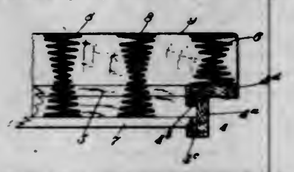
3. In a device for the purpose stated, the combination of a bushing, a driving pulley running thereon, a driving collar on top of the driving pulley, a spindle fitted in said bushing and in said driving collar and having a key-way therein, a key fitted in said driving collar and engaging said key-way, pins depending from said driving collar, and rollers mounted on said pins, said driving pulley having faces engaging said rollers.

4. In a device for the purpose stated, the combination of a bushing, a driving pulley running thereon, a driving collar on top of the driving pulley, a spindle fitted in said bushing and in said driving collar and having a key-way therein, a key fitted in said driving collar and engaging said key-way, pins depending from said driving collar, rollers mounted on said pins, and bearing pieces in said driving pulley engaging said rollers.

5. In a device for the purpose stated, the combination of a bushing, a driving pulley having a ball-bearing engagement therewith, a driving collar on top of the driving pulley, a spindle fitted in said bushing and in said driving collar and having a key-way therein, a key fitted in said driving collar and engaging said key-way, pins depending from said driving collar, rollers on said pins, said driving pulley having holes in which said rollers loosely fit, and slots, and bearing pieces fitted in said slots for engaging said rollers.

[Claims 6 and 7 not printed in the Gazette.]

901,516. BED-SPRING. NEWTON K. BILLOW, Columbus, Ohio. Filed July 20, 1908. Serial No. 444,373.



1. In a bed spring of the kind described, a frame to support springs having its sides each constructed of a vertically standing piece, a horizontally lying piece secured to the upper edge of the vertically standing piece and projecting both inwardly and outwardly beyond the opposite faces of the vertically standing piece, combined with the upper and lower beading strips secured to the inner face of the vertically standing piece, the upper beading strip lying in the corner formed by the vertically and horizontally standing pieces, and slats supported by the lower of said beading strips, substantially as shown and described.

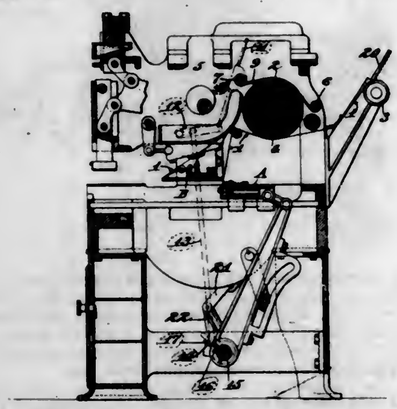
2. In a bed spring of the kind described, a frame to support springs having its sides each constructed of a vertically standing piece, a horizontally lying piece secured to the upper edge of the vertically standing piece and projecting both inwardly and outwardly beyond the faces of the vertically standing piece, combined with the bending strip 4^b, secured to the inner face of the vertically standing piece, and in the corner formed by the junction of the vertically standing piece with the horizontal piece, said beading strip coöperating with the upper edge of the vertically standing piece to form a support and brace for the horizontally lying piece, and slats supported at the lower edges of the vertically standing pieces, substantially as described.

901,517. STRIP-FEEDING MECHANISM. CHARLES E. BROOKS, St. Louis, Mo., assignor to B. Roth Tool Company, St. Louis, Mo., a Corporation of Missouri. Original application filed Mar. 31, 1908, Serial No. 424,308. Divided and this application filed June 29, 1908. Serial No. 440,799.

1. A strip feeding device comprising a spindle and means for intermittently rotating the same in opposite directions, a second spindle having a spring tending to turn it in a certain direction, a support for the strip supply roll, and a strap connected to said spindles, respectively, and adapted to bear against the periphery of the roll of paper.

2. A strip feeding mechanism comprising a support for rotatably mounting a supply roll, a feeding strap mounted to permanently frictionally engage the periphery of said supply roll, means to reciprocate said strap intermittently, and means for preventing the rewinding of said strip onto said roll.

3. A strip feeding mechanism comprising a support for rotatably mounting a supply roll, a rotatable spindle adjacent to said support, a spring tending to rotate said spindle, a friction strap connected to said spindle, and means for reciprocating said strap in contact with said supply roll.

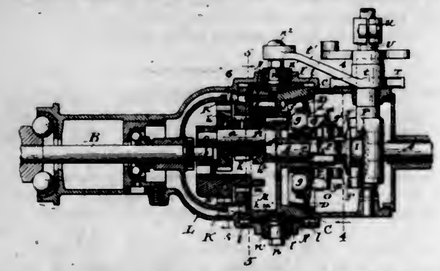


4. A strip feeding mechanism comprising a support for rotatably mounting a supply roll, two rotatably mounted spindles parallel therewith and on opposite sides thereof, a friction strap connected to said spindles, means tending to turn one of said spindles, and means for intermittently rotating the other spindle to reciprocate said strap in contact with the supply roll.

5. In a strip feeding mechanism, a support for rotatably mounting a supply roll, a rotatable spindle adjacent to said support, a spring tending to rotate said spindle, a friction strap connected to said spindle, means for reciprocating said strap in contact with said supply roll, and means for preventing the rewinding of the strip onto the supply roll.

[Claims 6 to 8 not printed in the Gazette.]

901,518. PLANETARY GEARING. ALANSON P. BRUSH, Detroit, Mich. Filed July 3, 1907. Serial No. 381,970.



1. In planetary gearing, the combination of a power shaft having a crank pin, an external gear mounted on said crank pin, a driven member, an internal gear fast to said driven member in mesh with said external gear, and means for locking said external gear to the power shaft.

2. In planetary gearing, the combination of a power shaft having a crank pin, an external gear mounted on said crank pin, a driven member, an internal gear fast to said driven member in mesh with said external gear, and means for turning said external gear backward upon the crank pin relative to the driving shaft.

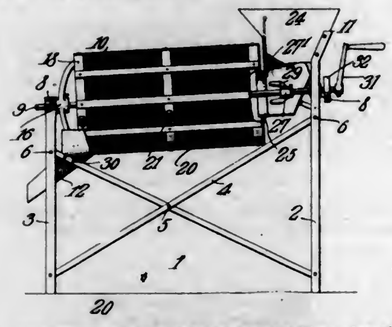
3. In planetary gearing, the combination of a power shaft having a crank pin, an external gear mounted on said crank pin, a driven member an internal gear fast to said driven member in mesh with said external gear, and mechanism whereby said external gear may be locked to the driving shaft or prevented from rotation with said driving shaft or turned upon said crank pin backwards relative to the driving shaft.

4. In planetary gearing, the combination of the power shaft, a driven member, a non-rotatable casing in which both are mounted and from which they project, and planetary transmission gearing which is wholly within said casing and is arranged for transmitting motion from the power shaft to the driven member, a brake ring rotatably mounted within the casing and supported thereby, and means carried by the brake ring projecting through the casing, whereby the ring may be turned, said brake ring being arranged to cover said hole.

5. In planetary gearing, the combination of a power shaft having a crank, a driven member concentric with the power shaft and having an internal gear, two connected external gears rotatably mounted upon said crank, one of said gearings being in mesh with said internal gear, a ring mounted concentrically with the power shaft and having an internal gear with which the other external gear is in mesh, and means for preventing the turning of said ring.

[Claims 6 to 20 not printed in the Gazette.]

901,519. SCREENING-MACHINE. GEORGE P. BURKE and PETER D. BURKE, Roswell, S. D. Filed Apr. 2, 1908. Serial No. 424,815.



1. The combination in a screening machine of a shaft, a cylindrical screen mounted thereon, and a flexibly jointed main frame provided with bearings for said shaft, said frame being longitudinally extensible to permit the removal therefrom of the cylinder and shaft.

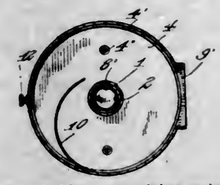
2. The combination in a screening machine of a shaft, a cylindrical screen mounted thereon, a longitudinally extensible knock-down frame having bearings for said shaft, the extension of the frame permitting the removal of the shaft and cylinder and detachable means normally holding said frame in shaft-holding position.

3. The combination in a screening machine of a longitudinally extensible frame formed of a plurality of pivotally connected sections, detachable means for locking the parts of the frame rigidly together, bearings on said frame, a shaft mounted in said bearings, a revoluble screen on said shaft and a feed hopper connected to the frame and having an opening for the passage of the shaft.

4. The combination in a screening machine of a shaft, a revoluble screen mounted thereon, a flexibly jointed main frame provided with bearings for said shaft, a hopper supported by the frame and opening into said screen, said hopper having an opening for the passage of the shaft, and cross-braces pivotally connected at their lower ends to said main frame and detachably connected at their upper ends to said frame, whereby on loosening the detachable connections said main frame may be elongated to permit of the removal of shaft and screen.

5. The combination in a screening machine of a shaft, a revoluble screen mounted thereon, a flexibly jointed main frame comprising a pair of legs at one end provided with a bearing for said shaft and a hopper fixed to said legs, a pair of legs at the opposite end of said frame supporting a second shaft bearing, cross-braces pivotally connected together and to the lower ends of said legs and detachably connected for securing the upper ends of said cross-braces to the upper ends of said legs whereby on the removal of said detachable connections the main frame may be elongated to permit the removal of the shaft and screen and then folded in an approximately flat form.

901,520. ROLL-PAPER HOLDER. GEORGE P. BURRIS, Seattle, Wash. Filed July 29, 1908. Serial No. 445,994.

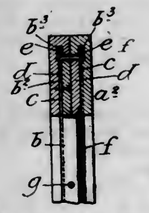


1. A roll-paper holder comprising relatively rotatable telescoping parts, laterally projecting heads at the outer ends of said parts, means for interlocking said parts by successive angular movements of one part relatively to the other, and a tubular shield provided with an aperture for passage of the paper extending between said heads.

2. A roll-paper holder comprising a base part, a core part for the roll of paper fitting on said base part for successive angular movements, coöperating means provided on said parts for interlocking the same by said movements of the core part, and a shield for said roll extending about the core part having an opening for feeding out the paper, and a head for said shield connected with said core part.

3. A roll-paper holder comprising relatively rotatable telescoping parts, one of said parts constituting a core for the roll of paper, means for interlocking said parts by successive angular movements of one part relatively to the other, heads secured each to a respective one of said parts, and a shield for the roll secured to one of said heads and having an opening for feeding out the paper.

901,521. WINDOW-SCREEN. EDWARD CARNEY, High Falls, N. Y. Filed Dec. 6, 1907. Serial No. 405,352.



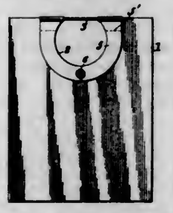
1. A window screen comprising two similar frames each composed of parallel side portions connected by an end member, the side portions of one frame overlapping the corresponding portions of the other frame, and screen material secured in the said frames, the side portions of said frames being also provided with longitudinal grooves which open inwardly and which are L-shaped in cross section, and said side portions of said frames being also connected near their free ends by transverse strips provided at their ends with L-shaped parts movable in said grooves.

2. A window screen comprising two similar frames composed of parallel overlapping side portions connected by end members, the end members being composed of separate parts secured together, and the side portions being provided in their adjacent faces with longitudinal grooves in which are secured separate strips, screen ma-

terial secured in the said frames between the separate parts thereof, said side portions of said frames being also provided near their free ends with transverse strips having end members which pass between the separate parts of the side portions of said frames and are provided at their outer ends with L-shaped parts movable in longitudinal L-shaped grooves formed in the side portions of the said frames.

3. A window screen comprising two similar frames composed of parallel overlapping side portions connected by end members, the end members being composed of separate parts secured together, and the side portions being provided in their adjacent faces with longitudinal grooves in which are secured separate strips, screen material secured in the said frames between the separate parts thereof, said side portions of said frames being also provided near their free ends with transverse strips having end members which pass between the separate parts of the side portions of said frames and are provided at their outer ends with L-shaped parts movable in longitudinal L-shaped grooves formed in the side portions of the said frames, said transverse strips being L-shaped in cross section and each frame being provided with a rod or rods connected with the end members thereof, and the transverse strip thereof, the said rod or rods of one frame being passed through the transverse strip of the other frame.

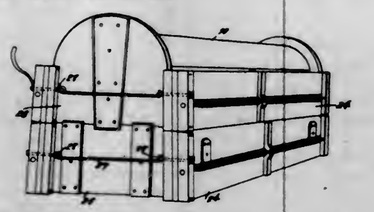
901,522. SCISSORS-SHARPENER. JOHN B. CARROLL, Chicago, Ill. Filed Aug. 2, 1907. Serial No. 386,743.



1. A scissors-sharpener, comprising a card having a marginal opening, a hard metal strip extending across said opening and seated against the edge of the card, and a sheet-metal fastener secured to the card and bent around the strip.

2. A scissors-sharpener, comprising a card having a marginal opening and a recess at each side of the opening, a hard metal strip extending across said opening and seated in said recesses, and a sheet-metal fastener and guard secured to the card around the opening and having its ends bent around the strip.

901,523. MOLD FOR MAKING BURIAL-VAULTS. THOMAS M. CASS, Fort Worth, Tex. Filed June 9, 1908. Serial No. 437,488.



1. Molds for making burial vaults comprising inner and outer molds, the inner molds consisting of side pieces arched at their upper parts, end pieces placed within the ends of the said side pieces, means for adjusting the said ends into and out of operative position relative said side pieces, a platform common for the inner and outer molds, and means for removing the inner molds downward through the platform.

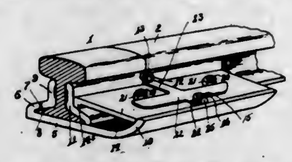
2. Molds for making burial vaults comprising inner and outer molds, the outer molds consisting of sides and ends and means for binding the sides on the ends, the ends extending above the sides and curved to conform to the form of the vault, the inner molds consisting of sides and ends placed within the ends of the sides, the upper parts of the sides being arched over the ends, a platform common to the inner and outer molds, means for removing the inner molds from the formed vault downwardly, the side pieces of the platform being cut away for the downward passage of the end pieces of the inner molds, the sides of the inner molds having braces therein, and hand bolts operating the braces of the sides for adjusting the end pieces of the inner molds into and out of operative positions whereby the end pieces may be brought into position to pass down through the cut-outs in said platform pieces.

3. Molds for making burial vaults comprising a portable platform, interior and exterior molds mounted on said platform, said platform having an opening therethrough for the passage of said interior molds, and means for removing said interior molds downward consisting of a vertically movable platform, a windlass, and cables attached to said windlass and to said vertically movable platform.

4. Molds for making burial vaults comprising exterior and interior molds, a platform supporting said molds, corner caps removably mounted on said interior molds to prevent the interior molds from clinging to the formed vault, and means for removing the interior molds downwards through said platform.

5. Molds for making burial vaults comprising exterior and interior molds, a platform supporting said molds, said interior molds having interior braces, rods and turn buckles for holding the parts of said interior mold in operative relation, and means for removal of said interior molds downward through said platform including rods and turn buckles and hand bolts operating in the braces of said interior molds and vertically moving platform.

901,524. RAIL-SPLICE. CHARLES M. CULP, South Bend, Ind. Filed Oct. 2, 1907. Serial No. 395,643.



1. The combination with abutting rail sections, of a base plate for the support of the rail sections, one edge of the base plate overhanging one side of the base flange of the rail sections and having an under-cut wall, the opposite edge of the base plate extending beyond the opposite edge of the base flange of the rail sections and being directed upwardly, a splice bar having a beveled edge for engagement with said under-cut wall of the base flange, a second splice bar for engagement with the opposite sides of the rail sections, a wedging plate engaging the second mentioned splice bar and upwardly directed bar of the base flange, and means for securing the base plate and the wedging plate together.

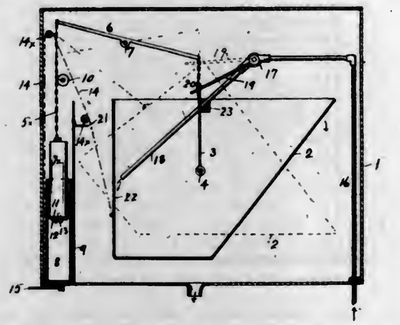
2. The combination with abutting rail sections, of a base plate for the support of the rail sections, one edge of the base plate overhanging one side of the base flange of the rail sections and having an under-cut wall, the opposite edge of the base plate extending beyond the opposite edge of the base flange of the rail sections and being directed upwardly, a splice bar having a beveled edge for engagement with said under-cut wall of the base flange, a second splice bar for engagement with the opposite sides of the rail sections, a bolt passed through the splice bars, a wedging plate engaging the second mentioned splice bar and upwardly directed bar of the base plate, and bolts passed through the wedging plate and the base plate to secure them together.

3. The combination with abutting rail sections, of a base plate for the support of the rail sections, one edge of the base plate overhanging one side of the base flange of the rail sections and having an under-cut wall, the opposite edge of the plate extending beyond the opposite edge of the base flange of the rail sections and being curved upwardly, a splice bar having a beveled edge for engagement with said undercut wall of the base plate, a second splice bar for engagement with the opposite sides of the rail sections, a bolt passed through the splice bars, a wedging plate engaging the second mentioned splice bar and the upwardly directed part of the base plate, bolts passed through the wedging plate and the base plate, nuts upon all of the bolts, and locking means engaging all of the nuts to prevent accidental turning of the latter.

4. The combination with abutting rail sections, of a base plate for the support of the rail sections, one edge of the base plate overhanging one side of the base flange of the rail sections and having an under-cut wall, the opposite edge of the base plate extending beyond the opposite edge of the base flange of the rail sections and being curved upwardly, a splice bar having a beveled edge for engagement with said undercut wall of the base plate, a second splice bar for engagement with the opposite sides of the rail sections, a bolt passed through the splice bars, a wedging plate engaging the second mentioned splice bar and the upwardly directed part of the base plate, bolts passed through the wedging plate and the base plate, nuts upon all of the bolts, a locking plate embracing one of said bolts and held upon the wedging plate by one of said nuts and having portions engaging all of the nuts to prevent accidental turning of the latter.

5. In a rail joint or chair, the combination with rail sections, of a base plate for the support of the rail sections, one edge of the base plate overhanging one edge of the base flange of the rail sections and having an undercut wall, the opposite edge of the plate extending beyond the opposite edge of the base flange of the rail sections and being curved upwardly, a splice bar engaging one side of the rail sections and having a beveled edge for coöperative engagement with said undercut wall, a splice bar engaging the opposite side of the rail sections, a bolt passed through the splice bars, the abutting ends of the rail sections each having a notch for registration with each other and through which said bolt passes to permit of contraction and expansion of the rail sections, a wedging plate engaging the second mentioned splice bar and the upwardly curved edge of the base plate for depression to wedge the splice bars tightly into coöperation with the rail sections, bolts passed through the base plate and wedging plate to hold the latter in operative position, nuts upon all of the bolts, and a locking plate having engagement with all of the nuts to prevent accidental turning of the latter.

901,525. WATER-CLOSET. GEORGE M. DEPEW, Canandaigua, N. Y. Filed Aug. 13, 1907. Serial No. 388,376.



1. The combination of a water receptacle, a suspending device, a water supply pipe, a faucet, a faucet handle, said handle being operatively engaged with said suspending device, and said supply pipe having a downwardly inclined extension opening near the end of the receptacle opposite its outlet end whereby impact of inflowing water tends to return the receptacle to horizontal position, and means for tilting the receptacle.

2. The combination in a flushing device, of a casing, a tilting receptacle, means for tilting the receptacle, a counterbalancing weight, a well to guide the weight, and a partition in the casing inclosing the well, and a stop on the partition, said stop being in the path of the tilting receptacle.

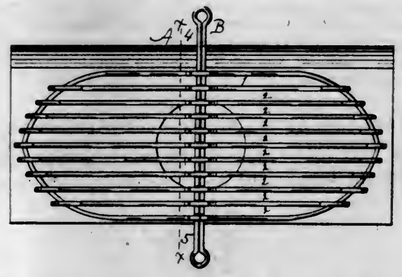
3. The combination in a flushing device, of a casing, a tilting receptacle, a counterbalancing weight, a well to guide the weight, a partition in the casing and inclosing the well, and a receptacle-moving cord situated adjacent the well and on the same side of the partition.

4. A tilting water receptacle having an inclined discharging end receptacle-supporting pivots, means for tilting the receptacle, and a supply pipe discharging near the end of the receptacle opposite said inclined end whereby impact of inflowing water tends to return the receptacle to horizontal position.

5. In a flushing device, a receptacle, means for tilting it to empty, and a refilling pipe discharging against an end of the receptacle at a point suitable to return said tilted receptacle toward horizontal position by impact of a fresh charge of water.

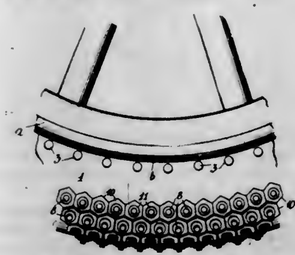
[Claims 6 to 8 not printed in the Gazette.]

901,526. GUTTER-STRAINER. HENRY DIXON, Dayton, Ohio. Filed Jan. 29, 1908. Serial No. 413,164.



The gutter-strainer comprising the folded sustaining wire; with looped engaging ends the marginal wire secured to said sustaining wire, the parallel wires connecting transversely with said sustaining and marginal wires, substantially as described.

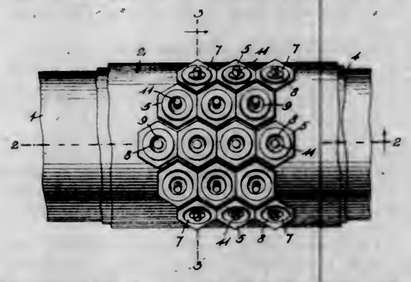
901,527. COVER FOR PNEUMATIC TIRES. ISAAC J. D. FAIRHURST, Orfordville, Wis. Filed Feb. 28, 1907. Serial No. 359,868.



A tire cover having a reinforcing strip in its tread portion, combined fastening and armor rivets securing said reinforcing strip to the cover and forming a protective armor on the outer side of the latter with abutting hexagonal plates secured on the projecting ends of said rivets,

reinforcing anti-skidding washers arranged on said armor plates and washer retaining heads formed on the outer ends of said rivets, said heads also forming anti-slipping projections, substantially as described.

901,528. ANTISLIPPING TIRE-COVER. ISAAC J. D. FAIRHURST, Orfordville, Wis. Filed Aug. 19, 1907. Serial No. 389,209.



In combination with a tire, a flexible cover arranged over the same, a flexible strip arranged over the tread portion of the tire under the cover, centrally apertured base plates arranged over the tread portion of the cover, outer plates formed with centrally apertured recessed portions arranged over the base plates with their recessed portions extending into the apertures thereof to points flush with the inner faces of the same and fastening rivets extending through the flexible strip, the tire cover and through the apertures of the base and outer plates, respectively, the outer ends of the rivets being slightly enlarged to engage the recessed portions of the outer plates and projecting beyond the same.

901,529. ARC-LAMP. RICHARD FLEMING and CROMWELL A. B. HALVORSON, Jr., Lynn, Mass., assignors to General Electric Company, a Corporation of New York. Filed May 16, 1904. Serial No. 208,125.



1. In an arc lamp, a positive electrode formed in two parts, and means for causing a somewhat violent engagement between the parts at intervals in the operation of the lamp.

2. In an arc lamp, a pair of electrodes, means for oscillating one of said electrodes and for reciprocating the other of said electrodes in the feeding operation of the lamp, and a dash pot for controlling the movement of the reciprocating electrode only.

3. In an arc lamp, a pair of electrodes brought together to strike an arc, and means for thereafter rapidly rocking one of said electrodes and for slowly moving the other of said electrodes away from the rocking electrode.

4. In an arc lamp, an electrode comprising a pivoted working portion and a pivoted starting portion, means for normally holding the starting portion out of engagement with the working portion, and means for causing the starting portion to engage the working portion after a small initial movement in the feeding operation of the lamp.

5. In an arc lamp, an electrode comprising a pivoted working portion and a pivoted starting portion, a regulating winding, a coöperating armature connected to the starting portion, and an operative connection between the starting portion and the working portion whereby when the regulating winding is energized and the armature is attracted the starting portion will be oscillated by the armature and the working portion will be oscillated by the starting portion.

[Claims 6 to 17 not printed in the Gazette.]

901,530. SAFETY-RAZOR. MARTIN FLYNN, Paterson, N. J. Filed Jan. 2, 1908. Serial No. 409,027.

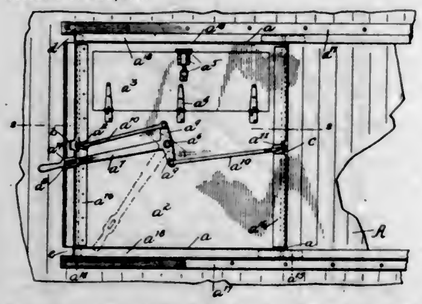


1. In a safety razor, a holder comprising a handle, a head disposed in the plane of the handle, arms bent forwardly from the head at the ends of the latter, a downwardly offset cross-bar having guard teeth, said cross-bar being integral with the arms and serving to connect the latter, blade holding clips at the outer side edges of the arms, and struck up lugs at the forward ends of the arms, said lugs adapted to engage the forward corners of the razor blade and to constitute stops and guards for said corners.

2. In a safety razor, a holder, including a head, having forward extending arms provided with struck up sector shaped lugs constituting corner guards for the razor blade, said head being provided with slots adjacent to said lugs.

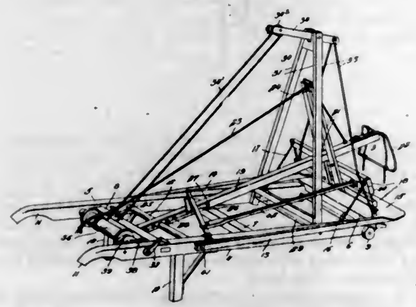
3. In a safety razor, a holder, including a broad, flat handle having an integral head provided with forward extending arms, an integral downwardly offset cross-bar connecting said arms and having guard fingers provided with terminal hooks, blade holding clips at the outer side edges of the arms, struck up lugs adjacent to the forward ends of the arms, and a blade engaging stop upon the back of the head adjacent to the upper edge of the latter.

901,531. GRAIN-CAR DOOR. THEODOR GERDES and GEORGE E. WILKEN, Danforth, Ill. Filed Feb. 28, 1908. Serial No. 418,294.



The combination with the side of a freight-car having an opening therethrough, of a door adapted to close said opening, a lever pivoted to said door and provided at its inner end with two arms, a rotatable rod carried by said door, at each of the two side ends thereof, and carrying on its ends slidable members adapted to travel on the exterior surface of said car, two links, each pivotally connected to one of said rods and to one of said arms, and two guide-strips extending longitudinally of the exterior of the car, and each comprising a base secured to said car, a horizontal wall, and a longitudinally-extending flange on top of which horizontal wall and between said longitudinally-extending flange and the side of the car said slidable members work, the front end of said longitudinally-extending flange terminating flush with the front pair of slidable members when the door is completely closed.

901,532. TRUCK. BENNETT S. GILLUM, Stahl, Mo. Filed May 7, 1908. Serial No. 431,382.



1. In a truck, freight carrying means, an ejector bar pivotally mounted thereon, and means operable to actuate the ejector bar.

2. In a truck, the foundation part, freight carrying means pivotally mounted thereon, freight receiving means mounted upon said carrying means and elevating means for said carrying means, said elevating means comprising a rocking frame pivoted to the foundation part, links connecting the rocking frame to said carrying means, a pulley on said rocking frame and a flexible connection passing over the pulley and attached to the foundation part.

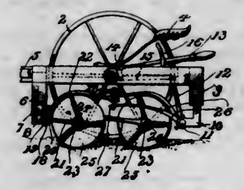
3. In a truck of the class described, a foundation part, freight receiving means pivotally mounted thereon and means for raising said freight receiving means, said means comprising a rocking frame pivoted to the foundation part, a link pivoted to the upper end of said rocking frame, connections between the front end of said link and the free end of the freight receiving means, a pulley mounted at the free end of said link, a windlass journaled to the foundation part, a flexible element attached to the foundation part and passing forwardly over said pulley and thence in a reverse direction and winding upon the windlass, and means for rotating the windlass.

4. In a truck of the class described, a foundation part, freight carrying means pivotally mounted thereon, means for elevating the freight carrying means, a shaft fixed to the foundation part, a longitudinal operating bar having a longitudinal slot in one end to receive said shaft, a fork at the free end of said operating bar and means for raising the forked end of said bar.

5. In a truck of the class described, a foundation part, freight carrying means pivotally mounted thereon, means for elevating said freight carrying means and freight retaining means, said freight retaining means comprising a transverse rod fixed to the foundation part, a longitudinally disposed operating bar provided with a longitudinal slot to receive said rod, a longitudinal plate pivoted to said operating bar and having a longitudinal series of notches any one of which is adapted to receive said transverse rod, a freight engaging fork at the free end of said operating bar and means for raising the forked end of said bar.

[Claim 6 not printed in the Gazette.]

901,533. QUACK-GRASS OR WEED EXTERMINATOR. ALVA G. HAM, Rochester, Minn. Filed May 18, 1908. Serial No. 433,503.

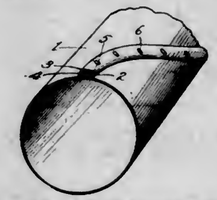


1. In a weed exterminator or the like, the combination with a frame of a shaft carried by the frame, a series of supports loose on the shaft, a series of colters one mounted in each support, a rock shaft mounted on the frame, a series of spring arms fast on the rock shaft each connected to a colter support and means connected to the rock shaft for operating the same.

2. In a weed exterminator or the like, the combination with a frame of two shafts carried by the frame, a series of supports loose on said shafts, said supports being formed into two series, rotary colters one mounted in each support, with the colters mounted in one series of supports behind the colters of the other series of supports, a rock shaft mounted on the frame, a series of spring arms fast on the rock shaft each connected to a colter support and means connected to the rock shaft for operating the same.

3. In a weed exterminator or the like, the combination with a frame, of a shaft carried by the frame, a series of supports loose on the shaft each support being formed with two arms, a series of colters one mounted in one arm of each support, a rock shaft, mounted on the frame, a series of spring arms faat on the rock shaft, each connected to the other arm of the colter supports, and means connected to the rock shaft for operating the same.

901,534. PIPE. CHARLES S. HAMLIN, Los Angeles, Cal., assignor to E. W. Wilson, Los Angeles, Cal. Filed Aug. 22, 1906, Serial No. 331,673. Renewed Mar. 9, 1908. Serial No. 420,107.



1. As a new article of manufacture, a pipe composed of a strip of wound metal provided with curved edges which respectively interlock, said curved edges having interposed an asbestos lining, the interlocking edges with the interposed lining being riveted together, the rivets lying wholly exteriorly of the pipe.

2. As a new article of manufacture, a pipe composed of a convoluted strip of sheet metal provided with curved edges which respectively interlock and lie upon the surface of the pipe, the curved edges having interposed a liquid-proof packing, the interlocking edges being riveted, the rivets lying exteriorly of the pipe and upon the outer periphery of the same.

3. As a new article of manufacture, a pipe composed of a strip of metal provided with curved edges which respectively interlock and lie upon the surface of the pipe, the curved edges having interposed an asbestos strip, and the curved edges being riveted, the rivet pins extending solely through the interlocked edges without piercing the pipe.

4. As a new article of manufacture, a pipe composed of a strip of metal coiled upon and away from itself and having its edges curved, which edges lie in proximate relative alinement and are of unequal sizes, the greater of which is

arranged to overlap and interlock with the smaller, an asbestos lining interposed between said interlocked edges, and rivet pins extending through the interlocked edges and the lining, the rivet pins lying wholly exteriorly of the pipe.

5. As a new article of manufacture, a pipe composed of a convoluted strip of sheet-metal provided with reversely-curved edges which interlock and lie in proximity to the surface of the pipe, the interlocking edges alone being riveted and extending wholly exteriorly of the pipe whereby the bore of the same is always free.

[Claims 6 to 8 not printed in the Gazette.]

901,535. POULTRY-HOUSE. JAMES H. IRWIN, Highmore, S. D. Filed Jan. 24, 1908. Serial No. 412,370.

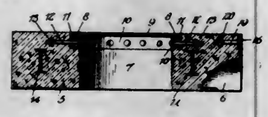


1. In a poultry house the combination with inclined floor sections, of a trough formed between the lower edges of the sections and secured thereto, perches mounted over the sections whereby a room separate from the remainder of the house is formed, and a foot walk supported over the trough.

2. A poultry house provided with a partition formed of inclined floor sections dividing the house into an upper and lower section, shelves arranged below the partition, removable nests having an open end and top mounted on the shelves whereby a partition is formed which divides the lower section of the house into two compartments and into either of which the open side of the nests may be caused to face.

3. A poultry house provided with partitions which divide the house into three rooms, one of which is floored to form a brooding section, the partition between the other two rooms being partly formed of nests having an open end and shelves upon which the nests are removably mounted whereby the nests may be made to face either of said last mentioned rooms, and doors connecting each of said last mentioned rooms with said brood room.

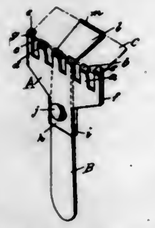
901,536. ARTIFICIAL-STONE SEWER-CAP. EDWARD F. KENNELLY, Boston, Mass. Filed Feb. 6, 1908. Serial No. 414,590.



1. As a new article of manufacture, an artificial stone sewer cap having a central man-hole opening therethrough, provided with a circular cut out portion extending around its upper edge to receive a suitable cover, spaced concentric circular metallic reinforcing bands partially embedded within the material of said sewer cap, and adapted to receive said material therebetween, to form the upper circular edges of said man-hole opening and said cut out portion, and provided with a plurality of alined openings, and anchoring bolts extending through said openings and having their inner ends provided with nuts embedded within the material of said sewer cap, substantially as described.

2. As a new article of manufacture, an artificial stone sewer cap having a recess formed upon the under surface of its front edge and constituting the sewer inlet, and a U-shaped reinforcing band partially embedded within the material of said cap to form the upper edge thereof, and having its angular ends similarly forming the upper edge of the sides of said sewer cap for a short distance thereon, and provided with inturned extremities embedded within the material of said sewer cap, and anchoring bolts extending inwardly from said reinforcing band and having their inner ends provided with nuts embedded within the material of said sewer cap, substantially as described.

901,537. RAZOR. ALFRED KOSCHERAK, New York, N. Y. Filed Mar. 28, 1908. Serial No. 423,854.



1. In a safety razor a holder for the blade comprising a handle bent back near the top forming a support for the back of the blade, the said support having on its top edge a groove for retaining the back of the razor blade, and an inverted comb slidably mounted on the handle and having teeth extending upwards from the top edge, the ends being bent to afford supports for the edge of the blade, the corner teeth being bent over forming lips for retaining the front corners of the blade.

2. In a safety razor a holder for the blade comprising a handle bent back near the top forming a support for the back of the blade, the said support having a groove on its top edge for retaining the back of the razor blade, an inverted comb slidably mounted on the handle and having teeth extending upwards from the top edge, the ends being bent to afford supports for the edge of the blade, the corner teeth being bent over forming lips for retaining the front corners of the blade and a thumb-screw extending through an elongated bore in the comb and screwed through the handle, to secure said parts together when properly adjusted to effect a retaining of the blade within the holder in spring pressed engagement between the back groove and front lips.

901,538. STRIKING-PIN FOR PISTON-HAMMER ROCK-DRILLING ENGINES. JOHN G. LEYNER, Denver, Colo. Filed Apr. 3, 1905. Serial No. 253,409.



1. In a rock drill, a drill-bit, a hammer piston, a striking pin inserted therebetween and adapted to receive and impart blows of said hammer piston to said drill-bit, and a buffer device arranged to receive direct blows from said hammer piston when the striking pin is in its lowermost position.

2. In a rock drill, a drill-bit, a hammer piston, a striking pin inserted therebetween and adapted to receive and impart blows of said hammer piston to said drill-bit, and an elastic buffer device arranged to receive direct blows from said hammer piston when the striking pin is in its lowermost position.

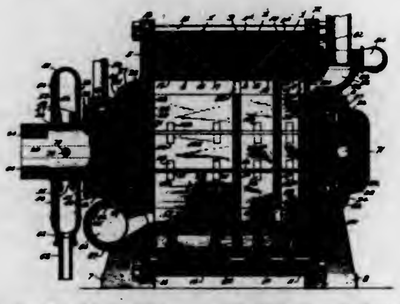
3. In a rock drill, a drill-bit, a hammer piston, a striking pin inserted therebetween and adapted to receive and impart blows of said hammer piston to said drill-bit, and an independently-mounted buffer device arranged to receive direct blows from said hammer piston when the striking pin is in its lowermost position.

4. In a rock drill, a drill bit, a striking-pin, a hammer-piston for striking the striking-pin, and an elastically mounted buffer device arranged to receive the inoperative blows of said hammer-piston.

5. In a motive fluid hammer-piston rock drilling engine, the combination with the cylinder and the hammer-piston, of a drill-bit holding chuck mounted in said cylinder, provided with an enlarged portion, a steel buffer sleeve mounted in said cylinder in the reciprocal path of said hammer-piston, and arranged to fit over the end of said chuck, a resilient buffer ring and a steel washer mounted on said chuck between said steel buffer sleeve and said enlarged portion of said chuck, said buffer sleeve having an axial aperture of two diameters, arranged to form a shoulder in the front end of said sleeve, a pin reciprocally mounted in said sleeve, and arranged to project normally beyond the said sleeve into the reciprocal path of said hammer-piston, a collar on said pin arranged to have a sliding movement between the shoulder in said steel buffer sleeve, and the adjacent end of said chuck, and adapted to define the reciprocal compensating movement of said pin, relative to the reciprocal strokes of said hammer-piston, and a drill-bit adapted to be supported by said chuck against said pin, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

901,539. MULTIPLE-STAGE AIR-COMPRESSOR. JOHN G. LEYNER, Denver, Colo. Filed June 14, 1905. Serial No. 265,267.



1. In an air-compressor, a plurality of cylinders arranged end to end but out of alinement, a partition between the ends of adjacent cylinders, a rotary piston in each cylinder, and a port extending through each partition, within the inner surfaces of the adjacent cylinders.

2. In an air-compressor, a plurality of cylinders arranged end to end but out of alinement, a partition between the ends of adjacent cylinders, a rotary piston in each cylinder, and a plurality of ports of different size extending through each partition, within the inner surfaces of the adjacent cylinders.

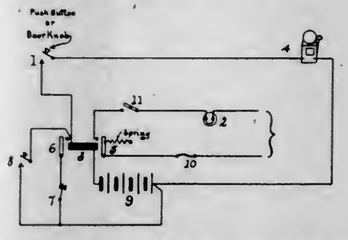
3. In an air-compressor, a plurality of connected cylinders arranged end to end but out of alinement, a rotary piston in each cylinder, an outlet from one end cylinder, and a revolving valve for said outlet.

4. In an air-compressor, a plurality of connected cylinders arranged end to end but out of alinement, a shaft extending longitudinally through said cylinders, an outlet from one end cylinder, and rotary pistons for said cylinders and a valve for said outlet, carried by said shaft.

5. In an air compressor, the combination of the cylindrical casings having eccentrically arranged cylinders therein, the piston shaft rotatably mounted in said casings and cylinders in rotary bearing contact with one point of the inner periphery of said cylinders, water circulating passages in said casings surrounding said cylinders, and a suitable water inlet and outlet in said casing into and out of said water passages, water circulating passages in said piston shaft, a water inlet aperture in said shaft connecting with one end of said passages and a water outlet aperture in said shaft connecting with the opposite end of said water passages, as set forth.

[Claims 6 to 12 not printed in the Gazette.]

901,540. COMBINED ELECTRIC ALARM AND LIGHT. WILLIAM A. LINDSEY, Narberth, Pa. Filed July 18, 1907. Serial No. 384,369.

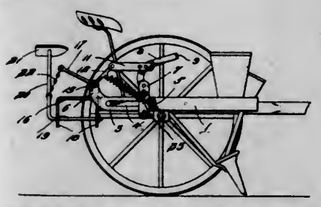


1. A combined electric alarm and light system comprising an electric conductor provided with a switch, as 1, an audible alarm device, a relay, and a source of electrical energy; an electrical conductor provided with a lamp and switch which latter is adapted to be operated by the relay; and a supplemental conductor in connection with the battery 9 and relay and provided with a switch, as 6, for locking the relay when the switch 1 is open.

2. A combined electric alarm and light system comprising an electrical conductor provided with a switch, as 1, an audible alarm device, a relay, and a source of electrical energy; an electrical conductor provided with a lamp and switch which latter is adapted to be closed by the relay; a conductor in connection with the battery 9 and relay, and provided with a switch 6; and a supplemental conductor in connection with the battery and relay, and provided with a switch, as 8, for throwing the lamp in circuit.

3. A combined electric alarm and light system comprising an electrical conductor provided with a door knob switch, an audible alarm device, a relay, and a source of electrical energy; an electrical conductor provided with a lamp and switch, said switch being adapted to be operated by the relay and close the circuit through the lamp when the door knob switch closes the circuit through the relay; and a supplemental conductor in connection with the battery 9 and relay and provided with a switch 6, for the purpose set forth.

901,541. MARKER ATTACHMENT FOR CORN-PLANTERS. JAMES C. LISTON, Chatsworth, Ill. Filed Feb. 13, 1908. Serial No. 415,708.



1. In combination with a planter frame of approximately U-shaped form, a supporting bar formed with a longitudinal slot in its body portion adjustably attached to one side piece of the frame, the forward end of said bar being formed with an outstanding ear and the opposite end bent in a vertical plane, a hanger member attached to the cross piece of the frame, a laterally movable marker proper supported by the hanger member, a rocker member comprising forwardly and rearwardly extending end portions mounted between the upper end of the hanger member and the rear end of the adjustable

supporting bar, a flexible connection between the rearwardly extending arm of the rocker member and the marker proper, an operating lever pivoted above the side piece of the planter frame adjacent to the adjustable supporting bar, horizontal connecting links arranged between the forwardly extending end portion of the rocker member and the body of the operating lever respectively, and an obliquely disposed pull spring arranged between the forwardly extending arm of the rocker member and the ear of the adjustable supporting bar.

2. A marker attachment for planters comprising a laterally movable marker mounted on the planter frame, a pull spring for normally holding the marker in an elevated or inoperative position, and connections under the control of the operator operable to shift the marker into a lowered or operative position and at the same time to relieve the marker of the pull normally exerted thereon by said spring.

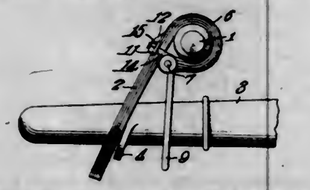
3. A marking attachment for corn planters comprising a laterally movable marker mounted in the planter frame, a rocker member comprising a rearwardly extending arm mounted at the rear of the frame, a flexible connection between the rocker member arm and marker, a pull spring arranged between the rocker member and planter frame to normally hold the marker in an inoperative or elevated position and means under the control of the operator operable to shift the marker into a lowered or operative position and at the same time to relieve the same of the pull normally exerted thereon by the spring.

4. In combination with a planter frame having a rear cross piece, an approximately U-shaped rearwardly extending hanger member attached to the cross piece of the frame with its arms spaced longitudinally, a laterally movable marker formed with a forwardly extending portion to extend through the arms of the hanger member, a pull spring for normally supporting the marker in an elevated or inoperative position and means under control of the operator operable to shift the marker into a lowered or operative position against the tension of said spring and at the same time to relieve the marker of the pull normally exerted thereon by the spring.

5. The combination with a planter frame, of a longitudinally adjustable supporting bar connected with one of the side pieces of the frame, a rocker member comprising forwardly and rearwardly extending end portions mounted on the frame and supporting bar, a connection between the rearwardly extending arm of the rocker member and marker, an operating lever mounted upon the adjustable supporting bar, connecting links between the forwardly extending arm of the rocker member and operating lever and a pull spring between the forwardly extending arm of the rocker member and the supporting bar to hold the marker in an elevated or inoperative position.

[Claim 6 not printed in the Gazette.]

901,542. NECK-YOKE CENTER. CHARLES LUKASIEWICZ, Farwell, Nebr. Filed Apr. 14, 1908. Serial No. 427,021.

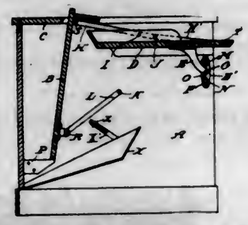


1. A neck-yoke center formed of flexible material having near one end an opening for the reception of a pole and provided at its opposite end with a fold, a cross bar inclosed within the fold and having projecting end portions, a pin extending across the upper portion of the neck-yoke center and fastened thereto, and a pole encircling loop having its ends secured to said pin, there being pivotal connections between the projecting ends of the cross bar and the loop.

2. A neck-yoke center made in flat form, a cross bar attached by a fold of suitable material to the front thereof with flattened and perforated projecting ends, a pin or bolt extending across the upper end of said neck-yoke center and fastened thereto, and a loop mounted on the ends of said pin and fastened thereto, said loop narrowing towards its lower end and having forwardly projecting arms adapted to pass through the perforated ends of said bar and fasten said neck-yoke center to the neck yoke.

3. A neck-yoke center made in flat form and having an aperture in its lower end for a vehicle pole or tongue, a bar attached to the front of said neck-yoke center and having perforated projecting ends, a pin or bolt extending across the upper end of the neck-yoke center and fastened thereto and a loop mounted on the projecting ends of said pin or bolt and fastened thereto and having arms arranged to pass through the perforated ends of said bar when the neck-yoke center is secured on the neck yoke, said loop narrowing towards its lower end and adapted to extend around a pole or tongue behind the bottom flange thereon.

901,543. TYPE-WRITER CABINET. JOHN METZLER, Herkimer, N. Y. Filed Aug. 22, 1907. Serial No. 389,604.



1. In combination, a desk, a cover and a shelf swingably and connectedly mounted therein to be reciprocally raised and lowered, arms forming the pivotal support for said shelf seated in brackets mounted on the desk said brackets having slots therein substantially vertical, said slots being provided with recesses of different elevations in which the lower end of said supporting arms may be seated, substantially as described.

2. In a desk, the combination of a cover, a platform, arms hinged at one end to the cover and pivotally secured at the other ends to the frame of the desk, jointed members pivotally secured at one end to the cover and at the other end to the platform and pivotally secured near their center to the frame of the desk, supporting arms rigidly secured at their upper ends to the platform, supports for the said supporting-arms rigidly secured to the frame of the desk and having substantially vertical slots with recesses vertically spaced therein in any opposite pair of which recesses the said supporting arms are pivotally seated, substantially as described.

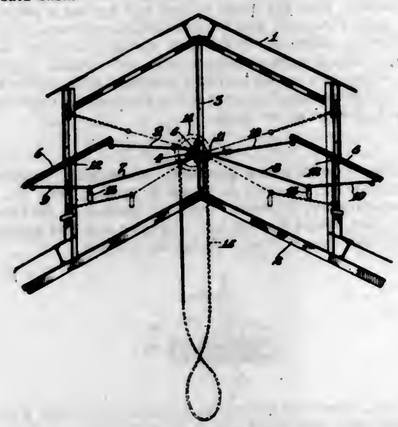
3. In a desk, the combination of a cover and platform, means for reciprocally raising and lowering the said cover and platform, said means including supporting arms for said platform pivotally seated in supports on the desk, said supports for said arms having slots recessed at different elevations for pivotally seating the lower ends of said arms, substantially as described.

901,544. VENTILATOR-SASH MECHANISM. FRANK D. MOON, Edgewater, N. J. Filed Jan. 18, 1907. Serial No. 352,957.

1. In ventilator sash operating mechanism, the combination of a rotatable shaft and means to operate the same, flexible connections between said shaft and sash and automatic tensioning means on said flexible connections to maintain uniform tension on said connections and to insure uniform opening and closing movements, and the tight closing of said sash.

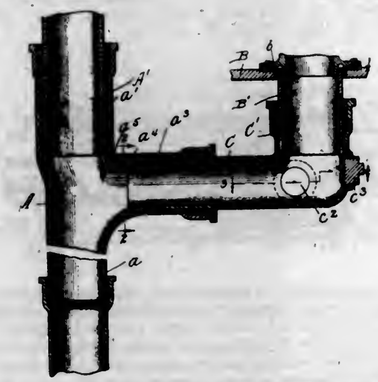
2. In ventilator sash operating mechanism, the combination of a rotatable shaft and means to operate the same, flexible connections between said shaft and sash and

weight attached to said flexible connections to maintain uniform tension on said connections and to insure uniform opening and closing movement, and the tight closing of said sash.



3. In ventilator sash operating mechanism, the combination of a plurality of sashes and an operating shaft common thereto of flexible connections between said sashes and shaft, automatic tensioning means on said connections to maintain uniform tension on said connections, said connections also adapted and arranged to permit one or more of said sashes to remain stationary while the others are moved to open or closed positions.

901,545. SANITARY PLUMBING CONNECTION. ANDREW M. MORRISON, Dubuque, Iowa. Filed Oct. 22, 1906. Serial No. 339,946.



1. In a device of the class described the combination with a main waste pipe having a lateral branch provided with a hubbed end, a stop in said branch, an elbow having a long end affording a slip joint with the branch, affording space for calking and limited by the stop from extending into the main waste passage, said elbow at its opposite end provided with a hub and having apertures for waste and vent connection, plugs adapted to be threaded into said apertures, a pipe or sleeve affording a slip joint with the hubbed end of said elbow and a flange threaded upon the upper end of the sleeve adapted to be engaged to the floor to secure said sleeve in alinement with the outlet aperture of the fixture.

2. In a device of the class described a sectional cast waste pipe for water closets embracing a straight tubular section supported at its upper end on the floor and opening therethrough and a tubular cast section affording a slip joint connection with said pipe and having its end directed at an angle therewith and affording a slip joint with the soil pipe and opening laterally in the latter, said cast section having hubbed ports for connection with vent and waste pipes and plugs calked in and closing said ports when not connected with a soil or vent pipe.

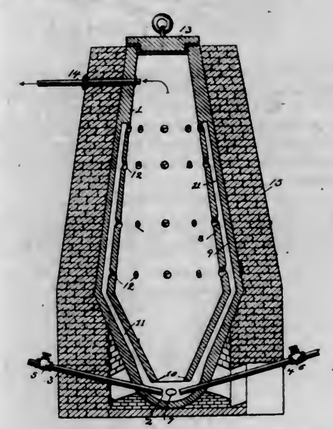
3. In a device of the class described the combination with a sanitary tee adapted for connection with a soil pipe of a sanitary elbow having at one end a long hub and the other end being plain for engagement in the waste pipe and a stop within the short end of the elbow just above the head.

4. In a device of the class described the combination with the soil pipe having a laterally directed branch, of a main waste pipe opening into said branch and affording a slip joint therein and comprising a plurality of similar sanitary fittings each affording a slip joint in the other, a hubbed branch on each, pipes extending through the floor into the branch past the hub affording a space for calking and affording a slip joint in each branch, means limiting the movement of each pipe thereby preventing the same from projecting into the main waste passage and a collar secured on each pipe and affording a tight joint and adapted to bear on the floor.

5. In a device of the class described the combination with a tee having a long hub on one end, of a branch engaged thereto having a hub on its outer end, a stop in said branch, a stop in said hubbed end, an elbow adapted to telescope said branch and afford a slip joint therewith, and having oppositely disposed apertures at the bend and an aperture at the axis thereof, a plug adapted to close each aperture, a stop in said elbow above said axial aperture and a pipe adapted to fit around the closet bowl and afford a slip joint with the upturned end of the elbow.

[Claims 6 and 7 not printed in the Gazette.]

901,546. PROCESS OF TREATING IRON AND STEEL. WILLIAM F. M. MCCARTY, Rocky Ridge, Md., assignor of one-fourth to George O. Eaton, one-fourth to Thomas M. Acken, and one-thirtieth to Alexander J. Guttman, New York, N. Y. Original application filed Nov. 23, 1907, Serial No. 403,452. Divided and this application filed Mar. 6, 1908. Serial No. 419,573.



1. A process of purifying iron and steel which consists in incorporating sodium chlorid and calcium chlorid therein and subjecting the metal, in a molten state, to the action of superheated steam.

2. A process of purifying iron and steel which consists in incorporating therein sodium chlorid and calcium chlorid, in the approximate proportions of 100 pounds of the former and 25 pounds of the latter, to every ton of metal

and subjecting the metal, in a molten state, to the action of superheated steam.

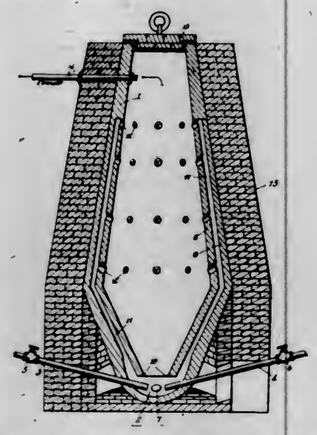
3. A process of purifying iron and steel which consists in incorporating sodium chlorid and calcium chlorid therein and subjecting the metal, in a molten state, to the action of superheated steam in intermittent jets or impulses.

4. A process of purifying iron and steel which consists in incorporating sodium chlorid and calcium chlorid therein and subjecting the metal, in a molten state, to the action of superheated steam and a vacuum.

5. A process of purifying iron and steel which consists in incorporating sodium chlorid and calcium chlorid therein and subjecting the metal, in a molten state, to the action of superheated steam in intermittent impulses and to the action of a vacuum.

[Claims 6 to 12 not printed in the Gazette.]

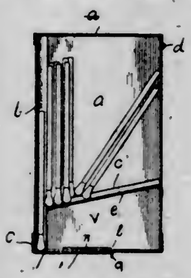
901,547. PROCESS OF TREATING IRON AND STEEL. WILLIAM F. M. MCCARTY, Rocky Ridge, Md., assignor of one-fourth to George O. Eaton, one-fourth to Thomas M. Acken, and one-thirtieth to Alexander J. Guttman, New York, N. Y. Original application filed Nov. 23, 1907, Serial No. 403,452. Divided and this application filed Apr. 9, 1908. Serial No. 426,147.



1. A process of purifying iron and steel, which consists in incorporating one or more chlorids therein, and subjecting the metal in a molten state to the action of a vacuum.

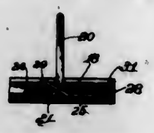
2. A process of purifying iron and steel, which consists in incorporating sodium chlorid and calcium chlorid therein, and subjecting the metal in a molten state to the action of a vacuum.

901,548. POCKET MATCH-SAFE. CHARLES J. NELSON, Laurium, Mich. Filed Jan. 31, 1908. Serial No. 413,660.



In a match-box, the combination with a receptacle having a longitudinal corrugation forming a match-receiving channel, a bottom within said receptacle having a centrally disposed bead forming a channel, said bottom slanting towards said corrugation, a hinged top secured to said receptacle, a cap secured to said receptacle below said slanting bottom, said cap being slotted and having a perforation registering with said longitudinal corrugation, a plunger having extending wings held within said slots, said plunger having a finger-piece at one end working against said wings, and a gate normally resting within said channel forming corrugation, said wings limiting the movement of said plunger, as set forth.

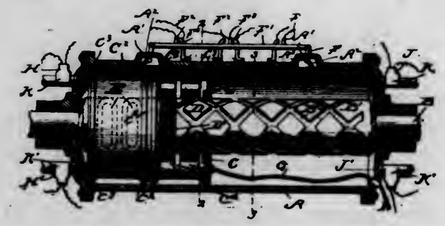
901,549. LOOSE-LEAF BINDER. CHARLES R. NELSON, Chicago, Ill., assignor to Sieber & Trussell Mfg. Co., a Corporation of Missouri. Original application filed Nov. 30, 1903, Serial No. 183,223. Divided and this application filed Jan. 3, 1905. Serial No. 239,405.



1. In a loose leaf binder, in combination, a slide way a binding ring comprising a pair of mating filing members pivotally attached to the slide way and having overlapping inner ends, and a cam slide having a single inclined cam portion for operatively engaging the overlapped ends of both members of the ring.

2. In a loose leaf binder in combination, a slide way, a binding ring comprising a pair of mating filing members pivotally attached to the slide way and having overlapping bifurcated inner ends, and a cam rod mounted on the slide way and having a single inclined cam portion laid into the bifurcated ends of both members.

901,550. FLUID-PRESSURE MOTOR. EBERHARDT P. NICHOLSON, New York, N. Y., assignor of one-half to Jeremiah A. Richardson, South Norwalk, Conn. Filed Feb. 25, 1905. Serial No. 247,339.



1. A motor of the kind described comprising a cylinder, a rotatable shaft, arranged longitudinally in the cylinder, the said shaft having double spiral grooves formed in its periphery within the cylinder, a piston movable upon said shaft, flanged rings arranged within the piston adapted to engage the said grooves, electro magnets arranged in the piston and adapted when energized to hold the said rings against rotation with respect to the shaft, means for automatically energizing and deënergizing the said electro magnets alternately as the piston reaches its limit of travel, inlet and exhaust pipes at each end of the cylinder, solenoidal valves controlling said inlet and exhaust pipes, and means for automatically making and breaking an electric circuit connected with the said valves.

2. A device of the kind described comprising a cylinder having housings thereon, a rotatable shaft journaled in the cylinder, said shaft having right and left threads cut therein, a piston movable upon the shaft within the cylinder, a flanged ring within the piston, adapted to engage the right hand threads of the shaft, a similar ring within the piston adapted to engage the left hand threads of the

shaft, an electro magnet arranged adjacent each of said rings, shoulders formed upon the piston, shafts journaled in the housings on the cylinder, levers carried by said shafts and having their free ends projecting in the path of the shoulders, cranks carried by the outer ends of the housing shafts, a switch bar connecting the said cranks, contact plates carried by the switch bar, stationary contact plates carried by the cylinder and adapted to be engaged by the contact plates carried by the switch bar, inlet and exhaust pipes arranged at each end of the cylinder, solenoidal valves arranged in each of said pipes, and electrical conductors extending from the contact plates to the said electro magnets and to the solenoidal valves as and for the purpose set forth.

901,551. REINFORCED STRUCTURE. DANIEL W. NORTON, Vincennes, Ind. Filed Jan. 8, 1908. Serial No. 409,743.



1. An article of manufacture, a reinforced structure made from a cement mixture molded to the desired form and having embedded therein a bar extending substantially through said structure, said bar being provided with perforations throughout its length through which perforations the cement mixture extends whereby the bar is keyed in place and having one of said perforations extending beyond the end of the structure and adapted to receive a suspending cord.

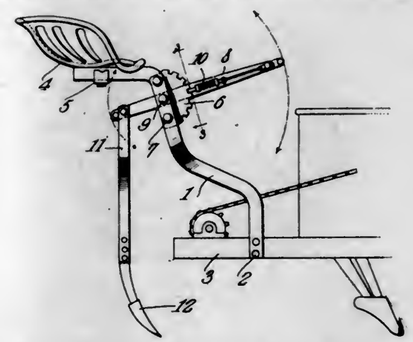
2. An article of manufacture, a reinforced structure made from a mixture of steel or iron scales and a binder molded to the desired form and having embedded therein a perforated bar through the openings in which the material extends, whereby said bar is keyed in place, and having one of said perforations extending beyond the end of the structure and adapted to receive a suspending cord.

901,552. PLANTER ATTACHMENT. JOHN B. O'BRIEN, Santa Anna, Tex. Filed June 20, 1908. Serial No. 439,639.

1. A planter attachment comprising seat posts adapted to be attached to the frame work of the planter, a gear segment mounted upon the posts, a seat carried by the upper portions of the posts, a lever fulcrumed between the posts and having a pawl adapted to engage the gear segment, standards attached to the lever and plows carried by the standards.

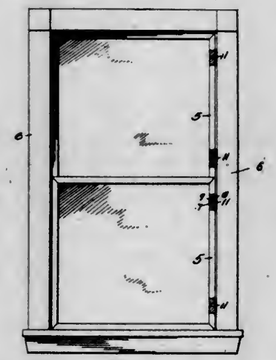
2. An attachment as described comprising seat posts adapted to be attached to the frame work of an implement, a seat adjustably mounted upon the upper end portions of the posts, a gear segment attached to the posts and being located between the same, a lever fulcrumed between the posts having a pawl adapted to engage the segment, standards pivotally connected with the working end of the lever and plows carried by said standards.

3. An attachment as described comprising posts having means for an attachment with the frame of an implement, a seat mounted upon the upper portions of the seat posts, a gear segment located between the posts and being fixed with relation to the same, a lever fulcrumed between the posts and having a pawl adapted to engage



said segment, standards adjustably and pivotally connected with the working end of said lever and plows carried by said standards.

901,553. SASH-BALANCE. STEPHEN E. PARKS, Portland, N. D., assignor of one-half to T. H. Arnold, Portland, N. D. Filed June 24, 1907. Serial No. 380,537.

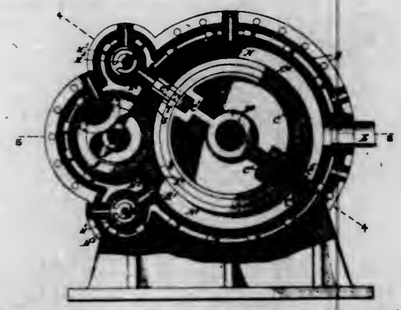


In a device of the class described, the combination with a window sash stile and the corresponding stile of the window frame, the sash stile being provided with a countersink and with a bore opening into the countersink, of a friction plate, the said plate having its upper and lower ends turned bodily inwardly, a stud formed integral with the inner face of the friction plate at a point mid-way of its said ends, the ends resting at their extremities normally against the inner wall of the countersink, the stud being formed with an enlargement, a socket seated in said bore, the enlargement upon the stud seating normally against the end of said socket, and a spring within the socket and bearing against the end of the stud to hold the friction plate flat against the stile of the window frame, the enlargement upon the stud serving to prevent inward bending of the friction plate at its middle.

901,554. REVERSIBLE-EXPLOSIVE-ROTARY-ENGINE UNIT. WILLIAM E. PEARSON, Swampscott, Mass. Filed Dec. 4, 1907. Serial No. 405,108.

1. An explosive rotary engine unit, comprising a casing, having exhaust and inlet ports; a cylindrical continuously rotating piston carrier and pistons; a continuously rotating buttress; continuously rotating valves controlling and directing the charges; a continuously rotating charge com-

pressor, a charge reservoir having rotating mixers, and means for operatively connecting the several parts; substantially as and for the purpose set forth.

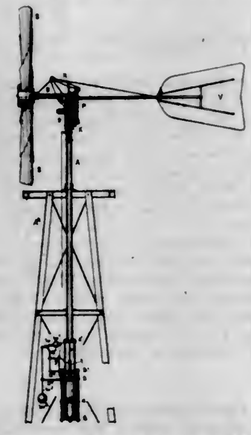


2. A reversible explosive rotary engine unit, comprising a casing, having exhaust and inlet ports; a cylindrical continuously rotating piston carrier and pistons; a continuously rotating buttress; continuously rotating valves controlling and directing the explosive charges; a continuously rotating charge compressor; a charge reservoir; an exhaust port and clearance ports and means for operatively connecting the several parts; substantially as and for the purpose set forth.

3. A reversible explosive rotary engine unit comprising a casing having exhaust and inlet ports; a cylindrical continuously rotating piston carrier and pistons; continuously rotating valves controlling and directing the charges; a continuously rotating charge compressor; a charge reservoir having continuously rotating mixers; clearance ports and means for operatively connecting the several parts; substantially as and for the purpose set forth.

4. In a rotary engine apparatus, a reversing valve, a lever for operating the said valve, clearance ports having closing valves and mechanism connecting said reversing valves with the closing valves of the said clearance valves whereby the said reversing valves and the said clearance valves will be operated substantially as and for the purpose set forth.

901,555. AIR-COMPRESSOR. THOMAS O. PERRY, Chicago, Ill. Filed Aug. 29, 1904. Serial No. 222,653.



1. The combination with a windmill and an air compressor having a plunger with connected parts to which reciprocating motion is imparted by the windmill, of a vent valve by which air may escape during a portion of the compressing stroke, vent closing mechanism operative through contact with a reciprocating part, and means whereby the time of said contact may be varied so that the vent may be closed after the plunger arrives within varying distances of the end of its compressing stroke, which distances vary with and are determined by the rate of the wind's velocity, substantially as herein set forth.

2. The combination with a windmill and an air compressor having a plunger with connected parts to which reciprocating motion is imparted by the windmill, of a vent valve by which air may escape during a portion of the compressing stroke, vent controlling mechanism operative through contact with a reciprocating part, and means whereby said operative contact occurs when the plunger arrives within varying distances of the end of its compressing stroke, said varying distances corresponding to variations in the velocity of the wind, substantially as herein set forth.

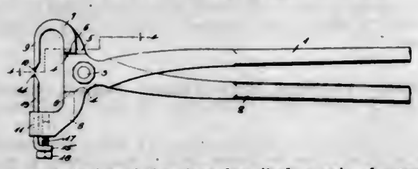
3. The combination with a windmill and an air compressor having a plunger with connected parts to which reciprocating motion is imparted by the windmill, of a vent valve by which air may escape during a portion of the compressing stroke, of a vent valve normally adapted to close, mechanism adapted to hold open and to retard the closing of the vent valve during part of the compressing stroke of the plunger, and means whereby said retarding mechanism releases said vent valve when the plunger arrives within varying distances of the end of its compressing stroke, said distances being greater or less as the wind velocity increases or diminishes, substantially as herein set forth.

4. The combination with a windmill and an air compressor having a cylinder and a reciprocating plunger operated by said windmill, of an intake-valve through which air may also escape during a portion of the plunger's compressing stroke, and intake controlling mechanism whereby the closing of said intake-valve may be delayed until the plunger has arrived within variable distances from the end of its compressing stroke which distances vary with and are determined by the rate of the wind's velocity, substantially as herein set forth.

5. The combination with a windmill and an air compressor having a cylinder and a plunger operated by the windmill, of an intake-valve in the head of said cylinder through which air may also escape during a portion of the plunger's compressing stroke, and intake controlling mechanism whereby the closing of said intake-valve may be delayed until the plunger arrives within varying distances of the end of its compressing stroke which distances vary with and are determined by the rate of the wind's velocity, substantially as herein set forth.

[Claims 6 to 12 not printed in the Gazette.]

901,556. CUTTING-TOOL. WILLIAM C. POOLE, Marysville, Cal. Filed Feb. 28, 1908. Serial No. 418,361.



1. In a device of the class described, a pair of crossed levers, a pivot bolt connecting said levers, cutting jaws carried by said levers, a shoulder on each lever arranged at a slight angle to the longitudinal plane of the levers, and a shoulder on each jaw formed parallel with the longitudinal plane of said levers and adapted to variably limit the movement of the jaws by wiping over the first mentioned shoulders.

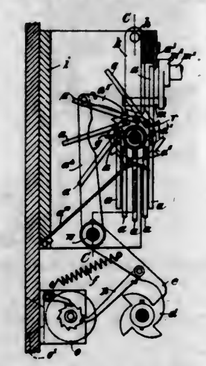
2. A cutting tool comprising a pair of crossed levers, a pivot bolt connecting said levers, a cutting jaw integral with one of said levers, the other lever being provided with a threaded socket and a slot, a cutting bit carried in said slot and having a depending apertured end, and a set screw passing through the depending end and engaging the threaded socket to adjust said cutting bit with respect to said jaw.

901,557. PRESERVED WOOD AND METHOD OF MAKING SAME. PETER C. REILLY, Indianapolis, Ind. Filed Feb. 21, 1907, Serial No. 358,687. Renewed Sept. 16, 1908. Serial No. 453,356.

1. As a new article of manufacture, wood impregnated with a hydro carbon oil derived by the direct filtration of tar, which oil is fluid at ordinary temperatures, contains practically all of the oils of the tar, and is substantially free of solids in suspension.

2. The process of impregnating wood for the purpose of preserving it from decay, which consists of filling the pores of the wood with a hydro carbon oil derived by the direct filtration of tar, which oil is fluid at ordinary temperatures, contains practically all the oils of the tar and is substantially free of solids in suspension.

901,558. FARE-INDICATOR. PAUL RICHERT, Berlin, Germany. Filed May 22, 1907. Serial No. 375,021.



1. The combination, in a fare indicator, of a roller, a series of plates pivotally mounted thereon near the periphery thereof, one of said plates being retained stationary in indicating position while the roller is at rest, a continuously rotatable element, and connections between said element and the roller for rotating the roller one step and moving the plate from the indicating position, at a predetermined point in the rotation of the continuously rotatable element.

2. The combination, in a fare indicator, of a roller, a series of plates pivotally mounted thereon near the periphery thereof, a stop in the path of movement of the plates when the roller is rotated, one of the plates being held stationary against the stop in indicating position while the roller is at rest, a continuously rotatable element, and connections between said element and the roller for rotating the roller one step and moving the plate from the indicating position, at a predetermined point in the rotation of the continuously rotatable element.

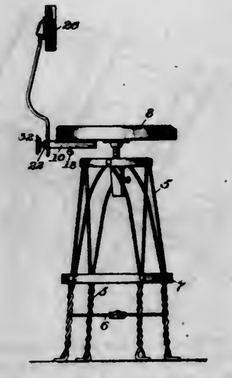
3. The combination, in a fare indicator, of a roller, a series of plates pivotally mounted thereon near the periphery thereof, a stop in the path of movement of the plates when the roller is rotated, one of the plates being held stationary against the stop, in indicating position, while the roller is at rest, by a transpivotal extension on the next succeeding plate, a continuously rotatable element, and connections between said element and the roller for rotating the roller one step and moving the plate from the indicating position at a predetermined point in the rotation of the continuously rotatable element.

4. The combination, in a fare indicator, of a roller, a series of plates pivotally mounted thereon near the periphery thereof, a stop in the path of movement of the plates when the roller is rotated, one of said plates being held stationary in indicating position while the roller is at rest, a continuously rotatable element, a registering mechanism, and connections from the continuously rotatable element to the roller and the registering mechanism for simultaneously rotating the roller one step, moving the plate from the indicating position, and actuating the registering mechanism one step forward at a predetermined point in the rotation of the continuously rotatable element.

5. The combination, in a fare indicator, of a roller a series of plates pivotally mounted thereon near the periphery thereof, a stop for holding one of said plates in indicating position when the roller is at rest, the plate being held stationary against the stop, a continuously rotatable element, a spring pressed pawl adapted to engage the roller and actuate it one step at a time in a forward direction and to free the indicating plate from the stop, and means actuated by the rotative element for holding said pawl inactive during predetermined portions of the rotation of said element and releasing it for action at the end of each of said periods.

[Claims 6 to 9 not printed in the Gazette.]

901,559. CHAIR-BACK ADJUSTMENT. JOSEPH SALOMON, Chicago, Ill. Filed Aug. 14, 1905. Serial No. 274,028.



1. In combination with a chair seat and back comprising rods or wires; a slide having a vertical plane flange and horizontal flanges, a clamp comprising a grooved free member to secure the back wires to the vertical flange, guides independent of the clamp securing means to secure said clamp in proper relation to the vertical flange, and guideways on the seat to engage the horizontal flanges.

2. In a chair back adjustment a slide independent of the seat comprising vertical and horizontal flanges and a tie bar to connect the front ends of the vertical flanges.

3. In a chair back adjustment, a slide comprising vertical flanges, horizontal flanges mitered together substantially at the rear portion, and a tie bar to connect the front ends of the slide.

4. In a chair back adjustment, a slide having vertical flanges, horizontal flanges mitered together at the rear portion, a clamp for the back wires comprising a free member, and means for adjustably securing the same to the rear portion of the slide.

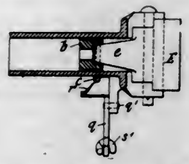
5. In a chair back adjustment, a slide having vertical flanges, horizontal flanges mitered together at the rear portion, a clamp for the back wires comprising a transversely fluted free member, and means for adjustably securing the same to the rear portion of the slide.

[Claims 6 to 10 not printed in the Gazette.]

901,560. UNCOUPLING MECHANISM FOR CENTRAL-BUFFER CLAW-COUPLINGS. LUDWIG SCHEIB, Sr., and LUDWIG SCHEIB, Jr., Kaiserslautern, Germany. Filed Nov. 14, 1907. Serial No. 402,191.

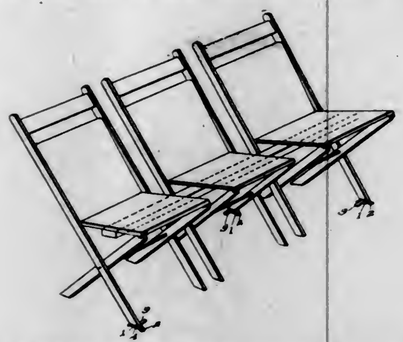
In a central buffer claw coupling, the combination with a locking cap, of a projection carried thereby, a pivoted claw hook designed to be engaged by the locking cap,

an uncoupling device comprising a pivoted lever provided with a cam surface adapted to engage said projection, said lever having two holes in its free end, and a locking handle having a curved crank passing through one of said



holes in the pivoted lever, said curved crank, on the handle being turned axially, passing through the other hole in the lever and thus locking the same against accidental movement, substantially as set forth.

901,561. CHAIR-LOCK. GEORGE E. SEARING, Towanda, Pa. Filed Mar. 21, 1908. Serial No. 422,485.



1. A lock for chairs or the like, comprising a plate designed to be attached to the floor and formed with an elongated slot, a nut adapted to pass into said slot and arranged for locking engagement therein, and a handle pivotally connected to the chair leg or the like and formed with a head of larger diameter than the nut and the slot and arranged to rest upon the upper surface of the plate, the nut being secured to said head.

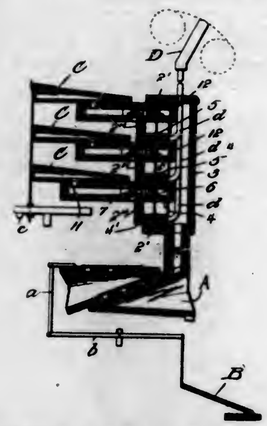
2. A lock for chairs or the like, comprising a plate designed to be attached to the floor and formed with an elongated slot and with a depending stop lug contiguous to one wall of the slot, a nut adapted to pass into said slot and formed with offset and outwardly extending wings arranged to lock the nut into engagement with the plate, and a handle provided with a head pivotally connected to the chair leg or the like, and of larger diameter than the nut and the slot, the nut being rigidly connected to the head, as and for the purpose specified.

901,562. PIANO-PLAYING ATTACHMENT. JOHN E. SHOEMAKER, Washington, D. C. Filed Feb. 15, 1906. Serial No. 301,196. Renewed Mar. 14, 1908. Serial No. 421,036.

1. In a playing attachment, the combination with the tracker board, of an exhaust chamber, the primary pneumatics mounted within the exhaust chamber, a series of valve boxes mounted within the said exhaust chamber, a series of power pneumatics, and connections leading from the said primary pneumatics to the tracker board.

2. In a playing attachment, the combination with the tracker board, of an exhaust chamber, the primary pneumatics mounted within the exhaust chamber, a series of valve boxes mounted within the said exhaust chamber, a series of power pneumatics, and connections leading from the primary pneumatics through the exhaust chamber to the tracker board, substantially as set forth.

3. In a playing attachment, the combination with the tracker board, of an exhaust chamber having a removable cover, bars extending longitudinally from end to end within the said exhaust chamber, the primary pneumatics mounted in said bars, conduits arranged to connect the primary pneumatics with the tracker board, valve boxes mounted within the said exhaust chamber, the power pneumatics, and connections between the valve boxes and the power pneumatics, substantially as set forth.

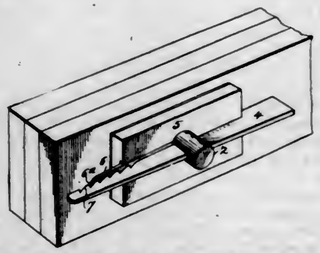


4. In a self playing attachment, the combination of an exhaust chamber, a primary pneumatic mounted within the said chamber, a power pneumatic, a valve box, one end thereof extending into the exhaust chamber and provided with an exhaust valve, and the opposite end leading to the power pneumatic, an inlet valve adapted to communicate with the atmosphere, and a rocker connecting together the said exhaust and inlet valves, substantially as set forth.

5. In a self playing attachment, the combination of an exhaust chamber, a primary pneumatic mounted inside of said chamber, a power pneumatic, a valve box, one end thereof extending into the said exhaust chamber and the opposite end connected with the power pneumatic, an exhaust valve and an inlet valve mounted within the valve box and arranged in the same horizontal plane, a rocking member connecting the said valves together, and a plate provided with valve seats and arranged to pivotally support the rocking member, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

901,563. BOLT-LOCKING DEVICE. JACOB L. STOFFER, Homeworth, Ohio. Filed Nov. 12, 1907. Serial No. 401,891.



1. The combination with a bolt formed with a slot, of a bolt locking device comprising a washer encircling said bolt and formed with a recess and a groove, said recess having a socket, a wedge designed to be inserted in the slot of the bolt and fitting in said groove, said wedge being formed with a series of teeth, and a spring tongue fitting in said recess and formed at one end with a lug received in said socket the other end of the tongue being outturned to engage the teeth of the wedge, whereby to prevent the accidental retraction of the latter.

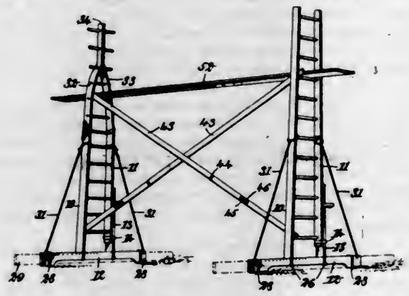
2. The combination with a bolt having a slot, of a bolt locking device comprising a washer encircling said bolt and formed with a recess and a groove, a wedge designed to be inserted in the slot of the bolt and fitting in said groove, said wedge being formed with a series of teeth, and a spring tongue removably secured in the recess and adapted to engage one of the series of teeth, as and for the purpose set forth.

901,564. TANNING-OOZE. GEORGE A. SWEETMAN, Bickford, Okla. Filed Feb. 24, 1908. Serial No. 417,540.

1. The herein described tanning bath consisting of soft water, Bengal catechu, septfoil root, aleppo galls, ground hops, and powdered gum senegal, substantially in the proportions specified.

2. The herein described tanning bath consisting of soft water, ten gallons; Bengal catechu, one-fourth pound; septfoil root, three pounds; aleppo galls, one-half pound; ground hops, one-fourth pound; and powdered gum senegal, one-fourth ounce.

901,565. COMBINED LADDER, STEP-LADDER, AND SCAFFOLDING. HIBBARD H. THOMSON, Lawrence, Kans. Filed Nov. 1, 1907. Serial No. 400,145.



1. A ladder, comprising two side bars, one of said side bars composed of two members slidably connected together, a strap encircling one of said members but unattached thereto, said strap being rigidly secured to the other member and having a portion thereof extending outwardly to form a bracket, and a pin carried by said bracket and movable in respect thereto and adapted to engage with the member encircled by said strap and prevent longitudinal movement thereof.

2. In a ladder, a bar composed of two members slidably connected together, a metal strap completely encircling one of said members and rigidly secured to the other member, said strap having a portion thereof extending outwardly to form a bracket and having an aperture therein adjacent the base of said bracket, and a locking pin carried by said bracket and movable through said aperture to prevent longitudinal movement of one member in respect to the other.

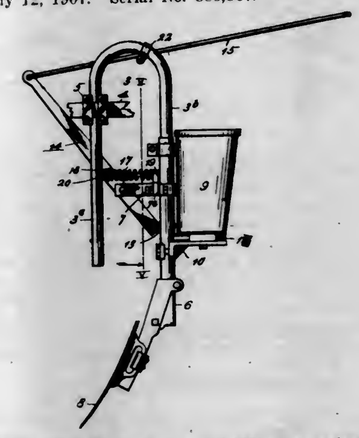
3. A ladder, comprising two side bars, one of said side bars composed of two members slidably connected together, a strap completely encircling one of said members and having its ends connected to the other member, a portion of said strap constituting a bracket, and a spring-pressed locking pin carried by said bracket and adapted to engage with one of the members and prevent longitudinal movement thereof.

4. A ladder, comprising two side bars, one of said side bars being composed of two members slidably connected together, a metal strap completely encircling one of said members and having its ends connected to the other of said members at one edge thereof, a portion of said band forming a bracket, and, a spring-pressed pin pivotally mounted upon said bracket and having one end thereof adapted for engagement with the member encircled by the strap, and the other end of said pin being disposed at the outer end of the bracket and constituting a handle.

5. In combination, two ladders, each having two side bars, means for adjusting the length of one of said side bars to each ladder, whereby the ladder may assume a vertical position irrespective of the inclination of the supporting surface, connecting braces for holding said ladders rigid in respect to each other, and means for connecting said braces to said ladders, each of said means comprising a substantially U-shaped clamp adapted to encircle the brace, and a bolt carried by said clamp and having a hook at one end thereof adapted to engage with a round of the ladder, and having means at the opposite end thereof for moving said bolt longitudinally to lock the round and brace to the clamp.

[Claim 6 not printed in the Gazette.]

901,566. REPLANTING ATTACHMENT FOR CULTIVATORS. GEORGE S. TUGGLE, Braymer, Mo. Filed July 12, 1907. Serial No. 383,367.



1. In combination with a cultivator, a replanting attachment consisting of an inverted U-shaped member having one leg secured to one of the cultivator shovel-beams, a spout telescopically carried by the other leg of said member, a seed box carried by said spout so as to be adjustable with said spout, a shovel carried by the lower end of said spout, and means for operating the seed box dropper.

2. In combination with a cultivator, a replanting attachment composed of an inverted U-shaped member secured to the cultivator, a spout adjustably carried by one leg of said member, a seed box on the spout movable therewith, a dropper for said seed box, a lever pivotally supported from said spout and connected to said dropper, an operating rod for said lever, and means to pivotally support said rod adjustably secured on the arched portion of said U-shaped member.

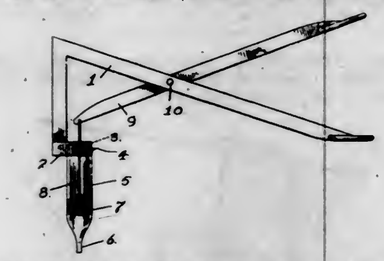
3. In combination with a cultivator, a replanting attachment composed of a supporting member, a spout carried by said member, means whereby said spout may be adjusted on said member, a seed box having a dropper carried by said spout, a lever connected to said dropper and receiving pivotal support from said spout, means to operate said lever, and means adjustable on said support for pivotally engaging said lever operating means.

4. In combination with a cultivator, a replanting attachment composed of an inverted U-shaped member having one of its legs secured to said cultivator, a spout, means to adjustably support said spout from the other

leg of said member, a seed box having a dropper carried by said spout, a lever pivoted to said dropper and to said spout, a rod pivoted to said lever, means for pivotally supporting said rod from the top of said U-shaped member, and a coil expansive spring disposed between said lever and said spout.

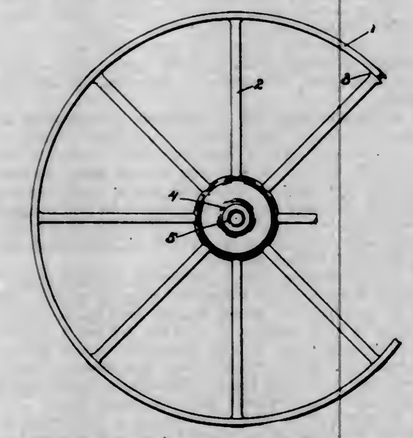
5. In combination with a cultivator, a replanting attachment comprising a support secured thereto, a spout and a seed box adjustably secured to said support, a dropper in the seed box, and means to operate said dropper including a lever pivoted thereto and to said spout, a rod pivoted to the lever, and means to pivotally support said rod from said support whereby when said spout and seed box are raised or lowered with respect to said support, said means may be correspondingly moved on said support.

901,567. DEVICE FOR EXTRACTING MATTER FROM INFLAMED TISSUES. WILLIAM G. UTSCHIG, San Jose, Cal. Filed Apr. 10, 1905. Serial No. 254,867.



In a pus and blackhead remover the combination of a cylinder having a tapering nozzle at one end and a flange at the other end; an angular arm having a handle and a vertical branch extending from said arm; a clasp connected to said branch having a groove penetrated by said flange for sustaining said cylinder; a lever and handle centrally fulcrumed to said arm for the operation of said remover by the closing of said handles, and a piston in said cylinder connected by a movable rod to said lever for drawing into said cylinder and expelling therefrom foreign matter to be removed by said device, substantially as described.

901,568. WHEEL. HOLLY M. VERPLANCK, Lansing, Mich., assignor to Lansing Wheelbarrow Company, Lansing, Mich. Filed Nov. 30, 1907. Serial No. 404,486.

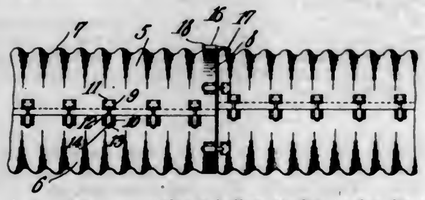


1. A wheel comprising a rim; metal spokes secured thereto; a hub bushing formed of tubes, said tubes being rolled up from sheet metal, and being sleeved together and arranged to break joints and with the ends of the inner tube projecting from the outer tube; and a cast metal hub molded upon said spokes and bushing.

2. A wheel comprising a rim; metal spokes secured thereto; a hub bushing formed of tubes, said tubes being rolled up from sheet metal and being sleeved together and arranged to break joints; and a cast metal hub molded upon said spokes and bushing.

3. A wheel comprising a rim; metal spokes secured thereto; a hub bushing formed of two tubes sleeved together, the inner tube being longer than the outer so that its ends project therefrom; and a cast metal hub molded upon said spokes and bushing, the ends of said hub embracing and engaging the portions of the inner tube which project from the outer.

901,569. CORRUGATED-METAL CULVERT. CLIFFORD D. VORIS, Crawfordsville, Ind. Filed Mar. 7, 1908. Serial No. 419,774.



1. A culvert comprising a hollow section having its adjacent longitudinal edges overlapped, and co-acting fastening devices independent of and secured to the over-lapped portions of said section and bearing against the adjacent longitudinal edges thereof for limiting the expansible and contractile movement of said sections.

2. A culvert comprising a hollow section corrugated circumferentially and having its adjacent longitudinal edges over-lapped, and a fastening device independent of and secured to the over-lapped portions of said section and comprising interengaging members, the member on one longitudinal edge of said section being disposed in contact with and forming a stop for the opposite longitudinal edge of said section.

3. A culvert comprising a hollow section corrugated circumferentially and having its adjacent longitudinal edges over-lapped, and fastening devices independent of and secured to the exterior walls of said section at the over-lapped edges thereof, said fastening devices being formed of interengaging members one of which is provided with a shank and the other with a socket for the reception of said shank.

4. A culvert comprising a hollow section corrugated circumferentially and having its adjacent longitudinal edges over-lapped, and spaced interengaging fastening devices independent of and secured to the exterior walls of the culvert section between the corrugations and serving to limit the expansible and contractile movement of said culvert sections.

5. A culvert comprising a hollow section corrugated circumferentially and having its adjacent longitudinal edges over-lapped, plates secured to the over-lapped edges of said section, one of said plates being provided with a shank having a threaded portion and the other plate provided with a socket for the reception of the shank, and a nut engaging the threads on the shank and bearing against the adjacent end of the socket.

[Claims 6 to 9 not printed in the Gazette.]

901,570. TELEPHONIC TRANSMITTER. FREDERICK G. WARRELL, Lansdowne, Pa., assignor to The Euelectric Co., a Corporation of New Jersey. Filed Oct. 3, 1907. Serial No. 395,743.

1. In a telephone transmitter, a diaphragm, a casing, oppositely disposed poles therein, a filling of loose material in the said casing, means for insulating one of said poles and said loose material from said casing, said other pole being secured to said diaphragm, and insulation covering the rear surface of said diaphragm and the periphery of said latter pole.



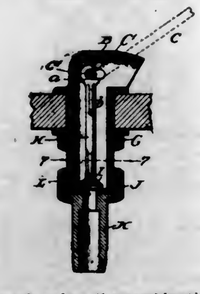
2. In a telephone transmitter, a diaphragm, a casing, said diaphragm being secured at its periphery to said casing, oppositely disposed poles in said casing, a filling of loose material in said casing, means for insulating one of said poles and said loose material from said casing, said other pole being secured to the center of said diaphragm, and insulation covering the rear surface of said diaphragm and periphery of said latter pole.

3. In a telephone transmitter, a diaphragm, a casing, oppositely disposed poles therein, loose material in said casing forming a complete conductor from pole to pole, means for insulating one of said poles and said loose material from said casing, the other pole being non-insulated from said casing and secured to the center of said diaphragm and insulation covering the rear surface of said diaphragm and periphery of said last named pole.

4. In a telephonic transmitter, a casing, a diaphragm secured thereto, insulation on said diaphragm extending to the outer periphery thereof and having a struck up portion forming a seat, a contact in said seat, a disk of insulating material oppositely disposed to said diaphragm, a contact on said disk and granular carbon in the space between said diaphragm and disk.

5. In a telephonic transmitter, a diaphragm, a casing, oppositely disposed poles therein, loose material in said casing forming a complete conductor from pole to pole, means for insulating one of said poles and said loose material from said casing, said other pole being secured to the center of said diaphragm, and an insulation covering the rear surface of said diaphragm and the periphery of said latter pole, said insulation having a struck up portion forming a seat for the reception of the pole therein.

901,571. BALL-COCK VALVE. EARL G. WATROUS, Chicago, Ill. Filed Apr. 15, 1901. Serial No. 55,938.



1. In a ball-cock valve, the combination, with the valve casing and valve, of a valve-operating rod formed at one end into a crank having bearings in opposite sides of the valve casing and coöperating with the valve said crank end of the rod being arranged to be inserted through said bearings; substantially as described.

2. In a ball-cock valve, the combination, with the valve casing and valve, of a valve operating rod formed at one end into a crank having bearings in opposite sides of the valve casing and coöperating with the valve, said crank end of the rod being arranged to be inserted through said bearings and withdrawable from engagement with the valve only when the rod is swung to an inoperative position; substantially as described.

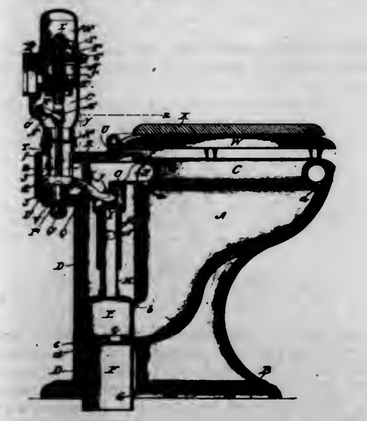
3. In a ball-cock valve, the combination, with the valve casing and valve, of a valve operating rod formed at one end into a crank having bearings in the valve casing and coöperating with the valve, and locking means operating to prevent accidental displacement of the crank from its bearings while the rod is in operative position and to permit its withdrawal therefrom when the rod is swung out of operative position; substantially as described.

4. In a ball-cock valve, the combination of a tubular valve casing, a longitudinally moving valve stem and valve therein, a valve-operating rod formed at one end and intermediate its length into a crank detachably connected with the valve stem and having bearings in the valve casing on either side of the crank, said crank end of the rod being insertible through said bearings, and means for locking the valve stem and crank together except when the rod is swung to an inoperative position; substantially as described.

5. In a ball-cock valve, the combination of the tubular valve casing, the longitudinally movable valve stem and valve therein, the valve-operating rod formed at one end into a crank having bearings in the valve casing and cooperating with the valve stem, and locking means preventing accidental displacement of the crank while the rod is in operative position but permitting the withdrawal of the crank when the rod is swung out of operative position; substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

901,572. WATER-CLOSET. EARL G. WATROUS, Chicago, Ill. Filed July 21, 1902. Serial No. 116,458.



1. In a water closet, the combination of a discharge valve controlling the discharge from the closet bowl, and a quick opening inlet valve permitting an unobstructed flow at the limit of its movement in one direction when the valve is opened and having a retarded movement in the other direction whereby the valve is closed gradually, a connection between said valves, and manually operable means whereby said valves may be positively opened, the closing movement of the inlet valve serving to also control the closing movement of the discharge valve.

2. In a water closet, the combination of a discharge valve controlling the discharge from the closet bowl, and a quick opening inlet valve permitting an unobstructed flow at the limit of its movement in one direction when the valve is opened and having a retarded movement in the other direction whereby the valve is closed gradually, a connection between said valves whereby the opening and closing movements of the inlet valve serve to control the

opening and closing movements, respectively, of the discharge valve, and manually operable means for positively operating the connection to open the valves.

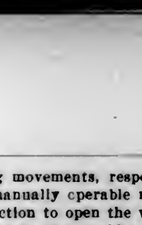
3. In a water closet, the combination of a discharge valve controlling the discharge from the closet bowl, and a quick opening inlet valve permitting an unobstructed flow at the limit of its movement in one direction when the valve is opened, and having a retarded movement in the other direction whereby the valve is closed gradually, said opening movement of the inlet valve serving to positively open the discharge valve, and said closing movement of the inlet valve serving to retard the closing movement of the discharge valve, but permitting the former to close independently of the latter.

4. In a water closet, the combination of a discharge valve controlling the discharge from the closet bowl, and a quick opening inlet valve permitting an unobstructed flow at the limit of its movement in one direction when the valve is opened, and having a retarded movement in the other direction whereby the valve is closed gradually, said closing movement of the inlet valve serving to retard the movement of the discharge valve until the latter is seated and said inlet valve having further independent movement before being seated, whereby the closet bowl is refilled by the final flow of water through the inlet valve.

5. In a water closet, the combination of a discharge valve controlling the discharge from the closet bowl, a quick opening inlet valve permitting an unobstructed flow at the limit of its movement in one direction when the valve is opened, and having a retarded movement in the other direction whereby the valve is closed gradually, and an adjustable connection between said valves whereby the opening movement of the inlet valve serves to positively open the discharge valve and whereby the closing movement of the discharge valve may be completed in advance of the closing of the inlet valve to any desired degree.

[Claims 6 to 35 not printed in the Gazette.]

901,573. EYEGLASS-HOOK. GEORGE W. WELLS, Southbridge, Mass. Filed Sept. 7, 1907. Serial No. 391,807.

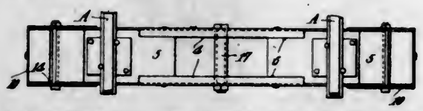


1. An eyeglass hook comprising two members connected by a bend and extending alongside each other, one of said members being pointed, a catch connected with the other member, and two guard members located on opposite sides of the first mentioned members and connected with each other by a turn which passes through the bend connecting said first-mentioned members, one of said guard members being connected with said catch.

2. An eyeglass hook comprising two members connected by a bend and extending alongside each other, one of said members being pointed, a catch connected with the other member, and two guard members located on opposite sides of the first-mentioned members and connected with each other by a turn which passes through the bend connecting said first-mentioned members, one of said guard members being connected with said catch, and a hook connected with the other guard member.

3. An eyeglass hook comprising two members connected by a bend and extending alongside each other, one of said members being pointed, a catch connected with the other member, and two guard members located on opposite sides of the first-mentioned members and connected with each other by a turn which passes through the bend connecting said first-mentioned members, one of said guard members being connected with said catch and a coil connected with the other guard member and surrounding the first-named guard member and the member with which the catch is connected.

901,574. RAILWAY-TIE. THOMAS W. WELSH, Mitchell, Ind., assignor of one-fourth to A. J. Harlow, Mitchell, Ind., and one fourth to D. H. Mahoney and one-fourth to Ike Lyons, Vincennes, Ind. Filed May 18, 1908. Serial No. 433,556.



1. A railway tie comprising a trough-like body, combined cushioning and supporting blocks insertible longitudinally into the ends of the body and projecting above said body, said blocks having recesses therein, and retaining flanges upon the body and disposed to be seated within the recesses in the blocks.

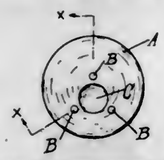
2. A railway tie comprising a trough-like body having spaced base portions and integral inwardly extending longitudinal retaining flanges, and cushioning blocks insertible longitudinally into the ends of the body and upon the base portions, said blocks having recesses for the reception of the flanges.

3. A railway tie comprising a trough-like body, cushioning blocks insertible into the ends thereof, and a yoke embracing the sides and detachably connected to each end of the body and constituting block retaining means.

4. A railway tie comprising a trough-like body, cushioning blocks insertible into the ends thereof, means integral with the body for limiting the movement of the blocks into the body, a block retaining yoke embracing each end of the body, and means carried by each yoke for bearing upon and detachably engaging the adjoining block.

5. A railway tie comprising a trough-like sheet metal body having longitudinal inwardly extending retaining flanges, said body having spaced bottom portions, a detachable transversely extending reinforcing device within the body and between said portions, and removable end caps embracing and detachably connected to the ends of the tie body.

901,575. LENS-BLANK. LOUIS WILHELM, Worcester, Mass., assignor of one-half to Frederick A. Stevens, Providence, R. I. Filed Feb. 18, 1908. Serial No. 416,621.



1. In a lens blank, the combination with the body, of integral projections upon the face of the body.

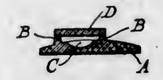
2. In a lens blank, the combination with the body of circularly disposed integral projections upon the face of the body.

3. In a lens blank, the combination with the body provided with a concave cavity, of integral projections upon the face of the body adjacent the margin of the cavity.

4. In a lens blank, the combination with the body, provided with a concave cavity, of integral projections circularly disposed upon the face of the body around the cavity.

901,576. METHOD OF MAKING BIFOCAL LENSES. LOUIS WILHELM, Worcester, Mass., assignor of one-half to Frederick A. Stevens, Providence, R. I. Filed Feb. 18, 1908. Serial No. 416,622.

1. The method of making bi-focal lenses which consists in molding glass to form a blank with integral projections and a cavity upon its surface, placing a fusible disk upon the projections, and subjecting the parts to a welding heat to unite disk and blank.



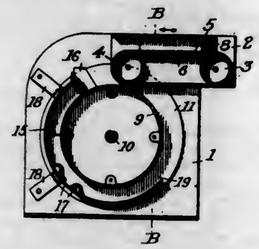
2. The method of making bi-focal lenses which consists in molding glass to form a blank with circularly disposed integral projections upon its surface and a cavity in the surface of the blank within and concentric to the projections, placing a disk upon the projections, and submitting the whole to heat whereby the disk sinks upon and is united with the blank.

3. The method of making bi-focal lenses which consists in molding glass to form a blank with integral projections upon its surface, forming a cavity in the surface of the blank within and concentric to the projections, placing a disk upon the projections, submitting the assembled parts to heat to precipitate the disk into the cavity and adhere to the blank, and grinding and polishing the completed lens.

4. The method of making bi-focal lenses which consists in molding a blank with a cavity and integral projections around the cavity, next grinding out the cavity, then placing a fusible disk upon the projections, and finally subjecting the parts to a welding heat to unite the parts.

5. The method of making bi-focal lenses which consists in molding a blank with integral projections upon its surface, grinding a cavity in the surface of the blank within the projections, and subjecting the parts to a welding heat to unite the disk and blank.

901,577. LOAF-MAKER FOR BREAD. THOMAS H. WILLIAMS, Hood River, Oreg. Filed Oct. 5, 1907. Serial No. 395,998.

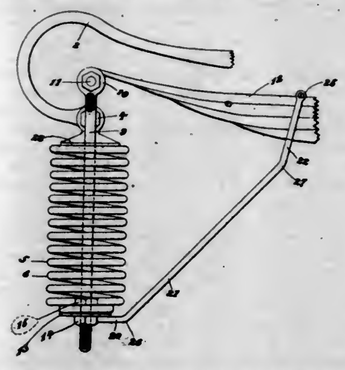


A loaf maker comprising a rotatable drum, an arc shaped plate partly surrounding the same and spaced apart therefrom so as to form a passage through which dough is adapted to travel, and a plurality of fixed, transverse ribs projecting from the inside of said plate, and extending across said passage.

901,578. STEADYING DEVICE FOR SUPPLEMENTARY VEHICLE-SPRINGS. WILLIAM YOUNG, St. Louis, Mo., assignor to Supplementary Spiral Spring Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 26, 1906. Serial No. 349,380.

1. In a device of the character described, the combination of an auxiliary spring, means for attaching same to the vehicle, means for connecting same to the main spring, said means being in connection with one end of said auxiliary spring, and means secured to said second-mentioned means adjacent the point of connection thereof with said auxiliary spring, said means extending to the body of the main spring.

2. In a device of the character described, the combination of an auxiliary spring, means for attaching one end of same to the vehicle, means for connecting the other end of same to the end of the main spring, and means for connecting said last-mentioned end of said auxiliary spring to another part of said main spring.



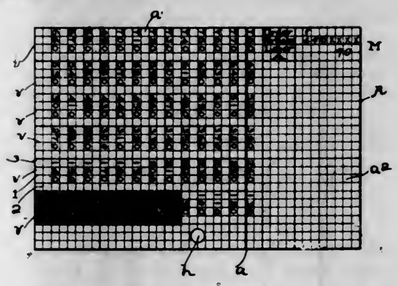
3. In a device of the character described, the combination of an auxiliary spring, means for attaching same to the vehicle, a hanger for connecting same to the main spring, said hanger being in pivotal connection with one end of said main spring, and a connector extending from the body of the main-spring to a point of said hanger opposite its point of connection with the main spring.

4. In a device of the character described, the combination of an auxiliary spring, means for attaching same to the vehicle body, means for connecting same to the main spring, and means engaging said auxiliary spring at a point adjacent that end of said spring which is connected to the vehicle, said last-mentioned means connecting said end to said second-mentioned means.

5. In a device of the character described, the combination of an auxiliary spring, means for attaching same to the vehicle, means for connecting same to the main spring, and means cross-connecting said vehicle-connecting means and said main spring-connecting means.

[Claims 6 to 22 not printed in the Gazette.]

901,579. ACCOUNTING SYSTEM. EDWARD C. ALBREE, Swampscott, Mass. Filed Nov. 16, 1904. Serial No. 232,930.



1. In an accounting system and in combination, a sheet having spaces of uniform size arranged in a plurality of columns of equal height, furnished with progressive numerals, beginning at a predetermined starting point and following a predetermined path, the centers of said spaces being equidistant from each other along the said path, and a second sheet provided with coupons divided from each other by weakened lines, each of the coupons on said second sheet being of one size which is a multiple of one of the spaces on the first sheet.

2. In an accounting system and in combination, a sheet having spaces of uniform size arranged in a plurality of

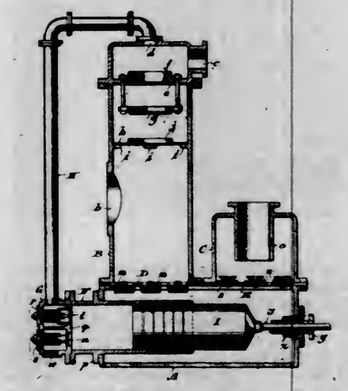
columns of equal height, furnished with progressive numerals, beginning at a predetermined starting point and following a predetermined path, the centers of said spaces being equidistant from each other along the said path, and two or more sheets provided with coupons divided from each other by weakened lines, the coupons on one coupon sheet being of different size from those on another coupon sheet, but all the coupons on any sheet being the same size and a multiple of the spaces on the first mentioned sheet.

3. In an accounting system and in combination, a sheet having spaces of uniform size arranged in a plurality of columns of equal height, furnished with progressive numerals, beginning at a predetermined starting point and following a predetermined path, the centers of said spaces being equidistant from each other along the said path, each of said numerals being a multiple of the number of the space to which it is applied, the number of said space being counted from said predetermined starting point along said predetermined path, and a second sheet provided with coupons divided from each other by weakened lines, each of the coupons on said second sheet being of one size which is a multiple of one of the spaces on the first sheet.

4. In an accounting system and in combination, a sheet having spaces of uniform size arranged in a plurality of columns of equal height, furnished with progressive numerals, beginning at a predetermined starting point and following a predetermined path, the centers of said spaces being equidistant from each other along the said path, and a second sheet provided with coupons divided from each other by weakened lines, each of the coupons on said second sheet being of one size which is a multiple of one of the spaces on the first sheet, said coupons being also furnished with progressive numerals.

5. In an accounting system and in combination, a sheet having spaces of uniform size arranged in a plurality of columns of equal height furnished with progressive numerals, beginning at a predetermined starting point and following a predetermined path, the centers of said spaces being equidistant from each other along the said path, and a second sheet provided with adhesive coupons divided from each other by weakened lines, each of the coupons on said second sheet being of one size which is a multiple of one of the spaces on the first sheet, whereby the coupons which are detached from the said coupon sheet may be caused to adhere to the said first sheet, covering some of the spaces thereon and concealing from sight the numerals in the said spaces.

901,580. CONDENSING-APPARATUS PUMP. JOHN ASTROM, Milwaukee, Wis. Filed Nov. 25, 1907. Serial No. 403,646.

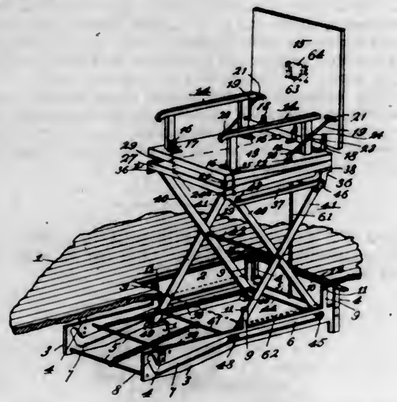


1. A pump comprising a liquid fluid chamber having valve controlled inlet and an outlet, a cylinder having an open end in connection with the chamber and provided at its opposite end with a valve-controlled inlet and outlet head for gaseous fluid, and a displacement plunger reciprocative in said chamber and cylinder but which separates the contents of same.

2. A pump comprising a liquid fluid chamber having valve-controlled inlet and outlet, a cylinder having an open end in connection with the chamber and provided at its opposite end with a hollow head divided into valve-controlled inlet and outlet gaseous fluid compartments, and a displacement plunger reciprocative in the said chamber and cylinder but which separates the contents of same.

3. A pump comprising a liquid fluid chamber having a valve-controlled inlet and outlet, an overflow chamber surrounding the outlet of the one aforesaid, a cylinder having an open end in connection with the first chamber and provided at its opposite end with a valve-controlled inlet and outlet head for gaseous fluid, and a displacement plunger reciprocative in said liquid fluid chamber and cylinder but which separates the contents of same.

901,581. AUTOMATIC FOLDING CHAIR. CHARLES O. AUSTIN, Kansas City, Kans. Filed Jan. 14, 1908. Serial No. 410,805.



1. A chair consisting of two pairs of folding-legs, a frame to which one pair of said legs are pivotally secured at their upper ends while the upper ends of the companion pair are arranged to move backward and forward in the frame, resilient means at the lower ends of the legs for folding the same, means carried by the frame for locking the legs in an extended position, and a seat pivoted to the frame and adapted to disengage the locking means from the legs.

2. A chair consisting of two pairs of folding-legs, a frame to which one pair of said legs are pivotally secured at their upper ends while the upper ends of the companion pair are arranged to move backward and forward in the frame, resilient means at the lower ends of the legs for folding the same, means carried by the frame for locking the legs in an extended position, a seat pivoted to the frame and adapted to disengage the locking means from the legs, and springs for normally holding said seat out of engagement with the locking means.

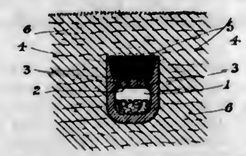
3. A chair consisting of two pairs of folding-legs, a frame to which one pair of said legs are pivotally secured while the companion pair are arranged to move backward and forward therein, means for folding said legs, a plunger for locking the legs in an extended position, a lever carrying said plunger, and a self-adjusting seat on the frame for actuating said lever.

4. A chair consisting of two pairs of folding-legs, a frame to which one pair of legs are pivotally secured while the upper ends of the companion pair are arranged to move backward and forward in the frame, a rung connecting the upper ends of said companion legs, a plunger for engaging the rung to lock the legs in an extended position, a lever for lifting said plunger out of engagement with the rung, an adjustable seat above said lever for actuating the same, means for holding the plunger in a raised position, a depending lever in the path of the rung connected to said means for releasing the latter from the lever, and resilient means connected to the legs for folding the same when unlocked.

5. In combination, a floor having an opening therein, a pair of slotted-rails beneath said opening provided with arms, and a folding-chair including rollers mounted in the slotted-rails and a back which latter fills the opening in the floor and rests upon the arms when the chair is folded.

[Claims 6 to 8 not printed in the Gazette.]

901,582. DRAINAGE AND IRRIGATION TILE. NELSON E. AUSTIN, Danbury, Conn. Filed Jan. 18, 1908. Serial No. 411,527.



1. A drainage and irrigation tile containing at its lower portion a conduit extending lengthwise of the tile, and having at its middle portion a horizontally disposed perforated roof directly over said conduit, the sides of the tile being extended upwardly in a vertical plane to form in connection with said roof a trough-like receptacle, while the conduit itself has no outlet except through said perforated roof.

2. A drainage and irrigation tile having vertically disposed sides and provided at the top with an open trough and at the bottom with a conduit, said trough and conduit extending lengthwise of the tile, and a perforated horizontally disposed web separating said trough and conduit and acting as the roof of the latter and the floor of the former and affording the only outlet for said conduit.

3. A drainage and irrigation tile comprising a water conduit pipe extending lengthwise of the tile, and an open trough parallel with said pipe and having its outer sides coincident with the outer sides of said conduit, said trough and conduit being separated by a perforated partition.

4. A drainage and irrigation tile comprising a water conduit pipe and a vertically disposed trough formed integral and in juxtaposition, the wall of the pipe being closed except as to openings in said wall adjacent to the trough whereby communication is established between said pipe and trough.

901,583. AUTOMATICALLY-CLOSING VALVE FOR FLUSHING WATER-CLOSETS, &c. WALTER H. BOWMAN, Elmhurst, Ill. Filed Aug. 27, 1906. Serial No. 332,212.

1. The combination in a valve device, of a cylindrical body portion having a bottom with an opening for the admission of liquid, and a discharge opening; a piston within the cylindrical body; a valve adapted to close the opening for the admission of liquid; a tube joining the piston and valve whereby the piston and valve will move together; a valve for controlling the flow of liquid through the tube to the space above the piston; means for opening said valve; means for holding said valve in an open position and for releasing the said valve and allowing it to close when the piston has moved downwardly a suitable distance within the cylindrical body portion of the device.

2. The combination in a valve device, of a cylindrical body having a bottom with an admission opening, and a discharge opening; a piston within the cylindrical body; a valve for the admission opening; a tube connecting the piston and valve so they will move together; a valve for controlling the flow of liquid through the tube to the space above the piston; means for opening said valve; and a lever mechanism for holding said valve open until the piston has moved downwardly a predetermined distance.



3. The combination in a valve device, of a cylindrical body having a bottom with an admission opening, and a discharge opening; a piston within the cylindrical body; a valve for the admission opening; a lever mechanism carried by said valve; a tube connecting the piston and valve; an operating rod located within the tube; a valve at the lower end of the rod controlling the flow of liquid through the tube to the space above the piston; and means for operating the said lever mechanism when the piston moves downwardly within the cylindrical body.

4. The combination in a valve device, of a cylindrical body having a bottom with an admission opening, and a discharge opening; a piston; a valve for the admission opening; a tube uniting the piston and valve; an operating rod located within the tube and extending through the cap which closes the top end of the cylinder, said rod having a knob between which and the said cap is located a spring and also a valve at its lower end controlling the flow of liquid through the said tube; mechanism for holding the last mentioned valve open; and means, consisting of a frusto-conical body secured to the end of the cylindrical body, for actuating the said mechanism when the piston moves downwardly.

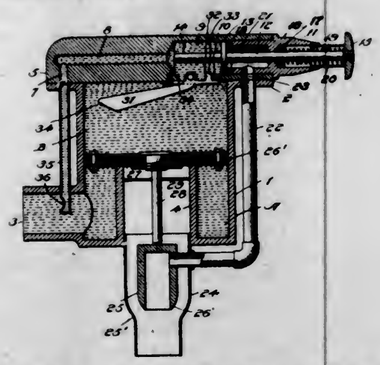
5. The combination in a valve device, of a cylindrical body having a bottom with an admission opening, and a discharge opening; a piston; a valve for the admission opening; a tube connecting the piston and valve, which latter carries a cylinder with an opening therethrough and a pivoted lever with one arm located within the opening in the cylinder; an operating rod with a sliding joint within the tube; a spring upon the upper end of the rod; a valve at the lower end of the rod controlling the flow of liquid through the tube; and a frusto-conical body secured to the end of the cylindrical body; in substance as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

901,584. FLUSHING-VALVE. WALTER H. BOWMAN, Elmhurst, Ill. Filed July 24, 1907. Serial No. 385,290.

1. A valve mechanism having a main cylinder with a delivery inlet and a discharge outlet, a main piston dividing the cylinder into two chambers, a passage for introducing fluid from the delivery inlet to the chamber back of the piston, a passage from the chamber back of the piston to the discharge outlet, means for closing the passage from the delivery inlet to the said chamber, means for opening the passage from the said chamber to the discharge outlet, and means operated by the movement of the main piston for closing the passage from the chamber to the discharge outlet and opening the passage from the delivery inlet to the chamber.

2. A valve mechanism having a main cylinder with a delivery inlet and a discharge outlet, a main piston dividing the cylinder into two chambers, a passage from the delivery inlet to the chamber back of the piston, a passage from the chamber to the discharge outlet, a starting valve for simultaneously closing the passage from the delivery inlet to the chamber back of the piston and opening the passage from the said chamber to the discharge outlet, and means for holding the starting valve open and releasing it to close when said means for holding the starting valve open is engaged and moved by the piston in its upward travel.



3. A valve mechanism having a main cylinder with a delivery inlet and a discharge outlet, the latter provided with an inverted cup, a main piston dividing the cylinder into two chambers, a passage from the delivery inlet to the chamber back of the piston, a passage from the chamber back of the piston to the inverted cup connected with the discharge outlet, and movable means for simultaneously closing the passage from the delivery inlet to the chamber back of the piston and opening the passage from said chamber to the discharge outlet.

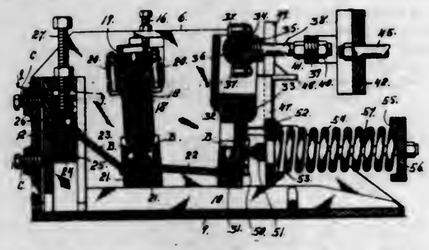
4. A valve mechanism having a main cylinder with an upwardly projecting cylindrical wall 4, the top edge thereof constituting a seat for a piston; a delivery inlet and a discharge outlet; a single piston with a stem, said piston normally dividing the main cylinder into two chambers and seated upon the edge of the wall 14; means within the cylindrical wall 4 engaging and guiding the piston stem; a passage from the delivery inlet to the chamber back of tne piston; a passage from the said chamber to the discharge outlet; a starting valve; means for holding the starting valve open; and means operated by the movement of the main piston for releasing the starting valve and allowing it to close.

5. A valve mechanism having a main cylinder with a delivery inlet and a discharge outlet, a main piston dividing the cylinder into two chambers, a passage from the delivery inlet to the chamber back of the piston, a passage from the said chamber to the discharge outlet, means for controlling the flow of liquid through the said two passages, and means in connection with the discharge outlet for creating a partial vacuum in the passage from the chamber back of the piston to the discharge outlet when the main piston is moved away from its seat and fluid is being discharged.

[Claims 6 and 7 not printed in the Gazette.]

901,585. HEAD-MOTION FOR CONCENTRATING-TABLES. SAMUEL H. BOYLAN, Denver, Colo. Filed May 13, 1907, Serial No. 373,403. Renewed Mar. 7, 1908. Serial No. 419,770.

1. In mechanism of the class described, the combination with a concentrating table mounted to have a reciprocating movement, of a crank shaft, a hanger connected with the crank of the shaft, toggle members engaging the hanger, vertically adjustable toggle seats for the outer extremities of both toggle members, a lever upon one arm of which one of said seats is mounted, a vertically adjustable connection between the other arm of the lever and the concentrating table, and a spring actuating device engaging a vertical series of recesses formed in the lower arm, to act on said lever to move the said table in one direction, the toggle members being utilized to move it in the opposite direction, substantially as described.



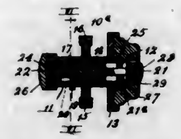
2. In a head motion for concentrators, the combination with a concentrator and a suitable frame work, of a crank shaft journaled in the frame work, a hanger mounted on the crank pin of said shaft, a lever fulcrumed in the frame work, a toggle member having its opposite extremities seated in the hanger and the lower arm of the lever, respectively, a second toggle member, a vertically adjustable seat for the opposite extremity of the second toggle member, suitable means for connecting the upper arm of the said lever with the concentrator, and a spring-actuated device engaging the lower arm of the lever for imparting the forward movement to the concentrator, and means for changing the point of engagement of the said device with the lever arm, for the purpose set forth.

3. In a head motion for concentrators, the combination with a concentrator and a head motion frame work, of a crank shaft, a hanger connected to be actuated by the crank of said shaft, a lever fulcrumed on the frame work, a toggle member interposed between the said hanger and the lower arm of the said lever, a second toggle member having one extremity engaging the hanger on the opposite side from the first toggle member, a toggle seat for the opposite extremity of the second toggle member, means for the vertical adjustment of the toggle member extremities remote from the hanger, a vertically adjustable connection between the upper arm of the said lever and the concentrator, and a spring-actuated device for engaging the lower arm of the lever on the opposite side from the first toggle member, the lower arm of the lever being provided with a vertical series of recesses, adapted to receive the spring-actuated device for the purpose set forth.

4. In a head motion for concentrators, the combination with a head motion frame work, of a crank shaft journaled in the frame work, a hanger connected to be actuated by said shaft, a lever fulcrumed in the frame work, a toggle member interposed between the hanger and the lower arm of said lever, a second toggle member interposed between the stationary part of the frame work and the hanger on the opposite side from the first toggle member, the upper arm of the said lever being provided with a vertical slot, a pin passing through said slot and vertically adjustable therein, a rod connecting said pin with the concentrator, the concentrator end of the rod being vertically adjustable to harmonize with the adjustment of the said pin, and a spring-actuated device engaging a vertical series of recesses arranged in the lower arm of the lever on the opposite side from the first named toggle member, substantially as described.

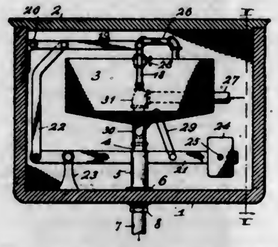
5. The combination with a structure to be vibrated, of a head motion therefor comprising a suitable frame work, a crank shaft journaled in the frame work, a hanger actuated thereby, a lever fulcrumed in the frame work, toggle members engaging the hanger on opposite sides, one of the said members engaging the lower arm of the lever while the other member engages the frame work, a vertically adjustable connection between the upper extremity of the said lever and the device to be vibrated, a cross bar, rods connecting the opposite extremities of the cross bar with the frame, a coil spring having one extremity engaging the cross bar intermediate its extremities, a seat for the opposite extremity of the said spring, the said seat having a rearward projection adapted to engage the lower arm of the lever which is provided with a vertical series of recesses therefor, substantially as described.

901,586. CAR-SIGNAL. JOSEPH H. BRADY, Kansas City, Mo. Filed Mar. 13, 1906. Serial No. 305,801.



In a car signal, a push button valve comprising a tubular case having opposite radial induction and eduction ports and at its front end an internal shoulder provided with a central orifice, an integral exterior annular attaching flange near its front end provided with screw holes, a piston valve sliding within the case and having a diametric port and a longitudinal slot, a screw through the case entering said slot so that when it engages the end thereof all ports are in register, a stem projecting from the front end of the piston through said orifice and another stem projecting from the rear end of the piston beyond said slot, a cap closing the rear end of the case, an expansion spring in the latter between the cap and valve and around its rear stem, a gasket within said case against its flange and around the front stem, a push button screwed on the end of the latter and having an exterior shoulder, and an escutcheon screwed on the front end of the case to cover the attaching plate and having a shoulder engaging that on the button.

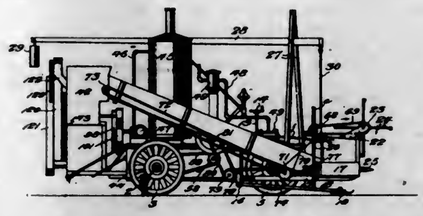
901,587. AUTOMATIC CLOSET-CISTERN. JOSEPH H. BRADY, Kansas City, Mo. Filed June 24, 1907. Serial No. 380,416.



1. In closet cisterns, in combination, a tank, a bracket therein, an arm pivoted to the bracket, a reservoir hung from the arm, a supply pipe, a pipe discharging therefrom into the reservoir, a flush pipe communicating with the supply pipe, a flush valve in the flush pipe, a standard in the tank, a lever pivoted between its ends to the standard, a link connecting one end of the lever with said arm, a weight on the other end of the lever, an arm on the stem of the flush valve, a link connected to said last named arm and to said lever adjacent the weighted end thereof, said reservoir moving downwardly under a predetermined weight of water contained therein, and means for causing the discharge of water from said reservoir at the termination of the downward movement of the latter.

2. In closet cisterns, in combination, a movable reservoir, means for supplying water thereto, a receiving pipe having an open end, a pipe depending from the reservoir and telescoping the open end of the receiving pipe, a perforated plate carried by each pipe, a valve in the depending pipe having its stem passed through the perforated plates, said valve being constructed to rest upon and to close the openings in the plate of the depending pipe when the reservoir is in normal position, the stem of said valve being provided with a flange to rest upon the plate of the other pipe when the reservoir is in lowered position and to hold said valve away from the plate of the depending pipe, said reservoir being movable under the weight of water therein contained, and means for returning the reservoir to normal position after each discharging movement thereof.

901,588. STEAM-DRIVEN COMBINED HEADING AND THRESHING MACHINE. LEWIS K. BROWN, Asotin, Wash. Filed Mar. 2, 1907. Serial No. 360,215.



1. The combination of a wheel-supported frame, runners or ground engaging members extending forwardly therefrom, a reaper frame extending transversely in front of the first-mentioned frame, upwardly-extending members on the runners, rack bars on the members, guides on the reaper frame for receiving the members, pinions engaging the rack bars, and means for actuating the pinions for raising or lowering the reaper frame with respect to the runners.

2. In a machine of the class described, the combination of an engine propelled vehicle, runners pivotally connected with the vehicle and extending forwardly therefrom, a reaper frame, members extending upwardly from and supported on the runners and located behind the reaper frame, means for guiding the frame on the members, a counterbalancing device on the vehicle, means for connecting the device with the frame, and means on the frame operating through the members for raising and lowering the frame with respect to the runners.

3. In a machine of the class described, the combination of a vehicle, runners connected therewith and located at opposite sides of the vehicle, upright members supported on the runners, a reaper frame disposed in front of the members, means on the frame and arranged to operate through the members for raising and lowering the frame, a support on the vehicle, a beam pivotally mounted on the support, a link connected with the front end of the beam and with the reaper frame at the middle thereof, and a counterbalancing weight on the rear end of the beam.

4. The combination of a wheel-supported frame, runners projecting forwardly therefrom and connected therewith, a horizontal reaper frame, upright members on the runners and disposed behind the reaper frame, means on the frame slidably engaging the members, and mechanism for raising and lowering the reaper frame at both ends simultaneously.

5. The combination of a wheel-supported frame, forwardly-extending runners thereon, a reaper frame disposed over the runners, means for supporting the frame on the runners and for vertically adjusting the frame with respect to the latter, endless belts on the reaper frame, an endless elevator upon which the belts discharge, a driving shaft, a second shaft, a cross belt between the shafts, a sprocket and chain connection between one shaft and one of the belts, and a sprocket and chain connection between the other shaft and remaining belt.

[Claims 6 and 7 not printed in the Gazette.]

901,589. MEANS FOR TRANSPORTING VESSELS. EDWARD L. BURWELL, Chelsea, Mass. Filed Jan. 31, 1906. Serial No. 298,767.



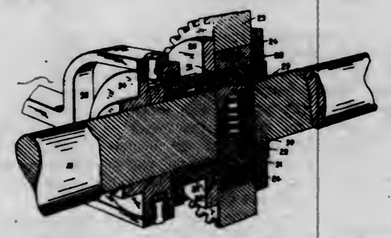
1. In an apparatus of the class described, a cradle having slidably sustained supports extending above the ground, means for moving said supports toward and from the vessel to maintain the vessel upright in said cradle, and means operated by tackle for confining said supports in position in contact with the sides of the vessel.

2. In apparatus of the class described, a cradle having slidably sustained supports extended above the gunwale, and means for moving said supports toward and from the vessel to maintain the vessel upright in said cradle.

3. In apparatus of the class described, a cradle comprising a base having three or more longitudinal series of wheels to run on tracks, and metallic slidable supports extended upwardly above the water line, and contacting with the sides of the vessel above its bilge, and means to move said supports automatically toward and from the vessel when the cradle is submerged.

4. In apparatus of the class described, a cradle having slidably sustained supports, and slidably sustained chocks, means for moving said supports toward and from the vessel, and means for moving said chocks under the bottom of the vessel toward and from the keel.

901,590. POWER-TRANSMISSION GEARING. GEORGE L. BUTLIN, Kogarah, near Sydney, New South Wales, Australia, assignor to The Butlin Gear Limited, Sydney, Australia, a Company. Filed Nov. 8, 1907. Serial No. 401,520.

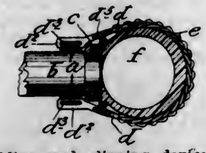


1. In a power transmission gearing, a shaft having a diametrically slotted enlargement, a pair of drive keys radially movable therein, a spring for impelling said drive keys apart, a gear having internal notches in diametrically opposite pairs adapted to be engaged by said keys, the keys and the notches of opposite pairs having oppositely-directed engaging shoulders, and means for radially displacing said keys to engage and disengage said gear and said shaft.

2. In a power transmission gearing, a driving member having a diametrically slotted portion, a pair of radial and oppositely moving driving keys thereon, said driving keys having driving shoulders presented in opposite circumferential directions, and a gear having diametrically opposite notches with shoulders presented in circumferential opposite directions for the respective pairs, and adapted to be engaged by said keys.

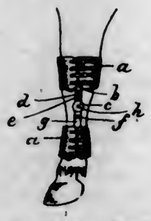
3. In a power transmission gearing, a driving member having a pair of radially movable keys, means for radially displacing said keys, each key having an inclined outer surface and a driving shoulder, the driving shoulders of the respective keys being presented in opposite circumferential directions, and a driven member having diametrically opposite notches adapted to closely fit the contour of said keys, whereby said keys slip into a relation to tightly lock the driving to the driven member, notwithstanding initial differing speeds of said members.

901,591. ANTI SKIDDING AND SLIPPING ATTACHMENT FOR AUTOMOBILE-WHEELS. HARRY H. CHANDLER, New York, N. Y. Filed Dec. 27, 1907. Serial No. 408,302.



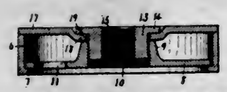
An anti-skidding and slipping device for automobile wheels comprising a leather strap adapted to be secured around the spokes adjacent to the rim of the wheel, snap hooks connected with said strap at the opposite sides of the spoke and extending downwardly and across the rim, said strap hooks being provided with oblong heads having oblong slots or openings through which the strap is passed, and a flexible drag connected with said hooks and passing around the tire of the wheel, said strap being also provided with inner members which separate the heads of the hooks from the spoke.

901,592. MEANS FOR PREVENTING HORSES' FRONT LEGS FROM KNOCKING TOGETHER. AMOS CLEGG, Christchurch, New Zealand. Filed Dec. 2, 1907. Serial No. 404,743.



Means for preventing horses' front legs from knocking together, the same consisting of a pair of bands adapted to be secured around each leg, one above and one below the knee, a bar depending upon the outside of the upper band and formed with a stud projecting from its outer face, a metal plate formed with a slot extending longitudinally therein through which the stud is passed, a bar extending upwards from the lower band formed with a hinge allowing only of outward turning movement and hinged at its upper end to the lower end of the said plate in such a manner as to permit of turning movement in a plane at right angles to itself and said plate, substantially as specified.

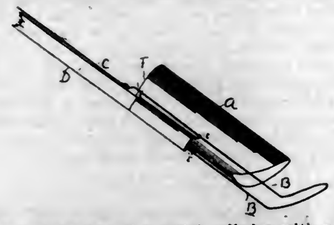
901,593. OUTLET-BOX. HARRY A. COFFIN, Malden, Mass. Filed Jan. 12, 1907. Serial No. 352,009.



1. An outlet box comprising a plate having a threaded central opening and provided with apertures to receive wires and other apertures to receive attaching devices, a rim loosely surrounding and supporting said plate, a bushing having a threaded engagement with the central opening of said plate, and means on said plate for limiting the vertical movement of said bushing in one direction.

2. An outlet box comprising a plate having a threaded central opening and provided with apertures to receive wires, a rim loosely surrounding said plate and provided with a flange to receive the plate, a bushing having a threaded engagement with the central opening of said plate, and provided with a flange, and a cover plate having a central opening to receive said bushing, said cover plate being arranged between said bushing flange and the first named plate, for the purpose set forth.

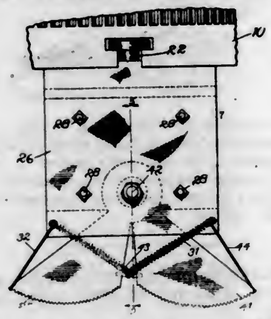
901,594. FRUIT-PICKER. HUGH CORRIGAN, Bradford, N. H. Filed Apr. 11, 1908. Serial No. 426,627.



1. The combination of a metal cylinder with a sliding metal looped rod, and a pole to which the cylinder is suitably attached, the loop portion of the rod being bent to extend over the end of the cylinder, substantially as set forth.

2. The combination of a cylinder with a looped rod sliding outside and legthwise of said cylinder, the looped portion being bent to extend over the end of the cylinder to separate the fruit from its support, and allow it to fall into said cylinder, all substantially as set forth.

901,595. WORK-HOLDER. CHARLES M. DEEMS, Indianapolis, Ind., assignor to Salmon W. Putnam 3d, Fitchburg, Mass. Filed June 10, 1907. Serial No. 378,171.



1. In a work-driver, the combination, with a work-engaging driving member, of a jaw carried by the work driver and adapted to engage the work and prevent a reverse movement thereof, said jaw having a cam-face gripping portion.

2. In a work-driver, the combination with a pivotally mounted work-engaging driving member, of a cam-face jaw adapted to engage the work and prevent the backward movement thereof, said member and jaw being movable about a common axis, and impelling means tending to move the jaw into contact with the work.

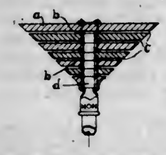
3. The combination in a work-driver, of a jaw carried thereby for engaging with and driving the work, a second jaw positioned on the driver, to prevent a reverse or backward movement of the work, both of said jaws being mounted on an axis which is transverse to the axis of the driver, and impelling means for each jaw tending to move the same into contact with the work.

4. A movable work-driver comprising a cam-face driving-dog, a cam-face jaw arranged reversely of the dog and adapted to prevent a reverse or backward movement of the work, impelling means tending to move the dog into driving contact with the work, impelling means tending to move the jaw into contact with said work, and latching means for the dog and jaw for holding the same retracted out of engagement with the work.

5. The combination with a work-driver, of a pair of relatively reversed jaws mounted on an axis common to both and each having a gripping portion constrained to move in a path oblique to the direction of the movement of the jaw.

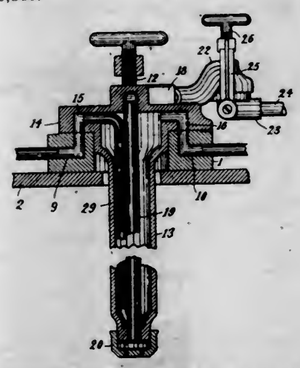
[Claims 6 to 9 not printed in the Gazette.]

901,596. GAS-BURNER FOR LIGHTING AND HEATING PURPOSES. GUSTAV DETSINYI, Berlin, Germany. Filed Jan. 21, 1908. Serial No. 411,907.



In an incandescent gas burner, the combination, with a supply tube, of a plurality of superposed plates surrounding said tube, there being a narrow slit or passage between each pair of plates communicating with the tube and extending to the peripheries of the plates, the lower plates being of lesser diameter than those above them and the whole formed to direct the rays of heat downwardly.

901,597. APPARATUS FOR SPRAYING LIQUIDS. HENRY L. DOHERTY, Madison, Wis. Filed Jan. 11, 1905. Serial No. 240,540.



1. The combination with a chamber wall having an aperture therethrough, of an apertured carrying plate secured on said wall with the apertures in register, a spray nozzle separable from the carrying plate extending through the apertures into the chamber and having a lateral flange resting on the carrying member around the aperture therein, said plate and flange being provided with communicating ports forming a passageway from the exterior of the carrying plate to the interior of the nozzle, a yoke carried by the carrying plate, and a clamping device carried by the yoke to secure the nozzle removably in place, as set forth.

2. The combination with a chamber-wall having an aperture therethrough, of an apertured carrying plate secured to the wall with the apertures in register and provided with two ports or passages, a spray nozzle extending through the apertures into the chamber and having a lateral flange resting on the carrying plate, said flange being provided with ports or passages registering with the first named passages, both of said passages through the flange being in communication with the interior of the nozzle, and means for removably securing the nozzle in the carrying plate.

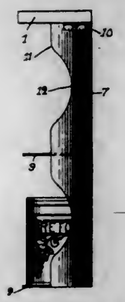
3. The combination of a carrying plate having a central aperture extending therethrough, and two ports, or passages, leading from its periphery to its outer face, a spray nozzle extending through the aperture and having a lateral flange abutting against said face of the carrying plate, said flange being provided with two ports, or passages, registering with the ports in the carrying plate, one of said passages in the flange being in direct communication with the rear end of the nozzle, and a pipe in communication at one end with the other of said passages in the flange and at its opposite end with the interior of the nozzle adjacent the discharge end of the latter.

4. The combination with a tubular member, a spray cap carried thereby and a liquid supply pipe extending through the tubular member to the spray cap, of means for circulating a cooling agent within the tubular member and around the liquid supply pipe including a pipe arranged within the tubular member having its discharge end located adjacent the forward end of said chamber, said pipe for introducing the cooling agent being disposed adjacent to the liquid supply pipe, and out of contact with the tubular member.

5. The combination with an apertured carrying member, having a seating face around the aperture therein and having passages in the body of the said member extending to the seating face, of a tubular member extending through said carrying member and provided with a lateral flange bearing on said seating face, the flange being provided with passages registering with the passages in the carrying member, a pipe inside the tubular member, extending from one of the said passages and discharging inside the said member adjacent to its outer end, the other of said passages being in communication with the interior of the tubular member, a spray cap on the tubular member, and a liquid supply pipe extending through the tubular member to the spray cap, as set forth.

[Claims 6 to 8 not printed in the Gazette.]

901,598. DETACHABLE AUXILIARY HOLDER FOR SHELVES AND TABLES. GREGOR EGGL, Toledo, Ohio. Filed Jan. 2, 1908. Serial No. 409,086.



1. In a detachable holder for shelves and the like, the combination with a shelf, of a sheet metal holder body bent to form a recess open at the front and top, the holder body being provided with a supporting ledge at its lower end portion and with a slot in its upper end portion parallel with its top end and extending through the back towards the front of the holder, and a plate adapted to be secured to the underside of the shelf in position to enter the slot when the holder with its top end engaging the underside of the shelf is pushed back thereon.

2. In a detachable auxiliary holder for shelves and the like, a plate having supports adapted to secure a portion between the supports parallel with and a distance below the underside of a shelf or table top, and a recessed holder body open at the front and provided with a supporting ledge, and having its top end portion provided with a slot to receive the portion of the plate between the supports when the top end of the holder body is engaged with the underside of the shelf and pushed back towards the plate.

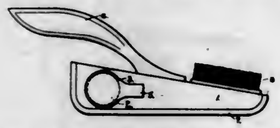
3. A detachable auxiliary holder for shelves, table tops and the like, comprising an elongated metal supporting plate, having stepped up portions adapted to be secured to the underside of a shelf or table top and support the intervening portion or portions parallel with the shelf or table top, and a semi-cylindrical holder body having a slot in its top end portion adapted to receive an intervening portion of the plate with the upper end of the holder in engagement with the underside of the shelf, and provided with a ledge or ledges at an interval or intervals below the top.

4. A detachable auxiliary holder for shelves, comprising an elongated metal supporting plate having stepped up portions adapted to be secured to the underside of a shelf and support an intervening portion parallel with the shelf, and a holder formed of sheet metal bent to form side portions and a back portion, and provided at the top end portion with a slot extending parallel with the top and through the back portion and partly through the side portions and adapted to receive the middle portion of the supporting plate, and at the lower end portion with a ledge adapted to support the object it is designed to support, partly between and partly without the sides of the holder.

901,599. METHOD OF PRODUCING A NEW CERAMIC MASS AND OF MANUFACTURING POTTERY. HERMANN EISENLOHR, Karlsruhe, Germany. Filed June 7, 1906. Serial No. 320,651.

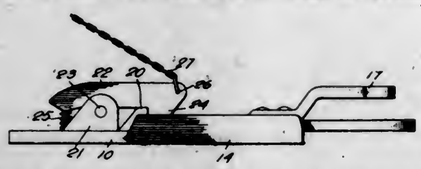
The herein described method of manufacturing pottery consisting in mixing granulated glass, having a content of at least 75% of silica and about 10% of alumina, with a non-plastic clay or quartz, adding to said mixture plastic clay to serve as a binding material, molding the desired vessels from such material, and burning the vessels.

901,600. BLACKING-BRUSH KIT. SILAS W. EMORY, Versailles, Mo. Filed Aug. 19, 1907. Serial No. 389,254.



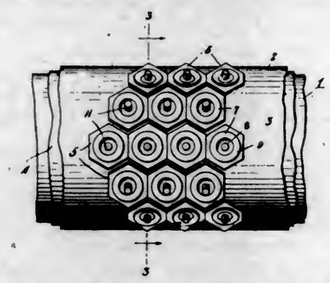
In a device of the class described, a body portion provided in one side with a cylindrical cavity, a receptacle for blacking adapted to be removably housed in said cavity, and having its ends open, and a stopper for said receptacle having a handle secured thereto and projecting laterally from one side thereof.

901,601. HORSE-RELEASER. GILBERT ERICSON, Sacred Heart, Minn. Filed Jan. 29, 1907. Serial No. 354,648.



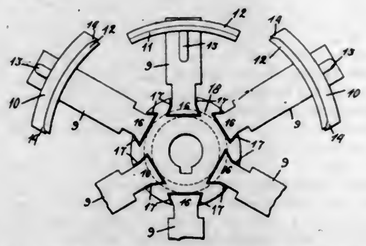
In a device of the kind described, the combination of a plate adapted to be attached to a vehicle pole and provided with a pair of longitudinal shoulders formed on its side edges, said shoulders being provided with inwardly-directed extensions arranged in spaced relation to the upper face of said plate; a whiffle-tree carrying member slidably mounted upon said plate between said shoulders and beneath the extensions of said shoulders, said member having an opening formed therethrough at its rear end; a transversely-disposed vertical shoulder formed on said member adjacent said opening; a pair of spaced ears formed on said plate in the rear of said member; a latch pivotally mounted intermediate its ends between said ears and having its front end extending across said transverse shoulder; a depending nose formed on said latch end; an expansible coil-spring interposed between said plate and the rear end of said latch and having its opposite ends fitted in sockets in the upper face of said plate and the under face of said latch, for holding said nose normally engaged in said opening; and means connected with the nose end of said latch for rocking the latter, to release its nose from engagement in said opening.

901,602. TIRE-COVER AND FASTENING MEANS THEREFOR. ISAAC J. D. FAIRHURST, Orfordville, Wis. Filed Jan. 6, 1908. Serial No. 409,576.



In combination with a tire, a flexible cover arranged over the same, a flexible strip arranged over the tread portion of the tire under the cover, centrally apertured base plates arranged over the tread portion of the cover, outer plates formed with centrally apertured recessed portions arranged over the base plates with their recessed portions extending into the apertures thereof to points flush with the inner faces of the same and fastening rivets extending through the flexible strip, the tire cover and through the apertures of the base and outer plates, respectively, the outer ends of the rivets being slightly enlarged to engage the recessed portions of the outer plates and projecting beyond the same, a number of flexible fastening strips arranged at each side of and extending circumferentially around the cover, and means for securing the strips to the cover.

901,603. CLUTCH-PULLEY. DAVID F. FELMLY, Akron, Ohio, administrator of William Duerr, deceased, assignor of one-half to Christana M. Duerr and one-half to Thomas Phillips, Cuyahoga Falls, Ohio. Filed May 6, 1907, Serial No. 372,286. Renewed Mar. 5, 1908. Serial No. 419,395.



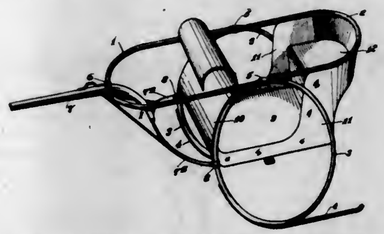
1. In a clutch, two members, one of which is provided with a flange, and the other one is provided with a plurality of radially arranged reciprocatory arms, the outer end of each arm being provided with a segmental clamp and the inner end provided with a head, and a reciprocatory sleeve having inclined dovetailed recesses in its periphery for the reception of said heads, said recesses being inclined in opposite directions for causing said clamps to engage with said flange upon opposite sides thereof.

2. In a clutch, a member provided with a flange, a radially recessed member adjacent to the edge of said flange, reciprocatory arms in said recesses, the outer ends of which are provided with clamps, an annular plate secured over said recesses, and a longitudinally recessed sleeve for engaging with said arms and causing the alternate arms to be moved in opposite directions, whereby their clamps are caused to simultaneously engage with said flange upon opposite sides thereof.

3. In a clutch, a member provided with a flange, a collar provided with a radially recessed flange adjacent to the rim of the first-mentioned flange, said collar being provided with a recess at one end and with longitudinal perforations communicating therewith, arms reciprocally mounted in said radial recesses, and each provided at its outer end with a clamp for engaging with said first-mentioned flange, a sleeve reciprocally mounted in said recess having inclined recesses in its periphery for engaging with the inner ends of said arms, screw threaded pins projecting through said perforations into said sleeve, and a shifting collar adjustably connected with the outer ends of said pins.

4. In a clutch, two members, one of which is provided with means for detachably engaging with the other, a shifting collar for actuating said means, the outer end of said collar being provided with an annularly recessed head, a band on said head comprising two semi-circular members, each of which is provided with a trunnion and has each end provided with a perforated projection, the inner face of said projection being cut away except at its tip, and means through said perforation for holding the corresponding tips of the two members in contact.

901,604. SLEIGH. EDWARD FERRISS, Napoleon, N. D. Filed Apr. 27, 1908. Serial No. 429,491.

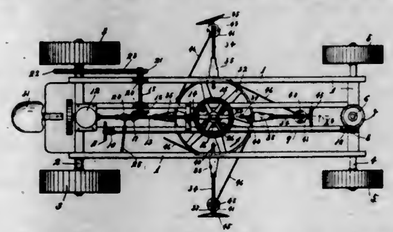


1. A sleigh having a frame formed from a metallic rod or bar bent to form horizontal front and rear yokes and laterally spaced depending hoops, and provided with a body secured thereto.

2. A sleigh having a frame constructed from a single metal rod bent to form horizontal front and rear yokes and laterally spaced depending hoops, runners connected to the lower portions of said hoops, and a body connected to said frame-work, substantially as described.

3. A cutter having a frame constructed from a metal rod bent to form front and rear yokes and laterally spaced hoops, runners applied to the lower portions of said hoops, clips rigidly secured to the overlapped upper portions of said hoops, and a body made up of a bottom, an up-turned dash-board and a seat, the said parts being rigidly secured to said frame-work, and the back of said seat being directly secured to and depending from the rear yoke of said frame, substantially as described.

901,605. MACHINE FOR PLOWING OR OTHERWISE CULTIVATING THE SOIL. EDWARD FERRISS, Napoleon, N. D. Filed Apr. 27, 1908. Serial No. 429,492.

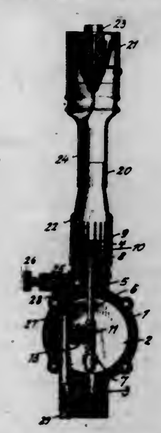


1. In a machine of the kind described, the combination with a truck, of a support connected to the intermediate portion of the truck frame for rotation around an approximately vertical axis, a multiplicity of arms flexibly connected to said support, and ground-working devices applied to the free outer ends of said arms.

2. In a machine of the kind described, the combination with a truck, of a support connected to the intermediate portion of the truck frame for rotary movement around an approximately vertical axis, a multiplicity of arms flexibly connected to said rotary support by telescoping angular bearings and sockets, spring pressed tension rods tending to hold said arms in radial positions in respect to said support, and ground-working devices applied to the free outer ends of said arms.

3. In a machine of the kind described, the combination with a truck, of a bevel gear having a vertical sleeve-like hub mounted in the bearing at the central portion of the truck frame, an engine carried by said truck, an engine driven shaft having a bevel pinion meshing with said bevel gear, a driving connection from said driven shaft to one of the truck wheels, an angular shaft arranged to move vertically through the hub of said bevel gear, a lifting lever and coöperating latch bar mounted on the truck frame, a swivel connection between said lever and the upper end of said angular shaft, a support secured to the lower end of said angular shaft, and a multiplicity of arms flexibly connected to said support and provided at their free outer ends with ground-working devices.

901,606. GAS-LAMP. GUSTAV R. FICKERT, Jersey City, N. J. Filed Oct. 15, 1903. Serial No. 177,096.



1. In a burner for gas lamps, the combination of a nozzle through which gas is supplied to the burner, a needle member having its pointed end projecting outwardly with relation to the nozzle opening, means for moving said needle member to admit and completely cut off the said supply, said means being unrestricted in its motion by which the supply is cut off except by the seating of the needle and means for varying the position to which said needle member is moved to admit said supply.

2. In a burner for gas lamps, the combination of a nozzle for supplying gas to the burner, means for controlling the supply of gas to the burner, means for regulating the supply of gas to the burner and means for cleaning said nozzle.

3. In a burner for gas lamps, the combination of a nozzle for supplying gas to the burner, a member having means for regulating the supply of gas to the burner, means for cleaning said nozzle and means for controlling said supply and means for operating said member.

4. In a burner for gas lamps, the combination of a nozzle for supplying gas to the burner, a member having a pointed end for regulating the supply of gas to the burner, a cylindrical portion for cleansing said nozzle and a valve portion for controlling said supply, and means for operating said member.

5. In a burner for gas lamps, the combination of a nozzle, a member having a gas supply regulating means and a gas supply controlling means, and means for reciprocating said member in the line of said nozzle, said reciprocating means comprising a rock shaft and connections between said shaft and said member.

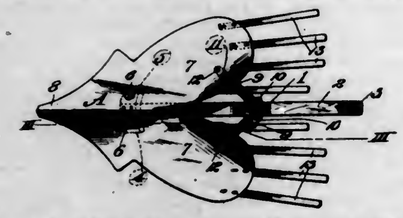
[Claims 6 to 14 not printed in the Gazette.]

901,607. ALUMINIUM-SOLDER. WILLIAM H. FINFROCK, Chicago, Ill. Filed Nov. 9, 1907. Serial No. 401,482.

1. An aluminium solder consisting of a compound of zinc and phosphor-tin.

2. An aluminium solder consisting of a compound of zinc and phosphor-tin mixed in the proportion of four ounces of zinc to one-half ounce of phosphor-tin said phosphor-tin consisting of five per cent. phosphorus and ninety-five per cent. tin.

901,608. POTATO-DIGGER. HERMAN J. FRISSE, near Pierron, Ill. Filed Apr. 3, 1908. Serial No. 424,970.

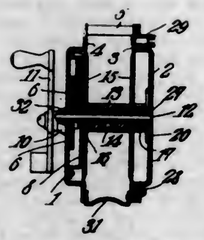


1. In a potato digger, the combination of a beam, a carrier bar attached to said beam, a cross piece carried by said carrier bar, a double plow comprising a pair of mold boards, bolts connecting the plow to said cross piece, and stays whereby said mold boards are connected to said carrier bar, substantially as set forth.

2. In a potato digger, the combination of a beam, a carrier bar attached to said beam, a cross piece carried by said carrier bar, a double plow comprising a pair of mold boards, bolts adjustably connecting the plow to said cross piece, and stays whereby said mold boards are connected to said carrier bar, substantially as set forth.

3. In a potato digger, the combination of a beam, a carrier bar attached to said beam, a cross piece carried by said carrier bar, a double plow comprising a pair of mold boards, bolts connecting said plow to said cross piece, and stays whereby said mold boards are adjustably connected to said carrier bar, substantially as set forth.

901,609. FISHING-REEL. CLAUDE H. GASKINS, Shamokin, Pa., assignor of one-fourth to Felix G. Seiler and one-fourth to Daniel G. Seiler, Shamokin, Pa. Filed Feb. 5, 1908. Serial No. 414,415.



1. In a fishing reel, the combination with a spool having a click gear rigid therewith, of a hinged shell having a boss to engage the gear to hold the spool from end shake, and means for controlling the force of contact between the boss and the gear.

2. A fishing reel comprising a stationary shell, a train of multiplying gears arranged therein, an annulus spaced from and rigidly secured to the shell, a spool having at one end a rigid gear to engage with one of the train of gears, and at its other end a rigid click gear, a second shell hinged to the annulus and carrying a click, and provided with a teat to engage with the click gear to prevent end shake of the spool, and a screw swiveled in the second shell and having a threaded engagement with the annulus.

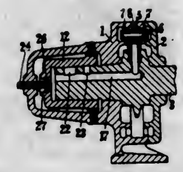
3. A fishing reel comprising a stationary shell, a train of multiplying gears arranged therein, a bridge plate secured to the shell to shield the gears and to hold them against accidental separation therefrom, an annulus spaced from and rigidly secured to the shell, a spool having at one end a rigid gear to engage with one of the train of gears and at its other end a rigid click gear, a second shell hinged to the annulus and carrying a click and provided with a teat to engage with the click gear to prevent end shake of the spool, and a screw swiveled in the second shell and having a threaded engagement with the annulus.

4. In a fishing reel, the combination with a two-part shell, one of which incloses a spool and mechanism for driving the same, of means permanently assembled with one of the shells for securing it to the other shell and for taking up end shake between the spool and one of the shell members.

5. In a fishing reel, the combination with a spool having a click gear combined therewith, of a hinged shell having a boss to engage the gear to hold the spool from end shake, and means for holding the shell in adjusted position relatively to the gear.

[Claim 6 not printed in the Gazette.]

901,610. ROTARY PUMP. PAUL GAUER, St. Petersburg, Russia. Filed Aug. 21, 1907. Serial No. 389,504.

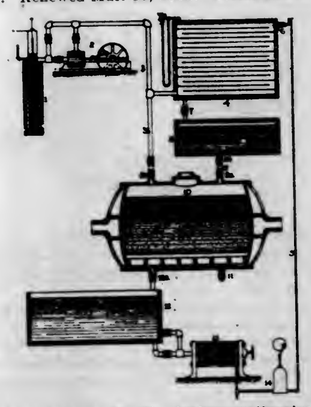


1. In a pump the combination of a casing, a rotating member eccentrically arranged therein, of pump cylinders provided in said member, a cap surrounding said member, an admission and delivery port in said cap, of ports respectively connected to said cylinders, of transverse ports respectively opening into each of said first ports and said cap adapted to be pressed against said member by the pressure of the water delivered, substantially as and for the purpose set forth.

2. In a pump the combination of a casing, a conical rotating member eccentrically arranged therein, of pump cylinders provided in said member, pistons respectively provided in said cylinders adapted to be reciprocated on the rotation of said member, a cap partly surrounding said member, an admission and delivery port in said cap, of ports respectively connected to said cylinders, of transverse ports respectively opening into each of said first ports and said cap adapted to be pressed against said member by the pressure of the water delivered, substantially as and for the purpose set forth.

3. In a pump the combination of a casing, a conical rotating member eccentrically arranged therein pump cylinders provided in said member, pistons respectively provided in said cylinders adapted to be reciprocated on the rotation of said member, a cap surrounding said member, a diaphragm in said cap, an admission and delivery port in said cap, of ports respectively connected to said cylinders, of transverse ports respectively opening into each of said first ports, said diaphragm adapted to be subjected to the pressure of the water delivered and a set-screw abutting against said diaphragm, substantially as and for the purpose set forth.

901,611. APPARATUS FOR THE EXTRACTION OF METALS FROM THEIR ORES. WILLIAM E. GREENAWALT, Denver, Colo. Filed Feb. 1, 1904, Serial No. 191,600. Renewed Mar. 30, 1908. Serial No. 424,117.



1. In an apparatus for the hydrometallurgical extraction of metals from their ores the combination of an electrolytic cell for generating chlorin; a chamber in which the chlorin so generated is absorbed in aqueous solution; means of forcing chlorin gas into said chamber under pressure greater than atmospheric pressure, and a chlorinating vessel, separate and distinct from the absorption chamber, in which the ore is treated with the solution so formed.

2. In an apparatus for the hydrometallurgical extraction of metals from their ores the combination of an electrolytic cell for generating chlorin; a chamber having means of absorbing the chlorin by subdivision; means of forcing chlorin gas into said chamber under pressure greater than atmospheric pressure and a chlorinating vessel for treating the ore with the solution so formed.

3. In an apparatus for the hydrometallurgical extraction of metals from their ores the combination of an electrolytic cell for generating chlorin; a chamber in which the chlorin so generated is absorbed in aqueous solution; means of forcing chlorin gas into said chamber under pressure greater than atmospheric pressure; a chlorinating vessel, separate and distinct from the absorption chamber, for treating the ore with the solution so formed, and means of establishing equilibrium in the pressure of the chlorin while the solution is being introduced into the chlorinating vessel.

4. In an apparatus for the hydrometallurgical extraction of metals from their ores, the combination of an electrolytic cell for generating chlorin; a chamber having means of absorbing the chlorin by subdivision; means of exhausting the chlorin from the electrolytic cell and forcing it into said chamber under pressure greater than atmospheric pressure, and a chlorinating vessel for treating the ore with the solution so formed.

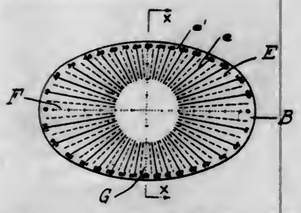
5. In an apparatus for the hydrometallurgical extraction of metals from their ores the combination of an electrolytic cell for the purpose of generating chlorin; a chamber in which the chlorin so generated is absorbed in aqueous solution; a chlorinating vessel for treating the ore with the solution so formed; means of introducing the solution into the chlorinating vessel and means of supplying an excess of chlorin under pressure in its gaseous form to the chlorinating vessel.

[Claims 6 to 10 not printed in the Gazette.]

901,612. LENS-PROTRACTOR. FREDERICK HAMILTON, Providence, R. I., assignor of one-half to Frederick A. Stevens, Providence, R. I. Filed Apr. 18, 1908. Serial No. 427,793.

1. A convex lens protractor having a substantially elliptical outline, and provided upon its face with graduations.

2. A lens protractor having a substantially elliptical outline and provided upon its face with radial graduations and with lines of dots indicating millimeters arranged along its major and minor axes.



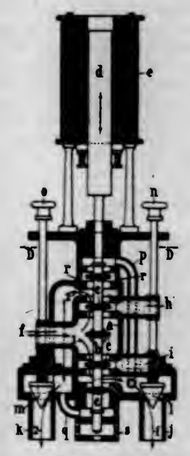
3. In a lens protractor, the combination with a convex elliptical plate, of a smooth material upon the exterior of the plate provided with graduations, and means for supporting the plate.

4. In a lens protractor, the combination with a convex elliptical plate, of a flange upon the margin of the plate, a smooth material upon the plate whose margin is folded against the face of the flange, a retaining ring frictionally engaging the marginal fold, and a body strip supported by the ring.

5. In a lens protractor, the combination with an elliptical plate, of a flange upon the margin of the plate, a smooth material upon the plate provided with a scale and whose margin is folded against the face of the flange, a retaining ring engaging the marginal fold, and a body strip mounted in the ring.

[Claims 6 and 7 not printed in the Gazette.]

901,613. ELECTROMECHANICAL REGULATOR FOR ELECTRIC TENSION. JOSEPH M. C. HERRGOTT, Valdoie, France. Filed Apr. 27, 1906. Serial No. 314,307.



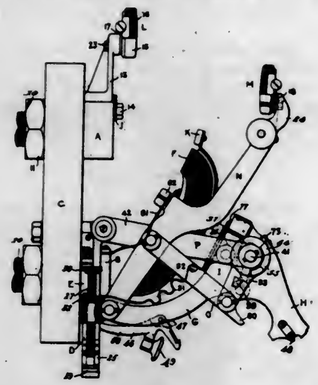
1. In an electro-mechanical regulator, the combination of a solenoid, a movable core, a slide rod rigid with this core and carrying multiple valves, a box containing the slide rod and having a conduit, an admission pipe for fluid under pressure connected to said conduit, a servo-motor and two pipes connecting the servo-motor with the box.

2. In an electro-mechanical regulator, the combination of a solenoid, a movable core, a slide rod rigid with the core and carrying multiple valves, a box containing the slide rod an admission pipe for fluid under pressure, a pipe connecting said admission pipe to the box, a servo-motor and two pipes connecting the said motor with the box, said box having auxiliary exit openings of varying volume for the fluid under pressure.

3. In an electro-mechanical regulator, the combination of a solenoid, a rheostat placed in the circuit of the winding of the electric coil, a movable core, a slide rod rigid with this core and carrying multiple valves, a box containing the slide rod furnished with a conduit connected with an admission pipe of fluid under pressure and two conduits joined to a servo-motor.

4. In an electro-mechanical regulator, the combination of a solenoid, of a rheostat and interrupters placed in the circuit of the winding of the solenoid, a movable core, a slide rod rigid with this core and carrying multiple valves, a box containing the slide rod furnished with a conduit connected with an admission pipe of fluid under pressure and two conduits joined to a servo-motor.

901,614. CIRCUIT-BREAKER. EDWARD M. HEWLETT and THEODORE E. BUTTON, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed Oct. 22, 1904. Serial No. 229,538.



1. In a circuit-breaker, the combination with a contact stud, of a magnet yoke in operative relation to said stud, an armature, a scale, and means for indicating the adjustment of the armature upon the scale, said yoke, armature, scale and means being combined in a unitary structure.

2. In a circuit-breaker, the combination with a contact stud, of a magnet yoke in operative relation to said stud, an armature, a scale, and a screw for adjusting said armature, having a head indicating directly upon said scale the adjustment of said armature, said yoke, armature, scale and screw being combined in a unitary structure.

3. In a circuit-breaker, the combination with a contact stud, of a magnet yoke partially surrounding said stud, an armature adapted to complete the magnetic circuit about said stud, a scale, and means for adjusting said armature and indicating said adjustment upon said scale, said yoke, armature, scale and means being combined in a unitary structure.

4. In a circuit-breaker, the combination with a contact stud, of a flat magnet yoke, a scale, an armature movable in the plane of said yoke, and a screw for adjusting said armature lying in the plane of said yoke and armature and having a head for indicating directly upon said scale the adjustment of said armature.

5. In a circuit-breaker, the combination with a contact stud, of a magnetic conductor operatively related to said stud and constituting a supporting base, and a movable switch element carried by said base.

[Claims 6 to 38 not printed in the Gazette.]

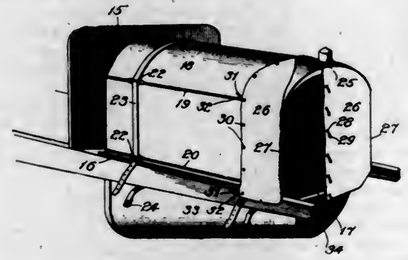
901,615. PIANOFORTE. WINFRED R. T. HILL, Asheville, N. C., assignor of one-third to J. M. Horner, Asheville, N. C. Filed Oct. 4, 1907. Serial No. 395,902.

1. In a piano forte, the combination of a main frame, a sound board on the side of the same, strips between the edges of the sound board and the frame, strings in tension over the sound board, and bridges between the strings and the sound board, said bridges and strips being located opposite each other.



2. In a piano forte, the combination of a main frame, strings in tension on both sides thereof, screws extending through the edge of the frame and having nuts upon both ends thereof, and connections between the nuts and the corresponding strings on opposite sides.

901,616. SUPPLEMENTAL HOOD FOR AUTOMOBILES. CHARLES L. HOBBS, Chicago, Ill. Filed Feb. 14, 1908. Serial No. 415,807.



1. A supplemental hood for an automobile hood, consisting of a heat-insulating covering adapted to be applied to substantially the entire outer surface of the automobile hood, and detachably connected thereto.

2. A covering for the front of an automobile radiator, consisting of a cover of heat insulating material, adapted to fit across said front or to be displaced therefrom.

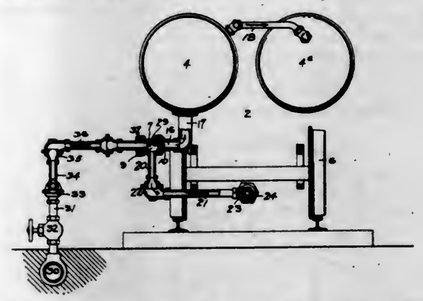
3. A supplemental hood for an automobile hood consisting of a flexible covering made up of an outer layer of water proof material, an intermediate layer of heat insulating material, and an inner layer of a soft fabric.

4. A supplemental hood for an automobile hood, consisting of a flexible water-proof heat insulating covering adapted to be applied to the surface of the automobile hood so as to be substantially co-extensive therewith, and adapted to be detachably connected thereto.

5. A supplemental hood for an automobile hood, consisting of a heat insulating covering adapted to be applied to the outer surface of the automobile hood, holes in the supplemental hood, staples on the automobile hood adapted to project through said holes, and a strap adapted to pass through the staples and thus connect the supplemental hood to the automobile hood.

[Claims 6 to 13 not printed in the Gazette.]

901,617. APPARATUS FOR CHARGING LOCOMOTIVES. CHARLES B. HODGES, Pittsburg, Pa. Filed Apr. 27, 1908. Serial No. 429,460.



1. In apparatus for charging compressed air locomotives in tandem, the combination with a supply pipe, of reservoirs, flexible pipe connections between said reservoirs, means for connecting up said connections with said supply pipe, means for cutting off said reservoirs from said connections, and means for releasing the pressure from said connections.

2. In apparatus for charging compressed air locomotives in tandem, the combination with a supply pipe, of reservoirs, flexible pipe connections between said reservoirs, check-valves controlling the supply to said reservoirs, and means for releasing the pressure from said pipe connections when said check valves are closed.

3. In apparatus for charging compressed air locomotives in tandem, the combination with a supply pipe, of reservoirs, check-valves, freely releasable connections between one of said check-valves and said supply pipe, flexible pipe connections from one check-valve to the other, connections between said check-valves and said reservoirs, and means for releasing the pressure in said flexible pipe connections.

4. In apparatus for charging compressed air locomotives in tandem, the combination with a supply-pipe, of reservoirs, check-valves, connections between said check-valves and said reservoirs, flexible pipe connections between said check-valves, freely releasable connections between said supply-pipe and one of said check-valves, and a bleeder-valve to release the pressure from said flexible pipe connections.

5. In apparatus for charging compressed air locomotives in tandem, the combination with a supply-pipe, of reservoirs, check-valves, connections between said valves and said reservoirs, flexible pipe connections from the supply side of the casing of one of said check-valves to the supply side of the casing of the other valve, the supply opening of one of said casings being closed, means for connecting up the other casing to said supply-pipe, and means for releasing the pressure from said flexible connections before or at the time that said locomotives are disconnected from said supply-pipe.

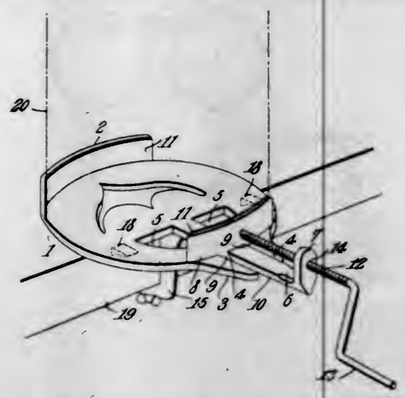
901,618. CLAMP FOR FRUIT-JARS. LOUIS HONSTEIN, Portland, Oreg. Filed May 6, 1908. Serial No. 431,269.

1. A fruit jar holder comprising a base member having a fixed jaw and provided with an integral clamping bracket, a clamping member carried by said bracket, that portion of the base opposite the fixed jaw being arranged to form a guiding bar, a slidable jaw mounted on the guiding bar and means for operating the slidable jaw.

2. A fruit jar holder, consisting of a base having a fixed jaw on one side, and a guide bar, and guide slots on its opposite side, a slidable jaw having guide lugs engaging said guide bar, means for operating the slidable jaw, and means for clamping the holder to a support.

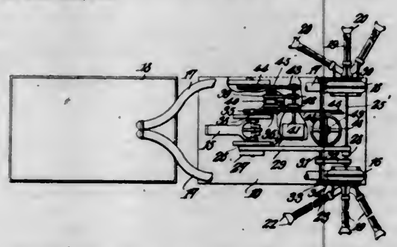
3. A fruit jar holder, consisting of a base having a fixed jaw on one side, and a slotted projection, and guide arm with tapering sides and bracket on its opposite side, a

slidable jaw with tapering lugs engaging the slots in the projection and the guide arm, an operating screw shaft mounted in the bracket of the guide arm, and connected



to the slidable jaw, a bracket with clamping screw depending from the base, and steadying lugs on the base on opposite side from the clamping bracket.

901,619. COTTON-PICKER. GEORGE W. JACKSON and JOHN H. JACKSON, Cairo, Ill. Filed Mar. 17, 1908. Serial No. 421,726.



1. In a cotton picker, a suction tube, a boll breaker carried at the end thereof, and means to actuate said boll breaker.

2. In a cotton picker, a suction tube comprising an unobstructed body portion, a boll breaker carried by the end thereof, and means exterior of said tube to actuate said boll breaker.

3. In a cotton picker, a suction tube, a flared mouth formed thereon, a boll breaker held in said mouth, and means exterior of said tube to actuate said boll breaker.

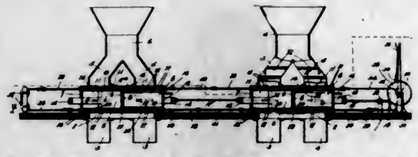
4. In a cotton picker, a suction tube, a boll breaker carried at the end thereof, a flexible shaft carried exterior of said tube, means to actuate said shaft, and means connected to said shaft and to the boll breaker.

5. In a cotton picker, a suction tube, a flared mouth formed thereon, a boll breaker held in said mouth, a flexible shaft carried exterior of said tube, and mounted thereon, means to actuate said shaft, and means to connect said shaft to the boll breaker.

[Claims 6 to 12 not printed in the Gazette.]

901,620. STOCK-FEEDING DEVICE. HENRY JENKINS, Weir, Kans. Filed Nov. 30, 1907. Serial No. 404,496.

1. In a stock feeding device, the combination with a feed receptacle, having a measuring compartment beneath the same, and slide valves arranged above and below said measuring compartment, of means for simultaneously operating said valves in reverse directions, comprising an operating lever, flexible connections between said lever and valves, a pulley at the end of the device remote from said lever and a flexible connecting device having its ends secured to said valves and its intermediate part engaged with said pulley.



2. In a stock feeding device, the combination with a plurality of feed receptacles, having a measuring compartment beneath each of the same, and slide valves arranged above and below said measuring compartments, of means for operating said valves, comprising an operating lever, flexible connections between said lever and adjacent valves, a pulley at the end of the device remote from said lever, flexible connecting means having its ends secured to the adjacent upper and lower valves and its intermediate part engaged with said pulley, means connecting the upper valves with each other and means connecting the lower valves with each other.

3. In a stock feeding device, the combination of a measuring box having a plurality of measuring compartments each of which has an inlet opening at its top and an outlet opening at its bottom, a valve covering the top of said box and provided with a plurality of openings adapted to register with the inlet openings to said compartments to admit feed thereto and with a plurality of solid portions adapted to cover said openings to exclude feed therefrom, a valve covering the bottom of said box and having a plurality of openings and solid portions adapted to register with the outlet openings from said compartments, and means for sliding said valves simultaneously in reverse directions comprising an operating lever, connections between the same and said valve, said connections including a flexible connecting device attached to said valves, a pulley at the end of the device remote from said lever and a flexible connecting device having its ends secured to the contiguous ends of the valves and its intermediate part engaged with said pulley.

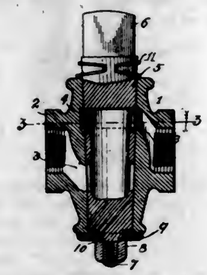
4. In a stock feeding device, the combination of a plurality of measuring boxes each having a plurality of measuring compartments and each of which compartments has an inlet opening at its top and an outlet opening at its bottom, a valve covering the top of each box and provided with a plurality of openings adapted to register with the inlet openings to said compartments and with a plurality of solid portions adapted to cover said openings, to admit feed to and exclude it from said compartments, respectively, a valve covering the bottom of each of said boxes and having a plurality of openings and solid portions adapted to register with the outlet openings from said compartments, and means for sliding said valves simultaneously in reverse directions, comprising an actuating device connected with said upper and lower valves, means for connecting the valves with each other at the end of the device remote from said actuating device, and means connecting the lower valves with each other.

5. A stock feeding device comprising a measuring box having an inlet and an outlet, valves for controlling the inlet to and the outlet from said box, and means for operating said valves simultaneously in reverse directions, said operating means comprising an actuating lever, connections between the same and the contiguous ends of the valves, and means connecting the other ends of said valves with each other and adapted to transmit motion from one to the other in reverse directions.

[Claims 6 to 24 not printed in the Gazette.]

901,621. STOP-COCK. LEBBENS JONES, Broomfield, W. Va. Filed Nov. 5, 1907. Serial No. 400,901.

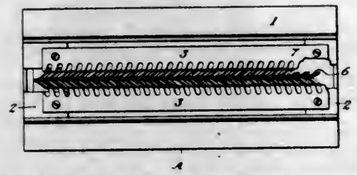
1. In a valve, the combination of a tubular casing a valve plug rotatably mounted within the tubular casing, a washer at one end of the valve plug for engaging the corresponding end of the casing, and a spring at the opposite end of the plug, the said spring being formed of a strip extending partially around the plug and having the end portions thereof returned upon themselves, the said returned end portions having their extremities secured to the plug and having a spring action tending to withdraw the plug from the casing.



2. In a valve, the combination of a tubular casing of tapered formation, the said casing being provided in its sides with an inlet port and an outlet port not in alinement with each other, a tapered valve plug of hollow formation rotatably mounted within the tubular casing and provided with openings adapted to establish communication with the inlet port and outlet port respectively, a washer at the tapered end of the valve plug for engaging the end of the casing, and a spring at the opposite end of the plug, the said spring being formed of a spring strip extending partially around the plug and having the end portions thereof returned upon themselves, the said returned end portions having their extremities secured to opposite sides of the plug and having a spring action tending to withdraw the plug from the casing.

3. In a valve, the combination of a casing, a valve plug rotatably mounted within the casing, one end of the valve plug loosely engaging the casing, and a spring at the opposite end of the plug, the said spring being formed of a strip extending partially around the plug and having the end portions thereof returned upon themselves, the said returned end portions having their extremities secured to the plug and having a spring action tending to withdraw the plug from the casing.

901,622. CRAYON-SHARPENER. SAMUEL KANN, New York, N. Y. Filed Feb. 19, 1908. Serial No. 416,692.

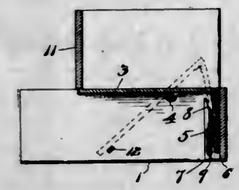


1. A sharpener of the character specified comprising a hollow frame carrying two opposed and converging abrading strips, each of said strips having a series of obliquely extending parallel blades formed therein and integral therewith, said blades having compoundedly curved edges, which edges form a common plane parallel to the plane of the strip, and said blades being bent at an angle to the plane of the strip so as to present an abrading surface, substantially as described.

2. A sharpener of the character specified, comprising a hollow frame having shoulders to which are suitably fastened two continuous abrading strips, each of said strips having a series of obliquely extending parallel blades formed therein and integral therewith, said blades having compoundedly curved edges, which edges form a common plane parallel to the plane of the strip, and said blades being bent at an angle to the plane of the strip so as to present an abrading surface, the opposite strips converging towards each other so as to form a V shaped aperture, substantially as described.

3. An abrading strip having a series of obliquely extending parallel blades formed therein and integral therewith, said blades having compoundedly curved edges, which edges form a common plane parallel to the plane of the strip, and said blades being bent at an angle to the plane of the strip so as to present an abrading surface, substantially as described.

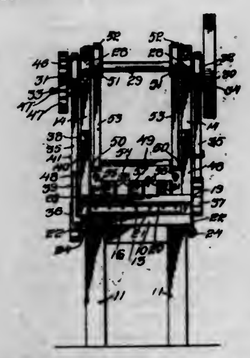
901,623. ANIMAL-DIPPING DEVICE. ELMER F. KOLOSICK, Washington, and JOSEPH A. KOLOSICK, Ainsworth, Iowa. Filed July 8, 1908. Serial No. 442,566.



1. In an animal dipping device, the dipping section consisting of side walls, a floor tiltingly mounted between said walls, a door pivotally secured to the rear end of said floor, and guideways on said side walls to guide the door, substantially as shown and described.

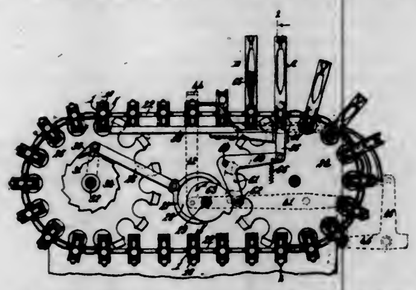
2. In an animal dipping device, the dipping section consisting of side walls, and a front wall, a bar secured to said side walls, a floor tiltingly supported on said bar, a gate hinged to the rear end of the floor, a board secured to the rear ends of the walls, cleats secured to the side walls and spaced from said board, said cleats and board forming guideways for the door aforesaid, the upper ends of the cleats and the lower edge of the door being beveled, substantially as shown and described.

901,624. FAT-CUTTING MACHINE. CLARENCE A. KRABILL, Fostoria, Ohio. Filed June 5, 1906. Serial No. 320,359.



In a machine of the class described, a table, an intermittently actuated feeding mechanism comprising an upper and a lower roll, a ratchet wheel on one end of each roll, said ratchet wheels having oppositely directed teeth, a rotatable shaft parallel to said rolls, a pair of eccentrics spaced apart upon said shaft, spring pressed pawl arms arranged to be operated by said eccentrics and respectively engaging said ratchet wheels, a reciprocating cutter, a second pair of eccentrics mounted upon said shaft, and operating means connected between said second pair of eccentrics and said reciprocating cutter.

901,625. BUNCH SHAPING, COMPRESSING, AND CONVEYING MECHANISM FOR CIGAR-MACHINES. JOSEPH D. LACROIX, New Orleans, La., assignor to Eugene H. Davis, New York, N. Y. Filed June 15, 1903, Serial No. 161,620. Renewed Mar. 19, 1908. Serial No. 422,102.



1. A cigar-bunch receiving-cup consisting of a shell, a bunch ejector arranged therein and constituting the bottom thereof, a bunch compressing member hinged to said shell, a keeper carried by said shell and an automatic locking device carried by said bunch compressing member and adapted to automatically engage said keeper.

2. In a cigar machine, a traveling bunch-conveying and shaping mechanism, comprising a plurality of bunch-receiving cups, lids therefor, means for locking said lids when closed, and stationary means arranged in the path of said cups and provided with lid opening and closing elements.

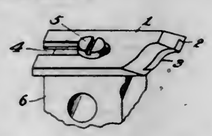
3. In a cigar machine, traveling mechanism, bunch-receiving cups carried thereby and provided with bunch ejecting means, and means arranged adjacent the path of said cups for forcing bunches thereinto.

4. In a cigar machine, traveling mechanism, bunch-receiving cups carried thereby and provided with bunch ejecting means, and a suitably shaped plunger arranged adjacent the path of said cups for forcing bunches thereinto, whereby the bunches are shaped.

5. In a cigar machine, traveling bunch-conveying and shaping mechanism comprising a plurality of bunch-receiving cups, lids or closures therefor including locking mechanism, means for releasing the locking mechanism and stationary means for opening the lids or closures.

[Claims 6 to 19 not printed in the Gazette.]

901,626. ROTATING WOODWORKING-CUTTER. CHAS. F. LA FOLLETTE, Highland, Cal., assignor of one-half to Walter Du B. Brookings, Highland, Cal. Filed July 18, 1907. Serial No. 384,473.

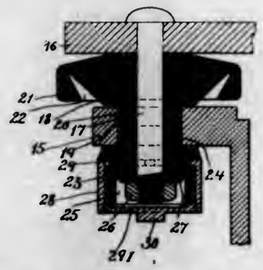


1. A rotary head, a flat cutter-head knife consisting in two blades dove-tailed together face to face, bifurcated at one end and beveled toward one side at the other end, and mounted on said cutter-head, and a screw in the cutter-head engaging the inside walls of the furcations of the knife, and provided with a head engaging said furcations.

2. A cutter-head knife consisting in two blades dove-tailed together face to face, bifurcated at one end and beveled toward one side at the other end, the sides of said knife being flat except at such beveled portion.

901,627. INSULATOR. ROYAL T. LANGLAN, Boston, Mass. Filed Dec. 10, 1907. Serial No. 405,927.

1. An insulator comprising two separable sections having bosses with abutting faces, one of said sections constituting a spacer and the other being formed to inclose the lower end of a bolt, substantially as described.



2. The combination with a support, a bolt, a nut, and a member to be supported thereby and insulated therefrom, of an insulator comprising two sections, one section interposed as a spacer between said member and said support, said sections having annular flanges meeting in an aperture formed in said member and having alined apertures to receive said bolt.

3. An insulator comprising two separable sections having abutting faces, one of said sections constituting a spacer and the other being formed with a cavity, and having a cover to close said cavity.

4. An insulator comprising a body formed of insulating material having an aperture to receive a bolt, said body having a cavity to receive a nut for the bolt, an inclosing casing, and a cover for said cavity attached to said casing.

5. An insulator of the character described, comprising a body divided transversely in two abutting sections, the upper section constituting a spacer and having a petticoat, the said sections having alined apertures to receive a bolt, the lower section being formed to inclose the lower end of a bolt, substantially as described.

901,628. SURGICAL TABLE. SOLON M. LANGWORTHY, Cedar Rapids, Iowa. Filed Mar. 10, 1906. Serial No. 305,404.



1. In a surgical table adapted to secure longitudinal traction, mechanism adapted to produce vibration in the line of such traction.

2. In a surgical table adapted for longitudinal traction, a coöperating vibrator connecting with the traction devices, and producing vibration in the line of such traction.

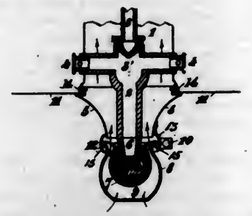
3. In a surgical table, the combination of head and foot carriages adapted to hold two parts of the body, means for forcibly moving them toward and away from each other, and a vibrator connecting with said carriages, and adapted to move them in the line of traction.

4. In a surgical table having head and foot carriages adapted to hold two parts of the body, and means for forcing them in opposite directions, but permitting a limited independent movement, the combination of a reciprocating vibrator, and a connection thereof with the head and foot carriages.

5. In a surgical table, the combination of carriages adapted to hold two parts of the body, a right and left screw to give opposite movement to them, nuts on said screw having a limited slip connection with said carriages, a toggle adjustably connecting with the carriages, a crank connecting with said toggle, and means for rotating said crank.

[Claims 6 to 12 not printed in the Gazette.]

901,629. INVERTED INCANDESCENT GAS OR VAPOR LAMP. LUCIEN LIAIS, Paris, France. Filed Nov. 30, 1904. Serial No. 234,928.



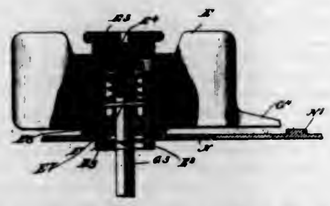
1. In an inverted incandescent burner, a depending tube, a filament supported around the lower end thereof, and a hollow conical reflector leading from the upper end of said filament and forming part of a flue through which the products of combustion escape.

2. In an inverted incandescent burner, a depending burner, a filament supported around said burner, a hollow conical reflector leading from the upper end of said filament and forming part of a flue through which the products of combustion escape, and a transparent casing surrounding said filament and leading downwardly from the lower end of said reflector.

3. In an inverted incandescent burner, a depending burner, a filament supported around said burner, a hollow conical reflector leading from the upper end of said filament and forming part of a flue through which the products of combustion escape, and a transparent casing surrounding said filament and depending from the reflector.

4. In an inverted incandescent burner, a depending tube, a filament supported around the lower end thereof, a hollow conical reflector through which the products of combustion escape, and a transparent casing depending from said reflector and surrounding said filament so as to direct the products of combustion into contact with said filament and through said hollow reflector.

901,630. OPERATING MEANS FOR CIRCUIT-CONTROLLING DEVICES. JULIUS K. LUX, Washington, D. C. Filed July 31, 1906. Serial No. 328,567.



1. In an indicator for an inclosed electric switch, a cover and exterior rotary indicator having a slip drive abutting connections with the switch for positioning the indicator relatively to the switch and allowing the indicator to rotate independently of the switch when power in excess of a predetermined amount is applied thereto.

2. In an operating means for an electric switch, a rotary handle, abutting means disposed at an angle to the plane of movement of said handle for operatively connecting the handle to the switch, said abutting means having coacting oblique engaging faces which allow the abutting faces to slip by each other when power in excess of a predetermined amount is applied to the handle.

3. An indicator for an inclosed electric switch, the same comprising indicating means exterior to the inclosing cover, means including a slip connection for positioning the said indicator relatively to the said switch, and yielding means for urging the said positioning means into operative position.

4. An operating means for an electric switch, the same comprising positioning means including a slip connection for connecting the said operating means to the said switch, and yielding means for urging the said positioning means into operative position.

5. An operating means for an electric switch, the same comprising a part removable from the switch, and a part for bearing the said removable part, one of the said parts having spring pressed means including a slip connection for connecting the said parts to operate the switch.

[Claims 6 to 14 not printed in the Gazette.]

901,631. CHANGEABLE-SIGN-EXHIBITING DEVICE. JACOB J. METZGER, Cleveland, Ohio. Filed May 20, 1907. Serial No. 374,676.



1. In a changeable sign exhibiting device, the combination with a frame, of a sign board arranged within said frame comprising a series of independent sections arranged in different planes, each of said sections consisting of a plurality of hinged leaves, means for supporting said sections, means for actuating said sections back and forth in said frame, and means for causing the leaves of each section to separate as they are moved forward in said frame and assume a position at an angle to the position occupied by said leaves in their backward position.

2. In a changeable sign exhibiting device, the combination with a frame, of a sign board arranged within said frame comprising a series of independent sections arranged in different planes, each of said sections consisting of a plurality of hinged leaves, means for supporting said sections, means for actuating said sections back and forth in said frame, a series of guideways provided with curved outer ends arranged in said frame, and shoes secured to the leaves of each section and adapted to travel in said guideways when the section is actuated within said frame.

3. In a changeable sign exhibiting device, the combination with a frame, of a vertical bar slidably mounted in said frame, a sign section, a rod pivotally secured to said sign section at one end and at its opposite end to said vertical bar, a stretcher rod pivotally secured at one end to a stationary support in said frame and having its other end pivotally secured to the first-mentioned rod near its center, means for actuating said bar in a vertical direction, a guideway having a curved outer end and a shoe secured to said sign section and arranged to travel in said guideway.

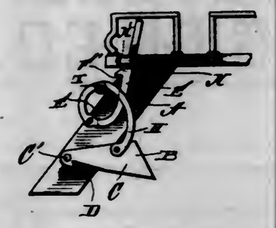
4. In a changeable sign exhibiting device, the combination with a frame, a plurality of bars slidably mounted in said frame, means for actuating said bars longitudinally, means for coupling a predetermined number of said bars together in series, a plurality of sign sections, a predetermined number of which are adapted to form a sign board, means for pivotally supporting each section of a series forming the sign board from a corresponding bar of a series of bars, said means comprising a rod pivotally secured at one end to said bar

and at its other end to a sign section a stretcher rod pivotally secured to a stationary support in said frame at one end and at its opposite end to said rod, guideways arranged in said frame and provided with curved outer ends, and shoes secured to said sign sections and adapted to extend into said guideways.

5. In a changeable sign exhibiting device, the combination with a frame, of a plurality of sign boards arranged within said frame, each sign board comprising a series of independent sections arranged in different planes within said frame, means for supporting said sections, means for actuating the sections of each sign board back and forth in said frame without actuating the sections of the other sign boards, and means for causing all the sections of each sign board to swing into the same plane when moved into their forward position.

[Claims 6 to 9 not printed in the Gazette.]

901,632. FOLDING CAR-STEP. HENRIETTE MILLER, Mead, Colo. Filed Aug. 1, 1908. Serial No. 446,454.

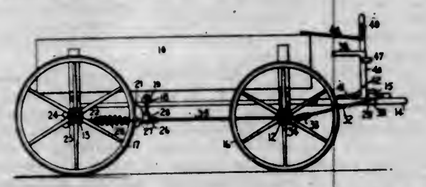


1. A folding step for railway cars comprising, in combination with the side rail of the fixed steps of the car, a pivotal step mounted thereon, a pivotal lever, a link pivotally connecting said lever and folding step, and notches upon said lever and step adapted to engage each other when the step is in its lowest position, as set forth.

2. A folding step for railway cars comprising, in combination with the side rail of the fixed steps of the car, a pivotal step mounted thereon, a pivotal lever, a link pivotally connecting said lever and folding step, notches upon said lever and step adapted to engage each other when the step is in its lowest position, a bracket member upon the platform of the car and having a projection thereon adapted to be engaged by said lever to hold the step folded, as set forth.

3. In combination with the side piece of the usual steps of a car, a folding step having sides pivotally connected to the sides of the fixed step and provided with notches upon the edges thereof, curved levers pivotally mounted upon the sides of the fixed step, links pivotally connecting the upwardly curved ends of said lever and said folding step, said levers each having a notch adapted, when the levers are thrown to their lowest positions, to engage the notches of said pivotal step, as set forth.

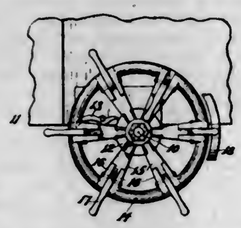
901,633. BRAKE. WILLIAM H. MITCHELL, Yancy Mills, Mo. Filed Oct. 24, 1907. Serial No. 398,924.



1. The combination, in a vehicle brake, with a rear axle, and a brake beam, a spring connected to the brake beam for moving it in the direction of the rear axle, a tongue, and a double-tree mounted for backward and forward sliding movement upon the tongue, of a bracket of inverted U-shaped form secured at the lower ends of its arms to the tongue, a lever pivoted between the arms of the bracket in a plane above the double-tree, the lower end of the lever being in engagement with the rear edge of the double-tree, connection between the double-tree and the brake beam, the upper end of the bracket being turned to extend rearwardly and having one of its arms formed throughout its rearwardly extended portion with rack teeth, and a lip formed upon the lever for engagement with said rack teeth interchangeably.

2. The combination with a vehicle including a rear axle, an oscillatory brake beam, a tongue, and a double-tree mounted for backward and forward sliding movement upon the tongue, of a rod adjustably engaged through the rear axle, a plate swiveled upon the brake beam and having its ends hooked, a spring secured at one of its ends to the forward end of the rod and at its opposite end to the rear hooked end of the plate, a rod connected at its rear end to the forward hooked end of the plate and extending forwardly of the vehicle, rods loosely connected at their forward ends to the double-tree and at their rear ends loosely with the forward end of the last mentioned rod, a bracket mounted at the forward end of the vehicle and including a rack portion, a lever pivoted in the bracket and having its lower end bifurcated to straddle the tongue and to bear against the double-tree, and a rod connected to the lever adjacent the upper end thereof and provided at its rear end with a hand grip.

901,634. BRAKE-WHEEL. DANIEL J. MONTAMBO, Pentoga, Mich. Filed May 29, 1908. Serial No. 435,641.



1. A brake wheel having grooved spokes and a rim, and handles pivotally mounted in the grooves of the spokes and adapted to swing to a position where they extend beyond the rim to afford a convenient hand-hold and to swing to an inward position within the grooves.

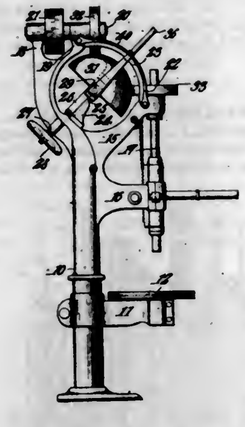
2. A brake wheel having grooved spokes and a rim, and handles pivotally mounted in the grooves and adapted to swing to a position where they extend beyond the rim to afford a convenient hand-hold with their sides confined within the grooves and supported by bearing on the bottom of the grooves and also adapted to be swung inwardly within the grooves, there being transverse openings in the spokes to permit of access to the handles when swung inwardly.

3. A brake wheel, comprising a wheel member, pivoted handles mounted thereon adapted to swing outwardly beyond the rim of the wheel, and a guard located in the path of the handles for automatically returning them to their inner position when the brake is released.

4. A brake wheel, comprising a wheel member, handles pivoted thereto and extending beyond the rim thereof, a cam guard positioned in the path of the handles to return them to their inner position when the brake wheel moves quickly as on the release of the brakes, but permitting them to move thereon without being thrown inwardly when the brake wheel moves slowly as during the application of the brakes.

5. A brake wheel, comprising a brake shaft; a wheel member mounted thereon, handles pivotally mounted on the wheel member and projecting beyond the rim thereof, a rod having cross arms adapted to be secured to the car body, a clip on the rod engaging a brake shaft, and a curved arc shaped guard mounted on the rod in the path of the handles adapted to cause them to swing to their inward position when they are moved past it on releasing the brake.

901,635. GEARING FOR DRILL-PRESSES. SAXTON J. MORGAN, Albany, Wis. Filed Dec. 30, 1907. Serial No. 408,633.



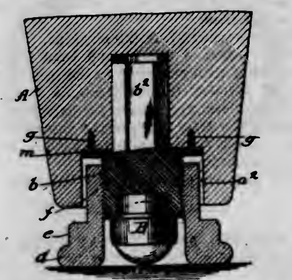
1. In a variable friction gear, a driving and driven disk, an adjustable sliding support, a transmission friction member intermediate of said disks and connected to and mounted on said support by a rocking joint, and means for adjusting said intermediate member to vary the points of contact between said member and the disks.

2. In a variable friction gear, a driving and a driven disk, a hemi spherical intermediate friction member, a sliding support having a rocking joint on which said intermediate member is mounted, means for adjusting said sliding support, and means for adjusting the intermediate member in the arc of a circle, and locking it in said adjusted position.

3. In combination, a frame having a pair of spaced arms, bearings carried by said arms, a pair of shafts journaled in the bearings and disposed at an angle to each other, friction disks carried by the shafts, an arched bar forming a connection between said arms and provided at one edge with a series of notches, an adjustable block carried by the frame, a second block pivoted to the adjustable block, a hemi-spherical friction member revolubly mounted upon said second block, and frictionally engaging both disks, and a spring adjusting lever connected to the pivoted block and arranged to interlock with the notches to hold said block in adjusted position.

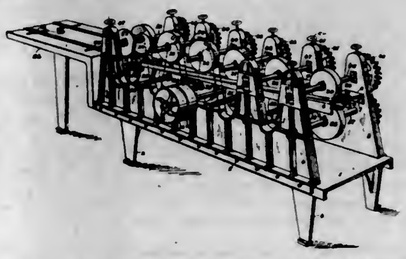
4. In combination, a frame having a pair of spaced arms, bearings carried thereby, a pair of shafts journaled in said bearings and disposed at an angle to each other, an arched bar connecting said arms and provided with a strengthening rib, said bar having a series of locking notches at one edge, a block supported by the frame, a screw for adjusting said block, a second block pivoted to the adjustable block, a hemi-spherical friction member revolubly mounted upon the second block and frictionally engaging both disks, an arm extending from the second block, a handled spring secured to said arm and forming an adjusting lever, and a U-shaped arm carried by the lever and having a portion arranged to engage the notches of said arm and bar, and an arm serving by engagement with the rib of said bar to limit outward movement of the lever.

901,636. COMBINED DEVICE FOR SUPPORTING AND LEVELING FURNITURE. JACOB N. MCINTIRE, New York, N. Y., assignor to The Brunswick-Balke-Collender Company, a Corporation of Ohio. Filed May 1, 1905. Serial No. 258,388.



In a supporting device, or contrivance for convertible sofa-billiard tables, adapted to operate, under different adjustments of its parts, either to support the piece of furniture on casters, or else in such manner that it cannot be easily moved about on the floor, the combination, with a caster, immovably combined with the article to be supported, of a device vertically adjustable relatively to the caster, which encircles the said caster and which operates to either throw the caster into disuse, and itself serve as the sole supporting device (when adjusted downward) or to be thrown into disuse, by a sufficient upward adjustment, all in substantially the manner hereinbefore set forth.

901,637. MACHINE FOR FORMING EAVES-TROUGHS. ANGUS MCKENZIE, Canton, Ohio. Filed Jan. 25, 1907. Serial No. 354,072.



1. In a sheet metal forming machine, a frame, a former provided with a bending surface, said surface having an increased degree of curvature between the ends of the former, a guide flange located at one side of the former, and the opposite side of the former provided with a bead forming groove, a series of upper and lower shafts, said upper and lower shafts provided with feed rolls, the peripheries of the lower feed rolls constituting a partial support for the sheet and the upper feed rolls adapted to press the sheet upon the peripheries of the lower feed rolls and means for rotating all of the feed rolls, substantially as and for the purpose specified.

2. In an eaves-trough forming machine, the combination of a frame, a trough former, initial sheet bending disks, lip forming disks adjustable laterally as to the former, said disks located in the path of the travel of a sheet, feed rolls adapted to grip the sheet, and means for rotating the feed rolls, substantially as and for the purpose specified.

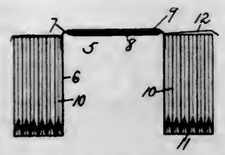
3. In an eaves-trough forming machine, the combination of a frame, a trough former, initial sheet bending disks, lip forming disks located in the path of the travel of a sheet, a guide plate located between the initial bending disks and the lip forming disk, feed rolls adapted to grip and move the sheet and means for rotating the rolls, substantially as and for the purpose specified.

4. In an eaves-trough forming machine, a suitable frame, a combined trough and bead former, a feed table provided with adjustable guide bars, a grooved guide flange adapted to guide a sheet upon the former, a sheet holding flange located upon the former, a series of feed rolls adapted to grip and move a sheet endwise, substantially as and for the purpose specified.

5. In an eaves-trough forming machine, the combination of a suitable frame, a trough and bead former held in fixed relationship with reference to the frame, initial bending disks lip forming disks adjustable laterally to the length of the former, and means for gripping and moving a sheet during the time between the entering and the delivering of a sheet to and from the former, substantially as and for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

901,638. STORING AND DISPLAY CASE. GEORGE A. MCNAMAR, Meriden, Conn. Filed July 31, 1908. Serial No. 446,255.

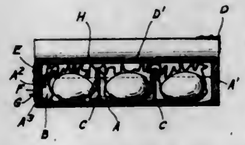


1. A case including a back and sides hinged together to permit the sides to be opened rearwardly upon the back, means for retaining an article on the outer surface of the back, a pocket secured to each of the sides for the reception of articles of merchandise, and means affording a standard or support to maintain the sides in an upright position.

2. A case including a back and sides hinged together to permit the sides to be opened rearwardly upon the back, means on the outer surface of the back for receiving an article of merchandise, and a series of pockets secured to the inner surface of each side for the reception of articles of merchandise.

3. A casing including a back of stiff material to support the structure, sides hinged to the back to be opened rearwardly thereupon, and of a stiffness to support the structure, means upon the outer surface of the back for receiving an article of merchandise, and a series of pockets of "bellows-fold" construction secured to the inner surface of each side and extending outwardly to form a support to maintain the structure in an upright position when the sides are opened rearwardly upon the back.

901,639. EGG-CARRIER. FREDRICK W. NERLICH, JR., Rochester, N. Y. Filed Nov. 18, 1907. Serial No. 402,649.



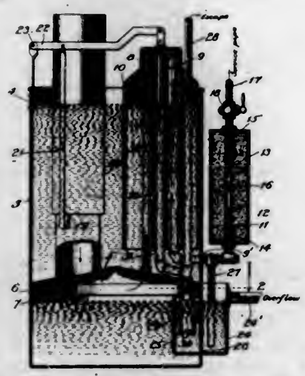
1. An egg carrier comprising a concave box, a cover whose under side is convex, and transverse partitions dividing the intervening space between the box and its cover into pockets for the eggs, and provided with concave edges to receive the cover; substantially as shown and described.

2. An egg carrier comprising a concave box divided into pockets with transverse, concave upper edges for the eggs, and adapted to receive a bag and eggs within the bag; and a cover for the box, whose under side is convex and adapted when in place, to fold down the bag around the eggs, and to confine them within said pockets; substantially as shown and described.

3. An egg carrier comprising a concave box divided into pockets with transverse, concave upper edges for the eggs, and adapted to receive a bag and eggs within the bag; and a cover hinged to the box at one end, whose under side is convex and adapted, when closed, to fold down the bag around the eggs, and to confine them within said pockets; substantially as shown and described.

4. An egg carrier comprising a concave box adapted to receive a bag and eggs within the bag; a cover hinged to the box at one end, whose under side is convex and adapted, when closed, to fold down the bag around the eggs; and transverse partitions, dividing the box into pockets and provided with concave edges to receive the convex cover, whereby the eggs are retarded by said partitions and cover in falling to the bottom of the bag as the latter is removed from the box; substantially as shown and described.

901,640. ACETYLENE-GAS GENERATOR. FRANKLIN C. NICKEL, Concord, Ill., assignor to Monmouth Acetylene-Electric Manufacturing Company, Monmouth, Ill., a Corporation of Illinois. Filed Feb. 13, 1908. Serial No. 415,634.



1. In an acetylene-gas generator, the combination with the reservoir containing the generating-chamber in its base-portion and the gasometer into which rises the outlet-pipe from said chamber, of a condensation-chamber having an external section on the outer wall of the generating-chamber and a relatively smaller internal section on the inner wall thereof, said sections intercommunicating and the inner section being open to the generating-chamber, a discharge-pipe for the service-gas leading from the gasometer and communicating with said external section, and a pressure relief pipe dipping into said inner section and leading therefrom to the atmosphere.

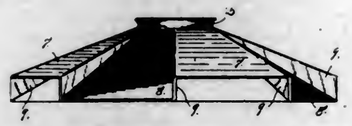
2. In an acetylene-gas generator, the combination with the reservoir containing the generating-chamber in its base-portion and the gasometer into which rises the outlet-pipe from said chamber, of a purifier having a service-pipe extending from it, a condensation-chamber having an external section on the outer wall of the generating-chamber and a relatively smaller internal section on the inner wall thereof, said sections intercommunicating and the inner section being open to the generating-chamber, a discharge-pipe for the service-gas leading from the gasometer to said purifier and having a branch extending into said external section, and a pressure-relief pipe dipping into said inner section and leading therefrom into the atmosphere.

3. In an acetylene-gas generator, the combination with the reservoir containing the generator-chamber in its base-portion and the gasometer into which rises the outlet-pipe from said chamber, of a condensation-chamber having an external section on the outer wall of the generating-chamber and provided with an overflow, and a relatively smaller internal section communicating with said external section and open to the generating-chamber, a discharge-pipe for the service-gas leading from the gasometer, and a pressure-relief pipe dipping into said inner section and leading therefrom to the atmosphere.

4. In an acetylene-gas generator, the combination with the reservoir containing the generator-chamber in its base-portion and the gasometer into which rises the outlet-pipe from said chamber, of a condensation-chamber having an external section on the outer wall of the generating-chamber and provided with an overflow, and a relatively smaller internal section communicating with said external section and open to the generating-chamber, a discharge-pipe for the service-gas leading from the gasometer, and a pressure-relief pipe terminating at its lower end in said internal section in a serrated tubular head and leading at its opposite end to the atmosphere.

5. In an acetylene-gas generator, the combination with the reservoir containing the generating-chamber in its base-portion and the gasometer into which rises the outlet-pipe from said chamber, of an apertured guide-sleeve depending in the gasometer-bell, a discharge-pipe for the service-gas leading from said gasometer, a condensation-chamber having an open external section on the outer wall of the generating chamber and provided with an overflow, and a relatively smaller internal section communicating with said external section and open to the generating-chamber, a pressure-relief pipe dipping into said inner section and leading therefrom to the atmosphere, and a volume-relief pipe extending in said sleeve and communicating with said pressure-relief pipe.

901,641. LAMP SHADE OR REFLECTOR. JOHN C. NORRIS, Denver, Colo. Filed Apr. 29, 1907. Serial No. 370,919.



1. A lamp shade or reflector comprising a central perforated portion from which lead radially disposed parts arranged at different elevations, and parts arranged at suitable angles and connecting the radially disposed parts, the said connecting parts being transparent while the lower surfaces of the connected parts constitute reflectors, substantially as described.

2. In an improved article of manufacture, a shade or reflector having a central portion from which lead two sets of radially disposed inclined segmental sectors arranged at different elevations, and transparent parts arranged at suitable angles and connecting the two sets of sectors, the two sets of connected parts forming reflectors, for the purpose set forth.

3. A lamp shade or reflector comprising a central portion from which lead two sets of radially disposed inclined parts arranged at different elevations and alternating with each other, and transparent parts arranged at suitable angles and connecting the two sets of parts, for the purpose set forth.

4. A lamp shade or reflector comprising a central portion from which lead two sets of radially disposed inclined parts arranged at different elevations and alternating with each other, the lower surface of the said parts forming reflectors, and means for connecting the two sets of parts to permit the light from the illuminating device to pass freely between said parts, for the purpose set forth.

901,642. STOVEPIPE-DAMPER. ANTON OHNEMUS, Quincy, Ill., assignor to Excelsior Stove & Manufacturing Company, Quincy, Ill., a Corporation. Filed Apr. 16, 1908. Serial No. 427,312.

1. The combination, with a stove pipe; of a rotatable inlet damper plate, the cut off damper plate carried by the inlet damper plate, the stationary inlet damper plate, the pivot pin, and the spring around the pivot pin, which serves to hold the rotatable plate against the stationary plate and prevent accidental movement of either of the movable dampers.



2. A stove pipe damper comprising a stationary damper plate having apertures, a rotatable damper plate having apertures and a radial handle extending through one of the apertures of the stationary damper plate, a pivot pin connecting the damper plates, a spring surrounding the pivot pin between the stationary damper plate and the outer head of the pivot pin and a cut off damper blade having an arm secured to the rotatable damper plate.

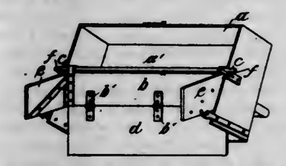
3. A stove pipe damper comprising a stationary damper plate having apertures and an annular flange, a rotatable damper plate having apertures and a radial handle extending through one of the apertures of the stationary damper plate, a pivot pin connecting the damper plates, a sleeve mounted upon the pivot pin, between the stationary damper plate and the outer head of the pivot pin, a spring surrounding the pivot pin within the sleeve, and a cut off damper blade having an arm secured to the rotatable damper plate.

4. A stove pipe damper comprising a stationary damper plate having apertures, a rotatable damper plate having apertures, a radial reinforce and a radial handle extending through one of the apertures of the stationary damper plate, a pivot pin connecting the damper plates, and a cut off damper blade having an arm secured to the radial reinforce of the rotatable damper plate.

5. A stove pipe damper comprising a stationary damper plate having apertures, a rotatable damper plate having apertures, spaced lugs, and a radial handle extending through one of the apertures of the stationary damper plate, a pivot pin connecting the damper plates, and a cut-off damper blade having an arm secured between the spaced lugs to the rotatable damper plate.

[Claim 6 not printed in the Gazette.]

901,643. DUMPING-CAR FOR STICKY MATERIALS. MAX ORENSTEIN, Berlin, Germany. Filed May 18, 1908. Serial No. 433,480.



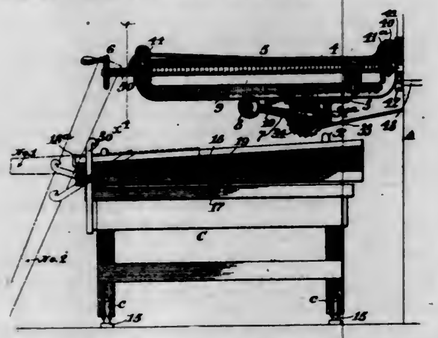
1. In a dumping-car, a tilting body; a tray fitting the latter and sliding therein on tipping of the body; and means on the body for arresting the top part of the tray after it has slid for a certain distance, whereby the tray is caused to swing about its top and dump the material in it, substantially as described.

2. In a dumping-car, a tilting body; a tray fitting therein and consisting of a base, and a back hinged thereto, said tray sliding in the body on tipping of the latter; and means on said body for arresting the top part of the tray-back after it has slid for a certain distance, whereby the tray-back swings about its top, while the base flaps back on its hinges, whence the material contained in the tray is dumped, substantially as described.

3. In a dumping-car, a tilting body; a tray fitting therein and consisting of a base, and a back hinged thereto, and presenting trunnions, said tray sliding in the body on tipping of the latter; and means on said body for engaging said trunnions and arresting the top part of the tray-back after it has slid for a certain distance, whereby the tray-back swings on said trunnions, while the base flaps back on its hinges, whence the material contained in the tray is dumped, substantially as described.

4. In a dumping-car, a tilting body; a tray fitting therein and consisting of a base, and a back, presenting rigid end-walls, hinged thereto, said tray sliding in the body on tipping of the latter; and means on said body for arresting the top part of the tray-back after it has slid for a certain distance, whereby the tray-back swings about its top, while the base flaps back on its hinges, whence the material contained in the tray is dumped, substantially as described.

901,644. MECHANISM FOR NOTCHING PIANO-SOUNDING-BOARD BRIDGES. HANS G. OSTERBERG and AUGUST F. OSTERBERG, Greensburg, Pa., assignors to H. Kleber & Brother Co. Incorporated, Pittsburg, Pa. Filed Feb. 25, 1908. Serial No. 417,760.



1. A mechanism of the character stated which comprises a suitable support, a frame hingedly sustained thereon for projecting in the horizontal plane, a carrier reciprocatably mounted on the said frame to move in the longitudinal direction thereof, a rotary cutter mounted on the carrier, adjustable means on the carrier for setting the cutting edge of the cutter and traveling table for supporting the object to be cut, said table having movement in a direction transverse to the direction of movement of the cutter carrier.

2. In a means for cutting bridge members of piano backs, the combination with a rotary cutter; of a table comprising a horizontally rotatable top, a supplemental top mounted thereon and slidable with respect to the rotatable top, said slidable member having a bracket at one end to form a rest for the piano back and means on the supplemental top and the main table for limiting the outward sliding of the supplemental table and for tilting it to a vertical position.

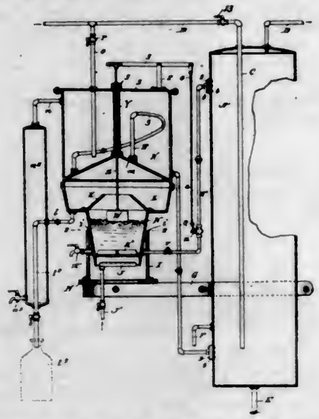
3. In a means for notching bridge members on piano backs, the combination with a cutting mechanism; of a supporting means, comprising a table transversely adjustable with respect to the cutting mechanism, said table including a rotary top, hook members pivotally connected to the opposite ends of the said top, a supplemental table top section slidably mounted on the rotatable top and having projecting studs at the opposite ends for coöperating with the pivoted hooks on the main table and having a bracket piece at one edge for sustaining the piano back, all being arranged substantially as shown and for the purposes described.

4. The combination with means for sustaining a piano back bridge in position for cutting; a support, an arm hinged to the support to swing to the horizontal plane over the back sustaining means, a carrier reciprocatably mounted on the said arm, a rotary cutter having a shiftable bearing on the carrier, a gage adjustably mounted on the support and a member connected with the shiftable bearing of the cutter for engaging the adjustable gage, for the purposes specified.

5. In a mechanism for the purposes stated, the combination with a suitable support and a table for sustaining the piano back in position to be operated on; of an arm projected horizontally from the said support over the piano back sustaining means, a carrier reciprocably mounted on the said arm, a rotary cutter eccentrically mounted on the carrier, a gage adjustably connected to the arm and a means that coöperates with the said gage and with the eccentric bearing of the rotary cutter for adjusting the cutting edge of the cutter with respect to the work to be operated on.

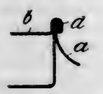
[Claims 6 and 7 not printed in the Gazette.]

901,645. DEVICE FOR DISTILLING WATER. JOSEPH R. PERRY, Wilkes-Barre, Pa. Filed Nov. 26, 1907. Serial No. 403,924.



The combination with the usual hot-water boiler connected to the water-back of a stove, or the like, of a retort communicating directly with the boiler, whereby hot water is supplied direct to said retort, a condensing-chamber disposed above and communicating with said retort, and provided, intermediate its depth and spanning its width, with an arched condensing surface, whereby said chamber is divided into an upper and a lower compartment; a steam-condensing coil in the upper compartment and provided with an inlet-end communicating with the lower compartment and with an outlet-end also communicating with said lower compartment.

901,646. RECEPTACLE-CLOSURE. ANDREAS RASMUSSEN and MARTIN OLSEN, Stavanger, Norway, assignors to Chr. Bjelland & Co., and C. Middelthon, Stavanger, Norway. Filed Apr. 9, 1906. Serial No. 310,659.



1. In combination with a packing receptacle, of a closure therefor having its rim spun into the rim of the receptacle forming a connecting seam, and a tongue spun into said seam having a portion projecting out of the same, said closure having weakening lines extending into the seam at both sides and close to the tongue forming a continuation of the outlines of the latter.

2. In combination with a packing receptacle, of a closure therefor having its rim spun into the rim of the receptacle forming a connecting seam, a separate tongue spun into said seam having a portion projecting out of the same, said closure having weakening lines extending over the edge of the receptacle into the seam at both sides and close to the tongue.

3. A receptacle comprising a sheet-metal box having a flanged edge, a cover having its edge spun around the flange and provided with weakening lines extending to the edge of the cover and embracing the contour of the opening to be made in the box, and a separate piece of metal extending beyond the edge of the cover interposed between the box and cover at the point of termination of the weakening lines.

901,647. PROCESS OF MAKING CEREAL FOOD PRODUCTS. CHARLES H. RICHARDS, Chicago, Ill., assignor of three-fourths to Louis Armstrong, Chicago, Ill. Filed June 3, 1907. Serial No. 377,036.



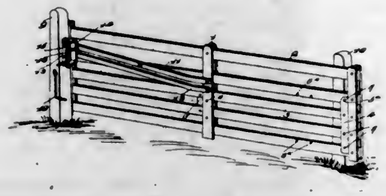
1. The process of making a cereal food product which consists in cooking the granular cereal until thoroughly softened, and thereafter treating the softened particles between relatively moving surfaces to first reduce the thickness of said particles and then roll them up and to completely dry the same simultaneously with the rolling up step of the process.

2. The process of making a cereal food product which consists in cooking a granular cereal, until thoroughly softened, and thereafter treating the softened cooked particles between relatively moving surfaces in a manner to flatten the particles and then roll them up, the action of the relatively moving surfaces on the material being such as to completely dry the same simultaneously with the rolling up step of the process.

3. The process of making a cereal food product which consists in subjecting a granular cereal to moisture to soften the same, and thereafter treating the softened particles between relatively moving surfaces in a manner to first flatten the same and then roll them up, the action of the relatively moving surfaces on the material being such as to completely dry the same simultaneously with the rolling up step of the process.

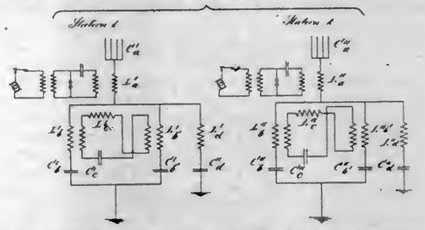
4. The process of treating hominy to produce a food product which consists in cooking the hominy until thoroughly softened, and thereafter treating the softened particles between relatively moving surfaces to first reduce the thickness of said particles and then roll them up and to completely dry the same simultaneously with the rolling up step of the process.

901,648. FARM-GATE. JAMES D. RODGERS, Georgetown, Ky. Filed Jan. 24, 1908. Serial No. 412,491.



In combination with a post, and a gate mounted both to move longitudinally and to swing about a vertical axis, a mounting for said gate comprising similar brackets pivotally connected, one of said brackets being attached to the post, a wheel fitted to the other bracket and receiving the gate, and a spring acting upon the two brackets to normally hold the gate closed.

901,649. SPACE TELEGRAPHY. OSCAR C. ROOS, Newton, Mass., assignor to Stone Telegraph and Telephone Company, Boston, Mass., a Corporation of Maine. Filed June 10, 1907. Serial No. 378,093.



1. In a space telegraph system, an elevated conductor, a parallel-branch circuit connected in series therewith and containing capacity and inductance in each of its branches, a resonant receiving circuit associated with both branches of said parallel-branch circuit and an oscillation-producing circuit associated with said elevated conductor, the said resonant receiving circuit having a very high impedance for oscillations of the frequency generated by said oscillation-producing circuit and the system comprising said elevated conductor and parallel-branch circuit having a very low impedance for oscillations of the frequency to which said resonant receiving circuit is attuned.

2. In a space telegraph system, an elevated conductor, a parallel-branch circuit connected in series therewith and containing capacity and inductance in each of its branches, a resonant receiving circuit associated with both branches of said parallel-branch circuit, an oscillation-producing circuit associated with said elevated conductor, the said resonant receiving circuit having a very high impedance for oscillations of the frequency generated by said oscillation-producing circuit and the system comprising said elevated conductor and parallel-branch circuit having a very low impedance for oscillations of the frequency to which said resonant receiving circuit is attuned; and an earth connector in series with said elevated conductor and in parallel with said parallel-branch circuit, said earth connector having practically zero impedance for the fundamental frequency of said elevated conductor.

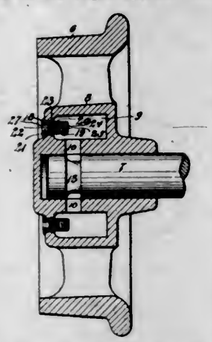
3. In a space telegraph system, an elevated conductor, a parallel-branch circuit connected in series therewith and containing capacity and inductance in each of its branches, a resonant receiving circuit associated with both branches of said parallel branch circuit and an oscillation-producing circuit associated with said elevated conductor, said parallel-branch circuit having a very high impedance for oscillations of the frequency generated by said oscillation-producing circuit and the system comprising said elevated conductor and parallel-branch circuit having a very low impedance for oscillations of the frequency to which said resonant receiving circuit is attuned.

4. In a space telegraph system, an elevated conductor, a parallel-branch circuit connected in series therewith and containing capacity and inductance in each of its branches, a resonant receiving circuit associated with both branches of said parallel-branch circuit, an oscillation-producing circuit associated with said elevated conductor, said parallel-branch circuit having a very high impedance for oscillations of the frequency generated by said oscillation-producing circuit and the system comprising said elevated conductor and parallel-branch circuit having a very low impedance for oscillations of the frequency to which said resonant receiving circuit is attuned; and an earth connector in series with said elevated conductor and in parallel with said parallel-branch circuit said earth connector having practically zero impedance for the fundamental frequency of said elevated conductor.

901,650. CAR-WHEEL. JOHN H. RUTHERFORD and WILLIAM J. ALFORD, Knoxville, Tenn. Filed June 6, 1907. Serial No. 377,560.

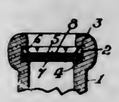
The combination with a wheel having an oil-chamber in its hub, of a valve comprising a hollow plug seating in

the wall of the oil-chamber and having a valve seat, a cage projecting from the inner end of the plug into the oil-chamber and surrounding the valve seat, outlets in the walls of the cage, a bearing plate at the end of the cage having a portion of its edges spaced from the walls of



the cage, a valve seating on the aforesaid seat and having a projecting stem, and a spring coiled around the valve stem and bearing at its ends on the valve head and on the bearing plate respectively.

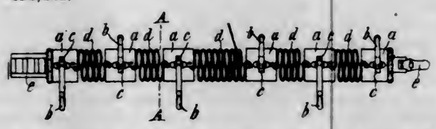
901,651. METHOD OF EFFECTING THE CLOSURE OF BOTTLES. CHARLES R. SCHMIDT, Baltimore, Md. Filed Oct. 22, 1907. Serial No. 398,631.



1. The method of effecting the closure of bottles while the bottle and its contents are unheated, consisting in applying to a bottle a plurality of closure portions and therebetween a material permanently plastic or semi-fluid and adapted to flow under pressure at normal temperature, and then causing the said plastic material to spread or flow by subjecting it to pressure.

2. The method of effecting the closure of bottles, consisting in applying to a bottle a plurality of closure portions and an intervening layer of material plastic or semi-fluid and elastic at normal temperature and then causing the said material to spread or flow by subjecting it to pressure.

901,652. SUPPORT FOR CLOTHING. WILHELM SEYDEL, Ratibor, Germany. Filed Jan. 30, 1908. Serial No. 413,442.



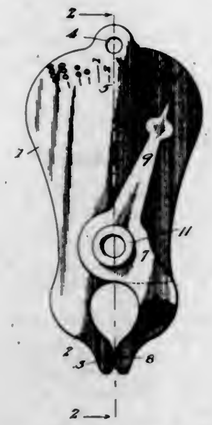
1. A clothing support consisting of an elastic girdle adapted to be attached to a tree or the like, being composed of alternately arranged springs (*d*) and plates (*a*) provided with hooks (*b*) for supporting the clothing substantially as set forth.

2. A clothing support consisting of an elastic girdle adapted to be attached to a tree or the like, being composed of alternately arranged springs (*d*) and plates (*a*) provided with hooks (*b*) for supporting the clothing, parts (*d*) and (*a*) being removably connected substantially as set forth.

3. A clothing support consisting of an elastic girdle adapted to be attached to a tree or the like, being composed of alternately arranged springs (*d*) and plates (*a*) provided with hooks (*b*) for supporting the clothing, the hooks being adjustably arranged for use either in a horizontal or in a vertical position substantially as set forth.

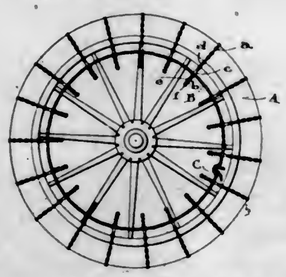
4. A clothing support consisting of an elastic girdle adapted to be attached to a tree or the like, being composed of alternately arranged springs (*d*) and plates (*a*) provided with hooks (*b*) for supporting the clothing, parts (*d*) and (*a*) being removably connected and the hooks being adjustably arranged for use either in a horizontal or in a vertical position substantially as set forth.

901,653. SELF-REGISTERING GAGE. MARSHALL S. SHAPLEIGH, Plainfield, N. J. Filed Feb. 5, 1907. Serial No. 355,827.



A self registering gage comprising a plain base plate having a scale upon the face adjacent one end thereof, the opposite end being fashioned into a projecting finger, a pivoted finger and index, and an eyelet passed through the base plate and the central portion of the pivoted finger and index; one of the fingers being offset so both fingers will lie in the same plane, and the fingers respectively provided with curved surfaces 3 and 8, whereby a wire may easily be inserted and withdrawn from between the fingers.

901,654. GRIP-TREAD FOR PNEUMATIC TIRES. BERTON H. SILLS, Ottawa, Ontario, Canada. Filed Dec. 14, 1907. Serial No. 406,580.



1. An anti-slipping device for vehicle wheels, comprising transverse chains to pass across the tread of the wheel, annular chains on each side of the wheel but disconnected therefrom, bolts on the extremities of the transverse chains extending through the annular chains, and rotatable with respect thereto, whereby the bolts and transverse chains are free to rotate about their longitudinal axes as they creep around the periphery of the wheel.

2. An anti-slipping device for vehicle wheels, comprising a flexible member to pass across the tread of the wheel, bolts connected to the extremities of the same, and means disconnected from the wheel for supporting the bolts with freedom both to move longitudinally and rotate about their longitudinal axes, whereby the bolts and flexible members may roll as they creep around the periphery of the wheel.

3. An anti-slipping device for vehicle wheels comprising annular members on each side of the wheel but disconnected therefrom, and transverse flexible members adapted to pass across the tread of the wheel, said flexible members having their extremities connected to said annular members with freedom both to move outwardly and inwardly and rotate bodily about their longitudinal axes, whereby the said flexible members may roll as they creep around the periphery of the wheel, and means for exerting an independent inward resilient pull on the extremities of each flexible member.

4. A non-slipping device for vehicle wheels, comprising transverse flexible members to pass across the tread of the wheel, bolts on the extremities of the said flexible members and annular members on each side of the wheel disconnected therefrom, having means for journaling the bolts, whereby the said bolts and flexible members may roll about their longitudinal axes, as they creep about the periphery of the wheel, and springs extending between the bolts and the annular members adapted to exert an independent inward resilient pull on each bolt.

901,655. DEVICE FOR OBTAINING COLOR COMBINATIONS. RICHARD A. SIMPKIN, Chicago, Ill. Filed May 8, 1908. Serial No. 431,611.



1. A color component indicating device comprising a base bearing a plurality of shades of two primary colors, arranged in pairs, and also a plurality of shades of the secondary color which results from the combination of said two primary colors, said secondary color shades being arranged in association with the pairs of primary color shades, from which they are derived, and a transparent member superposed upon the secondary color shades, said member bearing a plurality of shades of the third primary color.

2. A color component indicating device comprising a base having a plurality of shades of two primary colors, arranged in pairs, and also a plurality of shades of the secondary color which results from the combination of the said two primary colors, said secondary color shades being arranged in radial relation to the pairs of primary color shades from which they are severally derived, and a rotative transparent disk, superposed upon said secondary color shades, said disk bearing a plurality of shades of the third primary color.

3. A color component indicating device comprising a base bearing a plurality of shades of two primary colors arranged in pairs, and in circular order, and a plurality of shades of the secondary color which results from the combination of said two primary colors, said secondary color shades being arranged in circular order in radial alinement with the pairs of primary color shades from which they are severally derived, and a rotative, transparent disk superposed upon the part of the base bearing said shades of the secondary color, said disk bearing a plurality of shades of the third primary color arranged in circular order thereon.

4. A color component indicating device comprising a base bearing provided with a plurality of radial and circumferential lines, dividing the same into radially and circumferentially arranged color segments, and a transparent disk provided with a plurality of radial and circumferential lines dividing the same into radially and circumferentially arranged color segments, said color segments on the base being arranged in two groups or sets, one of which contains a plurality of shades of two primary colors arranged in pairs and the other of which contains a plurality of shades of the secondary color resulting from the combination of the said pairs of primary colors, together with a plurality of shades of both of said primary colors, the transparent disk having a plurality of shades of the third primary color and being superposed upon the set of segments bearing the shades of both the secondary and primary colors.

901,656. CHILL FOR SASH-WEIGHTS. WALTER G. STANDING, Sharpsburg, Pa. Filed June 5, 1908. Serial No. 436,785.



1. A three part sash weight chill consisting of two approximately similar members each being provided with an extension part, the inner faces of which are at some distance from each other when the two halves are in engagement; suitable apertures being formed through each of said extensions; and a sand core seated in said apertures and bridging the space between the two extension portions.

2. A three part sash weight chill consisting of two approximately similar members each being provided with an extension part, the inner faces of which are at some distance from each other when the two halves are in engagement; suitable apertures being formed through each of said extensions; a sand core seated in said apertures and bridging the space between the two extension portions; and means for locking the said two halves against movement one with the other when in the sand.

3. A three part sash weight chill consisting of two approximately similar members each being provided with an extension part, the inner faces of which are at some distance from each other when the two halves are in engagement; registering concaved surfaces to form the rounded outer portion of the eye; suitable apertures being formed through each of said extensions; a sand core seated in said apertures and bridging the space between the two extension portions; and means for locking the said two halves against movement one with the other when in the sand.

901,657. GALLOCYANIN DYE AND PROCESS OF MAKING SAME. ARNOLD STEINER, Basel, Switzerland, assignor to The Corporation of Chemical Works, formerly Sandoz, Basel, Switzerland. Filed Nov. 5, 1907. Serial No. 400,771.

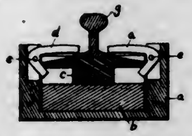
1. The process of manufacturing new coloring matters of the gallocyanin series which consists in combining a leucogallocyanin with a gallocyanin substantially as described.

2. The process of manufacturing new coloring matters of the gallocyanin series which consists in combining one molecule of a leucogallocyanin with one molecule of a gallocyanin substantially as described.

3. The process of manufacturing new coloring matters of the gallocyanin series which consists in combining one molecule of leucogallocyanin chlorinhydrate with one molecule of gallocyanin substantially as described.

4. The new dyestuffs of the gallocyanin series which are obtained by combining a leucogallocyanin with a gallocyanin, being when dried and pulverized dark violet powders soluble in water with a violet bluish color, soluble in strong sulfuric acid with a blue color turning red on addition of water and giving on addition of sodium acetate, a violet precipitate, the said dyestuffs dyeing violet on fibers mordanted with chromium, substantially as described.

901,658. RAIL-FASTENER. EMERY STEM, Spokane, Wash. Filed Mar. 3, 1908. Serial No. 419,048.



1. In a rail fastener, the combination of a support, a bed of elastic material superimposed upon the support, a compression block resting upon the bed, and rail clamping members actuated by the block.

2. In a rail fastener, the combination of a box, a bed of elastic material on the bottom of the box, a compression block resting upon the bed, and rail clamping members actuated by the block and connected with the box.

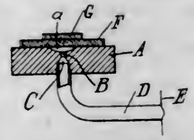
3. In a rail fastener, the combination of a rail, a compression block carrying the rail, and clamping levers actuated by the pressure of the rail upon the block.

4. In a rail fastener, the combination of a support, a bed of elastic material superimposed upon the support, a compression block carrying a rail resting upon the bed, and locking bars actuated by the pressure of the rail upon the block.

5. In a rail fastener, the combination of a box, a bed of elastic material on the bottom of the box, a compression block resting upon the bed, and locking bars actuated by the block, the said locking bars having pivots and being fulcrumed against the sides of the box.

[Claim 6 not printed in the Gazette.]

901,659. METHOD OF MAKING BIFOCAL LENSES. FREDERICK A. STEVENS, Providence, R. I. Filed Mar. 2, 1908. Serial No. 418,704.



1. The method of uniting lens blanks which consists in assembling the blanks one upon the other, rendering the assembled blanks plastic by subjecting them to heat, and bending the blanks transversely by atmospheric pressure.

2. The method of uniting lens blanks which consists in assembling blanks of different refractive indices one above the other, rendering the assembled blanks plastic by subjecting them to heat, and transversely bending the plastic blanks by atmospheric pressure.

3. The method of uniting lens blanks which consists in assembling the blanks one upon the other, subjecting the blanks to heat to fuse together their contacting surfaces, reducing the united blanks to a plastic condition by heat, and bending the blanks transversely by atmospheric pressure.

4. The method of uniting lens blanks which consists in assembling blanks of different refractive indices one upon the other, subjecting the blanks to heat to fuse together their contacting surfaces, reducing the united blanks to a plastic condition by heat, and bending the blanks transversely by atmospheric pressure.

5. The method of uniting lens blanks which consists in assembling blanks one upon the other, the upper blank being fusible at a lower temperature than the lower blank, subjecting the blanks to heat sufficient to fuse the face of the upper blank to the face of the lower blank, reducing the united blanks to a plastic condition by heat, and bending the blanks transversely by atmospheric pressure.

[Claims 6 to 9 not printed in the Gazette.]
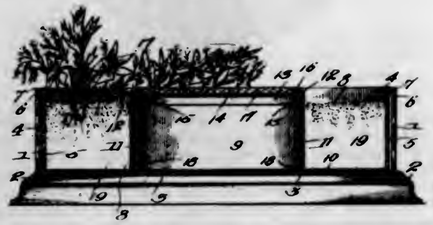
901,660. AIR SELF-COUPLING. BENJAMIN F. SWEENEY, Neosho, Mo. Filed Oct. 10, 1907. Serial No. 396,844.



1. An automatic coupling for pneumatic train pipes comprising pipes of different diameters, one adapted to telescope within the other, a packing about the end pipe adapted to form a movable air-tight connection as it telescopes within the other pipe, apertured valve seats within the pipe, valve stems, one within each pipe, valves fixed to said stems, and springs for normally holding the valves seated, the outer ends of the valve stems being adapted to contact with each other as one pipe telescopes within the other, thereby causing the valves to unseat, as set forth.

2. A coupling for pneumatic train pipes comprising pipes one adapted to telescope within the other, a packing about one pipe and forming a piston within the other, valves within the pipes and adapted to be unseated as the one pipe telescopes within the other, apertured partitions within said pipes, spring-actuated valve stems mounted one within each pipe and valves fixed to said stems, the outer ends of the latter being adapted to contact with each other as one pipe telescopes within another, whereby the valves may be unseated, as set forth.

901,661. FERN-DISH OR DISPLAY-RECEPTACLE. VINCENT P. TOMMINS, Hoboken, N. J. Filed Feb. 7, 1908. Serial No. 414,752.



1. A device of the character described comprising an outer holder, a base therefor, an inner receptacle divided into an outer circumferential compartment and a separate central compartment having mounted thereon a reflector.

2. A device of the character described including an outer holder, a base therefor, an inner receptacle divided into an outer receiving compartment and a central compartment having mounted on and supported by its wall thereof a lid having mounted therein a glass mirror adapted to act as a reflector.

3. A device of the character described including an outer receptacle, a base therefor, and an inner receptacle divided into an outer circumferential receiving compartment adapted to receive soil and decorative floral display, and a seperate central compartment adapted to receive a decorative art object.

901,662. DEVICE FOR MAKING MARCEL WAVES. MARIE K. TOVEY, Anacostia, D. C. Filed Feb. 1, 1908. Serial No. 413,899.



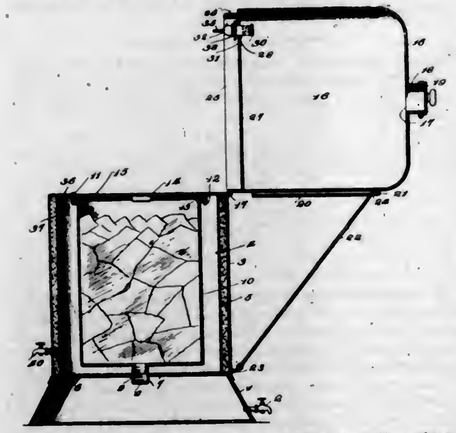
1. A device for waving the hair on the human head, comprising a primary cap of metal having corrugations, and an opening at top; and a heating cap of metal having corrugations to match those of the primary cap, and provided with a ventilating opening and handle.

2. A device for waving the hair of the human head, comprising a primary cap of metal having corrugations, and an opening at top, and provided with a lining; and a heating cap of metal having corrugations to match those of the primary cap, and provided with a ventilating opening and a handle.

3. A device for waving the hair on the human head, comprising a primary cap of metal having corrugations, and an opening at top; and a heating cap of metal having corrugations to match those of the primary cap, and provided with a ventilating opening and non-conducting handle.

4. A device for waving the hair on the human head, comprising a primary cap of metal having corrugations, and an opening at top; and a heating cap of metal having corrugations to match those of the primary cap, and provided with a ventilating opening and handle; and a heating cone of slightly less diameter than the heating cap, and having similar corrugations.

901,663. WATER-COOLER. GEORGE A. TURNER, New Orleans, La. Filed Nov. 15, 1907. Serial No. 402,319.

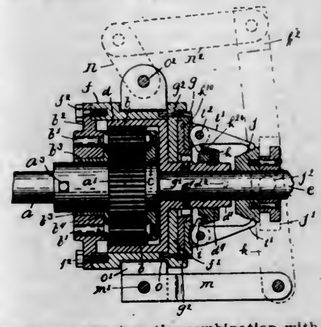


1. In a cooler, the combination with the cooling chamber, of an ice container removably seated therein, said container having a screw threaded pipe extending therefrom, a screw threaded connection passing through the bottom of the cooling chamber with which the screw threaded pipe is adapted to be connected, and a reservoir mounted above the cooling chamber and adapted to be connected thereto by an air tight joint.

2. In a cooler, the combination with a cooling chamber, of an ice chamber removably mounted within the cooling chamber, a reservoir hinged to one side of the cooling chamber, an outlet valve for the reservoir and means for effecting an air tight joint between the valve and the cooling chamber.

3. In a cooler, the combination with a cooling chamber, of a reservoir hinged to one side of the top of the cooling chamber, the reservoir being provided with an opening in its bottom, a valve casing fitted in the opening, said valve casing extending above and below the bottom of the reservoir, perforations through the portion of the casing within the reservoir, a valve located in the portion of the casing outside the reservoir and means for opening said valve when the reservoir and cooling chamber are connected.

901,664. REVERSE-GEARING. HENRY A. TUTTLE, Taunton, Mass., assignor to Evans Stamping and Plating Co., Taunton, Mass., a Corporation of Massachusetts. Filed Aug. 29, 1907. Serial No. 390,566.



1. In a reverse gearing, the combination with the driving-shaft and spur-gear thereon, of pinions engaging said spur-gear, an internal gear engaged by said pinions, a driven-shaft to which said internal gear is secured, an inclosing case for the gearing, supported at one end by the driving-shaft and at the opposite end by the driven-shaft, studs extended inwardly from one end wall of said case bearing said pinions, a clutch for connecting said case with the driven-shaft, a brake-band for engaging said case to hold it at rest, an actuating lever and means for operating said clutch connected with said actuating lever, and means for operating said brake-band, also connected with said actuating-lever, substantially as described.

2. In a reverse gearing, the combination with the driving-shaft and spur-gear thereon, of pinions engaging said spur-gear, an internal gear engaged by said pinions, a driven-shaft to which said internal gear is secured, an inclosing case for the gearing supported at one end by the driving-shaft, and at the opposite end by the driven-shaft, studs extended inwardly from one end wall of said case bearing said pinions, a plate contained in the case and supported on the hub of said spur-gear to which the inner ends of said studs are secured, a clutch for connecting said case with the driven-shaft, and a brake-band for engaging said case to hold it at rest, an actuating lever and means for operating said clutch connected with said actuating-lever, and means for operating said brake-band also connected with said actuating-lever, substantially as described.

3. In a reverse gearing, the combination with the driving-shaft and spur-gear thereon, of pinions engaging said spur-gear, an internal gear engaged by said pinions, a driven-shaft to which said internal gear is secured, an inclosing case for the gearing supported at one end by the driving-shaft and at the opposite end by the driven-shaft, studs extended inwardly from one end wall of said case bearing said pinions, a clutch-plate mounted on the hub of the internal gear which is movable toward and from the case, a brake-band surrounding the case, an actuating-lever and means for operating said clutch-plate connected with said actuating-lever and means for operating said brake-band also connected with said actuating-lever, substantially as described.

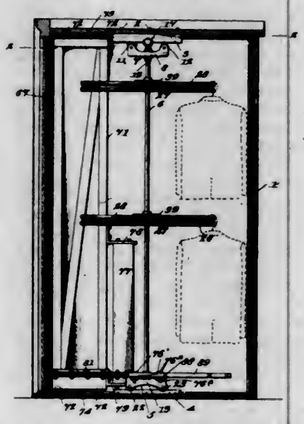
4. In a reverse gearing, the combination with a driving-shaft and spur-gear thereon, of pinions engaging said spur-gear, an internal gear engaged by said pinions, a driven-shaft to which said internal gear is secured, an inclosing case for the gearing supported at one end by the driving-shaft and at the opposite end by the driven-shaft, studs

extending inwardly from one wall of said case upon which said pinions are mounted, a plate to which the inner ends of said studs are secured, which is supported upon the driving-shaft, whereby the studs supporting the pinions are supported at both ends and held in parallelism with the driving-shaft, means for connecting said case with and disconnecting it from the driven-shaft, and means for engaging said case to hold it at rest, substantially as described.

5. In a reverse gearing, the combination with a driving-shaft and spur-gear thereon, of pinions engaging said spur-gear, an internal gear engaged by said pinions, a driven-shaft to which said internal gear is secured, an inclosing case for the gearing supported at one end by the driving-shaft and at the opposite end by the driven-shaft, studs extending inwardly from one wall of said case upon which said pinions are mounted, a plate to which the inner ends of said studs are secured which is supported upon the driving-shaft and which overlies the spur-gear, whereby the studs supporting the pinions are supported at both ends and held in parallelism with the driving-shaft and the pinions and gear are held from endwise movement relative to each other, means for connecting said case with and disconnecting it from the driven-shaft, and means for engaging said case to hold it at rest, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

901,665. STORE-FIXTURE. JAMES M. WALKER, Augusta, Ga. Filed July 11, 1907. Serial No. 383,312.



1. In a device of the character described, the combination with a rod, of a trolley secured to each end of said rod, guide rails for the respective trolleys, means to support said guide rails, bearing plates mounted on said rod, a plate interposed between said bearing plates and loosely encircling said rod, a supporting frame secured to and supported by the said central plate, and rolling bearings between the said central plate and the said plates between which it is interposed.

2. The combination with a cabinet, of a pair of guide rails mounted therein in the upper portion thereof, said guide rails being separated by a space extending longitudinally thereof; a trolley comprising a frame, a roller mounted therein to run in the said space between said guide rails, and rollers on opposite sides of said rollers adapted to run beneath said guide rails; a track in the lower portion of said cabinet beneath the said space separating said guide rails; a trolley adapted to run on said track, said trolley comprising a frame and two peripherally grooved rollers journaled therein and adapted to run on said track; a rod secured to and connecting said trolleys and vertically disposed in said cabinet; a supporting rack comprising a frame encircling said rod, and means to mount said frame for rotation on said rod as an axis.

3. The combination with a cabinet provided with a movable door, of a goods supporting rack mounted to travel in said cabinet, and operative connection between the said door and said rack whereby the said travel of said rack automatically moves said door.

4. The combination with a cabinet having hinged doors adapted to swing outward and then disappear into said cabinet, of a goods-supporting rack mounted to travel back and forth in said cabinet, an operative connection between said traveling rack and said door to cause said door to travel back into the cabinet when the said rack travels forward, and forward when said rack travels backward.

5. In a device of the character described, a goods supporting rack comprising a plurality of radiating arms each having an elevated ring supporting portion and a ring supporting portion below the level of said elevated portion, rings of different diameters supported by said elevated portion in a given horizontal plane, a ring of smaller diameter than said rings and a ring of larger diameter than the first mentioned rings supported on the said ring supporting portion of said arms below the level of and surrounding the axis of the first mentioned rings, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

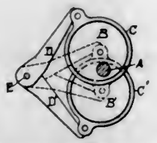
901,666. DISK FOR INFLUENCE OR STATIC INDUCTION AND CONDENSER MACHINES. ALFRED WEHRSEN, Berlin, Germany. Filed Mar. 10, 1908. Serial No. 420,199.



1. In a static induction machine, a disk composed of insulating material and having metal sectors embedded therein, said sectors being corrugated.

2. In a static induction machine, a disk composed of insulating material and having metal sectors embedded therein, said sectors being corrugated, said corrugations being of rectangular shape in cross section.

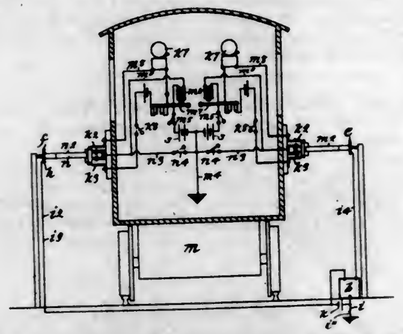
901,667. MACHINE FOR SPLITTING AND SPLAYING THE ENDS OF METAL BARS. EDWARD WRIGLEY, Auckland, New Zealand. Filed July 10, 1907. Serial No. 383,106.



1. In means for splitting and splaying the ends of metal bars, a pair of shear plates secured upon the adjacent faces of two levers pivoted on a fixed axis, and so disposed as to keep the faces of the shear plates in close contact, means for opening and closing the levers upon their axis, and a recess formed on the internal face of each shear plate and extending inwards from the front edge thereof, such recess having a straight cutting edge adapted to lie in a parallel line with the corresponding edge of the other shear plate when the levers are closed, substantially as herein specified.

2. In means for splitting and splaying the ends of metal bars, a pair of shear plates secured upon the adjacent faces of two levers pivoted on a fixed axis, and so disposed as to keep the faces of the shear plates in close contact, a power shaft, a pair of eccentrics secured thereon, and a pair of straps surrounding the respective eccentrics, to which straps the free ends of the respective levers are articulated, and a recess formed on the internal face of each shear plate and extending inwards from the front edge thereof, such recess having a straight cutting edge adapted to lie in a parallel line with the corresponding edge of the other shear plate when the levers are closed, substantially as herein specified.

901,668. SAFETY APPARATUS FOR RAILWAYS. SAMUEL L. ADELSON, New York, N. Y., assignor of one-half to Maurice Adelson, New York, N. Y. Filed Mar. 18, 1908. Serial No. 421,825.



1. A safety apparatus for railways, comprising a track apparatus arranged in blocks, a car, an alarm thereon, arms pivoted on said car, contacts adapted to be engaged by said arms and in electrical connection with said track apparatus, an electrical circuit on said car through said alarm and closed upon the movement of one of said arms on its pivot and an electrical circuit closed through another of said arms and the track apparatus for maintaining said alarm circuit in an open position when the track apparatus is set at normal safe position.

2. A safety apparatus for railways, comprising a track apparatus arranged in blocks, a car, an alarm thereon, arms pivoted to said car, contacts for said arms in electrical connection with the track apparatus, a circuit through said alarm and adapted to be closed when one of said arms is moved on its pivot, a circuit through said arm, its contact and the track apparatus for setting the same at danger and a circuit through said car and track apparatus, when set at safety, for breaking said alarm circuit.

3. A safety apparatus for railways, comprising a track apparatus arranged in blocks, a car, an alarm thereon, a track contact in electrical connection with the track apparatus, an arm movable on said car adapted to engage with said contact and means connected with said arm for closing an electrical circuit through said alarm when said arm is moved out of normal position.

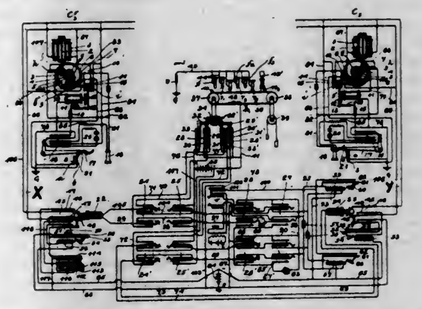
4. A safety apparatus for railways, comprising a track apparatus arranged in blocks, a car, an alarm thereon, an arm movable on said car, a contact for said arm in electrical connection with the track apparatus and contacts on said car, in electrical connection with said alarm, adapted to be bridged by said arm when moved out of normal position and thereby close said alarm circuit.

5. A safety apparatus for railways, comprising a track apparatus arranged in blocks, a car, an alarm thereon, an arm movable thereon, a circuit adapted to be closed through said alarm by the movement of said arm, a magnet in said track apparatus provided with a circuit breaker armature, a contact for said arm for shunting a normal circuit through said magnet, a supplemental arm on said car and a contact therefor grounded through said armature when the shunt circuit is open and arranged in a circuit maintaining said alarm circuit in an open position while the normal magnet circuit is operative, said shunt circuit serving to set said track apparatus at danger.

[Claims 6 to 8 not printed in the Gazette.]

901,669. MULTIPARTY-LINE TELEPHONE-EXCHANGE SYSTEM. GARRISON BANCOCK, Rochester, N. Y., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 4, 1904. Serial No. 219,419.

1. In a telephone exchange system, the combination with a central exchange, of a telephone line leading therefrom and terminating in a sub-station, a source of current at the exchange, a line signal at the exchange associated with said line, a normally open passing contact switch at the sub-station associated with a receiver hook, said passing contact hook being adapted to momentarily close a circuit through said source of current and said line signal upon depression of said receiver hook, local means at the central exchange for maintaining actuation of said line signal, and switch mechanism at the sub-station adapted to be actuated from the central exchange to cause said passing contact switch to be disconnected from said line circuit.



2. In a telephone exchange system, the combination with a central exchange, of a telephone line leading therefrom and terminating in a sub-station, a source of current at the exchange, a line signal at the central exchange associated with said line, a normally open passing contact switch at the sub-station associated with a receiver hook, said passing contact switch being adapted to momentarily close a circuit through said source of current and said line signal upon depression of the receiver hook, local means at the central exchange for maintaining actuation of said line signal, switch mechanism at the sub-station operated from the central station to disconnect said passing contact switch from the line circuit, signal bells at the sub-station, and switch mechanism for connecting said signal bells with the line circuit.

3. In a telephone exchange system, the combination with a central exchange, of a telephone line extending therefrom and terminating in a sub-station, a source of current at the central exchange, a line relay for said telephone line, a line signal controlled by said line relay, a normally open passing contact switch at the sub-station associated with a receiver hook, said passing contact switch being adapted to momentarily close a circuit through said source of current and said line signal upon depression of said receiver hook, local means at the central exchange for maintaining actuation of said line signal, switch mechanism at the sub-station operated from the central exchange for disconnecting said passing contact switch from the line, and a relay at the sub-station controlled by said switch mechanism, said relay controlling switch springs whereby the signal bells for the sub-station may be connected with the line circuit.

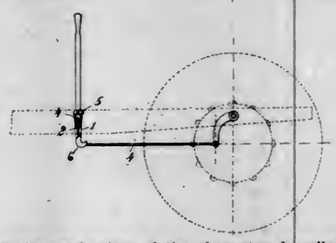
4. In a telephone exchange system, the combination with a central exchange, of a telephone line extending therefrom and terminating in a sub-station, a source of current at the central exchange, a line relay for said telephone line, a line signal controlled by said line relay, a passing contact switch at the sub-station associated with a receiver hook, said passing contact switch being adapted to momentarily close a circuit through said source of current and said line relay only upon depression of the receiver hook, local means at the central exchange for maintaining actuation of said line signal, switch mechanism at the sub-station controlled from the central exchange for disconnecting said passing contact switch from the line, signal bells at the sub-station, and a relay controlling switch springs whereby said signal bells may be connected with the circuit, the circuit through said relay being controlled by said switching device whereby said signal

bells may be connected with the line after said passing contact switch has been disconnected therefrom.

5. In a telephone exchange system, the combination with a central exchange, of a telephone line leading therefrom and terminating in a substation, a cord circuit at the central exchange, a source of current at the central exchange connected with said telephone line, a line signal at the central exchange for said telephone line, switching mechanism at the substation, a receiver hook at the substation, a passing contact switch controlled by said switch hook, a line circuit normally including said source of current, said line signal, said switching apparatus and said passing contact switch to be momentarily closed upon depression of said receiver hook, whereby said line signal is actuated, local means at the central exchange for maintaining actuation of said line signal, means upon connection of the cord circuit with said telephone line for causing said line signal to become inert, a signal bell at the substation normally disconnected from said line circuit, and means for actuating said switching mechanism from the central exchange to cause said passing contact switch to be disconnected from said line circuit and to cause connection with said line circuit of said substation signal bell, said signal bell then controlling the continuity of said line circuit upon disconnection of said cord circuit from said telephone line.

[Claims 6 to 13 not printed in the Gazette.]

901,670. BRAKE MECHANISM. ALBERTO BALLOCO, Turin, Italy, assignor to Societe Anonyme "Itala" Fabrica di Automobili, Turin, Italy. Filed Apr. 16, 1907. Serial No. 368,557.



1. A brake mechanism of the character described comprising a guide member, an arm adjacent to the end of said member, said arm being capable of swinging movement and having adjacent to its outer end a part adapted for engagement with a flexible connector to guide the same, a grooved sheave carried by said arm adjacent to the end of the guide member, and a flexible connector extended along said guide member and passed around the grooved perimeter of the sheave adjacent to the end of said member, and extended from said sheave along said arm in position for engagement with said part at the outer end of the arm and adapted for connection with a brake device.

2. A brake mechanism of the character described comprising a guide member, an arm adjacent to the end of said member, said arm being capable of swinging movement and having its outer end provided with a laterally directed rounded part the perimetral surface whereof is grooved to receive a flexible connector, a grooved sheave carried by said arm adjacent to the end of the guide member, and a flexible connector extended along said guide member and passed around the grooved perimeter of the sheave adjacent to the end of said member, and extended from said sheave along said arm and passed around the grooved perimetral surface of said laterally projecting part at the outer end of said arm and adapted for connection with a brake device.

3. A brake mechanism of the character described comprising a guide member, an arm adjustably secured upon the end of said member, said arm being capable of swinging movement and having, adjacent to its outer end, a part adapted for engagement with a flexible connector to guide the same, a grooved sheave carried by said arm adjacent to the end of the guide member, and a flexible connector extended along said guide member and passed around the grooved perimeter of the sheave adjacent to the end of said member, and extended from said sheave along said arm in position for engagement with said part at the outer end of the arm and adapted for connection with a brake device.

901,671. BREAD, CAKE, AND PIE LIFTER. FRED A. BENNETT and SARAH L. BENNETT, Moline, Ill. Filed July 30, 1907. Serial No. 386,250.



1. A device of the character described, comprising a scoop provided at its front end with inwardly curved portions, producing a substantially V-shaped point, a handle secured to said scoop, and a device for holding an article upon the scoop, said holding device being slidably mounted upon said handle and adapted to engage the edges of scoop upon opposite sides of said point for preventing lateral displacement thereof off of said scoop.

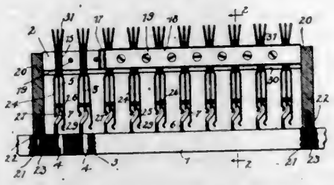
2. A device of the character described, comprising a scoop, a handle, provided with parallel sides, secured to said scoop, and a holder positioned contiguous to said handle, said holder provided at its inner end with integral, parallel horizontal portions disposed at right-angles to the body of said holder, which right-angle portions terminate in vertical portions, said vertical portions integral at their lower ends with looped portions, one of the horizontal portions spanning the distance between the parallel sides of the handle and connecting said looped portions, and said looped portions surrounding the parallel sides of said handle.

3. As a new article of manufacture, a device of the character described, comprising a scoop having a pointed, V-shaped front and provided, at its rear ends, with rolled portions constituting sockets, said rolled portions producing a V-shaped, rear scoop-like portion, each of the sides of the V-shaped point curved inwardly throughout a greater portion of its length, a handle extending into the sockets of the rolled portions, and a holder and a pusher slidably mounted upon said handle and having portions normally extending over the curved front edges of the V-shaped point, the curved front edges of said point serving to hold the holder and pusher upon the scoop.

4. A device of the character described, comprising a scoop, a handle formed from wire and provided with parallel sides, said handle secured to said scoop, a holder formed from a single-piece of wire and positioned contiguous to said handle, said holder provided with a body portion intermediate its ends formed from two portions of the single-piece twisted together, and the outer ends of said portions terminating in horizontal fingers, each finger provided, at its outer end with a vertical, S-shaped portion, the upper bend facing towards the scoop and the lower bend facing outwardly, the inner ends of said portions of the twisted body terminating in horizontal, right-angled portions, said right-angled portions terminating at their outer ends in vertical, downwardly-extending portions, each downwardly-extending portion terminating in an integral eye, and the eyes terminating at one end, in an integral, horizontal piece or portions, the eyes surrounding the parallel portions of the handle.

5. A device of the character described, comprising a scoop and a handle, said handle provided with parallel portions, of a pusher and a holder formed from a single-piece of wire and attached to the parallel portions of the handle, said pusher and holder comprising a body portion formed from a plurality of portions of the single-piece, said portions of the body terminating at their outer ends in fingers and terminating at their inner ends in outwardly-extending, horizontal portions, each finger provided at its outer end with a vertical S-shaped portion, the S-shaped portion formed in the same vertical plane with the finger, the horizontal portions at the inner end provided with vertical, depending extensions terminating in eyes surrounding the sides of the handle, and each eye terminating at one end in a straight, horizontal portion spanning the distance between the handles and rigidly connecting and bracing the vertical portions integral with the eyes.

901,672. MULTIPLE-SWITCHBOARD JACK. JULES A. BIRSFIELD, Rochester, N. Y., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 13, 1905. Serial No. 245,526.

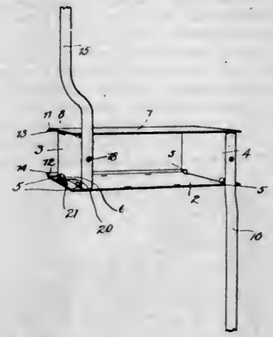


1. In a telephone switchboard, the combination with front and rear supporting bars, of insulating material, there being transverse vertical slots in the rear supporting bar, switch springs, notches 10 and 11 cut in the opposite edges at the rear end of each spring forming the reduced portion 14, the length of the notches being equal to the width of the rear supporting bar, the reduced section of said springs between the notches engaging in the transverse slots in the rear supporting bar and the sides of the slots engaging the sides of the supporting bar to hold the springs against longitudinal displacement, and a projection or shelf extending forwardly from the rear supporting bar into engagement with the body portion of the springs directly in front of the notches 10 and 11, said shelf serving to form a frictional surface to be engaged by the edges of the switch springs, and upon bending of said switch springs said shelf causes the distribution of the bending area thereof.

2. In a telephone switchboard, the combination with front and rear supporting bars, of insulating material, there being transverse vertical slots in the rear supporting bar, switch springs, notches 10 and 11 cut in the opposite edges at the end of each spring forming the reduced portion 14, the length of said notches being equal to the width of the rear supporting bar, the reduced section of said springs between the notches engaging in the transverse slots in the rear supporting bar and the sides of the slots engaging the sides of the supporting bar to hold the springs against displacement, and a projection or shelf 30 extending forwardly from the rear supporting bar into frictional engagement with the body portion of the springs directly in front of the notches 10 and 11, said shelf causing the bending center to be removed from the narrow parts of the springs and to be distributed along the heavier body portions thereof.

3. In a combined answering and lamp jack, front and rear supporting bars, slots in the rear bar for supporting jack springs, slots in the rear bar for supporting lamp springs, openings in the front bar registering with the slots in the rear bar, springs having portions of reduced width for engaging such slots, thimbles in the front openings associated with the jack springs and extending by integral springs to the rear bar to hold the bars together, a shelf formed on the rear bar between the sets of springs adapted to engage the edges of the wider portions of the springs, and means for clamping such springs against such shelf in assembling to distribute the bending stresses of the springs in use to the wider portions thereof.

901,673. SPREADING DEVICE. JULES A. BIRSFIELD, Rochester, N. Y., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed May 14, 1906. Serial No. 316,628.



1. In a device for the purpose described, the combination with opposite jaw plates, of lifting or spreading plates hinged to one of said plates and normally disposed to allow the jaw plates to come together, and a lever extending from each of the lifting plates adapted upon actuation to swing the plates to a vertical position between the jaw plates whereby said jaw plates and the wires or cables engaged thereby are spread apart.

2. In a device for the purpose described, the combination with rectangular jaw plates tapered at their ends to form an edge when closed to be inserted between wires or cables to be spread, lifting or spreading plates hinged at one edge to one of said plates and normally lying flat to allow the plates to close, and a lever arm extending from each of said lifting plates for swinging said plates to a vertical position between the jaw plates, whereby said jaw plates and the wires or cables engaged thereby are spread apart, said jaw plates and lifting plates then forming a working or entrance compartment.

3. In a device for the purpose described, the combination with jaw plates, of lifting plates pivoted at one end to the lower jaw plate to normally lie flat when the plates are together, rollers at the other edge of the lifting plates, lever mechanism for swinging said lifting plates to a position at right angles to the plates, said rollers during swinging of the plates being in engagement with the upper jaw plate to raise said plate, whereby the wires or cables engaged by the jaw plates are spread or held apart.

4. In a device for the purpose described, the combination with jaw plates each provided with a bent edge, such bent edges adapted to coöperate when the device is closed to form an entrance wedge, of spreading means between the jaw plates adapted when actuated to spread the plates apart.

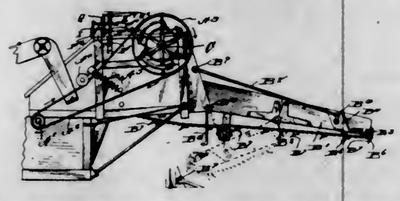
5. In a device for the purpose described, the combination with jaw plates each provided with a bent edge, such bent edges adapted to coöperate when the device is closed to form an entrance wedge, of spreading means between the jaw plates adapted when actuated to spread the plates apart, a channel or slot on one of said plates, and an extension or button from the other plate for engaging in said channel to prevent lateral displacement of the jaw plates when in their normal position to be inserted between the wires or cables.

[Claim 6 not printed in the Gazette.]

901,674. BAND-CUTTER AND FEEDER. HENRY H. BOCKELMAN, Sylvan Grove, Kans. Filed Mar. 21, 1908. Serial No. 422,531.

1. A feeding apparatus for threshing machines comprising, in combination with a casing, a crank shaft, a series of segment feeding plates pivotally connected to said crank shaft, a series of bars pivotally connected to said

crank shaft, segment plates upon said bars, a horizontally disposed and vertically movable shaft loosely held in bearings in the frame of the casing, links fixed to said horizontally disposed shaft and having pivotal connection with said bars, a bracket plate mounted upon the frame, a rod supported by said bracket arm and having an eye through which said horizontally disposed shaft passes, a pivoted lever, an arm projecting through said slot and having an eye through which said rod passes, a conveyer shaft, a winged sleeve fixed thereto and having a clutch tooth, a spring-pressed clutch pulley loosely mounted upon the conveyer shaft, belted connections between said clutch pulley and crank shaft, and means actuated by said pivoted lever for causing the winged sleeve and shaft to which it is fastened to stop while the crank shaft rotates, as set forth.



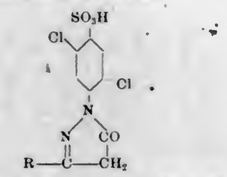
2. A feeding apparatus for threshing machines comprising, in combination with a casing, a crank shaft, a series of segment feeding plates pivotally connected to said crank shaft, a series of bars pivotally connected to said crank shaft, segment plates upon said bars, a horizontally disposed and vertically movable shaft loosely held in bearings in the frame of the casing, links fixed to said horizontally disposed shaft and having pivotal connection with said bars, a bracket plate mounted upon the frame, a rod supported by said bracket arm and having an eye through which said horizontally disposed shaft passes, a pivoted lever, an arm projecting through said slot and having an eye through which said rod passes, a conveyer shaft, a winged sleeve fixed thereto and having a clutch tooth, a spring-pressed clutch pulley loosely mounted upon the conveyer shaft, belted connections between said clutch pulley and crank shaft, a pivotal bar mounted upon the frame, and connections between said pivotal bar and lever, as set forth.

3. A feeding apparatus for threshing machines comprising, in combination with a casing, a crank shaft, a series of segment feeding plates pivotally connected to the latter, a series of bars pivotally connected to the crank shaft, segment plates upon said bars, a horizontally disposed and vertically movable shaft loosely held in bearings in the frame of the casing, links fixed to said horizontally disposed shaft and having pivotal connection with said bars, an adjustable bracket plate mounted upon the frame, rods supported by said bracket arm and having an eye through which the horizontally disposed shaft passes, a pivoted lever, an arm projecting through said slot and having an eye through which the rod passes, a conveyer shaft, a winged sleeve fixed thereto and having a clutch tooth upon one face thereof, a spring-pressed clutch pulley loosely mounted upon the conveyer shaft, a belted connection between said clutch pulley and crank, a pivotal bar mounted upon the frame, and connections between said bar and lever, as set forth.

4. A feeding apparatus for threshing machines comprising, in combination with a casing, a crank shaft, a series of segment feeding plates pivotally connected to the latter, a series of bars pivotally connected to the crank shaft, segment plates upon said bar, a horizontally disposed and vertically movable shaft loosely held in bearings in the frame of the casing, links fixed to said horizontally disposed shaft and having pivotal connection with said bars, an angled slotted plate, a clamping plate holding the slotted end of said angled plate in an adjusted position, a rod passing through an aperture in the bracket plate, a pin passing through said rod and supporting the rod, the latter being provided with an eye at its lower end through which said horizontally disposed shaft passes, a pivoted lever, an arm projecting through said slot and having an eye through which said rod passes, a pin projecting from said rod and upon which said arm rests, a conveyer shaft, a winged sleeve fixed thereto and having a clutch tooth, a spring-pressed clutch pulley loosely mounted upon the conveyer shaft, a belted connection between said clutch pulley and crank shaft, a pivotal bar mounted upon the frame, and connections between said pivotal bar and lever, as set forth.

901,675. YELLOW AZO DYE AND PROCESS OF MAKING SAME. MELCHIOR BÖNIGER, Basel, Switzerland, assignor to The Corporation of Chemical Works, formerly Sandoz, Basel, Switzerland. Filed June 11, 1908. Serial No. 437,964.

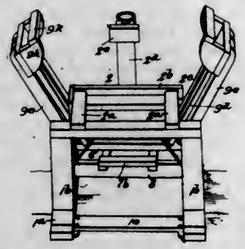
1. The herein described process for the manufacture of yellow azo dyes by combining in an alkaline solution a pyrazolone compound of the formula



wherein R stands for CH_3 or COOH, with the diazo compounds of anilincarboxylic acids, anilinsulfonic acids, their homologues and halogen derivatives.

2. The yellow coloring matters obtained as hereinbefore described, being in dry state yellow powders, easily soluble in water with yellow color, which is not altered by the addition of acids, dissolving in concentrated sulfuric acid with a greenish-yellow coloration, their neutral watery solution boiled with zinc dust being decolorized, the solution thereby obtained becoming in contact with the air rapidly reddish violet.

901,676. COMBINED BOX-PRESS AND BOX-MAKING APPARATUS. ROBERT H. BOWMAN, Canon City, Colo. Filed Apr. 21, 1908. Serial No. 428,354.



1. In a box machine, a main supporting frame having pairs of spaced grooved guides, arms movable therein and having a pivotal connection with said guides, said arms having clamping heads, said clamping heads comprising end stops and top clamping bars to position and hold a lid said frame having a box receiving bed or top, and means for normally holding said arms at their upward limit of movement and out of alinement with said grooved guides.

2. In a box press, a main supporting frame having pairs of grooved guides, arms movable in said grooved guides and having a pivotal connection therewith, said arms having clamping heads, said clamping heads comprising end stops and top clamping bars to position and hold a lid said frame having a box receiving bed or top, combined with means for normally holding said arms at their upward limit of movement and out of alinement with said grooved guides, together with means for first drawing said arms into alinement with said grooved guides and then upon further movement drawing such arms down into said grooved guides to form the box.

3. In a box press, a main supporting frame having pairs of grooved guides, arms movable in said grooved guides and having a pivotal connection therewith, said arms having clamping heads, said clamping heads comprising end stops and top clamping bars to position and hold a lid said frame having a box receiving bed or top, combined with means for normally holding said arms at their upward limit of movement and out of alinement with said grooved guides, together with means for first drawing said arms into alinement with said grooved guides and then upon further movement drawing such arms down into said grooved guides to clamp the box, and means forming a part of the box receiving bed for maintaining the box in position.

4. In a box press and assembling apparatus, a main supporting frame having pairs of side grooved guides, arms vertically movable in said guides, said arms having clamping heads said clamping heads comprising end stops and top clamping bars to hold a lid, a box receiving top or bed secured to said main frame, and a supplementary top secured on said first mentioned top or bed and means for operating said arms to clamp a box to said supplemental top.

5. In a box press, a main supporting frame having side and end standards, and cross braces connecting the same together, said end standards having grooves forming guides, a box receiving bed or top supported by said main frame, means carried by said top to form a guide and stop for the box, arms having clamping heads and tongues to slide in said grooved guides, a cross head carried by said arms having hubs for entering said grooved guides, combined with means for normally holding said arms with their tongues out of said grooved guides, and another means for first drawing said arms with their tongues into alinement with said grooved guides and upon further movement drawing said arms down with their tongues into said grooved guides.

[Claims 6 to 15 not printed in the Gazette.]

901,677. MARINE SIGNALING DEVICE. MARTIN BOYD, Irvine, Scotland. Filed July 24, 1905. Serial No. 271,022.



1. A signaling device comprising in combination, a tower having a plurality of signaling openings, lighting means adjacent said openings, movable means traveling abreast of said openings and lighting means and provided with different colored elements coöperating with said lighting means to produce signal lights of different colors, and means for preventing the blending of colors of the signal lights.

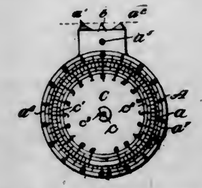
2. A signaling device comprising in combination, a tower having a plurality of signaling openings, lighting means adjacent said openings, movable means traveling abreast of said openings and lighting means and provided with different colored elements coöperating with said lighting means to produce signal lights of different colors, and means carried by said movable means for preventing the blending of colors of said signal lights.

3. A signaling device comprising in combination, a tower having a plurality of signaling openings, lighting means adjacent said openings, movable means traveling abreast of said openings and lighting means and provided with different colored elements coöperating with said lighting means to produce signal lights of different colors, a plate pivotally mounted on said movable means, and stationary elements for actuating said plate to prevent the blending of colors of the signal lights.

4. A signaling device comprising in combination, a tower having a plurality of signaling openings, lighting means adjacent said openings, movable means traveling abreast of said openings and lighting means and provided with different colored elements coöperating with said lighting means to produce signal lights of different colors, a weight actuated and gravity acting plate pivotally mounted on said movable means, and stationary elements for operating said plate to prevent the blending of colors of the signal lights.

5. A signaling device comprising in combination, a tower having a plurality of signaling openings, lighting means adjacent said openings, said openings being disposed in a manner to expose signal lights seawards and landwards, movable means traveling abreast of said openings and lighting means and provided with different colored elements coöperating with said lighting means to produce signal lights of different colors seawards and landwards, a gravity acting weight actuated plate pivotally mounted on said movable means to prevent the blending of colors of the seaward signal lights, a plate pivotally mounted on said movable means and operatively associated with said first mentioned plate for preventing the blending of colors of the landward signal lights, and stationary elements for operating said seaward plate.

901,678. MEASURING INSTRUMENT. ELIZABETH I. BRAYTON and JAMES T. BRAYTON, Chicago, Ill., assignors to Geneva Optical Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 27, 1907. Serial No. 370,548.



1. A measuring instrument comprising a pair of relatively movable coöperating members, a series of indices on each member, the indices of the same series being differently designated and the designations of one series corresponding with those of the other, the indices being so arranged that only one of the indices on either member registers with the correspondingly designated index on the other member in any relative position of the members, a plurality of relatively movable contact pieces, and means for causing the zero indices on said members to register when the contact pieces lie in a predetermined line and for causing said zero indices to be displaced from each other and other correspondingly designated indices to be brought into registration with each other as one of said contact pieces is moved out of said line.

2. A measuring instrument comprising a pair of relatively movable coöperating members, a series of indices on each member, the indices of the same series being differently designated and the designations of one series cor-

responding with those of the other, the indices being so arranged that only one of the indices on either member registers with the correspondingly designated index on the other member in any relative position of the members, a plurality of relatively movable contact pieces, and means for causing the zero indices on said members to register when the contact pieces lie in a predetermined line and for causing said zero indices to be displaced from each other in one direction or the other as one of said contact pieces is moved in one direction or the other from said line.

3. A measuring instrument comprising a pair of coöperating members movable relatively to each other and having coöperating graduated scales, each of said scales consisting of the same number of correspondingly designated indices so related to each other that no two indices on one scale register with the correspondingly designated indices on the other scale in any relative position of the scales, and the calibrations being such that the reading of the instrument is given by the designation of either of two similarly designated indices which may be in registration with each other in any relative position of the scales.

4. A measuring instrument comprising a pair of coöperating graduated scale members movable relatively to each other, each of said scale members having thereon the same number of correspondingly designated indices, the grouping of the indices being such that no two indices on one scale register with the corresponding indices on the other scale in any relative position of the scales, a plurality of relatively movable contact pieces, and connections between said members and said contact pieces for causing a relative movement between said contact pieces to effect a corresponding relative movement between the said members and their coöperating scales, the calibrations being such that the reading of the instrument is given by the designation of either one of any two similarly designated indices which may be in registration with each other in any relative position of said members.

5. A measuring instrument comprising a pair of relatively movable members each of which has two series of divisions, the divisions on each member being separated by a series of indices designated by characters corresponding to the designating characters associated with the indices of the corresponding series of divisions on the other member, said divisions being so proportioned that no two indices on one member register with the corresponding indices on the other member, the location of the several series of divisions being such that both pairs of zero indices are in registration in one relative position of said members, and the calibration of the instrument being such that the reading is given by either one of any two similarly designated indices which may at any time be in registration with each other.

[Claims 6 to 13 not printed in the Gazette.]

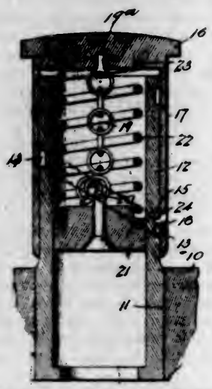
901,679. GREASE-CUP. FREDERICK L. BROWN and ISAAC W. SPRINK, Scottdale, Pa. Filed Nov. 26, 1907. Serial No. 403,842.

1. A grease cup comprising a body portion provided with an external spirally arranged guiding groove, a compression cap provided with a sleeve telescoping over the body and having a pin sliding in said groove and having a locking engagement therewith, and a spring-pressed follower piston.

2. A grease cup comprising a body portion provided with an external spirally arranged guiding groove, a compression cap provided with a sleeve telescoping over the body portion and adapted to engage with and be guided by said groove, and a follower piston having a flexible connection with said cap.

3. A grease cup comprising a body portion provided with an external spirally arranged guiding groove terminating in a keeper notch, a compression cap carrying a sleeve telescoping with the body portion and provided with a holding pin adapted to be inserted into said guiding groove and be guided thereby to said keeper notch, and a follower piston having a swiveled and flexible connection with said compression cap.

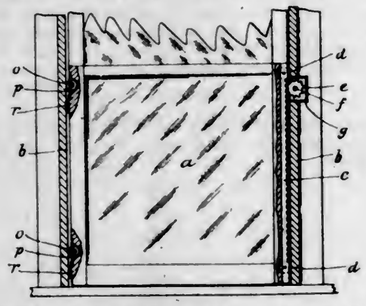
4. A grease cup comprising a body portion, a compression cap, and a follower piston having a swiveled and flexible connection with said compression cap.



5. A grease cup comprising a body portion, a compression cap, and a spring-pressed follower piston having a swiveled and flexible connection with said compression cap.

[Claims 6 and 7 not printed in the Gazette.]

901,680. WINDOW-SASH LIFTING AND LOCKING APPLIANCE. THOMAS E. CARTER, Auckland, New Zealand. Filed Nov. 30, 1907. Serial No. 404,600.

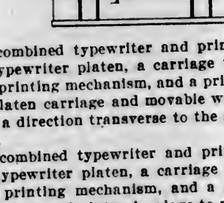


In a window, a toothed rack secured along the edge of a sash frame and having an anti-friction roller journaled in each end thereof engaging with the adjacent face of a pulley stile, a metal frame secured within the pulley stile, a spindle carried transversely in such frame and projecting beyond its front end a squared portion upon such projecting end, a sliding plate secured against the front face of the frame, and having a slot adapted to fit on to the squared portion of the spindle, and a pinion mounted upon the spindle and engaging with the rack on the sash, substantially as specified.

901,681. TOOL FOR CUTTING SEATS IN RAILWAY-SLEEPERS. ALBERT COLLET, Paris, France. Filed Jan. 27, 1906. Serial No. 298,233.

1. A tool of the character described having an upright rotatable shaft, a lower cutter head on said shaft and provided with peripherally disposed cutters which have their cutting edges disposed parallel with said shaft, and an upper cutter head on said shaft provided with peripherally disposed, circular cutting disks, the diameter of the upper cutter head being greater than that of the lower cutter head.

2. A tool of the character described having an upright rotatable shaft, a lower cutter head on said shaft, an upper cutter head on said shaft, said upper cutter head being of greater diameter than the lower cutter head and being provided with circular cutters which have their axes oblique to the horizon.



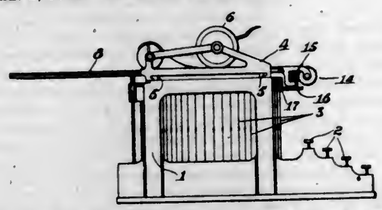
3. A tool of the character described comprising a shaft, a cutter head carried thereon, and circular cutters carried by the cutter head, each such cutter having its axis extended in a direction inclined to the length of the said shaft and being provided with two spaced peripheral cutting edges, the rearmost of which cutting edges of each such cutter being maintained, by the inclination of the cutter axis, out of cutting position during the operation of the tool.

4. A tool of the character described comprising a shaft, upper and lower cutter heads carried thereon, and cutters on the respective cutter heads, the cutters of the upper cutter head having a stroke of greater radius than those of the lower cutter head, and the cutters of the lower cutter head being provided with cutting edges extended parallel with the shaft.

5. A tool of the character described comprising a shaft, and upper and lower cutter heads carried thereon and provided with cutters, the cutters of the upper cutter head having a stroke of greater radius than those of the lower cutter head, and the cutters of the lower cutter head being capable of adjustment in directions radial with respect to the said shaft.

[Claims 6 and 7 not printed in the Gazette.]

901,682. COMBINED TYPE-WRITING AND PRINTING MACHINE. WILLIAM H. COLLIER, Jackson, Tenn. Filed Jan. 2, 1908. Serial No. 409,026.



1. In a combined typewriter and printer the combination of a typewriter platen, a carriage therefor, a frame, typewriter printing mechanism, and a printing bed movable with said platen carriage and movable with respect to said carriage in a direction transverse to the axis of rotation of said platen.

2. In a combined typewriter and printer the combination of a typewriter platen, a carriage therefor, a frame, typewriter printing mechanism, and a printing bed movably mounted in said platen carriage to move in a direction transverse to the axis of rotation of said platen.

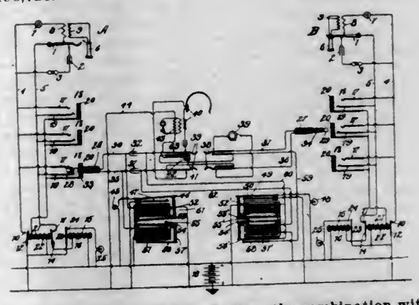
3. In a combined typewriter and printer the combination of a platen, a carriage therefor, a frame, typewriter printing mechanism, a printing bed movable with said carriage and movable in a direction transverse to the axis of rotation of said platen, ribbon carrying means mounted on said carriage and other ribbon carrying means mounted on said printing bed.

4. In a combined typewriter and printer the combination of a platen, a carriage therefor, a frame, typewriter printing mechanism, a printing bed movable with said carriage and movable in a direction transverse to the axis of rotation of said platen, a ribbon carrying reel mounted on said platen carriage, another ribbon carrying reel mounted on said printing bed, one of said wheels provided with automatic return means, and feeding means engaging the other of said wheels.

5. In a combined typewriter and printer the combination of a platen, a carriage therefor, a frame typewriter printing mechanism, a printing bed movable with said carriage and movable in a direction transverse to the axis of rotation of said platen, a ribbon carrying reel mounted on said platen carriage and provided with automatic return means, another ribbon carrying wheel mounted on said printing bed and ratchet mechanism for feeding the ribbon comprising a ratchet wheel mounted on said printing bed and a pawl adapted to engage said wheel.

[Claim 6 not printed in the Gazette.]

901,683. SUPERVISORY SYSTEM. MERRITT S. CONNER, Chicago, Ill., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 5, 1904. Serial No. 196,726.



1. In a telephone exchange system, the combination with a telephone line extending from a substation to a central station, of cord connecting apparatus at the central station for connecting said line with another, a supervisory signal, an armature absolutely controlling a circuit through said signal, an electromagnet for controlling said armature, a second armature controlled by a second electromagnet, a mechanical connection between said armatures whereby said first armature is mechanically controlled by said second armature, an electric circuit including part of the talking circuit closed through said second electromagnet upon the connection of said cord connecting apparatus with said line, and an electric circuit through said first electromagnet controlled by a switch at the substation.

2. In a telephone exchange system, the combination with a telephone line extending from a substation to a central exchange, of cord connecting apparatus at the central exchange for connecting said line with another, a supervisory signal, an armature absolutely controlling the circuit through said supervisory signal, an electromagnet for said armature, a second armature having normally mechanical engagement with said first armature, an electromagnet for said second armature, a circuit including part of the talking circuit closed through said second electromagnet upon connection of said cord connecting apparatus with the line, whereby said second armature is actuated and the mechanical connection between the armatures removed, and a circuit through said first electromagnet closed upon actuation of substation apparatus.

3. In a telephone exchange system, the combination with a telephone line extending from a substation to a central exchange, of cord connecting apparatus at the central exchange for connecting said line with another, a supervisory signal, a unitary electromagnetic device for controlling the circuit through said signal, two electromagnet coils for said device, an armature associated with one coil, switching mechanism included in the supervisory signal circuit and absolutely controlled by said armature, an armature for the second coil having normally mechanical connection

with said first armature, switching mechanism for said second coil adapted through said mechanical connection to normally cause the supervisory circuit to be opened at the switching mechanism of the first coil, a circuit including part of the talking circuit closed through said second coil upon connection of the cord connecting apparatus with the line whereby the corresponding armature is withdrawn from said mechanical connection with the first armature and the supervisory circuit allowed to be closed, and a circuit closed through said first coil upon actuation of substation apparatus, whereby said first armature is actuated to cause its switching mechanism to again open the supervisory circuit.

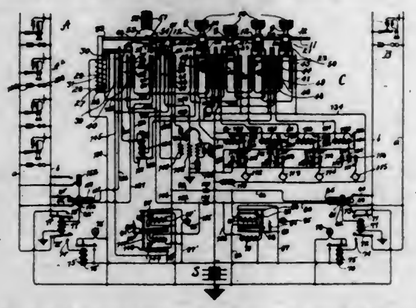
4. In a telephone exchange system, the combination with a telephone line extending from a substation to a central exchange, of cord connecting apparatus at the central exchange for connecting said line with another, a supervisory signal at the central exchange, an electromagnetic device comprising two electromagnets for jointly controlling said supervisory signal, an armature for one of said electromagnets, switching mechanism absolutely controlled by said armature and included in the supervisory signal circuit, an armature for the second electromagnet, switching mechanism associated with said second armature, a mechanical connection normally between said armatures and serving in conjunction with said switching mechanisms to maintain the armatures in a neutral position away from the poles of the electromagnets, in which position the switching mechanism of the first armature is caused to open the supervisory circuit, a circuit including part of the talking circuit closed through the second electromagnet upon connection of the cord connecting apparatus with the line, whereby said electromagnet is energized to attract its armature and to break the mechanical connection between the armatures whereby the supervisory circuit is closed through the switching mechanism of the first armature, and a circuit closed through the first electromagnet upon closing of the line at the substation, whereby said first electromagnet is energized to again open the supervisory circuit.

5. In a telephone exchange system, the combination with a line extending from a substation to a central exchange, of cord connecting apparatus at the central exchange for connecting said line with another, a supervisory signal, an electromagnetic device comprising two electromagnets for jointly controlling said supervisory signal, an armature for one of said electromagnets, switching mechanism included in the supervisory circuit and absolutely controlled by said armature, said switching mechanism tending to close the supervisory circuit, an armature for the second electromagnet, switching mechanism for said second armature tending normally to engage the first armature to prevent the switching mechanism of the first electromagnet from closing the supervisory circuit, a circuit including part of the talking circuit closed through said second electromagnet upon connection of the cord connecting apparatus with the line, whereby the second armature is withdrawn from engagement with the first armature to allow the switching mechanism of the first electromagnet to close the supervisory circuit, and a circuit closed through the first electromagnet upon closure of the line at a substation, whereby said first relay is energized to cause the switching mechanism to be again open.

[Claims 6 to 15 not printed in the Gazette.]

901,684. TELEPHONE-EXCHANGE SYSTEM. MERRITT S. CONNER, Rochester, N. Y., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed July 13, 1905. Serial No. 269,465.

1. In a telephone exchange system, the combination with a telephone line extending from a central exchange to a plurality of party-line substations, a plurality of selective ringing keys at the central exchange, one corresponding to each substation, a controlling electromagnet associated with said keys, a source of signaling current, means adapted upon actuation of one of said selective keys for closing a circuit through said controlling electromagnet, mechanical means operated upon energization of said controlling electromagnet to lock said depressed key in its actuated position, and a second circuit closed upon depression of said selective key for causing signaling current to flow from said source into the line through signal receiving apparatus at the corresponding party-line substation.



2. In a telephone exchange system, the combination of a telephone line extending from a central exchange to a plurality of party-line substations, a plurality of selective ringing keys at the central exchange, one corresponding to each substation, a controlling electromagnet associated with said keys, a source of signaling current, means operated upon actuation of one of said selective keys for closing a circuit through said controlling electromagnet, means adapted upon energization of said controlling electromagnet for locking said depressed key in its actuated position, a second circuit closed upon depression of said selective key for causing signaling current to flow from said source into the line through signal receiving apparatus at the corresponding party-line substation, and means adapted upon actuation of the telephonic apparatus at the called substation for causing said electromagnet circuit to be opened whereby said actuated selective key is released and the ringing circuit opened.

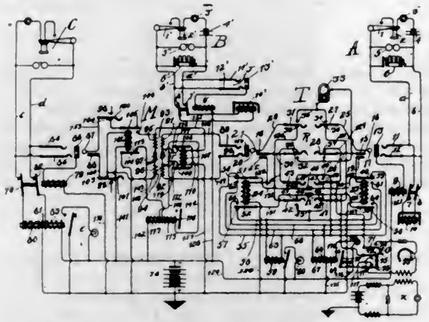
3. In a telephone exchange system, the combination with a telephone line extending from a central exchange to a plurality of party-line substations, a plurality of selective ringing keys at the central exchange, one corresponding to each substation, a controlling electromagnet associated with said keys, a source of signaling current, means adapted upon actuation of one of said selective keys for closing a circuit through said controlling electromagnet, means adapted upon energization of said controlling electromagnet for locking said depressed key in its actuated position, a second circuit closed upon depression of said selective key for causing signaling current to flow from said source into the line through signal receiving apparatus at the corresponding party-line substation, and electromagnetic means adapted upon actuation of telephonic apparatus at the called substation to open the circuit through said controlling electromagnet whereby said actuated selective key is released to cause opening of the ringing circuit.

4. In a telephone exchange system, the combination with a telephone line extending from a central exchange to a plurality of party-line substations, a plurality of selective ringing keys at the central exchange, one corresponding to each substation, a controlling electromagnet associated with said keys, a source of signaling current, means adapted upon actuation of one of said selective keys for closing a circuit through said controlling electromagnet, means adapted upon energization of said controlling electromagnet for locking said depressed key in its actuated position, a second circuit closed upon depression of said selective key for causing signaling current to flow from said source into the line through signal receiving apparatus at the corresponding party-line substation, and electromagnetic means controlled by the ringing circuit and adapted upon actuation of telephonic apparatus at the called substation to open the circuit through the controlling electromagnet whereby the actuated selective key is released to cause opening of the ringing circuit.

5. In a telephone exchange system, the combination with a telephone line extending from a central exchange and connecting with a plurality of party-line substations, of a plurality of selective keys at the central exchange, one corresponding to each substation, a controlling electromagnet associated with said selective keys, a local circuit including said controlling electromagnet and closed only upon actuation of one of said selective keys, means actuated upon current flow through the said electromagnet to cause the actuated selective key to be locked in position, a source of ringing current, and a circuit including said source of signaling current closed upon actuation of said selective key to send signaling current into the line through the signal receiving apparatus at the desired substation, said signaling circuit being controlled by the circuit conditions at the called substation.

[Claims 6 to 25 not printed in the Gazette.]

901,685. TELEPHONE-EXCHANGE SYSTEM. MERRITT S. CONNER, Rochester, N. Y., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 24, 1906. Serial No. 297,553.



1. In a telephone exchange system, the combination with a central exchange, of telephone lines leading therefrom and terminating in substations, a cord circuit at the exchange, a supervisory relay normally disconnected from the cord circuit, and a controlling relay for controlling the connection of said supervisory relay with the cord circuit, connection of the cord circuit with a line causing change in the circuit conditions for the controlling relay whereby said relay is actuated to connect the supervisory relay with the cord circuit.

2. In a telephone exchange system, the combination with a central exchange, of telephone lines leading therefrom and terminating in substations, a cord circuit at the exchange, a supervisory relay normally disconnected from the cord circuit, a controlling relay for controlling the connection of said supervisory relay with the cord circuit, connection of the cord circuit with a line causing change in the circuit conditions for the controlling relay whereby said relay is actuated to connect the supervisory relay with the cord circuit, and a source of current at the substation adapted for connection with the line to send current through the supervisory relay when said relay is connected with the cord circuit.

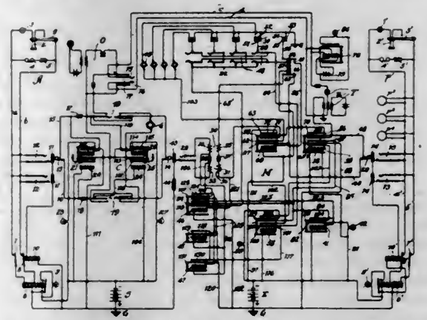
3. In a telephone exchange system, the combination with a central exchange, of telephone lines leading therefrom and terminating in substations, a cord circuit at the exchange, a supervisory relay normally disconnected from the cord circuit, a controlling relay for controlling the connection of said supervisory relay with the cord circuit, connection of the cord circuit with a line causing change in the circuit conditions for the controlling relay whereby said relay is actuated to connect the supervisory relay with the cord circuit, a source of alternating current at the substations adapted upon actuation to send current through said supervisory relay when said relay is connected with the cord circuit, and a local energizing circuit for maintaining energization of the supervisory relay upon cessation of current flow from said source at the substation.

4. In a telephone exchange system, the combination with a central exchange, of a telephone line leading therefrom and terminating in a substation, a cord circuit at the exchange, a supervisory relay normally disconnected from the cord circuit, a relay for controlling said supervisory relay, and means adapted upon connection of the cord circuit with the line for closing a local circuit through said controlling relay to cause actuation thereof to connect the supervisory relay with the cord circuit.

5. In a telephone exchange system, the combination with a central exchange, of a telephone line leading therefrom and terminating in a substation, a cord circuit at the exchange, a supervisory relay normally disconnected from the cord circuit, a relay for controlling said supervisory relay, means adapted upon connection of the cord circuit with the line for closing a local circuit through said controlling relay to cause actuation thereof to connect the supervisory relay with the cord circuit, and a source of current at the substation adapted for connection with the line to send current through the supervisory relay when said relay is connected with the cord circuit.

[Claims 6 to 33 not printed in the Gazette.]

901,686. TELEPHONE-EXCHANGE SYSTEM. MERRITT S. CONNER, Rochester, N. Y., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 23, 1906. Serial No. 302,372.



1. In a telephone exchange system, the combination with a calling substation connected with a sub-central exchange to a telephone line, of a substation to be called connected with the main exchange through a telephone line, a trunk circuit at the main exchange for connection with the line leading to the substation to be called, a cord circuit at the sub-exchange for connection with the calling line and said trunk circuit, a supervisory relay for the cord circuit, a controlling relay associated with the trunk circuit and adapted upon connection of the cord circuit with the trunk circuit to be connected in circuit with the supervisory relay, the resistance of said controlling relay being sufficiently high to normally prevent operation of the supervisory relay, signaling apparatus associated with the trunk circuit, a second relay for controlling the connection of said signaling apparatus with the trunk circuit and with the line leading to the substation to be called, said second relay being controlled by the controlling relay and actuated to connect the signaling apparatus with the trunk circuit upon connection of said controlling relay in circuit with the supervisory relay, and means adapted upon actuation of apparatus at the called substation in response to the signaling current for causing reduction of the resistance in the circuit connecting the supervisory controlling relay whereby sufficient current may flow to operate the supervisory relay to indicate such response of the called substation.

2. In a telephone exchange system, the combination with a calling substation connected with a sub-central exchange

to a telephone line, of a substation to be called connected with the main exchange through a telephone line, a trunk circuit at the main exchange for connection with the line leading to the substation to be called, a cord circuit at the sub-exchange for connection with the calling line and said trunk circuit, a supervisory relay for the cord circuit, a controlling relay associated with the trunk circuit and adapted upon connection of the cord circuit with the trunk circuit to be connected in circuit with the supervisory relay, the resistance of said controlling relay being sufficiently high to normally prevent operation of the supervisory relay, signaling apparatus associated with the trunk circuit, a second relay for controlling the connection of said signaling apparatus with the trunk circuit and with the line leading to the substation to be called, said second relay being controlled by the controlling relay and actuated to connect the signaling apparatus with the trunk circuit upon connection of said controlling relay in circuit with the supervisory relay, means upon actuation of apparatus at the called substation in response to the signaling current for causing reduction of the resistance in the circuit connecting the supervisory controlling relay whereby sufficient current may flow to operate the supervisory relay to indicate such response of the called substation, and further means operable upon actuation of the substation apparatus for causing the second relay to be controlled to disconnect the signaling apparatus from the trunk circuit and line.

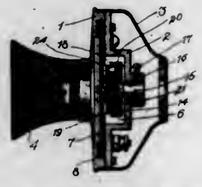
3. In a telephone exchange system, the combination with a calling substation connected with a sub-central exchange to a telephone line, of a substation to be called connected with the main exchange through a telephone line, a trunk circuit at the main exchange for connection with the line leading to the substation to be called, a cord circuit at the sub-exchange for connection with the calling line and said trunk circuit, a supervisory relay for the cord circuit, a controlling relay associated with the trunk circuit and adapted upon connection of the cord circuit with the trunk circuit to be connected in circuit with the supervisory relay, the resistance of said controlling relay being sufficiently high to normally prevent operation of the supervisory relay, a lower resistance circuit associated with the controlling relay, signaling apparatus associated with the trunk circuit, a second relay controlling the connection of said signaling apparatus with the trunk circuit, said second relay being controlled by the controlling relay, a main relay associated with the trunk circuit and controlling the high resistance relay and the lower resistance circuit associated therewith, said second relay being controlled by the controlling relay upon connection of said controlling relay in circuit through the supervisory relay to connect the signaling apparatus with the trunk circuit whereby the substation to be called is signaled, and means operable upon actuation of apparatus at the called substation in response to the signaling current for causing actuation of the main relay to render the low resistance circuit effective whereby sufficient current may flow to cause operation of the supervisory relay to indicate such response of the called substation.

4. In a telephone exchange system, the combination with a calling substation connected with a sub-central exchange to a telephone line, of a substation to be called connected with the main exchange through a telephone line, a trunk circuit at the main exchange for connection with the line leading to the substation to be called, a cord circuit at the sub-exchange for connection with the calling line and said trunk circuit, a supervisory relay for the cord circuit, a controlling relay associated with the trunk circuit and adapted upon connection of the cord circuit with the trunk circuit to be connected in circuit with the supervisory relay, the resistance of said controlling relay being sufficiently high to normally prevent operation of the supervisory relay, a low resistance relay, a third relay controlled by said low and high resistance relays, signaling apparatus adapted for connection with the trunk circuit upon actuation of the third relay to send signaling current to the substation to be called, and a main relay, actuation of substation apparatus in response to the signaling current causing actuation of the main relay to substitute the low resistance relay for the high resistance relay whereby the supervisory relay may operate to indicate the response of the called substation.

5. In a telephone exchange system, the combination with a calling substation connected with a sub-central exchange to a telephone line, of a substation to be called connected with the main exchange through a telephone line, a trunk circuit at the main exchange for connection with the line leading to the substation to be called, a cord circuit at the sub-exchange for connection with the calling line and said trunk circuit, a supervisory relay for the cord circuit, a controlling relay associated with the trunk circuit and adapted upon connection of the cord circuit with the trunk circuit to be connected in circuit with the supervisory relay, the resistance of said controlling relay being sufficiently high to normally prevent operation of the supervisory relay, signaling apparatus at the main exchange, relay mechanism for connecting the signaling apparatus with the trunk circuit, additional relay mechanism controlling the direct application of the ringing current to the line leading to the substation to be called, said additional relay mechanism being controlled by the high resistance relay and actuated upon energization of the high resistance relay when the cord circuit is connected with the trunk circuit, a low resistance relay, and a main relay associated with the trunk circuit, actuation of substation apparatus in response to the signaling current causing actuation of the main relay to substitute the low resistance relay for the high resistance relay whereby the supervisory relay may operate to indicate the response of the called substation, said additional relay mechanism upon deënergization of the high resistance relay being thereafter controlled by the low resistance relay, actuation of the main relay also causing operation of the first relay mechanism to disconnect the signaling apparatus from the trunk circuit.

[Claim 6 not printed in the Gazette.]

901,687. TELEPHONE-TRANSMITTER. MERRITT S. CONNER, Rochester, N. Y., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 18, 1906. Serial No. 348,454.



1. In a telephone transmitter, the combination with a diaphragm, of an electrode chamber, a positive and a negative electrode disposed side by side in said chamber and adapted to vibrate with said diaphragm, a common electrode disposed in opposition to said electrodes, comminuted resistance material disposed in said chamber whereby the current may pass from one electrode to the other therethrough and through said common electrode, and means for equally distributing the current throughout the resistance material.

2. In a telephone transmitter, the combination with a diaphragm, of an electrode chamber, a positive and a negative electrode disposed side by side in said chamber and adapted to vibrate with said diaphragm, a common electrode disposed in opposition to said electrodes, comminuted resistance material disposed in said chamber whereby the current may pass from one electrode to the other therethrough and through said common electrode, and means for decreasing the resistance toward that portion of one electrode furthest from the other electrode.

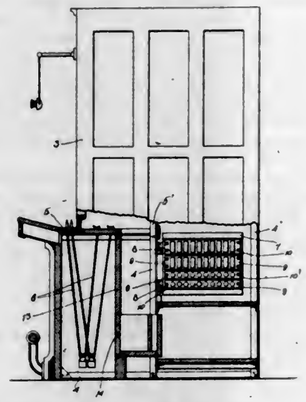
3. In a telephone transmitter, the combination with a diaphragm, of an electrode chamber, a positive and a negative electrode disposed side by side in said chamber and adapted to vibrate with said diaphragm, a common electrode disposed in opposition to said electrodes, and comminuted resistance material disposed in said chamber whereby the current may pass from one electrode to the other therethrough and through said common electrode, the contact surfaces of said positive and negative electrodes being so disposed that the amount of resistance material between said surfaces and said common electrode will decrease toward that portion of one electrode furthermost from the other electrode.

4. In a telephone transmitter, the combination with a diaphragm, of an electrode chamber, positive and negative electrodes disposed in said chamber and adapted to vibrate with said diaphragm, comminuted material forming a resistance medium between said electrodes, and means for adjusting the resistance inversely proportional to the distance between a point on the negative and a point on the positive electrode respectively.

5. In a telephone transmitter, the combination with a diaphragm, of an electrode chamber, positive and negative electrodes disposed in said chamber and adapted to vibrate with said diaphragm, comminuted material forming a resistance medium between said electrodes, and means for increasing the resistance toward the adjacent ends of said electrodes.

[Claims 6 to 13 not printed in the Gazette.]

901,688. SWITCHBOARD. MERRITT S. CONNER, Rochester, N. Y., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 18, 1906. Serial No. 348,456.



1. In a switchboard the combination with a main supporting frame, of an auxiliary frame hinged thereto, supporting plates on said auxiliary frame, said supporting plates being adapted to support the various switchboard apparatuses, the terminals of which are adapted to project through said plates whereby the wiring for said apparatuses may be disposed on the back of said frame.

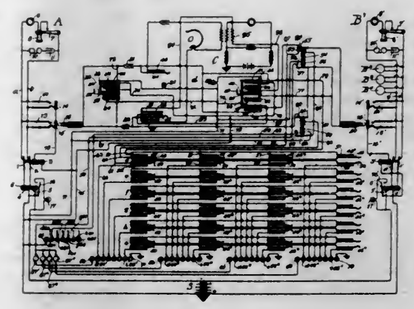
2. In a switchboard the combination with a main supporting frame, of an auxiliary frame hinged thereto, and supporting plates for said auxiliary frame upon which the switchboard electrical devices may be mounted, the terminals of such devices being adapted to extend through said plates whereby the wiring therefor may be located on the back of said auxiliary frame.

3. In a switchboard the combination with a main supporting frame, of an auxiliary frame hinged thereto, and supporting plates secured to said auxiliary frame, the switchboard devices being adapted to be disposed on said supporting plates with their terminals extending therethrough whereby the wiring for said devices may be located on the back of said auxiliary frame.

4. In a switchboard the combination with a main supporting frame, of a plurality of auxiliary supporting frames hinged thereto, and supporting plates for each of said auxiliary supporting frames to which the switchboard devices may be secured, the terminals of said devices extending through said plates and the wiring therefor being located on the back of the auxiliary frame.

5. In a switchboard the combination with a main supporting frame, of a plurality of auxiliary supporting frames hinged thereto, and supporting plates for each of said auxiliary supporting frames to which the switchboard devices may be secured, the terminals of said devices extending through said plates, the wiring therefor being located on the back of the auxiliary frame, and clamping means for retaining said frames in their normal position.

901,689. TELEPHONE-EXCHANGE SYSTEM. MERRITT S. CONNER, Rochester, N. Y., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 23, 1907. Serial No. 353,690.



1. In a telephone exchange system, the combination with a central exchange, of substations connected therewith through telephone lines, cord circuits at the central exchange, a source of ringing current at the central exchange, and means whereby said ringing current source may be periodically connected with each of said cord circuits successively.

2. In a telephone exchange system, the combination with a central exchange, of substations connected therewith through telephone lines, cord circuits at the central exchange, a source of ringing current at the central exchange, and interrupter means whereby said source may be periodically connected with each of said cord circuits in regular successive order.

3. In a telephone exchange system, the combination with a central exchange, of substations connected therewith through telephone lines, cord circuits at the central exchange, a source of ringing current at the central exchange, and means whereby said ringing current source may be effectively connected with said cord circuits successively at regular intervals.

4. In a telephone exchange system, the combination with a central exchange, of substations connected therewith through telephone lines, cord circuits at the central exchange divided into ringing divisions, a source of ringing current at the central exchange, and means whereby said ringing current source may be periodically connected with each of said ringing divisions in regular successive order.

5. In a telephone exchange system, the combination with a central exchange, of substations connected therewith through telephone lines, a plurality of groups of cord circuits at the central exchange, a source of ringing current at the central exchange, and means whereby said ringing current source may be periodically connected with each of said cord circuit groups in regular successive order.

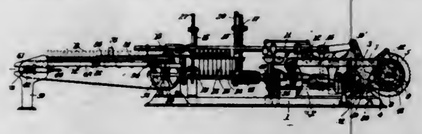
[Claims 6 to 21 not printed in the Gazette.]

901,690. GLASS-MOUNT FOR LAMP-SHADES AND KINDRED ARTICLES. REUBEN F. CROOKE, Meriden, Conn., assignor to Bradley & Hubbard Mfg. Co., Meriden, Conn., a Corporation. Filed June 8, 1908. Serial No. 437,329.



A glass-mount for lamp shades and kindred articles, cast in one piece and having frame-members forming the outline of the mount and inclosing and supporting the parts of the design which subdivide the space inclosed by the frame-members into spaces of various forms, the exterior surface of the parts forming the design being modeled in relief, and the rear faces of the frame-members being in the plane of the parts forming the design; in combination with transversely arranged sheets of glass placed against the flat back of the mount and extending transversely from edge to edge thereof, and means for holding the sheets of glass in place.

901,691. BRICK AND TILE CUTTING MACHINE. WILLIAM R. CUNNINGHAM, Bucyrus, Ohio, assignor to The American Clay Machinery Co., Bucyrus, Ohio, a Corporation. Filed Feb. 24, 1908. Serial No. 417,446.



1. In a machine of the character described, the combination with clay-measuring mechanism, clay-cutting mechanism, and a governing-mechanism for causing the cutting-mechanism to revolve substantially in register with and by the travel of the bar of clay, of an off-bearing or separating conveyer, and mechanism between the same and the governing-mechanism for causing the conveyer to travel in correct relative speed with the varying travel or speed of the measuring-mechanism and bar of clay.

2. In a machine of the character described the combination with clay-measuring mechanism, clay-cutting mechanism and a governing-mechanism, said mechanism being operable by the variable travel of the bar of clay, of an off-bearing conveyer, and means for maintaining a fixed ratio of speeds between the measuring-mechanism and the said conveyer for spacing the cut-brick suitable distances apart on the conveyer.

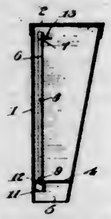
3. In a machine of the character described, the combination with clay-measuring mechanism, clay-cutting devices, and a governing-mechanism for causing the cutting-devices to operate substantially in register with the varying travel of the bar of clay, of an off-bearing traveling conveyer, and means governed by the moving bar of clay for imparting to the conveyer the irregular speed of said bar of clay.

4. Machines of the character described having a measuring belt at the receiving end of the machine, an off-bearing belt at the delivery end of the machine, cutting and governing mechanisms arranged between the two belts, and means for maintaining a fixed ratio of speeds between said belts in harmony with the variable travel of the bar of clay.

5. A brick and tile cutting machine having a measuring-belt upon which the bar of clay is received, clay-cutting mechanism operatively connected with the measuring-belt, governing mechanism for causing the cutting devices to operate substantially in register with the varying travel of the bar of clay, an off-bearing belt, and connections between the same and the governing-mechanism for causing the off-bearing belt to respond to variations in the movement or travel of the bar of clay.

[Claims 6 to 25 not printed in the Gazette.]

901,692. ICE-TANK. WHITNEY CURL and EDWARD WHEELOCK, Hot Springs, Ark. Filed Sept. 10, 1907. Serial No. 392,175.



1. The combination of a receptacle 1; a lid 2, fitting on top of said receptacle; a foot 3, extending from one of the walls of said receptacle; a drain-pipe 6, provided with inlet openings 7, 8 and 9, secured to the inner face of one of the walls of said receptacle, its lower end extending a little below the bottom 4, of said receptacle; a flange 5, extending downwardly from the bottom 4, of said receptacle; a rod 10, passing down through said pipe, and having its upper end turned at right-angles to its body, forming a lever 13, and a cup 11, provided with openings 12, in its upper edge, rigidly secured to the lower end of said rod, substantially as shown and described and for the purposes set forth.

2. The combination of a receptacle; a lid, fitting on the top of said receptacle; a drain-pipe, provided with inlet openings, secured to the inner face of the walls of the said receptacle, its lower end passing through the bottom of said receptacle; a depending flange extending from the bottom of said receptacle; a rod, passing through said drain-pipe, and a cup provided with openings in its upper edge rigidly secured to the lower end of said rod, with means for holding said tank in an upright position, and for rotating said rod and cup, substantially as shown and described and for the purposes set forth.

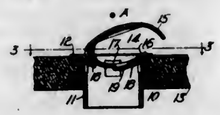
901,693. RUG HOLDER OR STIFFENER. ANTON DANEK, Chicago, Ill. Filed July 10, 1908. Serial No. 442,843.



A holding-device for rugs formed of a thin strip of resilient metal and provided with oppositely extending teeth disposed to engage and for removably securing both ends of the strip in a rug.

901,694. LACING-STUD. LUTHER B. DAVIS, Malden, Mass. Filed Mar. 7, 1908. Serial No. 419,616.

1. A lacing stud in two parts, namely, a base and a hook movably mounted thereon, said hook comprising a substantially U-shaped portion having an arm normally separated from said base by a space through which a lacing may be introduced into said hook, the whole of said hook being adapted to be moved bodily relatively to said base by said lacing to close said space.



2. A lacing stud in two parts, namely, a base and a hook slidably mounted thereon, said hook comprising a substantially U-shaped portion having an arm normally separated from said base by a space through which a lacing may be introduced into said hook, the whole of said hook being adapted to be moved bodily relatively to said base by said lacing to close said space.

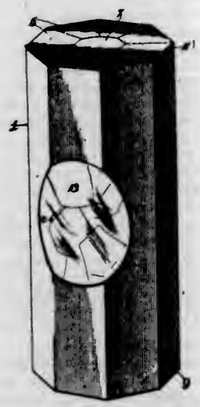
3. A lacing stud in two parts, namely, a base and a hook mounted thereon to slide in a curved path, said hook comprising a substantially U-shaped portion having an arm normally separated from said base by a space through which a lacing may be introduced into said hook, the whole of said hook being adapted to be moved bodily relatively to said base by said lacing to close said space.

4. A lacing stud in two parts, namely, a base and a hook slidably mounted thereon, said hook comprising a substantially U-shaped portion having two arms, one of said arms being slidably mounted on said base and the other of said arms being normally separated from said base by a space through which a lacing may be introduced into said hook, the whole of said hook being adapted to be moved bodily relatively to said base by said lacing to close said space.

5. A lacing stud in two parts, namely, a base and a hook mounted thereon to slide in a curved path about a center outside of said stud, said hook comprising a substantially U-shaped portion having an arm normally separated from said base by a space through which a lacing may be introduced into said hook, the whole of said hook being adapted to be moved bodily relatively to said base by said lacing to close said space.

[Claims 6 to 9 not printed in the Gazette.]

901,695. CARDBOARD BOX. OSCAR H. DAVIS, Kansas City, Mo., assignor to Davis Bros., Kansas City, Mo., a Copartnership. Filed May 26, 1908. Serial No. 435,134.

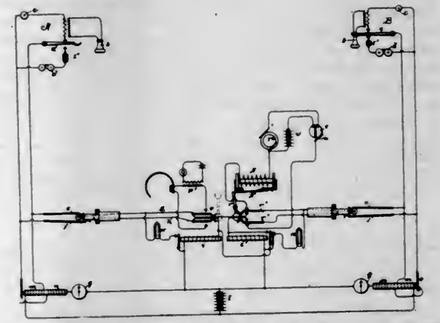


1. A box comprising a body portion and two end-portions, each end-portion consisting of a series of angular portions folded inwardly and having their side edges abutting squarely against each other so as to conjointly form a stiffening flange, the angular portions at one end being truncated to form a central opening.

2. A box, comprising a body portion and two end-portions, each end-portion consisting of a series of angular portions folded inwardly and having their side edges abutting squarely against each other so as to conjointly form a stiffening flange, the angular portions at one end being truncated to form a central opening, and seals secured to said end-portions and holding them in their folded positions with their edges abutting together, the seal at the end provided with the opening bridging and closing said opening.

3. A blank for forming boxes and provided with a plurality of scores parallel with its ends and dividing it into a series of similar sections, and terminating at one end in a flap or extension to lap the opposite end when the box is formed, angular portions projecting from the lower ends of said sections, and truncated angular portions projecting from the upper ends of said sections.

901,696. TELEPHONE-EXCHANGE SYSTEM. WILLIAM M. DAVIS, Chicago, Ill., assignor, by mesne assignments, to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 26, 1901, Serial No. 57,597. Renewed Oct. 8, 1903. Serial No. 176,311.



1. In a telephone exchange system, the combination with a telephone switch-hook at the subscriber's station for opening and closing the telephone circuit thereat, a telephone line extending from the subscriber's station to an exchange, a signaling generator at the exchange adapted for connection with the telephone line, a bell at the subscriber's station to be operated by current from the said generator, a second source of current, an electromagnet serving directly to disconnect the generator from the telephone line, means for alternately including the said sources of current in circuit with the telephone line, the switch-hook at the subscriber's station serving to afford a path for current from both of the said sources to energize the said magnet to remove the generator from the line, substantially as described.

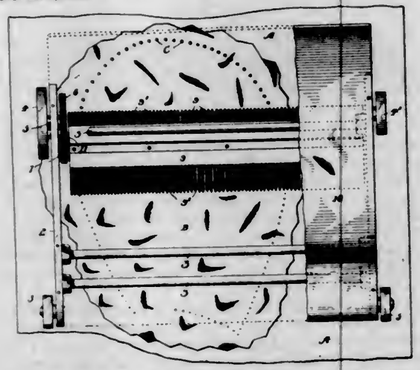
2. In a telephone exchange system, the combination with a telephone switch-hook at the subscriber's station for opening and closing the telephone circuit thereat, a telephone line extending from the subscriber's station to an exchange, a signaling generator at the exchange adapted for connection with the telephone line, a bell at the subscriber's station to be operated by current from the said generator, a second source of electricity furnishing direct current, an electromagnet serving directly to disconnect the generator from the telephone line, means for alternately including the said sources of current in circuit with the telephone line, the switch-hook at the subscriber's station serving to afford a path for current from both of the said sources to energize the said magnet to remove the generator from the line, substantially as described.

3. In a telephone exchange system, the combination with a central exchange station, of a subscriber's substation, a telephone line connecting said central station with said substation, a signal bell at the substation normally connected with the telephone line, a main signaling circuit

at the central exchange, a key for connecting said signaling circuit with the telephone line, an electromagnet in said main circuit, the armature of said electromagnet when unattracted acting in conjunction with said key to maintain connection with said signaling circuit and the telephone line, a signaling generator at the central station, a source of direct current in parallel relation therewith, a switch for alternately including said generator and said source of current in circuit with said electromagnet, the signal bell at the substation being responsive only to currents from the generator and the resistance thereof being high enough to prevent sufficient energization of said electromagnet, and means at the substation to change the circuit conditions to allow sufficient energization of said electromagnet, whereby its armature is attracted to break the connection between said signaling circuit and the telephone line, substantially as described.

4. In a telephone exchange system, the combination with a telephone line extending from a central exchange to a substation, of a signal bell at the substation, a circuit normally connecting said signal bell with the line limbs, a signaling generator at the central exchange, a key at the central exchange for connecting said generator in bridge of the line limbs whereby said signal bell is actuated, a source of direct current associated with said signaling generator, means for alternately connecting said signaling generator and said source of current in the ringing circuit, an electromagnet included in the ringing circuit, the adjustment of said signal bell circuit preventing energization of said electromagnet, an armature for said electromagnet normally inert and adapted to lock said key upon actuation, whereby said ringing circuit is maintained in connection with the line, actuation of substation apparatus allowing sufficient current to flow to cause energization of said electromagnet whereby said armature is attracted and said key released to disconnect the ringing circuit from the line.

901,697. FUR-NAIL-PICKING MACHINE. ANTHONY DIOSZEGHY, Allegheny, Pa. Filed Sept. 26, 1907. Serial No. 394,682.



1. In a fur nail picking machine, a portable frame open at the front to permit the front of the frame to pass over fur-holding nails projecting from the pattern board, and nail pulling means operative within the frame as the latter moves over the pattern board.

2. In a fur nail picking machine, a frame movable over a pattern board, and a series of successively acting nail-pulling combs rotatable in the frame on a horizontal axis.

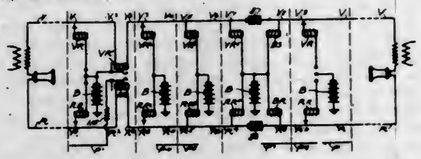
3. In a fur nail picking machine, a portable frame movable over and adapted to bear upon a pattern board, and nail pulling means rotatable on a horizontal axis within the frame and spaced upwardly from the bottom thereof for pulling nails from the board as the frame is moved thereover.

4. In a fur nail picking machine, a portable frame movable over a pattern board, movable nail pulling means mounted within the frame, a rotating member carried by the frame and adapted to roll on the pattern board, and an operative connection between said member and the nail pulling means for actuating the latter.

5. In a fur nail picking machine, a portable frame movable over a pattern board, a horizontal shaft within the frame and spaced upwardly from the bottom thereof, nail engaging means carried by the shaft, and a rotating member adapted to roll on the pattern board for actuating the shaft.

[Claims 6 to 9 not printed in the Gazette.]

901,698. AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. BERT G. DUNHAM, Chicago, Ill., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 5, 1904. Serial No. 227,288.



1. In an automatic telephone system, a subscriber's line, a metallic circuit trunk line, a selector serving to connect said subscriber's line with said trunk line, controlling magnets for said selector, switches operated by said controlling magnets to open the circuit of said magnets upon the completion of a selection, and electromagnet mechanism controlled over the line circuit to actuate said selector to disconnect said subscriber's line from said trunk line.

2. In an automatic telephone system, a subscriber's line, a selecting switch therefor, a trunk line, controlling magnets normally bridged across the subscriber's line for causing said switch to select and connect with said trunk line, means for automatically disconnecting said controlling magnets from said line after their operation, a source of current adapted to supply current over said trunk line to said subscriber's line, and means operated by current from said source over said trunk line to cause said switch to disconnect said subscriber's line from said trunk line, substantially as described.

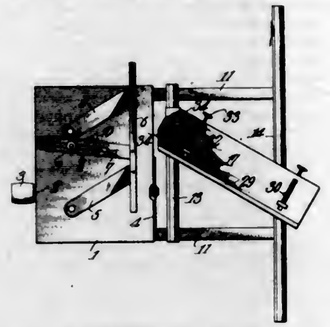
3. In an automatic telephone system, a metallic circuit line, a substation in said line, a selecting switch for said line, controlling magnets for said switch, a disconnect magnet for said switch, a metallic circuit trunk line, means at said substation for causing the selecting switch of said line to select and connect with said trunk line, means for automatically disconnecting said controlling magnets from said line after such selection and connection, and means operated over the limbs of said trunk line for closing the circuit of said disconnect magnet to cause said selecting switch to release said trunk, substantially as described.

4. In an automatic telephone system, a metallic circuit line, a substation and a selecting switch for said line, controlling magnets for said switch normally in operative relation with said line, a metallic circuit trunk line, means at said substation for causing its selecting switch to select and connect with said trunk line, means for automatically placing said controlling magnets in inoperative relation with said line after such selection and connection, relays connected with the limbs of said trunk, and means controlled by said relays for causing said selecting switch to disconnect said line from said trunk line, substantially as described.

5. In an automatic telephone system, a metallic circuit line, a substation and a selecting switch for said line, a pair of controlling magnets for said switch normally bridged across said line, a source of current connected between said magnets and a third conductor, a metallic circuit trunk line, means at said substation for connecting the limbs of said line with said third conductor for causing said selecting switch to select and connect with said trunk line, means for automatically disconnecting said controlling magnets from said line after such selection and connection, relays connected in the limbs of said trunk line, and means controlled by said relays for causing said selecting switch to disconnect said line from said trunk line, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

901,699. MITERING-MACHINE. JOHN M. FETZER, Madison, Wis. Filed Jan. 15, 1908. Serial No. 411,016.



1. A combined rip and mitering structure composed of a rip saw table having an adjustable guide for the material to be ripped, a side extension thereof on the saw side of the table, spaced tracks mounted on said side extension and parallel with the saw side of the table, and a mitering table mounted for longitudinal movement on the tracks, said mitering table being adjustable rotatively with relation to one track and in the direction of the length of said table with relation to the other track.

2. A mitering structure comprising a circular saw arbor, spaced tracks parallel with the face of the saw carried by the arbor, and a mitering table adjustable as a whole rotatively on the track adjacent to the saw and longitudinally with relation to the track remote from the saw, said table being mounted for movement along said tracks when in any position of adjustment relative to the same.

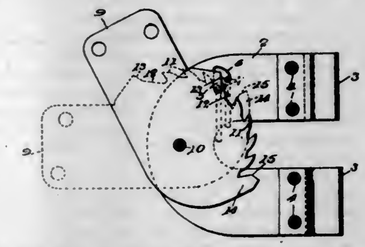
3. A mitering structure comprising two tracks of different length the shorter of which is adjacent to a mitering saw, a carriage on each track, a mitering table supported on the carriages, pivotal connections between the carriages and the table, and means for longitudinal adjustment of one of the pivotal connections with relation to the table.

4. In a mitering structure, two parallel tracks of different length, a saw arbor for a circular saw adjacent to the shorter track, a mitering table, carriages for the same mounted on the track, pivotal connections between the carriage on the shorter track and table, a longitudinal undercut slot in the table, pivotal connections between the carriage and the longer track and the table, said pivotal connections comprising a headed pin entering the undercut slot in the table, a slotted link pivotally connected to the carriage on the long track, and a clamping means extending through the slot in the link and engaging the table and serving to secure the table in adjusted relation to the carriages and track.

901,700. ADJUSTABLE BRACKET. IRA FILSON, Springfield, Ohio. Filed Feb. 3, 1908. Serial No. 413,993.

1. In an adjustable bracket, the combination, with a fixed member, and a movable member, one of said members having a plurality of supports arranged one above the other, of a detent adapted to be loosely mounted on one of said supports, a tooth carried by the other of said members and adapted to engage said detent when the same is mounted upon the lower support, means for moving said detent onto the upper support, and means for restoring the same to the lower support.

2. In an adjustable bracket, the combination, with a fixed member and a movable member, one of said members having a slot therein, said slot having a recess in one of the walls thereof, a detent mounted in said slot, and a part carried by the other member adapted to engage said detent, of means for moving said detent into said recess as said movable member approaches one limit of its movement.



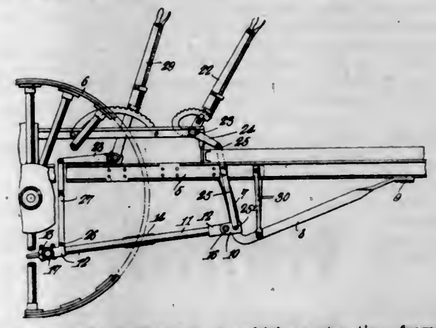
3. In an adjustable bracket, the combination, with a fixed member and a movable member, one of said members having a slot therein, said slot having a recess in one of the walls thereof, a detent mounted in said slot, and a part carried by the other member adapted to engage said detent, of means for moving said detent into said recess as said movable member approaches one limit of its movement, and other means for moving said detent out of said recess and into said slot as said movable member approaches the opposite limit of its movement.

4. In an adjustable bracket, the combination, with a fixed member having a slot therein, said slot having a recess in one wall thereof, and a detent mounted in said slot, of a movable member having a toothed portion adapted to engage said detent when the same is in said slot, and means located near one end of said toothed portion adapted to engage said detent as said movable member approaches one limit of its movement and move said detent into said recess.

5. In an adjustable bracket, the combination, with a fixed member having a vertical slot therein, said slot having a recess in the rear wall thereof, and a detent mounted in said slot, of a movable member having a toothed portion, and means located near the forward end of said toothed portion adapted to engage said detent as said movable member approaches the limit of its upward movement and move said detent into said recess.

[Claims 6 to 13 not printed in the Gazette.]

901,701. DRAFT APPLIANCE. FRED A. GERLING, Portland, Oreg. Filed Mar. 6, 1907, Serial No. 360,855. Renewed Mar. 27, 1908. Serial No. 423,590.



1. In draft mechanism, a vehicle, a traction frame, means operatively connected with the opposite ends of the traction frame for raising and lowering the same thereby to change the point of application of the load, and a coupling device carried by and adjustable transversely of the frame.

2. In draft mechanism, a vehicle, a traction frame, a coupling device carried by and adjustable transversely of

the traction frame, and means operatively connected with the opposite ends of the frame for raising and lowering the same thereby to change the point of application of the load.

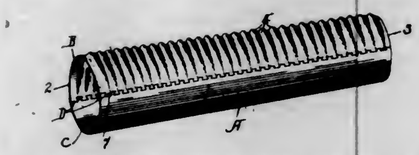
3. In draft mechanism, a vehicle, a traction frame, a coupling device adjustable laterally of the frame, levers operatively connected with the opposite ends of said frame for raising or lowering either end thereof, and means for locking the coupling device in adjusted position.

4. In draft mechanism, a vehicle, a traction frame, levers mounted on the vehicle, links forming a pivotal connection between the levers and the traction frame thereby to tilt the latter at any angle with respect to the vehicle, and a coupling device secured to and adjustable transversely of the frame.

5. In draft mechanism, a vehicle, a traction frame, levers mounted on the vehicle for independently raising and lowering the opposite ends of the frame, links forming a pivotal connection between the levers and the traction frame, and a coupling device secured to and adjustable transversely of one end of the frame.

[Claims 6 to 12 not printed in the Gazette.]

901,702. CULVERT. CHARLES E. GLASSPOOLE, St. Paul, Minn. Filed Jan. 13, 1908. Serial No. 410,560.



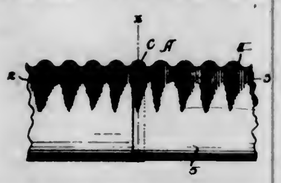
1. A device of the class set forth, comprising, a pipe having longitudinal upper and lower parts, said upper part having transverse corrugations and said lower part having an inner smooth surface, said parts being joined together along their sides, for the purposes specified.

2. A culvert of the class set forth, comprising, a thin metal pipe having upper and lower parts which are joined together, said upper part having a corrugated surface and said lower part a smooth surface, for the purposes specified.

3. A culvert of the class set forth, comprising, a pipe made out of thin metal and having upper and lower sections, said upper section having a series of transverse corrugations and said lower section a smooth inner surface, said sections being joined together by overlapping edges along their sides, for the purposes specified.

4. A device of the class set forth, comprising, a culvert in the form of a pipe made out of thin metal and having upper and lower sections B and C, said upper section having series of transverse corrugations 4 and said lower section an inner smooth surface, said sections being joined together by flaps 5 and 6 which overlap the side edges of the lower section, on its outer and inner surfaces, for the purposes specified.

901,703. CULVERT. CHARLES E. GLASSPOOLE, St. Paul, Minn. Filed Mar. 3, 1908. Serial No. 418,941.



1. A device of the class set forth, comprising a pipe having longitudinal upper and lower integral parts, said upper part having transverse corrugations and said lower part an inner smooth surface, for the purposes specified.

2. A culvert of the class set forth, comprising, a sheet metal pipe having upper and lower integral parts, said upper part being intersticed to reinforce the strength of the culvert and said lower part having a smooth inner surface, for the purposes specified.

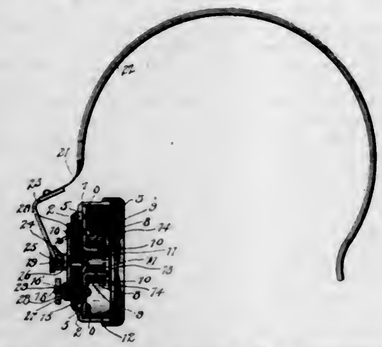
3. A culvert of the class set forth, comprising, a pipe made out of a thin sheet and having upper and lower parts, said upper part having a series of transverse corrugations and said lower part a longitudinal smooth inner surface, the side edges of said sheet being secured together and forming a longitudinal joint, for the purposes specified.

4. A culvert in the form of a pipe made out of a single piece of sheet metal having a reinforced upper longitudinal part provided with transverse corrugations and a lower part having a longitudinally smooth inner surface, for the purposes specified.

5. A culvert of the class set forth, comprising, two lengths the ends of which being joined together, each of said lengths comprising a pipe having upper and lower integral parts, the upper part having a series of transverse corrugations and the lower part a longitudinal smooth inner surface, for the purposes specified.

[Claims 6 to 10 not printed in the Gazette.]

901,704. RECEIVER. JOHN S. GOLDBERG, Chicago, Ill., assignor to The Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 23, 1903. Serial No. 182,351.



1. In a receiver, the combination of an outer cylindrical casing consisting of a continuous one-piece shell of magnetic material of which diametrically opposite regions are oppositely polarized, bent pole-pieces extending from such polarized regions, coils disposed on such pole pieces and held in place between the bent ends and the upset ends thereof, and a diaphragm disposed over the pole faces of said pole pieces.

2. In a receiver, the combination with an outer cylindrical casing consisting of a continuous one-piece shell of magnetic material having diametrically opposite regions oppositely polarized, of bent pole pieces extending from said polarized regions, coils disposed about said pole pieces and held in place between the bent ends and the upset ends thereof and a disk of magnetic material disposed before the pole faces of said pole pieces, said disk being supported from a diaphragm of non-magnetic material.

3. In a receiver, the combination with an outer one piece casing in the shape of a continuous ring and composed of magnetic material, diametrically opposite regions of said casing being oppositely polarized, bent pole pieces extending inwardly from said polarized regions, cores extending perpendicularly from the inner ends of said pole pieces, receiver coils disposed upon said cores and held in place between the bent ends and the upset ends thereof and a diaphragm disposed before the faces of said cores.

4. In a receiver, the combination with an outer one piece casing in the shape of a continuous ring and composed of magnetic material, of an annular web extending inwardly from the rear edge of said casing, two diametrically opposed regions of said casing being oppositely polarized, a bent pole piece secured to such web at each of said

areas and extending inwardly, integral cores extending forwardly and perpendicularly from said pole pieces at the inner ends thereof, receiver coils disposed about said cores and held in place by the upset ends thereof and by the body portions of the pole pieces, a disk of magnetic material disposed before the pole faces of said cores and a diaphragm of non-magnetic material for supporting said disk.

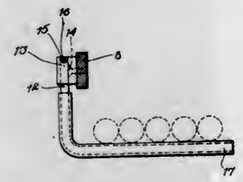
901,705. PRINTING SULFURIZED DYESTUFFS. MAX GRÜNBAUM, Berne, Switzerland, assignor to The Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Filed Dec. 2, 1907. Serial No. 404,645.

1. The herein described improved process for printing sulfurized dyestuffs, which consists in first preparing a printing color which contains an excess of sodium sulfid at such a high degree of concentration that brass or copper is not attacked thereby, and then printing the same by means of rollers containing copper, whereby such printing may be effected without blackening of said rollers.

2. The herein described improved process for printing sulfurized dyestuffs, which consists in first preparing a printing color which contains caustic alkali and an excess of sodium sulfid at such a high degree of concentration that brass or copper is not attacked thereby, and then printing the same by means of rollers containing copper, whereby such printing may be effected without blackening of said rollers.

3. The herein described improved process for printing sulfurized dyestuffs, which consists in first preparing a printing color which contains a caustic alkali and hydrosulfite and an excess of sodium sulfid at such a high degree of concentration that brass or copper is not attacked thereby, and then printing the same by means of rollers containing copper, whereby such printing may be effected without blackening of said rollers.

901,706. CABLE-SUPPORT. ELBERT A. HAWKINS, Baldwin, N. Y., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 18, 1906. Serial No. 348,488.



1. A swinging bracket consisting in a supporting block, a bent bar adapted to extend vertically through such block and horizontally below such block, the vertical portion of such bar conformed to rotate in such block, means for supporting such bar from such block, means for preventing rotation of such bar in such block, and means for releasing such bar from such block to permit rotation of such bar and means for normally preventing the removal of the bar from the block.

2. A swinging bracket consisting in a supporting block, a bent rod adapted to extend vertically through such block and horizontally below such block, the vertical portion of such bar conformed to rotate in such block, and means for supporting such bar from such block, such means adapted to prevent rotation of such bar in such block when such bar is in a desired angular position, such means permitting rotation of such bar in such block when such bar is in another angular portion and normally preventing the removal of the bar from the block.

3. A swinging bracket consisting in a supporting block, a bent bar adapted to extend vertically through such block and horizontally below such block, the vertical portion of such bar conformed to rotate in such block, means for supporting such bar from such block, such means adapted to prevent rotation of such bar in such block when the bar is in a desired angular position, and means for releasing such bar from such block consisting in lifting the bar therein such supporting means normally preventing the removal of the bar from the block and adapted to be detached from the bar to permit the removal of the bar from the block.

4. A swinging bracket consisting in a supporting block, a round bent bar adapted to extend vertically through such block and horizontally below such block, a removable pin extending through the upper end of the vertical portion of such bar, and a slot in the face of the block adapted to coöperate with such pin such pin serving normally to support the bracket and prevent the removal of the bar from the block and also adapted by its removal from the bar to permit the removal of the bar from the block.

901,707. ARTIFICIAL FUEL. GEORGE W. HERBEIN, Seattle, Wash. Filed Nov. 30, 1907. Serial No. 404,634.

1. An artificial fuel formed from petroleum, peat, and saccharate of lime in dry powder form.

2. An artificial fuel formed from petroleum twenty per cent., peat seventy-eight per cent., and powdered saccharate of lime two per cent.

901,708. PROCESS OF MAKING CAMPHOR. JOSEF HERTKORN, Berlin, Germany. Filed June 1, 1908. Serial No. 435,888.

1. The process of producing camphor by subjecting borneol to nascent oxygen, which consists in adding to a hypochlorite solution a mixture of a salt of one of the metals of the sulfid of ammonium group and a salt of one of the metals of the sulfid of hydrogen group, and adding borneol to the resulting mixture, substantially as described.

2. The process of producing camphor, which consists in adding to a solution of hypochlorite of lime a mixture containing chlorid of iron and chlorid of copper in solution and slowly stirring borneol into the resulting product, substantially as described.

3. The process of producing camphor which consists in adding to a strong solution of hypochlorite of lime a strong solution containing chlorid of copper and chlorid of iron, adding borneol to the resulting mixture, controlling the temperature during the oxidation of the borneol by said resulting mixture, and purifying the oxidized product, substantially as described.

901,709. PROCESS OF MAKING IODIN PRODUCTS. JOSEF HERTKORN, Berlin, Germany. Filed June 1, 1908. Serial No. 435,890. (Specimens.)

1. The herein described process for making products containing iodin, which consists in treating the condensation products of aldehydes and ketones with iodin-yielding substances, substantially as described.

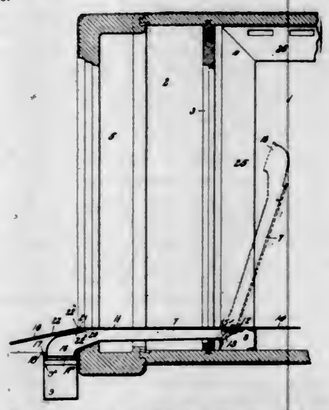
2. The herein described process for obtaining products containing iodin, which consists in condensing a mixture of an aldehyde and a ketone, and treating the product with a substance which under heat will yield iodin, substantially as described.

3. The herein described process for making products containing iodin, which consists in condensing a mixture of an aldehyde and a ketone by means of an alkali, separating the precipitate, warming the same with benzin, and adding thereto an iodin-yielding substance, heating the mass, and purifying the product obtained, substantially as described.

901,710. MOVABLE VENTILATOR FOR VAULTS. FREDERICK S. HOLMES, New York, N. Y., and GEORGE L. DAMON, Pittsburg, Pa. Filed June 23, 1908. Serial No. 439,993.

1. In combination with a safe or vault, a ventilating conduit comprising an outer flue and a movable flue adapted to communicate with the outer flue and movable into and out of a position extending across the bottom of the vestibule.

2. In combination with a safe or vault, a ventilating conduit comprising an outer flue and a movable flue adapted to communicate with the outer flue and movable into and out of a position extending across the bottom of the vestibule; said movable flue providing a foot-way across the vestibule.



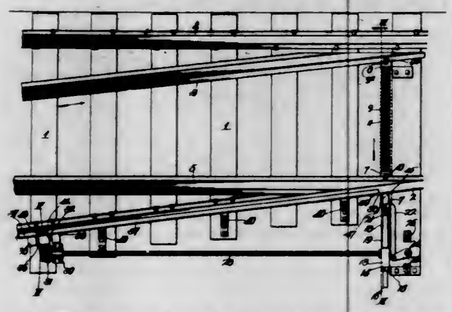
3. In a ventilator for vaults, the combination of an outer flue, a movable flue adapted to connect with the outer flue and lie across the bottom of the vestibule, and a foot-plate carried by the said movable flue.

4. In a ventilator for vaults, a movable flue hinged at one end within the vault, and movable upon said hinge into and out of a position lying across the bottom of the vestibule, and means coöperating with said movable flue to direct an air current therethrough.

5. In combination with a vault, an inner ventilating flue, and a movable flue adapted to communicate with said inner flue and to be moved into and out of position across the bottom of the vestibule.

[Claims 6 to 10 not printed in the Gazette.]

901,711. RAILWAY-SWITCH. IRA M. KELTNER, Carrollton, Mo. Filed Nov. 25, 1907. Serial No. 403,672.



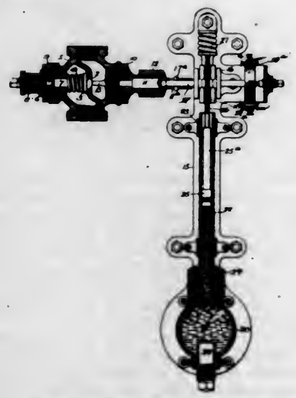
1. In a railway switch, a main track section comprising a stationary rail and a movable rail, a switch track section comprising a stationary rail and a movable rail, a cross-bar connecting the movable rails together, and provided with rack-teeth, a pair of levers suitably pivoted at their remote ends and pivoted together at their contiguous ends and sloping upward toward the last-named ends to a point above the contiguous stationary main track rail, a vertical rack-bar movable with said levers, a shaft, a gear wheel secured upon one end of the shaft and engaging said rack-bar, a second gear wheel secured upon said shaft and engaging the rack-teeth of said cross-bar, and yielding means for resisting the depression of said levers and the opening of the switch.

2. In a railway switch, a main track section comprising a stationary rail and a movable rail, a switch track section comprising a stationary rail and a movable rail, a cross bar consisting of an inner member connecting the movable rails and an outer member slidably connected to the inner member, a spring tending to hold said members pressed endwise together and the switch closed, a switch-stand provided with a movable arm, a link pivotally connecting said arm with the said inner member, a pin projecting from said inner member and a bevel-end catch suitably pivoted and adapted when the switch-stand is operated to open the switch, to be pushed aside by said pin and then drop behind it to lock the switch open.

3. In a railway switch, a main track section comprising a stationary rail and a movable rail, a switch track section comprising a stationary rail and a movable rail, a cross bar consisting of an inner member connecting the movable rails and an outer member slidably connected to the inner member, a spring tending to hold said members pressed endwise together and the switch closed, a switch-stand provided with a movable arm, a link pivotally connecting said arm with the said inner member, a pin projecting from said inner member, a bevel-end catch suitably pivoted and adapted when the switch-stand is operated to open the switch, to be pushed aside by said pin and then drop behind it to lock the switch open, and means to operate the said outer member and cause the same to lift said catch to inoperative position.

4. In a railway switch, a main track section comprising a stationary rail and a movable rail, a switch track section comprising a stationary rail and a movable rail, a cross-bar consisting of an inner member connecting the movable rails and an outer member slidably connected to the inner member, a spring-actuated pin locking said members rigidly together, means to unlock said pin, a switch-stand embodying a shaft provided with a handle and a crank arm, a link pivotally connecting the crank arm and the inner member of the cross-bar, and a spring for resisting movement of the inner member tending to open the switch.

901,712. VALVE-CONTROLLING MEANS. JEANNOT W. KENEVEL, Philadelphia, Pa. Filed June 13, 1907. Serial No. 378,757.



1. The combination of a valve, means for maintaining the same in one position, a rotatable stem adapted to engage said valve and movable longitudinally when rotated in engagement with said valve, and means controlled by the temperature for rotating said stem to effect a change in the position of said valve.

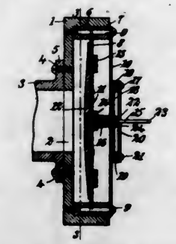
2. The combination of a valve, means for maintaining the same in one position, a longitudinally movable stem in engagement with said valve and serving to effect a change in the position of said valve when moved in one direction, and to permit closing of the valve when moved in the opposite direction, a movable spindle in engagement with said stem, a pinion carried by said spindle, a rack in engagement with said pinion, a piston carried by said rack, a body of expanding fluid for moving said rack in one direction, and means for moving the rack in the opposite direction when released from the influence of the expanding fluid.

3. The combination of a valve, means for maintaining the same in a closed position, a motor, circuit closing means for starting said motor, a rotatable stem in engagement with the valve, said stem also carrying circuit closing means, and means controlled by the temperature for operating said stem and simultaneously closing the circuit to start the motor.

4. The combination of a valve, means for maintaining the same in a closed position, a rotatable stem adapted to engage said valve and movable longitudinally when rotated in engagement with said valve, and means controlled by the temperature for rotating said stem to open the valve.

5. The combination of a valve, means for maintaining the same in closed position, a longitudinally movable stem in engagement with said valve and serving to open the valve when moved in one direction, and to permit closing of the valve when moved in the opposite direction, a movable spindle in engagement with said stem, a pinion carried by said spindle, a rack in engagement with said pinion, a piston carried by said rack, a body of mercury for moving said rack in one direction, and means for moving the rack in the opposite direction when released from the influence of the mercury.

901,713. SOUND-BOX. JAMES S. KERR, Valparaiso, Chile. Filed Dec. 28, 1907. Serial No. 408,388.



1. In a sound box, a diaphragm having an opening therethrough, and means for connecting a stylus bar to said diaphragm at said opening intermediate and remote from the edges of the diaphragm forming said opening.

2. In a sound box, a diaphragm having an opening therethrough, and bracing members rigidly secured to one of the faces of said diaphragm and extending across the same, said members being contiguous with respect to said diaphragm throughout their lengths.

3. In a sound box, a diaphragm having an opening therethrough, and bracing members rigidly mounted upon said diaphragm and extending over said opening.

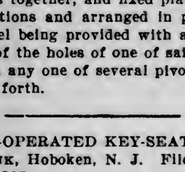
4. In a sound box, a diaphragm having an opening therethrough, bracing members rigidly mounted upon said diaphragm and extending over said opening, and means for securing a stylus bar to one of said members within said opening.

5. In a sound box, a diaphragm having an opening therethrough, bracing members rigidly mounted upon said diaphragm and extending over said opening in different directions, a stylus bar, and means for securing said stylus bar to said members within said opening.

[Claims 6 to 13 not printed in the Gazette.]

901,714. VESSEL FOR DISPENSING LIQUIDS. LEWIS G. LANGSTAFF, New York, N. Y. Filed Jan. 6, 1906. Serial No. 294,818.

A liquid dispensing vessel including a dispensing chamber having a discharge mouth, a piston for forcing liquid from the dispensing chamber, said piston having its rod projecting exterior to the vessel, a handle on the rod, a stopper carried by the piston exterior to the vessel arranged to open and close the discharge mouth, said stopper having its shank passing up through the discharge



mouth and the dispensing chamber and adjustably engaged with the piston, and a spring interposed between the top of the vessel and the handle arranged to normally hold the piston raised and the discharge mouth closed.

901,715. AWNING REFLECTOR-SCREEN. JOSEPH N. LAPRÉS, Montreal, Quebec, Canada. Filed Sept. 13, 1907. Serial No. 392,653.



1. A series of fabric-covered panels, individually journaled for limited rotary movement, in combination with means for locking each panel independently in any one of several angular positions and a cord connected to all of said panels and adapted to operate them simultaneously substantially as set forth.

2. A series of panels each of which is mounted to turn through a part of a circle and is permitted a limited up and down motion bodily, in combination with flexible means for operating all the panels together, each panel being adapted to be readily freed from said means and moved independently endwise, or from one pivotal position to another and means for locking each panel in any one of several pivotal positions substantially as set forth.

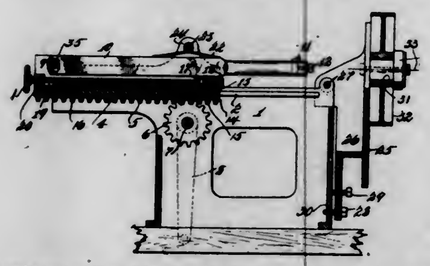
3. A series of pivotally adjustable panels, in combination with a cord connected detachably thereto in order that all of said panels may be operated together, or each one of them independently on disconnecting it from said cord and locking devices for holding each panel in any one of several pivotal positions substantially as set forth.

4. A series of pivotally adjustable panels, in combination with means, detachable from each panel, for operating all of said panels together, and fixed plates provided with series of perforations and arranged in proximity to said panels, each panel being provided with a part adapted to fit into any one of the holes of one of said plates for locking each panel in any one of several pivotal positions substantially as set forth.

901,716. HAND-OPERATED KEY-SEATING MACHINE. FREDERICK LINK, Hoboken, N. J. Filed Feb. 28, 1908. Serial No. 418,207.

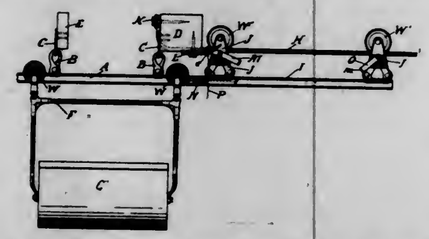
1. In a key-seating machine, a reciprocating slide, a tool-bar pivoted, at one end thereof, to said slide, said pivoted end being adapted for a transverse movement upon the pivot therefor, a cutting tool carried by said tool-bar, a slidable block carried by said slide having a rounded top in contact with said tool-bar, a spring carried by said slide adapted to keep said bar in contact with said block, and means adapted to slide said block to advance the tool carried by said tool-bar.

2. In a key-seating machine, a reciprocating slide, a tool-bar, provided in one end thereof with an elongated slot, said slot being at a right angle to the cutting movement of said bar, a pivot pin carried by said slide adapted to pass through said slot, a cutting tool carried by said bar, an adjustable block carried by said slide adapted to



raise said bar to advance the tool carried thereby, said block also constituting a fulcrum point for the oscillation of said bar, when said bar is returning from a cutting operation, and a spring carried by said slide adapted to reset the bar after said bar has been returned to its starting point.

901,717. TRANSFER FOR OVERHEAD TRACKS. WILLIAM LOUDEN, Fairfield, Iowa. Filed June 17, 1908. Serial No. 439,072.



1. In elevated carriers, two overhead tracks running in substantially the same direction, a transfer carriage adapted to run on one of the tracks and having a track-section similar to and in alinement with the other track, and a carrier adapted to run on the other track and on the track-section of the transfer carriage.

2. In elevated carriers, two overhead tracks running in substantially the same direction but, in different alinements, a transfer carriage adapted to run on one of the tracks and having a track-section similar to and in alinement with the other track, and a carrier adapted to run on the other track and on the track-section of the transfer carriage.

3. In elevated carriers, two overhead tracks running in substantially the same direction but, one in alinement above the other, a transfer carriage adapted to run on the upper track and carrying a track-section similar to and in alinement with the lower track, and a carrier adapted to run on the lower track and on the track section of the transfer carriage.

4. In elevated carriers, two overhead tracks running in substantially the same direction, a transfer carriage adapted to run on one of the tracks and having a track-section similar to and in alinement with the other track, a carrier adapted to run on the other track and on the track-section of the transfer carriage, and a latch to hold the transfer carriage adjacent to the other track.

5. In elevated carriers, two overhead tracks, a transfer carriage adapted to run on one of the tracks, and having a track-section similar to and in alinement with the other track, a carrier adapted to run on the other track and on the track-section of the transfer carriage, a latch to hold the transfer carriage adjacent to the other track and stops to hold the carrier from running off the track of the transfer carriage.

[Claims 6 to 25 not printed in the Gazette.]

901,718. PROCESS FOR BLEACHING FATS, OILS, RESINS, WAXES, AND THE LIKE. KARL LÜDECKE, Charlottenburg, Germany, assignor to The Firm of "Vereinigte Chemische Werke Actiengesellschaft," Charlottenburg, Germany. Filed July 10, 1907. Serial No. 383,013.

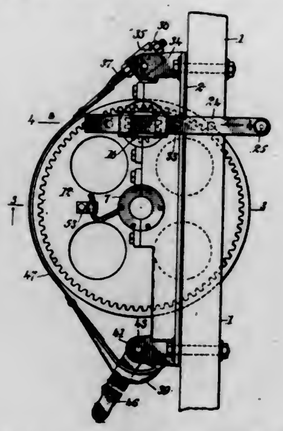
1. The process for bleaching fats, fatty oils, mineral oils, resins, waxes, paraffin, yolk, fatty acids and the like which consists in dissolving organic superoxids in the material to be bleached and allowing the organic superoxids to act on the material to be bleached.

2. The process for bleaching fats, fatty oils, mineral oils, resins, waxes, paraffin, yolk, fatty acids and the like which consists in dissolving organic superoxids in the material to be bleached and heating the said solution.

3. The process for bleaching fats, fatty oils, mineral oils, resins, waxes, paraffin, yolk, fatty acids and the like which consists in dissolving organic superoxids in a solution of the material to be bleached and heating the said solution.

4. The process of bleaching fats, fatty oils, mineral oils, resins, waxes, paraffin, yolk, fatty acids and the like which consists in dissolving, without aqueous solutions, organic superoxids in the material to be bleached, avoiding emulsions, and heating the said solution.

901,719. WINCH. VOLNEY W. MASON, Providence, R. I. Filed Aug. 28, 1905. Serial No. 276,055.



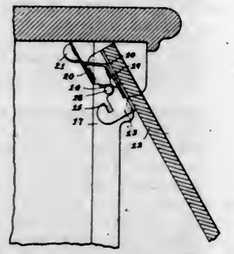
1. In a winch, in combination, a frame, a lever mounted on said frame, a drum, a brake-wheel rotating with said drum, a brake-band coöperating with said brake-wheel, a shackle attached to the extremity of said brake-band and attached to said lever, said lever affording means for tightening said brake-band on said wheel, and means whereby said lever may engage said shackle to limit the movement thereof and lock said band.

2. In a winch, in combination, a brake-wheel, a brake-band coöperating therewith, a frame, a lever mounted on said frame, and a shackle attached to said brake-band and having a slot receiving said lever, said lever affording means for tightening said brake-band, the edge of said slot affording means for arresting the movement of said lever to lock said band.

3. A winch-drum adapted to have a cable wound thereon and presenting a body of reduced diameter, heads at the extremities thereof, said body having a longitudinal bore, and inclined openings at said heads passing from said bore to the outer faces of said heads, said openings being disposed at the intersection of said heads with said body, whereby other openings are formed on the outer surface of said body adjacent to said heads.

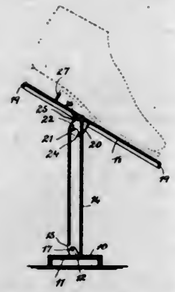
4. A winch-drum having a body of reduced diameter and enlarged heads at the extremities thereof, said body having a longitudinal bore, and openings adjacent to the inner faces of said heads and opening communication from said bore, said body further having a slot disposed substantially in alinement between said openings.

901,720. HANGER. JULIAN T. MAYER, New York, N. Y. Filed May 29, 1908. Serial No. 435,746.



A hanger for piano panels and the like, comprising: a securing member adapted to be attached to said panel or the like, and having a bearing face integral therewith and extending perpendicularly thereto, said face being provided with an open bearing and a cut; and a locking plate or member pivoted to said securing member adapted to fit said cut and thereby close said bearing.

901,721. DISPLAY-RACK. MORITZ MAYER, New York, N. Y. Filed May 1, 1908. Serial No. 430,283.

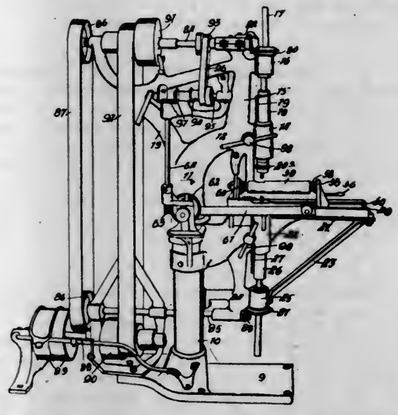


1. A display rack comprising a base, an upright member pivotally connected to the said base, a platform, means depending from the said platform and adapted to span the upper portion of the said upright member, the said means being provided with a series of oppositely disposed holes and a pin adapted to pass through certain of the said holes, and also through a hole in the said upright member to pivotally connect the said platform and upright member and determine the position assumed by the former when in use.

2. A display rack comprising a base, an upright pivotally connected to the said base, a platform, lugs secured to the underside of the said platform and adapted to span said upright and provided with series of holes arranged in pairs, a pin passing through any one pair of the said holes in the said lugs and also through the said upright, whereby the said platform is pivotally connected to said upright and the position of the former relatively to the latter is determined, and a stop on the under side of the said platform adapted to bear against the upper edge of the front of the upright to maintain the platform in position.

3. A display rack comprising a base, an upright pivotally connected to the said base, a platform, lugs secured to the underside of the said platform and adapted to span the said upright and provided with series of holes arranged in pairs, a pin passing through any one pair of the said holes in the said lugs and also through the said upright, whereby the said platform is pivotally connected to said upright and the position of the former relatively to the latter is determined, and a stop located between the said lugs secured to the said platform, the upper end of the said upright being beveled so that the said platform may be turned to a position substantially parallel to the upright in one position and the said stop may engage the upper edge of the front of the upright to maintain the platform in its other position.

901,722. ROUTING-MACHINE. ROBERT MILNE, Rockford, Ill., assignor to B. F. Barnes Company, a Corporation of Illinois. Filed Nov. 22, 1907. Serial No. 403,417.



1. In a machine of the class described, the combination of a slide plate, means for reciprocating the slide plate, a dog carried by the slide plate, a ratchet wheel adapted to be engaged by the dog, a worm connected with and adapted to be actuated by the ratchet wheel, a worm gear normally in mesh with the worm, and a drill member adapted to be intermittently advanced by the movement of the worm gear wheel, substantially as described.

2. In a machine of the class described, the combination of a slide plate, means for reciprocating the slide plate, a dog carried by the slide plate, a ratchet wheel adapted to be engaged by the dog, a worm connected with and adapted to be actuated by the ratchet wheel, a worm gear normally in mesh with the worm, a drill member adapted to be intermittently advanced by the movement of the worm gear wheel, a pivoted bracket within which the worm is journaled, and means for automatically throwing back the pivoted bracket at a predetermined point in the advance of the drill member to unmesh the worm and worm gear, substantially as described.

3. In a machine of the class described, the combination of a slide plate, means for reciprocating the slide plate, a dog carried by the slide plate, a ratchet wheel adapted to be engaged by the dog, a worm connected with and adapted to be actuated by the ratchet wheel, a worm gear normally in mesh with the worm, a drill member adapted to be intermittently advanced by the movement of the worm gear wheel, a pivoted bracket within which the worm is journaled, a dog normally engaging the bracket to hold the worm and worm gear in mesh, means for throwing back the bracket on the release of the dog, and a member movable with the drill member and adapted to engage the dog at a predetermined point and move it to releasing position, substantially as described.

4. In a machine of the class described, the combination of a slide plate, means for reciprocating the slide plate, a feed shaft, a worm jointed to the feed shaft, a pivoted bracket within which the worm is journaled, means for imparting rotation to the feed shaft, a worm gear normally meshing with the worm, a drill member adapted to be advanced by the movement of the worm gear, and means for automatically throwing back the pivoted worm bracket at a predetermined point in the advance of the drill member, substantially as described.

5. In a machine of the class described, the combination of a slide plate, means for reciprocating the slide plate, a feed shaft, a worm journaled to the feed shaft, a pivoted bracket within which the worm is journaled, means for imparting rotation to the feed shaft, a worm gear normally meshing with the worm, a drill member adapted to be advanced by the movement of the worm gear, a dog normally engaging the worm bracket, a spring adapted to throw back the bracket when released by the dog, and means movable with the drill member for actuating the dog at a predetermined point to release the bracket, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

901,723. INVISIBLE-PICTURE CARD. CHARLES F. MORSE, New York, N. Y. Filed May 29, 1907. Serial No. 376,385.



1. A sheet or card containing on a portion of its surface an invisible impression, and upon another portion of its surface a developer for such impression.

2. A sheet or card containing an invisible picture upon one portion of its surface, and upon another portion of its surface a developer therefor.

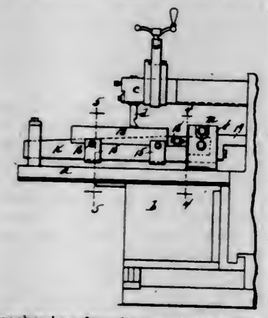
3. A sheet or card containing an invisible picture upon its surface, and a developer upon a portion of its surface surrounding the said invisible picture.

4. A sheet or card having a light central portion having thereon an invisible picture, and a darker surrounding portion containing a developer for the said picture.

5. A sheet or card containing on a portion of its surface an invisible impression, and upon another portion of its surface a developer for such impression, said developer soluble in water.

[Claims 6 to 8 not printed in the Gazette.]

901,724. MECHANISM FOR PLANING SHOES AND WEDGES. MATTHEW MORTON, Muskegon Heights, Mich. Filed Dec. 8, 1906. Serial No. 346,935.



1. In a mechanism for planing shoes and wedges, a base plate provided with a box receptacle at one end thereof, a bearing journaled in said receptacle, a holder journaled at one end in said bearing whereby the forward end of the holder may be raised and lowered to a desired position of vertical adjustment, and whereby also the holder may be rotated in said bearing to a desired position of lateral adjustment, means at the outer end of the holder to fasten the holder in a desired position of vertical adjustment, means to fasten the holder in a desired position of lateral adjustment, and means to clamp the work upon the holder.

2. In a mechanism for planing shoes and wedges, a base plate provided with a box receptacle at one end thereof, a bearing journaled in said receptacle and held from lateral movement therein, a holder journaled at one end in said bearing whereby the forward end of the holder may be raised and lowered to a desired position of vertical adjustment and whereby the holder may be rotated in said bearing to a desired position of lateral adjustment, means to secure the holder in a desired position of vertical adjustment, means to interiorly clamp the work upon said holder, and additional means to exteriorly clamp the work upon the holder.

3. In a mechanism for planing shoes and wedges, a base plate provided with a box receptacle at one end thereof, a bearing journaled in said receptacle and held from lateral movement therein, a holder journaled at one end in said bearing whereby the forward end of the holder may be raised and lowered to a desired position of vertical adjustment, and whereby also the holder may be rotated in said bearing to a desired position of lateral adjustment, means to secure the holder in desired position of vertical adjustment, means to fasten the holder in a desired position of lateral adjustment, a slide movable longitudinally upon the upper surface of the holder, means to exteriorly clamp the work upon the holder, and transversely arranged clamping arms at each side of the holder actuated by said slide to interiorly engage the work.

4. In a mechanism for planing shoes and wedges, a base plate provided with a box receptacle at one end thereof, a bearing journaled in said receptacle and held from lateral movement therein, a holder journaled at one end in said bearing whereby the forward end of the holder may be raised and lowered to a desired position of vertical adjustment, and whereby also the holder may be rotated in said bearing to a desired position of lateral adjustment, means to secure the holder in desired position of vertical adjustment, means to fasten the holder in a desired position of lateral adjustment, a slide movable longitudinally upon the upper surface of the holder, means to exteriorly clamp the work upon the holder, transversely arranged clamping arms at each side of the holder actuated by said slide to interiorly engage the work, and a cover plate located over said slide and clamping arms.

5. In a mechanism for planing shoes and wedges, a base plate, provided with a box receptacle at one end thereof, a bearing journaled in said receptacle, a vertically oscillatory holder journaled at one end in said bearing, a slide movable longitudinally upon the upper surface of the holder, clamping devices actuated by said slide to interiorly engage the work upon the holder, and additional clamping devices to exteriorly engage the work upon the holder.

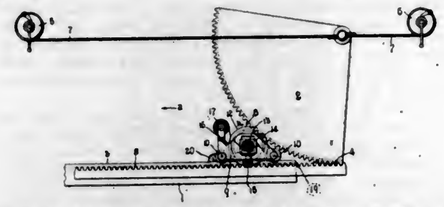
[Claims 6 to 11 not printed in the Gazette.]

901,725. APPARATUS FOR FORMING SHEETS OF GLASS. DANIEL J. MURNANE, Kirkwood, Mo. Filed July 5, 1907. Serial No. 382,328.

1. In an apparatus for making wire glass, a table and an embedding roller which travels over the table and rotates in a direction opposite to that in which it moves over the table; substantially as described.

2. An apparatus for making wire glass provided with a corrugated embedding roller which rotates upwardly away from the molten glass into which it forces the wire mesh; substantially as described.

3. An apparatus for making wire glass, comprising a table, an embedding roller adapted to travel over the table and provided with means for forcing a piece of wire mesh into molten glass, and a member coöperating with the table to form the glass into a sheet and also adapted to rotate the embedding roller in a direction opposite to that in which it travels over the table; substantially as described.

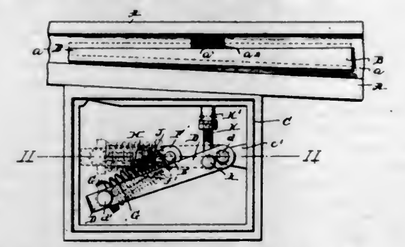


4. An apparatus for making wire glass, comprising a table, a segmental-shaped rocking member adapted to travel over the table to form a mass of molten glass into a sheet, and a corrugated embedding roller provided with flanges of greater diameter than the ribs thereon, said flanges being adapted to contact with the curved surface of the rocking member so that the embedding roller will be moved forwardly and rotated as the rocking member travels over the table; substantially as described.

5. An apparatus for making wire glass, comprising a table, a segmental-shaped member adapted to move longitudinally over the table with a rocking motion to spread a mass of molten glass into sheet form and then come to rest out of contact with the top surface of said sheet, a truck that is moved longitudinally over the table by said member, means on said truck for carrying a supply of wire mesh, means on the table for securing one end of the piece of wire mesh and for holding it elevated from the table, and an adjustable device on said truck for embedding the wire mesh in the molten glass; substantially as described.

[Claim 6 not printed in the Gazette.]

901,726. RETAINING DEVICE FOR SWITCH-POINTS. ARCHIE R. MURRAY, Johnstown, Pa., assignor to The Lorain Steel Company, a Corporation of Pennsylvania. Filed Feb. 19, 1908. Serial No. 416,794.



1. In a switch point retaining device, a switch point, a pivoted lever, a connecting member between the switch point, and the pivoted lever, a spring bearing against the free end of the pivoted lever and a fixed point between the ends of the pivoted lever.

2. In a switch point retaining mechanism, a switch point, a connecting member between the switch point, and the pivoted lever, a yielding member confined between the ends of the lever, and adapted to hold the free end of the lever in its extreme positions.

3. In a switch point retaining mechanism, a switch point, an adjustable connecting member between the switch point and the pivoted lever, a yielding member confined between the ends of the lever and adapted to hold the free end of the lever in its extreme positions.

901,727. PLUMB-LEVEL. WILLIAM H. MCKEEN, Brawley, Cal. Filed June 19, 1908. Serial No. 439,361.

1. A plumb level, embodying a stock, a circular casing therein, a shell having a gravity block thereon and hung rotatably in the casing, a pendulum hung from the shell, and indicating devices controlled by the pendulum.



2. A plumb level, embodying a stock, a circular casing stationary therein, a hollow hub on the casing, a circular shell mounted on the hub, a gravity block on the shell, dial plates on the sides of the casing, a shaft rockable in the hub, index hands on the ends of the shaft that indicate on the scales of the dial plates, a pendulum hung in the shell, and means connecting the pendulum with the shaft for moving the hands in accord with the swing of the pendulum.

3. A plumb level, embodying a stock, a circular casing stationary therein, a hollow hub central on a side wall of the casing and extended therein, a shaft in the hub, index hands on the shaft, end walls of the casing having scales whereon the hands indicate, a circular shell having a gravity block at one side therein, said block having a rockable engagement with the hub, a pendulum block hung by a rod thereon from the inner side of the shell and rockable thereon, a rock arm pivoted on a side of the pendulum block and at one end loosely connected with the shell, an arm projecting from the shaft, and a fork on the rock arm at its opposite end and loosely engaging a lateral pin on the arm.

4. In a plumb level of the character described, in combination, a stock, having an opening in its working faces, a circular casing stationary in the stock and having a scale on its periphery exposed to view through said opening, dial plates having scales thereon and forming sides of the casing, an axially perforated hub projected inward from and central on one dial plate, a shaft rotatably located in the perforated hub, and index hands on the ends of said shaft, that indicate on the dial plates, one of said hands having a lateral finger on its end that is adapted for indicating on the scale marked on the peripheral wall of the shell.

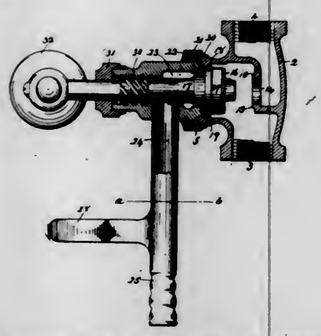
5. In a plumb level of the character described, in combination, a stock, a casing therein, a hollow cylindrical hub on one side wall of the casing and projecting thereinto, a scale formed on the outer side of said wall, a shell having a gravity block therein at one side of the center, said block having a lateral bore therein, which receives the hub, whereby the shell is mounted rotatably in the casing, a shaft rockable in the hub, an index hand on one end of said shaft for indicating on the scale, said scale and hand at zero indicating a level position for the stock, and means for holding the shell turned on the hub, so as to adapt the hand and scale to indicate when the stock is vertically disposed.

[Claims 6 to 10 not printed in the Gazette.]

901,728. COMBINED DESCENDING-SHOWER AND SHAMPOO FIXTURE FOR SHOWER-BATHS. WILLIAM G. NEWTON, New Haven, Conn., assignor to The Peck Bros. & Co., New Haven, Conn., a Corporation. Filed Apr. 4, 1907. Serial No. 366,311.

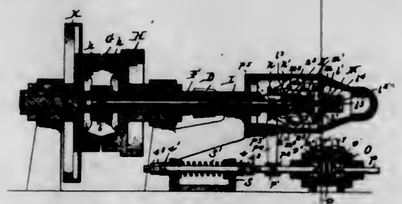
1. In a combined descending shower and shampoo fixture, the combination with hot and cold water valves, and hot and cold water connections therefor, of a mixing-chamber located between the said valves and connected therewith, a mixing-column rising from the said mixing-chamber, a shower-tube extending upward above the said mixing-column, a vertically arranged valve-body interposed between the upper end of the said column and the lower end

of the said tube and having a downwardly opening inlet for the reception of the upper end of the said column, an upwardly opening shower-outlet for the reception of the lower end of the said tube, and a lateral shampoo-outlet; a horizontally arranged bonnet applied to the said shampoo-outlet, a depending shampoo-tube made independently of the said bonnet and having its upper end entered thereinto between the ends thereof, a horizontally arranged valve-spindle passing through the said bonnet, a lever-handle at the outer end of the spindle, packing washers located at the inner end thereof, and quick threads upon the spindle taking into corresponding threads in the bonnet and pitched so that a half turn of the lever-handle will shift the washers for diverting the water from one outlet to the other.



2. In a combined descending shower and shampoo fixture, the combination with hot and cold water valves and hot and cold water connections therefor, of a mixing-chamber located between the said valves and connected therewith, a mixing-column rising from the said mixing-chamber, a shower-tube extending upward above the said mixing column, a vertically arranged valve-body interposed between the upper end of the said column and the lower end of the said tube and having a downwardly opening inlet for the reception of the upper end of the said column, an upwardly opening shower-outlet for the reception of the lower end of the said tube, a bonnet applied to the said shower-outlet of the body, a valve-spindle mounted in the bonnet, and a depending shampoo tube having its upper end entered into the said bonnet between the ends thereof, having its lower end adapted for the application to it of a rubber tube and furnished with a forwardly projecting fork-like shampoo-rose holder fixed in a horizontal plane.

901,729. CLUTCH-CENTERING MECHANISM. FERDINANT NIESSNER, Johnstown, Pa. Filed July 12, 1907. Serial No. 383,521.

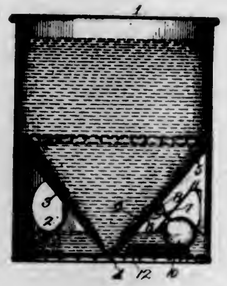


1. In a driving mechanism, two driving clutch members, a driven clutch member, the driven clutch member having oppositely disposed working faces to engage either of the driving clutch members, shifting mechanism to shift the driven clutch member into engagement with either of the driving clutch members, a spring to return the clutch members to their disengaged position when the shifting mechanism is released, the movement of the spring being positively restrained from further action when the clutch members have reached their adjusted disengaged position.

2. In a driving mechanism, two driving clutch members rotating in opposite directions, a driven clutch member between the driving clutch members, and having two oppositely disposed working faces to engage either of the driving clutch members, shifting mechanism to shift the driven clutch member into engagement with either of the driving clutch members, a spring to return the driven clutch member to its disengaged position when the shifting mechanism is released, the movement of the spring being positively restrained when the driven clutch member has reached its adjusted disengaged position.

3. In a driving mechanism, two driving clutch members, a driven clutch member between the driving clutch members, and having two oppositely disposed working faces to engage either of the driving clutch members, shifting mechanism to shift the driven clutch member into engagement with either of the driving clutch members, a spring to return the clutch members to their disengaged position when the shifting mechanism is released, the further movement of the spring being confined between stops when the clutches have reached their adjusted disengaged position.

901,730. STOCK-FOUNTAIN. EMANUEL E. NORQUIST, Kansas City, Mo. Filed Nov. 6, 1906. Serial No. 342,276.

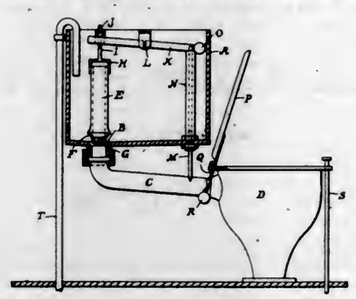


1. A stock fountain, comprising an open-top tank constituting a drinking-chamber for large stock and provided with a plurality of openings in its side near its bottom, an inverted conical shaped partition extending from the bottom to the sides and terminating in a plane above said openings and having a water-tight connection with said bottom and sides and dividing the tank into an upper chamber and a lower chamber and provided with an orifice, a valve controlling said orifice and located within the upper chamber, a float pivotally secured to said partition and located in the lower chamber and adapted to be raised by the water passing from the upper into the lower chamber through said orifice, to close said valve, and to descend as the water level in the lower chamber falls, to unseat the valve, and a pair of radial partitions of right-angle-triangle form, within the lower chamber and disposed at opposite sides of said float, one of said partitions being provided with an opening below the plane of the lower edges of the openings in the side of the tank.

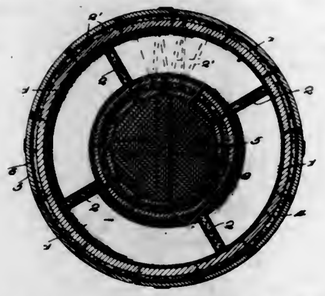
2. A stock fountain comprising a tank having an opening in its side near its bottom, ribs secured externally to the tank at opposite sides of and adjacent to said opening, a partition dividing the tank into an upper chamber and a lower chamber and provided with an opening, a valve controlling said opening and a float in the lower chamber, connected to the valve to cause the latter to close as the float rises and open as it descends.

901,731. ANTIFREEZING FLUSH-TANK. ALBERT W. OBERLIES, Philadelphia, Pa., assignor to Rayner Raynor, Philadelphia, Pa. Filed Nov. 2, 1905. Serial No. 285,555.

In combination with a tank having a beveled valve seat in its bottom, a stand valve having an enlarged bottom beveled on its peripheral edge to engage said valve seat, a yoke secured to the top of said valve provided with an upwardly projecting threaded stem, a nut on said stem, a horizontal pivoted lever in said tank having its ends disposed between the ends of the tank, one end of said lever having an opening therein through which said threaded stem passes so as to be engaged by said nut, a tube stationarily supported in said tank and providing at its top end a stop to engage and limit the downward movement of the lever, a weight on the opposite end of said lever, a rod secured to said lever and extending through said tube, and means to operate said rod.



901,732. LIFE BUOY AND RAFT. LOUIS OLSON, Airlie, Minn. Filed Feb. 14, 1908. Serial No. 415,852.



1. In a device of the character described, the combination with a series of air containing metal cylinders forming floats, of an inclosing frame therefor consisting of a coiled metallic spring, as set forth.

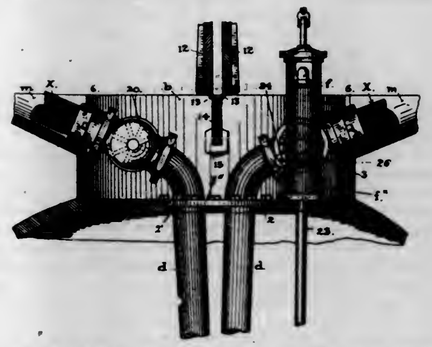
2. In a device of the character described, the combination with a series of air containing floats, of an inclosing frame therefor consisting of a coiled spring inclosing the same, cushioning packing between the ends of said floats and between the floats and spring, and hoops securing the structure together, as set forth.

3. In a device of the character described, the combination with a series of floats, of an inclosing frame therefor consisting of a coiled metallic spring, a netting over said spring, and hoops arranged in pairs within and without said spring, the adjacent inner and outer hoops of each pair being secured together, whereby the coils of the spring are held between the same, as set forth.

4. The combination with a life buoy comprising a circular or ring-shaped structure formed of a series of floats, a metal skeleton-framing therefor, hoops securing the structure in place, of a second buoy constructed in accordance with said first buoy and of a size sufficient to encircle the same when placed thereover and connected thereto, thereby forming a structure of greater area and weight sustaining capacity, as set forth.

5. In a device of the character described, the combination with a series of floats, of an inclosing frame therefor consisting of a coiled metallic spring, a netting over said spring, a waterproof covering inclosing the structure, a hoop on the outer periphery of the structure and over said covering, a netting within the central space of the structure, and life lines attached to the structure, as set forth.

901,733. EMERGENCY-CISTERN FOR FIRE-ENGINES. EDWARD O'SULLIVAN, San Francisco, Cal. Filed Nov. 17, 1906. Serial No. 343,802.



1. In a cistern, the combination with the water reservoir, a top for closing the said reservoir, a coupling chamber above the top, a cover for closing the said coupling chamber, a suction pipe, a branch pipe leading from the coupling chamber to a point below the water in the reservoir, means for connecting the suction pipe with an engine hose or the like, and a foldable pump connected to the branch pipe arranged to be folded down when the said cover is closed, substantially as set forth.

2. In a cistern, the combination of a water reservoir, a coupling chamber provided with a depressed portion extending outwardly therefrom, a suction pipe extending from a point below the water in the reservoir to the coupling chamber, the said pipe being bent at its upper end so as to lie in a line substantially parallel with the plane of the depressed portion, a cover for closing the top of the coupling chamber, and a wing on the said cover for closing the said depressed portion, substantially as set forth.

3. In a cistern, the combination of a water reservoir, a coupling chamber, provided with a depressed portion extending outwardly therefrom, and a suction pipe extending from a point below the water in the reservoir to the coupling chamber, the said pipe being bent at its upper end so as to lie in a line substantially parallel with the plane of the depressed portion, substantially as set forth.

901,734. STOCKING-SUPPORTER. THOMAS PAPWORTH, Portland, Oreg. Filed Sept. 11, 1907. Serial No. 392,302.



1. A stocking supporter, comprising a clasp, a headed stud carried by the clasp, a key-hole shaped link separate from the clasp and adapted to receive the headed stud, and means carried by the clasp for enlarging the enlarged upper end of the link to hold it in clamping position on the stud.

2. A stocking supporter, comprising a clasp, a headed stud carried by the clasp, a key-hole shaped link separate from the clasp and adapted to receive the headed stud, and a hook carried by the clasp and with which the enlarged end of the link engages to hold said link in clamping position on the stud.

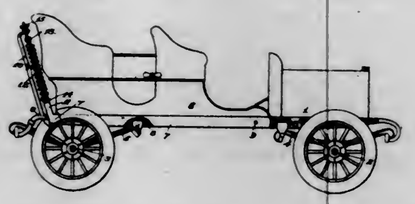
3. A stocking supporter, comprising a clasp, a headed stud carried by the clasp, a key-hole shaped link separate from the clasp and adapted to receive the headed stud, a hook carried by the clasp and with which the enlarged end of the link engages to hold the link in clamping position on the stud, and a cord or chain connecting the link with the supporter.

4. A stocking supporter, comprising a clasp having a locking lever provided at its end with a hook, a headed stud carried by the clasp and an independent key-hole shaped link adapted to receive the headed stud and to be engaged with the hook of the lever.

5. A stocking supporter, comprising a clasp having spring members and provided with an operating lever having a hook at its end, one of the jaws being apertured, a headed stud between the members of the clasp and projecting through the apertured member, and an independent key-hole shaped link having resilient members and adapted to receive the headed stud and to be engaged with the hook of the said operating lever.

[Claim 6 not printed in the Gazette.]

901,735. VEHICLE-FRAME. CHARLES J. PEMBROKE, Rochester, N. Y. Filed Sept. 10, 1907. Serial No. 392,109.



1. In a vehicle frame, the combination with a yieldingly supported main frame, having an upwardly projecting frame at the rear thereof, of a seat carrying frame pivotally mounted at its front end and yieldingly suspended at its rear from the upwardly projecting frame.

2. In a vehicle frame, the combination with a yieldingly supported main frame, of a seat carrying frame pivotally connected at its forward end to the main frame and a plurality of vertically arranged parallel coil springs arranged in rear of and suspending the rear of the seat carrying frame from the main frame.

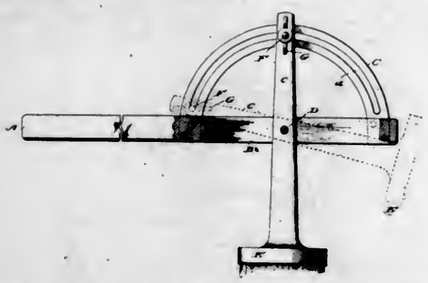
3. In a vehicle frame, the combination with a main frame having longitudinal side pieces, of a seat carrying frame having longitudinal side pieces pivoted at their forward ends and arranged on the outside and in a horizontal plane with the side pieces of the main frame, and a yielding support for the rear end of the seat carrying frame carried by the main frame.

4. In a vehicle frame, the combination with a main frame having an upwardly extending frame at the rear thereof, of a seat carrying frame pivotally supported on the main frame, and adjustable yielding devices connecting the upwardly extending frame and the rear end of the seat carrying frame.

5. In a vehicle frame, the combination with a main frame having an upwardly extending frame at the rear thereof, of a seat carrying frame pivotally mounted on the main frame, a series of parallel coil springs connecting the upwardly extending frame and the seat carrying frame, and devices for adjusting the tension of the springs arranged at the upper ends of the latter.

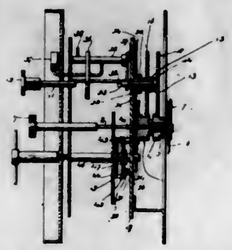
[Claims 6 to 8 not printed in the Gazette.]

901,736. BRUSH-HANDLE. PHILIP A. PINES, Leyton, London, England. Filed Apr. 29, 1908. Serial No. 429,892.



The herein described appliance comprising a main handle having a longitudinal slot, an arc-like device arranged in a plane at one side of that of the slot and fixedly connected at its ends to the said main handle, a brush having its stem or handle arranged in the slot of the main handle and alongside the arc-like device, a pintle extending through the side walls of the slot in the main handle and through the stem or handle of the brush at an intermediate point in the length of said stem or handle and serving as a fulcrum for the same, and means carried by the stem or handle of the brush for coöperating with the arc-like device to adjustably fix the stem or handle thereto.

901,737. ALARM-CLOCK. WILSON E. PORTER, New Haven, Conn., assignor to New Haven Clock Co., New Haven, Conn., a Corporation. Filed June 8, 1908. Serial No. 437,342.



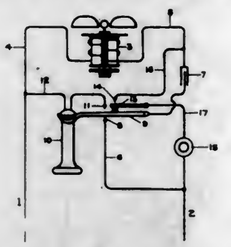
1. In an alarm clock, the combination with a twelve hour time-dial which is utilized for setting the alarm, of an alarm-hand arranged concentrically with the said twelve-hour time-dial, means located at one side of the center of the said dial and operated by the time mechanism of the clock for releasing the alarm-mechanism of the clock once in twenty-four hours, and an alarm-setting mechanism also located at one side of the center of the dial and geared to the said alarm-hand.

2. In an alarm clock, the combination with a twelve-hour time-dial which is utilized for setting the alarm, of an alarm-hand arranged concentrically with the said twelve-hour time-dial, a center shaft, an alarm-setting shaft located at one side of the said center shaft and geared to the said alarm-hand for sweeping the same over the dial, and a twenty-four hour alarm-wheel turning upon the said alarm-setting shaft and rotated once in twenty-four hours by the time-mechanism of the clock.

3. In an alarm clock, the combination with a twelve-hour time-dial which is utilized for setting the alarm, of a center shaft, an hour-hand socket located thereupon, an alarm-setting pinion turning loosely upon the said socket, an alarm-hand carried by the said pinion for sweeping the time-dial, an alarm-setting shaft located at one side of the said center shaft, an alarm-setting wheel mounted upon the said alarm-setting shaft and meshing into the said alarm-setting pinion, an alarm-wheel turning loosely upon the alarm-setting shaft and rotated once in twenty-four hours by the time-mechanism of the clock, and means coacting with the said alarm-wheel for letting off the alarm train once in twenty-four hours.

4. In an alarm clock, the combination with the time-dial and center shaft thereof, of an alarm-setting pinion axially mounted with respect to the center shaft, an alarm hand carried by the said alarm-setting pinion, an alarm-setting shaft, an alarm-setting wheel carried thereby and meshing into the said alarm-setting pinion, an alarm-wheel turning upon the alarm-setting shaft, and rotated once in twenty-four hours by the time-train, an alarm-cam rotating with the said alarm-wheel, an alarm spring coacting with the said alarm-wheel for moving the same longitudinally upon the alarm-setting shaft, a combined lifting-cam and warning pin carried by the said spring, a lifting lever coacting with the said cam, a locking lever operated by the lifting lever, a stop hook coacting with the locking lever, a warning finger coacting with the warning-pin aforesaid, and an alarm-sustaining mechanism coacting with the said locking-lever for sustaining the sounding of the alarm.

901,738. SUBSCRIBER'S TELEPHONE-CIRCUIT. HOWARD M. POST, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed July 31, 1905. Serial No. 271,931.



1. A subscriber's telephone circuit comprising a path for signaling current containing the coils of a suitable ringer, a path for talking currents containing the coils of a receiver, means when the receiver is removed from its hook for closing a path for direct-current through the coils of said ringer, said coils possessing sufficient impedance to prevent the passage of voice currents, and means in the path containing the receiver for preventing the passage of direct current, and a transmitter in series with both of said paths, substantially as described.

2. A subscriber's telephone circuit comprising a path for signaling current containing the coils of a suitable ringer, a path for talking currents containing the coils of a receiver, means when the receiver is removed from its hook for closing a path for direct current through the coils of said ringer and for connecting both said ringer coils and said receiver coils in series with the transmitter, said ringer coils possessing sufficient impedance to prevent the passage of voice currents, and means in the path containing the receiver for preventing the passage of direct current.

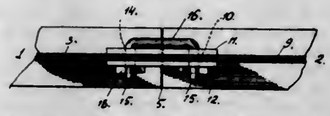
3. A subscriber's telephone circuit comprising two paths for current, one of said paths being opaque to direct currents and containing a receiver and a condenser, the other of said paths containing the coils of a ringer and being opaque to voice currents, a transmitter in series with both paths, and switching means under the control of the subscriber for placing said condenser and ringer coils in series in the telephone line, and for excluding said transmitter from the line circuit, substantially as described.

4. A subscriber's telephone circuit comprising a path for signaling current containing the coils of a suitable ringer and a condenser, a normally-open path for talking currents containing the coils of a receiver, means when the receiver is removed from its hook for closing a path for direct current through the coils of said ringer, and for including said condenser in the path containing the receiver and for placing a transmitter in series with both of said paths, the coils of said ringer possessing sufficient impedance to prevent the passage of voice currents, said condenser preventing the passage of direct current through the path containing the receiver, substantially as described.

5. A subscriber's telephone circuit comprising two paths for current, one of said paths containing a receiver and a condenser in series, the other of said paths containing the coils of a ringer, a transmitter in series with both paths, and means for placing said condenser and ringer in series in the telephone line, substantially as described.

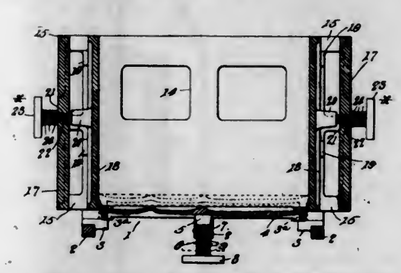
[Claims 6 to 13 not printed in the Gazette.]

901,739. RAIL-JOINT. PETER P. RAGALLER, Avella, Pa. Filed June 5, 1907. Serial No. 377,444.



In a rail joint, the combination of abutting rail sections having the webs thereof provided with circular openings, of fish plates positioned at each side of the webs and having openings in alinement with the openings in the webs, each of said fish plates of less width than the width of a web of a rail section, one of said fish plates of less thickness than the other of said fish plates, a yoke shaped fastening member extending through said plates and webs and abutting against the fish plate of greater thickness, said member cylindrical in cross section at any point throughout its length and having each of its arms provided with a rectangular opening extending in the direction of the length of the rail sections, a longitudinally-extending tapering key detachably secured in each of said openings for retaining said member in position, said keys independent of each other and having the smaller ends opposing each other, said keys provided with vertically-extending circular openings in close proximity to the smaller ends thereof, and cotter pins engaging in said vertically-extending openings.

901,740. CEMENT-BLOCK MACHINE. GEORGE L. REED, Springfield, Ohio, assignor to The Reed Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Oct. 10, 1906. Serial No. 338,217.



1. A device of the character described comprising a frame, a mold supported thereby, a vertically adjustable face plate for said mold having a threaded boss, supporting members carried by said frame and adapted to extend beneath the edges of said face plate, filling strips adapted to be interposed between said supporting members and said face plate for varying the position of said face plate relatively to the side walls of said mold, and a threaded bolt loosely mounted in said frame and engaging said threaded boss to secure said face plate in its adjusted position, and means for limiting the movement of said bolt in said frame.

2. A device of the character described comprising a frame, a mold supported thereby, a vertically adjustable

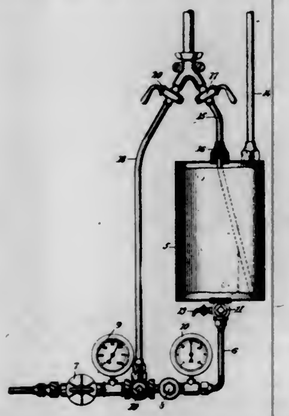
face plate for said mold having an internally threaded boss, a support for said plate, means for varying the position of said support relatively to the side walls of said mold, a threaded bolt loosely mounted in said frame and engaging said threaded boss, and means for limiting the movement of said bolt in said frame to correspond to the position of said support, substantially as described.

3. In a device of the character described, a frame having corner posts, a mold supported by said frame and comprising longitudinal members extending between said posts at the sides of said mold, one of said longitudinal members being removable, removable lateral members extending between said posts at the ends of said mold, said lateral members extending beyond the vertical edges of said posts and engaging said longitudinal members to retain the same in their proper positions, and an adjustable bottom member for said mold, substantially as described.

4. In a device of the character described, the combination, with a frame comprising a base, end members, and upright posts carried by said end members and arranged near the sides of said base, of a mold comprising a face plate adjustably supported on said base, end plates carried by the end members of said frame between said upright posts, and side plates arranged on the opposite sides of said base between the upright posts of the opposite end members.

5. In a device of the character described, the combination, with a frame comprising a base, end members, and upright posts carried by said end members and arranged near the sides of said base, of a mold comprising a face plate supported on said base, means for adjusting the position of said face plate relatively to said frame, a clamp for securing the same in its adjusted position, an end plate adjustably secured to each of the end members of said frame between the upright posts thereof, and side plates arranged on the opposite sides of said base between the upright posts of the opposite end members.

901,741. PRESSURE-REDUCER FOR GASEOUS LIQUIDS. HARRY A. REED, New York, N. Y., assignor to Carbonic Condensing Co., Hoboken, N. J., a Corporation of New Jersey. Filed Aug. 19, 1907. Serial No. 389,281.

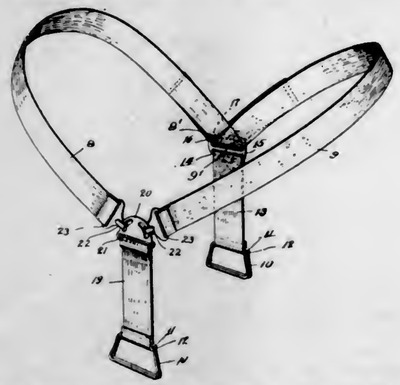


1. A pressure reducer for gaseous liquids, comprising a tank for storing, cooling and settling the liquid, a pipe leading from the liquid supply to said tank, a pressure reducing valve located in the length of said pipe, three-way valves in the length of the supply pipe at each side of the reducing valve, pressure gages carried by said pipe at the opposite sides of the reducing valve, a discharge pipe leading from near the bottom of the tank and passing through the top thereof, a vent-pipe connecting with the top of the tank, a by-pass connecting one of said three-way valves and the discharge pipe, and hand-operated valves located in said by-pass and the discharge pipe adjacent to said tank.

2. A pressure reducer for gaseous liquids, comprising a tank, a pipe leading from the liquid supply to the lower portion of the tank, a pressure reducing valve located in the length of the pipe, a discharge pipe leading from the tank, and means for passing a liquid from the supply pipe at the rear of the reducing valve through the discharge pipe into the tank, and drain it therefrom through the supply pipe in advance of said valve.

3. A pressure reducer for gaseous liquids, comprising a tank, a pipe leading from the liquid supply to said tank, a pressure reducing valve located in the length of said pipe, three-way valves in the length of said pipe at each side of the reducing valve, a discharge pipe leading from the tank, and a by-pass connecting one of said three-way valves with the discharge pipe, whereby a liquid for washing out the tank may be introduced thereinto through the supply pipe, one of said three-way valves, by-pass and discharge pipe, and drained therefrom through the other of said three-way valves.

901,742. CATAMENIAL-SACK SUPPORT. HARRIET M. RICHARDS, Joliet, Ill., assignor to The Womans Mutual Benefit Company, Joliet, Ill., a Corporation of Illinois. Filed Sept. 7, 1907. Serial No. 391,751.



In a device of the character described, the combination of a belt comprising a pair of side straps, a connecting-member between said straps having bars or guides, each of said straps being extended around one of said bars or guides and having an end secured to the other strap, an attaching-device connected to said member, a clasp-member and hooks on the other ends of said straps for connecting them to said clasp-member, said clasp-member being formed so that the hooks may slide therein to permit lateral self-adjustment of the band to the body.

901,743. NAIL-FILE OR SIMILAR INSTRUMENT. ERNST RUETTGERS, Brooklyn, N. Y. Filed Dec. 19, 1907. Serial No. 407,110.



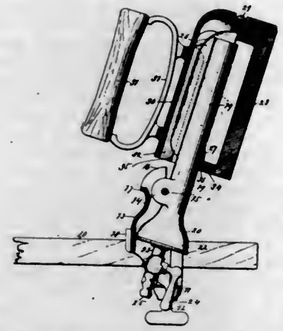
1. A handle for a nail file or similar instrument having a tang comprising two sheets of flexible material arranged one upon either side of the tang, and a binding strip U-shaped in cross section surrounding and tightly engaging the edges of the said sheets.

2. A handle for a nail file or similar instrument having a tang comprising two sheets of flexible material arranged one upon either side of the tang, said sheets being of greater width than the said tang, and a binding strip U-shaped in cross section surrounding and tightly engaging the edges of the said sheets, whereby the edges of the said sheets are pinched together beyond the edges of the said tang.

3. A handle for a nail file or similar instrument having a tang with a lateral recess comprising two sheets of flexible material arranged one upon either side of the tang, said sheets having a recessed portion along one edge thereof co-incident with the recess in the tang, and a binding strip U-shaped in cross section surrounding and tightly engaging the edges of the said sheets.

4. The combination with a nail file or similar instrument provided with a tang having a lateral recess, of a handle therefor comprising two sheets of flexible material arranged one on either side of the said tang, said sheets being of a width greater than the width of the said tang, and having a recess along one edge thereof co-incident with the recess in the said tang, and a binding strip U-shaped in cross section surrounding and tightly engaging the edges of the said sheets, whereby they will be pinched together beyond the edges of the said tang.

901,744. SAD-IRON HEATER. HALSEY W. RUSSELL, Manchester, N. H., assignor to Tubeless Iron Company, Manchester, N. H., a Corporation of Maine. Filed June 19, 1908. Serial No. 439,339.



1. In a sad-iron heater of the character described, a supporting-bracket adapted to be clamped or secured to a table, a gas-heater pivotally connected with said supporting-bracket and adapted to move in a vertical plane, and a burner and sad-iron adapted to be supported by the heater, the frame of said supporting-bracket being of shape to sustain in connection with the pivot-pin the heater, burner and sad-iron either in a substantially vertical or a substantially horizontal position, for the purpose set forth.

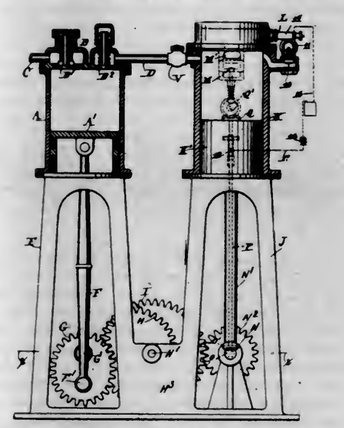
2. In a sad-iron heater of the character described, a supporting-bracket adapted to be secured or clamped to a table and comprising a frame provided with upward extensions connected by a flange-shaped rest, a gas-heater pivotally connected with said upward extensions and adapted to move in a vertical plane, and a burner and sad-iron adapted to be supported by the heater, whereby when the heater, burner and sad-iron are in a substantially horizontal position the heater rests on said flange shaped rest between said upward extensions.

3. In a sad-iron heater of the character described, a supporting-bracket adapted to be secured or clamped to a table and comprising a frame substantially concavo-convex in horizontal section and provided with upward extensions connected by a flange-shaped rest, a gas-heater pivotally connected with said upward extensions and adapted to move in a vertical plane, and a burner and sad-iron adapted to be supported by the heater, whereby when the heater, burner and sad-iron are in a substantially horizontal position the heater rests on said flange-shaped rest between said upward extensions, and when the heater is in a substantially vertical position its lower end which contains the mixing-chamber lies within the concavity in said frame.

4. In a sad-iron heater of the character described, a supporting-bracket adapted to be clamped or secured to a table, a gas-heater pivotally connected with said supporting-bracket and adapted to move in a vertical plane, a locking-stop rigid with the upper surface of the heater when it is in a horizontal position, a burner, a sad-iron secured thereto, said burner and sad-iron being provided with suitable orifices for the reception of the heater, the combined orifices being somewhat larger in diameter than the heater, and a tooth or projection extending from the lower end of the sad-iron when the same is elevated under the said locking-stop whereby when the heater, burner and sad-iron are in a substantially vertical position said tooth moves by gravity under the said locking-stop, for the purpose set forth.

5. In a sad-iron heater of the character described, a supporting-bracket adapted to be secured or clamped to a table and comprising a frame provided with upward extensions connected by a flange-shaped rest and with horizontal parallel projections or guides, a gas-heater pivotally connected with said upward extensions and adapted to move in a vertical plane, and a burner and sad-iron adapted to be supported by the heater, whereby when the heater, burner and sad-iron are in a substantially horizontal position the heater rests on said flange-shaped rest between said upward extensions and the handle of the sad-iron rests against said frame between the horizontal projections or guides.

901,745. GAS-ENGINE. ANTON SCHIEFERSTEIN, Bayonne, N. J. Filed Sept. 2, 1905. Serial No. 276,785.



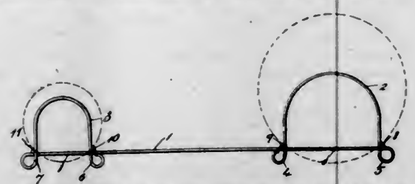
1. The combination with a gas engine of an air pump, a conduit connecting the outlet of the air pump and the cylinder of the engine, a shaft for the engine and a shaft for the air pump, a pair of elliptic gears connected up between said shafts so that the discharges from the air pump will be forced into the cylinder of the engine during the intervals that the spent gases are exhausted from the latter.

2. The combination with a gas engine of an air pump, a pipe connecting the discharge opening of the air pump and the cylinder of the gas engine, a crank shaft for the engine, a pinion on said shaft, a crank shaft for the air pump, a third shaft between said shafts, a gear wheel on the third shaft meshing with said pinion, an elliptic gear on the third shaft, an elliptic gear on the shaft of the air pump, the elliptic gears meshing with each other, and proportioned so that each up stroke of the air pump will be made in the same interval of time as every second up stroke of the engine, to force air from the air pump into the cylinder of the engine when the latter is exhausting its spent gases.

901,746. PROCESS OF MAKING CONCENTRATED LIQUID DYESTUFFS. ALBRECHT SCHMIDT and OTTO SCHWAB, Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed June 21, 1905. Serial No. 266,225.

The process herein described of making highly concentrated liquid sulfurized dyestuffs, which consists in adding to the undried dyestuff, obtained directly in its manufacture, sodium sulfid in such proportions that the dyestuff is transformed into a complete solution which preserves its liquid condition on standing.

901,747. DISH-DRYING RACK. LEWIS M. SCHOMBER, Shirley, Ind. Filed Jan. 9, 1908. Serial No. 410,050.



In a dish drying rack, the combination with a series of horizontally extending wires arranged in parallel relation to each other, vertically extending bows formed integral at the ends of each of said horizontally extending wires, and integral supporting loops at the bottom of said bows, said loops being disposed beneath the horizontal wires, of straight rods extending at right angles to said horizontally extending wires and rigidly fastened thereto and to each of said loops of each bow.

901,748. CALCULATING-MACHINE. ERNST SCHUSTER, Berlin, Germany. Filed Jan. 3, 1908. Serial No. 409,188.



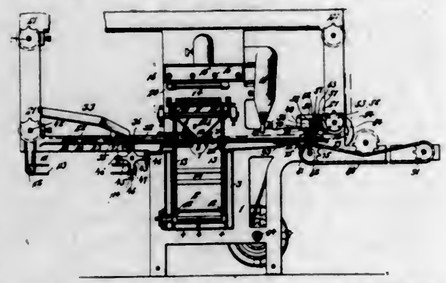
1. In a calculating machine, the combination with a shaft, indicating mechanism thereon, a second shaft and counting mechanism on the latter, of means connecting one end of the former shaft with one end of the second shaft, the arrangement being such that when one shaft is rotated, the other is positively driven, whereas one shaft alone can be rotated, substantially as described.

2. In a calculating machine, the combination with a shaft, indicating mechanism thereon, means for rotating and simultaneously laterally shifting said shaft, a second shaft, counting mechanism on the latter, and means for rotating and simultaneously laterally shifting the latter shaft, of a spring-pressed member connecting and adapted to be driven by the ends of said shafts, the arrangement being such that when the former shaft is rotated, the second shaft is also rotated positively, whereas when the second shaft is rotated, the former shaft remains stationary, substantially as described.

3. In a calculating machine, the combination with a carriage and a perforated partition therein, of an indicating-mechanism shaft journaled in one side of the carriage, a counting-mechanism shaft journaled in one side of the carriage, and a spring pressed intermediate piece movably connecting said shafts rectilinearly through said partition, the connection of said intermediate piece with said shafts being such that when the indicating mechanism shaft is rotated, the counting-mechanism shaft is rotated positively, whereas when the latter shaft is rotated, the indicating-mechanism shaft remains stationary, substantially as described.

4. In a calculating machine, the combination of an indicating-mechanism shaft having a hole and a cam-notch in one end and journaled in the side of the carriage, a counting mechanism shaft having a hole in and a slot-like hole through one end and journaled in the side of the carriage, a piece in said partition having a plug at each side in and connecting the ends of said shafts, said piece carrying a nose adapted to said cam-notch and a pin in said slot-like hole, and a spring on the end of said counting-mechanism shaft pressing the ping in the same, substantially as described and for the purpose set forth.

901,749. COATING-MACHINE. MYRON A. SMITH, New York, N. Y. Filed Aug. 6, 1903. Serial No. 168,411.



1. A coating machine in which is comprised a device for automatically feeding a single row of centers to be coated to a holder consisting of two automatically movable members; a series of said holders carried by endless chains; means for directing and applying coating material to the centers; a device adapted to assist in removing the coated centers from the carriers; a series of receivers for the coated goods, and means for moving all of said parts in unison, substantially as shown and described.

2. A coating machine in which is comprised a device for automatically feeding a single row of centers to be coated to a holder consisting of two automatically movable members; a series of said holders carried by endless chains; means for directing and applying coating material to the centers; means for removing the surplus coating material from the centers; a device adapted to assist in removing the coated goods from the carriers, and a series of receivers for the coated goods, the whole combined and arranged to operate substantially as shown and described.

3. In a coating machine, a feeding device in which is comprised a sloping feed board; a movable center support beneath the delivery end of the feed board; means for reciprocating said support; a rotatable reel carrying receiving shelves or plates, and means for rotating said reel, in combination with a series of center carriers and means for moving the same.

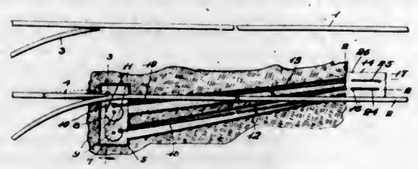
4. In a coating machine, a sloping feed board; a movable center support consisting of teeth projecting from a plate beneath the delivery end of the feed board; means for reciprocating said plate; a reel carrying pivoted shelves provided with means for maintaining the shelves in a horizontal position, teeth projecting from the upper surfaces of said shelves, in combination with a series of center carriers, and means for moving the reel and center carriers in unison, substantially as shown and described.

5. In a coating machine, the combination with a coating material tank, a perforated distributer mounted thereabove, and means for elevating and spreading coating material over said distributer, of sloping directing plates beneath the distributer, substantially as shown and described.

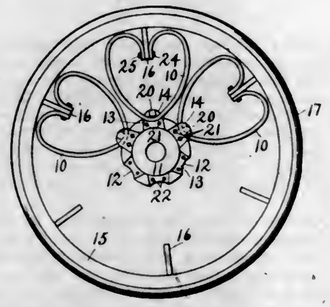
[Claims 6 to 31 not printed in the Gazette.]

901,750. RAILWAY-SWITCH-OPERATING DEVICE. GEORGE M. SPALDING, St. Louis, Mo. Filed Aug. 26, 1907. Serial No. 390,264.

The herein described railway switch operating device, comprising a movable switch point, a housing located beneath the switch point, a pair of independent disks arranged for rotation within the housing, a shifting bar pivotally connected to said disks and to the under side of the switch point, a housing located adjacent the track at a point in front of the switch point, in the top of which second mentioned housing is formed a pair of slots, a pair of tubes connecting the two housings, independent rods connected at their forward ends to the disks and extending through the tubes into the second mentioned housing, a shaft arranged in the second mentioned housing, a pair of levers fulcrumed on said shaft, the lower ends of which levers are connected to the rear ends of the rods and the upper ends of which levers project through the slots in the top of the second housing, all in combination with an operating means carried by the car, and comprising a tube arranged in the car platform, a pin removably seated in said tube and a pivoted member carried by the lower end of said pin, and which pivoted member is adapted to strike the upper ends of the levers.



901,751. SPRING-WHEEL. JOHN E. STANNARD, Springfield, Mass., assignor of one-half to Francis J. Miles, Springfield, Mass. Filed Aug. 19, 1907. Serial No. 389,144.



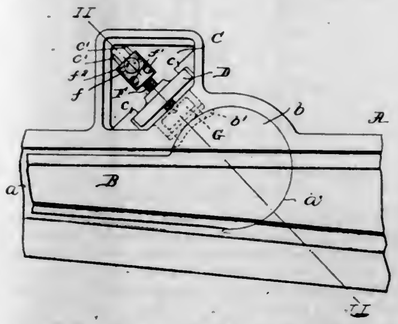
1. A spring wheel comprising a hub, a rim provided with inwardly projecting members, a plurality of independent heart-shaped springs closed at their apexes and severed at their indented ends to receive such inwardly projecting members between them, means to attach such apexes to said hub, and means to fasten the severed terminals to said inwardly projecting members.

2. The combination, in a wheel, of a hub, a rim provided with radial rods, a plurality of heart-shaped springs having closed apexes and inturned terminals to bear against said rods, means comprising tongues and plates to fasten said apexes to said hub, and means to fasten said inturned terminals at the indented ends of said springs to said rods.

3. The combination, in a wheel, of a plurality of independent heart-shaped springs closed at their apexes, a hub having peripheral recesses or seats for such apexes, a rim provided with radial rods entering between the inturned terminals of the springs, means comprising tongues and plates to fasten said apexes in such seats, and means to fasten said inturned terminals at the indented ends of said springs to said rods.

4. The combination, in a wheel, of a hub, a rim, a plurality of independent heart-shaped springs closed at their apexes, means to fasten said apexes to such hub, means to connect the indented ends of said springs with said rim, and buffers carried by the aforesaid fastening and connecting means for said springs, located between the apexes and the indented ends of the springs, and so arranged as to be brought into active service only when the heart-shaped springs are so abnormally disposed as to cause their ends to be brought within a predetermined distance of each other which is less than any normal distance between such ends.

901,752. SWITCH STRUCTURE. HENRY C. STIFF, Johnstown, Pa., assignor to The Lorain Steel Company, a Corporation of Pennsylvania. Filed Dec. 2, 1907. Serial No. 404,875.



1. In a switch structure, a pinless tongue having an enlarged circular heel whose center is at a point near the gage line of the tongue, the bearing surface of the heel being on a line with the bearing surface of the tongue.

2. In a switch structure, a pinless tongue having an enlarged circular heel whose center is at a point near the gage line of the tongue, the bearing surface of the heel being on a line with the bearing surface of the tongue, an angular face on the periphery of the heel, and a retaining plate bearing against the angular face.

3. In a switch structure, a pinless tongue having an enlarged circular heel whose center is at a point near the gage line of the tongue, the bearing surface of the heel being on a line with the bearing surface of the tongue, an angular face on the periphery of the heel, and in front of the center thereof, and a retaining plate bearing against the angular face.

4. In a switch structure, a pinless tongue having an enlarged circular heel whose center is at a point near the gage line of the tongue, the bearing surface of the heel being on a line with the bearing surface of the tongue, an angular face on the periphery of the heel, a retaining plate bearing against the angular face, and a screw bearing against the retaining plate.

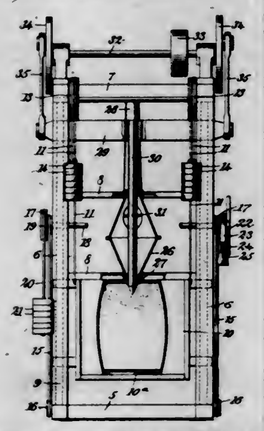
5. In a switch structure, a pinless tongue having an enlarged circular heel, the bearing surface of the heel being on a line with the bearing surface of the tongue, an angular face on the periphery of the heel, a retaining plate bearing against the angular face, a screw bearing against the retaining plate, and a pin to lock the screw in its adjusted position.

[Claims 6 to 8 not printed in the Gazette.]

901,753. MACHINE FOR FINISHING THE PACKING OF BARRELS. JOHN H. VOGT and LOUIS STORCK, Stamford, Conn. Filed Apr. 21, 1908. Serial No. 428,374.

1. The combination of a frame, a cross-head vertically movable on the frame, means for reciprocating the cross-head, a box support adapted to carry a receptacle, a hopper having a discharge neck for feeding a material through the head of the receptacle, a plunger carried by the cross-head and passing through the hopper and its discharge

neck for packing the material into the receptacle, and means having removable weights tending to force the support in the direction of the plunger.



2. The combination of a support adapted to carry a receptacle, a hopper for feeding a material into the receptacle having an approximately double conical form provided with tubular extensions at opposite ends, and a plunger movable through the hopper for packing the material into the receptacle and having a bearing in said extensions.

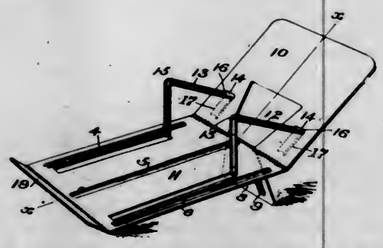
3. The combination of a frame, a cross-head movable on the frame, means for reciprocating the cross-head, a support adapted to carry a receptacle, a hopper for feeding a material into the receptacle, a plunger carried by the cross-head movable through the hopper, and separate means having removable weights tending to move the support in opposite directions.

4. The combination of a frame having vertically-arranged guides at opposite sides, a receptacle support slidable on said guides, a cross-head slidable on said guides above the support, a hopper for feeding a material to the receptacle supported on the frame, a plunger attached to the cross-head and operating through the hopper for packing the material within the receptacle, and means tending to slide the support on the guides toward the plunger.

5. The combination of a support adapted to carry a receptacle, means for feeding a material into the receptacle, a plunger working through the feeding means for packing the material into the receptacle, weighted means tending to force the support toward the plunger, and weighted means tending to move the support in the opposite direction.

[Claim 6 not printed in the Gazette.]

901,754. STAND FOR CALENDARS. JOSEPH W. TATUM, Philadelphia, Pa. Filed Feb. 24, 1908. Serial No. 417,331.



1. In a device of the character described, a base, a back formed at an angle to the base and side arms integral with said base adapted to be connected with said back.

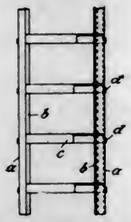
2. In a device of the character described, a base, arms integral with said base, a back formed at an angle to said base, means for connecting said arms with said back and a support integral with said back.

3. In a device of the character described, a base, a support therefor, a back situated at an angle with respect to said base, arms integral with said base and bent to engage with said back.

4. In a device of the character described, a base, a back situated at an angle with respect to said base, a support bent upon said back, arms bent upwardly from said base and passing through openings in said back, the ends of said arms being bent to engage with said back and a foot piece on said base.

5. In a device of the character described, a base, a back projecting at an angle from said base and integral therewith, a support bent on said back and integral therewith; arms projecting upwardly from said base and integral therewith, said arms being curved in cross section and having a portion thereof passing through openings in said back and a foot piece integral with said base.

901,755. LADDER AND STEP. PAUL TIEPOLT, Cologne-Lindenthal, Germany. Filed Aug. 14, 1907. Serial No. 388,478.

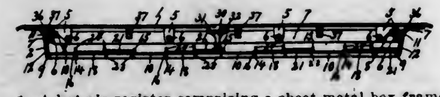


1. A ladder or step, comprising longitudinally ribbed thin walled metal side-pieces, and thin walled metal rungs fitting into said side-pieces and having portions receiving and embracing the ribs thereof, substantially as described.

2. A ladder or steps, comprising thin walled slotted metal side pieces, presenting elevated portions and thin walled metal rungs receiving and embracing and supported by said elevated portions and presenting lugs fitting into said slots and bent over at the back, substantially as described.

3. A ladder or steps, comprising thin walled slotted metal side-pieces presenting elevated portions, thin walled metal rungs supported by said elevated portions and presenting lugs fitting into said slots and bent over at the back, and a back-plate covering said lugs and embraced by the overturned edges of the side-piece, substantially as described.

901,756. HOT-AIR REGISTER. WILLARD S. TUTTLE, Brooklyn, N. Y. Filed Apr. 5, 1906. Serial No. 310,085.



1. A hot air register comprising a sheet metal box frame having integral bottom bars spaced apart forming intervening ports, a slide valve movable upon the inner faces of said bars and itself provided with transverse bars spaced apart forming intervening ports adapted to be registered with the first named ports, the bottom being depressed inwardly beyond the marginal edges of the frame and a grille-plate across the open side of the box.

2. A hot air register comprising a box frame having bottom bars spaced apart forming intervening ports and depressed inwardly beyond the inner marginal edges of the frame, a slide valve movable upon and across the inner faces of said bars, a second slide valve movable across and upon the first named valve, the slide valves having transverse bars spaced apart forming intervening ports and movable across the ports in the bottom of the box and a grille plate across the open side of the box.

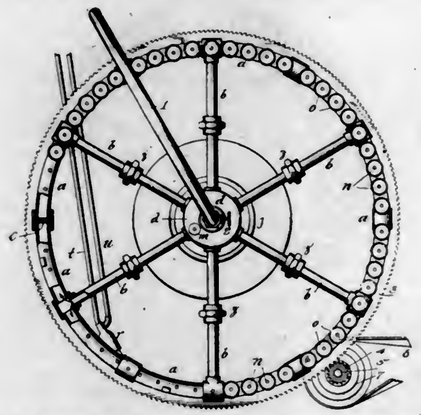
3. A wall register comprising a sheet metal box frame having its bottom depressed within the sides and forming therewith lengthwise grooves between the longitudinal edges of the bottom and sides of the box, and provided with transverse bars spaced apart forming intervening ports, a sheet metal valve plate having its longitudinal edges provided with outturned lengthwise flanges guided in said lengthwise grooves, said valve having a series of transverse bars spaced apart forming intervening ports and slidable upon the inner faces of the bottom bars of the box, and a grille plate across the open side of the box.

4. A wall register comprising a sheet metal box frame having its bottom integral with its sides and depressed in a plane wholly within said frame and provided with integral parallel bars spaced apart forming intervening ports, said frame having grooves at the junction of its bottom with its sides, a slide valve movable upon the bottom of the box and provided with opposite lengthwise flanges guided in the adjacent grooves in the sides of the box, and a second slide valve movable across and upon the first named valve and provided with out-turned flanges running along its opposite longitudinal edges, and a grille plate across the open side of the box.

5. A wall register comprising a box frame having parallel bottom bars spaced apart forming intervening ports each bar having a raised rib, a slide valve resting on the ribs of each bar and a grille plate across the open side of the box.

[Claims 6 to 20 not printed in the Gazette.]

901,757. MACHINE FOR DRYING BOTTLES. EMILE UTARD and ALEXANDER GIMONET, New York, N. Y., assignors to H. & G. Klotz & Co., New York, N. Y., a Firm. Filed Mar. 26, 1908. Serial No. 423,321.



1. In a machine of the character described, a central support, a carrier for bottles consisting of a plurality of hollow sections fitted to rotate on the central support, perforated nozzles and bottle supports attached to the hollow sections of the carrier, an air supply pipe, means for admitting air therefrom to the hollow sections successively, and means for applying heat to the hollow sections of the carrier and the air passing therethrough to the perforated nozzles.

2. In a machine of the character described, a central support, a carrier for bottles consisting of a plurality of hollow sections fitted to rotate on the central support, perforated nozzles and bottle supports attached to the hollow sections of the carrier, an air supply pipe, means for admitting air therefrom to some of the hollow sections, means for continuously rotating the carrier, and means for heating the hollow sections only through which the air is passing.

3. In a machine of the character described, a chambered central support, a carrier for bottles consisting of a plurality of hollow sections fitted to rotate on the central support, perforated nozzles and bottle supports attached to the hollow sections of the carrier, an air supply pipe connected to the upper part of the chamber of the central support, means for admitting air from this chamber successively to the hollow sections as they are rotated on the central support, a pipe extending from the lower part of the chamber of the central support for the discharge of aqueous and other deposits precipitated from the air, and means for heating the carrier sections only through which the air is passing.

4. In a machine of the character described, a central support, a carrier for bottles consisting of a plurality of hollow sections fitted to rotate on the central support, perforated nozzles and bottle supports attached to the hollow sections of the carrier, an air supply pipe, means for admitting air therefrom to the hollow sections successively, means for closing the perforations of some of the nozzles, as the alternate ones, at will, and means for applying heat to the hollow sections of the carrier and the air passing therethrough to the perforated nozzles.

5. In a machine of the character described, a hollow ring, a central support, a chambered hub fitted to rotate on said central support, hollow spokes connecting the hollow ring and hub, perforated nozzles extending upwardly from the hollow ring, bottle supports for holding bottles over the nozzles, a supply pipe connected to the central support and an annular gas pipe located beneath the hollow ring and having burners arranged to direct the burning gas against the ring.

[Claims 6 to 12 not printed in the Gazette.]

901,758. ELECTROLYTE. ABRAHAM VAN WINKLE, Newark, N. J., assignor to The Hanson & Van Winkle Company, Newark, N. J., a Corporation of New Jersey. Filed Oct. 24, 1907. Serial No. 398,871.

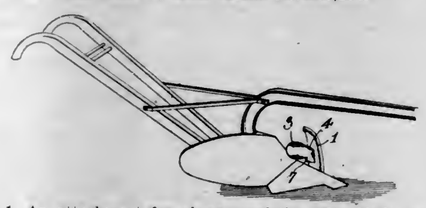
1. An electrolyte comprising fluorid of zinc in solution.

2. An electrolyte comprising slightly neutralized fluorid of zinc in solution.

3. An electrolyte comprising a fluorid of zinc solution, and an alkali for slightly neutralizing the fluorid of zinc.

4. An electrolyte comprising a fluorid of zinc solution, and carbonate of ammonia.

901,759. PLOW-COLTER. HENRY H. WACHTER, Melrose, Wis. Filed June 24, 1908. Serial No. 440,104.



1. An attachment for plows consisting of a blade constructed at one end to be attached to and supported solely by the landside of a plowshare, and a moldboard projecting from the said blade.

2. An attachment for plows consisting of a vertically disposed blade arranged to be secured at its lower end to the landside of a plowshare and having a front cutting edge, and a moldboard projecting laterally from the blade.

3. An attachment for plows consisting of a vertically-disposed blade having a convex front cutting edge, and a moldboard adjustably secured to said blade and projecting laterally therefrom.

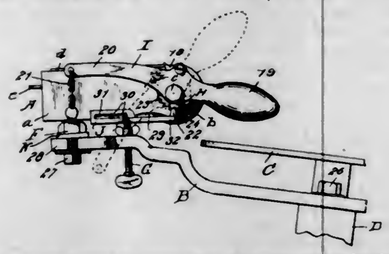
4. An attachment for plows consisting of a blade, and a moldboard projecting laterally from the blade and having a triangular notch in its lower edge.

5. The combination with a plow, of a vertically-disposed

blade secured at its lower end to the landside of a plow-share and having its upper end short of the plow beam, and a moldboard projecting from the blade.

[Claim 6 not printed in the Gazette.]

901,760. INK-FOUNTAIN. NORTON WAGNER, Scranton, Pa. Filed Oct. 4, 1906. Serial No. 337,386.



1. An ink fountain comprising an outer casing having a vertical slot at one end, a feed roller arranged at the opposite end of the casing between its sides, an ink trough within the casing, an adjusting screw extending through said slot and engaging the trough, and a locking screw threaded into the casing above the adjusting screw and transversely thereto, said locking screw being adapted to retain the adjusting screw within the slot and having a tapering part adapted to bind against the adjusting screw.

2. An ink fountain comprising an outer casing having a vertical slot at one end, a feed roller arranged at the opposite end of the casing between its sides, an ink trough within the casing, an adjusting screw extending through said slot and engaging the trough, said adjusting screw having an annular groove, and a locking screw threaded into the casing above the adjusting screw and transversely thereto, said locking screw having a part adapted to fit loosely within the groove in one position of the locking screw and having a tapering part adapted to bind against the adjusting screw in another position of the locking screw.

3. The combination with a suitable supporting arm, of an ink fountain, a device for connecting said fountain pivotally to the arm, and a wedge-shaped washer between said device and arm, for the purpose set forth.

4. An ink fountain comprising an outer casing pivotally supported at its rear end, a feed roller at the forward end of the casing, and a shoe secured to the casing and extending at one side of the roller below its axis, for the purpose set forth.

5. An ink fountain comprising an outer casing pivotally supported at its rear end, a feed roller at the forward end of the casing, and a shoe secured to the casing at one side of the roller, said shoe being adjustable longitudinally of the casing.

[Claims 6 and 7 not printed in the Gazette.]

901,761. ANCHOR AND BASE-PLATE FOR LAWN SWINGS, BENCHES, &c. AUGUST W. H. WEBER, Indianapolis, Ind., assignor of one-half to John M. Spencer and Bertha M. Spencer, Indianapolis, Ind. Filed Apr. 21, 1908. Serial No. 428,391.



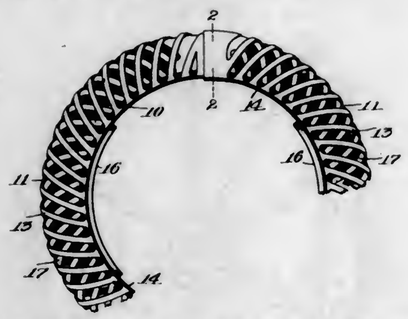
An anchor base-plate for lawn swings, benches and like articles consisting of a supporting plate, prongs on said plate to engage the ground and prevent skidding of said plate, a flange on the face of said plate to abut and prevent displacement of the swing and bench legs from said plate, and ears composed of flexible material embedded in said plates and adapted to bend against the legs, and means for rigidly securing the ears and legs together.

901,762. TOY. EDWARD V. WETZEL, New York, N. Y. Filed Feb. 5, 1908. Serial No. 414,372.



A toy comprising a hollow figure, a semispherical weighted base, a hammer suspended in said figure and a number of musical pins or tongues arranged in a circle upon the base in the path of said hammer.

901,763. HAIR-ROLL. JOSEPH WILCOX, Athol, Mass. Filed Apr. 24, 1908. Serial No. 428,967.



1. As an article of manufacture, a hair support comprising a sheet of flexible material having a series of ribs extending across it at an acute angle to the side edges and rolled up to form a body of substantially circular cross section, the edges of the sheet overlapping but being free from each other except at their ends and secured to each other at their ends.

2. As an article of manufacture, a hair roll comprising flexible material having a series of ribs extending across it rolled up to form a body of substantially circular cross section, the edges of the sheet being free from each other except at their ends where they are secured together, the two ends of the roll being rigidly secured together to form a circular roll.

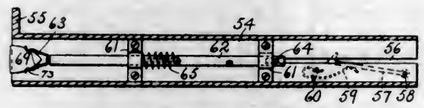
3. As an article of manufacture, a hair roll comprising a sheet of flexible material having a series of ribs extending across it diagonally rolled up, one end of the roll entering into the other end and secured thereto, whereby a circular roll is formed.

4. As an article of manufacture, a hair support comprising a rolled sheet of flexible material having a series of ribs extending across it, the edges of the sheet overlapping but being free from each other except at their ends and secured to each other at their ends, the two ends of the support being secured together so as to form a circular roll, and a pair of combs, each secured to one of said free edges, whereby the other edge is movable independently of the combs.

5. As an article of manufacture, a hair support comprising two sheets of flexible material, each having a series of ribs extending diagonally across it, each sheet being rolled up to form a body of substantially circular cross section, one of said bodies being located inside the other in such a way that the ribs of the two bodies cross each other.

[Claims 6 to 9 not printed in the Gazette.]

901,764. LOOM. FRED T. WITHEE and ROBERT WHITE, Springfield, Mass. Filed Sept. 28, 1906. Serial No. 336,547.



1. Shuttle-operating mechanism, for a loom, comprising the slay, a shuttle plunger provided with a projecting member and spring-actuated in one direction, traveling with said slay, a latch also traveling with the slay and normally lying in the lateral path of said member, and stationary means, lying in the path of the member which it takes with the slay and of the path of said latch which it takes when the slay swings rearward, to alternately actuate the member into engagement with the latch and out of such engagement.

2. The combination, in a loom, with the slay and the shuttle-box at each end thereof, of a plunger spring-actuated in one direction, longitudinally mounted in such box, provided with means at its inner end for grasping and releasing a shuttle and further provided with a downwardly-extending pin which projects below the floor of said box, and a yielding latch attached to the underside of said floor in operative relation to said pin and adapted to hold and release the same.

3. The combination, in a loom, with the slay and shuttle-box at each end thereof, of shuttle-operating mechanism comprising a plunger spring-actuated in one direction, in such box, provided with means for grasping and releasing a shuttle, and stationary means to retract said plunger and release the same to the action of its spring during the forward and backward movement of said slay.

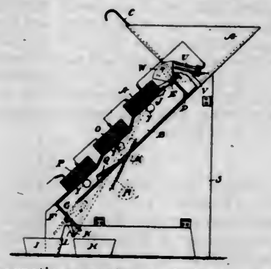
4. The combination, in a loom, with the slay and shuttle-box at each end thereof, of shuttle-operating mechanism comprising a plunger spring-actuated in one direction, in such box, provided with means for grasping and releasing a shuttle and provided with a projecting member, a yielding latch in operative relation with such member, and stationary means to cause said member to be actuated into engagement with said latch and said plunger to be retracted against the resiliency of its spring upon the forward sweep of said slay and to cause the member to be released from the latch and the plunger to be released to the spring upon the rearward sweep of the slay.

5. The combination, in a loom, with the slay and the shuttle-box at each end thereof, of a plunger spring-actuated in one direction, longitudinally mounted in such box, provided with means at its inner end for grasping and releasing a shuttle and further provided with a downwardly-extending pin which projects below the floor of said box, and a stationary retractor in the path of said pin to cause the same to be forced outward with said plunger against the resiliency of the plunger spring when said slay swings forward.

[Claim 6 not printed in the Gazette.]

901,765. MAGNETIC SEPARATOR. REUBEN I. WRIGHT and HOMER E. FROST, Cleveland, Ohio, assignors to The Electric Controller & Supply Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 10, 1907. Serial No. 372,973.

1. In a magnetic separator, a chute, a cut-off valve therefor, an electro-magnet over the chute, a switch in the circuit of the magnet, and mechanically connected to the valve operating mechanism, and switch contacts arranged for closing the switch prior to the opening of the valve.



2. In a magnetic separator, a chute, a cut-off valve to alternately permit and prevent the flow of material into the chute, an electro-magnet over the chute, a switch in the circuit of the magnet, the movable member of the switch being connected to move with the valve and switch contacts arranged to close the magnet circuit prior to the opening of the valve.

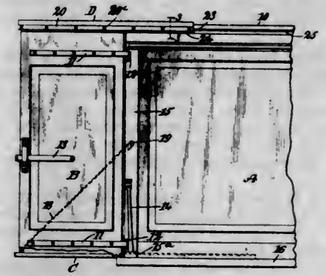
3. In a magnetic separator, a chute, a pivoted cut-out valve arranged at the feeding-in end thereof, said valve containing magnetic material, and a magnet over the chute below the valve, said valve being arranged, when opened, to be held open by the attraction of said magnet on said magnetic material.

4. In a magnetic separator, a chute having a fixed floor, a magnet over the same for attracting magnetic material passing down the chute, and a pivoted cut-off valve arranged to control the inlet to the chute and having a magnetic portion thereof movable into the field of the magnet so as to be retained in open position thereby.

5. In a magnetic separator, a chute, a magnet over the chute, a cut-off valve for the chute arranged when open to be retained open by the magnet, a switch in the circuit of the magnet, and mechanical means connecting the switch and the valve for closing the switch prior to the opening of the valve.

[Claims 6 to 8 not printed in the Gazette.]

901,766. MOVING-VAN. ANDREW B. YETTER, New York, N. Y. Filed Oct. 8, 1907. Serial No. 396,383.



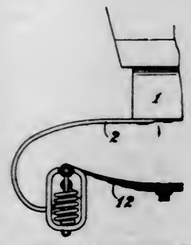
1. An extension section for vans, comprising a slidable bottom and a slidable hood, and end doors, for forming the side portions of the extension.

2. An extension section for vans comprising a slidable bottom, a correspondingly slidable hood and end doors which when the two said sections are in operative position constitute the side portions of said extension.

3. In a moving van, an auxiliary bottom located at the rear adapted to slide outward and inward relatively to the main bottom, a hood mounted at the upper portion of the van adapted to slide outward and inward relatively to the roof thereof, doors for the van which co-act with the said auxiliary bottom and the said hood to constitute sides for the extension, means for supporting the auxiliary bottom in its outer position and for limiting the outward movement of the hood.

4. In a moving van, an auxiliary bottom located at the rear adapted to slide outward therefrom, guides for the said auxiliary bottom and supports therefor, a hood slidably mounted at the roof of the van at the rear, means for limiting the outward movement of the said hood, tracks at the side portions of the van, brackets carried by the hood that receive between them the said tracks, and doors at the rear of the van adapted at the outer position of the hood and the auxiliary floor to extend between the outer side edges of said factors and constitute a housed extension for the rear end of the van.

901,767. BRACE FOR SUPPLEMENTARY VEHICLE-SPRINGS. WILLIAM YOUNG, St. Louis, Mo., assignor to Supplementary Spiral Spring Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 24, 1905. Serial No. 288,899.



1. A rigid brace for a supplementary vehicle spring composed of a pair of arms and a pair of cross-pieces connecting same, said cross-pieces containing openings by which said brace is attached to the device to be braced, the opening in one of said cross-pieces being in a different vertical plane from the opening in the other.

2. A brace for supplementary vehicle springs composed of a pair of arms and a pair of cross-pieces connecting same, said cross-pieces containing openings by which said brace is attached to the device to be braced, the openings in one of said cross-pieces being at approximately a right angle to the opening in the other.

3. A brace for a supplementary vehicle spring comprising a pair of parallel members in fixed connection with another pair of parallel members, and means in the brace for connecting same to said spring, said second pair of members being obliquely connected by said first-mentioned pair.

4. A brace for a supplementary vehicle spring comprising a pair of parallel members in fixed connection with another pair of parallel members, and means in the brace for connecting same to said spring, said second pair of members being so connected together by said first-mentioned pair that the former occupy different vertical as well as different horizontal planes with relation to each other.

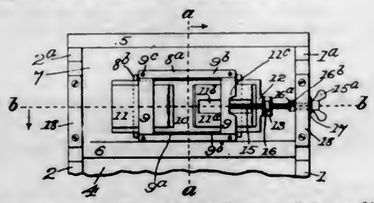
5. In a device of the character described, the combination of a helical spring, means for connecting same to the vehicle body, separate means for connecting same to the leaf spring, a third means for connecting the last-mentioned means to the end of the helical spring opposite said first-mentioned means, and a brace connected to said end of said helical spring and, also, to said second-mentioned means.

[Claims 6 to 40 not printed in the Gazette.]

901,768. SOAP-HOLDER FOR WASHBOARDS. VICTOR B. ADAMS, Cincinnati, Ohio, and GEORGE J. SCHALLER, Covington, Ky. Filed Aug. 3, 1908. Serial No. 446,782.

1. A soap-holder for a wash-board, comprising a plate having an elongated opening or orifice, a guide-way on the back of said plate and coinciding with said orifice, a carrier-plate in said guide-way, tapering means carried by said carrier-plate and adapted to forwardly-project said carrier-plate toward said orifice, and means for reciprocating said carrier-plate across the rear of said orifice.

2. A soap-holder for wash-boards, comprising a filling-plate having an orifice for the soap therein, a raised and orificed guide-frame mounted on the rear face of said filling-plate registering with said soap-orifice, a carrier-plate engaging said guide-way and having thereon a pair of inclined or tapered members adapted to engage said guide-way and forwardly-project said carrier toward said soap-orifice, a slotted box at the fore end of said carrier, a thumb-screw having a traveling-nut thereon and adapted to engage within said slotted box to propel or reciprocate said soap-projecting carrier and a suitable frame for supporting the device above a rubbing-surface.



3. A soap-holder for wash-boards, comprising a filling-plate having an orifice for the soap therein, a rearwardly and forwardly movable back-plate in said orifice, a raised and orificed guide-frame mounted on the rear face of said filling-plate registering with said soap-orifice and back-plate, a carrier-plate engaging said guide-way and having thereon a pair of tapered members or wedges adapted to engage said guide-way and forwardly-project said carrier and back-plate toward said soap-orifice, and means for reciprocating said carrier-plate across said guide-way.

901,769. DRYING-MACHINE. THOMAS ALLSOP and WALTER W. SIBSON, Philadelphia, Pa., assignors to The Philadelphia Drying Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 25, 1907. Serial No. 394,480.



1. In a machine of the class described, the combination with a casing, of a conveyer arranged to travel therethrough, means for actuating said conveyer, and means carried by the conveyer for supporting thereon the articles to be dried and to retain the articles upon the conveyer over the return stretch thereof, said means serving to automatically discharge the articles from the conveyer when the terminal of the return stretch of the conveyer is reached.

2. In a machine of the class described, the combination with a casing, of a conveyer arranged to travel therethrough, means for actuating said conveyer, means for circulating the air within said casing, and means carried by the conveyer for supporting thereon the articles to be dried and to retain the articles upon the conveyer over the return stretch thereof, said means serving to automatically discharge the articles from the conveyer when the terminal of the return stretch of the conveyer is reached.

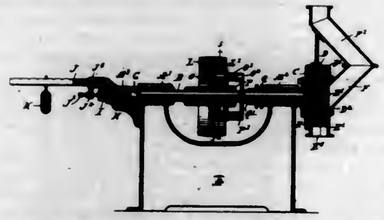
3. In a machine of the class described, the combination with a casing, of a conveyer arranged to travel therethrough, means for actuating said conveyer, means for heating the air within the casing, means for circulating the air within said casing, and means carried by the conveyer for supporting thereon the articles to be dried and to retain the articles upon the conveyer over the return stretch thereof, said means serving to automatically discharge the articles from the conveyer when the terminal of the return stretch of the conveyer is reached.

4. In a machine of the class described, the combination with a casing having heating and drying chambers, of a conveyer arranged to travel through said drying chamber, means for actuating said conveyer, and means carried by the conveyer for supporting thereon the articles to be dried and to retain the articles upon the conveyer over the return stretch thereof, said means serving to automatically discharge the articles from the conveyer when the terminal of the return stretch of the conveyer is reached.

5. In a machine of the class described, the combination with a casing having heating and drying chambers, of a conveyer arranged to travel through said drying chamber, means for actuating said conveyer, means for circulating the air within said casing, and means carried by the conveyer for supporting thereon the articles to be dried and to retain the articles upon the conveyer over the return stretch thereof, said means serving to automatically discharge the articles from the conveyer when the terminal of the return stretch of the conveyer is reached.

[Claims 6 to 21 not printed in the Gazette.]

901,770. GRINDING-MILL. DAVID S. ANTHONY, Durango, Mexico. Filed Jan. 25, 1907. Serial No. 354,088.



1. A grinding mill having a fixed grinding ring and a revoluble grinding ring, the rings having a common horizontally disposed axis and each having inclined and overlapping teeth, said teeth extending from the inner surface of the outer face to the inner or grinding face of the ring and from the inner periphery of the ring to about the center thereof.

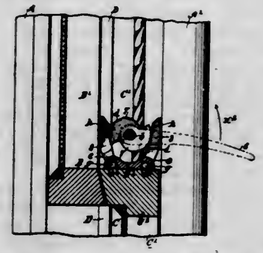
2. In a grinding mill, a frame having bearings, one of which is elongated, a shaft mounted in the bearings, a grinding disk on one end of the shaft, a stationary grinding disk, a sliding block in the elongated bearing, a ball between the block and the other end of the shaft, a pin slidably mounted in the elongated bearing and having one end engaging the block and its other end projecting out through said bearing, a weighted lever pivoted to the elongated bearing and provided with an arm, and a screw in the arm and engaging the said pin.

3. A grinding mill, comprising a frame, a casing at one end of the frame and having a central inlet opening therein, a shaft mounted in the frame to have endwise movement and having one end projecting into the casing, a grinding ring secured directly to the end of the shaft in the casing, a second grinding ring secured to the inner face of the casing, the rings being each provided with inclined and overlapping teeth extending from the inner surface of the outer face to the inner or grinding face, a yielding pressure device for the end of the shaft to hold the revoluble grinding ring in grinding relation to the fixed ring, and means for operating said shaft.

901,771. SASH-FASTENER. HENRY ATWATER, Chattanooga, Tenn. Filed July 17, 1908. Serial No. 444,110.

1. A sash fastener, comprising a base plate having an upright flange that is provided with a lateral opening, a handle lever, a double edged cam, a shaft connecting the lever and cam, and clamping dogs carried by the base plate and adapted to receive pressure from the cams.
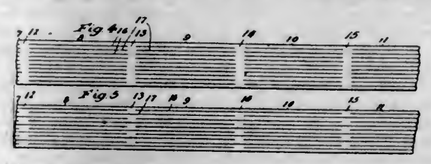
2. A sash fastener, comprising a base plate, an upright flange thereon having a lateral opening therein, an extension of the base plate near said flange, perforated ears on the extension, a cam block formed in two sections, the cam surfaces thereon trending oppositely, a handle lever, a short shaft joining the cam blocks with the lever, said shaft engaging the opening in the upright flange, and clamping dogs rockable on the perforated ears, said dogs receiving pressure from the cam sections when they are rocked with the lever.



3. A sash fastener, comprising a base plate, an upright flange on said base plate near one straight edge thereof, said flange having a lateral opening therein that is concave in its bottom, forming a bearing, the base plate having an extension beyond the flange, upright ears on the extension, said ears each having a lateral opening therein, a cam block formed in two integral sections, the cam faces of which trend oppositely, said faces being serrated, a handle lever, a short shaft connecting the cam sections with the lever, said shaft having rockable engagement with the upright flange in its opening, and two clamping dogs each pivoted at one end on a respective ear, and having curved edges that are serrated, the concave edges thereof having engagement with the serrated faces of the cam sections.

4. The combination with a window casement, and an upper sash and a lower sash, both slidable in the casement, of a sash fastener, comprising a base plate securable on the meeting rail of the lower sash, an upright flange on the base plate, having a lateral opening therein near its upper edge, a cam block formed in two sections, the cam surfaces of which trend oppositely, said surfaces having serrations thereon, a handle lever, a short shaft connecting the cam block with the handle lever, said shaft loosely engaging within the opening in the upright flange, ears on the base plate, having lateral openings therein, and clamping dogs pivoted to the ears through the openings therein, said dogs receiving pressure on their inner edges from the cam sections and pressing upon the upper sash and casement when the lever is rocked downward.

901,772. PROCESS OF CUTTING SHEET METAL. ANDREW BENSON, Chicago, Ill., assignor to Lewis E. Curtis, Chicago, Ill. Filed Jan. 27, 1908. Serial No. 412,694.



1. The improvement in the process of preparing sheet metal for expanding, consisting in first forming alined slits in longitudinally separated sections of the sheet, and then uniting alining slits of adjacent sections by cutting the separating bonds, alternating the cuts both transversely and lengthwise of the sheet.

2. The improvement in the process of preparing sheet metal for expanding, consisting in first dividing the sheet into the slitted sections with uncut separating sections, the slits being uniform in length and not staggered but

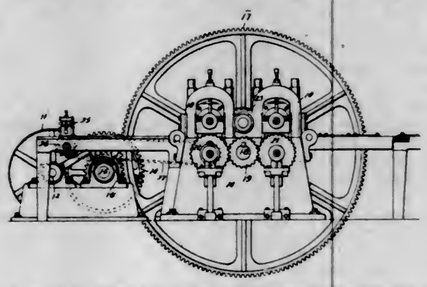
in uniform alinement, and then uniting the slits of adjoining sections by cutting the separating sections alternately both transversely and longitudinally of the sheet.

3. The improvement in the process of slitting sheet metal preparatory to expanding it, consisting in first slitting transverse sections or portions of the sheet with uniform alined slits spaced the width desired for the strand in the completed article, leaving uncut bond portions between the sections, and then uniting the alternate slits of adjoining sections by cutting the bond portions alternately both transversely and lengthwise of the sheet.

4. The improvement in the process of slitting sheet metal preparatory to expanding it, consisting in first forming a plurality of series of alined slits of uniform length and spaced apart to correspond to the width of the strands in the completed article, and then uniting the alternate slits of adjacent sections by cutting through the alternate bond portions, these cuts being alternated both transversely and lengthwise of the sheet.

5. The herein described process of preparing sheet metal for expanding, consisting in first cutting the sheet to form sections of narrow parallel strips, the separating slits between the said strips of different sections being coextensive and in alinement, and then cutting the bond portion remaining between the said sections to unite alternate slits of adjacent sections, alternating the cuts transversely and lengthwise, throughout the sheet.

901,773. MACHINE FOR CUTTING SHEET METAL. ANDREW BENSON, Chicago, Ill., assignor to Lewis E. Curtis, Chicago, Ill. Filed Jan. 27, 1908. Serial No. 412,695.



1. In a machine for slitting sheet metal preparatory to expanding it, the combination of slitting rolls for forming long alined slits in transverse sections of the sheets, separated by transverse uncut bond sections, and slitting rolls for severing the bond sections so as to connect alternate pairs of slits in the slitted sections at opposite sides of the bond sections.

2. In a machine for slitting sheet metal preparatory to expanding it, the combination of slitting rolls for forming alined longitudinal slits of uniform length in adjacent transverse sections of the sheet, such sections being separated by uncut bond sections, and other slitting rolls for severing the bond sections in such manner as to connect only alternate pairs of slits in the slitted sections through any one bond.

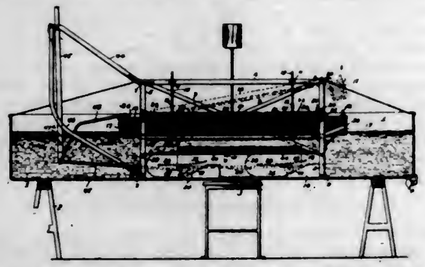
3. The combination of rolls for forming alined slits in transverse sections of the sheets and other rolls arranged in the rear of the first mentioned ones and acting to slit the bonds between the slitted sections in such manner as to connect the alternate pairs of slits therein.

4. The combination of rolls for forming alined slits in transverse sections of the sheets, other rolls arranged in the rear of the first mentioned ones and acting to slit the bonds between the slitted sections so as to connect alternate pairs of the slits made by the first rolls, essentially as described, and means for feeding the sheet after it passes from the first mentioned rolls.

5. The combination of rolls for forming alined slits in transverse sections of the sheets, other rolls arranged in the rear of the first mentioned ones and acting to slit the bonds between the slitted sections in such manner as to connect alternate pairs of the slits made by the first rolls essentially as described, and guides for preventing lateral movement by the sheets.

[Claims 6 to 10 not printed in the Gazette.]

901,774. MACHINE FOR SCOURING EGGS. EDWARD M. BOIES and WILLIAM W. BOIES, Yarmouth, Iowa. Filed July 3, 1907. Serial No. 382,050.



1. In a machine of the character described, the combination with a frame, of a brush movable therein, and a normally stationary egg holder mounted in said machine in position to retain the egg in position to be engaged by said brush.

2. In a machine of the character described, the combination of a frame, two brushes movable therein, one above the other and a normally stationary egg holder supported in said frame between the brushes.
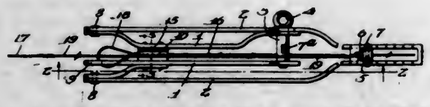
3. In a machine of the character described, the combination with a tank, of a frame therein, a brush movable in said frame, and a normally stationary egg holder mounted in said frame in position to hold the eggs submerged and to subject them to the action of the brushes.

4. In a machine of the character described, the combination with a tank, of a frame mounted therein, two reciprocating brushes mounted in said frame, one above the other, and a normally stationary egg holder mounted in the frame in position to hold the eggs submerged and subject to the action of said brushes.

5. In a machine of the character described, the combination with a frame, of two brushes mounted therein, one above the other, means for reciprocating both brushes simultaneously in the same direction, and a normally stationary egg holder supported by said frame between the brushes.

[Claims 6 to 13 not printed in the Gazette.]

901,775. WIRE-STRETCHER AND SPLICER. HARRY F. BONESTEELE, Shannon, Mont. Filed Oct. 24, 1905. Serial No. 284,227.



1. A device of the kind described, comprising a frame provided with a hook at one end, and a clutch for engaging a wire, in combination with a second frame pivotally connected to said first frame and carrying a tensioning device comprising a series of ratchet teeth, a lever provided with pawls for engaging said teeth and means for attaching a second wire to said lever.

2. A device of the kind described, comprising a frame provided with a hook at one end, and a clutch for engaging a wire, in combination with a second frame pivotally connected to said first frame near the hook end thereof and carrying near its free end a tensioning device comprising a plurality of series of ratchet teeth, a lever provided with a plurality of spring actuated pawls for engaging said teeth, and means for attaching a second wire to said lever.

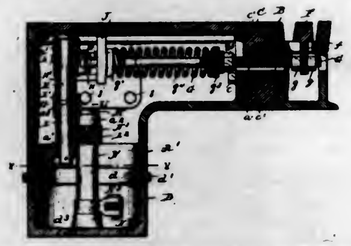
3. A device of the kind described, comprising a frame provided with means for fixedly engaging a wire, in combination with a second frame pivotally connected to said first frame and provided with means for movably engaging a second wire, whereby two fixed wires may be tensioned for splicing, and then permanently spliced without changing their tension.

4. A device of the kind described, comprising a frame provided with a hook at one end and a clutch for engaging a wire, in combination with a second frame pivotally connected to said first frame and carrying a tensioning device comprising a series of ratchet teeth, a lever provided with pawls for engaging said teeth and means for attaching a second wire to said lever.

5. In a device of the kind described, a frame provided with means for engaging a wire, and a hook for partially controlling the position of said wire in said frame, in combination with tensioning means attached to said frame and means for engaging a second wire with said tensioning means.

[Claims 6 to 9 not printed in the Gazette.]

901,776. UNIVERSAL SWITCH-BOX. WILLIAM M. BROWN, Johnstown, Pa., assignor to The Lorain Steel Company, a Corporation of Pennsylvania. Filed Dec. 2, 1907. Serial No. 404,842.



1. In a switch-box, a tongue operating rod, a link leading to an operating lever, connections between the operating rod and the link, and means for changing the angle between the operating rod and the link.

2. In a switch-box, a tongue operating rod, a link leading to an operating lever, connections between the operating rod and the link, and means for changing the angle between the operating rod and the link, in combination with a casing having an adjustable portion to compensate for difference in angle between the operating rod and the link.

3. In a switch box of the character described, a casing inclosing the operating mechanism, and a chock interposed between the casing and the switch structure, one of its faces conforming to the face of the switch structure and the other face conforming to the face of the casing, for the purpose specified.

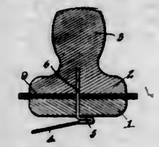
4. In a switch of the character described, a casing inclosing the operating mechanism, an adjustable cap having a pipe socket, and a chock interposed between the casing and the switch structure.

5. In a switch-box, a crank, connections between the crank and the switch, a second crank, an operating link connected thereto, and adjustable operating means between the two cranks.

[Claims 6 to 9 not printed in the Gazette.]

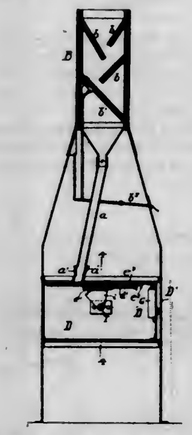
901,777. MILK-BOTTLE CLOSER. FREDERICK BUCKHALTER, Ashbourne, Pa. Filed July 6, 1908. Serial No. 442,089.

A milk bottle closer of the character described, comprising a pair of circular opposing clamping sections, a circular flexible disk carried between said sections, and a sharpened metallic cap removing prong, one of said clamping sections being provided with a central outwardly extending boss or knob, forming a handle, and said cap removing prong being provided with an angular shank at one end thereof, having projecting teeth and adapted for engagement through the opposite one of said clamping sections, and with an intermediate portion bent back upon itself to form a head whereby the said shank may be driven through



said flexible disk and into the material of said clamping section provided with said handle, to engage the material thereof with its said teeth, and to clamp said sections, and said disk together, substantially as described.

901,778. FARE-BOX. EZRA S. BUCKNAM, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 30, 1908. Serial No. 424,179.



1. The combination in a fare box, of a receptacle for the fares, said receptacle having a fare receiving opening, a lock for securing the receptacle in position in the box, and means for closing the opening actuated by the lock that secures the receptacle to the box.

2. The combination in a fare box, of a receptacle mounted in the box and having a fare receiving opening, means for closing said opening, a lock for securing the receptacle to the box, and mechanism actuated by the lock to close the opening before the locking bolt is retracted.

3. The combination in a fare box, of a removable receptacle mounted in the box having an opening for the passage of fares into the box, a lock for securing the receptacle to the box, means for closing the opening in the receptacle, and mechanism connecting the lock mechanism with the closing mechanism in such a way that the closing mechanism will be actuated so as to close first the opening and then retract the bolt of the lock to release the box.

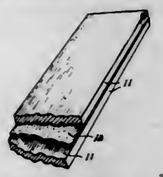
4. The combination in a fare box, of a receptacle for the fares, having an opening for the passage of the fares into the box, a lock for securing the receptacle in position in the box, a door for the receptacle so that access may be had to the interior of the receptacle, a lock for the door, means for closing the opening, and mechanism connecting said means with the lock that secures the receptacle to the box so that the receptacle will be closed before it is withdrawn from the box, with means connecting the said closing device with the door lock so that it will be released when the door is opened.

5. The combination of a fare box, a receptacle mounted therein, and having an opening communicating with the

fare receiving opening of the box, a lock for securing the receptacle to the box, a slide for closing the opening in the receptacle, means connecting the spindle of the lock to said slide, the parts being so arranged that a given amount of lost motion will be provided so that on turning the spindle of the lock the slide will close the opening prior to the withdrawal of the bolt to release the receptacle from the box.

[Claims 6 to 17 not printed in the Gazette.]

901,779. FRICTION-BOARD FOR DROP-FORGING HAMMERS. JOHN A. BURGER, Detroit, Mich. Filed Aug. 14, 1907. Serial No. 388,440.



1. A friction board for drop-forging hammers consisting of outer strips of wood forming the friction surfaces of the board, and a strengthening strip of strong flexible material interposed between said outer strips and secured thereto throughout its length.

2. A friction board for drop-forging hammers consisting of strips of material forming the friction surfaces of the board, and a strip of leather interposed between said strips and secured thereto.

901,780. CLEVIS FOR PLOWS. JOHN F. CASSMAN, Lake Cicott, Ind. Filed Dec. 31, 1907. Serial No. 408,798.



1. In combination with a plow beam, a clevis having side portions connected to the beam and provided with a slotted front portion, a double-tree coupling slidingly mounted in the slotted portion of said clevis, and means carried by one of the side portions of the clevis for imparting movement to the double-tree coupling.

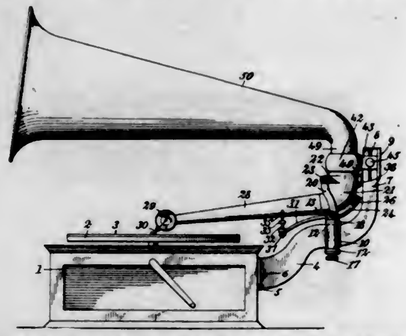
2. In combination with a plow beam, a clevis having side portions pivoted to the beam and provided with a slotted front portion, means carried by said beam for shifting the clevis, a double-tree coupling slidingly mounted in the slotted portion of said clevis, and means carried by one of the side portions of the clevis to impart movement to the double-tree coupling.

3. In combination with a plow beam, a clevis having side portions pivoted to the beam and provided with a slotted front portion, means carried by said beam for raising and lowering the clevis, a double-tree coupling slidingly mounted in the slotted portion of said clevis, a link in engagement with said double-tree coupling, and coöperating means carried by one of said side portions of the clevis and also having engagement with said link for imparting movement to the double-tree coupling.

4. In combination with a plow beam, a clevis consisting of side members having a pivotal engagement with the plow beam and provided with a front projected portion having formed therein a curved guide slot, a bell-crank lever carried by the plow beam and having a connection with said clevis, a bell-crank lever carried by one of the said side members of the clevis, a double-tree coupling slidingly mounted in said guide slot and having a linked pivotal connection with the bell-crank lever carried by the side member, an adjusting lever having connection with the bell crank lever carried by the plow beam for imparting a vertical movement to the clevis, and an adjusting lever having connection with the bell crank lever carried by the side member for imparting movement to the double tree coupling within the slot.

5. In combination with a plow beam, a clevis consisting of integral side and end members and an intermediate cross-bar, the side members being pivoted to said plow beam and the end member and the cross-bar being arranged to form between them a curved guiding slot, a bell-crank lever carried by the plow beam and having a connection with said clevis, an adjusting lever having a connection with said bell-crank lever to raise or lower said clevis, a bell-crank lever carried by one of said side members, a double tree coupling slidingly mounted in the curved slot of the clevis and having a pivotal link connection with the last-mentioned bell-crank lever, and an adjusting lever having a connection with said last mentioned bell-crank lever for imparting a movement to said double-tree coupling within the guiding slot.

901,781. TALKING-MACHINE. WILLIAM A. CHAPMAN, Smithville, Ark. Filed Oct. 9, 1907. Serial No. 396,566.



1. In a device of the class described, in combination, a standard, a cradle arranged to swing upon said standard, a sound tube movably mounted upon said cradle, and means carried by said cradle for supporting said sound tube, said cradle having a guideway, said sound tube having a part engaging slidably at said guideway.

2. In a device of the class described, in combination, a standard, a cradle arranged to swing upon said standard, a sound tube arranged to swing upon said cradle in a direction at an angle with the direction of swing of said cradle, and resilient means carried by said cradle for supporting said sound tube, said cradle having a guideway, said sound tube having a part engaging slidably at said guideway.

3. In a device of the class described, in combination, a standard, a cradle arranged to swing upon said standard, a sound tube arranged to swing upon said cradle, an adjustable connection mounted upon said standard and adapted to carry a horn, said connection communicating with said sound tube, and resilient means carried by said cradle for supporting said sound tube.

4. In a device of the class described, in combination, a standard, a cradle pivotally mounted upon said standard, an elbow mounted to swing upon said cradle, a connection movably engaging said elbow and communicating interiorly therewith, said connection being adapted to support a horn, a sound tube secured to said elbow, and resilient means carried by said cradle for supporting said sound tube, said cradle having a guide tongue, said elbow having a guide groove engaging slidably at said tongue.

5. In a device of the class described, in combination, a standard, a cradle pivotally mounted upon said standard, said cradle being formed to constitute a guideway, an elbow mounted to swing upon said cradle and slidably engaging said guideway, a connection adjustably carried by said standard and movably engaging said elbow and communicating interiorly therewith, a horn carried by said connection, a sound tube secured to said elbow and communicating interiorly therewith, and resilient means carried by said cradle for supporting said sound tube.

[Claims 6 to 12 not printed in the Gazette.]

901,782. SOUND-REPRODUCER. WILLIAM A. CHAPMAN, Smithville, Ark. Filed Dec. 2, 1907. Serial No. 404,664.



1. In a sound reproducer, a diaphragm having opposite, vibrating faces rigid with each other at a point within their peripheries, and an annular spacing member separating said faces at their peripheries whereby said faces are rendered concave, said member having the opposite sides shaped to conform to the curvature of said vibrating faces.

2. In a sound reproducer, a diaphragm having opposite, vibrating faces rigidly secured together at a point within their peripheries and in direct engagement at this point, and an annular spacing member between said faces at the peripheries thereof whereby said faces are oppositely incurved, said member having the opposite sides shaped to conform to the curvature of said vibrating faces.

3. In a sound reproducer, a diaphragm having opposite, vibrating faces fastened together near the centers and in direct engagement at the point of fastening, and an annular spacing member separating said faces at their peripheries whereby said faces are rendered oppositely concave, said member having opposite sides beveled to conform to the concavity of said faces.

4. In a sound reproducer, a diaphragm having opposite, vibrating faces partly in engagement within the peripheries and partly spaced whereby an air-tight chamber is formed therebetween, and an annular member between said faces and at their peripheries, said member having the opposite sides shaped to conform to the curvature of said faces.

5. In a sound reproducer, a diaphragm, a stylus bar mounted to rock and having a vibrating arm secured to said diaphragm, means for adjusting said bar, and pneumatic cushioning means for resisting the movement of said bar.

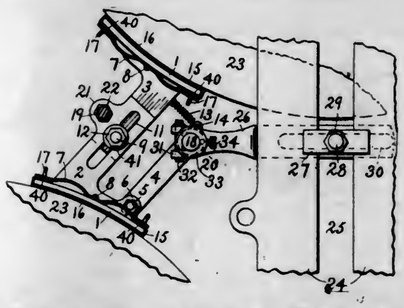
[Claims 6 to 8 not printed in the Gazette.]

901,783. CLEANER FOR ROLLS. SOULIADA CODERRE, Holyoke, Mass. Filed Mar. 30, 1908. Serial No. 424,095.

1. The combination, in a roll cleaner, of two shoes, means of connection between such shoes, an arm directly connected with one of said shoes and adapted to be mounted to slide on a rod, and a connecting member between the free end of said arm and said means of connection between the shoes.

2. The combination, in a roll cleaner, of two shoes, arms connecting such shoes, an arm connected with one of said shoes and adapted to be mounted to slide on a rod, and a spring extending between said last-mentioned arm and the adjacent shoe arm.

3. The combination, in a roll cleaner, of two shoes, longitudinally adjustable arms connecting such shoes, an arm connected with one of said shoes and adapted to be mounted to slide on a rod, and a spring extending between said last-mentioned arm and the adjacent shoe arm.

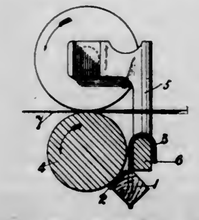


4. The combination, in a roll cleaner, of two shoes provided with connecting arms, continuous spring clips centrally fastened to such shoes, cross-pieces connecting the ends of such clips, said clips and cross-pieces being arranged and adapted to grasp the ends of covers on the faces of the shoes, an arm connected with one of said shoes and adapted to be mounted to slide on a rod, and a spring extending between said last-mentioned arm and the adjacent shoe arm.

5. The combination, in a roll cleaner, with a suitably supported rod, of an arm provided with a head which is capable of being slidingly mounted on said rod, two shoes provided with connecting arms, one of such shoes being provided with a lug to which said first-mentioned arm is pivoted, and a spring extending between said head and the adjacent shoe arm.

[Claims 6 and 7 not printed in the Gazette.]

901,784. APPLIANCE FOR CLEANING THE DELIVERY-ROLLERS OF MULE SPINNING AND TWISTING FRAMES. WILLIAM A. CORDINGLEY, Pudsey, England. Filed Sept. 3, 1907. Serial No. 391,262.

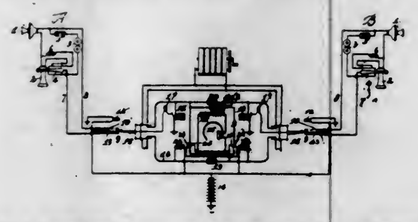


The combination, with a revoluble roller, and a supporting rail arranged on one side of the said roller; of a bar provided with a cleaning strip of soft material for bearing against the said roller, and rods of flexible material secured to the said bar at one end and having their free end portions bent over the said rail, said rods affording a means for adjusting the position of the said cleaning strip and regulating its pressure against the said roller.

901,785. TELEPHONE SYSTEM. ELMER R. CORWIN, Chicago, Ill., assignor to Corwin Telephone Manufacturing Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 26, 1906. Serial No. 349,374.

1. A telephone exchange system including telephone lines, jacks therefor, a cord circuit for uniting telephone lines in conversation, an operator's telephone equipment having multiplied terminals, and two relays, one serving to control the connection of one set of said multiple terminals with the cord circuit and the other serving to control the connection of the other set of said multiple terminals with the cord circuit, one of said relays being con-

trolled by the plug used as an answering plug and apparatus associated with the line connected with the said answering plug, while the other relay is controlled by the plug used as a connecting plug and apparatus associated with the line connected with the said connecting plug.



2. A telephone exchange system including telephone lines, jacks therefor, a cord circuit for uniting telephone lines in conversation, an operator's telephone equipment, and two relays, each serving to establish connection of the operator's equipment with the cord circuit, and each adapted to break the connection it effects, one of said relays being controlled by the plug used as an answering plug and apparatus associated with the line connected with the said answering plug, while the other relay is controlled by the plug used as a connecting plug and apparatus associated with the line connected with the said connecting plug.

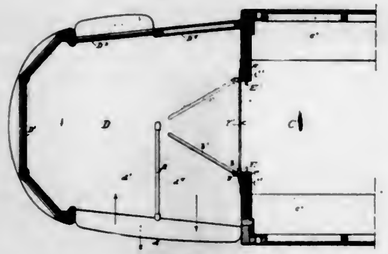
3. A telephone exchange system including telephone lines, jacks therefor, a cord circuit for uniting telephone lines in conversation, an operator's telephone equipment having multiplied terminals, and two relays, one serving to control the connection of one set of said multiple terminals with the cord circuit and the other serving to control the connection of the other set of said multiple terminals with the cord circuit, one of said relays being controlled by the plug used as an answering plug and apparatus associated with the line connected with the said answering plug, while the other relay is controlled by the plug used as a connecting plug and apparatus associated with the line connected with the said connecting plug, the relay associated with the plug used as an answering plug serving to break the connection it effects, while the relay associated with the plug used as a connecting plug maintains the connection it governs until said connecting plug has been connected with the called line.

4. A telephone exchange system including telephone lines, jacks therefor, a cord circuit for uniting telephone lines in conversation, an operator's telephone equipment, and two relays, each serving to establish connection of the operator's equipment with the cord circuit, and each adapted to break the connection it effects, one of said relays being controlled by the plug used as an answering plug and apparatus associated with the line connected with the said answering plug, while the other relay is controlled by the plug used as a connecting plug and apparatus associated with the line connected with the said connecting plug, the relay associated with the plug used as an answering plug serving to break the connection it effects, while the relay associated with the plug used as a connecting plug maintains the connection it governs until said connecting plug has been connected with the called line.

901,786. PASSENGER-CAR. SAMUEL M. CURWEN, Haverford, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 13, 1908. Serial No. 432,702.

1. The combination in a passenger car, of a body portion, a platform, a transverse partition having a doorway therein, a guard mounted at the partition and projecting over the platform and adapted to move from one side of the doorway to the other, and means for shifting the guard as it moves from one position to the other.

2. The combination in a passenger car, of a body portion, a platform, a transverse partition separating the body portion from the platform, a doorway in the partition, rails above and below the doorway, a shaft adapted to slide mounted on the rails, a guard secured to the shaft and extending over the platform, said shaft being adapted to move either to one side or the other of the doorway, and means for turning the shaft as it moves from one position to the other to change the position of the guard.



3. The combination in a passenger car, of a body portion, a platform, a transverse partition separating the platform from the body portion, a doorway in said partition, a transverse rail extending from one edge of the platform near the center thereof and separating the platform into ingress and egress sections, a vertical shaft mounted on the platform side of the doorway and arranged to be shifted from one side of the doorway to the other, a guard projecting from said shaft to a point near the inner end of the guard rail, and means for turning the shaft and the guard as the shaft is shifted from one side to the other of the doorway.

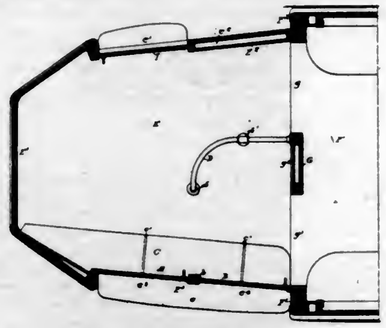
4. The combination in a passenger car, of a body portion, a platform, a transverse partition separating the body portion from the platform, a central doorway in said partition, transverse rails extending from one side of the platform to a point near the center thereof and dividing the platform into ingress and egress sections, the egress section being nearest the partition, two transverse rails, one above and the other below the doorway, slides adapted to said rails, a vertical shaft mounted in bearings in said slides, a guard secured to the shaft and projecting towards the inner end of the guard rail of the platform, an arm at one end of the shaft, and a fixed guide for the outer end of said arm so that when the shaft is shifted from one side of the doorway to the other the guide will turn the shaft through the arm.

5. The combination in a passenger car, of a body portion, a platform, a transverse partition separating the body portion from the platform, a central doorway therein, a guard extending from one side of the platform to a point near the center thereof separating the platform into ingress and egress sections, two transverse rails, one mounted below the doorway and the other mounted above the doorway, slides mounted on said rails, a vertical shaft adapted to bearings on the slides, a guard projecting from said vertical shaft to a point near the inner end of the guard that separates the platform into two sections, an arm on the upper end of said shaft, and a bracket secured to a fixed point and having a pin, said arm being slotted to receive the pin, so that when the shaft is moved from one side of the doorway to the other the guard will be shifted to block either the ingress or the egress passageway.

[Claim 6 not printed in the Gazette.]

901,787. PASSENGER-CAR. WARREN M. SMITH, Moore, and SAMUEL M. CURWEN, Haverford, Pa., assignors to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 28, 1908. Serial No. 435,436.

1. The combination in a passenger car, of a body portion, a platform, ingress and egress passageways at one side of the platform, the egress passageway being nearest the body of the car, a post at the edge of the platform separating the two passageways, a door hinged to the post and arranged to close the egress passageway, a sliding door, and guides for the door, said door being arranged to slide against the end of the vestibule framing.

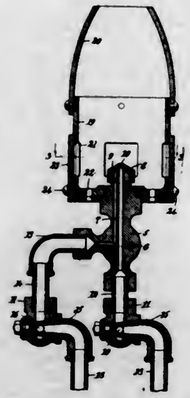


2. The combination in a passenger car, of a body portion, a platform, vestibule framing at one end of the platform, a post at one side of the platform separating the ingress and egress passageways leading to the platform, a sliding door closing the ingress passageway, a pivoted door closing the egress passageway, a guard at the center of the platform and forming with the door closing the egress passageway when open a partition separating the egress section of the platform from the ingress section.

3. The combination in a passenger car, of a body portion, a platform, vestibule framing at the end of the platform, a transverse partition separating the body of the car from the platform, ingress and egress passageways in said partition, a fixed section separating the said passageways, a rail extending from one side of the fixed section over the platform, a post at one side of the platform, a pivoted door hung to the post and closing one of the passageways, said door when open forming with the rail a partition separating the ingress section of the platform from the egress section, and a sliding door arranged to close the other passageway at the side of the car.

4. The combination in a passenger car, of a platform, ingress and egress passageways at the side of the platform, doors closing said passageways, a detachable seat section having lugs engaging the projections on the fixed portion of the car and having collapsible leg sections, said seat extending along the inner side of the two doors.

901,788. BURNER. WILLIAM H. DAMON, New York, N. Y. Filed Nov. 16, 1907. Serial No. 402,437.



In a hydrocarbon burner, a burner body having air and fuel passages, a combustion flue surrounding said body, having air intake openings in the side and bottom thereof, and a regulating device closely fitting said flue, having like openings in the side and bottom thereof, the side openings and the bottom openings of the flue and regulating device movable alternately into and out of register when the device is revolved relatively to the flue.

901,789. CHAIN. JAMES M. DODGE, Philadelphia, Pa. Filed Mar. 31, 1904. Serial No. 201,001.



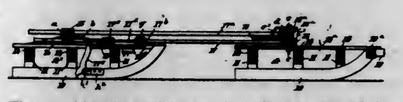
1. The combination in a chain, of two sets of links, a pivot pin having a rib engaging one set of links, and a segment of a bushing mounted on the pin and having it edges in engagement with shoulders on the other set of links, said bushing and pins extending the full width of the chain, substantially as described.

2. The combination in a chain, of two sets of links, a pivot pin having a rib engaging one set of links, a bushing fitting partially around said pin having its edges engaged by shoulders of the other set of links so as to be immovably held thereto, said bushing and pin extending the full width of the chain, with a washer or washers mounted between a link element or elements so as to increase the width of the chain, substantially as described.

3. The combination of a chain link having a pivot-pin-opening and a segment of a bushing forming a pivot-pin-bearing detachably fixed within said opening and extending laterally from said link, substantially as described.

4. The combination in a chain, of two sets of links, the links of one set each having an opening, of which the greater portion is circular in outline and the remainder has a toothed shaped recess, a pivot pin having a longitudinal rib entering the toothed shaped recess of said first set of links, the second set of links each also having an opening, of which a portion is formed to permit of the free movement of the pivot pin and its rib, with a segment of a bushing fixed in the remaining portion of the opening of said second set of links and fitting around the pivot pin, substantially as described.

901,790. BOB-SLED AND BRAKE THEREFOR. EBEN G. DOLAND, Starksboro, Vt. Filed Apr. 8, 1908. Serial No. 425,923.



1. The combination with two bob-sleds arranged in sequence, of two bolster-bars pivoted together and upon the front bob-sled, one bolster-bar being slidable on the other one, two brake-levers having depending toes and pivoted on the runners of the rear bob-sled, and means for connecting the sliding bolster-bar with the brake-levers for rocking them in unison.

2. The combination with two bob-sleds arranged in sequence, of two bolster-bars pivoted together and upon the front bob-sled, the top bolster-bar having a transverse slot and the pivot occupying said slot, rollers on said bolt working in the slot, two brake-levers pivoted on the runners of the rear bob-sled, and means connecting the sliding bolster with the brake-levers and rocking them in unison.

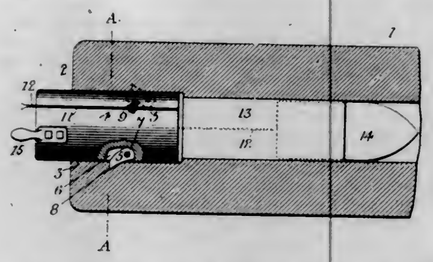
3. The combination with the two bob sleds arranged in sequence, of a pair of bolster bars pivoted together and to the front bob sled, said upper bolster bar having a lost motion connection with the lower bar, brake levers pivoted on the runners of the rear bob sled, a pair of sliding plates extending from the lower bolster bar and having a con-

nection with the brake levers, and plates extending from the upper bolster bar to a connection with the rear bob sled.

4. The combination with the two bob sleds arranged in sequence, of two bolster bars pivoted one upon the other and to the front bob sled, the upper bolster bar having a lost motion connection with the lower bar and with the front sled, a bolster bar on the rear bob sled, brake levers on the runners of the rear bob sled, plates connected with the lower bolster bar and with the brake levers, and plates connected with the upper bolster bar, and having a connection with the lower bolster bar.

5. The combination with two bob sleds arranged in sequence, of reinforce blocks mounted on the frame of the rear sled above the runners, said blocks each having a transverse recess, the recesses having a concave bottom, a bolster bar having transverse slots, rollers journaled in the bottoms of the slots, said rollers seating in the recesses.

901,791. BREECH-LOADING ORDNANCE. WILLIAM Y. DONAHOE, Cascade, Iowa. Filed Nov. 19, 1907. Serial No. 402,835.



1. The combination with a rotatable breech-block, of a locking member carried by the block and movable therein a portion of the locking member normally projecting outward beyond the surface of the block, and a breech having a breech-block chamber and having also a groove to receive the projecting portion of the locking member.

2. The combination with a breech-block, of a pawl pivoted thereto, and a breech having a breech-block chamber and having also a groove in the wall of said chamber the pawl being adapted to automatically engage the groove wall to lock the block in its chamber when inserted therein the pawl being also adapted to be disengaged by the breech-block from locking engagement with the breech.

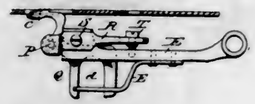
3. The combination with a breech-block, of a spring-actuated member carried by the breech-block, and a breech having a breech-block chamber and having also a groove intersecting the wall of the chamber and adapted to receive a portion of the spring-actuated member the groove formation ejecting the spring-actuated member therefrom upon the rotation of the breech-block in its chamber.

4. The combination with a breech block, of a plurality of pawls seated in recesses therein and pivoted to the breech-block, springs normally projecting the free ends of the pawls outward beyond the surface of the breech-block, a breech having a chamber therein for the reception of the breech-block and having also grooves intersecting the walls of the chamber the grooves decreasing the depth towards one end and being adapted to receive the free ends of the pawls, and hand-grasps for the breech-block, the breech-block being adapted to be unlocked by rotating it in the direction of the decreasing depth of the grooves.

5. In a breech-loading gun adapted to use electrically ignited cartridges having conductors attached thereto and adapted to convey an igniting charge of electricity to the cartridge, a breech-block having a peripheral channel adapted to receive the electric conductor and to permit a portion thereof to extend beyond the rear portion of the breech-block.

[Claim 6 not printed in the Gazette.]

901,792. FEEDING MECHANISM FOR SEWING-MACHINES. ERNEST F. DURAND, Paris, France, assignor to Union Special Sewing Machine Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 1, 1901. Serial No. 53,826.



1. A sewing machine including in combination a main feed bar, a feed dog carried thereby, means for operating said feed bar, an auxiliary feed dog, means for moving said auxiliary feed dog into and out of contact with the material during each feeding movement, means for giving said auxiliary feed dog a differential feeding movement, relative to the movement of said main feed dog, a pivoted lever, and means for swinging said lever about its pivot, whereby said relatively differential movement of the auxiliary feed dog may be rendered ineffective.

2. A sewing machine including in combination, a main feed bar, a feed dog carried thereby, means for operating said feed bar, an auxiliary feed dog, means for moving said auxiliary feed dog into and out of contact with the material during each feeding movement, means for giving said auxiliary feed dog a differential feeding movement relative to the movement of said main feed dog, a pivoted lever constructed to move bodily with said main feed bar and means for swinging said lever about its pivot, whereby said relatively differential movement of the auxiliary feed dog may be rendered ineffective.

3. A sewing machine including in combination a main feed dog, means for operating the same, an auxiliary feed dog, a feed bar supporting the same, means for moving the auxiliary feed dog into and out of contact with the material during each feeding movement, means for giving said auxiliary feed dog a differential movement relative to the main feed dog, and a lever operating through the auxiliary feed dog bar for moving said dog out of contact with the material, whereby its feeding action is rendered ineffective.

4. A sewing machine including in combination, a main feed bar, a feed dog carried thereby, an auxiliary feed bar supported by said main feed bar and moving vertically in unison therewith, an auxiliary feed dog carried by said auxiliary feed bar, means for giving the auxiliary feed dog a differential feeding movement relative to the feeding movement of the main feed dog, a pivoted lever moving bodily in unison with the main feed bar, and means for swinging said lever about its pivot, whereby said relatively differential feeding movement of the auxiliary feed dog, may be rendered ineffective.

5. A sewing machine including in combination, a rocking frame, a main feed dog, means for moving said main feed dog horizontally from said rocking frame, an auxiliary feed dog, means for giving said auxiliary feed dog a differential feeding movement from said rocking frame, a lever moving back and forth with said rocking frame, and connected to said auxiliary feed dog, whereby said auxiliary feed dog, may be moved out of contact with the material, and its feeding action rendered ineffective.

[Claims 6 to 22 not printed in the Gazette.]

901,793. INSECTICIDE AND PROCESS OF PREPARATION THEREOF. CARLETON ELLIS, White Plains, N. Y., assignor to Fertilizer Products Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 15, 1907. Serial No. 368,168.

1. As an insecticide, a dry, pulverulent mass having each of its particles coated with a non-volatile, insoluble poison, said base particles comprising a material of a chemically different character from the coating thereof.

2. As an insecticide, a dry impalpable powder, each particle of which is coated with a non-volatile insoluble insect poison, said base particles comprising a material of a chemically different character from the coating thereof.

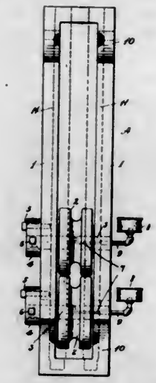
3. As an insecticide, a dry powder having each of its particles coated with an insoluble inorganic insect poison, said base particles comprising a material of a chemically different character from the coating thereof.

4. As an insecticide, a dry impalpable powder having each of its particles coated with an insoluble arsenical compound, said base particles comprising a material of a chemically different character from the coating thereof.

5. As an insecticide, a dry powder having each of its particles coated with precipitated copper arsenite, said base particles comprising a material of a chemically different character from the coating thereof.

[Claims 6 to 29 not printed in the Gazette.]

901,794. CABLE OR ROPE GUIDE. JOHN C. ELZY and ERIC E. ANDERSON, St. Paul, Minn. Filed Apr. 10, 1908. Serial No. 426,347.



1. A cable or rope guide comprising a pivotally supported frame and sheaves and rollers journaled therein in pairs on axes at right angles to each other.

2. A cable or rope guide comprising a pivotally supported frame and sheaves and rollers journaled therein in pairs on axes at right angles to each other, and means for lubricating the sheaves.

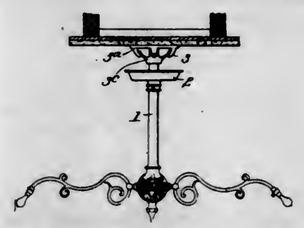
3. In a cable guide, the combination with a rectangular skeleton frame having orifices in the top and bearings in the bottom and removable rollers let down through the orifices and stepped in the bearings in the bottom, of sheaves, removable axles therefor upon which the sheaves are loosely mounted, and collars secured to the frame and to the axles.

4. In a cable guide, the combination with a rectangular skeleton frame having orifices in the top and bearings in the bottom, and removable rollers let down through the orifices and stepped in the bearings in the bottom, of sheaves, removable axles therefor upon which the sheaves are loosely mounted, collars secured to the frame and to the axles, said axles having oil ducts therein, and means for supplying the latter with a lubricant.

901,795. TRIPOD FOR SUPPORTING LIGHTING-FIXTURES. EDWIN A. EMERY, Galva, Ill. Filed Aug. 26, 1907. Serial No. 390,201.

1. A tripod for the purpose specified comprising an upper and a lower plate, said upper plate having a plurality of curved converging arms, the lower plate having a like number of similarly curved diverging arms, the arms of the lower plate being arranged above and supported upon the arms of the upper plate, and means to adjustably secure the corresponding arms of said plates together.

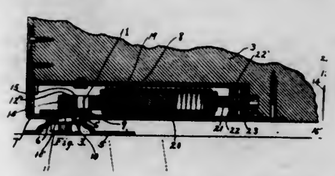
2. A tripod for the purpose specified comprising an upper and a lower plate, said upper plate having three curved converging arms, the lower plate having a like number of similarly curved diverging arms, the arms of the lower plate being arranged above and supported upon the arms of the upper plate, and means to adjustably secure the corresponding arms of said plates together.



3. A tripod for the purpose specified comprising an upper and a lower plate, said upper plate having a plurality of curved converging arms provided with enlarged openings therein, the lower plate having a like number of similarly curved diverging arms, the arms of the lower plate being arranged above and supported upon the arms of the upper plate, and screws passed through said enlarged openings in the lower arms and engaged with the upper arms.

4. A tripod for the purpose specified, comprising an upper and a lower plate, said upper plate having a plurality of curved converging arms, the lower plate having a like number of similarly curved diverging arms, the arms of the lower plate being arranged above and supported upon the arms of the upper plate, the spaces between the arms on the upper plate being wider than the arms on the lower plate whereby said plates may be disconnected, and means to adjustably secure the corresponding arms of said plates together.

901,796. DOUBLE-ACTING SPRING-HINGE. MARCUS A. ERICKSON, Minneapolis, Minn. Filed Dec. 19, 1907. Serial No. 407,108.



1. A double acting spring hinge having means for holding the door in an open position, said holding means permitting the door to close through its momentum when pushed farther open, or beyond the point where said holding means is operative, and released.

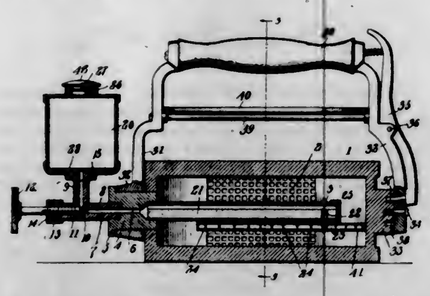
2. A double acting swing door in combination, with a spring hinge therefor, said hinge including means for holding said door to prevent it from closing when swung open past a predetermined point, and a spring device permitting the further opening of the door, but yieldingly resisting such movement, for the purpose specified.

3. A double acting swing door in combination with a double acting spring hinge, said hinge comprising stationary pins and a plate having cam edges arranged to engage said pins and travel thereon, and said plate having recesses in its opposite sides to receive said pins when the door is swung to an open position, the walls of said recesses engaging said pins and holding the door in its open position, and a spring attached to said plate and arranged to be put under tension by the movement of the door, substantially as described.

4. The combination, with a double swing door, of a double acting spring therefor and comprising a disk and pins mounted thereon, a plate having cam edges arranged to bear on said pins and a spring connected with said plate, said plate traveling on said pins as the door is swung to an open position and having recesses to receive said pins

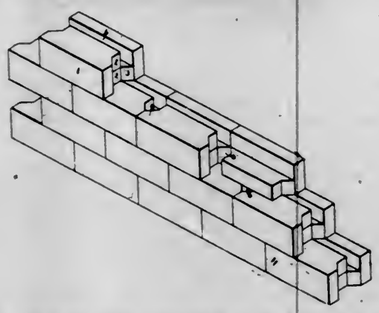
when the door is open, a spring device arranged to hold said plate in engagement with said pins and thereby lock the door at a predetermined point in its open position, said plate swinging on one of said pins as a pivot from the closed position of the door to its open position, and the axis of said plate being transferred from one pin to the other, and the resistance of said spring increasing thereon when the door is pushed beyond its normal open position.

901,797. SAD-IRON HEATER. GEORGE W. FALLIN, Montgomery, Ala., assignor to Mathew M. Freed, Montgomery, Ala. Filed May 13, 1908. Serial No. 432,680.



The combination with the body of a sad iron, of a heater comprising a plug engaging the body having a longitudinal opening, a tube threaded into the plug, and extending into the body of the sad iron, a second tube arranged below the first tube and provided with a plurality of perforations, a tube connecting the two first named tubes and extending into the upper tube, an asbestos lining in the upper tube, a fuel tank connected with the plug, and a valve for controlling the communication between the tank and the plug.

901,798. CONCRETE CONSTRUCTION. MINER E. FENNER, Durand, Ill., assignor of one-half to Thomas L. Hamilton, Durand, Ill. Filed Jan. 20, 1908. Serial No. 411,672.

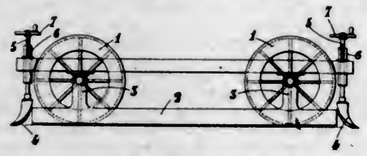


1. A building block comprising a facing wall and an interlocking projection, the projection being flush with one edge of the facing wall, and the front edge of the projection being shortened.

2. A building block comprising a facing wall and an interlocking projection, the projection being flush with one edge of the facing wall, and the front edge of the projection being shortened at both ends.

3. A building block comprising a facing wall and an interlocking projection, the projection being flush with one edge of the facing wall, and the front edge of the projection being shortened at both ends, and the angles at the ends being filled in.

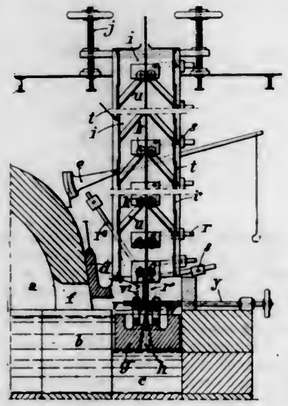
901,799. ANCHORING DEVICE FOR AGRICULTURAL TRACTORS OR THE LIKE. JOSEPH E. W. FILLET, Paris, France. Filed Apr. 6, 1908. Serial No. 425,503.



1. In an anchoring device for tractors, in combination, tractor wheels, means located in advance of each wheel for forming a furrow in the ground, the wheels traveling in the furrows thus formed, and means carried by the tractor and bearing against corresponding sides of the furrows, for offsetting side draft.

2. In an anchoring device for tractors, in combination, tractor wheels, means located in advance of each wheel for forming a furrow in the ground, the wheels traveling in the furrows thus formed, and plates carried by the tractor adjacent the wheels and bearing against corresponding sides of the furrows for offsetting side draft.

901,800. APPARATUS FOR THE MANUFACTURE OF GLASS SHEETS OR PLATES. EMILE FOURCAULT, Lodelinsart, Belgium. Filed Apr. 5, 1904. Serial No. 201,763.



1. In an apparatus of the class set forth, a molten glass receptacle, mechanism for upwardly drawing an endless sheet of glass from the said receptacle, and a vertical casing inwardly heated by heat radiated from the molten glass and from the said receptacle, the means and mechanism for drawing the endless sheet of glass being located within the casing and operating to draw the glass vertically within the latter and cause the sheet to cool gradually and regularly to present it in proper condition at the upper part of the casing for cutting into desired lengths.

2. In an apparatus of the class set forth, a receptacle for molten glass, a movable vertical casing adapted to be arranged near the receptacle, a plurality of horizontal pairs of drawing rolls provided with an incombustible and glass non-scratching means, and means for actuating the rolls, the rolls coming into contact with the glass solely when the latter is hot and wholly solidified and operating to draw the endless sheet of glass upwardly within the casing by their mutual motion.

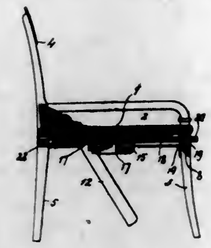
3. In an apparatus of the class set forth, a casing carrying a plurality of pairs of rolls, one of the rolls of each pair being fixed and the other movable, and means for causing the movable rolls to be automatically brought nearer to the fixed rolls or removed from the latter, in combination with means for drawing a sheet of glass.

4. In an apparatus of the class set forth, a casing carrying a plurality of pairs of drawing rolls, one of the rolls of each pair having means coöperating therewith for automatically bringing it nearer to the other, and a plurality of transverse partitions or diaphragms located within the casing and arranged to permit the passage of an endless sheet of glass therethrough and operating to keep the heat radiated from the molten glass in the lower part of the casing.

5. In an apparatus of the class set forth, a casing carrying a plurality of pairs of drawing rolls, and a plurality of inner transverse partitions or diaphragms in the casing and a series of lateral apertures or man-holes formed in the walls of the latter and having means for closing the same, the said apertures or man-holes permitting the removal of bits of broken glass and if necessary the escape of the excess of heat from the casing.

[Claims 6 to 29 not printed in the Gazette.]

901,801. WINDOW-CHAIR. HENRY J. FREY, Pittsburg, Pa. Filed Nov. 27, 1907. Serial No. 404,117.



A window chair comprising a seat, two sets of cleats secured to the lower face thereof, each set arranged at one side of the center of the seat, a slidable plate positioned between the cleats of each set, a pair of blocks suitably spaced apart and depending from the lower face of each of said plates, said blocks of less width than the width of the plates, an angularly disposed clamping member depending from each set of plates and abutting against the blocks carried by its respective plate, a pair of bars arranged below a cleat of each set of cleats and having their ends abutting against the clamping members and fixedly secured to the blocks, a brace secured to the front of the seat and depending from the lower face thereof, said brace cut away to permit of the passage of said plates, a screw bearing secured to the rear of the seat depending from the lower face thereof, screw bearings carried by the bars, a rotatable screw extending through said brace engaging in the screw bearing secured to the seat and engaging the screw bearings carried by the bars, said screw in connection with said bearings adapted when rotated to shift the plates whereby the clamping members are adjusted.

901,802. TENT. FRANK H. GOTSCHE, San Francisco, Cal. Filed Jan. 20, 1908. Serial No. 411,636.

1. A tent composed of a plurality of sections of substantially triangular shape, each section having means at its opposite side edges serving to detachably connect it to the adjacent tent sections when employed as an element of the tent, or to connect the opposite portions of each edge together when the section is folded transversely upon itself to provide a poncho.

2. A substantially triangular tent section having fastening devices at its opposite edges, the said fastening devices at one edge extending for substantially one-half the length thereof and located on one side of the tent section, and the fastening devices at the opposite edge extending at the opposite half thereof and located on the other side of the tent section whereby when the said section is folded transversely upon itself the opposite portions of the same edge may be detachably connected by said fastening device.

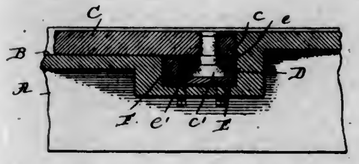
3. A tent section of substantially triangular shape having means for detachably connecting it to one or more like sections at its opposite side edges to form a Sibley tent, and means at its other edge serving in connection with the first mentioned means for connecting it to a plurality of like tent sections to form a shelter tent.



4. A tent section of approximately triangular shape adapted to be folded transversely upon itself intermediate its length, and provided with means when so folded to detachably connect the two adjacent portions of each side edge of the section and produce a poncho of substantially uniform width, the said means being arranged to leave intervals of the connected edges free for the passage of the arms of the wearer therebetween to the outside of the poncho.

5. A tent section of approximately triangular shape adapted to be folded transversely upon itself intermediate its length and provided with means when so folded to detachably connect the two adjacent portions of each side edge of the section on a diagonal line and produce a poncho of substantially uniform width.

901,803. SWITCH STRUCTURE. HEENAN S. GOUGHNOUR, Johnstown, Pa., assignor to The Lorain Steel Company, a Corporation of Pennsylvania. Filed Dec. 2, 1907. Serial No. 404,868.



1. In a switch structure, a tongue having a pintle, enlarged at its free end, a split bearing composed of two semicircular pieces surrounding the pintle, a recess in the switch structure to receive the pintle and split bearing, the bottom of the pintle and split bearing being on a line with each other and means for tightening the bearing.

2. In a switch structure, a tongue having a pintle with a countersunk head, a split bearing composed of two semicircular pieces surrounding the pintle, a recess in the switch structure to receive the pintle and split bearing, the bottom of the pintle and split bearing being on a line with each other and means to tighten the bearing.

3. In a switch structure, a tongue having a pintle, a split bearing composed of two semicircular pieces surrounding the pintle, a recess in the switch structure to receive the pintle and split bearing, and a wedge to tighten the bearing.

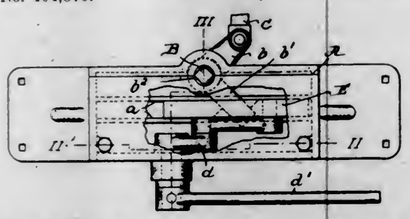
4. In a switch structure, a tongue having a pintle with a countersunk head, a split bearing composed of two semicircular pieces surrounding the pintle, a recess in the switch structure to receive the pintle and split bearing, and a wedge to tighten the bearing.

5. In a switch structure, a tongue having a pintle, a split bearing composed of two semicircular pieces surrounding the pintle, a recess in the switch structure to receive

the pintle and split bearing, the bottom of the pintle and split bearing being on a line with each other, a bearing plate for the pintle and split bearing in the recess, and means to tighten the bearing.

[Claims 6 to 8 not printed in the Gazette.]

901,804. SWITCH-STAND. HEENAN S. GOUGHNOUR, Johnstown, Pa., assignor to The Lorain Steel Company, a Corporation of Pennsylvania. Filed Dec. 2, 1907. Serial No. 404,870.



1. In a switch-stand, a vertical shaft having a crank to which the switch rod is connected, a horizontal shaft having an operating lever and a crank, and a sliding connection between the crank on the horizontal shaft and the vertical shaft to transmit motion from the horizontal to the vertical shaft.

2. In a switch-stand, a vertical shaft having a crank to which the switch rod is connected, a horizontal shaft having an operating lever and a crank connected thereto, and a sliding connection between the crank on the horizontal shaft and a second crank on the vertical shaft, to transmit motion from the horizontal shaft to the vertical shaft.

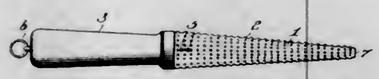
3. In a switch-stand, a vertical or target shaft having a crank to which the switch rod is connected, a second crank on said shaft in engagement with a sliding plate, a horizontal or operating shaft having a crank and an operating lever connected thereto, and connections between the crank on the operating shaft and the sliding plate.

4. In a switch-stand, a vertical or target shaft having a crank to which the switch rod is connected, a second crank on said shaft in engagement with a sliding plate, a horizontal or operating shaft having a crank and an operating lever connected thereto, and a link connecting the crank on the operating shaft and the sliding plate.

5. A switch stand having a switch actuating shaft, and an operating shaft, said shafts being at right angles to each other, connecting mechanism between said shafts including a rectilinear movable member arranged to move the switch actuating shaft, and lock the same in its turned position.

[Claims 6 to 10 not printed in the Gazette.]

901,805. FISH-SCALING DEVICE. MAX W. GROSSER, Chicago, Ill. Filed Oct. 15, 1907. Serial No. 397,521.

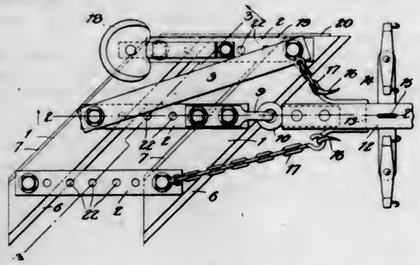


The herein described fish scaler comprising a tapered metallic tube provided with punched holes having roughened burs upon the outer side of the tube, and a handle having a reduced portion to which the upper end of the tube is secured.

901,806. COMBINED ROAD-GRADER, DRAG, AND HARROW. HAMILTON D. GUFFEY, Unionville, Mo. Filed Mar. 16, 1908. Serial No. 421,410.

1. A combined road grader, drag and harrow comprising transversely disposed blades, a landside removably attached between the ends of the blades at one side of the grader, and means whereby the position of the grader may be changed to throw the dirt to either one side or the other.

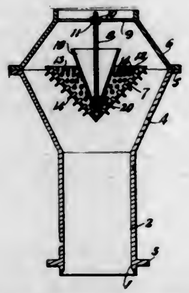
2. In a machine of the character described, transversely disposed blades having along their upper and lower edges forwardly projecting beveled extensions, a landside adapted to be detachably secured between the ends of the blades, at one side of the machine, a loosely connected draft tongue, and detachable controlling devices connected to the opposite ends of the grader and to the opposite sides of said tongue whereby the position of the grader may be regulated to throw the dirt to one side or the other, substantially as described.



3. A machine of the character described, comprising transversely disposed blades, a series of connecting bars to secure said blades together, a brace bar to hold said blades in operative position, a draft hook, a tongue loosely connected to said draft hook, draft regulating chains connected to the opposite ends of the grader and to said tongue, and a landside secured to the ends of said blades along one side of the machine, substantially as described.

4. A machine of the character described comprising transversely disposed blades, a series of connecting bars, said bars having formed therein a series of harrow teeth passages, a brace bar, a landside arranged along one side of the grader, a detachable harrow bar, a draft tongue, and means to connect the machine with said tongue whereby the position of the former may be changed, substantially as described.

901,807. SPARK-ARRESTER. ALFRED HALL, Edmonton, Alberta, Canada. Filed Oct. 23, 1907. Serial No. 398,822.



1. A spark arrester comprising an inverted hollow cone having openings therethrough and semi-circular projections on the outer face of the cone, each projection surrounding the upper half of each opening.

2. A spark arrester comprising an inverted hollow cone having openings therethrough, tubes passing through the openings and extending outwardly beyond the cone, said tubes having their lower half cut away.

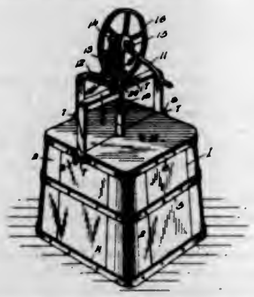
3. A smoke stack having an upper enlargement therein, and an inverted hollow cone supported within the enlargement, said cone having openings therethrough, and semi-circular projections on the outer face of the cone and at the upper side of each opening.

4. In a spark arrester the combination with the smoke stack having an upper enlargement, increasing and then decreasing in horizontal cross sectional area, when passing upwardly, of an inverted hollow cone suspended within the enlargement, said cone having a series of openings therethrough, tubes passing through the openings and extending beyond, both inwardly and outwardly, the said tubes having part of their outwardly extending portion cut away, as and for the purpose specified.

5. In a spark arrester the combination with the smoke stack having an upper enlargement, increasing and then decreasing in horizontal cross sectional area, when passing upwardly, of an inverted hollow cone suspended within the enlargement, said cone having a series of openings therethrough, straight tubes passing through the openings and extending beyond, both inwardly and outwardly, the lower half of the outwardly extending portion of the tubes being cut away, as and for the purpose specified.

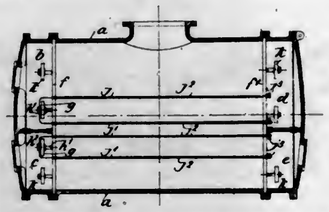
[Claims 6 to 12 not printed in the Gazette.]

901,808. CHURN. DOLE HAMILTON, Goshen, Ind. Filed May 15, 1908. Serial No. 433,003.



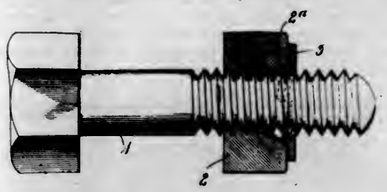
In a churn, the combination with a four sided receptacle, of a dasher having a shouldered upper end, a tripod mounted removably to three sides of the receptacle and above the same, a vertical shaft having a shouldered portion adapted to co-act with the shoulder of the dasher, said shaft passing through the tripod, a sleeve slidingly mounted to surround the co-acting ends of the dasher and shaft to make a detachable coupling therebetween, means to hold the sleeve in operative or inoperative position, a pinion carried by the shaft above the tripod, an angle casting secured to the center leg of the tripod and having bearings for the vertical shaft and a recess between the bearings for the passage of the pinion, said casting also being provided with a horizontal bearing in its upper end, a horizontal shaft journaled therein, a large gear wheel carried thereby and meshing with the pinion, and a crank connected to said gear wheel and above the free side of the receptacle.

901,809. SURFACE CONDENSER. ANTHONY HARRIS, Greenock, Scotland, and FREDERIC A. ANDERSON, Westminster, England. Filed Apr. 25, 1905. Serial No. 257,374.



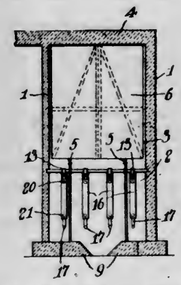
In a surface condenser, the combination with the vessel containing the conduits for condensing, of a body of aluminium arranged to be immersed in the water in the vessel, and in electrical connection with the portions of the conduit engaged by the water in the vessel.

901,810. NUT-LOCK. EDWARD A. HEMSTEGER, Chicago, Ill. Filed June 25, 1908. Serial No. 440,375.



As a new article of manufacture, a nut lock consisting of a plate provided with an opening adapted to receive a bolt, said plate having a spiral thread engaging flange of triangular cross section projecting outwardly from a side thereof and substantially concentric with reference to the bolt opening aforesaid, the flange increasing in size from its point of beginning to an abrupt terminal point substantially at said point of beginning and at the same time inclining outwardly from its point of beginning to its abrupt extremity above mentioned.

901,811. DRYING-KILN. THOMAS C. MORRIS, Little Rock, Ark. Filed May 11, 1908. Serial No. 432,218.



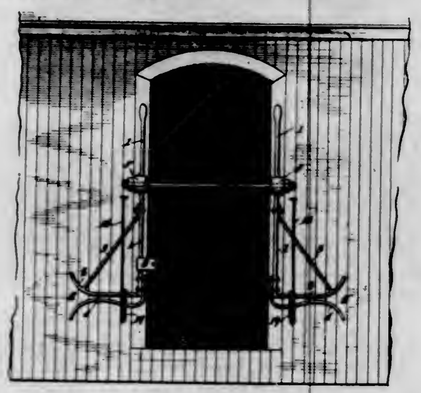
A dry kiln of the class described embodying side, front, and rear walls, rails extending longitudinally of the kiln but supported in the front and rear walls thereof, vertical I-beams arranged at intervals in the length of the kiln and supporting upon the upper ends thereof the said rails, cross bars having opposite ends seated in the side walls of the kiln and secured intermediate of their ends to the I-beams, supporting members connected at their upper ends with the cross bars, heating apparatus carried by said supporting members, and brace means connecting the I-beams substantially as described.

901,812. MAIL-BAG CATCHER AND DELIVERER. WILLIAM R. MORRISON, Derry, N. H. Filed Dec. 28, 1907. Serial No. 408,364.

1. In an apparatus for the purpose specified, the combination, with a car and a transverse shaft arranged across its side doorway, of hooks adapted to slide on such shaft and projecting in opposite directions, and means for coupling such hooks together detachably, so that they may be used as a double hook, or disconnected and arranged on the sides of the doorway when not required for use, substantially as described.

2. In an apparatus for the purpose specified, the combination, with a car and a horizontal shaft extending across its side doorway, of a hook mounted, and adapted to slide and rotate, on said shaft, and a spring-tension device comprising a chain and spring, the same being attached at one end to the car body adjacent to the doorway, and at its opposite end to the hook of the catcher, the normal length of the said device being such that it is subjected to tension when the hook slides back part way of the length of the shaft, as shown and described.

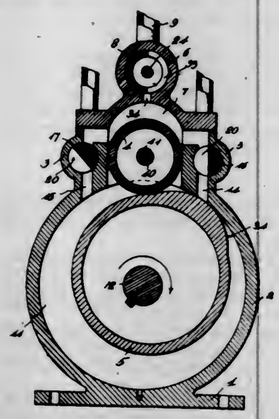
3. In an apparatus for the purpose specified, the combination, with a support arranged adjacent to a railway track, and a mail-bag catcher secured thereto, of an impact-reliever located below such catcher, and consisting of a frame on which a mail-bag is received, the same having a pivot on which it is adapted to swing in a vertical plane, substantially as described.



4. In an apparatus for the purpose specified, the combination, with a fixed support and a mail-bag catcher attached thereto of an impact-reliever consisting of a device interposed in the path of a mail-bag and adapted to swing in a vertical plane, and a spring which resists the movement of the said device, substantially as described.

5. In an apparatus for the purpose specified, the combination, with a fixed support, and a mail-bag catcher secured thereto, of an impact-reliever comprising frames having woven wire stretched thereon in two planes which are at an angle to each other, as shown, the device being pivoted and adapted to swing in a vertical plane, substantially as described.

901,813. ROTARY ENGINE. WILLIAM S. MOSES, Tracy, Minn. Filed Jan. 28, 1908. Serial No. 412,972.



1. In combination, a cylindrical casing, an eccentric rotatively mounted therein, an abutment mounted to bear against said eccentric, and inlet and exhaust ports for said casing on opposite sides of said abutment, the length of said abutment being yieldably adjustable.

2. In combination, a cylindrical casing, an eccentric rotatably mounted therein, an abutment chamber, a cylindrical abutment in said chamber and bearing against said eccentric and dividing the casing into two inclosures, means to yieldably extend the length of said abutment, exhaust and inlet ports to said inclosures communicating with said chamber, a feed pipe, and a rotatable cutoff valve between said feed pipe and said chamber and connection between said valve and said eccentric, whereby said valve is constrained to rotate in step with said eccentric.

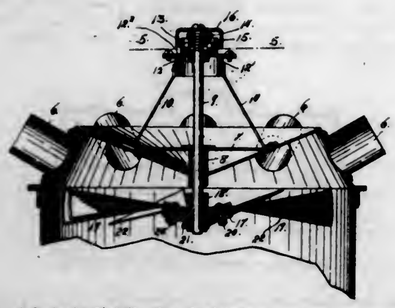
3. In combination, a casing, an eccentric having end flanges and rotatably mounted in said casing, an abutment chamber, an abutment therein and bearing against the ends thereof, against said end flanges and said eccentrics, whereby said casing is divided into two inclosures, exhaust and inlet ports for said inclosures, said abutment being divided into a body and an end section, said sections being adapted to contact the ends of said chamber to contact said end flanges, and means to yieldably force said sections apart.

4. In a rotary engine, a cylindrical casing, an eccentric rotatably mounted therein, an abutment chamber communicating with said cylindrical casing, an abutment movable in said chamber and bearing against said eccentric to divide the cylindrical casing into two inclosures, inlet and exhaust ports communicating with said inclosures, rotatable valves for said ports, means adapted to rotate said valves, the valves of each of said inclosures being constrained to move together, whereby when one port is closed the other will be open, a tapering steam chest communicating with said chamber, a feed pipe communicating with said steam chest, a cylindrical tapering rotary cut-off valve mounted in said steam chest, means to yieldably press said cut-off valve longitudinally in one direction, openings in said rotary valve adapted to register with said feed pipe and the openings to said chamber through a portion of the revolution of said cut-off valve, and means adapted to rotate said cut-off valve in step with said eccentric, the openings of said cut-off valve being so positioned that steam pressure is admitted into said chamber throughout only a portion of the rotation of said eccentric.

5. In combination, a cylindrical casing, a piston rotatable therein, means to bear against said piston to divide it into two inclosures, inlet and exhaust ports communicating with said inclosures, a feed pipe, a tapering cylindrical steam chest communicating with said feed pipe and said inlet ports, a tapering cylindrical cut-off valve rotatably mounted in said steam chest, means to yieldably hold said cut off valve against movement in one direction, openings in said valve adapted to register with said feed pipe and said inlet ports, and means adapted to rotate said valve.

[Claims 6 to 8 not printed in the Gazette.]

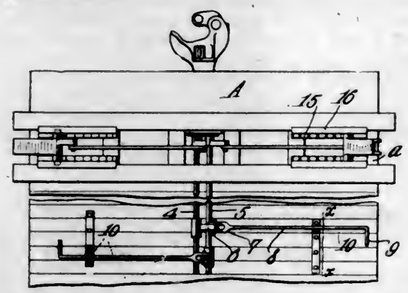
901,814. HOT-AIR-DISTRIBUTING DEVICE FOR FURNACES. JUNIUS L. MURPHY, Denver, Colo., assignor of one-half to Edgar A. Hardy, Denver, Colo. Filed Apr. 23, 1907. Serial No. 369,840.



1. A hot air distributing device for furnaces, comprising a shaft, a fan mounted on said shaft, and suitable suspension means in which said shaft is mounted, said means comprising an adjustable disk, a ball bearing cup mounted on said disk, and a cone member mounted on the upper extremity of said shaft and acting on the balls of said cup.

2. The combination with a furnace provided with an air distributing device, of a shaft, suitable suspension means in which said shaft is journaled, and a fan mounted on said shaft consisting of sections, each section having formed around its edges impressions forming ribs for strengthening purposes and also having located intermediate its extremities other suitable impressions for alining said sections.

901,815. CHOCK ATTACHMENT FOR CARS. JOSEPH A. MCCONNELL, Dallas, Oreg. Filed Jan. 24, 1908. Serial No. 412,457.



1. An attachment for cars comprising parallel beams, means for securing the beams to a car platform, oppositely disposed chocks pivotally and movably mounted between the beams, fixed means for engaging the chocks when elevated only to hold them against sliding movement in one direction, and means carried by the beams for actuating the chocks.

2. An attachment for cars comprising beams, combined stop and guide devices fixedly carried thereby, chocks pivotally and slidably mounted within said devices, means carried by the chocks for engaging the devices only when the chocks are raised to limit the sliding movement of the chocks, and means carried by the beams for actuating the chocks.

3. An attachment for cars comprising beams, combined guide and stop devices carried thereby, chocks pivotally and slidably mounted within said devices, means integral with the chocks for engaging the devices to limit the movement of the chocks in one direction, and separate means for elevating the chocks.

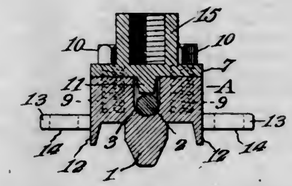
4. An attachment for cars comprising beams, combined guide and stop devices fixedly carried thereby, chocks pivotally and slidably mounted within said devices, means integral with the chocks for engaging the devices only when the chock is raised to limit the sliding movement of the chocks in one direction, and means extending toward one end of the beams for actuating the chock adjacent the other end thereof.

5. An attachment for cars comprising beams, a chock pivotally and slidably mounted between the end portions thereof, a shaft journaled within the beams, a crank arm carried thereby, a link connection between said arm and chock, and means coöperating with the chock for limiting its movement in one direction, said crank arm and link being disposed to lock the chock in an elevated position.

[Claims 6 to 10 not printed in the Gazette.]

901,816. TROLLEY-WIRE ANCHOR. ALLAN MCISAAC, Hartford, Conn. Filed Mar. 4, 1908. Serial No. 419,207.

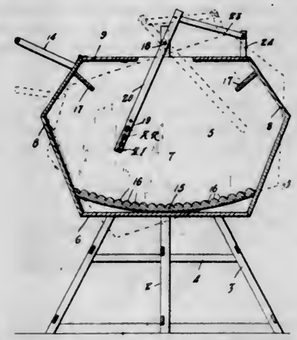
1. A trolley wire anchor comprising a body having in its top a longitudinal groove inclined downwardly at its ends and provided with a central rib at its bottom, a horizontal plate-like bridge piece having a tongue extending into the groove, bolts for removably securing the bridge piece to the body, bosses rising from the body adjacent the ends thereof and having slots disposed in line with the groove, clamping members slidably mounted in the slots in the bosses and extending into the groove, and means on the bosses for holding the said pieces in clamping position.



2. A trolley wire anchor comprising a body having a longitudinal groove for receiving the trolley wire, a plate-like bridge piece removably secured to the center of the body and having a depending tongue on its bottom side extending into the longitudinal groove of the latter for clamping the wire in position and also having a threaded boss rising from the top side for connection with a supporting means, and clamping devices adjacent the ends of the body for clamping the wire in position, said devices each consisting of a threaded member, a nut on the member, and a slidably mounted clamping piece guided on the member and having abutments with which the nut engages.

3. A trolley wire anchor consisting of a body provided with a longitudinal groove in its top, a longitudinal rib in the bottom thereof, apertured flanges extending laterally from the body, a bridge piece secured to the top of the body, a tongue on the bottom of the bridge piece extending into the groove for engagement with the trolley wire, means on the bridge piece for attachment to a support, exteriorly threaded bosses rising from the body adjacent the ends thereof, clamping members guided on the bosses, and nuts on the bosses for holding the members in clamping position.

901,817. WASHING-MACHINE. DOC MCMANNAMA, Villisca, Iowa. Filed Nov. 25, 1907. Serial No. 403,801.

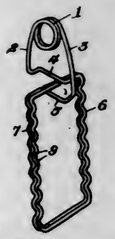


1. In a washing machine, a supporting frame, a body mounted to swing therein, a pivotally mounted clothes pounder operable in said body, pounder operating standards, means whereby said standards are adjustably secured to said body, and links to connect the upper end of said pounder with said standards, substantially as described.

2. In a washing machine, a supporting frame, a rocking body, a pivotally mounted pounder, said pounder comprising parallel side bars connected at their lower ends by a series of curved and straight cross bars, pounder operating standards, means to adjustably secure said standards to said machine body and links to pivotally connect the upper ends of the side bars of said pounder to said operating standards substantially as described.

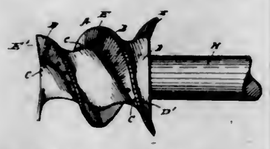
3. A washing machine comprising a supporting frame, a body pivotally mounted therein, a handle to rock said body, a corrugated rubbing board arranged in the lower end of the latter, compressing boards arranged on the opposite end thereof, a pivotally mounted pounder adapted to operate in said body, said pounder comprising parallel side bars, a series of straight and curved cross bars at the lower end of said side bars, between which the clothes to be washed are inserted, a pair of pounder operating standards adjustably secured to one end of said body and operating links pivotally connecting the upper end of said standards, whereby the movement of the body in one direction will swing said pounder in the oppoaite direction.

901,818. GARMENT CLASP OR HOLDER. LEROY A. MCSTAY, Glen Elder, Kans. Filed Mar. 10, 1908. Serial No. 420,226.



The herein described garment clasp or holder formed of a single piece of wire and comprising a pair of vertically disposed counterpart oblong rectangular clamping jaws, said jaws being formed by the terminal portions of the wire which are bent to partially form the upper cross bars of the jaws, a spring coil formed by the central portion of the wire and constituting a suspending loop arranged transversely of and above the upper ends of the jaws, arms diverging from the sides of said coil beyond the outer sides of the jaws, connecting stems extending inwardly at an angle to the arms transversely of the jaws and projecting respectively above and below the upper cross bars of said jaws and connecting said arms with the other portions of the cross bars, and a suspending device connected with the coil for supporting the clasp from the garment of the wearer.

901,819. EXPRESSING SCREW OR AUGER FOR BRICK-MACHINES. HERMAN NEITZEL, Concordia, Kans. Filed Sept. 6, 1907. Serial No. 391,748.



1. An expressing screw or auger for brick machines, having a spiral rounded groove therein, and a spiral plate secured to the working face of the ridge at the edge of said groove and inclined rearwardly in conformity to said face.

2. An expressing screw or auger, for brick machines, having a spiral rounded groove therein, and a spiral plate secured to the working face of the ridge at the edge of said groove and inclined rearwardly in conformity to said face, except at the forward end of said auger where said plate is inclined slightly forward.
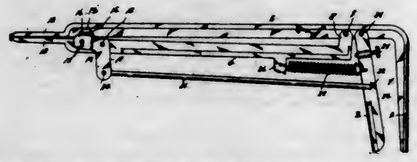
3. An expressing screw or auger for brick machines having its head formed with a spiral rounded groove, and a spiral wear plate secured in a rabbet groove in the working face of the ridge at the edge of said groove, said plates projecting beyond said ridges and being inclined rearwardly in conformity to said working face.

4. An expressing screw or auger for brick machines having its head formed with a spiral rounded groove, and a spiral wear plate secured in a rabbet groove in the working face of the ridge at the edge of said groove, said plates projecting beyond said ridges and being inclined rearwardly in conformity to said working face, except at the forward end of said head where said plate is inclined slightly forward.

5. An expressing screw or auger for brick machines comprising a solid cast head having a socket in its rear end extending only part way therethrough, and a shaft secured in said socket, said head being tapered and having a plurality of spiral rounded grooves formed in its surface, and spiral wear plates secured in rabbet grooves in the working faces of the ridges at the edges of said grooves, said plates projecting beyond said ridges and being inclined rearwardly in conformity to said working faces.

[Claim 6 not printed in the Gazette.]

901,820. WEED-PULLER. GUSTAF N. NELSON, Denver, Colo. Filed Mar. 23, 1908. Serial No. 422,842.



1. A weed puller comprising two main members having coöperating jaws at their lower extremities and pivotally connected above the jaws, two handle members, one being rigid with one of the main members, while the other is pivotally connected therewith, a rod connected with the pivoted handle member, and an operative connection between the rod and the two main members at a point between the jaws and the pivotal connection of the said members, whereby as the pivoted handle member is actuated, the jaws of the two handle members are caused to close, substantially as described.

2. In a device of the class described, the combination of two main members having jaws at their lower extremities and pivotally connected together above the jaws, two coöperating handle members, one being rigidly connected with a main member and the other pivotally connected therewith, and an operative connection between the pivoted handle member and the two main members at a point between the jaws and the pivotal connection of the two main members, substantially as described.

3. The combination of two main members having cooperating jaws at their lower extremities, the said members being pivotally connected together above the jaws, two handle members, one being rigid with one of the main members and the other pivotally connected therewith, a rod attached at one extremity to the pivoted handle member, a link and lever connection between the two main members at a point below the pivotal connection of the two members, the lever being connected with the opposite extremity of the said rod, substantially as described.

4. A device of the class described, comprising two main members having jaws at their lower extremities and pivotally connected above said jaws, two handle members, one rigidly connected with one main member, and the other pivotally connected therewith, a suitable connection between the pivoted handle member and the two main members below their pivotal connection, and a spring connecting the pivotal handle member with one of the main members and normally acting to hold the jaws in the open position, substantially as described.

5. A device of the class described, comprising two main members having jaws at their lower extremities and pivotally connected above said jaws, an operating handle member pivotally connected with one of the main members, and an operative connection between the pivoted handle member and the two main members below the pivotal connection of the latter whereby as the handle member is actuated the main members are operated, substantially as described.

901,821. WRENCH. CHARLES R. OLBERG, Vienna, Va., assignor of one-half to Francis R. Weller, Washington, D. C. Filed July 25, 1907. Serial No. 385,484.



1. In a wrench, the combination with the jaws, of outer and inner members having bearing-surfaces between which the jaws are disposed and arranged upon rotation in either direction with respect to the jaws the outer member to force the jaws toward each other and upon reversal of rotative movement the inner member to force the jaws apart.

2. In combination with the jaws of a wrench, a rotatable member having a surface engaging one of said jaws and upon movement thereof with respect to said jaw operable thereon to force the jaw away from an article clutched, said engaging surface lying in a substantially elliptical continuous curve.

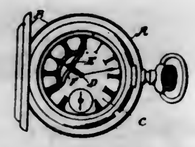
3. In a wrench, the combination with the jaws, of an outer member having a curved jaw-engaging surface, and an inner member having a curved jaw-engaging surface, the outer member being arranged when rotated in either direction with respect to the jaws to cause the same to clutch, and the inner member being arranged upon reversal of rotation to positively release the clutch irrespective of the direction of initial rotation to clutch the jaws.

4. A wrench comprising a handle, an outer member pivoted thereon and arranged to receive rotative motion therefrom, a flange on said outer member forming a continuous bearing-surface lying substantially in an elliptical curve, an inner member attached to said outer member and having a bearing surface complementary to that of the outer member, and jaws having portions disposed and capable of movement between said bearing-surfaces.

5. A wrench comprising a handle, an outer member pivoted thereon and having a laterally polygonal recess, a flange on said outer member forming a continuous bearing-surface lying substantially in an elliptical curve, an inner member having a laterally polygonal portion seated in said recess and formed with a bearing-surface complementary to that of the outer member, and jaws having portions disposed and capable of movement between said bearing-surfaces.

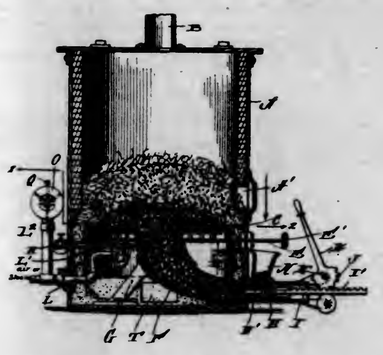
[Claims 6 to 12 not printed in the Gazette.]

901,822. ATTACHMENT FOR TIMEPIECES. FREDERICK PAQUETTE, Toledo, Ohio, assignor of one-half to Fred Kuehn, Toledo, Ohio. Filed Oct. 31, 1907. Serial No. 400,117.



An indicating attachment for watches and clocks comprising a plate having apertured lugs for the reception of the hour hand thereof, set screwa operating through said lugs to secure said plates, a curved band having spaced pointers, and radial arms extending between said plate and the ends of said band, substantially as described.

901,823. GAS-PRODUCER. LEWIS C. PARKER, Hamilton, Ohio. Filed June 18, 1908. Serial No. 439,137.



1. A gas producer comprising a shell, an under feed fuel pipe with its upper end flaring and passing through the wall of the shell, means for feeding the fuel therein, grate bars mounted within the shell and in a line with the exit end of said feed pipe, a band surrounding said grate bars and having a space intervening between the outer marginal edge thereof and the shell of the gas producer, and an apron depending from the outer marginal edge of said band and spaced apart from the wall of the shell, as set forth.

2. A gas producer comprising a shell, an under feed fuel pipe with its upper end flaring and passing through the wall of the shell, a plunger mounted within said pipe and having a pin projecting from the inner end thereof and extending into said feed pipe, means for reciprocating the plunger, grate bars mounted within the gas producer and in a line with the exit end of the feed pipe, a band surrounding said grate bars, with a space intervening between its outer marginal edge and the surrounding wall of the gas producer shell, and an apron depending from the band and forming with the wall of the shell an ash passageway, as set forth.

3. A gas producer comprising a shell, an under feed fuel pipe with its upper end flaring and passing through the wall of the shell, a plunger mounted within said pipe and having a pin projecting from the inner end thereof and extending into said feed pipe, rack teeth upon the stem of the plunger, a pivotal lever having rack teeth in mesh with the teeth of said stem, rocking grate bars mounted on a level with the upper exit end of said feed pipe, an operating rod pivotally connected to said grate bars, an ash band surrounding the grate bars and in the same plane therewith, a space intervening between the marginal edge of said band and the surrounding wall of the producer shell, an apron depending from said band, a pipe leading through said shell and having an exit end beneath said bars, as set forth.

901,824. MANUFACTURE OF COPYING-PAPER. ANTONIO PIDELASERRA Y BRIAS and MARIANO PIDELASERRA Y BRIAS, Barcelona, Spain. Filed Mar. 13, 1908. Serial No. 420,840.

1. The process of producing copies from impressions made in ink which consists in impregnating a suitable sheet of paper with a compound capable of taking up moisture to which has been added an acid, and a saponified wax; in bringing said sheet in contact with the impressions to be copied; and applying sufficient pressure to cause a copy to be taken, substantially as described.

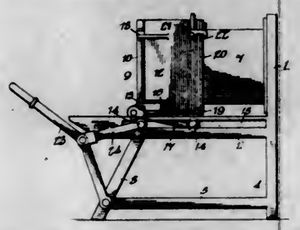
2. The method of preparing sheets of paper for use in copying, which consists in saturating said sheets with a solution containing a hygroscopic compound to which has been added gallic acid and saponified wax, substantially as described.

3. The method of preparing sheets of paper for use in copying, which consists in impregnating said sheets with a

solution containing glycerin, gallic acid, saponified wax, and honey, substantially as described.

4. The method of preparing sheets of paper for use in copying, which consists in impregnating said sheets with a solution containing glycerin, gallic acid, saponified wax, and honey, and then calendering said paper, substantially as described.

901,825. CONCRETE-BLOCK MACHINE. ARTHUR PIERCE, Seville, Ohio, assignor to John P. Heckman, Creston, Ohio. Filed June 29, 1907. Serial No. 381,471.

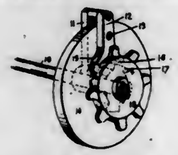


1. In a concrete block machine, the combination with a stationary upright frame having suitably supported horizontal, longitudinally slotted members extending therefrom, said frame having a plurality of mold cores rigidly secured thereto, and extending therefrom above and parallel with said members, of a mold body mounted to move to and from said cores, spaced transverse members extending between said slotted members and projecting within the slots thereof, spacing members rigidly connecting said transverse members and provided with forwardly projecting ends, said mold body comprising a base plate, and a skeleton front frame hinged together and to said projecting ends of said spacing members, and end plates hinged to said skeleton frame and extending upon said base plate, a removable pallet board freely supported in said body upon said skeleton frame, a skeleton plate fitting about said cores, means for locking said rear skeleton plate to said end plates and means engaging one of said transverse members for moving said mold body, substantially as described.

2. In a concrete block machine, the combination with a stationary upright frame having suitably supported horizontal, longitudinally slotted members, extending therefrom, said frame having a plurality of mold cores secured thereto and extending therefrom, above and parallel with, said slotted members, of a mold body mounted to move to and from said cores, spaced transverse members extending between said slotted members and projecting within the slots thereof, spacing members rigidly connecting said transverse members, and provided with forwardly projecting ends, said mold body comprising a base plate, and a skeleton frame hinged together to said projecting ends of said spacing members, and end plates hinged to said skeleton frame extending upon said base plate, said base plate having upwardly projecting lugs extending exteriorly of the lower rear edge of said end plates to prevent the same from spreading, a removable pallet board freely supported in said body upon said skeleton frame, a rear skeleton plate fitting about said cores, means for locking said rear skeleton plate to said end plates, and means engaging one of said transverse members for moving said mold body, substantially as described.

901,826. DIFFERENTIAL GEAR FOR MOTOR-VEHICLES. CHARLES J. PITTMAN, Redfern, near Sydney, New South Wales, Australia, assignor of one-half to Frank Ireland, Sydney, New South Wales, Australia. Filed May 11, 1908. Serial No. 432,186.

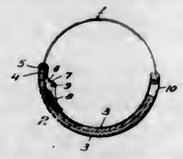
1. A differential gear for vehicles comprising a driving shaft, an arm fixed to turn therewith, a part loosely balanced on said shaft, a notched wheel also loosely mounted on said shaft, and a pawl pivotally mounted on said arm and fulcrumed on said part, said pawl having an arm adapted to be engaged and disengaged relatively to the notched wheel by a relative rotation of said arm and part.



2. A differential gear for motor vehicles comprising a driving shaft, an arm fixed to turn therewith, a disk loosely balanced on said shaft, a notched wheel also loosely mounted on the driving shaft, and a pawl pivotally connected to said arm and fulcrumed on said disk, the pawl having a pair of reversely arranged arms either of which is adapted to be engaged and disengaged relatively to the notched wheel by a relative rotation of said arm and disk.

3. A differential gear for motor vehicles comprising a driving shaft, an arm fixed to rotate therewith, a notched wheel loosely mounted on the driving shaft, a disk also loosely mounted on the driving shaft at one side of said arm, and a pawl pivotally connected to the free end of said arm and fulcrumed on said disk, said pawl being arranged at that side of the disk opposite to said arm and having a portion adapted to be engaged and disengaged relatively to said notched wheel by a relative rotation between said arm and disk.

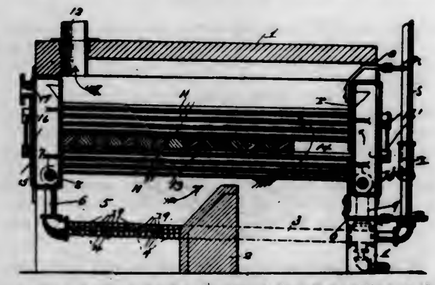
901,827. LOCK-PIN. VINCENT V. PITTMAN, Santa Cruz, Cal. Filed Nov. 20, 1907. Serial No. 403,071.



1. A lock pin comprising two pivotally connected semicircular members, opposing jaws on one member between which the point of the other member is received, and a cam operating in conjunction with the jaws to clamp the pin point.

2. A lock pin comprising two pivotally connected semicircular members one of which is pointed, a movable jaw on the other member, and a clamp to force said jaw against the pointed member to lock the free ends of the two members together.

901,828. HOT-WATER HEATER. JAMES E. POTTS, Cleveland, Ohio. Filed July 29, 1907. Serial No. 385,996.

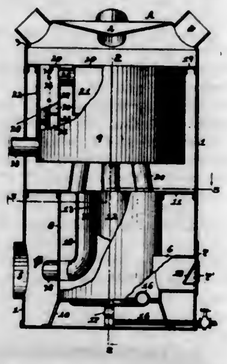


1. In a heating device, having a furnace setting, a fire box and bridge wall, the combination therewith, of duplicate inclined longitudinal water inlet pipes arranged one on each side thereof in said setting, a common inlet opening therefor, a horizontal series of transversely arranged grate tubes, connecting said longitudinal pipes in front of the bridge wall, alternating short and long flanged nozzles upon said longitudinal pipes, flanges upon the ends of said tubes for attachment to said nozzles, said flanges being arranged in staggered order to enable said grate bars to be placed closely together, a front common chamber with which said longitudinal pipes communicate, said chamber being situated in the front wall of the casing and provided with a hinged front wall and having an outlet at the upper end, and a rear chamber with which said circulating pipes communicate and pipes connecting said front and rear chambers.

2. In a heating device, provided with a furnace casing, and a fire box and bridge wall therein, the combination therewith, of a manifold chamber in the front wall, and a similar manifold chamber in the rear wall, said chambers having swinging outer walls, horizontal tubes connecting said manifolds, a horizontal partition mounted on said tubes intermediate between the upper and lower tubes, a lower system of transverse water tubes forming a grate in the fire box and spaced closely together, longitudinal pipes in the sides of the casing with which said tubes communicate, flanged joints connecting said grate tubes and said circulating pipes, the flanges thereon being staggered in position, connecting pipes between said longitudinal pipes and said rear manifold, connecting pipes between said longitudinal pipes and said front manifold, and a circulating pipe communicating with the front swinging wall of said front manifold and with both said longitudinal pipes at the sides of said casing, substantially as described.

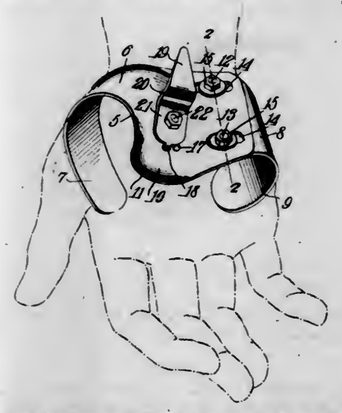
3. In a heating device, having a furnace setting a fire box and bridge wall, the combination therewith, of duplicate longitudinal water inlet pipes arranged one on each side thereof and inclined upwardly from the rear, a common water inlet therefor located in the rear thereof, a series of horizontal, transverse grate tubes, communicating with said longitudinal pipes, and arranged in steps, the highest grate tube at the front end of said fire box, a common front chamber communicating with said longitudinal pipes, an outlet at the upper end thereof, and a rear chamber communicating with the rear ends of said longitudinal tubes, and connecting pipes between said chambers above said fire box.

901,829. HEATER. WILLIAM H. RAMALEY, Ben Avon, Pa., assignor of one-fourth to Charles E. Doell and one-fourth to Peter M. McVay, Pittsburg, Pa. Filed Jan. 13, 1908. Serial No. 410,519.



In a heater, the combination of a casing having an air inlet and flues leading from said casing, a burner chamber and a heating chamber in said casing, flues between said chambers, a partition having openings therein within said heating chamber for forming heating compartments therein, and vertical straightway flues passing through said partition and compartments, and a flue-strip in each of said compartments and one of said strips having openings therein.

901,830. HUSKER. JOSEPH A. RAMSEY, Beatrice, Nebr. Filed Sept. 30, 1907. Serial No. 395,265.



1. A corn husker including a thumb piece having a series of perforations formed therein and provided with a palm piece, there being spaced longitudinally disposed slots formed in the palm-piece, a heel piece adjustable laterally of the thumb piece, a hook carried by the thumb piece, a fastening device piercing the thumb piece and engaging the hook, clamping devices passing through the slots in the palm piece for clamping the heel piece in adjusted position, and a spur depending from the hook and adapted to engage the perforations in the thumb piece.

2. A corn husker including a relatively stationary thumb piece having a curved terminal adapted to bear against the back of the hand and provided with a palm piece, a movable heel piece associated with the thumb piece and provided with a similar curved terminal, there being a series of perforations formed in the thumb piece, a hook carried by the thumb piece and provided with an offset defining an extension, a fastening device passing through the thumb piece and engaging the extension of the hook, a spur depending from said extension and adapted to enter the perforations in the thumb piece, and means for clamping the heel piece in adjusted position.

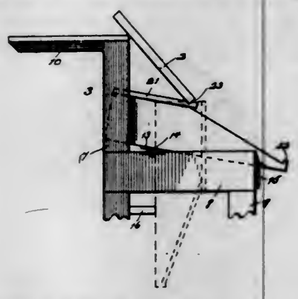
3. A corn husker including a thumb piece having a palm piece extending laterally from one edge thereof, an adjustable heel piece, one of said pieces being provided with spaced slots, a hook carried by the slotted piece, and fastening devices extending through the slots for clamping the heel piece in adjusted position, one of said fastening devices forming in effect a pivot when the other fastening device is released.

4. A corn husker including relatively stationary and movable sections curved to conform to the shape of the palm of the hand and having their adjacent ends overlapped, a hook carried by one of said sections, clamping arms carried by both sections and adapted to embrace the back of the hand of the operator with their adjacent ends spaced apart, and means for clamping the movable section in engagement with the stationary section.

901,831. TYPE-CASE. JOHN R. RANKIN, Washington, D. C. Filed Mar. 9, 1908. Serial No. 420,039.

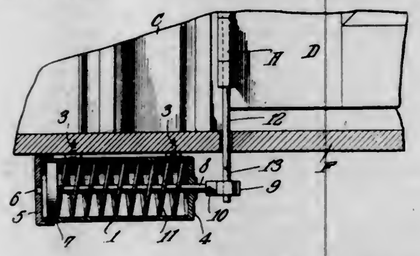
A case for type, comprising a series of type boxes of a size sufficient to hold a number of type, said type boxes being provided with reservoir portions for holding a large supply of type, a stand upon which the case is pivoted, a support for said case to hold same in its normal position, said case being pivoted on said stand in such manner that when one or more of the type boxes become depleted the forward portion of the case can be swung down to cause a number of the type in the said reservoir portions to fill the said type boxes, a removable cover for said case arranged to be placed over the said type boxes to prevent the type from falling therefrom when the forward portion

of the said case is swung down, the said case being pivoted in such manner that the forward portion thereof can be



swung upward to cause the type in said type boxes to pass into the said reservoir portions thereof.

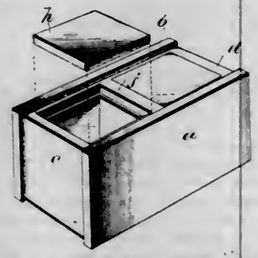
901,832. DOOR-CHECK. JAMES W. REED and LA ROY CHAPMAN, Berwind, Colo. Filed June 22, 1908. Serial No. 439,803.



1. The combination with a door hinge, of a rod having its upper end rigidly secured to the two terminal knuckles of the movable member of the hinge and its lower end provided with a crank, and a door check embodying a spring-pressed piston having a rod, and a longitudinally slotted head carried by the rod and with which the crank engages.

2. The combination with a door hinge, of a rod having one end rigidly secured to the terminal knuckles of the movable member of the hinge and its other end projected through an opening in the floor and provided with a crank, a cylinder secured beneath the floor of a room, a spring-pressed piston arranged within the cylinder, a rod carried by the piston, and a longitudinally slotted head rigid with the rod and with which the crank engages.

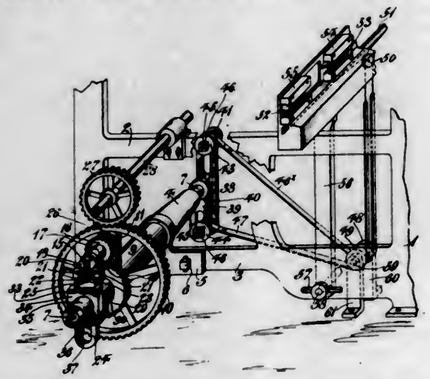
901,833. HOLLOW BUILDING-BLOCK. JULIUS E. RETTIG, Reading, Pa. Filed Apr. 7, 1908. Serial No. 425,728.



1. A hollow building block provided with cavities and with sides projecting beyond the other parts of the block, leaving a channel extending completely around said block, and plates adapted to be cemented into recessed seats in the block, so as to close the cavities and leave said channel uninterrupted.

2. A wall composed of hollow blocks grouted together and laid so as to break joints, each block being provided with cavities, with a mortar channel extending entirely around said block and plates adapted to be cemented to said block, and to close one end of said cavities without interrupting the mortar channel, substantially as described.

901,834. MECHANISM FOR OPERATING SHUTTLES OF NARROW-WARE LOOMS. HENRY RIEHL, Philadelphia, Pa. Filed Feb. 1, 1905. Serial No. 243,618.



1. In shuttle operating mechanism, a shuttle-actuating rack, a shaft, connections between said rack and shaft, planetary gearing arranged to revolve about said shaft, a crank mounted upon the planet of said gearing and connections between said crank and said shaft.

2. In a shuttle operating mechanism, a shuttle-actuating rack, a shaft, means for connecting the shaft and rack, sliding means engaging said shaft, a crank engaging said sliding means and means for causing said crank to travel about the shaft in epicycloidal movement.

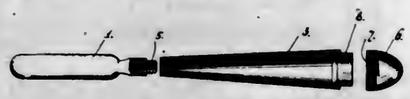
3. In a shuttle operating mechanism, a shaft, planetary gearing surrounding said shaft, a crank connected with the planet gear and means for forming a sliding connection between said shaft and said crank.

4. In shuttle operating mechanism, planetary gearing, a rotatable shaft, a guide mounted transversely of the planet gear, a crank adjustable along said guide and means for connecting said crank and said shaft.

5. In a shuttle operating mechanism, a shaft, a crank, means for causing revolution of the crank to produce angular movement of the shaft, means for giving said crank epicycloidal movement about said shaft and means for changing the epicycloidal movement.

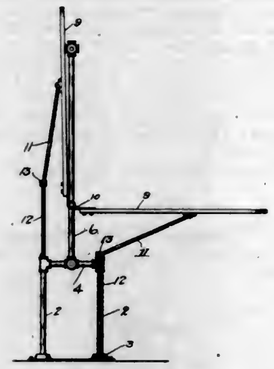
[Claims 6 to 25 not printed in the Gazette.]

901,835. TOOTH-BRUSH. ROY R. RINGER, Pittsburg, Pa. Filed Mar. 28, 1907. Serial No. 365,064.



A tooth brush comprising a tubular handle internally threaded at one end and provided with a detachable cap at the other end, a bristle holding member internally threaded at the inner end, and a threaded plug engaging the internally threaded portion of the bristle holding member and the internally threaded portion of the handle and forming a detachable coupling means between the parts.

901,836. LAUNDRY APPLIANCE. CHARLES B. ROGERS and JOHN W. GARDNER, St. Peter, Minn. Filed Mar. 21, 1908. Serial No. 422,413.



1. An ironing board frame comprising upright standards 2 arranged in pairs and means securing them to the floor, and cross bars connecting the upper portions of said standards, standards 6 mounted on said cross bars, and longitudinal bars 7 and 8 connecting said standards 6 with one another, a series of ironing boards having their inner ends hinged on said connecting bars 8, said boards being adapted to swing to an upright position, and braces connected to the under side of said boards and having sliding connections with said standards 2, for the purpose specified.

2. An ironing board frame comprising hollow upright standards 2 and cross bars connecting them, standards 6 arranged between said standards 2 and projecting above the same, horizontal longitudinal connections between said standards 6, ironing boards hinged on said horizontal connections and adapted to swing to a vertical position or to a horizontal position, braces connected to said boards and means slidably arranged within said hollow standards and pivotally connected at their upper ends to said braces and means for locking said slidable means in their raised position.

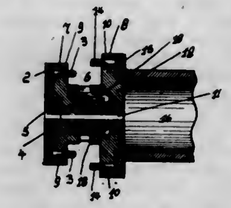
3. An ironing board stand composed of gas pipe having upright standards arranged in pairs and cross pipes connecting them, standards supported upon said crosspipes and extending above said pairs of standards, a series of pipes connecting said first and second named standards, the lower pipes of the series having water supply pipes therein, the intermediate pipes of the series having gas pipes therein and the upper pipes of the series containing electric conductors, ironing boards hinged on each side of said frame and having braces supporting them in a horizontal position, said electric conductor having means for connection to a flat iron and said water pipe having means for connection with a sprinkling device.

4. The combination, with a hollow standard, of a plunger slidable therein and having a spring catch adapted to engage the top of said standard and lock said plunger in its raised position, a brace pivotally connected to said plunger, an ironing board having a pivotal connection with said brace and a hinge at one end of said board and whereon it is adapted to swing to a vertical inoperative position or to a horizontal operative position.

5. An ironing board stand composed of gas pipe having upright standards and horizontal pipes connecting them, said horizontal pipes having water supply pipes and gas pipes and electric conductors therein, ironing boards hinged to said frame and having suitable braces, said electric conductor having means for connection to a flat iron and said water pipe having means for connection with a sprinkling device.

[Claims 6 to 10 not printed in the Gazette.]

901,837. INTERMEDIATE HEAD FOR ENGINE-FRAMES AND PUMP-CYLINDERS. ALEXANDER RUSSELL, St. Marys, W. Va. Filed Dec. 28, 1905. Serial No. 293,647.



The combination of an engine frame provided at one end with a vertically extending disk having a centrally disposed opening and a relatively small outwardly projecting boss surrounding said opening, said disk provided with a plurality of laterally extending screw-threaded bolts formed integral therewith and arranged in close proximity to the periphery thereof, a flanged cylinder, the flange of said cylinder provided with a plurality of laterally extending screw-threaded bolts formed integral therewith and arranged in close proximity to the outer edge of the flange, and a tubular member interposed between said cylinder and disk, said tubular member having a relatively large boss at one end fitting within the cylinder and constituting a head therefor and having its other end provided with a relatively small centrally disposed recess adapted to receive the boss of said disk, said tubular member further provided with a longitudinally extending opening registering with the opening in said disk and communicating with the interior of the cylinder, the wall of said longitudinally extending opening being recessed thereby decreasing the weight of the said tubular member, said tubular member further provided at one end with a pressure flange of greater thickness than the thickness of said disk, said apertured flange abutting against said disk and adapted to have the bolts carried by the disk extend therethrough, the edge of said flange upon said tubular member being flush with the edge of said disk, said tubular member further provided with an apertured flange abutting against the flange of the cylinder and adapted to have extended therethrough the bolts carried by the flange of the cylinder, that flange which abuts against the flange of the cylinder having its edge flush with the edge of the flange of the cylinder, said flange which abuts against the flange of the cylinder being of greater thickness than the flange of the cylinder, and nuts mounted upon the projecting ends of the bolts whereby said member is fixedly secured to the disk and the cylinder.

901,838. CHECK. RYLAND M. SCOTFORD, Kansas City, Mo. Filed Apr. 27, 1906. Serial No. 314,062.

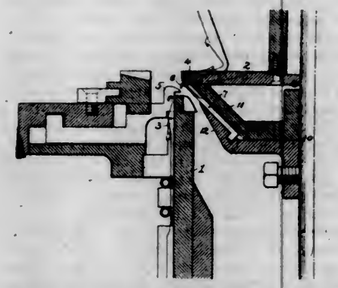


1. As a new article of manufacture, a check for keys, comprising a substantially flat rigid base, and a protective cushion around the edges of said flat base, said check having suitable descriptive matter on said flat face within the confines of said cushion, substantially as described.

2. As a new article of manufacture, a check for keys, comprising a stiff or rigid base and a protective covering on the face and edges of said base, said covering having inscriptive matter thereon, substantially as described.

3. As a new article of manufacture, a check for keys, comprising a stiff or rigid base, a protective covering of rubber vulcanized on the face and edges of said base, said rubber protective covering having inscriptive matter thereon and being relatively thicker at the edges and thus forming a cushion, substantially as described.

901,839. WEB-HOLDER FOR RIB-KNITTING MACHINES. ROBERT W. SCOTT, Leeds Point, N. J., assignor of one-half to Louis N. D. Williams, Ogontz, Pa. Filed July 3, 1906. Serial No. 324,615.

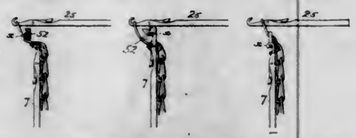


1. A rib knitting machine having two sets of web holders, one set operating in conjunction with the needles of one needle carrier, and the other set operating in conjunction with the needles of the other needle carrier.

2. A rib knitting machine having two sets of web holders, one set operating in conjunction with the needles of one needle carrier, and the other set operating in conjunction with the needles of the other needle carrier, and having movement in a direction transverse to the direction of movement of said needles.

3. A rib knitting machine having two sets of web holders, one set operating in conjunction with the needles of one needle carrier, and the other set operating in conjunction with the needles of the other needle carrier to engage the sinker wales of a course of stitches in advance of that whose stitches are being drawn by the said needles.

901,840. RIB-KNITTING MACHINE. ROBERT W. SCOTT, Leeds Point, N. J., assignor of one-half to Louis N. D. Williams, Ogontz, Pa. Filed Aug. 17, 1906. Serial No. 331,015.



1. The combination of two sets of needles, knitting cams, and knitting yarn guide or guides of a rib knitting machine, with means for projecting the stitches carried by one set of needles and means for feeding a fleecing yarn behind said stitches and into engagement with the other set of needles.

2. The combination of the two sets of needles, knitting cams, and knitting yarn guide or guides of a rib knitting machine, with means acting directly upon the stitches carried by one set of needles to displace them from their normal position and means for laying a fleecing yarn behind said stitches and into engagement with the other set of needles.

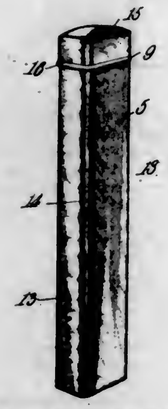
3. The combination of the two sets of needles, knitting cams, and knitting yarn guide or guides of a rib knitting machine, with a fleecing yarn guide and a stitch deflector operating on the inside of the machine.

4. The combination of the two sets of needles, knitting cams, and knitting yarn guide or guides of a rib knitting machine, with a fleecing yarn guide and a stitch deflector operating on the inside of the machine, and a tubular guide for conveying the fleecing yarn from the outside to the inside of the machine.

5. The combination of the two sets of needles, knitting cams, and knitting yarn guide or guides of a rib knitting machine, with an internal fleecing yarn guide having a deflecting surface for acting upon the stitches upon one set of needles, and a finger for feeding the fleecing yarn to the other set of needles.

[Claims 6 to 9 not printed in the Gazette.]

901,841. CASE FOR TOOTH-BRUSHES. RUSSELL SEWELL, Cedartown, Ga. Filed Mar. 13, 1908. Serial No. 420,819.



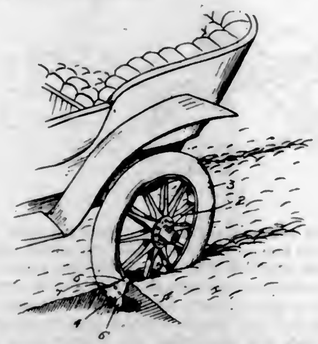
1. A tooth brush holder comprising an elongated casing having one end thereof open and provided with a circumferential stop bead defining a vertical flange, a cap forming a closure for the open end of the casing and adapted to engage the flange, and a spring plate having its intermediate portion bowed laterally to accommodate the stop bead and its opposite ends rigidly connected with the casing and cap, respectively.

2. A tooth brush holder comprising a casing having one end thereof open and provided with a circumferential stop bead defining a vertical flange, a cap forming a closure for the open end of the casing, a spring plate having its intermediate portion bowed to accommodate the bead and its opposite ends rigidly secured to the casing and cap, respectively, the opposite sides of the cap being beveled in the direction of the top thereof to form bearing surfaces, there being a depression formed in the flange and adapted to receive a lug carried by the cap for locking the latter in closed position.

901,842. DETACHABLE SHOE FOR SELF-PROPELLED-VEHICLE WHEELS. WILLIAM P. SHATTUCK, Minneapolis, Minn., assignor of one-half to M. McVoy, Jr., New York, N. Y. Filed Apr. 22, 1907. Serial No. 369,674.

1. The combination, with a wheel and its tire, of a flexible shoe and means for securing it to the tire, metallic plates secured to said shoe on each side of the center line of the tread of the tire, said shoe being adapted to yield between said plates and allow them to conform to the compression of the tire, and propelling blades mounted on said plates and adapted to engage the soil as the wheel revolves, and pack it ahead of them on each side of the wheel, for the purpose specified.

2. The combination, with a wheel and a tire thereon, of a shoe composed of flexibly connected sections adapted to fit the tread of the tire and having means for detachably connecting it to the wheel, and laterally projecting wings carried by said shoe and having comparatively broad bearing surfaces at right angles substantially to the plane of the wheel, which surfaces engage the soil and pack it ahead of said wings, whereby rotary slippage of the tire will be prevented.



3. An emergency shoe for temporarily increasing the traction of a mechanically rotated vehicle wheel, comprising a flexible band adapted to encircle and be detachably connected to the tire and rim of the wheel, between the spokes of the latter, and a plate carried by said band and having a laterally projecting wing normally disposed when said shoe is in use between the normal tread of said wheel and hub thereof said wing having a flat face adapted to engage the soil and resist the rotary slippage of the wheel when the latter sinks into the soil of the roadway.

4. An emergency traction-increasing shoe for a mechanically driven vehicle wheel, comprising a soil-engaging wing having a flat face adapted to resist the rotary slippage of the wheel when the latter sinks into the soil of the roadway, and means for connecting said wing to the wheel with its lowermost edge arranged between the normal tread of the tire and the hub of the wheel and with the plane of the wing at right angles to the plane of the wheel.

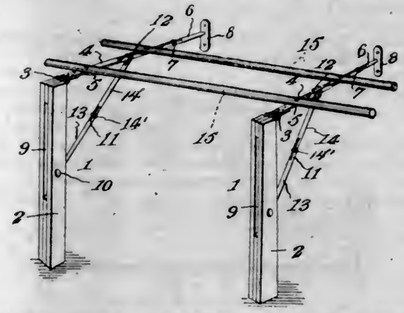
5. An emergency traction-increasing shoe for a mechanically driven vehicle wheel, comprising a flexible band adapted to encircle and to be detachably connected to the tire and rim of the wheel between spokes thereof, and a plate carried by said flexible band and having a concave surface conforming to the shape of the tire on the wheel, said plate having a soil-engaging wing arranged to extend, when the shoe is in use, in a plane at right angles to the plane of the wheel, and adapted to resist the rotary slippage of the wheel when the latter sinks into the soil of the roadway.

901,843. FOLDING POULTRY-ROOST. EDWARD A. SIGLER, Coleman, Mich. Filed Feb. 25, 1908. Serial No. 417,670.

1. A poultry roost comprising a pair of spaced supports, each comprising a standard, a supporting bar composed of jointed sections, one secured to the standard and the other adapted for fixed connection with a wall, and a folding brace connecting the first-named section of the standard to the post, and perch bars carried by the supporting bars, whereby the device as a whole is adapted to be folded in proximity to the wall to which said supporting bars are attached.

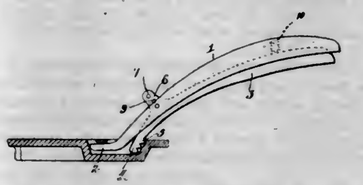
2. A poultry roost comprising a pair of spaced standards adapted to rest at their lower ends upon a floor surface, supporting bars pivoted at one end to the standards and provided at their opposite ends with means of connection to a wall, said bars being composed of jointed sections, perch bars carried by the supporting bars, and folding braces connecting said supporting bars with the standards.

3. A poultry roost comprising a pair of spaced standards having vertical slots, supporting bars pivoted at one end to the upper ends of the standards and provided at their opposite ends with brackets for attachment to a wall, said



bars being composed of jointed sections, perch bars carried by the supporting bars, and folding braces connecting the bars with the posts, said braces being adapted to fold into the slots in the posts.

901,844. STOVE-LID LIFTER. ALEXANDER SMITH, Newport, R. I. Filed June 5, 1908. Serial No. 436,933.



1. A lid lifter comprising a handle having a lifting blade, a lever pivotally mounted upon the handle and provided with a toothed gripping jaw for coöperation with said blade, and a spring disposed between the handle and lever and operating to normally hold the jaw retracted.

2. A stove-lid lifter comprising a handle having a longitudinal recess in the underside thereof and provided with a lifting blade, a lever pivotally mounted upon the handle to fold within said recess and provided with a toothed jaw for coöperation with said blade, and a spring disposed within the recess between the handle and lever and acting upon the latter to hold the jaw normally retracted.

3. A stove-lid lifter comprising a handle provided with a lifting blade, a lever having an adjustable pivotal connection with the handle and provided with a toothed jaw to coöperate with said blade, and a spring arranged to control the movement of said lever in one direction.

4. A stove-lid lifter comprising a handle having a lifting blade and a slot in rear thereof, a lever disposed upon the underside of said handle and provided with a lug projecting through said slot and having a series of openings and formed in advance of said lug with a toothed jaw to coöperate with said blade, a pivot pin adapted to be engaged with any one of said openings to adjustably and pivotally support the lever, and a spring disposed between the handle and lever for moving said lever in one direction.

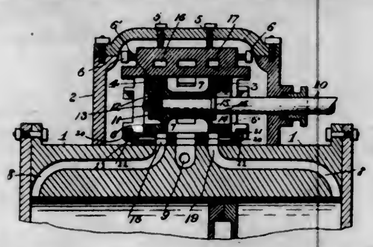
901,845. RAILROAD-TIE. JESSE T. SPAULDING, Port Byron, N. Y. Filed Sept. 13, 1907. Serial No. 392,731.



In a railroad tie, a metallic casing having side walls provided with inwardly extending flanges adjacent the ends

of the casing, the bottom of the intermediate portion of the casing inclining downwardly toward the center of the casing to form a depression, said bottom being formed with openings in the depression portion.

901,846. PISTON-VALVE. HARVEY S. SPRAGUE, Dana, Ind. Filed Feb. 12, 1907. Serial No. 357,071.

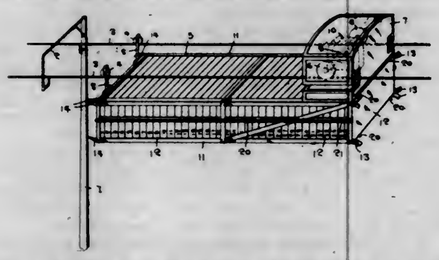


1. A slide valve comprising a casing having a valve chamber formed therein, a piston valve received therein, and the said casing having steam passages formed therein, and openings leading from the steam passages to the valve chamber for admitting steam for cushioning the valve, and spring controlled relief valves received in the heads of the casing.

2. A steam-engine slide-valve of the piston-type, comprising a casing therefor, a chest inclosing said casing, and spring-controlled relief valves arranged in the heads or ends of said casing.

3. A steam valve of the piston type, comprising a valve-casing having a disk-shaped relief-valve arranged on the end of said casing and having projecting from one side thereof guiding arms for controlling the movement of the valve, said valve having a spring arranged in connection therewith for its retention in initial position.

901,847. ELECTRIC MAIL DELIVERING AND COLLECTING MACHINE. OTTO E. STOUT, Ozark, Ill. Filed June 30, 1908. Serial No. 441,157.

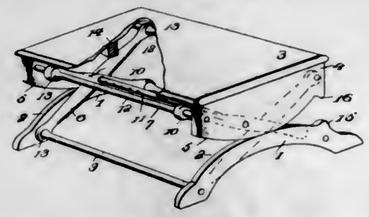


1. In a device of the character described, the combination of a trackway, a carrier movable thereon, receptacles within the carrier, outwardly flared springs at one end of the carrier and means for delivering a receptacle at one end of the carrier and withdrawing a receptacle from the opposite end of the carrier.

2. In a device of the character described, the combination of a trackway, a carrier movable thereon containing receptacles; of a station for the receptacles comprising a fork and spring arms carried by the fork, said spring arms being provided with elongated openings.

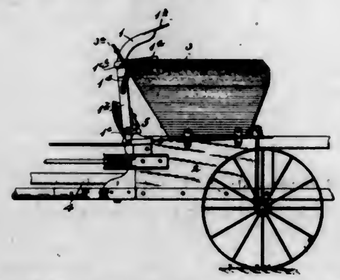
901,848. ROCKING-CHAIR. JOHN SUVA, Bryant, S. D. Filed Apr. 2, 1907. Serial No. 366,039.

The herein described rocking chair, comprising a stand embodying side pieces and rods connecting said side pieces together at their ends, a seat and a pair of side pieces secured thereto and mounted to rock upon the side pieces of the stand, transverse rods connecting together the side pieces of the seat near the ends thereof, one of the rods of the stand and the diagonally opposite rod of the seat being formed near their ends with outwardly facing shoulders, link members mounted upon the ends of the two last named rods and adapted to abut against said shoulders to prevent the movement of said link members toward each other, two other link members mounted between the first



named link members and mounted upon the other rods of the seat and stand respectively, said last named rods being also formed with inwardly facing shoulders against which the last named link members abut, whereby to prevent the movement of said members toward each other, and a spoke connecting said last named members together intermediate of their ends and preventing the outward movement of said link members.

901,849. HAY-BALING PRESS. HORACE M. TALLMAN, Shelbyville, Ill., assignor to Admiral Hay Press Co., Kansas City, Mo., a Corporation of Missouri. Filed Dec. 4, 1905. Serial No. 290,232.



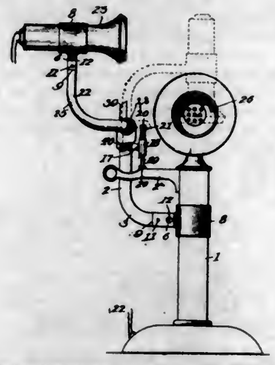
1. In a baling press, the combination with a press chamber, of a rock-shaft mounted thereon, feeder arms mounted on the shaft, a plate on the arms, and a supplemental feeder pivoted to the arms and adapted to be forced out of the way of the plunger.

2. In a baling press, the combination with a press-chamber, of a rock-shaft journaled thereon, feeder arms mounted on the shaft, a blade connected to the arms, a supplemental feeder pivoted to the arms, and means for limiting the movement of the supplemental feeder.

901,850. TELEPHONE-RECEIVER HOLDER. GEORGE J. THOMAS, New York, N. Y. Filed Aug. 14, 1907. Serial No. 388,510.

1. A telephone-receiver holder, comprising a bracket provided at its upper end with a bifurcated portion, an arm pivotally mounted upon the bifurcated portion of said bracket, a plunger, means supporting said plunger upon said bracket, a spur carried by said arm within the bifurcated portion of said bracket, said spur adapted to engage said plunger, and telephone-receiver supporting means formed upon said arm.

2. In a device of the character described, the combination with a bracket, of a horizontal, auxiliary bracket secured to said bracket, a vertical, hollow portion secured to said auxiliary bracket, a spring-pressed plunger mounted in said vertical, hollow portion, an arm provided with receiver-supporting means, pivotally mounted upon said bracket, and means carried by said arm and capable of being held away from said plunger and adapted to engage and press down upon said plunger.



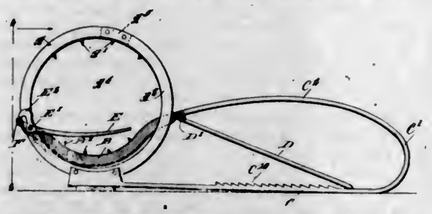
3. A telephone-receiver holder, comprising a bracket, a spring-pressed plunger carried by said bracket, a telephone-receiver holder-arm pivotally mounted upon said bracket, and means carried by said arm and capable of being held away from said plunger and adapted to actuate the same.

4. A telephone-receiver holder, comprising a bracket provided with a bifurcated end, a plunger supported upon said bracket, an arm journaled upon the bifurcated end of said bracket, a presser member positioned within the bifurcated end of said bracket and secured against independent rotary movement upon said arm, said presser member comprising a body provided with a squared aperture and said body provided with spurs extending in opposite directions, and receiver-holder carrying means supported by said arm.

5. A telephone-receiver holder, comprising a bracket, an arm provided with an integral bearing and an integral, squared portion, journaled upon said bracket, a detachable bearing journaled upon said bracket, means securing said detachable bearing to said arm against independent rotary movement, a spur, means securing said spur to the squared portion of said arm, means for actuating a telephone-rest carried by said bracket and adapted to be operated by said spur, and receiver-supporting means carried by said arm.

[Claims 6 to 11 not printed in the Gazette.]

901,851. TRAP. ANDREW O. THOMPSON, Wolverton, Minn., assignor of one-half to William C. Huff, Wolverton, Minn. Filed Apr. 25, 1908. Serial No. 429,157.



1. The trap herein described, comprising a base having a ring-shaped jaw at one end composed of two sections spaced apart forming a slot between, the other end of the base being upturned and extended forming an arm, a jaw carried by said arm and curved reversely to the first said jaw, and a trigger for holding said jaws apart, the jaws being provided with opposing teeth or spurs, a dog carried by the jaw supporting arm, and ratchet teeth on the base for engagement by said dog, substantially as set forth.

2. A trap including a ring-shaped jaw composed of sections spaced apart forming an intermediate slot, and an opposing jaw operating in the said slot.

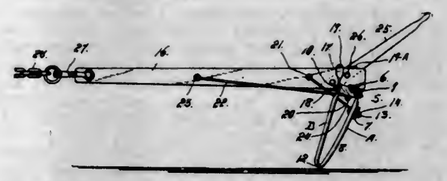
3. The combination in a trap of a base having ratchet teeth, a ring-shaped jaw on one end of the base and having sections spaced apart, an opposing jaw operating in said space between the sections of the first jaw, an arm carrying said opposing jaw, and provided with a dog engaging with the ratchet on the base, and a trigger for holding said opposing jaw, substantially as set forth.

4. The combination in a trap of a ring-shaped jaw composed of sections side by side, an opposing jaw operating between said sections and in a direction parallel to the planes thereof, and trigger devices for holding the jaw, substantially as set forth.

5. The combination in a trap of the main jaw and an opposing jaw, a pivoted trigger having a body portion and an arm projecting beyond the pivot and having a hooked portion, and a pin pivoted to the main jaw and extending transversely across the opposing jaw and engaging with the hooked portion of the trigger arm, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

901,852. BEET-UNLOADER. STUART M. THORNTON, Billings, Mont. Filed Jan. 17, 1908. Serial No. 411,217.



1. An unloader comprising a tongue, and a head rigidly connected with the rear extremity of the tongue, the said head being composed of teeth and two transverse beams one connected with the upper extremities of the teeth and the other connected with the teeth intermediate their extremities and in the rear thereof.

2. An unloader comprising a head and a tongue, the rear extremity of the tongue being centrally connected with the top of the head, the said head being composed of teeth, a transverse top beam and a transverse lower beam, the upper extremities of the teeth being secured to the top beam, the teeth being attached to the lower beam intermediate their extremities, the lower beam being in the rear of the teeth, and braces connecting the tongue with the upper and lower beams, substantially as described.

3. An unloader comprising a head and a tongue, the head having transverse upper and lower beams, and teeth attached to said beams, the rear extremity of the tongue being connected with the upper beam, and braces connecting the two beams with the tongue, substantially as described.

4. An unloader comprising a tongue and a head, the head being composed of a series of teeth, and transverse beams to which the teeth are attached, the rear extremity of the tongue being attached to the central part of the head, the device being provided with an arm extending upwardly and rearwardly from the head, substantially as described.

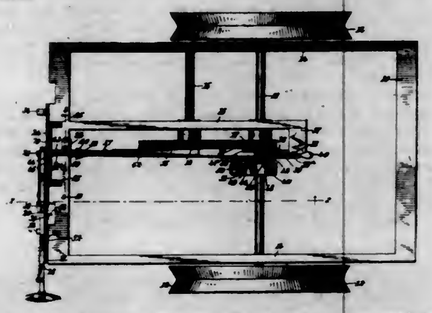
5. An unloader comprising a tongue, a head and an operating arm, the head being provided with a series of teeth, the rear extremity of the tongue being centrally connected with the top of the head, and the operating arm being connected with the tongue and extending upwardly and rearwardly from the head, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

901,853. MARKER ATTACHMENT. LAWRENCE R. TURNER, Long Pine, Nebr. Filed Mar. 4, 1908. Serial No. 419,090.

1. In a planter, a marker arranged to be positioned inoperatively and operatively, driving mechanism, connecting means between said marker and said driving mechanism, a normally inoperative device whereby said connecting means can be rendered operative to permit the marker to

be actuated by said driving mechanism, said device automatically becoming inoperative when said driving mechanism has executed a predetermined movement, means for holding said marker in an operative position, means for locking said marker in an inoperative position, and means controlled by said device for releasing said locking means.



2. In a planter, in combination, a marker arranged to be swung into a plurality of positions, a driving axle, means for swinging said marker, a dog controlling said means, means for operating said dog from said axle, said dog being normally inoperative, means for rendering said dog operative, means for locking said marker in an inoperative position, and means for controlling said locking means from said means for controlling said dog.

3. In a planter, in combination, a marker arranged to be swung into a plurality of positions, a driving axle having a pinion loose thereupon, a gear wheel operatively connected with said pinion, means for actuating said marker from said gear wheel, a dog pivoted with respect to said pinion, a member rigid with said shaft and adapted to engage said dog to drive said pinion, means for normally holding said dog out of engagement with said member, means for releasing said dog, and means tending to force said dog into engagement with said member.

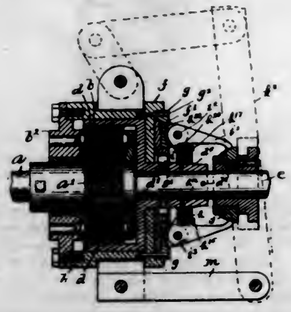
4. In a planter, in combination, a marker arranged to be swung into a plurality of positions, driving mechanism, means for operatively connecting said driving mechanism and said marker, and including an independently movable member controlling said marker, a member controlled by said driving mechanism, a dog secured to said independently movable member and pivoted with respect thereto, said member controlled by said driving mechanism being adapted to engage said dog in a predetermined position of the latter to operate said independently movable member, and releasable means for holding said dog out of engagement with said member controlled by said driving mechanism.

5. In a planter, in combination, a marker arranged to be swung into a plurality of positions, driving mechanism, means for operatively connecting said driving mechanism and said marker to swing the same, and including a member movable independently of said driving mechanism and controlling said marker, a cam controlled by said driving mechanism, a dog secured to said member and pivoted with respect thereto, said cam being adapted to engage said dog in a predetermined position of the same to operate said member, and releasable means for holding said dog out of engagement with said cam, said dog being formed to displace said last-mentioned means into an inoperative position while said dog is being rotated through a portion of a revolution by said cam.

[Claims 6 to 10 not printed in the Gazette.]

901,854. CLUTCH MECHANISM FOR REVERSE-GEARING. HENRY A. TUTTLE, Taunton, Mass., assignor to Evans Stamping & Plating Company, Taunton, Mass., a Corporation. Filed June 23, 1908. Serial No. 439,940.

1. In a clutch-mechanism, the combination of a hollow cylindrical case having an end wall provided with two oppositely disposed clutch-engaging faces, means for connecting it with the driving-shaft, a member arranged within said case having an engaging-face for engaging one of the engaging-faces of the end wall of said case, and having a hub extending through a center hole in the clutch-engaging end wall of said case, means for connecting it with the driven-shaft, a clutch-plate slidably connected with said hub for engaging the other engaging-face of the end wall of said case, an actuating-plate disposed contiguous said clutch-plate, fingers having toes pivotally connected to said actuating-plate, a collar on the hub of said inclosed member, engaged by said toes, and a sliding cone engaged by said fingers, substantially as described.



2. In a clutch-mechanism, the combination of a hollow cylindrical case having an end wall provided with two oppositely disposed clutch-engaging faces, means for connecting it with the driving shaft, a member arranged within said case having an engaging-face for engaging one of the engaging-faces of the end wall of said case, and having a hub extending through a center hole in the clutch-engaging end wall of said case, means for connecting it with the driven-shaft, a clutch-plate slidably connected with said hub for engaging the other engaging-face of the end wall of said case, an actuating-plate disposed contiguous said clutch-plate, means for slidably connecting it with said case, fingers having toes pivotally connected to said actuating-plate, a collar on the hub of said inclosed member, engaged by said toes, and a sliding cone engaged by said fingers, substantially as described.

3. In a clutch-mechanism, the combination with two independently rotatable members respectively connected with a driving-shaft and a driven-shaft, of a clutch-plate slidably connected with one of said members and adapted to engage the other member whereby the two members are connected together, an actuating-plate for said clutch-plate, fingers having toes pivotally connected to said actuating-plate, means for moving said fingers, a collar on the member bearing said clutch-plate having an abutting face which is engaged by said toes, which permits movement of said fingers rotarily about it, substantially as described.

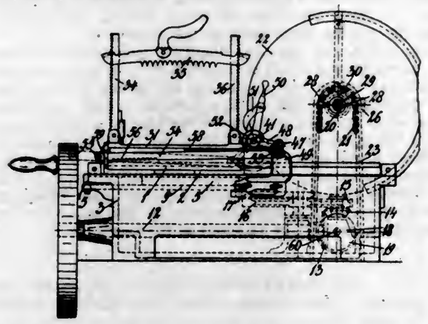
4. In a clutch-mechanism, the combination with two rotatable members respectively connected with a driving-shaft and a driven-shaft, of a clutch-plate slidably connected with one of said members and adapted to engage the other member, an actuating-plate for said clutch-plate, fingers having toes pivotally connected to said actuating-plate, means for moving said fingers, an anti-friction ring engaged by said toes, and means for supporting said ring, connected with the member bearing the clutch-plate, substantially as described.

5. In a clutch-mechanism, the combination with two rotatable members respectively connected with a driving-shaft and driven-shaft, of a clutch-plate slidably connected with one of said members and adapted to engage the other member, an actuating-plate arranged contiguous said clutch-plate having a marginal flange which extends over the edge of said clutch-plate and pins projecting from the member which is adapted to be engaged by the clutch-plate

which enter holes in said actuating-plate, whereby said plate is slidably connected with said member, and means for moving said actuating-plate, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

901,855. MEAT-SLICING MACHINE. WILHELMUS A. VAN BERKEL, Rotterdam, Netherlands. Filed Sept. 14, 1905. Serial No. 278,432.



1. In a meat slicing machine, the combination of a reciprocating table having depending projections and a tongue, a supporting frame for the table provided with rectangular grooves engaged by said projections, a guide bar on the frame under which the tongue projects, means for receiving oil from the mechanism, a movable meat plate, means for holding said meat plate in proper position, guiding and gradually feeding the same forward relative to said table, and means for regulating the feed of the meat plate relative to the table.

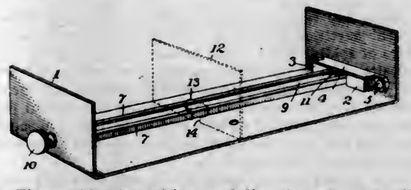
2. In a meat slicing machine, the combination of a reciprocating table, a supporting frame for the table, means for guiding the table relative to the frame, a meat plate on the table, guide bars, one of the latter being fixed to and the other yieldingly mounted on the said table and adapted to guide the meat plate, and means for regulating the feed of the meat plate relative to the table.

3. In a meat slicing machine, the combination of a reciprocating table, a supporting frame for the table, the table and frame having engaging means, guide means for the table, a meat plate on the table, a threaded shaft mounted on and extending transversely over the table, handles on the meat plate, one of the handles being rotatable and having an arm fixed thereto and movable therewith and provided with a toothed end to engage the said threaded shaft, the toothed arm being adapted to be turned out of engagement from the shaft by the rotatable handle.

4. In a meat slicing machine, the combination of a reciprocating table, a supporting frame for the table, the table and frame having engaging means, guides for the table, a meat plate on the table, a threaded shaft also mounted on the table and extending transversely thereover, handles on the meat plate, one of the handles being rotatable and having means fixed thereto for engaging the shaft to feed the table, a ratchet wheel and elbow lever on the threaded shaft, the lever being loosely mounted on the shaft, a pawl carried by one arm of the elbow lever and engaging the shaft, a roller carried by the other arm of the lever, an inclined track rigidly mounted on the frame and adapted to be engaged by the said roller when the table is reciprocated on the frame, a graduated bar adjustably mounted on the frame and having a series of notches, a stirrup in which said bar is fixed and connecting means between the pawl and bar for regulating the forward movement of the meat plate.

5. In a meat slicing machine, the combination of a reciprocating table, a frame for supporting the table, knives for the table held by the frame, a meat plate on the table, a feeding shaft for controlling the movement of the meat plate forwardly on the table, handles on the meat plate, one handle being rotatable and provided with an arm having a toothed end to removably engage the feeding shaft and thrown into and out of engagement with relation to said shaft by turning the rotatable handle, a circular and spherical knife movably mounted on the frame obliquely to the latter and having a shaft, a box in which the said knife shaft is longitudinally adjustable, and clamping means coöperating with the box and shaft to hold the said shaft and knife in adjusted position.

901,856. CARD-FILE. SAMUEL T. WALTON, Brooklyn, N. Y., assignor to The Unit Steel Cabinet Company, Brooklyn, N. Y., a Corporation of New York. Filed Oct. 19, 1907, Serial No. 398,167. Renewed Sept. 19, 1908. Serial No. 453,826.



1. The combination with a card file, of a pair of parallel bars mounted therein so as to be capable of movement toward and away from each other, and means adapted to engage and move said bars at points throughout their length.

2. The combination with a card file, of means for locking the cards therein, such means comprising a pair of locking bars arranged to pass through openings in the cards, and a spreader adapted to slide in between said bars, and engage the same throughout their length.

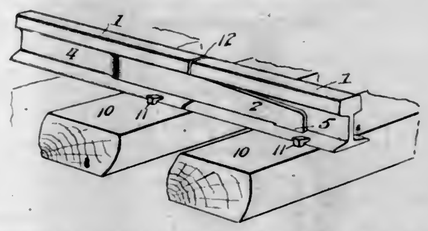
3. The combination with a card file, of means for locking the cards therein, such means comprising a pair of parallel locking bars, and a spreader adapted to slide in between the same, said parts being so disposed that the cards embrace both said bars and spreader.

4. The combination with a card file, of means for locking the cards therein, such means comprising a pair of parallel, spring-pressed locking bars, and a spreader adapted to slide between and engage said bars throughout substantially their whole length, and thus force them apart.

5. The combination with a card file, of a pair of parallel bars mounted therein so as to slide toward and away from each other, springs normally urging said bars together, and a spreader adapted to be inserted between said bars and force them apart, said bars being so formed as to engage and guide said spreader.

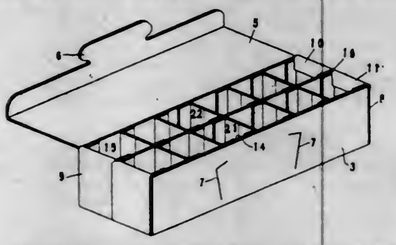
[Claims 6 to 9 not printed in the Gazette.]

901,857. RAIL-JOINT. LEONARD WHITE, Polloksville, N. C. Filed Mar. 13, 1908. Serial No. 420,824.



In a rail joint, the combination of rail ends, one of which is provided with forked arms which project longitudinally beyond the end of the rail and are provided at their extremities with depending tenons and which have their upper edges tapered or sloping toward the extremities, the other rail end being provided with mortises in the base flanges thereof at opposite sides of the web, said mortises being adapted to receive the tenons of the fork arms, substantially as described.

901,858. FOLDING CARRIER. CHARLES F. WILLLAMS, New York, N. Y. Filed Mar. 6, 1908. Serial No. 419,427.



1. An egg carrier comprising front and back walls, a central partition parallel to the front and back walls, a series of folding cross pieces permanently connected to the opposite sides of the partition and to the adjacent faces of the walls and having central vertical creases, and forming a single row of pockets on each side of the central partition, and a separately formed folding bottom connected to the front and back walls and having a central longitudinal crease beneath said partition.

2. A folding carrier comprising front, back and central walls formed of separate strips, a series of creased folding cross pieces glued to the central wall and to the front and back walls, some folding inwardly and others folding outwardly and forming a single row of pockets on each side of the central wall, and a body secured to the front and back walls and having a centrally creased folding bottom.

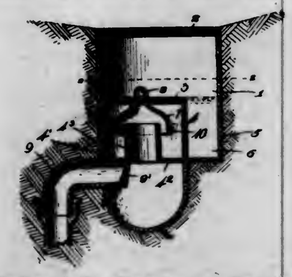
3. A folding carrier comprising front and back walls, a central partition, folding cross pieces connected to the partition and to the walls and forming a single row of pockets on each side of the central partition, a folding bottom centrally creased and secured to the front and back walls, and a cover hinged on an axis parallel to the bottom crease.

4. A folding carrier comprising a plurality of parallel walls connected permanently by centrally creased cross pieces forming a plurality of rows of small collapsible pockets, a folding bottom permanently connected to the front and back walls, and end pieces hinged to the bottom and having tuck flaps for holding the pockets distended.

5. A folding carrier comprising the combination of a nest portion consisting of front and back strips and folding cross strips secured thereto, and a separately formed body consisting of front and back portions secured to the front and back strips of the nest portion and a bottom portion centrally creased so as to fold, together with means for holding the body and nest distended.

[Claims 6 to 10 not printed in the Gazette.]

901,859. CATCH-BASIN AND TRAP. JOHN R. WILLIAMS, Milwaukee, Wis. Filed May 25, 1908. Serial No. 434,883.

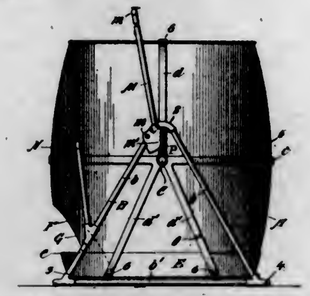


1. A device of the character described comprising an upright casing, a trap arranged eccentrically within and projecting below the casing, a transverse partition provided with a central upright tubular extension formed in the trap, a waste pipe extending into the trap below said partition and an outwardly opening check valve arranged in the waste pipe.

2. A device of the character described comprising a cylindrical casing, an upright cylindrical trap arranged eccentrically with and extending through the bottom of the casing, leaving a crescent-shaped space between a portion of the outer surface of the upper projecting end of the trap and a portion of the inner surface of the casing, a transverse partition provided with a central upright tubular extension formed in the trap, a bell-shaped deflector arranged in the upper end of the trap and surrounding the upper end of the tubular extension, a waste pipe extending into the trap below the partition thereof, and an outwardly opening check valve in the waste pipe.

3. A device of the class described comprising a casing, a removable perforated cover arranged over the upper end thereof, a trap extending through the bottom of the casing, a partition provided with a central tubular extension formed in the trap, a removable perforated cover arranged over the upper end of the trap, a bell-shaped deflector arranged in the upper end of the trap and surrounding the upper end of the tubular extension, said deflector having a handle portion projecting through and above the trap cover, a waste pipe extending into the trap below the casing and a check valve arranged in the waste pipe.

901,860. STOCK-WATERING DEVICE. FRANK E. WILLIAMSON, Glasco, Kans. Filed May 18, 1908. Serial No. 433,517.



1. A self-feeding device for the watering of stock comprising a vessel having a drinking trough near its bottom to which the water from the vessel is fed and so arranged that the flow is controlled by atmospheric pressure, a set of strengthening bands on the outside of the vessel, trunnions projecting from the meeting points of the strengthening bands, and a frame in which the vessel in hung by the said trunnions.

2. In a stock-watering device, the combination of a cylindrical vessel provided near is lower end with a strengthening band, and having an open water trough separated from the main body of the vessel by a diaphragm or partition, the front wall of the trough being formed by the said band, and there being formed in the diaphragm near the bottom of the vessel an opening for the flow of water and at a level a little below the upper edge of the band vent openings for the inflow of air.

3. A stock-watering device, comprising in combination a frame having a supporting base, a water vessel with a drinking trough in its lower portion pivotally supported in the frame, and means for effecting a relative movement of the pivotal supports for the vessel and the base, whereby the vessel may be allowed to rest upon the base to be steadied and supported thereby, and when the parts are separated the vessel is left free to be swung on its pivots.

4. A stock-watering device comprising in combination a frame having a supporting base, a water holding vessel with a drinking trough in its lower part pivotally supported in the frame and lifting means for the vessel and its pivotal supports arranged to lift and suspend the vessel above the supporting base whereby it is free to be swung on its pivots.

5. A stock-watering device comprising in combination a water holding vessel, a frame having a supporting base and side standards between which the vessel is pivotally supported, levers pivoted in the standards and flexible connections between the levers and the pivotal supports of the vessel.

[Claims 6 and 7 not printed in the Gazette.]

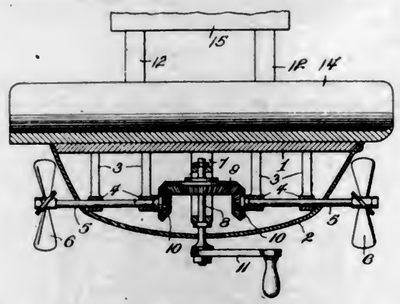
901,861. TELEGRAPHIC SOUNDER. VINCENT C. DE YBARRONDO, Los Angeles, Cal. Filed May 6, 1907. Serial No. 372,126.



1. In a telegraphic sounder, an attachment comprising a U-shaped metallic member, and means for adjusting the arms of the member, in combination with a hammer disposed between the arms and between the said means and bottom of the member.

2. In a telegraphic sounder, an attachment comprising a U-shaped metallic member, and a bolt adjustably connecting the extremities of the member together, in combination with a hammer arranged to strike directly on the member.

901,862. LIFE-PRESERVING APPARATUS. CARL A. ZETTERBERG, Duluth, Minn. Filed Mar. 27, 1908. Serial No. 423,690.



1. A life preserving apparatus including a base, an inclosed casing depending therefrom, propeller shafts supported within the casing, means for operating said shafts, propellers carried by said shafts beyond the casing, body engaging straps projecting from the base, and buoyant sections connecting the straps beyond their connections with the base.

2. A life preserving apparatus including a base, an inclosed casing depending therefrom, propeller shafts supported within the casing, means for operating said shafts, propellers carried by said shafts beyond the casing, body engaging straps projecting from the base, and cork sections connecting the respective straps beyond their connections with the base.

3. A life preserving apparatus comprising a base of concavo convex shape in cross section, a buoyant strip secured to the base, an inclosed casing depending therefrom, propeller shafts supported within the casing, means for operating said shafts, propellers carried by said shafts beyond the casing, body engaging straps projecting from the base, and buoyant sections connecting the straps beyond their connections with the base.

4. A life preserving apparatus including a base of concavo convex shape in cross section, a buoyant strip secured to the base and conforming thereto in sectional contour, an inclosed casing depending therefrom, propeller shafts supported within the casing, means for operating said shafts, propellers carried by said shafts beyond the casing, body engaging straps projecting from the base, and buoyant sections connecting the straps beyond their connections with the base.

5. A life preserving apparatus including a base of concavo convex shape in cross section, a buoyant strip secured to the base and conforming thereto in sectional contour, said buoyant strip being of greater width and length than the similar dimensions of the base, an inclosed casing depending therefrom, propeller shafts supported within the casing, means for operating said shafts, propellers carried by said shafts beyond the casing, body engaging straps projecting from the base, and buoyant sections connecting the straps beyond their connections with the base.

901,863. CAR-COUPLING. ORLANDO L. ALBERTSON, Richmond, Va., assignor of three-fourths to Charles H. Reid, Richmond, Va. Filed Nov. 18, 1907. Serial No. 402,618.



1. A car coupling comprising a draw-head having its top wall provided with an upwardly projecting chamber and having a fixed jaw and a pivoted jaw and having the said jaw provided with a shank and in the rear face thereof at its upper edge with a recess extending to the upper face of the said shank, a jaw-opening lever having an upwardly projecting pivot portion extending within the upwardly projecting chamber of the draw-head, and having a forwardly projecting arm operating above the shank of the jaw and provided at its swinging end with a depending lug operating in the recess in said shank, the said opening lever having a second arm projecting laterally from its pivot portion, and a coupling pin having in its side facing said second arm of the opening lever a recess whose lower wall is inclined forming a cam surface for engagement by said arm of the opening lever, said coupling pin being also adapted to secure and release the shank of the pivoted jaw, all substantially as and for the purpose set forth.

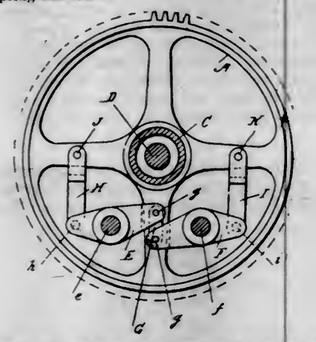
2. The combination of a draw-head, a pivoted jaw having a shank, a jaw-opening lever pivoted in the draw-head and having a forwardly projecting arm for operating the jaw shank and also having an arm extending laterally to its pivot, and a coupling pin arranged laterally to the pivot of the jaw-opening lever and having in its side, facing said pivot of the lever, a recess receiving the end of the laterally projecting arm of the opening lever and having said recess provided with a lower inclined wall forming a cam surface operating upon said lateral arm of the opening lever to actuate the same to open the jaw, and having the upper cam wall to operate upon said lateral arm of the opening lever whereby to re-adjust the latter, substantially as set forth.

3. A car coupling substantially as described comprising a draw-head, a pivoted jaw having a shank, a pivoted jaw opening lever having a forwardly projecting arm engaging with the jaw shank to open said jaw and also having a second arm projecting laterally to its pivot and a coupling pin having in its side facing the end of said second arm a recess receiving said end and having a lower inclined wall forming a cam surface to engage the said end of the second arm to operate the lever, substantially as described.

901,864. UNIVERSAL COUPLING. GUSTAF A. ANDERSON, Waynesboro, Pa., assignor to The Geiser Manufacturing Company, Waynesboro, Pa. Filed Nov. 22, 1907. Serial No. 403,354.

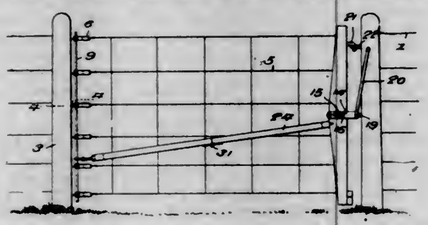
1. In a universal coupling, the combination, with two coupling-members, of a pair of links operatively connected at one end with one of the said coupling-members, a pair of levers pivoted to the other of the said coupling-members

and having their outer ends pivoted to the other ends of the said links, said levers being arranged between the said links with their adjacent end portions overlapping each other, and a link pivoted to the adjacent ends of the said levers and normally arranged substantially radial of the said coupling-members.



2. In a universal coupling, the combination, with two coupling members, of two pairs of levers pivoted to one of the said coupling members, two equalizing levers pivoted to the other coupling member and arranged between the said pairs of levers, means for connecting together the adjacent ends of the levers forming each pair of levers, links connecting the outer ends of one pair of levers with the outer ends of the said equalizing levers, and links connecting the outer ends of the other pair of levers with the inner ends of the said equalizing levers.

901,865. GATE CONSTRUCTION. WILLIAM H. ANSTED, Dundee, Mich. Filed Feb. 1, 1908. Serial No. 413,920.



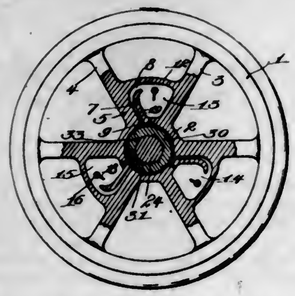
1. A gate of the class described, comprising the combination with posts and line wires secured to said posts; of a plurality of independent wires between two of said posts, means to pivotally secure said wires to one of the posts, a bar at the opposite ends of said wires, plates adjustably secured to said bar and adapted to extend beyond the outer edge of the bar, a latch pivotally mounted in the extended ends of the plates, that portion of the latch, between the plates, having a curved connecting bar and a hook on the post adjacent said bar, with which the curved connecting bar is adapted to coöperate to secure the gate in its closed position, said latch being adapted to raise and then lower the bar when the latch is operated to secure the gate.

2. In a gate construction of the class decribed, the combination with a pair of posts; of wires interposed between said posts, anchoring eyes carried by one of said posts, clevises having eyes therein adapted to coöperate with the anchoring eyes, said clevises being carried by said wires, a rod extending through the eyes in the clevises and through the anchoring eyes, a bar at the opposite ends of said wires, a brace rod adjustably and hingedly secured between said rod and bar, a plate adjustably secured to each face of the bar and adapted to extend beyond one edge thereof, a latch pivoted in the extended ends of said plates, that portion of the latch between the plates being substantially U-shaped and having a curved connecting bar, arms for said latch, a cross bar adapted to limit the swinging movement of said arms and a hook on one of said posts, with which the latch is adapted to engage when said arms are swung upwardly and additional means to secure the bar to the post.

3. In a gate of the class described, the combination with a pair of posts; of a gate between said posts, said gate being formed of strands of wire, anchoring eyes secured to one of said posts, clevises secured to said wires and having eyes adapted to coöperate with the anchoring eyes, a rod extending through said anchoring eyes, and the eyes of the clevises, a bar at the opposite ends of said wires, means to secure said bar to its adjacent post, a brace bar between said rod and bar on the wires, said bar being formed in two sections, pivotal means to secure said sections together, means to removably secure one end of the brace bar to the bar on the wires, a clip on said rod and means between said clip and end of the brace bar to adjust said brace bar longitudinally.

4. In a gate construction of the class described, the combination with a pair of posts; of a gate, the body of said gate being preferably formed of strands of wire, means to pivotally secure one end of said wires to one of the posts, a bar at the opposite ends of said wires, parallel plates adjustably secured to said bar and adapted to extend beyond one edge thereof, a latch pivotally secured to the extended ends of said plates, that portion of the latch between the plates being substantially U-shaped and having a curved connecting bar, arms on said latch, a cross bar adapted to limit the swinging movement of said arms in one direction, a hook on the post, adjacent said bar, adapted to be engaged by the curved connecting bar, whereby, when the arms are moved from their lower to their upper position, the latch will be engaged with said hook and the gate held in its closed position, a hook on said bar and an eye on the post adapted to receive said hook.

901,866. SELF-LUBRICATING WHEEL. HOWARD ATKINSON, Charleston, W. Va. Filed Nov. 8, 1907. Serial No. 401,336.



1. A self-lubricating wheel embodying a hub, a plurality of grooved rings secured within said hub, a plurality of lubricating chambers interposed between the spokes of the wheel, and means whereby a circulation of the lubricant will be had through the said rings and from chamber to chamber.

2. A self-lubricating wheel embodying a hub, a plurality of grooved rings secured within said hub, a plurality of lubricating chambers interposed between the spokes of the wheel, and means whereby a circulation of the lubricant will be had through the said rings and from chamber to chamber, said rings capable of an independent rotative movement with respect to each other and with respect to the wheel.

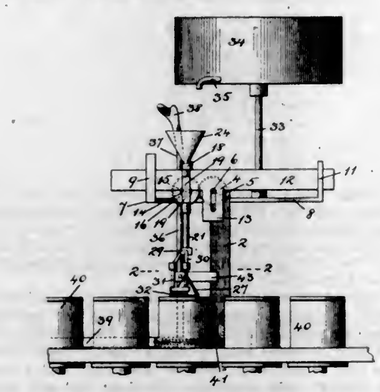
3. A self-lubricating wheel embodying a grooved hub, means for providing said wheel with a plurality of lubricating chambers, said hub provided with ports for establishing communication between said chambers and the interior of the hub, and means for conducting lubricant from the outer ends of said chambers to the interior of the hub, said means independent of said ports.

4. A self-lubricating wheel embodying a grooved hub, means for providing said wheel with a plurality of lubricating chambers, said hub provided with ports for establishing communication between said chambers and the interior of the hub, means for conducting lubricant from the outer ends of said chambers to the interior of the hub, said means independent of said ports, and a plurality of grooved bearing rings retained within the said hub, said rings providing means for lubricating the inner face of the hub and the axle spindle.

5. A self-lubricating wheel embodying a grooved hub, means for providing said wheel with a plurality of lubricating chambers, said hub provided with ports for establishing communication between said chambers and the interior of the hub, means for conducting lubricant from the outer ends of said chambers to the interior of the hub, said means independent of said ports, and a plurality of grooved bearing rings retained within the said hub, said rings providing means for lubricating the inner face of the hub and the axle spindle, said rings capable of an independent rotative movement with respect to each other and with respect to said wheel.

[Claims 6 to 8 not printed in the Gazette.]

901,867. CAN-FLUXING MACHINE. CHARLES H. AYARS, Salem, N. J., assignor to Ayars Machine Company, Salem, N. J., a Corporation of New Jersey. Filed Feb. 8, 1906. Serial No. 300,158.



1. A can-fluxing machine having a device to convey the cans on their ends; a flux-applying device, and one of said devices being revolubie relative to the other; means for moving the flux device in a single vertical plane and parallel with the advancing cans while applying flux to the end thereof and then raise said flux device and return it through the same vertical plane to meet another can.

2. A can-fluxing machine having means to convey the cans; a flux-applying device revolving in a horizontal plane; means for moving the revolving flux device in a direction with a can to apply the flux thereto, and then reverse the movement of the revolving flux device and cause it to return to meet the next can.

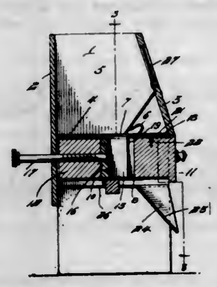
3. A can-fluxing machine having a device to support the cans; a flux-applying device; means for revolving the flux-device; means for moving the revolving flux-device through a complete circuit in a vertical plane above the can, and means for rocking the flux device as it moves above the cans.

4. A can-fluxing machine having a movable can carrier; a revolving flux-applying device sustained above the carrier, and means for moving the revolving flux-device through substantially an elliptical circuit to cause it to travel with one can while fluxing it and to then return and meet the next can to be fluxed.

5. A can-fluxing machine having a carrier to move the cans; a bar movable longitudinally above the cans; a flux-applying device carried by said bar; means for revolving the flux device, and means for moving the bar in a lengthwise direction.

[Claims 6 to 19 not printed in the Gazette.]

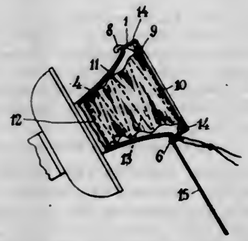
901,868. SEED-CABINET. THOMAS A. BATEMAN, Springfield, Mo. Filed Mar. 5, 1908. Serial No. 419,352.



1. A seed receptacle of the character specified comprising an upright open frame, a floor or partition arranged between the side pieces of the frame and extending from the back piece thereof to within a suitable distance of the front piece, a scraper block positioned between the side pieces of the frame in front of said floor or partition leaving a space or discharge opening between the front end of said floor or partition and the scraper block, and a discharging member having a discharge opening to register with said first mentioned opening mounted to slide under the lower floor or partition and scraper block.

2. A seed receptacle of the character specified comprising an upright open frame, a floor or partition arranged between the side pieces of the frame and extending from the back piece thereof to within a suitable distance of the front piece, a scraper block positioned between the side pieces of the frame in front of said floor or partition leaving a space or discharge opening between the front end of said floor or partition and the scraper block, and a discharging member having a discharge opening to normally register with said first mentioned opening mounted to slide under the floor or partition and scraper block, a floor arranged under the discharge opening of the discharging member and an inclined chute arranged beneath said last mentioned floor or partition.

901,869. PROTECTOR FOR TELEPHONE-TRANSMITTERS. JOSEF BAUMGARTEN, New York, N. Y. Filed Jan. 18, 1908. Serial No. 411,419.



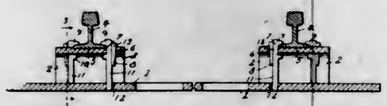
1. A protector for telephone transmitters comprising a cylindrical body portion, a collapsible funnel of flexible material mounted therein and adapted to fit a telephone transmitter, a diaphragm closing one end of the funnel, and a retaining means for holding the funnel collapsed and protecting the diaphragm when not in use.

2. A protector for telephone transmitters comprising a cylindrical body portion, a collapsible fabric funnel mount-

ed therein and adapted to fit a telephone transmitter, a diaphragm closing one end of the funnel, and retaining means pivoted on the body portion for holding the funnel collapsed and protecting the diaphragm when not in use.

3. A telephone protector comprising a cylindrical body portion having an inwardly extending flange at one end, a fabric funnel having a coiled expanding spring secured to said body portion within said flange, a diaphragm closing one end of the funnel, and a cover pivoted on said body portion and adapted to close one end thereof and hold the spring under compression whereby to protect the diaphragm.

901,870. RAILROAD-TIE. JACOB W. BILLER, Summit Point, W. Va. Filed Nov. 15, 1907. Serial No. 402,339.



1. A metallic railroad tie comprising a base plate having open-ended rail-supporting sleeves provided with grooves constituting rail seats and slots adjacent the said grooves, in combination with rails fitted in the seats, holding members having heads engaging the rail flanges, and laterally extending lugs engaging the undersides of the tops of the sleeves, and fastening means for securing the holders.

2. A metallic railroad tie comprising a base plate having rail supporting sleeves provided with slots in their upper sides, the base plate being provided with apertures registering with said slots, in combination with rails supported upon the sleeves, holders having rail-engaging heads and sleeve-engaging lugs, said holders being provided with shanks extending into the apertures in the base plate, and fastening means for securing the holders in rail-engaging position.

3. A metallic railroad tie comprising a base plate having rail supporting sleeves provided with slots in their upper sides, said base plate being provided with corresponding apertures, in combination with the rails supported upon the sleeves, holders having rail engaging heads, sleeve-engaging lugs, shanks extending into the apertures of the base plate, and split keys or wedges driven adjacent to the holders.

4. In a metallic railroad tie, a base plate having open-ended rail-supporting sleeves provided with slots in their upper sides, rails supported upon the sleeves, holders engaging the slots of the sleeves and having rail-engaging heads and sleeve-engaging lugs, and fastening members consisting of split keys or wedges driven adjacent to the holders and accessible through the open ends of the sleeves.

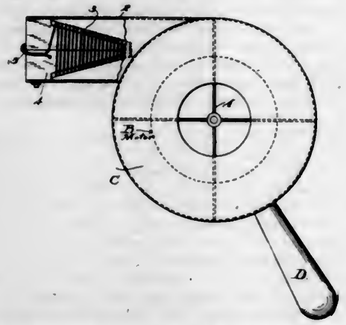
5. A metallic railroad tie comprising a base plate having open-ended rail-supporting sleeves provided with recesses or seats at their upper sides or faces, rails supported upon the sleeves, brace members comprising foot pieces fitted in the seats of the sleeves and having inclined brace members provided with terminal downturned flanges engaging the rail webs.

901,871. ELECTRIC HEATER AND DRIER. GEORGE N. BLANCHARD, San Francisco, Cal., assignor of one-half to The Electric Manufacturing Co., San Francisco, Cal. Filed Feb. 21, 1908. Serial No. 417,077.

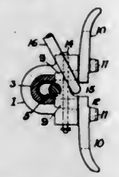
1. In an air-heating apparatus, an air-forcing mechanism, a discharge tube, and a pyramidal electrical resistance coil fixed within said tube.

2. In an apparatus of the character described, an air discharge passage, a resistance coil, consisting of wires wound upon a divergent or pyramidal insulated frame, and located in said passage.

3. In an apparatus of the character described, an air discharge passage, a frame having insulated edges adapted to receive naked electrically resistant wires which are coiled thereon, and gradually divergent from one end to the other, said frame being fitted in the air discharge passage, and electrical current connections with the resistant coil.



901,872. BRAKE-HEAD. GEORGE A. BOWMAN and CYRUS L. HARMEYER, Fort Wayne, Ind., assignors of one-third to Franklin B. Ladd, Fort Wayne, Ind. Filed May 21, 1908. Serial No. 434,098.



1. A brake head comprising a thrust block provided with a key way or opening therethrough, a divisible and removable head provided with openings which register with said key way or opening and a key passing through said key way and registering openings whereby the divisible head is secured to the thrust block.

2. A brake head comprising a thrust block provided with a key way or opening therethrough and with two recesses or sockets intersecting said key way, a divisible and removable head provided with openings which register with said key way within said recesses or sockets, and a key passing through said registering openings and key way whereby the head is secured to the thrust block.

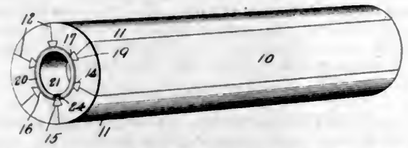
3. A brake head comprising a thrust block provided with a key way or opening therethrough and with two recesses or sockets intersecting said key way or opening, a divisible and removable head provided with rearwardly extending tenons or projections having openings therein which register within said thrust block with said key way or opening and a key passing through said key way and openings whereby the head is secured to the thrust block.

4. In a brake head the combination of a thrust block provided with a key way or opening, a plurality of recesses or sockets intersecting said key way or opening, a removable head comprising two independent portions each having an opening which registers with said key way or opening and a key passing through said key way and registering openings whereby the several parts of the head are secured to the thrust block.

5. In a brake head the combination with a thrust block provided with a key way or opening and with recesses or sockets intersecting said key way or opening, of a divisible and removable head comprising two independent portions each provided with a rearwardly extending tenon or projection which is adapted to be supported in one of said recesses or sockets, which tenon or projection is provided with an opening in alinement with said key way and a key passing through said key way and alining openings whereby the several parts are secured to the thrust block.

[Claims 6 to 8 not printed in the Gazette.]

901,873. ROLLER. HENRY BRUBAKER, York, Pa., assignor of two-thirds to Henry D. Hershey, Columbia, Pa. Filed July 9, 1907. Serial No. 382,858.



1. A roller comprising a plurality of longitudinally arranged strips provided with cut away portions on the undersurface of their meeting edges, and an inner supporting frame consisting of a tube or shell provided with end rings or collars and a plurality of longitudinally arranged wedge-shaped locking members adapted to enter said cut-away portions of said strips.

2. A roller comprising a plurality of longitudinally arranged strips provided with cut away portions on the undersurface of their meeting edges which form longitudinal recesses, and an inner supporting frame consisting of a shell or tube provided with end rings and a plurality of longitudinally arranged keys connected to said shell or tube and having a wedge shaped portion adapted to enter said recesses to hold the strips in position.

3. A roller comprising a plurality of longitudinally arranged strips provided with cut away portions on the undersurfaces of their meeting edges which form longitudinal recesses, and an inner supporting frame consisting of a tube or shell provided with end rings and a plurality of longitudinally arranged locking keys connected to said tube or shell and having a portion adapted to enter said recesses to retain said strips in position.

4. A roller comprising a plurality of sections the undersurfaces of which are provided with recesses, a supporting frame having a portion adapted to enter said recesses, and end rings carried by said frame and provided with slots whereby they may be connected with a source of power.

5. A roller comprising an outer sectional shell, an inner supporting frame provided with end rings or collars, and means for detachably connecting the said end rings or collars of the supporting frame with a source of power.

[Claims 6 to 9 not printed in the Gazette.]

901,874. PLUG FOR GAS-WELLS. WALTER F. BURGESS, Atwood, W. Va. Filed Apr. 10, 1908. Serial No. 426,339.

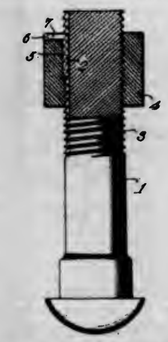


1. The improved gas-well plug comprising a hollow body having tapered portions, slidable wedging and locking devices applied to such tapered portions, a spring acting against one of said devices for forcing it along the adjacent tapered portion, a breakable pin traversing the body of one of the tapered portions and serving to hold one of the locking devices in retracted position, a rubber sleeve applied to the lower portion of the body, an expanding plug operatively connected with said sleeve, and a rod having a breakable-joint connection with such expanding plug and adapted to slide in the body of the gas-plug, substantially as described.

2. The improved gas-well plug comprising upper and lower tapered portions, a rubber sleeve applied to the lower end of the plug, and a slidable plug adapted to expand said sleeve, a rod connected with such plug and adapted to slide in the body of the gas-plug as a whole, and locking devices which are movable on the body of the gas-plug for preventing upward or downward movement of the same in the well, substantially as described.

3. In a gas-well plug, the combination with the tapered body of the same, of a locking device comprising a wedge and a part securing the wedge slidably on the tapered portion, a spring tending to force the locking device outward, a breakable cross-pin holding the device in retracted position against the tension of said spring, and a slotted rod which is slidable in the body of the plug and having a shoulder adapted to engage the breakable pin, whereby, when traction is applied to the rod, the pin may be broken and the locking device released in the manner described.

901,875. NUT-LOCK. RUFUS G. BURTON, Bluefield, W. Va. Filed Dec. 5, 1906. Serial No. 346,480.

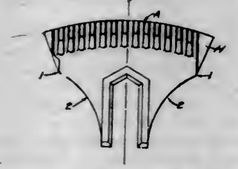


A nut lock comprising a bolt having a groove rectangular in cross section extending longitudinally of its thread, a nut having a groove rectangular in cross section extending along its thread from the outer face of the nut to a point intermediate of the inner and outer faces thereof and arranged to leave one or more entire threads in said nut adjacent the inner face, the said grooves of the bolt and nut being of the same transverse dimensions and configuration and the said grooves extending entirely through the threads into the body of the bolt and nut, said nut having upon its outer face a radially extending channel which communicates at its inner end with the groove in the nut, a key of comparatively soft metal which is forced into the registering grooves of the nut and bolt and having its end bent into the radially extending channel of the nut whereby the said key lies entirely within the perimeter of the nut, the transverse dimensions of the key being the same as the combined transverse dimensions of the groove in the bolt and in the nut thread.

901,876. ROCKING GRATE. PETER CAMERON, Williamsport, Pa., assignor to Valley Iron Works, Williamsport, Pa., a Corporation. Filed Oct. 26, 1906. Serial No. 340,786.

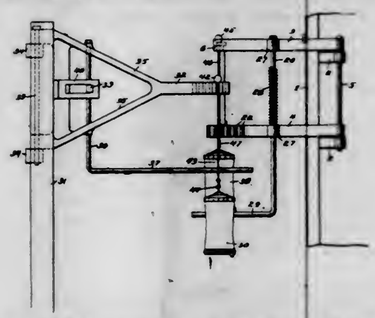
1. In a rocking grate, the combination of a plurality of grate bars, alternate bars being pivotally mounted in different planes, a link for rocking the bars and connections between the link and the bars constructed and arranged to permit the varying movement of alternate bars, saddles mounted on the bars, the adjacent faces of the saddles in different rows being differently and complementally shaped:

whereby when the saddles are tilted a moderate distance in either direction, a uniform, narrow space is preserved between the rows, but when they are tilted further in the same direction the space is greatly increased for dumping.



2. The combination of two grate bars pivotally mounted at different relative heights, a link for rocking the bars, the link being connected to one bar by a pivot and to the other by a pin and slot connection, a saddle on each bar, one end of the saddle on the lower pivot bearing being of a generally-convex shape and the adjacent end of the other saddle having a complemental, generally-convave shape.

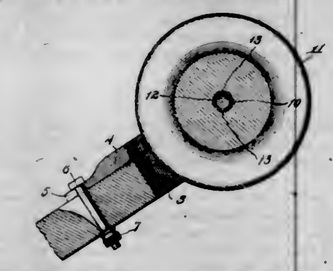
901,877. MAIL-BAG CATCHER AND DELIVERER. ROSARIO M. CANTILLO, Norristown, Pa. Filed Mar. 11, 1908. Serial No. 420,415.



1. A mail bag catcher comprising a pair of arms pivoted to the mail car, one of said arms having a pair of fingers projecting therefrom and the other arm having a series of fingers comprising a catching fork, a post provided with a crane having a series of fingers projecting therefrom, and an arm provided with a pair of fingers for supporting a mail bag by means of a cord and ball.

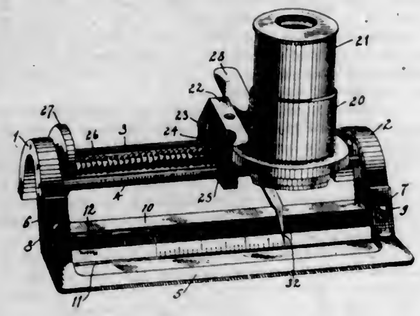
2. In a mail bag catcher, a pair of fingers, a disk pivotally mounted between said fingers and provided with a notch, a spring connected to said disk, a trigger engaging a notch in said disk, and means whereby said trigger is actuated to release the disk, and a mail bag suspended from a cord and connected to said disk.

901,878. TROLLEY-WHEEL BEARING. WILLIAM M. CASWELL and JOSEPH A. SCHOFIELD, Warren, Pa. Filed Dec. 16, 1907. Serial No. 406,749.



A trolley wheel bearing comprising fixed and hinged sections, the free end of the hinged section being formed with a bifurcated lug and the fixed section with a transverse opening of gradually increasing size from one end to register with the bifurcation in said lug, a connecting bolt arranged to extend through the opening of the fixed section with its headed portion bearing upon the lug of the hinged section and a nut screwing upon the threaded portion of the bolt, the headed portion of the bolt being adapted to be disengaged with the lug of the hinged section without removing the bolt from position.

901,879. THREAD-COUNTING APPARATUS. AUGUST CHRONIK and LOUIS CHRONIK, New York, N. Y. Filed June 19, 1908. Serial No. 439,435.



1. In an instrument for counting picks or threads in fabrics, the combination with a supporting frame adapted to rest flat on the fabric and having an aperture through which the threads of said fabric may be counted, of a microscope carried by said frame and adapted to move in a plane parallel to the plane of the fabric, a pointer secured to and moving with said microscope, and a scale mounted upon said frame adjoining said aperture.

2. In an instrument for counting picks or threads in fabrics, the combination with a supporting frame adapted to rest flat on the fabric and having an aperture through which the threads of said fabric may be counted, of a microscope mounted upon said frame and adapted to move in a plane parallel to the plane of the fabric, a pointer located in the longitudinal axis of and moving with said microscope, and a scale mounted upon said frame adjoining said aperture.

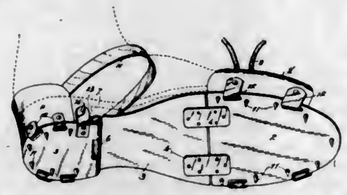
3. In an instrument for counting picks or threads in fabrics, the combination with a supporting frame adapted to rest flat on the fabric and having an aperture through which the threads of said fabric may be counted, of a microscope mounted upon said frame and adapted to move in a plane parallel to the plane of the fabric, a pointer secured to and moving with said microscope, and a triangular scale rotatably mounted upon said frame adjoining said aperture.

4. In an instrument for counting picks or threads in fabrics, the combination with a supporting frame adapted to rest flat on the fabric and having an aperture through which the threads of said fabric may be counted, of a microscope mounted upon said frame and adapted to move in a plane parallel to the plane of the fabric, a pointer secured to and moving with said microscope, a triangular scale rotatably mounted upon said frame adjoining said aperture, means on said frame for illuminating the fabric being examined, and means on said scale for illuminating the surface of the fabric being viewed.

5. In an instrument for counting picks or threads in fabrics, the combination with a supporting frame adapted to rest flat on the fabric and having an aperture through which the threads of said fabric may be counted, of a microscope movably supported by said frame, a pointer in the longitudinal axis of said microscope and adapted to move with said microscope in a plane parallel to the plane of the fabric, a scale mounted upon said frame adjoining said aperture, and means for imparting movement to said microscope and the pointer secured thereto.

[Claims 6 to 11 not printed in the Gazette.]

901,880. SAFETY-SHOE FOR LOGGERS. GUY L. CLEMENT, Portland, Oreg. Filed Mar. 18, 1908. Serial No. 421,773.

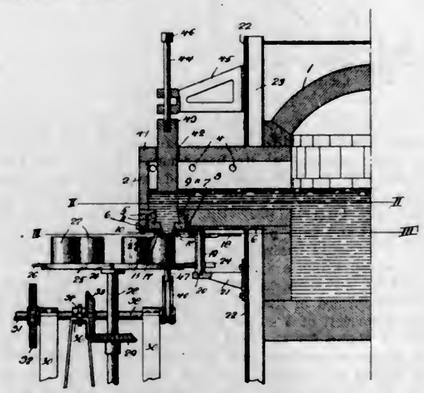


1. In a shoe of the character described, the combination with a metal sole, and a metal heel portion hinged thereto in a plane slightly lower than that of the sole, said sole consisting of two parts flexibly connected to permit it to yield in walking, the forward of said parts having a series of slots near the edge, and a series of downwardly projecting pins, said forward portion having upwardly projecting sides, and metal clips secured to said sides and extending down over the edge of said forward portion of the sole and having their lower ends bent upwardly into engagement with the slots therein.

2. In a shoe of the character described, the combination with a metal sole, of a metal heel portion hinged thereto in a plane slightly lower than that of the sole, said heel portion having a series of slots near the edge and having downwardly projecting pins, a heel leather, and metal clips secured to said leather and extending down over the edge of the heel portion and having their lower ends bent upwardly into engagement with said slots.

3. In a shoe of the character described the combination with a metal sole, of a metal heel portion hinged thereto in a plane slightly lower than that of the sole, said heel portion having a series of slits near the edge and having downwardly projecting pins, a heel leather, and metal clips secured to said leather and extending down over the edge of the heel portion and having their lower ends bent upwardly into engagement with said slits, a metal lug secured to said heel portion and bent upwardly above the inner edge thereof, and provided with a spur, and an ankle strap secured to the heel leather.

901,881. GLASS-FEEDING APPARATUS FOR TANKS, POTS, AND SIMILAR RECEPTACLES. GEORGE E. CLEVELAND, Greenfield, Ind. Filed Nov. 18, 1907. Serial No. 402,713.



1. The combination with a tank having an extension, of a cup detachably mounted in the bottom of said extension, a reciprocating plunger movably mounted in said extension and adapted to enter said cup, a cooling collar supported beneath said cup, revoluble knives arranged beneath said extension for closing said collar, a movable mold support arranged adjacent to said extension for supporting a mold beneath said collar, means for intermittently moving said mold support, means actuated by said mold support for moving said knives, and means for reciprocating said plunger.

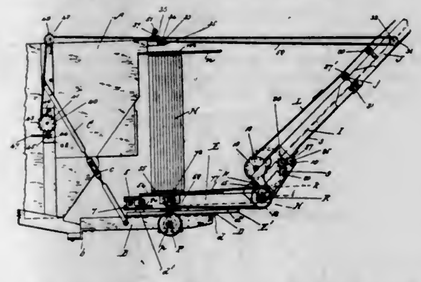
2. The combination with a tank having an extension, of a cup mounted in the bottom of said extension, a cooling collar arranged beneath said cup, revoluble knives arranged beneath said collar, a plunger mounted in said extension and adapted to enter said cup, a movable mold support arranged adjacent to said extension for supporting a mold beneath said collar, means for rotating said mold support, means carried by the mold support for shifting said knives, and means for moving said plunger.

3. The combination with a tank having an extension, of a cup mounted in said extension, revoluble knives arranged beneath said cup, a movable mold support for supporting a mold beneath said cup, a plunger mounted in said extension and adapted to enter said cup, means for moving said mold support, means actuated by said mold support for moving said knives, and means for reciprocating said plunger.

4. A glass feeding apparatus comprising a cup for holding a quantity of glass, a reciprocating plunger for entering said cup, and forcing the glass therefrom, a mold support for supporting a mold beneath said cup to receive the contents thereof, and an intermittently shiftable means rotatably supported adjacent to said mold support for closing the cup and severing the material passing therefrom.

5. A glass feeding apparatus comprising the combination with a tank formed with an extension having an outlet, a cup arranged in operative relation with respect to said outlet and adapted to hold a quantity of glass, a reciprocating plunger extending through the top of the extension and adapted to enter the cup thereby forcing the glass therethrough, an intermittently rotatable member arranged in suitable relation with respect to said cup, a plurality of molds carried by said member and adapted to be successively positioned below said cup to receive the contents therefrom, a vertically-extending loosely-mounted sleeve arranged adjacent to said cup and member, a series of radially-extending knives carried by the sleeve for closing the cup and severing the material passing therefrom, and means carried by said member for shifting said knives.

901,882. STRAW-STACKER. EZRA G. CLYMANS and MELVIN A. FLAUTT, Waynesboro, Pa., assignors to The Geiser Manufacturing Company, Waynesboro, Pa. Filed Jan. 23, 1908. Serial No. 412,301.



1. The combination, with a threshing-machine casing, of a conveyer-frame pivotally supported from the said casing and movable in a horizontal plane, an upper guide secured to the said casing, a curtain carried by the said upper guide, a lower guide secured to the said conveyer frame, and detachable spring-clips slidable on the said lower guide and normally connecting the lower part of the said curtain with it.

2. The combination, with a threshing-machine casing, of a stationary frame secured to the said casing, a revoluble frame mounted on the said stationary frame, a straw-

conveyer carried by the said revoluble frame, an upper guide carried by the said casing, curtains suspended from the said guide, a lower guide carried by the said revoluble frame, and spring-clips connecting the lower parts of the said curtains with the said lower guide.

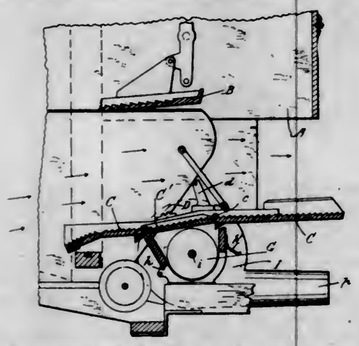
3. The combination, with a threshing-machine casing, of a straw-stacker carried by the said casing and pivoted to swing horizontally and provided with a straw-elevator, a center guide-sheave mounted over the pivot of the straw-stacker at the top of the said casing, two guide-sheaves mounted one on each side of the said center sheave, two guide-sheaves mounted one on each side of the said elevator, windlasses arranged at the sides of the said casing, two guide-sheaves mounted on the said casing above the said windlasses, and a flexible connection having its middle part looped around the said center guide-sheave and its ends connected to the said windlasses, the intervening portions of the said flexible connection being carried by the said guide-sheaves, substantially as set forth.

4. The combination, with a threshing-machine casing, of a straw-stacker carried by the said casing and pivoted to swing horizontally and provided with a straw-elevator formed of foldable sections, a center guide-sheave mounted over the pivot of the straw-stacker at the top of the said casing, two guide-sheaves mounted one on each side of the said center guide-sheave, a roller supported from the said casing over the said two guide-sheaves, two guide sheaves mounted one on each side of the upper section of the said elevator, two guide-sheaves mounted at the sides of the said casing, windlasses arranged at the sides of the said casing below the last said guide-sheaves and operatively connected together, and a flexible connection having its middle part looped around the said center guide-sheave and its ends connected to the said windlasses, the intervening portions of the said flexible connection being carried by the said guide-sheaves, substantially as set forth.

5. In a straw-stacker, the combination, with a stationary supporting frame, a turntable-ring secured to the said frame, and a central bearing also secured to the said frame and provided with a collar; of a revoluble straw-conveyer frame, two longitudinal planks secured to the underside of the said revoluble frame one on each side of the said central bearing with their end portions projecting over the said turntable-ring and preventing the revoluble frame from tilting, and an annular bearing-plate journaled on the said central bearing and resting on its said collar, said bearing-plate being secured to the middle portions of the said longitudinal planks and supporting the said revoluble frame pivotally.

[Claims 6 to 14 not printed in the Gazette.]

901,883. CHAFF-SEPARATOR. EZRA G. CLYMANS and MELVIN A. FLAUTT, Waynesboro, Pa., assignors to The Geiser Manufacturing Company, Waynesboro, Pa. Filed Jan. 30, 1908. Serial No. 413,422.



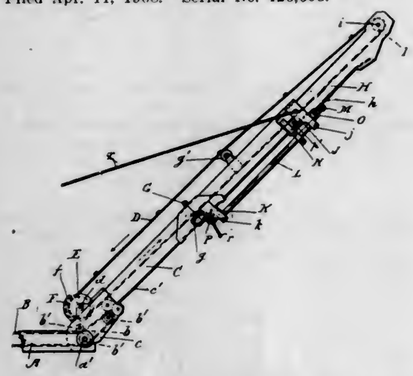
1. The combination, with the rear end portion of a grain-separator, and a grain-pan arranged therein; of a chaff-catcher arranged below the said grain-pan and provided with an opening, and a door pivotally connected to the rear side of the said opening and operating when raised to obstruct the rearward current of blast and chaff between the said grain-pan and chaff-catcher, so that the chaff falls through the said opening.

2. The combination, with the rear end portion of a grain-separator, and a grain-pan arranged therein; of a chaff-catcher arranged below the said grain-pan and provided with an opening, a door pivotally connected to the rear side of the said opening and operating when raised to obstruct the current of blast and chaff between the said grain-pan and chaff-catcher, and catch mechanism for securing the said door in different positions.

3. The combination, with the rear end portion of a grain separator, of a chaff-catcher supported therein and provided with an opening, a door normally closing the said opening, and means for supporting the said door in a raised position at the rear side of the said opening to obstruct the rearward current of blast and chaff, so that the chaff falls through the said opening.

4. The combination, with a chaff-catcher provided with an opening, of a conveyer spout secured under the said opening, a fan casing secured at one end of the said spout, a driving shaft arranged in the said spout and casing, a spiral conveyer secured on the said shaft and arranged in the said spout, a delivery fan secured on the said shaft and arranged in the said casing, and trap-door for closing the said opening.

901,884. STRAW-STACKER. EZRA G. CLYMANS and ANDREW M. HESS, Waynesboro, Pa., assignors to The Geiser Manufacturing Company, Waynesboro, Pa. Filed Apr. 11, 1908. Serial No. 426,608.



1. In a straw-stacker, the combination, with an inclined straw-elevator provided with an endless carrier and having shaft bearings at its lower end, of a driving shaft journaled in the said bearings and provided with flanged pulleys for driving the said carrier, and guard-plates provided with laterally projecting flanges which overlap the flanges of the said pulleys and having also hubs which project laterally from them on the same side as the said flanges and which are secured on the said bearings.

2. In a straw-stacker, the combination, with a straw-elevator formed of hinged sections and provided with an endless carrier, of a socket secured to one of the said sections, a clamp for the said carrier comprising a cranked bar which is slidable and revoluble in the said socket, and means for securing the said bar to the said socket.

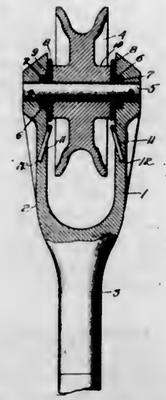
3. In a straw-stacker, the combination, with a straw-elevator provided with an upper telescopic section, of a tubular guide secured to the lower section of the said elevator, wheels carried by the said lower section, a flexible connection passing over the said wheels and secured to the said telescopic section and having its lower bight arranged in the said tubular guide, and a slide secured to the lower part of the said telescopic section and working on the said guide.

4. In a straw-stacker, the combination, with a straw-elevator provided with an upper telescopic section, of a tubular guide secured to the lower section of the said elevator, sprocket-wheels carried by the said lower section, a drive-chain engaging with the said sprocket-wheels and secured to the said telescopic section and having its lower bight arranged in the said tubular guide, a slide secured to the said telescopic section and working on the said guide, and a driving device for revolving one of the said sprocket-wheels.

5. In a straw-stacker, the combination, with a straw-elevator provided with an upper telescopic section which slides outside of its lower section, of arch-shaped brackets secured to the said lower section and extending over and below the sides of the said telescopic section, rollers for the said telescopic section to run on carried by the said brackets, guides having their upper ends secured to the said brackets, supports for the lower ends of the said guides secured to the said lower section, and slides secured to the said telescopic section and working on the said guides.

[Claim 6 not printed in the Gazette.]

901,885. ELECTRIC CONTACT-SPRING FOR TROLLEY-HARPS. ALBERT L. COLE, Auburndale, Mass., assignor to United Copper Foundry Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 28, 1905. Serial No. 280,401.



1. A trolley harp, a trolley wheel journaled therein, and a combined washer and contact spring mounted between the hub of the wheel and the harp and comprising a normally compressed disk-like washer portion expansible both radially and transversely of said wheel, extending co-axially of said hub.

2. A trolley harp, a trolley wheel journaled therein, and a combined washer and contact spring mounted co-axially between the harp and the hub of the wheel, said combined washer and spring consisting of a one-piece wire coiled into a radially extending flat washer portion provided with means for directly securing it to the harp.

3. A trolley harp, a trolley wheel journaled therein, and an electric contact in the form of a coiled spring mounted co-axially between the hub of the wheel and the harp, said spring having a flat or spiral portion acting as a washer and an adjacent helical portion.

4. A trolley harp, a trolley wheel journaled therein, and a coiled spring having a flat circumferential portion extending between the harp and wheel and a terminal portion removably mounted in the harp.

5. A trolley harp, a trolley wheel journaled therein, and a spring bent in a continuous coil having its opposite ends retained by said harp for holding the spring pressed against the hub of the wheel.

901,886. BUTTON PENCIL-HOLDER. EDWARD D. CONKLIN, Newark, N. J., assignor to The Whitehead & Hoag Company, Newark, N. J., a Corporation of New Jersey. Filed May 17, 1907. Serial No. 374,185.



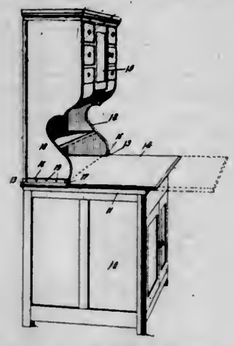
1. A button pencil holder comprising a metallic shell having a portion of its back cut away to provide a transversely extending tongue having lateral off-set portions, said lateral off-set portions bent to provide a pair of pencil gripping arms extending outwardly from said tongue.

2. A button pencil fastener comprising a metallic shell having a portion of its back cut away to provide an angle-shaped tongue embodying a rearwardly and a transversely extending arm, said transversely extending arm of greater length than said rearwardly extending arm and provided with lateral off-sets, said off-sets bent to provide pencil gripping arms extending outwardly from said transversely extending arm.

3. A button pencil fastener comprising a metallic shell having a portion of its back cut away to provide a transversely extending tongue having lateral off-set portions bent to provide pencil gripping arms extending outwardly from said tongue, said tongue formed with a plurality of transverse slits whereby a portion of said arms is formed from the body portion of the tongue.

4. A button pencil fastener comprising a metallic shell having a portion of its back cut away to provide a transversely extending tongue having lateral off-set portions bent to provide pencil gripping arms extending outwardly from said tongue, said tongue formed with a plurality of transverse slits whereby a portion of said arms is formed from the body portion of the tongue, said transversely extending arm provided with a plurality of slits whereby a portion of each of said gripping arms is formed from a part of said transversely extending arm.

901,887. SLIDING TOP FOR CABINETS. JAMES W. CONNATY, Indianapolis, Ind., assignor to G. P. McDougall & Son, Indianapolis, Ind., a Corporation of Indiana. Filed June 1, 1908. Serial No. 436,113.

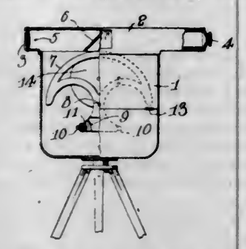


1. A kitchen cabinet comprising a main table structure having a forwardly sliding top, a pair of U-shaped plates having their lower arms secured to opposite sides of the table structure at the rear corners thereof beneath the top and their upper sides loosely overlapping the rear corners of the sliding top, and a cabinet superstructure secured to the upper arms of the U-shaped plates.

2. A kitchen cabinet comprising a main table structure having a forwardly sliding top, a pair of U-shaped plates having their lower arms secured to opposite sides of the table structure at the rear corners thereof beneath the top

and their upper sides loosely overlapping the rear corners of the sliding top, a vertical flange carried by the upper face of each of the upper arms of said U-shaped plates, and a cabinet superstructure mounted upon the upper arms of the U-shaped plates and secured to said vertical flanges.

901,888. GRADIENT INSTRUMENT. CHARLES B. CRIM, Seattle, Wash. Filed May 9, 1908. Serial No. 431,788.



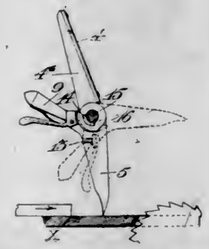
1. In an instrument of the class described, the combination with a balanced scale bearing member, of a telescope embodying an eye piece, a cross strand, and a reflector, the latter being arranged to display the graduations of the scale and indicate the relation between such graduations and the cross strand.

2. In an instrument of the class described, a pivotally mounted scale bearing member, means for balancing the same, and an observation device embodying an eye piece, a cross strand, and a reflector arranged to permit the vision to simultaneously take in the cross strand and the graduations of the scale.

3. In an instrument of the class described, a balanced scale bearing member, in combination with an observation device comprising an eye piece at one end, a cross strand located at a distance from the eye piece, and a reflector set at an angle to the line of vision and of a width permitting a simultaneous view of the cross strand and the adjacent graduations of the scale.

4. In an instrument of the class described, the combination with an observation device embodying an eye piece, a cross strand, and a reflector, of a case, a scale bearing member pivotally supported in said case, and adjustable balances having a threaded engagement with the scale bearing member, substantially as described.

901,889. SAW-TABLE SAFETY ATTACHMENT. EARLE W. CUMMINGS, Oakland, Cal., assignor to George H. Young, San Francisco, Cal. Filed Nov. 16, 1907. Serial No. 402,405.



1. In an apparatus of the character described, a bar adapted to be projected over a sawing table, substantially parallel with the saw arbor, fingers independently turnable upon a shaft carried by the bar having points at the ends adapted to rest upon and engage the passing strip of lumber, lugs upon the sides of the fingers adapted to engage successively, a pawl carrying handle movable upon the same axis, and having a lug adapted to engage the first of the fingers when the handle is depressed, and latches with which the pawl may engage to retain the fingers in an elevated position.

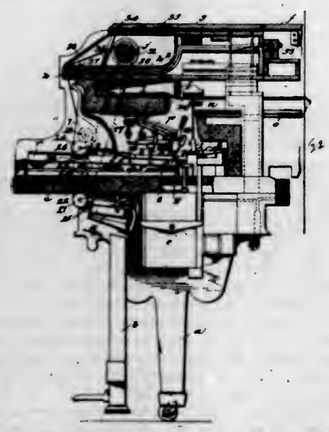
2. In an apparatus of the character described, a support extending transversely above the sawing-table, substantially parallel with the saw arbor, a shaft carried by said support, pointed fingers adapted to engage the surface of the lumber, passing to the saw, and to prevent its return, a fixed shield projecting upward from the finger support, means for raising the fingers, said means including inter-engaging lugs, with a pawl and ratchet mechanism whereby the depression of the lever causes the engagement of the lugs, and a simultaneous raising of all the fingers.

3. In an apparatus of the character described, a vertical standard having a turnable head, an arm projecting horizontally from said head into the plane of motion of the tool, means by which said head and arm are turnably engaged with the standard, a fixed guard extending upwardly from the arm, independently movable fingers extending downwardly having points to engage the passing material, and means by which said fingers are raised or released, said means including lugs adapted to engage the hubs of the fingers, a pawl-carrying handle turnable upon the finger support having a lug adapted to engage the first of said fingers, and catches with which the pawl may engage so that the turning of the handle will elevate all of the fingers out of contact with the surface beneath.

4. In an apparatus of the character described, a horizontally movable arm having a fixed guard extending upwardly therefrom in line with the tool, independent fingers turnably supported from the arm having points to engage the material, said fingers having engaging lugs upon the sides, a handle having a lug to engage one of said fingers and transmit motion to the others whereby the whole series may be raised to free them from the material below.

5. In an apparatus of the character described, a horizontally supported arm having a fixed guard extending upwardly therefrom, independent fingers turnably mounted upon the arm so that the points of said fingers may drop and engage the material passing beneath, the heads of the fingers having curved key-ways, a feather upon the shaft extending into the key-ways, a handle turnable upon the shaft having a lug to engage and raise the fingers, and a latch by which the handle and fingers are maintained in elevated position.

901,890. AUTOMATIC GRAND PIANO. JOHN W. DARLEY, Jr., Baltimore, Md., assignor to Ernest J. Knabe, Jr., Baltimore, Md. Filed Nov. 3, 1906. Serial No. 341,891.



1. In an automatic grand piano, the combination of strings, tuning pins for said strings, a fall board, a music roll mounted in bearings in said fall board, and a tracker normally fixed in position and overlying said tuning pins, but movable from said position to permit access to said pins, substantially as described.

2. In an automatic grand piano, the combination of strings, tuning pins for said strings, a fall board, a music roll mounted in bearings in said fall board and a tracker board overlying said tuning pins and movable independently of said music roll upwardly and rearwardly to permit access to said tuning pins, substantially as described.

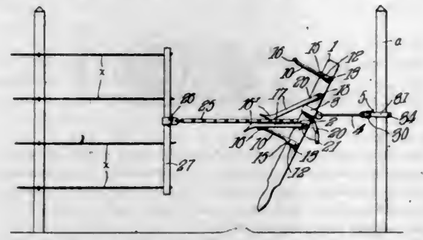
3. In an automatic grand piano, the combination of a fall board provided with bearings, one of which is spring pressed, and a tracker board pivotally movable independently of said bearings into and out of operative position, substantially as described.

4. In an automatic grand piano, the combination of keys, strings, tuning pins for said strings, a fall board adapted to be folded down over the keys, said fall board having a recessed portion, bearings in said recessed portion, one of which is spring pressed, and a tracker board located above said tuning pins but movable independently of said bearings upwardly and rearwardly to permit access to said tuning pins, substantially as described.

5. In an automatic grand piano, the combination of a pivoted fall board provided with a recess, bearings projecting into said recess, one of which is spring pressed, a music roll mounted in said bearings, and means carried by said fall board for positively driving said music roll, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

901,891. WIRE-FENCE STRETCHER. CLAUDE L. DAVIS, Doran, Va. Filed Mar. 27, 1908. Serial No. 423,689.



1. The combination with an apertured lever, of two pawl-provided arms pivotally secured thereto, springs fixed to said lever, and a pliable connection extending through said aperture and engaged by said pawls.

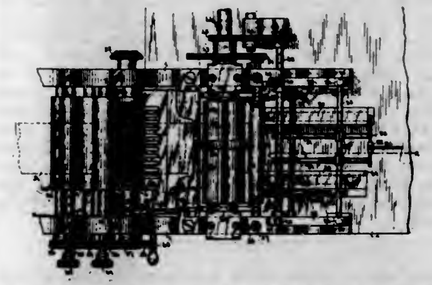
2. A wire stretcher having in combination, a lever, two spring arms extended in like direction, two pivotally secured pawls proximal to said spring arms, said lever being apertured at a point between said pawls, and a chain engaged by said pawls and passing through said aperture.

3. A wire stretcher comprising a lever having supporting trunnions and an aperture, of two pawls positioned adjacent to said aperture, one upon each side thereof, a clevis secured to said trunnion, springs projected parallel to said pawls, and a clamp-provided chain extended between said pawls and through said aperture, all arranged substantially as set forth.

901,892. PAPER PERFORATING, CUTTING, AND DELIVERY APPARATUS. RODERICK M. DAVIDSON, Elmira, N. Y. Filed Jan. 29, 1908. Serial No. 413,289.

1. A perforating, cutting and delivery apparatus comprising a perforating mechanism, feed rolls to deliver a web of paper thereto, a cutting mechanism to which the web passes from the perforating mechanism, separable delivery rolls between which the end of the web enters prior to the action of the cutting mechanism, means for closing said rolls upon the paper after the cutting mechanism has severed a sheet therefrom and for separating the rolls upon the passage of the sheet through the rolls, and a delivery mechanism to receive the sheets from said rolls.

2. A perforating, cutting and delivery apparatus adapted to operate upon one or more webs of paper, said apparatus comprising one or more perforating mechanisms through which the webs are fed, feed rolls whereby the webs are delivered to the perforator or perforators in vertical alinement, a cutting mechanism to which the webs pass from the perforators in superposed position, separable delivery rolls between which the ends of the webs enter prior to the action of the cutting mechanism, means for closing said rolls upon the superposed sheets after the cutting mechanism has severed them from the webs and for separating the rolls upon the passage of the sheets through the rolls, and a delivery mechanism to receive the sheets from said rolls.



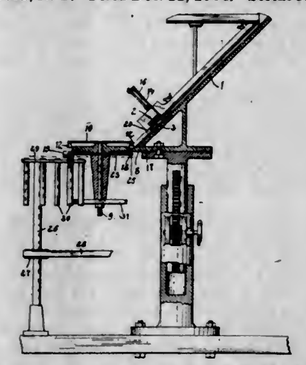
3. A perforating, cutting and delivery apparatus comprising a rotary perforating mechanism set transversely to the line of travel, means for feeding a web of paper thereto, means embodied in said mechanism for disengaging the perforating teeth from the paper whereby the web may run free immediately after perforation, a cutting mechanism to and through which the web freely passes from the perforating mechanism, and means for delivering the severed sheets from the cutting mechanism.

4. The combination, with a cutting mechanism, of means for feeding a web of paper thereto, means for delivering the severed sheets therefrom, a delivery receptacle above which the sheets are deposited, and one or more reciprocating presser arms adapted to engage the surface of the sheets to enter the sheets into the receptacle.

5. The combination, with a rotary cutting mechanism, of means for feeding a web of paper thereto, means for delivering the severed sheets therefrom at an accelerated speed, a delivery receptacle above which the sheets are deposited, said receptacle having an opening at its top narrower than the sheets, one or more reciprocating presser arms adapted to enter the sheets into the receptacle, and means for imparting a complete reciprocation to said arm or arms during each revolution of the cutting mechanism.

[Claims 6 to 8 not printed in the Gazette.]

901,893. MACHINE FOR CONVEYING AND DISTRIBUTING BUTTON-BLANKS. IGNAZIO DE FRANCISCI, New York, N. Y. Filed Dec. 11, 1906. Serial No. 347,316.

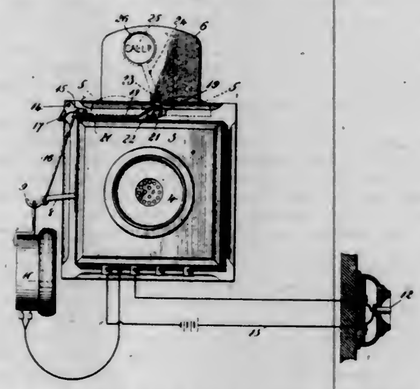


1. In a button machine, the combination with an inclined table capable of delivering button blanks, of a hori-

zontal table having a conduit, a support, said conduit leading from said inclined table to said support, a rotatable shaft, a conveyer on said shaft and adapted to receive said blanks from the said inclined table and convey same along said conduit and deliver them to said support, a receiving table, a second conveyer on said shaft located in a plane parallel to the plane of and beneath said first conveyer and above the plane of said support and adapted to engage said blanks on said support and convey them to said receiving table.

2. In a button machine, the combination with an inclined table capable of delivering button blanks, of a horizontal table having a conduit, a support, said conduit leading from said inclined table to said support, a rotatable shaft, a conveyer on said shaft and adapted to receive said blanks from the said inclined table and convey same along said conduit and deliver them to said support, a receiving table at the base of said inclined table, a second conveyer on said shaft located in a plane parallel to the plane of and beneath said first conveyer and above the plane of said support and adapted to engage said blanks on said support and convey them to said receiving table.

901,894. INDICATOR FOR TELEPHONE-CALLS. EUGENE T. DUCHARME, Boston, Mass. Filed Nov. 15, 1907. Serial No. 402,261.



1. In a telephone box, a bell, a clapper for ringing the same, a pivotally mounted arm, an indicator disk carried by said arm, combined with means for causing the first movement of said clapper to be communicated to said arm.

2. In a telephone box, a bell, a clapper for ringing the same, a pivotally mounted arm, an indicator disk carried by said arm, a lever connected with said arm, said lever being placed so as to be moved to one side by said clapper when said bell is rung, whereby said arm is moved upon its pivot.

3. In a telephone box, a bell, a clapper for ringing the same, a pivotally mounted arm, an indicator disk mounted on said arm, a lever connected with said arm, a movable head connecting said lever and said arm, said lever being placed so as to be moved to one side by said clapper when said bell is rung, whereby said arm is moved upon its pivot.

4. In a telephone box, a pivotally mounted arm, an indicator disk carried by said arm, a longitudinally moving rod connected to said arm, an elbow lever, a pivotally mounted hook, a connecting-rod connecting said hook to one of the arms of said elbow lever, the free arm of said lever being so arranged as to strike against the free end of said rod when said lever is moved upon its fulcrum.

5. In a telephone box, a pivotally mounted hook, a spring actuating the same and normally held at a tension, an elbow lever, a connecting-rod connecting said hook with one of the arms of said elbow lever, a pivotally mounted disk arm, an indicator disk mounted on said disk arm, a longitudinally moving rod, a movable head connecting said rod with said disk arm, said elbow lever being arranged so that its free arm will strike against the free end of said rod when the tension against said spring is released.

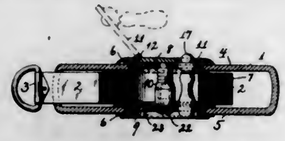
901,895. PAINT OR VARNISH REMOVER. CARLETON ELLIS, White Plains, N. Y., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed Feb. 4, 1907. Serial No. 355,639.

1. The paint or varnish remover comprising approximately propyl alcohol 16 parts, ethyl alcohol 3 parts, benzol 1 part and stiffening material, including wax, 1 part.

2. The paint or varnish remover comprising approximately propyl alcohol 16 parts, ethyl alcohol 3 parts, a wax softening agaent 1 part, and stiffening material.

3. The finish remover comprising approximately an alcoholic finish solvent 16 parts, the next lower alcoholic finish solvent of the same series 3 parts, aromatic finish softening material 1 part, ceresin wax ȷd part and wood flour ȷd parts.

901,896. TAPE-REEL. PHILIP FERBER, Hoboken, N. J., assignor to The Keuffel & Esser Company, Hoboken, N. J., a Corporation of New Jersey. Filed Dec. 30, 1907. Serial No. 408,665.



1. In a tape reel, the combination with a tape drum, of a hinged arm provided with a socket having a longitudinal slot of limited length, and a handle adapted to project through said slot and terminating in a ball adapted to engage loosely with said socket.

2. In a tape reel, the combination with a tape drum, of a hinged arm provided with a socket having a longitudinal slot of limited length, a handle comprising a central rod terminating in a ball adapted to engage loosely with said socket and which rod projects through the slot, and a sleeve loosely mounted to rotate on the rod and the outer surface of which contacts with the walls of the slot to limit the movement of the handle.

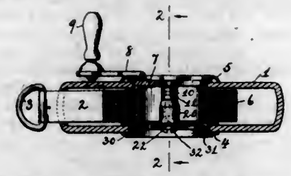
3. In a tape reel, the combination with a tape drum, of a hinged arm provided with a socket having a longitudinal slot of limited length, a handle comprising a central rod terminating in a ball adapted to engage loosely with said socket and which rod projects through the slot, a sleeve loosely mounted to rotate on the rod and the outer surface of which contacts with the walls of the slot to limit the movement of the handle, and means for holding the sleeve on the central rod.

4. In a tape reel, the combination with a tape drum, comprising two side plates each apertured in line to receive the handle, of a hinged arm secured to one of the plates and provided with a socket having a longitudinal slot of predetermined length therein, and a handle terminating in a ball adapted to engage the socket, the movement of the handle being limited by the walls of the slot to cause the handle, when swung inwardly, to register with the apertures in the drum plates.

5. In a tape reel, the combination with a tape drum comprising two side plates, each apertured in line to receive the handle, of a hinged arm secured to one of the plates and provided with a socket having a longitudinal slot of predetermined length therein, a handle terminating in a ball adapted to engage the socket and means for holding the handle against accidental displacement from the second plate.

[Claims 6 to 12 not printed in the Gazette.]

901,897. TAPE-REEL. PHILIP FERBER, Hoboken, N. J., assignor to The Keuffel & Esser Company, Hoboken, N. J., a Corporation of New Jersey. Filed Dec. 30, 1907. Serial No. 408,666.



1. In a tape reel, a case provided with bearings, a rotative tape drum having walls mounted in said bearings, and means for adjustably connecting said walls together and holding them fixedly in adjusted position, comprising elements which adjustably engage each other and respectively project from said walls and means whereby said elements are held in adjusted position.

2. In a tape reel having a tape drum adapted to rotate and provided with an axial post, means for varying the effective length of the post, comprising a sleeve adjustably secured to the post and means adapted to prevent its displacement after adjustment.

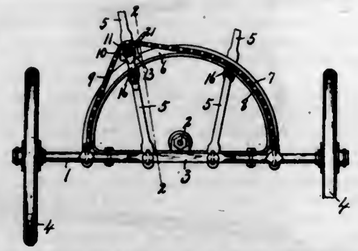
3. In a tape reel having a tape drum adapted to rotate and provided with an axial post, means for varying the effective length of the post, comprising threads on the post, a threaded sleeve adapted to engage therewith and means for limiting the position of the sleeve.

4. In a tape reel having a tape drum adapted to rotate and provided with an axial post secured to the drum, means for varying the effective length of the post, comprising a threaded member adapted to engage therewith and a screw adapted to hold the latter in position.

5. In a tape reel having a rotatable tape drum adapted to revolve in bearings, and provided with members adapted to engage such bearings, means adapted to hold the engaging members comprising a threaded axial post secured to one member, a threaded member coöperating therewith secured to the other member, and means adapted to vary the distance between said members and to prevent such variation after adjustment.

[Claims 6 to 11 not printed in the Gazette.]

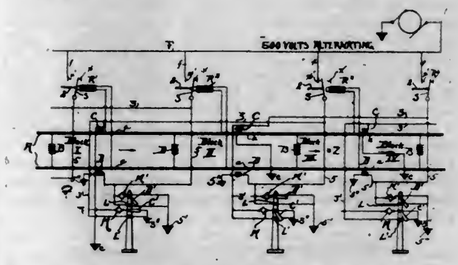
901,898. STEERING MECHANISM FOR SELF-PROPELLED VEHICLES. CHARLES B. HATFIELD, Cortland, N. Y., assignor to Hatfield Motor Vehicle Company, Cortland, N. Y., a Corporation of New York. Original application filed Jan. 26, 1907, Serial No. 354,308. Divided and this application filed Apr. 24, 1907. Serial No. 370,027.



1. A steering mechanism for self-propelled vehicles in combination with a steering axle, a segmental guide secured to the axle, said guide constituting a fifth wheel section, a bearing for said segmental guide, a chain passed around the guide and connected to the axle, a steering post and means on the steering post for engaging and actuating the chain.

2. A steering gear for self-propelled vehicles comprising a centrally pivoted axle, a semi-circular segmental guide secured to and projecting rearwardly from the axle concentric with its pivot, a steering post at the rear of the segment, a sprocket wheel keyed to but slidable lengthwise upon the steering post, and a chain engaged with said sprocket wheel and extending around and upon the segmental guide and having its ends attached to the axle.

901,899. ELECTRIC SIGNALING SYSTEM FOR RAILWAYS. WILLIAM J. HIGGINS and CHRISTOPHER J. SHERIDAN, Buffalo, N. Y. Filed Dec. 27, 1907. Serial No. 408,329.



1. In a railway signal system, separate blocks of track insulated from each other and each block connected in circuit with a battery, a relay magnet in circuit with each block and energized by said battery, a main line leading from a source of current, a relay switch for each block normally held from electrical connection with said main line by said relay magnet when energized, means whereby the switch may be actuated to electrically connect with said main line when the relay magnet is deënergized, and a cautionary circuit electrically connected to said switch extending from said relay to a preceding block of track, and there provided with a primary coil and connected to the motor of a caution signal semaphore arm, a danger signal circuit electrically connected with said relay switch and extending to a preceding block having therein primary coils of a transformer, and a motor for actuating the danger signal semaphore arm, in combination with secondary coils mounted upon a car in such position as to be moved adjacent to the cautionary and danger track coils, said secondary coils being connected to signal mechanism within the car indicating the passing of the car adjacent to said primary coils.

2. In a railway signal system, separate blocks of track insulated from each other and each block connected in circuit with a battery, a relay magnet in circuit with each block and adapted to be short-circuited by the arrival of a train upon that block, a main line leading from a source of alternating current, a switch for each block, a connection from said main line to a terminal with which the switch is adapted to contact in one position, said switch being normally held from electrical contact with said terminal by said relay magnet when energized, and connections from said switch to circuits having in each a primary coil of a transformer, in combination with secondary coils mounted upon a train in such position as to pass adjacent to said primary coils, and means whereby the current so induced in the secondary coils will operate a signal.

3. In a railway signal system, separate blocks of track insulated from each other and each block connected in circuit with a battery, a relay magnet in circuit with each block and adapted to be short-circuited by the arrival of a train upon that block, a main line leading from a source of alternating current, a switch for each block, a connection from said main line to a terminal with which the switch is adapted to contact in one position, said switch being normally held from electrical contact with said terminal by said relay magnet when energized, connections from said switch to circuits having in each a signal motor and semaphore signals adapted to be operated by said motor, and primary transformer coils in said circuits, in combination with secondary coils mounted upon the train in such position as to pass adjacent to said primary coils,

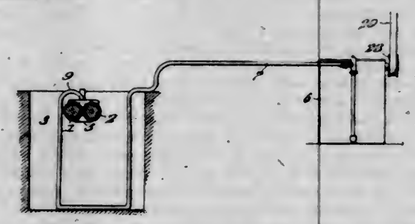
and means whereby the current so induced in the secondary coils will operate the signal.

4. In a railway signal system, separate blocks of track insulated from each other and each block connected in circuit with a battery, a relay magnet in circuit with each block and adapted to be short-circuited by the arrival of a train upon that block, a main line leading from a source of alternating current, a switch for each block, a connection from said main line to a terminal with which the switch is adapted to contact in one position, said switch being normally held from electrical contact with said terminal by said relay magnet when energized, connections from said switch to circuits having in each a signal motor and semaphore signals adapted to be operated by said motor, and primary transformer coils in said circuits, in combination with secondary coils mounted upon the train in such position as to pass adjacent to said primary coils, a polarized relay connected to each of said secondary coils, a local circuit normally open but closed upon the energizing of the said relay, said local circuit having therein a battery and an electromagnet, a signal lamp and a shutter connected to said signal lamp normally closing the same, and an armature on said electromagnet adapted to release said shutter and allow the same to fall.

5. In a railway signal system, separate blocks of track insulated from each other and each block connected in circuit with a battery, a relay magnet in circuit with each block and adapted to be short-circuited by the arrival of a train upon that block, a main line leading from a source of alternating current, a switch for each block, a connection from said main line to a terminal with which the switch is adapted to contact in one position, said switch being normally held from electrical contact with said terminal by said relay magnet when energized, connections from said switch to circuits having in each a signal motor and semaphore signals adapted to be operated by said motor, and primary transformer coils in said circuits, in combination with secondary coils mounted upon the train in such position as to pass adjacent to said primary coils, a polarized relay connected to each of said secondary coils, a local circuit normally open but closed upon the energizing of the said relay, said local circuit having therein a battery and an electromagnet, a signal lamp and a shutter connected to said signal lamp normally closing the same, an armature on said electromagnet adapted to release said shutter and allow the same to fall, a throttle valve closing the steam supply pipe of the engine, a latch holding said valve open, means for closing said valve when the latch is raised, an electromagnet having an armature connected to the latch to raise the same, a local circuit in which said electromagnet is connected, said circuit being normally broken, and a plug attached to the lamp shutter adapted to close said local circuit and thereby release the said throttle valve.

[Claims 6 to 8 not printed in the Gazette.]

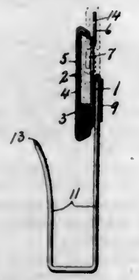
901,900. TINNING APPARATUS. WALTER I. HILL, Clarksburg, W. Va. Filed Mar. 3, 1908. Serial No. 418,997.



1. The combination with tinning rolls, and a receptacle for oil in which said rolls are mounted, of a force-feed oil pipe leading from a point of supply downward beneath the rolls and upward above the plane of said rolls and adapted to discharge oil into the space between the rolls.

2. The combination with tinning rolls having rabbeted ends, of nips or guards, means for yieldingly holding said nips into engagement with the rabbeted ends of the rolls, and a force-feed oil pipe arranged to discharge into the pocket formed by the rolls and nips.

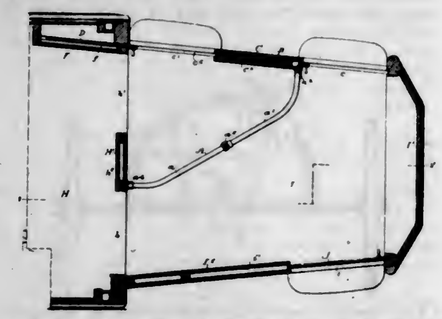
901,901. ADVERTISING BILL-HOOK. WILLIAM HORNICH, Jr., Newark, N. J., assignor to The Whitehead & Hoag Company, Newark, N. J., a Corporation of New Jersey. Filed June 3, 1908. Serial No. 436,413.



1. In an advertising device of the character described, a sheet metal disk having a flaring annular flange, a cap having its marginal edge crimped over and upon said flange, a guide on the back of the disk, a bill hook turnable and movable longitudinally in said guide, a means on the shank of the hook coöperating with one side of the guide to hold the bill hook against turning when adjusted for use.

2. In an advertising device of the character described, a sheet metal disk having an upturned tongue stamped therefrom and leaving an opening therein, a guide on the disk, a bill hook having a shank turnable and movable longitudinally in said guide and provided with an offset movable into and out of registration with said opening to permit turning of the bill hook in the guide, and means at one side of the guide interlocking with the offset to prevent turning of the hook when adjusted for use.

901,902. PASSENGER-CAR. HENRY HOWSON, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 23, 1908. Serial No. 434,528.



1. The combination in a passenger car, of a platform at one end of the car, a panel at one side of the platform forming two passageways, and a guard separating the platform into two sections and extending from the panel to the body of the car, so as to form ingress and egress passageways connecting the body of the car with the side of the platform.

2. The combination in a passenger car, of a platform at one end thereof, a panel centrally situated at the side of the platform, leaving passageways on either side, and a sliding door arranged to close one of the passageways and adapted to slideways in the panel.

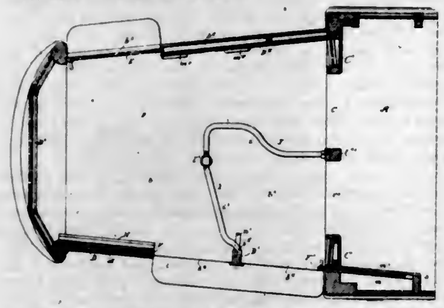
3. The combination in a passenger car, of a platform at one end, a panel at one side of the platform so arranged as to leave an ingress passageway at one side of the panel and an egress passageway on the other side of the panel, sliding doors closing said passageways, one of said doors adapted to guides on the panel so that when the door is open it will be protected by the panel.

4. The combination in a car, of a body portion, a platform, a transverse partition separating the body portion from the platform, ingress and egress passageways in said partition separated by a panel, a panel at the side of the platform midway between the ends thereof forming ingress and egress passageways, one on each side of the panel, and a rail extending from the panel in the transverse partition to the panel at the side of the platform and dividing the platform into ingress and egress sections.

5. The combination in a car, of a body portion, a platform, a transverse partition separating the body portion from the platform, ingress and egress passageways in said partition separated by a panel, a panel at the side of the platform midway between the ends thereof forming ingress and egress passageways, one on each side of the panel, a rail extending from the panel in the transverse partition to the panel at the side of the platform and dividing the platform into ingress and egress sections, and sliding doors for closing the ingress and egress passageways at the side of the platform.

[Claims 6 to 10 not printed in the Gazette.]

901,903. PASSENGER-CAR. HENRY HOWSON, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 25, 1908. Serial No. 434,956.



1. The combination in a passenger car, of a body portion, a platform, means for closing one side of the platform, said means consisting of a fixed panel at the outer end of the platform, leaving a passageway, and two sliding doors adapted to move towards and from each other to close the passageway.

2. The combination in a passenger car, of a body portion, a platform, a panel at one side of the platform near the outer end thereof, a post separating the space between the panel and the body of the car into ingress and egress passageways, and sliding doors adapted to move to and from each other and arranged to close the passageways.

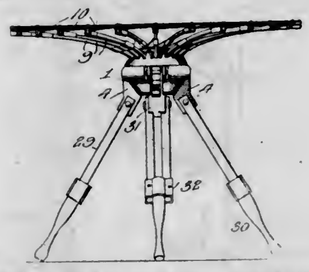
3. The combination in a passenger car, of a body portion, a platform, a panel at one side of the platform, near the outer end thereof, a post separating the space between the panel and the body of the car into ingress and egress passageways, said panel having a channel for the reception of a door, a channel at the side of the body portion of the car for the reception of another door, and two doors adapted to the channels and arranged to close the passageways.

4. The combination in a passenger car, of a body portion, a platform, a transverse partition separating the platform from the body portion, a post in the center of the partition forming ingress and egress passageways, a post at the side of the platform, a post at the point near the center of the platform, a rail dividing the said platform into ingress and egress sections, said rail being collapsible so as to provide a clear passageway on each side of the rail when the platform is at the forward end of the car.

5. The combination in a passenger car, of a body portion, a platform, a transverse partition separating the platform from the body of the car and having a center post in said partition, ingress and egress passageways, a post at the side of the platform, a post near the center of the platform, a guard dividing the platform into ingress and egress sections, said guard consisting of two rail sections, one section being pivoted to the center post and to the post in the center of the transverse partition and so arranged that it can be raised and lowered, the other section being hinged to the center post and pivoted to a socket on the post at the side of the car and adapted to be moved into position alongside the other rail section when lowered, so as to provide a clear space on either side of the platform.

[Claims 6 to 8 not printed in the Gazette.]

901,904. FOLDING STOOL. GEORGE S. HUTCHINSON, North Bennington, Vt. Filed Mar. 25, 1908. Serial No. 423,257.



1. A seat for foldable stools comprising a plurality of flexible wings having their outer edges overlapping each other, a plurality of pivoted ribs, and means carried by said wings for detachable engagement with said ribs.

2. A seat for foldable stools comprising a plurality of flexible wings, each wing having one edge overlapping the edge of its adjacent wing, flat headed rivets engaged with the wings, a plurality of pivoted ribs, and means carried by said wings for detachable engagement with said ribs.

3. A seat for foldable stools comprising a plurality of substantially V-shaped wings, a plurality of collars carried by each wing and formed by bending one edge of each wing upon itself, and a plurality of pivotally mounted ribs detachably engaged with said collars.

4. A folding stool comprising a hollow body having a plurality of fingers and a plurality of movable ribs between said fingers, a movable collar within the body engaging the fingers, pivoted legs upon the body having offsets engaging the lower face of the collar, and means provided within the body for forcing the collar downwardly and folding the ribs when the offsets of the legs are brought away from engagement with the collar.

5. A foldable stool comprising a hollow body having a plurality of fingers, a plurality of ribs between said fingers, a collar within the body engaging said ribs, a post within the body, a nut upon said post normally engaging the top of the fingers, a pressure spring between the nut and the collar, and pivoted legs having offsets engaging the lower face of the collar secured to the body.

[Claims 6 to 9 not printed in the Gazette.]

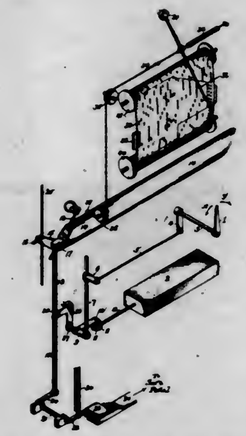
901,905. PROCESS OF PRODUCING HYDROXY-FATTY ACIDS. GEORGES IMBERT, Nuremberg, Germany. Filed July 25, 1906. Serial No. 327,748. (Specimens.)

1. A process of producing hydroxy-fatty acids from unsaturated fatty acids which consists in first treating the latter with chlorin the whole being stirred the while heating the product under pressure with at least the theoretical quantity of an alkaline substance, driving off any carbon

dioxid as it develops and precipitating out the hydroxy-fatty acid by means of a mineral acid.

2. A process of producing hydroxy-fatty acids, which consists in first treating the solutions of an unsaturated fatty acid in the presence of the theoretical quantity of alkali carbonate with chlorin, the whole being stirred the while, heating the resultant mass under pressure with at least the theoretical quantity of alkali carbonate, driving off the carbon dioxid as it develops and precipitating out as specified.

901,906. SELF-PLAYING PIANO. FREDERIC E. IVES, Woodcliffe-on-Hudson, N. J. Filed Dec. 23, 1907. Serial No. 407,732.



1. The combination, in a self playing piano, of the valve-controlling mechanism having an arm, the expression lever operating the same, the soft pedal mechanism, the hammer rest bar, connections between said soft pedal mechanism and hammer rest bar, including a lifter rod, and a bell crank lever interposed between said rod and the arm of said valve controlling mechanism and engaging with each.

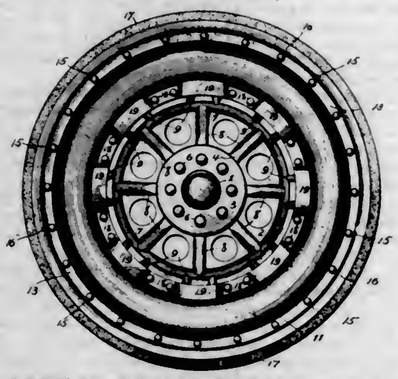
2. In a self-playing piano, the combination with the hammer action of the music roll and its supports, and the tracker board all located above the hammer action, an expression indicating pointer pivotally mounted above the music roll and having a lower end movable across the front of the tracker board, the soft pedal mechanism, and a connection between said soft pedal mechanism and the indicating pointer.

3. The combination with the hammer action, in a self-playing piano, of the music sheet rolls, and the tracker board all located above the hammer action, the hammer rest bar, a pointer mounted above and overlying the music sheet, and a connection between said pointer and the rest bar whereby the movement of said rest bar is transmitted to the pointer.

4. The combination with the hammer action, in a self-playing piano, of the music sheet rolls, and the tracker board all located above the hammer action, the hammer rest bar, a pointer mounted above and overlying the music sheet, a connection between said pointer and the rest bar whereby movement of the rest bar is transmitted to the pointer, and a spring connected to the pointer and tending to move the same in one direction.

5. The combination, in a self-playing piano, of the valve-controlling devices, an expression lever for operating the same, a hammer rest rail, a soft pedal mechanism, connections between said hammer rest rail and the soft pedal mechanism, including a lifter rod, a connection between said lifter rod and the valve operating devices, a pointer operating in conjunction with the music sheet, and a connection between said pointer and the hammer rest rail, whereby movement of the latter is imparted to the pointer.

901,907. WHEEL. ARTHUR L. JIMINEZ, New York, N. Y., assignor of forty-five one-hundredths to William Freeman, five one-hundredths to Joseph Lopez Jiminez, and one-twentieth to Juan M. Rigau Carrera, New York, N. Y. Filed July 1, 1907. Serial No. 381,689.



1. A wheel comprising a sheet-metal body-portion and a tire-portion, said body portion comprising two plates secured together and each provided with a peripheral bead, the peripheral beads of the respective sheet metal body members coöperating to form a hollow rim disposed within the tire-portion and a pneumatic tube within the tire portion and constituting a bearing for the hollow rim formed by the peripheral beads on the plates of the body-portion.

2. A wheel comprising a body-portion, a tire-portion and a pneumatic tire within the tire-portion, said body portion comprising two members secured together and having peripheral beads disposed within the tire-portion and bearing against the pneumatic cushion therein, each plate of the body portion having beads between its center and the tire-portion and said plates of the body-portion having radial beaded portions passing into the tire-portion and terminating at the peripheral beads of the plates of the body-portion, and said tire-portion having guide-ways in which the radial beaded portions of the wheel body can have radial and lateral movement.

3. A wheel comprising a body portion, a tire portion movable relatively thereto and a pneumatic cushion within the tire-portion and bearing against the body portion, said body portion comprising two plates having flat parallel central portions secured together, each of said plates having an outwardly projecting annular bead removed a distance from the flat central portion and also having radial beads extending from the flat central portion to the annular bead, and said plates also having radial beaded portions which enter the tire-portion and the peripheries of the plates composing the body portion of the wheel having beads located within the tire-portion of the wheel and bearing against the pneumatic cushion within the latter.

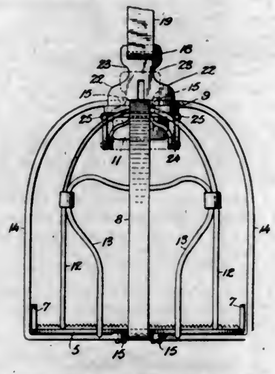
901,908. STIRRUP. ROBERT E. H. JOHNSON, Jersey City, N. J. Filed May 26, 1908. Serial No. 435,062.

1. A stirrup comprising a base plate, suspension means for said plate, a sliding plate connected to the suspension means pivoted side guards at the front of the stirrup, and means carried by the sliding plate for throwing the side guards to the sides of the stirrup when pressure is put on the same.

2. A stirrup having a sliding plate a strap connected to the plate, said plate having cam faces, and guide bars normally positioned at the front of the stirrup and arranged for engagement with the cam faces when pressure is put upon the stirrup, whereby said bars are thrown to the sides of said stirrup.

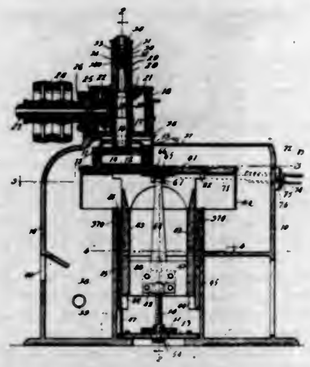
3. In a stirrup, the combination with suspending means, of a base plate, pivoted guards at the sides of the stirrup, and a plate operated by the suspending means to hold the guards at the sides of the device

4. In a stirrup, the combination with a sliding plate by which the stirrup is hung, of an upright from the base plate carrying the sliding plate, side guards normally positioned at the front of the stirrup, and means on the sliding plate to throw the side guards to the sides of the stirrup when pressure is put on same.



5. In a stirrup, the combination with a base piece, of an upright, a slotted block at the end of the upright, a sliding plate in the slot in the block and hanging from the suspending strap, a spring to retain the block at its lowermost position, cam faces on the plate and pivoted side guards at the front of the stirrup and adapted to be thrown to the sides when pressure is put on the stirrup.

901,909. GRINDING-MACHINE. ALLEN JOHNSTON, Ottumwa, Iowa. Filed Mar. 18, 1907. Serial No. 362,890.



1. The combination in a grinding machine, of a reciprocating work holding table, a vertical spindle stationarily located, and a ring grinder supported by said spindle in an inverted position, and having means for admitting the water through its top, of means for rotating the grinder, a U shaped lever for actuating the table, means for protecting the journal of said lever from the water and grit, means for supplying the grinder with water.

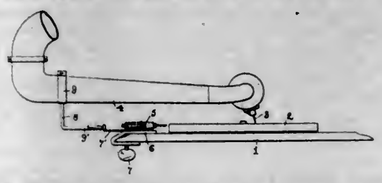
2. The combination in a grinding machine, of a reciprocating work holding table, a vertical spindle stationarily located, and a ring grinder supported by said spindle in an inverted position, and having means for admitting the water through its top, of means for rotating the grinder, means for supplying it with water, a U shaped lever pivoted at its bottom, for reciprocating the table and a hand operated device for actuating the lever.

3. The combination in a grinding machine of a horizontal work holding table adapted to reciprocate below the grinder, a stationarily located ring grinder supported in an inverted position above the table, means for rotating the grinder, a swinging arm or lever for reciprocating the table, a second swinging arm rigidly connected to and moving in unison with the first mentioned one, a rack attached to said second arm, and extending at right angles therefrom, a pinion meshing with said rack, and a shaft supported in stationary bearings and carrying said pinion.

4. The combination in a grinding machine, of a horizontal work holding table adapted to reciprocate below the grinder, a support for said table whereby it may be vertically adjusted, a stationarily located inverted ring grinder, having water passages leading from its top to its interior, a vertical spindle carrying said grinder, means for supplying water to the top of the grinder, means for rotating the grinder, and means for reciprocating the table.

5. The combination with the work holder table, of the slide ways 42, the depending members 43, the vertical ways 44, the cross brace 48 connecting members 43, the adjusting screw 50, the wedge 46, the surrounding frame, and means for adjusting the ways 44 relative to the wedge.

901,910. GRAPHOPHONE-STOP. JUNIUS W. JONES, Baton Rouge, La. Filed Apr. 8, 1908. Serial No. 425,890.



1. In combination with the trip stop device, an arm attached to the arm of the horn to contact with the trip stop device, said arm being adjustable to a plurality of different predetermined conditions for operating the trip stop earlier or later to suit the records of different diameters and having means whereby said adjustment is arrested at said predetermined points, substantially as described.

2. In combination with the trip stop device, an arm attached to the arm of the horn and having means whereby its contacting end may be widened or narrowed to predetermined degree to strike the trip stop device earlier or later, said means being thrown at once from one position to the other and there arrested substantially as described.

3. In combination with the trip stop device, an arm attached to the arm of the horn having a spring member 10 attached thereto to contact with the trip stop device and a pivoted finger piece to adjust the spring member 10 towards or from the side of the arm on the horn, substantially as described.

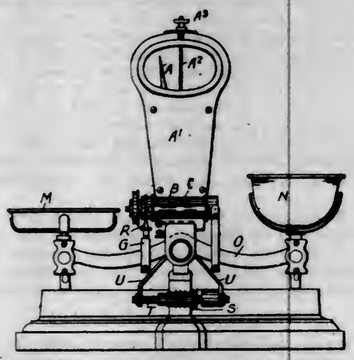
901,911. BEAM-SCALE. OSWALD JONES, Redfern, near Sydney, New South Wales, Australia. Filed Nov. 30, 1907. Serial No. 404,495.

1. A draft attachment for beam scales comprising a tube pivotally mounted on the beam, a ball in said tube and acting to tip the beam by rolling under the influence of gravity towards the load pan immediately the beam has passed a horizontal position, and a carrier on the scale frame engaging with the tube for preventing said tube from resting on the rising end of the beam until the beam is partially tipped.

2. In combination with a beam scale, a tube carrying a rolling ball, a pivotal support on the load pan end of the beam for one end of said tube, a relieving support on the frame for the other end of said tube, and a pillar on the weight pan end of the beam adapted to lift the tube from the relieving support before the beam and the tube have attained the horizontal position.

3. The combination with a beam scale, of a tube B carrying a rolling gravity ball C, a trunnion support E F on the load pan side of the beam, a relieving support H K on the frame for the end of said tube overlying the weight pan

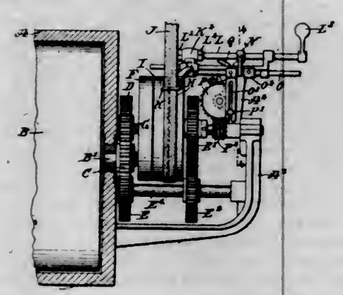
side of the beam, and an adjustable pillar G R on the weight pan side of the beam for taking the weight of the overlying end of the tube off the relieving support H K after the beam has commenced to cant.



4. The combination with a beam scale fitted with a tube B carrying an overbalancing gravity ball, of balance adjustments comprising a movable weight S hung pendularly below the beam axle and weight nuts *d d'* above the same on the end of the tube B.

5. The combination of beam O, tube B, rolling ball C therein, trunnion support E F, relieving support H K, pillar support G R, dial, and pointer A mounted on the beam axis.

901,912. MECHANICAL MOVEMENT. SAMUEL JONES, East Liverpool, Ohio. Filed Apr. 24, 1908. Serial No. 428,905.



1. A mechanical movement comprising a shaft, a driving pulley secured thereon, loose pulleys on the said shaft on opposite sides of the said driving pulley, gearings connecting the said loose pulleys with the part to be driven, a driving belt for the said pulleys, and an automatic belt shifter for the said belt and actuated from the said shaft.

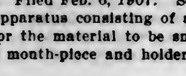
2. A mechanical movement comprising a shaft, a driving pulley secured thereon, loose pulleys on the said shaft on opposite sides of the said driving pulley, gearings connecting the said loose pulleys with the part to be driven, a driving belt for the said pulleys, a belt shifter for the said belt, and an actuating mechanism connecting the said shaft with the said belt shifter to actuate the latter.

3. A mechanical movement comprising a shaft, a driving pulley secured thereon, loose pulleys on the said shaft on opposite sides of the said driving pulley, gearings connecting the said loose pulleys with the part to be driven, a driving belt for the said pulleys, a belt shifter mounted to slide and engaging the said belt, a slide engaging the said belt shifter for shifting the latter, a worm wheel having a wrist pin engaging the said slide, and a worm on the said shaft and in mesh with the said worm wheel.

4. A mechanical movement comprising a shaft, a driving pulley secured thereon, loose pulleys on the said shaft on opposite sides of the said driving pulley, gearings connecting the said loose pulleys with the part to be driven, a driving belt for the said pulleys, a worm on the said shaft, a worm wheel in mesh with the said worm and provided with a wrist pin, a slide having spaced collars, of which one terminates in a slotted arm engaged by the said wrist pin, and a belt shifter engaging the said belt and having a lug extending between the said collars.

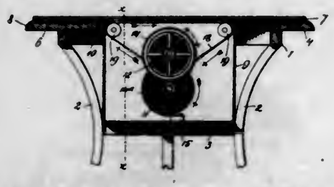
5. A mechanical movement comprising a shaft, a driving pulley secured thereon, loose pulleys on the said shaft on opposite sides of the said driving pulley, gearings connecting the said loose pulleys with the part to be driven, a driving belt for the said pulleys, a worm on the said shaft, a worm wheel in mesh with the said worm and provided with a wrist pin, a slide having spaced collars, of which one terminates in a slotted arm engaged by the said wrist pin, a belt shifter engaging the said belt and comprising a rod mounted to slide and to turn, a lug on the said rod extending between the said collars, and a fork for the reception of the said lug on turning the said rod.

901,913. FLUTE. DJALMA JULLIOT, La Couture-Boussey, France, assignor to Jean Mignolet, Denver, Colo. Filed Feb. 20, 1906. Serial No. 301,986.



A flute having telescoping parts provided with registering holes, the inner hole being larger than the outer hole to permit adjustment of said parts, substantially as shown and described.

901,914. TABLE. HUGO KARDOS, Homestead, Pa. Filed Feb. 4, 1908. Serial No. 414,240.



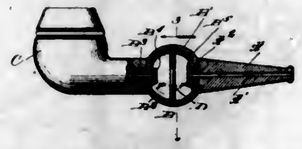
1. A table of the type described provided with legs, a frame supported by said legs, a table top carried by said frame and having an opening formed therein, a card or plate mounted upon said table top and having an opening registering with the opening of said table top, a transparent plate mounted upon said card, a flanged frame surrounding said table top for holding said transparent plate thereon, a casing arranged beneath said table top, a movable apron arranged within said casing for traveling across the opening in said table top, and a shaft journaled in said casing for moving said apron in one direction, and a spring connecting with said shaft for moving the apron in the opposite direction.

2. A table of the type described provided with a table top, said table top having an opening formed therein, a transparent plate arranged upon said table top, a flanged frame surrounding said table top for retaining said plate thereon, a casing mounted beneath said table top, a movable apron arranged therein for traveling across the opening in said table top, shafts journaled in said casing and upon which said apron is adapted to wind, means for winding said apron upon one of said shafts and a spring to rewind said apron upon the other of said shafts.

901,915. SMOKING-PIPE. WILLIAM R. KAUFMAN, Sulphur, Okla. Filed Feb. 6, 1907. Serial No. 356,028.

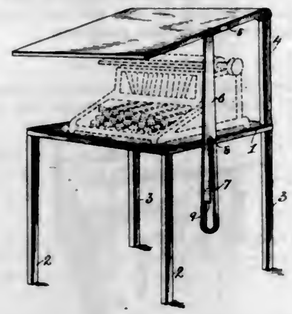
The smoking apparatus consisting of a stem or mouthpiece, a holder for the material to be smoked and a bulb between the said mouth-piece and holder, said bulb being

divided midway between said parts into sections, and having said sections united by a screw joint, combined with a strainer held at its edges between said sections at the screw threaded joint thereof, the said sections being



provided on opposite sides of the strainer with tubular portions projecting inwardly in a direction at a right angle to the plane of the strainer, all substantially and for the purposes set forth.

901,916. TYPE-WRITER TABLE. CHESTER E. KINGSTON, Columbus, Miss. Filed Nov. 30, 1907. Serial No. 404,552.



The herein described typewriter table comprising a body portion, front and rear pairs of legs supporting the same, the rear legs being extended upwardly beyond the body portion to form standards, a screen pivotally secured at its rear end to the standards and arranged to extend over the body portion, a rod pivotally connected at one end to the screen and formed at its other end within its margin with a slot provided near its lower end with a downwardly facing shoulder, and a stud projecting from the body portion and slidingly mounted in the slot, said stud being arranged to abut against the upper end of the slot or the shoulder at the lower end thereof, to hold the screen in a raised or lowered position, as and for the purpose specified.

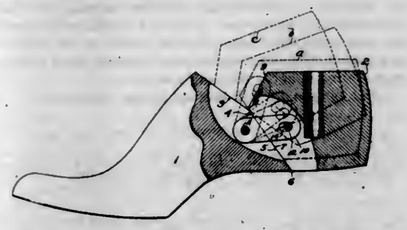
901,917. CRIB. FRANZ W. T. KREISEL, Warrenton, Va. Filed Jan. 28, 1908. Serial No. 413,076.



1. A crib having its sides and ends formed of spaced bars arranged one above the other, the meeting ends of the bars of the sides and ends of the crib alternating and overlapping, securing means passing through the overlapping ends of the bars, and an adjustable bottom adapted to be supported at its respective ends by being inserted between any two adjacent bars of the crib ends.

2. A crib having its sides and ends formed of spaced bars arranged one above the other, the meeting ends of the bars of the sides and ends of the crib alternating and overlapping, rods passing through the overlapping ends and hinging the sides and ends of the crib together, and swinging members carried by the upper bars of either the sides or ends and having side flanges adapted to engage the side edges of the upper bars of the other part.

901,918. DIVIDED LAST. EDWIN O. KRENTLER, Detroit, Mich., assignor to Krentler-Arnold Hinge Last Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 16, 1908. Serial No. 421,521.



1. In a divided last, the combination of a heel-part and forepart severed from each other by a line of cut affording a secant angle capable of permitting the heel-part when in the shoe to slide downwardly and rearwardly in substantial parallelism to itself at all points for engaging the counter portion of a shoe, and to swing upwardly for leaving the counter portion of the shoe, and connecting means for said two last-parts.

2. In a divided last, the combination of a heel-part and forepart severed from each other by a line of cut affording a secant angle capable of permitting the heel-part when in the shoe to slide downwardly and rearwardly in substantial parallelism to itself at all points for engaging the counter portion of a shoe, and to swing upwardly for leaving the counter portion of the shoe, connecting means for said two last-parts, and means for maintaining the last-parts in alinement against lateral shifting.

3. The combination, in a divided last, of a forepart and heel-part separated at their upper portions by an intervening gap and thence separated along a line of cut extending obliquely downwardly and continuously rearward at every succeeding lower point to the bottom of the last from the bottom of said gap, which bottom coincides with a point located at a distance from the bottom of the last permitting the heel-part when in fully lengthened position in a shoe to have an initial swinging collapsing movement, without lengthening, about said point as a center, and connecting means arranged to coöperate with the uninterrupted rearward oblique line of severance in permitting the heel-part to have final sliding movement in substantial parallelism to itself back into fully lengthened position in the shoe.

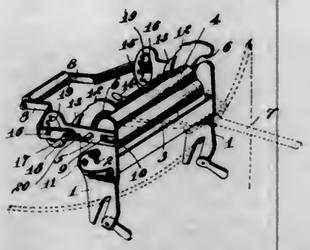
4. In a divided last, a forepart and heel-part, having angular secant faces at their meeting ends with level, uninterrupted surfaces permitting said last-parts to slide on each other in going to lengthened position, and the angle being located about midway from bottom to top of the last and constituting the pivotal center for the heel-part to turn on in its upward swinging movement, and connecting means having a length which limits said downward movement to fully lengthened position, the secant ends and connecting means being constructed and operating to permit the heel-part to have a combined swinging and sliding collapsing movement when in a shoe, and to permit said heel-part to have, when in the shoe, an obliquely downward and rearward continuously-sliding lengthening movement to fully extended position against the counter of the shoe, whereby the back and front of said heel-part move down with substantially the same speed to the end of the lengthening movement.

5. In a divided last, the combination with a forepart and heel-part, of a link connection pivoted at its opposite ends in the respective last-parts, the forepart having at its rear end a wall extending rearwardly and down-

wardly in a single uninterrupted oblique plane throughout the entire extent of the surface over which the heel-part slides, and the heel-part having a complemental abutting surface, all constructed and arranged to permit the heel-part to slide downward on and in continuous contact at all points with said plane forepart wall, when the last is in a shoe, until the heel-part is in fully lengthened position, the upper end of one of said last-parts being cut away at an angle to said wall from a point located at a distance from the bottom of the last permitting the heel-part to disengage from the counter of the shoe by a shortening swinging movement and said connection being located at such a height and position in the last with reference to said point as to permit said shortening swinging movement without interfering with said sliding lengthening movement.

[Claims 6 to 11 not printed in the Gazette.]

901,919. WRINGER. SIMEON C. LAWLOR, Duluth, Minn. Filed Nov. 4, 1907. Serial No. 400,537.



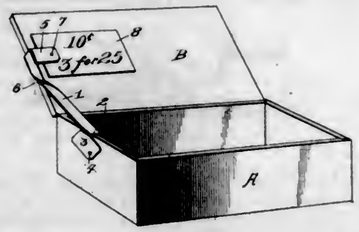
1. In a wringer, the combination of a frame, a wringer-roller rotatable in a bearing in the frame, an operating lever detachably fulcrumed on the frame by an open slot bearing elongated longitudinally in the lever, a coöperating second wringer-roller rotatable in a bearing in the lever, and an open slot guide in the frame adapted to receive a guided lug to guide the second roller, said guide being so disposed as to press by the operation of the lever the second roller obliquely toward the first roller.

2. In a wringer, the combination of a frame, a wringer roller rotatable in a bearing in the frame, an operating lever detachably fulcrumed on the frame, a coöperating second wringer roller rotatable in a bearing in the lever, and a curved open slot guide in the frame adapted to receive a guided lug borne by the second wringer roller, said guide being so disposed as to press by the operation of the lever one wringer roller obliquely toward the other wringer roller.

3. In a wringer, the combination of a frame, a wringer roller rotatable in a bearing in the frame, an operating lever detachably fulcrumed on the frame by an open slot bearing elongated longitudinally in the lever, a coöperating second wringer roller rotatable in a bearing in the lever, an open slot guide in the frame adapted to receive a guided lug borne by the second wringer roller said guide being so disposed as to press by the operation of the lever one wringer roller obliquely toward the other wringer roller, means to hold the second wringer roller in a fixed position in the course of its oblique travel, and a spring to press the first wringer roller diametrically toward such fixed position of the second wringer roller.

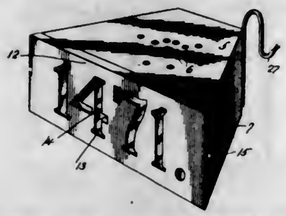
901,920. BOX-LID HOLDER. GEORGE M. LINK, Dunkirk, N. Y. Filed Apr. 20, 1907. Serial No. 369,365.

1. A box lid holder comprising a single strip of flexible material, said strip being provided at one end with laterally projecting flanges, integral with the side edges thereof, and also provided at its opposite end with depending flanges integral with the side edges thereof and projecting beyond said end, the latter named flanges extending lengthwise longitudinally of the strip, said strip being quarter twisted adjacent to the first named flanges to project the end portions thereof into different planes at right angles to each other.



2. A sheet metal blank for the production of a box lid holder made of a single piece of material comprising an elongated strip provided at one end with extensions from the opposite sides thereof arranged in alinement with each other and at right angles to the strip, and at its opposite end with flanges projecting longitudinally in parallel relation beyond the said end and integral with the side edges thereof at their rear ends.

901,921. AUTOMOBILE-LAMP. JOHN MARKMAN, Pittsburg, Pa. Filed Apr. 30, 1908. Serial No. 430,161.



In a device of the type described, a lamp box comprising a base and side walls secured thereto, guides carried by said side walls adjacent the upper and lower edges thereof, reflectors secured in said guides, braces connecting said side walls at the ends thereof, a transparent plate seated in the brace at the forward end of said box and in the said base, a sign-plate secured over said transparent plate, a perforated metallic top-plate for said box, a hinged door for the rear end of said box, and a reflector carried by the inner face of said door.

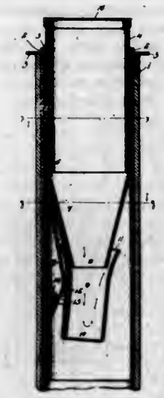
901,922. WATER-TRAP. FREDERICK W. MEIER, Upper Sandusky, Ohio. Filed June 3, 1908. Serial No. 436,401.

1. In a trap, the combination of a horizontal casing adapted to be inserted into the end of a drain or sewer pipe, a tapering spout mounted therein, and a trap or cup slidingly and swingingly mounted in the casing below the spout, whereby the spout is opened or closed thereby.

2. In a trap, the combination of a horizontal casing adapted to be inserted into the end of a drain or sewer pipe, of a tapering spout mounted therein, a trap or cup slidingly and swingingly mounted in the casing to control the exit of the spout, and means for guiding the trap or cup within the casing.

3. In a trap, the combination of a horizontal casing adapted to be inserted into the end of a drain or sewer pipe, of a tapering spout mounted therein, a trap or cup slidingly and swingingly mounted in the casing to control the exit of the spout, and anti-frictional means for guiding the trap or cup within the casing.

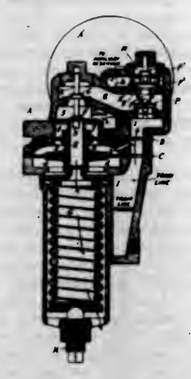
4. In a trap, the combination of a horizontal casing adapted to be inserted into the end of a drain or sewer pipe, of a tapering spout mounted in the casing and having a reduced lower end, and a tapered cup slidingly and swingingly mounted in the casing below the spout the walls of which are of the same taper as the spout, whereby as the cup swings toward the spout the entire lower end of the spout is sealed by the cup.



5. In a trap, the combination with the horizontal inlet of a drain pipe, of a casing adapted to be inserted horizontally in said pipe, a tapered spout carried by said casing, and a cup swingingly mounted within the casing adapted to normally swing toward and cover the mouth of the spout.

[Claim 6 not printed in the Gazette.]

901,923. AIR-BRAKE. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car Heating Company, a Corporation of West Virginia. Filed Mar. 2, 1907. Serial No. 360,281.



1. The combination in a triple valve, of inlet and exhaust valves for the brake cylinder controlled by a balance of train-line and brake-cylinder pressures against a standard pressure, means for admitting either auxiliary-reservoir air or train-line air to the brake cylinder according to the rate of train-line decrease, and means for shutting off the train-line air and admitting the auxiliary-reservoir air by the differential effect of the auxiliary-reservoir and train-line pressures.

2. The combination in a triple valve, of inlet and exhaust valves for the brake cylinder controlled by a balance of train-line and brake-cylinder pressures against a standard pressure, means for shutting off the auxiliary reservoir from the brake cylinder and connecting the train line thereto according to the rate of train-line pressure variation, and means for subsequently cutting off the train-line air and admitting the auxiliary-reservoir air to the brake cylinder dependent upon the balance of auxiliary-reservoir pressure against the train-line pressure.

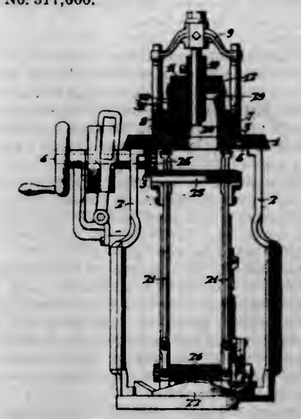
3. The combination in a triple valve, of inlet and exhaust valves for the brake cylinder controlled by a balance of train-line and brake-cylinder pressures against a standard pressure, a chamber communicating with the brake cylinder through the inlet valve aforesaid, a valve between said chamber and the auxiliary reservoir, means for closing the last named valve when the pressure in said chamber falls below the train-line pressure, and means for subsequently opening it when the pressure in said chamber falls below the pressure in the auxiliary reservoir.

4. The combination in a triple valve, of inlet and exhaust valves for the brake cylinder controlled by a balance of train-line and brake-cylinder pressures against a standard pressure, a chamber communicating with the brake cylinder through the said inlet valve, a valve for connecting said chamber alternately with the auxiliary reservoir and the train line, and a check-valve between said chamber and the auxiliary reservoir restricting the flow into, while permitting a free flow out of, the auxiliary reservoir.

5. The combination in a triple valve, of inlet and exhaust valves for the brake cylinder controlled by a balance of train-line and brake-cylinder pressures against a standard pressure, a chamber communicating with the brake cylinder through the said inlet valve, a check-valve between said chamber and the train line, and a second check-valve between the said chamber and the auxiliary reservoir.

[Claims 6 to 18 not printed in the Gazette.]

901,924. CIRCULAR-KNITTING MACHINE. HERBERT B. TAYLOR, Philadelphia, Pa., assignor of one-half to James Taylor, Philadelphia, Pa. Filed May 19, 1906. Serial No. 317,660.



1. In a circular knitting machine, the combination of a rotary cam cylinder, a rotary needle cylinder, and means for positively rotating both of said cylinders simultaneously, in opposite directions, substantially as set forth.

2. In a circular rib-knitting machine, the combination with the needle beds, the cam beds, and suitable supporting parts therefor; of means to rotate the needle beds in one direction and means simultaneously to rotate the cam beds in the other direction, whereby the production of the machine is increased.

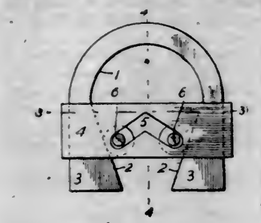
3. In a circular rib-knitting machine, the combination with the needle cylinder, the dial, the cam cylinder, the dial cam-plate, and means for supporting the parts; of means for rotating the needle cylinder and the dial in one direction and means for simultaneously rotating the cam cylinder and the dial cam-plate in the opposite direction.

4. In a circular rib-frame, the combination with suitable supporting parts, of the needle cylinder, an annular

rack connected to the needle cylinder, the dial, connections between the dial and the needle cylinder, the cam cylinder, the dial cam-plate, connections between the cam cylinder and the dial cam-plate, an annular rack connected to the cam cylinder, gearing meshing on its opposite sides with both of said racks, and means to rotate said gearing, whereby the needle cylinder and dial are rotated together in one direction and the cam cylinder and dial cam-plate are simultaneously rotated together in the opposite direction

5. In a circular knitting machine, the combination of a rotary cam cylinder and a rotary needle cylinder; oppositely disposed gear rings connected to said cylinders; and gear wheels on a common shaft meshing with said gear rings whereby said cylinders may be driven at different rates of speed.

901,925. CLAMP. HARRY A. THOMPSON, Cambridge, Mass. Filed Dec. 31, 1907. Serial No. 408,790.



1. The combination, in a clamp, of a U-shaped frame, a band encompassing said frame, and a revoluble clamping roller carried by said band and disposed between the legs of the frame, the pivots of said roller fitting in slots formed in the sides of the band.

2. The combination, in a clamp, of a U-shaped frame, the inner sides of the legs of the frame being inclined inward and downward, a band encompassing said frame and provided with registering slots formed in the opposite sides thereof, and a clamping roller carried by the band and having its pivots projecting through the slots in said band, to permit a bodily movement of the roller along the inclined side of the adjacent leg.

3. The combination, in a clamp, of a U-shaped frame, the inner sides of the legs of the frame being inclined inward and downward, a band encompassing said frame, and a roller carried by said band and movable along the inclined side of the adjacent leg.

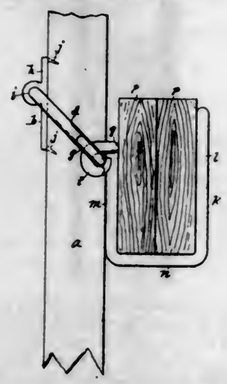
4. The combination, in a clamp, of a U-shaped frame, the inner sides of the legs of the frame being inclined inward and downward, a movable band encompassing the frame and a roller carried by said band and movable bodily therewith along the inclined side of the adjacent leg, said roller being disposed at right angles to the plane of the frame and having the ends of its pivots fitted in openings in the band.

5. The combination, in a clamp, of a U-shaped frame, a movable band encompassing the frame, and a pair of parallel rollers carried by the band and movable bodily therewith towards and from each other, to exercise a clamping pressure upon a substance between the rollers.

[Claims 6 and 7 not printed in the Gazette.]

901,926. SAFETY SCAFFOLD-BRACKET. JOHN R. WATT, Detroit, Mich., assignor of one-half to John C. Johnson, Detroit, Mich. Filed Dec. 16, 1907. Serial No. 406,641.

1. A safety scaffold bracket comprising a U-shaped clevis formed with lateral arms to embrace two sides of an upright, and with an intermediate cross arm connecting the lateral arms, to extend across the side of the upright opposite the extremities of the clevis, an upright toothed plate having a swiveled engagement intermediate its extremities with said cross arm, to engage the side of the upright opposite the extremities of the clevis, and a depending U-shaped hanger formed with front and rear vertical arms and with a horizontal supporting arm connecting the lower ends of the front and rear vertical arms, the rear vertical arm of the hanger having a permanent jointed engagement at its upper end with one of the lateral arms of the clevis, and a detachable engagement with the other arm of the clevis, said hanger located on the side of the upright opposite the toothed plate and arranged to support a timber in a direction parallel to the toothed plate.



2. A safety scaffold bracket comprising a clevis open at one end thereof formed with lateral arms to embrace two sides of an upright and with an intermediate cross arm connecting the lateral arms to extend across the side of the upright opposite the extermities of the clevis, an upright toothed plate having a swiveled engagement intermediate its extremities with said cross arm to engage the corresponding side of an upright opposite the extremities of the clevis, and a depending hanger formed with front and rear vertical arms and with a horizontal supporting arm connecting the lower ends of the front and rear vertical arms, the rear vertical arm of the hanger having a jointed engagement at its upper end with one of the arms of the clevis, and a hooked engagement with the other arm of the clevis, said hanger located on the side of the upright opposite the toothed plate and arranged to support a timber in a direction parallel to the toothed plate.

3. A safety scaffold bracket comprising a clevis open at one end thereof formed with lateral arms to embrace the two sides of an upright, and with an intermediate cross arm connecting the lateral arms to extend across the side of the upright opposite the extremities of the clevis, an upright toothed plate having a swiveled engagement intermediate its extremities with said cross arm to engage the corresponding side of the upright opposite the extremities of the clevis, and a depending hanger formed with front and rear vertical arms and with a horizontal supporting arm connecting the lower ends of the front and rear vertical arms, the rear upright arms of the hanger at the upper end thereof formed with laterally extending arms, one of said laterally extended arms having a jointed engagement with one of the lateral arms of the clevis, and the other laterally extending arm having a detachable engagement with the other lateral arm of the clevis, said hanger located on the side of the upright opposite the toothed plate and arranged to support a timber in a direction parallel to the toothed plate.

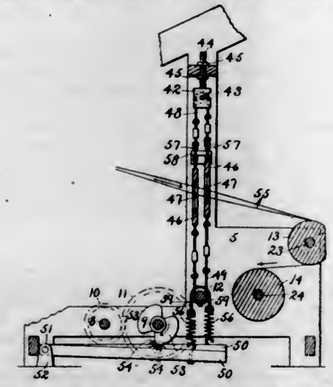
4. A safety scaffold bracket comprising a clevis open at one end thereof formed with lateral arms to embrace two sides of an upright, and with an intermediate cross arm connecting the lateral arms to extend across the side of the upright opposite the extremities of the clevis, an upright toothed plate having a swiveled engagement intermediate its extremities with the cross arm to engage

the corresponding side of an upright opposite the extremities of the clevis, and a depending hanger formed with front and rear vertical arms and with a horizontal supporting arm connecting the lower ends of the front and rear vertical arms, the extremities of the lateral arms of the clevis formed the one with an eye and the other with a hook, the rear vertical arm of the hanger formed at its upper end with laterally extending arms the one having a jointed connection with the eye of the corresponding arm of the clevis, and the other laterally extending arm of the hanger formed with a hook to engage the hook of the other arm of the clevis, said hanger located on the side of the upright opposite the toothed plate and arranged to support a timber in a direction parallel to the toothed plate.

5. A safety scaffold bracket comprising a clevis open at one end thereof formed with lateral arms to embrace two sides of an upright, and with an intermediate cross arm connecting the lateral arms to extend across the side of the upright opposite the extremities of the clevis, an upright toothed plate having a swiveled engagement intermediate its extremities with said cross arm to engage the corresponding side of an upright opposite the extremities of the clevis, and a depending hanger formed with front and rear vertical arms and with a horizontal supporting arm connecting the lower ends of the front and rear vertical arms, the extremities of the lateral arms of the clevis formed the one with an eye and the other with a hook, the rear vertical arm of the hanger formed at its upper end with integral laterally extending arms, the one formed with an eye having a jointed connection with the eye of the corresponding arm of the clevis, and the other laterally extending arm of the hanger formed with a hook to engage the hook of the other arm of the clevis, the eye and the hook of the clevis being turned laterally in opposite directions, and the eye and the hook of the rear vertical arms of the hanger being turned rearward, said hanger located on the side of the upright opposite the toothed plate and arranged to support a timber in a direction parallel to the toothed plate.

[Claim 6 not printed in the Gazette.]

901,927. HEDDLE ADJUSTMENT FOR LOOMS. FRED T. WITHEE, Springfield, Mass., and ROBERT WHITE, Cleveland, Ohio. Original application filed Sept. 28, 1906, Serial No. 336,547. Divided and this application filed Aug. 7, 1907. Serial No. 387,510.



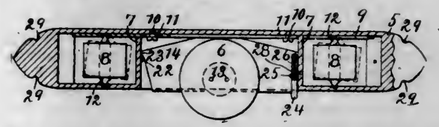
1. The combination, in a loom, with the drive-shaft of the loom, a shaft driven from said drive-shaft and having cams mounted thereon, and treadles actuated by said cams, of the heddle-frames, operating mechanism for said heddle-frames, such mechanism being yieldingly connected with said treadles, and stops in the path of travel of the heddle-frames arranged to limit the movement of the same.

2. The combination, in a loom, with the drive-shaft of the loom, a shaft driven by said drive-shaft and having cams mounted thereon, and treadles actuated by said cams, of the heddle-frames, operating mechanism for said heddle-frames, such mechanism including a rock-shaft, stops in the path of travel of the heddle-frames arranged to limit the movement of the same, and yielding connecting means between said rock-shaft and said treadles.

3. The combination, in a loom, with the frame of the loom, rolls and a rock-shaft supported by such frame, straps passing over and under such rolls and rock-shaft, the heddle-frames, connections between the latter and said straps, and yielding means to actuate said rock-shaft, of suitable members supported from the loom frame in the paths of travel of said heddle-frames to limit the movement of the latter.

4. The combination, in a loom, with the heddle frames, suitably supported rolls and a rock-shaft, straps passing over and under such rolls and rock-shaft, connections between the heddle-frames and said straps, and stop members bracketed in the paths of travel of said heddle-frames, of the treadles, and connecting mediums between the latter and said rock-shaft, such mediums consisting in part of springs connected with the rock-shaft and treadles.

901,928. LOOM-SHUTTLE. FRED T. WITHEE, Springfield, Mass., and ROBERT WHITE, Cleveland, Ohio. Original application filed Sept. 28, 1906, Serial No. 336,547. Divided and this application filed Aug. 7, 1907. Serial No. 387,513.



1. A loom shuttle comprising rollers a case mounted on said rollers and provided with a single movable bearing member for both rollers.

2. A loom shuttle comprising a case, a movable bearing member in said case at one side, oppositely disposed fixed bearings, and rollers journaled in said member and in said fixed bearings.

3. A loom shuttle comprising a case, a sliding bar in said case, and rollers each having one of its journals mounted in said bar and the other journal mounted in the opposite wall of the casing.

4. The combination, in a loom, of a suitable case for a bobbin holder and bobbin, a holder adapted to be received in said case and comprising a suitable support including a post and a revoluble thimble mounted thereon, a tension spring between said post and thimble, and a bobbin arranged to fit over said thimble and to engage the same positively for rotation without lost motion.

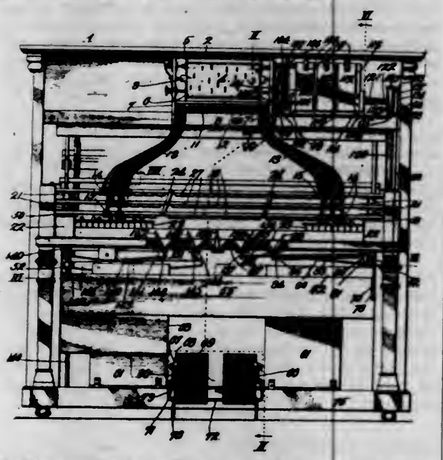
5. The combination, in a loom shuttle, of a suitable case for a bobbin holder and bobbin, a hollow bobbin adapted to fit over a thimble, a plate, a fixed post on said plate, a rotary thimble over said post, a spring fast at one end to the post and having the other end arranged to bear on the inside of said thimble, and pins to lock said bobbin to the thimble so that they will revolve together.

[Claim 6 not printed in the Gazette.]

901,929. AUTOMATIC PIANO. FREDERICH W. WOOD, Kansas City, Mo., assignor to Berry-Wood Piano Player Co., Kansas City, Mo. Filed Aug. 13, 1906. Serial No. 330,467.

1. The combination with a piano case having the usual blocks at the ends of the keyboard, of hollow blocks resting on the said blocks, a wind chest bridging the keyboard and resting at its ends on and communicating with said blocks, a transverse wind throat underlying the keyboard and standing on edge, and hollow blocks connected to the

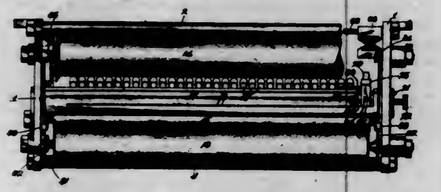
first-named hollow blocks and having valve controlled passages communicating with the wind throat.



2. The combination with a piano case having the usual blocks at the ends of the keyboard, of hollow blocks resting on the said blocks, a wind chest bridging the keyboard and resting at its ends on and communicating with said blocks, a transverse wind throat underlying the keyboard and standing on edge, hollow blocks connected to the first-named hollow blocks and having valve controlled passages communicating with the wind throat, a transversely extending rock-shaft journaled in the wind throat and projecting beyond one end of the same and provided at such end with a crank arm and within the chest with arms adapted for unseating said valves, a lever, and connections between the same and said crank arm to operate the rock shaft.

3. The combination with a piano case having the usual blocks at the ends of the keyboard, of hollow blocks resting on said blocks, a wind chest bridging the keyboard and resting at its ends on and communicating with said blocks, a transverse wind throat underlying the keyboard and standing on edge, hollow blocks connected to the first-named hollow blocks and having valve-controlled passages communicating with the wind-throat, a pendent extension for one end of the wind throat, an equalizer pneumatic and a tube connecting such pneumatic with said extension.

901,930. NOTE-SHEET-GUIDE MECHANISM. FREDERICH W. WOOD, Kansas City, Mo., assignor to Berry-Wood Piano Player Co., Kansas City, Mo. Filed May 28, 1907. Serial No. 376,152.



1. In a mechanism of the character described, the combination of a series of guide rolls, and a tracker bar arranged parallel with said rolls and provided with a longitudinal series of air passages, of a perforated note sheet running over said rolls and tracker bar, a rod contiguous to the note sheet and disposed substantially parallel with said rolls and tracker bar and means for causing said rod to assume a position at an angle to its normal position and apply pressure at one end on the note sheet at one side of the longitudinal center of the same, to cause said note sheet to creep or swerve laterally toward the opposite end of said rod.

2. In a mechanism of the character described, the combination of a series of guide rolls, and a tracker bar arranged parallel with said rolls and provided with a longitudinal series of air passages, of a perforated note sheet running over said rolls and tracker bar, a rod contiguous to the note sheet and disposed substantially parallel with said rolls and tracker bar, a pair of pneumatics linked to the opposite ends of said rod, and means whereby the lateral swerving of the note sheet toward one side shall result in the operation of the pneumatic at such side and cause the same to move the corresponding end of said rod into frictional engagement with the note sheet at the corresponding side of its longitudinal center and compel said sheet to swerve in the opposite direction.

3. In a mechanism of the character described, the combination of a series of guide rolls, and a tracker bar arranged parallel with the rolls and provided with a longitudinal series of air passages, of a block arranged at one end of the series of tracker bar passages, and provided with a pair of air passages arranged at right angles to the series of tracker bar passages, each of said block passages having one side substantially in line with the center of the other, and a perforated note sheet running over said rolls in a direction parallel to that of the passages of the block and engaging the tracker bar and blocks and normally uncovering one of the passages of the latter and partially covering the other passage of the same.

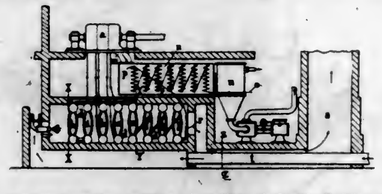
4. In a mechanism of the character described, the combination of a series of guide rolls and a tracker bar arranged parallel with the rolls and provided with a longitudinal series of air passages, of a block arranged at one end of the series of tracker bar passages, and provided with a pair of air passages arranged at right angles to the series of tracker bar passages, each of said block passages having one side substantially in line with the center of the other, a perforated note sheet running over said rolls in a direction parallel to that of the pair of passages of the block and engaging the tracker bar and blocks and normally covering one of the passages of the latter and partially covering the other passage of the same, and means for swerving the note sheet toward the passage of the block described as normally partially uncovered should the note sheet swerve in the opposite direction and uncover the companion passage of said block.

5. In a mechanism of the character described, the combination of a series of guide rolls and a tracker bar arranged parallel with the rolls and provided with a longitudinal series of air passages, of a block arranged at one end of the series of tracker bar passages, and provided with a pair of air passages arranged at right angles to the series of tracker bar passages, each of said block passages having one side substantially in line with the center of the other, a perforated note sheet running over said rolls in a direction parallel to that of the passages of the block and engaging the tracker bar and blocks and normally covering one of the passages of the latter and partially covering the other passage of the same, and means to swerve the note sheet in the proper direction to partially uncover the passage described as partially uncovered normally, should the note sheet swerve and cover said passage.

901,931. TURBINE. SEBASTIAN Z. DE FERRANTI, Grindleford, near Sheffield, England. Original application filed Oct. 31, 1903, Serial No. 179,407. Divided and this application filed Sept 16, 1907. Serial No. 393,125.

1. In combination with a plurality of elastic fluid motors wherein said fluid undergoes progressive expansion, means for initially superheating said fluid together with means for maintaining the temperature of said fluid at the inlets of the second and following motors equal to the temperature of superheat at the inlet of the first of said motors.

2. In combination with a plurality of elastic fluid motors wherein said fluid undergoes progressive expansions, means for initially superheating said fluid together with means for maintaining the temperature of said fluid at the inlets of the second and following motors equal to the temperature of superheat at the inlet of the first of said motors, together with a regenerator through which the exhaust fluid is passed.



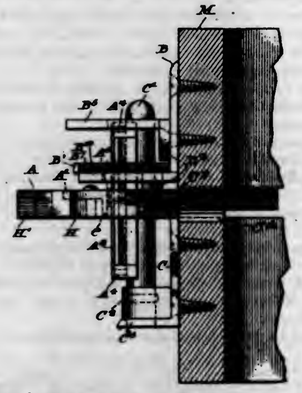
3. In combination with a plurality of elastic fluid motors, wherein said fluid undergoes progressive expansions, means for initially superheating the fluid together with means disposed between successive expansions for re-heating said fluid, the mean temperatures of the re-heats being substantially identical.

4. In combination with a plurality of elastic fluid motors wherein said fluid undergoes progressive expansion, means for superheating the fluid at some point of the total expansion, together with means disposed between successive expansions after said superheating point for re-heating said fluid at each re-heat to the superheating temperature.

5. In combination with a plurality of elastic fluid motors, wherein said fluid undergoes progressive expansions, means for superheating the fluid at some point of the total expansion together with means disposed between successive expansions after said superheating point for heating said fluid to a uniform high temperature.

[Claims 6 to 18 not printed in the Gazette.]

901,932. MOLDING-MACHINE. FREDERICK W. HALL, Merchantville, N. J., assignor, by direct and mesne assignments, to J. W. Paxson Company, Philadelphia, Pa., a Corporation of Pennsylvania. Original application filed Dec. 28, 1906, Serial No. 349,762. Divided and this application filed June 22, 1907. Serial No. 380,322.



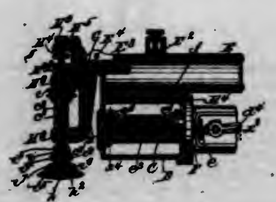
1. In molding apparatus comprising oppositely-disposed flask elements and an interposed pattern-frame, of a fitting for the cope member, consisting of a bracket handle having an outwardly-projecting base-plate which is centrally recessed and provided with a pair of parallel guide-ribs, a fitting for the drag, having a vertically-disposed guide-pin, and connecting means operating as an adjustable guide between said elements, consisting of a plate mounted to slide between said guide ribs of the cope-fitting and having a central opening for the passage of the guide pin of the drag fitting.

2. In molding apparatus comprising oppositely-disposed flask elements and an interposed pattern frame, of a fitting for the drag member of the flask consisting of a bracket support having a basal end projecting outwardly, a socket on the upper face thereof, a vertically-disposed guide pin mounted in said socket, an inwardly projecting flange on the bracket adapted to overlap the edge of the drag member, and vertical lugs on the bracket adapted to coincide with the edge of the pattern frame to hold it in operative register with the flask elements.

3. In molding apparatus comprising oppositely-disposed flask elements and an interposed pattern frame having a yoke-like handle, of a drag-fitting consisting of a bracket support having a vertically-disposed guide pin mounted thereon, a cope-fitting consisting of a bracket having horizontal guiding ribs and a recessed plate slidingly mounted thereon between said ribs, the guide pin of the drag passing through said recess and through the yoke-handle of the pattern frame, and means to yieldingly maintain said pattern frame in operative position relatively to the flask elements.

4. In molding apparatus comprising oppositely-disposed flask elements and an interposed pattern frame having a projecting yoke-like handle, the combination therewith of a fitting for the drag member comprising a bracket support, having a vertically-disposed guide-pin mounted thereon, a fitting for the cope member comprising a bracket support, a recessed guide-plate mounted slidingly thereon, said guide pin extending through the recess of said sliding plate and through the yoke-handle of the pattern-frame, with means to maintain said frame in operative alinement with the drag, consisting of a spring-actuated guiding device mounted midway of its length in the handle of the pattern frame and bearing resiliently against the guide-pin of the drag member.

901,933. BUFFING-MACHINE. SHERMAN W. LADD, Beverly, Mass., assignor to Sidney W. Winslow, trustee, Beverly, Mass. Filed Aug. 16, 1897. Serial No. 648,389.



1. A buffing machine having a tubular spindle; an inflatable buffing pad carried by the spindle; and means for producing a substantially constant pressure of air in the pad, comprising an air compressor, a chamber to receive the compressed air, a reservoir communicating with the pad, a restricted orifice connecting the chamber to the reservoir and proportioned to retard the transmission of the compressed air from the receiving chamber to the reservoir.

2. A buffing machine having a tubular spindle; an inflatable buffing pad carried by the spindle; and means for maintaining a constant pressure of air in the pad, comprising a pump, an air supply duct therefor leading from a point remote from the buffing pad, a chamber into which the pump discharges air, a reservoir of large capacity, an orifice of small capacity between the chamber and the reservoir, a conductor of small capacity communicating with the tubular spindle and extending into the reservoir to a distance beyond its end wall, and a relief valve in the reservoir.

3. In a buffing machine, a flexible pad adapted to be inflated and to carry an abrasive covering; means for compressing air; and connecting means between the compressor and the pad, comprising a receiving chamber, a reservoir, a passage connecting the compressor with the chamber, a conduit of small diameter connecting the chamber and reservoir, and a passage between the reservoir and the pad.

4. A buffing machine having a supporting frame; a tubular spindle journaled thereon; an inflatable buffing pad

carried by the spindle; and means for maintaining air pressure in the pad, comprising a pump cylinder mounted in the frame, a piston, piston actuating mechanism inclosed in the frame, an air supply duct extending from the interior of the frame to the pump cylinder, a valve between the duct and the cylinder, and a passageway leading from the pump cylinder to the pad spindle.

5. A buffing machine having a frame; a tubular spindle; an inflatable buffing pad carried by the spindle; and means for maintaining air pressure in the pad, comprising a pump cylinder projected from the frame, a piston, and actuating mechanism therefor inclosed by the frame, a casting comprising a chamber D, and a reservoir E communicating with each other through the relatively small passage *f*, said casting being arranged with the chamber D inclosing the pump cylinder, and a connection between the reservoir and the spindle.

[Claim 6 not printed in the Gazette.]

901,934. ATMOSPHERIC GAS-BURNER. THOMAS J. LITLE, Jr., Philadelphia, Pa., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Filed Aug. 30, 1905. Serial No. 276,349.



1. An atmospheric gas burner having a thermostatic device located in the channel for the mixture feed, said device being arranged to reduce the proportion of air at the time of ignition and to increase the proportion of air under the influence of heat for the normal operation of the burner; substantially as described.

2. An atmospheric gas burner having a thermostatically controlled impedance in the channel for the mixture feed arranged to prevent flash-backs at the time of ignition, the impedance being shifted by the action of heat for the normal operation of the burner, substantially as described.

3. An atmospheric gas burner having a thermostatic impedance in the channel for the mixture feed, said impedance being arranged to allow a flow of the mixture at all times, substantially as described.

4. An atmospheric gas burner of the inverted type having a thermostatically-controlled impedance in the channel for the mixture feed, said impedance being arranged to allow a flow of the mixture at all times, substantially as described.

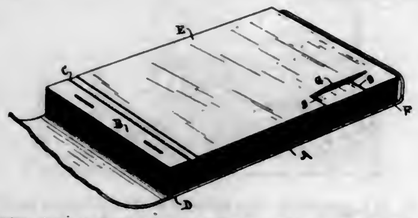
5. An atmospheric gas burner having in its burner tube a thermostatic device consisting of a split cone, substantially as described.

[Claim 6 not printed in the Gazette.]

901,935. MANIFOLD COPY BOOK OR PAD. WILLIAM C. METZGER, Elmira, N. Y., assignor to American Sales Book Company, Elmira, N. Y. Filed Oct. 22, 1906. Serial No. 339,898.

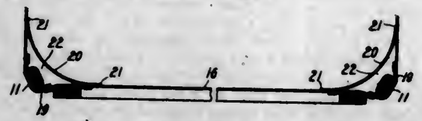
1. The combination, with the leaves of a manifolding book or pad, of a carbon sheet which overlies the leaves, said sheet having a portion thereof at one side adjacent the free ends of the leaves cut to form a flap, said flap when raised being adapted to expose a portion of the underlying leaf, whereby the leaves may be grasped in manipulating the book without handling the carbon sheet.

2. The combination, with the leaves of a manifolding book or pad, of a carbon sheet which overlies the leaves, said sheet being provided at one side with a flap formed by



cutting into and creasing the sheet, substantially as and for the purpose set forth.

901,936. COUCH-HAMMOCK. ISAAC E. PALMER, Middletown, Conn., assignor to The I. E. Palmer Company, Middletown, Conn., a Corporation of Connecticut. Filed Mar. 28, 1908. Serial No. 423,914.



1. A hammock frame adapted for engagement with a hammock and provided at its ends with cross rods and with means independent of the hammock for spacing said cross rods from said ends and for supporting them against displacement at both faces of said frame to permit reversal of the frame.

2. A reversible hammock frame provided with end members, cross rods, and means independent of the hammock for spacing said cross rods from said end members to leave suspension spaces and for supporting said cross rods against displacement at both faces of said frame to permit reversal of the frame.

3. A hammock frame provided at its ends with hammock engaging members combined with a hammock having portions extended above and below said engaging members and in supporting engagement therewith, whereby is produced a reversible framed hammock, the portion whereof between the ends of said frame is maintained under hammock supporting tension.

4. A hammock frame having connected transversely disposed end suspension members, combined with a hammock overlying said frame and provided with portions passing above and below said suspension members and supporting means for said suspension members permitting frame reversal.

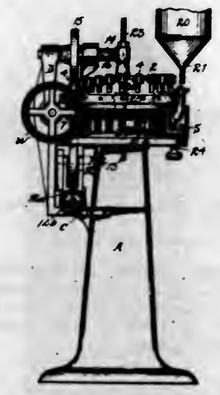
5. A hammock frame adapted for engagement with a hammock and provided at its ends with brackets and cross rods spaced from said ends, said brackets encircling said cross rods sufficiently to support said frame with either face uppermost.

[Claims 6 to 29 not printed in the Gazette.]

901,937. TABLET-FORMING MACHINE. BURTON W. SCOTT, Detroit, Mich., assignor to Arthur Colton Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 15, 1907. Serial No. 402,263.

1. In a machine of the kind described, the combination of a head, a die thereon provided with an aperture, a punch located above said head and adapted to engage in the aperture of said die, a part connected with said punch extending through said head and adapted to reciprocate therein, and a cam located below said head and adapted to co-act with said part to actuate said punch, said part and connected punch being adapted to be removed from engagement with said head.

2. In a machine of the kind described, the combination of a head, a die thereon provided with an aperture, a slot in said head, a block fitting into said slot, a punch secured to said block above said die and adapted to engage in the aperture thereof, a part extending from said block through said head, and a cam located below said head and adapted to coact with said block and punch to actuate the same.



3. In a machine of the kind described, the combination of a rotary head, a series of dies provided with apertures arranged in a circle on said head concentric therewith, a portion of said head of less diameter than the series of dies and extending above said dies, said cylindrical portion being provided with slots extending radially inward from the periphery thereof, blocks fitting in said slots and carrying punches located above said dies, and means for actuating said blocks.

4. In a machine of the kind described, the combination of a rotary head, a series of dies provided with apertures arranged in a circle on said head concentric therewith, a portion of said head of less diameter than the series of dies and extending above said dies, said portion being provided with slots extending radially inward from the periphery thereof, blocks fitting in said slots and carrying punches located above said dies, a part extending from each of said blocks through said head, and a cam located below said head and adapted to coact with said part to actuate said punches.

5. In a machine of the kind described, the combination of a rotary head, a circular series of dies thereon having their upper surfaces level with a plane surface on said head, means for supplying powder to said dies, compressing it into tablets and lifting the tablets from said dies, a delivery trough, a finger extending over said surface and adapted to guide the tablets into said trough, means for displacing the surplus powder to a part of said surface inside of said finger, and means for again displacing said powder to cause it to fall into said dies.

[Claims 6 to 11 not printed in the Gazette.]

901,938. CULTIVATOR. FREDERICH BAUMGARTNER, Fairview, Pa., administrator of Ernest Baumgartner, deceased, assignor to Excelsior Garden Tool Company, Erie, Pa., a Corporation of Pennsylvania. Filed Nov. 29, 1907. Serial No. 404,463.

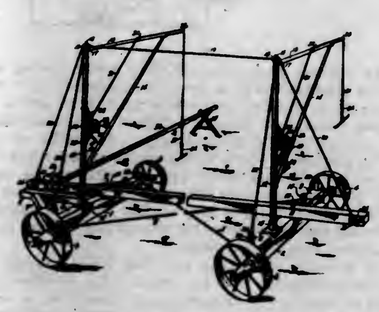


In a cultivator the combination with the rearwardly extending arm, having the slotted head; the swivel piece 9 having the corrugations 14 extending axially thereon; a shovel plate carried by the swivel piece; the eye bolt extending around the swivel piece and into the slotted head; a clamping piece 13, having the concave face 15 of less radius than the radius of the swivel piece, whereby the ends 16 of the concave face will enter into the grooves formed by the corrugations for the purpose described.

REISSUES.

12,866. [WITHDRAWN.]

12,867. LOADING APPARATUS. ARTHUR MARVIN, El Paso, Ill., assignor to Marvin Manfg. Company, El Paso, Ill., a Corporation of Illinois. Filed Aug. 22, 1907. Serial No. 389,756. Original No. 831,015, dated Sept. 11, 1906, Serial No. 300,873.



1. A running-gear including bolsters, a sill pivotally supported upon said bolsters, sockets upon the bolsters intermediate the sill and the ends of the bolsters, masts stepped for rotation in the sockets at one side of the sill and having derrick-arms, stay means connecting the masts, guy means connecting the masts with the ends of the sill and with the bolsters said guy means including clevises, windlasses supported upon the masts, and flexible hoisting members connected with the drums of the windlasses and guided over pulleys upon the derrick-arms.

2. A device of the class described including a running-gear, bolsters, a sill pivoted upon the bolsters, sockets upon the bolsters intermediate the sill and the ends of the bolsters, masts stepped for rotation in the sockets at one side of the sill and having derrick-arms, windlasses supported upon the masts, and flexible hoisting members connected with the drums of the windlasses and guided over pulleys upon the derrick-arms; in combination with a trestle having an arm adapted to be detachably connected with the sill.

3. A running gear, comprising front and rear axles, a bolster mounted on each axle, a supporting sill connecting said bolsters and axles centrally thereof, a mast for each bolster, capable of having an interchangeable connection with opposite ends thereof, raising and lowering means in connection with said masts, and mechanism supported by said masts for operating said raising and lowering means.

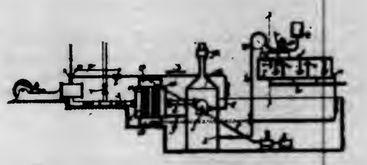
4. A running gear, comprising front and rear axles, a bolster mounted on each axle, a supporting sill connecting said bolsters and axles centrally thereof, a mast for each bolster, said masts adapted to have an interchangeable and revoluble connection with the opposite ends of said bolsters, a derrick arm attached to swing with each mast, raising and lowering means in connection with each derrick arm, and mechanism supported to rotate with said masts for operating said raising and lowering means.

5. In combination, an axle, a bolster mounted thereon, a mast, means for connecting the lower end of the mast to rotate on said bolster, means for sustaining said mast in an upright position, a derrick arm connected to swing with said mast, a drum mounted on said mast, gearing for

operating said drum, also mounted on said mast, and flexible hoisting means connected with said drum and guided over idlers on said derrick arm.

[Claims 6 to 8 not printed in the Gazette.]

12,868. STEAM-CONDENSING AND FEED-WATER-HEATING PLANT. REINHOLD SCHNEIDER, Sharon, Pa. Filed Jan. 13, 1908. Serial No. 410,699. Original No. 806,368, dated Dec. 5, 1905, Serial No. 235,096.



1. In a steam condensing and feed water heating system, the combination of a condenser connected to receive exhaust steam therefrom, a water supply having means for spraying water into the steam within said condenser, a valve controlling said water supply, a device for controlling the passage of steam to the engine cylinder and connections between said device and the valve in the water supply pipe, whereby they are operated in unison and the amount of water sprayed into contact with the steam be maintained proportionate to the quantity of exhaust steam and passing into the condenser.

2. In a steam condensing and feed water heating system, the combination with the engine, of a condenser connected to receive the exhaust steam therefrom, a water supply to said condenser, a valve controlling said water supply, and automatically operating connections from said valve to the throttle valve of the engine whereby the former valve is moved in unison with the latter, substantially as described.

3. In combination, a steam engine, a surface condenser 2 or steam injected condenser receiving exhaust steam from said surface condenser, a storage tank located at a higher elevation than the surface condenser and receiving the feed water from the lower part of the said second condenser, a pipe connection from the storage tank to the surface condenser, and a boiler feed pump connected to the surface condenser, said surface condenser being located at an elevation intermediate of that of the storage tank and of the feed pump, substantially as described.

4. In a steam condensing and feed water heating plant, the combination with the engine of a steam injected condenser or heater receiving exhaust steam therefrom, means for spraying water into the condenser in quantities corresponding to the steam coming from the engine, a storage tank connected with the condenser, and means for feeding water purifying material into said storage tank in quantities varying according to the flow of water into the same, substantially as described.

DESIGNS.

39,622. EMBLEM. LEONARD JAMES FOX, Cincinnati, Ohio. Filed July 16, 1908. Serial No. 443,943. Term of patent 14 years.



The ornamental design for an emblem, as shown.

39,623. FINGER-RING OR SIMILAR ARTICLE. JOHN ANTHONY DE LUISI, Cincinnati, Ohio, assignor to himself and Merrick Linley Bates, Cincinnati, Ohio. Filed July 20, 1908. Serial No. 444,549. Term of patent 14 years.



The ornamental design for a finger-ring, or similar article, as shown.

39,624. KNIFE, SPOON, OR SIMILAR ARTICLE. GUSTAVE STROHHAKER, Wallingford, Conn., assignor to International Silver Co., Meriden Conn., a Corporation of New Jersey. Filed June 18, 1908. Serial No. 439,258. Term of patent 7 years.



The ornamental design for a knife, spoon or similar article, as shown.

39,625. BOTTLE. DOS TAYLOR, Sharpsburg, Pa., assignor to H. J. Heinz Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed June 5, 1908. Serial No. 437,030. Term of patent 14 years.



The ornamental design for a bottle as shown.

39,626. GAS-RANGE. WILLIAM M. CRANE, New York, N. Y., assignor to William M. Crane Company, a Corporation of New York. Filed July 30, 1908. Serial No. 446,207. Term of patent 7 years.



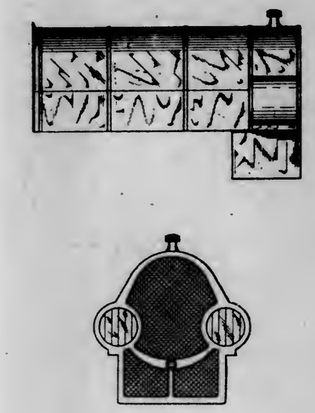
The ornamental design for a gas range, as shown.

39,627. GRINDING-MILL STANDARD. CUNNINGHAM N. MCLAUGHLIN, Winona, Minn., assignor to New Winona Manufacturing Company, Winona, Minn., a Corporation of Minnesota. Filed July 6, 1908. Serial No. 422,259. Term of patent 14 years.



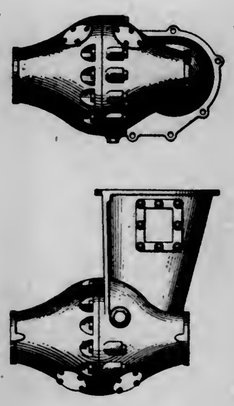
The ornamental design for a grinding mill standard, as shown and described.

39,628. AUTOMOBILE-HOOD. WILLIS S. SHERMAN, Milwaukee, Wis. Filed June 29, 1908. Serial No. 441,036. Term of patent 14 years.



The ornamental design for an automobile hood, as shown and described.

39,629. REAR-AXLE CASING. RUSSELL HUFF, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of West Virginia. Filed June 1, 1908. Serial No. 436,163. Term of patent 7 years.



The ornamental design for a rear axle casing, as shown and described.

39,630. SEAT END. EDWARD G. BUDD, Philadelphia, Pa., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 24, 1908. Serial No. 445,288. Term of patent 7 years.



The original design for a seat-end, as shown.

39,631. CLOSET-SCREEN. JAMES W. KELLY, Chicago, Ill. Filed Apr. 9, 1908. Serial No. 426,153. Term of patent 14 years.



The ornamental design for a closet screen, as shown and described.

TRADE-MARKS

PUBLISHED OCTOBER 20, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 7,054. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE E. E. SUTHERLAND MEDICINE CO., Paducah, Ky. Filed May 29, 1905.



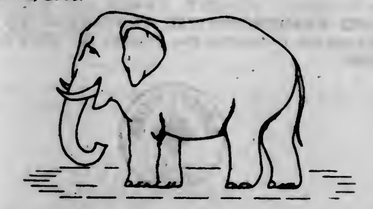
Particular description of goods.—Remedies for Coughs, Colds, Croup, Whooping-Cough, Bronchitis, Asthma, Grip, Soreness of the Throat, Chest, and Lungs, Cuts, Burns, Wounds, Sprains, Rheumatism, Neuralgia, Toothache, Cramps, Colic, Diarrhea, Scalds, Chills, and Skin Affections.

Ser. No. 13,454. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ORIENT COMPANY, LIMITED, London, England. Filed Oct. 9, 1905. Used ten years.

COCOLANKA

Particular description of goods.—Desiccated Cocoanut.

Ser. No. 17,277. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ROBERT EXNER, Berlin, Germany. Filed Feb. 23, 1906.



Particular description of goods.—Cordials, Straight Cognac, Blended Cognacs, Egg-Cognacs, Straight Arac, Blended Aracs, Straight Rums and Blended Rums, Juniper-Gin, Punches, Extract for Making Punches, and Extract for Making Grog.

Ser. No. 20,184. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, New York, N. Y. Filed June 9, 1906.

LITTLE WITCH BISCUIT

Particular description of goods.—Biscuits.

Ser. No. 29,634. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) BENNETT F. SMITH, Temple, Tex. Filed Aug. 28, 1907.



Particular description of goods.—A Carbonated Grape Beverage and Syrup for Making the Same.

Ser. No. 29,793. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE BANANA POLISH CO., Napoleon, Mich. Filed Sept. 7, 1907.



Particular description of goods.—Polish for Varnished Surfaces.

Ser. No. 30,436. (CLASS 27. HOROLOGICAL INSTRUMENTS.) J. J. ELLIOTT AND SONS LIMITED, Clerkenwell, England. Filed Oct. 5, 1907.



Particular description of goods.—Clocks and Watches.

Ser. No. 32,489. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE KNOWLTON DANDERINE CO., Chicago, Ill. Filed Jan. 30, 1908.



Particular description of goods.—A Liquid Preparation for Use as a Scalp-Tonic.

Ser. No. 32,747. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE HARRAL SOAP CO., New York, N. Y. Filed Feb. 13, 1908. Used ten years.

Kleeneasy

Particular description of goods.—Scouring-Soap.

Ser. No. 33,226. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MARSHALL-WELLS HARDWARE CO., Duluth, Minn. Filed Mar. 6, 1908. Used ten years.



Particular description of goods.—Butcher-Knives, Farrier-Knives, Chisels, Drawing-Knives, Axes, Adzes, Hatchets, Mattocks, Picks, Auger-Bits, Grass-Scythes, Razors, Augers, Scissors, Shears, Pocket-Knives, Gouges, Ship-Augers, Car-Bits, Expansion-Bits, Bark-Spuds, Cedar-Spades, Hunting-Knives, Meat and Bread Slicers, Bread-Knives, Kitchen-Knives, Circular Saws, Rasps, Pitchfork-Handles, Cold-Chisels, Gimlets, Countersinks, Screw-Driver Bits, Hacksaw-Blades, Braces, Trowels, Scratch-Awls, Hammer-Handles, Ax-Handles, Saw-Sets, Nail-Sets, Belt-Punches, Solid Punches, Spring-Punches, Pike-Poles, Timber-Carriers, Cant-Hook Handles, Peavey-Handles, Glass-Cutters, Reamers, Pliers, Hammers, Wrenches, Screw-Drivers, Revolving Spring-Punches, Handsaws, Files, One-Man Saws, Crosscut-Saws, Peavies, Pickaroons, Shovels, Spades, Scoops, Horse-Clippers, Sewing-Machines, Sewing-Machine Needles.

Ser. No. 33,281. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE PACKARD ELECTRIC COMPANY, Warren, Ohio. Filed Mar. 10, 1908.

Packard

Particular description of goods.—Insulated Wires, Insulated Cables, Insulating-Varnish, Insulated Varnished Tape, and Insulated Cloth.

Ser. No. 34,363. (CLASS 47. WINES, EXCEPT MEDICATED.) J. CALVET & CO., Bordeaux, France. Filed Apr. 25, 1908. Used ten years.



Particular description of goods.—Claret-Wines, Sauternes, and Burgundy Wines.

Ser. No. 34,460. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. K. BROWN, Chattanooga, Tenn. Filed Apr. 29, 1908.



Honeymoon

Particular description of goods.—Maple Pralines.

Ser. No. 34,532. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) WILLIAM S. HAINES COMPANY, Philadelphia, Pa. Filed May 2, 1908.



Particular description of goods.—Steam-Traps.

Ser. No. 34,567. (CLASS 39. CLOTHING.) UNION KNITTING COMPANY, St. Johnsville, N. Y. Filed May 4, 1908.



Particular description of goods.—Knitted Ribbed Underwear.

Ser. No. 34,605. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE HOLDFAST MANUFACTURING COMPANY, Philadelphia, Pa. Filed May 6, 1908.



Particular description of goods.—Safety Match-Box Holders.

Ser. No. 34,743. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES LICHETTI, Philadelphia, Pa. Filed May 14, 1908.



Particular description of goods.—An Oil for the Treatment of Rheumatism and Sciatica.

Ser. No. 34,791. (CLASS 17. TOBACCO PRODUCTS.) CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y., and Caguas, Porto Rico. Filed May 16, 1908.



Particular description of goods.—Cigars, Cheroots, and Cigarettes Made of Cigar-Tobacco.

Ser. No. 34,810. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LISTMAN MILL COMPANY, La Crosse, Wis. Filed May 18, 1908.

HEATH

Particular description of goods.—Wheat-Flour.

Ser. No. 34,933. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) DEERING, MILLIKEN & CO., New York, N. Y. Filed May 25, 1908.

BIANCO

Particular description of goods.—Bleached Cotton Goods in the Piece.

Ser. No. 34,956. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) DAVID J. BASS, Springfield, Mo. Filed May 26, 1908.

Ginger Olo

Particular description of goods.—A Non-Alcoholic Carbonated Ginger Beverage.

Ser. No. 35,132. (CLASS 39. CLOTHING.) JAMES E. ADAMS, Boston, Mass. Filed June 4, 1908.

The Jack and Jill Shoe

Particular description of goods.—Ladies' and Children's Leather Shoes.

Ser. No. 35,208. (CLASS 2. RECEPTACLES.) GARRY P. VAN WYE, New York, N. Y. Filed June 8, 1908.



Particular description of goods.—Vacuum Insulated Bottles.

Ser. No. 35,232. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) THE CRAVENETTE COMPANY, LIMITED, Bradford, England. Filed June 9, 1908. Used ten years.

CRAVENETTE

Particular description of goods.—Waterproofed Woolen, Worsted, Cotton, and Linen Vehicle Dust-Cloths and Covers and Lap-Robes.

Ser. No. 35,361. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) DOLLFUS-MIEG & CIE SOCIÉTÉ ANONYME, Mulhouse, Germany. Filed June 15, 1908.

DMC

Particular description of goods.—Fancy Trimmings and Braids Made of Cotton, Wool, Silk, Linen, Jute, and Ramie.

Ser. No. 35,362. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) DOLLFUS-MIEG & CIE SOCIÉTÉ ANONYME, Mulhouse, Germany. Filed June 15, 1908.



Particular description of goods.—Fancy Trimmings and Braids Made of Cotton, Wool, Silk, Linen, Jute, and Ramie.

Ser. No. 35,363. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) DOLLFUS-MIEG & CIE SOCIÉTÉ ANONYME, Mulhouse, Germany. Filed June 15, 1908.



Particular description of goods.—Fancy Trimmings and Braids Made of Cotton, Wool, Silk, Linen, Jute, and Ramie.

Ser. No. 35,369. (CLASS 39. CLOTHING.) BLOCK BROTHERS CLOTHING COMPANY, St. Joseph, Mo. Filed June 15, 1908.

"Yankee Doodle" Clothes

Particular description of goods.—Boys' and Men's Overcoats, Coats, Vests, and Trousers.

Ser. No. 35,390. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SENECA G. DORR, Los Angeles, Cal. Filed June 15, 1908.

LA PALOMA BRAND.

Particular description of goods.—California Olives and California Olive-Oil.

Ser. No. 35,395. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NANCI EMORY HOLDING, Cynthia, Ky. Filed June 15, 1908.

CALSOID

Particular description of goods.—Chemical Antisoot Composition.

Ser. No. 35,420. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PEEK, FREAN & CO., LIMITED, London, England. Filed June 16, 1908.

PAT-A-CAKE

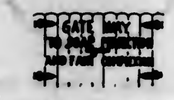
Particular description of goods.—Biscuits.

Ser. No. 35,444. (CLASS 33. GLASSWARE.) STANDARD GLASS COMPANY, Marion, Ind. Filed June 17, 1908.

BLUE RIBBON

Particular description of goods.—Glass Bottles.

Ser. No. 35,450. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ENTERPRISE SOAP WORKS, Nashville, Tenn. Filed June 17, 1908.



Particular description of goods.—Soap.

Ser. No. 35,679. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) ABRAHAM HIRSHFIELD, Brooklyn, N. Y. Filed June 23, 1908.

E-Z

Particular description of goods.—Foot-Supporters.

Ser. No. 35,744. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MORRIS H. SIEGEL, New York, N. Y. Filed June 24, 1908.

Florozone

Particular description of goods.—Aromatic Disinfectants and Dust-Allayers.

Ser. No. 35,765. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHINA & JAPAN TRADING COMPANY, LIMITED, New York, N. Y. Filed June 25, 1908.



Particular description of goods.—Unbleached Sheetings, Shirtings, Drills, and Flannels Woven of Cotton Yarn.

Ser. No. 35,930. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE GREAT WESTERN CEREAL COMPANY, Jersey City, N. J., and Chicago, Ill. Filed July 3, 1908.

GRAINFALFA

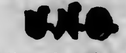
Particular description of goods.—Prepared Stock Food for Live Stock.

Ser. No. 35,950. (CLASS 32. FURNITURE AND UPHOLSTERY.) LOUISVILLE PILLOW CO., Louisville, Ky. Filed July 6, 1908. Used ten years.



Particular description of goods.—Feather and Down Pillows and Cotton-Felt Mattresses.

Ser. No. 36,000. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) EVERETT & BARRON COMPANY, Providence, R. I. Filed July 8, 1908.



Particular description of goods.—Blacking, Shoe-Polish, Leather-Dressing.

Ser. No. 36,007. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) SOCIETA ANONIMA AMBROSIO, Turin, Italy. Filed July 8, 1908.



Particular description of goods.—Kinematographic Films and Apparatus.

Ser. No. 36,125. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) LEONARDO GRAZIADEI, New York, N. Y. Filed July 15, 1908.



Particular description of goods.—Leather Dressings and Polishes.

Ser. No. 36,132. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ELS. CONSERVEN-FABRIK & IMPORT-GESELLSCHAFT, Schiltigheim, near Strassburg, Germany. Filed July 15, 1908.



Particular description of goods.—Peppermint Tablets.

Ser. No. 36,133. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ELS. CONSERVEN-FABRIK & IMPORT-GESELLSCHAFT, Schiltigheim, near Strassburg, Germany. Filed July 15, 1908.

Loriot

Particular description of goods.—Peppermint Tablets.

Ser. No. 36,134. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ELS. CONSERVEN-FABRIK & IMPORT-GESELLSCHAFT, Schiltigheim, near Strassburg, Germany. Filed July 15, 1908.



Particular description of goods.—Peppermint Tablets.

Ser. No. 36,140. (CLASS 17. TOBACCO PRODUCTS.) GODFREY S. MAHN, New York, N. Y. Filed July 15, 1908.



Particular description of goods.—Smoking-Tobacco.

Ser. No. 36,192. (CLASS 18. AGRICULTURAL AND DAIRY MACHINERY AND PARTS THEREOF.) INTERNATIONAL HARVESTER COMPANY OF AMERICA, Chicago, Ill. Filed July 17, 1908.

NEW IDEAL

Particular description of goods.—Grain-Binding Harvesters and Front-Cut Grass-Mowers.

Ser. No. 36,248. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WELLINGTON & SON, Anderson, Ind. Filed July 21, 1908.

Wellington's AXA

Particular description of goods.—Wheat-Flour.

Ser. No. 36,297. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) THE MEHLBACH SADDLE CO., New York, N. Y. Filed July 24, 1908. Used ten years.

WHITMAN

Particular description of goods.—Riding-Saddles and Parts Thereof, Saddle-Cloths, Bridles, and Bits.

Ser. No. 36,316. (CLASS 27. HOROLOGICAL INSTRUMENTS.) SPROEHNLE & COMPANY, Chicago, Ill. Filed July 24, 1908.

TRIBUNE

Particular description of goods.—Watches.

Ser. No. 36,349. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DECATUR CEREAL COMPANY, Decatur, Ill. Filed July 27, 1908.

OXO

Particular description of goods.—Hominy Feed.

Ser. No. 36,354. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHAS. LACEY PLUMB, New York, N. Y. Filed July 27, 1908.

GABRIELLE

Particular description of goods.—Wheat-Flour.

Ser. No. 36,367. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE PERKINS ELECTRIC SWITCH MANUFACTURING COMPANY, Bridgeport, Conn. Filed July 28, 1908.



Particular description of goods.—Push-Button Switches, Rotary Snap-Switches, and other Small Electrical Switches.

Ser. No. 36,373. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) E. A. MUNNS PRODUCTS COMPANY, San Francisco, Cal. Filed July 28, 1908.

RAYOLITH

Particular description of goods.—Surgical Plaster Compound.

Ser. No. 36,393. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) H. G. PAPE ELECTRIC & MFG. CO., Buffalo, N. Y. Filed July 30, 1908.

AURISTOPHONE

Particular description of goods.—Telephonic Apparatus for Enabling the Deaf to Hear, for the Correction of Defective Hearing, and for the Instruction of the Deaf and Dumb.

Ser. No. 36,432. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) COCHRAN, DRUGAN & CO., Trenton, N. J. Filed Aug. 3, 1908.

CODRU

Particular description of goods.—Water-Closets.

Ser. No. 36,452. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) H. M. VAN DEUSEN WHIP CO., Westfield, Mass. Filed Aug. 3, 1908.

LITTLE QUEEN

Particular description of goods.—Whips.

Ser. No. 36,540. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE BRADFORD DYERS' ASSOCIATION, LIMITED, Bradford, England. Filed Aug. 7, 1908.

Permo

Particular description of goods.—Cloths and Stuffs of Wool, Worsted, or Hair.

Ser. No. 36,544. (CLASS 38. PUBLICATIONS.) THOMAS NELSON & SONS, New York, N. Y. Filed Aug. 7, 1908.



Particular description of goods.—Loose-Leaf Encyclopedias.

Ser. No. 36,553. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) DEERING, MILLIKEN & CO., New York, N. Y. Filed Aug. 8, 1908.



Particular description of goods.—Bleached Cotton Goods in the Piece.

Ser. No. 36,554. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) DEERING MILLIKEN & CO., New York, N. Y. Filed Aug. 8, 1908.



Particular description of goods.—Bleached Cotton Goods in the Piece.

Ser. No. 36,555. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) DEERING, MILLIKEN & CO., New York, N. Y. Filed Aug. 8, 1908.



Particular description of goods.—Bleached Cotton Goods in the Piece.

Ser. No. 36,574. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AUGUSTUS AARONS, New Orleans, La. Filed Aug. 10, 1908. Used ten years.

DR. SYLVESTER'S

Particular description of goods.—Remedy for Chills and Fever, Coughs and Colds, and All Diseases of Inflammatory Nature in Horses and Cattle.

Ser. No. 36,584. (CLASS 31. FILTERS AND REFRIGERATORS.) HIBBARD, SPENCER, BARTLETT & COMPANY, Chicago, Ill. Filed Aug. 10, 1908. Used ten years.

GREENLAND
HIBBARD, SPENCER, BARTLETT & CO.

Particular description of goods.—Refrigerators.

Ser. No. 36,608. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WALTER A. MESTREZAT, Morgantown, W. Va. Filed Aug. 11, 1908.

NEOG

Particular description of goods.—Medical Preparation for Skin Diseases.

Ser. No. 36,655. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908. Used ten years.

BARTLETT BAY BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 36,659. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908. Used ten years.

COOKS INLET

BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 36,662. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908. Used ten years.

CAPE KARLUK



Particular description of goods.—Canned Salmon.

Ser. No. 36,664. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908. Used ten years.

CHARTERS STRAITS BRAND.

Particular description of goods.—Canned Salmon.

Ser. No. 36,679. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908. Used ten years.

HUME'S KARLUK



Particular description of goods.—Canned Salmon.

Ser. No. 36,695. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908. Used ten years.

NATIONAL
BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 36,698. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908. Used ten years.

NAHA BAY BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 36,705. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908. Used ten years.

RUSSIAN-AMERICAN
BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 36,707. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908. Used ten years.

RED BRAND

Particular description of goods.—Canned Salmon.

Ser. No. 36,727. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) FISHEL & LEVY, New York, N. Y. Filed Aug. 14, 1908.



Particular description of goods.—Compounded Whisky.

Ser. No. 36,734. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DALMATIA CO., Bridgeport, Conn. Filed Aug. 14, 1908.



Particular description of goods.—A Blood-Purifier.

Ser. No. 36,746. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. BOOTH & COMPANY, Chicago, Ill.; Baltimore, Md.; St. Paul, Duluth, and Minneapolis, Minn.; St. Louis, Mo.; Louisville, Ky.; Omaha, Nebr.; Indianapolis, Ind., and Port Arthur, Canada. Filed Aug. 15, 1908.

VAL BRAND

Particular description of goods.—Canned Salmon and Canned Oysters.

Ser. No. 36,751. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) GOODMAN CHEMICAL CO., New York, N. Y. Filed Aug. 15, 1908.



Particular description of goods.—Dyed Fur and Dyed Skins.

Ser. No. 36,787. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ARLINGTON MILLS, Lawrence and Boston, Mass. Filed Aug. 17, 1908.



Particular description of goods.—Worsted Dress Goods.

Ser. No. 36,810. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE INTERNATIONAL MANUFACTURING CO., New York, N. Y. Filed Aug. 18, 1908.

Gilt Edge

Particular description of goods.—Handkerchiefs.

Ser. No. 36,811. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE INTERNATIONAL MANUFACTURING CO., New York, N. Y. Filed Aug. 18, 1908.

TRUE BLUE

Particular description of goods.—Handkerchiefs.

Ser. No. 36,812. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE INTERNATIONAL MANUFACTURING CO., New York, N. Y. Filed Aug. 18, 1908.

Banner

Particular description of goods.—Handkerchiefs.

Ser. No. 36,830. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHEEK-NEAL COFFEE CO., Nashville, Tenn. Filed Aug. 19, 1908.

FIVE
MILLION
CLUB

Particular description of goods.—Coffee.

Ser. No. 36,847. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MOONEY MUELLER DRUG COMPANY, Indianapolis, Ind. Filed Aug. 20, 1908. Used ten years.

MELOL

Particular description of goods.—Castor-Oil Compound.

Ser. No. 36,869. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. C. COLE MILLING COMPANY, Chester, Ill. Filed Aug. 21, 1908.

DELTA

Particular description of goods.—Wheat-Flour.

Ser. No. 36,870. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. C. COLE MILLING COMPANY, Chester, Ill. Filed Aug. 21, 1908.

THETA

Particular description of goods.—Wheat-Flour.

Ser. No. 36,871. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. C. COLE MILLING COMPANY, Chester, Ill. Filed Aug. 21, 1908.

OMEGA

Particular description of goods.—Wheat-Flour.

Ser. No. 36,872. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. C. COLE MILLING COMPANY, Chester, Ill. Filed Aug. 21, 1908.

SOUTHERN CROSS

Particular description of goods.—Wheat-Flour.

Ser. No. 36,877. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) KRUSE & DEWENTER COMPANY, Indianapolis, Ind. Filed Aug. 21, 1908.

MONARCH

Particular description of goods.—Steel and Cast-Iron Warm-Air Furnaces.

Ser. No. 36,889. (CLASS 12. MASONRY MATERIALS.) THE BARBER ASPHALT PAVING COMPANY, Philadelphia, Pa. Filed Aug. 22, 1908.

GENASCO

THE STANDARD OF EXCELLENCE

Particular description of goods.—Bituminous Roofing, Roofing-Felt, Bituminous Roofing-Cement, Waterproofing-Felt, Bituminous Waterproofing Fabric, Bituminous Waterproofing-Cement, Mineral Rubber, Bituminous Pipe-Coating, and Bituminous Compounds for Heat Insulation.

Ser. No. 36,906. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LISTMAN MILL COMPANY, La Crosse, Wis. Filed Aug. 24, 1908.

TANSAN

Particular description of goods.—Wheat-Flour.

Ser. No. 36,942. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H. Filed Aug. 25, 1908. Used ten years.



Particular description of goods.—Tickings.

Ser. No. 36,943. (CLASS 43. THREAD AND YARN.) JAMES CHADWICK & BROTHER LIMITED, Ewely Mills, Bolton, England. Filed Aug. 25, 1908.



Particular description of goods.—Sewing-Cotton on Spools or Reels.

Ser. No. 37,031. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) A. O. LEONARD COMPANY, New York, N. Y. Filed Aug. 29, 1908.

UNSEEN COMFORT

Particular description of goods.—Artificial Ear-Drums.

Ser. No. 37,038. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SKEETER SKAT CO., Dallas, Tex. Filed Aug. 29, 1908. The design being printed in red.



Particular description of goods.—An Insect-Repellant.

Ser. No. 37,122. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) B. B. GLOSS MANUFACTURING CO., Ridgewood, N. Y. Filed Sept. 2, 1908.

B B

Particular description of goods.—Tablets for Glossing Washable Articles.

Ser. No. 37,162. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE ENTERPRISE MANUFACTURING COMPANY, Akron, Ohio. Filed Sept. 3, 1908. Used ten years.

PFLUEGER

Particular description of goods.—Fish-Hooks, Leaders, Flies, Baits, Spoons, Swivels, Sinkers, Fish-Scalers, Spears, Extractors, Stringers, Lines, Floats, Guts, Spinners, Trollers, Spreaders, Rings, Set-Line Snaps and Rings, Connecting-Links, Chugging-Rigs, Reels and Reel Parts, Snelled Hooks, Snells, Gangs, Trimmers, Casting-Weights, Trolling-Rigs, Trolley-Rigs, Frog and Minnow Rigs, Line-Winders, and Gaff-Hooks.

Ser. No. 37,185. (CLASS 31. FILTERS AND REFRIGERATORS.) THE NORTHERN REFRIGERATOR COMPANY, Grand Rapids, Mich. Filed Sept. 3, 1908.

GLACIER

Particular description of goods.—Refrigerators.

Ser. No. 37,201. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H. Filed Sept. 3, 1908. Used ten years.



Particular description of goods.—Tickings.

Ser. No. 37,205. (CLASS 10. FERTILIZERS.) ALABAMA CHEMICAL COMPANY, Montgomery, Ala. Filed Sept. 4, 1908.

BLUE RIBBON

Particular description of goods.—Guano.

Ser. No. 37,206. (CLASS 10. FERTILIZERS.) ALABAMA CHEMICAL COMPANY, Montgomery, Ala. Filed Sept. 4, 1908.

BIG-BOLL

Particular description of goods.—Guano.

Ser. No. 37,207. (CLASS 10. FERTILIZERS.) ALABAMA CHEMICAL COMPANY, Montgomery, Ala. Filed Sept. 4, 1908.

GULF

Particular description of goods.—Fertilizer.

Ser. No. 37,208. (CLASS 10. FERTILIZERS.) ALABAMA CHEMICAL COMPANY, Montgomery, Ala. Filed Sept. 4, 1908.

SUNBEAM

Particular description of goods.—Guano.

Ser. No. 37,209. (CLASS 10. FERTILIZERS.) ALABAMA CHEMICAL COMPANY, Montgomery, Ala. Filed Sept. 4, 1908.

MAGNOLIA

Particular description of goods.—Guano.

Ser. No. 37,210. (CLASS 10. FERTILIZERS.) ALABAMA CHEMICAL COMPANY, Montgomery, Ala. Filed Sept. 4, 1908.

OMEGA

Particular description of goods.—Fertilizer.

Ser. No. 37,211. (CLASS 10. FERTILIZERS.) ALABAMA CHEMICAL COMPANY, Montgomery, Ala. Filed Sept. 4, 1908.

REX

Particular description of goods.—Guano.

Ser. No. 37,212. (CLASS 10. FERTILIZERS.) ALABAMA CHEMICAL COMPANY, Montgomery, Ala. Filed Sept. 4, 1908.

LIBERTY BELL

Particular description of goods.—Guano.

Ser. No. 37,233. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WILKES-BARRE LACE MANUFACTURING CO., New York, N. Y. Filed Sept. 4, 1908.

MISSIONET

Particular description of goods.—Lace Curtains.

Ser. No. 37,244. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. MERCK, Darmstadt, Germany. Filed Sept. 5, 1908.

SUPTOL-BUROW

Particular description of goods.—A Remedy in Liquid Form Applied by Injection for the Treatment of Hog-Plague.

Ser. No. 37,248. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) VERNAS CHEMICAL COMPANY, New York, N. Y. Filed Sept. 5, 1908.

VERNAS

Particular description of goods.—Lotions for the Gums, Mouth, and Throat.

Ser. No. 37,314. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FULTON IRON WORKS, St. Louis, Mo. Filed Sept. 11, 1908.

CORA

Particular description of goods.—Cane-Mills.

Ser. No. 37,316. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JONES DRY GOODS CO., Kansas City, Mo. Filed Sept. 11, 1908.

MAYWOOD

Particular description of goods.—Sewing-Machines.

Ser. No. 37,318. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RAINBOW DYE CO., New York, N. Y. Filed Sept. 11, 1908.

OTERITE

Particular description of goods.—A Preparation for Stripping or Discharging Color from Textile Fabrics.

Ser. No. 37,328. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) DANIEL KUHN, Youngstown, Ohio. Filed Sept. 12, 1908.



KUHN'S
Clothes Cleaner

Particular description of goods.—Clothes-Cleaning Preparation.

Ser. No. 37,334. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GEORGE F. SMITH, Woodsboro, Md. Filed Sept. 12, 1908.

ROSEBUD



Particular description of goods.—Medicinal Soap.

Ser. No. 37,347. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed Sept. 14, 1908.

Angelo

Particular description of goods.—Photographic Paper.

Ser. No. 37,350. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed Sept. 14, 1908.

BULLET

Particular description of goods.—Photographic Cameras and Tripods.

Ser. No. 37,351. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed Sept. 14, 1908.

Flexo

Particular description of goods.—Photographic Cameras and Tripods.

Ser. No. 37,352. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed Sept. 14, 1908.

NEPERA

Particular description of goods.—Photographic Paper.

Ser. No. 37,376. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) OTTO PREU, Trenton, N. J. Filed Sept. 14, 1908.

MAGIC

Particular description of goods.—A Canvas, Kid, and Suede Shoe Cleaning and Coloring Preparation.

Ser. No. 37,414. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CORA E. HOPKINS, Philadelphia, Pa. Filed Sept. 16, 1908. Used ten years.



Particular description of goods.—Dental Paste.

TRADE-MARKS

REGISTERED OCTOBER 20, 1908.

70,923. CERTAIN EXPLOSIVES. CURTIS'S & HARVEY, LIMITED, London, England.
Filed April 10, 1908. Serial No. 34,003. PUBLISHED AUGUST 18, 1908.

70,924. CERTAIN EXPLOSIVES. CURTIS'S & HARVEY, LIMITED, London, England.
Filed April 10, 1908. Serial No. 34,004. PUBLISHED AUGUST 18, 1908.

70,925. CERTAIN EXPLOSIVES. CURTIS'S & HARVEY, LIMITED, London, England.
Filed April 10, 1908. Serial No. 34,005. PUBLISHED AUGUST 18, 1908.

70,926. CERTAIN EXPLOSIVES. CURTIS'S & HARVEY, LIMITED, London, England.
Filed April 14, 1908. Serial No. 34,079. PUBLISHED AUGUST 18 1908.

70,927. PORCELAIN TEETH. THE DENTISTS' SUPPLY CO., New York, N. Y., and York, Pa.
Filed April 29, 1908. Serial No. 34,467. PUBLISHED AUGUST 18, 1908.

70,928. MATCHES. JOHN ANGUS HUNT, London, England.
Filed June 20, 1908. Serial No. 35,630. PUBLISHED AUGUST 18, 1908.

70,929. MATCHES. JOHN ANGUS HUNT, London, England.
Filed June 20, 1908. Serial No. 35,631. PUBLISHED AUGUST 18, 1908.

70,930. AIR-PUMP ATOMIZERS FOR SPRAYING LIQUID AIR-DISINFECTANTS. WALTER K. JAHN, Chicago, Ill.
Filed April 15, 1908. Serial No. 34,107. PUBLISHED AUGUST 18, 1908.

70,931. WATCHES, WATCHCASES, AND WATCH-MOVEMENTS. AMERICAN-SWISS WATCH CO., New York, N. Y.
Filed July 2, 1908. Serial No. 35,923. PUBLISHED AUGUST 18, 1908.

70,932. IRON TONIC. SAMUEL ALBERT, New York, N. Y.
Filed June 15, 1908. Serial No. 35,358. PUBLISHED AUGUST 18, 1908.

70,933. TALCUM POWDER, FACE-BLEACH, AND TOOTH-POWDER. MARY L. BABCOCK, New York, N. Y.
Filed April 30, 1908. Serial No. 34,492. PUBLISHED AUGUST 18, 1908.

70,934. WEEKLY MAGAZINE. H. J. BOHN & BRO., Chicago, Ill.
Filed June 27, 1908. Serial No. 35,823. PUBLISHED AUGUST 18, 1908.

70,935. TOILET CREAM. THE C. B. WOODWORTH SONS CO., Rochester, N. Y.
Filed July 9, 1908. Serial No. 36,032. PUBLISHED AUGUST 18, 1908.

70,936. POWDER FOR DESTROYING ROSE-BUGS. JAMES C. CLARK, East Hampton, Conn.
Filed June 20, 1908. Serial No. 35,641. PUBLISHED AUGUST 18, 1908.

70,937. SOAP. FISK MFG. CO., Springfield, Mass.
Filed July 1, 1908. Serial No. 35,899. PUBLISHED AUGUST 18, 1908.

70,938. HERB TEA. J. C. FRESE & CO., Hamburg, Germany.
Filed December 19, 1906. Serial No. 24,141. PUBLISHED AUGUST 18, 1908.

70,939. PREPARED ASBESTOS. J. W. ROBERTS, LIMITED, Leeds, England.
Filed June 11, 1908. Serial No. 35,294. PUBLISHED AUGUST 18, 1908.

70,940. POWDER FOR SOFTENING WATER AND FOR CLEANSING. JAMES PYLE & SONS, Edgewater, N. J.
Filed May 22, 1908. Serial No. 34,880. PUBLISHED AUGUST 18, 1908.

70,941. PERIODICAL RELATING TO RAILROADS AND ALLIED SUBJECTS. THE RAILROAD GAZETTE, New York N. Y.
Filed June 12, 1908. Serial No. 35,298. PUBLISHED AUGUST 18, 1908.

70,942. CHAIRS. ROYAL CHAIR CO., Sturgis, Mich.
Filed June 29, 1908. Serial No. 35,852. PUBLISHED AUGUST 18, 1908.

70,943. CHAIRS. ROYAL CHAIR CO., Sturgis, Mich.
Filed June 29, 1908. Serial No. 35,853. PUBLISHED AUGUST 18, 1908.

70,944. DISINFECTANT, ANTISEPTIC AND DEODORIZING PREPARATION. SCHOELLKOPF, HARTFORD & HANNA COMPANY, Buffalo, N. Y.
Filed July 9, 1908. Serial No. 36,027. PUBLISHED AUGUST 18, 1908.

70,945. INDELIBLE INK, INDELIBLE TAPESTRY-INK, AND INDELIBLE FIXATIVE. REBECCA T. SWENNING, Los Angeles, Cal.
Filed September 6, 1907 Serial No. 29,779. PUBLISHED AUGUST 18, 1908.

70,946. SAD-IRONS. MARCUS L. UDWIN, Chicago, Ill.
Filed April 27, 1908. Serial No. 34,421. PUBLISHED AUGUST 18, 1908.

70,947. PLANT-FERTILIZING MATERIALS. WILSON & TOOMER FERTILIZER CO., Jacksonville, Fla.
Filed June 24, 1908. Serial No. 35,739. PUBLISHED AUGUST, 18, 1908.

70,948. PLANT-FERTILIZING MATERIALS. WILSON & TOOMER FERTILIZER CO., Jacksonville, Fla.
Filed June 24, 1908. Serial No. 35,740. PUBLISHED AUGUST, 18, 1908.

70,949. SILK, LINEN, AND COTTON FISH-LINES. ASHAWAY LINE & TWINE MANUF'G CO., Ashaway, R. I.
Filed May 11, 1908. Serial No. 34,690. PUBLISHED AUGUST 18, 1908.

70,950. SARDINES IN COTTON-SEED OIL. BLANCHARD MFG. & CANNING CO., Eastport, Me.
Filed April 4, 1908. Serial No. 33,866. PUBLISHED AUGUST 18, 1908.

70,951. HAMS AND BACONS. BRITTAIN & COMPANY, Marshalltown, Iowa.
Filed February 29, 1908. Serial No. 33,105. PUBLISHED MAY 26, 1908.

70,952. EXTRACTS OF MEAT. THE COMPAGNIE DES PRODUITS KEMMERICH SOCIÉTÉ ANONYME, Antwerp, Belgium.
Filed December 10, 1907. Serial No. 31,655. PUBLISHED AUGUST 18, 1908.

70,953. MAGAZINE. THE CUSHMAN COMPANY, Springfield, Mass.
Filed May 2, 1908. Serial No. 34,541. PUBLISHED JUNE 23, 1908.

70,954. HOSIERY. DES MOINES HOSIERY MILLS, Des Moines, Iowa.
Filed April 24, 1908. Serial No. 34,305. PUBLISHED AUGUST 18, 1908.

70,955. SODA-CRACKERS. THE HESS BISCUIT AND BREAD Co., Ogden, Utah.
Filed April 25, 1908. Serial No. 34,382. PUBLISHED AUGUST 18, 1908.

70,956. CALCIMINE. ILSLEY DOUBLEDAY & Co., New York, N. Y.
Filed April 4, 1908. Serial No. 33,861. PUBLISHED AUGUST 18, 1908.

70,957. LADIES' BELTS FOR PERSONAL WEAR. SOLOMON ISAAC, New York, N. Y.
Filed May 2, 1908. Serial No. 34,536. PUBLISHED AUGUST 18, 1908.

70,958. BASKETS AND PACKAGES OF GRAPES. KEYSTONE GRAPE COMPANY, North East, Pa.
Filed April 27, 1908. Serial No. 34,394. PUBLISHED AUGUST 18, 1908.

70,959. WALL-COATINGS IN DRY POWDERED FORM. THE MURALO COMPANY, New Brighton, N. Y.
Filed May 13, 1908. Serial No. 34,725. PUBLISHED AUGUST 18, 1908.

70,960. CANNED FRUITS, CANNED VEGETABLES, APPLE-BUTTER, BOTTLED TOMATO-CATSUP, AND MINCE-MEAT. NAVE-MCCORD MERCANTILE COMPANY, St. Joseph, Mo.
Filed April 4, 1908. Serial No. 33,859. PUBLISHED AUGUST 18, 1908.

70,961. SARDINES. THE NEUMAN & SCHWIERS Co., New York, N. Y.
Filed April 27, 1908. Serial No. 34,428. PUBLISHED AUGUST 18, 1908.

70,962. WHEAT-FLOUR. THE OGILVIE FLOUR MILLS COMPANY, LIMITED, Montreal, Quebec, Canada.
Filed April 6, 1908. Serial No. 33,899. PUBLISHED AUGUST 18, 1908.

70,963. MEASURING-RULES. WILLIAM PRYM, Vienna, Austria-Hungary.
Filed August 6, 1907. Serial No. 29,256. PUBLISHED AUGUST 18, 1908.

70,964. LEATHER SHOES. R. P. SMITH & SONS Co., Chicago, Ill.
Filed October 19, 1907. Serial No. 30,686. PUBLISHED AUGUST 18, 1908.

70,965. COTTON-SEED OIL. THE UNION OIL COMPANY West New York, N. J.
Filed May 4, 1908. Serial No. 34,561. PUBLISHED AUGUST 18, 1908.

70,966. CIGARS, CHEROOTS, AND CIGARETTES MADE OF CIGAR-TOBACCO. CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y., and Caguas, Porto Rico.
Filed May 16, 1908. Serial No. 34,789. PUBLISHED AUGUST 18, 1908.

70,967. CIGARS, CHEROOTS, AND CIGARETTES MADE OF CIGAR-TOBACCO. CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y., and Caguas, Porto Rico.
Filed May 16, 1908. Serial No. 34,790. PUBLISHED AUGUST 18, 1908.

70,968. CIGARS, CHEROOTS, AND CIGARETTES MADE OF CIGAR-TOBACCO. CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y., and Caguas, Porto Rico.
Filed May 16, 1908. Serial No. 34,792. PUBLISHED AUGUST 18, 1908.

70,969. CIGARS, CHEROOTS, AND CIGARETTES MADE OF CIGAR-TOBACCO. CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y., and Caguas, Porto Rico.
Filed May 16, 1908. Serial No. 34,793. PUBLISHED AUGUST 18, 1908.

70,970. CIGARS, CHEROOTS, AND CIGARETTES MADE OF CIGAR-TOBACCO. CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y., and Caguas, Porto Rico.
Filed May 16, 1908. Serial No. 34,794. PUBLISHED AUGUST 18, 1908.

70,971. CIGARS, CHEROOTS, AND CIGARETTES MADE OF CIGAR-TOBACCO. CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y., and Caguas, Porto Rico.
Filed May 16, 1908. Serial No. 34,795. PUBLISHED AUGUST 18, 1908.

70,972. CIGARS, CHEROOTS, AND CIGARETTES MADE OF CIGAR-TOBACCO. CAYEY-CAGUAS TOBACCO COMPANY New York, N. Y., and Caguas, Porto Rico.
Filed May 16, 1908. Serial No. 34,797. PUBLISHED AUGUST 18, 1908.

70,973. CIGARS, CHEROOTS, AND CIGARETTES MADE OF CIGAR-TOBACCO. CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y., and Caguas, Porto Rico.
Filed May 16, 1908. Serial No. 34,798. PUBLISHED AUGUST 18, 1908.

70,974. WRITING, DRAWING, AND LITHOGRAPHING PENS AND PAPER. BOGDAN GISEVIUS, Berlin, Germany.
Filed June 10, 1907. Serial No. 27,999. PUBLISHED AUGUST 18, 1908.

70,975. LEATHER BOOTS AND SHOES. LOCKE SHOE COMPANY, Wheeling, W. Va.
Filed December 10, 1906. Serial No. 23,922. PUBLISHED MAY 21, 1907.

70,976. OYSTERS. MILLER BROS. & Co., Baltimore, Md.
Filed August 4, 1905. Serial No. 11,238. PUBLISHED AUGUST 18, 1908.

70,977. MEN'S UNDERSHIRTS, DRAWERS, AND PAJAMAS. TIM & Co., New York, N. Y.
Filed May 14, 1908. Serial No. 34,732. PUBLISHED AUGUST 18, 1908.

70,978. PAINTS. THE A. BURDSAL COMPANY, Indianapolis, Ind.
Filed July 8, 1908. Serial No. 36,010. PUBLISHED AUGUST 18, 1908.

70,979. COFFEE. A. J. KASPER COMPANY, Chicago, Ill.
Filed June 11, 1908. Serial No. 35,292. PUBLISHED AUGUST 18, 1908.

70,980. CERTAIN TEXTILES. THE ADAMS MANUFACTURING COMPANY, New York, N. Y.
Filed April 3, 1905. Serial No. 285. PUBLISHED JUNE 27, 1905.

70,981. CHEWING-GUM. F. J. BANTA & SON, Lima, Ohio.
Filed April 9, 1908. Serial No. 33,963. PUBLISHED JUNE 16, 1908.

70,982. STRAIGHT WHISKY. BESHARA GANIM & BRO., New York, N. Y.
Filed June 10, 1908. Serial No. 35,263. PUBLISHED JULY 28, 1908.

70,983. WILTON RUGS. THOMAS DEVELON, Jr., Philadelphia, Pa.
Filed May 28, 1908. Serial No. 35,000. PUBLISHED AUGUST 18, 1908.

70,984. WILTON RUGS. THOMAS DEVELON, Jr., Philadelphia, Pa.
Filed May 28, 1908. Serial No. 35,001. PUBLISHED AUGUST 18, 1908.

70,985. DAMP-PROOFING COLORLESS LIQUID COATING FOR CEMENT, BRICK, OR STONE. DEXTER BROTHERS Co., Boston, Mass.
Filed June 1, 1908. Serial No. 35,049. PUBLISHED AUGUST 18, 1908.

70,986. LOOM-TEMPLES. DRAPER COMPANY, Portland, Me., and Hopedale, Mass.
Filed June 3, 1908. Serial No. 35,124. PUBLISHED AUGUST 18, 1908.

70,987. BEER. DU BOIS BREWING CO., Du Bois, Pa.
Filed June 18, 1908. Serial No. 35,604. PUBLISHED AUGUST 18, 1908.

70,988. CERTAIN FOODS. FOLEY BROS. & KELLY, St. Paul, Minn.
Filed April 21, 1908. Serial No. 34,243. PUBLISHED AUGUST 18, 1908.

70,989. LUCCA OLIVE-OIL. JOSEPH E. GATTI & BRO., Washington, D. C.
Filed June 29, 1908. Serial No. 35,832. PUBLISHED AUGUST 18, 1908.

70,990. LAGER-BEER, ALE, AND PORTER. THE INTERNATIONAL BREWING COMPANY, Buffalo, N. Y.
Filed January 6, 1908. Serial No. 32,103. PUBLISHED AUGUST 18, 1908.

70,991. CERTAIN OILY PREPARATION. JACQUES WOLF AND Co., Passaic, N. J.
Filed May 14, 1908. Serial No. 34,741. PUBLISHED AUGUST 18, 1908.

70,992. CERTAIN ELECTRICAL SUPPLIES. THE JOHNS-PRATT COMPANY, Hartford, Conn.
Filed April 22, 1908. Serial No. 34,281. PUBLISHED AUGUST 18, 1908.

70,993. WATCHMAKERS' TOOLS. KENDRICK & DAVIS, Lebanon, N. H.
Filed June 17, 1908. Serial No. 35,438. PUBLISHED AUGUST 18, 1908.

70,994. FISHING-LINES. E. J. MARTIN'S SONS, Rockville, Conn.
Filed June 4, 1908. Serial No. 35,138. PUBLISHED AUGUST 18, 1908.

70,995. COPING-SAWS. FRANK P. MAXSON, Chicago, Ill.
Filed June 22, 1908. Serial No. 35,659. PUBLISHED AUGUST 18, 1908.

70,996. LINSEED-OIL. MOUND CITY PAINT & COLOR COMPANY, St. Louis, Mo.
Filed May 18, 1908. Serial No. 34,807. PUBLISHED AUGUST 18, 1908.

70,997. CALCIMINE. THE MURALO COMPANY, New York and New Brighton, N. Y.
Filed July 14, 1908. Serial No. 36,094. PUBLISHED AUGUST 18, 1908.

70,998. OIL-PAINT. THE MURALO COMPANY, New York and New Brighton, N. Y.
Filed July 14, 1908. Serial No. 36,095. PUBLISHED AUGUST 18, 1908.

70,999. PAINTS, STAINS, ENAMELS, LACS, VARNISHES, AND FILLERS. THE PATTERSON-SARGENT COMPANY, Cleveland, Ohio.
Filed May 29, 1908. Serial No. 35,019. PUBLISHED AUGUST 18, 1908.

71,000. CANNED SMOKED NORWEGIAN SARDINES IN OLIVE-OIL. HOWARD B. RITCHIE, Boston, Mass.
Filed April 6, 1908. Serial No. 33,873. PUBLISHED JUNE 9, 1908.

71,001. HOSIERY. SHAW STOCKING COMPANY, Lowell, Mass.
Filed May 27, 1908. Serial No. 34,976. PUBLISHED AUGUST 18, 1908.

71,002. ROOT-BEER SYRUP. STEVENS & DOW, Haverhill, Mass.
Filed July 9, 1908. Serial No. 36,033. PUBLISHED AUGUST 18, 1908.

71,003. STRAIGHT SLOE GIN. GEORGES STIEGLER & Co., New York, N. Y.
Filed May 1, 1908. Serial No. 34,506. PUBLISHED JULY 28, 1908.

71,004. HOISTING, DREDGING, AND CONVEYING BUCKETS. WILLIAM B. HOUGH COMPANY, Chicago, Ill.
Filed June 1, 1908. Serial No. 35,070. PUBLISHED AUGUST 18, 1908.

71,005. CHEWING-GUM. ZENO MANUFACTURING Co., Chicago, Ill.
Filed June 8, 1908. Serial No. 35,221. PUBLISHED AUGUST 18, 1908.

LABELS

REGISTERED OCTOBER 20, 1908.

14,409.—*Title:* "AROMA." (For Cigars.) McKENZIE BROS., Danville, Ill. Filed September 8, 1908.

14,410.—*Title:* "CORKER." (For Cigars.) THE HILSON COMPANY, New York, N. Y. Filed August 21, 1908.

14,411.—*Title:* "J. POLLACK'S FAMOUS STOGIES." (For Stogies.) JULIUS POLLACK, Cleveland, Ohio. Filed August 14, 1908.

14,412.—*Title:* "THE WEBER COCKTAILS." (For a Beverage Commonly Known as Cocktails.) CHARLES F. WEBER, Mount Vernon, N. Y. Filed July 8, 1908.

14,413.—*Title:* "GRIFFING CHOCOLATE CO. BREAKFAST COCOA." (For Cocoa.) GRIFFING CHOCOLATE COMPANY, New York, N. Y. Filed September 18, 1908.

14,414.—*Title:* "WITCH BRAND FLOUR." (For Flour.) SANDS, TAYLOR & WOOD CO., Boston, Mass. Filed August 25, 1908.

14,415.—*Title:* "GOLD MEDAL BREAD." (For Bread.) FLOYD T. SHORT, Chicago, Ill. Filed September 21, 1908.

14,416.—*Title:* "KLEANWELL." (For Tooth-Brushes.) ALFRED H. SMITH CO., New York, N. Y. Filed September 22, 1908.

14,417.—*Title:* "THE KEY TO YOUR SUCCESS." (For a Skin-Cultivator and Germ-Eradicator.) GEORGE A. SCHMIDT, Chicago, Ill. Filed July 27, 1908.

14,418.—*Title:* "SULPHO-TRI-TERPENES." (For a Veterinary Remedy.) C. E. FRAZIER & Co., Nappanee, Ind. Filed March 9, 1908.

14,419.—*Title:* "ACME BAR POLISH." (For a Polish.) MAURICE BLOOMINGTON, San Francisco, Cal. Filed September 21, 1908.

14,420.—*Title:* "BRILLIANTINE METAL POLISH." (For Metal-Polish.) SMITH BROS. HARDWARE COMPANY, Oakland, Cal. Filed September 1, 1908.

14,421.—*Title:* "NO-DUST." (For a Compound to be Used for the Purpose of Allaying Dust When Sweeping Floors.) WEBB-FREYSCHLAG MERC. CO., Kansas City, Mo. Filed July 25, 1908.

14,422.—*Title:* "KANTLEAK DUCK." (For a Waterproofed Duck.) HENRY GITTERMAN & Co., New York, N. Y. Filed September 8, 1908.

14,423.—*Title:* "KERCHIEFS." (For Handkerchiefs.) ROYAL PAPER BOX MANUFACTURING COMPANY, Philadelphia, Pa. Filed August 12, 1908.

14,424.—*Title:* "OXFORD LINEN MILLS PURE LINEN." (For Linen.) OXFORD LINEN MILLS, North Brookfield, Mass. Filed September 1, 1908.

PRINTS

REGISTERED OCTOBER 20, 1908.

2,365.—*Title:* "JOHN J. CLARK'S BEST 6 CORD SPOOL COTTON." (For Spool-Cotton.) BLODGETT & ORSWELL CO., Pawtucket, R. I. Filed September 9, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE HARTLEY.

Decided September 28, 1908.

1. PUBLIC USE—EVIDENCE—COMMISSIONER'S DECISION INSTITUTING PROCEEDINGS NOT CONCLUSIVE.

The fact that the Commissioner holds certain *ex parte* affidavits filed in support of a petition for the institution of public-use proceedings to be sufficient to make out a *prima facie* case of public use such as to warrant the taking of testimony does not preclude the Primary Examiner from ruling that the evidence taken in such proceedings is not sufficient to warrant the rejection of the claims.

2. APPEAL NOT ALLOWED FROM PRIMARY EXAMINER'S FAVORABLE DECISION ON PUBLIC USE.

The action of the Examiner holding that testimony in public-use proceedings is insufficient to warrant the rejection of the applicant's claims will be reviewed only where such obvious error appears as will warrant the supervisory action of the Commissioner.

SWITCH.

Mr. Albert G. Davis for the applicant.

Mr. Charles M. Clarke for the protestant.

MOORE, *Commissioner:*

This is a petition by Bergmann, the protestant in the above-entitled case, that he be allowed an appeal from the decision of the Primary Examiner holding that the testimony presented by him to establish the statutory bar of public use against the grant of a patent to Hartley is insufficient to warrant a rejection of the latter's claims.

It is urged that the finding of the Primary Examiner is not only at variance with the evidence, but contrary to the finding of the Commissioner that the affidavits presented by the protestant established a *prima facie* case of public use. The affidavits presented by the protestant were deemed sufficient to lay the foundation for the introduction of testimony; but they are not in themselves testimony upon which a decision may be based, and, *a fortiori*, cannot be allowed to contravene testimony taken in accordance with the established rules of evidence. (*Nielson* v. *Bradshaw*, 91 O. G., 644; 16 App. D. C., 92; *Shrum* v. *Baumgarten*, 104 O. G., 577.)

Public-use proceedings are *ex parte* in their nature, the sole question being whether the applicant is barred from obtaining a patent on the invention claimed by reason of the public use or sale of devices embodying the invention claimed.

While it is the practice to permit one of the general public to file a protest and to take testimony in behalf of the Patent Office upon this question, such party has no rights in the controversy other than those authorized by the Commissioner. When the evidence presented has been submitted to the Primary Examiner for consideration and in his opinion this testimony does not establish a statutory bar of public use, there is no greater warrant for a review of his decision upon this question than from a decision by the Examiner that references in his possession, whether obtained by search or upon motion for dissolution in an interference, do not anticipate the claims of an application. The action of the Examiner holding that testimony in public-use proceedings is insufficient to warrant the rejection of the applicant's claims will be reviewed only where such obvious error appears as will warrant the supervisory action of the Commissioner. In the present case no such error is found.

The petition is denied.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

IN RE TAYLOR.

Decided June 2, 1908.

PATENTABILITY—PRINTED MATTER—NON-INVENTION.

A claim for a guarantee credit book having certain designated columns for certain entries, *Held* to involve no invention over the prior art which disclosed the general scheme, the only difference being the addition of certain columns for the purpose of keeping an account of liquidated damages.

Mr. H. E. Bellows for the appellant.

Mr. F. A. Tennant for the Commissioner of Patents.

SHEPARD, *C. J.:*

This is an appeal from the decision of the Commissioner of Patents denying an application for a patent having the following claims:

In a guarantee credit book, two pages, one of which has a column suitably designated for balances due stores, columns suitably designated for entries pertaining to liquidated damages and a column suitably designated for balances due as liquidated damages, while the other is provided with columns cooperating with those of the first-mentioned page and suitably designated for

entries pertaining to gross credit balances available for the use of a purchaser and suitably designated for entries pertaining to net credit balances for which a guarantor is responsible, respectively.

The references in the decisions of the Patent Office tribunals are, first, a patent to Taylor February 4, 1902, No. 692,384; second, a patent to Taylor March 10, 1903, No. 722,391. The first of these is for a deposit credit book having complementary pages, one of which is a deposit-sheet, the other an account-sheet provided with appropriately-headed spaces for data relating to commercial transactions other than those with the bank, etc. The second relates to books employed to secure safety in commercial transactions, and has for its purpose the utilization of a bank account or other credit balance to secure credit for an equal or lesser sum in merchandise elsewhere than at the place of deposit without withdrawing any part of the bank account in the first instance, and without interrupting the accumulation of interest upon the balance. The claim is for a credit-book with oppositely-disposed sheets divided into columns appropriately headed, in which are to be made different entries showing the amount deposited, the amount withdrawn, the amount of purchases at certain stores, and balance due the depositor. The general scheme of the present application is the same as that of the above-mentioned patents. It adds other columns for the purpose of keeping an account of liquidated damages, that is the amount which the depositor must pay the guarantor for the failure to purchase a stipulated amount of merchandise.

We agree with the Commissioner that it involves no invention to add to the book the additional columns to accomplish this purpose. (See *Munson* v. *New York City*, 124 U. S., 601, 604; *U. S. Credit System Co.* v. *American Credit Indemnity Co.*, 69 Fed. Rep., 139, 143.)

The decision will be affirmed. It is so ordered, and that this decision be certified to the Commissioner of Patents. Affirmed.

Court of Appeals of the District of Columbia.

DAVIS *v.* HORTON.

Decided June 9, 1908.

INTERFERENCE—PRIORITY—DILIGENCE.

Where the junior party had disclosed the invention to several persons and had ordered tools to manufacture the same prior to the entry of the senior party into the field and in a few months thereafter actually sold a small number which was followed a few months later by the manufacture and sale of large numbers of such devices, *Held* that he was diligent in reducing his invention to practice.

Mr. W. G. Carr for the appellant.

Mr. L. S. Bacon, *Mr. J. H. Milans*, and *Mr. Sheldon A. Wood* for the appellee.

ROBB, *J.:*

This is an interference proceeding, and, as stated by one of the tribunals of the Patent Office, involves a fuse-holder of an inclosed type upon the exterior of which is mounted a mechanical indicator consisting of a spring attached to the casing or cover of the fuse, to show whether or not the fuse has been blown. The issue is stated in the following counts:

1. In a fuse-holder, a casing, a fuse therein, a spring secured to the exterior of the casing, and a transverse connection between said spring and the fuse serving to hold the spring in contact with the exterior of the casing while the fuse therein is unbroken.

2. The combination with a casing having end terminals and a fusible strip within the casing and connected to the end terminals, of a spring-actuated indicator supported exteriorly upon the side of the casing and a wire having its respective ends so attached to the indicator and to an intermediate point in the fusible strip as to exert a lateral strain thereon.

3. The combination with a casing or holder having end terminals and an inclosed fuse having its ends attached to the casing terminals, of a spring-actuated indicator upon the outside of the casing and a wire that projects through the side of the casing and has its respective ends attached to the indicator and to an intermediate portion of the fuse.

4. In an inclosed fuse or cut-out, a casing having an aperture through its side wall, an internal fuse-wire attached at its ends to the casing, an external spring-acting finger attached at one end to the casing, and a connection between the opposite end of said finger and fuse-wire, passing through said aperture, for holding said finger under tension.

5. In a fuse-holder, a casing, a fuse therein, having a weakened portion, a movable indicator secured to the exterior of the casing, and a connection between the indicator and the weakened portion of the fuse.

6. In a fuse-holder, a casing, a fuse therein having a weakened portion, a spring-actuated indicator secured to the exterior of the casing and a transverse connection between the spring-actuated indicator and the weakened portion of the fuse.

Davis, the senior party, filed January 20, 1904, and alleged conception and disclosure of the invention August 1, 1903, and reduction to practice about the same time. These averments he sustained by competent evidence.

Horton, the junior party, filed August 29, 1904, and alleged conception and disclosure in the spring of 1901, and reduction to practice in the spring of 1903. Counsel for Davis, with commendable candor, states that—

both parties to the interference are original and independent inventors, so far as the records show.

Horton is an electrical engineer and skilled in the art to which this invention relates. In May, 1901, he was the electrical engineer of the Detroit Copper Mining Company at Morenci, Ariz. He testifies that along the last of that month he had a great deal of trouble in the blowing out of fuses, particularly in the store of the company, and that where several fuses were located in close proximity with each other it was difficult to ascertain which particular fuse or fuses had blown; that he thereupon sought to devise, and did in fact devise a device which he thought would obviate the difficulty; that he disclosed his idea to the company's purchasing agent, a Mr. Puckett, by means of sketches which he then made. Mr. Horton says of these sketches:

I explained them fully to Mr. Puckett and showed him how the device worked, and how by attaching a spring fastened to the case and by a wire running from the spring to a cut-away portion of the fuse-strip, that the fuse would always burn in two where this weakened portion was, and that when the fuse had burned in two at this weakened portion the spring would be released and would assume its normal position away from the case and would provide mechanical means by which I could readily determine whether or not the fuse was blown.

In November, 1901, Horton was called to his home in Michigan by the illness of his father who died late in December of that year. Horton administered upon the estate which occupied his time until the middle of December, 1902, when he went to Detroit, Mich., and established a plant for the manufacture of inclosed fuses. It was February before he got the factory under operation and made his first delivery of fuses. Soon after establishing his plant he conducted experiments on inclosed fuses embodying the idea which he had disclosed to Puckett at Morenci in 1901. In April or May he experimented with a device which embodied the dominating idea of the issue even though technically it differed from it. This device consisted of a fine wire extending through a fuse-tube and attached to the central portion of the fuse element, and so constructed that when the fuse was ruptured by the burning in two of the fusible element, the wire would be released, it being under tension during the operation of the device by a small rubber band, one end of which was fastened to the wire and the other end to a nail driven into the board upon which the fuse-block was mounted. Several specimen devices were tested in the presence of witnesses, and the practicability of such indicators fully demonstrated. It appears that the National Board of Fire Underwriters were contemplating the issuance of specifications for standardizing inclosed fuses, and that Horton hesitated about attempting to put his invention upon the market until they had taken action. He did, however, explain a device which fully embodied the issue to one Massnick in July, 1903, and employed Massnick, who was a skilled mechanic, to work upon tools for cutting the fusible element for fuses that could be made to embody the invention. These tools were completed some time in September, and Massnick on October 1, 1903, became superintendent of Horton's company. Immediately thereafter steps were taken to embody the perfected invention in concrete form, the result being that about the middle of October fuses of a commercial type were successfully tested. In November Horton actually manufactured and sold a small line of these fuses, and in July, 1904, after the Board of Fire Underwriters had issued their rules he manufactured them in large numbers. Mr. Puckett, who is an absolutely disinterested witness, fully corroborates Horton as to what took place at Morenci in 1901, and his testimony is definite and convincing. He was asked on cross-examination whether Horton requested him as purchasing agent to procure any fuses like those Horton had described, and answered:

The matter was discussed and we wondered if there was anything in the market like it, and we both decided that there was nothing on the market like that, and that if we secured that fuse we would have to make it or have it made.

The witness also explained satisfactorily why nothing was then done toward making such a fuse. He further testifies that the sketches Horton made at the time remained on his desk for several days.

Several other witnesses testified in corroboration of Horton, but we do not deem it necessary to devote more time to the analysis of testimony.

The only question involved in this appeal is whether Horton was sufficiently diligent. In a case like this where it conclusively appears that the party, against whom the rule of diligence is sought to be enforced, was in fact the prior inventor, the facts and circumstances surrounding him at the time of his alleged lack of diligence will be carefully considered before he will be deprived of the fruits of his discovery. (*Woods* v. *Poor*, 29 App. D. C., 387.) As above stated, Horton soon after the establishment of his plant at Detroit, Mich., conducted experiments on inclosed fuses and demonstrated the practicability of the idea which he had disclosed to Puckett in 1901. Everything he did after this demonstration indicates a desire and intention on his part to give to the public the benefit of his discovery at the earliest practicable moment. We do not regard it as at all strange or unusual that he did not proceed with greater haste. Davis did not enter the field until August, 1903, at which time Horton had fully disclosed his invention to several witnesses, had demonstrated its entire practicability, and being skilled in the art was fully aware of its value. He had made arrangements for tools with which to manufacture the different parts of fuses embodying his invention, and, as evidence that he was acting in good faith, we find that immediately upon the completion of these tools, which was not long after Davis entered the field, he actually constructed fuses fully embodying the issue. All this occurred at a time when, so far as the record discloses, he knew absolutely nothing of Davis or his invention.

We agree with the tribunals of the Patent Office that Horton was reasonably diligent, and that he is entitled to the award of priority.

The decision of the Commissioner is affirmed, and the clerk of the court will certify this opinion and the proceedings in this court to the Commissioner of Patents, in accordance with law.

Court of Appeals of the District of Columbia.

KINSMAN *v.* STROHM.

Decided June 9, 1908.

INTERFERENCE—PRIORITY—APPEAL TO COURT—STATUS OF REVIVED APPLICATION.

On an appeal on priority the court will not review the findings of the Commissioner upon the sufficiency of a showing to support a petition for the reinstatement of an abandoned application where there appears to have been no abuse of power on the part of the Commissioner.

Mr. C. S. Champion, *Mr. C. J. O'Neal*, and *Mr. C. L. Mooney* for the appellant.

Mr. T. A. Connolly and *Mr. J. B. Connolly* for the appellee.

ROBB, *J.:*

In this case Kinsman, the junior party, seeks to reverse the decision of the Commissioner of Patents awarding priority of invention to Strohm, the senior party. The issue is contained in the following counts:

1. The combination, substantially as described, with an electrically-propelled vehicle and a driving-motor therefor, of a manual device acting on a controlling-switch for governing the speed or power of such electric motor, an electric switch governing the action of said motor and controlled independently of said manual device and irrespective of the position of the latter, an electromagnet governing said switch, and means upon the permanent way for bringing said magnet into operation when the car or vehicle passes a given point.

2. The combination, substantially as described, with an electrically-propelled vehicle and its propelling electric motor, of a manual device such as a handle, acting on suitable electric controlling apparatus for governing the speed or movement of the motor at will, an electric switch controlled independently of said manual device, and governing the circuit of said motor, an electric magnet carried by said vehicle and governing said switch, and means upon the road-bed or permanent way for governing the circuit of said magnet.

3. The combination, substantially as described, with an electrically-propelled vehicle and its propelling-motor, of a manual device such as a handle acting on an electric controller for governing the speed or power of said motor, an electric switch governing a circuit of said motor and controllable independently of said manual device, an electromagnet energized from the road-bed when the vehicle passes a certain point thereon for governing said switch, and a braking appliance brought into operation simultaneously with the action of said independently-controllable switch, as and for the purpose described.

The subject-matter of this interference is a means for automatically stopping electrically-propelled vehicles. Strohm has taken no testimony, and is, therefore, restricted to his filing date, August 29, 1891, as his date of conception and reduction to practice.

In Kinsman's preliminary statement he alleged conception of the invention in 1886 or 1887, and reduction to practice of certain elements of the invention in 1890. The Patent Office thereupon objected to this preliminary statement on the ground that it was too indefinite. An opportunity was given Kinsman to amend but he failed to embrace it. He testifies that between May, 1890, and November, 1891, he experimented with different forms of automatic stopping devices on the Fitchburg Railroad at Ayer Junction, Mass. These devices were all used in connection with a steam-locomotive. (See *Kinsman* v. *Kintner*, present term.) He says, however, that he then had a spindle or wheel made for use in electrical experiments, and was thereby enabled to determine how long a contact was necessary to energize a magnet designed to operate the automatic cut-off of the power-circuit.

The Commissioner says of this testimony:

> Upon the questions of conception and disclosure the testimony of Kinsman is supported by two witnesses, a brother, A. M. Kinsman, and J. B. Collins, the latter having been the one selected by Kinsman to assist him in carrying out his early experimental work. Most of the testimony of Collins relates to installations of signaling systems on steam-roads which involved cutting off the steam and the application of brakes, while the issue specifically calls for a combination of electrically-operated devices of an electrically-equipped system. He states, however, that Kinsman had the idea of adapting the same devices to electrically-propelled vehicles, and that under Kinsman's instruction he made a trolley wheel and harp for use in such combination. But this is the extent of the disclosure made to Collins, according to his testimony, and as this is but a part of the combination of the issue, it seems too clear for argument that it cannot be regarded as a sufficient disclosure of the entire combination. The sufficiency of this disclosure is urged on the ground that the part of the combination actually disclosed was the only novel element and that the remaining parts of the combination were well-known devices operating on well-known principles. It may be true that the elements disclosed were the only novel elements and that Collins knew the result which Kinsman desired to accomplish, but there is nothing to prove that either Kinsman or Collins knew what old elements should be combined, or how they should be combined, with these novel elements to accomplish such result. A. M. Kinsman testifies that his brother disclosed to him in 1886 or 1887 an invention for automatically stopping electrically-operated trains, but he is unable to recall any details except that he was shown a sketch of a trolley wire and wheel having wires coming down on both sides or on one side of the car. For the reasons above stated in discussing the testimony of Collins this testimony is clearly insufficient to prove a disclosure by Kinsman of the specific combination of the issue. It is clear that Kinsman's record fails to prove a conception of the invention prior to Strohm's filing date. But even if the testimony be regarded as sufficient for this purpose, Kinsman would still not be entitled to prevail, since he has utterly failed to show diligence thereafter in the filing of his application.

We are constrained to adopt the view of each of the three tribunals of the Patent Office, that Kinsman's testimony falls short of proving a conception of the invention prior to Strohm's filing date. Moreover, as stated by each of the three tribunals, the testimony fails to show diligence on the part of Kinsman at or about the time Strohm entered the field. This would defeat him even though it should be held that he was the first to conceive and reduce to practice.

The contention is made on behalf of Kinsman that the Commissioner erred in not striking Strohm's application from the files. It appears that during its pendency in the Office the application became abandoned by failure to prosecute, and that upon proper showing it was subsequently reinstated by the Commissioner. Kinsman based his motion to strike Strohm's application from the files on the ground that its reinstatement was obtained through fraud. The testimony bearing on this question was carefully considered by the Commissioner and held not to sustain Kinsman's contention. We are satisfied that there has been no abuse of power on the part of the Commissioner in respect to this motion, and, therefore, decline to interfere with the exercise of his discretion. (*In re Atkins & Co.*, 29 App. D. C., 385; *Richards* v. *Meissner*, 114 O. G., 1831; 24 App. D. C., 309; *American Stove Co.* v. *Detroit Stove Works et al.*, 134 O. G., 2245, present term.)

The decision of the Commissioner awarding priority of invention to Strohm is affirmed. The clerk of the court will certify this opinion and the proceedings in this court to the Commissioner of Patents, in accordance with law.

Court of Appeals of the District of Columbia.

McKillop v. Fetzer.

Decided June 9, 1908.

INTERFERENCE—ORIGINALITY—DELAY IN FILING APPLICATION.

Where the question is one of originality and the relation of employer and employee exists between the parties, the fact that the junior party, who was the employee, did not file his application till nearly a year after he knew of the issuance of the senior party's patent and has given no excuse for such delay justifies resolving any doubt as to who was the originator of the invention against him.

Mr. C. F. Burton for the appellant.

Mr. L. S. Bacon and *Mr. J. H. Milans* for the appellee.

ROBB, *J.:*

This is an interference proceeding and involves an alleged improvement for grain-drills. The issue is stated in fifteen counts, but we think the following amply sufficient for the purposes of this opinion:

> 1. A foot for hopper ends formed of sheet metal struck up to provide oppositely-disposed overlying flanges, and a reinforcing-filling intermediate said flanges.
>
> 3. A hopper of the character described formed partially of wood and partially of sheet metal, the sheet-metal part having struck-up portions forming receiving portions for securing and bracing the wooden parts in place.
>
> 8. A single-piece sheet-metal hopper end having an integral struck-up perforated ear flanged exteriorly.
>
> 13. A single-piece sheet-metal hopper end having integral struck-up side and top flanges, and a struck-up exteriorly-flanged perforated ear intermediate said top and one of the side flanges, the flange of said ear merging into said top and side flanges.

Fetzer, the senior party, filed an application October 22, 1904, which ripened into a patent on January 31, 1905. McKillop, the junior party, filed his application April 30, 1906, which was a year and three months after the issuance of a patent to Fetzer, and about eleven months after actual knowledge of such issuance.

Prior to and during the year 1904 Fetzer was secretary and general manager of the McSherry Mfg. Co., manufacturers of agricultural machinery including grain-drills. These drills as then manufactured contained cast-iron ends which had given the company some trouble in shipment owing to their liability to breakage. Fetzer and the company's draftsman, one Moehring, saw a pressed-steel hopper in Kansas City in 1901, at which time Fetzer suggested the idea of manufacturing the ends of their grain-drills of pressed steel. Early in 1904 McKillop, who was prominently connected with the Comstock Sash Lock & Novelty Co., manufacturers of pressed-steel articles, wrote the McSherry Mfg. Co. soliciting orders. This resulted in April, of the same year, in a visit by McKillop to the

office of the McSherry Mfg. Co., where he had an interview with Fetzer who represented his company. It is clearly established that Fetzer then suggested to McKillop the idea of manufacturing drill ends out of pressed steel and that McKillop pronounced the idea feasible. The testimony as to just what was said during the interview is neither clear nor convincing. Certain it is, however, that McKillop was shown a cast-iron drill and requested to get out a duplicate sample in pressed steel. It is also certain that as the result of this interview such a sample was made and late in July shipped to Fetzer's company. The first sample was not satisfactory in detail and several others followed before perfection was attained. In the meantime McKillop again visited Fetzer, and the subject was again under discussion. The testimony, however, as to what was said at the second interview is as indefinite as the testimony concerning the first interview. The correspondence between Fetzer and McKillop during this period has been introduced, but it throws little light on the subject other than to establish Fetzer's evident desire to hasten the construction and perfection of the drill-end sample and certain other parts which McKillop was to make in pressed steel.

It is contended on the part of Fetzer that he imparted to McKillop not only the broad idea embraced in the invention but suggested to him the various modifications and changes incident to the change in material.

McKillop, on the other hand, contends that Fetzer did nothing more than furnish him a sample of the old construction and request him to duplicate it in pressed steel, and that the modifications and changes which were made and which really constitute the patentable features of the issue were the product of his own mind.

It will thus be seen that the question presented is one of originality rather than of priority of invention. Each of the three tribunals of the Patent Office has ruled that Fetzer was the originator of the invention, and while the question is not free from doubt we are inclined to concur. We are impelled to this conclusion because of the relation of the parties, which imposes a heavy burden upon McKillop; because of McKillop's long delay in filing his application after he had actual knowledge of the issuance of Fetzer's patent; and because Fetzer possessed expert knowledge of grain-drills and was in a position to know what changes would be necessary. The decision in *Kreag* v. *Geen* (28 App. D. C., 437) is apposite here. In that case the court, by Mr. Chief Justice Shepard, said:

> The relation of employer and employee once established, the law is well settled that when one conceives the principle or plan of an invention, and employs another to perfect the details and realize his conception, though the latter make valuable improvements therein, such improved result belongs to the employer. * * * As before declared, it is not our province, under the limitation of the jurisdiction conferred upon us in such cases as this, to say that the improvement was the result of mere mechanical skill rather than of invention.

In the present case the relation of employer and employee is established. McKillop has failed to explain his long delay in asserting his claims, and has likewise failed to overcome the burden that was upon him.

The decision of the Commissioner is affirmed. The clerk of the court will certify this opinion and the proceedings in this court to the Commissioner of Patents, in accordance with law.

Court of Appeals of the District of Columbia.

In re White.

Decided June 9, 1908.

1. PATENTABILITY—PROCESS.

A claim for a process of forming metal rings which differs from the references merely by the statement that a bead is formed centrally of the blank *Held* unpatentable.

2. SAME—SAME—FUNCTION OF MACHINE.

A claim for a process *Held* unpatentable when it does not appear that said process can be carried out by any other means than that invented for such purpose by appellant and for which he has obtained a patent.

Mr. L. P. Whitaker for the appellant.

Mr. F. A. Tennant for the Commissioner of Patents.

SHEPARD, *C. J.:*

This is an appeal from the decision of the Commissioner of Patents refusing claims 4 and 5 of an application for a patent for a process of making metal rings for pipe-couplings.

The application contained five claims as follows:

> 1. The herein-described process of forming metal rings provided with flared ends and an internal bead, which consists in forming a skelp having a central longitudinal bead on one face, and lateral edges inclined toward the beaded face, severing said skelp and forming a blank therefrom having its ends parallel and inclined to the faces thereof, bending the blank into circular form with the bead on the inner side and welding the ends together, flaring the ends of the ring so formed and bringing its inclined edges perpendicular to the axis of the ring and expanding the portions of the ring between said flared portions to bring it to a true circle of required diameter.
>
> 2. The herein-described process of forming metal rings having an internal bead, and flared ends, which consists in forming a blank consisting of a flat plate of a width substantially equal to the length of the desired ring, and a length greater than the periphery thereof, said plate being provided with a longitudinal bead on one face, and having its edges inclined toward its beaded face, forming the blank into a ring with the bead inside and welding the ends together and then flaring the ends of the ring outwardly, and bringing said inclined edges perpendicular to the axis of the ring.
>
> 3. The herein-described process of forming metal middle rings for pipe-couplings which consists in bending a plate or blank having its edges inclined toward one of its faces, into ring form, welding the ends of the blank together and then bending marginal portions at each end of the ring outwardly to bring the inclined faces thereof perpendicular to the axis of the ring, substantially as described.
>
> 4. The herein-described process of forming metal middle rings for pipe-couplings provided with an internally-projecting stop, and having a packing-recess at each end, which consists in forming a blank consisting of a flat plate having a longitudinal bead located centrally on one side of the same, bending said blank into the form of a ring, with the bead on the inside, welding the ends of the blank together, and then bending the marginal portions of the ring at each end thereof bodily outwardly to form the packing-recesses, substantially as described.
>
> 5. The herein-described process of forming metal middle rings for pipe-couplings, which consists in bending a plate or blank into ring form, welding the ends together and then bending marginal portions only of the ring at each end thereof bodily outwardly out of line with the central portions of the ring between said marginal portions, substantially as described.

The Examiner rejected claims 1, 2, 4 and 5, and allowed claim 3. His allowance of claim 3 was on the ground that it included the beveling of the edges in the flat blank in order to bring the said edges in a plane perpendicular to the axis of the ring after the flaring operation. On appeal to the Examiners-in-Chief they affirmed the rejection of the remaining claims. The Commissioner, on appeal, reversed this decision as to claims 1 and 2, and affirmed the rejection of claims 4 and 5. He said that:

> Claim 3 having been allowed because it includes the limitation that the beveled edges of the flat blank are inclined toward one of its faces, it is not believed that claims 1 and 2, which include this limitation and also the limitation of forming a blank with a bead thereon, that is, claims which state the process by which the exact article shown is made, should be rejected.

The appealed claims 4 and 5 were rejected on Hambay's patent April 19, 1887, and Boyd's of August 12, 1902.

The invention consists in an improved method or process of manufacturing the middle ring of a pipe-coupling similar to the middle ring shown in a prior patent to S. R. Dresser, dated July 2, 1889. This middle ring or sleeve is slipped over the meeting ends of plain or unthreaded pipes, and is provided with a central stop in the form of an annular inwardly-projecting bead to center it with respect to the joint, and having a recess at each end to receive the packing-rings of rubber. Clamping-rings engage the outer faces of the packing-rings and are compressed by bolts which compress the packing-rings and produce a tight joint. These middle rings were of cast-iron to which there was objection on account of sand holes which required testing before use, and became more or less liable to crack under strains thereby causing leaks in the joints. To avoid these difficulties, Dresser proposed to make the rings of wrought iron or steel. The problem which appellant undertook to solve for Dresser, who is the assignee of his application, was to produce a process of making these middle, wrought-metal rings, at or near the cost of the ones made of cast-iron.

The steps in his process are described in appellant's brief as follows:

1. A "skelp" or bar of steel or wrought-iron is rolled or formed consisting of a long flat plate, of a width equal to the length of the middle ring, and having on one face a longitudinally-disposed *central* rib or bead, which is to form the centering-stop in the finished article.
2. A section of this skelp is bent into ring form, *with the central bead inside*, and the ends of the section are united by welding to form a ring, having the *internal centering-stop*.
3. Marginal portions of this ring at each end are bent *bodily outward*, to produce the packing-recesses, to receive the packing-rings.

They are specifically stated in the brief for the Commissioner as follows:

First. Forming by rolling a "skelp" having a central longitudinal bead on one face and the lateral edges inclined toward the beaded face.
Second. Severing the skelp in such a manner that a blank is formed having beveled and parallel ends by means of which an overlapping welded joint may be formed.
Third. Bending the blank into circular form with a bead on the inside and its inclined edges overlapping and welding the ends together.
Fourth. Flaring the ends of the ring so formed and bringing its inclined edges perpendicular to the axis of the ring.
Fifth. Expanding the interior portion of the ring to a true circle of the required size.

The appellant contends that he is entitled not only to the claims for the process of making the rings with beveled edges, but also for the process of making them without. Claim 4 omits the beveled edges, or the lateral edges inclined toward the beaded face, described in claims 1, 2, and 3, and the argument in its support is that because of the inner bead of the blank it cannot be bent and welded on a straight or tapered mandrel as in other processes. It is contended that the ordinary mandrel would have to be grooved to receive the bead, which would be locked therein. As Hambay's patent calls for a bead or rib at the end, or near the edge of the ring, it is said to be obvious that a mandrel can be made for bending and welding, with a reduced outer end from which its removal can be made; and it is declared that:

As a matter of fact the appellant was obliged to devise a special welding device, for which he has been granted a patent.

The process of making the rings of wrought metal and then bending, welding and truing them was well known, and the alleged novelty of appellant's process consists in doing this with blanks having an inner bead or rib, which could not be carried out on an ordinary mandrel, or one with the reduced outer end that could be used to accommodate the bead in Hambay's construction. No other way is suggested by which the welding can be successfully done than by means of the apparatus which the appellant has patented for the purpose. And counsel for appellant say in their brief:

No "similar process" is disclosed in the prior art patents, and no process or apparatus has been disclosed therein which could be used to produce the appellant's ring.

As was said in *America Lava Co.* v. *Steward*, (155 Fed. Rep., 731, 738:)

No doubt it is competent, when the circumstances permit it, for an inventor in describing a machine or apparatus which he has devised to make a claim for a process which his patented device is capable of carrying out. But to entitle him to do this the process must be one capable of being carried out by other means than by the operation of his patented machine, and, unless such other means are known or within the reach of ordinary skill and judgment, the patentee is bound to point them out: for unless the public are informed by what other means the process can be carried out, the process is to them nothing else than the operation of the machine, in other words, the exercise of its functions.

The function of a machine is not patentable. (*Risdon Locomotive Works* v. *Needart*, 158 U. S., 68, 79; *Westinghouse* v. *Boyden Power Brake Co.*, 170 U. S., 535, 537.)

Claim 5 which omits the beaded inner ring is obviously not patentable. As said by the Primary Examiner:

Flanging of pipes is a very common operation, and if the finished article is to have a flanged end, as in this case, no invention was required to flange it by an ordinary method.

The decision will therefore be affirmed. It is so ordered, and that this decision be certified to the Commissioner of Patents.

Amendment to Rules of the Court of Appeals of the District of Columbia.

The following amendment to the rules of the Court of Appeals of the District of Columbia is published for the information of those practicing before that court.

EDWARD B. MOORE,
Commissioner of Patents.

It is ordered that section 3 of Rule VIII of this court be, and is hereby, amended by adding thereto the following paragraph:

(4) Whenever a decision of this court, that has been published in the official reports of the court, shall be cited in a brief, the reference shall include the volume and page of the report wherein the same has been published.

This rule shall take effect on the first Tuesday in October, 1908, and apply to all cases submitted for hearing thereafter.

By the COURT,
June 9, 1908.

Test:
HENRY W. HODGES, *Clerk.*
Promulgated June 9, 1908.

Changes in Classification.

(ORDER No. 1,782.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 14, 1908.

The following changes in the classification of patents are hereby directed to take effect this day:

In Division V, class 56, Harvesters, establish subclass—

Horse-rakes—
Drags—
137. Clearers.

In Division VI, class 71, Fertilizers, establish subclass—

10. Bacterial,

this subclass being composed of patents from class 47, Trees, Plants, and Flowers, subclass 36, Treatment.

In Division XIII, class 86, Arms, Projectiles, and Explosive Charges, Making, abolish subclasses—

Ammunition loading—
Filling—
Implements—
34. Flasks and chargers,
35. Measures,

the patents formerly contained therein having been transferred to appropriate subclasses in class 73, Measuring Instruments.

In Division XXXII, class 221, Dispensing-Cans, abolish subclass—

Powder-cans—
Cut-offs—
63. Measuring,

the patents formerly contained therein having been transferred to class 73, Measuring Instruments, and to a new subclass hereinafter established in class 221, Dispensing-Cans.

In the same division, class 221, Dispensing-Cans, establish subclass—

94. Liquid-soap containers,

this subclass to contain some of the patents from subclass 63, Powder-cans, cut-offs, measuring, above abolished.

Attention is called to the following corrections of errors in the Classification of Inventions published July 1, 1908:

In Division XIV, class 201, Metal-Ornamenting, the subclass Stippling should read under the main class title instead of under Nurling, as printed.

In the same division, class 81, Tools, subclass 3, Special, should control only subclasses 4 to 8 inclusive, instead of controlling additional groups of subclasses as printed.

In Division XX, class 16, Builders' Hardware, the subtitle Shutters should read under the main class title instead of under the subclass of Shutter-bowers, as printed.

In Division XXIX, class 20, Wooden Buildings, the subtitle Scaffolds, at the head of the second column, should control only subclasses 86, 81, 82, 83, and 87, immediately following; instead of controlling additional groups of subclasses as printed; and the subtitle of Brackets, directly under the title of Scaffolds, above referred to, should control only subclass 86, Shingling, instead of subclasses 81, 82, 83, and 87, following.

In the same division, class 20, Wooden Buildings, subclass—

97. Wooden columns,

should be substituted for subclass 72.5, Wooden columns, as printed.

In Division XXXVI, class 73, Measuring Instruments, subclass—

79. Lactometers,

should be substituted for subclass 79, Lactometers, as printed.

EDWARD B. MOORE,
Commissioner.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE.
Washington, D. C., October 14, 1908.

Kinney Tobacco Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Falk Tobacco Company, of New York, N. Y., and Richmond, Va., for registration of a trade-mark and a trade-mark registered to the Kinney Tobacco Company, of New York, N. Y., and the notice of said declaration sent by registered mail to the Kinney Tobacco Company was delivered to and receipted for by the American Tobacco Company, of New York, N. Y. The assignment records of this Office disclose that the Kinney Tobacco Company assigned to the American Tobacco Company the whole right, title, and interest in the said registered trade-mark. That assignment, however, does not include the good-will or business of the Kinney Tobacco Company, and is therefore of no force or effect.

Notice is accordingly hereby given to the said Kinney Tobacco Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 10, 1908.

A. Levy & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the applications of Sweet, Orr & Company, of 817 Broadway, New York, N. Y.; Wappinger Falls, N. Y.; Joliet, Ill., and Brooklyn, N. Y., and Legler & Company, of East Bacon street, Dayton, Ohio, for registration of a trade-mark and a trade-mark registered to A. Levy & Company, of 610 Broadway, New York, N. Y., and the notice of said declaration sent by registered mail to the said A. Levy & Company having been returned undelivered, notice is hereby given to the said A. Levy & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents, in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 10, 1908.

E. F. Poulterer & Company, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Franklin & Hayes Brewing Company, of Pocatello, Idaho, for registration of a trade-mark and a trade-mark registered to E. F. Poulterer & Company, whose address of record is No. 1430 Montgomery avenue, Philadelphia, Pa., and the notice of said declaration sent by registered mail to said E. F. Poulterer & Company at the address above given has been returned by the Post-Office Department undelivered, with the statement "Removed" endorsed thereon.

Notice is therefore hereby given to the said E. F. Poulterer & Company, their assigns or legal representativ s, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 19, 1908.

Koster & Bial, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Hugo Goldschmidt, of 506 South Main street, Los Angeles, Cal., for registration of a trade-mark and a trade-mark registered to Koster & Bial, of 110 West Twenty-fourth street, New York, N. Y., and the notice of said declaration sent by registered mail to the said Koster & Bial having been returned undelivered notice is hereby given to the said Koster & Bial, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 5, 1908.

William M. Marcus, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the J. G. Haas Soap Company, of Prairie avenue and Benedict street, St. Louis, Mo., for registration of a trade-mark and a trade-mark registered to William M. Marcus, of Talladega, Ala., and the notice of said declaration sent by registered mail to the said William M. Marcus having been returned unde-

livered, notice is hereby given to the said William H. Marcus, his assigns or legal representatives, that if he or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

Photographic Copies of Drawings.

The Patent Office will furnish photographic prints of any unbound drawing, foreign or domestic, which may be in its possession. These prints will be made only in two sizes, 8 by 12½ at 15 cents per sheet and 10 by 15 at 25 cents per sheet.

Prints of drawings of pending, abandoned, forfeited, or informal cases and of caveats may be had in either of the above-named sizes.

Prints of United States or foreign patent drawings will be made only in the 10 by 15 size.

In ordering copies of drawings of foreign patents cited as references, applicants must state the date and number thereof, the name of the patentee, the country in which each patent was granted, and the class and subclass in which the patent is classified. If the class and subclass were not given in the Office letter citing the patent, the applicant must state the serial number of the application in which it was cited, the number of the action therein, the name of the inventor, and the title of the invention.

The photo prints will be furnished more expeditiously if the number of the division is given in which they may be found. A separate order should be made for each drawing, for which the Office will furnish blanks gratuitously upon request.

BOUND VOLUMES CANNOT BE USED FOR MAKING PRINTS.

Failure to give the fullest data whereby the mounted drawing may be found will cause unnecessary delay and correspondence.

Applicants and attorneys are strongly urged to file a set of prints, small size, or order them to be made by the Office at the time of filing an application. Such procedure will save delay later, if correction of the drawing is desired or required.

Drawings.

PRECAUTIONS TO BE OBSERVED IN FORWARDING DRAWINGS TO THE UNITED STATES PATENT OFFICE.

Where drawings are to be filed in connection with an application for Letters Patent in the United States Patent Office, each sheet, before it can be accepted by the Office as a part of the application, must be signed in the name of the inventor at the lower right-hand corner, either by him or by an attorney whose written authorization from the applicant is filed in connection with the application. This signature must also be attested by two witnesses, each of whom should sign the drawing at the lower left-hand corner of the sheet. The signatures should never be written on a line parallel with the longer edges of the sheet, one of the shorter edges being always regarded, for the purpose of locating the signatures, as the lower edge of the sheet. The signatures must all be within the margin-lines of the sheet and below the lines of the drawing. The title of the invention should be written with pencil on the back of each sheet of drawings.

When there are filed on the same day two or more applications by the same inventor, each of the documents and drawings belonging to the same application should have placed thereon the same letter or number, which should be different from the letter or number placed upon those of any other of the applications.

It is desirable that all parts of the complete application, including the drawings, be deposited in the Office at the same time. Should, however, the other parts of the application be filed before the drawings are sent, the latter when forwarded should be accompanied by a letter stating the number of sheets inclosed, and that the drawings are to be filed with the other parts of the application, giving the date at which such other parts were filed in the Office, the name of the inventor, and title of the invention. If the application has received a serial number, that should also be given, and it should be indorsed with pencil on the back of each sheet of drawings. The letter should also state, if such be the case, that the new drawings are to be substituted for those previously filed.

RULE 38.

38. When there are drawings the description will refer to the different views by figures and to the different parts by letters or numerals (preferably the latter).

RULE 52—EXTRACT.

(a) The different views should be consecutively numbered. Letters and figures of reference must be carefully formed. They should, if possible, measure at least one-eighth of an inch in height, so that they may bear reduction to one twenty-fourth of an inch; and they may be much larger when there is sufficient room. They must be so placed in the close and complex parts of drawings as not to interfere with a thorough comprehension of the same, and therefore should rarely cross or mingle with the lines. When necessarily grouped around a certain part, they should be placed at a little distance, where there is available space, and connected by short broken lines with the parts to which they refer. They must never appear upon shaded surfaces, and when it is difficult to avoid this, a blank space must be left in the shading where the letter occurs, so that it shall appear perfectly distinct and separate from the work. If the same part of an invention appear in more than one view of the drawing it must always be represented by the same character, and the same character must never be used to designate different parts.

It is suggested that numerals or letters be used without exponents.

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

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Labels	20	No. 14,425 to No. 14,444, inclusive.
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TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	3	New Hampshire	2	.....
Alaska, District of	.....	.....	New Jersey	31	4
Arizona Territory	2	.....	New Mexico Ter't'y	.....	.....
Arkansas	.....	.....	New York	123	37
California	12	2	North Carolina	2	.....
Colorado	6	.....	North Dakota	3	1
Connecticut	18	.....	Ohio	37	3
Delaware	3	.....	Oklahoma	3	.....
District of Columbia	4	2	Oregon	7	.....
Florida	1	.....	Panama	.....	.....
Georgia	9	.....	Pennsylvania	58	21
Hawaii Territory	.....	.....	Philippine Islands	.....	.....
Idaho	2	.....	Rhode Island	5	.....
Illinois	53	3	South Carolina	1	.....
Indiana	19	1	South Dakota	.....	.....
Iowa	14	3	Tennessee	5	1
Kansas	11	.....	Texas	3	.....
Kentucky	3	1	Utah	1	.....
Louisiana	3	.....	Vermont	2	.....
Maine	2	3	Virginia	6	.....
Maryland	7	1	Washington	8	1
Massachusetts	41	10	West Virginia	1	2
Michigan	13	2	Wisconsin	10	.....
Minnesota	12	1	Wyoming	.....	.....
Mississippi	1	1	U. S. Army	.....	.....
Missouri	8	3	U. S. Navy	.....	.....
Montana	4	.....			
Nebraska	1	.....	Total to citizens of the United States	558	106
Nevada	.....	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Algeria	.....	.....	Natal	.....	.....
Austria-Hungary	1	.....	Netherlands	.....	.....
Belgium	.....	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	3	.....
British West Indies	.....	.....	New Zealand	4	.....
Canada	5	.....	Norway	.....	.....
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	.....	.....
China	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	1	.....	Scotland	1	.....
Denmark	.....	.....	South Australia	1	.....
Ecuador	.....	.....	Spain	.....	.....
England	13	2	Sweden	3	.....
France	3	.....	Switzerland	2	.....
Germany	27	1	Transvaal, South Africa	1	.....
Haiti	.....	.....	Victoria	1	.....
Ireland	.....	.....	Western Australia	.....	.....
Italy	2	.....			
Japan	.....	.....	Total to citizens of foreign countries	68	3
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NOTICES.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 30, 1908.

Attention is called to the amendment on the 23d instant (136 O. G., 853) of the third paragraph of Rule 47, which amendment requires that ALL application papers filed on and after December 1, 1908, must be attached together and a ribbon or tape passed one or more times through all the sheets of the application and the ends of said ribbon or tape brought together under the seal before the latter is affixed or impressed, or each sheet must be impressed with the official seal of the officer before whom the oath was taken, or if he is not provided with a seal then each sheet must be initialed by him.

EDWARD B. MOORE,
Commissioner.

The Official Gazette is printed and distributed by the Government Printing Office. All subscriptions and inquiries relating thereto should be forwarded to the "Superintendent of Documents, Government Printing Office," and not to the Patent Office.

Printed Copies of Patents.

A printed copy of the complete specification and drawings of any patent published herein can be obtained for five cents.

APPLICATIONS UNDER EXAMINATION.

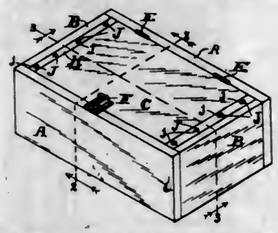
Condition at Close of Business October 20, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Oct. 6	June 23	785
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Oct. 5	Sept. 21	169
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Oct. 1	Aug. 20	341
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Sept. 28	Aug. 10	248
280	XL. Baggage; Check-Controlled Apparatus: Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Sept. 28	July 24	514
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Sept. 25	July 18	361
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Sept. 21	Aug. 20	212
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Sept. 21	July 28	314
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Sept. 17	July 15	290
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Masonry and Concrete Structures; Tents, Canopies, Umbrellas, and Canes.	Sept. 16	July 18	432
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Sept. 15	June 13	322
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Sept. 10	Aug. 3	440
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools	Sept. 10	June 1	691
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Sept. 9	July 28	662
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	Sept. 2	July 20	495
125	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Sept. 1	May 23	732
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Sept. 1	May 23	594
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Aug. 26	Aug. 14	697
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Aug. 25	May 14	681
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Aug. 24	Aug. 3	565
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Aug. 24	July 24	742
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Aug. 21	July 21	455
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Aug. 21	July 7	436
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Aug. 19	July 18	375
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Aug. 19	July 6	268
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Aug. 14	July 2	534
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Aug. 13	Aug. 3	586
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	Aug. 12	June 13	615
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Aug. 10	July 30	358
332	X. Carriages and Wagons	Aug. 10	July 23	591
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Aug. 8	June 18	624
167	V. Bookbinding; Harvesters; Jewelry; Music.	Aug. 7	May 23	428
238	XIX. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Aug. 6	Aug. 13	415
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	Aug. 5	Apr. 14	727
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	July 31	July 21	473
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	July 16	June 3	543
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	July 16	May 21	554
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	July 7	May 4	685
321	XXXIX. Baths and Closets; Water Distribution.	July 2	Apr. 27	690
109	XVI. Telegraphy; Telephony	June 29	June 6	447
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	June 9	Apr. 6	427
	Total number of applications awaiting action			**20,518**
161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks	Oct. 7	Sept. 15	763
	Designs	Oct. 8	Aug. 20	187
	Labels and Prints	Oct. 12	Oct. 9	42

PATENTS

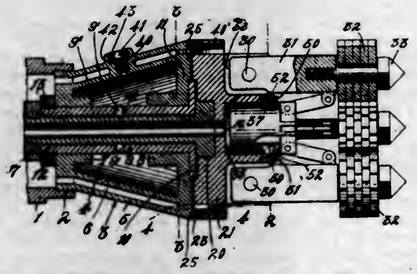
GRANTED OCTOBER 27, 1908.

901,939. CUT-OUT BOX. THOMAS Q. ANDRAZYK, Chicago, Ill. Filed July 29, 1907. Serial No. 386,045.



The combination of a box and a cover, such box comprising an outer wooden casing lined with asbestos and such cover hinged thereto to shut down between the sides of the box with the upper edges of such sides in substantially the same plane as the upper face of the cover, and such cover consisting of a wooden body part provided with tongues at its ends, in combination with U-shaped metal strips, such strips provided with V-shaped apertures obtained by forcing V-shaped pieces, attached at the respective bases thereof to the body part of the strips, into a plane substantially at right angles with such body part, and fastenings extending through such V-shaped apertures and into the wooden body part of the cover, to attach such U-shaped metal strips in place; substantially as described.

901,940. TUBE-CLEANER. THOMAS ANDREWS, Rockaway, N. J., assignor to Thomas Andrews Manufacturing Company, Rockaway, N. J., a Corporation of New Jersey. Filed Mar. 18, 1907. Serial No. 363,092.



1. A tube cleaner having cleaning devices and a head, with an oil chamber therein, and a bushing forming part of the inner wall of said oil chamber and having a perforation therein.

2. A tube cleaner having a head, a perforated bushing therein, a shaft in said bushing having cutters connected therewith, said head also having therein fluid-supply passages and an oil chamber, the latter being interposed between said bushing and said fluid-supply passages, the inner wall of said head forming a portion of the wall of the chamber.

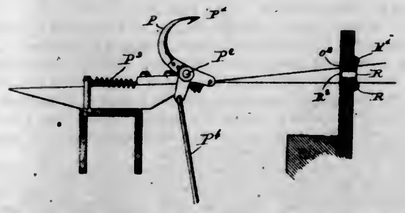
3. A tube cleaner having a head, with an oil chamber therein, a bushing forming part of the wall of said oil chamber and having a perforation therein, a shaft extending through said bushing, and cleaning devices connected with said shaft.

4. A tube cleaner having a head, with an oil chamber therein, a bushing forming a portion of the wall of said oil chamber and having a perforation therein, thrust-receiving members connected with the ends of said bushing, a shaft extending through said bushing and having thrust-receiving members at the ends thereof, and cleaning devices connected with said shaft.

5. A tube cleaner having a head, with a frusto-conical oil chamber therein, a bushing forming a portion of the inner wall of said oil chamber and having perforations intermediate the ends thereof, thrust receiving members connected with the ends of said bushing, a shaft extending through said bushing and having thrust-receiving members co-acting with the thrust-receiving members of said bushing, a turbine connected with said shaft, cleaning devices connected with said turbine, and an annular fluid passage extending around said oil chamber.

[Claims 6 to 10 not printed in the Gazette.]

901,941. SELVAGE-FORMING MECHANISM FOR SHORT-WEFT LOOMS. FREDRICK E. ARROUQUIER, Westbrook, Me., assignor to Goodall Matting Company, Kennebunk, Me., a Corporation of Maine. Filed Mar. 7, 1904. Serial No. 196,822.



1. Selvage forming mechanism for a loom weaving in short weft lengths, comprising means for turning the weft end around the selvage cord and back over the adjacent warp and down around said warp and a separate means for carrying said weft end up between said warp and selvage cord.

2. Selvage forming mechanism for a loom weaving in short weft lengths, comprising means for turning the weft end around the selvage cord and back over and down around the adjacent warp and under the warp and selvage cord, and a separate means for carrying the turned weft end up between said warp and selvage cord.

3. Selvage forming mechanism for a loom weaving in short weft lengths, comprising means mounted upon the lay for turning the weft end around the selvage cord and back over and down around the adjacent warp and under the warp and selvage cord, and a separate means for carrying the turned weft end up between said warp and selvage cord.

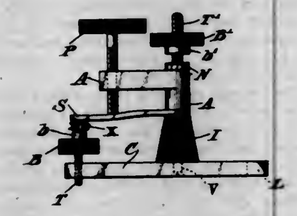
4. Selvage forming mechanism for a loom weaving in short weft lengths, comprising means for turning the weft end around the selvage cord and back over and down around the adjacent warp and under the warp

and selvage cord, and means mounted upon the breast-beam for carrying the turned weft end up between said warp and selvage cord.

5. Selvage forming mechanism for a loom weaving in short weft lengths, comprising means mounted upon the lay for turning the weft end around the selvage cord and back over and down around the adjacent warp and under the warp and selvage cord, and means mounted upon the breast-beam for carrying the turned weft end up between said warp and selvage cord.

[Claims 6 to 27 not printed in the Gazette.]

901,942. WAVE-RESPONSIVE DEVICE. CLIFFORD D. BABCOCK, New York, N. Y., assignor to United Wireless Telegraph Company, New York, N. Y., a Corporation of Maine. Filed Aug 27, 1906. Serial No. 332,196.



1. A wave responsive device, which comprises a metal base, means for connecting the base to one side of the electric circuit, an adjustable contact mounted on the base as a support for a sensitive substance, a spring contact arm having a free end operatively positioned opposite said contact support to bear lightly on such substance, an insulating standard mounted on said metal base as a support for the other end of the spring contact arm, adjustable means bearing on the spring contact arm intermediate its ends to press it firmly against the sensitive substance, a support for said adjustable means and mounted on said standard, and means for connecting said spring contact arm to the other side of the circuit.

2. A wave responsive device, which comprises a contact support for a sensitive substance, a spring contact arm having a free end operatively positioned opposite said contact to bear lightly on such substance, a support for the other end of the spring contact, adjustable means intermediate the free and supported ends of the spring contact arm to press the free end firmly against the sensitive substance, and a support for said adjustable means.

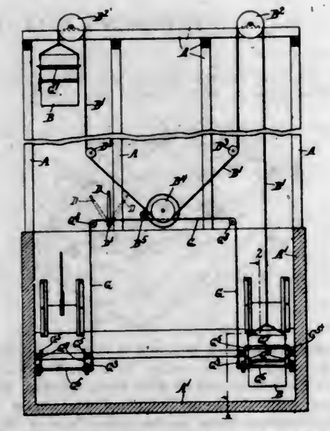
3. A wave responsive device which comprises an adjustable contact, a spring contact arm having a free end operatively positioned opposite said adjustable contact, a support for the other end of the spring contact, means intermediate the free and supported ends of the spring contact arm to adjust it with respect to the adjustable contact, and a support for said adjusting means.

4. A wave responsive device which comprises a metal base, an adjustable contact mounted thereon, an insulating standard also mounted thereon, a spring contact supported on the insulating standard and operatively positioned opposite said adjustable contact, an adjusting screw bearing on said spring contact intermediate the point of support and the operatively positioned part of the spring contact, a supporting arm for the adjusting screw mounted above the contact spring on the insulating standard, means for holding together in position the insulating standard, the contact spring, and the supporting arm, means for connecting the spring-supporting arm to one terminal of the circuit, and means for connecting the metal base to the other terminal of the circuit.

5. A wave responsive device, which comprises a base, a contact mounted therein, a standard mounted on the base, a spring contact arm mounted on said standard so that one end of the arm is operatively positioned with respect to said contact, an adjusting screw bearing on the spring contact arm between its point of support and its operative end, and a support for the adjusting screw also carried by said standard.

[Claims 6 to 8 not printed in the Gazette.]

901,943. AUTOMATIC HOISTING DEVICE. EDWARD E. BARRETT, La Grange, Ill. Filed July 3, 1908. Serial No. 444,779.



1. In an automatic hoisting device, the combination of two receptacles with a hoisting cable, the receptacles associated so that one is at one end of its excursion while the other is at the opposite end of its excursion, a power device for operating the cable, a power reverser and a power throttle for the same, a controller connected with the reverser and the throttle, a lost motion device and a dash-pot device connected with such controller, and two controller motors comprising each a movable part in the path of one of the receptacles and a connection thence to the controller to alternately operate the same in opposite directions.

2. In an automatic hoisting device, the combination of two receptacles with a hoisting cable, the receptacles associated so that one is at one end of its excursion while the other is at the opposite end of its excursion, a power device for operating the cable, a power reverser and a power throttle for the same, a controller connected with the reverser and the throttle, a lost motion device connected with the controller, and two controller motors comprising each a movable part in the path of one of the receptacles and a connection thence to the controller to alternately operate the same in opposite directions.

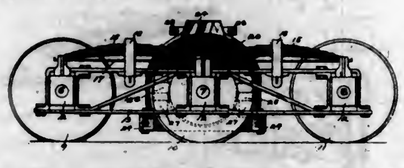
3. In an automatic hoisting device, the combination of two receptacles with a hoisting cable, the receptacles associated so that one is at one end of its excursion while the other is at the opposite end of its excursion, a power device for operating the cable, a power reverser and a power throttle for the same, a controller connected with the reverser and the throttle, and two controller motors comprising each a movable part in the path of one of the receptacles and a connection thence to the controller to alternately operate the same in opposite directions.

4. In an automatic hoisting device, the combination of a receptacle with a hoisting cable, a power device for operating the cable, a power reverser and a power throttle for the same, a controller connected with the reverser and the throttle, a lost motion device and a dash-pot device connected with such controller, and a controller motor comprising a movable part in the path of the receptacle and a connection thence to the controller.

5. In an automatic hoisting device, the combination of a receptacle with a hoisting cable, a power device for operating the cable, a power reverser and a power throttle for the same, a controller connected with the reverser and the throttle, a lost motion device connected with such controller, and a controller motor comprising a movable part in the path of the receptacle and a connection thence to the controller.

[Claims 6 to 9 not printed in the Gazette.]

901,944. CAR-TRUCK. ASA F. BATCHELDER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 29, 1908. Serial No. 413,169.



1. In a car truck, a plurality of wheels and axles, journal boxes for said axles, side frames in which said journal boxes may move vertically, springs for supporting said frames on said journal boxes, a motor armature mounted on one axle, and a combined bolster and motor field frame supported on said side frames.

2. In a car truck, a plurality of wheels and axles, journal boxes for said axles, side frames in which said journal boxes may move vertically, springs for supporting said frames on said journal boxes, a motor armature mounted on one axle, and a frame supported on said side frames and extending over and down upon each side of said armature and adapted to serve both as a bolster and as a motor field frame.

3. In a car truck, three axles having wheels thereon, journal boxes for said axles, side frames in which said journal boxes may move vertically, springs for supporting said frames on said journal boxes, a motor armature mounted on the middle axle, and a combined bolster and motor field frame supported on said side frames and extending from one to the other over the motor armature.

4. In a car truck, three axles having wheels thereon, journal boxes for said axles, side frames in which said journal boxes may move vertically, springs for supporting said frames on said journal boxes, a motor armature mounted on the middle axle, and a frame supported on said side frames and extending over the middle pair of wheels and over said armature and down upon each side thereof, said frame being adapted to serve both as a bolster and as a motor field frame.

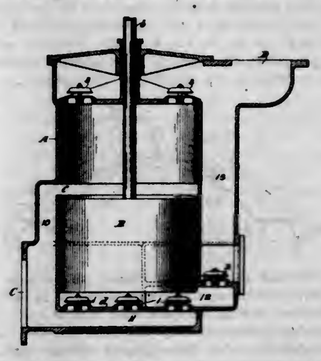
5. In a car truck, three axles having wheels thereon, journal boxes for said axles, side frames in which said journal boxes may move vertically, springs for supporting said frames on said journal boxes, a motor armature on the middle axle, and a one piece frame supported on said side frames and extending over the middle pair of wheels and over and down on each side of said armature and having pole pieces integral therewith, said one piece frame being adapted to serve both as a bolster and as a motor field frame.

[Claim 6 not printed in the Gazette.]

901,945. AIR-PUMP. PHILLIPS P. BOURNE, Somerville, Mass., assignor to The Blake & Knowles Steam Pump Works, a Corporation of New Jersey. Filed Sept. 14, 1907. Serial No. 392,828.

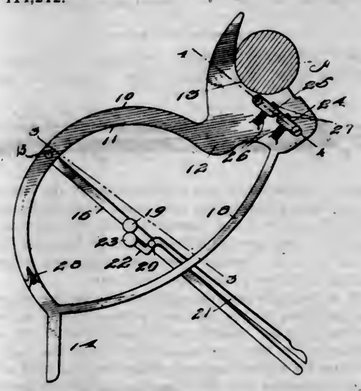
1. In a vertical double acting pump, a pump cylinder having a central valveless suction passage, a plunger, a suction chamber below the cylinder, a suction inlet connected to the suction passage and suction chamber, and suction valves controlling admission from the suction chamber to the cylinder below the plunger.

2. The combination with a vertical pump cylinder A having central valveless suction passage c and plunger B, of suction inlet C at the bottom of the pump, passage 10 connecting the suction inlet and the valveless suction passage, plate *d* extending across the bottom of the cylinder and forming suction and pulsation chambers 11, 12,



and suction and force valves 1, 2 controlling admission and delivery below the plunger.

901,946. WIRE-STRETCHER. PERRY L. BROOKS, Washington county, Kans. Filed Feb. 4, 1908. Serial No. 414,242.



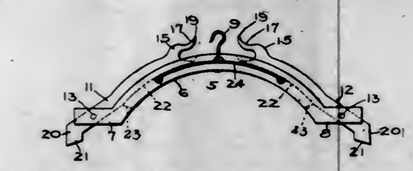
1. A wire stretcher comprising an arcuate member having a forked post engaging head at one end, an arcuate slotted bar connecting said arcuate member and said head respectively, a pivoted lever carried by said arcuate member and disposed for movement in the slotted portion of said bar, a vertically disposed roller carried by said lever, a lever pivotally connected to the first named lever, a roller carried by said last named lever for frictionally engaging the first named roller, and wire clamping dogs carried by said head and arranged for disengagement with a wire upon operation of said first named lever.

2. A wire stretcher comprising an arcuate member having a forked post engaging head at one end, said member having a handle at the end opposite said head, a bar connecting said head and said member, said bar having a horizontally disposed slot, a lever pivotally connected with said member and disposed with a portion in said slot, wire clamping means carried by said lever, spring pressed dogs carried by said head and arranged to receive a wire therebetween, and stops carried by said head for limiting the outward movement of said dogs.

901,947. HOG-GAMBREL. PERRY L. BROOKS, Washington county, Kans. Filed Mar. 6, 1908. Serial No. 419,521.

1. An animal gambrel comprising an arcuate member, a supporting hook carried thereby, the member having inter-

ally extending forked ends, the member having recesses upon its upper side in communication with the opening between each of said forked ends, arms pivotally mounted between the forked ends and including portions arranged for movement to lie at times in the recesses, means for holding the arms at times in a horizontal position, and tendon receiving hooks carried by the arms.



2. An animal gambrel comprising an arcuate member having forked ends and recessed portions in communication with the opening between said forked ends, and tendon receiving arms pivotally mounted between said ends and arranged to lie at times partly within said recessed portions.

3. An animal gambrel comprising an arcuate member having forked ends, shoulders carried by said member and extending between the forked ends, and tendon receiving arms pivotally mounted between the forked ends and having portions arranged for engagement at times with said shoulders to limit the outward movement of the arms.

901,948. FOUNTAIN-PEN. FRANCIS C. BROWN, New Brighton, N. Y. Filed Jan. 3, 1907. Serial No. 350,630.



1. In a fountain pen, the combination of the barrel, the sleeve extending within the rear portion of the barrel, the perforated plug located partly within the forward end of the sleeve and partly in front thereof, the nib-carrying feed bar movable through the said plug, and means for advancing and retracting the feed bar.

2. In a fountain pen, the combination of the barrel, the sleeve extending within the rear portion of the barrel, the perforated plug for closing the forward end of the sleeve, the nib-carrying feed bar movable through the said plug, and means for advancing and retracting the feed bar.

3. In a fountain pen, the combination of the barrel, the sleeve extending within the rear portion of the barrel, the perforated plug for closing one end of the sleeve, the nib-carrying feed bar movable through the said plug, and means for advancing and retracting the feed bar.

4. In a fountain pen, the combination of the barrel, the sleeve extending within the rear portion of the barrel, said sleeve being chambered at one end, the tubular packing contained in the chamber of the sleeve, the nib-carrying feed bar movable through the sleeve and packing, and means for advancing and retracting the feed bar.

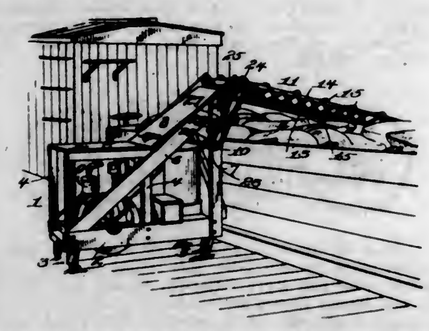
5. In a fountain pen, the combination of the barrel, the sleeve extending within the rear portion of the barrel and chambered at one end, the tubular packing contained in the chamber of the sleeve, means engaging the ends of the the packing to hold it against lengthwise movement, and means for advancing and retracting the feed bar.

[Claims 6 to 20 not printed in the Gazette.]

901,949. UNLOADING APPARATUS. FRANK H. BROWN and FRED H. BROWN, Portland, Oreg. Filed Jan. 22, 1908. Serial No. 412,214.

1. In an unloading apparatus, the combination of a portable stand having a flat platform, an upwardly inclined chute member coöperating with said platform, and a conveying organization movably held adjacent to the upper end of the chute member and adjustable to different vertical planes.

2. In an unloading apparatus, a portable stand having a platform, a conveying organization movably connected at one end to the stand above the platform and adjustable to different elevations, means between the connected end of the conveying organization and the platform for directing bags, parcels and the like to the said platform, and motive means carried by the stand for actuating the conveying organization.



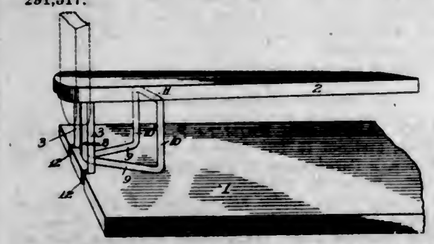
3. In an unloading apparatus, a portable stand having a horizontal platform, a conveying organization movably connected at one extremity to the upper portion of the stand and adjustable at its free end to different elevations, means between the connected extremity of the conveying organization and the platform for delivering bags, parcels and the like to the said platform, and means for actuating the conveying organization.

4. In an unloading apparatus, a portable stand having a receptive platform, a conveying organization movably connected at one extremity to a portion of the stand above the platform, and means between the connected extremity of the conveying organization and the platform to deliver parcels, bags and the like to the said platform.

5. In an unloading apparatus, a portable stand having a receptive platform, a conveying organization movably connected at one extremity to a portion of the stand above the platform and having its free end adjustable to different elevations, the conveying organization being foldable over on the stand, means between the platform and conveying organization for directing parcels, bags and the like from the conveying organization to the platform, and a complete operating mechanism carried by and movable with the stand for actuating the conveying organization.

[Claims 6 to 18 not printed in the Gazette.]

901,950. IRONING-BOARD ATTACHMENT. CHARLES BURGESS, Rochester, N. Y., assignor to George Tibbils, Rochester, N. Y. Filed Dec. 13, 1905. Serial No. 291,517.



1. The combination with a main board and an auxiliary board, of a frame comprising arms pivoted at their lower ends to the main board and at their upper ends to the auxiliary board, and a support extending forwardly from the arms near their lower ends to rest upon the main board and thence upwardly to engage the under surface of the auxiliary board.

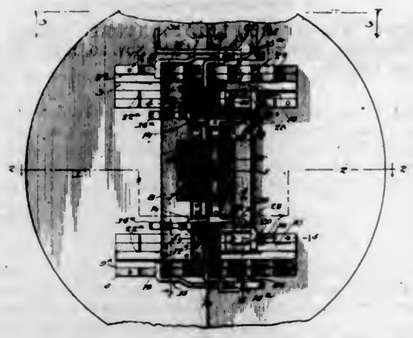
2. The combination with a main ironing board and an auxiliary ironing board, of a frame comprising arms which are pivotally connected at their lower and upper ends to the main and auxiliary boards respectively and a strut extending from the arms between and bearing against the two boards at one side of the arms.

3. The combination with a main ironing board and an auxiliary board, of a frame comprising arms pivotally connected at their lower ends to the lower side of the main board, and at their upper ends to the lower side of the auxiliary board and a strut extending from the arms engaging the main board to normally support the arms in an upright position and forming a rest for holding the auxiliary board parallel to the main board.

4. The combination with a main ironing board provided with slots at one end and an auxiliary ironing board, of arms pivoted to the lower side of the main board and adapted when in the normal position to project upwardly through said slots, connections between the upper ends of the arms and the auxiliary board and means extending forwardly from said arms and engaging the main and the auxiliary board for holding the auxiliary board parallel to the main board.

5. The combination with a main and an auxiliary ironing board, of a frame connecting them and comprising a pair of arms having portions at each end extending toward each other and connected to the boards, portions extending downwardly from the upper portions to the main board, portions extending forwardly from the lower ends of the downwardly extending portions, portions extending upwardly from the forwardly extending portions, and a portion connecting the upper ends of the upwardly extending portions and supporting the auxiliary board.

901,951. EXTENSION-TABLE LOCK. CHARLES S. BURTON, Oak Park, Ill., assignor to Emil Tyden, Hastings, Mich. Filed June 10, 1907. Serial No. 378,090.



1. In an extension table, in combination with the extensible table top members, the sets of slides which connect them for extension consisting each of a middle slide and exterior and interior slides, the extreme exterior and interior slides being connected to the opposite table members and adapted to be withdrawn in opposite directions from the middle slide, the fillers adapted to be inclosed between the table top members when extended, and means carried by the middle slides for disengageably engaging the other slides at intervals corresponding to the width of the fillers.

2. In an extension table, in combination with the separable table members, the sets of slides which connect them for extension consisting each of a middle slide and slides at opposite sides of such middle slide, the extreme slides at each side being connected respectively to the opposite table members and adapted to be withdrawn in opposite directions from the middle slide; a rock shaft carried by the middle slides; pawls operated by the rock shaft, the extreme slides having means for engagement of the pawls therewith for drawing and holding them in direction resisting extension.

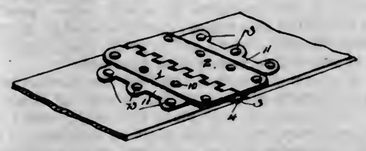
3. In an extension table, in combination with the separable table members, two sets of slides connecting them for extension consisting each of a middle slide and slides in each set at opposite sides of the middle slides respectively, the extreme exterior and the extreme interior slides being connected respectively to the opposite table members and adapted to be withdrawn in opposite directions from the middle slides; a bridge bar connecting the middle slides rigidly; a rock shaft mounted on the bridge bar; two sets of pawls operated by the rock shaft engaging respectively the interior and exterior slides, said slides having devices for engagement of the pawls therewith to retract the slides and resist extension thereof.

4. In an extension table, in combination with the separable table members, two sets of slides which connect them for extension, and fillers adapted to be interposed, each set comprising a middle slide and exterior and interior slides at opposite sides of the middle slides respectively, all said exterior and interior slides being ratcheted, the step intervals between the ratchet shoulders being half the unit filler width, and means carried by the middle slides cooperating with the ratchet shoulders for resisting extension.

5. In an extension table, in combination with the separable table members, the slides which connect them for extension; a rock shaft carried by the middle slides having end cranks outside the outermost slides and intermediate cranks between the two sets of slides, said end and intermediate cranks being extended in opposite directions from the shaft, the slides which are movable with respect to the middle slides for extension being ratcheted on their lower edges; pawls on the end cranks engaging the ratchets of the slides outside the middle slides, and pawls on the intermediate cranks engaging the ratchets of the slides inside the middle slides.

[Claim 6 not printed in the Gazette.]

901,952. BELT-COUPLING. DANIEL CHASE, New York, N. Y., assignor to The Strong Machinery & Supply Co., New York, N. Y., a Corporation of New York. Filed Nov. 26, 1907. Serial No. 403,939.



1. In a belt coupler, a plurality of pivotally mounted plates, each of said plates being formed from a single piece of material and folded upon itself to form a pintle receiving portion and being again deflected until its inner edge is in a plane with the outer edge of the folded portion, and a pintle passing through said plates for pivotally securing the same together.

2. In a belt coupler, a plurality of plates, means for pivotally securing same together and means for securing said plates to said belt, each of said plates being stamped from a single piece of sheet metal and formed with elongated bars designed to be bent for receiving said pintle and an extension formed on one edge of each of said plates bent for taking a position in the same plane as the end of that portion of the plate that is bent over for forming a pintle receiving portion.

901,953. SPIRIT-LEVEL. WILLIAM L. COUTURE, San Francisco, Cal. Filed Mar. 3, 1908. Serial No. 419,052.

1. In a level of the kind described having a main body with apertures therein, the combination consisting of an adjustable supporting plate in each of said apertures, screw bolts extending through said body and plate, nuts on said bolts in contact with said plate, elastic washers on said bolts intermediate of said plate and main body; an elastic

tube secured to said plate, means for securing said tube on said plate, and a glass tube secured within said elastic tube as described.



2. In a level of the kind described having a main body with an aperture therein; the combination consisting of a plate within said aperture; screws through said body and plate; an elastic body intermediate of said main body and said plate; a hollow elastic member secured on said plate; means adapted to secure said member on said plate; a spirit glass partly inclosed and secured in said elastic member as described.

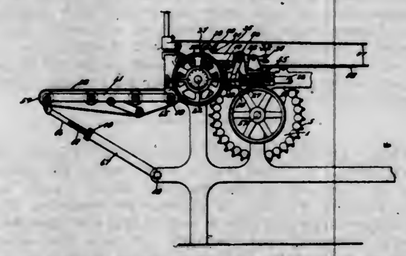
3. In a level of the kind described, the combination with the main body having an aperture, of a plate supported in said aperture, elastic members intermediate of said plate and body; means for securing said plate on said members in said aperture; an elastic hollow member secured on said plate means for securing said member and a spirit glass supported within said elastic member as described.

4. In a level of the kind described, the combination with a main body having a plurality of apertures; of a plate in each of said apertures; elastic members intermediate of said plates and body; means for securing said plates and members in said apertures an elastic hollow member secured on each of said plates; means adapted to secure said members to said plates; and a spirit glass supported in each of said hollow members as described.

5. In a level of the kind described, the combination with the main body, a plate supported therein; of elastic cushions intermediate of said plate and body; means for securing said cushions and said plate on said body; a hollow elastic member secured on said plate and a spirit glass secured within said hollow member as described.

[Claims 6 and 7 not printed in the Gazette.]

901,954. TOWN-MARKER FOR ADDRESSING-MACHINES. SANDFORD C. COX, Chicago, Ill., assignor, by mesne assignments, to Cox Multi-Mailer Company, Augusta, Me., a Corporation of Maine. Filed May 29, 1905. Serial No. 262,723.



1. In a device for the purpose described the combination of individual disconnected and independent addressing devices, means for causing the same to travel to and from a printing position, means for placing a distinguishing mark upon the papers, conveying means for conducting the papers past said marker, means for holding the marker inactive while some of the papers pass it, and means operatively related to some of said addressing devices for rendering the marker active while other papers pass it.

2. In a device for the purpose described the combination of individual addressing devices, means for causing the same to travel to and from a printing position, an ink impression device for marking the papers, conveying means for conducting folded papers and presenting the folded edges thereof to said ink impression device, means for holding the impression device inactive while some of the papers pass it, and means operatively related to some of said addressing devices for pressing the impression device against the folded edge of the paper contiguous thereto.

3. In a device for the purpose described the combination of individual devices for addressing folded papers, and means operatively related to some of said devices for placing an impression against the folded edge of some of the papers.

4. In a device for the purpose described the combination of a paper addressing means, a table comprising a pivoted traveling conveyer for receiving the addressed papers, means for adjusting said conveyer upon its pivot, and means for projecting the papers upon the conveyer.

5. In a device for the purpose described the combination of means for addressing the papers, means for conducting the papers to the addressing means, means arranged in line of movement of the papers for squaring the papers up preparatory to being addressed, a marker for engaging the papers and producing a distinguishing mark thereon, means for holding said marker inactive while some of the papers pass it, means for rendering the marker active when others of the papers pass it, operatively related to the said means for squaring the papers up whereby it will act in time therewith.

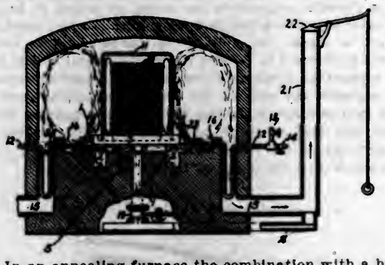
[Claims 6 to 8 not printed in the Gazette.]

901,955. ADJUSTABLE LIGHT-FIXTURE. GEORGE W. CRAIGHEAD, Richmond, Ind. Filed Nov. 20, 1907. Serial No. 402,968.



An adjustable light-fixture, comprising, in combination, the following parts: a stem carrying, at its lower end, a spider and, at its upper end, a collar; a tube within which said stem is adapted to slide; a bushing disposed within said tube and encircling said stem; a socket-member inclosing said tube; a set-screw passing through said socket-member and said tube and bearing against said stem; a cylindrical member carried by and inclosing the lower portion of said socket-member; and a set-screw passing through said cylindrical member and said socket-member toward the top thereof.

901,956. ANNEALING-FURNACE. ELMER E. F. CREIGHTON, Schenectady, N. Y., assignor to Stanley G. I. Electric Manufacturing Company, a Corporation of New Jersey. Filed Feb. 7, 1906. Serial No. 299,940.



1. In an annealing furnace the combination with a heating chamber, of a support mounted in said chamber to carry the material to be annealed, said support having passages opening into said chamber at the sides of said support, and heaters mounted to direct part of the heated gases against the sides of said support and part of said gases into the open ends of said passages.

2. In an annealing furnace the combination with a heating chamber, of a support mounted in said chamber to carry the material to be annealed and having passages opening into said chamber, heaters mounted to direct heated gases against said support and into the passages, an exhaust flue for said chamber, and an independent exhaust flue connected to said passages.

3. In an annealing furnace the combination with a heating chamber, of a support mounted in said chamber to carry the material to be annealed and having passages opening into said chamber, heaters mounted to direct heated gases against said support and into said passages, independent exhaust flues connected to said chamber and to said passages, and a damper mounted in one of said flues to control the flow of gases through it.

4. In an annealing furnace, the combination with a heating chamber, of heaters for directing heated gases away from the walls and toward the bottom of the chamber, and exhaust flues opening into the chamber near the lower edge of the walls thereof.

5. In an annealing furnace, the combination with a heating chamber, of heaters for directing heated gases away from the walls and toward the bottom of the chamber, adjustable means for controlling the direction of flow of the gases, and exhaust flues opening into the chamber near the lower edge of the walls thereof.

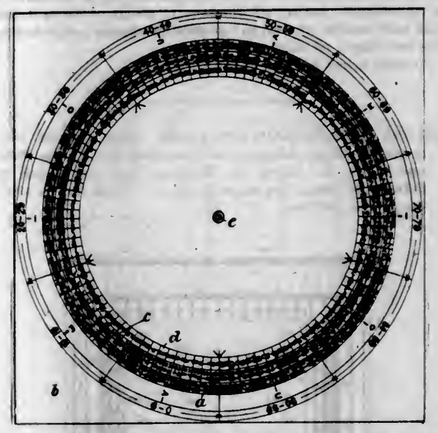
[Claims 6 to 9 not printed in the Gazette.]

901,957. TELEGRAPHIC-CODE CONDENSER. MATTHEW B. DICKIE, Glasgow, Scotland, assignor to Nobel's Explosives Company, Limited, Glasgow, Scotland. Filed Feb. 21, 1908. Serial No. 417,219.

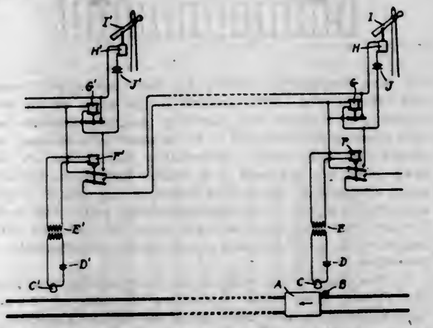
1. A telegraphic code condenser consisting of concentric circular scales pivotally connected together, each of which is divided into compartments with the compartments in one scale radially in line with the compartments in another scale, each compartment in each scale containing a number and a letter footing on radial lines whereby the number in one compartment of one scale can be brought radially in line with the number in a compartment in another scale and in like manner the letter in one scale can be brought radially in line with the letter in another scale.

2. A telegraphic code condenser consisting of a circular scale having a number of compartments each containing a number of two digits and a syllable formed of a vowel and a consonant, an intermediate scale also having a number of compartments each containing a number of two digits and a syllable formed of a vowel and a consonant and an inner scale also having a number of compartments each containing a number and a consonant.

3. A telegraphic code condenser consisting of a circular scale with numerous compartments each containing a number of two digits and a syllable of two letters, the compartments being divided into divisions according to the vowels employed in them an intermediate scale also divided into the same number of compartments each containing a number of two digits and a syllable of two letters and an inner scale with numerous compartments substantially as described each containing a number and a letter.



901,958. RAILWAY-SIGNAL. HEINRICH DIEHL, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Apr. 23, 1907. Serial No. 369,856.



1. In a railway signal system, a device adjacent to the trackway that varies in resistance with variation in light, means carried by a moving car for varying the light on said device, a source of current in circuit with said device, and signal controlling means responsive only to a sudden variation in the current from said source.

2. In a railway signal system, a selenium cell adjacent to the trackway, means carried by a moving car for throwing light on said cell, a source of current in circuit with said cell, and signal controlling means responsive only to a sudden variation in the current from said source.

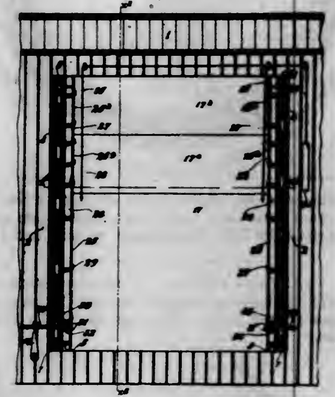
3. In a railway signal system, a device adjacent to the trackway that varies in resistance with variation in light, means carried by a moving car for varying the light on said device, a source of current in circuit with said device, an inductive winding in circuit with said cell and said source, and signal-controlling means actuated by current produced inductively by said winding.

4. In a railway signal system, a selenium cell adjacent to the trackway, means carried by a moving car for throwing light on said cell, a source of current in circuit with said cell, an inductive winding in circuit with said cell and said source, and signal controlling means actuated by current produced inductively by said winding.

5. In a railway signal system, a device adjacent to the trackway that varies in resistance with variation in light, means carried by a moving car for varying the light on said device, a source of current in circuit with said device, a transformer having its primary in circuit with said cell and said source, and signal-controlling means connected to the secondary of said transformer.

[Claim 6 not printed in the Gazette.]

901,959. GRAIN-DOOR FOR CARS. JOHN EDMAN, Minneapolis, Minn., assignor of one-eighth to Charles Dahl, one-fourth to Alfred M. Hovland, and one-eighth to Edward G. Dahl, Minneapolis, Minn. Filed May 8, 1907. Serial No. 372,494.

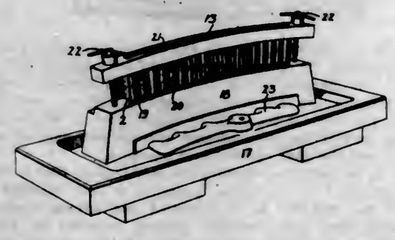


1. The combination with a car body having stop cleats and pivoted lock blades applied to the sides of the door opening, of a grain door movable laterally through said door opening and adapted to be clamped between said lock blades and stop cleats, coöperating lock strips on said grain door and on said lock blades having interlocking parts and one of which lock strips is movable to engage and interlock with the coöperating lock strip, and means for securing said movable lock strips in positions interlocked with the coöperating lock strips, substantially as described.

2. The combination with a car body having stop cleats and pivoted lock blades applied to the sides of the door opening, a grain door made up of sections and adapted to be clamped between said lock blades and stop cleats, perforated lock strips on said door sections, lock strips on said lock blades having lock projections insertible through the perforations of the lock strips on said door, an operating lever with connections for imparting reverse oscillatory movements to said lock blades, and a lock device operative on said lever to cause the same to hold the lock blades in operative positions, and operative on the lock strips of said door and lock blades to hold the same interlocked, substantially as described.

901,960. METHOD OF MANUFACTURING TURBINE-BUCKETS. EDMUND H. FARQUHAR, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 2, 1906. Serial No. 294,182.

1. The method of manufacturing bucket segments which consists in forming the buckets to the desired dimensions, mounting the buckets at one end in a holder to space them apart and preserve their alinement, mounting a second holder adjacent the other ends of the buckets to space and aline them, securing the buckets by suitable means against longitudinal movement in the holders, placing the buckets so prepared and arranged in a nowel and packing molding sand round one of the holders and between the buckets to support and position them therein, releasing the securing means to permit a holder to be removed from the ends of the buckets, completing the nowel, reversing it, forming the cope, separating the flask, removing the last-mentioned holder to expose the ends of the buckets and to form a space in the mold to receive the molten metal which forms the supporting member of the series of buckets composing the segment, the ends of the buckets projecting from the sand into said space, closing the mold and pouring molten metal into said space round the ends of the buckets, the temperature of the metal being such as to cause a fusion between it and the ends of the buckets.



2. The method of manufacturing bucket segments which consists in cutting the buckets to the desired length, forming a tenon on one end, sharpening the edges, mounting the other ends of the buckets in a device to space them apart and aline them, mounting a second spacing device on the tenons, clamping the buckets between the two devices, ramming molding sand around said devices and between the buckets, removing the first device to expose the ends of the buckets, and pouring molten metal into the mold around said ends, the temperature of the metal being sufficiently great to cause fusion with the buckets.

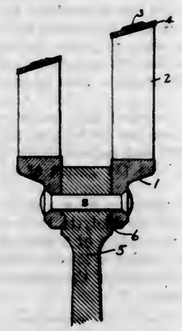
3. The method of manufacturing bucket segments which consists in forming the buckets to the desired dimensions, mounting both ends of the same in holders to space them and preserve their alinement, securing said holders against movement longitudinally of the buckets, ramming molding sand around the buckets, removing the holders leaving the ends of the buckets exposed, baking the mold to harden it, and pouring molten metal around the exposed ends of the buckets.

4. The method of manufacturing bucket segments which consists in forming the buckets to the required dimensions, reducing the cross-sectional area of the ends of the buckets to be exposed to the molten metal, mounting one end of the buckets in a holder to space them apart and preserve their alinement, mounting a second holder on the other ends of the buckets to space and aline them, clamping the buckets between the two holders, packing molding sand around the first holder and between the buckets, removing the holders, completing the mold, and pouring molten metal around the exposed ends of the buckets, the temperature of the metal being such as to cause a fusion between it and the buckets without injuring the sharpened edges of the buckets.

5. The method of manufacturing bucket segments which consists in forming the buckets to the required dimensions, mounting the buckets in a grooved block, inserting spacers between the base ends of the buckets, mounting a crown on the opposite ends of the buckets to preserve the alinement of the buckets at that point, packing sand around the buckets and block, removing the crown and filling the mold to cover the exposed ends of the buckets, reversing the mold, forming the cope, separating the parts of the flask, removing the block and the individual spacers, inserting the core and closing the flask and pouring molten metal into the mold of such temperature that it will cause a fusion with the bucket bases without injuring the sharpened edges.

[Claim 6 not printed in the Gazette.]

901,961. BUCKET FOR TURBINES. EDMUND H. FARQUHAR, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 7, 1906. Serial No. 310,416.



1. In an elastic-fluid turbine, the combination of a plurality of buckets made of a hot rolling alloy, a cast-metal support to which the buckets are fused, and a carrier for the support.

2. In an elastic-fluid turbine, the combination of a plurality of buckets each having a concave and a convex wall and made of a hot rolling alloy, a cast-metal base to which the buckets are fused at one end, a means for connecting the opposite ends of the buckets to hold them in alinement and preserve the pitch distance, and a carrier for the base.

3. In an elastic-fluid turbine, the combination of a plurality of buckets each being separately formed and provided with concave and convex walls, a base to which the buckets are secured by fusing, tenons on the buckets, a cover or shroud that is secured to the buckets by the tenons, which forms one wall of the fluid passage, preserves the pitch relation between the buckets and assists in securing the buckets against centrifugal strains, and a carrier for the base.

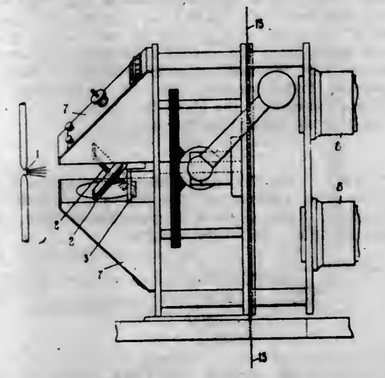
4. In an elastic-fluid turbine, the combination of a plurality of buckets each being made of extruded metal and provided with a recess at one end, tenons formed integral with the buckets, a cast-metal base to which the buckets are fused, the metal of the base filling the recesses and forming an additional mechanical support, a cover for the buckets which is secured thereto by riveting over the ends of the tenons, the said cover acting as a mechanical support to resist centrifugal strains and also to preserve the pitch distance between buckets and hold them in alinement against lateral displacement, and a carrier for the base.

901,962. KINEMATOGRAPH MECHANISM. ROBERT T. HAINES, London, England. Filed Aug. 25, 1906. Serial No. 332,021.

1. In a kinematograph apparatus the combination of a single source of light, a pair of reflecting mirrors set at an angle to each other, means for giving said mirrors a reciprocating movement across the light beam from said source of light and sets of prisms and condensers adapted to receive alternately and gradually the reflected beam from said mirrors and to effect the gradual exposure and obscuration of a series of pictures projected on to the screen.

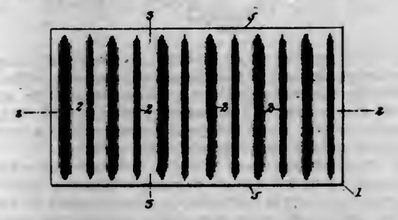
2. In a kinematograph apparatus the combination of a single source of light, a pair of reflecting mirrors set at an angle to each other mounted on a shaft, a crank adapted to reciprocate said shaft, and sets of prisms and condensers adapted to receive alternately and gradually the reflected beam from said mirrors and to effect the gradual exposure and obscuration of a series of pictures projected on to the screen.

3. In a kinematograph apparatus the combination of a single source of light, a pair of reflecting mirros set at an angle to each other, means for adjusting the distance between said mirrors, means for giving said mirrors a reciprocating movement across the light beam from said single source of light and sets of prisms and condensers arranged on each side of said mirrors adapted to receive alternately and gradually the reflected light beam from said mirrors and to effect the gradual exposure and obscuration of a series of pictures projected on to the screen.



4. In a kinematograph apparatus the combination of a single source of light, a pair of reflecting mirrors set at an angle to each other mounted on a shaft, a crank adapted to reciprocate said shaft, and sets of prisms and condensers arranged on each side of said mirrors adapted to receive alternately and gradually the reflected light beam from said mirrors and to effect the gradual exposure and obscuration of a series of pictures projected on to the screen.

901,963. METHOD OF SHAPING BILGE BODIES. ROBERT W. HARDIE, New York, N. Y. Original application filed June 17, 1907, Serial No. 379,527. Divided and this application filed Jan. 24, 1908. Serial No. 412,390.



1. The method of shaping bilge bodies consisting in forming the opposite faces of an approximately flat blank with a series of corrugations diminishing in depth from the middle toward the opposite terminals of said corrugations, said terminals merging into the unbroken lateral margins of the blank, then pressing out the corrugations and bending the blank into cylindrical form.

2. The method of shaping bilge bodies, consisting in forming the opposite faces of an approximately flat blank with a series of corrugations diminishing in depth from the middle toward the opposite terminals of said corrugations, then pressing out the corrugations and bending the blank into cylindrical form.

3. The method of shaping bilge bodies, consisting in forming the opposite faces of an approximately flat blank with a series of corrugations diminishing in depth from the middle toward the opposite terminal of said corrugations, then pressing out the corrugations, bending the blank into cylindrical form, and fastening the ends of the blank together.

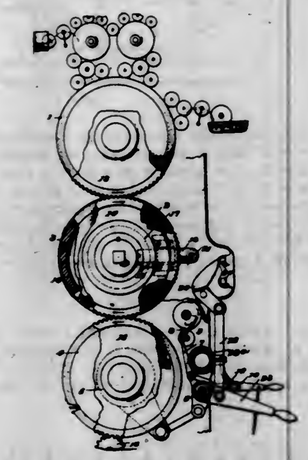
4. The method of shaping bilge bodies, consisting in forming the opposite faces of an approximately flat blank

with a series of corrugations diminishing in depth from the middle toward the opposite terminal of said corrugations, then simultaneously bending the blank into cylindrical form, and pressing out the corrugations.

5. The method of shaping bilge bodies, consisting in forming an approximately flat blank with its middle longitudinal portion of a different thickness from that of the lateral margins of the blank, and providing the opposite faces of said blank with a series of corrugations decreasing in depth from the middle toward the opposite terminals of said corrugations, then bending the blank into cylindrical form, pressing out the corrugations, and fastening the ends of the blank together.

[Claim 6 not printed in the Gazette.]

901,964. PRINTING-PRESS. CHARLES G. HARRIS, Niles, Ohio, assignor to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed Dec. 31, 1906. Serial No. 350,259.



1. In a printing press having a form-carrying member, a transfer-member, and an impression-member, means for operating the three members by power applied to one of them, and means for automatically bringing the transfer-member to rest while the form-carrying member and impression member may continue to be operated.

2. In a printing press having a form-carrying cylinder, a transfer-cylinder, and an impression-cylinder, means for operating the three cylinders by power applied to one of them, and means for automatically causing the transfer-cylinder to cease to rotate while the form-carrying cylinder and impression-cylinder may continue to be operated.

3. In a printing press having a form-carrying cylinder, a transfer-cylinder, and an impression-cylinder, means for operating the three cylinders by power applied to the impression-cylinder, and means for automatically causing the transfer-cylinder to cease to rotate while the form-carrying cylinder and impression-cylinder may continue to be operated.

4. In a printing press having a form-carrying cylinder, a transfer-cylinder, and an impression-cylinder, means for uniformly operating all of said cylinders, and means for automatically causing the transfer-cylinder to cease to rotate while the other cylinders remain in operation.

5. In a printing press having a form-carrying cylinder, a transfer-cylinder, and an impression-cylinder, intermeshing gear-wheels carried by said cylinders, and means for automatically releasing the transfer-cylinder from its gear to allow the latter to revolve in unison with the gears of the form-cylinder and impression-cylinder while the transfer-cylinder is brought to rest.

[Claims 6 to 9 not printed in the Gazette.]

901,965. PREPARATION OF ELECTROTYPE-MOLDS. ALBERT W. HARRISON, Baltimore, Md. Filed July 16, 1906. Serial No. 326,436.

1. The herein described solution for use in preparing electrotype molds, for the electrolytic bath, containing the ingredients specified and substantially in the proportions named, comprising one (1) gallon of water, and one (1) ounce of a mineral salt, of a mineral having a lower conductivity than the metallic base of the salt of the electrolyte.

2. The herein described solution for use in preparing electrotype molds for the electrolytic bath containing the ingredients specified and substantially in the proportions named, comprising one (1) gallon of water, and one (1) ounce of kainit.

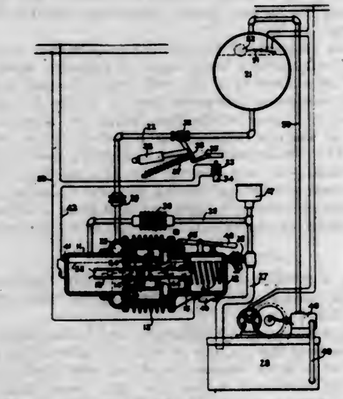
3. The improved solution for use in preparing molds for electrotypes for the electrolytic bath which consists of substantially one (1) gallon of water, one (1) ounce of a salt of a mineral having a lower conductivity than the metallic base of the salt of the electrolyte, and a small quantity of graphite.

901,966. SOLUTION FOR TREATING ELECTROTYPE-MOLDS. ALBERT W. HARRISON, Baltimore, Md. Filed Dec. 7, 1906. Serial No. 346,703.

1. The hereindescribed solution for treating electrotype molds consisting of nitrate of soda dissolved in water with graphite added thereto, all in substantially the proportions named.

2. An improved solution for treating electrotype molds prior to submitting them to the electrolytic bath, comprising as its principal ingredient nitrate of soda dissolved in water in substantially the proportions named.

901,967. OIL-SWITCH. EDWARD M. HEWLETT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 7, 1904. Serial No. 231,667.



1. The combination with an electric switch, of a circulating oil system comprising a reservoir, a pump for storing oil under pressure in said reservoir, means for admitting oil under pressure from said reservoir to said switch, actuating mechanism operated by oil under pressure to open the switch and permit the oil to extinguish the arc produced, and a discharge pipe for returning oil from the switch to the pump.

2. The combination with an electric switch, of a circulating oil system comprising a system of piping, a pump for supplying oil under pressure to a portion of said system, means for admitting oil under pressure from said portion of said system to the switch, actuating means operated by oil under pressure to open the switch and permit the oil to flow under pressure against the arc produced by the opening of the switch, and a discharge pipe for returning the oil from the switch to said pump.

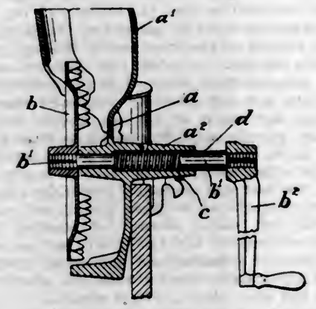
3. An electric switch comprising a casing containing oil, a partition therein, means connected with opposite sides of said partition for conducting the oil from one side and supplying it under pressure to the other side, and separable electrodes within said casing providing upon separation a communicating passage between the opposite sides of said partition.

4. An electric switch comprising a casing containing oil, a partition therein, means connected with opposite sides of said partition for conducting the oil from one side and supplying it under pressure to the other side, and separable electrodes within said casing, one of said electrodes being provided with an opening therethrough communicating between the opposite sides of said partition.

5. An electric switch comprising a casing containing oil, a movable abutment therein, means connected with opposite sides of said abutment for conducting oil from one side and supplying it under pressure to the other side, and separable electrodes actuated by said abutment and arranged to provide upon separation a communicating passage between its opposite sides.

[Claims 6 to 9 not printed in the Gazette.]

901,968. CORN-SHELLER. WILFORD H. HOLSCLAW, Louisville, Ky., assignor to Brinly-Hardy Company, Louisville, Ky., a Corporation of Kentucky. Filed Aug. 16, 1907. Serial No. 388,875.



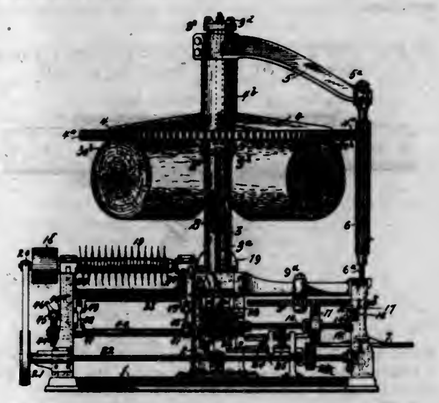
1. In a corn sheller, a main frame having a hub, a rotatable shaft located in said hub having a shelling disk thereon, a spring located about said shaft within said hub, a crank for said shaft, and a loose sleeve on said shaft between said crank and said spring disconnected from and freely movable with reference to said hub, substantially as specified.

2. In a corn sheller, a main frame having a hub, a shaft located in said hub having a shelling disk thereon, said hub being provided with a chamber about said shaft, a spring located in said chamber, a crank on the end of said shaft, and a loose sleeve on said shaft between said crank and spring located partly within said chamber but disconnected from and freely movable with reference thereto, substantially as and for the purpose specified.

3. In a corn sheller, a main frame having a hub, a rotatable shaft located in said hub having a shelling disk thereon, a spring located about said shaft within said hub, a crank for said shaft, a loose sleeve about said shaft between said crank and said spring disconnected from said hub and freely movable with reference thereto, and means for adjusting the tension of said spring, substantially as specified.

4. In a corn sheller, a main frame having a chambered hub, a rotatable shaft located in said hub having a shelling disk thereon, a spring located about said shaft within said hub, a crank on the end of said shaft, and a longitudinally slidable sleeve on said shaft between said spring and crank and held in position thereon by said crank, substantially as specified.

901,969. WOOD-FIBER MACHINE. HORACE M. HOOVER, Perrysburg, Ohio. Filed Feb. 12, 1906. Serial No. 300,623.



1. In a wood-fiber machine, a cutting mechanism, a pillar, a carriage, means for rotating the carriage upon the pillar, means for moving the carriage upon the pillar toward and away from the cutting mechanism, and means for securing a log or bolt to the carriage in operative relation to the cutting mechanism.

2. In a wood-fiber machine, a frame, a cutting mechanism, a pillar, a carriage or table revolubly mounted on said pillar, means for securing a log or bolt to said carriage, a toothed gear at the margin of the carriage, an elongated pinion engaging the toothed gear, a screw-support for the carriage, and means for driving the pinion and the screw whereby said table is caused to revolve upon its axis and to reciprocate upon the pillar toward and away from the cutting mechanism.

3. In a wood-fiber machine, a cutter-head, a pillar, a carriage journaled upon the pillar, a screw in said pillar, connections between the screw and the carriage, and means for revolving the screw, the carriage and the cutter-head.

4. In a wood-fiber machine, a cutter-head, a revoluble carriage, a screw support therefor, a train of gearing adapted to drive said screw in either direction, and means for actuating said train rapidly in one direction and slowly in the other direction.

5. A wood-fiber machine comprising a base or frame, a series of cutter-heads journaled therein, and in radial relation to each other; a pillar, a carriage vertically and revolubly movable upon said pillar, means for securing a series of logs or bolts to said carriage, means for feeding said carriage and its load slowly to the cutter-heads, and means for withdrawing said carriage rapidly from the cutter-heads.

[Claims 6 to 10 not printed in the Gazette.]

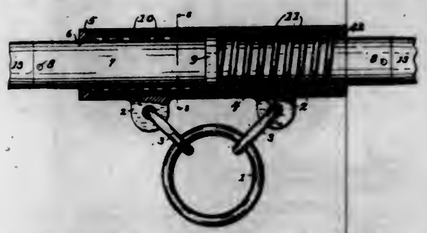
901,970. BLACK SULFUR DYE AND PROCESS OF MAKING SAME. GUSTAV E. JUNIUS, Hagen, Germany, assignor to R. E. B. Sanderson, New York, N. Y. Filed Oct. 24, 1906. Serial No. 340,365. (Specimens.)

1. The process of preparing a black dyestuff which consists in treating nitr-scortho-cresol with sodium sulfid and sulfur in the presence of water, substantially as described.

2. The dyestuff formed by treating nitroso-ortho-cresol with sodium sulfid and sulfur in the presence of water and characterized in the isolated and purified state by being insoluble in water, acids and alkali carbonates, but soluble in alkali sulfid, such as sodium sulfid; and by dyeing cotton directly in a bath containing sodium sulfid and salt, substantially as described.

3. The process of preparing a black dyestuff which consists in boiling a bath of water containing nitroso-ortho-cresol, sodium sulfid and sulfur, substantially as described.

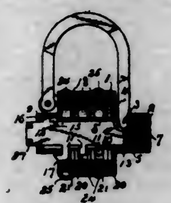
901,971. NECK-YOKE. WILLIAM KLEINESCHAY, Elmore, Wis. Filed June 30, 1908. Serial No. 441,210.



1. The combination of a yoke having a shoulder, a sleeve around the same, having means for connection to a wagon tongue, and springs held within the sleeves, and bearing against opposite sides of the shoulder.

2. The combination of a yoke having a shoulder, a sleeve around the same, having inner shoulders at opposite ends, one of which is removable, and springs coiled around the yoke within the sleeve and bearing at opposite ends against the shoulders of the sleeve and yoke, respectively.

901,972. KEYLESS PADLOCK. GEORGE W. KONE, Kansas City, Mo. Filed Jan. 16, 1905. Serial No. 241,312.



1. The combination with the shackle, of the crown provided with an opening to receive the shackle, a cap, a member connecting the crown and cap and from which the cap is detachable, a slide bolt mounted in the crown and adapted to engage the shackle, a slidable member mounted in the connecting member and adapted when moved in one direction to free the slide bolt from the shackle and provided with means for releasably engaging and preventing detachment of the cap, a plurality of tumblers rotatively mounted between the crown and cap, each tumbler when disposed in a certain position permitting reciprocation of the slidable member and provided with means for engaging and holding said slidable member when the tumbler is turned to any other position, and a spring for forcing the slide bolt and the slidable member into the locked positions.

2. The combination with the shackle, of the crown provided with an opening to receive the shackle, a tube secured at one end to the crown, a cap detachably secured to the other end of the tube, a slide bolt adapted to engage the shackle, a slide bar reciprocatively mounted in the tube and adapted when moved in the proper direction to move the slide bolt so as to free it from the shackle and provided with means for releasably engaging and preventing detachment of the cap, a plurality of tumblers rotatively mounted between the cap and crown and encircling the tube and slidable member and provided each with means for engaging and holding the slidable member, but permitting movement thereof when the tumbler is disposed in a certain position, and a spring for forcing the slide bolt and the slidable member into the locked positions.

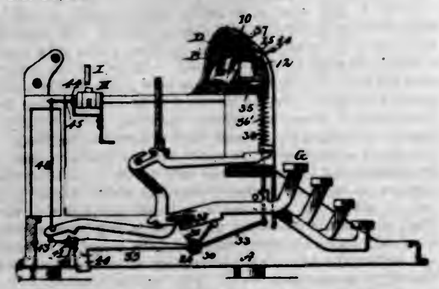
3. The combination with the shackle, of the crown provided with an opening to receive the shackle, a cap, a member connecting the crown and cap from which the cap is detachable, a slide bolt for engaging and holding the shackle in the crown, a slidable member mounted in the connecting member for moving the slide bolt to disengage it from the shackle and provided with means for engaging the cap and preventing detachment of the cap from the connecting member, a plurality of tumblers rotatively mounted between the cap and crown and encircling the connecting member and provided each with means for preventing the movement of the slidable member when the said tumbler is disposed in any other than a certain position, and a spring for forcing the slide bolt and the slidable member into the locked positions.

4. The combination with the shackle, of the crown provided with an opening to receive the shackle, a cap, a tube secured at one end to the crown and having the cap detachably secured to its other end, a slide bolt for holding the shackle when the shackle is inserted in said opening in the crown, a slide bar reciprocatively mounted in the tube and adapted to engage the slide bolt and free it from the shackle when the bar is properly moved, and provided with means for engaging and preventing detachment of the cap excepting when the slide bar is moved inward, a plurality of tumblers rotatively mounted between the cap and crown, and provided each with means for engaging and preventing depression of the slide bar excepting when the tumbler is disposed in a certain position relative to the slide bar, and a spring for forcing the slide bolt and slide bar into the locked positions.

5. The combination with the shackle, of the crown, a cap, a member secured at one end to the crown and detachably secured at the other end to the cap, the crown having an opening to receive the shackle, a slidable member reciprocatively mounted in the connecting member and provided with means for releasably engaging and preventing detachment of the cap, a slide bolt for engaging the shackle when the shackle is inserted in said opening in the crown, and movable by the slidable member out of engagement with the shackle, means for moving the slide bolt into engagement with the shackle, said means being employed to force the slidable member to engage the cap, and a plurality of tumblers rotatively mounted between the cap and crown and provided each with means for engaging and preventing sliding movement of the slidable member when the tumbler is disposed in any other than a certain position.

[Claims 6 to 14 not printed in the Gazette.]

901,973. TABULATING DEVICE FOR TYPE-WRITERS. CHARLES S. LABOFISH, Washington, D. C., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 30, 1901. Serial No. 53,670.



1. In a tabulating attachment for typewriting machines, the combination with the fixed frame of the machine, of printing keys, a transversely movable paper carriage, a rock shaft extending transversely of the machine and in operative relation to the printing keys and adapted to be rocked different degrees by the depression of said keys, a rotary shaft, a graduated contact piece carried thereby, connections including a segment between said rock shaft and said rotary shaft, a connection between said graduated contact piece and the typewriter carriage, and one or more relatively fixed column stops.

2. In a tabulating attachment for typewriting machines, the combination of a transversely arranged rock shaft as 30, a series of graded rockers thereon, a series of printing keys provided with extensions to engage said rockers to turn the shaft 30 different degrees, a second transversely extending rock shaft, operative connections between said rock shafts, a graduated contact piece upon said second rock shaft adapted to be turned different degrees, and column stops.

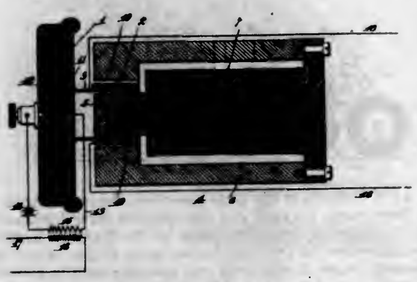
3. In a tabulating attachment for typewriting machines, the combination with the fixed frame, of printing keys, a transversely movable paper-carriage, a shiftable rock-shaft extending transversely of the machine beneath the printing keys and operable thereby, suitable column stops, a rock shaft carrying a contact piece adapted to engage said column stops to arrest the said carriage at a predetermined point, and an operative connection between the said two rock-shafts.

4. In a typewriting machine, the combination of the carriage, a feeding mechanism therefor, a rock shaft, means for rocking said shaft, a toothed segment attached to said shaft, an additional rock shaft, a pinion thereupon and engaging said segment, and operative connections between said last mentioned rock shaft and the carriage feeding mechanism whereby when the first mentioned rock shaft is actuated the parts of the carriage feeding mechanism may be separated and the carriage released.

5. In a tabulating attachment for typewriting machines, the combination of a paper carriage, a feeding mechanism therefor, printing keys, a rock-shaft arranged beneath the printing keys and operable thereby, mechanism adapted to release the paper carriage operated by said rock shaft, column stops adjustably secured against movement to the frame of the machine, and means operatively connected with said rock shaft and movable thereby into coöperation with the column stops for arresting the carriage at a predetermined point.

[Claims 6 to 23 not printed in the Gazette.]

901,974. TELEPHONE-REPEATER. LUCIUS A. LINDSEY, Crystal Springs, Ga. Filed Mar. 20, 1906. Serial No. 307,031.



1. A telephone repeater having a carbon button, one of the plates of which is attached to the diaphragm, there being a coil mounted on such diaphragm and a separate core in coöperative relation with the coil, the said core being mounted independently of the diaphragm, and an exciting coil in coöperative relation with the core.

2. A telephone repeater having a carbon button, one of the plates of which is attached to the diaphragm, there being a spool mounted on the diaphragm, a coil carried by the spool and a separate core in coöperative relation with the coil, the said core being mounted independently of the diaphragm, and an exciting coil in coöperative relation with the core.

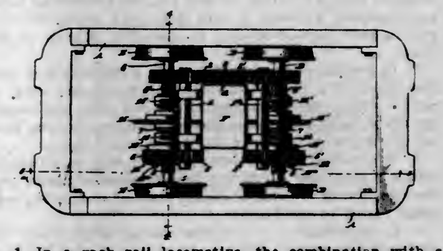
3. A telephone repeater having a carbon button, the said button having a diaphragm which is an essential part thereof, there being a coil mounted on such diaphragm and a separate core in coöperative relation with the coil, the said core being mounted independently of the diaphragm, and an exciting coil in coöperative relation with the core.

4. A telephone repeater having a carbon button, one of the plates of which is attached to the diaphragm, there being a coil mounted on such diaphragm, and a separate core in coöperative relation with the coil, the said core being mounted independently of the diaphragm.

5. A telephone repeater having a carbon button, one of the plates of which is attached to the diaphragm, there being a spool mounted on the diaphragm, a coil carried by the spool, and a separate core in coöperative relation with the coil, the said core being mounted independently of the diaphragm.

[Claim 6 not printed in the Gazette.]

901,975. RACK-RAIL LOCOMOTIVE. GEORGE E. LYNCH, Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Jan. 26, 1906. Serial No. 298,043.



1. In a rack rail locomotive, the combination with a locomotive frame, axles therefor, track-engaging supporting wheels on the said axles, and a motor on the frame, of a rack wheel mounted on the frame, and the train of power transmitting devices interposed between said motor and both said rack wheel and one of said axles and adapted to rotate both the rack wheel and the axle with power, and having in said train compensating mechanism to allow the said axle to rotate relative to the said rack wheel.

2. In a rack rail locomotive, the combination with a locomotive frame, axles carried thereby, track wheels connected with the axles and a motor on the said frame, of a rack wheel mounted on one of said axles, and a train of power transmitting devices interposed between said motor and both the said rack wheel and the axle upon which it is mounted and adapted to rotate both the rack wheel and the axle with power, and having in said train compensating mechanism adapted to permit the relative rotation of the rack wheel and the said axle.

3. In a rack rail locomotive, the combination with a locomotive frame, axles mounted in the frame, at least one of which is a driving axle, supporting wheels rigidly secured to said driving axle, and a motor on the frame, of a rack wheel loosely mounted upon the driving axle, and a train of power transmitting devices interposed between said motor on the locomotive and the said rack wheel and axle and adapted to drive both the rack wheel and the axle with power, and having in said train compensating mechanism arranged to allow the axle to rotate relative to the rack wheel.

4. In a locomotive of the class described, the combination with a locomotive frame, axles mounted therein, track wheels rigidly secured to the axles, and a motor on the frame, of a rack wheel loosely mounted on one of said axles, power transmitting compensating mechanism interposed between said rack wheel and said axle, and power transmitting mechanism interposed between said power transmitting compensating mechanism and said motor.

5. In a locomotive of the class described, the combination with a truck frame, axles mounted therein, track wheels rigidly secured to said axles and a motor on the frame, of a rack wheel loosely mounted on one of said

axles, a differential power transmitting mechanism interposed between said axle and said rack wheel, and having an external gear, and a train of power transmitting devices interposed between said differential power transmitting mechanism gear and the said motor.

[Claims 6 to 17 not printed in the Gazette.]

901,976. CURRENT-COLLECTING MEANS. CAMPBELL MACMILLAN, Schnectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 12, 1906. Serial No. 300,579.



1. In combination, a rotating collector ring, a stationary collector ring, a rotating contact member connecting them and engaging the sides of both rings, and means for supporting said contact member in operative relation to the rings.

2. In combination, a rotating shaft, a collector ring carried thereby, a coöperating stationary collector ring, a rolling contact device connecting the two rings and engaging the sides of both rings, and means for supporting said contact device in operative relation to said rings.

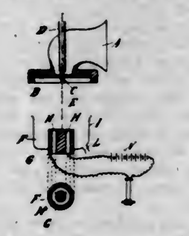
3. In combination, a rotating collector ring, a stationary collector ring, and a rotating contact member connecting them formed of a series of dished disks of conducting material nested in one another.

4. In combination, a collector ring rotating about its own axis, a stationary collector ring encircling the rotating ring, and a plurality of rotating contact members engaging the sides of both rings.

5. In combination, a collector ring rotating about its own axis, a stationary collector ring encircling the rotating ring, a plurality of rotating contact members engaging both rings, and a member for spacing said members apart.

[Claims 6 to 9 not printed in the Gazette.]

901,977. MICROPHONE APPARATUS FOR TELEPHONE AND OTHER CIRCUITS. QUIRINO MAJORANA, Rome, Italy. Filed July 7, 1906. Serial No. 325,106.



1. An electro dynamic microphone of the kind described comprising a vibratory diaphragm, a liquid supply tube and an elastic connection between the diaphragm and the outlet end of the liquid supply tube, in combination with an electrode consisting of an outer conducting ring and a central conducting rod of large diameter to readily transmit current of light intensity, and an intervening ring of non-conducting material the thickness of which is of the same dimensions as the liquid wave corresponding to the mean sound wave to be transmitted, substantially as set forth.

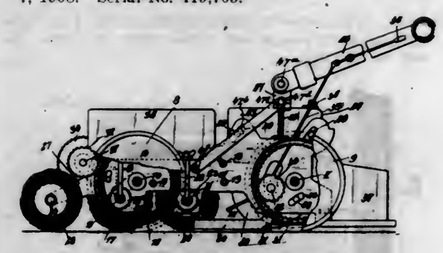
2. An electro dynamic microphone of the kind described comprising a vibratory diaphragm, a liquid supply tube and an elastically connected extension thereof, in combination with an electrode consisting of an outer conducting ring and a central conducting rod of large diameter to readily transmit current of light intensity, and an intervening ring of non-conducting material the thickness of which is of the same dimensions as the liquid wave corresponding to the mean sound wave to be transmitted substantially as set forth.

3. An electro dynamic microphone of the kind described comprising a vibratory diaphragm, a liquid supply tube, an extension elastically connected thereto and connected to the vibratory diaphragm, in combination with an electrode consisting of an outer conducting ring and a central conducting rod of large diameter to readily transmit current of light intensity, and an intervening ring of non-conducting material the thickness of which is of the same dimensions as the liquid wave corresponding to the mean sound wave to be transmitted substantially as set forth.

4. An electro dynamic microphone of the kind described comprising a vibratory diaphragm, a liquid supply tube, an extension elastically connected thereto and connected to the vibratory diaphragm, in combination with an electrode consisting of an outer conducting ring and a central conducting rod of large diameter to readily transmit current of light intensity, and an intervening ring of non-conducting material the thickness of which is of the same dimensions as the liquid wave corresponding to the mean sound wave to be transmitted substantially as set forth.

5. An electro dynamic microphone of the kind described comprising a vibratory diaphragm, a liquid supply tube, an extension elastically connected thereto and connected to the vibratory diaphragm, the outlet orifice of the extension being relatively much smaller than that of the supply tube, in combination with an electrode consisting of an outer conducting ring and a central conducting rod of large diameter to readily transmit current of light intensity, and an intervening ring of non-conducting material the thickness of which is of the same dimensions as the liquid wave corresponding to the mean sound wave to be transmitted substantially as set forth.

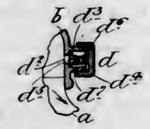
901,978. FLOOR SCRUBBER AND POLISHER. TADE Z. MALLY and ANDREW PELZ, Chicago, Ill. Filed Mar. 7, 1908. Serial No. 419,705.



1. In a device of the class described, the combination of a fixed frame, forward and rear driving wheels journaled to the frame, a scrubber carried by the frame, a movable frame carried by the fixed frame, springs upon which the movable frame is supported and normally held in elevated position, a handle connected with the movable frame and adapted to depress the same against the tension of the springs, a rotary squeegee carried by the movable frame and normally out of contact with the floor and adapted to be carried down when the movable frame is depressed to bring the surface of the squeegee into contact with the floor, a tank in coöperative position with respect to the squeegee for receiving the water carried up thereby, gear mechanism in train with one of the driving wheels for imparting rotation to the squeegee, and gear mechanism in train with one of the driving wheels for actuating the scrubber, substantially as described.

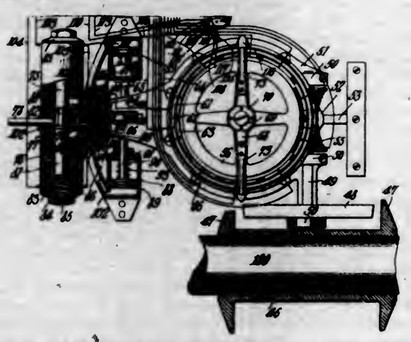
2. In a device of the class described, the combination of a fixed frame, forward and rear driving wheels journaled to the frame, a scrubber carried by the frame, a movable frame carried by the fixed frame, springs upon which the movable frame is supported and normally held in elevated position, a handle connected with the movable frame and adapted to depress the same against the tension of the springs, a rotary squeegee carried by the movable frame and normally out of contact with the floor and adapted to be carried down when the movable frame is depressed to bring the surface of the squeegee into contact with the floor, a tank in coöperative position with respect to the squeegee for receiving the water carried up thereby, gear mechanism in train with one of the driving wheels for imparting rotation to the squeegee, gear mechanism in train with one of the driving wheels for actuating the scrubber, and adjustable hangers for regulating the height of the scrubber, substantially as described.

901,979. SIPHON. JACOB MARTIN, Brooklyn, N. Y., assignor to Landau Economic Syphon Company, San Francisco, Cal., a Corporation of California. Filed Nov. 5, 1907. Serial No. 400,780.



A siphon or similar device, the neck of which is provided with the usual discharge spout and a pressure exhaust device connected with the neck below the discharge spout, said device consisting of a port or passage in the side of the neck, an outwardly directed screw-threaded tubular casing inclosing said port or passage and provided adjacent to said neck with an outlet, a threaded cap screwed onto said casing, a valve within said casing for closing said port or passage, and a spring placed between said cap and said valve.

901,980. SPEED-CHANGING GEAR. WILLIAM C. MAYO and JOHN HOULEHAN, El Paso, Tex., assignors of one-third to George E. Briggs, Barstow, Tex. Filed July 26, 1907. Serial No. 385,645.



1. In a speed changing mechanism, a progressive series of speed gears, means for moving said speed gears into and out of operation in regular order, the action of said means being in the same sense as the order of movement into and out of operation of the speed gears, and means actuated by the gear operating means when moved to active position for locking the next adjacent gear operating means against movement to the active position.

2. In a speed changing mechanism, a progressive series of speed gears, means for moving said speed gears into and out of operation in regular order, the action of said means being in the same sense as the order of movement into or out of operation of the speed gears, and means actuated by the gear operating means when moved to active position for locking the next adjacent gear operating means on each side against movement to the active position.

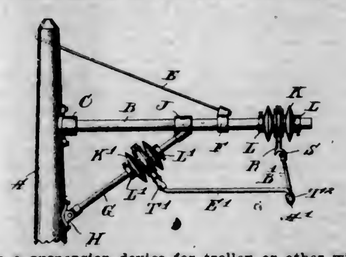
3. In a speed changing mechanism, speed changing gears comprising annular series of pins movable into and out of active position, and compressed air controlled means for moving said pin series into active position.

4. In a speed changing mechanism, speed changing gears comprising annular series of pins, springs for holding said series of pins in inactive position, and compressed air controlled means for moving the pins into active position against the stress of the springs.

5. In a speed changing mechanism, a transmission disk comprising spaced parallel parts, pins movable therethrough and connected in annular series, and springs tending to hold each series of pins with their free ends approximately flush with one of said parts.

[Claims 6 to 50 not printed in the Gazette.]

901,981. SUSPENSION DEVICE FOR TROLLEY-WIRES OR OTHER CONDUCTORS CARRYING CURRENTS OF HIGH VOLTAGE. GEORGE A. MEAD, Mansfield, Ohio. Filed Dec. 2, 1904. Serial No. 235,153.



1. In a suspension device for trolley or other wires or conductors, an arm or bracket, an insulator sleeved thereon, a trolley or other wire or conductor supported by said insulator, and an insulated brace rod connected to said wire or conductor.

2. In a suspension device for trolley or other wires or conductors, an arm or bracket, an insulator sleeved upon said arm or bracket, a trolley or other wire or conductor supported by said insulator, an auxiliary insulator, and a brace rod connected to said auxiliary insulator and to said wire or conductor.

3. In a suspension device for trolley or other wires or conductors, an arm or bracket, an insulator sleeved thereon, an auxiliary insulator also sleeved upon said arm or bracket, a trolley or other wire or conductor supported by said first-mentioned insulator, and a brace rod connected respectively to said auxiliary insulator and to the trolley or other wire or conductor.

4. In a suspension device for trolley or other wires or conductors, an arm or bracket, an insulator sleeved thereon, a messenger wire supported by said insulator, a trolley or other wire or conductor suspended from said messenger wire, an auxiliary insulator, and a brace rod respectively connected to said auxiliary insulator and said trolley or other wire or conductor.

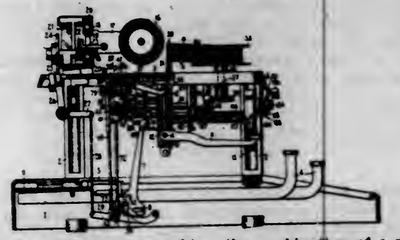
5. In a suspension device for trolley or other wires or conductors, an arm or bracket, means for supporting the same, an insulator carried by said arm or bracket, a messenger wire supported by said insulator, a trolley or other wire or conductor suspended from said messenger wire, an auxiliary insulator also mounted on said arm or bracket, and a brace rod respectively connected to said auxiliary insulator and to said trolley or other wire or conductor.

[Claims 6 to 17 not printed in the Gazette.]

901,982. TYPE-WRITING MACHINE. HENRY W. MERRITT, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Feb. 10, 1905. Serial No. 245,078.

1. In a typewriting machine, the combination of printing keys, a ribbon vibrator, actuating means movable by

the printing keys and normally in operative connection with said vibrator, other actuating means movable by the printing keys and normally out of operative connection with said vibrator, and switch mechanism for disconnecting the first mentioned means from the ribbon vibrator, for connecting the last mentioned means with said ribbon vibrator and for rendering both of said means inoperative on said ribbon vibrator at the same time.



2. In a typewriting machine, the combination of a ribbon vibrator, a key actuated universal bar, two independent means operative by the universal bar and between said universal bar and said ribbon vibrator, for separately operating said vibrator and both of which means are adapted to be inoperative on said ribbon vibrator at the same time, and hand operated means for controlling said independent means to render either operative or both at the same time inoperative.

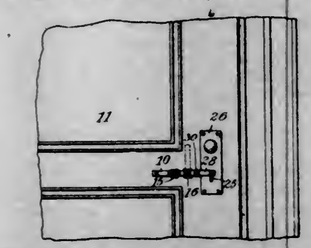
3. In a typewriting machine, the combination of printing keys, a ribbon vibrator, means actuated by the printing keys for throwing said vibrator a given distance, other means actuated by the printing keys for throwing said vibrator a different distance, and hand actuated means for switching one of said means out of operative relation with said vibrator, whereby said vibrator is rendered inoperative, and for thereafter switching the other of said means into operative relation with said ribbon vibrator.

4. In a typewriting machine, the combination of a ribbon vibrator adapted to be moved a predetermined extent so that the types will strike along one portion of the ribbon and also adapted to be moved to another predetermined extent so that the types will strike along another portion of the ribbon, duplex means interchangeable at will for so actuating said ribbon vibrator, printing keys adapted to move said duplex means and means for rendering said duplex means simultaneously inoperative.

5. In a typewriting machine, the combination of printing keys, a ribbon vibrator movable different distances from normal position, a means actuated by the printing keys for moving said vibrator one of said distances, a separate means actuated by the printing keys for moving it the other of said distances, and hand actuated means for throwing one vibrator moving means out of operative relation with the ribbon vibrator whereby said vibrator is rendered inoperative and for thereafter throwing the other vibrator moving means into operative relation with said vibrator.

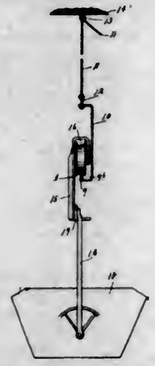
[Claims 6 to 39 not printed in the Gazette.]

901,983. BURGLAR-ALARM. CARL A. METZGER, New York, N. Y. Filed Feb. 15, 1908. Serial No. 416,016.



A device of the character described comprising a door having a key hole, a pivoted arm on the door and adapted to be swung across said key hole, a tubular guide rigidly projecting from the free end of said arm, a plunger encompassed by said tubular guide, and having a collar that slidably engages the inner face thereof, and a coiled spring mounted on the plunger within the tubular guide and bearing with its ends against the arm and collar respectively, substantially as described.

901,984. CARRIER SYSTEM. JULIUS J. MEYER, Kenyon, Minn., assignor to The Standard Carrier Co., Kenyon, Minn., a Corporation of Minnesota. Filed Feb. 28, 1908. Serial No. 418,203.



1. In a carrier system of the kind described, the combination with elevated tracks extended transversely of each other, and one or more displaceable switch rails connecting the same, of a swiveled turn table adjacent to one of said rails, the said rail being continuous past said turn-table, substantially as described.

2. In a carrier system of the kind described, the combination with elevated track wires extending transversely of each other, and one or more displaceable switch rails connecting said track wires, of a turn table comprising a rail, a laterally offset upwardly extended rail supporting bracket, and a swivel connection supporting said turn table bracket from an overhead support, substantially as described.

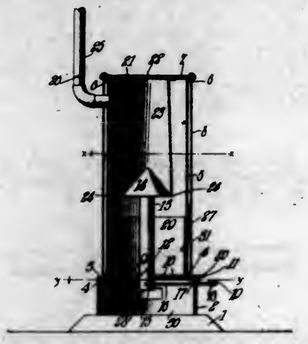
3. In a carrier system of the kind described, the combination with track wires extending transversely of each other, and one or more displaceable curved switch rails connecting said track wires, of a turn table comprising a horizontal rail having inwardly and outwardly offset pairs of lugs for engagement with one of said track wires, a laterally offset upwardly extended rail supporting bracket, and a swivel connection supporting said turn table track from an overhead support, substantially as described.

4. In a carrier system of the kind described, the combination with track wires extending transversely of each other, and reversely curved and extended displaceable switch rails connecting said track wires, of a turn table comprising a horizontally extended rail, a laterally offset upwardly extended rail supporting bracket, and a swivel connection applied to the upper end of said turn table bracket and supporting the same with freedom for vertical and for horizontal oscillatory movements, substantially as described.

901,985. HEATING-STOVE. CHARLES F. MINNICK, North Powder, Oreg. Filed Jan. 3, 1908. Serial No. 409,140.

1. In a stove the combination with a casing and a grate therein; of a magazine supported above the grate, a combined closure and spreading means within the lower end of the magazine, and means entirely outside of the magazine for lowering said spreading means to release and spread the contents of the magazine upon the grate.

2. A stove comprising a casing, a grate therein, a magazine suspended within the casing and above the grate, a conical closure in the bottom of the magazine, a stem depending therefrom and guided by the grate, means for actuating the stem to shift the closure, and means for locking the closure in shifted position.

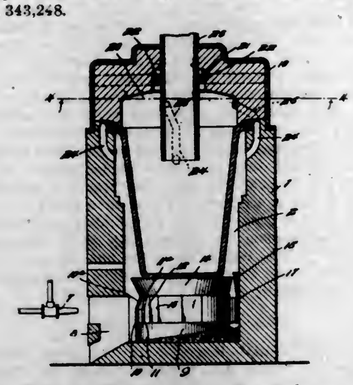


3. A stove comprising a casing, a grate therein, a magazine suspended within the casing and above the grate, said magazine having an open bottom and tapered toward its upper end, a closure for said upper end, a combined closure and spreading device for the lower end of the magazine, and separate means below the magazine for lowering and locking said device.

4. A stove comprising a casing, a grate therein, a magazine suspended within the casing and above the grate, said magazine having its lower end open and flared, a removable closure for the upper end of the magazine, a conical closure for the lower end thereof, a stem depending from said conical closure and guided within the grate, and means for actuating the stem to shift the closure.

5. A stove comprising a casing, a grate therein, a magazine suspended within the casing and above the grate, said magazine having its lower end open and flared, a removable closure for the upper end of the magazine, a conical closure for the lower end thereof, a stem depending from said conical closure and guided within the grate, an actuating arm pivotally connected to said stem, and means engaging the arm for locking it in adjusted position.

901,986. FURNACE. JOHN F. MONNOT, New York, N. Y., assignor to Duplex Metals Company, New York, N. Y., a Corporation of New York. Filed Nov. 13, 1906. Serial No. 343,248.



1. A flame heated furnace provided with flame producing means and comprising a furnace chamber and, within the same, a body of refractory material having a plurality of reflecting faces arranged in steps laterally, one behind the other, said stepped faces being in impinging relation to the flame from said flame-producing means.

2. A flame heated furnace provided with flame producing means and comprising a furnace chamber and, within and near the base of said chamber, a faceted face of refractory material having stepped lateral facets, a plurality of said facets being in impinging relation to the flame from said flame producing means and the facets being so placed with regard to the furnace chamber walls as to cause an approximately uniform upward movement of flame gases in said chamber.

3. A flame-heated furnace provided with flame-introducing means and a support for a heating chamber, said support at its base being provided with faces having facets at different angles and said faceted faces being in impinging relation to the flame produced by said flame-introducing means.

4. A flame heated furnace provided with flame introducing means and a support for a heating chamber having an overhanging upper edge and a faceted base thereunder in impinging relation to the flame produced by said flame introducing means.

5. A flame heated furnace provided with flame introducing means and a support for a heating chamber having an overhanging upper edge and a faceted base thereunder in impinging relation to the flame produced by said flame introducing means, the facet in the direct line of said flame being rounded.

[Claims 6 to 27 not printed in the Gazette.]

901,987. HOOK AND EYE. VIRGIL E. MORSE, Shelton, Conn. Filed Nov. 11, 1907. Serial No. 401,663.



1. The herein described hook for hooks and eyes formed from a single piece of wire having a loop formed in the center thereof and at opposite ends of the wire, the intermediate portion of the wire bent into U-shape extending obliquely upward and rearward forming a short hook, and thence forward in a plane parallel with the plane of the loops and thence straight downward forming a locking shoulder at the forward end of the bill.

2. The herein described hook for hooks and eyes formed from a single piece of wire having a loop formed in the center thereof and at opposite ends of the wire, the intermediate portion of the wire bent into U-shape extending obliquely upward and rearward forming a short hook, and thence forward in a plane parallel with the plane of the loops and thence straight downward forming a locking shoulder at the forward end of the bill, and an eye with which the said hook may engage and between the sides of which the shoulder of the hook may pass, substantially as described.

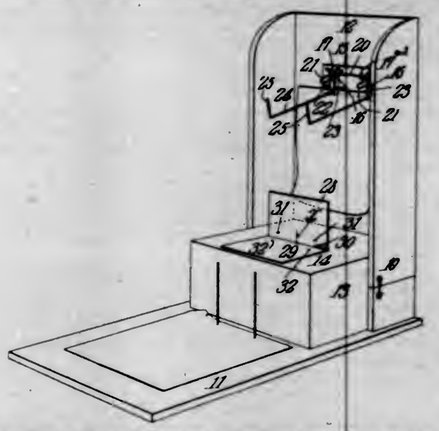
901,988. FILING DEVICE. JOHN D. D. MORTIMER, Newport, England. Filed Dec. 13, 1907. Serial No. 406,360.

1. A filing device comprising a wire frame centrally bent to form a cross bar, and a plurality of parallel arms, the wire being further bent to form a pair of parallel filing rods having upturned terminals, and a support having hooks for receiving the base, and vertical flanges for engaging the arms to thereby prevent lateral play.

2. A filing device comprising a wire frame bent to form a cross bar, and a plurality of parallel arms, the wire being further bent to form a plurality of filing rods having upturned terminals, and a support comprising a base plate, a pair of sets of flanges, each set being arranged for the reception of one of the arms, and hooks carried by the base plate and arranged to receive the cross bar.

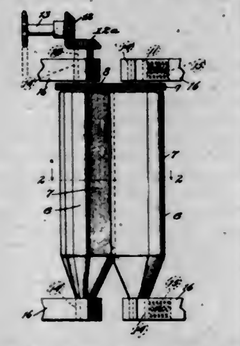
3. In a filing device, a cover member comprising a back and cover boards, the back being provided with a pair of openings, a strip secured to the back, and a paper-receiving file detachable from the cover, said file comprising a base member having a plurality of spaced arms and bent to form a pair of parallel filing rods having upturned and threaded terminals, the arms being arranged to engage the strip, and the terminals to pass through the openings in the back, and nuts for engaging the threaded terminals of the rods to thereby confine the file within the cover.

4. A filing device comprising a wire frame bent to form a base and a pair of parallel U-shaped clips at the terminals of the base, said clips merging into parallel arms and



terminating in end portions extending approximately at right angles therefrom and a support for engagement with the base.

901,989. CORN-HARVESTING DEVICE. VERNARD R. MCDOLE, Aurora, Ill., and ALMERION HOLLENBECK, Janesville, Wis. Filed Dec. 20, 1906. Serial No. 348,681.



1. In a device for the purpose described, the combination of a pair of contiguous rotary members adapted to receive the stalks between them, and provided with means for deflecting the ear of corn while on the stalk at an angle to the line of travel of said members, and means for rotating said members in opposite directions.

2. In a device for the purpose described, the combination of a pair of contiguous rotary members adapted to receive the stalk between them, said members having means for gripping the stalk between them, and means for deflecting the ear with respect to the stalk at an angle to the line of travel of the members, and means for rotating said members in opposite directions.

3. In a device for the purpose described, the combination of a pair of contiguous rotary members adapted to receive the stalk between them, having means for oscillating the ear on the stalk in opposite directions, and means for rotating said members in opposite directions.

4. In a device for the purpose described, the combination of a pair of contiguous rotary members adapted to receive the stalk between them, said members having co-acting faces adapted to engage the ear and deflect it laterally at an angle to the line of travel of the members, and means for rotating the members in opposite directions.

5. In a device for the purpose described, the combination of a pair of contiguous rotary members having longitudinal ribs provided with outwardly-curved peripheries and flat sides, the curved peripheries being arranged to oppose said flat sides, whereby the stalk will be received between the members and the ear will be deflected to one side of the line of travel of the members, and means for rotating said members in opposite directions.

[Claim 6 not printed in the Gazette.]

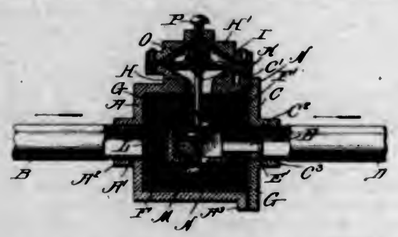
901,990. HARNESS ATTACHMENT. ELZA A. NELSON, Salem township, Meigs county, Ohio. Filed Sept. 3, 1907. Serial No. 391,049.



1. A hold-back attachment for harness consisting of a wire bent to form a horizontally standing loop 6, a vertically standing double ring 7 to engage the shaft, and two separate loops for the reception of the parts of the billet loop, substantially as described.

2. A hold back attachment for harness consisting of a wire bent to form a horizontally lying loop for the attachment of the hold back strap, a vertically standing double loop for the passage of the vehicle shaft and two horizontally lying members each adapted to receive a side portion of the billet loop.

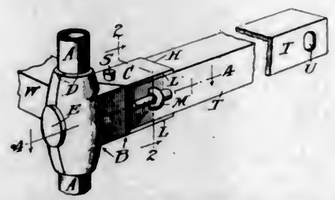
901,991. GAS-REGULATOR. ALBERT T. NEWMAN, Greeley, Kans. Filed Mar. 11, 1907. Serial No. 361,807.



A gas regulator comprising a box like casing having a removable side, said removable side having a threaded opening, a supply pipe screwed into said opening, a short section of pipe screwed also into said opening from the interior of the box, a valve box carried at the inner end of said short section of pipe, said valve box having a detachable top, the top and bottom of the box being provided with openings, valves adapted to close said opening, the stem carrying said valves the guides carried by the valve box and in which the valve-stem works, a diaphragm arranged in the upper portion of the casing and to which the valve stem is connected, an adjustable spring pressing means operating upon the opposite side of the diaphragm and a delivery pipe leading from the box like casing, all of said parts being constructed, arranged and adapted to operate substantially as shown and described.

901,992. METALLIC BEDSTEAD. CHARLES NETZEL, Chicago, Ill. Filed Mar. 2, 1908. Serial No. 418,862.

1. In a bedstead, the combination with each corner post thereof; of a jaw adapted to grip said post and to support end and side bars, said jaw consisting of two members, one having a recessed lug, an aperture intersected by a keyway, channels adapted to receive the ends of cross bars, parallel channels adapted to receive the ends of side bars, a lug having a keyway located between said channels, the other member having a lip insertible in said recessed lug, and a lug insertible in said aperture, said lug having a keyway adapted to register with said intersecting keyway, a pair of cross bars supported in said jaws secured thereto by a key insertible in said intersecting keyway, and a pair of side bars supported in said parallel channels and secured therein by a key insertible in said keyway in said lug between said channels, said cross and side bars having apertures adapted to admit therethrough said key, and keyway lug whereby said bars are made reversible as described.



2. In a bedstead of the kind described, the combination with each of the corner posts thereof; of an attachable and detachable jaw, each of said jaws consisting of two members, adapted to be joined and locked together on the post by a key insertible in said members, each of said jaws having longitudinal and transverse channels adapted for the insertion and support therein of an angular cross bar and a side bar, said cross bar being locked to said jaw by a key adapted to lock said jaw together on said post, and said side bar being locked to said jaw by a key insertible in said jaw as described.

3. A metallic bedstead jaw consisting of two members, said members having a vertical keyway and being locked together by a key inserted vertically in said keyway, one of said members having angular transverse channels intersecting said keyway, adapted for the insertion and support therein of either end of a perforated angular cross bar, and parallel longitudinal channels adapted for the insertion and support therein of either end of a perforated side bar and a keyway lug intermediate of said channels, a key insertible, vertical in said members and cross bar thereby locking said members and cross bar together, and a key insertible in said lug thereby locking said member and said side bar.

901,993. CARBON PENCIL OF ELECTRIC-ARC LIGHTS. JOHN NICHOLSON, Frackville, Pa. Filed Apr. 20, 1908. Serial No. 428,009.

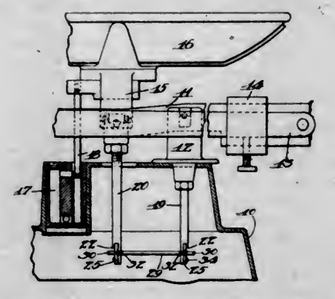


1. An electrode for an arc light comprising a cored carbon pencil having a metal cap and a metal strip secured to said cap and extending substantially centrally through the core, substantially as described.

2. An electrode for an arc light comprising a cored carbon pencil having a metal cap and a metal strip secured to said cap and extending centrally through said core and terminating at a distance from the socket end, substantially as described.

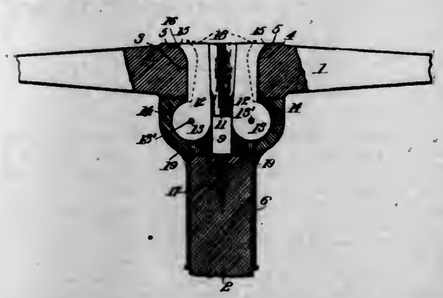
3. An electrode for an arc light comprising a cored carbon pencil having a metal cap and a metal jacket, substantially as described.

901,994. WEIGHING-SCALE. LAWRENCE C. OSTENDORF, Dundee, Ill., assignor to Joseph E. Cochran, Dundee, Ill. Filed Feb. 19, 1906. Serial No. 301,756.



In combination, in a scale, a link bearing, comprising a link provided with a centrally disposed projecting portion extending from the extremities thereof and having apertures adjacent the projections, the extremities of the link on each side of the projections being beveled to form knife edges, a rod passing through the aperture and provided with a reduced extremity to form a shoulder, said shoulder having a transverse groove therein, a plate of a length greater than the width of the rod, and provided with an aperture also of a length greater than the width of the rod, and means for securing the plate to the rod with one edge thereof resting in the groove, and with the projecting portion of the link passing through the aperture therein, the sides of the plate resting against and forming a bearing for the knife edges of the link.

901,995. PICK. ADOLPH OSTLUND, Exline, Iowa. Filed Apr. 1, 1908. Serial No. 424,641.



1. In a device of the character described, the combination with a casing, a pick engaging said casing, of a pair of pivotally mounted dogs carried by said casing and extending into said pick, and means positioned between said dogs and normally holding the same apart for causing the same to engage opposite portions of the pick and thereby hold the pick and casing together.

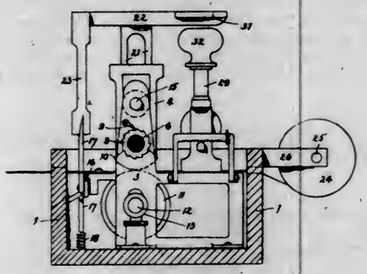
2. In a device of the character described, the combination with a casing, of pivotally-mounted dogs positioned in said casing and extending beyond one portion thereof, a pick surrounding parts of said dogs, and a locking-key positioned between said dogs and adapted to cause the same to engage opposite portions of the pick for securing said pick to the casing.

3. The combination with a casing and a pick engaging the same, of a dog extending into said casing and pick, said dog provided near one end with an outwardly-extending flange or integral portion, and at its opposite end, with an outwardly-bulged portion, means for holding said outwardly bulged portion in engagement with the casing and said flange in engagement with the pick, whereby said pick is normally secured to said casing.

4. In a device of the character described, the combination of a casing provided with a transverse opening, a pick engaging said casing, separable fastening means positioned in the casing and said pick, and means positioned contiguous to the opening of the casing and adapted to hold said separable fastening means in engagement with the pick for securing said pick to the casing, said opening being adapted to receive a member for releasing or detaching said fastening means for permitting the pick to be removed from said casing.

5. In a device of the character described, the combination of a casing, dogs positioned in said casing and extending beyond one end thereof, each dog provided with a body portion having at its inner end a cylindrical-portion engaging the casing and at its outer end an outwardly-extending spur or flange, a pick having an opening, the dogs extending into said opening of the pick, the opening of the pick provided with opposite portions conforming to the shape of the body of the dogs and their flanges or spurs, and a tapering wedge-shaped fastening member positioned between said dogs and adapted to hold the same in a locked position for securing the pick to the casing.

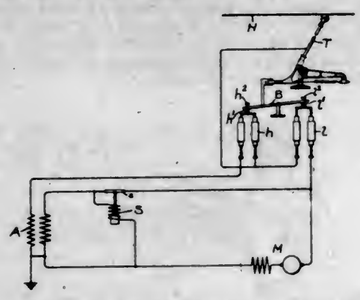
901,996. MACHINE FOR PRINTING AND ISSUING TICKETS. ALEXANDER PARKER, Dannevirke, New Zealand. Filed June 18, 1907. Serial No. 379,634.



1. A machine for printing and issuing tickets, comprising, in combination, a framework, a shaft mounted in the framework, a printing roller secured upon the shaft and a roller mounted in the framework beneath, a feeding table in a line with the point of engagament of the peripheries of the rollers, a numbering machine mounted on the feeding table, cutting mechanism upon the end of such table, and means whereby the numbering machine and the cutting mechanism may be operated simultaneously with the revolution of the shaft, substantially as specified.

2. A machine for printing and issuing tickets, comprising, in combination, a framework, a shaft mounted in the framework, a printing roller secured upon the shaft and a roller mounted in the framework beneath, a feeding table in a line with the point of engagement of the peripheries of the rollers, a numbering machine mounted on the feeding table, cutting mechanism upon the end of such table, a crank upon the shaft, a vertical sliding bar having a cross head on its top end, a connecting rod joining the crank and the sliding bar, a rigid rod depending from one end of the cross head, and overlying the cutting mechanism and a projection upon the other end of the cross head overlying the numbering machine handle, substantially as specified.

901,997. ELECTRIC-RAILWAY SYSTEM. HORACE F. PARSHALL, London Wall, London, England, assignor to General Electric Company, a Corporation of New York. Filed Aug. 19, 1904. Serial No. 221,324.



1. In an electric railway system, a conductor having sections energized by currents differing in character and arranged in different positions relative to the track, a car, circuits thereon, a collecting device carried by the car and adapted to engage said conductor, a switch on the car for changing the connections of the car circuits, and means between said collecting device and said switch for moving the switch from one position to another when the collecting device passes from one section of conductor to another.

2. In an electric railway system, a conductor having sections energized by currents differing in character, said sections being arranged at different heights above the track, a car, circuits thereon, a trolley carried by the car and adapted to engage said conductor, and means on the car operated by the trolley for changing the connections of the car circuits when the trolley passes from one section of conductor to another.

3. In an electric railway system, a conductor adapted to be engaged by a moving car and comprising sections energized by currents differing in character, a car, circuits thereon, a movable member carried by the car, means stationed at a point between said sections for engaging and moving said member, a switch on the car adapted to change the connections of the car circuits, and operative connections between said switch and said member.

4. In an electric railway system, a working conductor having sections energized by currents differing in character, a car, circuits thereon, a collecting device carried by the car and adapted to engage said conductor, the said sections being differently positioned relatively to the track so that said collecting device is shifted in passing from one section to another, and means operated by the shifting of said device for changing the circuit connections on the car.

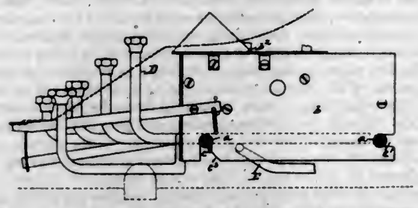
5. In an electric railway system, a working conductor comprising sections energized by currents differing in character and differently positioned relatively to the track, a car, circuits thereon, a collecting device carried by the car and adapted to be shifted in passing from one section to another, a switch adapted to change the connections of the car circuits, and operative connections between said device and said switch.

[Claims 6 to 10 not printed in the Gazette.]

901,998. TYPE-WRITER. JOHN W. PAUL, Kittanning, Pa. Filed July 5, 1906. Serial No. 324,905.

1. In a typewriter, the combination of a main frame; a universal bar mounted on the main frame; an auxiliary frame removably mounted in the main frame; and the type basket and key levers mounted in the auxiliary frame, said key levers being in position to actuate the universal bar when the auxiliary frame is mounted in the main frame and the type basket being movably mounted in the auxiliary frame.

2. In a typewriter, the combination of a main frame; a universal bar mounted in said main frame; an auxiliary frame removably and fixedly mounted on the main frame; a type basket mounted in the auxiliary frame; said basket being movable in the auxiliary frame for upper and lower case letters and key levers mounted in the auxiliary frame, said key levers being in position to actuate the universal bar when the auxiliary frame is in place.



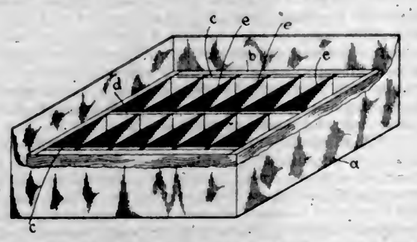
3. In a typewriter, the combination of a main frame having the lug *a* extending from the sides thereof, said lugs being provided with the groove *a'*; an auxiliary frame having the side plate *b* in which are arranged the slots *c'* and c^2 in proper relation to permit the mounting of said auxiliary frame with the sides of the slots in said plates around the lugs *a* and in the grooves *a'*.

4. In a typewriter, the combination of a main frame having the lug *a* extending from the sides thereof, said lugs being provided with the grooves *a'*; an auxiliary frame having the side plates *b* in which are arranged the slots *c'* and c^2 in proper relation to permit the mounting of said auxiliary frame with the sides of the slots in said side plates around the lugs *a* and in the grooves *a'*; the type basket C pivotally mounted between the side plates *b* and the key levers D carried by said auxiliary frame.

5. In a typewriter, the combination with a main frame and platen; of a universal bar mounted in the main frame; an auxiliary frame removably mounted in the main frame; and a type basket and key levers mounted in the auxiliary frame, the basket being movable in the auxiliary frame for upper and lower case letters and adapted to carry type bars arranged to strike the front of the platen, and the key levers being adapted to actuate the universal bar.

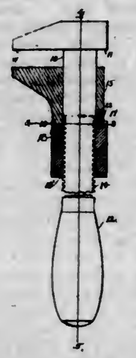
[Claims 6 and 7 not printed in the Gazette.]

901,999. SANITARY BAKING-PAN. WILTON H. PERRY, New York, N. Y. Filed Oct. 12, 1907. Serial No. 397,184.



In a bake pan, an outer casing formed of a bottom, sides and ends, a frame in the outer casing having sides and ends and having the lower edges of said sides and ends seating on said bottom of the outer casing, said bottom of the outer casing forming a bottom for the frame, said sides and ends of the outer casing projecting for a distance up from the top edges of the frame, side plates having vertical sockets, arranged to engage the inner face of each of said sides of the inner casing, lateral strips formed of bendable sheet metal having their ends removably received in said sockets of said plates, and provided with cut-out seats, and a dividing plate engaged in said cut-out seats and having opposite cut-out seats to receive said lateral strips.

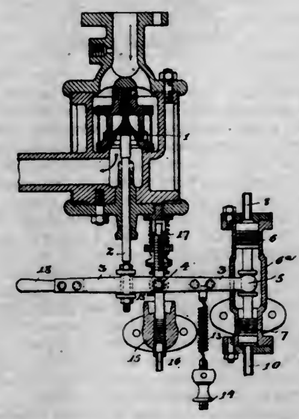
902,000. QUICK-ACTING WRENCH. CLAUDE E. RAGSDALE, Trafalgar, Ind. Filed Nov. 18, 1907. Serial No. 402,653.



1. In a wrench the combination of a threaded stem 10; a movable jaw mounted thereon provided with extensions 16; a nut 18 surrounding said extensions and adapted to engage or disengage threads on stem 10; a ring 17 integral with the jaw and concentric with the nut; and a ring 19' secured to the lower end of extensions 16 and concentric with the nut said rings adapted to carry said nut, all arranged substantially as and for the purpose set forth.

2. In a wrench the combination of a threaded stem 10, a movable jaw mounted thereon provided with extensions 16; a nut 18 surrounding said extensions and adapted to engage or disengage threads on stem 10; a ring 17 integral with the jaw and concentric with the nut; and a ring 19' secured to the lower end of extensions 16 and concentric with the nut said rings adapted to carry said nut; a spring detent 22 carried by the jaw and adapted to take into recesses in nut 18; all arranged substantially as and for the purpose set forth.

902,001. AUTOMATIC REGULATING DEVICE FOR FLUID-PRESSURE APPARATUS. AUGUSTE C. E. RATEAU, Paris, France, assignor to Rateau Turbine Company, Chicago, Ill., a Corporation of West Virginia. Filed Apr. 28, 1905. Serial No. 257,849.



1. The combination with a pressure generator, of a motor, a connection for applying pressure from said generator to said motor, a regulator for controlling the pressure admitted to said motor, a pump driven by said motor, and controlling mechanism independent of the regulator

for governing said regulator, said controlling mechanism being acted upon oppositely by the pressure from said generator and said pump.

2. The combination with a pressure generator, of a motor, a pump for supplying said generator driven by said motor, a regulator for said motor having a movable controlling part, and controlling mechanism for governing said regulator, said controlling mechanism comprising differential pistons of unequal cross-section acted upon oppositely by the pressure from said generator and said pump, respectively.

3. The combination with a fluid feed pump, of a motor driving the same, and mechanism controlling said motor adapted to shut off the power thereto when the fluid pressure from said pump fails, substantially as described.

4. The combination with a fluid feed pump, of a motor driving the same, and a mechanism subjected to the discharge pressure of the pump controlling said motor and adapted to shut off the power thereto when the fluid pressure from said pump fails, substantially as described.

5. The combination with a fluid pressure generator, of a motor receiving its motive fluid supply from said generator, a pump for supplying said generator driven by said motor, a throttle-valve for said motor, and a differential-piston controlling mechanism connected to said throttle-valve, but independent thereof, the pistons whereof are acted upon oppositely by the pressure from said generator and said pump, respectively, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

902,002. COMBINED GRATE AND AIR-HEATER. ALFRED D. RATHBONE, Grand Rapids, Mich. Filed June 15, 1905. Serial No. 265,302.



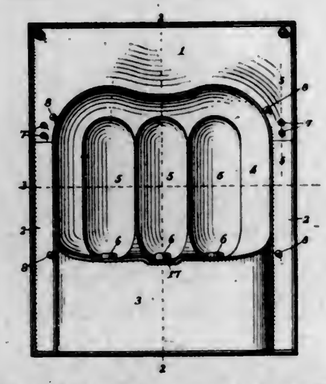
1. In a heater, a casing, a fire-box, an ash-pit having a downward and forwardly inclined wall, a chamber beneath the ash-pit, a flue communicating with the fire-box and the chamber, a chute communicating with the ash-pit and the chamber, said chute having openings in its rear wall and a slide operable between the ash-pit and chamber.

2. In a combined grate and air heater, a case, a vertical flue at the rear of the case, a chamber at the bottom of the case and connected to the flue, a vertical partition in the flue and extending into the rear of the chamber, an inclined chute at the front edge of the partition and extending through the chamber, said chute having perforations in its side toward the flue, an ash pit above the chute, a slide to close the upper end of the chute, a firebox above the ash pit, a top flue connecting the fire-box with both sides of the rear flue, means for connecting one side of the rear flue with a chimney, and a damper to disconnect the top flue and the other side of the rear flue.

3. The combination of a case, a bottom chamber in the case, an ash pit above said chamber and having a bottom opening, a slide to open and close said opening, a chute extending downward from said opening through the bottom chamber and having openings in its rear side, a grate pivotally supported above the ash pit and adapted to turn downward at the rear and upward at the front, a fire box above said grate, vertical flues extending upward from the rear of the bottom chamber and a partition between said flues and extending within the rear of the bottom chamber and to said chute, a top flue connecting the fire box and the vertical flues and a damper and collar connected to one of the vertical flues.

4. In a device of the class described, the combination of a case having openings for inlet and exit of air, a bottom chamber extending from front to rear of the case, a vertical flue plate extending upward from the bottom chamber and having rearwardly extended sides flanged and bolted to the rear of the case, a partition extending from the flue plate to the rear of the case and within the rear portion of the bottom chamber, an ash pit mounted on the bottom chamber, a chute extending from the ash pit downward through the bottom chamber and provided with openings to permit dust to pass from the chute during the passage of ashes through the latter, the ash-pit having an opening in its bottom a slide at the bottom of the ash-pit to operate over said ash-pit opening, a grate pivotally supported above the ash pit, a fire box above the grate, a top flue connecting the fire box with openings in the flue plate at each side of the partition, and a damper to close one of said openings.

902,003. ELECTRIC FIREPLACE. ALFRED D. RATHBONE, Grand Rapids, Mich. Filed Feb. 4, 1908. Serial No. 414,234.



1. An electric fireplace, comprising a forwardly projecting head, a pilaster extending downward at each side, a detachable base, the same forming a structure surrounding a central opening and adapted in outline to fit the opening of an ordinary grate or fireplace, a concave reflector at the rear of said opening and closing the same, and means for supporting one or more electric heaters in front of said reflector and within said opening.

2. In an electric fireplace, a structure adapted to fit within the opening of an ordinary fireplace or grate and having a central opening, a reflector attached thereto and closing said opening, said reflector having concave margins and a series of concave recesses, and means for supporting an electric heater in front of each of said recesses and in the axis thereof.

3. In an electric fireplace, a structure adapted to fit within the opening of an ordinary fireplace or grate, and having a central opening, a detachable base beneath said opening, a concave reflector back of said opening and having a forwardly projecting lower margin provided with one or more openings, a bar supported below said margin, and sockets supported on the bar and projecting through said openings, and also adapted to receive and support electric heaters.

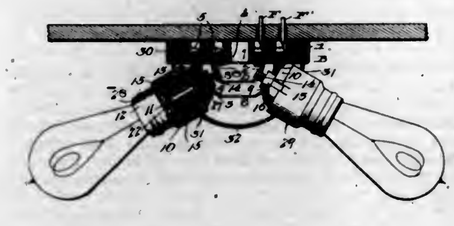
4. In an electric fireplace, a forwardly projecting head, a pilaster at each side and attached to the head, a base connecting the lower ends of the pilasters, hooks on the pilasters, hooks on the base engaging the first named hooks,

a reflector having forwardly projecting margins attached to the head and pilasters, and also having a forwardly projecting lower margin provided with openings, a bar beneath said openings, brackets supporting the bar and adjustably attached to lugs on the said lower margin, and sockets supported on the bar and projecting through said openings, and also adapted to receive and support electric heaters.

5. An electric fireplace, comprising a reflector having concave margins and a series of concave recesses, the lower margin of the same having a series of openings, downwardly projecting lugs on the said lower margins, a bar beneath said openings, brackets supporting the bar and extending forward and upward therefrom, said upward portions engaging the lugs and provided with vertical slots, and screws inserted in said slots and in the lugs.

[Claim 6 not printed in the Gazette.]

902,004. PLURAL-LAMP FIXTURE. FRANK J. RUSSELL, New York, N. Y. Filed Oct. 20, 1906. Serial No. 339,818.



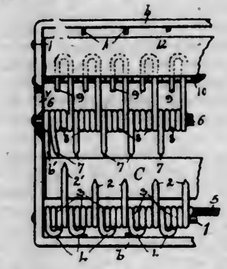
1. In a plural lamp fixture, a member carrying a pair of inner and outer concentrically arranged wire terminal elements, and a self-contained receptacle unit carrying both plug contacts and having a fastening and conducting engagement with the inner wire terminal element and an interlocking and conducting engagement with the outer wire terminal element.

2. In a plural lamp fixture, a cluster bracket having a pair of concentrically arranged wire terminal shells provided with a plurality of pairs of openings therein, and a receptacle unit having at one side a projecting holding tenon engaged within the opening in one of the wire terminal shells, two plug contacts carried by the receptacle unit one of said plug contact elements having a fastening stud member detachably engaging the opening in the other of said terminal shells.

3. In a plural lamp fixture, a cluster bracket having a base piece, and a pair of concentric semi-spherical wire terminal shells carried by said base piece, and a receptacle unit comprising a case section, a side plug contact element mounted on said base section and having conductors exposed upon the opposite side of the base section, and a central plug contact screw mounted in the base section and having an inner fastening stud element engaging the inner wire terminal shell and arranged to draw the said conductors into contact with the other shell.

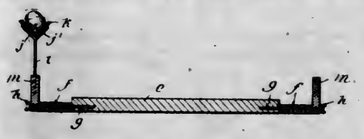
4. In a plural lamp fixture, a cluster bracket having a pair of concentrically arranged wire terminal shells provided with openings therein, and a receptacle unit comprising an insulating base section having at one side a recessed projecting holding tenon for engagement in the opening of the outer wire terminal shell, a side plug contact element arranged upon one side of the base section, headed conductor screws securing said side plug contact element and exposed at the opposite side of the base section for contact with the outer wire terminal shell, and a central plug contact screw exposed within the plug receiving opening of the receptacle and carrying at its inner end a fastening stud seated within the recess of the said holding tenon and arranged to have threaded engagement with the opening in the inner wire terminal shell.

902,005. ANIMAL-TRAP. JOHN SHEPHERD, Chicago, Ill., assignor to Frank B. Ullery, Chicago, Ill. Filed Feb. 19, 1906. Serial No. 301,901.



The combination in an animal trap of a casing at one end thereof, a lower tine supporting bar held transversely within said casing, a plurality of tines loosely held upon said bar each tine being provided with a heel stem, a stop bar, positioned above said heel stems, aforesaid casing being provided with two registering slots, a movable tine holding bar within said slots said tine holding bar being disposed above said first mentioned tine holding bar, a plurality of tines held upon said movable bar each tine being provided with a heel stem, of a second stop bar, said second stop bar being adapted to receive the heel stems of said second mentioned tines, a third stop bar disposed adjacent said last mentioned tines to be engaged by said last mentioned heel stems, and a guard plate pendent from said movable tine bar, all arranged substantially as set forth.

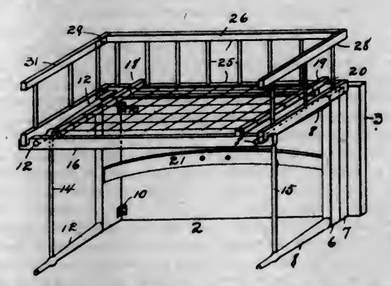
902,006. GAME APPARATUS. NATHANIEL W. SMEAD, Sheldon, Iowa. Filed July 30, 1906. Serial No. 328,348.



1. A collapsible game apparatus, comprising a target section and an alley section detachably connected, L-shaped gutters detachably connected with said alley section, and a ball trough removably supported on one of said gutters.

2. A collapsible game apparatus, comprising a target section, an alley section detachably connected therewith, L-shaped gutters detachably connected with said alley section and having sockets therein, standards removably secured in said sockets, and a trough supported by said standards.

902,007. COMBINED TABLE AND BED. ETHEL P. SMITH, Galesburg, Ill. Filed May 26, 1908. Serial No. 435,092.



1. In a device of the character described, and in combination, a table including foldable legs provided with notches in the sides of a portion thereof, a guard-rail

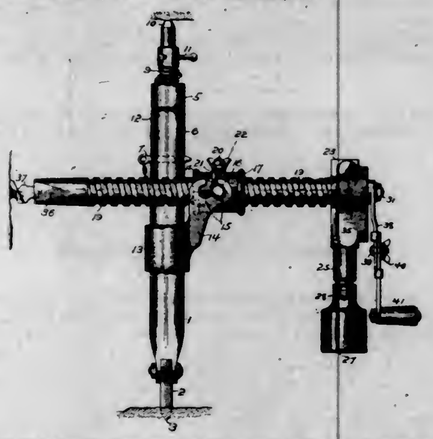
adapted for engagement with said notches, and means for supporting a mattress, said means adapted to be partly supported by the guard-rail and partly by the outer ends of the table-legs.

2. In a device of the character described, and in combination, a table including foldable legs provided with notches in the sides of a portion thereof, a guard-rail adapted for engagement with said notches, and a mattress-support having apertures adapted for engagement with the outer ends of said legs, whereby one of its sides is supported.

3. In a device of the character described, and in combination, a foldable table having notches in the sides of the legs thereof, a foldable guard-rail adapted for engagement with said notches, and to be partly supported thereby, and a mattress-support adapted to be partly supported by said guard-rail and partly by the outer ends of the table-legs.

4. In a device of the character described, and in combination, a foldable table having notches in the sides of the legs thereof, a foldable guard-rail, one of its members adapted to rest in said notches and to be partly supported by said legs, and a mattress-support adapted to be supported partly by the free ends of said legs and partly by the guard-rail.

902,008. DRILL. FRANK E. SNYDER, Massillon, Ohio. Filed Feb. 7, 1908. Serial No. 414,716.



1. In a drill, the combination with a threaded housing and a tubular threaded feed-bar passing through the same, of a drill rod extending through the tubular feed-bar, gears on the feed-bar and drill-rod, a gear-housing loosely mounted on and supported by the feed-bar, and gears supported by said housing and in constant mesh with the gears on the feed-bar and drill-rod.

2. In a drill, the combination with a threaded housing and a tubular threaded feed-bar passing through the same, of a drill-rod passing through the feed-bar, a pendulous device mounted on the feed-bar, gears carried by said pendulous device and gears secured respectively to the feed-bar and drill-rod and meshing with the gears carried by the pendulous device.

3. In a drill, the combination with a threaded housing and a tubular threaded feed-bar passing through the same, of a drill-rod passing through the feed-bar, a gear-housing mounted loosely on the feed-bar, connected gears carried by said housing, gears on the feed-bar and drill-rod and meshing with said connected gears, and a weight adjustably attached to the lower end of said gear-housing.

4. In a drill, the combination with a threaded housing and a tubular threaded feed-bar passing through the same, of a drill-rod passing through the feed-bar, a gear-housing mounted loosely on the feed-bar and capable of rotation thereon, connected gears carried by said gear-housing, gears secured respectively to the feed-bar and drill-rod and meshing with said connected gears, and operating means attached to the drill-rod.

5. In a drill, the combination with a threaded housing and a tubular threaded feed-bar passing through the same, of a drill-rod passing through the feed-bar, a pendulous device mounted loosely on the feed-bar, connected gears carried by said pendulous device, gears secured respectively to the feed-bar and drill-rod and meshing with said connected gears and detachable means for permitting the feed-bar and drill rod to be rotated simultaneously at the same speed.

[Claims 6 to 8 not printed in the Gazette.]

902,009. VEHICLE-TIRE. FREADRICK A. STALL, Jr., Darlington, S. C. Filed Sept. 12, 1907. Serial No. 392,478.



The combination with a vehicle wheel, of a resilient tire provided with a longitudinal bore having a flattened unbroken bottom face, an arched top face, and upwardly diverging side walls connecting said top and bottom faces, and an approximately cylindrical securing wire threaded through said bore and provided with a smooth, unbroken flattened bottom face contacting with the bottom face of said bore.

902,010. MANUFACTURE OF STEEL. SIR STAPLEFORD and JAMES F. WAGNER, Aberdeen, Wash., assignors of one-third to Richard H. Robinson and Newton W. Bush. Filed Jan. 9, 1908. Serial No. 409,968.

1. The process of extracting, purifying and producing iron and steel, which consists in using magnetic oxid of iron or sand, 100 pounds; pulverized charcoal, damp, 80 pounds; bicarbonate of soda, 12 pounds; pulverized borax, 8 pounds, or the same ingredients in like proportions, the above ingredients being thoroughly mixed into a thick paste with silicate of soda, and made into bricks, dried in an oven and then reduced in a metallurgical furnace, substantially as described.

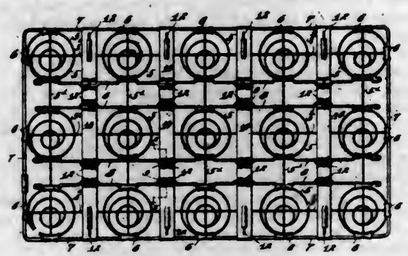
2. The process of making steel from magnetic oxid of iron or sands, which consists in mixing said magnetic oxid of iron or sands with damp pulverized charcoal, bicarbonate of soda and pulverized borax, into a thick paste with silicate of soda, drying in an oven, and then extracting therefrom the steel by the melting process in a crude oil furnace, substantially as described.

3. The process of winning metals from magnetic iron, sand, or from magnetic particles separated therefrom, or from metallic iron ore, dust or from any metallic residues, which consists in mixing the said materials with pulverized charcoal, bicarbonate of soda and pulverized borax, forming from the mass bricks, and extracting therefrom the materials by a furnace process, substantially as described and set forth.

902,011. SPRINGWORK. JOHN A. STAPLES, Newburgh, N. Y. Filed June 15, 1908. Serial No. 438,508.

1. In spring-work, a series of springs, a border-wire and supporting-wires intermediate the springs and secured to the larger coils of adjacent springs, brace strips intermediate the springs and having seats for the supporting-wires and secured to the border-wires, and a key co-acting with each strip to retain the supporting wires in the seats.

2. In spring-work, a plurality of springs arranged in longitudinal and transverse rows, a border-wire secured to the larger coils of adjacent springs, supporting-wires intermediate the longitudinal rows of springs and fastened to the larger coils of adjacent springs, transverse brace strips intermediate the springs and having seats for the supporting-wires and looped around the border wire, and a key coöperating with each strip to lock the supporting wires in their seats and the loops of the strips about the border wire.



3. In spring-work, a plurality of springs arranged in longitudinal and transverse rows, a border-wire secured to the larger coils of adjacent springs, supporting-wires arranged in pairs intermediate the longitudinal rows of springs and fastened to the larger coils of adjacent springs, brace strips intermediate the transverse rows of springs and having seats for the supporting-wires, and a key passing through each strip above the supporting-wires to retain them in their seats.

4. In spring-work, a plurality of springs arranged in longitudinal and transverse rows, an upper and lower border-wire fastened respectively to the upper and lower coils of adjacent springs, supporting-wires intermediate the longitudinal rows of springs and connected to the top and bottom coils of adjacent springs, transverse brace strips having end-hooks for the border-wires and seats for the supporting-wires, and keys coöperating with the seats and having their ends passed through the end-hooks of the strips.

5. In spring-work, a plurality of springs arranged in rows, a border-wire secured to the edge springs, supporting-wires intermediate the rows of springs in one direction, brace-strips intermediate the rows in the other direction and connected to the border-wire, seats on the supporting wires at their points of crossing the brace-wires and adjacent the springs, and means to secure the springs and brace-wires to the supporting wires at their seats.

902,012. TYPE-WRITING MACHINE. HERBERT H. STEELE, Watertown, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed July 22, 1903. Serial No. 166,595.



1. In a typewriting machine, the combination with a line-space wheel and a platen which are adapted to maintain a fixed relation when operated, of a two-piece differential gear mechanism connecting said wheel and platen; and means for manually operating said gear mechanism to vary the relation of said wheel and platen.

2. In a typewriting machine, the combination of a platen roller; an internally toothed gear fixed thereto; a spindle for said roller, a pinion journaled eccentrically on said spindle and meshing with said gear; a line-spacing wheel journaled on said spindle; and a pin and slot connection between said line-spacing wheel and said pinion.

3. In a typewriting machine, the combination with a line-space wheel and a platen roller which are adapted to maintain a fixed relation when operated, of a two-piece differential gear mechanism connecting said wheel and roller; and means for manually operating said gear mechanism to vary the angular relation of said wheel and roller.

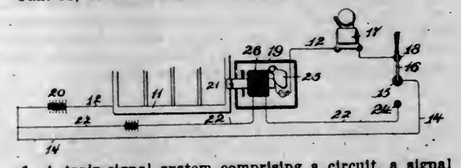
4. In a typewriting machine, the combination with two members, one a platen roller and the other a line space wheel; of a differential gear connection between said members consisting of a concentric gear, fixed to one of said members, an eccentric gear meshing with said concentric gear; and means connecting the other of said members with said eccentric gear to prevent relative rotation of said member and said eccentric gear.

5. In a typewriting machine, the combination with two members, one a platen roller and the other a line-space wheel controlling said roller; of a differential gear connection between said members consisting of a concentric, internally toothed gear fixed to one of said members, an eccentric spur gear meshing with said concentric gear; and means to prevent relative rotation of said eccentric gear and the other of said members.

[Claims 6 to 24 not printed in the Gazette.]

902,013. [WITHDRAWN.]

902,014. SIGNALING SYSTEM FOR RAILROAD-TRAINS. SHELLMAN T. STEWART, Newark, N. J. Filed Jan. 31, 1908. Serial No. 413,532.



1. A train-signal system comprising a circuit, a signal therein, gates to make and break the circuit, latches for locking the gates shut, and a second circuit to operate the latches.

2. A train-signal system comprising a circuit, a signal therein, gates to make and break the circuit, latches for locking the gates shut, a circuit connecting the latches and having one end connected to the return wire of the first circuit, and manually operated means as a switch for making the second circuit.

3. A train-signal system comprising a circuit, a signal in the circuit, a two-contact switch in the circuit, gates to make and break the circuit, latches to hold the gates normally shut, and a second circuit connecting the latches and having its ends connected to the two-contact switch.

4. A train-signal system comprising a circuit, a signal in the circuit, a two-contact switch in the circuit, gates to make and break the circuit, latches for locking the gates, magnets adapted to operate the latches to release the gates, a second circuit connecting the magnets and being attached to the two-contact switch whereby the latches can be operated in unison, the signal circuit being made by the switch when the second circuit is broken, and vice versa.

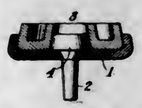
5. A train-signal system comprising a signal circuit and second circuit, the circuits having a common return wire, manually operated means on the return wire for making either of the circuits complete, a signal in the signal circuit, gates to make and break the signal circuit, and electrically operated latches in the second circuit to normally hold the gates shut.

[Claim 6 not printed in the Gazette.]

902,015. TIRE-PROTECTIVE RIVET. EDWIN B. STIMPSON, Brooklyn, N. Y., assignor to Edwin B. Stimpson Company, a Corporation of New York. Filed Jan. 30, 1908. Serial No. 413,373.

1. A protective-rivet, comprising a base member having a hole through it, a shank-member projecting from said hole having a headed portion too large to pass there-

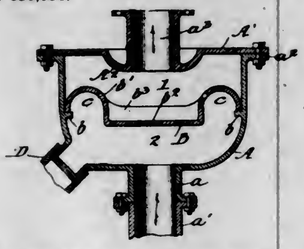
through, a ring-like member secured on the base member by infolding the latter against it and having the walls of its ring-opening in an engagement with the shank head adapted to prevent movement of said shank head away from the base member, said ring-member being recessed on its outer face to have ring-like road-contacting walls, one within the other and separated by a space.



2. A protective-rivet comprising a base member having a hole through it, a shank member projecting from said hole and having a head too large to pass through said hole, a ring-like member located on the base member with its ring-opening receiving the shank head, said ring-opening being wider below than above and its walls engaging the shank head to prevent motion of said head away from the base member, the periphery of the ring-member extending outwardly toward the bottom and being engaged by infolded portions of the base-member, and the outer face of the ring-member being recessed to have ring-like road-contacting walls, one within the other and separated by a space.

3. A protective-rivet, comprising a shank, a base member, and integrally connected ring-like road-contacting walls supported on the base member one within the other, and separated by a space, the bottom of said base member being adapted to contact with the fabric.

902,016. EQUALIZER AND SEPARATOR FOR STEAM. DAVID M. STOTT, Chicago, Ill., assignor of one-half to Horace E. Argo, Chicago, Ill. Filed Apr. 30, 1908. Serial No. 430,056.



1. In a steam separator and water equalizer, a casing provided with inlet and outlet passages, and a baffle plate interposed between said passages in position to be moved by the inrush of water and provided with an opening adapted to be closed by the movement of the baffle plate, due to the inrush of water, and provided with a port suitably positioned to remain open during all movements of the baffle plate, substantially as described.

2. In a steam separator and water equalizer, the combination of a casing provided with inlet and outlet passages, and a baffle plate interposed between said passages and positioned to be lifted by the inrush of water, and provided, near its periphery, with a hole adapted to be closed by the lifting of the baffle plate, and provided, near its center, with a port adapted to remain open during all movements of the baffle plate, substantially as described.

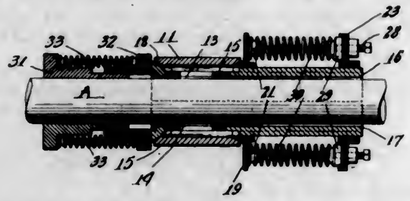
3. In a steam separator and water equalizer, the combination of a casing provided with inlet and outlet passages, and a baffle plate interposed between said passages and adapted to be lifted by the inrush of water, and provided, near its periphery, with a hole adapted to be closed by engagement of the baffle plate with the wall of the casing when the baffle plate is lifted, and provided with a port adapted to remain open during all movements of the baffle plate, substantially as described.

4. In a steam separator and water equalizer, the combination of a casing provided with inlet and outlet passages, a baffle plate interposed between said passages, and provided, around its periphery, with a backwardly turned edge, and provided, near said edge, with a hole adapted to be closed by engagement of the baffle plate with the wall of the casing when the plate is raised, and provided, near its center, with a port adapted to remain open during all movements of the baffle plate, substantially as described.

5. In a steam separator and water equalizer, the combination of a casing provided with inlet and outlet passages, the wall of the casing adjacent the outlet passage being inwardly dished to provide a boss, and a baffle plate recessed in its center and provided on its edge with a pair of backwardly turned lips or flanges, and having, near its edges, a pair of holes adapted to be closed by engagement of the baffle plate with the boss around the discharge passage, the baffle plate being further provided, near its center, with a hole adapted to remain open during all movements of the baffle plate, substantially as described.

[Claim 6 not printed in the Gazette.]

902,017. ELECTRIC-CAR TRUCK. FERNANDO F. STOWE, Worcester, Mass. Filed Mar. 10, 1905, Serial No. 249,360. Renewed Mar. 16, 1908. Serial No. 421,426.



1. In a car truck, the combination of a truck-frame, an electric motor, and spring-pressed cone bearings holding the motor in place in the truck-frame.

2. In a car-truck, the combination of a truck-frame, an axle, an electric motor, a set of spring-pressed cone-bearings supporting one point of the motor from the axle, and a second set of spring-pressed cone-bearings supporting a different point of the motor from the truck-frame.

3. In a car truck, the combination of a truck-frame, an electric motor, spring-pressed cone bearings holding the motor in place in the truck-frame, and means for adjusting the springs to vary the rigidity with which the motor is supported.

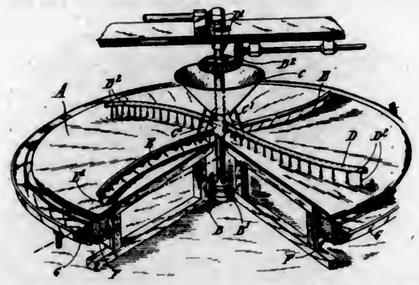
4. In a car truck, the combination of a truck-frame, an axle, a motor, a set of spring-pressed cone bearings supporting one point of the motor from the axle, a second set of spring-pressed cone bearings supporting another point of the motor from the truck-frame, and means for adjusting the springs of the cone-bearings to regulate the comparative rigidity with which the motor is supported.

5. In a car truck, the combination of a truck-frame, an axle, and a set of spring-pressed cone-bearings supporting the motor from the axle, said cone-bearings being adapted to be applied to an intermediate part of the axle so that said parts may be put on to an axle already in use.

[Claims 6 to 16 not printed in the Gazette.]

902,018. ORE-CONCENTRATOR. HENRY L. SULMAN and EVAN A. SULMAN, London, England, assignors to Minerals Ceparation, Limited, London, England. Filed July 31, 1906. Serial No. 328,551.

1. In an apparatus for concentrating ores the combination of a fixed surface, means for feeding powdered ore over the surface, means for continuously feeding a thin stream of liquid over the surface, a movable body having a flexible squeegee edge in contact with the surface sufficiently flexible to pass over the ore while exerting sufficient pressure on the surface to remove the film of water therefrom, means for sweeping the body over the surface in a direction at right angles to the direction of flow of the water to cause the ore to be alternately exposed to the air and to the edge of the liquid.



2. In an apparatus for concentrating ores the combination of a fixed inclined surface over which powdered ore will not flow, means for continuously distributing a thin stream of liquid over the surface, means for supplying powdered ore to the surface, a movable body having a flexible squeegee edge in contact with the surface sufficiently flexible to pass over the ore while exerting sufficient pressure on the surface to remove the film of water therefrom, means for sweeping the body over the surface in a direction at right angles to the direction of flow of the water to remove the layer of liquid temporarily from the ore and also to feed the ore over the surface.

3. In an apparatus for concentrating ores the combination of a fixed inclined surface over which powdered ore will not flow, means for continuously distributing a thin stream of liquid over the surface, means for supplying powdered ore to the surface, a movable body having a flexible squeegee edge in contact with the surface sufficiently flexible to pass over the ore while exerting sufficient pressure on the surface to remove the film of water therefrom, means for sweeping the body over the surface in a direction at right angles to the direction of flow of the water to remove the layer of liquid temporarily from the ore and also to feed the ore over the surface, means for collecting the floating material from the surface, and means for collecting the discharged material which does not float.

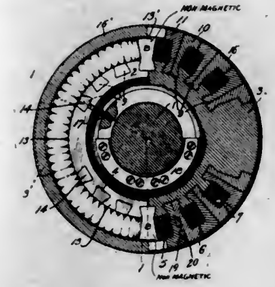
4. In an apparatus for concentrating ores the combination with a fixed inclined surface over which powdered ore and a thin layer of liquid are continuously fed of a squeegee sufficiently flexible to pass over the ore while exerting sufficient pressure on the surface to remove the film of water therefrom which is swept over the surface intermittently in a direction at right angles to the direction of flow of the water to remove the layer of liquid from the ore, whereby the ore is alternately exposed to the air and to the advancing edge of the layer of liquid.

5. In an ore concentrator the combination of a fixed conical surface of wide angle at the apex, means for continuously distributing a thin stream of liquid over the surface, means for supplying powdered ore to the surface, a movable arm having a flexible squeegee edge in contact with the surface sufficiently flexible to pass over the ore while exerting sufficient pressure on the surface to remove the film of water therefrom, means for sweeping the arm over the surface in a direction at right angles to the direction of flow of the water to remove the layer of liquid temporarily from the ore and to feed the ore over the surface, means for collecting the floating material from the surface and means for collecting the discharged material which does not float.

[Claims 6 to 9 not printed in the Gazette.]

902,019. DYNAMO-ELECTRIC MACHINE. KARL SULZBERGER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Apr. 8, 1905. Serial No. 254,461.

1. In combination, a core comprising a body portion and integral projections extending therefrom, and conductor holders secured to said body portion and combining with the integral projections to form a substantially cylindrical member, some of said coil holders being formed of magnetic material, and others of non-magnetic material, said cylinder member having conductor-receiving recesses formed therein.



2. In combination, a core comprising a body portion, polar projections extending therefrom, and conductor holders secured to said body portion and combining with the body and polar projections to form a substantially cylindrical member, some of said coil holders being formed of magnetic material and others of non-magnetic material, said polar projections and said conductor holders having conductor-receiving recesses.

3. In combination, a cylindrical core having axially-extending undercut grooves formed in its surface, a formed coil for said core, proportioned so that a space extends between one end of the core and the inner surface of one end of said coil and coil holders, one entering each of said grooves, each of said coil holders being divided longitudinally in two parts, one of said parts extending throughout the length of the coil holders and being inserted radially in the corresponding groove and the other of said parts being sub-divided into short blocks which are passed one at a time radially into said space between the end of the coil and the end of the core, and then moved axially into the undercut groove.

4. In combination, a core, a distributed winding, a plurality of winding holders arranged between the parts of the distributed winding, some of said holders being formed of magnetic material, and others of non-magnetic material.

5. In combination, a rotating field magnet, comprising a cylindrical body portion with polar projections, said body portion being formed with axially-extending undercut grooves or slots located about its periphery, a winding surrounding each polar projection, and a plurality of coil holders formed with tenons each dovetailed into said slots, some of said holders being formed of magnetic material and others of said holders being formed of non-magnetic material.

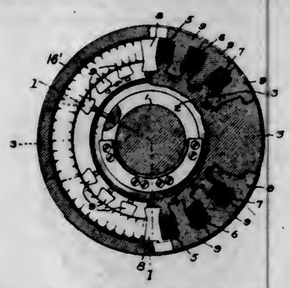
[Claims 6 and 7 not printed in the Gazette.]

902,020. DYNAMO-ELECTRIC MACHINE. KARL SULZBERGER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Dec. 12, 1906. Serial No. 347,463.

1. In combination, a core having an axially extending undercut slot or groove formed in its surface, conductors formed into a loop or coil applied thereto and proportioned so that a space extends between one end of said slot and the inner surface of one end of said loop or coil, and a conductor holder having a tenon fitted to said slot, radially inserted into said space and then moved axially into said slot.

2. In a dynamo electric machine, a substantially cylindrical core body, a formed coil applied thereto and proportioned so that a space extends between one end of the core body and the inner surface of one end of said coil, and coil holders secured to said body by tongue and slot connections, said coil holders being formed in sections or units which are passed one at a time radially into said space be-

tween the end of the coil and the end of the core body and are then moved axially to bring about the tongue and slot engagement between the unit and the body.



3. In combination, a core, a winding therefor, holders or securing devices for the winding dovetailed to the core and end connections for the winding spaced away from the end of said core, said holders being made in the form of short blocks or units to first allow of their insertion radially into the space between the end connections and the end of the core and their subsequent axial movement to bring about the dove-tailed connection between the blocks and the core.

4. In combination, a rotating core body provided with a number of parallel ribs, adjacent ribs being separated by undercut grooves, conductors resting on said ribs, and a plurality of short blocks entering each groove, each block having a tenon entering the groove, and portions overhanging the conductors resting on the ribs at opposite sides of the grooves, the outer ends of different blocks being equidistant from the axis of rotation, and end connections for the conductors spaced away from the end of the core body, whereby the blocks may be inserted one at a time into the end of the proper groove.

5. In combination, a core body provided with a number of parallel ribs, adjacent ribs being separated by undercut grooves, conductors resting on said ribs, and a plurality of blocks entering each groove, each block having a tenon engaging the ribs at opposite sides of the groove and portions overhanging the conductors resting on adjacent ribs, and end connections for the windings spaced away from the end of the core body a distance not less than the axial length of a block whereby the blocks may be inserted one at a time into the end of the proper groove.

[Claims 6 to 13 not printed in the Gazette.]

902,021. PROCESS OF MAKING AZO DYES CONTAINING FATTY ACID RADICALS. NATHAN SULZBERGER, New York, N. Y. Filed Oct. 2, 1907. Serial No. 395,507.

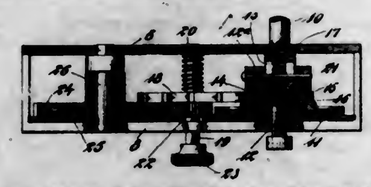
1. A process for the production of azo dye stuffs containing the radicals of fatty acids occurring in fats and oils, consisting in coupling diazo compounds with oxy-and-amino-derivatives of arylids containing the radical of such fatty acids as occur in animal and vegetable fats and oils, substantially as described, and for the purpose set forth.

2. A process for the production of azo dye stuffs containing the radicals of fatty acids occurring in fats and oils, consisting in coupling diazo compounds with oxy-and amino derivatives of arylids containing the radicals of mixtures of fatty acids occurring in animal and vegetable fats and oils, substantially as described and for the purpose set forth.

902,022. REGISTER. ORANGE S. STURTEVANT, Adrian, Mich., assignor to Adrian Wire Fence Co., Adrian, Mich. Filed Jan. 15, 1908. Serial No. 410,956.

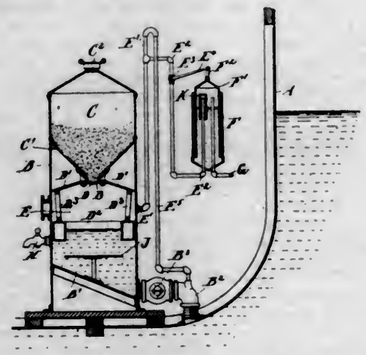
1. In a register, the combination of a spindle having a central longitudinal bore in one end, a registering wheel loose on the spindle, a clutch on the spindle and normally engaging the wheel, and a push pin extending into the said bore and connected to the clutch, to disengage the same.

2. In a register, the combination of a frame having an index, a spindle mounted in the frame and having a central longitudinal bore in one end, a dial loose on the spindle, a normally-engaged clutch between the spindle and the dial, and a push pin extending into the said bore and connected to the clutch to disengage the same.



3. In a register, the combination of a primary wheel and a secondary wheel and gearing therebetween, including a spindle and a gear wheel thereon meshing with the primary wheel, and a pinion thereon meshing at all times with the secondary wheel, the spindle being slidable lengthwise to disengage the said gear and primary wheels.

902,023. ACETYLENE-GENERATOR. ELMER E. TAGGART, New York, N. Y. Filed Dec. 5, 1907. Serial No. 405,228.



1. A floating structure, a tank disposed within said structure and closed at its upper end, a carbid chamber in the upper portion of said tank, means for supplying water under pressure from the water floating such structure to the portion of said tank below said carbid chamber, and means controlled by the constantly varying quantity of water in said tank through such supply for automatically controlling the feed of the carbid to such water.

2. A floating structure, a tank disposed within said structure and closed at its upper end, a carbid chamber in the upper portion of said tank, means for supplying water under pressure from the water floating such structure to the portion of said tank below said carbid chamber, and means controlled by the constantly varying quantity of water in said tank through such supply for automatically controlling the feed of the carbid to such water, the bottom of said carbid receptacle being at all times above the highest water level in the tank and below the level of the water floating said structure.

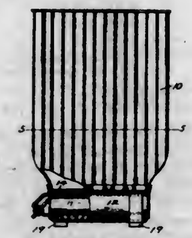
3. A tank closed at its upper end, a carbid chamber in the upper portion of said tank, a pipe for supplying water under pressure to the portion of said tank below said carbid chamber, means controlled by the constantly varying quantity of water in said tank for automatically controlling the feed of the carbid to such water, and means exteriorly of the tank for discharging the excess of gas downward through said water-supplying pipe.

4. A floating structure, a tank therein closed at its upper end, carbid supplying means with its discharge end at all times above the highest water level in said tank, a pipe for supplying water under pressure from the water floating such structure to the bottom of said tank and automatically discharging the spent carbid therefrom through said water supply pipe, and means controlled by the constantly varying quantity of water in said tank for automatically controlling the feed of the carbid to such water.

5. A floating structure, a tank therein closed at its upper end, carbid supplying means with its discharge end at all times above the highest water level in said tank, a pipe for supplying water under pressure from the water floating such structure to the bottom of said tank and automatically discharging the spent carbid therefrom through said water supply pipe, and means controlled by the constantly varying quantity of water in said tank for automatically controlling the feed of the carbid to such water and insuring a constantly varying quantity of water in the tank.

[Claims 6 to 14 not printed in the Gazette.]

902,024. ELECTRIC HEATER. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 17, 1907. Serial No. 379,352.



1. An electric heater comprising an air-tight receptacle containing a quantity of fluid, an electric heating device for vaporizing said fluid, and radiating walls inclosing an extended space communicating with said fluid adapted to condense the vapor, the condensing space being larger than the fluid space.

2. An electric heater comprising an air-tight receptacle containing a quantity of fluid, an electric heating device in heat-conductive relation to said fluid, and radiating walls forming a space communicating with said fluid and arranged to condense the vapor, the condensing space being several times as large as the fluid space.

3. An electric heater comprising an air-tight receptacle having heat radiating walls, a quantity of fluid in said receptacle and occupying a small portion of the space thereof, and an electric heating device in conductive relation to said fluid arranged to vaporize the same.

4. An electric heater comprising an air-tight receptacle containing a quantity of fluid and having a condensing space several times larger than the fluid space above and in communication with said fluid, and an electric heating device for vaporizing said fluid.

5. An electric heater comprising a fluid container, an electric heating device in heat-conductive relation thereto, and a corrugated casing forming a condensing space communicating with the fluid.

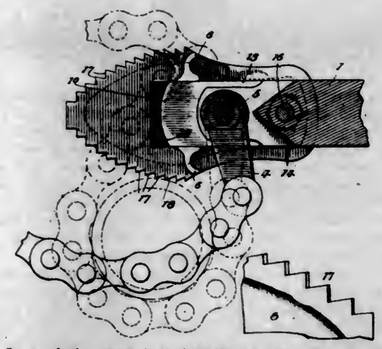
[Claims 6 and 7 not printed in the Gazette.]

902,025. CHAIN WRENCH. ALBRO M. TILTON, Brooklyn, N. Y. Filed June 21, 1907. Serial No. 380,056.

1. In a chain wrench, the handle, the chain, two jaws rigidly attached to the handle, each jaw having a toothed or serrated biting edge, the teeth or serrations of which are oppositely inclined and are obliquely inclined to the plane of movement of the axis of the handle when the latter is rotated around the jaws as a pivot.

2. In a chain wrench, the handle, the chain, two jaws, the handle being between the jaws and rigidly attached thereto, teeth or serrations on the biting edge of each of the jaws extending obliquely across the face of the jaws forwardly from and toward the axial line of the handle.

3. In a chain wrench, the handle, the chain, two jaws rigidly attached to the handle, each jaw having a toothed or serrated edge, the teeth or serrations of which extend obliquely across the faces of the edges and in opposite directions on the two jaws.

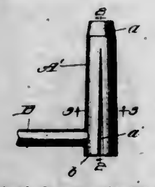


4. In a chain wrench, a handle, a chain, two serrated jaws and chain locks on the side of the handle opposite the jaws, the handle extending appreciably outward of the rear ends of the serrated portions of the jaws, and having therethrough in proximity to the jaws a passage of a size and shape to permit the body of the chain, after it has been led around the pipe or other object, to pass through the handle in an approximately direct line to the locks on the opposite side.

5. In a chain wrench, a handle, a chain, two serrated jaws mounted at the end of the handle and chain locks on the side of the handle opposite the jaws, the handle extending appreciably outward of the rear ends of the serrated portions of the jaws, and having therethrough in proximity to the jaws a passage of a size and shape to permit the body of the chain, after it has been led around the pipe or other object, to pass through the handle in an approximately direct line to the locks on the opposite side.

[Claims 6 to 11 not printed in the Gazette.]

902,026. RAIL-BOND. EUGENE W. VOGEL, Chicago, Ill., assignor to The Railroad Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 9, 1906. Serial No. 300,218.



1. A rigid terminal for an electrical bond adapted to be driven into a hole in a conductor and having shallow superficial grooves in the portion thereof which is adapted to engage with the wall surrounding the hole.

2. A terminal for an electrical bond adapted to be driven into a hole in a conductor and having tapered superficial grooves in the portion thereof adapted to enter the hole.

3. A tapered terminal for electrical bonds adapted to be driven in a hole in a conductor and having in the portion adapted to enter the hole a superficial groove tapered to correspond to the taper of the terminal.

4. A bonding pin for electrically uniting conductors having superficial grooves therein and having a coating of soft metal thereon.

5. A bond for electrically uniting conductors having a grooved terminal adapted to be driven in a hole in a conductor and having on said terminal a coating of soft metal.

[Claims 6 to 11 not printed in the Gazette.]

902,027. REINFORCED CEMENT CULVERT. CLIFFORD D. VORIS, Crawfordsville, Ind. Filed Mar. 13, 1908. Serial No. 420,953.
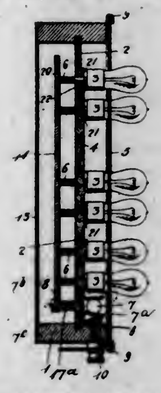


1. A culvert or the like comprising a circumferentially corrugated metal tube having a plurality of apertures therethrough, a plurality of bars secured to the inside wall of the tube, a plurality of bars secured to the outside wall of the tube, the end portions of the last named bars being curved back, a cement body covering all of said metal parts and having a notch formed in one end thereof and a tongue formed at the other end thereof, and a flange formed at each end thereof, two or more of the sections thus formed being adapted to be connected tandem.

2. A culvert or the like formed of cement sections, a flange extending out from around each end of each section, having a notch formed in one end of each section, a tongue extending out from the other end of each section, means for sealing the adjoining ends of the sections together, which means comprises a half-round channel formed in oppositely disposed adjoining faces of each of the flanges which together form a substantially round aperture which at one point opens to the periphery of the flanges, said aperture being adapted to be filled with a sealing compost after the sections are united, bolts for connecting the sections, and means for reinforcing the sections.

3. A culvert or the like comprising a corrugated sheet metal section formed cylindrical in cross section, a plurality of bars located both on the exterior and the interior and extending longitudinally of and secured to said sheet metal, reverse curves formed by the ends of said bars, and a cement body inclosing said metal parts, all substantially as shown and described.

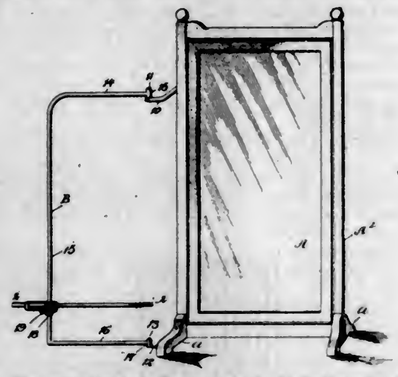
4. A culvert or the like formed of tubular cement-sections, flanges extending out at right-angles from around each end of each section, a notch formed on one end of each section, a tongue extending out from the other end of each section, the said tongue of one section being adapted to fill the notch of the adjoining section, bolts for securing the flanges of adjoining sections together, means for sealing the adjoining ends of the sections after they are secured together, and a system of reinforcing inclosed in each of the sections, substantially as described.

902,028. ELECTRIC SIGN. HENRY J. WALSER, Cleveland, Ohio. Filed May 29, 1906. Serial No. 319,323.



In an electric display system, a panel having an insulating plate extending across the same, a front conducting plate mounted on the face of said insulating plate, a rear conducting plate supported upon and spaced from the back of the insulating plate, said conducting plates being connected to opposite sides of the circuit, all of said plates having a monogram of registering holes, and interchangeable lamp sockets adapted to be inserted in any of said holes and having contact rims which rest upon the front plate and stems which extend through the holes in the insulating plate and are screwed into the holes in the rear conducting plate.

902,029. SKIRT-MARKER. ALBERT WATERMAN, New York, N. Y. Filed Feb. 7, 1908. Serial No. 414,753.

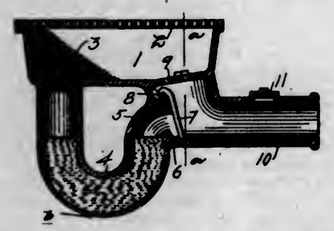


1. In a skirt marker, the combination with a mirror and its frame, of a swinging frame carried by the mirror frame, and a marking device carried by the swinging frame.

2. In a skirt marker, the combination with a mirror and its frame, of a swinging frame carried by the mirror frame and mounted to be swung to the front or rear of the mirror, a carrier adjustable upon said frame and a marking arm adjustable in said carrier.

3. In skirt markers, the combination with a mirror and its frame of an auxiliary frame, mounted at one side of the mirror frame to swing in the arc of a circle to the front or back of the mirror, a carrier adjustably mounted upon the swinging auxiliary frame, and a marking arm having sliding movement in said carrier.

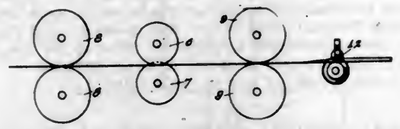
902,030. FLOOR-DRAIN AND BACKWATER TRAP. WILLIAM WEILER, Dayton, Ohio. Filed June 25, 1908. Serial No. 440,267.



A drain trap comprising a basin, a bend extending therefrom and forming the trap proper, one end of which communicates with the basin, an off-carrying tubular connection joining the basin and the other end of the trap, said basin, trap and tubular connection being integrally joined, a valve interposed between the discharge end of the trap and the off-carrying extension, and an opening in the bottom of the basin above said valve and above the tubular connection, said opening being closed by a cap, and a cover for the basin, substantially as specified.

902,031. PROCESS FOR MAKING GUTTERS. HALBERT E. WHITE and HARRY K. WHITE, Chicago, Ill. Filed May 6, 1908. Serial No. 431,104.

1. The method of making gutters, which consists in passing a blank sheet through forming rolls to form a flange thereon, then pressing the sheet between dies to form the body of the gutter and to further partially form a bead along the flanged edge, and finally presenting said partially formed gutter to a second set of dies which complete the forming of the bead or roll by turning the flanged edge in against the outer side of the gutter.



2. The process of forming a gutter or eaves trough, which consists in forming a flange along one edge of a strip of suitable stock, then stamping said stock to form the body of the gutter and to partially form a roll along the flanged edge, and finally again stamping said partially completed gutter to turn the flanged edge in to complete the roll.

3. The process of forming gutters or troughs, which consists in shearing a strip of metal from suitable stock and simultaneously forming a flange thereon, then stamping said strip to form the body of the gutter and to partially form a bead or roll along the flanged edge, and again stamping the flanged edge in to complete the roll or bead along the edge of the gutter.

4. The process of making gutters, which consists in forming a rounded flange along the edge of the stock, then pressing said stock to form the body of the gutter and to simultaneously further partially form a bead along the flanged edge, then pressing in said edge to complete the bead whereby the surface of the inturned edge will lie against the outer surface of the adjacent portion of the gutter.

902,032. INCANDESCENT ELECTRIC LAMP. WILLIS R. WHITNEY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 31, 1904. Serial No. 230,685.

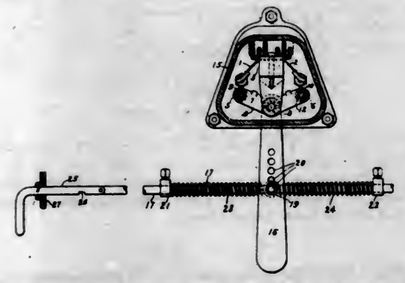


1. In an incandescent lamp, the combination of a lamp bulb, a metal cap sealed about the end of said lamp bulb, the metal forming the seal being under tension, a glass tube sealed through a tubular reëntrant portion of said cap, that portion of the cap forming the seal being under tension, and a metal cap sealed about the exposed end of said glass tube and being under tension.

2. The combination of a glass bulb, a combined seal and attaching device therefor consisting of a screw cap of thin metal surrounding a portion of the bulb and being under tension, a filament in the bulb, terminals for the filament, one electrically connected to the screw cap and the other insulated therefrom by a glass tube tightly clasped under tension by a portion of said screw cap.

3. In an incandescent lamp, the combination of a bulb, a screw cap of thin metal tightly inclosing the contracted portion of the bulb so as to be under tension, a glass tube tightly inclosed by the screw cap, the latter being under tension about the tube, and a metal cap tightly closing the outer end of said tube and being under tension.

902,033. SWITCH MECHANISM. JOHN B. WIARD, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 28, 1906. Serial No. 314,187.



1. A switch having two sets of fixed contacts, a rocker having two sets of contacts arranged to engage with the fixed contacts, a handle for moving said rocker to bring one set of movable contacts into engagement with one set of fixed contacts, a spring between said handle and said rocker, means for locking said handle in such position that the spring is placed under tension and holds the rocker yieldingly in position, and means for moving said rocker against the tension of the spring to bring the second set of contacts on the rocker into engagement with the corresponding set of fixed contacts.

2. A reversing switch comprising two sets of resilient contact fingers, and a rocker member having two sets of tubular contact members arranged with their axes parallel to the axis of the rocking member.

3. A reversing switch comprising two sets of fixed contact fingers, a rocker member, a pair of rods on said rocker member arranged parallel to the axis of said member, a plurality of tubular contacts mounted end to end on each of said rods and insulated from each other, and sleeves of insulating material between said tubular contacts and said rod.

4. In a reversing switch, two sets of fixed contacts, a rocker member coöperating therewith and comprising a bracket, a pair of parallel rods mounted on said bracket, a plurality of tubular contact members arranged end to end on each of said rods and insulated from each other and from each rod, means for holding said rocker member in one of its operative positions, and means for momentarily throwing said rocker member to its other position when said holding means is released.

5. In a reversing switch, two sets of fixed contacts, a movable switch member coöperating therewith and comprising a bracket provided with journals, a pair of rods mounted on said bracket and arranged parallel to said journals, a plurality of tubular contact members arranged end to end on each of said rods and insulated from each other and from said rods, means for holding said movable member in one of its operative positions, and means for throwing said member to its other operative position when said holding means is released.

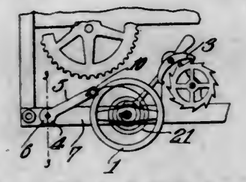
[Claims 6 to 9 not printed in the Gazette.]

902,034. WATCH-REGULATOR. JOHN J. WIENS, Quincy, Wash., assignor of one-fourth to Frank H. Boldt, one-fourth to David J. Wiens, and one-fourth to Preston F. Billingsley, Quincy, Wash. Filed Apr. 2, 1908. Serial No. 424,826.

1. A hair-spring regulator for time pieces, consisting of a shaft clamped in the frame of the time piece, means for adjusting the shaft in rotative position, a regulator lever arm mounted on said shaft; a hair spring having one end connected to the end of the lever arm; and means for adjustably clamping the end of the hair spring on the lever arm.

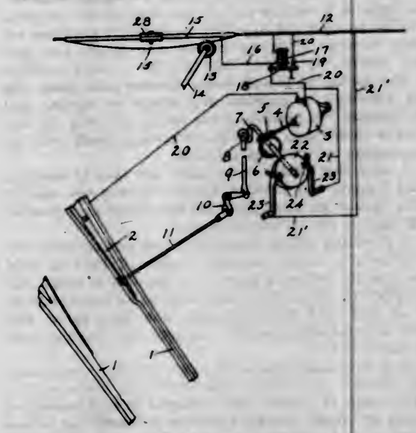
2. A hair spring regulator for time pieces, consisting of a shaft mounted to turn in and projecting through the

frame of the time piece; a collar, and set screw on said shaft adjustably clamping it to the frame; a regulator lever arm mounted on said shaft, and having a slot at its outer



end a hair spring, and an adjusting stud and set screw mounted on the slotted end of the lever arm, and clamping the end of the hair spring thereto.

902,035. ELECTRIC RAILROAD-SWITCH. MERLE J. WIGHTMAN, New York, N. Y. Filed Jan. 2, 1908. Serial No. 409,074.



1. The combination of a railway switch, a motor, mechanism driven thereby for reciprocating the switch, means for closing the circuit of the motor from a moving vehicle, means for maintaining a circuit of said motor independently of the position of the vehicle, and means for automatically stopping the motor when the railway switch completes its throw in one or the other direction.

2. The combination of a railway switch, an operating electric motor for reciprocating the same, an insulated section of conductor, a collector carried by the vehicle, a starting switch having a magnet energized over the circuit of said insulated section for starting the motor, and means driven by the motor for automatically closing an operating circuit of the motor as soon as it is started and breaking said circuit when the switch has completed its throw in one or the other direction.

3. The combination of a railway switch, an operating electric motor, a motor driven crank shaft and connecting mechanism between said crank and switch, a circuit closer and breaker in an operating circuit of the motor, means for causing the same to close said operating circuit when the motor starts and to break said circuit when the crank shaft has turned to a predetermined point, and independent means for starting the motor.

4. The combination of a railway switch, a current collector carried by a vehicle, an insulated section of conductor adapted to be engaged thereby, an electromagnet in a connection to said insulated section, an electric motor connected to the switch, a circuit closer controlling an operating circuit of the motor and operated by said magnet, a branch or substitute connection for supplying operating current to the motor, independent means for closing said circuit when the motor starts, and means for breaking said circuit automatically when the switch completes its throw.

5. The combination of a railway switch, a current collector on a vehicle, an insulated section of conductor engaged thereby, an electric motor connected to the switch, a circuit closer for starting the motor when the collector passes the insulated section of conductor, a crank shaft between the motor and switch, and means on said crank shaft for automatically stopping the motor at the completion of the throw of the switch in either direction.

[Claims 6 to 8 not printed in the Gazette.]

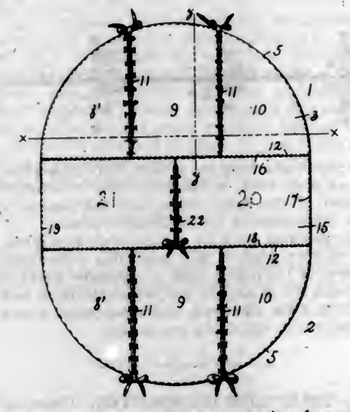
902,036. FOLDING LANTERN. MARTIN L. WILLIAMS. Tacoma, Wash. Filed Mar. 30, 1908. Serial No. 424,144.



1. In a folding lantern, the combination of two side plates hinged together; top and bottom triangular bodies, each consisting of two similar triangular plates, each of said last plates being hinged together in pairs and to the side plates, whereby said top and bottom bodies can be folded inwards together and said side plates can be brought into parallel planes, and whereby said top and bottom bodies can be unfolded into substantially horizontal planes and said side plates opened to form the body of the lantern; a transparent plate adapted to be held between the ends of said side plates when they are extended, and adapted to be placed adjacent the inner side of one of said side plates when they are folded; a triangular recess in the other of said side plates; and a triangular lamp adapted to rest above the bottom body when said side plates are extended, and within said recess when said side plates are folded.

2. In a folding lantern, the combination of two side plates hinged together; a hollow hinge pintle for the hinge of said side plates; top and bottom triangular bodies, each consisting of two similar triangular plates, each of said last plates being hinged together in pairs and to the side plates, whereby said top and bottom bodies can be folded inwardly together and said plates can be brought into parallel planes, and whereby said top and bottom bodies can be unfolded into substantially horizontal planes and said side plates opened to form the body of the lantern; a transparent plate adapted to be held between the ends of said side plates when they are extended, and adapted to be placed adjacent the inner side of one of said side plates when they are folded; a metal dark slide plate having a hole therein and adapted to be placed outside of said transparent plate; a shutter pivoted to said dark slide plate and adapted to cover the hole thereof; a triangular recess in the other of said side plates; a triangular lamp adapted to rest above the bottom body when said side plates are extended, and within said recess when said side plates are folded; and a hanger handle having a pin at its lower end adapted to engage under the plates forming the top body and having a spring catch formed thereon to hold said handle above said lantern.

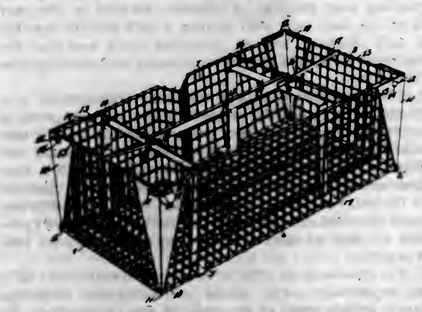
902,037. SECTIONAL TABLE-PAD. OSCAR WINTER, Philadelphia, Pa. Filed Sept. 26, 1907. Serial No. 394,621.



1. In a table top protection, a covering formed of an upper and lower part permanently secured together for a portion of their edges to thereby form a receptacle which is open at the free portion of the edges for the insertion of sectional pads; removable means to subdivide the cover and segregate the pad sections, and means at the cover's free edges to removably secure the pad sections.

2. A plurality of pad sections, an outer covering therefor fashioned to have an opening whereby the pad sections may be inserted within the covering; removable means to close the opening; and means to segregate the pad sections, comprising a strip of material interlaced through the outer coverings, between the pad sections, and removable when the outer covering needs to be cleansed.

902,038. FILTER-BASKET. FLOYD J. WOOD, Niles, Mich. Filed Nov. 8, 1907. Serial No. 401,299.



1. A receptacle adapted to contain filtering material, said receptacle having a bottom and four sides hinged thereto, a handle, and links connecting the handle with all four sides for operating them simultaneously, said links being comparatively stiff whereby the movement of the sides may be positively controlled in either direction.

2. A filter basket having a perforate bottom and sides hinged to said bottom, a handle, substantially inflexible links connecting said handle to said sides, and means for limiting the inward swing of said sides.

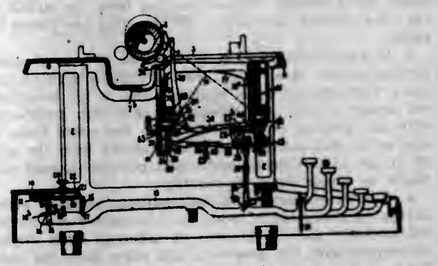
3. A filter basket having a bottom and sides hinged thereto, a frame within the basket attached to and rising from the basket bottom, said frame being adapted to limit the inward swing of two of the basket sides, a handle, and links connecting said sides to said handle.

4. A filter basket having a bottom and four sides hinged thereto, a frame within the basket attached to and rising from the basket bottom, said frame being adapted to limit the inward swing of at least two of the basket sides, a handle, and links leading from said handle to the different sides of the basket, said handle being adapted to rest upon said frame when not supporting the basket.

5. A filter basket having a bottom and four sides hinged thereto, and corner pieces adapted to complete the corners of the basket and permit relative movement of said sides.

[Claims 6 and 7 not printed in the Gazette.]

902,039. TYPE-WRITING MACHINE. OSCAR WOODWARD, New York, N. Y., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed Aug. 15, 1905. Serial No. 274,288.



1. In a typewriting machine, the combination of a segment, and a hanger secured thereto, said hanger having a substantially straight arm and a bent arm, both of said arms bearing against the face of the segment to which the hanger is secured.

2. In a typewriting machine, the combination of a substantially vertically disposed segment, a series of type bar hangers secured thereto, and a series of type bars pivoted to said hangers, a terminal type bar hanger having a substantially straight arm and a bent arm, the bent arm of said terminal hanger being uppermost, and both arms of said terminal hanger bearing against the face of said segment to which said hanger is secured.

3. In a typewriting machine, the combination of a segment having two segmental securing faces at different elevations or distances from the body of the segment, and two series of bifurcated hangers with the bifurcated portions thereof extending towards each other, a terminal hanger of one series having a bent arm and a substantially straight arm, the bent arm of said terminal hanger being outermost.

4. In a typewriting machine, the combination of a segment having two segmental securing faces at different elevations or distances from the body of the segment, and two series of bifurcated hangers with the bifurcated portions thereof extending towards each other, the hangers of one series being staggered relatively to the hangers of the other series, and a terminal hanger of one series having a bent arm and a substantially straight arm, the bent arm of said terminal hanger being outermost.

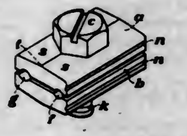
5. In a typewriting machine, the combination of a segment, a face thereof to which type bar hangers are secured being in a single plane, a series of type bar hangers, and a series of type bars, the pivots of which are arranged nearer the securing face of the segment as the sides of the system of type bars are approached.

[Claims 6 to 31 not printed in the Gazette.]

902,040. WIRE-CONNECTOR. HOMER W. WYCKOFF, Indianapolis, Ind.; Nathan H. Richardson administrator of said Homer W. Wyckoff, deceased. Filed Mar. 12, 1906. Serial No. 305,529.

1. In a wire-connector, in combination, two metal plates having opposed inner faces for receiving wires therebetween upon opposite sides of the longitudinal center of

the plates, said metal plates having surfaces slanting from the middle to the sides thereof, and means for clamping the plates together.

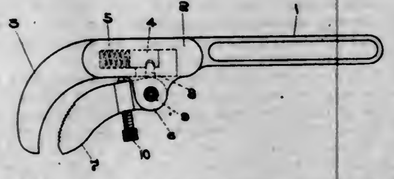


2. In a wire-connector, in combination, two metal plates having opposed inner faces, each of said faces being provided with grooves upon opposite sides of the longitudinal center thereof, the grooves of each face registering with the grooves in the other face, the outer faces of said metal plates having surfaces slanting from the middle to the sides thereof, and means for clamping the plates together.

3. In a wire-connector, in combination, two metal plates having opposed inner faces, each of said faces being provided with grooves upon opposite sides of the longitudinal center thereof, the grooves of each face registering with the grooves in the other face, the outer faces of said metal plates having surfaces slanting from the middle to the sides thereof, and a bolt passing through said plates to clamp the same together.

4. In a wire-connector, in combination, two metal plates having opposing inner faces, each of said faces having substantially parallel grooves of different cross section registering with the grooves in the other face, the outer faces of said metal plates having surfaces slanting from the middle to the sides thereof, and a bolt passing through said plates to clamp the same together.

902,041. PIPE-WRENCH. CHARLES E. ADAMS, Scrubgrass, Pa., assignor of one-half to Bryan H. Osborne, Franklin, Pa. Filed Dec. 31, 1907. Serial No. 408,796.



1. In a pipe-wrench, a unitary structure consisting of a resistance jaw, a body-portion and a handle, there being ears upon said body-portion adapted to the mounting or attachment of a movable pressure jaw, there being also a recess formed in said body between said ears, a movable pressure jaw attached by one of its ends to said ears, the other end of said jaw being in juxtaposition to said first mentioned jaw, there being a lug upon said movable jaw approximate to the pivotal point thereof extending into said recess, an actuating block seated in said recess and adapted to engage said lug, a spring adapted to bear upon one end of said block for the purpose set forth, and adjustable means for limiting the gripping action of said movable jaw.

2. In a pipe-wrench, a unitary structure consisting of a main resistance jaw, a body portion and a handle, there being ears upon said body portion adapted to the mounting or attachment of a movable pressure jaw, there being also a recess formed in said body between said ears, in combination with a movable pressure jaw attached by one of its ends to said ears, the other end of said jaw being in juxtaposition to said first mentioned jaw, there being a lug upon said movable jaw, approximate to the pivotal point thereof, extending into said recess, an actuating block seated in said recess and adapted to engage said lug and a spring adapted to bear upon one end of said block, for the purpose set forth.

902,042. EQUALIZER-HOOK FOR VEHICLE DRAFT APPARATUS. JACOB B. ASHENFELTER, Olex, Oreg. Filed Dec. 23, 1907. Serial No. 407,698.



1. An equalizing hook for vehicle draft apparatus, comprising an open hook or bill permitting attachment and detachment of the draft chain, and independent closed eyes for connection to the doubletree hooks.

2. An equalizing hook for vehicle draft apparatus, comprising an open hook or bill permitting attachment and detachment of the draft chain, a releasable guard or closure for said bill or hook to prevent accidental detachment of the draft chain therefrom, and independent closed eyes for connection to the doubletree hooks.

902,043. TELEPHONE-TRANSMITTER. GEORGE F. ATWOOD, East Orange, N. J., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 12, 1906. Serial No. 305,549.



1. The combination with a telephone transmitter, of a containing case therefor, a chamber secured to the rear wall of the case, said wall having a hole therein opening into said chamber, and an insulated block carrying the transmitter terminals projecting through said opening into said chamber.

2. The combination with a telephone transmitter, of a front supporting plate for supporting the working parts of the transmitter, an auxiliary support for the transmitter carried by the plate behind the transmitter, insulated terminals for the transmitter carried by said support, a cup-shaped member secured to the rear of said plate, a chamber upon the outer surface of said member, and a removable cap for said chamber, the terminals carried by said support projecting through an opening in said cup-shaped member into said chamber.

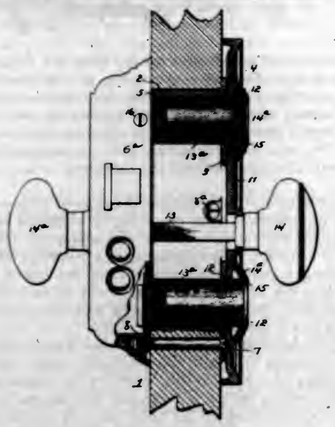
3. The combination with a telephone transmitter, of a front supporting plate having a rearwardly extending flange, a bridge piece at the rear of the transmitter, inwardly projecting lips formed from said flange and supporting said bridge piece, an insulated block mounted upon said bridge piece and carrying the transmitter terminals, a cup-shaped member within which the flange of the front plate fits, means for securing said plate and member together to form an inclosing casing for the transmitter, and a terminal chamber mounted upon the rear of said cup-shaped member, said member having an opening therein through which said block projects into said chamber.

4. A containing case for telephone transmitters comprising a front supporting plate having a rearwardly-extending annular flange, a cup-shaped member in which said flange fits, an outwardly projecting annular lug carried by said plate abutting against the edge of said cup-shaped member, said member having screw threads upon its outer surface, an internally threaded clamping ring screwing upon said cup-shaped member, and an inturned annular lip carried by said ring and abutting against said outwardly projecting lug, whereby said cup-shaped member and front plate are locked together and the joint between said parts sealed.

5. The combination with a telephone transmitter, of a containing case therefor, a chamber secured to the rear wall of the case, said wall having a hole therein opening into said chamber, an insulated block mounted within said containing case, transmitter terminals mounted on said block and projecting through said opening into said chamber, and a spring-pressed plunger passing through the side walls of said chamber and arranged to control the connection of said switch terminals.

[Claim 6 not printed in the Gazette.]

902,044. LOCK. PETER F. AUGENBRAUN, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed May 8, 1908. Serial No. 431,585.



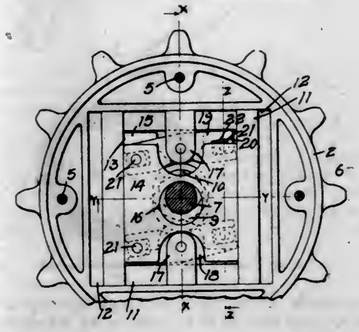
1. The combination with a door, of a frame or spider secured to one face of the door, a lock bearing against the other face of the door, screws connecting the spider and the lock, an escutcheon plate covering the spider and secured thereto, and means held in place by the lock cylinders for covering and concealing the devices which secure the escutcheon plate to the spider.

2. The combination with a door, of a frame or spider secured to one face thereof, a lock resting against the other face of the door, screws connecting the spider and lock, an escutcheon plate covering the spider and secured thereto by screws, lock cylinders passing through the escutcheon and spider and into the lock, and roses carried by the cylinders and concealing the screws securing the escutcheon plate to the spider.

3. The combination of a spider, a lock, screws passing through the spider and engaging the lock, an escutcheon plate covering the spider and concealing said screws, one or more other screws securing the escutcheon plate to the spider, one or more lock cylinders passing through the escutcheon plate and spider and engaging the lock, and roses carried by the cylinders and concealing the screws which secure the escutcheon plate to the spider.

4. The combination of a face plate having a series of openings through same, and a continuous outwardly projecting rectangular flange, the latter having one or more screw holes arranged at an inclination, a lock, screws passing through the plate and engaging the lock, an escutcheon plate, covering said first mentioned plate and secured thereto by screws, lock cylinders passing through the two plates and screwed to the lock, and roses carried by said cylinders and covering and concealing the screws connecting the two plates.

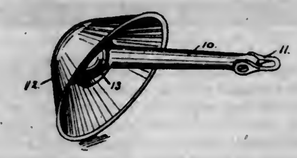
902,045. DIFFERENTIAL MECHANISM. EMILE AZE, Minneapolis, Minn., assignor of one-half to Hans Bjelland, Minneapolis, Minn. Filed May 15, 1908. Serial No. 432,980.



1. A differential mechanism comprising a gear wheel, a casing secured thereto and having hubs, axles journaled in said hubs and having eccentrics on their inner ends, a primary cross head having a guideway in said gear, secondary cross heads having guideways in said primary cross heads and movable in a direction substantially at right angles to the direction of movement of said primary cross head, said secondary cross heads having openings to receive said eccentrics, and means whereby the movement of one secondary cross head will be transmitted to the other one.

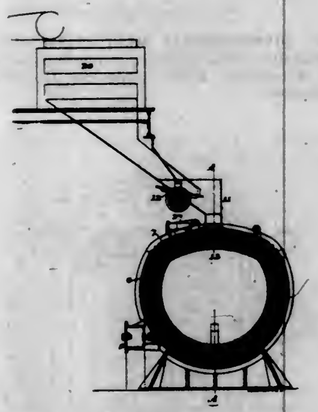
2. A compensating mechanism comprising a gear wheel having a guideway therein, a primary cross head adapted to slide in said guideway and having guideways at right angles substantially to the guideway in said gear wheel, secondary cross heads fitting within said secondary guideways and having openings therein, plates secured to said gear and inclosing said cross heads, axles journaled in said plates and having eccentrics to enter the openings in said secondary cross heads, and levers centrally pivoted on said primary cross head, each lever having a pivotal connection at one end with one of said secondary cross heads and a corresponding connection at its other end with the other of said secondary cross heads, for the purpose specified.

902,046. ANCHOR FOR VESSELS. WASHINGTON I. BABCOCK, New York, N. Y. Filed Dec. 19, 1907. Serial No. 407,129.



A combined anchor and hawse buckler for vessels consisting of a head formed of a dished circular plate adapted to cover and close the hawse hole and also to catch on the bottom, and a shank connected by a universal joint to said head, substantially as shown and described.

902,047. LIQUATION FURNACE. RALPH BAGGALEY, Pittsburg, Pa., CHARLES M. ALLEN, Lo Lo, Mont., and EDWARD W. LINDQUIST, Chicago, Ill. Filed Aug. 7, 1905. Serial No. 273,051.



A converter having an ore-feeding opening, a matte outlet opening, blast twyers, a preheating chamber, means for delivering the hot gases from the converter to the preheating chamber, and means for delivering the preheated ores to the feeding opening; substantially as described.

902,048. MOLDED RESISTANCE. LAWRENCE E. BARRINGER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 2, 1906. Serial No. 299,143.

1. A resistance conductor comprising a steam-hardened compound of a conducting material and a hydrated non-conducting material.

2. A resistance conductor comprising a steam-hardened compound of a comminuted conducting material with silica and a hydrate.

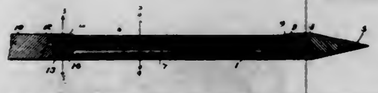
3. A resistance conductor comprising a compound of a comminuted conducting material and a hydrous silicate.

4. A resistance conductor comprising a steam-hardened compound of a comminuted conducting material with silica and calcium hydrate.

5. A resistance conductor comprising a compound of a comminuted conducting material and hydrous silicate of calcium.

[Claims 6 to 9 not printed in the Gazette.]

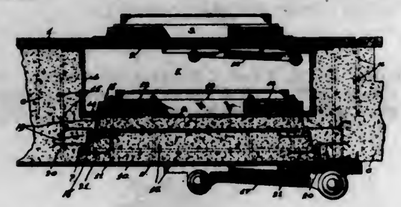
902,049. SAMPLER FOR GRANULAR MATERIAL. HAROLD D. BONNELL, Norfolk, Va. Filed Nov. 6, 1907. Serial No. 401,020.



1. In a sampler for granular material, the combination with a tube provided with a longitudinal slot and with a circumferential slot extending part way around it, of a second tube rotatively mounted in the first tube provided with a longitudinal slot, a spring pressed pin mounted in said second tube and adapted to project into the circumferential slot of the first tube, and an extension of the second tube constituting an operating handle.

2. In a sampler for granular material, the combination with a tube provided with a longitudinal slot extending almost its full length and with a circumferential slot extending part way around it near one end, of a second tube rotatively mounted in the first tube provided with a longitudinal slot corresponding to that in the first tube, closures for the ends of the said second tube flush with the ends of the slot, and a spring pressed pin beyond the end closure of the second tube adapted to normally enter the circumferential slot of the first tube and adapted to be depressed below the surface to permit separation of the tubes.

902,050. FIREPROOF ATTACHMENT FOR VAULTS. THOMAS M. BRINTNALL, Oakland, and NELSON R. DOOLITTLE, Berkeley, Cal. Filed Nov. 20, 1907. Serial No. 402,949.

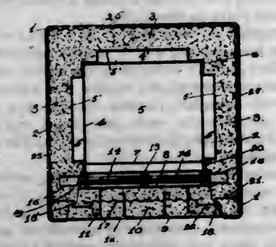


1. A fireproof attachment for the door of a deposit vault and in combination with the vault, a metallic vestibule frame secured to the face of the vault to encompass the door thereof, of a concrete wall embracing the vestibule frame, and a door for closing the entrance-way to the vestibule, the same comprising face plates separated by a concrete wall of approximately the thickness of the vestibule wall.

2. A fireproof attachment for the door of a deposit vault and in combination with the vault, a vestibule frame secured to the face of the vault to encompass the door thereof, of a concrete wall embracing the vestibule frame, of reinforcing material embedded within the concrete wall, and a door for closing the entrance-way to the interior of the vestibule, the same comprising face plates separated by a wall of reinforced concrete.

3. The means of protecting the door and burglar-proof lock mechanism of a safe deposit vault, which consists in surrounding the door of the vault to be protected by a vestibule having its walls composed of concrete, and closing the entrance-way of the vestibule by a door consisting of face plates separated by a wall of concrete, forming a closed air chamber around the door of the vault when the door to the vestibule is closed.

902,051. SAFE. THOMAS M. BRINTNALL, Oakland, and NELSON R. DOOLITTLE, Berkeley, Cal. Filed Nov. 20, 1907. Serial No. 402,950.



1. A fireproof safe, the same comprising a skeleton angle frame, a reinforced lining therefor, an inner metallic box forming the interior compartment of the safe, a concrete body within which said box and the reinforced lining for the angle frame is embedded, and air compartments interposed between the walls of the said box and the concrete body of the safe.

2. A fireproof safe free of metallic door and jamb frames, the same comprising a skeleton angle frame, a

body of concrete forming the wall of the safe, an interior safe compartment within the concrete body, a door for closing the opening of the concrete body, the said door consisting of an inner and an outer face plate, and a concrete wall or bed interposed between the said face plates.

3. A fireproof safe free of metallic door and jamb frames, the same comprising a skeleton angle frame, a reinforced lining for the angle frame, an inner box forming the interior compartment of the safe, a concrete body for the safe within which the reinforced lining and the said box are embedded, outer cement panels for the safe approximately flush with the surfaces of the angle frame, a door for the safe, the same consisting of an inner and an outer face plate, and a concrete wall or bed interposed between the said plates, and union pieces extended from the face plates and embedded within the concrete wall or bed between the said plates.

4. In a safe of the described character, the combination with the concrete body thereof, of a door composed of an inner and an outer face plate and a concrete wall or bed interposed between the said face plates and to which the plates are held, and anchor clips embedded respectively in the edge of the concrete body of the safe and the door edge of the concrete wall or bed of the door.

5. A fireproof safe, the same comprising a skeleton angle frame, an inner metallic box forming the interior compartment of the safe, a concrete body within which said box is embedded, and which body of concrete forms the outer wall of the safe, and air compartments interposed between the walls of the said box and the concrete body of the safe.

902,052. PROCESS FOR MANUFACTURING STEEL FROM CHROMIFEROUS PIG-IRON. FRANK D. CARNEY, Steelton, Pa., assignor to The Pennsylvania Steel Company, Steelton, Pa., a Corporation of Pennsylvania. Filed Aug. 28, 1907. Serial No. 390,476.

1. The process of manufacturing steel which consists in blowing chromiferous pig iron in a pneumatic converter, and maintaining a comparatively low temperature during the progress of the blow, substantially as described.

2. The process of manufacturing steel which consists in blowing chromiferous pig iron having a low content of silicon in a pneumatic converter, and maintaining a comparatively low temperature during the progress of the blow substantially as described.

3. The process of manufacturing steel which consists in blowing chromiferous pig iron in a pneumatic acid converter, and maintaining a comparatively low temperature during the progress of the blow substantially as described.

4. The process of manufacturing steel which consists in blowing chromiferous pig iron having a low content of silicon in a pneumatic acid converter, and maintaining a comparatively low temperature during the progress of the blow, substantially as described.

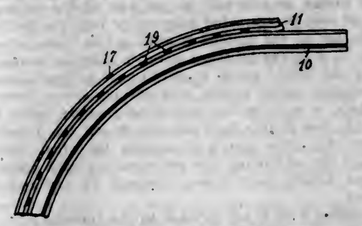
5. The process of manufacturing steel which consists in blowing chromiferous pig iron in a pneumatic converter, and maintaining a comparatively low temperature during the progress of the blow by cooling methods substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

902,053. BALL-BEARING RAILWAY-TRACK CURVE. WILLIAM R. CLARK, Jamestown, N. Y. Filed June 12, 1908. Serial No. 438,042.

1. In a railway track, a rail consisting of, a plate having spaced openings conforming to the shape of a ball and extending therethrough, a middle plate having correspondingly spaced openings therein forming four-point bearings for the balls, a third plate having a flat hardened face opposite said openings, balls in said openings, and suitable bolts to unite said plates in a rail.

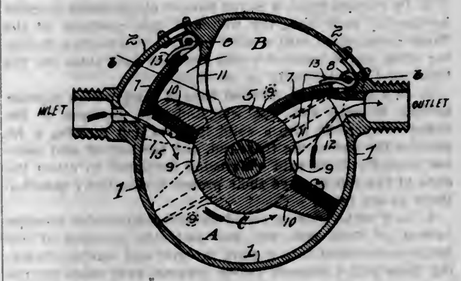
2. In a railway track, a rail composed of three plates bolted together, the plate adjacent the wheel flange having the spaced round openings extending therethrough, the middle plate having squared openings therein spaced to correspond with said round openings, the outer plate having a flat face opposite said square and round openings, and balls in said openings.



3. In a railway track curve, a wheel bearing rail, a guide rail alongside said wheel bearing rail, said guide rail composed of three plates bolted together, the plate adjacent said wheel bearing rail having spaced round openings therethrough conforming to the form of a ball, the middle plate having square openings therein spaced to correspond with said round openings, the third plate having a hardened face opposite said square openings, and balls in said openings protruding through the face of said guide rail, substantially as and for the purpose specified.

4. In a railway track curve, a track rail 10, a guide rail 11 alongside said track rail composed of plates 14 15 and 16 united by bolts 17, said plate 16 having spaced round openings 21 conforming to the shape of the ball, said plate 15 having square openings 20 spaced to correspond with said round openings, said plate 14 having a flat hardened face opposite said spaced openings, and balls 19 in said openings, substantially as and for the purpose specified.

902,054. ROTARY PRESSURE-MOTOR. PETER T. COFFIELD, Dayton, Ohio. Filed Mar. 26, 1908. Serial No. 423,378.



1. In a rotary pressure motor, a suitable motor casing, two pistons located opposite each other on a rotating shaft, and a pair of drivers or valves located on one side of the axis of the piston shaft, and means enabling the pressures on both sides of the valves to be equalized in order that each valve may be raised from its seat by the approaching piston, said piston thus being relieved from moving the valve against opposing pressure.

2. In a rotary pressure motor, two pistons mounted upon a rotating shaft, two drivers or valves mounted in pockets in the motor casing adjacent to the inlet and outlet to and from the motor, and means to relieve the pressure in front of the valves before the approaching piston engages said valve.

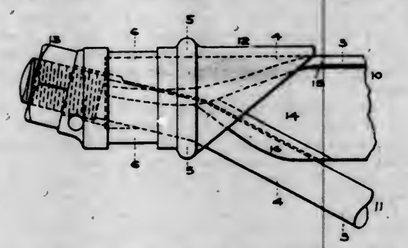
3. In a rotary pressure motor, a suitable casing, two pistons mounted upon a rotating shaft within said casing, two drivers or valves mounted respectively adjacent to the inlet and outlet to and from the motor, one of said valves serving to trap the motive fluid between it and a piston while said piston is passing the other valve, and means for equalizing the pressures upon both sides of a valve before said valve is raised by the approaching piston.

4. In a rotary pressure motor, a suitable casing having one inlet port and one outlet port, two pistons mounted upon a rotating shaft, two valves mounted in pockets in said casing on one side of the axis of the piston shaft, one of said valves being adapted to trap the motive fluid while one of the pistons is passing the other valve.

5. In a rotary pressure motor, a suitable casing having inlet and outlet ports, a plurality of pistons mounted on a rotating shaft within said casing, valves mounted in pockets in said casing, one of said valves being adapted to trap the motive fluid between it and the driven piston while the other piston is passing the other valve, and means for equalizing the pressures on both sides of the valves before each valve is raised by the approaching piston.

[Claims 6 to 8 not printed in the Gazette.]

902,055. RAILWAY BRAKE-BEAM. SETH A. CRONE, East Orange, N. J. Filed Aug. 5, 1908. Serial No. 447,022.



1. In a brake-beam, a rolled flanged compression member having, at each end, the web and side portions of the flange, compressed into a solid integral end forming a recess for the end of the truss-rod; substantially as set forth.

2. In a brake-beam, a rolled flanged compression member having, at each end, the web and side portions of the flange compressed into a solid integral end having diverging sides and a concave recess between said sides for the truss-rod; substantially as set forth.

3. In a brake-beam, a rolled flanged compression member having, at each end, the web and side portions of the flange compressed into a solid integral end forming a recess for the end of the truss-rod, and the web of said member inwardly from said ends being displaced to allow the ends of the rod to have their proper inclination; substantially as set forth.

4. In a brake-beam, a rolled flanged compression member having, at each end, the web and side portions of the flange compressed into a solid integral end having diverging sides and a concave recess between said sides for the truss-rod, and the web of said member inwardly from said ends being displaced to allow the ends of the rod to have their proper inclination; substantially as set forth.

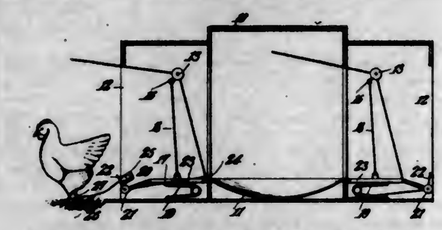
5. In a brake-beam, a rolled flanged compression member having, at each end, a portion of the web split and spread open to receive the truss-rod, and beyond the same having the web and side portions of the flange compressed into a solid integral end forming a recess for the outer portion of the truss-rod; substantially as set forth.

[Claim 6 not printed in the Gazette.]

902,056. HEN'S NEST. ALBERT D. CROSLEY, Jewell, Iowa. Filed Apr. 28, 1908. Serial No. 429,769.

1. In a device of the kind described, a nest, a door thereto, means adapted to be actuated by a fowl for opening and closing said door, means for locking said door from opening and means for attachment to a fowl to operate said locking means.

2. In a device of the kind described, a nest, a door thereto comprising a shaft having a plurality of series of parallel fingers attached thereto, means adapted to be actuated by a fowl for opening and closing said door, means for locking said door from opening and means for attachment to a fowl to operate said locking means.



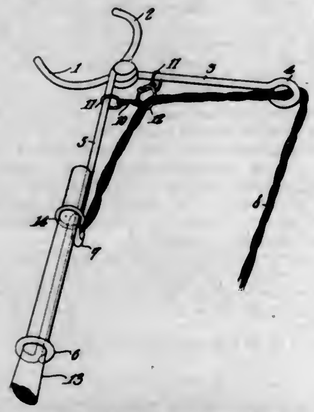
3. In a device of the kind described, a nest, a door thereto comprising a shaft having two angularly disposed series of parallel fingers mounted thereon, means adapted to be actuated by a fowl for opening and closing said door, means for locking said door from opening and means for attachment to a fowl to operate said locking means.

4. In a device of the kind described, a nest, a door thereto comprising a shaft having a plurality of series of parallel fingers attached thereto, a platform hinged below said shaft, a rock-arm on said shaft, a rod connecting said rock arm and platform, a spring normally holding said platform raised but adapted to be strained by the weight of a fowl and permit said platform to be depressed, means for locking said door from opening and means for attachment to a fowl to operate said locking means.

5. In a device of the kind described, a nest, a door thereto, means adapted to be actuated by a fowl for opening and closing said door, a roller provided with a series of spaced arms, a lock for said door actuated by said roller, and a clog adapted to be attached to a fowl to rotate said roller and actuate the lock.

[Claims 6 to 8 not printed in the Gazette.]

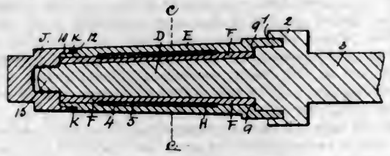
902,057. ANIMAL-CATCHER. CHARLES B. CRUSE, Perkins, Okla. Filed June 6, 1908. Serial No. 437,169.



1. An animal catching device consisting of grappling tongs with pivoted curved jaws and foldable arms; a cord connected to one of said arms and slidably extending through the other, and a flexible connection between said arms, slidable thereon, and connected with said cord.

2. An animal catching device consisting of grappling tongs with pivoted curved jaws, one having a short arm and the other an extended arm, said arms being foldable together; a chain connecting said arms and slidable thereon; a cord connected to the extended arm and slidably connected with said chain, and slidably extending through the short arm; and a pole detachably connected with the extended arm.

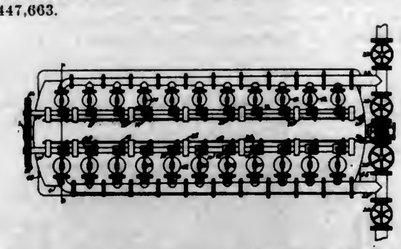
902,058. AXLE-BEARING. CHARLES M. DORITTY, Grimsby, Ontario, Canada. Filed Nov. 18, 1907. Serial No. 402,599.



1. In an axle bearing, a stationary axle, a bushing adapted to rotate thereon and having an annular recess and a longitudinal slot communicating with said recess and axle, and having grooves in the periphery of the bushing communicating with the ends of the slot, a sleeve having a chamber, conforming to said recess, and adapted to rotate on the bushing, and independently of the bushing, and lubricating material in said slot, recess and chamber.

2. In an axle bearing, a tapered stationary axle having a threaded shank on the tapered end thereof, a tapered bushing fitting and adapted to rotate thereon and having an annular recess on a longitudinal slot communicating with said recess and axle, and having grooves in the periphery of the bushing communicating with the ends of the slot, a tapered sleeve on the bushing and adapted to rotate with and independently of the bushing, and having an annular recess on the tapered end thereof, a retaining cover screwed on the shank and abutting the ends of the bushing and the sleeve, and a flexible washer on said recess and between the cover and the shoulder of the sleeve formed by said recess.

902,059. ROTARY STEAM-ENGINE. ELLIS F. EDGAR, Woodbridge, N. J. Filed Aug. 10, 1908. Serial No. 447,663.



1. A rotary engine comprising a driving shaft, a series of piston driving wheels secured thereto, each piston driving wheel having a pocket containing a piston and each piston driving wheel having a cylinder surrounding said piston driving wheel, said cylinder having a bulkhead or division, said piston having one end made to fit in said cylinder and means for moving said piston in and out of said cylinder, said cylinder having an exhaust connecting to an exhaust line, leading to a condenser and an inlet port connected through a puppet cut-off valve to a steam line from a steam generator, said puppet cut-off valve governing the flow of steam to said inlet port in conjunction with a multiple cam, whereby the steam may be let in as many of the cylinders in starting as desired, and cut off automatically at any desired point, and capable of being operated in reversing in the same manner, all substantially as set forth.

2. A rotary engine comprising a driving shaft, a series of piston driving wheels secured thereto, each piston driving wheel having a pocket containing a piston and each piston driving wheel having a cylinder surrounding said piston driving wheel, said cylinder having a bulkhead or division, said piston having one end made to fit in said cylinder, and means for moving said piston in and out of said cylinder, said cylinder having an exhaust connecting to an exhaust line leading to a condenser and an inlet port, a cut-off valve governing the flow of steam to said inlet port in conjunction with a multiple cam whereby the steam may be let in as many of the cylinders in starting as desired and cut off automatically at any desired point, and capable of being operated in reversing in the same manner, all substantially as set forth.

3. A rotary engine comprising a driving shaft, a series of piston driving wheels secured thereto, not less than six in number, each piston driving wheel having a pocket containing a piston and each piston driving wheel having a cylinder half circle in cross section, surrounding said piston driving wheel, said cylinder having a bulkhead or division, said piston having one end half circle in cross section to fit in said cylinder and a shaft running through said piston, having on its ends a cap containing rollers and supported in grooves in such a manner as to move said piston in and out of said cylinder, said cylinder having an exhaust connecting to an exhaust line leading to a condenser and an inlet port connected through a puppet cut-off valve to a steam line from a steam generator, said puppet cut-off valve governing the flow of steam to said inlet port in conjunction with a multiple cam, whereby the steam may be let in as many of the cylinders in starting as desired, and cut off automatically at any desired point, and capable of being operated in reversing in the same manner, all substantially as set forth.

4. A rotary engine comprising a driving shaft, a series of piston driving wheels, secured thereto, not less than ten in number, each piston driving wheel having a pocket containing a piston and each piston driving wheel having a cylinder half circle in cross section surrounding said piston driving wheel, said cylinder having a bulkhead or division, said piston having one end half circle in cross section to fit in said cylinder, and a shaft running through said piston, having on its ends a cap containing rollers and supported in grooves in such a manner as to move said piston in and out of said cylinder, said cylinder having an exhaust connecting to an exhaust line leading to a condenser, and an inlet port connected through a puppet cut-off valve to a steam line from a steam generator said puppet cut-off valve governing the flow of steam to said inlet port in conjunction with a multiple cam, whereby the steam may be let in as many of the cylinders in starting as desired, and cut off automatically at any desired point, and capable of being operated in reversing in the same manner, all substantially as set forth.

5. A rotary engine comprising a driving shaft, a series of piston driving wheels secured thereto, each piston driving wheel having a pocket containing a piston driving wheel having a cylinder half circle in cross section surrounding said piston driving wheel, and a packing strip located on each side of said cylinder, said cylinder having a bulkhead or division, said piston having one end half circle in cross section to fit in said cylinder, containing a bull ring on its surface of a lead-containing metal and a shaft running through said piston, having on its ends a cap containing rollers and supported in grooves in such a manner as to move said piston in and out of said cylinder, said cylinder having an exhaust connecting to an exhaust line leading to a condenser and an inlet port connected through a puppet cut-off valve to a steam line from a steam generator, said puppet cut-off valve governing the flow of steam to said inlet port in conjunction with a multiple cam, whereby the steam may be let in as many of the cylinders in starting as desired and cut off automatically at any desired point, and capable of being operated in reversing in the same manner, all substantially as set forth.

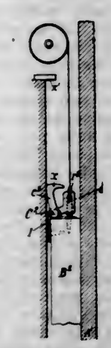
[Claims 6 and 7 not printed in the Gazette.]

902,060. WINDOW. OLIVER M. EDWARDS, Syracuse, N. Y. Filed Jan. 5, 1906. Serial No. 294,706.

1. In a window the combination, substantially as set forth, of a frame adapted to receive and hold a sash, a sash movable in the frame, sash holding means consisting in part of a lever pivotally mounted on the sash, and sash supporting means engageable with such lever at an angle to the direction of movement of the sash in the frame and at the same time adapted to more or less support the sash.

2. In a window the combination, substantially as set

forth, of a frame adapted to receive and hold a sash, a sash movable in the frame, sash holding means mounted on the sash, sash supporting means, and means connecting the sash holding means and supporting means together and permitting of movement of a portion of one relatively to a portion of the other, whereby a movement of one means relatively to the other may take place and thereby enable the supporting means to evenly support or carry the sash.



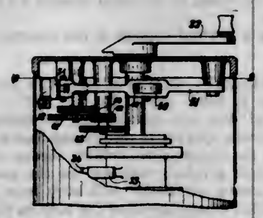
3. In a window the combination, substantially as set forth, of a frame adapted to receive and hold a sash, a sash movable in the frame, holding means arranged at each of two edge portions of the sash, a support for the sash having a part composed of flexible material connecting the holding means at opposite edge portions of the sash together, whereby the sash is led in the frame with substantially equal force at its opposite edges.

4. In a window the combination, substantially as set forth, of a frame adapted to receive and hold a sash, a sash movable in the frame, a pair of oppositely arranged sash holding levers, sash supporting means, and means detachably connecting such holding levers to the supporting means, whereby, the sash supporting means act upon the sash through the holding levers to support the sash and hold it in the frame and are detachable from the sash without disturbing the fastenings which secure the holding levers to the sash.

5. In a window the combination, substantially as set forth, of a frame adapted to receive and hold a sash, a sash movable in the frame, sash supporting means connectible with the sash, and means, portions of which are attached to the sash and provide recesses opening towards one another and adapted to receive the opposite ends of a bar in an endwise direction, whereby, the sash supporting means are detachable from the sash without disturbing the fastenings which secure such portions to the sash.

[Claims 6 to 9 not printed in the Gazette.]

902,061. MOTOR-CONTROLLER. HENRY F. ELSHOFF, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed June 30, 1906. Serial No. 324,175.



1. In a controller, a rotatable drum, a switch biased toward closed position but arranged to be opened by said drum when the latter is removed between certain positions, and clockwork mechanism for retarding part of the closing movement of said switch only.

2. In a controller, a rotatable drum, a switch arranged to be opened by said drum when the latter is moved between certain positions, means which tends to close said switch, and clockwork mechanism arranged to retard the first part of the closing movement of said switch but to allow the last part of the closing movement and all of the opening movement thereof to be unretarded.

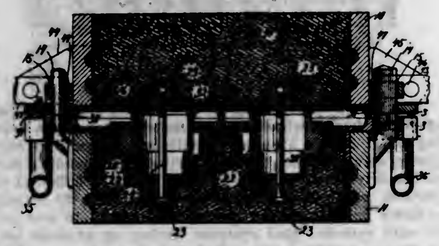
3. A multiple voltage controller, a motor controlled thereby, a resistance in the armature circuit of said motor, a switch normally closed to short-circuit said resistance, said switch being separate from the controller drum but arranged to be opened thereby to break said short-circuit whenever the armature connections are changed from one set of mains to another, and a train of gearing with an escapement for retarding the closing movement of said switch.

4. A multiple-voltage controller, a motor controlled thereby, a resistance for the armature circuit of said motor, a switch normally closed to short-circuit said resistance, said switch being separate from the controller drum but arranged to be opened thereby to include said resistance in the armature circuit whenever the armature connections are changed from one set of mains to another, means tending to close said switch, and a clockwork escapement for retarding such closure.

5. A multiple-voltage controller, a motor controlled thereby, a resistance for the armature circuit of said motor, a switch normally closed to short-circuit said resistance, said switch being separate from the controller drum but arranged to be opened thereby to effectively include said resistance in the armature circuit whenever the armature connections are changed from one set of mains to another, means tending to close said switch, and clockwork mechanism for retarding such closure, but arranged to allow a free opening movement of the switch.

[Claims 6 to 9 not printed in the Gazette.]

902,062. MOLDING APPARATUS. EZRA ESTEP, Sandwich, Ill. Filed May 4, 1908. Serial No. 430,780.



1. In combination, a pattern plate for bench molding, a stripping plate coöperating therewith, and a pivoted handle for lifting the plates adapted to react between the plates to separate them when swung to the position of service.

2. In combination, a pattern plate adapted to be interposed between the cope and drag members of a two-part molding flask, a stripping plate coöperating with the pattern plate, and a pivoted lever reacting between the plates to separate them.

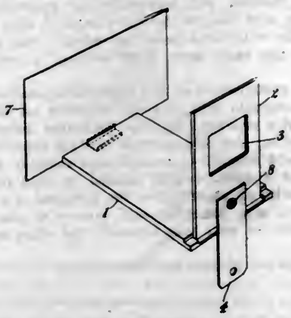
3. In combination, a pattern plate for bench molding, a stripping plate coöperating therewith, a pivoted handle for lifting the plates adapted to react between the plates to separate them when swung to the position of service, and a bolt limiting the separation of the plates.

4. In combination, a molding flask for bench use, a pattern plate fitting the mouth of the flask, and a pivoted handle for lifting the flask adapted to react on the pattern plate to separate it from the flask when swung to the position of service.

5. In combination, a two-part molding flask for bench use, a pattern plate fitting the flask, a stripping plate coöperating with the pattern plate, and a pivoted handle for lifting the pattern plate adapted to react between the pattern plate and the stripping plate to separate them when swung to the position of service.

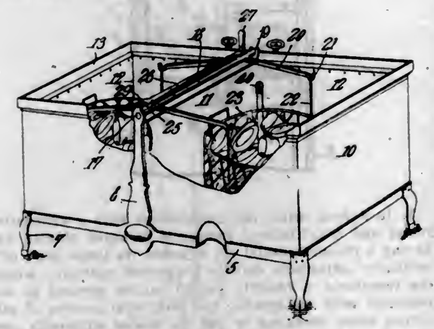
[Claims 6 to 10 not printed in the Gazette.]

902,063. GRAPHOSCOPE. ARTHUR A. FELIX, New York, N. Y. Filed Nov. 25, 1907. Serial No. 403,760.



In a graphoscope, the combination of a lens, a folding lens support, a pocket-case, containing a receptacle for the folded lens support and lens, a band connecting the lens support and case together and adapted to hold the lens support in a vertical position at right angles to the said case and means on said case for holding a picture at the proper focus from the lens in its operative position.

902,064. DISH-WASHER. CHARLES W. FETHEROLF, Binghamton, N. Y. Filed Nov. 25, 1907. Serial No. 403,784.



1. A dish washer including a supporting frame, a tank having a plurality of liquid receiving compartments, a rock shaft provided with oppositely disposed arms for supporting a dish containing vessel within each compartment, and an operating lever pivotally mounted on the shaft for rocking the latter thereby to alternately raise and lower the dish containing vessels, said operating lever being movable into engagement with the frame for locking the shaft against rocking movement.

2. A dish washer including a supporting frame a liquid containing tank, a rock shaft means carried by the rock shaft for supporting a dish containing vessel, and an operating lever pivotally mounted on the shaft and foldable downwardly in engagement with the frame for locking the shaft against rocking movement.

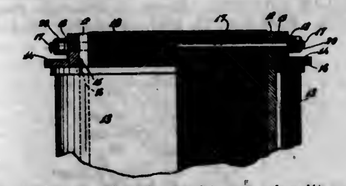
3. A dish washer including a supporting frame, a tank mounted on the frame and provided with a plurality of liquid receiving compartments, a rock shaft journaled in the frame and provided with means for supporting a dish containing vessel in each compartment, and an operating lever pivotally mounted on the shaft for actuating the latter to raise and lower the dish containing vessels, said lever being adapted to engage the frame when in folded position thereby to lock the shaft against rocking movement.

4. A dish washer including a supporting frame, a tank mounted on the frame and provided with a plurality of liquid containing compartments, a rock shaft journaled in the frame and provided with means for supporting a dish containing vessel in each compartment, a lug carried by the frame, an operating lever pivotally mounted on the rock shaft and adapted to engage the lug for locking the shaft against rocking movement.

5. A dish washer including a supporting frame having spaced uprights, one of which is bifurcated, a tank mounted on the frame and provided with liquid receiving compartments, a rock shaft journaled in one of the uprights and having its other end seated in the bifurcated end of the opposite upright, arms extending laterally from the rock shaft for supporting a dish containing vessel within each compartment, and an operating lever pivotally mounted on the rock shaft and adapted to engage one of the uprights for locking the shaft against rocking movement.

[Claims 6 and 7 not printed in the Gazette.]

902,065. DYNAMO-ELECTRIC MACHINE. ALLAN B. FIELD, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed May 13, 1907. Serial No. 373,493.



1. In a dynamo-electric machine, a plurality of field pole-pieces, coils therefor, conducting rings for bracing said pole-pieces and for retaining said coils in place, and conducting rods passing through said pole-pieces and electrically connecting said rings.

2. In a dynamo-electric machine, a plurality of field pole-pieces, coils thereon, conducting rings for bracing said pole-pieces and for retaining said coils in place, conducting rods passing through said pole-pieces and electrically connecting said rings, and means for making a wedging connection between said rods and said rings.

3. In a dynamo-electric machine, a rotary field member having radiate pole-pieces, coils thereon, conducting rods extending through the pole-pieces, and combined conducting braces and coil retainers electrically connected to said rods and secured to the outer ends of each pair of adjacent pole-pieces by said rods.

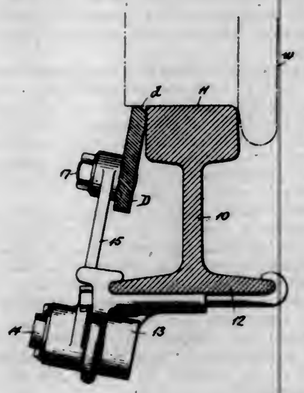
4. In a dynamo-electric machine, a rotary field member having radially extending field poles, coils on said field poles, damper rods extending through said field poles, and unitary means for electrically connecting the ends of said rods, for bracing the field poles, and for retaining the field coils in place.

5. In a dynamo-electric machine, a rotary field member having radiate field poles, coils on said poles, damper rods extending through said poles, and a conducting ring on each side of said poles for bracing the latter, retaining the field coils in place, and electrically connecting the damper rods.

902,066. DETECTOR-BAR FOR RAILROAD-SWITCHES. ANDREW G. FOLEY, East Hartford, Conn., assignor of one-half to Joseph R. Carroll, East Hartford, Conn. Filed Dec. 9, 1907. Serial No. 405,682.

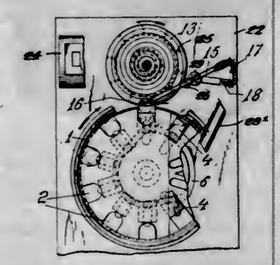
1. The combination with a rail, of a detector-bar resting against the side thereof and vertically slidable thereon

and having its uppermost edge or tread portion free from contact with the rail side.



2. The combination with a rail, of a detector-bar resting against the side thereof and having its rail-contacting edge rounded to avoid sharp contact with the side of said rail.

902,067. CALCULATING-MACHINE FOR MONEY AND SIMILAR OBJECTS. MAGNI G. FRÖBERG, Stockholm, Sweden. Filed Nov. 23, 1907. Serial No. 403,471.



1. The combination of a coin counting mechanism, of a base provided with a coin discharge opening and a cam slot, a register provided with an actuating member, a revoluble receiver provided with a plurality of coin receiving slots adapted to register with said discharge opening, radially movable slides carried by said receiver and actuated by said cam slot to open said coin slots for entrance of the coin therein at certain points in the revolution of the receiver, said cam slot projecting said slides outwardly in said slots toward said actuating member to engage the coin therewith at other points in the revolution of said receiver, and means for operating said receiver.

2. The combination of a coin counting mechanism, of an inclined base provided with a discharge opening and a cam slot, a register provided with an actuating member, a revoluble inclined coin receiver provided with a plurality of coin receiving slots adapted to register with said discharge opening, slides for said slots actuated by said cam slot to open said coin slots at lowermost points of said receiver to permit entrance of coin in said slots, said slides projecting said coin into the path of said member at uppermost points and being subsequently actuated to permit discharge of said coin through said opening, and means for operating said receiver.

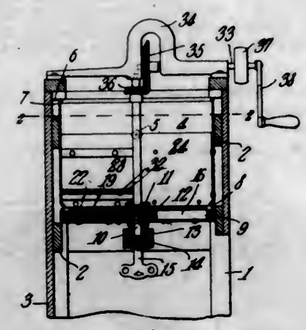
3. The combination of a coin counting mechanism, of an inclined base provided with a discharge opening, a register provided with an actuating member, a revoluble inclined coin receiver provided with a plurality of coin receiving slots adapted to register with said discharge openings, slides for said slots, an element for actuating said slides to retract the same at lowermost points in the revolution of said receiver to permit of entrance of the coin in said slots and projecting the coin outwardly in said slots at uppermost points in the revolution and into the path of said member and subsequently retracting said slides to permit of discharge of said coin through said opening, and means for operating said receiver.

4. The combination of a coin counting mechanism, of a base, a revoluble coin receiver, a register provided with an actuating member, cam mechanism for projecting the coin carried by said receiver into the path of said member to actuate the latter, and means geared with said receiver for arresting the same upon completion of a predetermined count.

5. The combination of a coin counting mechanism, of a base, a revoluble coin receiver mounted on said base, a coin register provided with an actuating member, means for projecting the coin carried by said receiver into the path of said member to actuate said register, a disk provided with a spiral groove rotated by said member and provided with an abutment at the terminal of said groove, a swinging arm engaging said groove at one end, and graduations for said base adjacent the other end of said arm.

[Claim 6 not printed in the Gazette.]

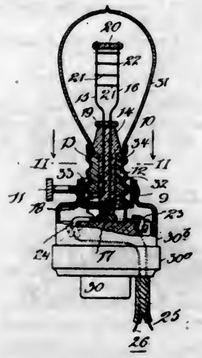
902,068. FEED-CUTTER. IVAN GARDNER and ISAAC N. GARDNER, Wapella, Ill. Filed Oct. 16, 1907. Serial No. 397,708.



1. In a feed cutter the combination with a supporting frame and a cylindrical receptacle mounted therein and having a circumferential rib adjacent its lower end; of a vertically adjustable spindle supported centrally within the receptacle, a radially slotted carrier secured to and revoluble with the spindle, the peripheral portion of said carrier being overhung by the rib, blades adjustably connected to the carrier and extending partly across the slots therein, a partition within the receptacle and above the carrier, and inclined deflecting blades secured upon and extending downward from opposite faces of the partition.

2. In a feed cutter the combination with a supporting frame, a cylindrical receptacle mounted therein and having a circumferential rib adjacent its lower end; of a vertical spindle adjustably mounted and extending centrally within the receptacle, a carrier mounted in the lower portion of the receptacle and having its periphery overhung by the rib, said carrier having radial slots, blades adjustably connected to the carrier adjacent the slots, means for rotating the spindle and carrier, a partition secured diametrically within the receptacle and partly embracing the spindle, and a deflecting blade secured to each face of the partition, each of said blades comprising a metallic strip angular in cross section and secured along its longitudinal edges to the partition, the lower portion of each blade being inclined upwardly away from the partition.

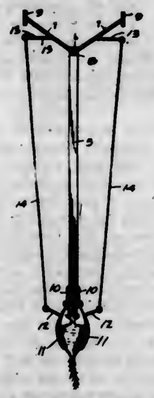
902,069. INCANDESCENT LAMP. HUGO GERNSBACK, New York, N. Y., assignor, by mesne assignments, to The Motor Car Equipment Company, New York, N. Y., a Corporation of New York. Filed Mar. 12, 1907. Serial No. 362,051.



1. An incandescent electric lamp having a globe, a plurality of metallic feed wires extending into the globe, a plurality of filaments connecting said feed wires and adapted to burn in parallel and simultaneously, and a non-conductive stiffening member connecting the said feed wires.

2. An incandescent electric lamp having a globe, a plurality of metallic feed wires extending into the globe, a stiffening member of non-conductive material connecting the said feed wires and a plurality of filaments connecting the feed wires between the said stiffening members and adapted to burn in parallel and simultaneously.

902,070. TRANSPLANTER. THOMAS GOOCH, Marysville, Idaho. Filed Aug. 29, 1907. Serial No. 390,649.

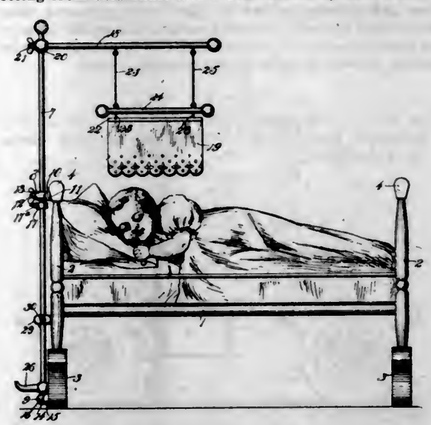


An implement of the class described comprising an elongated member, handle members pivoted to the upper ends thereof and formed with angular extensions projecting therefrom approximately centrally thereof and in the same plane therewith, gripping jaws pivoted to the lower ends thereof and formed with angular extensions arranged in the same plane with the handle members and links connecting the respective extensions of said handles with the respective extensions of said jaws.

902,071. FAN FOR CRADLES. NEAL GORDON, Vernon, Tenn. Filed Apr. 27, 1908. Serial No. 429,420.

1. A device of the character described comprising a bearing, an upright shaft rotatable therein, a foot piece carried by said shaft, an arm rigidly fixed to and projecting at right angles from said shaft and a fan hung from said arm.

2. A device of the character described comprising a bearing, an upright shaft normally rotatable therein, a lever secured to said shaft for manually operating the same, means for holding said shaft against rotation, an arm projecting from said shaft and a fan carried by said arm.



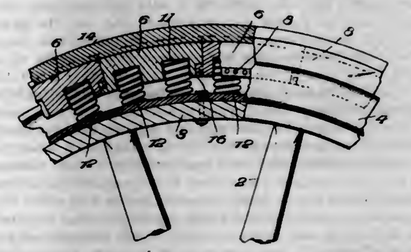
3. A device of the character described comprising a bearing, an upright shaft rotatable therein, a spring for actuating said shaft in one direction, a foot piece rigidly fixed to and projecting at right angles from said shaft for actuating the same in the other direction and a fan carried by said shaft.

4. A device of the character described comprising a bearing, an upright shaft normally rotatable therein, a spring for actuating said shaft in one direction, a foot piece fixed to and projecting at right angles from said shaft for actuating the same in the other direction, means for holding said shaft against rotation, an adjustable arm upon the shaft and a fan carried by said arm.

5. A device of the character described comprising bearings, an upright shaft rotatable therein, means for holding said shaft against rotation, a spring for actuating said shaft in one direction, a foot piece on the shaft for actuating it in the other direction, a vertically adjustable arm upon the shaft, a weighted bar, links suspending the latter from said arm, and a fan carried by said bar.

[Claims 6 to 9 not printed in the Gazette.]

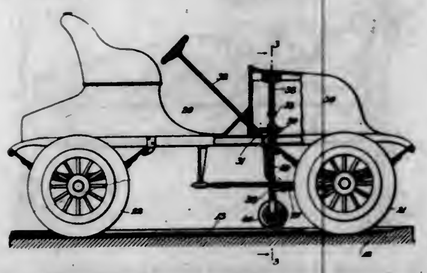
902,072. WHEEL. RICHARD K. GREGORY, Greensboro, N. C. Filed Mar. 16, 1907. Serial No. 362,706.



In a vehicle wheel, the combination with a channeled rim and its support, and a circumferentially extending series of shoes movable within said rim and spring pressed outwardly and formed with transversely enlarged inner ends producing outwardly facing shoulders, the rim being formed with coacting shoulders to limit the outward movement of the shoes, the sides of said enlargement being formed with sockets, each shoe being formed at one end with spaced sockets in line with the sockets of the enlargements and between said end sockets with a groove,

each being formed at its opposite end with a tongue of less width than the shoe and in alinement with the side enlargements, said tongue being adapted to fit in the groove of the next adjoining shoe, antifriction devices mounted in the sockets of the side enlargements of the respective shoes and bearing against the sides of the rim, and other antifriction devices in the end sockets at opposite sides of the grooves, said last named antifriction devices bearing against the end of the respective adjacent shoes.

902,073. AMUSEMENT APPARATUS. CHARLES H. GUERITEY, Brooklyn, N. Y. Filed Aug. 12, 1908. Serial No. 448,146.



1. An amusement apparatus comprising a longitudinally inclined roadway and a wheeled vehicle to travel thereon by gravity, said vehicle having steering mechanism and a projecting rod for uncoupling the same when moved in one direction, and said roadway having a longitudinal depression into which the traveling vehicle if not properly steered may descend for effecting the movement of said rod to render inoperative said steering mechanism; substantially as set forth.

2. An amusement apparatus comprising a roadway which inclines longitudinally and also laterally from its center line to its sides, and a wheeled vehicle to travel thereon by gravity, said vehicle having steering mechanism and a projecting rod for uncoupling the same when moved in one direction, and said roadway having a longitudinal depression into which the traveling vehicle if not properly steered may descend for effecting the movement of said rod to render inoperative said steering mechanism; substantially as set forth.

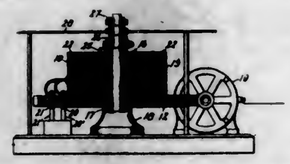
3. An amusement apparatus comprising a roadway which is inclined longitudinally and also laterally from its center line to its sides and provided at its center and at each side with a longitudinal gutter, and a wheeled vehicle to travel thereon by gravity provided with steering mechanism and an uncoupling rod therefor which extends downwardly into near relation to said roadway and which by contact with said roadway when the vehicle wheels enter the gutters and thus become lowered will be moved to uncouple the steering mechanism; substantially as set forth.

4. An amusement apparatus comprising a longitudinally inclined roadway and a wheeled vehicle to travel thereon by gravity provided with steering mechanism and an uncoupling rod therefor having on its lower end a wheel and extending downwardly into near relation to said roadway so as to be engaged and moved to its uncoupling position thereby should said vehicle become lowered to effect such engagement, said roadway being provided with a longitudinal depression into which the vehicle will descend and thus become lowered if it is not properly steered; substantially as set forth.

5. An amusement apparatus comprising a roadway which is inclined longitudinally and also laterally from its center line to its sides and provided at its center and at each side with a longitudinal gutter, and a wheeled vehicle to travel thereon by gravity having its front wheels on short pivoted axles provided with crank-arms, a rod connecting said crank-arms, rearwardly extending converging springs (41, 42) connected at their front ends with said crank-arms and at their rear ends to a rigid part of the vehicle, steering mechanism and an uncoupling rod therefor which extends downwardly into near relation to said roadway and which by contact with said roadway when the vehicle wheels enter the gutters and thus become lowered will be moved to uncouple the steering mechanism; substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

902,074. SPEED-INDICATOR. JOHN L. HALL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 28, 1906. Serial No. 303,367.



1. A speed indicator comprising a rotatable member and means whereby said member is constantly driven from the part the speed of which is to be indicated, a second member, means for periodically driving said second member with a continuous motion from said first member, an indicating device, and direct connection between the second member and the device for advancing the latter.

2. A speed indicator comprising a rotatable member and means whereby said member is constantly driven from the part the speed of which is to be indicated, a second member, electrically-controlled means for periodically driving said second member from said first member with a continuous motion, an indicating device, and direct connection between the second member and the device for advancing the latter.

3. A speed indicator comprising a constantly rotating member, a second member, electrically-controlled means for periodically driving said second member from said first member with a continuous motion, a spring-returned indicating device, means in connection with the second member for directly engaging the said device and advancing the same, and means for holding the device in advanced position.

4. A speed indicator comprising a constantly rotating member, a second member, electrically-controlled means for periodically driving said second member from said first member with a continuous motion, a spring-returned indicating device, direct connection between the second member and said device for advancing the latter, and electrically-controlled means for holding the device in advanced position and periodically releasing the same.

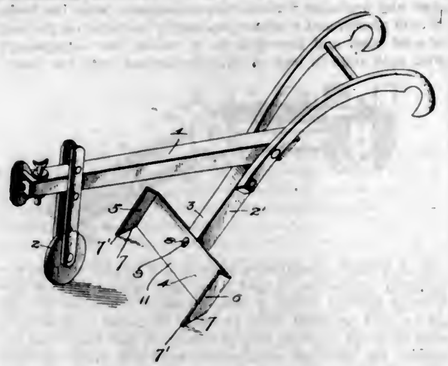
5. A speed indicator comprising a constantly rotating member, a spring-returned member, electrically-controlled means for periodically locking said members together and unlocking the members to release the same, a spring-returned indicating device, means in connection with the second member for advancing the said device, and means for holding the same in advanced position.

[Claims 6 to 15 not printed in the Gazette.]

902,075. COTTON-CHOPPER. JAMES T. HAMILTON, Albertson, Miss. Filed Apr. 9, 1908. Serial No. 426,102.

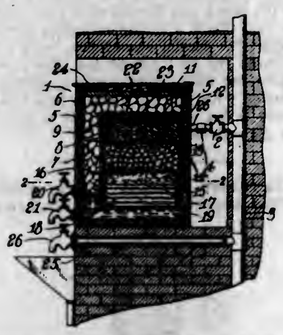
1. In a cotton chopper, the combination with a supporting frame, of a scraper blade secured thereto at an oblique angle and having flanges at its opposite ends, said flanges projecting forwardly and having pointed projections arranged at their lower ends and constructed to penetrate the ground in advance of the scraping edge of the blade.

2. A cotton chopper comprising a beam having a depending standard, a blade secured to said standard intermediately of its ends with its lower cutting edge inclined downwardly, right angularly disposed inwardly extending flanges formed at opposite ends of said blade, said flanges extending beyond the cutting edge of said blade and having their lower ends beveled to form projecting



points for engaging the ground in advance of the cutting edge of the blade.

902,076. FILTER AND WATER-COOLER. JOE HAVASSY, Copperhill, Tenn. Filed Apr. 20, 1908. Serial No. 428,122.



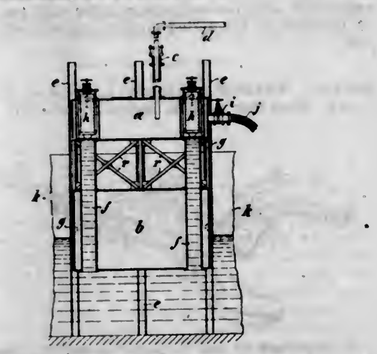
The combination with a wall having a recess therein and a water supply pipe arranged at the back of said recess, of a combined cooler and filter housed within said recess and spaced from the walls thereof, a valved pipe connecting said filter with said water supply pipe and a coupling arranged in said pipe to provide for the disconnection of the filter when desired, faucets for drawing off the iced and filtered water, respectively, and a pipe extending through said wall and connected with said supply pipe.

902,077. DEVICE FOR EXHAUSTING AIR FROM SIPHONS OF SLUICES AND THE LIKE. CHRISTIAN HAVESTADT, Wilmersdorf, near Berlin, Germany. Filed May 24, 1907. Serial No. 375,478.

1. In a device for exhausting air from siphons of sluices and the like the combination of a suction chamber, a floating chamber, means rigidly connecting the suction chamber with the floating chamber, a water discharge pipe on the suction chamber and means for movably connecting the suction chamber with the suction pipe leading to the siphon, substantially as set forth.

2. In a device for exhausting air from siphons of sluices and the like the combination of a suction chamber, a floating chamber, means rigidly connecting the suction chamber with the floating chamber, a water discharge pipe on the suction chamber, means for movably connecting the suction chamber with the suction pipe leading to the siphon and means for guiding the said chambers substantially as set forth.

3. In a device for exhausting air from siphons of sluices and the like the combination of a suction chamber, a floating chamber, a framework rigidly connecting the suction chamber with the floating chamber, a water discharge pipe on the suction chamber and means for movably connecting the suction chamber with the suction pipe leading to the siphon, substantially as set forth.

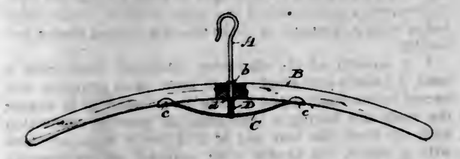


4. In a device for exhausting air from siphons of sluices and the like the combination of a suction chamber, a floating chamber, means rigidly connecting the suction chamber with the floating chamber, a water discharge pipe on the suction chamber and a telescopic pipe for movably connecting the suction chamber with the suction pipe leading to the siphon, substantially as set forth.

5. In a device for exhausting air from siphons of sluices and the like, the combination of a suction chamber, a floating chamber, means rigidly connecting the suction chamber with the floating chamber, a water discharge pipe on the suction chamber, and a telescopic pipe having connection with the suction chamber through an air-tight stuffing box, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

902,078. GARMENT-HANGER. EUGENE W. HAWLEY, Milwaukee, and GEORGE H. WHEARY, Racine, Wis., assignors to The Hartman Trunk Company, Racine, Wis. Filed May 18, 1908. Serial No. 433,462.



1. A garment-hanger comprising a suspension device having a shouldered shank, a stiff bar guided on the shank below the shoulder of same, a support in connection with the lower end of said shank, and a spiral-spring surrounding the aforesaid shank under tension between the bar and support, the expansive force of the spring being exertive against said bar to normally hold the same against the shank-shoulder.

2. A garment-hanger comprising a suspension device having a shouldered shank, a stiff-bar having a central eye engaged by the shank below the shoulder of same, a support in connection with the lower end of said shank, and a spiral-spring surrounding the aforesaid shank under tension between the bar and support, the expansive force of the spring being exertive against said bar to normally hold the same against the shank-shoulder.

3. A garment-hanger comprising a hook, a stiff-bar guided on the shank of the hook, and a semi-elliptic spring in connection with the hook-shank under said bar against which it is loose at its ends to be expansile and contractile longitudinally of the same.

4. A garment-hanger comprising a hook, a stiff bar guided on the shank of the hook, a semi-elliptic spring in connection with the hook-shank under said bar, and a spiral-spring surrounding said hook-shank intermediate of the aforesaid bar and semi-elliptical spring.

5. A garment - hanger comprising a hook, a stiff bar guided on the shank of the hook, a semi-elliptic spring in connection with the hook-shank under said bar, and ears at the ends of the spring lapping opposite sides of said bar.

902,079. WRENCH. STEPHEN A. HOLMAN, Guadaloupe, Cal. Filed Feb. 6, 1908. Serial No. 414,570.



1. A wrench of the character described, comprising a head, a handle connected to said head, jaws pivotally and slidingly connected to said head, a jaw closing device adapted to engage the work between the jaws and having a longitudinally movable connection with the head, and a connection between said jaw closing device and jaws and arranged to close the latter upon the rearward movement of the former relative to the head.

2. A wrench of the character described, comprising a head, a handle secured to the head, jaws formed with oblique slots, the head being provided with pins mounted in said slots, a jaw closing device mounted between said jaws and adapted to contact with the work, and having a longitudinally movable connection with the head, and a connection between said jaw closing device and jaws arranged to swing the latter towards each other upon the movement of the former rearwardly relative to the head.

3. A wrench of the character described, comprising a head, a handle secured to the head, jaws pivotally connected to the head, a jaw closing device adapted to contact with the work and having a longitudinally movable connection with the head, a connection between said jaw closing device and the jaws arranged to close the former upon the rearward movement of the latter relative to the head, and a spring arranged to press the jaw closing device forwardly.

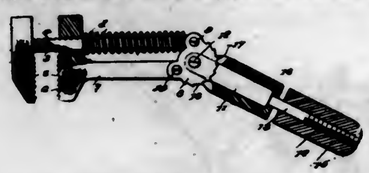
4. A wrench of the character described, comprising a head, a handle connected to said head, jaws pivotally connected to the head, a jaw closing device adapted to engage the work and having a longitudinally movable connection with the head, the rear end of said device being provided with a nipple, the handle being provided with a coacting nipple, and a coil spring connected to said nipples and acting expansively on the jaw closing device.

5. A wrench of the character described, comprising a head, a handle connected to said head, jaws having a pivoted and sliding connection with the head, a jaw closing device adapted to contact with the work and having a longitudinally movable connection with the head, and also connected with the jaws, the jaw closing device being arranged to draw said jaws rearwardly and their outer ends towards each other upon the rearward movement of the jaw closing device relative to the head, and means for permitting a limited simultaneous rearward and lateral movement of the jaws and jaw closing device relative to the head.

[Claims 6 to 10 not printed in the Gazette.]

902,080. WRENCH. STEPHEN A. HOLMAN, Guadaloupe, Cal. Filed Feb. 6, 1908. Serial No. 414,571.

1. A wrench, comprising jaws and a handle portion operatively connected to said jaws, said handle portion embodying toothed plates, a stem pivotally connected to said plates, a slide mounted to move longitudinally on said stem and arranged for meshing engagement with the teeth of said plates, and a sleeve adjustably mounted on the end of said stem and arranged to be moved into engagement with said slide to lock it into engagement with the teeth.



2. A wrench, comprising jaws, and a handle portion operatively connected to said jaws, said handle portion embodying toothed plates, a stem pivotally connected to said plates, and provided with an outer threaded extremity, a slide mounted to move longitudinally on said stem, and arranged for meshing engagement with the teeth of said plates, and a threaded sleeve mounted on the threaded end of said stem, arranged to be moved into engagement with said slide to hold it in engagement with the teeth.

3. A wrench, comprising a jaw 1, a shank 3 to which said jaw is secured, said shank being provided on its rear edge with teeth inclined towards the jaw, another jaw 2 provided with a yoke encircling and by which it is mounted to move on the shank and formed with teeth coacting with the teeth of said shank, a spring encircling said shank and bearing against the second named jaw, with a tension to press it towards the first named jaw, the second named jaw being provided with a rearwardly extending arm, and a handle portion with which the shank and arm are pivotally connected in an eccentric relation to each other, as and for the purpose set forth.

902,081. GARMENT. AUGUST HOLSTE, Bielefeld, Germany. Filed Aug. 26, 1907. Serial No. 390,172.



1. An undergarment for imparting warmth to certain parts of the body, comprising the combination with a frontal member adapted to cover the abdomen only without pressure, waist-bands on said frontal member and shoulder suspension straps detachably and adjustably secured to said waist-bands, of a back covering member having arm holes, and means for detachable connection of said back covering member with the suspension straps of the frontal member, said two members being capable of wear independently of each other, substantially as set forth.

2. An under garment for imparting warmth to certain parts of the body, comprising the combination of a frontal member adapted to cover the abdomen only without pressure, waist-bands on said frontal member, shoulder suspension straps in connection with said waist-bands, a back covering member having arm-holes and means for detachably and adjustably connecting said back covering member with the shoulder straps of the frontal member whereby the combined garment may be regulated as to height and width, said two members being capable of wear independently of each other, substantially as set forth.

902,082. CORD-FASTENER FOR SHADES AND THE LIKE. HENRY S. HUBBELL, Chicago, Ill. Filed July 26, 1907. Serial No. 385,613.

1. As a new article of manufacture, a curtain clamp formed from a sheet of metal and comprising wings or ears, securing flanges, and a continuous channel of varying diameter formed therebetween.



2. As a new article of manufacture, a curtain clamp formed from a single sheet of metal comprising a pair of side wings or braces, a pair of securing flanges adjacent thereto, a second pair of wings or braces adjacent to said flanges, and a continuous vertical channel of varying diameter being formed between said pairs of wings and flanges.

3. As a new article of manufacture, a curtain clamp formed from a single sheet of metal, and having a continuous vertical channel of varying diameter formed therein adapted to receive and hold a curtain cord, upper and lower pairs of braces or ears projecting laterally from said channel, and a pair of pointed securing flanges extending inwardly at right angles to said braces and adapted to enter and engage a curtain stick between said upper and lower braces.

4. As a new article of manufacture, a curtain clamp formed from a single sheet of metal, and having a continuous vertical channel of varying diameter formed therein, a shoulder formed by the change in diameter of said channel, the upper portion of said channel being adapted to receive a curtain cord, and said shoulder adapted to prevent the knotted end of said cord from slipping therethrough, upper and lower pairs of braces or ears projecting laterally from said channel, and a pair of pointed securing flanges extending inwardly at right angles to said braces and adapted to enter and engage a curtain stick between said upper and lower braces.

902,083. REVOLVER-HOLSTER. ARTHUR H. HUDSON, Salt Lake City, Utah. Filed Feb. 24, 1908. Serial No. 417,370.



1. A holster, comprising plates, spring hinges connecting said plates near their upper ends, and a manually operated latch adapted to lock said plates when in apposition.

2. A holster, including two plates arranged in apposition, ears attached to the plates and pivotally connected to form hinges, springs for the hinges tending to separate said plates, and a latch pivoted to one of said plates and adapted to engage lugs upon the opposite plate.

3. In a holster for a pistol, the combination of a casing formed in sections, hinges connecting the sections near their upper ends, springs for the hinges tending to separate said plates, and a latch pivoted to one of the plates and adapted to engage suitable lugs upon the opposite plate.

4. A holster for a pistol, including a casing composed of opposite plates, ears bent at right angle to the plates, to form the ends of the casing, hinged connection between the ears, springs for the hinges, and a latch for locking the plates in apposition.

5. A holster for a pistol, including two plates arranged in apposition with each other, pivotal connection between said plates, springs tending to separate the plates, means for locking the plates in apposition, and a removable arm adapted to be inserted between said plates and having means for engaging one of said plates.

[Claims 6 and 7 not printed in the Gazette.]

902,084. GARMENT-SUPPORTER. CARL F. HYLTÉN-CAVALLIUS, Halmstad, Sweden. Filed Apr. 8, 1908. Serial No. 425,824.



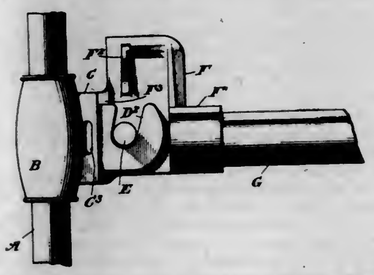
1. A supporter comprising in combination, a supporting garment having shoulder engaging portions and provided on its interior with a plurality of engageable elements arranged to afford engagement at a plurality of different vertical points, and a supported garment provided with a plurality of supporting members adapted to extend within and automatically engage the elements.

2. A supporter comprising in combination, a supporting garment having shoulder engaging portions and provided on its interior with a plurality of parallel longitudinally disposed, engageable elements arranged to afford engagement at a plurality of different vertical points, and a supported garment provided with a plurality of supporting members adapted to extend within and automatically engage said elements.

3. A supporter comprising in combination, a supporting garment provided on its interior with a plurality of parallel strings, and a supported garment provided with a plurality of supporting members and adapted to extend within said strings and automatically engage the same.

4. A supporter comprising in combination, a supporting garment provided on its interior with a plurality of parallel strings, said garment being provided with yokes or supporting elements extending from said strings to points around the shoulder portions of said garments, and a supported garment provided with a plurality of hooks adapted to extend within said strings and automatically engage the same.

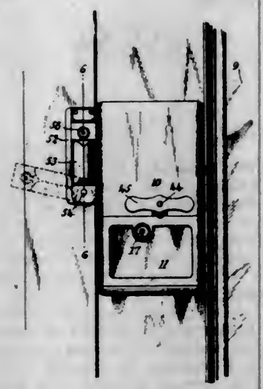
902,085. CORNER-FASTENER FOR BEDSTEADS. ALFRED E. IRELAN, Philadelphia, Pa., assignor to Philadelphia Metalic Bed Company, Philadelphia, Pa. Filed Feb. 26, 1908. Serial No. 417,815.



In a bedstead, a vertical post having thereon a sleeve provided with an outwardly projecting rib, said rib being recessed longitudinally along its outer edge, a hook-plate fitting in said recess, said plate being slotted and having the wall of said recess forced into said slot, the rib being also provided with a projecting flange parallel to the hook-plate but spaced therefrom, and with an outwardly projecting shoulder located between said flange and the hook-plate; in combination with a horizontal rib having at its end a terminal cap, an outwardly projecting web

having laterally enlarged projecting shoulders adapted to fit between the hook-plate and the adjacent flange and over said intermediate shoulder, and a laterally projecting pin on the web engaging with the hook-plate.

902,086. COIN-CONTROLLED LOCK. FREDRICK W. KASSLER, St. Louis, Mo., assignor of one-half to Isidor Wagner, St. Louis, Mo. Filed July 8, 1907. Serial No. 382,581.



1. In a lock, the combination of a coin chute, a main bolt provided with a slot for receiving a coin from said coin chute, an arm controllable by pressure of said coin when held within said slot, and means connected with said arm for preventing the entry of other coins into said coin chute while said bolt occupies a predetermined position.

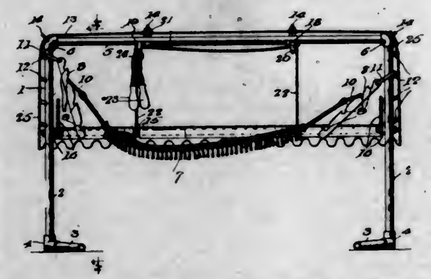
2. In a coin-controlled lock, the combination of a coin slot through which coins may be dropped into the machine, a movable bolt provided with a portion for engaging said coins one at a time, means for closing said coin chute so as to prevent the entry of coins thereinto, and an arm connected with said means for actuating the same, said arm being provided with a lug projecting into the path of a coin engaging said bolt so as to turn said arm when said bolt is moved in a predetermined position.

3. The combination of a casing, a bolt slidable in relation thereto, an arm for actuating said bolt, a rocking stem connected with said arm for turning the same, a second arm mounted upon said stem, said second arm being loose relatively to said stem, a latch for holding said last-mentioned arm in a predetermined position, and means connected with said first-mentioned arm for releasing said second-mentioned arm, a coin chute, and a slide connected with said second-mentioned arm for opening and closing said coin chute.

902,087. HAMMOCK-STAND AND AWNING. PETER KING, Springfield, Ohio. Filed Jan. 24, 1907. Serial No. 353,917.

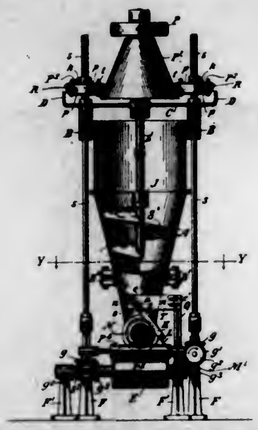
1. A support of the character described comprising a pair of vertical standards, a ridge pole connecting the upper ends of said standards, a substantially triangular base for each of said standards consisting of a pair of diverging arms extending in a substantially horizontal plane and having their converging ends connected to said vertical standard, a series of stops carried by one of said standards, a notched bar, a ring secured to said bar and loosely surrounding said standard, whereby it may be freely moved on said standard to engage any one of said stops, a hammock, a ring carried by one end of said hammock and adapted to engage any one of the notches in said bar, and means for connecting the other end of said hammock to the other vertical standard.

2. A support of the character described comprising an upright member and a substantially triangular base therefor consisting of a pair of diverging arms having their converging ends connected to said upright member, each arm having its outer end in contact with the supporting surface and having that portion intermediate the ends thereof raised out of contact with the supporting surface.



3. A support of the character described comprising an upright member and a substantially triangular base therefor comprising a three-way connection at the base of said upright member, and arms secured in the horizontal members of said three-way connection and extending at substantially right angles to said upright member, substantially as described.

902,088. DOUGH-CUTTING MACHINE. CHARLES J. KINTNER, New York, N. Y. Filed Nov. 6, 1903. Serial No. 180,134.



1. A dough cutting machine provided with feeding mechanism for feeding the dough continuously forward; snap acting cutting mechanism for cutting the same into equal parts and variable speed gear for varying the intervals of said snap acting cutting mechanism; in combination with variable speed gear operatively connected to the feeding mechanism and to delivery mechanism for delivering the severed dough at some distant point.

2. A dough cutting machine provided with a rotary shaft, a feeding worm or screw, and yielding snap acting mechanism detachably secured in a slot or slots in the end of said shaft; in combination with stationary means located in the path of the free end of the cutting mechanism; together with interchangeable, variable speed gear for connecting the cutting mechanism with the feeding worm or screw.

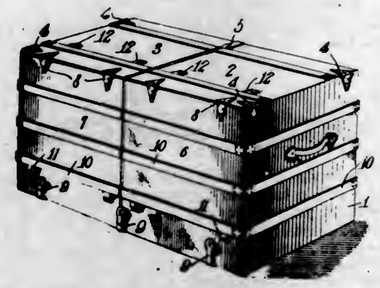
3. A dough cutting machine provided with a rotary shaft carrying a feeding worm or screw; snap acting cutting mechanism secured to a second shaft geared to said shaft; in combination with interchangeable, variable speed gear for varying the relative rotation of the cutting mechanism to the feeding mechanism; together with means located in the path of the cutting mechanism for giving to it the snap acting effect.

4. A dough cutting machine provided with a nozzle; means connected to a rotary shaft for forcing the dough therethrough at a definite rate of speed; rotary cutting means adjacent to the nozzle and connected through shafting gearing and two cone-shaped pulleys to the same source of power which drives the first-named rotary shaft, one of the cone-shaped pulleys having a yielding cone-shaped ring and means for adjusting it frictionally against the face of the other.

5. A dough cutting machine provided with a nozzle; power driven means for forcing the dough therethrough; cutting mechanism adjacent to the nozzle for successively cutting the dough as it emerges therefrom into proportionate lengths; means for delivering the severed dough at a distant point; interconnected gearing and shafting between the cutting mechanism and the delivering mechanism operatively connected through two cone-shaped pulleys with a single cone-shaped driving pulley carried by the same shaft which operates the dough forcing mechanism, the cone-shaped driven pulleys being each provided with a yielding cone-shaped ring and means for adjusting the same frictionally against the face of the common driving pulley.

[Claims 6 to 10 not printed in the Gazette.]

902,089. COLLAPSIBLE STAND. JOHN W. KLINE, Bedford, Ind. Filed Nov. 15, 1907. Serial No. 402,321.



1. A collapsible stand comprising a trunk-like body, a sectional top, said sections being hinged to opposite walls of the body, and a sectional wall, said wall sections being hingedly connected to the respective top sections.

2. A collapsible stand comprising a trunk-like body, oppositely disposed cover sections movably connected to opposite walls of the body, and separate wall sections movably connected to the respective cover sections, and means for supporting said wall and cover sections beyond the body.

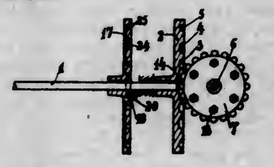
3. The combination with a body having a fixed top; of a sectional cover, said cover sections being movably connected to the body and normally positioned above the fixed top, a sectional wall, the sections of said wall being movably connected to the respective cover sections, and means for securing all of said sections in closed position.

4. The combination with a body having a rigid top, and burners mounted within the body and below said top; of a sectional cover, the sections of said cover being movably connected to opposite portions of the body and normally positioned above the rigid top, separate wall sections movably connected to the respective cover sections, and means for fastening the respective sections in closed position.

5. The combination with a body having a rigid top, and burners mounted within the body and below said top; of a sectional cover, the sections of said cover being movably connected to opposite portions of the body and normally positioned above the rigid top, separate wall sections movably connected to the respective cover sections, and supports for removably engaging the respective sections to hold them extended beyond the top.

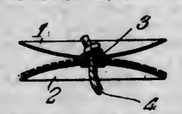
[Claim 6 not printed in the Gazette.]

902,090. CHANGE-SPEED GEARING. HANS KUPFERSCHMID, Burgdorf, Switzerland. Filed Sept. 26, 1907. Serial No. 394,689.



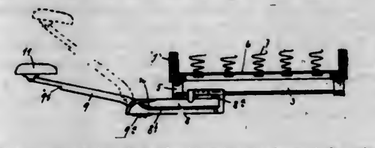
In a change speed gearing, the combination of a driving shaft a disk on the driving shaft having concentric rings of recesses connected by sloping transfer grooves, a sliding toothed wheel engaging in the recesses, and means for effecting the movement of the wheel consisting of a disk having concentric grooves connected by sloping channels, a sliding bar moving with the toothed wheel and a stud on the bar engaging in the grooves and moving from one to the other through the sloping channels, substantially as herein described.

902,091. PACKAGE-TIE. CHARLES M. LANCASTER, Traverse City, Mich. Filed Oct. 9, 1907. Serial No. 398,648.



A package tie, comprising a pair of concave disks with their convex sides opposite each other, and an eyelet connecting said disks, and on which they are spaced apart, and slidably mounted, and adapted to rock.

902,092. EXTENSION FOOT-REST. WILLIAM E. LATIMER, Utica, N. Y., assignor to E. R. Latimer, Utica, N. Y. Filed Feb. 15, 1907. Serial No. 357,498.



1. The combination in a foot rest attachment for chairs of a single rail secured to the under side of the chair seat and extending from front to rear centrally thereof, a primary extension arm provided with a slide portion at its rear mounted to slide on said rail and support the arm rigidly therefrom whereby the arm is adapted to be projected beyond the front of the seat or withdrawn thereunder and supported at all times by the rail and slide, a secondary extension arm mounted on and folding within the primary extension arm and having a pivot pin engaging in ways and adjacent to the pin having ratchet teeth adapted to engage with a catch shoulder on the primary arm and support the secondary arm in extended position of angular adjustment, and a stool mounted on the outer end of the secondary arm, substantially as set forth.

2. The combination in a foot rest attachment for chairs of a single inverted T-shaped rail attached to the under side of a chair seat and extending from front to rear centrally of the seat, a sliding primary extension arm mounted on said rail by a slide provided on the rear portion thereof and adapted to be projected beyond the front of the seat or withdrawn thereunder, a swinging secondary extension arm having a ratchet tooth segment at its shank end adapted to be received in a recess within the primary extension arm and provided with a pivot in its shank end engaging in longitudinal ways in the primary extension arm, and a reversible stool pivotally mounted on the projecting end of said secondary extension arm, substantially as set forth.

3. The combination in a foot rest attachment for chairs of a single rail secured to the underside of the chair seat and extending from front to rear centrally thereof, a primary extension arm provided with a slide portion at its rear engaged on said rail and suspending the arm therefrom, and rigidly supporting it thereby, said arm having a longitudinal slide or way therein, a secondary extension arm mounted on and folding within the primary extension arm and having a pivot pin engaging in said ways and having adjacent to said pin a set of ratchet teeth arranged in a curved line and adapted to engage with a fixed catch shoulder on the primary arm and support the secondary arm in extended positions of angular adjustment, and a stool mounted on the outer end of the secondary arm, substantially as set forth.

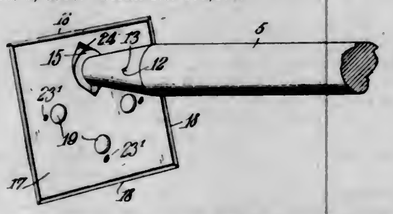
4. The combination in a foot rest attachment for chairs of a single rail secured to the underside of the chair seat and extending from front to rear centrally thereof, a primary extension arm provided with a slide portion at its rear engaging slidably on said rail and supporting the arm rigidly suspended therefrom, whereby the arm is adapted to be projected beyond the front of the seat or withdrawn thereunder and supported at all times by the rail and slide, said arm being recessed longitudinally and provided with longitudinal grooves affording ways, a secondary extension arm mounted on and adapted to fold within the recess in the primary extension arm and having at one end a pivot pin engaging in said ways in the primary arm and having adjacent to the pin a set of ratchet teeth arranged in a curve and adapted to engage with a catch shoulder on the primary arm and support the secondary arm in extended positions of angular adjustment, and a stool mounted on the outer end of the secondary arm, substantially as set forth.

902,093. PROCESS OF SEPARATING CELLULOSE ESTERS FROM SOLUTIONS. LEONHARD LEDEBER, Sulzbach, Germany. Filed Nov. 24, 1906. Serial No. 344,867.

1. The process for obtaining cellulose esters from solutions of the same, which consists in intimately intermingling carbon-tetrachlorid with the solution until a paste is formed, and then subjecting the product to mechanical separation, substantially as described.

2. The process for obtaining cellulose esters from liquid acidylizing mixtures, which consists in intimately intermingling carbon tetrachlorid with the mixture until a paste is formed, and then subjecting the product to mechanical separation, substantially as described.

902,094. HOE. JAMES S. LESTER, Louisville, Ky. Filed Nov. 9, 1907. Serial No. 401,479.



1. An implement of the class described comprising a ferrule for attachment to an operating handle, co-acting set blocks one of which bears against the adjacent end of the ferrule, a blade interposed between the set blocks, and a fastening device piercing the blade and blocks and adapted to be driven into the handle.

2. An implement of the class described comprising a ferrule for attachment to an operating handle, co-acting wedge shaped blocks one of which bears against the adjacent end of the ferrule, said blocks being provided with inclined faces, a blade interposed between the blocks and engaging the inclined faces of the latter, and a fastening device piercing the blade and blocks and adapted to be driven into the adjacent end of the handle.

3. A device of the class described comprising a ferrule, co-acting set blocks one of which bears against the adjacent end of the ferrule, a blade interposed between the blocks and having a plurality of openings formed therein, and a fastening device passing through the blocks and one of the openings in the blade for engagement with the adjacent end of the operating handle.

4. A device of the class described comprising a ferrule having means for attachment to an operating handle, wedge shaped blocks one of which is secured to one end of the ferrule, both blocks being provided with inclined faces, a blade interposed between the blocks and bearing against said inclined faces, said blade being provided with a plurality of cutting edges and having a series of transverse openings formed therein, and a fastening device passing through the blocks and one of the openings in the blade for engagement with the adjacent end of the handle.

5. A device of the class described comprising a ferrule for attachment to an operating handle, wedge shaped blocks having apertures formed therein and adapted to register with each other, a blade interposed between said blocks and having a plurality of openings and apertures formed therein, a pin extending through the apertures in the blocks and one of said apertures in the blade and engaging the adjacent end of the handle, and a set screw passing through said blocks and one of the openings in the blade for engagement with the adjacent end of the handle.

[Claim 6 not printed in the Gazette.]

902,095. AUTOMATIC GATE. ANSON T. LISTER, Cedar Vale, Kans. Filed Nov. 22, 1907. Serial No. 403,343.



1. In a device of the character described, the combination of a gate, a base, end platforms hinged to the base, an intermediate platform loosely connected to the end platforms and normally held in an elevated position, the end platforms and intermediate platform being adapted to be forced together when depressed and separated when moved upwardly into normal position, and means for opening the gate when the platforms are depressed.

2. In a device of the character described, the combination of a gate, a base, end platforms hinged to the base, an intermediate platform, coöperating hangers and arms loosely connecting the intermediate platform to the end platforms and admitting of the platforms being forced together when depressed and spreading apart when elevated in normal position, and means for opening the gate when the platforms are depressed.

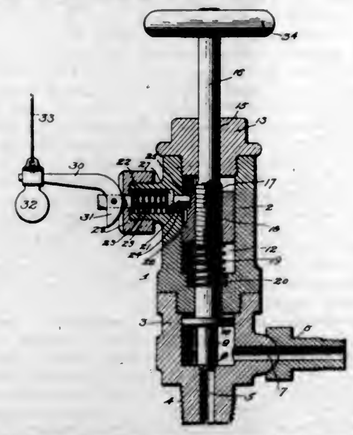
3. In a device of the character described, the combination of a gate, a base, guide members upon the base, end platforms hinged to the base, an intermediate platform loosely connected to the end platforms and normally held in an elevated position, arms pendent from the end platforms, and cables connected to the pendent arms and passing over the before mentioned guide members, the said cables having an operative connection with the gate for opening the same when the platforms are depressed.

4. In a device of the character described, the combination of a gate, a pulley rigid with the pivot end of the gate, a base, a swinging platform mounted upon the base, a pulley journaled upon the base, an arm pendent from the swinging platform, and a cable connected to the arm and passing around the pulley upon the base and having an operative connection with the pulley upon the gate.

5. In a device of the character described, the combination of a gate, a base, a pair of end platforms hinged to the base, an intermediate platform loosely connected to the end platforms and normally held in an elevated position, means for opening the gate when the platforms are depressed, a rock shaft under the swinging end of each of the end platforms, supporting members carried by the rock shafts for engaging the end platforms to hold the platforms in an inoperative position, connecting means between the rock shafts for causing the same to operate simultaneously, and a trip mechanism for moving the rock shafts to swing the supporting members into an inoperative position.

[Claims 6 to 9 not printed in the Gazette.]

902,096. VALVE. JOHN F. LOVE, Zanesville, Ohio. Filed Jan. 28, 1908. Serial No. 412,957.



1. In a device of the character described, a valve having a stem, an adjustable operating device on said stem, a spring projected locking pin adapted to engage said operating device and to hold said valve in its closed position, and means to release said locking pin, substantially as described.

2. In a device of the character described, a spring retracted valve having a threaded stem, an operating nut adapted to be engaged with said threaded stem, a spring projected locking pin adapted to engage said nut and thereby hold said valve in closed position, and means to release said pin, substantially as described.

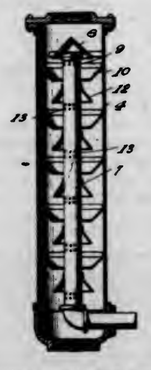
3. In a device of the class described, a spring retracted valve having a threaded stem, an operating nut having a locking socket and a guide groove adapted to be engaged with said threaded stem, a spring projected locking pin adapted to engage said socket to lock the valve in closed position and to engage said guide groove to guide and limit the movement of said nut, and means to release said locking pin, substantially as described.

4. In a valve of the character described, an upper section having a longitudinally disposed passage, a lower section having a recess and inlet and discharge passages, a valve stem slidably mounted in said upper section of the casing, a valve on the lower end of said stem to close the inlet passage in the lower section of the casing, a collar on said valve stem adapted to form a fluid-tight closure at the upper end of the recess in the lower section of the valve when the latter is in an open position, a threaded section formed on said valve stem in the passage of the upper section of the valve casing, a holding nut screwed on said threaded section of the stem, said nut having formed therein a locking socket and a guide groove, a coiled spring on said stem adapted to engage said nut and to force the latter upwardly to open said valve, means to lock said nut down and the valve in closed position, and means to release the same, substantially as described.

5. A valve comprising a casing formed in upper and lower sections, said upper section having a centrally disposed passage and said lower section having a centrally disposed recess, and inlet and discharge passages, a valve seat at the upper end of said inlet passages, a valve to engage said seat, a stem formed on said valve and projecting upwardly through the passage in the upper section of the casing, a plug to close the upper end of the passage, said plug having a guide passage through which the stem of said valve projects, a nut adapted to be screwed onto said stem within the passage of the upper section of the valve, said nut having a locking socket, a spring to normally force said nut upwardly and thereby open the valve, a spring-projected locking pin adapted to engage said locking socket, a releasing lever connected to the outer end of said pin, and an operating element connected to said lever whereby the latter may be operated at a distance, substantially as described.

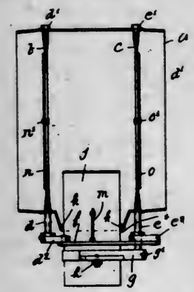
[Claim 6 not printed in the Gazette.]

902,097. MEANS FOR WITHDRAWING AND CONDENSING VAPORS. CUTHBERT B. LOWRY, Lexington, Ky., and RICHARD BERNHARD, Chicago, Ill. Filed May 9, 1906. Serial No. 316,023.



A vacuum producing apparatus comprising a casing having an inlet for the gases at its upper end, a vertically-disposed water pipe located within said casing and having separate series of outlets, a series of collecting funnels extending inwardly from the casing toward the water pipe, and a series of deflectors extending from the pipe outwardly toward the casing, the funnels being located each beneath a series of outlets, and the deflectors located each beneath the lower open end of a funnel, water being supplied to said pipe at its lower end, so that the temperature of the water will effect a gradual decrease in the temperature of the gases as the latter travel downwardly, the gases in passing downwardly being intermingled with the water and subjected to the successive action of sprays of water of gradually reduced temperature.

902,098. DAMPER. WILLIAM D. LUCE, Haverhill, Mass. Filed Mar. 30, 1908. Serial No. 424,005.



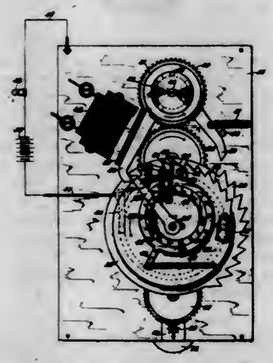
1. In combination with a furnace, a smoke pipe having an air-check opening through the side thereof and a door

for closing said opening, a pair of dampers adapted and arranged partially to close the passageway at each side of said opening when in closed position, the damper next the furnace acting to restrict the discharge of gases from the furnace and the other damper acting to restrict the discharge of air through said opening into the pipe beyond the dampers, and means for simultaneously holding said dampers in closed position and said door in open position, substantially as described.

2. A device of the character described comprising a casing having a passageway therethrough, and a side opening, a pivot rod rotatably mounted in said casing at each side of said opening and having dampers connected thereto and movable thereon to obstruct said passageway, a door for closing said side-opening pivoted to swing transversely of said dampers, a connecting link for said dampers movable longitudinally to operate them simultaneously, and a link pivoted at one end to said connecting link and at the other to said door and disposed to move said door towards its open position as the dampers are moved towards their closed position, substantially as described.

3. In combination with a furnace, a damper located in the smoke pipe thereof and adapted partially to close the same when in its closed position, said smoke pipe having an air check opening leading thereinto and located entirely between the closed position of said damper and the furnace, and a door for closing said opening, connections between said door and damper disposed to cause one to be opened when the other is closed, and means for obstructing the passageway between the air check and the furnace, substantially as described.

902,099. SELECTIVE SIGNALING DEVICE. IRA F. MANNY, Milwaukee, Wis., assignor to The Manny Signal Company, Milwaukee, Wis., a Copartnership. Filed Dec. 12, 1907. Serial No. 406,173.



1. A selective signaling device, comprising a suitably operated pawl, a motor driven rotary member having escapement teeth engaged by the pawl, means for moving the pawl out of the path of the escapement teeth, and a signaling member in position to be engaged by the pawl when the pawl is moved out of the path of the escapement teeth from the tooth corresponding to the number of the signaling device for causing a signaling.

2. A selective signaling device, comprising a suitably operated pawl, a motor driven rotary member having escapement teeth engaged by the pawl, means for moving the pawl out of the path of the escapement teeth, a signaling member movable with the rotary member in position to be engaged by the pawl when the pawl is moved out of the path of the escapement teeth from the tooth corresponding to the number of the signaling device, and a signaling circuit with a contact carried by the rotary member and adapted to be closed when the said contact engages the signaling member by reason of the detention of the signaling member by the pawl.

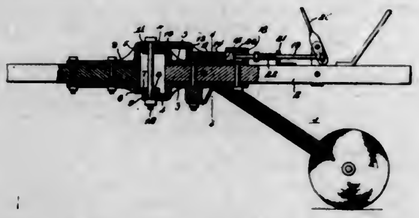
3. A selective signaling device, comprising a suitably operated pawl, a motor driven rotary member having escapement teeth engaged by the pawl, means for moving the pawl out of the path of the escapement teeth, a signaling member moving with the rotary member in position to be engaged by the pawl when the pawl is moved out of the path of the escapement teeth from the tooth corresponding to the number of the signaling device, a signaling contact carried by the rotary member and insulated therefrom and adapted to move into engagement with the signaling member when the latter is detained by the pawl, and means for moving the signaling member out of engagement with the pawl when the engagement of the signaling contact has been made therewith.

4. A selective signaling device, comprising a suitably operated pawl, a motor driven rotary member having escapement teeth engaged by the pawl, means for moving the pawl out of the path of the escapement teeth, a signaling member movably mounted on the rotary member eccentric thereof in position to be engaged by the pawl when the pawl is moved out of the path of the escapement teeth from the tooth corresponding to the number of the signaling device, and a signaling contact carried by the rotary member and insulated therefrom and adapted to be moved into engagement with the signaling member when the latter is detained by the pawl, the movement of the rotary member with relation to the signaling member serving to move the latter out of engagement with the pawl.

5. A selective signaling device, comprising a suitably operated pawl, a motor driven rotary member having escapement teeth engaged by the pawl, means for moving the pawl out of the path of the escapement teeth, an eccentric mounted on the rotary member, a spring actuated signaling member mounted to turn on the eccentric and normally standing in position to be engaged by the pawl when the pawl is moved out of the path of the escapement teeth from the tooth corresponding to the number of the signaling device, and a signaling contact carried by the rotary member and adapted to move into engagement with the signaling member to complete a signaling circuit when the signaling member is detained by the pawl, the movement of the rotary member with relation to the signaling member serving to cause the eccentric to move the signaling member out of engagement with the pawl when the signaling contact is made.

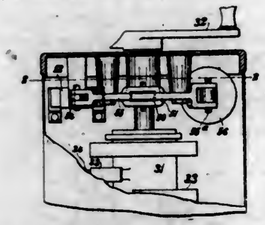
[Claims 6 to 16 not printed in the Gazette.]

902,100. TONGUE SUPPORTING AND LOCKING MEANS. MAX MEYER and THEODORE KENNE, Luverne, Iowa. Filed Mar. 26, 1908. Serial No. 423,448.



The combination with a cultivator beam, of a tongue hinged thereto, a bearing member having an arc-shaped bearing plate arranged at the front end and on the upper face of the cultivator beam, a second bearing member mounted upon the upper face and at the rear end of the tongue and having a rearwardly extending locking portion adapted to bear upon said first mentioned bearing member, an arc-shaped bearing plate carried by said locking portion to bear upon said first mentioned bearing plate, and locking mechanism sustained by the cultivator beam for normally holding the locking portion of said second named bearing member in fixed relation with the cultivator beam.

902,101. MOTOR-CONTROLLER. ANTHONY L. MCHUGH, Cincinnati, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed June 30, 1906. Serial No. 324,165.



1. A controller arranged to impress different voltages on a motor armature, a resistance in the motor armature circuit, and a mechanically operated switch separate from the controller drum and its coöperating contact fingers and arranged to normally short-circuit said resistance, but to open said short-circuit whenever the voltage impressed on the motor armature is varied.

2. A multiple-voltage controller, a motor controlled thereby, a resistance for the armature circuit of said motor, a switch normally closed to short-circuit said resistance, said switch being separate from the controller drum but arranged to be opened thereby to effectively include said resistance in the armature circuit whenever the armature connections are changed from one set of mains to another.

3. A multiple-voltage controller, a motor controlled thereby, a resistance in the armature circuit of said motor, a switch normally closed to short-circuit said resistance, said switch being separate from the controller drum but arranged to be opened thereby to break said short-circuit whenever the armature connections are changed from one set of mains to another, and a device for retarding the closing movement of said switch.

4. A multiple-voltage controller, a motor controlled thereby, a resistance for the armature circuit of said motor, a switch normally closed to short-circuit said resistance, said switch being separate from the controller drum but arranged to be opened thereby to effectively include said resistance in the armature circuit whenever the armature connections are changed from one set of mains to another, and means tending to close said switch.

5. A multiple-voltage controller, a motor controlled thereby, a resistance in the armature circuit of said motor, a switch normally closed to short-circuit said resistance, said switch being separate from the controller drum but arranged to be opened thereby to break said short-circuit whenever the armature connections are changed from one set of mains to another, means tending to close said switch, and a time-limit device for retarding such closure.

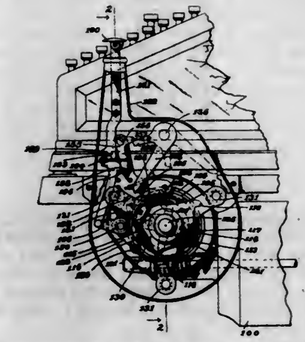
[Claims 6 to 20 not printed in the Gazette.]

902,102. COMPOUND FOR RENDERING PHOTOGRAPHS TRANSLUCENT. ALBERT T. MCILVAIN and GEORGE F. STOVER, Olathe, Kans. Filed Jan. 26, 1907. Serial No. 354,243.

The process of rendering photographs transparent consisting in applying to photographic prints a compound prepared of balsam of fir, poppy oil, spirits of turpentine and alkanet root extract.

902,103. POWER-TRANSMITTING MECHANISM FOR CALCULATING-MACHINES. CHARLES N. MCFARLAND, Kingston, Pa., assignor to The Adder Machine Company, Kingston, Pa., a Corporation of Pennsylvania. Filed Sept. 21, 1906. Serial No. 335,573.

1. A continuously rotating member, a shaft mounted near the same and provided with a plurality of clutches each yieldingly pressed toward engagement with the rotating member, a holder normally keeping the clutches out of such engagement, means manually operated temporarily to interrupt the function of said holder and automatic means adapted to restore said function comprising a cam actuated by the shaft which positively moves the holder to its initial position.



2. A continuously rotating member, a shaft mounted near the same and provided with a clutch constantly pressed toward engagement with the rotating member, a holder normally keeping the clutch out of such engagement, manually operated means comprising a key having a dependent stem adapted temporarily to interrupt the function of said holder, automatic means adapted to restore said function in connection with means to supplement such restoration which means are actuated by a part of the mechanism moved from the rotating member.

3. An adding machine comprising a vibratory actuating shaft, a prime motor, a continuously rotating member moved thereby, a shaft mounted near said member and provided with a clutch pressed toward engagement therewith, a holder normally keeping the clutch out of such engagement, means comprising a manually operated key adapted temporarily to interrupt the function of said holder, and means adapted to restore said function automatically operated from the rotating member shaft.

4. An adding machine, comprising a vibratory actuating shaft, a prime motor, a continuously rotating member moved thereby, a shaft mounted near said member and provided with a clutch pressed toward engagement therewith, a holder normally keeping the clutch out of such engagement, means comprising a manually operated key adapted temporarily to interrupt the function of said holder, and means adapted to restore said function automatically operated from the rotation member shaft, and means operated from the actuating shaft of the machine to prevent the depression of the key before the vibratory shaft resumes its normal position.

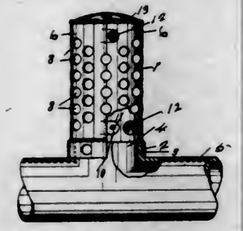
5. A motor provided with a shaft carrying a worm, a continuously rotating worm wheel meshing therewith, a countershaft driven by said wheel, an adding machine or similar mechanism comprising a vibratory actuating shaft provided with an arm and means for intermittently connecting the arm with the countershaft comprising a plurality of members secured to the countershaft and each adapted to engage the arm of the vibratory shaft whereby the arm is moved through the required angle of oscillation to actuate the machine while the countershaft is making less than one revolution.

[Claims 6 to 11 not printed in the Gazette.]

902,104. TILE-DRAIN INLET. HENRY N. NEIBEITER, Decatur, Ind. Filed Apr. 27, 1908. Serial No. 429,325.

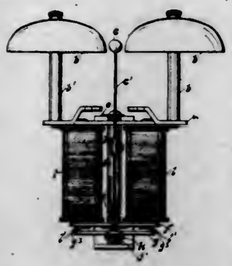
1. A tile drain inlet consisting of a plurality of curved longitudinal sections having a series of lateral perforations, and provided with means for detachably uniting the sections into an open ended cylindrical conduit and an apertured removable cap adapted to close the upper end of the conduit.

2. An inlet for tile drains consisting of a cylindrical conduit formed of a plurality of curved longitudinal sections laterally apertured and provided with means for rigidly uniting the sections, and a removable cap adapted to close the upper end of the conduit.



3. A cylindrical inlet for tile drains comprising a plurality of perforated longitudinal sections provided at one edge thereof with apertured off set lugs, and having at their other edge lateral openings; means for securing the lugs of one section to the openings of the adjacent section; and a removable perforated cap adapted to close the upper end of the said inlet.

902,105. ELECTRIC BELL. CHARLES H. NORTH, Cleveland, Ohio, assignor to The North Electric Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 22, 1905. Serial No. 256,826.



1. In an electro-magnetic appliance, the combination with the electro-magnet thereof, of an oscillating armature positioned to be actuated thereby, co-acting scale-bearings therefor, a spring and opposing means acting upon the armature at its point of engagament with said scale-bearings for retaining said parts in operative relation to each other, substantially as set forth.

2. In an electro-magnetic appliance, the combination with the electro-magnet thereof, of an oscillating armature positioned before its poles, scale-bearing parts engaging the outer and inner faces of said armature, an adjusting screw, and an opposing spring maintaining said parts in operative relation, substantially as set forth.

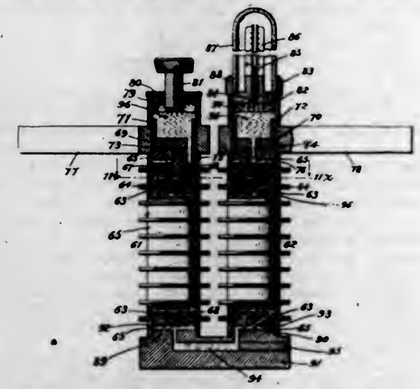
3. In an electro-magnetic bell, the combination with the actuating electro-magnet, of an armature mounting the bell-tapper, a mounting for the armature avoiding lost motion and permitting its free oscillation under the impulse of the electro-magnet, and an adjustable weight slidably mounted upon the bell-tapper for adapting the bell to selective actuation by predetermined currents, substantially as set forth.

4. In an electric bell of the class described, the combination with its electro-magnet, of an armature positioned before the pole pieces thereof and carrying the bell-tapper, and a mounting for said armature comprising inner and outer scale-bearings engaging the armature, and a spring for retaining the parts in close engagement and avoiding lost motion, substantially as set forth.

5. In an electric bell of the class described, the combination with the actuating electro-magnet, of an oscillating armature positioned before its pole-pieces, a bell-tapper carried by the armature, inner and outer scale-bearings, and a spring and opposing adjusting-screw for maintaining the armature and its bearing-parts in close engagement, substantially as set forth.

[Claims 6 to 15 not printed in the Gazette.]

902,106. METHOD OF AND MEANS FOR UTILIZING THE PRESSURE IN THE INTERIOR OF AN ELECTRIC CONDUCTOR CARRYING CURRENT. EDWIN F. NORTHRUP, Philadelphia, Pa., assignor to The Leeds and Northrup Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 1, 1907. Serial No. 359,983.



1. The method of producing motion electrically, which consists in passing an electric current through a conductor to cause internal pressure in the mass of said conductor, and causing the said pressure to act upon a body capable of motion.

2. The method of producing motion electrically which consists in passing an electric current through a conductor to cause internal pressures within the mass of said conductor, combining these pressures in series, and causing the combined force of a plurality of the same to act upon a body capable of motion.

3. An electric conductor having a plurality of chambers containing a liquid conductor, said chambers only communicating with each other by a passage passing from a point near the center of one chamber to a point more remote from the center of an adjacent chamber.

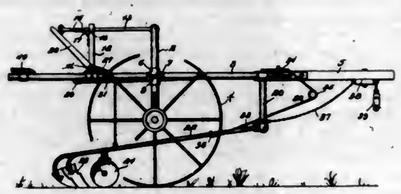
4. An electric conductor having a plurality of chambers containing a liquid conductor and a mass of magnetic material, said chambers only communicating with each other by a passage passing from a point near the center of one chamber to a point more remote from the center of an adjacent chamber.

5. A heterogeneous electrical conductor comprising superposed liquid and solid conducting masses having means to transmit pressure at or near the center of one of said liquid masses due to the passage of electric current through said conductor, to a point of lower pressure more remote from the center of another of said liquid masses.

[Claims 6 to 13 not printed in the Gazette.]

902,107. CULTIVATOR. JOHN W. OSBORNE, Winchester, Ill., assignor of one-half to George Hart, Winchester, Ill. Filed Feb. 6, 1908. Serial No. 414,599.

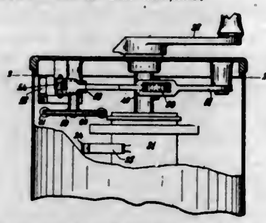
1. In a machine of the character described, the combination with the supporting wheels, of a bowed axle, a U-shaped frame pivotally connected to the vertical portions of said axle, an upright locking member having an aperture near its upper end, fixedly mounted on the frame in rear of the axle, a longitudinally disposed operating member connected with the central portion of the axle and having a plurality of spaced locking recesses formed in its upper edge for engaging the upper wall of the locking member aperture, and a resilient element fixed to the locking member for maintaining one of the locking recesses of the operating member in locking engagement with the aperture of the locking member.



2. In a machine of the character specified, the combination with the supporting wheels, of a bowed axle, a U-shaped frame pivotally connected with the end pieces of the axle, means for locking the axle in an adjusted position, plow beams pivotally sustained by the frame, plows at the free ends of said beams, lifting mechanism sustained by the frame, and operable for raising the plow beams, and resilient means for normally exerting pressure upon the plow beams.

3. In a machine of the character specified, the combination with the supporting wheels, of an axle, a frame pivotally connected to the axle longitudinally disposed plow beams pivotally mounted below the frame, plows at the ends of said beams, lifting levers pivotally mounted on the frame in rear of the axle, means for connecting the forward ends of said levers with the free ends of the plow beam, and longitudinally disposed pull springs fixed to the frame and connected with the lifting levers.

902,108. MOTOR-CONTROLLER. WILLIAM D. POMEROY, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Dec. 31, 1906. Serial No. 350,255.



1. In a controller, a rotatable drum, a switch biased toward closed position but arranged to be opened by said drum when the latter is moved between certain positions, and a band-brake arranged to retard the closing movement of said switch.

2. In a controller, a rotatable drum, a switch arranged to be opened by said drum when the latter is moved between certain positions, means which tends to close said switch, and friction mechanism arranged to retard the first part of the closing movement of said switch but to allow the last part of the closing movement and all of the opening movement thereof to be unretarded.

3. A multiple-voltage controller, a motor controlled thereby, a resistance in the armature circuit of said motor, a switch normally closed to short-circuit said resistance, said switch being separate from the controller drum but arranged to be opened thereby to break said short-circuit whenever the armature connections are changed from one set of mains to another, and a friction disk coöperating with a friction band for retarding the closing movement of said switch, the tension of said band being adjustable.

4. A multiple-voltage controller, a motor controlled thereby, a resistance for the armature circuit of said motor, a switch normally closed to short-circuit said resistance, said switch being separate from the controller drum but arranged to be opened thereby to include said resistance in the armature circuit whenever the armature connections are changed from one set of mains to another, means tending to close said switch, and adjustable friction mechanism for retarding such closure.

5. A multiple-voltage controller, a motor controlled thereby, a resistance for the armature circuit of said motor, a switch normally closed to short-circuit said resistance, said switch being separate from the controller drum but arranged to be opened thereby to effectively include said resistance in the armature circuit whenever the armature connections are changed from one set of mains to another, means tending to close said switch, and friction mechanism for retarding such closure but arranged to allow a free opening movement of the switch.

[Claims 6 to 9 not printed in the Gazette.]

902,109. DENTAL FINGER-TRAY. JOHN G. POWELL, Norris City, Ill. Filed Feb. 6, 1908. Serial No. 414,609.

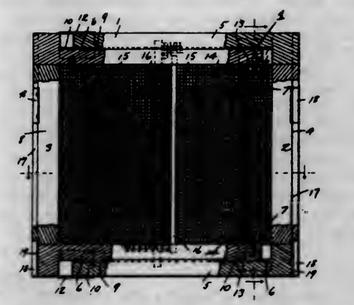


1. A device of the kind described comprising a ring, a circular tray and means for holding the tray upon the ring.

2. A device of the kind described comprising a ring, a tray holder formed integral with the ring, and a concavo-convex tray carried by said holder.

3. A device of the kind described comprising a ring, a holder mounted upon the ring, and a tray carried by the holder, and projecting points carried by the holder and bent over the tray edges.

902,110. ADJUSTABLE WINDOW-SCREEN. EDWIN A. REITZ, Reynoldsville, Pa. Filed Sept. 19, 1907. Serial No. 393,673.



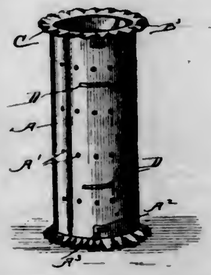
1. In a window screen, a frame formed in sections, one of which is provided with longitudinal grooves, tongues formed on the opposing sections to engage said grooves, sleeves arranged on each of said sections to receive the ends of the opposite sections, the sleeves of one of said sections having formed therein longitudinal slots, set screws in the ends of the opposite section to engage said slotted sleeves and thereby secure said sections together in adjustable engagement, and means arranged on the outer edges of said sections to form guide grooves, substantially as described.

2. In a window screen a frame formed in sections one of which is provided with longitudinal grooves, tongues formed on the opposing sections to engage said grooves, sleeves arranged on each of said sections to receive the ends of the opposite section, the sleeves on one of said sections having formed therein longitudinal slots, set screws in the ends of the opposite section to engage said slotted sleeves and thereby secure said sections together in ad-

justable engagement, strips arranged on the outer edges of said sections to form guide grooves and channeled plates arranged on said edges to form part of the guide groove thereon, substantially as described.

3. In a window screen a frame formed in sections having a sliding tongue and groove engagement with each other, slotted sleeves arranged on one of said sections to receive the ends of the opposite section, set screws in said ends to engage said slotted sleeves and thereby secure said sections in adjustable engagement, strips arranged on the outer side edges of said sections to form guide grooves, channeled plates arranged on said edges to form part of said grooves, overlapping screen sections arranged on said frame sections and binding strips on the inner edges of said screen sections, substantially as described.

902,111. COOKING UTENSIL. FRANK ROBINSON, Mesa, Ariz., assignor of one-half to A. A. Jones and John W. Hagerlund, Mesa, Ariz. Filed Sept. 28, 1906. Serial No. 336,601.

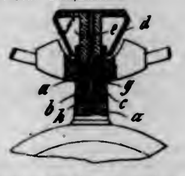


1. A cooking utensil of the kind described, comprising a cylinder perforated and open at the ends, and detachable caps, each cap having a flange adapted to slide within the cylinder and the flaring flange adapted to project without the cylinder.

2. A device of the kind described comprising a perforated cylinder having circumferential grooves upon its inside adjacent its ends, and longitudinal grooves extending from the ends, and leading into the first mentioned grooves, end caps provided with flanges, a projection upon said flanges adapted to engage said grooves, and a flaring flange carried by the first mentioned flange adapted to project without the cylinder and to support the same while in a horizontal position.

3. A device of the kind described comprising a cylindrical body portion, said body portion being perforated, end caps, and outwardly extending flanges carried by the caps and supporting the device when in a horizontal position.

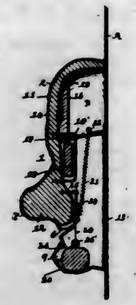
902,112. DUST-PROOF WATCHCASE-PENDANT. MICHAEL ROSENHAFT, Hamburg, Germany. Filed Dec. 5, 1907. Serial No. 405,138.



1. A watch pendant having a socket provided with an upper thread and a lower smooth face, combined with a crown hub entering said socket and having an upper smooth face and a lower thread, the thread on one of said parts being opposed by the smooth face of the other part, substantially as specified.

2. A watch pendant having an inner recess and an outer socket, said socket being provided with an upper thread and a lower smooth face, combined with a crown hub having a tubular projection entering said recess, and a sleeve entering said socket, the sleeve having an upper smooth face and a lower thread, the thread on the sleeve being opposed by the smooth face of the socket, while the smooth face of the sleeve is opposed by the thread of the socket, substantially as specified.

902,113. DEVICE FOR MAKING FACIAL EXPRESSIONS. FREDERICK RUPLE, Pittsburg, Pa., assignor of three-fourths to Thomas F. Kirk, Jr., Edward J. Small, and Albert A. Shepard, Pittsburg, Pa. Filed June 12, 1907. Serial No. 378,564.



1. In a device for producing facial expressions, the combination of a supporting head portion having a nose portion thereon, and a thin flexible facial portion over and depending from said head and nose portion and adapted to have expressions formed therein.

2. In a device for producing facial expressions, the combination of a supporting head portion having a nose portion thereon, and a thin flexible facial portion over and depending from said head and nose portion and adapted to be engaged interiorly to form different expressions therein.

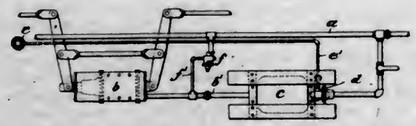
3. In a device for producing facial expressions, the combination of a supporting head portion having a nose portion thereon, a thin flexible facial portion over and depending from said head and nose portion, and means interiorly engaging with said flexible portion for moving the same to form different expressions therein.

4. In a device for producing facial expressions, the combination of a supporting head portion having a nose portion thereon, a thin flexible facial portion over and depending from said head and nose portion, and means connected to said head portion and engaging with the back of said flexible portion for moving the same to form different expressions therein.

5. In a device for producing facial expressions, the combination of a supporting head portion having a nose portion thereon, a thin flexible facial portion over and depending from said head and nose portion, and means on the back of said facial portion and engaging with the chin portion thereof for moving the same to form different expressions therein.

[Claims 6 to 11 not printed in the Gazette.]

902,114. FLUID-PRESSURE BRAKE SYSTEM. WILLIAM H. SAUVAGE, New York, N. Y. Filed May 28, 1908. Serial No. 435,382.



1. In a fluid pressure brake system, means operated by deficiency of pressure in the brake cylinder and independent of the usual connection through the triple valve to admit fluid under pressure from the train pipe to the brake cylinder.

2. In a fluid pressure brake system, the combination with a brake cylinder and means to supply fluid under pressure, of a connection between the fluid pressure supply and the brake cylinder independent of the usual connection through the triple valve and means operated by deficiency of pressure in the brake cylinder to admit fluid under pressure from said fluid pressure supply to the brake cylinder.

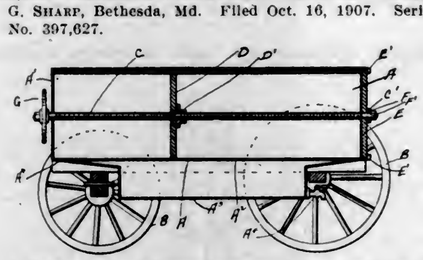
3. In a fluid pressure brake system, the combination with a brake cylinder and train pipe, of a connection between the train pipe and the brake cylinder independent of the usual connection through the triple valve, and means operated by deficiency of pressure in the brake cylinder to admit fluid under pressure from the train pipe to the brake cylinder.

4. In a fluid pressure brake system, the combination with a brake cylinder, train pipe, retaining valve and retaining valve pipe, of a connection between the train pipe and retaining valve pipe independent of the usual connection through the triple valve and means operated by deficiency of pressure in the brake cylinder to admit fluid under pressure from the train pipe to the brake cylinder.

5. In a fluid pressure brake system, the combination with a brake cylinder and a train pipe, of a connection from the brake cylinder to the train pipe independent of the usual connection through the triple valve, and a valve actuated by reduction of pressure in the brake cylinder to admit fluid under pressure from the train pipe to the brake cylinder.

[Claim 6 not printed in the Gazette.]

902,115. GARBAGE-COLLECTING VEHICLE. ALFRED G. SHARP, Bethesda, Md. Filed Oct. 16, 1907. Serial No. 397,627.



1. In a garbage collecting vehicle, a body of metal or other suitable material, running on wheels and provided with means for compressing the contents.

2. In a garbage collecting vehicle, a body of sheet steel running on wheels provided with means for compressing the contents of the body, separating the fluids therefrom.

3. In a garbage collecting vehicle, a body of sheet metal running on wheels adapted to be propelled by any suitable power and provided with longitudinal means for compressing the contents and extracting the fluids therefrom.

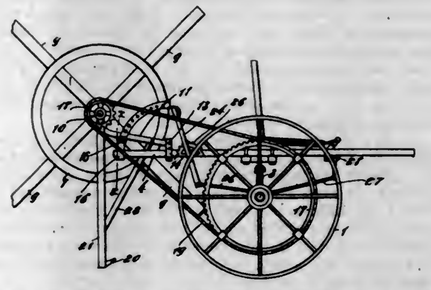
4. In a garbage collecting vehicle, a body of sheet metal running on wheels adapted to be propelled by any suitable power, provided with longitudinal means for compressing the contents, and provided with a fluid chamber to catch and hold the fluids.

5. In a garbage collecting vehicle, a body of sheet metal running on wheels, adapted to be propelled by any suitable power, provided with longitudinal means for compressing the contents, chamber to catch the fluids, means for drawing off the fluids and sliding doors on top of the body substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

902,116. STALK-BREAKER. DRURY P. SHAW, Rhome, Tex., assignor of one-half to W. J. Tackaberry, Fort Worth, Tex. Filed Feb. 19, 1908. Serial No. 416,722.

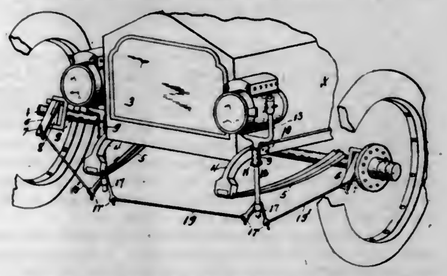
1. The combination of a cultivator having backwardly projecting beams and a stalk breaking mechanism comprising a reel, a shaft for driving said reel, upwardly yielding arms pivotally connected to said beams and supporting said shaft, guides consisting of pairs of arms mounted rigidly on said beams for said upwardly yielding arms, pins coöperating with said guides to hold said reel at different elevations, and means for driving said reel at any elevation.



2. The combination of a wheeled cultivator having backwardly projecting beams and stalk breaking mechanism comprising a reel provided with a shaft, upwardly yielding arms pivotally connected to said beams and carrying said shaft, guides holding said arms at any desired elevation mounted on said beams, a sprocket wheel mounted on said shaft, a sprocket wheel mounted on one of the cultivator wheels, a sprocket chain transmitting the power of the cultivator wheel to said shaft, and a lever for taking up the slack of said sprocket chain.

3. The combination of a wheeled cultivator having backwardly extending beams and stalk breaking mechanism comprising a reel provided with a driving shaft, upwardly yielding arms pivotally connected to said beams and carrying said shaft, means attached to said beams for supporting said arms at any desired elevation and for guiding said arms, sprocket wheels mounted on said shaft, sprocket wheels mounted on the cultivator wheels, sprocket chains transmitting the power of said cultivator wheels to said shaft, levers for taking up the slack of said sprocket chains, and a blade provided with arms adjustably attached to said upwardly yielding arms and coöperating with said reel.

902,117. AUTOMATIC HEADLIGHT-DEFLECTING MECHANISM. JOSEPH J. SHIPLEY, Washington, D. C. Filed May 17, 1906. Serial No. 317,370.



1. In a motor-vehicle, a spring-supported body, steering-knuckles, duplicate lamps rotatably-supported from said body, a connection between the lamps whereby they may be moved in unison, means connecting one of the steering-knuckles with one of the lamps, and means connecting the other steering-knuckle with the other lamp, whereby both of the said lamps may be rotated to project the light in the path of travel of the vehicle when turning corners or rounding curves.

2. In a motor-vehicle, a spring-supported body, steering-mechanism, duplicate lamps rotatably-supported from said

body, mechanism connecting said lamps, and elastic or resilient connecting-mechanism arranged to transmit motion from the steering-mechanism to each of said lamps, whereby they will be caused to move in unison and project the light in the path of travel when the vehicle is turning corners or rounding curves.

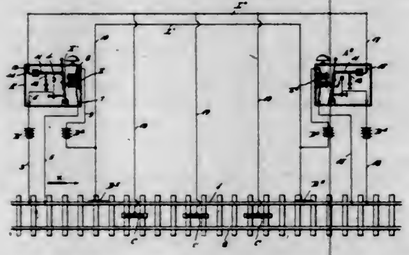
3. In a motor-vehicle, a spring-supported body, steering-knuckles, duplicate lamps mounted in suitable supports journaled in bearings attached to said body, means connecting the lamps so they may be moved in unison, and connecting mechanism arranged to transmit motion from the steering-knuckles to each lamp-support, whereby both supports will be caused to rotate in unison and project the light in the path of travel when the vehicle is turning corners or rounding curves.

4. In a motor-vehicle, a spring-supported body, steering-knuckles, duplicate lamps mounted in supports journaled in suitable bearings attached to said body, means connecting the lamp-supports so that motion transmitted to either one will be imparted to the other simultaneously, and elastic or resilient connections arranged to transmit motion from the steering-knuckles to the lamp-supports, and thereby cause both supports to rotate and project the light in front of the car.

5. In an automobile, a spring-supported body, duplicate lamps supported from said body and partaking of the movements permitted by the supporting springs, said lamps being movable about a vertical axis, steering-mechanism for said automobile, connecting-mechanism including a resilient member adapted to transmit motion from said steering-mechanism to each of said lamps, and other means connecting said lamps and acting to transmit motion imparted to either one of said lamps to the other.

[Claims 6 to 11 not printed in the Gazette.]

902,118. SIGNAL SYSTEM. BURT A. SLATER and MICHAEL J. MCDERMOTT, Boise, Idaho. Filed Mar. 5, 1908. Serial No. 419,361.

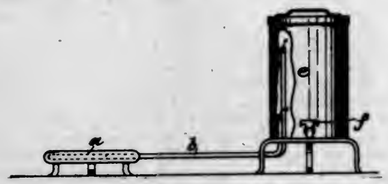


1. In a signaling system, electrically connected stations, track rails, vehicles traveling there-over, a source of current included in circuit with a relay, said circuit being controlled by the vehicle traveling over the track rails, a second circuit including a source of current, means to partially complete said secondary circuit, signals operated at both stations upon completion of said first circuit, means carried by the vehicle for completing said second circuit, a local circuit controlled by the secondary circuit, and a signal included in the local circuit.

2. In a signaling system, electrically connected stations, track rails, vehicles traveling there-over, a source of current independent of the vehicles included in a circuit, a secondary circuit including a source of current, means carried by the vehicle for controlling the first circuit, signals operated at both stations upon completion of said first circuit, means included in the first circuit for controlling the second circuit to partially complete the same, means carried by the vehicle to fully complete said second circuit, and a continuously ringing bell circuit controlled by the second circuit, said bell circuit being carried by the cab.

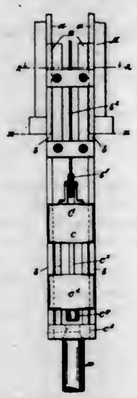
3. In a signaling system, electrically connected stations, track rails, vehicles running there-over, a pair of automatic switches at separate stations along the line, a primary circuit for each switch, a secondary circuit for each switch, both including a separate source of current, means in the primary circuit at both stations to partially complete the secondary circuits at both stations simultaneously, means to initially close the primary circuit, said means carried by the vehicles, signals operated at both stations upon completion of said first circuit, contact strips included in the secondary circuits, brushes carried by the vehicle and included in circuit with a relay to engage the contact strips to fully complete the secondary circuit, a continuously ringing alarm circuit carried by the train and controlled by said relay.

902,119. HOT-WATER-SERVICE ATTACHMENT TO THE BURNERS OF GAS HEATER STOVES OR TO THE GAS-RINGS USED FOR HEATING POTS, IRONS, &c. JOHANNA J. STRAIN, Christchurch, New Zealand. Filed Apr. 29, 1907. Serial No. 370,756.



In combination, a water tank, a gas ring and a water pipe having a loop inclosed within and concentric of said gas ring, the ends of the water pipe aforesaid opening to the interior of said tank.

902,120. PILE-DRIVER. HARRY B. STRONG, Cleveland, Ohio. Filed Feb. 24, 1908. Serial No. 417,243.



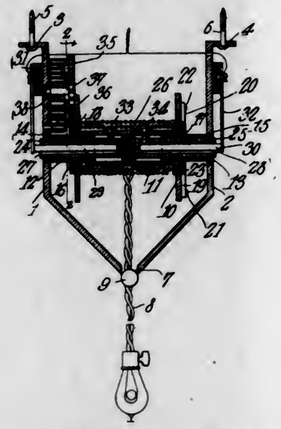
1. In a pile driver, the combination of a fixed support, leaders or guides adjustably mounted in said support, and a hammer mounted fixedly upon said leaders or guides so as to move up and down with the same, said leaders or guides extending upwardly beyond said hammer, whereby the latter may be lowered below said support.

2. In a pile driver, the combination of a fixed support including a vertically disposed guide-way, leaders or guides slidably held in said guide-way, and a hammer mounted fixedly upon said leaders or guides so as to move up and down with the same, said leaders or guides extending upwardly beyond said hammer, whereby the latter may be lowered below said guide-way.

3. In a pile driver, the combination of a fixed support adapted to rest on the normal working level, said support including a vertically disposed guide-way, leaders or guides slidably held in said guide-way, and a hammer mounted fixedly within the lower ends of said leaders or guides so as to move up and down with the same, said leaders or guides extending upwardly beyond said hammer, whereby the latter may be lowered below such working level.

4. In a pile driver, the combination of a fixed support adapted to rest on the normal working level, said support including a vertically disposed guide-way, leaders or guides slidably held in said guide-way, and a steam hammer mounted fixedly within the lower end of said leaders or guides so as to move up and down with the same, said leaders or guides extending upwardly beyond said hammer for a sufficient distance to permit the latter to be lowered entirely below such working level.

902,121. ELECTRIC FIXTURE. EDGAR C. SUITER, Olympia, Wash. Filed Apr. 30, 1907. Serial No. 371,107.



The combination with supporting arms; of insulating bushings fixedly mounted therein and extending inwardly therefrom, each bushing having an annular retaining flange adjacent its inner end, a ratchet wheel fixedly mounted on one of said retaining flanges, alining shafts bearing in and extending through the bushings, an insulating coupling between said shafts, a spool journaled upon said coupling and the inner ends of the bushings, said spool being held against longitudinal movement by the retaining means, pawls carried by the spool for engaging the ratchet wheel, conducting pins within and extending beyond the outer ends of the shafts, brushes bearing against the outer ends thereof, a conducting cord adapted to be wound upon the spool, conducting means extending into the spool and against the pins for securing the cord to the spool, and means for rotating the spool.

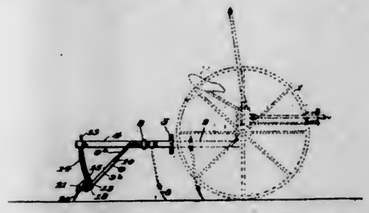
902,122. TOOTH-CLEANER. ELIZABETH E. SULZER, Philadelphia, Pa. Filed May 18, 1907. Serial No. 374,493.



1. A tooth cleaner consisting of a single piece of wire so bent and twisted as to form a fork at one extremity, a twisted wire handle adjacent to the fork, loops on the end of the handle opposite to the fork and disposed in the same plane, an indented depression formed on the end of the handle by the divergence of the loops, a notch at the extremity of each tine of the fork terminating in narrow slits vertically disposed to the longitudinal axis of the wire and adapted to receive a band of elastic material, substantially as described.

2. A tooth cleaner consisting of a single piece of wire twisted to form a fork at one extremity, a notch in the extremity of each tine of the fork, said notch terminating in a narrow slit adapted to receive a band of elastic material, a twisted wire handle formed with the fork, loops formed on the end of the handle opposite to the fork, said loops being symmetrically and oppositely disposed and lying in the same plane as the fork, and adapted to receive the looped end of the elastic band, substantially as described.

902,123. HARROW ATTACHMENT FOR CULTIVATORS. GEORGE TROMPETER, near Horton, Kans. Filed Dec. 14, 1907. Serial No. 406,523.



1. A harrow attachment for cultivators and the like, comprising a bar designed to be connected to a cultivator beam and to project rearwardly beyond the same, the rear end of the bar being provided with a sleeve, a swinging arm pivotally mounted upon the bar, a slide bar connected to the swinging arm and passing loosely through the sleeve, a rake carried by the swinging arm, and a spring mounted upon the slide bar for holding the rake member yieldingly in position.

2. A harrow attachment for cultivators and the like, comprising a bar designed to be applied to a cultivator beam and project rearwardly beyond the same, a swinging arm mounted upon the bar, a plate secured to the swinging arm and laterally adjustable thereon, a rake member carried by the plate, and means coöperating with the swinging arm to hold the rake member yieldingly in position, the plate preventing the soil from passing over the rake.

3. A harrow attachment for cultivators and the like, comprising a bar designed to be applied to a cultivator beam and to project rearwardly beyond the same, a swinging arm pivotally mounted upon the bar, a slide bar connected to the swinging arm and loosely engaging the bar, a plate carried by the swinging arm, a bracket projecting from the plate, a rake member adjustably mounted upon the bracket, and a spring coöperating with the slide bar to hold the rake yieldingly in position, the plate preventing the soil from passing over the rake.

4. A harrow attachment for cultivators comprising a bar designed to be detachably connected to a cultivator beam and to project rearwardly beyond the same, the forward end of the bar being formed with a clevis provided with a vertical series of openings any selected one of which may be engaged by a bolt connecting the bar to the cultivator beam, an intermediate portion of the bar being designed to be clamped to the cultivator beam while the rear end of the bar is provided with a sleeve, a swinging arm mounted upon the bar, a rake member carried by the swinging arm, a slide bar connected to the swinging arm and passing loosely through the sleeve, and a spring mounted upon the slide bar for holding the rake member yieldingly in position.

902,124. MULTIBLADED GARDEN IMPLEMENT. DRAPER VOSHELL, Wilmington, Del. Filed June 1, 1908. Serial No. 435,952.

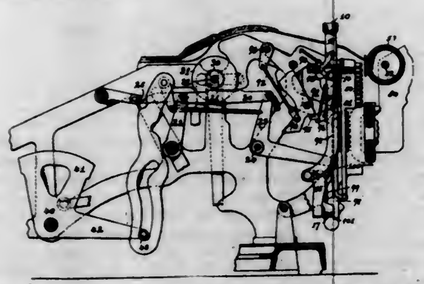
A garden implement having a handle provided at its lower end with a reduced portion, a tapered hollow ferrule fitting over said reduced portion, the upper end of said

ferrule abutting against a shoulder on the handle, the lower end of the ferrule being thickened and screw threaded on its interior, said screw threaded portion extending into and joining said hollow ferrule thereby forming a shoulder



against which the end of the handle fits; in combination with a blade having a screw threaded shank adapted to fit into the screw threaded ferrule and to abut against the end of the handle.

902,125. PRINTING-ELIMINATING DEVICE FOR ADDING-MACHINES. CHARLES WALES, Cleveland, Ohio, assignor to The Adder Machine Company, Kingston, Pa., a Corporation of Pennsylvania. Filed Oct. 23, 1906. Serial No. 340,135.



1. In a machine of the class described, comprising adding mechanism and printing mechanism, the latter, comprising separate type, separate means whereby they are individually propelled to record their respective figures separate holding means for the propelling means, and separate releasing means to permit each propelling means to operate, the combination therewith of means adapted to suspend temporarily the function of the releasing means.

2. In a machine of the class described, comprising adding and printing mechanism, the latter comprising separate type, separate means whereby they are individually propelled to record their respective figures separate holding means for the propelling means, and separate releasing means to permit each propelling means to operate, the combination therewith of means adapted to suspend temporarily the function of the releasing means.

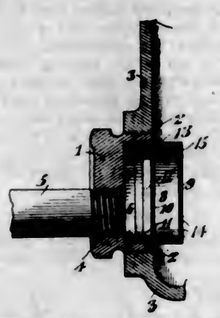
3. In a machine of the class described, comprising a printing mechanism provided with type-bars and movable type, means for positioning the type bars, means by which each type is individually propelled to record its respective number, separate holding means for the propelling means and separate releasing means to permit each propelling means to operate, the combination therewith of means adapted to prevent the operation of the releasing means and thus prevent the propelling means from actuating the type, and a manually depressible key for actuating said preventing means.

4. In a machine of the class described, comprising a printing mechanism provided with type bars, means for positioning them, hammers for striking such bars, and hooks for holding the hammers inactive, the combination therewith of means for preventing the disengagement of the hooks and the hammers.

5. In a machine of the class described, comprising a printing mechanism provided with type bars, means for positioning them, hammers under constant tension and adapted to strike the type bars when released, and hooks for holding the hammers inactive, the combination therewith of means for preventing the disengagement of the hooks and the hammers.

[Claims 6 to 9 not printed in the Gazette.]

902,126. STEAM-TRAP FOR RADIATORS. FRANK L. WATSON, Lynchburg, Va. Filed Apr. 18, 1908. Serial No. 427,847.

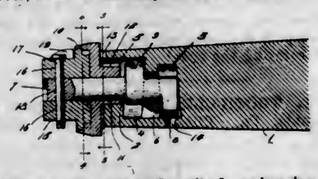


1. A steam trap for radiators including a bushing having a reducing opening and provided at its inner face with a chamber, a trap casing having an inner end wall and provided with an open outer end fitted within the chamber of the bushing, and a transverse partition arranged within the trap casing and extending upward from the bottom thereof to form an inner compartment, the upper edge of the partition being spaced from the top of the trap casing and the latter being provided at the lower portion of the compartment with a water inlet.

2. A steam trap for radiators including a bushing having a reducing opening and provided with a cylindrical chamber, a cylindrical trap casing provided with an inner end wall and having an open outer end fitted within the cylindrical chamber of the bushing, and a substantially segmental transverse partition arranged within the trap casing and extending upward from the bottom to form an inner compartment and spaced from the top of the casing, the latter being provided at the lower portion of the inner end wall with perforations to form a water inlet and having an air vent perforation located above the upper edge of the partition.

3. The combination with a bushing having a reducing opening, of a cylindrical trap casing having an inner end wall and provided with an open outer end secured to the bushing, and a transverse partition arranged within the trap casing and extending upward from the bottom thereof to form an inner compartment, said trap casing being provided at the lower portion of the compartment with a water inlet and having an air vent at the upper portion of the said compartment.

902,127. HUB-SECURING DEVICE. JOHN A. WEITZEL, Rochester, N. Y. Filed May 28, 1908. Serial No. 435,462.



1. A device of the class described, embracing an axle-skein having a pocket provided with shoulders therein, a locking key having diagonally opposed lugs effective for engagement with said shoulders, and means for the retention of said key in locked position.

2. A device of the character described, embracing an axle-skein having a pocket provided with a plurality of shoulders having spiral surfaces, a locking key having diagonally opposed lugs adapted for engagement with said surfaces, and locking means for said key.

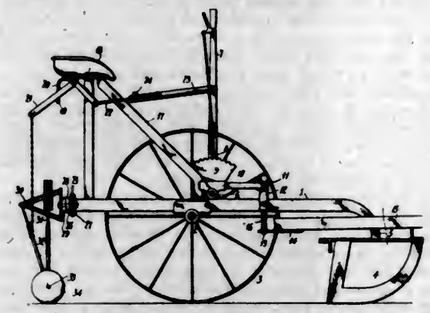
3. A device of the character described, embracing an axle-skein having a pocket provided with inner and outer end annular recesses, a locking key having diagonally opposed lugs engaging said recesses, and locking means for said key.

4. A device of the class described comprising an axle-skein having a pocket provided with spaced apart annular recesses, the walls thereof having spiral or inclined surfaces, a locking key having diagonally opposed lugs engaging said walls, and locking means for said key.

5. A device of the character described embracing an axle-skein provided with a pocket having inner and outer end annular recesses with their walls formed on spiral lines, a locking key having diagonally opposed lugs effective for engagement with said walls, and locking means for said key.

[Claims 6 to 12 not printed in the Gazette.]

902,128. LAND-MARKER. ELMER E. YOUTZ, Casner, Ill. Filed Apr. 13, 1908. Serial No. 426,770.



1. In a corn planter, the combination, with the frame, and a transversely-disposed rock shaft carried thereby, of a marker pivotally connected with the rear end of the frame; a seat-supporting rod mounted upon said frame; a depending slotted strap secured to the upper end of said rod; an angle lever pivotally connected with said rod end and having its rear arm extending through the slot in said strap; a flexible connection between said lever arm and said marker, for moving the latter into and out of operative position when said lever is rocked upon its pivot; an operating lever; and a rod connected at opposite ends to the operating lever and to the front arm of the angle lever, for rocking the latter when the operating lever is swung in one direction or the other.

2. In a corn-planter, the combination, with the frame, and a transversely-disposed rock-shaft carried thereby, of a marker pivotally connected with the rear end of the frame; a seat-supporting rod mounted upon said frame; a strap secured centrally to the upper end of said rod and having its ends bent downwardly, the rear portion of said strap being provided with a longitudinal slot; an angle lever pivoted at its apex to the front end of said strap and having its rear arm extending through said slot; a flexible connection between said lever arm and said marker, for moving the latter into and out of operative position when said lever is rocked upon its pivot; an operating lever; and a rod connected at opposite ends to the operating lever and to the front arm of the angle lever, for rocking the latter when the operating lever is swung in one direction or the other.

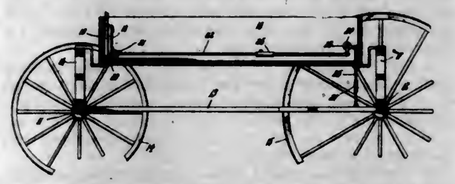
3. In a corn planter, the combination, with the frame, and a transversely-disposed rock shaft carried thereby, of a marker pivotally connected with the rear end of the frame; a seat supporting rod mounted upon said frame; a depending slotted strap secured to the upper end of said rod; an angle lever pivotally connected with said rod end and having its rear arm extending through the slot in said strap; a flexible connection between said lever arm and said marker, for moving the latter into and out of operative position when said lever is rocked upon its pivot; an operating lever; and a rod connected at opposite ends to the operating lever and to the front arm of the angle lever, for rocking the latter when the operating lever is swung in one direction or the other, said rod comprising a pair of telescoping members adjustably connected together, whereby said angle lever may be rocked independently of the movement of the operating lever.

4. In a corn-planter, the combination, with a frame, and a transversely-disposed rock shaft carried thereby, of a marker pivotally connected with the rear end member of the frame, said marker comprising a triangular frame, a pair of longitudinally-socketed converging rods secured at their inner ends to said triangular frame, and a V-shaped member having its arms slidably fitted in the sockets in said rods, a marking-wheel attached to the apex of said member, and means for retaining said member in adjusted position with respect to said rods; an operating lever pivoted to said rock-shaft; and connecting devices between the operating lever and said marker, for raising the latter bodily into inoperative position when said lever is swung in one direction.

5. In a corn-planter, the combination, with a frame and a transversely-disposed rock-shaft carried thereby, of a bracket secured to the rear end member of the frame and provided with a perforated hemi-spherical bearing member; a triangular frame provided with a perforated hemi-spherical bearing member; a bolt passed through the perforations in said bearing members, for pivotally connecting said triangular frame with said bracket; a pair of longitudinally-socketed converging rods secured at their inner ends to said triangular frame; a V-shaped member having its arms slidably fitted in the sockets in said rods; a marking wheel rotatably attached to the apex of said member; means for retaining said member in adjusted position with respect to said rods; an operating lever pivoted to said rock-shaft; and connecting devices between the operating lever and one of said rods, for raising the marking-wheel into inoperative position when said lever is moved in one direction.

[Claim 6 not printed in the Gazette.]

902,129. WHIP-LOCK. WILLIAM J. ARNETT, Margerum, Ala. Filed Apr. 29, 1908. Serial No. 429,900.



1. The combination with a vehicle including the body, running gear, and springs between the body and running gear, of a socket to receive the whip, a whip having a lateral projection at the butt end and engaging said socket, and means operative by the running gear for locking said whip within said socket when the springs are in distended position and to release the whip when the springs are compressed by the weight of the person in the vehicle.

2. The combination with a vehicle including the body, running gear, and springs between the body and running gear, of a socket, a whip detachably engaging said socket, and a locking means between the running gear and the socket and operating to engage the whip when the springs are distended and to release the whip when the springs are compressed.

3. The combination with a vehicle including the running gear, body and springs between the running gear and body, of a socket for receiving the whip carried by the body, a whip having a lateral projection at the butt end and engaging said socket, a rod movably disposed in said body and adapted to engage said whip when in one position, and connecting means between said rod and the running gear, whereby said rod is projected into said socket and engaged with said whip when the springs are distended and withdrawn from the socket and the whip released when the springs are compressed.

4. The combination with a vehicle including the body, running gear, and springs between the body and running gear, of a socket for the whip carried by the body, a whip

having a lateral projection, a bell-crank lever connected to said body, a rod pivoted at one end to one end of said bell-crank lever and with the other end protruded into said socket and adapted to engage above the protuberance on the whip, and a rod connected at one end to the other end of said bell-crank lever and at the other end to said running gear, whereby when the springs are depressed by the load disposed within the body the rod will be withdrawn and release the whip, and the rod projected into the socket and locking the whip therein when the load is removed from the body and the springs expanded.

902,130. FOLDING HAT-RACK AND KNEELING-STOOL FOR PEWS. FRANK X. AUMANN, Jr., Manitowoc, Wis. Filed Aug. 5, 1907. Serial No. 387,165.



1. The combination with a pew, of a kneeling stool pivotally connected with the pew and arranged to swing upward beneath the seat of the same, a hat rack movable backwardly and forwardly to arrange it for use and to carry it beneath the seat of the pew, and means for connecting the hat rack with the kneeling stool, whereby the former will be automatically operated by the latter.

2. The combination of a folding pivotally mounted kneeling stool, guides, a hat rack slidable in the guides, and means for connecting the hat rack with the kneeling stool.

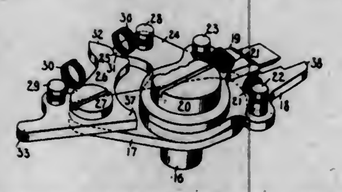
3. The combination of a folding pivotally mounted kneeling stool, guides, a hat rack slidable in the guides, a pivotally mounted lever connected with the hat rack and forming a support for the same, and means for connecting the lever with the kneeling stool.

4. The combination of a pivotally mounted kneeling stool, guides located above and in advance of the kneeling stool, a hat rack provided at its front with projecting pivots operating in the guides, levers connected with the hat rack at the rear portion thereof, and links connected with the levers and with the kneeling stool.

5. The combination of a guide designed to be secured to a pew and consisting of an approximately horizontal front portion and an inclined rear portion, a hat rack provided at its front with a pivot operating in the guide, and a lever connected with the hat rack at a point in rear of the said pivot and fulcrumed at a point beneath the said hat rack to form a support for the same.

[Claims 6 to 9 not printed in the Gazette.]

902,131. TYPE-WRITING MACHINE. GLENN J. BARRETT, Syracuse, N. Y., assignor to The Smith Premier Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed May 21, 1908. Serial No. 434,078.



1. In a typewriting machine, escapement devices including an actuator, a dog movable with said actuator, said dog and actuator also being relatively movable, a device automatically operative to take up the lost motion between the actuator and said dog, and means for resetting said device operated directly by a return movement of the actuator.

2. In a typewriting machine and in escapement mechanism, the combination with a dog and an actuator for said dog, said actuator being movable independently of said dog, of a wedge device for taking up lost motion between said dog and said actuator, said wedge device comprising a pivoted piece having an eccentric edge which acts as a wedge.

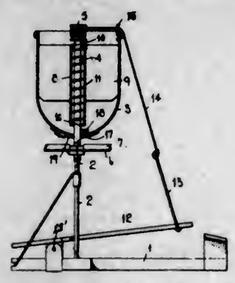
3. In a typewriting machine and in escapement mechanism, the combination with a dog and an actuator for said dog, said actuator being movable independently of said dog, of a wedge device movably connected with said actuator for taking up lost motion between said dog and said actuator, and a stop against which said wedge device is moved by the actuator, said stop coöperating with said wedge device to restore the same normal position relatively to said dog.

4. In a typewriting machine and in escapement mechanism, the combination with a dog and an actuator for said dog, said actuator being movable independently of said dog, of a two-armed piece pivoted to said actuator, one of the arms of said piece having an eccentric edge which acts as a wedge to take up lost motion between said dog and said actuator, a part connected with said dog and coöperating with said eccentric edge, and a stop coöperating with the other arm of said pivoted piece to restore the same to normal position relatively to said dog.

5. In a typewriting machine and in escapement mechanism, the combination of a dog, an oscillatory dog actuator movable independently of said dog, an arm rigid on said actuator, an automatically operating wedge device pivoted to said arm and operating to take up lost motion between said actuator and said dog, and a fixed stop for restoring said wedge device to normal position relatively to said dog.

[Claims 6 to 19 not printed in the Gazette.]

902,132. CHICKEN-EXERCISING FEEDER. ALBERT BRUHN and WILLIAM BRUHN, St. Bonifacius, Minn. Filed Mar. 28, 1907. Serial No. 365,003.



1. In an automatic feeder and exercising device, a hopper, a shaft journaled vertically therein, the lower end of which projects below the hopper and is provided with a horizontally arranged distributer, a spring around the shaft for rotating it in one direction, and means for rotating the shaft against the tension of the spring by the weight of a fowl.

2. In an automatic feeder and exercising device, a hopper, a shaft journaled vertically therein, the upper end of which is provided with a spool, and the lower end with a winged distributer, a spring around said shaft, a cord adapted to be wound around the spool, and means connected with said cord for actuating the shaft against the tension of the spring by the weight of a fowl.

3. In an automatic feeder and exercising device, a hopper, a casing therein, a shaft journaled in said casing, the upper end of which is provided with a spool and the lower end projects below the hopper, and is provided with a winged distributer, a coiled spring within the casing, one end of which is connected with the shaft and the other with the casing, a cord adapted to be wound upon the spool, and a tripping lever connected with the other end of the cord, whereby the lever will cause the shaft and distributer to be rotated in opposition to the spring.

4. In an automatic feeder and exercising device, a hopper provided with an opening in its lower end, regulating devices therefor, a shaft journaled in the hopper with its lower end extending through said opening, a winged disk on the lower end of the shaft below the opening, a pin projecting from the shaft above the opening, and means for rotating the shaft by the weight of a fowl.

5. In an automatic feeder and exercising device, a hopper provided with an opening in its lower end, two gates pivotally secured at one end to the hopper and having their free ends adapted to be moved from and toward each other, a shaft journaled vertically in the hopper, with its lower end projecting through said opening between said gates, a disk adjustably mounted on the lower end of the shaft and having its upper face provided with radially arranged wings, an agitator on the shaft above said opening, a spring for rotating the shaft in one direction, and means for rotating the shaft in the opposite direction by means of the weight of a fowl.

[Claims 6 to 8 not printed in the Gazette.]

902,133. COMBINATION TENT AND SLEEPING-BAG. FREDERICK W. BURCH, Pueblo, Colo. Filed Feb. 20, 1908. Serial No. 416,899.

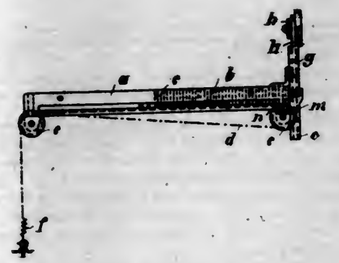


1. A combination tent and sleeping bag comprising a body portion approximately rectangular in form, flaps secured to the longitudinal edges of said body portion, said flaps being approximately right-triangular in shape and having their bases at the ends of the body and their apices approximately centrally of said longitudinal edges, a cushion secured centrally of the body portion the entire length thereof, the longitudinal edges of the cushion being parallel with the longitudinal edges of the body, said cushion being of less width than the body, the portions of the body between the longitudinal edges of the cushion and the longitudinal edges of the body serving as flaps when the device is employed as a bed.

2. A combined tent and sleeping bag, comprising a body portion, flaps carried by said body portion, and a cushion secured centrally of the body portion the entire length thereof the longitudinal edges of the cushion being parallel with the adjacent edges of the body, said cushion being of less width than the body, the portions of the body between the longitudinal edges of the cushion and the longitudinal edges of the body serving as flaps when the device is employed as a bed.

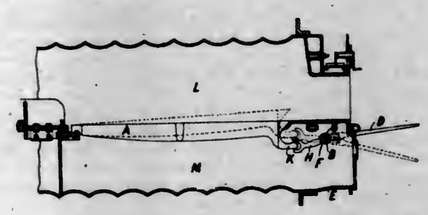
902,134. TYPOGRAPHER'S COMPOSING AND FOUNDING MACHINE. HEINRICH BURRIS, Hemer, Germany. Filed Nov. 8, 1907. Serial No. 401,301.

In a typographers' composing and founding machine, an automatic device for charging-up the crucible during the founding process; comprising in combination with the crucible receiving the founding mass and with the old type-rows to be melted down in said crucible; an adjustable type-galley disposed with one end directly above said crucible and designed to receive said old type-rows, means to force said old type-rows to one side of said galley facing said crucible, an enlarged face wall on one side of said galley facing the crucible, a slide disposed in said face wall to close and open automatically so as to allow in the latter case of one of said type-rows being supplied to said



crucible, and means to operate said slide, all for the purpose set forth.

902,135. FURNACE-GRATE AND FIRE-BAR. RICHARD CAMPBELL, Liverpool, England. Filed Nov. 13, 1906. Serial No. 343,275.



1. In a furnace-grate, the combination of a series of independent bars; a tube provided at one end with a lever by which it can be oscillated, said tube having a longitudinal slot formed therein; a screw shaft mounted within the tube; an arm mounted upon the screw shaft and projecting through the longitudinal slot in the tube; and means for turning said screw shaft so as to traverse the arm longitudinally and bring it into engagement with one or another of the grate-bars.

2. In a furnace-grate, the combination of a series of independent grate-bars; a screw shaft; an outwardly-projecting arm provided with a threaded boss which is mounted on the shaft, the outer end of the arm being adapted to engage a projection on the grate-bars; means for turning the shaft so as to traverse the arm longitudinally; and a slotted tube surrounding the screw shaft, with the arm projecting through the slot, so that by oscillating said tube it will impart an oscillating or shaking movement to the arm for the purpose of shaking the grate-bars.

3. In a furnace-grate, the combination of a series of independent grate-bars; a hollow shaft journaled in bearings in the side of the furnace or boiler and projecting through the same, said hollow shaft being formed with a longitudinal slot in that side adjacent to the grate-bar ends; a screw shaft journaled in the hollow shaft; an arm having one end adapted to engage one or another of said grate-bars; a threaded boss formed upon the arm and mounted on the screw shaft; means at the outer end of the screw shaft for turning the same; and means located without the furnace for shaking or oscillating the hollow shaft.

4. In a furnace-grate, the combination of a series of independent bars; an arm normally in engagement with one or another of said bars; means for shifting the arm laterally to bring it into engagement with one or another of the bars and to hold it in such relation; and means for rocking the arm, whereby the bars may be independently shaken.

902,136. COMPOUND RAIL. THOMAS S. CROMER, Linden, Tex., assignor of one-half to John E. A. Banger, Linden, Tex. Filed Nov. 18, 1907. Serial No. 402,718.

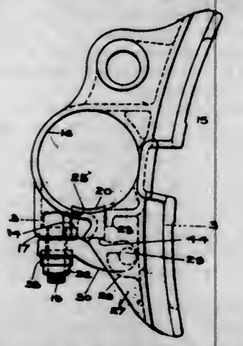


1. A compound rail comprising a base portion having transversely spaced flanges, and a tread portion, the latter arranged to break joint with sections of the base portion, said tread portion comprising a head and a web, the latter entering the space between the flanges of the base portion and said web having a thickened portion between its ends to fill widened spaces formed between the flanges of adjacent base portions.

2. A compound rail consisting of a base portion and a tread portion, the latter arranged to break joint with the former, the base portions having transversely spaced flanges, the space between said flanges gradually widening at opposite ends, and the tread portion comprising a head and a web, the latter being thickened between its ends and tapered outward to snugly fit the enlarged end portions of the spaces formed between the flanges of adjacent base portions.

3. A compound rail consisting of a base portion and a tread portion, the latter arranged to break joint with the former, the base portion having transversely spaced flanges, the space between said flanges gradually widening at opposite ends and the tread portion comprising a head and a web, the latter being thickened between its ends and tapered outward to snugly fit the enlarged end portions of the spaces formed between the flanges of adjacent base portions, and said head having grooves in its underside adjacent to the web to receive the upper edge portions of the flanges of the base portions.

902,137. RAILWAY-CAR BRAKE. SETH A. CRONE, East Orange, N. J. Filed Aug. 5, 1908. Serial No. 447,021.



1. A brake-head, and means carried thereby for securing the same comprising a hinged bar, means for moving and securing the free end of said bar, and a locking-block above and engaged by said bar; substantially as set forth.

2. A brake-head, and means carried thereby for securing the same comprising a hinged bar, means for moving and securing the free end of said bar, and a locking-block above and engaged by said bar, said bar having a curved upper surface where it engages said block; substantially as set forth.

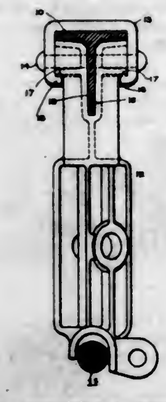
3. A brake-head, and means carried thereby for securing the same comprising a hinged bar, a screw and nut for moving and securing the free end of said bar, and a locking-block above and engaged by said bar; substantially as set forth.

4. A brake-head having below its applying sleeve a chamber open at the top and one part of which is open at the bottom, and securing means carried by the head and comprising a hinged bar below said chamber, a screw and nut for moving and securing the free end of said bar, and a locking-block in said chamber and exposed at the open bottom thereof to said bar, said bolt having its head confined in said chamber and thence extending downwardly through said bar and receiving its nut below the latter; substantially as set forth.

5. A brake-head having below its applying sleeve a chamber open at the top and bottom, and securing means carried by the head and comprising a hinged bar below said chamber, means for moving and securing the free end of said bar, and a locking-block in said chamber and exposed at its lower end to said bar, said chamber and block having overlapping parts forming shoulders to prevent the complete descent of the block from said chamber; substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

902,138. RAILWAY BRAKE-BEAM. SETH A. CRONE, East Orange, N. J. Filed Aug. 25, 1908. Serial No. 450,162.



1. A brake-beam comprising a compression member, a truss rod and a strut, said compression member being a rolled section and the end of said strut engaging said member and being seated on a horizontal portion of the same and having shoulders on its upper and lower sides, combined with a clip transversely embracing said compression member and having inturned lips engaging said shoulders; substantially as set forth.

2. A brake-beam comprising a compression member, a truss rod and a strut, said compression member being a rolled section and the end of said strut engaging said member and being seated on a horizontal portion of the same and having shoulders on its upper and lower sides, combined with a clip transversely embracing said compression member and having inturned lips engaging said shoulders, said shoulders and lips being inclined so as to wedge together; substantially as set forth.

3. A brake-beam comprising a compression member which is of T-shape in cross section, a truss rod and a strut, the end of the latter being recessed to pass on the web of the compression member and formed with shoulders on its upper and lower sides, combined with a clip transversely embracing said compression member and the end of said strut and having inturned lips engaging said shoulders; substantially as set forth.

4. A brake-beam comprising a compression member which is of T-shape in cross section, a truss rod and a strut, the end of the latter being recessed to pass on the web of the compression member and formed with shoulders on its upper and lower sides, combined with a clip transversely embracing said compression member and the end of said strut and having inturned lips engaging said shoulders, said shoulders and lips being inclined so as to wedge together; substantially as set forth.

5. A brake-beam comprising a compression member which is of T-shape in cross section, a truss rod and a strut, the end of the latter being recessed to pass on the web of the compression member and formed with shoulders on its upper and lower sides, combined with a clip transversely embracing said compression member and the end of said strut and having inturned lips engaging said shoulders, the outer end of said strut being curved to permit angular movement of the strut in applying the same and to enable a firm seating of the end of the strut against the compression member; substantially as set forth.

902,139. ATTACHMENT FOR ROAD-MACHINES. JOHN T. EADY, Carrollton, Ga. Filed Feb. 29, 1908. Serial No. 418,516.



1. The combination with a scraper, of a bar or member extending longitudinally of the scraper and arranged to project from either end of the same for tearing down embankments at the side of a road, and means for adjustably securing the bar or member to the scraper.

2. The combination with a scraper, of a bar or member extending longitudinally of the scraper and having pointed terminals and slidably connected with the scraper so as to project from either end thereof.

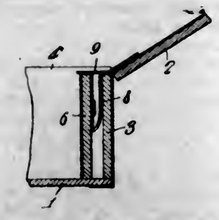
3. The combination with a scraper, of a bar or member disposed longitudinally of the scraper and projecting from one end thereof for tearing down an embankment at the side of a road, and a guard arranged at the end of the scraper from which the bar or member projects to prevent the said end of the scraper from catching in an embankment.

4. The combination with a scraper, of a bar or member disposed longitudinally of the scraper and projecting from one end thereof for tearing down an embankment at the side of a road, and a guard consisting of a plate arranged at the end of the scraper from which the bar or member projects and extending in advance and in rear of the scraper.

5. The combination with a scraper, of a bar or member disposed longitudinally of the scraper and projecting from one end thereof for tearing down an embankment at the side of a road, and a guard consisting of a plate provided with an opening receiving the bar or member, said guard being extended in advance and in rear of the scraper.

[Claims 6 to 14 not printed in the Gazette.]

902,140. CIGAR-BOX AND LID. WILLIAM J. FARRELL, Johnstown, N. Y. Filed Mar. 5, 1908. Serial No. 419,334.

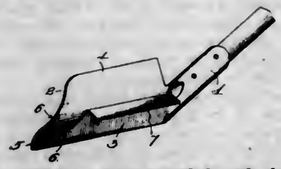


1. The combination with a receptacle and cover, of a partition within the receptacle forming a compartment with the rear wall thereof, and a flexible apron carried by the cover adapted to seal the compartment.

2. A receptacle having a cover and partition therein forming a compartment with the rear wall of said receptacle for the reception of said cover, a main hinge and an auxiliary hinge member secured to the cover and partition and adapted to keep the two connected when the cover is in the compartment.

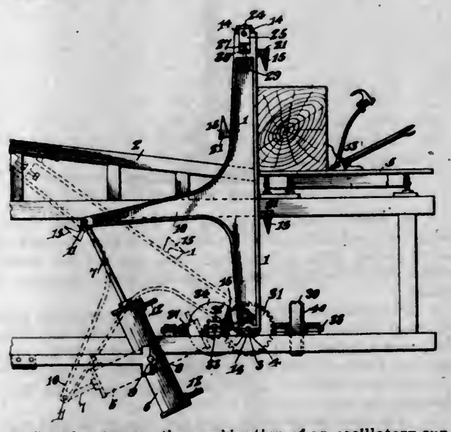
3. A receptacle and cover connected by a main hinge, a partition firmly secured to the sides of the receptacle and forming a compartment for the reception of the cover when detached from the main hinge, flexible auxiliary hinge members secured to the cover and partition and adapted to maintain the connection between the cover and receptacle when the cover is detached from the main hinge and inserted in the compartment.

902,141. LAWN-TRIMMING IMPLEMENT. DWIGHT H. FINCH, Manchester, Iowa. Filed Mar. 2, 1908. Serial No. 418,783.



A device of the character specified made from a single piece of metal bent to form a handle receiving member and a head, the latter comprising a vertical and an obliquely disposed outwardly curved side piece or member connected by a bottom strip, the former of the side pieces or members being bent outwardly at its upper edge to form an outwardly extending guide flange, the bottom strip extending to a point in advance of the guide flange and the side pieces having front inwardly curved sharpened cutting edges.

902,142. LOG-TURNER. AAGE FOSS and LOREN COOLIDGE, Montesano, Wash. Filed Sept. 12, 1907. Serial No. 392,581.



1. In a log turner, the combination of an oscillatory support adapted to fit against one of the faces of a log, a cylinder having a piston connected with the support for actuating the same, an endless chain mounted on the support and provided with log-engaging means spaced apart a sufficient distance to permit the log to fit against a support and adapted to engage a log either at the top or bottom, and gearing connected with the endless chain for operating the same.

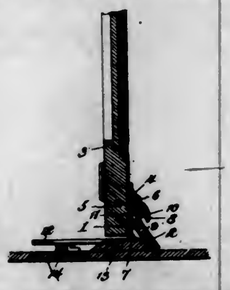
2. In a log turner, the combination of an oscillatory support adapted to fit against one of the faces of a log, an endless chain provided with dogs tapered longitudinally of the chain to form front engaging portions and provided with straight rear edges, whereby the dogs are adapted to move a log in either direction, means for oscillating the support, and gearing for operating the chain.

3. In a log turner, the combination of an oscillatory support having a groove provided with inwardly extending flanges, an endless chain mounted on the support and operating in the groove and adapted to engage the inner faces of the said flanges and provided with exterior dogs slidable on the outer faces of the said flanges, said dogs being interlocked with the support by the endless chain, and gearing for operating the chain.

4. In a log turner, the combination of an oscillatory support provided with a front groove and having its ends bifurcated, the upper end of the support being also provided with opposite recesses, bearing blocks arranged in the recesses and slidably interlocked with the walls thereof, an upper shaft carried by the bearing blocks, a lower shaft forming a pivot for the support, sprocket wheels mounted on the upper and lower shafts, a chain meshing with the sprocket wheels and operating in the front groove and provided with dogs and interlocked with the support by the said chain, adjusting devices connected with the bearing blocks for stretching the chain, and gearing connected with the lower shaft for operating the chain.

5. In a log turner, the combination of an oscillatory support provided at its front with a longitudinal groove, sprocket wheels mounted at each end of the support, a chain arranged on the sprocket wheels and extending along the support at the front and back of the same, the front portion of the chain being located within the said groove, and dogs having flat inner faces to slide on the inner face of the support at opposite sides of the groove and provided with reduced integral shanks extending into the groove and forming links of the chain and interlocked with the support by means of the said chain.

902,143. WEATHER-STRIP. SIMON FRIGONE, Chicago Lawn, Ill. Filed Apr. 18, 1908. Serial No. 427,853.



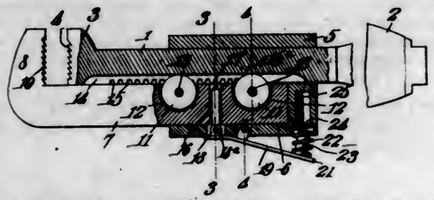
1. A weather strip including an inner flexible elastic strip arranged to fit against a door and a door sill, and an outer hinged strip arranged to bear against the elastic strip to hold the same against the door when the latter is closed.

2. A weather strip including an attaching strip, an elastic strip connected at its upper edge with the attaching strip and adapted to fit against the outer face of the door and the door sill, and an outer hinged strip supported by the attaching strip and arranged to bear against the inner elastic strip when the door is closed.

3. In a weather strip, the combination of an attaching strip provided with depending eyes and designed to be secured to the outer face of the door, an elastic strip having its upper edge secured between the attaching strip and the door and arranged to fit against the latter and the sill thereof, a hinged strip provided with eyes linked into the eyes of the attaching strip and arranged to bear against the elastic strip when the door is closed, and a curved supporting bar arranged to extend inwardly from the sill to support the inner and outer strips in an elevated position when the door is opened.

902,144. WRENCH. IRA L. FRYE, Vandergrift, Pa. Filed Apr. 23, 1908. Serial No. 428,806.

1. A wrench comprising a pair of parallel shanks each having a jaw at one end, a handle attached to the opposite end of one shank and a sleeve on the end of the other shank slidable on the handled shank, anti-friction rollers between the two shanks, pins extending through the sleeve, the slidable shank and the rollers, and serving as bearings for said rollers and means for fastening the sleeve to its shank and a locking mechanism on one shank adapted to engage holding means on the other shank.

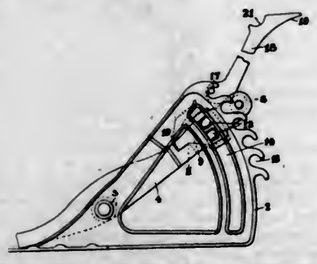


2. A wrench comprising a pair of parallel shanks in clos proximity to each other, coöperating jaws, one on the end of each shank, a handle on the opposite end of one shank and a sleeve slidable on said shank and fastened on the opposite end of the other shank, rollers pivoted in one shank adapted to run on the bottom of a groove in the other shank, removable pins passing through the sleeve and shank fastening them together and serving as pivots for said rollers, and a T-headed spring actuated dog movable through said sleeve and shank adapted to engage transverse slots in the handled shank and lock the jaws to the adjusted position.

3. A wrench comprising a shank having a jaw at one end and a handle at the other a second shank parallel with and in close proximity thereto provided with a coöperating jaw on one end and removably attached at its other end by pins to a sleeve slidable on the first named shank, rollers pivoted on said pins within pockets made in said second shank adapted to run on the bottom of a groove in the adjacent side of the other shank, said side having a plurality of transverse closely spaced slots, a T-headed dog slidable in the shank carrying the rollers and adapted to engage by its T-head in said slots and lock the shanks together, and a pivoted finger lever for operating said dog.

4. A wrench comprising a shank having a handle on one end and a jaw on the other end, said shank formed with a longitudinal groove on one side and a series of closely spaced transverse slots on the same side perpendicular to said groove, a sleeve slidable on said shank and having secured thereto a movable shank parallel to the first or stationary shank and lying close thereto said movable shank having a coöperating jaw at its outer end and pockets in the side adjacent the grooved side of the stationary shank, rollers pivoted in said pockets and running on the bottom of said groove, a dog slidable in a perforation in said movable shank, and sleeve, and adapted to engage the transverse slots in the fixed shank, and a finger lever fulcrumed to said sleeve and pivoted at one end to said dog.

902,145. LOAD LIFTING AND LOWERING APPARATUS. VICTOR FUNCK, Luxemburg, Germany. Filed June 11, 1908. Serial No. 438,007.



1. In load lifting and lowering apparatus, the combination of a stationary frame with an arc-shaped slot therein, a load lever having a movement proportional to the movement of the load pivoted in said frame with a transverse aperture therein, a locking device having a front shoulder and a rear shoulder and extending transversely through said arc-shaped slot and also through the aperture in said lever, said front shoulder being adapted to engage said load lever, and said rear shoulder being adapted to transmit a canting strain opposing the canting tendency of said lever, whereby the locking device is released and the load is lowered in a corresponding degree, as set forth.

2. In load lifting and lowering apparatus, the combination of a stationary frame with an arc-shaped slot therein, a load lever having a movement proportional to the movement of the load, pivoting in said frame, with a transverse aperture therein, a locking piece having a front shoulder and a rear shoulder, extending transversely through the load lever aperture, a fork with apertured prongs formed on said load lever adapted to embrace said locking piece and a shoulder formed at the root of said fork, adapted to engage the front shoulder on said locking piece, and locking blocks mounted transversely in said locking piece and extending in said arc-shaped slot.

3. In load lifting and lowering apparatus the combination of a stationary frame with an arc-shaped slot therein, a load lever having a movement proportional to the movement of the load, with a transverse aperture therein pivoted in said frame, a locking piece having a front shoulder and a rear shoulder, extending transversely through the load lever aperture, a shoulder formed on said lever adapted to engage the front shoulder on said locking piece, a transverse aperture in said locking piece, an open-sided recess in the rear edge of said locking piece, locking blocks mounted in said transverse aperture and open-sided recess respectively and extending through an open arc-shaped slot and a hand lever adapted to engage the rear shoulder on said locking piece, in order to exert on the locking blocks, a canting movement directed oppositely to the canting force exerted by the load lever on said locking piece, as set forth.

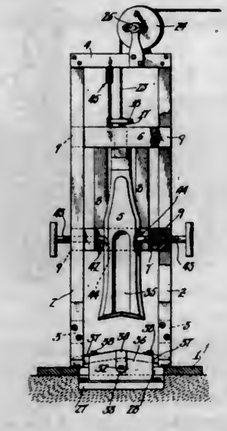
4. In load lifting and lowering apparatus, the combination of a stationary frame with an arc-shaped slot therein, a load lever having a movement proportional to the movement of the load pivoted in said frame with a fork having apertured prongs, and a shoulder at the root of said fork, a locking piece extending through said apertured prongs, having a front shoulder adapted to be engaged by the shoulder on the load lever fork, and a rear shoulder, and transverse apertures, locking blocks in said apertures extending in said arc-shaped slot, a series of teeth-like recesses on said frame concentric with said arc-shaped slot, and a hand lever formed at one end with a pivot pin adapted to serve as a fulcrum for the said hand lever in one of the teeth-like recesses for lifting the load, and formed at its other end with a recess adapted to engage the load lever as a fulcrum, and with a toe adapted to engage the rear shoulder of the locking piece to lower the load, as set forth.

902,146. DRILL-SHARPENER. DORSEY E. GILSON, Coalinga, Cal. Filed Nov. 25, 1907. Serial No. 403,817.

1. In a drill sharpener, an anvil having its upper face formed into a die and recessed transversely, a fuller removably seated in said recess provided with a perforated depending arm and having its upper face corresponding with the surface of the die, a bolt through said arm, an adjustable fuller at each end of the anvil, and means for alternately moving a drill longitudinally relatively to the anvil.

2. In a drill sharpener, an anvil having its upper face formed into a die with its ends perforated, a fuller at each end of the die having its inner end concaved and tapered and its body provided with a longitudinal slot, a bolt through each slot into the perforation of the die, a fuller removably secured to the center of the die and means for alternately moving a drill longitudinally relatively to the anvil.

3. In a drill sharpener, an anvil having its upper face formed as a die, vertically arranged slotted standards, a frame reciprocally mounted on said standards provided with projections for fitting in said slots, means in the upper portion of said frame for engaging with a drill bit, means in the lower part of the frame for adjustably securing said bit in position, and means for reciprocating the frame.



4. In a drill sharpener, an anvil having its upper face formed into a die, vertically arranged slotted standards, a frame reciprocally mounted in said standards comprising two cross heads and spacing strips, a socket mounted in the upper cross head and adjusting screws in the lower cross head.

5. In a drill sharpener, an anvil having its upper face formed into a die, vertically arranged standards provided with a pulley at their upper ends, a frame reciprocally mounted between said standards comprising a perforated upper cross head and a recessed lower cross head and vertically arranged connecting strips, a socket rotatably mounted in the perforation of the upper cross head and provided with means adapted for engaging with the stem of a drill bit by rotary movement, inwardly projecting screws in the ends of the lower cross head, and a cable connected with said socket and extending over said pulley for reciprocating said frame.

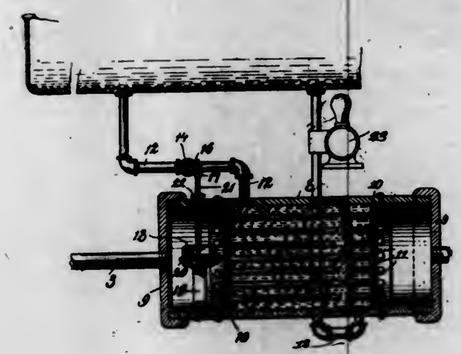
[Claim 6 not printed in the Gazette.]

902,147. TIRE. EDWIN T. GREENFIELD, Kiamesha, N. Y. Filed Oct. 30, 1906. Serial No. 341,255.



In a tire, the combination of a resilient tube, an armoring therefor consisting of sheet-metal of U-shape cross-section partially inclosing the tube and so formed as to provide spaces between the tube and armoring into which the tube may fill when depressed, said armoring having openings in the face thereof, and projections supported on the tube and extending through the openings in the armoring, said projections being provided with means for preventing them from passing through said openings, substantially as set forth.

902,148. HEATING SYSTEM. EDWIN T. GREENFIELD, Kiamesha, N. Y. Filed Jan. 20, 1908. Serial No. 411,584.



1. In a heating system, a steam-pipe, a cooler connected therein having a plurality of pipes therein through which the steam passes, means for circulating a cooling agent about said pipes of the cooler, a thermostatic regulator mounted in the steam passage beyond the outlet of said pipes of the cooler, and means actuated by said regulator for controlling the flow of said cooling agent, substantially as set forth.

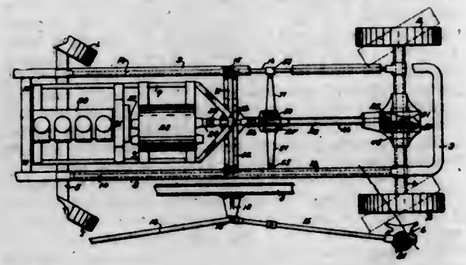
2. In a heating system for trains, a steam-pipe on each of the cars of the train, flexible connections between the several pipes, a cooler connected in one of said steam-pipes having a plurality of pipes therein through which the steam passes, means for circulating a cooling agent about said pipes of the cooler, a thermostatic regulator mounted in the steam passage beyond the outlet of said pipes of the cooler, and means actuated by said regulator for controlling the flow of said cooling agent, substantially as set forth.

3. In a heating system for trains propelled by steam locomotives, a steam-pipe on each of the cars of the train, flexible connections between the several pipes, a cooler mounted on the tender and connected in the steam-pipe thereon, said cooler having a plurality of pipes therein through which the steam passes, pipes connecting said cooler with the tank of the tender for circulating cooling water about said pipes of the cooler, a valve in one of said water-pipes, a thermostatic regulator mounted in the steam passage on the tender beyond the outlet of said pipes of the cooler, and a connection between said regulator and said valve, substantially as set forth.

4. In a heating system, a steam-pipe, a cooler connected therein comprising a casing, headers therein, a plurality of pipes extending between said headers and having their ends secured in openings therein, pipes for carrying a cooling agent entering said casing between said headers, a thermostatic regulator mounted within said casing between the header to which the outlet ends of said pipes are connected and the end of the casing adjacent thereto, a valve in one of said pipes carrying the cooling agent, and a connection between said regulator and said valve, substantially as set forth.

5. In a heating system for trains propelled by steam locomotives, a steam-pipe on each of the cars of the train, flexible connections between the several pipes, a cooler mounted on the tender and connected in the steam-pipe thereon, said cooler comprising a casing, headers therein, a plurality of pipes extending between said headers and having their ends secured in openings therein and a thermostatic regulator mounted within said casing between the header to which the outlet ends of said pipes are connected and the end of the casing adjacent thereto, pipes connecting the tank of the tender with the casing of the cooler between the headers therein for circulating cooling water about said pipes of the cooler, a valve in one of said water-pipes and a connection between said valve and said regulator, substantially as set forth.

902,149. DRIVING MECHANISM FOR MOTOR-DRIVEN VEHICLES. HANS T. HANSEN, Milwaukee, Wis., assignor, by mesne assignments, to T. D. Lovering, St. Paul, Minn. Filed May 29, 1905. Serial No. 262,760.



1. In a motor driven vehicle, the combination of a motor mounted on a yielding frame, and connected to drive the four wheels through rotary axle shafts,—said connections comprising a flexible motor shaft, and a set of transmission shafts connected therewith by differential gearing, and operatively connected to drive the respective axle shafts, one of the transmission shafts being flexibly jointed between said differential gearing and the axle shaft, and supported at the joint from the yielding frame.

2. In a motor driven vehicle, the combination with the axle bars, of a main frame yieldingly supported therefrom; a casing connecting the axle bars and supported from the main frame at an intermediate point; a motor mounted on the main frame and provided with jointed power transmitting shafting entering said casing; and power transmitting connections in said casing, operatively connected with said jointed shafting; said casing and power transmitting connections being provided with flexible joints at the point of support from the main frame.

3. In a motor driven vehicle, the combination with the axle bars, of a main frame yieldingly supported therefrom; a casing connecting the axle bars and supported from the main frame at an intermediate point; a motor mounted on the main frame and provided with jointed power transmitting shafting entering said casing; and power transmitting connections in said casing, operatively connected with said jointed shafting; said casing and power transmitting connections being provided with flexible joints at the point of support from the main frame, together with a set of strut rods connected with one of the axle bars and having jointed connection with the main frame in a transverse line through said flexible joints.

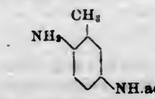
4. In a motor driven vehicle, the combination with the axle bars, of a main frame yieldingly supported therefrom; a casing connecting the axle bars and supported from the main frame at an intermediate point; a motor mounted on the main frame; power transmitting connections located in said casing and provided with differential gearing; and a jointed shaft connected to be driven by the motor and arranged to transmit motion to the differential gearing; said power transmitting connections and casing being provided with flexible joints at the point of connection with the main frame.

5. In a motor driven vehicle, having a motor mounted on a yielding frame and connected to drive the four wheels through rotary axle shafts; a flexible motor shaft, and a set of transmission shafts, having gear connection with the motor shaft; one of the transmission shafts being flexibly jointed and supported from the yielding frame; together with a casing for the transmission shafts and gears, having a flexible joint inclosing the joint in the transmission shaft.

[Claims 6 to 8 not printed in the Gazette.]

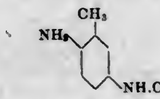
902,150. PARA-AMINOACETYL META-TOLUIDIN. CARL HEIDENREICH, Vohwinkel, near Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Mar. 10, 1908. Serial No. 420,249. (Specimens.)

1. The herein-described new para-amino-acidyl-meta-toluidins having the formula:



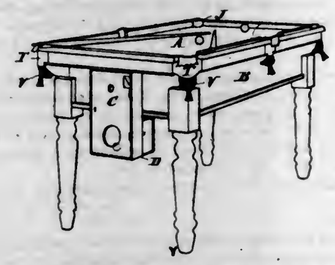
which compounds are crystalline powders soluble in water and easily soluble in alcohol; aminotoluidin (CH_3:NH_2:NH_2—1:3:6) being formed by heating them with caustic alkalies, substantially as described.

2. The herein-described new aminoacetyl-toluidin of the formula:



which is a whitish crystalline powder melting at 71° C., soluble in water, alcohol, ether and benzene; aminotoluidin (CH_3:NH_2:NH_2—1:3:6) being formed by heating it with caustic alkalies, substantially as described.

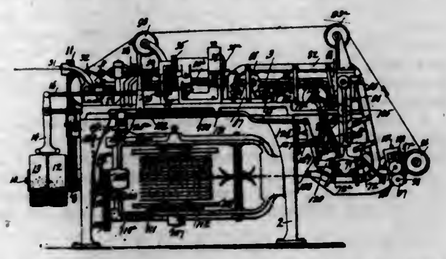
902,151. BILLIARD-TABLE AND THE LIKE. FRANK HEPTON, Woolwich, England. Filed Feb. 15, 1905. Serial No. 245,645.



1. A coin freed attachment for billiard and like tables comprising in combination with the table having inclined chutes the casing (C), means forming a coin receptacle, an incline (15), and a flap dividing said casing into two compartments, the upper one having an opening in its back and the lower one an opening in its front, the said casing being so located as to permit the passage of the playing balls from the converging point of a plurality of inclined chutes of the table through the opening in the said upper compartment onto the said incline (15), and coin freed means in said casing, adapted to prevent the balls from reaching the lower compartment of the said casing.

2. A coin freed attachment for billiard and like tables, comprising in combination with the table having inclined chutes a casing (C), means forming a coin receptacle, an incline (15), and a flap dividing said casing into two compartments, the upper one having an opening in its back and the lower one an opening in its front, the said casing being so located as to permit the passage of the playing balls from the converging point of a plurality of inclined chutes of the table through the opening in the said upper compartment onto the said incline (15), means being provided at the base of the said lower compartment, constituting a semi-circular track for the balls, a guide for directing the playing balls round said track and coin freed means in said casing preventing the balls from reaching the lower compartment of the said casing.

902,152. BARB-WIRE MACHINE. WILLIAM A. KILMER, Cleveland, Ohio, assignor to Carroll Barb-Wire Manufacturing and Fence Co., Peoria, Ill., a Corporation of Illinois. Filed Oct. 20, 1904. Serial No. 229,239.



1. In a machine of the character described, the combination of wire feeding devices, a coiling member for producing a barb, means for projecting the barb along its carrying wire, and mechanism for receiving and retaining the barb in its projected position on the carrying wire, substantially as specified.

2. In a machine of the character described, the combination of wire feeding devices, a coiler for placing a barb on its carrying wire, a reciprocally arranged member in the coiler adapted to move the barbs along its carrying wire after forming, and mechanism for retaining the barbs in such positions, substantially as specified.

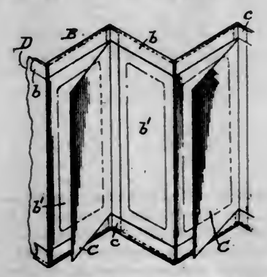
3. In a machine of the character described, the combination of wire feeding devices, means for placing a barb on its carrying wire, means for corrugating a second wire, and mechanism for twisting together the barb carrying and corrugated wires, substantially as specified.

4. In a machine of the character described, the combination of wire feeding devices, means for placing a barb on its carrying wire, means for corrugating a second wire at intervals, mechanism for placing the corrugations of the last mentioned wire coincident with the barbs of the first mentioned wire, and means for twisting the barb carrying and corrugated wires, substantially as specified.

5. In a machine of the character described, the combination of a coiling member, a plunger reciprocally carried in the member, a carrier movable in advance of the coiling member, and a twister, all substantially as shown and described.

[Claims 6 to 28 not printed in the Gazette.]

902,153. FILM-HOLDER. GAYLORD LOGAN, Albany, N. Y. Filed Mar. 5, 1906. Serial No. 304,221.



1. A film holder comprising an elongated band divided into sections by means of creased transverse lines, and having a backing of transparent material, and retaining strips extending along the outer portions of said backing.

2. A film holder comprising an elongated band having retaining strips folded over onto the body of the band, and creased transverse lines dividing said body and retaining strips into separate sections and a separating leaf arranged between two oppositely disposed sections.

3. A film holder having an elongated band divided into sections by means of creased transverse lines and provided with retaining strips folded over on to the face of the band and with openings formed in said sections, and a back formed of transparent material, substantially as shown and described.

4. A film holder having an elongated band divided into sections by means of creased transverse lines, and provided with retaining strips folded over on to the face of said band, with a transparent back, and a separating leaf arranged between two opposite sections, substantially as shown and described.

5. A film holder having the combination of an elongated band provided with retaining strips folded over on to the face of said band, and divided into sections by means of creased transverse lines, a back of transparent material, and a separating leaf of paraffin paper arranged between two opposite sections, substantially as shown and described.

[Claim 6 not printed in the Gazette.]

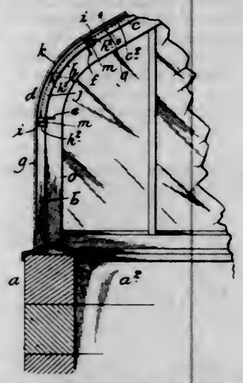
902,154. CELESTIN-BLUE SULFONIC ACID. WILHELM LOMMEL, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed June 23, 1908. Serial No. 439,979.

The herein-described new sulfonic acid of celestin blue of the probable formula:

$$C_{17}H_{16}N_2O_4.SO_3H,$$

which is in the free state a dark powder which dissolves in water and in sulfuric acid with a blue color; dissolves in dilute hydrochloric acid with a red color and dissolves in acetic acid with a pure blue color; and produces when printed with chromium compounds on cotton pure blue shades, substantially as described.

902,155. GREENHOUSE CONSTRUCTION. WILLIAM H. LUTTON, Jersey City, N. J. Filed Apr. 27, 1908. Serial No. 429,350.

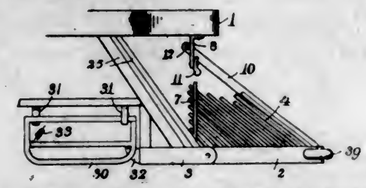


1. The herein described means for forming a curved eave construction for greenhouses provided with the usual rafters and side posts or bars, comprising separate curved segmental metal brackets or supports secured to the lower ends of the rafters and to the tops of the side bars or supports, and curved segmental pieces of wood secured to said brackets or supports and forming a continuation of the rafters and connecting the same with the tops of the side bars or posts.

2. The herein described means for forming a curved eave construction for greenhouses provided with the usual rafters and side posts or bars, comprising separate curved segmental metal brackets or supports secured to the lower ends of the rafters and to the tops of the side bars or supports, and curved segmental pieces of wood secured to said brackets or supports and forming a continuation of the rafters and connecting the same with the tops of the side bars or posts, and transparent panels placed between said curved segmental members.

3. In an eave construction for greenhouses, a curved segmental bracket provided at its opposite ends with outwardly directed ears h^2, and between said ends with outwardly directed ears h^3, and a curved segmental member secured to said bracket.

902,156. SAFETY APPLIANCE FOR STREET-CARS. LOWELL M. MAXHAM, Boston, Mass. Filed May 25, 1906, Serial No. 318,610. Renewed Mar. 26, 1908. Serial No. 423,433.



1. A pilot comprising a wedge, and means for collapsing the wedge.

2. A pilot comprising a wedge, and means for changing the planes of the wedge into substantial parallelism.

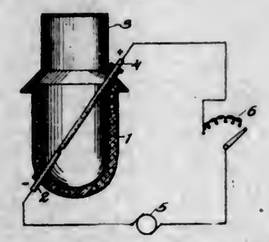
3. A pilot comprising a wedge, and means for changing the planes of the wedge into substantial parallelism perpendicular to the deck of the car.

4. A safety appliance for cars comprising a centrally projecting terminally pivoted member located in a substantially horizontal plane, and members rising from the first-named member to elevated points and disposed to permit the first-named member to be turned up to a housed position.

5. A safety appliance for cars comprising a plow-shaped device having its V-shaped lower front edge terminally pivoted to fixed supports and disposed to be folded up to a housed position, and the members composing the two faces of the plow being constructed to permit such housing and to give access to the car coupling bar.

[Claims 6 to 15 not printed in the Gazette.]

902,157. PROCESS FOR PRODUCING PHOSPHORIC ACID. FREDERICK J. MAYWALD, Brooklyn, N. Y. Filed Sept. 10, 1902. Serial No. 122,759.



1. The process of treating phosphates which consists in producing a low potential arc in a granular mass of phosphates having an earthy base and heating such phosphates to a dissociating temperature, thereby decomposing the same into phosphoric oxid and base, and in collecting the fumes of phosphoric oxid as such.

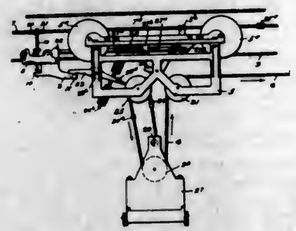
2. The process of treating phosphates which consists in subjecting a granular mass of phosphates having an earthy base to heat and the action of a short electric arc and heating such phosphates to a dissociating temperature, thereby decomposing the same into phosphoric oxid and a basic residue, and in collecting evolved fumes of phosphoric oxid.

3. The process of treating phosphates which consists in subjecting a granular mass of relatively infusible phosphates to heat and the action of a short electric arc while permitting access of air to such mass, and heating such phosphates to a dissociating temperature, thereby decomposing said phosphates into phosphoric oxid and a basic residue, and in collecting the evolved fumes of phosphoric oxid.

4. The process of treating phosphates which consists in subjecting a granular mass of relatively infusible phosphates to the action of the arc produced by an electric current not materially exceeding 60 volts in potential, and heating such phosphates to a dissociating temperature, thereby decomposing said phosphates into phosphoric oxid and a basic residue, and in collecting the fumes of phosphoric oxid produced.

5. The process of treating phosphates which consists in initially heating a granular mass of relatively infusible phosphates by means of a short electric arc produced by an electric current not materially exceeding 60 volts in potential, continuing the heating by passing a low potential current through said granular mass and heating such phosphates to a dissociating temperature thereby decomposing the same into phosphoric oxid and a basic residue, and in collecting the fumes of phosphoric oxid produced.

902,158. HOISTING AND CONVEYING MECHANISM. WILLIAM M. MYERS and GEORGE W. HINTON, St. Joseph, Mo.; said Hinton assignor to said Myers. Filed Feb. 17, 1908. Serial No. 416,274.



1. In a hoisting and conveying mechanism, a carriage, two track cables, for said carriage, four transporting wheels, for said carriage, adapted to travel on said track cables, a hoisting cable; provided with a large shoulder clamp and a small shoulder clamp secured thereon; two pulleys mounted in said carriage, and adapted to receive and carry said hoisting cable thereon, said hoisting cable being adapted to have its extremity attached to a load receiver; an abutment pivotally mounted in said carriage; and adapted to have said large shoulder clamp abutted thereby for supporting a load receiver; a spring actuated bolt slidable in bearings in said carriage, for operating said abutment, into and out of abutting position; a carriage stop, secured on said track cables; provided with a buffer adapted to stop said carriage and to operate said spring actuated bolt; a bracket extending from said carriage stop, a friction roll, rotatably mounted in said bracket; a latch lever, pivotally mounted in said carriage; two spring actuated bolts secured in said carriage for movably holding said lever in normal position; a hook on the outer end of said latch lever, adapted to engage said friction roll, for detachably holding said carriage, the inner end of said latch lever being adapted to be operated by said large shoulder clamp, for disengaging said latch hook from engagement with said friction roll, an emergency stop, secured on said track; cables for stopping said carriage, and winding means for winding said hoisting cable.

2. In a mechanism of the class described, two track cables; a carriage, having four transporting wheels, adapted to travel on said track cables, and an eye projection on said carriage; a clamp cable passing through the eye of said eye projection; a shoulder clamp on said clamp cable, adapted to be moved against said eye piece and thereby move said carriage on said track cables, and moving means for moving said clamp cable.

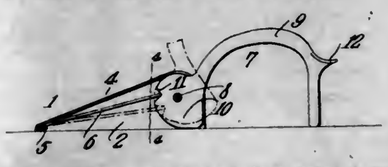
3. In a mechanism of the class described, two track cables; a carriage adapted to travel on said cables; a self clamping stop detachably secured on said track cables and provided with a buffer for stopping said carriage; a bracket on said stop; an inverted T crank provided with an eye in the upper extremity thereof, and pivotally secured on said bracket, a clamp piece guided in bearings attached to said stop; a spring on the lower end portion of said clamp piece, adapted to normally draw said clamp piece downward on said track cables, and to press said cables against the inner surface of said stop; two slotted connecting rods having their lower ends pivotally attached to said clamp piece and their slotted ends slidably and pivotally secured, one on each of the two lower extremities of said inverted T crank; a clamp cable, passing through the eye of said inverted T crank, and moving means for moving said clamp cable.

4. In a mechanism of the character described, in combination, two track cables; supports and tensioning means for said cables; a carriage, adapted to travel on said track; two pulleys rotatably mounted in said carriage; a hoisting cable passing over said pulley and having its extremity adapted to be attached to a load receiver; a carriage stop movably secured on said track cables for stopping said carriage; a clamp cable for operating said carriage and for operating said carriage stop, and operating means for operating said cables.

5. In a mechanism of the character described, a carriage adapted to travel on a track; a stop for stopping said carriage, and provided with a projected friction roll and a latch lever pivotally mounted in said carriage, and provided with a latch hook on the outer end thereof; adapted to detachably engage said friction roll; two spring actuated adjusting bolts for movably holding said latch lever in normal position, and disengaging means for disengaging said hook from said friction roll.

[Claim 6 not printed in the Gazette.]

902,159. TRACE-HOLDER. BERNAL C. MCKAY, Atlanta, N. Y. Filed Jan. 24, 1908. Serial No. 412,463.



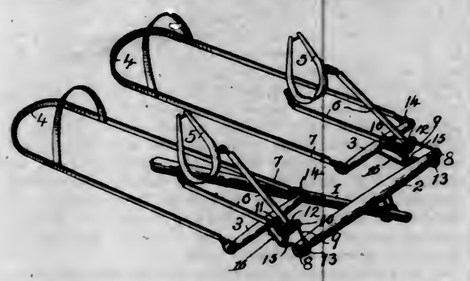
1. A trace holder comprising a hollow casing, a curved finger pivoted between the side plates of said casing at one end and having a notch in rear of its pivot, and a flat spring attached to the other end of the casing with its free end seated in said notch pressing endwise against said finger and adapted to hold the latter in closed or open position.

2. A trace holder comprising an integrally stamped and folded casing or frame higher at one end than at the other, a finger pivoted between the side plates of said frame and closing the opening thereinto, and a spring fixed at one end to said casing with its free end engaging a notch in said curved finger and pressing endwise against the same, said free end of the spring adapted to be carried across the pivot of said finger to hold said finger in either open or closed position when moved thereto.

3. A trace holder comprising an integrally stamped and folded casing or frame, the spaced sides of which are joined above by a downwardly inclined cover having a projection on its lower end, a curved finger having a hub on one end

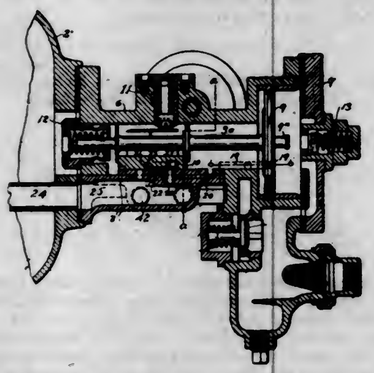
pivotally connected to said side pieces and extending beneath the cover and in close relation thereto, a notch being formed in said hub below said cover, and a straight flat spring fastened to the frame by folding said projection inwardly and having its opposite end seated in said notch and pressing against the hub in an endwise direction.

902,160. NECK-YOKE. ORLANDO H. NASON, Martha Furnace, Pa. Filed June 16, 1908. Serial No. 438,845.



The combination with the hames and the breeching of a double harness, of a main neck yoke, auxiliary neck yokes carried thereby, clips at the ends of said main neck yoke, each of said clips being of U-form and having a roller journaled between its arms and one arm formed with a loop, breast straps extending from the hames and passed around said rollers, clips engaged with the loops of said clips and connected to the auxiliary neck yokes and breeching straps leading from the breeching and engaged with the ends of the auxiliary neck yokes.

902,161. QUICK-ACTION AUTOMATIC RELEASE MECHANISM FOR AIR-BRAKES. JOSEPH E. NORMAND, Hoboken, N. J., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Apr. 28, 1903. Serial No. 154,706.



1. In a railway air-brake system, the combination with a triple valve and train pipe, of a supplemental reservoir; and means whereby the release action of said triple valve will permit air to flow from supplemental reservoir to the train-pipe whereby to assist in the restoration of air-pressure in the latter to release the brakes.

2. In a railway air-brake system; the combination with the triple valve and train-pipe, of a supplemental reservoir; and means whereby the release action of one triple valve will open communication between said supplemental reservoir and the next succeeding section of the train-pipe, as and for the purpose set forth.

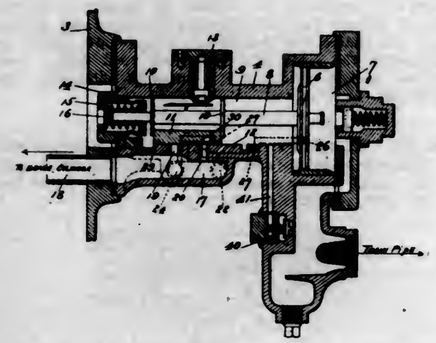
3. In a railway air-brake system, the combination with a triple valve and train-pipe connected therewith, of a supplemental reservoir connected with the train-pipe, a valve mechanism interposed between said supplemental reservoir and train-pipe; and means whereby the release action of the triple valve will establish communication between said supplemental reservoir and train-pipe as set forth.

4. In a brake mechanism, the combination with a train-pipe a supplemental reservoir, of a hand valve controlling communication between said supplemental reservoir and train-pipe for the purpose of charging a long train when it is made up at a terminus, substantially as set forth.

5. In a brake mechanism, the combination with a train-pipe a supplemental reservoir, of a hand valve controlling communication between said supplemental reservoir and train-pipe, for the purpose of releasing the brakes on a long train without the aid of the locomotive, and without bleeding the auxiliary reservoir, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

902,162. QUICK-ACTION AUTOMATIC RELEASE MECHANISM FOR AIR-BRAKES. JOSEPH E. NORMAND, Hoboken, N. J., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Jan. 13, 1904. Serial No. 188,833.



1. In a fluid pressure brake system, the combination with a train pipe, auxiliary reservoir, brake cylinder and supplemental reservoir, of a valve device for opening communication from the supplemental reservoir to the auxiliary reservoir when the brakes are applied, whereby the auxiliary reservoir may be recharged from the supplemental reservoir without releasing the brakes.

2. In a fluid pressure brake system, the combination with a train pipe, auxiliary reservoir, brake cylinder and supplemental reservoir, of a valve device for controlling communication between the supplemental and auxiliary reservoirs when the brakes are applied, and a release valve mechanism operated by an increase in train pipe pressure for opening communication from the supplemental reservoir to the train pipe.

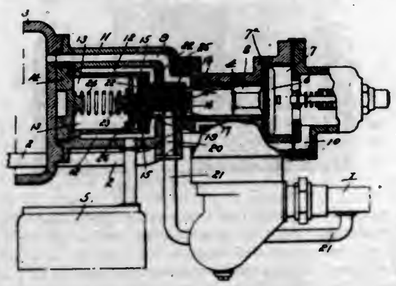
3. In a fluid pressure brake system the combination, with a train pipe, a brake cylinder, an auxiliary reservoir, a supplemental reservoir, and a valve mechanism operated by an increase of pressure in the train pipe to recharge the auxiliary reservoir from the supplemental reservoir, without releasing the brakes.

4. In a fluid pressure brake system the combination, with a train pipe, brake cylinder, an auxiliary reservoir, supplemental reservoir, and triple valve, of means whereby the auxiliary reservoir may be recharged from the supplemental reservoir through the slide valve of the triple valve, without releasing the brakes.

5. A fluid pressure brake system comprising, a train pipe, a brake cylinder, an auxiliary reservoir, a triple valve, a supplemental reservoir, an independent valve controlling communication between said supplemental reservoir and the train pipe, a piston for operating said valve and subject to train pipe pressure on one side and auxiliary reservoir pressure on the other, whereby communication between the supplemental reservoir and the train pipe is controlled by variations in pressure between the auxiliary reservoir and train pipe.

[Claims 6 to 17 not printed in the Gazette.]

902,163. VALVE MECHANISM FOR RAILWAY AIR-BRAKE SYSTEMS. JOSEPH E. NORMAND, Hoboken, N. J., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Nov. 15, 1904. Serial No. 232,813.



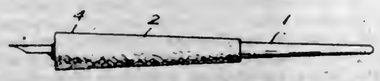
1. In a fluid pressure brake, the combination with a brake cylinder and piston held in release position by fluid under pressure on opposite sides thereof, a valve device operating upon a reduction in train pipe pressure for releasing air from one side of said brake piston to apply the brakes, of a supplemental reservoir and means operating upon an increase in train pipe pressure, for opening communication from the supplemental reservoir to the train pipe.

2. In a fluid pressure brake, the combination with a brake cylinder and piston held in release position by fluid under pressure on opposite sides thereof, a valve device operating upon a reduction in train pipe pressure for releasing air from one side of said brake piston to apply the brakes, of a supplemental reservoir and a release valve mechanism operated by said valve device for controlling communication from the supplemental reservoir to the train pipe.

3. In a fluid pressure brake, the combination with a brake cylinder, train pipe, auxiliary reservoir and supplemental reservoir, of a release valve mechanism operating upon an increase in train pipe pressure by means of the reduced auxiliary reservoir pressure for opening communication from the supplemental reservoir to the train pipe, and a valve in the release valve mechanism for controlling communication from one side of the release valve mechanism to the auxiliary reservoir.

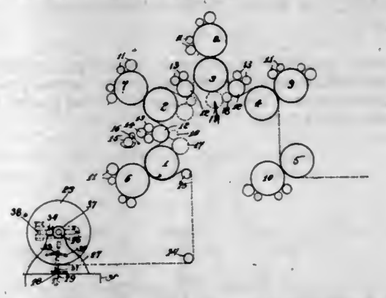
4. In a fluid pressure brake, the combination with a train pipe, brake cylinder, auxiliary reservoir, and supplemental reservoir, of a release valve mechanism normally subject on opposite sides to the pressure in the supplemental reservoir, and a valve in said valve mechanism operated upon an increase in train pipe pressure for releasing air from one side of the release valve mechanism to the auxiliary reservoir, thereby actuating said release valve mechanism to supply air from the supplemental reservoir to the train pipe.

902,164. PENHOLDER. ERNEST R. ORCHARD, Fargo, N. D. Filed June 14, 1907. Serial No. 379,046.



In combination with a pen holder having its writing end portion tapered, a sleeve of absorbent material on the holder projecting over the tapered portion of the holder in spaced relation thereto and forming therewith a cup.

902,165. MULTICOLOR-PRINTING PRESS. GEORGE E. PANCOAST, New York, N. Y., assignor to American Lithographic Company, a Corporation of New York. Filed Dec. 30, 1905. Serial No. 293,927.



1. A rotary multicolor press including in combination, a plurality of printing couples each having a single impression surface for each design surface, and web forwarding means including a member for forwarding the web from one couple to the next, the relative arrangement of the forwarding member and the impression cylinders of the couples being variable and such that the portions of the web in contact with the impression surfaces are relatively great and the intermediate portions relatively small whereby the travel of the web through the press is substantially unaffected by the inequalities in the web or by the surface inequalities of the design cylinders of the couples.

2. A rotary multicolor press including in combination, a plurality of printing couples, each having a single impression surface for each design surface and means for forwarding the web from one couple to the next, the relative arrangement of the web forwarding means and the impression cylinders of the couples being variable and such that the portions of the web in contact with the impression surfaces are relatively great and the intermediate portions relatively small whereby the travel of the web through the press is substantially unaffected by inequalities in the web or by the surface inequalities of the design cylinders of the couples.

3. A rotary multicolor press including in combination, a plurality of printing couples each having a single impression surface for each design surface, and a cylinder for forwarding the web from one couple to the next, the web forwarding cylinder being movable with relation to and adjacent to the impression cylinders of the couples and so arranged with relation thereto that the web is caused to cling to each of the cylinders whereby the travel of the web through the press is substantially unaffected by inequalities in the web or by the surface inequalities of the design cylinders of the couples.

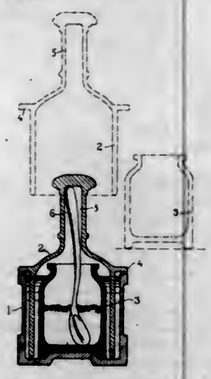
4. A rotary multicolor press including in combination, a plurality of printing couples each having a single impression surface for each design surface, web feeding means constructed so that irrespective of its inequalities a web may be passed smoothly into the press, and means for forwarding the web through the press, the relative arrangement of an element of the forwarding means and the impression cylinders of the couples being variable and such that the portions of the web in contact with the impression surfaces are relatively great and the intermediate portions relatively small whereby the travel of the web through the press is substantially unaffected by inequalities in the web or by the surface inequalities of the design cylinders of the couples.

5. A rotary multicolor press including in combination, a plurality of printing couples each having a single impression surface for each design surface, web feeding means having provision for varying the tension of the web locally with relation to its width, and means for forwarding the web through the press, the relative arrangement of the forwarding means and the impression cylinders of the couples being such that the portions of the web in contact with the impression surfaces are relatively great and the inter-

mediate portions relatively small whereby the travel of the web through the press is substantially unaffected by inequalities in the web or by the surface inequalities of the design cylinders of the couples.

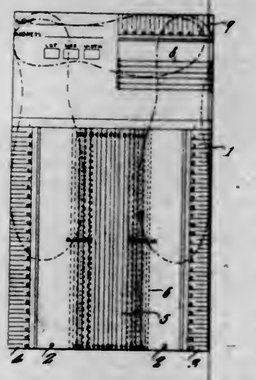
[Claims 6 to 32 not printed in the Gazette.]

902,166. JAR, POT, OR VESSEL FOR CONTAINING OR KEEPING PERISHABLE PRODUCTS. ALBIN PERLICH, Laubegast, near Dresden, Germany. Filed June 7, 1907. Serial No. 377,708.



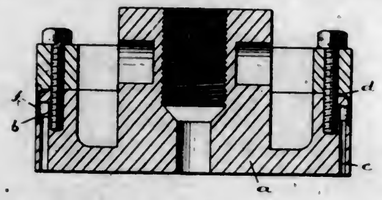
A receptacle of the character described, comprising an outer vessel having the central portion of its bottom projected inwardly, an inner vessel of smaller diameter than the outer vessel and having the central portion of its bottom hollowed out to fit over the projection of the bottom of said outer vessel, thereby centering the inner vessel in the outer vessel and leaving an annular space between the sides of the two vessels to receive a liquid to form a water seal, and a third vessel having an open bottom and inverted between the two vessels in said water seal, said third vessel being provided with an outer peripheral flange to rest upon the rim of the outer vessel, a bell shaped top, and a long hollow stem projecting upwardly from said cover, substantially as set forth.

902,167. FOOT-MEASURING DEVICE. AUSTAVE P. PHILLIPS, Atlanta, Ga. Filed Dec. 5, 1907. Serial No. 405,224.



The combination with a box, of a series of charts arranged loosely therein, each having disposed transversely of one end a foot width and a foot length scale, longitudinally of the two edges foot length scales divided into inches and fractional parts thereof, and intermediate of its width longitudinally-disposed foot width scales indicated by solid and broken straight lines each having associated with it a suitable legend, the solid lines being used to determine the width of a man's feet and the broken lines the width of a woman's feet.

902,168. PISTON-PACKING. MARTIN J. QUINN, Toronto, Ontario, Canada, assignor to Cluff Brothers, Toronto, Canada, a Firm. Filed Sept. 3, 1907. Serial No. 391,056.

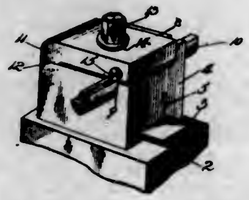


1. A piston having an unoccupied peripheral channel communicating with the pressure side of the piston, and a packing secured at one edge to the piston to overhang said channel, and having its other edge free to be pressed outwards from the piston by the pressure fluid within the said channel.

2. A piston having an unoccupied circumferential channel in its peripheral surface, a duct in the piston leading from the circumferential channel to the pressure side of the piston and a packing secured at one edge to the piston to overhang the circumferential channel, and having its other edge free to be pressed outwards from the piston by the pressure fluid entering the circumferential channel through the said duct.

3. A piston having an unoccupied circumferential channel in its peripheral surface, a series of ducts formed through the piston from the pressure side thereof and communicating with the circumferential channel, a packing secured at one edge to the piston to overhang the circumferential channel, and having its other edge free to be pressed outward from the piston by the pressure fluid entering the circumferential channel through the said ducts.

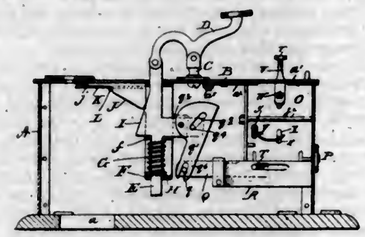
902,169. ADJUSTABLE TOOL-SUPPORT. FRANCIS H. RICHARDS, Hartford, Conn. Filed Dec. 16, 1902. Serial No. 135,373.



1. The combination with a tool support having a tool receiving recess, of a tool adapted to move longitudinally therein and having a worm rack on its upper face, a tool holder having a portion bearing on said support, a screw mounted in said holder and interposed between the same and said tool, and means for locking said holder to said support.

2. The combination with a tool support having a tool receiving recess and a bearing portion, of a tool mounted in said recess for longitudinal movement and having a worm rack, a holder for said tool comprising a member having a bearing portion at a distance from said recess on said support, a screw mounted in said holder and interposed between the same and the tool and engaging said rack, and means for clamping the holder upon said screw and bearing portion of the support.

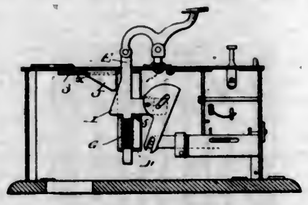
902,170. CIGAR-CUTTER AND MATCH-DELIVERER. EDWARD SALZER, Laporte, Ind. Filed Nov. 26, 1906. Serial No. 345,261.



1. A device of the character described comprising a resiliently mounted or cushioned rod-member, means for manually operating the same, a plunger adapted to engage and deliver a match, means for feeding matches to said plunger, said rod member having a fixed arm, a lever having an inclined slot receiving a lateral pin from said arm about in horizontal alinement with the fulcrum of said lever, said lever occupying an initially inclined position of approximately obliquity with that of said slot, and having pin and slot connections with said plunger, resiliently pressed means for severing or clipping the tip end of a cigar, said rod-member having a cam formation thereon, adapted for engagement with said severing means.

2. A match holder and deliverer, a hopper having two approximately V-shape walls, one of which has a slot, an agitator slidable on the said slotted wall and having an element projecting through the slot, a cover for the hopper having an opening therein, a handle movable through the opening and attached to the element of the agitator whereby movement of the handle is communicated to the agitator.

902,171. CIGAR-CUTTER. EDUARD SALZER, Laporte, Ind. Filed May 2, 1908. Serial No. 430,572.



1. A device of the character described comprising a reciprocating knife, a casing having apertures with relation to which the knife reciprocates, a fin on the knife, a spring engaging the knife for holding the knife normally retracted, a reciprocating bar, a cam on the bar engaging the fin of the knife whereby the knife is projected, and means for reciprocating the bar.

2. A device of the character described consisting of an apertured casing, a knife mounted to reciprocate with relation to the aperture, a fin on the knife, a spring engaging the fin for holding the knife retracted, a guide, a bar slidable therein, a spring for holding the bar normally depressed, a cam on the bar adapted to engage the fin of the knife and projecting the same when the knife is moving upward, a spring for depressing the bar, and a suitable lever for operating the bar.

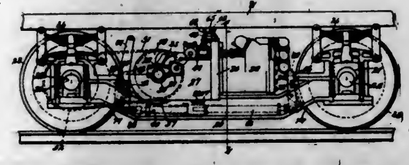
3. In combination, a suitable knife, a fin thereon, a spring engaging the outer end of the fin for holding the knife normally retracted, a bar slidable with relation to the end of the fin, a cam on the bar adapted to engage the fin and project the knife when the said bar is moving upwardly, a spring for depressing the bar, and a lever for reciprocating the bar.

4. A device of the character described comprising a resiliently mounted cutter having a pendent fin or extension, a resiliently upheld member having an inclined cam formation adapted to engage said fin or extension and means for actuating said resiliently upheld member.

5. A device of the character described comprising a member having apertures therein adapted to receive the tip end of a cigar, a resiliently mounted cutter having a pendent extension or fin, said cutter adapted as it is actuated to move past said apertures for engaging the inserted cigar tip ends, a resiliently upheld member having a cam formation whose face is inclined upwardly and inwardly for engagement initially at its upper vanishing end with the lower end of said fin or extension, and means for actuating said resiliently upheld member.

[Claims 6 and 7 not printed in the Gazette.]

902,172. CAR-TRUCK. JOSEPH G. SARVENT, Chicago, Ill. Filed July 25, 1907. Serial No. 385,409.



1. The combination of a car truck including disconnected side beams, a portion of which are spaced for some distance below the car sill, and a motor frame connecting said beams, said frame being supported directly by the beams within the spaced portion and entirely below the car sill.

2. The combination of a car truck including disconnected side beams, a portion of which are spaced for some distance below the car sill, a motor supported directly by and connecting said beams to form a part of the truck and located within the spaced portion entirely below the car sill, and means for preventing longitudinal and lateral displacement of the motor with relation to the truck.

3. The combination of a car truck including disconnected spaced side beams each of which is provided with a depressed portion intermediate its ends, and a motor beneath the car sill supported directly by and connecting the side beams.

4. The combination of a car truck including disconnected spaced side beams, the body portions of which are located in a plane below the plane of the car axles, a motor frame supported directly by the beams beneath the car sill and connecting the beams, a motor and means for preventing displacement of the motor.

5. The combination of a car truck including disconnected side beams each having a depressed portion intermediate its ends, a horizontally disposed engine supported directly by the side beams within the depressed portions and means for securing the engine to the side beams and connecting said beams.

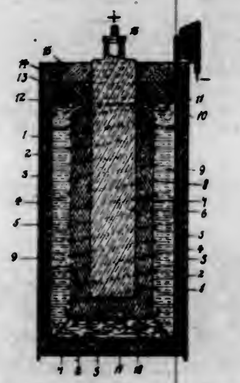
[Claims 6 to 21 not printed in the Gazette.]

902,173. ELECTRIC CELL. GEORGES SCHAULI, London, England. Filed Sept. 18, 1906. Serial No. 335,087.

1. An electric cell comprising a negative-pole electrode composed of metallic plates separated by an intervening layer of porous, liquid absorbing material in contact with the adjacent surfaces of both plates, the arrangement being such that the electrolyte comes initially into contact with one plate only but, on the penetration thereof by electrochemical action, the electrolyte has access to the second plate at the portion of its surface adjacent to the place of penetration of the first.

2. An electric cell comprising a negative-pole electrode composed of metallic plates both of which are in metallic connection with the attachment for the return lead of the electric circuit to the cell, the plates being separated by an intervening layer of porous, liquid absorbing ma-

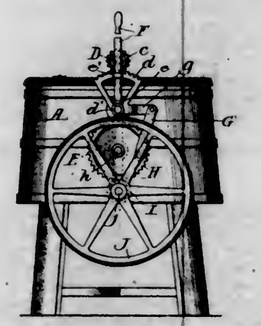
terial in contact with the adjacent surfaces of both plates, the arrangement being such that the electrolyte comes initially into contact with one plate only but, on the penetration thereof by electro-chemical action, the electrolyte has access to the second plate at the portion of its surface adjacent to the place of penetration of the first.



3. An electric cell comprising a negative-pole electrode composed of metallic plates separated by an intervening layer of porous, liquid absorbing material impregnated with electrolytic re-agents in a dry and inert condition which porous layer is in contact with the adjacent surfaces of both plates, the arrangement being such that the electrolyte comes initially into contact with one plate only but, on the penetration thereof by electro-chemical action, the electrolyte has access to the second plate at the portion of its surface adjacent to the place of penetration of the first.

4. A form of construction of electrode for an electric cell in which the metallic plate, with which the electrolyte comes in contact, is a compound plate composed of a continuous fluid tight plate and a perforated plate in metallic contact therewith throughout the entire area of one surface of the perforated plates.

902,174. GEARING FOR WASHING-MACHINES. BERNHARD L. SCHMIDT, Davenport, Iowa, assignor to White Lily Manufacturing Company, Davenport, Iowa, a Corporation of Iowa. Filed May 21, 1908. Serial No. 434,084.



1. The combination with a rotary reciprocal vertical shaft, a rotary reciprocal horizontal shaft at right angles thereto, means for operatively connecting said shafts, of a lever fulcrumed at its lower end independent of said horizontal shaft, a balance wheel whose axis is below said lever and parallel to said horizontal shaft and revoluble means actuated by said lever for operating said wheel.

2. The combination with a rotary reciprocal vertical shaft, a rotary reciprocal horizontal shaft at right angles thereto, means for operatively connecting said shafts, of a lever fulcrumed at its lower end independent of said horizontal shaft, an arm projecting from the lower end of said lever, a balance wheel whose axis is below and parallel to said horizontal shaft, and means including a pitman for imparting motion from said arm to said wheel.

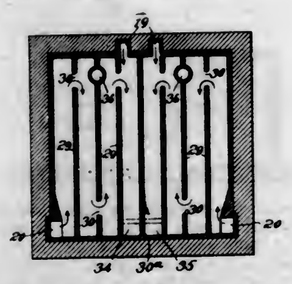
3. The combination with a rotary reciprocal vertical shaft, a rotary reciprocal horizontal shaft arranged at right angles thereto, means for operatively connecting said shafts, of a lever fulcrumed at its lower end independent of said horizontal shaft, an arm projecting from the lower end of said lever, a balance wheel whose axis is below and parallel to said horizontal shaft, a pitman whose upper end is pivotally connected to said arm, and a continuously revoluble gear engaged by said pitman that actuates said balance wheel.

4. The combination with a rotary reciprocal vertical shaft, a rotary reciprocal horizontal shaft at right angles thereto, means mounted on the adjacent ends of said shafts for operatively connecting the same and a pinion on the opposite end of said horizontal shaft, of a lever fulcrumed at its lower end independent of said horizontal shaft, a balance wheel whose axis is below said lever and parallel to said horizontal shaft, a segmental rack carried by said lever and engaging the undermost segment of said pinion, and a gear indirectly actuated by said lever for operating said wheel.

5. The combination with a rotary reciprocal vertical shaft, a rotary reciprocal horizontal shaft at right angles thereto, means for operatively connecting said shafts, and a pinion on the outer end of said horizontal shaft, of a lever fulcrumed at its lower end whose axis is parallel to said last mentioned shaft, a segmental rack carried thereby and engaging the undermost segment of said pinion, an arm projecting from the lower end of the same, a balance wheel and means including a pitman for imparting motion from said arm to said wheel.

[Claim 6 not printed in the Gazette.]

902,175. OVEN. HUGO SCHUBERT, New York, N. Y. Filed May 24, 1907. Serial No. 375,515.



1. In a baker's oven, the combination with a setting having a furnace chamber, of an air chamber over the furnace chamber, a heating chamber having independent compartments separated by a central partition, a baking chamber between the air chamber and the heating chamber, chambers arranged along the furnace chamber at the side thereof, a plurality of partitions arranged in the heating chamber on each side of the longitudinal center and having openings arranged alternately so as to cause the heat to pass from the front to the rear and vice versa, a plurality of flues leading from the baking chamber to cool the same at each side of the longitudinal center thereof, means for controlling each oven flue independent of the other, flues connecting the chambers at the side of the furnace chamber and the heating chamber, and flues connecting the furnace chamber with the heating chamber at the front and rear thereof, whereby the products of combustion is made to pass to the front and to the rear of the heating chamber to distribute the heating evenly over the baking chamber.

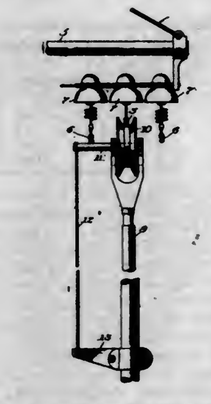
2. In a baker's oven, the combination with a setting having a furnace chamber extending the length of the oven and a plurality of chambers arranged on each side thereof and communicating with the furnace chamber, of a baking chamber located above the furnace, a closed air chamber arranged between the baking chamber and the furnace, a heating chamber having a plurality of partitions arranged on each side of the longitudinal center and provided with openings alternately arranged to cause the products of combustion to pass from the front to the rear and vice versa toward the center so as to heat the entire surface of the baking oven, a central partition extending throughout the length of the heating chamber and dividing said heating chamber into independent compartments, a chimney flue, independent flues connecting the furnace chamber and the chambers at the side of the furnace chamber with the heating chamber at the front and rear thereof, a plurality of flues connecting the baking chamber with the chimney flue at each side of the longitudinal center, dampers for regulating the passage of the products of combustion into the chimney flues, and dampers in the flues leading from the baking chamber, whereby the products of combustion is made to pass to the front and to the rear of the heating chamber to distribute the heating evenly for the baking chamber.

3. In a baker's oven, the combination with a setting having a furnace chamber extending the length of the oven, and a plurality of chambers arranged at each side thereof and provided with openings alternately arranged and communicating with the furnace chamber to cause the products of combustion to pass from the front to the rear and back to the front again, of a baking chamber located above the furnace chamber and having the rear end thereof closed, a closed air chamber arranged between the baking chamber and the furnace chamber, a heating chamber having a number of partitions arranged on each side of the longitudinal center of said chamber and provided with openings alternately arranged to cause the products of combustion to pass from the front to the rear and vice versa toward the center so as to heat the entire surface of the baking oven, a central partition extending throughout the length of the heating chamber and dividing said heating chamber into independent compartments, a chimney flue communicating with the compartments on each side of the vertical partition of the heating chamber independent of each other, independent dampers controlling the exit of the products of combustion from the heating chamber on each side of the said partition and entirely independent of each other, independent flues connecting the outer chambers located adjacent to the furnace chamber at their forward ends with the outer compartments of the heating chamber, independent flues arranged at the rear of the furnace chamber and communicating with the rear of the heating chamber whereby the products of combustion from the furnace chamber may pass both from the rear and front to the rear and front of the heating chamber to properly distribute the heat throughout the entire surface of the heating chamber, a plurality of flues connecting the baking chamber with the chimney flue at each side of the longitudinal center, and dampers for closing or opening either or both of the flues from the baking chamber whereby different degrees of heat may be obtained in the baking chamber.

902,176. RAILWAY SIGNALING SYSTEM. CARL J. SCHWARZE, Adrian, Mich. Filed July 18, 1906. Serial No. 326,780.

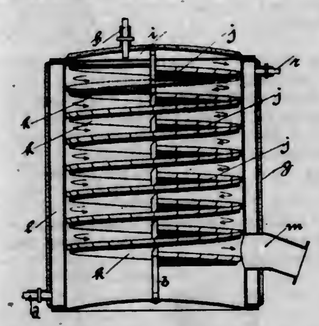
1. The combination with track rails and a trolley wire of signaling conductors extending on opposite sides of said trolley wire, a car traveling on said rails and having a trolley to engage the trolley wire, said trolley being provided with a side extension to engage the signaling conductors, and with a bracket extending laterally from the trolley pole a substantial distance from the upper extremity thereof, a guard member comprising a rod connected with the outer end of said side extension and with the outer end of the bracket and extending parallel to the trolley pole, and a circuit connected with the trolley wire and with the rails and including a signaling device.

2. The combination with track rails and a trolley wire of signaling conductors extending on opposite sides of said trolley wire, a car traveling on said rails and having a trolley to engage the trolley wire, said trolley being provided with a side extension to engage the signaling con-



ductors, a guard member depending from the outer end of the side extension of the trolley, and a circuit connected with the trolley wire and with the rails and including a signaling device.

902,177. APPARATUS FOR TREATING OLEIC ACID. PHILIPP SCHWOERER, Strassburg, Germany. Filed Dec. 26, 1907. Serial No. 408,125.



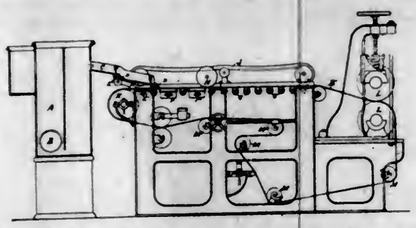
1. In an apparatus for converting oleic acid into stearic acid according to the contact process, a reaction chamber, a helical pan therein, inlet and outlet means for said reaction chamber, and a catalytic agent on the underside of said pan, substantially as and for the purpose set forth.

2. In an apparatus of the type and for the purpose described, a reaction chamber, a stationary helical pan therein contacting with the wall of said chamber, inlet and outlet means for said chamber, a heating jacket about said chamber, inlet and outlet means for said jacket, and a catalytic agent finely distributed over the underside of said pan, substantially as set forth.

3. In an apparatus of the type and for the purposes described, in combination with the reaction chamber and a helical pan therein, a catalytic agent on the underside of said helical pan, substantially as set forth.

4. In an apparatus of the type and for the purposes described, in combination with the reaction chamber and a helical pan therein, a catalytic agent on the underside of said helical pan comprising a copper skeleton, an asbestos body held by said skeleton, and a nickel catalytic agent finely distributed through and over said asbestos body, substantially as set forth.

902,178. MEANS FOR MANUFACTURING PAPER, BOARD, AND PULP. WILLIAM E. SHEEHAN, Albany, N. Y. Filed Apr. 25, 1906. Serial No. 313,574.



1. In a paper making machine, a flow box; a trough; a means for agitating the pulp in said trough; a traveling felt upon which said pulp while in an agitated condition is deposited from said trough; a means for exerting suction upon the pulp immediately upon its delivery to the felt, from beneath the felt, substantially as described.

2. The combination of a traveling felt; a trough mounted at an angle to said felt; means for delivering pulp to said trough; a means for regulating the flow of pulp through said trough; a means for agitating the pulp emitted through said trough at the time of its emission; a means for exerting suction upon the pulp at the time of its delivery delivered on the felt from said trough.

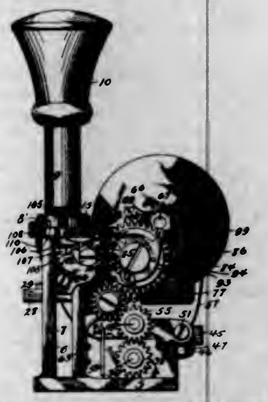
3. The combination of an endless woven cloth; a trough mounted at an angle to said cloth; means for delivering pulp to said trough; a means for regulating the flow of pulp through said trough; a means for exerting suction upon the pulp at the time of its delivery to said cloth, substantially as described.

4. The combination of a flow box; a trough; a bar adapted to reciprocate near the opening of said trough; a series of fingers attached to said reciprocating bar and an endless woven cloth adapted to receive the contents of said trough.

5. In a machine for making millboard and similar substances, the combination of a pair of press-rolls, a series of suction-boxes, an endless band of felt passing over said suction-boxes and through said rolls and means for initially depositing a dilute mixture of pulped fiber and cement on the upper section of said endless felt.

[Claims 6 to 8 not printed in the Gazette.]

902,179. STAMP-AFFIXER. GOODWIN B. SMITH and IRA ROBBINS, Philadelphia, Pa. Filed Dec. 6, 1906. Serial No. 346,635.



1. In a stamp affixer, a reciprocatory plunger, a knife carried thereby, said knife being pivotally mounted, and adjusting means adapted to apply pressure to said knife in a direction longitudinally of the path of movement of said plunger.

2. In a stamp affixer, a stamp magazine comprising a substantially cylindrical casing closed at one end, a rod or pintle disposed centrally of said casing and secured to said closed end, a closure adapted to fit over the open end of said cylindrical casing, and key controlled locking means adapted to maintain said closure in place.

3. In a stamp affixer, a liquid reservoir, a slotted plate pivoted thereto and a grooved roller having portions thereof extending within said slots, substantially as described.

4. In a stamp affixer, a liquid reservoir, a roller disposed therein, a slotted plate pivotally mounted and disposed above said roller, and a feed roller mounted in a pivoted frame, said feed roller being adapted and arranged to feed stamps over said plate, and in contact with said first named roller.

5. In a stamp affixer, a reciprocatory plunger, a rack carried thereby, a segmental gear adapted to engage said rack during a portion only of its movement, and means to adjustably limit the movement of said rack in one direction while the latter is in engagement with the said gear.

[Claims 6 to 15 not printed in the Gazette.]

902,180. COMBINED PRESSER-FOOT AND GUIDE FOR SEWING-MACHINES. GEORGE J. STEVENS, London, England, assignor, by mesne assignments, to American Attachment Company, Portland, Me., a Corporation of Maine. Filed Feb. 6, 1902. Serial No. 92,883.



1. A blind stitching device for sewing machines, comprising a presser-foot and a guide foot, rigidly attached to the presser bar and in different horizontal planes, said presser foot and said guide foot being laterally adjustable independently of each other, and each of said feet being vertically adjustable, whereby either of said feet may act as a presser foot.

2. In combination, two feet attached to a presser bar in different horizontal planes and one of them having a vertical recess in its edge to receive the bulge of the cloth and means for adjusting the said recessed foot towards and from the needle, the said presser feet maintaining a permanent relation to each other when adjusted substantially as described.

3. In combination, two feet attached to the presser bar, each being vertically and laterally adjustable independently of the other whereby each may be adjusted to a higher position in relation to the other and each may be adjusted towards the needle and each having a vertical recess in its edge near the needle, substantially as described.

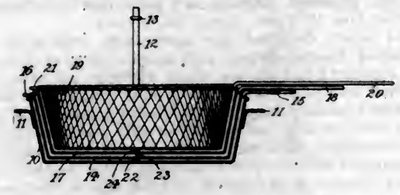
4. A blind-stitching device for sewing machines, comprising a block adapted to receive and be secured to the presser-bar of the machine, a rearwardly projecting extension upon the said block, two feet secured to the extension of the block, and means for adjusting the said feet vertically upon the said extension said means serving to fix the said presser feet rigidly in position.

5. A blind-stitching device for sewing machines, comprising a block adapted to receive and be secured to the presser-bar of the machine, a rearwardly projecting extension upon the said block, two feet secured to the extension of the block, means for adjusting the said feet vertically upon the said extension, and means for adjusting the said feet nearer to or away from each other and the needle of the machine said means serving to fix the said presser feet rigidly in position.

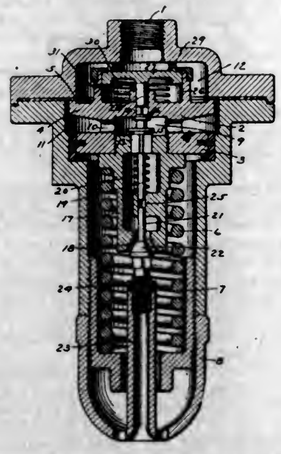
[Claim 6 not printed in the Gazette.]

902,181. COOKING UTENSIL. HUGO TIDOW, New York, N. Y. Filed Apr. 23, 1908. Serial No. 428,805.

A cooking utensil, comprising a pot, a first fine meshed strainer hung therein, a second wider meshed strainer hung in the first strainer, and a still wider meshed frying basket hung in the second strainer, the strainers and frying basket being composed of wire gauze at the sides and bottom, combined with means for spacing said strainers and frying basket, substantially as specified.



902,182. HIGH-SPEED-REDUCING VALVE FOR AIR-BRAKES. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Jan. 14, 1904. Serial No. 188,997.



1. A reducing valve device for air brakes, comprising a piston subject to the opposing pressures of the brake cylinder and an adjustable spring for controlling an outlet from the brake cylinder, and means operating in emergency applications of the brakes to temporarily hold said outlet closed during the outward movement of the piston.

2. A reducing valve device for air brakes, comprising a piston subject to the opposing pressures of the brake cylinder and an adjustable spring for controlling an outlet from the brake cylinder, and means operated by a sudden rush of air to the brake cylinder for temporarily closing said outlet independently of the movement of said piston.

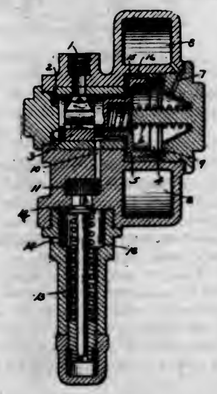
3. A reducing valve device for air brakes, comprising a piston subject to the opposing pressures of the brake cylinder and an adjustable spring for controlling an outlet from the brake cylinder, a valve for closing said outlet and a supplemental piston exposed to brake cylinder pressure for closing said valve.

4. A reducing valve device for air brakes, comprising a piston subject to the opposing pressures of the brake cylinder and an adjustable spring for controlling an outlet from the brake cylinder, a valve for closing said outlet, a supplemental piston exposed on one side to brake cylinder pressure for closing said valve, and means for slowly equalizing the pressure to the opposite side of said supplemental piston.

5. A reducing valve device for air brakes, comprising a main piston subject to the opposing pressures of the brake cylinder and spring and having an outlet from the brake cylinder therethrough, and means operated by a sudden rush of air to the brake cylinder for temporarily closing said outlet through the main piston independently of its movement.

[Claims 6 to 20 not printed in the Gazette.]

902,183. HIGH-SPEED-REDUCING VALVE FOR AIR-BRAKES. WALTER V. TURNER, Wilkinsburg, and JOHN S. CUSTER, Pittsburg, Pa., assignors to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Jan. 29, 1904. Serial No. 191,129.



1. A reducing valve device for air brakes, comprising a valve mechanism set to open at a certain pressure for controlling an outlet from the brake cylinder, and means operating in emergency applications for closing communication from the brake cylinder to said valve mechanism.

2. A reducing valve device for air brakes, comprising a valve mechanism governed by the opposing pressures of the brake cylinder and an adjustable spring for controlling an outlet from the brake cylinder, and means operated by the rise in brake cylinder pressure in emergency applications for closing communication from the brake cylinder to said valve mechanism.

3. A reducing valve device for air brakes, comprising a valve governed by the opposing pressures of the brake cylinder and an adjustable spring for controlling an outlet from the brake cylinder, and a time mechanism operated by the rapid increase in brake cylinder pressure in emergency applications for holding said outlet entirely closed for a limited period of time and then opening the same.

4. A reducing valve device for air brakes, comprising a valve governed by the opposing pressures of the brake cylinder and an adjustable spring for controlling an outlet from the brake cylinder, and a time mechanism comprising a piston and valve for temporarily closing said outlet in emergency applications previous to the opening of said valve.

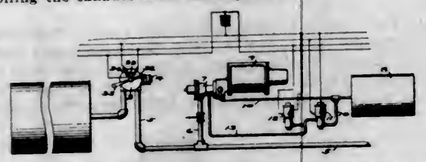
5. A reducing valve device for air brakes, comprising a valve for controlling an outlet from the brake cylinder, a piston operating in emergency applications to temporarily hold said outlet closed, and means for gradually equalizing the fluid pressure upon opposite sides of said piston.

[Claims 6 to 15 not printed in the Gazette.]

902,184. ELECTROPNEUMATIC BRAKE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Mar. 20, 1905. Serial No. 250,989.

1. In a fluid pressure brake, the combination with a train pipe, reservoir, brake cylinder, and a pneumatically operated valve device having an exhaust port, of an electric application valve for controlling the supply of air to the brake cylinder, and a normally open electric release valve for controlling said exhaust port.

2. In a fluid pressure brake, the combination with a train pipe, auxiliary reservoir, triple valve and brake cylinder, of an application magnet valve for supplying air to the brake cylinder, and a release magnet valve for controlling the exhaust from the triple valve.



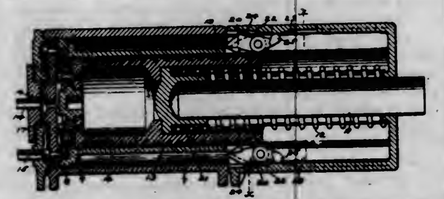
3. In a fluid pressure brake, the combination with a train pipe, auxiliary reservoir, triple valve and brake cylinder, of an application magnet valve for supplying air from the auxiliary reservoir to the brake cylinder, and a release magnet valve for controlling the triple valve exhaust port.

4. In a fluid pressure brake, the combination with a train pipe, auxiliary reservoir, triple valve and brake cylinder, of an application magnet valve for supplying air through the triple valve exhaust port to the brake cylinder, and a release magnet valve for controlling the release through the triple valve exhaust port.

5. In a fluid pressure brake, the combination with a train pipe, auxiliary reservoir, triple valve and brake cylinder, of an application magnet valve for controlling the supply of air to the brake cylinder, a release magnet valve for controlling the release from the exhaust port of the triple valve, and means for energizing both magnets at the same time.

[Claims 6 to 13 not printed in the Gazette.]

902,185. DUPLEX BRAKE-CYLINDER. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Feb. 27, 1907. Serial No. 359,605.



1. A duplex brake cylinder, comprising a large cylinder and piston, a small cylinder and piston mounted on the large piston, and means for locking the large piston to the smaller after the latter has moved outward in its cylinder each piston having means for supplying fluid under pressure thereto.

2. A duplex brake cylinder, comprising a large cylinder and piston, a small cylinder and piston mounted on the large piston, and a locking mechanism for connecting the large piston to the small piston each piston having means for supplying fluid under pressure thereto.

3. A duplex brake cylinder, comprising a large cylinder, a piston therein carrying a smaller cylinder, a piston in said small cylinder, and a clutch device for locking the large piston to the smaller after the latter has made an outward stroke each piston having means for supplying fluid under pressure thereto.

4. A duplex brake cylinder, comprising a large cylinder and piston, a small cylinder and piston mounted on the large piston, and a clutch device operating upon the initial movement of the large piston to lock the same to transmit movement to the small piston.

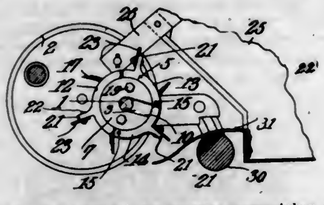
5. A duplex brake cylinder, comprising a large cylinder and piston, a small cylinder and piston mounted on the large piston, and locking means carried by the large piston for connecting the same to the small piston.

[Claims 6 to 10 not printed in the Gazette.]

902,186. AZO DYE. PAUL VOLKMANN, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed June 17, 1908. Serial No. 438,922.

The herein described new azodyestuffs, obtainable by combining diazocompounds with sulfonic acids of 1-naphthyl-3-methyl-5-pyrazolones, which dyestuffs are after being dried and pulverized in the shape of their sodium salts powders soluble in water and soluble in concentrated sulfuric acid; yielding upon reduction with stannous chlorid and hydrochloric acid amins and sulfonic acids of 4-amino-1-naphthyl-3-methyl-5-pyrazolones and dyeing the fiber from yellow to red to brown shades, substantially as described.

902,187. ROTARY RAKE. EDWARD M. WARRENFELTZ, Funkstown, Md. Filed July 1, 1908. Serial No. 441,349.



1. An attachment for lawn mowers, comprising a pair of rake carrying members each consisting of a plurality of articulated segments, rakes connected with the segments, and means for expanding the members.

2. An attachment for lawn mowers comprising a pair of rake carrying members each consisting of a plurality of articulated segments, rakes connected with the segments, means for expanding the members, and devices for holding the expanding means in their adjusted position.

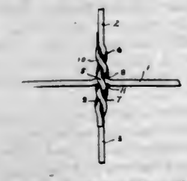
3. An attachment for lawn mowers comprising a pair of articulated members each provided with a like number of arms, rakes carried by the arms, a pair of expanders coacting with the members, a pair of disks, and means for connecting the expanders and disks.

4. An attachment for lawn mowers comprising a pair of articulated members each provided with a like number of arms, rakes detachably connected with the arms, a pair of expanders housed by the members, a pair of disks against which the members bear, and means for connecting the expanders and disks.

5. An attachment for lawn mowers, comprising a pair of interiorly beveled articulated members each provided with a like number of arms, rakes carried by the arms, a pair of peripherally beveled expanders for the members, a pair of disks, and means for connecting the expanders and disks.

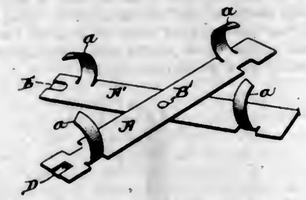
[Claims 6 to 8 not printed in the Gazette.]

902,188. WIRE FENCE. ALFRED WESTERBERG, De Kalb, Ill., assignor to Jacob Haish Company, De Kalb, Ill. Filed Apr. 18, 1907. Serial No. 368,845.



A wire fence composed of strands and stays, each of the stays comprising a plurality of short sections which overlap each other and which are continuously intertwisted throughout their overlapping portions, and upon each side of the strand wires, and the strands of said fence being composed of single strand wires which pass through said intertwisted portions said strand wires being bowed at the points at which they pass through said stays.

902,189. LOOSE-LEAF BINDER. WILLIAM M. WHEILDON, Boston, Mass., assignor to Arthur Murphy, Sr., Quincy, Mass. Filed Aug. 9, 1906. Serial No. 329,830.



1. A loose-leaf binder, consisting of two bars each having a leaf-receiving half member secured thereto in opposed and coöperating relation to a half member upon the other bar, the said bars being movably secured together by a pivot pin; means to retain the two bars in their leaf retaining position, all organized and arranged substantially as shown and described.

2. A loose-leaf binder, consisting of two bars each having a leaf-holding half member secured thereto upon opposite sides and ends, the said bars being pivotally connected at their middle portions, and a channel, properly shaped and proportioned to receive the two bars in their leaf retaining position, all organized and arranged substantially as shown and described.

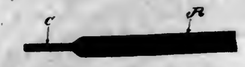
3. A device of the character described comprising two members each supplied with a plurality of leaf holders, pivoted together by a pivot parallel to the plane of said leaf holders at a point lying between the outermost leaf holders supported by each member and adapted to permit one of said members to rotate about said pivot through a limited arc, and means for locking said members together when closed.

4. A device of the character described, comprising two members, each provided with a plurality of leaf holders and pivoted together by a pivot parallel to the plane of said leaf holders at a point intermediate the outermost leaf holders, a protuberance on one of said members, and an opening in the other member adapted to coöperate with said protuberance to lock the members together when in closed position.

5. A device of the character described, comprising two superimposed members pivoted together by a pivot extending transversely through both members and each provided with a plurality of curved members adapted to coact in pairs to form suitable leaf holders; and means for locking said members together.

[Claim 6 not printed in the Gazette.]

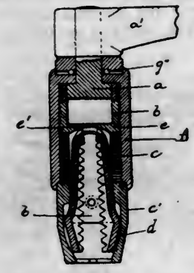
902,190. LACING. FRANK W. WHITCHER, Boston, Mass., assignor to Frank W. Whitcher Company, Boston, Mass., a Corporation of Maine. Filed May 16, 1906. Serial No. 317,094.



The improved tip for lacings consisting of a portion of tubular fabric folded back on itself on the outside and compressed.

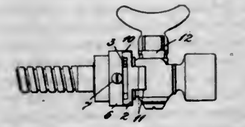
902,191. CHUCK. PARDON A. WHITNEY, Southington, Conn., assignor to Peck, Stow & Wilcox Company, Southington, Conn., a Corporation of Connecticut. Filed Dec. 27, 1904. Serial No. 238,317.

In a device of the character described a slotted spindle, jaws located in said slot, a non-rotable jaw closing body fixedly secured to the end of said spindle, an annular follower surrounding said spindle and adapted for lengthwise movement with respect thereto, threads on the exterior of said follower, a web extending diametrically across one end of said follower adapted to fit in said slot in the spindle and receive the inner end of said jaws, a sleeve surrounding said spindle rotatable with respect thereto and held against longitudinal movement, threads on the interior wall of said sleeve engaging with the



threads on the follower, and an anti-friction thrust bearing for the rear end of said sleeve, all substantially as described and for the purposes set forth.

902,192. COCK-COUPLING. EMIL WITZENMANN, Pforzheim, Germany. Filed Apr. 11, 1907. Serial No. 367,494.



1. In a cock coupling, a pipe having a coupling piece, a cock having a plug with a plane surface, a collar rotatably mounted on the nozzle of the cock, means for limiting the rotation of said collar, and means on the collar for engaging said plane surface to lock the plug in its closed position.

2. In a cock coupling, a pipe having a coupling piece, a cock having a plug with a plane surface, a collar rotatably mounted on the nozzle of the cock, means for limiting the rotation of said collar, means on the collar for engaging said plane surface to lock the plug in its closed position, and means on said coupling piece to engage notches in said collar.

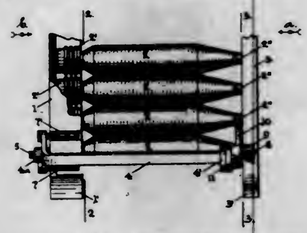
3. In combination, a pipe having a coupling-piece presenting two horns; a cock having a plug, and a nozzle making a bayonet-joint with the pipe coupling-piece, and presenting a pin; and a collar rotating on the nozzle and having a recess to receive said pin and notches to receive said horns and a lug adapted to engage with a face of the plug and lock the latter in closed position when the bayonet-joint is open and the horns lie in their notches; substantially as described.

4. In a cock coupling, a pipe having a coupling piece, a cock having a plug with a plane surface, a collar rotatably mounted on the nozzle of the cock, means for limiting the rotation of said collar, means on the collar for engaging said plane surface to lock the plug in its closed position, means on said coupling piece to engage notches in said collar, and means on the collar for engagement with the nozzle to form a bayonet-joint therewith.

902,193. LOOM-FILLING-CARRIER MAGAZINE. HORACE WYMAN, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed May 11, 1907. Serial No. 373,057.

1. In a magazine for a weft replenishing loom, having a guide-way or compartment for the heads of bobbins, and a guide-way or compartment for the tips of bobbins, a rocking support or holder for the lowest bobbin in the guide-way or compartment, said support pivotally mounted at its outer end, and having thereon a support for the tip of the bobbin and pivotally mounted at its inner end and

carrying two outwardly extending pins or extensions for the heads of the bobbins, the lowest pin adapted to extend under the head of the lowest bobbin in the normal operation of the loom, and a second pin adapted to extend under the head of the bobbin above the lowest bobbin, when the support is rocked to release the lowest bobbin.



2. In a magazine for a weft replenishing loom, having a guide-way or compartment for the heads of bobbins, and a guide-way or compartment for the tips of bobbins, a rocking support or holder for the lowest bobbin in the guide-way or compartment, said support pivotally mounted at its outer end, and having thereon a support for the tip of the bobbin, said support for the tip of the bobbin adjustable relative to the support for the head of the bobbin, and pivotally mounted at its inner end and carrying two outwardly extending pins or extensions for the heads of the bobbins, the lowest pin adapted to extend under the head of the lowest bobbin in the normal operation of the loom, and a second pin adapted to extend under the head of the bobbin above the lowest bobbin, when the support is rocked to release the lowest bobbin.

3. In a magazine for a weft replenishing loom, having a guide-way or compartment for the heads of bobbins, and a guide-way or compartment for the tips of bobbins, a rocking support or holder for the lowest bobbin in the guide-way or compartment, said support pivotally mounted at its outer end, and having thereon a support for the tip of the bobbin, said support of curved shape on its engaging edge, and the lower part of said edge adapted to extend under the tip end of the last bobbin when the loom is operating normally, and the outer end adapted to be moved under the bobbin next to the lowest bobbin when the last bobbin is released, and pivotally mounted at its inner end and carrying two outwardly extending pins or extensions for the heads of the bobbins, the lowest pin adapted to extend under the head of the lowest bobbin in the normal operation of the loom, and a second pin adapted to extend under the head of the bobbin above the lowest bobbin, when the support is rocked to release the lowest bobbin.

4. In a magazine for bobbins or filling carriers, a bobbin or filling carrier support for the lowest bobbin, pivotally mounted at each end to have a rocking movement and carrying two pins or supports for the head of a bobbin, and a support for the tip end of a bobbin, and adapted to hold the lowest bobbin in place, and on the release of the lowest bobbin to engage the head and tip end of the next lowest bobbin to retain the same, preparatory to the transfer of the lowest bobbin.

902,194. STIFFENING-STRIP. ALBERT A. ACKERMAN, Chicago, Ill., assignor, by mesne assignments, to Warren Featherbone Company of Michigan, Three Oaks, Mich., a Corporation of Michigan. Filed Sept. 4, 1903. Serial No. 171,943.

1. An article of the class described, comprising a plurality of continuous strands arranged side by side and stitching zig-zagged across all the strands, the threads of the stitching interlocking at a plurality of points in each reach of the zig-zagged stitching whereby the strands are all bound and secured together solely by said stitching into a flat resilient blade or tape.

2. An article of the class described, comprising a plurality of continuous resilient strands arranged side by side and a continuous zig-zagged row of stitches therethrough, each reach of said zig-zagged row of stitches being arranged to embrace all of the strands whereby they are all bound and secured together into a flat resilient blade or tape solely by said stitching, there being a plurality of stitches through said blade in each of the reaches, said strands consisting of fibered quill portions of feather bound together by a wrapping thread.

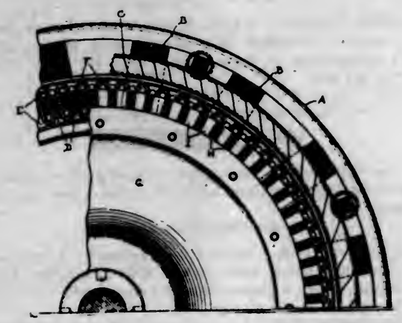


3. An article of the class described, comprising a plurality of continuous resilient strands arranged side by side and a continuous zig-zagged row of stitches therethrough, each reach of zig-zagged row of stitches being arranged to embrace all of the strands whereby they are all bound and secured together into a flat resilient blade or tape solely by said stitching, there being a plurality of stitches through said blade in each of the reaches.

4. An article of the class described, comprising a plurality of continuous resilient strands arranged side by side and a continuous zig-zagged row of stitches therethrough, each reach of said zig-zagged row of stitches being arranged to embrace all of the strands whereby they are all bound and secured together into a flat resilient blade or tape solely by said stitching, the strands consisting of fibered quill portions of feather bound together by a wrapping thread.

5. An article of the class described, comprising a plurality of continuous resilient strands arranged side by side and a continuous zig-zagged row of stitches therethrough, each reach of said zig-zagged row of stitches being arranged to embrace all of the strands whereby they are all bound and secured together into a flat resilient blade or tape solely by said stitching.

902,195. TELEPHONE-RELAY. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 25, 1908. Serial No. 412,555.



1. A telephone relay comprising a high-frequency inductor alternator having a stationary field winding connected in the primary circuit and a stationary armature winding connected in the secondary circuit.

2. In combination, a high-frequency inductor alternator having both field and armature windings stationary, a telephone transmitter and a source of current in circuit with the field winding of the alternator, and a telephone receiver in circuit with the armature winding of the alternator.

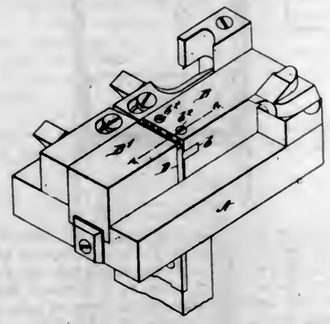
3. A telephone relay comprising a laminated stator, a stationary field winding connected in the primary circuit, an inductor magnetized thereby adapted to be driven at high speed and having a large number of laminated polar projections, and a stationary armature winding connected in the secondary circuit and adapted to have high frequency alternating-current induced in it by said inductor.

4. A telephone relay comprising a laminated stator having opposite faces lying in adjacent radial planes, a stationary field winding connected in the primary circuit, an inductor magnetized thereby adapted to be driven at high speed and having a large number of laminated polar projections extending between the opposite stator faces, and a winding carried in slots on said faces and connected in the secondary circuit.

5. A telephone relay comprising a laminated stator having opposite faces lying in adjacent radial planes, the laminations near said faces extending circumferentially, a stationary field winding connected in the primary circuit, an inductor magnetized thereby adapted to be driven at high speed and having a large number of narrow laminated polar projections extending between the opposite faces, and a winding carried in slots on said faces and connected in the secondary circuit.

[Claims 6 and 7 not printed in the Gazette.]

902,196. TYPE-MOLD. ISAAC BAAS, Newark, N. J., assignor to American Type Founders Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 25, 1908. Serial No. 434,901.



1. In a type mold, a cheek piece, a key piece having a series of projections extending from one edge thereof and with said cheek piece forming one side of the mold cavity, and means whereby said key piece may be held in place against said cheek piece.

2. In a type mold, means for casting type provided with nicks comprising a cheek piece and a key piece having a series of projections extending from one edge thereof and, with said cheek piece forming one side of the mold cavity, said key piece being attached to said cheek piece and detachable therefrom.

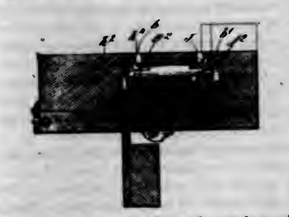
3. In a type mold, a plate provided with projections mounted thereon, said projections being adapted to lie within the mold cavity and against one side thereof, and means whereby said plate is detachably secured to hold said projections in place in said mold.

4. A cheek-piece provided with a recess and a key piece provided with a base adapted to set into the recess in said cheek piece, and means for holding it therein, said key piece being also provided with a series of projections extending from one edge thereof into the mold cavity whereby type cast in said mold may be provided with a series of nicks, as set forth.

5. In a type mold system, a series of key pieces of the same dimensions each having a given number of projections similarly arranged and located thereon, the projections on one key piece being longer than those on another, as described.

[Claims 6 to 8 not printed in the Gazette.]

902,197. MOLD FOR CASTING TYPE. ISAAC BAAS, Newark, N. J., assignor to American Type Founders Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 25, 1908. Serial No. 434,902.



1. The mold above described having a key piece located to form a portion of one side thereof and a plunger adapted to expose a greater or less extent of the said side of said mold, as described.

2. The mold above described, one side of which comprises a cheek piece and a key piece attached thereto to expose a portion thereof, and a plunger adapted to expose to a greater or less extent said side of said mold, whereby a type may be cast therein, a portion of which is of the setwise dimension and a portion of which is thinner than the setwise dimension, as set forth.

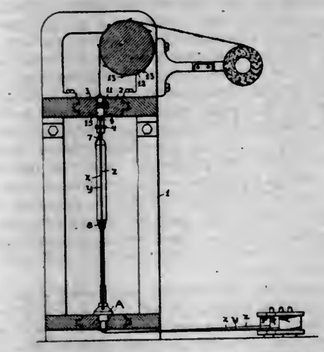
3. The mold above described, having a key piece and cheek piece forming one side of the mold, and plunger adjustable as to its stroke and adapted to coöperate with the key piece to cast nicked type of different setwise dimensions.

4. The mold above described, having a cheek piece, a key piece narrower than said cheek piece, and a plunger shaped to engage said key piece and the portions of said cheek piece at the sides of said key piece, as set forth.

5. The mold above described, having a cheek piece, a key piece detachably located thereon to expose portions of said cheek piece, and a plunger adapted to engage said key piece and portions of the exposed portions of said cheek piece, as described.

[Claims 6 to 11 not printed in the Gazette.]

902,198. WIRE-NETTING MACHINE. ARTHUR E. BARLOW, Worcester, Mass., assignor to Wright Wire Company, Worcester, Mass., a Corporation of Massachusetts. Filed Mar. 18, 1907. Serial No. 362,847.



1. In a wire netting machine of the class described, the combination with a wire twisting section provided with a single hole for the passage of a wire, of a second wire twisting section provided with a number of holes, each hole arranged for the passage of a wire, means for rotating

said section carrying more than one wire, separately and in combination with said single wire twisting section, alternately.

2. In a wire netting machine of the class described, the combination with a wire twisting section provided with a single hole for the passage of a wire, of a second wire twisting section provided with a number of holes, each hole arranged for the passage of a wire, means for rotating alternately said section carrying more than one wire separately in one direction, and in combination with said single wire twisting section in the opposite direction.

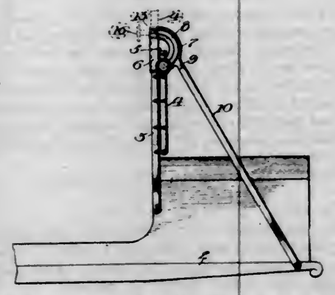
3. In a wire netting machine, of the class described, the combination with a series of wire twisting gear sections, each having a hole for the passage of wires to form the body of the fabric, of a selvage gear section having a multiplicity of adjacent holes, and means for carrying said selvage gear section into and out of engagement with one of the gear sections having a single hole.

4. In a wire netting machine of the class described, the combination with a series of wire twisting gear sections, each having a hole for the passage of single wires forming the body of the fabric, of a selvage gear section having a multiplicity of adjacent holes, means for carrying said selvage gear section into and out of engagement with a gear section having a single hole, and means for alternately rotating said gear sections in opposite directions.

5. A wire netting machine of the class described, comprising a single wire twisting section provided with a multiplicity of holes, each hole arranged for the passage of a wire, and means for rotating said twisting section alternately in opposite directions.

[Claims 6 and 7 not printed in the Gazette.]

902,199. WIND-SHIELD FOR VEHICLES. WALTER N. BEECHER, Chicago, Ill. Filed Jan. 13, 1908. Serial No. 410,605.



1. A wind-shield for vehicles comprising a stationary lower sash and a movable upper sash hinged thereto, a bracket secured to and projecting above the top edge of the lower sash and provided with a transverse recess near the upper end of its vertical portion, and a swinging pivoted bolt secured to said upper sash and adapted to engage said recess and lock said upper sash in its adjusted position.

2. A wind-shield for vehicles comprising a stationary lower sash and a movable upper sash hinged thereto, a bracket secured to and projecting above the top edge of the lower sash and provided with a transverse recess near the upper end of its vertical portion, a swinging pivoted bolt secured to said upper sash and adapted to enter said recess when said sash is raised, and a hand-nut engaging said bolt the tightening of which secures said upper sash in its adjusted position.

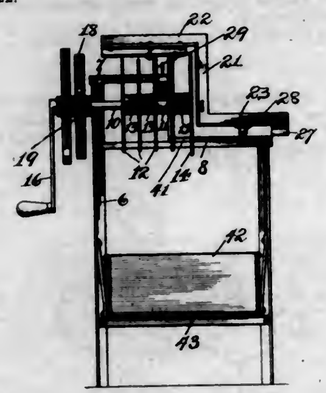
3. A wind-shield for vehicles comprising a stationary lower sash and a movable upper sash hinged thereto, a bracket secured to and projecting above the upper portion of the lower sash and having a semi-circular slot therein that connects with a transverse recess in the vertical portion of said bracket, and a pivoted bolt secured to the upper sash and operating in said slot and adapted to engage said recess and lock said upper sash in its adjusted position.

4. An wind-shield for vehicles comprising a stationary lower sash and a movable upper sash hinged thereto, a bracket secured to and projecting above the upper portion of the lower sash and having a semi-circular slot therein that connects with a transverse recess in the vertical portion of said bracket, a pivoted bolt operating in said slot secured to said upper sash and adapted to be seated in said recess, and a hand-nut engaging said bolt the tightening of which secures said upper sash in its adjusted position.

5. A wind-shield for vehicles comprising a stationary lower sash and a movable upper sash, hinges connecting the same, the plate thereof attached to the upper sash having parallel lugs projecting laterally therefrom, a bracket secured to and projecting above the top edge of the lower sash and provided with a transverse recess near the upper end of its vertical portion, and a bolt one end of which is pivotally secured between the lugs on said hinge-plate and the free end thereof is adapted to enter said recess and lock said upper sash in its adjusted position.

[Claims 6 to 14 not printed in the Gazette.]

902,200. ICE-CUTTING MACHINE. GEORGE S. BLAKESLEE, Chicago, Ill. Filed July 20, 1904. Serial No. 217,422.



1. A machine for cutting cubical blocks, comprising a plurality of parallel scoring-saws, a severing-saw parallel with said scoring-saws, a table for supporting the material while being scored, and a table on a different level for supporting the material while being severed into blocks, said severing-saw projecting over the latter table.

2. A machine for cutting cubical blocks, comprising a drive-shaft, a plurality of parallel scoring-saws mounted on said shaft, a severing-saw parallel with said scoring-saws and mounted on said shaft, a table for supporting the material while being scored, and a table on a different level for supporting the material while being severed into blocks said severing saw extending above the latter table to engage the material thereon.

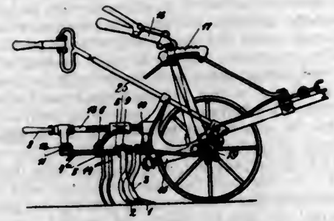
3. A machine for cutting cubical blocks, comprising a plurality of parallel scoring-saws, a severing-saw parallel with said scoring-saws and of greater diameter, a table for supporting the material while being scored, and a table on a different level for supporting the material while being severed into blocks said severing saw extending above the latter table to engage the material thereon.

4. A machine for cutting cubical blocks, comprising a plurality of parallel scoring-saws, a severing-saw parallel with said scoring-saws, a scoring table above the axis of said scoring-saws, and a cutting table below the axis of said severing-saw.

5. A machine for cutting cubical blocks, comprising a plurality of parallel scoring saws, a severing saw parallel with said scoring saws, a shaft on which said saws are mounted, a table for supporting the material while being scored, and a table on a lower level for supporting the material while being severed into blocks, said severing saw extending above the latter table to engage the material thereon.

[Claims 6 to 9 not printed in the Gazette.]

902,201. HOEING-MACHINE. CARL BONGARTZ, Mielershof, near Dilliken, Germany. Filed Mar. 27, 1908. Serial No. 423,528.

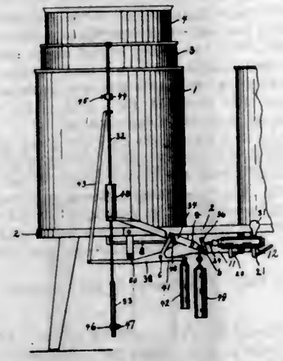


1. A hoeing machine, comprising a frame, a series of sets of hoes carried thereby, each set consisting of a central hoe and a pair of flanking hoes, and means for simultaneously and uniformly adjusting the flanking hoes of each set with relation to its central hoe, substantially as specified.

2. A hoeing machine, comprising an inner set of hoes and two outer sets of hoes, each set being composed of a central hoe and a pair of flanking hoes, means for laterally adjusting the outer sets with relation to the central set, and means for adjusting, simultaneously and uniformly, the flanking hoes of each set with relation to its central hoe, substantially as specified.

3. A hoeing machine comprising a frame, cross bars adjustable thereon, slides carried by the cross bars, overlapping hoe-carriers engaging the slides, sleeves movable on the cross bars, toggles connecting the hoe-carriers to the cross bars and sleeves, a longitudinal bar engaged by the sleeves, and means for adjusting said bar, substantially as specified.

902,202. WATER-MOTOR. ALBERT W. BREIDING, Sterling, Ill. Filed June 20, 1907. Serial No. 379,898.



1. A device of the class named, comprising a cylinder; a central compartment therein, provided in one of its walls with an opening permitting the passage of a body of water from such compartment and the return of such water thereto; an inlet chamber, communicating with said central compartment; an outlet chamber, also communicating with said central compartment; a valve-stem extending longitudinally through said central compartment and inlet and outlet chambers; a valve, fixed on said valve-stem within said inlet chamber; a valve, loosely mounted on said valve-stem within said outlet chamber; means for holding such valve-stem normally in position with the inlet valve closed; and means for closing the valve in the outlet chamber and simultaneously opening the valve in the inlet chamber; substantially as shown and described.

2. A valve, comprising a cylinder 12, suitably mounted on the frame of the machine; a compartment 13, centrally thereof, and provided with an opening 30 in the wall thereof; a chamber 14, communicating with the compartment 13, and provided with an inlet pipe 21; a chamber 15, communicating with the compartment 13, and provided with an outlet pipe 29; a valve-stem 16, extending longitudinally of the chambers 14, 13 and 15, and provided with a shoulder 27; a valve 17, fixed on the valve-stem 16, and adapted to close the passage from the chamber 14 to the compartment 13; a valve 22, loosely mounted on the valve-stem 16 within the chamber 15, and adapted to close the opening between such chamber and the chamber 13; a plunger 24, adapted to actuate the valve 22, to close the same and simultaneously open the valve 17; and means for holding the valve 17 normally closed, substantially as shown and for the purpose set forth.

3. In a device of the class named, the combination with a tank 1, provided with a cylinder 5 and piston 6 therein, and the bell 3, vertically movable in said tank, of the cylinder 12, suitably mounted on the frame of the machine, and communicating with the cylinder 5; mechanism for permitting the passage of a body of water through the cylinder 12 and permitting the return thereof through said cylinder; a plunger 24, controlling the inlet of such water into the cylinder 12, and the discharge of such water therethrough; a lever 34, fulcrumed on the frame of the machine, and adapted to actuate the plunger 24 to permit the inlet of water through the cylinder 12; and means for operating the lever 34 to actuate such plunger when the bell 3 reaches the end of its downward movement; substantially as shown and for the purpose named.

4. In a device of the class named, the combination with a tank 1, provided with a cylinder 5 and piston 6 therein, and the bell 3, vertically movable in said tank, of the cylinder 12, suitably mounted on the frame of the machine, and communicating with the cylinder 5; mechanism for permitting the passage of a body of water through the cylinder 12 and permitting the return thereof through such cylinder; a plunger 24, controlling the inlet of such water into the cylinder 12, and the discharge of such water therethrough; a lever 34, fulcrumed on the frame of the machine, and adapted to actuate the plunger 24; means for operating the lever 34 to actuate the plunger 24 when the bell 3 reaches the end of its downward movement; and means for operating the lever 34 to release such plunger when the bell 3 reaches the end of its upward movement, substantially as shown and described.

5. In a device of the class named the combination, with a cylinder 12, and mechanism therein for alternately permitting the passage of a stream of water through such cylinder, and the return of such water therethrough, and a plunger 24, controlling the action of such mechanism; of a lever 34, fulcrumed so as to have its short end in proximity to the outer end of the plunger 24; a cam 36, interposed between the end of the lever 34 and the plunger 24, and provided with a recess 37; means for holding the lever 34 and cam 36 normally out of engagement with the plunger 24; means for operating the lever 34 to cause the inward action of the plunger 24; and means for the operation of the lever 34 to release said plunger, substantially as shown and set forth.

[Claims 6 to 8 not printed in the Gazette.]

902,203. NEEDLE-LOOM. JOHN C. BROOKS, Paterson, N. J. Filed Jan. 18, 1902. Serial No. 90,273.



1. In a loom, a filling inserting needle provided with means to engage with and disengage from its actuating means and a yieldable device upon the needle to hold the needle in a predetermined position when not in operation.

2. In a loom, a needle to insert weft provided with means to resist accidental misplacement and with means to enable the needle to engage with and disengage from actuating means.

3. The combination in a filling inserting needle of means upon the needle to enable the needle to engage with and disengage from its actuating means, means upon the needle to enable the needle to flexibly lock itself in a predetermined position, with means within the needle to detect a float and sever the weft thread upon the occurrence of a float.

902,204. CONCRETE CONSTRUCTION. ROBERT T. BROWN, Boston, Mass., assignor of one-half to F. William Brown, Boston, Mass. Filed Feb. 1, 1907. Serial No. 355,294.



1. In a concrete construction, the combination with supporting I-beams, of an arch, said arch consisting of a series of reinforced, molded, concrete planks trapezoidal in transverse section and each provided with a longitudinally extending cavity, said planks having their ends resting on and supported by the lower flanges of said I-beams and the broader side of each plank being downward, whereby V-shaped spaces are formed between adjacent planks; and a layer of cementitious material superimposed upon said arch and filling said spaces.

2. In a concrete construction, the combination with supporting I-beams of a curved arch, said arch consisting of a plurality of contiguous reinforced, molded, concrete planks trapezoidal in transverse section and each provided with a longitudinally extending cavity, said planks having their ends resting on and supported by the lower flanges of said I-beams and the broader side of each plank being downward, whereby V-shaped spaces are formed between adjacent planks; a layer of cementitious material superimposed upon said arch and filling said spaces; and a flat arch beneath said curved arch, said flat arch consisting of a series of reinforced concrete planks, each having its reinforces resting upon the lower flanges of said I-beams and so arranged that an air-space is formed between said arches.

3. In a concrete construction, the combination with supporting I-beams, of an arch, said arch consisting of a plurality of contiguous reinforced, molded concrete planks trapezoidal in transverse section and each provided with a longitudinally extending cavity, said planks having their ends resting on and supported by the lower flanges of said I-beams and the broader side of each plank being downward, whereby V-shaped spaces are formed between adjacent planks; and a layer of fire-proof material superimposed upon said arch and filling said spaces and the space between the webs of said I-beams and the top of said arch.

902,205. DRIVE-CHAIN. WALTER F. BROWN, Worcester, Mass. Filed May 24, 1907. Serial No. 375,448.



1. A detachable drive chain, comprising central links, a pivotal pin in each end of said central links, side plates uniting said pivotal pins, said pivotal pins provided with straight transverse grooves, and an elastic bendable locking plate for each of said pins, provided with a central slot open at one end with the sides of said slot parallel and fitting said transverse grooves.

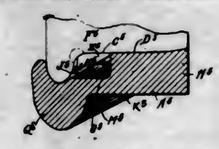
2. A detachable drive chain, comprising central links, a pivotal pin in each end of said central links, side plates uniting said pivotal pins, said pivotal pins provided with straight tranverse grooves, and an elastic bendable locking plate for each of said pins, provided with a central slot open at one end with the sides of said slot parallel and fitting said transverse grooves, said plate having means for preventing its longitudinal movement.

3. A detachable drive chain, comprising central links, a pivotal pin in each end of said central links, side plates uniting said pivotal pins, said pivotal pins provided with straight transverse grooves on opposite sides of said pins, and an elastic bendable locking plate provided with a central slot open at one end and having straight parallel sides fitting the transverse grooves in each of said pins, the sides of said slot provided with shoulders to prevent longitudinal movement of said locking plate in said slot.

4. A detachable drive chain, comprising central links, a pivotal pin in each end of said central links, side plates uniting said pivotal pins and held from turning thereon, said pivotal pins provided outside said side links with transverse grooves, and locking means for each of said pins, comprising an elastic bendable sheet metal plate having a central slot and an opening at one end communicating with said central slot, and with the sides of said slot inclosed in said transverse grooves.

5. As an article of manufacture, a locking plate for a detachable drive chain, consisting of a flat inelastic plate having a central opening or slot with divergent sides, said slot being open at one end, said plate being compressible against the pivotal pins of a drive chain.

902,206. BRAKE-SHOE. SAMUEL P. BUSH, Columbus, Ohio. Filed Jan. 21, 1908. Serial No. 411,995.



1. A brake shoe comprising a flange engaging portion, a rim engaging portion spaced away from the flange engaging portion to avoid contact with the throat of the wheel and a plurality of stiffening ribs on the front of the shoe adjacent the throat.

2. A brake shoe comprising a flange engaging portion, a rim engaging portion, an intermediate portion cut back to avoid contact with the throat of the wheel and a plurality of ribs partially bridging the cut back portion.

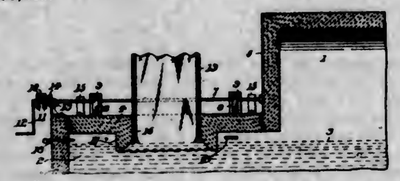
3. A brake shoe having its face cut away at the throat of the wheel and provided with a plurality of ribs partially bridging such cut away portion.

4. A brake shoe having its face cut away at the throat of the wheel and provided with a plurality of ribs extending diagonally across the throat of the wheel.

5. A brake shoe comprising a flange engaging portion, a rim engaging portion, an intermediate portion cut back to avoid contact with the throat of the wheel and a plurality of ribs on the back of the shoe opposite the cut away portion.

[Claims 6 and 7 not printed in the Gazette.]

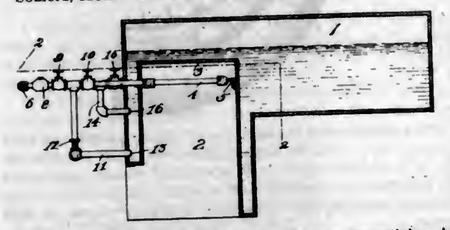
902,207. GLASS-MAKING APPARATUS. JAMES CAMPBELL, Pittsburg, Pa. Filed Oct. 25, 1907. Serial No. 399,143.



1. In a glass drawing furnace, a vertically movable roof therefor, having therein a drawing opening, a shield projecting from the lower face of said roof, having movement with the said roof, and forming the lower part of said opening, means to raise and lower the roof so that the flange may project into the glass during the drawing operation and be raised out of the glass after the same, and burners arranged to project their flames into the space between the top-stone and the glass line.

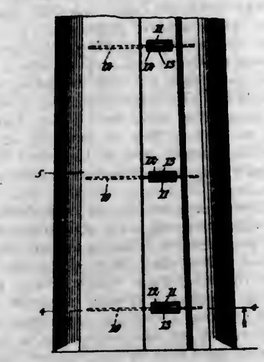
2. In a glass drawing furnace, a glass melting tank, a forehearth connected thereto, a vertically movable roof for the latter, having a drawing opening therein, a shield projecting from the bottom of the roof, having movement with the said roof, and forming the lower part of said opening, means to raise and lower said roof, and burners arranged to project their flames into the space between the roof and the glass line.

902,208. FEED-WATER HEATER. LUTHER H. CAVERLY, Somers, Mont. Filed Feb. 29, 1908. Serial No. 418,571.



The herein described feed water heater comprising in combination with a steam boiler having a water space surrounding its fire box, of a coil supporting bracket 5 arranged within the fire box upon one of its walls, the feed water heating coil 4 arranged in the upper portion of the fire box and engaged with said bracket, said coil having the horizontal discharge end 14 extending outside of the front of the boiler, then downwardly and then inwardly into the water space of the boiler below the normal level of the water, the controlling valve 15 in said branch or end 14, said coil also having its inlet end or branch extending outside of the boiler, the branch pipe 11 having the vertical branch depending from said inlet end of the coil and the horizontal branch extending into the water space of the boiler at a point below the discharge end 14 of the coil, the controlling valve 12 in said branch pipe 11, controlling valves 9, 10 in the inlet pipe of the coil on opposite sides of the branch pipe connection, and the check valve 8 in said inlet end or branch in advance of the valve 9.

902,209. COLUMN. CALVIN T. CUNNIUS, Long Branch, N. J. Filed Apr. 8, 1908. Serial No. 425,956.



1. A column composed of a plurality of staves having abutting edges of the same relative taper, each stave having a transverse aperture registering with a like aperture in the adjacent staves, a band passing through the aperture of the staves having its ends reversely threaded, and a turnbuckle engaging the threaded ends of the wire for drawing the staves together.

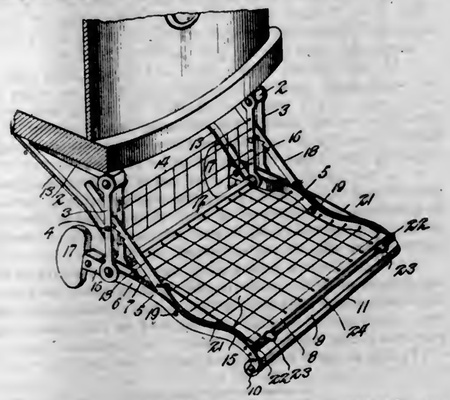
2. A column composed of a plurality of staves of the same relative taper, with one of said staves consisting of an inner and outer section, the outer section being unbroken and approximately equal in length to the other staves of the column, and a band passing through the several staves circumferentially of the column, with the free ends of the band joined together at the inner section of the sectional stave.

3. A column composed of a plurality of staves of the same relative taper, said staves having engaging tongues and grooves on their abutting edges, and a band passing through the several staves circumferentially of the column on a line intersecting the tongues and grooves, operating to bind the staves together.

4. A column comprising a plurality of staves, an inner stave section having a slot, a wire band passing through the several staves, with its free ends reversely threaded and passing into said slot, a turnbuckle in said slot in threaded engagement with the threaded ends of the band, and an outer stave section covering the inner stave section and the turnbuckle.

5. A column composed of a plurality of abutting staves, a band passing through the several staves circumferentially of the column, and a turnbuckle in threaded engagement with the free ends of the band for drawing the staves together.

902,210. CAR-FENDER. DANA E. CONN, Hyde Park, Mass., assignor of one-half to William G. Crawford, Boston, Mass. Filed Jan. 14, 1908. Serial No. 410,856.



1. A car provided with a pivoted fender, means for automatically elevating the fender to an inoperative position, and means for holding the fender in its operative position against the action of the elevating means.

2. A car fender comprising supporting means, a fender body pivotally supported thereby, counterbalancing weights adapted to elevate the fender to an inoperative position, and counteracting means for holding the fender in operative position against the action of the counterbalancing weights.

3. A car provided with a pivoted fender, gravity-controlled means for automatically elevating the fender to an inoperative position, and means for holding the fender in its operative position against the action of the elevating means.

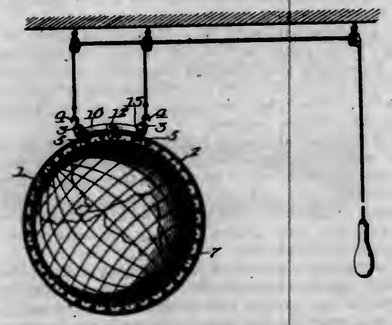
4. A car provided with a pivoted fender, means for automatically elevating the fender to an inoperative position, latch mechanism for holding the fender in its operative position against the action of the elevating means, and means for retracting said latch mechanism.

5. A car fender comprising supporting means, a fender body pivotally connected therewith, means for automatic-

ally elevating the fender body to an inoperative position, latch mechanism for holding the fender body in operative position against the action of such elevating means, and means for releasing said latch mechanism.

[Claims 6 to 14 not printed in the Gazette.]

902,211. GLOBE-SUSPENDING DEVICE. THOMAS H. COSTELLO, Chicago, Ill. Filed Oct. 28, 1907. Serial No. 399,409.



1. In combination with a globe and a meridian ring provided with flanges on either side, a yoke, means on the ends of said yoke for engaging the flanges of the ring, and means attached to the yoke for supporting the globe and its attachments.

2. In combination with a globe and a meridian ring provided with flanges on either side, a plurality of clips adapted to engage the flanges of the meridian, and a yoke to secure the clips in rigid relation to each other.

3. In combination with a globe and its meridian ring, a balancing yoke, means for supporting the same, clips at either end of the yoke having slots in which said yoke ends are seated, means for engaging the meridian ring seated in said slot, and means for securing said meridian engaging means and the yoke ends in the slots.

4. In combination with a globe and a meridian ring having a flange on one side thereof; a supporting yoke having downturned ends adapted to bear on one side of the meridian, and clips secured to the yoke to engage the flange on the other side of the meridian.

5. In combination with a globe and a meridian ring having flanges on either side thereof; a supporting yoke having downturned ends adapted to engage the flange on one side of the meridian, and clips secured to the yoke to engage the flange on the other side of the meridian.

[Claims 6 and 7 not printed in the Gazette.]

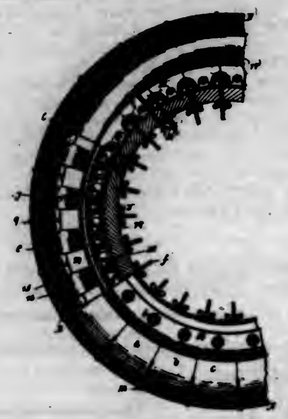
902,212. SECTIONAL TIRE. HORACE O. CRAVEN, Schenectady, N. Y. Filed Nov. 11, 1905. Serial No. 286,794.

1. In a tire section, two end supports of metal constructed to be attached to a wheel, a layer of textile material extending between said supports and connected thereto and an outer sheathing of elastic material covering said textile material and receiving said supports.

2. In a tire section, two end supports of metal constructed to be attached to a wheel and having longitudinal rods, a plurality of layers of textile material secured at their ends to said rods and an outer sheathing of elastic material covering said textile material and receiving said supports.

3. A tire formed of sections of elastic material in split tubular form, metal supports secured to the edges thereof, means for securing the supports of each section in lateral contact and means for connecting the supports of the several sections together at their ends.

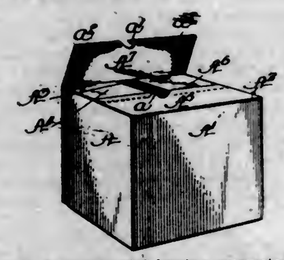
4. A tire formed of sections of elastic material in split tubular form, metallic supports secured to the edges thereof, means for securing the supports of each section in lateral contact, means for connecting the supports of the several sections together at their ends and means for securing said supports to a wheel.



5. A plurality of tire sections of elastic material in split tubular form, metallic supports secured to the edges thereof, a wheel having a circumferential recess constructed to receive said supports end to end, and means for connecting said supports at their contiguous ends to said wheel.

[Claims 6 to 19 not printed in the Gazette.]

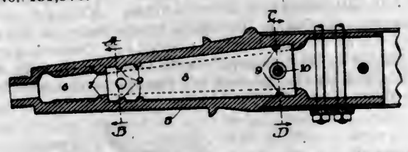
902,213. CONTAINER. FRANK B. DAVIDSON, Marseilles, Ill., assignor to The Howe and Davidson Company, East Orange, N. J., a Corporation of New Jersey. Filed Jan. 13, 1908. Serial No. 410,483.



1. A box of sheet material having connected side walls and an end wall, said end wall consisting of two opposite inner flaps which are folded inwardly into the same plane and two opposite outer flaps which are folded inwardly against the inner flaps, which overlap each other at their meeting margins, and each of which has in its margin a notch forming a laterally extending tongue, the tongues on the two outer flaps extending in opposite directions and interlocked with each other, and the marginal part of each outer flap, at one side of the notch therein, extending beneath, and at the other side of said notch, extending over, the marginal part of the other outer flap.

2. A box of sheet material having connected side walls and an end wall, said end wall consisting of two opposite inner flaps which are folded inwardly into the same plane and two opposite outer flaps which are folded inwardly against the inner flaps, which overlap each other at their meeting margins, and each of which has in its margin a notch forming a laterally extending tongue, the tongues on the two outer flaps extending in opposite directions and interlocked with each other, and the marginal part of each outer flap, at one side of the notch therein, extending beneath, and at the other side of said notch, extending over, the marginal part of the other outer flap, said outer flaps being also provided at each end of their meeting margins, one with a notch and the other with a slit forming a tongue fitting within said notch, and said outer flaps being secured to the inner flaps, and to each other in their overlapping portions, by adhesive material.

902,214. AXLE-SKEIN. SAMUEL K. DENNIS, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed May 8, 1908. Serial No. 431,573.



1. An axle skein including, in combination, a wrought metal rib cast integral with the body portion of the skein and extending longitudinally and vertically within its interior.

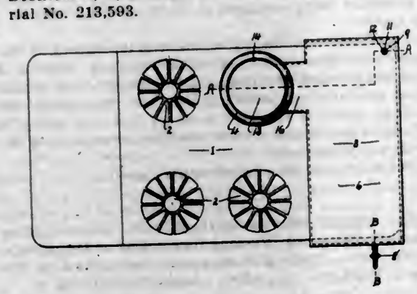
2. An axle skein having, in combination, an interior portion and longitudinally arranged ribs on the upper and lower surface thereof, and a wrought metal plate having its opposite edges embedded in said ribs.

3. An axle skein having, in combination, a wrought metal plate longitudinally and vertically arranged within said skein, cast integral therewith, said plate having one or more notches on the edge thereof.

4. An axle skein having, in combination, a longitudinally and vertically arranged wrought metal plate cast integral with the body of the skein, said plate having a tapered form and provided with a plurality of notches upon opposite edges thereof.

5. In an axle skein, a skein in combination with an axle, and means for securing the skein to the axle, of a wrought metal plate cast integral with the body of the skein and extending longitudinally relative thereto, and an opening through said plate designed to receive the securing means connecting the skein with the axle member.

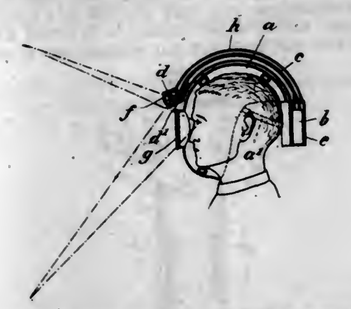
902,215. UTENSIL FOR COOKING-RANGES. ROSA B. DICKINSON, Syracuse, N. Y. Filed June 22, 1904. Serial No. 213,593.



A utensil for cooking ranges comprising an elongated reservoir, and a heating-receptacle arranged at one side of one end of the reservoir and communicating therewith, said reservoir having an imperforate flat top and a flat bottom, and the receptacle projecting above the top of the reservoir, substantially as and for the purpose set forth.

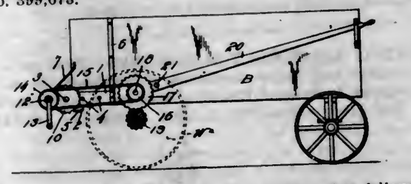
902,216. ELECTRIC LAMP FOR HELMETS AND SIMILAR HEAD-COVERINGS. JOHANN H. DRÄGER, Lübeck, Germany. Filed Jan. 2, 1908. Serial No. 409,078.

1. A device of the character described comprising a head covering having a receptacle thereon, a battery mounted in the receptacle, a casing integral with the receptacle detachably connected to the covering, a lamp in the casing, and a conductor in the latter connecting the battery and lamp.



2. An electric lamp for head-coverings in combination with a battery and a conductor connecting the lamp with the battery the lamp being attached to the head covering on its front part and the battery in such position on the hinder part of the head-covering that it covers the neck of the wearer and serves as a protection to the same.

902,217. LOADING AND UNLOADING DEVICE. ANDREW A. EGENESS, Room, Minn. Filed Oct. 29, 1907. Serial No. 399,673.



1. The combination with a wagon body, of a follower therein, a draft cable attached to the follower and a winding device for the cable operatively connected to one of the wheels of the wagon.

2. The combination with a wagon body, of a follower therein, a draft cable attached to the follower, a windlass for said cable, means for rotating said windlass and means whereby the windlass may be connected to and operated by one of the wheels of the wagon.

3. The combination with a wagon body, of a follower therein, a draft cable attached to the follower, a windlass for said cable, a gear for operating said windlass, hand operated means for actuating said gear, driving connections between said gear and one of the wheels of the wagon, and means for throwing said driving connections into and out of operation.

4. The combination with a wagon, of bearings at the rear of its body, a transverse shaft in said bearings, a follower, a flexible element attached to the follower and adapted to be wound up by the shaft and driving connections between the shaft and one of the wagon wheels.

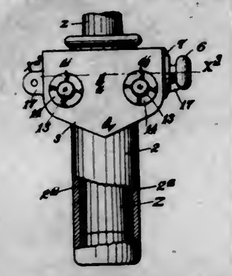
5. The combination with a wagon, of bearings at the rear of its body, a transverse shaft in said bearings, a follower, a flexible element attached to the follower and adapted to be wound up by the shaft, a winding drum upon one end of said shaft, a gear upon the other end of said shaft, a hand crank for rotating said gear, driving connections between said gear and one of the wagon wheels and means for throwing said driving connections out of operation.

[Claims 6 and 7 not printed in the Gazette.]

902,218. LOCK-EQUIPPED WHIP-SOCKET. MIKKEL ELLINGSON, Brooten, Minn. Filed Apr. 23, 1908. Serial No. 428,773.

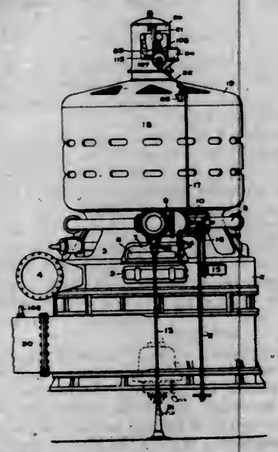
1. The combination with a whip socket, of main and supplemental lock bolts rotatively mounted in said socket,

the said main bolt having a notch adapted to be turned into alinement with the whip seat of said socket and having notches adapted to be turned into alinement with said supplemental lock bolts, and the said supplemental lock bolts having notches adapted to be turned into alinement with said main lock bolt, substantially as described.



2. The combination with a whip socket, of main and supplemental lock bolts rotatively mounted in the head portion of said socket, said main lock bolt having a notch adapted to be turned into alinement with the whip seat of said socket and having notches adapted to be turned into alinement with said supplemental lock bolts, the said supplemental lock bolts having notches adapted to be turned into alinement with said main lock bolt, and the said main and supplemental lock bolts having knobs and dials at one end, substantially as described.

902,219. GOVERNOR FOR TURBINES. WILLIAM L. R. EMMET and OSCAR JUNGGREN, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed May 8, 1903. Serial No. 156,142.



1. In combination, a plurality of separately actuated valves, nozzles or nozzle sections controlled thereby, and a means anticipating the movement of the valves, for varying the effective discharge of a nozzle or nozzle section.

2. In combination, a plurality of nozzles or nozzle sections, a plurality of separately actuated valves, each having an open and a closed position but no intermediate, and a valve for varying the effective discharge of a nozzle or nozzle section.

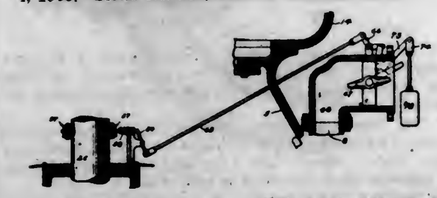
3. In combination, a plurality of separately actuated means for varying the cross-sectional area of a fluid column, with a device acting between the opening and closing of each two of the said means for varying the total volume of fluid delivered thereby.

4. In combination, a plurality of separately actuated valves controlling the admission of elastic fluid to a motor, with a means which precedes the action of each valve for admitting or cutting off a volume of fluid which is less than that controlled by one of the first-mentioned valves.

5. In combination, a valve responsive to speed changes which opens and closes to control the passage of a certain volume of fluid, with a second valve acting on the same fluid, which always precedes the action of the first both opening and closing.

[Claims 6 to 67 not printed in the Gazette.]

902,220. GOVERNING MECHANISM. WILLIAM L. R. EMMET and OSCAR JUNGGREN, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Original application filed May 8, 1903, Serial No. 156,142. Divided and this application filed Oct. 4, 1905. Serial No. 281,237.



1. In combination, a motor, with an emergency governor therefor, comprising a centrifugally acting weight, and a spring which normally opposes the action of the weight and is situated on one side of the dead center and crosses said center and acts accumulatively with said weight under abnormal speed conditions.

2. In a governor, the combination of a pivotally supported weight, a spring acting on said weight and arranged to work on either side of a dead center, and an actuator which is moved by the weight.

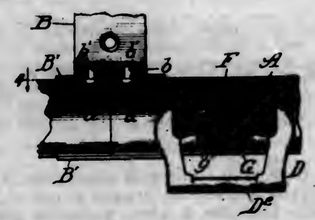
3. In a governor, the combination of a support, a weight pivotally mounted thereon, a spring and abutment for opposing the centrifugal action of the weight and arranged to work on either side of a dead center, and a pivotal support for the spring and abutment.

4. In a governor, the combination of a support, a weight pivotally attached to the support, an actuator arranged to engage with the weight under abnormal conditions, and a spring and movable abutment engaging with the weight, the abutment being arranged to work on either side of a dead center.

5. In a governor, the combination of a support, a centrifugally acting weight pivotally attached thereto, a spring and abutment for opposing the action of the weight, and a pivotally supported holder for the spring and abutment, which is arranged to swing from one side of a dead center to the other when the speed exceeds a certain predetermined amount.

[Claims 6 to 23 not printed in the Gazette.]

902,221. TRACK FOR DOOR-HANGERS. HENRY L. FERRIS and HOWARD J. FERRIS, Harvard, Ill., assignors to Hunt, Helm, Ferris & Company, a Corporation of Illinois. Filed Mar. 11, 1908. Serial No. 420,470.

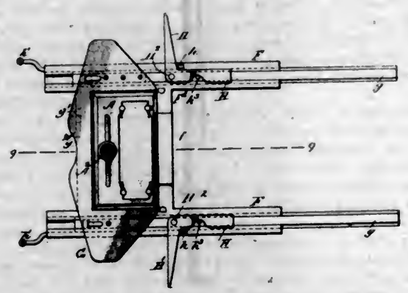


1. The combination with a series of short lengths of hollow cylindrical track each slotted on its lower face and adapted to receive internally a hanger, of a series of brackets for supporting the track-sections, each bracket having sleeves surrounding the lengths at the ends thereof and serving to support the lengths, the sleeves being slotted coincidently with the slots in the track-sections to permit the passage of projecting hanger-portions.

2. The combination with a series of short lengths of hollow track, each slotted on its lower face and being adapted to receive therein hangers, of a plurality of brackets for supporting and coupling the track-sections, each having a sleeve surrounding the ends of adjacent sections and means for preventing relative rotation of the sections with respect to each other, each bracket-sleeve being slotted to permit the passage of a projecting hanger-portion.

3. The combination with a series of short lengths of cylindrical track slotted at the bottom and adapted to receive therein hangers, projecting portions of which can pass through the slot, of a series of brackets for coupling and supporting the sections, each having a sleeve surrounding the adjacent ends of the track-sections, and slotted coincidently with the slot in the section the brackets and sections having engaging projections and slots to prevent the rotation of the sections with respect to the brackets.

902,222. ENVELOP-MACHINE. FRED F. FLAGG and GEORGE W. SMITH, Worcester, Mass., assignors to John A. Sherman, Worcester, Mass. Filed May 4, 1907. Serial No. 371,777.



1. In an envelop machine, a plunger having a feed opening therein, and means located about said opening for holding the ends of patches correspondingly shaped and supported above said opening from a movement toward each other.

2. A plunger having an opening therethrough the edge of which is provided with projections forming with the ends of said opening recesses near said ends, rods located on said projections and projecting upwardly therefrom whereby blanks shaped suitably to said opening will be restrained from movement towards the middle of said opening, and means to prevent the dropping of such blanks down through said opening, as described.

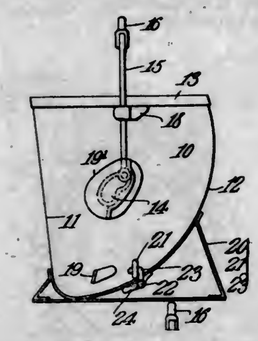
3. In an envelop machine, a plunger having a feed opening narrower near the end than at the middle, the narrowing edges of the opening being adapted to engage corresponding portions of the patches corresponding in shapes to said opening and hold them from movement towards or from each other.

4. In an envelop machine, a plunger having a feed opening substantially rectangular in shape, having near each end a narrowed portion and at the extreme end a wider portion, whereby a blank correspondingly shaped may be held from lengthwise movement by engagement of its end sections with the narrowed portion of said opening.

5. In an envelop machine, a plunger having a feed opening substantially rectangular in shape provided near each end with guide rods projecting into and narrowing the feed opening, whereby the ends of the lower one of a pile of blanks held above said opening shaped to correspond therewith are kept from movement towards or from each other and the lower blank is allowed to sag at the middle, as and for the purposes set forth.

[Claims 6 to 17 not printed in the Gazette.]

902,223. HOISTING-BUCKET. GEORGE FOCHT, Hoboken, N. J. Filed Apr. 2, 1908. Serial No. 424,791.



1. A hoisting bucket substantially segmental in cross section, in combination with a bail provided with pivot lugs, and cam guides for the pivots held upon the sides of said bucket.

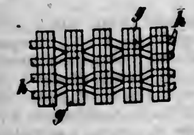
2. A hoisting bucket having a bottom formed to cause said bucket to be in unstable equilibrium when placed on level ground, in combination with a bail having pivots movable on said bucket, and cam guides for the pivots.

3. A hoisting bucket having a bottom formed to cause said bucket to be in unstable equilibrium when placed on level ground, in combination with a bail provided with pivot lugs, means for moving the pivot point as the bucket is dumped and cam guides for the pivots, held upon the sides of said buckets.

4. A hoisting bucket having a pair of end walls provided with cam slots oppositely disposed and each arranged to have one end above the center of gravity when in loaded position and the other end above the center of gravity when in unloaded position, a straight back wall, and a continuously curved front and bottom wall the lowermost point of which lies to the rear of the center of gravity when the bucket is in loaded position, in combination with a bail provided with pivot lugs engaging said cam slots, and means to limit the rotation of said bail.

5. A hoisting bucket having a pair of end walls provided with cam slots oppositely disposed, and each arranged to have one end above the center of gravity when in loaded position, and the other end above the center of gravity when in unloaded position, a straight back wall, a continuously curved front and bottom wall, the lowermost point of which lies to the rear of the center of gravity when the bucket is in loaded position, in combination with a bail provided with pivot lugs engaging said cam slot, means to limit the rotation of said bail, and a cradle to hold said bucket upright.

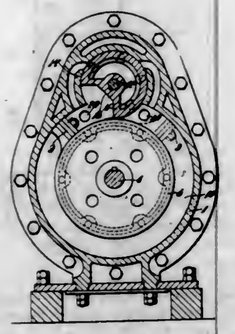
902,224. BELT. GUSTAVE FOUILLARON, Paris, France. Filed Jan. 22, 1906. Serial No. 297,190.



A belt for use with pulleys of the class described, and comprising a plurality of trapezoidal plates and a plural-

ity of straps passed therethrough, the different plates being assembled in groups upon the straps, the different groups being spaced apart from one another, whereby the belt is flexible laterally so as to be capable of assuming a sinuous form, as and for the purpose set forth.

902,225. ROTARY ENGINE. JOHN E. FRIEND, Annandale, Sydney, New South Wales, Australia. Filed Sept. 6, 1907. Serial No. 391,682.



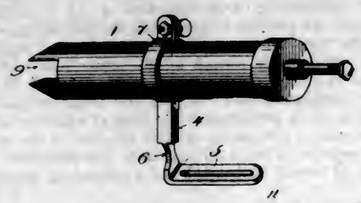
1. A rotary steam engine, comprising a casing having an annular chamber, a shaft co-axial with the annular chamber, a piston revoluble therein, and secured upon the shaft, a circular abutment having a groove and fitting a corresponding recess at the top of the annular chamber, a spindle upon which the abutment is mounted, a toothed wheel secured upon the shaft, a second toothed wheel secured to the spindle and gearing with the first toothed wheel, a steam chest having a port communicating with the annular chamber, a valve secured upon the spindle and having a port through its circular rim adapted to register with the port of the steam chest, substantially as set forth.

2. In a rotary steam engine, the combination with a steam chest of a valve having a port through its circular rim, means for rotating the valve, a chamber communicating by a port with the steam chest, a reversing valve fitting the chamber, a spindle to which the reversing valve is secured, and a handle secured upon the spindle, substantially as set forth.

3. A rotary steam engine, comprising a casing having an annular chamber, a shaft co-axial with the annular chamber, a piston revoluble therein, and secured upon the shaft, a circular abutment having a groove and fitting a corresponding recess at the top of the annular chamber, a spindle upon which the abutment is mounted, a toothed wheel secured upon the shaft, a second toothed wheel secured to the spindle and gearing with the first toothed wheel, a steam chest having a port, a valve secured upon the spindle and having a port through its circular rim adapted to register with the port of the steam chest, a chamber communicating by the said port with the steam chest, a reversing valve in the chamber and means for operating the reversing valve, substantially as set forth.

902,226. GUIDE-GREASER FOR ELEVATORS. THEODORE F. GOODRICH, Albany, N. Y., assignor to Theodore F. Goodrich, August Rommel, and Gustav Rommel, doing business under the name of Goodrich, Rommel Company, a Copartnership. Filed Dec. 7, 1907. Serial No. 405,472.

In an article of the class described, a lubricator for elevators and the like comprising a cylinder having a slot at one end, inclined walls on each side of said slot, a cap at the other end of said cylinder, a follower and a spring between said follower and said cap, whereby the lubricating material is forced through said slot by said follower and



by the inclined walls so that three sides of the guide may be lubricated simultaneously.

902,227. COTTON-PICKING FINGER. THOMAS J. GRAY, Indianapolis, Ind., assignor to Henry E. Bullock and James E. Bullock, Chicago, Ill. Filed June 6, 1908. Serial No. 437,136.



1. The combination with a rotatable shaft having barbs to engage the cotton, of a sleeve perforated for the passage of the barbs and surrounding the shaft, said sleeve having a surface opposed to the barbs between which and the barbs the cotton will wedge when moved longitudinally, whereby a longitudinal strain exerted upon the cotton will rotate the sleeve to positively strip the cotton from the barbs.

2. The combination with a rotatable shaft having barbs to engage the cotton, of a sleeve surrounding the shaft, said sleeve having a groove perforated along one side for passage of the barbs, said sleeve being rotatable with respect to said shaft, whereby, when the cotton is moved longitudinally with respect to the shaft, it will wedge against the opposite side of the groove from the barbs and rotate the sleeve to positively strip the cotton from the barbs.

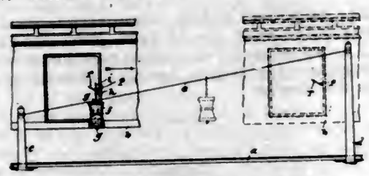
3. In a device of the class described, the combination with a rotatable shaft, of a sheet-metal web extending longitudinally of the shaft, oppositely-stamped yokes formed from the body of said web and surrounding the shaft, barbs turned at an angle to said web, and a sleeve surrounding the shaft and having a groove one side of which is perforated for the passage of the barbs.

4. The combination with a rotatable shaft, of a sheet-metal web having oppositely-stamped yokes surrounding the shaft and non-rotatable with respect thereto, oppositely-turned barbs along the edges of the web, and a sheet-metal sleeve having inwardly-stamped grooves on its opposite side, the corresponding faces of the grooves being perforated for the passage of the barbs.

5. The combination with a rotatable shaft, of a sheet-metal web extending longitudinally thereof and provided with barbs, of a block rigid upon the shaft near one end, locking means between said web and block to cause the web to rotate with the block as motion is imparted to the latter, and a sleeve surrounding the shaft and body-portion of the web.

[Claims 6 and 7 not printed in the Gazette.]

902,228. APPARATUS FOR DELIVERING MAIL-BAGS FROM RAILWAY-TRAINS. JACOB C. GROETSCH and CHRISTIAN L. SAAL, Jr., Paterson, N. J. Filed Dec. 4, 1907. Serial No. 405,002.



1. The combination, with a railway and a vehicle running thereon, of an inclined runway arranged substantially parallel with the railway, a hook-shaped bag-holder, and means, comprising a rearwardly extending arm, for removably supporting said bag-holder on the vehicle in position to be engaged by said runway, substantially as described.

2. The combination, with a railway and a vehicle running thereon, of an inclined runway arranged substantially parallel with the railway, a hook-shaped bag-holder, and means, comprising a rearwardly extending upwardly inclined arm, for removably supporting said bag-holder on the vehicle in position to be engaged by said runway, substantially as described.

3. The combination, with a railway and a vehicle running thereon, of an inclined runway arranged substantially parallel with the railway, a hook-shaped bag-holder, and a support for the bag-holder pivoted in the vehicle on a horizontal axis and comprising a rearwardly extending arm adapted to receive the bag-holder, substantially as described.

4. The combination, with a railway and a vehicle running thereon, of an inclined runway arranged substantially parallel with the railway, a hook-shaped bag-holder, and a support for the bag-holder pivoted in the vehicle on a horizontal axis and comprising a rearwardly extending upwardly inclined arm adapted to receive the bag-holder, substantially as described.

5. The combination, with a vehicle, of an inclined runway, a hook-shaped bag-holder, and a support for the bag-holder having a bag-holder receiving arm extending from the support upwardly in an incline reverse to that of the runway, substantially as described.

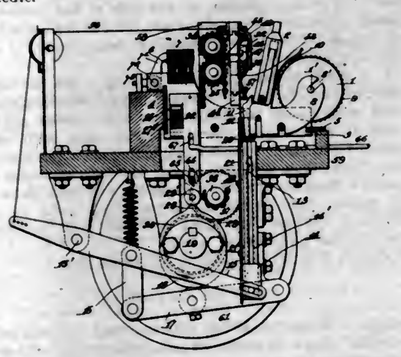
[Claim 6 not printed in the Gazette.]

902,229. THREADING-MACHINE FOR CARPET-LOOMS. HUGO HEYMAN, Gottenborg, Sweden. Filed June 11, 1904. Serial No. 212,101.

1. In a machine for threading tuft yarns through the frame tubes in carpet looms, the combination with a support for the spool, tubes and a support therefor, of means for supporting the yarn adjacent to the tubes in the path of the needle, a needle, and means for reciprocating the needle successively through the tubes to engage with the yarns and draw them through the tubes.

2. In a machine for threading tuft yarns through the frame tubes in carpet looms, the combination with a support for the spool, tubes and a support therefor, of a brush for supporting the yarns adjacent to the tubes, a needle, and means for reciprocating the needle successively through the tubes to engage with the yarns and draw them through the tubes.

3. In a machine for threading tuft yarns through the frame tubes in carpet looms, the combination with a support for the spool, of tubes and a support therefor, of a brush for supporting the yarns adjacent to the tubes, a needle, means for reciprocating the needle successively through the tubes, and means for engaging the yarns with the needle.

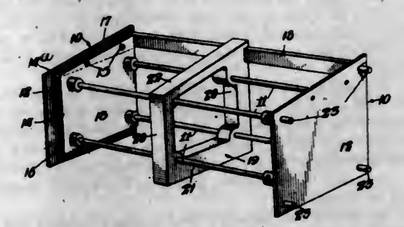


4. In a machine for threading tuft yarns through the frame tubes of carpet looms, the combination with a carriage supporting the spool, tubes and a support therefor, and a brush for supporting the yarns adjacent to the tubes, of a needle, and means for reciprocating the needle successively through the tubes to engage with the yarns and draw them through the tubes.

5. In a machine for threading tuft yarns through the frame tubes of carpet looms, the combination with a carriage supporting the spool, tubes and a support therefor, and a brush for supporting the yarn above the tubes, of a needle and means for reciprocating the needle successively through the tubes and means for engaging the yarns with the needle.

[Claims 6 to 15 not printed in the Gazette.]

902,230. WORK-HOLDER FOR BOX-MAKING. WILLIAM H. HOLLAND, South Bend, Ind. Filed June 17, 1907. Serial No. 379,452.



1. A work holder for use in making a box having four side and two end walls, comprising two end members provided with means for holding end wall blanks, and each provided at its four peripheral margins, each with an outwardly facing fully exposed cleat supporting shoulder.

2. A work holder for use in making a box having four side and two end walls, comprising two end members provided with means for holding end wall blanks, each provided at its four peripheral margins, each with an outwardly facing fully exposed cleat supporting shoulder, and means on said end members exterior to said shoulders adapted to engage the end margins of side wall blanks placed on cleats supported on said shoulders.

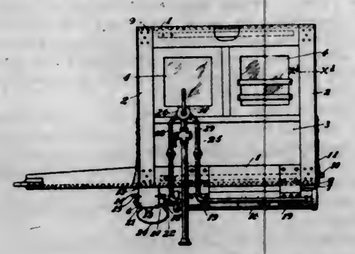
3. A work holder for use in making a box having four side and two end walls comprising two end members provided with means for holding end wall blanks, and each provided at its four peripheral margins, each with an outwardly facing fully exposed supporting shoulder, the shoulders of said end members at one side of the holder being spaced a distance outwardly from the end wall blank holding means.

4. A work holder for use in making a box having four side and two end walls, comprising two end members provided with means for holding end wall blanks, each provided at its four peripheral margins, each with an outwardly facing fully exposed supporting shoulder, the shoulders of said end members at one side of the holder being spaced a distance outwardly from the end wall blank holding means, said latter shoulders being solid to afford clenching surfaces.

5. A work holder for use in making a box having four side and two end walls, comprising two end members provided with means for holding end wall blanks, each provided at its four peripheral margins, each with an outwardly facing fully exposed supporting shoulder, the shoulders of said end members at one side of the holder being spaced a distance outwardly from the end wall blank holding means, said latter shoulders being solid to afford clenching surfaces and being provided with longitudinal ribs, for the purpose set forth.

[Claims 6 to 22 not printed in the Gazette.]

902,231. SLIDING SIDE PANEL FOR LOCOMOTIVE-CABS. JOHN N. HOLM, Minneapolis, Minn. Filed Mar. 23, 1908. Serial No. 422,681.



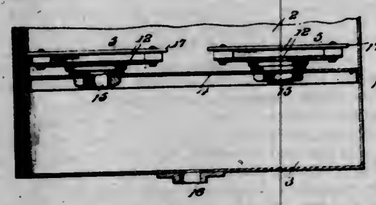
1. An engine cab provided with a side panel adapted to be moved to open up the side of the cab, in combination with a motor arranged to move said panel from its closed into an open position, substantially as described.

2. An engine cab provided with a side panel adapted to be moved to open up the side of the cab, in combination with a fluid-actuated motor arranged to move said panel from its closed into an open position, substantially as described.

3. An engine cab having a panel mounted to slide to and from a closed position, in combination with a straight line reciprocating fluid-actuated motor, connected to said panel for imparting sliding movements thereto, and a lock normally holding said panel in its closed position but arranged to be released by the initial action of the engine, substantially as described.

4. An engine cab provided with a panel forming the entire side of the cab and arranged to open up the entire side of the cab.

902,232. FILTER-VALVE. CHURCHILL HUNGERFORD, Philadelphia, Pa. Filed May 26, 1906. Serial No. 318,899.



1. A valve of the character stated consisting of top and bottom plates and an intermediate frame forming ports, said frame responding to pressure to vary the area of the ports.

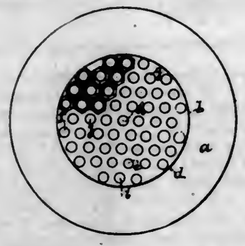
2. A valve of the character stated consisting of top and bottom plates and an intermediate resilient frame forming ports whereof the area is variable with the pressure.

3. A valve of the character stated having ports whereof the area is variable with the pressure and having a frame and top and bottom plates of which the former plate overhangs the ports.

4. A valve of the type described having ports bounded by the edges of resilient plates and a resilient frame which respond to pressure and vibrate at their edges and produce a grinding action.

902,233. PENCIL-CUSHION. GEORGE F. IRELAND, Fort Totten, N. Y. Filed Aug. 17, 1906. Serial No. 330,948.

1. A holder consisting of a rubber base, and a concavo-convex rubber piece thereon, having a plurality of perforations therethrough.



2. A holder consisting of a mass of rubber having a plurality of contiguous and parallel cylindrical perforations, with the upper portion of each perforation enlarged to form a hexagonal opening, so that the wall between any of the central perforations and the six next adjacent perforations is hexagonal both on the inside and on the outside.

902,234. PROCESS FOR THE PRODUCTION OF AN ORGANIC SOLUBLE IRON PREPARATION. WILHELM JAGELKI, Düren, Germany, assignor to The Firm of Dr. Degen & Kuth, Düren, Germany. Filed May 28, 1908. Serial No. 435,529.

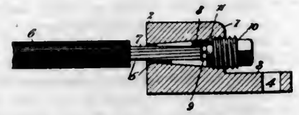
1. The process of producing a preparation of iron salts and oxymethyl-anthrachinon containing substances, which is soluble in water, consisting in mixing an iron salt solution with the fluid extract of the oxymethyl-anthrachinon containing substance forming thereby a precipitate, and dissolving said precipitate in a caustic alkali solution in the presence of a compound containing an alcohol group.

2. The process of producing a preparation of an iron salt solution and the fluid extract of rhubarb roots containing oxymethyl-anthrachinon, which is soluble in water, said process consisting in mixing the iron salt solution with the fluid extract of rhubarb roots forming thereby a precipitate, and dissolving said precipitate in a caustic alkali solution in the presence of a compound containing an alcohol group.

3. The process of producing a preparation of an iron salt solution and the fluid extract of rhubarb roots containing oxymethyl-anthrachinon, which is soluble in water, said process consisting in mixing the iron salt solution with the fluid extract of rhubarb roots forming thereby a precipitate, and dissolving said precipitate in a caustic alkali solution in the presence of mannite.

4. The process of producing a preparation of iron salts and the fluid extract of rhubarb roots containing oxymethyl-anthrachinon consisting in extracting the coarsely cut rhubarb roots by percolation, filtering the extract, adding to said fluid extract an iron salt solution, forming thereby a precipitate, separating same from the liquid, adding mannite and dissolving this mixture in a solution of caustic alkali.

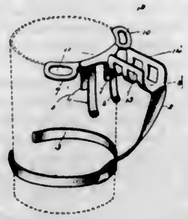
902,235. CABLE-TIP. LOUIS KELLNER, New York, N. Y., assignor to Metropolitan Switchboard Co., a Corporation of New Jersey. Filed Nov. 11, 1907. Serial No. 401,567.



1. A cable tip comprising a block having a flattened extension at one end and having a tapering hole extending inward and increasing in diameter from the other end, said hole extending clear through the block out of alinement with said flattened extremity, and threaded at its end adjacent to said flattened extremity, a split conical sleeve within said tapered hole, and a screw-plug engaging said sleeve to force the same inward toward the reduced end of said tapered hole.

2. A cable tip comprising a block having a flattened extension at one end and having a tapered hole extending inward and increasing in diameter from the other end, said hole extending clear through the block out of alinement with said flattened extremity, and threaded at its end adjacent to said flattened extremity, a conical sleeve having slots extending alternately inward from its respective ends and inclosed within said tapered hole, and a screw plug engaging said sleeve to force the same inward toward the reduced end of said tapered hole.

902,236. DETACHABLE HANDLE FOR GLASSES. ROBERT R. KINTZ, Meriden, Conn. Filed June 18, 1908. Serial No. 439,204.



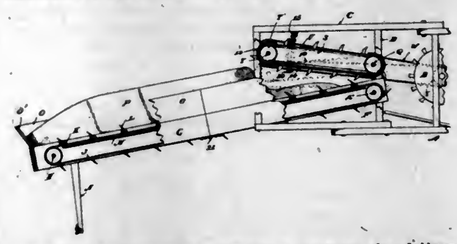
1. A detachable handle for glasses comprising a handle, a spring band connected with the lower end thereof, the inner end of the top portion of the handle formed on opposite sides with arms, and a pair of spring fingers extending downwardly from the opposite edges of said arms.

2. A detachable handle for glasses comprising a handle, a spring band connected with the lower end of the handle, spring fingers connected with the upper ends of the handles, perforated arms extending on opposite sides of the inner end of said handle, substantially as described.

3. A detachable handle for glasses comprising a handle, a spring band connected with the lower end of said handle, spring fingers connected with the upper end of said handle, perforated arms on opposite sides of the inner end of said handle, the upper portion of the handle formed with outwardly projecting flanges, substantially as described.

902,237. BAND-CUTTER AND FEEDER. EMIL M. KRAMER, Clasna Park, Ill. Filed Aug. 6, 1906. Serial No. 329,489.

1. In a band cutter and feeder, a conveyer for receiving and carrying grain to the threshing cylinder, a series of belts above said conveyer, a frame for carrying said belts, means for imparting relatively different speeds to the belts, a series of band cutting knives on the belts and consequently moving at different speeds, the said frame and the delivery end of the conveyer being relatively fixed in position, the forward end of the said means adapted for free vertical movement, and means for providing a yielding downward pressure upon the frame upon the grain substantially as and for the purposes set forth.



2. In a band cutter and feeder, a conveyer for delivering grain to the threshing cylinder, a series of belts above said conveyer, a frame for carrying the same, means for driving the conveyer and imparting relatively different speeds to the belts, but all of which are adapted to move faster than the conveyer, a series of band cutting knives on the belts and consequently moving at different speeds, the said belt frame and the delivery end of the conveyer being relatively fixed in position the outer end of the said frame adapted for vertical movement and means for imparting positive downward movement to the belt carrying frame for the purposes set forth.

3. In a band cutter and feeder, a traveling conveyer for delivering grain to the threshing cylinder, a series of belts above the conveyer adapted to be driven at relatively different speeds, band cutting devices carried thereby, said belts having fixed relation at one end with the delivery end of the conveyer, their other ends adapted for a vertical tilting motion, means for imparting to the belts a positive downward pressure upon the grain, means for imparting movement to the belts, and mechanism for altering the speed of travel of the belts relative to the conveyer, said mechanism comprising a gear for driving the conveyer, an adjustable stud adjacent thereto, a pinion on the stud adapted to drive the gear, and a driving wheel to impart movement to the pinion and driven from the said belts.

4. In a band cutter and feeder, a conveyer arranged to travel toward and deliver grain to the threshing cylinder and having teeth thereon, a series of variously speeded band cutting devices, coöperating with the teeth of the conveyer for the delivery of the grain to the cylinder in a thin, even layer, the delivery end of the conveyer and one extremity of the said series of band cutters having relatively fixed position, the opposite end of the band cutters adapted for vertical movement, and means in conjunction with and for imparting a positive downward pressure of the said band cutter upon the grain and mechanism for driving the conveyer and band cutter.

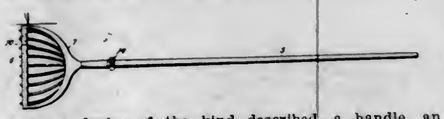
5. In a band cutter and feeder, a conveyer arranged to travel toward and deliver grain to the threshing cylinder and having teeth thereon, a series of variously speeded band cutting devices, coöperating with the teeth of the conveyer for the delivery of the grain to the cylinder in a thin even layer, the delivery end of the conveyer and one extremity of the said series of band cutters having relatively fixed position, the opposite end of the band cutters adapted for vertical movement, and means in conjunction with and for imparting a positive downward pressure of the said band cutter upon the grain and mechanism for driving the conveyer and band cutter, the latter arranged to have a greater speed of travel than said conveyer.

[Claim 6 not printed in the Gazette.]

902,238. RAKE. JOHN L. KUMMER, Cold Spring, Minn. Filed May 9, 1908. Serial No. 431,839.

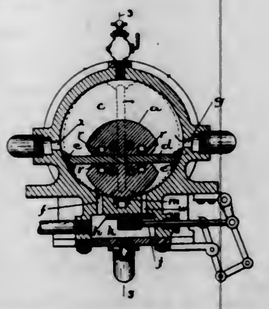
1. The combination with a rake including a head provided with teeth and a handle, of a clearing device consisting of a plurality of fingers having a spring stem secured against the lower face of the handle, the extremities

of the fingers passing between the rake teeth and bent therebeyond in a downwardly direction, the spring stem being so constructed and positioned as normally to hold the portion of the fingers lying directly between the teeth at the lower end of said teeth and to permit movement of the fingers to the upper end of the teeth.



2. In a device of the kind described, a handle, an arcuate yoke extending from said handle provided with a cross-bar connecting the ends of the yoke, rake teeth extending downwardly from said cross bar, a spring member attached to said handle, a series of clearing fingers formed on said spring member having their outer ends between the rake teeth, said fingers all lying within the limits of the periphery of said yoke and normally having their ends positioned near the points of the rake teeth.

902,239. ROTARY ENGINE. HERBERT LEE, Kensington, New South Wales, Australia. Filed Oct. 8, 1907. Serial No. 396,389.

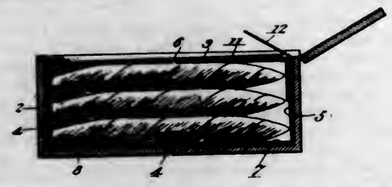


1. A rotary engine comprising an engine cylinder, a cylindrical piston hub revolubly mounted in the engine cylinder and eccentrically arranged with regard to the inner circumference thereof, a piston slidable through the piston hub, shoes fulcrumed to the ends of the piston engaging with the inner surface of the engine cylinder, packing bars within the piston hub engaging the piston, packing rings within the wall of the cylinder engaging the ends of the piston hub, a packing block within the cylinder engaging the peripheral surface of the hub and packing blocks for the side edges of the piston to engage with the inner surface of the cylinder.

2. A rotary engine comprising an engine cylinder a cylindrical piston hub revolubly mounted in the engine cylinder and eccentrically arranged with regard to the inner circumference thereof, a piston slidable through the piston hub, shoes fulcrumed to the ends of the piston engaging with the inner surface of the engine cylinder, packing bars within the piston hub engaging the piston, packing rings within the walls of the cylinder engaging the ends of the piston hub, a packing block within the cylinder engaging the peripheral surface of the hub, packing blocks for the side edges of the piston to engage with the inner surface of the cylinder, a steam chest, an inlet pipe for the steam chest, ports for the admission of the steam from the steam chest into the engine cylinder, exhaust ports for the engine cylinder slide valves controlling the exhaust ports, and means for acutating the slide valves.

3. A rotary engine comprising an engine cylinder a cylindrical piston hub revolubly mounted in the engine cylinder and eccentrically arranged with regard to the inner circumference thereof, a piston slidable through the piston hub, shoes fulcrumed to the ends of the piston engaging with the inner surface of the engine cylinder, packing bars within the piston hub engaging the piston, packing rings within the walls of the cylinder engaging the ends of the piston hub, a packing block within the cylinder engaging the peripheral surface of the hub, packing blocks for the side edges of the piston to engage with the inner surface of the cylinder, a steam chest, an inlet pipe for the steam chest, ports for the admission of the steam from the steam chests into the engine cylinder, exhaust ports for the engine cylinder, slide valves controlling the exhaust ports, means for actuating the slide valves, and means for reversing the action of the slide valves controlling the inlet and outlet ports.

902,240. MEANS FOR SEALING CIGARS. HERBERT E. LIPSCOMB and AUGUSTUS H. ANDREWS, Lancaster, Pa., assignors to Federal Cigar Company, New York, N. Y., a Corporation of Pennsylvania. Filed June 25, 1908. Serial No. 440,326.



1. A cigar box provided with front and back liners, one of which has a free folding flap, and a sealing sheet interleaved between said liners.

2. A cigar box provided with a front liner extending partly across and secured to the box bottom, and having a free folding flap, a back liner secured to the rear of the box and having a free flap extending partly across the box bottom and lapped upon said front liner, and a sealing sheet interleaved between said liners and having a free folding flap.

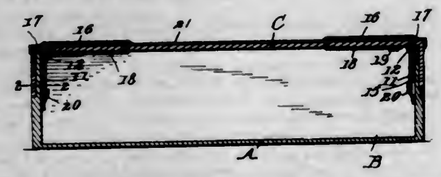
3. A cigar box provided with a front liner extending partly across and secured to the box bottom, and having a free folding flap, a rear liner secured to the rear wall of the box and having a free flap extending partly across the box bottom and lapped upon said front liner, a sealing sheet interleaved between said liners and having a free folding flap, and means for sealing said flap down in folded position.

4. A cigar box provided with a front liner extending partly across and secured to the box bottom and having a free folding flap, a back liner secured to the rear wall of the box and having a free flap extending partly across the box bottom and lapped upon said front liner, a sealing sheet interleaved between said liners and having a free folding flap, and a sealing tab at the opposite side of the box to engage and seal said sealing flap in folded position.

5. A cigar box provided with a sealing sheet having a free sealing flap coextensive with the superficial area of the box, and a flap-engaging sealing tab cemented to said flap to hold the sheet in folded position.

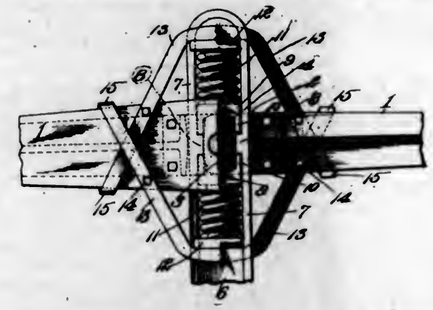
[Claims 6 and 7 not printed in the Gazette.]

902,241. BOX-FASTENER. WALTER G. LONG and JOHN A. CAMPBELL, Wilmington, Del. Filed Apr. 28, 1908. Serial No. 429,703.



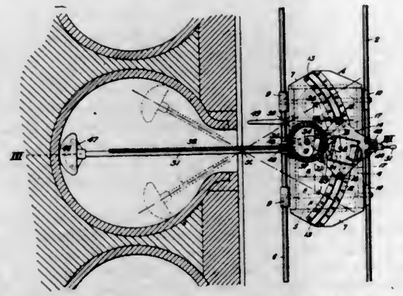
The combination with a receptacle, having metallic members having barbed portions engaged with the end walls of the receptacle, of metallic members carried by the cover of the receptacle and including portions arranged in parallel relation and engaged upon both sides of the cover, spurs carried by the outermost portions for engagement with the innermost portions, each of said last named members having a portion adjacent to the end wall of the cover depending at right angles and in spaced relation to its adjacent end wall, and a locking tongue carried by each of said depending portions for engagement with said first named member at the end wall of the receptacle, the end walls of the cover being arranged to lie outwardly of and cover the barbs carried by the first named members when the cover is in its closed position.

902,242. DRAFT-RIGGING. WILLIAM D. LOWRY, St. Louis, Mo. Filed Sept. 19, 1907. Serial No. 393,598.



The combination with a bolster and resistance members carried directly by the bolster and extending laterally therefrom at its sides, of a draw bar, a draft and buffing spring located at each side of the bolster and interposed between the bolster and resistance members, and means whereby said draw bar is caused to act upon all of said springs in either a forward or rearward movement of the draw bar, substantially as set forth.

902,243. COKE-DRAWER. ROBERT L. MARTIN, Jr., and WALTER W. MACFARREN, Pittsburg, Pa., assignors of three-fourths to said Martin and one-fourth to said Macfarren. Filed Dec. 21, 1906. Serial No. 348,896.



1. In a coke drawer, the combination of a supporting truck, a laterally movable ram carriage mounted on the truck, an independent motor and gearing mounted on the truck and engaging the ram carriage for moving it laterally, a reciprocating ram mounted in the ram carriage, and means mounted on said carriage for actuating the ram.

2. In a coke drawer, the combination of a supporting truck, a laterally movable carriage mounted on the truck, an independent motor and gearing mounted on the truck and engaging the ram carriage for moving it laterally and for locating it bodily at varying horizontal positions thereon, a reciprocating ram mounted on the ram carriage, and means mounted on said carriage for actuating the ram.

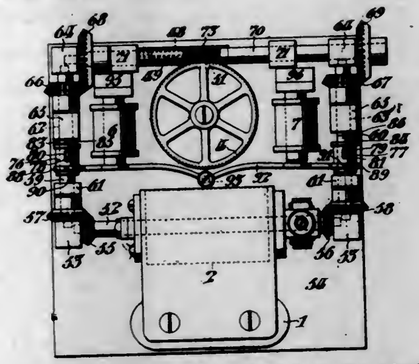
3. In a coke drawer, the combination of a wheeled truck provided with a curved trackway and an independent motor, a laterally movable ram carriage mounted on the truck engaging said trackway and provided with ram guiding devices, shifting means engaging the ram carriage and actuated by said motor, a ram mounted on the ram carriage, and means mounted on the ram carriage for actuating the ram.

4. In a coke drawer, the combination of a wheeled truck provided with a curved trackway and an independent motor, a laterally traveling bodily movable ram carriage mounted on the truck engaging said trackway and provided with ram guiding devices, shifting means engaging the ram carriage and actuated by said motor, a ram mounted on the ram carriage, and means mounted on the ram carriage for actuating the ram, with frictional driving mechanism incorporated therewith.

5. In a coke drawer, the combination with a ram carriage, the ram having a rack, the driving pinion therefor, its shaft and driven gear wheel; of a motor mounted on the ram carriage, its shaft and driving gear, and friction clutch mechanism mounted on the motor shaft for actuating the driving gear and arranged for slippage upon the ram encountering unyielding resistance.

[Claims 6 to 17 not printed in the Gazette.]

902,244. ELECTRICALLY-CONTROLLED LOCK. EDWARD W. MARVEL, Philadelphia, Pa., assignor to William H. Hollar, Philadelphia, Pa. Filed May 12, 1908. Serial No. 432,540.



1. The combination with a lock having a rotary wheel; of an indicator having a rotary dial; means operatively connecting said wheel and dial arranged to turn them synchronously in either direction, comprising synchronously operative electric motors respectively local to said wheel and dial; gearing operatively connected with the respective motor armature shafts and comprising counter-shafts respectively provided with worms and engaged with said wheel and dial; shafts extending transversely with respect to said armature shafts and worm shafts and having gearing operatively connecting them; clutch mechanisms upon each of said transverse shafts arranged to render them alternately operative and inoperative; electro magnets respectively local to said clutch mechanisms; and, electric connections, whereby the clutch magnets of said winding mechanism and said indicator mechanism are simultaneously similarly actuated, substantially as set forth.

2. The combination with a lock having a rotary member; of an indicator having a rotary member; means operatively connecting said members arranged to turn them synchronously in either direction, comprising synchronously operative electric motors respectively local to said rotary members; gearing operatively connected with the respective motor armature shafts and comprising counter-shafts respectively provided with worms and engaged with said rotary members; shafts extending transversely with respect to said armature shafts and worm shafts; and

having gearing operatively connecting them; clutch mechanisms upon each of said transverse shafts arranged to render them alternately operative and inoperative; electromagnets respectively local to said clutch mechanisms; and, electric connections, whereby the clutch magnets of said winding mechanism and said indicator mechanism are simultaneously similarly actuated, substantially as set forth.

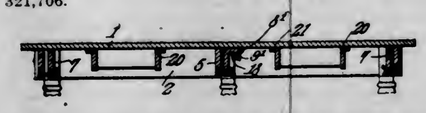
3. The combination with a lock having a rotary member; of an indicator having a rotary member; means operatively connecting said members arranged to turn them synchronously in either direction, comprising synchronously operative electric motors respectively local to said rotary members; gearing operatively connected with the respective motor armature shafts and comprising countershafts respectively provided with means engaged with said rotary members; shafts extending transversely with respect to said armature shafts and counter-shafts and having gearing operatively connecting them; clutch mechanisms upon each of said transverse shafts arranged to render them alternately operative and inoperative; electromagnets respectively local to said clutch mechanisms; and, electric connections, whereby the clutch magnets of said winding mechanism and said indicator mechanism are simultaneously similarly actuated, substantially as set forth.

4. The combination with a lock arbor in operative relation with a worm wheel; of a shaft having a worm engaging said wheel; an electric motor armature shaft extending parallel with said worm shaft; shafts extending transversely with respect to said worm and armature shafts and operatively connecting them at their respectively opposite ends; clutch devices arranged to slide upon said respective transverse shafts; a clutch lever fulcrumed intermediate of its length and having its opposite ends respectively pivotally connected with said clutch devices; electromagnets respectively operatively related to the opposite ends of said clutch lever; and means arranged to energize said clutch magnets, in alternation; whereby said worm wheel may be rotated alternately in opposite directions by rotation of said armature shaft continuously in one direction, substantially as set forth.

5. The combination with a lock arbor; of a worm wheel on said arbor; a shaft having a worm engaging said wheel; an electric motor having an armature shaft extending parallel with said worm shaft; a divided shaft connecting said armature shaft with said worm shaft and comprising alined relatively rotary sections; clutch mechanism arranged to alternately engage the sections of said divided shaft to turn together and permit them to turn independently; and electrically controlled means arranged to operate said clutch mechanism, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

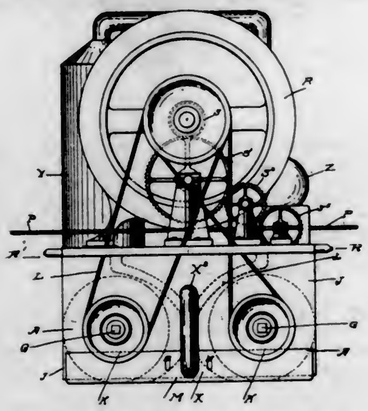
902,245. FOLDABLE TABLE. WALTER R. MONTGOMERY, Shreveport, La. Filed June 14, 1906. Serial No. 321,706.



1. A table comprising a top, continuous longitudinal side rails rigidly secured to the table top, cross rails permanently secured to the opposite ends of the side rails, a plurality of sets of terminal and intermediate legs connected by cross heads and pivotally supported upon the side rails, the cross head of the intermediate set of legs being provided with an angularly disposed cleat having a pin and slot connection with the adjacent side rails, the cross heads and legs of the terminal sets being arranged to fold laterally against the bottom of the table and the legs of the intermediate set being arranged to fold upon one of the terminal sets of legs, an intermediate cross rail rigidly secured to the side rails, and bracing means carried by the cross rails and engaging the cross heads for holding said legs in supporting position.

2. A table comprising a top, continuous longitudinal side rails rigidly secured to the table top, cross rails pivotally secured to the opposite ends of the side rails, a plurality of sets of terminal and intermediate legs connected by cross heads and pivotally supported upon the side rails, the cross head of the intermediate set of legs being provided with an angularly disposed cleat having a pin and slot connection with the adjacent side rails, the cross heads and legs of the terminal sets being arranged to fold laterally against the bottom of the table, and the legs of the intermediate set being arranged to fold upon one of the terminal sets of legs, an intermediate cross rail rigidly secured to the side rails, and bracing means between the cross heads and the adjacent cross rails for holding said legs in supported position, said bracing means including a threaded pin having a clamping nut, and a hinged member loosely carried by the pin and seated in a saw kerf in one of the members to be connected, the other member being provided with a notch to receive the pin, and a fastening device piercing the hinged member in the saw kerf.

902,246. FLOOR SURFACING AND POLISHING MACHINE. EDWIN F. MURDOCK, East Orange, N. J., assignor, by direct and mesne assignments, to Floor Scraping Machine Company, a Corporation of New York. Filed Mar. 22, 1907. Serial No. 363,924.

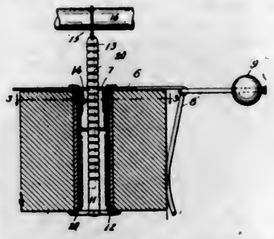


1. In a portable floor surfacing machine the combination of a driving mechanism mounted on a suitable frame; two parallel abrasive rolls mounted in said frame to support and carry the full weight of the said frame and any weights added thereon; power transmitting devices whereby the driving mechanism and rolls are connected to rotate the said rolls in opposite directions; adjustable devices adapted to be raised and lowered from the floor to regulate the depth of cutting of the said rolls, substantially as described.

2. In a portable floor surfacing machine the combination of a driving mechanism mounted on a suitable frame; two parallel abrasive rolls mounted in said frame to support and carry the full weight of said frame and any weights added thereon; power transmitting devices whereby the driving mechanism and rolls are connected to rotate the said rolls in opposite directions; adjustable gages having straight surfaces next the floor on which the machine is moved, extended between the lines of cutting of the said rolls, to maintain the level of operation, substantially as described.

3. In a portable floor surfacing machine the combination of a driving mechanism mounted on a suitable frame; an abrasive roll connected to the said driving mechanism; adjustable gages having straight surfaces next the floor on which the machine is moved extended from the cutting line of the roll in either and both directions to maintain the level of operation, substantially as described.

902,247. FACTORY SPOOL-HOLDER. AARON S. NICHOLS, New York, N. Y. Filed Jan. 31, 1908. Serial No. 413,557.



1. The spool holder adapted to confine the spool, and means positively locking the confining means so the spool cannot be removed from the holder, such locking means embodying a spring catch which is covered by the spool.

2. The factory spool holder supporting the spool in a vertical position by means located at the axis of the spool so that the thread can be drawn from the lower end of the spool, said holder being provided with a yielding guard bearing on the thread to prevent it from unwinding too fast.

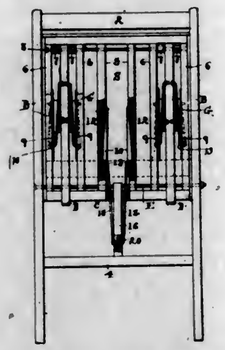
3. A spool holder for factory sewing machines embodying means adapted to be entered in the bore of the spool and serving to support it in a vertical position, such means embracing a spring locking device being wholly within the circumferential line of the spool and permitting the unwinding of the thread without turning the spool.

4. In a new article of manufacture, a spool holder having devices for holding and locking the spool against removal, consisting of a notched keeper entering the bore of the spool and a locking spring adapted to enter said notches.

5. As a new article of manufacture, a spool holder having devices for holding and locking the spool against removal, consisting of a notched keeper entering the bore of the spool and a locking spring adapted to enter said notches, said spring being releasable by a removable key.

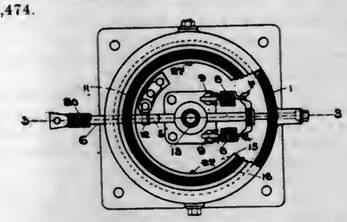
[Claims 6 to 15 not printed in the Gazette.]

902,248. FOLDING CHAIR. THOMAS M. PAINTER, Cleveland, Ohio. Filed July 5, 1907. Serial No. 382,191.



A folding chair having a rigid one part back and leg frame, a seat frame pivoted to fold thereon and to open to seating position, separate folding front legs pivoted on the front of said seat frame, three several pairs of guide channels on said seat frame, a wire brace on each leg adapted to be automatically locked in the corresponding pair of said channels, and a wire brace pivoted on the said back and leg frame adapted to run and automatically lock in the middle pair of said channels.

902,249. SWITCH-POINT THROWER. RECHICHI PASQUALE, Oil City, Pa. Filed Apr. 11, 1907. Serial No. 367,474.



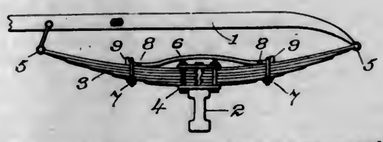
1. In a switch-point thrower, a case adapted to occupy a position intermediate the rails of a railway approximate to a switch point, a longitudinally-movable bar mounted in said case, flexible means connecting said bar directly to said switch-point, means for keeping said bar normally at one position of said longitudinal movement, a revoluble cam mounted in said case and adapted to move said bar to the other position of said longitudinal movement, said cam being adapted to be actuated by a car, in combination with means upon said car for actuating said cam.

2. In a switch-point thrower, a case adapted to occupy a position intermediate to the rails of a railway approximate to a switch, a longitudinally movable bar mounted in said case, means for holding said bar at one limit of said longitudinal movement, a revoluble cam in said case adapted to move said bar to the other limit of said movement, means for locking said bar at said last mentioned limit, means upon said cam for releasing said lock, means connecting said bar to the point of said switch, in combination with means upon one end of a car for revolving said cam one-quarter of a revolution.

3. In a switch-point thrower, a case adapted to occupy a position intermediate the rails of a railway, and approximate to a switch, a longitudinally-movable bar mounted in said case, flexible means for holding said bar at one limit of said longitudinal movement, a revoluble cam in said case adapted to move said bar to the other limit of said movement, means for locking said bar at said last-mentioned limit, means upon said cam for releasing said lock, means connecting said bar to the switch-point in said switch, in combination with means upon the front end of a car to revolve said car one-quarter of a revolution and means upon the rear end of said car to revolve said cam another quarter of a revolution for the purpose set forth.

4. In a switch-point thrower, a longitudinally-movable bar occupying a position intermediate the rails of a track approximate to a switch and attached by one of its ends directly to the switch-point, flexible means for holding said bar at one limit of said longitudinal movement, a revoluble cam adapted to move said bar to the other limit of said movement, a suitable bearing for said bar and for said cam, in combination with means upon a car for revolving said cam.

902,250. EMERGENCY REPAIR DEVICE FOR VEHICLE-SPRINGS. DUDLEY P. POWER, Rivervale, N. J. Filed Nov. 10, 1906. Serial No. 342,011.



1. The combination with a vehicle body spring and axle clip, of reinforcing means comprising spring engaging devices arranged at opposite sides of the clip, and a non-resilient member interposed between and connecting said devices.

2. The combination with a sectional body spring and axle clip, the sections of the spring being assembled end to end within the clip, of a non-resilient member arranged as

a connection between the sections, and clamping means securing the member to the sections at opposite sides of the clip.

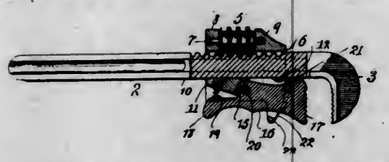
3. The combination with a sectional body spring and axle clip, the sections of the spring being arranged end to end within the clip, of a rigid tie-rod extending over the clip and secured to the sections.

4. An emergency repair device for uniting the broken ends of a spring maintained in position by a clip, comprising a non-resilient member having a portion intermediate its ends adapted to bridge the clip, and clamping means securing the member to the spring.

5. An emergency repair device for uniting the broken ends of a multiple leaf body spring, comprising means securing the leaves in assembled relation at each side of the break, and a rigid member maintaining an end to end relation between the broken sections.

[Claims 6 to 10 not printed in the Gazette.]

902,251. WRENCH. SOLOMON V. REIHART, Lakeview, Oreg. Filed Apr. 28, 1908. Serial No. 429,600.



1. In a wrench, a shank, a stationary jaw carried thereby, a sliding stock having a constant bearing on both the front and the rear edge of said shank, means for adjusting said stock on said shank, a jaw coöperating with said stationary jaw, a swinging lever carrying said coöperating jaw and having a convex supporting lug received and bearing in a socket in said stock, an extension on said lever beyond said socket, a spring between said extension and said stock and means for holding said lever in said stock.

2. In a wrench, a shank, a stationary jaw thereon, a sliding stock on said shank and having a constant bearing on both the front and the rear edge of said shank, means for holding said slide in adjusted position on said shank, a swinging lever having a jaw at one end, a thumb piece at the other end and a convex supporting lug on its inner side between said jaw and said thumb piece and constructed to enter a correspondingly formed concave socket in said stock, a spring interposed between said lever and said stock and a pin passing through the walls of said stock and said lever; the aperture in said lever receiving said pin being of greater diameter than said pin to permit said lug to obtain a bearing in said socket.

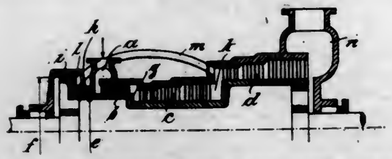
3. In a wrench, a shank having a straight front edge, a stationary jaw carried by said shank and protruding from said edge, a nontiltable sliding stock on said shank and internally bearing directly on both the front and the rear edge of said shank, means coöperating with the rear edge of said shank for adjusting said stock thereon, a jaw coöperating with said stationary jaw, a swinging lever carrying said coöperating jaw and having a supporting convex lug received and bearing in a socket in said stock and means for holding said lever in said stock.

4. In a wrench, a shank having a straight front edge, a stationary jaw carried by said shank and protruding from said edge, a nontiltable sliding stock on said shank, a cross piece in said stock directly bearing on said straight front edge, means coöperating with the rear edge of said shank and bearing thereon for adjusting said stock on said shank, a jaw coöperating with said stationary jaw, a swinging lever carrying said coöperating jaw and having a supporting convex lug received and bearing in a socket in said cross piece and means for holding said lever in said stock.

5. In a wrench, a shank, a stationary jaw carried by said shank, a sliding stock on said shank having a fixed bearing on both the front and the rear edge of said shank, a jaw coöperating with said stationary jaw, a swinging lever carrying said coöperating jaw and having a supporting convex lug received and bearing in a socket in said stock, means for manually operating said lever, means for holding said lever in said stock and resilient means for normally holding said coöperating jaw in position with its working face parallel to the working face of said fixed jaw.

[Claims 6 and 7 not printed in the Gazette.]

902,252. TURBINE. CARL ROTH, Zehlendorf, near Berlin, Germany. Filed June 24, 1908. Serial No. 440,182.



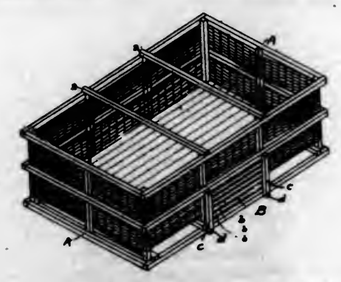
1. In a mixed turbine having a high pressure velocity flow stage and a plurality of pressure flow stages arranged co-axially in series therewith on parts of the drum of different diameter, the diameter of the first pressure flow stage being less than that of the velocity flow stage, end balancing means for the pressure flow parts comprising separate dummy pistons for each of the diameters of said pressure flow parts, the dummy piston surface for the first pressure flow stages being the step in the diameter from the velocity flow turbine to the diameter on which said stages are arranged, and a labyrinth packing arranged before the velocity flow part.

2. In a mixed turbine having a high pressure velocity flow stage and a plurality of pressure flow stages arranged co-axially in series therewith on parts of the drum of different diameter, the diameter of the first pressure flow stage being less than that of the velocity flow stage, end balancing means for the pressure flow parts comprising separate dummy pistons for each of the diameters of said pressure flow parts, the dummy piston surface for the first pressure flow stages being the step in the diameter from the velocity flow turbine to the diameter on which said stages are arranged, and a labyrinth packing arranged before the velocity flow parts, said packing being subjected on its low pressure side to the pressure at the step from the diameter of the first pressure flow stages to the diameter on which the second set of pressure flow stages are arranged.

3. In a mixed turbine having a high pressure velocity flow stage and a plurality of pressure flow stages arranged co-axially in series therewith on parts of the drum of different diameter, the diameter of the first pressure flow stage being less than that of the velocity flow stage, end balancing means for the pressure flow parts comprising separate dummy pistons for each of the diameters of said pressure flow parts, the dummy piston surface for the first pressure flow stages being the step in the diameter from the velocity flow turbines to the diameter on which said stages are arranged, and a labyrinth packing arranged before the velocity flow part, said packing being subjected on its low pressure side to the pressure at the step from the diameter of the first pressure flow stages to the diameter on which the second set of pressure flow stages are arranged, a further packing arranged also at the high pressure end of the turbine and adapted to preserve the pressure difference between the said intermediate pressure and the exhaust.

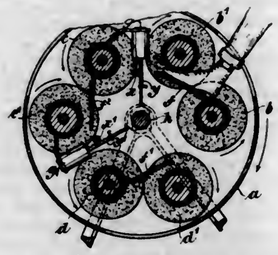
902,253. FLOATING CRIB FOR TRANSPORTATION OF PULP-WOOD. GEORGE F. ROWE, Bangor, Me., and JACKSON JOHNSTON, Mispec, New Brunswick, Canada. Filed Oct. 8, 1906. Serial No. 337,881.

The combination of a floating timber-crib having an open top and skeleton ends, sides and bottom and fitted with a gateway extending from the bottom of the crib upwards substantially to or above the load-line; a gate adapted to close said gateway; and swinging lock-bars the lower ends of which are pivoted to the sill of the gateway



and the upper ends adapted to be locked outside the gate to some convenient part of the frame above or near the load-line.

902,254. SHOE-CLEANING APPARATUS. BERTHA VON SALVIATI, Dusseldorf, Germany. Filed Apr. 5, 1905. Serial No. 254,043.

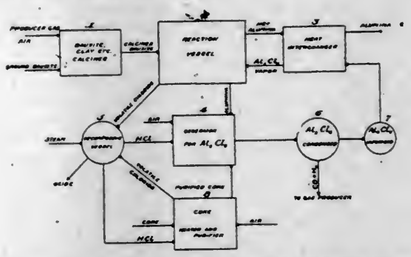


1. In a shoe-cleaning and polishing apparatus the combination of a rotary drum mounted on a horizontal axle, a moving series of pairs of rotatable brushes within, for cleaning the boot, putting on the blacking or cream and polishing the boot, a series of peripheral apertures being provided in the drum for access of the feet to the brushes, and a series of foot-rests mounted within the rotary drum in positions to accommodate the feet to be introduced in an easy position between the brush-pairs, substantially as described.

2. In a shoe-cleaning and polishing apparatus the combination of a rotary drum mounted on a horizontal axle, a series of pairs of rotatable brushes within said drum, adapted to act successively on the boot for cleaning it, putting on the blacking or cream, and polishing the boot, said drum having a series of peripheral apertures for access of the feet to the brushes, and a series of foot-rests, mounted within the rotary drum in positions to accommodate the feet to be introduced in position between the brush-pairs, the brushes of each pair rotating in opposite direction thereby pressing the foot against the foot-rest, substantially as described.

3. In a shoe-cleaning and polishing apparatus the combination of a rotary drum mounted on a horizontal axle, a series of pairs of rotatable brushes within said drum, adapted to act successively on the boot for cleaning it, putting on the blacking or cream and polishing the boot, said drum having a series of peripheral apertures for access of the feet to the brushes, a series of foot-rests mounted within the rotary drum in positions to accommodate the feet to be introduced in position between the brush-pairs, the brushes of each pair rotating in opposite direction thereby pressing the foot against the foot-rests and a series of devices for putting on the blacking or the cream on each brush of one pair of brushes, the said devices being actuated by the rotation of the drum, substantially as set forth.

902,255. PROCESS OF TREATING ALUMINOUS MATERIALS. LEWIS E. SAUNDERS, Niagara Falls, N. Y., and JACOB G. PETAIKIN, Lock Haven, Pa. Filed Mar. 27, 1907. Serial No. 364,911.



1. The process of treating aluminous materials to separate therefrom elements yielding volatile chlorids, which consists in forming chlorids of such elements by reacting upon said aluminous materials with aluminum chlorid, and volatilizing said chlorids.

2. The process of treating aluminous materials to separate therefrom elements yielding volatile chlorids, which consist in heating the aluminous material and reacting thereon with aluminum chlorid vapor.

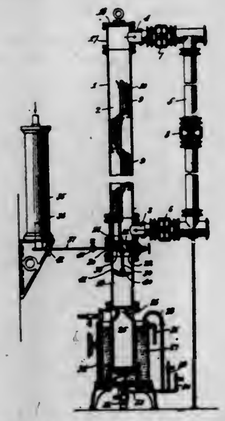
3. The process of treating aluminous materials to separate therefrom elements yielding volatile chlorids, which consists in heating the aluminous material and reacting thereon with aluminum chlorid vapor superheated above its vaporizing point.

4. The process of treating aluminous materials to separate therefrom elements yielding volatile chlorids, which consists in forming chlorids of such elements by reacting with aluminum chlorid, volatilizing said chlorids, converting the same into a chloridizing agent, and reacting therewith on alumina to produce aluminum chlorid.

5. The process of treating aluminous materials to separate therefrom elements yielding volatile chlorids, which consists in forming chlorids of such elements by reacting with aluminum chlorid, volatilizing said chlorids, converting the same into a chloridizing agent, and reacting therewith on a portion of the residual alumina to produce aluminum chlorid.

[Claims 6 to 11 not printed in the Gazette.]

902,256. REFRIGERATING APPARATUS. JOHN SCHEIDEMAN, Washington, D. C. Filed Mar. 2, 1908. Serial No. 418,707.



1. In refrigerating apparatus, an absorption chamber, a distilling chamber having independent communications with said absorption chamber, a check-valve controlling

one of said communications and operating to close against pressure in the absorption chamber and to open to pressure in the distilling chamber, and an adjustable valve controlling the other communication between the chambers.

2. In refrigerating apparatus, an absorption chamber, an expansion chamber having independent communications with said absorption chamber, a check-valve controlling one of said communications and operating to close against pressure in the absorption chamber and to open to pressure in the expansion chamber, an adjustable valve controlling the other communication between the chambers, a separator communicating with said expansion chamber, means controlling the communication between the separator and the expansion chamber, and a distilling chamber communicating with said expansion chamber.

3. In refrigerating apparatus, an absorption chamber, a distilling chamber having independent communications with said absorption chamber, a check-valve controlling one of said communications and operating to close against pressure in the absorption chamber and to open to pressure in the distilling chamber, an adjustable valve controlling the other communication between the chambers, a separator communicating with said distilling chamber, and means controlling the communication between the separator and the distilling chamber.

4. In refrigerating apparatus, a casing, inlet and outlet pipes connected with said casing, a by-pass connecting said inlet and outlet pipes, valves controlling said inlet and outlet pipes and said by-pass to divert the refrigerating agent through either the casing or by-pass, an absorption chamber in said casing between the inlet and outlet pipes, an expansion chamber communicating with said absorption chamber, a separator communicating with said expansion chamber, and means for controlling the communication between said separator and said expansion chamber.

5. In refrigerating apparatus, a casing, inlet and outlet pipes connected with said casing, a by-pass connecting said inlet and outlet pipes, valves controlling said inlet and outlet pipes and said by-pass to divert the refrigerating agent through either the casing or by-pass, an absorption chamber in said casing between the inlet and outlet pipes, an expansion chamber communicating with said absorption chamber, a separator communicating with said expansion chamber, means for controlling the communication between the separator and the expansion chamber, and a distilling chamber communicating with said expansion chamber.

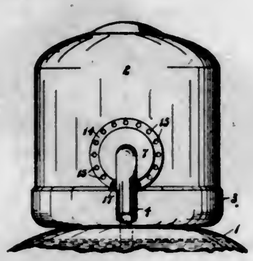
[Claims 6 to 14 not printed in the Gazette.]

902,257. DRAWING-COMPASSES. GEORG SCHOENNER, Nuremberg, Germany. Filed Nov. 26, 1907. Serial No. 403,910.



A compass having a disk located between the lugs of the compass legs, said disk having a slot therein through which the pivot pin passes, a stud on each side of the disk, one stud located on one side of the slot and one on the other, and said lugs of the compass legs having grooves therein adapted to engage with the lugs on the disk, and means for connecting said disk with the compass head.

902,258. DISPENSING-SIPHON. JOHN A. SCHULTZ, Jr., Newark, N. J., assignor to The Schultz Syphon Company, a Corporation of New York. Filed Dec. 6, 1906. Serial No. 346,546.



1. In a dispensing siphon, a liquid reservoir, a gas dome having on its outer wall a valve seat, a liquid duct leading from said reservoir and opening through said valve seat, gas ducts leading from the gas dome and the liquid reservoir and opening through said valve seat, a detachable discharge spout secured to the outer wall of the gas dome at said valve seat and providing an opposite valve-engaging surface, and a valve held in said seat by said discharge spout and having independent ports adapted to connect the liquid duct with the discharge spout and to connect the gas ducts, respectively.

2. In a dispensing siphon, a liquid reservoir, a gas dome having on its outer wall a valve seat, a liquid duct leading from said reservoir and opening through said valve seat, gas ducts leading from the gas dome and the liquid reservoir and opening through said valve seat, a discharge spout projecting from the gas dome at said valve seat and providing a valve-engaging surface opposite thereto, a cap removably holding said spout to said valve seat, and a valve held in said seat by said discharge spout and having independent ports adapted to connect the liquid duct with the discharge spout and to connect the gas ducts, respectively.

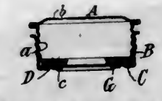
3. In a dispensing siphon, a liquid reservoir, a gas dome having on its outer side a valve seat, a discharge spout at the outer side of said valve seat and having a vent opening through its side wall, a cap removably holding said spout to the valve seat and covering the said vent opening, a liquid duct leading from the reservoir to said valve seat, gas ducts leading from the reservoir and gas dome to said valve seat, and a valve in said seat adapted to control communication between the liquid duct and discharge spout and between the gas ducts.

4. In a dispensing siphon, a liquid reservoir, a gas dome having on its outer walls an exteriorly threaded annular flange providing an interior valve seat, the outer edge of said flange being slotted, a discharge spout adapted to enter the outer end of said annular flange and having lugs to engage the slots thereof, a cap inclosing said end of the discharge spout and adapted to screw upon the said annular flange, a liquid duct leading from the reservoir to the valve seat, gas ducts leading from the gas dome and liquid reservoir to said valve seat, and a valve in said seat having a port to connect said liquid duct and discharge spout and a second port to connect said gas ducts.

5. In a dispensing siphon, a liquid reservoir, a gas dome having on its outer wall a valve seat, a disk valve arranged in said seat, a discharge spout secured against the outer side of said valve, a liquid duct leading from the reservoir to the inner side of the valve, and gas ducts leading from the reservoir and gas dome to the inner side of the valve, said valve having a transverse port adapted to be turned into, or out of, alinement with the liquid duct and the discharge spout and a second port adapted to connect the gas ducts.

[Claims 6 to 8 not printed in the Gazette.]

902,259. CLOSURE FOR JARS OR THE LIKE. MAXIMILLIAN C. SCHWEINERT, West Hoboken, N. J., and HENRY P. KRAFT, New York, N. Y. Filed Apr. 6, 1907. Serial No. 366,687.



1. A stopper having a sheet metal inner side bent to form an integral hollow projecting portion of materially smaller diameter than the body of the stopper, a packing washer surrounding such projecting portion, and having a seating face on its under side, and means for holding said washer in place, such means being fixed against axial movement and engaging a part of the under surface of said washer, and being free from engagement with said seating face.

2. A stopper having an exteriorly screw threaded body portion, and a bottom at the lower end thereof, such bottom being formed with an integral hollow projecting portion of materially smaller diameter than the body of the stopper, and around such portion with an annular flat wall adapted to form a bearing face for a washer, a packing washer surrounding such projecting portion and bearing against said face, said washer having a seating face on its under side, and means for holding said washer in place.

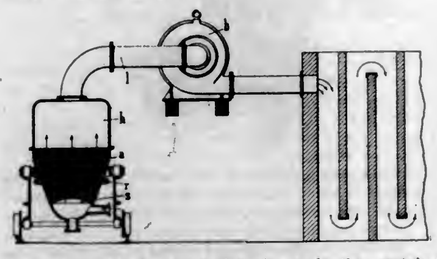
3. The combination with a vessel having a seat of a stopper therefor, said stopper having a sheet metal inner side formed with an integral hollow sheet metal projection, and an annular packing washer, surrounding such projection and having a seating face on its under side above said seat, and a portion radially inward of said face, and means for holding said washer in place, said means extending beneath said washer inwardly of said seating face.

4. A stopper formed with a projecting portion, a washer surrounding such portion, such portion being formed with a part extending laterally outward, and a plate engaged by such part and extending over said washer.

5. A stopper formed with a projecting portion, a washer surrounding such portion, such portion being formed with a part extending laterally outward, and a plate engaged by such part and extending over said washer, said plate having a flange fitting between the two.

[Claims 6 and 7 not printed in the Gazette.]

902,260. PROCESS OF OBTAINING METALLIC OXIDS. RICHARD SEIFFERT, Bobrek, Germany. Filed Dec. 21, 1905. Serial No. 292,798.



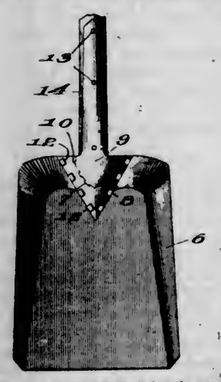
1. The process for extracting zinc and other metals in a volatile oxidized form, from ores and metallurgical products containing the same, consisting in first forcing a blast at low pressure through the ore or smelting product containing the necessary fuel and introduced into a suitable receiver, after the combustion has been started, for the purpose of drying the material and making it porous, and then in increasing the pressure of the blast in such manner, that the temperature, required for the reduction or volatilization of the metals to be expelled, is attained shortly after the starting of the blowing and is communicated almost simultaneously throughout the entire charge, and in continuing the blowing and maintaining the high temperature until the volatile metals to be extracted have been expelled.

2. The process for extracting zinc and other metals in a volatile, oxidized form, from ores and metallurgical products containing the same, consisting in mixing the ore or the smelting products containing the necessary fuel with a suitable binding material, in forming it into lumps or pieces of any desired shape, in forcing through the goods thus prepared and introduced into a suitable receiver, after the starting of the combustion, first a blast of a weak pressure, for the purpose of drying the material and making it porous, then in increasing the pressure of the blast in such manner that the temperature required for the reduction and volatilization of the metals to be expelled, is obtained, shortly after the starting of the blast, throughout the whole depth of the charge, and in continuing the blowing until the volatile metals to be extracted have been expelled.

3. The process for extracting zinc and other metals in volatile oxidized form, from ores and metallurgical products containing the same, consisting in blowing, after the starting of combustion, through the ore or smelting product containing the necessary fuel and introduced into a suitable receiver, a blast of such pressure that the temperature required for the reduction and volatilization of the metals to be expelled is obtained throughout the whole depth of the charge shortly after the starting of the blowing, and in maintaining this temperature by suitable regulation of the pressure of the blast, until the greater portion of the zinc to be extracted has been obtained, and then by accelerating the blowing in converting the contents of the receiver into liquid state and in blowing with the increased pressure through the molten mass until the zinc has been completely expelled.

4. The process for extracting zinc and other metals in volatile, oxidized form, from ores and metallurgical products containing the same, consisting in blowing through the ore or smelting product containing the necessary fuel, and brought into a suitable receiver, immediately after starting the combustion, a blast of such pressure that the temperature required for the reduction and volatilization of the metals to be extracted is obtained throughout the whole depth of the charge shortly after the starting of the blast, in maintaining the said temperature by suitable regulation of the pressure of the blast until the greater portion of the zinc to be extracted has been expelled, and simultaneously in assisting and accelerating the generation of the metal fumes and their escape from the charge, by suction over the surface of the charge, then in liquefying the contents of the receiver by accelerating the blowing and in continuing the blowing through the liquid mass with an increased pressure until the zinc has been completely expelled.

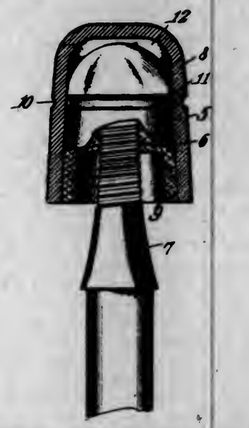
902,261. SHOVEL. JOHN A. SOUTHWELL, Wyoming, Pa. Filed July 14, 1908. Serial No. 443,462.



An implement of the kind stated, having a body plate with inner and outer rows of holes at the heel thereof, and front

and back straps the front ends of which have tongues struck up therefrom at opposite sides, said tongues being inserted through the said holes from opposite sides of the plates respectively and clenched on the other side of the plate, the back strap covering the tongues of the front strap on the back of the plate.

902,262. INSULATOR-PROTECTOR. ROBERT R. SPARKS, Greenfield, Mass. Filed May 20, 1908. Serial No. 433,927.



1. The combination with an insulator, of a removable jacket forming a housing for the insulator and held in frictional engagement with the exterior walls of the insulator.

2. The combination with an insulator having smooth unobstructed walls, of a removable jacket forming a housing for the insulator and held in position thereon by frictional engagement with the smooth exterior walls of the insulator, the exterior walls of the jacket being coated with a water proof compound.

3. The combination with an insulator having its exterior walls tapered and smooth and unobstructed, of a removable jacket forming a housing for the insulator and having smooth correspondingly tapered interior walls adapted to frictionally engage the exterior walls of said insulator.

4. The combination with an insulator having its exterior walls tapered and smooth and unobstructed, of a jacket forming a housing for the insulator and having its interior walls correspondingly tapered and smooth and unobstructed and adapted to frictionally engage the exterior walls of the insulator, there being a circumferential wire seating groove formed in the exterior walls of said jacket.

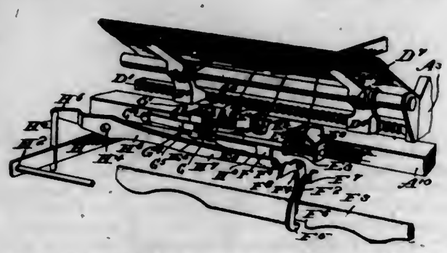
5. The combination with an insulator having its exterior walls tapered and smooth and unobstructed, of a jacket surrounding the insulator and having its upper end spaced from the top of the insulator, the interior walls of the jacket being correspondingly tapered and smooth and unobstructed for frictional engagement with the smooth exterior walls of the insulator, the exterior walls of said insulator being formed with a wire receiving groove.

[Claim 6 not printed in the Gazette.]

902,263. MARGIN-STOP. CHARLES SPIRO, New York, N. Y. Filed Aug. 3, 1905. Serial No. 272,605.

1. In a typewriter, a margin gage mechanism comprising a plurality of transversely movable stops having contact faces disposed in different parallel planes, a support for said stops having abutments disposed at one end of the faces of said stops, a carriage carrying means to engage said stops, and means at the keyboard of the typewriter connected to move said stops for different lengths of transverse travel whereby they may be successively engaged.

2. In a typewriter a margin gage mechanism comprising an oscillating stop having straight contact faces disposed in different parallel planes, a carriage provided with means to engage said stop, abutments for said stop, and a key lever connected to oscillate said stops for different lengths of travel.



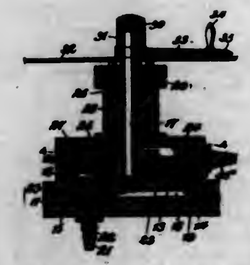
3. In a typewriter, a margin gage comprising transversely and longitudinally movable sliding stops upon a fixed part, a carriage provided with means to engage said stops, a keyboard locking device disposed in the path of the sliding travel of said stops to be actuated thereby, and a keyboard connection adapted to transversely actuate said stops out of the path of the carriage means.

4. In a typewriter, a margin gage mechanism comprising a plurality of transversely movable stops disposed in different planes, a carriage provided with means to engage said stops, a key lever to actuate said stops, and a key pivotally mounted on said lever and having an extension to engage a fixed part to limit its travel.

5. In a typewriter, a margin gage mechanism comprising a plurality of movable stops disposed in different planes, a carriage provided with means to engage said stops, a key lever adapted to actuate said stops, a key pivotally mounted upon said lever to engage the upper face thereof, and a depending yoke from said key extended beneath said lever into its path of travel.

[Claims 6 to 38 not printed in the Gazette.]

902,264. FLUID-CONTROLLING MEANS. FRED P. STEVENS, Denver, Colo., assignor of one-half to J. Arthur Eddy, Denver, Colo. Filed Apr. 20, 1907. Serial No. 369,290.



1. In controlling means of the character set forth, the combination with a valve seat member, of a stationary stem projecting therefrom, said member having a passageway therethrough at one side of the stem, a rotatable valve journaled on the stem and having a portion movable on the outer face of the seat member to different positions over the passageway, and exposed actuating means connected to the valve and rotating around the stem as an axis for operating said valve.

2. In controlling means of the character set forth, the combination with a valve seat member, of a stationary stem projecting therefrom, said member having a passageway therethrough at one side of the stem, a rotatable valve journaled on the stem and having a portion movable on the outer face of the seat member to different positions over the passageway, an exposed handle connected to the valve and rotating around the stem as an axis for operating said valve, a retaining device mounted on the outer end of the stem, and a spring interposed between the device and the stem for yieldingly holding the valve on the seat.

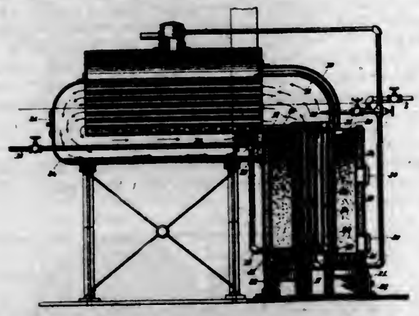
3. In controlling means of the character set forth, the combination with a valve seat member, of a dial located in spaced relation to one of the faces thereof, a stationary stem projecting from said face of the member and projecting through the dial, a rotatable valve journaled on the stem and coöperating with said face of the seat member, a sleeve fixed to the valve and journaled on the stem, said sleeve projecting through the dial, and a combination handle and pointer fixed to the sleeve and operating over the dial.

4. In controlling means of the character set forth, the combination with relatively rotatable members, one of said members having a curved elongated channel varying in cross sectional area from end to end and extending but partially through the members, said channel being disposed longitudinally of the line of movement of the members and eccentrically to the axis of rotation thereof, the other member covering and uncovering different portions of the channel on the relative movement of the members.

5. In controlling means of the character set forth, the combination with relatively rotatable members having coacting elongated channels disposed in angular relation and moving transversely of each other on the relative rotation of the members, said channels having portions extending but partially through the members and one of the channels varying in cross sectional area from end to end, different portions of the channels registering during the said relative rotation.

[Claims 6 to 11 not printed in the Gazette.]

902,265. BOILER-FURNACE. JOHN R. SURRELL, New York, N. Y. Filed Mar. 4, 1908. Serial No. 419,154.



1. A feed water heater for steam boilers having a water chamber and heating surfaces, said heater comprising a fuel receptacle having grate bars and an ash pit, a set of connected piping mounted within said receptacle with a fuel space surrounding it and forming a chamber for air and gases within it, means for supplying water to one end of said piping, means connecting the other end of said piping with the water space of the boiler for delivering the heated water thereto, means placing said chamber in communication with the heating surfaces of said boiler, substantially as described and set forth.

2. A feed water heater for steam boilers having a water chamber and heating surfaces, said heater comprising a fuel receptacle having grate bars and an ash pit, a set of connected piping mounted within said receptacle with a fuel space surrounding it and forming a chamber for air and gases within it, means for supplying water to one end of said piping, means connecting the other end of said piping with the water space of the boiler for delivering the heated water thereto, and means placing said chamber in communication with the heating surfaces of said boiler, said piping being vertically disposed within said receptacle and extending from the grate bars to the upper end thereof, and said chamber being open at its upper end, substantially as described and set forth.

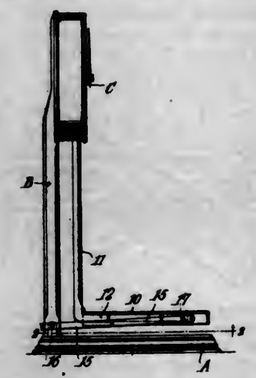
3. A feed water heater for steam boilers having a water chamber and heating surfaces, said heater comprising a fuel receptacle having grate bars and an ash pit, a set of connected piping mounted within said receptacle with a fuel space surrounding it and forming a chamber for air and gases within it, means for supplying water to one end of said piping, means connecting the other end of said piping with the water space of the boiler for delivering the heated water thereto, means placing said chamber in communication with the heating surfaces of said boiler and means for leading external air to said chamber and having means for controlling the passage of said external air through the same, substantially as described and set forth.

4. A feed water heater for steam boilers having a water chamber and heating surfaces, said heater comprising a fuel receptacle having grate-bars and an ash pit, a set of connected piping mounted within said receptacle with a fuel space surrounding it and forming a chamber for air and gases within it, means for supplying water to one end of said piping, means connecting the other end of said piping with the water space of the boiler for delivering the heated water thereto, and means placing said chamber in communication with the heating surfaces of said boiler, said piping being vertically disposed within said receptacle upon a cylindrical base extending downward through the ash pit of said receptacle and forming a continuation of said chamber, means for leading external air through said base to said chamber, and means controlling the same, substantially as described and set forth.

5. A feed water heater for steam boilers having a water chamber and heating surfaces, said heater comprising a fuel receptacle having top covers, clinker doors, grate-bars and an ash pit, a set of connected piping mounted within said receptacle with a fuel space surrounding it and forming a chamber for air and gases within it, means for supplying water to one end of said piping, means connecting the other end of said piping with the water space of the boiler for delivering the heated water thereto, and means placing said chamber in communication with the heat surfaces of said boiler, said piping being vertically disposed within said receptacle and having at its upper and lower ends an annular collar, the lower annular collar resting upon a cylindrical base extending downward through the ash pit, said base forming a continuation of said chamber and having means leading external air thereto, and means controlling the passage of said external air through the same, substantially as described and set forth.

[Claims 6 to 8 not printed in the Gazette.]

902,266. SCALE. WILLIAM G. TEMPLETON, Colorado Springs, Colo. Filed Nov. 8, 1906, Serial No. 342,536. Renewed Sept. 15, 1908. Serial No. 453,142.

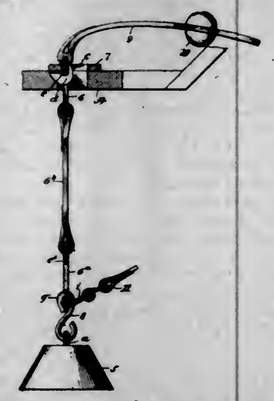


1. In a weighing scale, a weight indicating means, a load receiver, a suspension means forming a connection between the indicating means and the load receiver, and a guiding frame having at least three pivotal connections

between the under-side of the load receiver and a fixed point, said frame being arranged to be subjected to endwise strain during the weighing operation, and serving to prevent swaying of the load receiver in any direction.

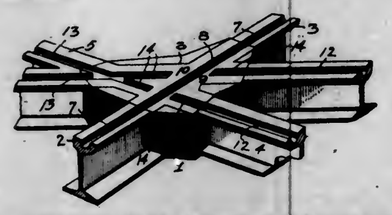
2. In a weighing scale, a weight indicating means, a load receiving platform, a suspension rod rigidly secured to the platform and extending from one edge thereof, said rod forming a connection between the platform and the indicating means, and a guiding means pivotally connecting the under side of the platform to a fixed point and arranged to be subjected to endwise strain during the weighing operation, said guiding means serving to prevent swaying movement of the platform in any direction.

902,267. HITCHING-WEIGHT HOLDER. HERBERT H. TOTHILL, Lockport, N. Y. Filed Nov. 8, 1907. Serial No. 401,221.



The combination with a weight-block, and a hanger-strap having two spaced link-plates, each formed with a rectangular opening therein, an S-shaped link coupling the weight-block with one of the link-plates and also coupling a hitching-strap therewith, of a rectangular bracket-plate having a rectangular slot therein, a fixed upturned hook formed on a transverse edge of said slot, said hook engaging one link-plate at an edge of its opening when the weight-block is lowered and the other link-plate when said block is raised, and means connected with one link-plate for manual movement of the weight block.

902,268. RAILROAD-CROSSING FROG. MICHAEL J. WALSH, Pittsburg, Pa., assignor of one-half to Fritz Uhlenhaut, Pittsburg, Pa. Filed July 3, 1908. Serial No. 441,856.

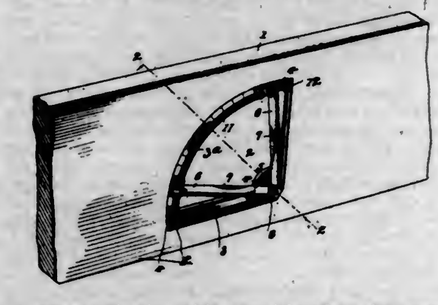


1. A railway frog having a substantially flat upper face, one continuous track groove extending across the same, and grooves on both sides leading toward but terminating short of the main groove.

2. A railway frog having a substantially flat upper face, one continuous track groove extending across the same, and grooves on either side leading thereto but terminating short of the main groove, said grooves having inclines leading to the top face of the frog.

3. A railway frog having a continuous track groove extending across the same and a flat upper face leading to a cross track and providing for the travel of the wheel on the flat face of the frog in crossing the same.

902,269. SPIRIT-LEVEL. JOHN D. WEAVER, Naples, Ill. Filed May 29, 1908. Serial No. 435,754.

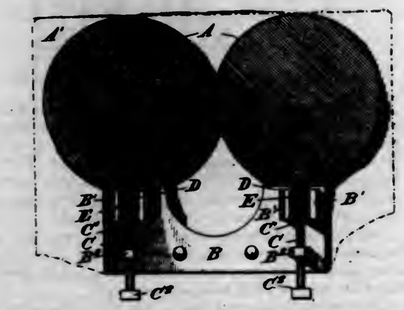


1. The combination with a straight edge, of a sector-shaped plate secured thereto, a pair of tubes hinged to the plate, spirit levels carried in the tubes, and means for adjusting either of the tubes.

2. The combination with a straight edge, of a sector-shaped plate secured thereto, a pair of tubes pivoted at one end to the plate by a single pivot, a scale on the outer edge of the sector-shaped plate, and means for securing the outer ends of either of the tubes in any position of adjustment relative to the scale.

3. The combination with a straight edge, of a sector-shaped plate secured to the straight edge, a pair of tubes pivoted to the plate by a single pivot, an arc shaped screw mounted adjacent the outer edge of the plate, the outer ends of the tubes being provided with perforations through which the screw passes, nuts mounted on the screw and adapted to secure the outer ends of the tubes in any position of adjustment.

902,270. BRUSH AND DUCK SCRAPER BRACKET. WILLIAM B. WILL, Grand Junction, Colo. Filed Mar. 2, 1907. Serial No. 360,178.



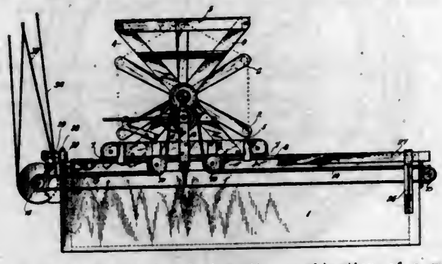
1. The combination with a frame, of a pair of rollers carried by said frame, brackets carried by said frame and arranged transversely with respect to said rollers, vertically slidable scrapers held by said brackets in engagement with the rollers, and movable means carried by the brackets to engage and prevent sliding movement of the scrapers.

2. The combination with a frame, of a pair of rollers carried by said frame, brackets arranged transverse to said rollers and supported by the frame, a pair of shoulders formed on one side of each bracket, scrapers having their end portions held loosely between said shoulders, and vertically arranged screws bearing against the lower edges of the scrapers and locking them between the shoulders.

3. A device of the kind described comprising a frame, oppositely arranged brackets carried by the frame, shoulders, in pairs, formed upon said brackets, perforated lugs carried by the brackets, each lug being in vertical alinement with the space between one pair of shoulders, vertically movable blocks extending from bracket to bracket and having their end portions fitting between the shoulders, a scraper formed of a flexible fabric held between said blocks, and block adjusting means working through the lugs and engaging the lower faces of the blocks.

4. A device of the kind described comprising a supporting frame, brackets carried by the frame, each bracket comprising two members, said members being oppositely angled, the members of each bracket being slidable on each other, the body portion of one member being slotted, a pair of shoulders formed on each angled portion and spaced apart, lugs carried by the body portions of the said members, the lug of one member extending through the slot of the other, scrapers having their end portions loosely held between the shoulders, and screws working upwardly through the lugs and bearing on the under faces of the scrapers.

902,271. APPARATUS FOR DYEING. HENRY ANNER, Phillipsburg, N. J., assignor to Standard Silk Company, a Corporation of New Jersey. Filed May 5, 1906. Serial No. 315,293.



1. In apparatus for dyeing, the combination of a receptacle for holding the dye, a reel mounted above said receptacle, means for rotating said reel at various speeds and means for moving said reel across the top of said receptacle in either direction.

2. In apparatus for dyeing, the combination of a receptacle for holding the dye, a carriage supporting said reel above said receptacle, and means for moving said carriage back and forward above said receptacle.

3. In an apparatus for dyeing, the combination of a receptacle for holding the dye, a carriage mounted upon said receptacle and carrying a reel, means for moving said carriage backward and forward across the top of said receptacle, and means for locking said carriage at any position on said receptacle.

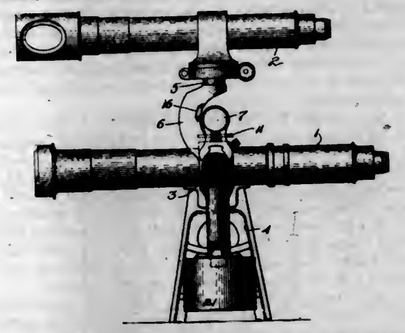
4. In apparatus for dyeing, the combination of a receptacle for holding the dye, a reel mounted in a frame, said frame being adapted to be moved back and forth upon the top of said receptacle, and means for moving same in either direction.

5. In dyeing apparatus, the combination of a receptacle for holding the dye, a track mounted upon said receptacle, a reel mounted in a frame on wheels resting upon said track, and means for moving said frame carrying the reel back and forth on said track.

[Claims 6 to 13 not printed in the Gazette.]

902,272. MINE-TRANSIT. WILLIAM A. BERGER, Boston, Mass. Filed May 18, 1908. Serial No. 433,418.

1. In a mining transit, a main telescope, its horizontal axis, an auxiliary telescope adapted to be mounted in vertical parallel alinement above said main telescope, and means for rigidly supporting said auxiliary telescope in said position, said supporting means being deflected at a point between said horizontal axis and the auxiliary telescope sufficiently to permit a striding level to rest in the usual position on said horizontal axis in the vertical plane of said horizontal axis and the vertical axis of the auxiliary telescope.



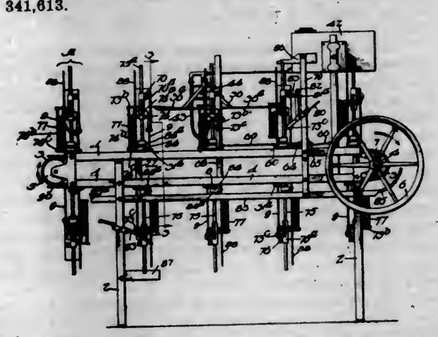
2. In a mining transit, a main telescope, its horizontal axis, a striding level mounted on said horizontal axis, and a vertical support extending around said striding level for supporting beyond the striding level another portion of the instrument.

3. In a mining transit, a main telescope, its horizontal axis, a striding level mounted on said horizontal axis, a support extending around said striding level for supporting beyond the striding level another portion of the instrument, and reflecting means carried by said support at one side of said striding level for facilitating the reading of the latter.

4. The combination with a surveying telescope and its horizontal axis, of a striding level for striding said horizontal axis, reflecting means at the back of said level, and a support extending from said telescope for supporting said reflecting means.

5. The combination with a surveying telescope and its horizontal axis, of a member extending at one side of said horizontal axis provided with a sighting aperture for sighting in the vertical plane of said telescope, said member being provided with a reflector in position to facilitate the reading of a striding level when mounted on said horizontal axis and said striding level therefor.

902,273. MACHINE FOR CLOSING AND SEALING THE ENDS OF PAPER BOXES. ROBERT Y. BRADSHAW, Chicago, Ill. Filed Nov. 1, 1906. Serial No. 341,613.



1. In a device of the character described, the combination of conveyer mechanism adapted to move in a predetermined path, means carried by said conveyer mechanism for holding a box or carton having side and end flaps adapted to be folded and sealed, a folding finger mounted on said main frame and adapted to be moved into the path of said conveyer by the forward advance of

the conveyer, said finger operating to enter the path of movement of a carton from the rear and to overtake and fold the rear end flap forwardly and inwardly, a member carried by said main frame in the path of said conveyer adapted to contact with the forward end flap of a carton, means in the path of said conveyer adapted to apply an adhesive to one of said side flaps and means on said conveyer adapted to fold said side flaps inwardly and to retain them in folded position during a predetermined part of the movement of said conveyer.

2. In a device of the character described, the combination of a main frame, a conveyer mechanism, means on the conveyer mechanism adapted to support a box or carton during a predetermined period of travel of the conveyer, means for folding and gumming the ends of the boxes or cartons carried on the conveyer, a member carried on said conveyer adjacent the carton support, a discharge finger on said member, and a track or way on the main frame adapted to control the movements of the member and the discharge finger carried thereby.

3. In a device of the character described, the combination of conveyer mechanism adapted to travel along a predetermined path, box or carton holding means carried thereby, said means adapted to receive a box or carton provided with side flaps and end flaps to be folded for the purpose of forming a top and bottom therefor, means for actuating said conveyer mechanism, means in the path thereof adapted to fold the front and rear end flaps of a box or carton carried thereby, means adjacent to the path of movement of said conveyer mechanism adapted to apply an adhesive to the two sides of one of the side flaps of said box or carton, means interposed in the path of forward movement of said conveyer mechanism adapted to be actuated thereby for folding inwardly said gummed side flap, and means carried by said conveyer mechanism adjacent to said box or carton holding means adapted to fold the remaining side flap of said box or carton, said last mentioned means adapted also to remain in contact with the folded flaps of said carton during a predetermined portion of the forward travel of said conveyer mechanism.

4. In a device of the character described, the combination of conveyer mechanism adapted to move along a predetermined path, embodying means for carrying boxes or cartons provided with side and end flaps adapted to be folded and sealed for forming tops or bottoms therefor, means for actuating said conveyer mechanism, and means interposed in the path of said conveyer mechanism adapted to apply an adhesive to one of the flaps of a box or carton, said means embodying a pair of feed members, means for conducting a flap of said box or carton therebetween, and elastic means adapted to contact with the sides of said flap after passing between said feed members for the purpose of removing superfluous adhesive therefrom.

5. In a device of the character described, the combination of conveyer mechanism adapted to move along a predetermined path, means mounted thereon adapted to carry a box or carton having flaps adapted to be folded and sealed for the purpose of forming a top or bottom therefor, mechanism interposed in the path of said conveyer adapted to apply an adhesive to a flap on a carton or box, said mechanism embodying a pair of adhesive feed members resting normally in contact with each other and adapted to be separated by the passing of a box or carton flap therebetween and means adjacent to said feed members adapted to contact with the sides of flaps after passing therefrom for the purpose of removing superfluous deposits of adhesive.

[Claims 6 to 25 not printed in the Gazette.]

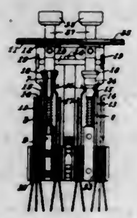
902,274. BROOCH. CARLOS N. BRUZAUD, Peekskill, N. Y., assignor of one-third to Rosa D. Kornhauser, Peekskill, N. Y. Filed June 13, 1907. Serial No. 378,735.

1. A brooch comprising a sheath having an aperture in its wall and an ornamental projection arranged opposite the aperture, a sword consisting of a blade and a handle, said blade having a transversely extending aperture adapted to register with the aperture of the sheath, said blade forming a cutter and a nail file, and a locking pin having a shank portion extending through the aperture of the sheath and into the aperture of the sword and having a head disposed outside the sheath to form an ornament corresponding to the projection and serving as a grip for facilitating the removal and insertion of the pin.



2. A brooch comprising a hollow sheath open at one end and having an aperture adjacent the open end and at the top side of the sheath and provided with an ornamental projection depending from the bottom side of the sheath at a point opposite from the aperture, a member extending into the sheath and provided with transversely-extending opening adapted to register with the aperture of the sheath, a locking pin having a shank portion proportioned to fit in the aperture of the sheath and opening of the member and having its upper end formed into a head disposed outside the sheath at a point opposite from the said projection and serving as a grip for facilitating the removal and insertion of the pin, and means on the back of the sheath for securing the brooch in position.

902,275. BANK OF LOCKING SWITCH-KEYS. ELMER R. CORWIN and CHARLES A. BALS, Chicago, Ill., assignors to Corwin Telephone Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 28, 1908. Serial No. 423,885.

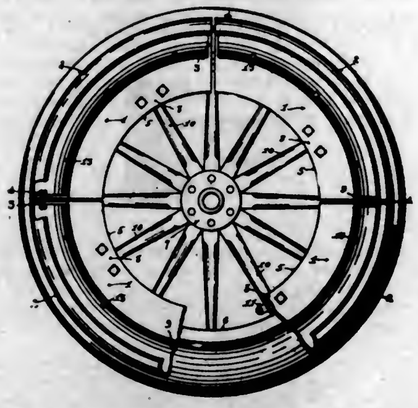


1. A bank of switch keys comprising a plurality of push-buttons, a plunger for each of the push-buttons adapted to be operated thereby, a set of spring-contact members for each of the plungers adapted and arranged to be controlled thereby, a vertical bar for each of the keys connecting the push-button with the plunger, notches in each of the said vertical bars, one being beveled at its upper surface, a plurality of longitudinal side bars slidably mounted, a plurality of tranverse locking bars carried by the said side bars, the said locking bars being adapted to normally rest in the notches of the said vertical bars, a leaf spring near one end of the bank of keys adapted to bear against one of the said transverse bars for forcing the latter as a unit into the said notches of the said vertical bars, and a coil spring acting on each of the said plungers to operate same when the latter are released, the depression of any one of the push-buttons causing the beveled surface of the notch associated therewith to operate the said locking bars and said side bars as a unit so as to disengage the said locking bars from the various notches of the said vertical bars whereby any of the push-button keys which may have been in depressed position are released, the said push-button which is being depressed being automatically locked in depressed position when depressed far enough to allow the said locking bars to be forced by the said leaf spring into the notches of the said vertical bars.

2. A bank of locking switch keys having a plurality of longitudinal side bars and a plurality of transverse locking bars comprising a unit, operable as such, a plurality of plungers in locking relation with the said transverse locking bars, a leaf spring acting on a transverse bar of the locking bar unit to operate the latter when released by the depression of any of the said plungers, and an adjustment screw for the said leaf spring whereby the tension of same acting on the said locking bar unit may be adjusted as desired.

3. A switch key of the character described comprising a nonconducting plunger, switch-contact members adapted to be operated by the plunger, switches adapted to be controlled by the switch-contact members, means whereby a partial depression of the plunger operates both of the switch-contact members to control respective switches, and means whereby a still further depression of the plunger operates only one of the switch-contact members still further to control an additional switch.

902,276. TIRE-PROTECTOR. FRANCIS G. CRONE, Buffalo, N. Y. Filed Sept. 11, 1905. Serial No. 277,959.



1. The combination with a vehicle wheel and a tire attached thereto of a tire protector comprising a plurality of circular plates provided with peripheral tread surfaces and means for rigidly securing said plates to said wheel so that the periphery of said plates may bear any predetermined relation to the periphery of said tire.

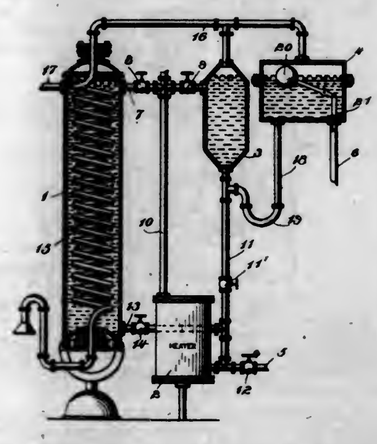
2. The combination with a vehicle wheel and a tire attached thereto of a tire protector comprising segmental circular plates, the segments having similar outwardly and inwardly curved rims to form a tread, and depending flanges and means for securing said flanges to the spokes of the wheel.

3. The combination with a vehicle wheel and a tire attached thereto of a plurality of segmental, circular tire protectors, the segments having similar outwardly and inwardly curved rims to form a tread, depending flanges and straps and bolts for securing said flanges at their ends with each other and with the spokes of the wheel, lugs on the ends of said segments and bolts uniting said lugs to rigidly secure said segments to each other.

4. The combination with a vehicle wheel a rim and a tire attached thereto of a tire protector comprising an outside rim, a depending flange, means for rigidly securing said protector to the spokes of said wheel and set-screws threaded through said protector and bearing against the tire rim to further secure the protector to the wheel.

902,277. COMBINED HOT-WATER HEATER AND STILL. DENNIS W. DALEY, Pittsburg, Pa. Filed Nov. 14, 1906. Serial No. 343,391.

1. In a device of the character described, the combination with a domestic boiler, a heater piped thereto for furnishing hot water to said boiler for usual domestic purposes, a steam tank piped to said heater, a valve in the pipe between said domestic boiler and heater for closing connection between said domestic boiler and heater to prevent passage of water from said heater to said boiler, means for supplying said heater and domestic boiler, independent means for supplying said heater and steam tank to keep the water in said steam tank at a uniform level, and means for condensing the steam passing from said steam tank, substantially as described.



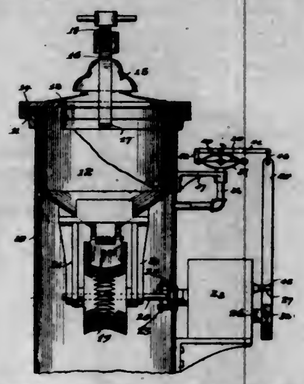
2. In a device of the character described, the combination with a domestic boiler, of a heater piped thereto for furnishing hot water to said boiler for usual domestic purposes, a steam tank piped to said heater, a float chamber associated with said steam tank to feed said steam tank, a valve located in the pipe between said heater and said domestic boiler for closing connection between said heater and said domestic boiler to prevent passage of water from said heater to said domestic boiler, and means for condensing the steam passing from said steam tank, substantially as described.

3. In a device of the character described, the combination with a domestic boiler, of a heater piped thereto for furnishing hot water to said boiler for usual domestic purposes, a steam tank piped to said heater, a float chamber associated with said steam tank to feed the same, and a trap located between said steam tank and said float chamber to prevent the entrance of hot water from said steam tank into the said float chamber, substantially as described.

4. In a device of the character described, the combination with a domestic boiler, of a heater piped thereto for furnishing hot water to said boiler for usual domestic purposes, a steam tank piped to said heater, a valve in the pipe between said heater and said steam tank to prevent passage of water from said heater to said steam tank, and for confining the circulation to said domestic boiler and said heater, a valve in the pipe between said heater and said domestic boiler to prevent the passage of water from said heater to said domestic boiler, and for confining the circulation to said heater and steam tank, and means for leading the steam from said steam tank through said domestic boiler to condense the same, substantially as described.

5. In a device of the character described, the combination of a domestic boiler, a heater piped thereto for furnishing hot water to said boiler for usual domestic purposes, a steam tank piped to said heater, a valve located in the pipe between said heater and said domestic boiler to prevent passage of water from said heater to said domestic boiler, and for confining circulation to said heater and steam tank and a condensing coil arranged in said domestic boiler and connected to said steam tank to condense the steam from said steam tank, substantially as described.

902,278. GOVERNOR. AUGUSTINE DAVIS, Chicago, Ill., assignor to Davis Acetylene Company, Elkhart, Ind., a Corporation of South Dakota. Filed Feb. 8, 1907. Serial No. 356,431.

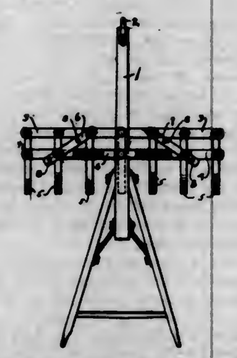


1. In a governor, the combination with a brake-disk and a brake-band therefor, of a centrifugally-actuated weight mounted on said brake-disk having a part adapted to be projected beyond the periphery of said brake-disk under abnormal speed into engagement with said brake-band, substantially as described.

2. In a governor, the combination with a cup-shaped brake-disk having an apertured rim, and a brake-band therefor, of a centrifugally-actuated weight pivotally mounted in said brake-disk and provided with a lug adapted to be projected under centrifugal action through said aperture of the brake-disk and into frictional engagement with said brake-band, substantially as described.

3. In a governor, the combination with a cup-shaped brake-disk having in the rim thereof at diametrically opposite points a pair of apertures, and a brake-band therefor, of a pair of centrifugally-actuated weights pivotally mounted in said brake-disk, said weights being provided on their outer sides with lugs adapted to be projected under centrifugal action through said apertures of the brake-disk and into frictional engagement with said brake-band, substantially as described.

902,279. HARROW. AMOS E. DIESEM, Columbus, Ohio, assignor to The Bucher & Gibbs Plow Company, Canton, Ohio, a Corporation of Ohio. Filed June 13, 1906. Serial No. 321,433.



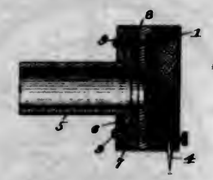
1. The combination of a beam, an implement support comprising a pair of bars having a fixed pivotal connection to the beam, and implement-supporting extension bars extending lengthwise of the other bars and shiftable to different distances from the beam.

2. The combination of a beam, a pair of pivoted implement-carrying bars extending to one side of the beam, a second pair of implement-carrying bars extending to the opposite side of the beam and implement-carrying extension bars entending lengthwise of and attached to said second pair of pivoted bars and separated from said beam.

3. The combination of a beam, implement-carrying bars pivotally attached to said beam, implement-carrying extension bars secured to said bars that are pivoted to the beam, the implements being pivotally attached to their respective bars, and link bars secured to the implement-carrying bars.

4. In a harrow of the class described, the combination of a beam, toothed bars pivotally attached to said beam, toothed extension bars secured to the toothed bars pivoted to the beam, and the harrow teeth pivotally attached to the toothed bars and extension bars and link bars secured to said toothed bars, substantially as and for the purpose specified.

902,280. SOUND-BOX FOR TALKING-MACHINES. LEON F. DOUGLASS, Philadelphia, Pa., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Mar. 19, 1903. Serial No. 148,478.



1. In a talking machine the combination of the part of the sound box carrying the means for producing sound waves, a support forming part of the sound box and also forming a part of the sound conveying devices, and an interposed yielding member independently connected with said part and said support.

2. In a sound box for talking machines, a disk of india rubber attached to the back thereof, and a support which enters said disk and which has a low projection which is embedded therein to hold said disk and sound box upon said support, the outer surface of said disk being substantially unconfined.

3. In a sound box for talking machines, a disk of india rubber attached to the back thereof, a sound box support having a low flange which is embedded in said disk, the outer surface of said disk being substantially unconfined.

4. In a sound box for talking machines, a disk of india rubber attached to the back thereof, and a flanged sound box tube having its end embedded in said disk, the outer surface of said disk being substantially unconfined.

5. In a sound box structure a casing containing a diaphragm, a part of the sound box forming means for supporting the same, and a yielding member interposed between and independently connected with the said casing and supporting means.

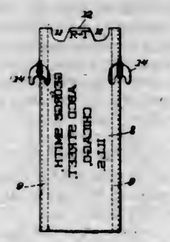
[Claims 6 to 21 not printed in the Gazette.]

902,281. PRINTING-PLATE. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1908. Serial No. 428,504.

1. A printing device consisting of a substantially rectangular metal plate having printing characters thereon, and oppositely disposed projections stamped out of the blank for the device, within the margin thereof, and bent outward to project beyond opposite edges of the plate.

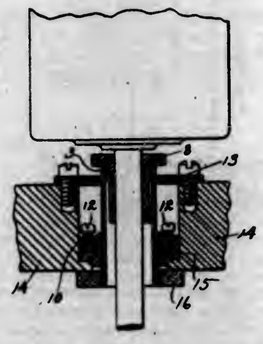
2. A printing device consisting of a metal plate having printing characters thereon, spacing flanges formed by bending over the side edges of the plate, and hook projections stamped out of the blank for the plate, within the margin thereof, and bent outward.

3. A printing device consisting of a metal plate of substantially rectangular form and having printing characters thereon, and hook projections stamped out of the blank for the device, within the margin thereof, and bent outward



to project beyond the side edges of the plate and extending substantially parallel with said side edges.

902,282. FLEXIBLE NECK-BEARING FOR CENTRIFUGAL SEPARATORS. HANNA EDLUND, Providence, R. I., administratrix of Claus A. Edlund, deceased; John Doran, administrator de bonis non of said Claus A. Edlund, deceased, assignor of one-half to Emil Bernstrom, Providence, R. I. Filed Dec. 22, 1906. Serial No. 349,022.



1. A flexible neck bearing for centrifugal separators comprising a tubular body portion, there being a plurality of spring fingers formed in said body, a bearing collar retained in the grip of said fingers, means for regulating the spring tension of said fingers on said collar, and means inclosing said spring fingers to retain the same in position in case one or more become broken.

2. A flexible neck bearing, comprising a tubular body there being a plurality of spring fingers formed in said body, a bearing collar provided with a groove around its outer surface, there being means in the free ends of said fingers for engaging the groove in said collar to retain the same in position, and means for regulating the spring tension of said fingers on said collar.

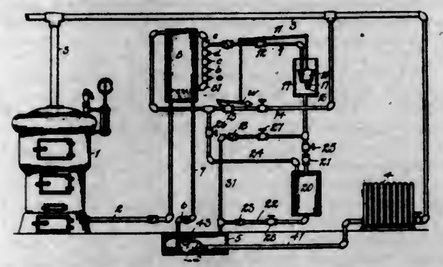
3. A flexible neck bearing comprising a tubular body there being a plurality of spring fingers formed in said body, a bearing collar, there being means in the free ends of said fingers for engaging and retaining said bearing collar, means for regulating the spring tension of said fingers on said collar, and means inclosing said spring fingers to retain the same in position in case one or more of said fingers become broken.

4. A neck bearing for centrifugal separators comprising a tubular body portion, said body being provided with slots cut inward from one end thereof forming a plurality of flexible fingers in said tube, a bearing collar, there being means in the free ends of said fingers for engaging and retaining said bearing collar, and an inclined portion on the exterior of the tube at the base of the fingers, a plate adapted to engage said inclined portion, and means for adjusting said plate to regulate the tension on the spring fingers.

5. A neck bearing for centrifugal separators comprising a tubular body portion, said body being provided with slots cut inward from one end thereof, the metal between said slots forming a plurality of flexible fingers around said tube, a bearing collar provided with a groove around its outer surface, there being a bead formed on the ends of said fingers for engaging the groove in said collar to retain the same in position, and a safety ring inclosing said fingers to retain the same in position if broken.

[Claims 6 and 7 not printed in the Gazette.]

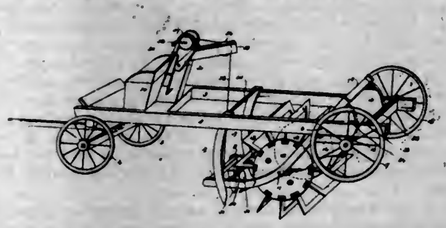
902,283. BOILER-FEEDER. NORMAN ENGLISH, Detroit, Mich. Filed Mar. 25, 1908. Serial No. 423,082.



1. In a boiler feeder, in combination with a steam boiler and a system of steam heating pipes supplied thereby, a well into which said pipes drain, a tank located above the boiler and adapted to empty thereinto by gravity, a pipe connecting said well and said tank, an overflow pipe from said tank, a receptacle into which said overflow drains, a valve in said overflow pipe controlled by said receptacle as a weight, a valve in the steam pipe adapted to control the admission of steam into said tank and itself controlled by said receptacle as a weight, substantially as described.

2. In a boiler feeder, in combination with a steam boiler and a system of heating pipes supplied thereby, a collecting well, a collecting tank, a pipe through which water may be forced from the well to the tank, a valve therein adapted to prevent a return flow therethrough, an overflow pipe from said tank, a receptacle adapted to catch the overflow therefrom, pipes connecting said tank and said receptacle with the boiler, whereby water may be returned thereinto from either, and valves actuated by said receptacle, whereby steam may be admitted to equalize the pressure on the water contained in the tank, substantially as described.

902,284. PLOW. LUIGI FERRY and FILIPPO DI GIOIA, Derby, Conn. Filed June 29, 1908. Serial No. 441,049.



1. A plow comprising a frame, rocking arms mounted between the frame, transverse blades mounted between said arms, vertical cutters connected with said rocking arms in advance of said blades, and means connected with said rocking arms for raising their forward ends whereby the blades and cutters are lifted above the surface of the ground, substantially as described.

2. A plow comprising a frame having side bars, the forward wheels connected therewith, rocking arms mounted

between the sides of the frame near the rear ends thereof, a shaft through said arms, disks mounted thereon, said disks supporting transverse blades, vertical cutters connected with the forward end of said rocking arms, a winding spindle mounted at the forward end of the frame, and connection between said spindle and rocking arms, whereby the forward ends of the rocking arms may be raised, substantially as described.

3. A plow comprising a frame having side bars, a seat supported at the forward end thereon, and the forward end mounted upon the wheels, rocking arms mounted between said side bars, wheel supports at the rear end of said rocking arms and wheels connected therewith, a shaft mounted in said rocking arms, disks mounted thereon, transverse blades connected with said disks, cutters connected with the forward ends of said arms, a winding spindle mounted on said seat support and connection between said spindle and rocking arms whereby the forward ends of the rocking arms may be raised.

902,285. CONDUIT. JOHN A. GAREY, Mound City, Mo. Filed Aug. 12, 1907. Serial No. 388,255.



1. In combination, a third rail, a support therefor, a pair of loosely mounted plates, and springs tending to hold both the upper and the lower edges of said plates toward each other to form a wholly inclosing shield or conduit for the third rail.

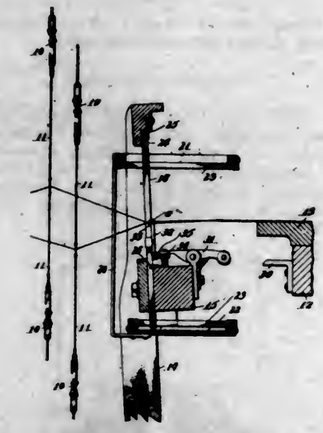
2. In combination, a vertical bar forming a third rail support, a pair of lips or flanges extending from the lower portion of the bar, a pair of plates having their lower edges resting on said lips or flanges, the upper edges of the plates being curved and provided with contacting heads, and springs connecting the plates to the bar and arranged to permit opening movement of either the upper or the lower edges of the plates.

3. In combination, a third rail, a vertically arranged bar forming a third rail support, a pair of flanges extending outward from the lower portion of said bar, a pair of plates having their lower edges resting on the flanges, the upper edges of said plates being curved around and over the third rail, tension springs connecting the plates to the bar, a bolt carried by the bar and having end tongues extending through openings in the lower portions of the plates, and compression springs mounted on said bolt and tending to hold the lower edges of the plates against the bar.

4. In combination, a third rail, a vertically arranged bar forming a third rail support, a pair of flanges extending outward from the lower portion of said bar, a pair of plates having their lower edges resting on the flanges, the upper edges of the plates being curved over the third rail, contacting clips carried by the adjacent upper edges of the plates, a pair of tension springs connecting the plates to the bar, a bolt carried by the bar and having its opposite ends extending through openings formed in the plates, springs mounted on the bolt, and nuts forming rests for the outer ends of said springs.

5. In combination, a pair of angle bars, the upper edges of which are bent outward to form horizontal flanges, and thence inward to form inclined flanges, the bars being connected together to form at the top a recess approximately trapezoidal in cross section, a third rail having a base portion corresponding to the recess and movable therein, there being insulating material between the base of the rail and the flanges which form the recess, and a pair of spring actuated plates arranged to inclose the upper portion of the bars and the third rail.

902,286. LOOM FOR WEAVING SHORT-WEFT FABRICS. JULIUS GARST, Worcester, Mass. Filed Jan. 25, 1908. Serial No. 412,533.



1. In a loom the combination with the lay of a frame in fixed position and having converging guides, and reed dents movably mounted on said lay and guided in said frame.

2. In a loom for making short weft fabric, the combination with the lay, of a frame in fixed position and having guides converging toward the warp board, and reed dents movably mounted in said guides, whereby the reed dents are uniformly brought nearer together across the fabric as the lay beats up.

3. A loom having a lay, reed dents mounted on the lay, and movable longitudinally thereon, and means for positively and uniformly moving said reed dents on the lay, toward each other during the beat of the lay to assist in crimping the weft.

4. A loom having a lay, transverse guides, each guide located at a slight angle to the next one, and reed dents mounted to be moved along said guides.

5. In a loom the combination with the lay, of a fixed frame having upper and lower reed dent guides consisting of bars fixed to said frame and transversely placed with respect to the lay, and movable reed dents mounted in said guides.

[Claims 6 to 14 not printed in the Gazette.]

902,287. RAILROAD-TIE. THOMAS F. GILCREST, Des Moines, Iowa. Filed Aug. 31, 1907. Serial No. 390,972.



1. A composite tie for railways composed of spaced angle irons and a cement body completely embedding the webs of the angle irons with the angle extensions of said angle irons at the surface of the tie and projecting oppositely and together with the cement body between the webs constituting the rail-receiving face of the tie.

2. A composite tie for railways composed of a cement body and spaced angle irons having their webs adjacent and the angle extensions projecting oppositely, the cement body completely embedding the webs of the angle irons and extending between them and level with the surface of the angle extensions, and means also embedded in the cement body for holding the angle irons in spaced relation.

3. A composite tie for railroads, composed of a body of cement, spaced angle irons having web portions embedded in the body of the tie and their angle extensions constituting the rail-supporting face of the tie, bolts extending through the webs of the angle irons within the cement body, spacing sleeves surrounding the bolts and holding the webs apart, metallic strips parallel with the outer faces of the webs and carried by the bolts, and spacing means between the strips and the contiguous faces of the webs.

4. A composite tie for railroads composed of a body of cement, spaced angle irons having the web portions embedded in the body of the tie with the angle extensions oppositely projecting and constituting the rail-supporting face of the tie, longitudinally-disposed strips adjacent to the outer faces of the webs and also embedded in the cement body, and means for connecting the webs together and to the strips.

902,288. FLUID-PRESSURE-ENGINE-OPERATED TOOL. GEORGE H. GILMAN, Claremont, N. H., assignor to Sullivan Machinery Company, Claremont, N. H., a Corporation of Maine. Filed Sept. 5, 1905. Serial No. 276,946.



1. A fluid-pressure, direct-acting tool engine having a differential piston valve normally maintained in one position by constant exposure of an area thereof to live pressure, a valve-block having an opening in which said valve is slidable, one or more longitudinal passages in said block in addition to said opening and connected with the pressure supply, one or more longitudinal passages continuing through said block but longitudinally spaced from said first-mentioned longitudinal passages and connected with the head end of the cylinder, said pressure passages and cylinder passages being in communication when the valve is in normal position, and means controlled by forward piston movement for moving said valve to cut off communication between said passages.

2. A fluid-pressure, direct-acting tool engine having a cylinder, a piston movable therein, a casing adapted to receive one end of said cylinder, a valve-block also within said casing and adapted to act as a closure for the head end of said cylinder, a valve block cover between said valve block and the casing, and a differential pressure piston valve having an area exposed to constant pressure and movable within said valve-block in alinement with the piston but oppositely movable therefrom said valve block having one or more longitudinal passages therein in addition to the valve opening, and one or more longitudinal passages continuing through said block but spaced from said first-mentioned longitudinal passages.

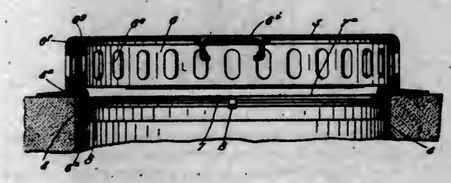
3. A fluid pressure direct acting tool engine having a cylinder, a piston movable therein, a valve chamber separate from the piston chamber and located at the rear end thereof, said valve chamber having a pair of annular grooves, one or more longitudinal passages connecting one of said grooves with the source of pressure supply, one or more longitudinal passages connecting the remaining groove with the head end of the cylinder, one or more exhaust passages leading from said valve chamber, a pressure supply passage connecting said chamber with the tool end of the cylinder, and a piston valve adapted in one position to connect the pressure supply with the head end of said cylinder through said longitudinal passages and in another position to connect the pressure supply with said tool end pressure supply passage through said first longitudinal passage or passages and the exhaust with the head end of said cylinder through said second longitudinal passage or passages, said valve having an area exposed to constant pressure.

4. A fluid pressure direct acting tool engine having a cylinder, a piston movable therein, a differential pressure piston valve controlling said piston and having an area exposed to constant pressure, a constant pressure chamber, a valve chamber within which said valve operates and a plurality of longitudinal passages connecting said valve chamber with said constant pressure chamber and connected with the valve intermediate the ends of the latter, communication between the engine cylinder and the several passages being simultaneously opened or closed by the valve.

5. A fluid-pressure, direct-acting tool engine having a cylinder, a piston, a differential pressure piston valve at the rear of said piston having an area thereof constantly exposed to pressure, a valve chamber in which said valve operates, a constant pressure chamber, a pressure passage leading from said valve chamber to the tool end of said piston, one or more straight-away longitudinal passages leading from said constant pressure chamber to said valve chamber, one or more longitudinal passages leading from said valve chamber to supply pressure to the head end of the cylinder, said passages being longitudinally spaced from said first-mentioned longitudinal passages, said valve being adapted to connect valve chamber either with the head end of said cylinder or with said tool end pressure supply passage.

[Claims 6 to 38 not printed in the Gazette.]

902,289. VENTILATING-COVER FOR CISTERNS. JOHN U. GRIBBEN and MAX MOHR, Columbus, Ohio. Filed Oct. 23, 1907. Serial No. 398,688.

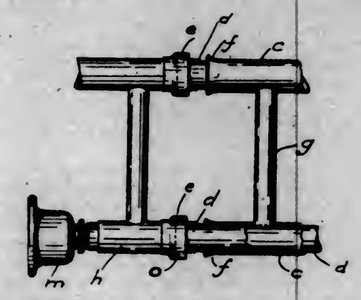


1. A ventilating cover for cisterns comprising an upwardly-extending exposed inclosing wall provided with ventilating openings, a rabbet-like shoulder on the exterior of its lower end to enter and engage a curb thimble, and an interior rim on said lower end to support a screen, and a rabbet-like shoulder at the upper end of the wall to receive the ordinary cover of a cistern, combined with a screen and a cover, substantially as described.

2. In a removable ventilating cover for cisterns and the like, an integral upwardly-extending ring or wall provided at its lower end with a double contraction, one to engage a curb thimble, and the other to afford a seat for a screen, said ring also having ventilating openings in its main portion and also constructed at its upper end to receive an ordinary cover of a cistern.

3. In a removable ventilating cover for cisterns and the like, the integral upright perforated ventilating section having a contracted lower end, two shoulders on said lower end to fit upon a curb ring of a cistern, an interior rim on said lower end to receive a screen, and a rabbet-like seat in the upper end of said section to receive a removable cover.

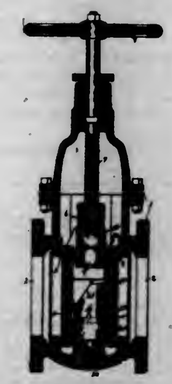
902,290. MUSICAL WIND INSTRUMENT. JOHN A. HALLOWAY, New York, N. Y. Filed Mar. 23, 1908. Serial No. 422,800.



1. A musical instrument having a sliding part telescoping inside another part, the ends of the outer tubular casing diverging from the bearing-fit for the purpose described.

2. A slide trombone, provided with cupped ends on the tubular casing forming the slide for the purpose described.

902,291. VALVE. JOHN P. L. HALYBURTON, Cohoes, N. Y. Filed July 21, 1905. Serial No. 270,606.



1. In a slide-gate valve, the combination with the case; stem; and stem-nut having oppositely projecting trunnions; of a wedge having on its opposite sides inclined surfaces of different degrees of inclination; an auxiliary gate having lugs provided with apertures adapted to loosely receive and permit lost motion of said trunnions, and an inclined surface corresponding in inclination with and adapted to engage the surface of greater inclination on said wedge; and a main gate carried by said auxiliary gate and having an inclined surface corresponding in inclination and engageable with the surface of lesser inclination on said wedge.

2. In a slide-gate valve, the combination with the case; stem; and stem-nut having oppositely projecting trunnions; of a wedge having on one side a plane inclined surface and on the opposite side a curved inclined surface, said surfaces being of different degrees of inclination; and a pair of gates loosely connected with each other, one having a plane inclined surface corresponding in inclination and engageable with the similar surface on said wedge and the other having a curved inclined surface corresponding in inclination and engageable with the similar surface on said wedge, one of said gates having on its back a pair of lugs or flanges adapted to receive between them said stem-nut and provided with bearing apertures for the trunnions on the stem-nut.

902,292. AUTOMATIC PENCIL. OWEN L. HARRISON, Coleta, Ill. Filed Feb. 4, 1907. Serial No. 355,713.



1. A device of the class described, embracing a casing, a slidable metallic tube mounted in said casing, a marking lead mounted in said tube and capable of adjustment therein, said tube having a recess, a frictional plug mounted in said recess, a removable cap adapted to shield said plug, said plug being capable of holding said slidable lead in the desired position.

2. A device of the class described, embracing a casing, a slidable metallic tube mounted in said casing, a slidable marking lead mounted in said tube and capable of adjustment therein, said tube having a recess, a frictional plug mounted in said recess, a removable cap adapted to shield said plug, said plug being capable of holding said slidable lead in the desired position, and frictional means for holding said tube in its adjusted position.

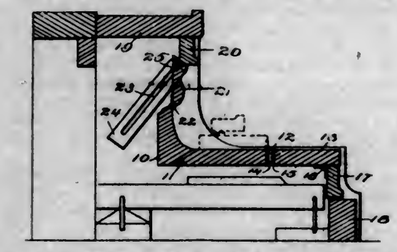
3. A writing instrument comprising a casing, a revolving nut mounted in said casing, a longitudinal tube extending through said casing and piercing said nut, a lead carried by said tubing, said tube being adapted to recede, and means arranged in said tube for holding said lead against casual movement.

4. A device of the class described, comprising a casing, screw threaded caps mounted in each end thereof, a revoluble nut arranged in said casing, a slotted tube adjustably mounted in said caps and piercing said revoluble nut, marking substance mounted in said tube, a tongue formed in said nut and adapted to engage said slot, and means mounted in said nut for frictionally engaging said tube.

5. A writing instrument, consisting of a handle having a tube mounted therein, said tube having lead mounted therein and a rubber plug mounted in said tube for holding said lead against movement, and a nut mounted in said handle and adapted to engage said tube and having means mounted in said nut for preventing the lead from receding, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

902,293. FALL-BOARD FOR PIANOS. JUSTUS HATTEMER, West New York, N. J., assignor to Hardman, Peck & Company, New York, N. Y., a Corporation of New York. Filed May 15, 1908. Serial No. 433,109.



1. The combination with a piano case provided with grooves inclined to a vertical, of a fallboard hinged to the case, and a member hinged to the hinged member and provided with means engaging with and slidable in the inclined grooves.

2. The combination with a piano case, of a fallboard hinged to the case, of a member hinged to the outer extremity of the fallboard and provided with a hinge joint, and a member hinged to the fallboard and slidable relative to the case.

3. The combination with a piano case provided with grooves inclined to a vertical, of a fallboard hinged to the case, a member hinged to the fallboard and provided with pintles engaging and slidable within the grooves, a member hinged to the outer edge of the fallboard and foldable thereupon, and a strip hinged to the hinged member and adapted to fold over and upon the adjacent edges of the hinged member and fallboard.

4. The combination with a piano case, of a fallboard member hinged thereto, of a member hinged to the fallboard member and extending upwardly, groove members at opposite ends of the fallboard, and means carried by the upwardly extending strip engaging and traveling in the groove member.

5. The combination with a piano case provided with grooves at opposite ends inclined to a vertical, of a fallboard member substantially L-shaped in transverse section hinged to the case, a strip hinged to the fallboard member and extending upwardly, means carried by the hinged strip traveling in the inclined grooves, and a hinged strip carried by the fallboard member.

[Claims 6 to 8 not printed in the Gazette.]

902,294. POST-HOLE AUGER. HERMAN HERMANNS, Galesburg, Ill. Filed May 11, 1908. Serial No. 432,271.



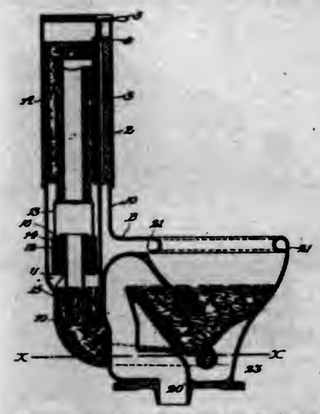
1. In combination in a device of the character described, a tubular shank, a casing at the lower end thereof, a rod loosely seated in said shank, a compacting disk thereon and within said casing, the lower portion of said casing comprising boring blades having inwardly directed extremities.

2. In a device of the character described, a tubular shank, a cross-head at the lower end thereof, vertically disposed cutting blades carried thereby, a ring to which the lower end of said blades are fixed, boring blades fixed to said ring, their extremities bent inwardly, a rod loosely mounted in said shank, and a compacting plate carried by said rod and adapted to coöperate with said boring blades, whereby the soil cut thereby may be tamped while in the hole.

3. In a device of the character described, a tubular shank, a cross-head at the lower end thereof, vertically disposed and spaced cutting blades carried thereby, whereby discharge of soil is permitted, a ring to which the lower ends of said blades are fixed, boring blades depending from said ring, their extremities bent inwardly, a rod loosely mounted in said shank, and a compacting plate carried by said rod and adapted to coöperate with said blades, whereby the soil cut thereby may be tamped while in the hole.

4. In a device of the character described, a tubular shank, a cross-head at the lower end thereof, vertically disposed spaced cutting blades carried thereby, whereby discharge of soil is permitted, a ring to which said blades are fixed, there being peripheral protuberances on said ring, boring blades fixed on said ring, a portion of them spaced by the lower ends of the vertical blades and another by said protuberances, the extremities of the boring blades bent inwardly but not directed toward a common center, and a compacting plate carried by said rod and adapted to coöperate with said blades, whereby the cut soil may be tamped within and lifted from the hole.

902,295. WATER-CLOSET. FREDERICK O. HILFIKER, Ilion, N. Y. Filed July 1, 1907. Serial No. 381,678.



1. In a device of the character described, a tank member having a siphon member mounted therein, and a vertically moving valve mounted in the siphon-discharge and adapted to coöperate with the siphon member to effect the flush through the bowl of the device.

2. In a device of the character described, a tank member having a siphon therein, one member of the siphon extending downwardly in an enlarged portion, a bowl portion having an upward extending chamber, the tank being adapted to be supported thereon, a cup-seal mounted in the said chamber to receive the extended arm of the siphon and a vertically movable valve adapted to be sealed by the cup-seal and to be opened to break the seal and effect discharge of the tank.

3. In a device of the character described, a bowl having in connection with the ordinary parts a rearward vertical chamber, a tank mounted relative to the said chamber, a siphon in the tank, a water-seal adapted to be supplied by the discharge from the tank, a valve in the chamber, the said siphon being extended into the water-seal, and the valve having a return portion extending into said seal, and of an enlarged bulk whereby to quicken the action of the siphon on lifting the valve, the said members coöperating on the lifting of the valve to cause the flush of the device, substantially as shown.

4. A device of the character described, having a bowl portion with an upward extended chamber, a tank member positioned for the discharge therefrom into the said chamber and having a siphon with one member extended into said chamber, and a valve adapted to control the operation of the siphon comprising a water-cup, the said cup being mounted to be maintained by the discharge of the siphon in condition for operation of the valve, substantially as shown.

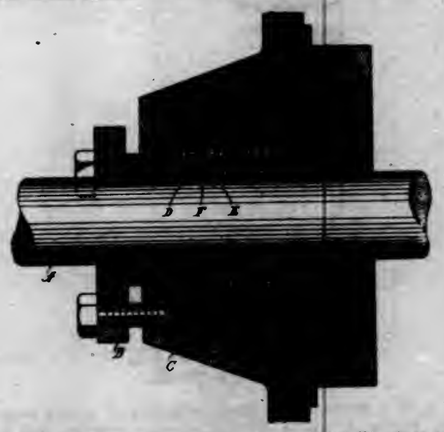
5. In a device of the character described, a siphon having one member extending downwardly in an open-end portion, the said siphon also comprising a cup-seal receiving the said open-end portion and a vertically movable valve having an end extending into the cup-seal and adapted upon its upward movement to operate the siphon, substantially as described.

[Claim 6 not printed in the Gazette.]

902,296. ROD-PACKING. GEORGE K. HOWARD, Richmond Hill, N. Y. Filed Dec. 21, 1907. Serial No. 407,539.

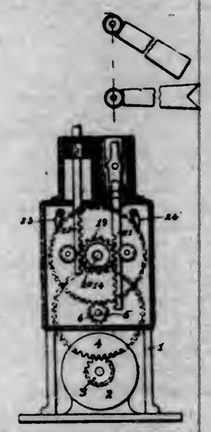
1. A rod packing comprising sectional metallic rings encircling the rod and in contact with the rod, the said me-

tallic rings having portions extending towards each other and against the rod, a space being left between the said extended portions of the rings and exposing the rod, a stuffing box, and rings of compressible packing placed between the said metallic rings, the said packing rings adapted to be compressed between the metallic rings and against both the stuffing box and the rod, the said metallic rings being held out of contact with the stuffing box and forced against the rod, substantially as described.



2. A rod packing comprising sectional metallic rings encircling the rod and in contact with the rod, the said metallic rings having curved portions extending towards each other and against the rod, a space being left between the said extended portions of the rings and exposing the rod, a stuffing box, and rings of compressible cylindrical packing placed between the said metallic rings, the said packing rings adapted to be compressed between the metallic rings and against both the stuffing box and the rod, the said metallic rings being held out of contact with the stuffing box and forced against the rod, substantially as described.

902,297. RAILWAY SIGNALING APPARATUS. WINTHROP K. HOWE, Buffalo, N. Y., assignor to General Railway Signal Company, Buffalo, N. Y., a Corporation of New York. Filed Nov. 27, 1905, Serial No. 289,258. Renewed June 6, 1908. Serial No. 437,200.



1. In combination with a motor and a double signal, an electro-magnetic clutch for each signal and means for moving one signal blade when said motor is energized to rotate in one direction and means for moving the other signal blade when said motor is energized to rotate in the opposite direction.

2. In combination with a motor and a double signal, an electro-magnetic clutch for each signal, means for moving one signal blade to reverse when said motor is energized to rotate in one direction, means for holding said signal blade at reverse so long as the clutch of said signal is energized, means for moving the other signal blade to reverse when said motor is energized to rotate in the opposite direction and means for holding said last mentioned signal blade at reverse so long as its respective clutch is energized.

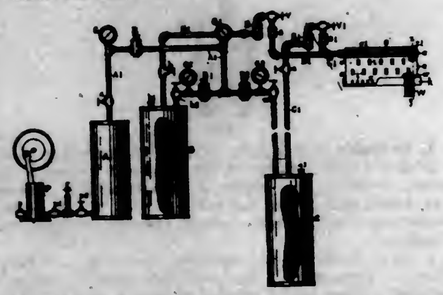
3. In combination with a motor and a double signal, an electro-magnetic clutch for each signal, means for successively moving said signals by the energization of said clutches and by reverse energization of said motor.

4. In combination with a motor and a double signal, an electro-magnetic clutch for each signal, means for successively moving said signals by the successive energization of said clutches and by reverse energization of said motor, means for holding said signals at reverse after current is reversed or cut off from said motor so long as said clutches are energized and means for returning one or both of said signals to normal by the deënergization of said clutches.

5. In combination with a motor and a double signal, an electro-magnetic clutch for each signal, means for successively moving said signals by the successive energization of said clutches and by reverse energization of said motor, means for holding said signals at reverse and means for returning one or the other or both of said signals to normal by gravity by the deënergization of one or both of said clutches through a slot circuit or circuits.

[Claims 6 to 8 not printed in the Gazette.]

902,298. APPARATUS FOR BURNING HYDROCARBON. HAMPDEN HYDE, Rochester, N. Y. Filed Aug. 2, 1906. Serial No. 328,866.



1. In an apparatus of the character described, a mixing and generating chamber comprising a hollow casting having transversely arranged partitions therein adapted to cause a to and fro movement of the gases or fluids passing therethrough; feed pipes for oil and water connecting with such chamber at approximately the same level and near the top of the chamber; a receptacle for a sub-flame and openings through one of such partitions permitting oil to reach such receptacle without passing the entire length of such partitions.

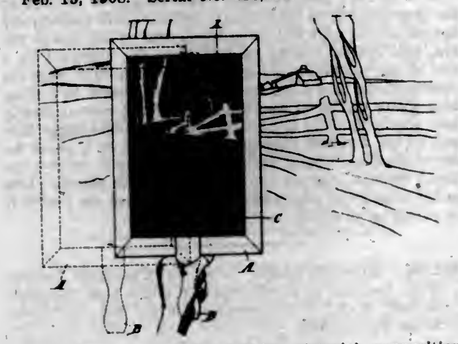
2. In an apparatus of the character described, a mixing and generating chamber, a water tank connected to such generating chamber by a pipe containing a suitable regulating valve, an oil tank connected to such chamber through a pipe containing a suitable regulating valve and means for maintaining a regulable pressure of air or gas in such water tank and independent thereof means for maintaining a regulable pressure of air or gas in such oil tank.

3. An apparatus for burning hydro-carbon comprising an oil tank, a water tank, a mixing and generating chamber and means for subjecting the same continuously to the action of the heat resulting from the combustion of such hydro-carbon, a pipe leading from such oil tank to such mixing and generating chamber containing a valve and a strainer interposed between the tank and the valve, a pipe leading from such water tank to such generating chamber containing a valve and a strainer between the tank and the valve, a source of air or gas under pressure, means for supplying air or gas under pressure to such oil tank and for regulating the pressure of the air therein and independent means for supplying air or gas under pressure to such water tank and for regulating the pressure therein.

4. An apparatus for burning hydro-carbon comprising an oil reservoir, a water reservoir, a mixing and a generating chamber independently connected to each of such tanks through separate pipes having regulating valves therein, means for supplying air or gas under pressure to such water tank and for regulating such pressure and independent means for supplying air or gas under pressure to such oil tank and for regulating the pressure therein.

5. In an apparatus of the character described, a mixing and generating chamber comprising a metallic box; a sub-flame pan secured to the under side of such box; exit orifices through the side walls of such chamber near the lower edge thereof, the edges of such pan extending upwardly above and in proximity to such orifices and adapted to prevent ignition of the gases issuing therefrom below the edges of such pan whereby such gases may be caused to burn in a solid sheet of flame surrounding such chamber and extending upwardly from the upper edges of the side walls of such pan and projecting members of heat conducting material extending outwardly from the side walls of such chamber and into the path of the flame.

902,299. DEVICE FOR USE IN STUDYING PICTORIAL COMPOSITION. ADA B. JOHNSON, Chicago, Ill. Filed Feb. 15, 1908. Serial No. 416,093.

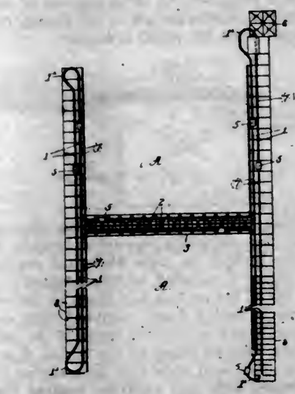


1. A device for use in studying pictorial composition, comprising a relatively wide frame containing an opening, in combination with a metallic netting stretched upon the frame, flush with one side thereof, through which the subject or landscape may be viewed, upon which the student may draw the principal lines of the view presented and through which such lines may be transferred, substantially as described.

2. A device for use in studying pictorial composition, comprising a relatively wide frame having an opening and provided with a handle, in combination with a metallic netting stretched upon the frame, flush with one side thereof, through which the subject or landscape may be viewed, upon which the student may draw the principal lines of the view presented and through which such lines may be transferred, substantially as described.

902,300. STORAGE APPARATUS. THOMAS C. KENNEDY, Chicago, Ill., assignor to Fairbanks, Morse & Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 31, 1907. Serial No. 355,068.

1. In a storage apparatus, the combination of a pair of parallel stationary tracks arranged on one side of the storage area and connected by loops formed at their opposite ends and located at two adjacent corners of said storage area, a bridge movable longitudinally of said tracks, and a pair of parallel tracks on said bridge connecting with one of the stationary tracks in all positions of the bridge and arranged to permit cars to traverse said bridge and to enter and leave at the same end thereof.



2. In a storage apparatus, the combination of two pairs of stationary tracks arranged on opposite sides of the storage area, a bridge movable longitudinally of said tracks, a pair of parallel tracks on said bridge connecting with one of the stationary tracks in all positions of the bridge and arranged to permit cars to traverse said bridge and to enter and leave at the same end thereof, and an endless cable along said stationary tracks and the bridge tracks arranged to draw cars therealong, the members of each pair of stationary tracks being connected by end loops and such pairs of tracks being unconnected except through the medium of the bridge tracks.

3. In a storage apparatus, the combination of a pair of stationary parallel tracks connected by end loops, a bridge movable longitudinally of said tracks, and a pair of parallel tracks on said bridge both connecting by curved portions with one of the stationary tracks in all positions of the bridge and arranged to permit cars to traverse said bridge in opposite directions and to enter and leave at the same end thereof.

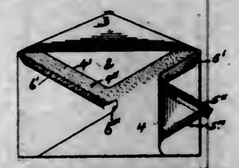
4. In a storage apparatus, the combination of two pairs of stationary parallel tracks arranged at opposite sides of a storage area or the like, a bridge movable longitudinally of said tracks, and a pair of tracks on said bridge both curved at their opposite ends to connect with the innermost member of each pair of stationary tracks, the tracks of each pair of stationary tracks being connected by end loops and the two pairs of such tracks being connected by the bridge tracks for the travel of cars in opposite directions across said bridge so that the cars enter and leave the bridge at the same end.

5. In a storage apparatus, the combination of two pairs of stationary parallel tracks arranged at opposite sides of a storage area or the like, a bridge movable longitudinally of said tracks, a pair of tracks on said bridge both curved at their opposite ends to connect with the innermost member of each pair of stationary tracks, the tracks of each pair of stationary tracks being connected by end loops and the two pairs of such tracks being connected by the bridge tracks for the travel of cars in opposite directions across said bridge so that the cars enter and leave the bridge at the same end, and a cable along the pairs of stationary tracks and the bridge tracks to positively draw cars thereabout.

902,301. SAFETY-ENVELOP. ISIDORE KLEIN, New York, N. Y. Filed Nov. 13, 1906. Serial No. 343,194.

1. An envelop having an upper sealing flap and side flaps, a lower flap extending upwardly beneath the side flaps and having a gummed margin projecting beyond the upper edge of the side flaps along its entire length adapted to engage with the margin of the sealing flap when the latter

is sealed down, said side flaps being gummed to the outer face of the lower flap and having free auxiliary flaps extending along the whole length of their upper edges and directly attached to and in one piece with the upper edges of the side flap, said auxiliary flaps being provided on their under surface with an adhesive and being adapted to cover and be attached to the outside margin of the sealing flap along its whole length when the latter is sealed.

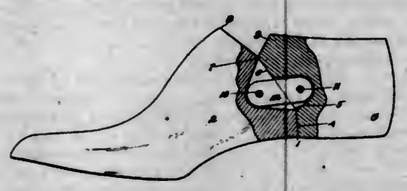


2. An envelop having an upper sealing flap and side flaps, a lower flap extending upwardly beneath the side flaps projecting beyond the same along the entire length thereof and having a gummed margin adapted to engage with the margin of the sealing flap along its entire length when the latter is sealed down, auxiliary flaps extending along the entire length of the side edges of the lower flap, folded inwardly and attached to the inside face of the front of the envelop, said main side flaps having an upper margin continuous with and abutting against the entire length of the lower edge of the sealing flap when the latter is sealed, and being provided with auxiliary flaps extending the entire length of said upper margin directly attached and formed in one piece with the side flaps, provided on their under surface with an adhesive adapted to be folded down to cover and be attached to the outside face of the lower margin of the sealing flap.

3. A blank for envelops having the face portion 2, the sealing flap 3, the lower flap 4 having the gummed margin 4'', and the two end flaps 5 and 6 having the gummed margins 5'' 5''', 6'' 6''', provided with the auxiliary flaps 5' 6' gummed on their inner surfaces for attachment to the sealing flap 3, when the envelop is folded, substantially as described.

4. A blank for envelops having the face portion 2, the sealing flap 3, the lower flap 4 having the gummed margin 4'' and the auxiliary gummed side flaps 4''', and the two end flaps 5 and 6 provided with the auxiliary flaps 5' 6' gummed on their inner surfaces for attachment to the sealing flap 3, when the envelop is folded, substantially as described.

902,302. LINK-LAST. EDWIN O. KRENTLER, Detroit, Mich., assignor to Krentler-Arnold Hinge Last Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 4, 1908. Serial No. 409,262.



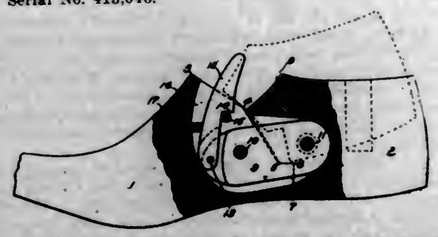
1. A divided last, having its forepart and heel-part severed by a line of cut and joined by a connecting member, affording a corner having its angular extremity at the front bottom edge of the heel-part, an overhanging inclined wall on the forepart engaged and supported by said angular extremity of said corner when the last is shortened, and flatly abutting oblique secant faces of extensive area at the secant ends of said last-parts adjacent the crown extended forward towards the crown in planes transverse to the general direction of the pressure on the forepart, of a shoe when being shoved rearward on said forepart in being relasted.

2. A divided last, having its parts severed by an angular line of cut extending down from the crown of the last rearwardly in an oblique direction, a single connecting link transversely pivoted at its opposite ends in said respective last-parts approximately midway from the bottom to the top of the last and substantially in a horizontal plane and transverse pivot pins for said connecting link maintained in all positions at the same distance apart, the upper portion of said angular line of cut extending forward in a plane affording flat abutting faces of extensive area transverse to the general direction of the pressure on the forepart, of a shoe when being shoved rearward on said forepart in being relasted, said flatly abutting faces, when in contact with each other, serving to resist said relasting pressure of the shoe and aid in preventing the tendency of the last to collapse prematurely and to prevent the tendency of either last-part to turn on its pivot with relation to the other last-part.

3. A divided last, having its forepart provided at its rear end with two transverse secant faces at an angle to each other and both extending obliquely downward toward the heel end of the last, the lower of said two secant faces more nearly approaching the vertical than the upper, and having its heel-part provided with an oblique secant face adapted to coöperate with the lower of said forepart faces when the last is in lengthened position and with the upper of said two forepart faces when the last is in collapsed position, a link apertured at its opposite ends, and transverse pivot pins snugly fitting said apertures for pivotal movement only, said link and pins permanently connecting said forepart and heel-part and permitting the heel-part to adjust its said secant face against the lower forepart face when the last is lengthened and against the upper forepart face when the last is shortened, whereby when the last is in said shortened position the said two abutting faces tend to aid in maintaining the last in position for receiving a shoe when being relasted.

4. A divided last, having a connecting link pivoted at its opposite ends in the forepart and heel-part respectively approximately half way from the bottom of the last to the top, said forepart being severed from the heel-part by a line of cut extending in a vertical plane upward from the bottom of the last a short distance and thence in a diagonal plane extending upward and forward approximately half the distance to the crown of the last, the upper rear end of the forepart having its secant face in a plane deflected from said point forward at an angle to receive the broad extended face of the heel-part at said oblique plane in flat supporting engagement therewith when the heel-part is swung on said link.

902,303. HINGED LAST. EDWIN O. KRENTLER, Detroit, Mich., assignor to Krentler-Arnold Hinge Last Company, Detroit, Mich., a Corporation. Filed Feb. 10, 1908. Serial No. 415,046.



1. A divided last, comprising a forepart and heel-part, separated by a broken line of cut and provided with connecting means, permitting each of said parts to have a pivotal movement with relation to the other when in a shoe, said two last-parts being severed by a line of cut affording a corner at the front bottom edge of the heel-part and an abutment extending approximately horizontally rearwardly from the rear bottom end of the forepart in position to engage and support said corner when the last is shortened.

2. A divided last, comprising a forepart and heel-part separated by a broken line of cut and provided with a single connecting hinge-plate pivoted adjacent its opposite ends in and to the respective last-parts, permitting each of said parts to have a pivotal movement with relation to the other when in a shoe, said two last-parts being severed by a line of cut affording a corner at the front bottom edge of the heel-part and an abutment extending approximately horizontally rearwardly from the rear bottom end of the forepart in position and operating to engage and support said corner when the last is shortened.

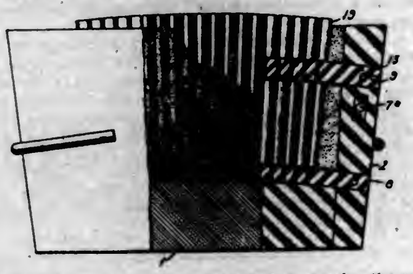
3. A divided last, having a separate forepart and heel-part, connecting means permitting one part to swing on the other, including a horizontal pivot in one of said parts, a locking finger pivoted on said connecting means within said pivot-containing last-part beyond said pivot, and stationary means to be engaged by said locking finger to lock the last in lengthened position.

4. In a last, a forepart and heel-part, a hinge-plate pivoted at its opposite ends in said respective last-parts, a locking finger mounted on said hinge-plate and movable therewith eccentrically about the adjacent pivot, and means coöperating with said finger to lock the last in lengthened position.

5. In a last, a forepart and heel-part, a hinge-plate at its opposite ends in said respective last-parts, a locking finger mounted on said hinge-plate and moved in a direction opposite to the movement of the heel-part, by the swinging of said hinge-plate on its pivot in the last-part containing said finger, and means coöperating with said finger to lock the last in lengthened position.

[Claims 6 to 9 not printed in the Gazette.]

902,304. CORE-BOX. ALFRED H. KUDLICH, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 4, 1906. Serial No. 309,766.



1. A core-box comprising a receptacle to receive the core material having removable guides arranged in a plurality of pairs to space a series of articles to be embedded in the core and hold them adjacent each end by their opposite edges.

2. A core-box comprising a receptacle to receive core material for forming a core with a group of articles embedded therein, said receptacle having guides for spacing and holding the articles which engage their edges intermediate their ends, and removable guiding means for the ends of the articles which when removed leaves said ends projecting from the core.

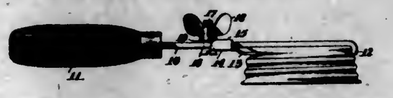
3. A core-box comprising a receptacle to receive core material for forming a core with a group of articles embedded therein, said receptacle having removable guiding devices which engage the opposite edges of the articles adjacent one set of their ends and a removable guiding device for the other ends of the articles, said devices spacing and holding the group of articles in position in the receptacle.

4. A core-box comprising a receptacle to receive the core material, guides having grooves to receive the edges of the articles to be embedded in the core to preserve their alinement, and means for preventing the core material from covering the ends of said articles while the core is being formed.

5. A core-box comprising a receptacle to receive the core material, guides arranged to receive and hold the articles to be embedded in the core by their edges, and removable blocks which are located between the ends of said articles so that the ends thereof will be exposed when the core is completed.

[Claims 6 to 11 not printed in the Gazette.]

902,305. WRENCH. HENRY F. LARAVA, Worcester, Mass. Filed May 14, 1908. Serial No. 432,841.



1. As an article of manufacture, a wrench comprising a straight bar having the end thereof turned down to form an integral jaw of the same width as the bar, and a second jaw slidably mounted on the bar and comprising a sheet metal plate having teeth in the form of the arc of a circle on the side thereof facing said integral jaw and projecting in opposite directions from the center thereof, and having integral ears extending upwardly and lapping over the bar to guide the jaw in its sliding motion thereon.

2. As an article of manufacture, a wrench comprising a bar having a handle thereon and a transverse jaw at the end thereof, a longitudinally movable jaw on the bar, a wedge adapted to engage the movable jaw, and rotatable means on the bar connected with the wedge for moving it transversely of the bar to move the movable jaw therealong.

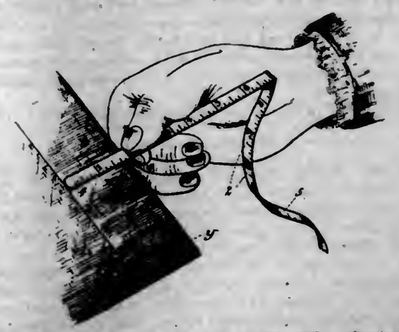
3. As an article of manufacture, a wrench comprising a movable jaw, a cone adapted to engage the rear edge of said jaw, a screw on the cone, a nut for engaging the screw and moving the cone to move said jaw, and a second jaw.

4. In a wrench the combination of a straight bar having the end turned down to form a jaw, a second jaw movably mounted on the bar and comprising a sheet metal plate having ears extending upwardly and lapping over the bar to hold the jaw in position, a screw extending through the bar, the head thereof constituting a conical member for engaging the rear of said second jaw, and a nut on the screw on the opposite side of the bar for moving the second jaw toward the first named jaw.

5. In a wrench the combination of a bar, a jaw thereon, a second jaw movably mounted thereon and having integral lips extending over the edge of the bar to hold it in position, said bar being perforated at the rear of said movable jaw, a screw extending through the perforations, the head of the screw constituting a wedge for engaging the movable jaw, and a nut on the screw for moving the movable jaw.

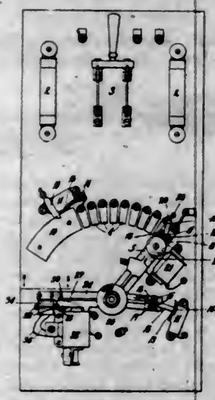
[Claim 6 not printed in the Gazette.]

902,306. MEASURE. ELIZABETH F. LEAHY, New York, N. Y. Filed Apr. 16, 1907. Serial No. 368,563.



In combination, a limp tape-measure, and a short piece of flexible, springy material, combined with an end of the limp tape-measure and adapted to make said end self-supporting, flexible and springy.

902,307. ELECTRIC CONTROLLING DEVICE. HARRY W. LEONARD, Bronxville, N. Y. Filed May 13, 1905. Serial No. 260,198.



1. The combination of a source of electromotive force, a translating device, a switch for completing the circuit, said switch comprising an auxiliary independently movable contact carried by the movable element of said switch, and means for causing the quick closing of the circuit independently of the rate of movement of said switch.

2. The combination of main contacts, an independently movable auxiliary contact device, means for producing a magnetic field in the presence of the auxiliary contact device, and means for causing the auxiliary contact device to be quickly moved to make and break the circuit independently of the rate of movement of the main contact or contacts.

3. The combination with a motor having a shunt field winding, of a movable resistance controlling switch adapted to make and break the supply current to both the armature and field windings of the motor, an independently movable auxiliary contact device, one of the contact elements of said device being carried by said switch, means for causing said contact device to quickly break the circuit independently of the rate of movement of said switch, and means for producing a magnetic field in the presence of the auxiliary contact device.

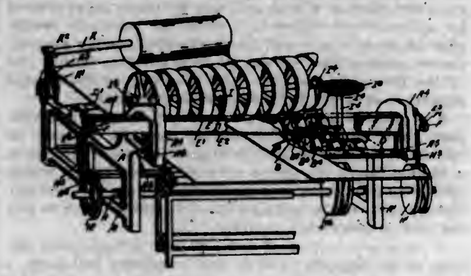
4. The combination of a movable resistance controlling switch, an independently movable auxiliary contact device carried by said switch, and means for causing said contact device to quickly close the circuit independently of the rate of movement of said switch.

5. The combination of a movable resistance controlling switch, an independently movable auxiliary contact device, one of the contact elements of said device being carried by said switch, means for causing said contact device to quickly close and break the circuit independently of the rate of movement of said switch, and means for producing a magnetic field in the presence of the auxiliary contact device.

[Claims 6 to 36 not printed in the Gazette.]

902,308. HOSE-MAKING MACHINE. JOSEPH S. H. LOVETT, Trenton, N. J., assignor of one-third to Theodore Pessinger Payne, Newark, N. J., and one-third to William Wallace Near, Toronto, Canada. Filed Nov. 20, 1907. Serial No. 403,103.

1. A machine of the character described, comprising a main frame, a ledger plate, a coacting cutting blade, a feed table extending horizontally therefrom and at an angle thereto, supporting rollers for the canvas, feed rollers mounted on a suitable shaft, a main driving shaft, a cam mounted thereon, a vertical shaft, gears connecting such shaft to the shaft supporting the feed rollers, a ratchet on the vertical shaft, a rock arm and pawl engaging the ratchet and a link connecting the rock arm to the cam as and for the purpose specified.

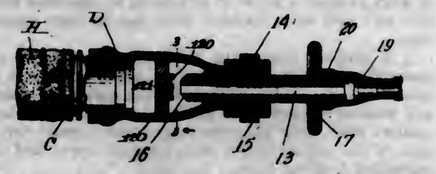


2. In a machine of the character described, the combination with the feed table, ledger plate and coacting knife, of rotatable shafts designed to hold rolls of canvas in a lapped position, feed rollers mounted on a suitable shaft, a supporting roller for the lapped edges of the canvas, an arm swung on the feed roller shaft and having forked lower end and a spiked roller journaled in the forks and designed to press upon the lapped edges of the canvas as and for the purpose specified.

3. In a machine of the character described, the combination with the ledger plate, and the cutting table having vertical guide ways located at each end of the ledger plate, of a knife bar extending through the guide ways, a lever pivoted at one end to a suitable portion of the frame and having a slot at the other end through which a portion of the knife bar extends, a depending link bar pivotally connected to the lever and means for imparting a vertical movement thereto as and for the purpose specified.

4. In a machine of the character described, the combination with the ledger plate, and the cutting table having vertical guide ways located at each end of the ledger plate, of a knife bar extending through the guide ways, a lever pivoted at one end to a suitable portion of the frame and having a slot at the other end through which a portion of the knife bar extends, a depending link bar pivotally connected to the lever and a grooved cam suitably mounted and driven and rollers at the lower end of the link bar coacting with the groove in the cam as and for the purpose specified.

902,309. NOZZLE. JAMES F. MACWILLIAM, Hubbardston, Mass. Filed Dec. 2, 1908. Serial No. 183,471.



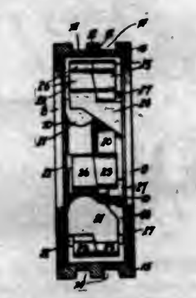
1. As an article of manufacture, a nozzle comprising a body portion having a valve-seat, an outlet tube mounted in the body portion, its end being adapted to seat against the valve-seat to close the nozzle, a hand-wheel threaded on the outlet tube, and a nozzle tip also threaded onto the outlet tube and forming a lock nut for holding the hand-wheel in place.

2. As an article of manufacture, a nozzle comprising a body portion having a bridge, an outlet tube threaded into the body portion so that its end may be seated against the bridge to close the nozzle, a hand-wheel threaded on to the outlet tube, and a nozzle tip also threaded on to the outlet tube and forming a lock-nut for holding the hand-wheel in place.

3. As an article of manufacture, a nozzle comprising a body portion having a bridge, and having screw threads at one end for receiving a coupling to connect the nozzle with the hose, a soft metal piece secured in the bridge of the body portion and having an annular groove with a central projection, an outlet tube threaded into the opposite end of the body portion and having a tapering end which may be seated in the groove of the soft metal piece, a hand-wheel threaded on to the outlet tube, and a nozzle tip also threaded on to the outlet tube, and serving as a lock-nut for fastening the hand-wheel in place.

4. As an article of manufacture, a nozzle comprising a body portion having a chamber therein provided with a bridge spaced from both ends of the chamber, said body portion having means at one end to receive a coupling to connect the nozzle with a hose, a soft metal piece mounted on the bridge and having an annular groove, an outlet tube adjustably mounted in the opposite end of the body portion and having a tapering end adapted to be seated in the groove of the soft metal piece to close the nozzle, and a nozzle tip on the outlet tube.

902,310. PISTON. KARL MATHEUS, Chicago, Ill. Filed June 2, 1908. Serial No. 436,274.



1. In a piston, a pair of heads, each provided with interlocking lugs undercut peripherally completed across their interlocking faces, and adapted to be revolubly moved to engage one another, substantially as described.

2. In a piston, a pair of heads, each provided with interlocking lugs undercut peripherally completely across their interlocking faces and beveled, and adapted to be revolubly moved to engage one another, substantially as described.

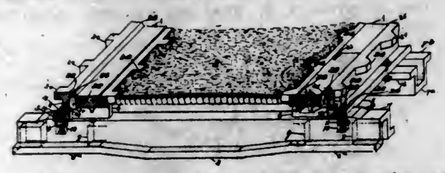
3. In a piston, a pair of heads, each provided with interlocking lugs undercut completely across their interlocking faces, and adapted to be revolubly moved to engage one another, one of the heads being provided with a protuberant portion recessed from the outer face of the head, and the other head being provided with a threaded pin adapted to be entered through the wall of said recess, and a nut for engaging the projected end of the pin thus entered, substantially as described.

4. In a piston, a pair of heads, each provided with interlocking lugs undercut completely across their interlocking faces and beveled, and adapted to be revolubly moved to engage one another, one of the heads being provided with a protuberant portion recessed from the outer face of the head, and the other head being provided with a threaded pin adapted to be entered through the wall of said recess, and a nut for engaging the projected end of the pin thus entered, substantially as described.

5. In a piston, a pair of heads, each provided with interlocking lugs undercut completely across their interlocking faces, and adapted to be revolubly moved to engage one another, one of the heads being provided with a protuberant portion recessed from the outer face of the head, and the other head being provided with a threaded pin adapted to be entered through the wall of said recess, a nut for engaging the projected end of the pin thus entered, and one of the heads being provided with a protuberant portion recessed from the outside and having a set screw entered therethrough and adapted to bear against a portion of the other head to exert an unlocking pressure, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

902,311. CONCRETE CONSTRUCTION. FREDERICK MELBER, Ross township, Allegheny county, Pa. Original application filed July 11, 1903, Serial No. 165,089. Divided and this application filed Nov. 9, 1903. Serial No. 180,314.



1. In concrete construction, a load bearing member consisting of a horizontal web, a vertical web integral therewith and a horizontal flange integral with said vertical web, substantially as described.

2. In concrete construction, a load bearing member consisting of a horizontal web, a vertical web integral therewith and a transverse vertical web integral with said horizontal and vertical webs, substantially as described.

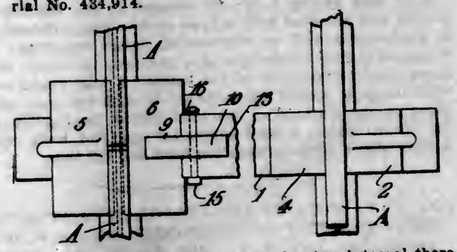
3. In concrete construction, a load bearing member consisting of a horizontal web, a vertical web integral therewith, a horizontal flange integral with said vertical web and a transverse vertical web integral with said horizontal and vertical webs, substantially as described.

4. In concrete roadbed stringers, a horizontal traffic bearing web, a wheel retaining flange along the edge thereof and a vertical supporting web integral with said horizontal web, substantially as described.

5. In concrete roadbed stringers, a horizontal traffic bearing web and a reinforced wheel retaining flange along the edge thereof and integral therewith, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

902,312. RAIL-TIE. THOMAS B. MODLIN, Hurdland, Mo., assignor of two-thirds to Homer Black and Lem C. Schenimann, Hurdland, Mo. Filed May 25, 1908. Serial No. 434,914.

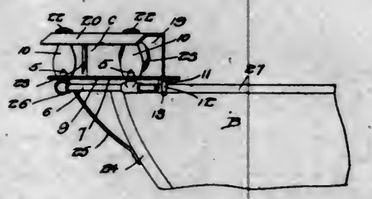


1. The combination with a tie and a jaw integral therewith and constituting an abutment for the outer base flange and the outer face of the head of a rail; of a removable rail engaging jaw having end projections for lapping the sides of the tie, said jaw being shaped to receive the inner base flange of the rail, a key within and extending from the tie, a tongue integral with the key and extending over the removable jaw, and means extending transversely through the tie for detachably securing the key upon the tie.

2. The combination with a metal tie having an integral jaw constituting an abutment for the outer base flange and the outer face of the head; of a removable jaw straddling the tie and disposed to embrace the inner base flange of a rail, said jaw having a grooved upper face, a key detachably secured within the tie, and a tongue integral therewith and seated within the groove.

3. The combination with a tie having an integral rail engaging jaw extending beyond opposite faces of the tie; of a removable jaw straddling the tie and having one face shaped to receive the base flange of a rail, said removable jaw having a groove therein, a key detachably secured within the tie, a tongue integral therewith and seated within the groove, and a stop projection upon the key, there being a recess within the tie constituting a seat for the projection.

902,313. ILLUMINATING DEVICE. WILLIAM H. MOLLOY, Hicksville, N. Y. Filed July 18, 1908. Serial No. 444,169.



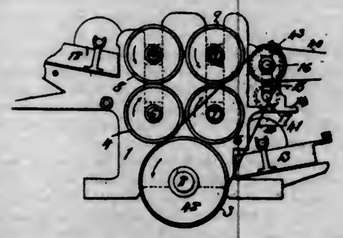
1. In an illuminating device of the character described, a burner supporting pipe, a base connected with and supported upon said pipe and having keepers upon the under side thereof, slides supported in said keepers and having terminal hooks at their outer ends, and a right and left threaded screw connecting the inner ends of the slides.

2. In an illuminating device of the character described, a burner supporting pipe, a base supported upon and connected with said pipe and having apertures through which the burners extend and recesses intermediate said burners and in its rear edge, keepers upon the under side of the base, slides supported in the keepers and having terminal hooks at their outer ends, a right and left threaded screw connecting the inner ends of the slides, a hood supported upon the base and lantern-globes fitted between the hood and the base.

3. In an illuminating device of the class described, a burner supporting pipe, a base connected with said pipe, adjustable clamping means connected with the base, a hood supported upon the base and comprising a back wall and a top, the latter provided with apertures and with caps supported adjacent to said apertures, and lantern-globes fitted between the base and the top of the hood.

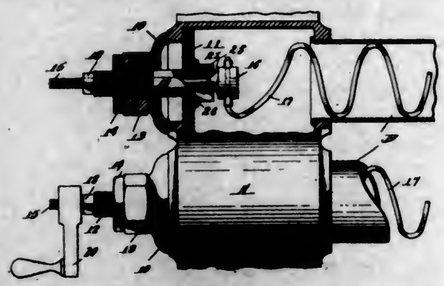
4. A boat having a bracket secured to the cut-water thereof and provided with a hook at its upper extremity, in combination with an illuminating device comprising a V-shaped burner supporting pipe the apex of which engages the terminal hook of the bracket, a base connected with the pipe, hooked slides connected with the base and engaging the gunwale of the boat, means for tightening the hooked slides, a hood supported upon the base, and lantern globes fitted between the hood and the base.

902,314. CUTTING AND PERFORATING ATTACHMENT FOR PRINTING-MACHINES. GEORGE F. McADAMS, New York, N. Y. Filed Apr. 1, 1903. Serial No. 150,520.



In a line printing machine, the combination with the disk rolls, of two shafts mounted adjacent to the disk rolls and having longitudinal grooves along the same, one member of a paper cutting device and one member of a perforating device being mounted on one shaft and the other member of the paper cutting device and the other member of the perforating device being mounted on the other shaft, whereby all two devices are fitted to simultaneously receive the paper from the disk rolls, the said devices being so formed as to act as supports for holding the paper flat as it is being operated upon, set screws carried by the said device members arranged to enter grooves in the shaft for securing the members of the devices to the shaft at any desired position along the same and means for preventing the paper which is being operated upon from wrapping around the shaft as it leaves the perforating disk.

902,315. BOILER-TUBE CLEANER. EUGENE J. McCARTY, Clinton, Mass., assignor to The Clinton Specialty Manufacturing Company, a Corporation of Massachusetts. Filed Jan. 27, 1906, Serial No. 298,137. Renewed Nov. 9, 1907. Serial No. 401,492.



1. The combination with a tube, of a hand-hole cover for the tube concentric therewith, a hollow bushing passing through the hand-hole cover extending inside thereof and having a head located in a recess in said cover, a shaft journaled in said bushing and having a head inside the cover adapted to bear against said bushing head, a cleaning device connected with said shaft head and extending into the tube, the axes of the tube cleaning device and bushing being in the same line, and means outside the cover for rotating said shaft and cleaning device.

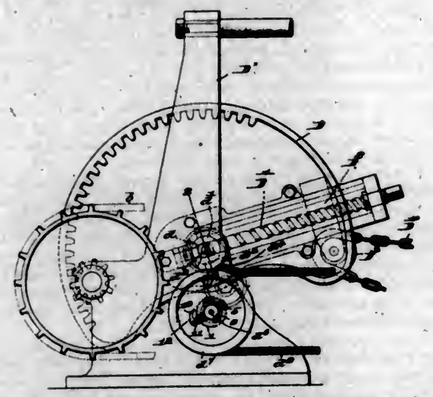
2. A permanently located cleaning device for water tube boilers comprising a hollow bushing extending through the hand hole cover and provided with a valve-seat on its inner end, a shaft passing through the bushing and having an enlarged head inside the boiler provided with a ground joint for engagement with said seat, a cleaning device connected with said head, and means outside the cover for rotating said shaft while maintaining the steam-tight joint between the head and said valve-seat.

3. In a boiler, the combination with a plurality of water tubes and a hand-hole cover located in front of the end of each tube, of a bridge for each hand-hole-cover, a bushing removably mounted in each hand-hole cover and passing through it, each of said bushings having a valve-seat, a shaft passing through said bushings and having an enlarged head engaging said valve-seat and constituting a steam tight joint, a rotatable cleaner connected with each of said shafts and extending within each of said water tubes, and means for securing each of said shafts in position on its bushing and hand-hole cover so that it may be rotated from outside the hand-hole cover and retain the tightness of said steam tight joint.

4. In a boiler, the combination with a series of parallel water tubes located therein, of a rotatable cleaner located in each tube and extending substantially the whole length thereof, a rotatable, non-reciprocable shaft concentric with each tube for rotating the cleaner, a removable bushing near the end of each tube in which said shaft is journaled, said bushing and shaft each having a head forming a steam tight joint at the inner end of the bushing constituting means for preventing the longitudinal motion of the shaft, whereby each shaft may be rotated when steam is on without permitting the escape of steam, a hand-hole cover opposite the end of each tube in which said bushing is mounted, and means for securing said hand-hole covers, shafts and bushings in position.

5. In a boiler having hand holes therein, the combination with a plurality of water tubes located in said boiler, each having one end registering with one of said hand holes, of a cleaner located in each tube, a hand-hole cover opposite the end of each tube, and means fixed to each cleaner and extending through the adjacent hand hole cover for operating each cleaner individually from the outside, said means having a steam tight joint, whereby each tube may be cleaned individually from the outside without removing or replacing the connections and without allowing steam to escape.

902,316. SPINNING-MULE. JOHN J. McGLINCY, Worcester, Mass., assignor to Davis & Furber Machine Company, North Andover, Mass., a Corporation of Massachusetts. Filed Oct. 14, 1907. Serial No. 397,250.



1. In a mule, in combination, a reciprocating carriage, a quadrant, its screw, gearing connected with and to effect rotation of the screw, a feed motion, including a rotatable member, and means controlled by the tension of the yarn to rotate said member at any point on the inward run of the carriage and thereby connect the rotatable member and said gearing to effect rotation of the quadrant screw, manual reverse rotation of the latter effecting automatically disengagement of said rotatable member and the gearing.

2. In a mule, in combination, a reciprocating carriage, a quadrant nut, mechanism to effect movement thereof relatively to the quadrant, a feed motion, and means to automatically connect it with and effect the operation of said mechanism at any point on the inward run of the carriage, manual winding down of the quadrant nut effecting automatically disengagement of the said mechanism and the feed motion.

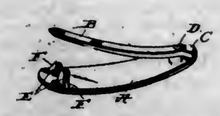
3. In a mule, in combination, a reciprocating carriage, a quadrant, its screw, a feed motion, including a rotatable sheave, gearing intermediate said sheave and the screw, to effect rotation of the latter by the sheave, a coupling between the sheave and gearing, and means controlled by the tension of the yarn to automatically throw the coupling into operative condition at any point on the inward run of the carriage.

4. In a mule, in combination, a reciprocating carriage, a quadrant, its screw, a feed motion, including a rotatable sheave, a ratchet rotatable independently of the sheave, gearing operatively connecting the ratchet and screw, a pawl movable with and also relatively to the sheave and adapted to coöperate with the ratchet, and means controlled by the tension of the yarn to cause angular movement of the sheave at any point on the inward run of the carriage, to first throw the pawl into engagement with the ratchet and thereby couple the feed motion and the quadrant screw and then to continue such angular movement of the sheave to effect rotation of the screw.

5. The combination, in a mule, of a reciprocating carriage, a quadrant-screw and its nut, a feed motion, a transmitting connection between it and the screw, and means controlled by the tension of the yarn to automatically couple said connection and the feed motion at any point on the inward run of the carriage and thereby effect requisite rotation of the screw.

[Claims 6 to 10 not printed in the Gazette.]

902,317. BARRETTE OR HAIR-RETAINER. JOHN W. NICHOLS, Leominster, Mass. Filed May 7, 1908. Serial No. 431,425.



1. In a hair-retainer, the combination of a body portion; a pin pivoted thereon; and means for throwing the free end of the pin toward the body.

2. In a hair-retainer, the combination of a body portion; a pin pivoted thereon so as to have a slight rocking motion; and means to force the free end of the pin toward the body.

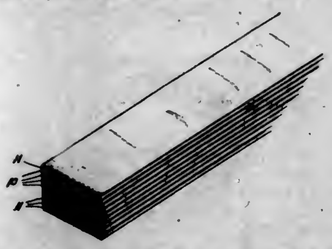
3. In a hair-retainer, the combination of a body portion; a pin pivoted thereon to swing laterally; and means tending to throw the free end of the pin toward the body of the retainer.

4. In a hair-retainer, the combination of a body portion; a pivot-stud extending therefrom adjacent to one end; and a pin pivoted upon said stud, the short end of the pin bearing on the body and serving to throw the free end of the pin toward the body.

5. In a hair-retainer, the combination of a body portion; a pivot-stud extending outwardly therefrom adjacent to one end; and a resilient pin pivoted upon the stud, the short end of the pin being curved downwardly and bearing on the body portion.

[Claims 6 to 9 not printed in the Gazette.]

902,318. PACKING AND PROCESS OF PRODUCING SAME. JAMES OSTRANDER, Indianapolis, Ind. Filed Jan. 25, 1908. Serial No. 412,546.



1. That improvement in the art of producing a packing which comprises the subjection of a laminated strip to a compressive force substantially parallel with the laminæ and transversely thereof to produce wrinkles substantially normal to the compressive force, and subjecting the packing in its wrinkled condition to a process which will cause the same to become set in wrinkled condition.

2. That improvement of producing a laminated fabric-rubber packing which consists in subjecting a strip of sheet comprising a plurality of fabric-lamina and interposed rubber to a distorting pressure applied in a direction substantially parallel with the planes of the fabric to wrinkle the same transversely, and treating the packing in its wrinkled condition to a curing process to set the same.

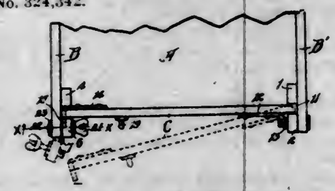
3. That improvement in the art of producing a laminated packing which comprises the subjection of the packing to a compression in one dimension of its cross section under such conditions as to wrinkle the lamina transversely and set the same in that condition.

4. That improvement in the art of producing laminated fabric packing which comprises the subjection of such packing to a compressive force which decreases the lineal dimension of the fabric-lamina in one dimension transversely to the thickness of said laminæ, and setting the packing in that condition.

5. That improvement in the art of producing a packing which comprises the subjection of a laminated strip to a compressive force substantially parallel with the laminæ and transversely thereof to produce wrinkles substantially normal to the compressive force, and subjecting the packing in its wrinkled condition to a process which will cause the same to become set in wrinkled condition and attaching thereto a previously corrugated finishing lamina.

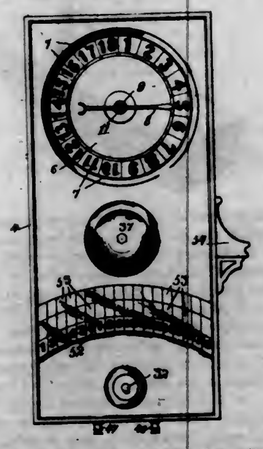
[Claims 6 to 11 not printed in the Gazette.]

902,319. END-GATE FOR WAGONS. WILLIAM H. PALMER, Council Bluffs, Iowa. Filed July 2, 1906. Serial No. 324,342.



The combination, with a pair of parallel cleats secured to one side of a wagon-box, one of said cleats having a looped box strap secured thereto, and a pair of parallel cleats secured to the opposite side of said wagon-box, one of said cleats being pivotally secured thereto and provided with a grooved face or recess, and a one piece detachable end-gate provided at opposite ends and upon either side with an L shaped strap the angular end of one of said straps engaging the looped box strap and the angular end of the other strap adapted to lie in and engage the inner grooved surface of the pivotally held cleat to prevent upward or outward movement of the end-gate.

902,320. GAME-REGISTER. EDWARD O. PARKER and HAROLD E. GREY, Independence, Iowa. Filed Apr. 19, 1906. Serial No. 312,594.



1. In a game register, the combination with an indicating dial, a ratchet wheel, an index carried on said wheel, electrically operated means for moving the ratchet wheel, a contact member carried by said ratchet wheel, and a battery, of an insulated arm arranged in the path of the said contact member, an electro-magnetic signal apparatus, a circuit closer, electric connection between the battery and the said signal apparatus and the said means for moving the ratchet wheel, and independent circuit wires between the battery and said ratchet wheel and the insulated arm.

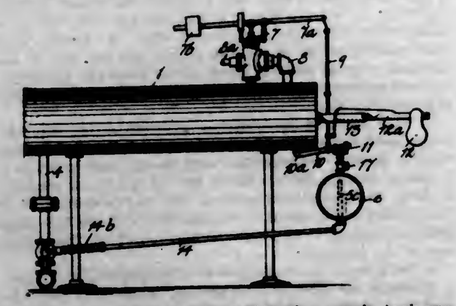
2. In a game register, the combination with an indicating dial, a ratchet wheel, an index carried on said wheel, a battery, an electro-magnet, an armature for said magnet, a pawl attached to said armature and engaging the ratchet wheel, and a contact pin carried by said ratchet wheel, of an insulated arm fixed to said dial and arranged in the path of said contact pin, an electro-magnetic signal apparatus, a circuit closer, electric circuit wires connecting the battery and said electro-magnet and said signal apparatus, and circuit wires between the battery and said wires and the insulated arm.

3. An apparatus for the purpose stated, including an arbor concentric with said dial, an index mounted on the arbor, a ratchet attached to said arbor for said dial, a ratchet attached to the arbor of said index, means for permanently preventing the backward movement of said ratchet, an electro-magnetic signal mechanism, electrically operated means for advancing said index step by step, and simultaneously therewith indicating said step by step advance by operating said signal mechanism, electrically operated means for advancing said index step by step without operating said electro-magnetic signal mechanism, and means for operating said index manually.

4. An apparatus for the purpose stated, including an indicator dial, an index having a ratchet fixed thereto, means for permanently preventing the backward movement of said ratchet, an electro-magnetic signal mechanism, electrically operated means for advancing said index step by step and simultaneously operating said signal mechanism, means for manually advancing said index, and electrical means for operating said signal mechanism when said index passes a predetermined point in its rotation.

5. An apparatus for the purpose specified, including an indicator dial, an arbor carrying a pointer, a ratchet fixed on said arbor, an electro-magnetic signal apparatus, electrically operated means for advancing said index step by step and simultaneously operating said signal apparatus, electrically operated means for advancing said index without operating said signal, electrical means for automatically producing an audible signal when the pointer reaches its initial position and means for manually advancing said pointer.

902,321. RETURN STEAM-TRAP. HUBERT V. PEARCE, Detroit, Mich. Filed Feb. 10, 1908. Serial No. 415,102.



1. A water trap having in combination a main tank provided with a water inlet, a water outlet and a steam inlet, a movable tank connected with the main tank by a conduit having a flexible section therein, and with the water inlet pipe by a conduit having a flexible section therein, the first mentioned conduit having a terminal located within and near the top of the main tank and a second terminal located within and near the top of the movable tank, whereby the movable tank secures a supply of water from the already filled main tank, a valve controlling the steam inlet, a lever adapted to actuate said valve connections between the lever and the movable tank, substantially as described.

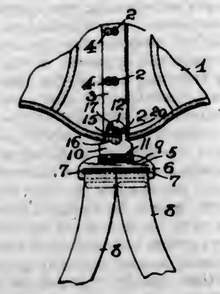
2. A water trap having in combination a main tank provided with a water inlet, a water outlet and a steam inlet, a movable tank, a conduit for admitting water into said movable tank having one terminal located within and near the top of the main tank and one terminal located within and near the top of the movable tank, a conduit for discharging water from said movable tank having its discharge terminal opening with the main inlet pipe, a check valve in said discharge conduit, a steam valve, a controlling lever adapted to actuate said valve, connections between the lever and the movable tank whereby the descent of the movable tank opens said valve, a relief valve to said movable tank, a lever adapted to open said valve contemporaneously with the rising of said movable tank, substantially as described.

902,322. METHOD OF PRODUCING MOVEMENT-PLATES FOR WATCHES, CLOCKS, AND THE LIKE. WILSON E. PORTER, New Haven, Conn., assignor to New Haven Clock Co., New Haven, Conn., a Corporation. Filed Feb. 24, 1908. Serial No. 417,439.



The herein described method of producing movement-plates for watches, clocks and the like, consisting in first subjecting the plate to pressure, whereby limited areas of it are reduced in thickness and hardened, and second in punching pivot-holes in the areas so hardened, whereby a plate is provided with pivot-bearings integral with and thinner and harder than its body.

902,323. HOSE-SUPPORTER FOR GARMENTS. GEORGE E. POST, New York, N. Y. Filed Nov. 19, 1907. Serial No. 402,935.



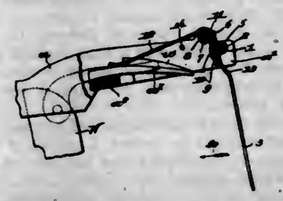
1. An attaching means for hose-supporters comprising a main body-plate formed with an elongated opening adapted to receive a post or stud of a garment, one portion of said opening being wider than the remaining portion, a cam-shaped locking device pivoted to said body-plate at one side of said opening, and an arm extending from said locking device, said arm being adapted to be disposed over the narrow part of the opening and the cam-portion of the locking device being adapted to be disposed over the wide part of said opening, substantially as and for the purposes set forth.

2. An attaching means for hose-supporters comprising a main body-plate formed with an elongated opening adapted to receive a post or stud of a garment, one portion of said opening being wider than the remaining portion, a cam-shaped locking device pivoted to said body-plate at one side of said opening, and an arm extending from said locking device, said arm being adapted to be disposed over the narrow part of the opening and the cam-portion of the locking device being adapted to be disposed over the wide part of said opening, said locking-device being made from spring-metal and of a convex conformation, the marginal edge-portions of said locking device being in frictional engagement with said main body-plate, substantially as and for the purposes set forth.

3. An attaching means for hose-supporters comprising a main body-plate formed with an elongated opening adapted to receive a post or stud of a garment, one portion of said opening being wider than the remaining portion, a cam-shaped locking device pivoted to said body-plate at one side of said opening, and an arm extending from said locking device, said arm being adapted to be disposed over the narrow part of the opening and the cam-portion of the locking device being adapted to be disposed over the wide part of said opening, said body-plate being provided with a raised portion, and the arm of said locking device having a receiving depression adapted to be brought into engagement with said raised portion, substantially as and for the purposes set forth.

4. An attaching means for hose-supporters comprising a main body-plate formed with an elongated opening adapted to receive a post or stud of a garment, one portion of said opening being wider than the remaining portion, a cam-shaped locking device pivoted to said body-plate at one side of said opening, and an arm extending from said locking device, said arm being adapted to be disposed over the narrow part of the opening and the cam-portion of the locking device being adapted to be disposed over the wide part of said opening, said locking-device being made from spring-metal and of a convex conformation, the marginal edge-portions of said locking device being in frictional engagement with said main body-plate, said body-plate being provided with a raised portion, and the arm of said locking device having a receiving depression adapted to be brought into engagement with said raised portion, substantially as and for the purposes set forth.

902,324. FILLING-DETECTING MECHANISM FOR LOOMS. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Dec. 4, 1907. Serial No. 405,032.



1. In filling detecting mechanism for looms, a slide, a loop fulcrumed thereon and having a depending, short extension adjacent its fulcrum, and a filling-fork separately fulcrumed on the slide, the extension of the loop slidingly engaging the tines between their fulcrum and their lower end.

2. In filling detecting mechanism for looms, a slide, a loop and a fork separately fulcrumed thereon, said fork comprising a body and attached depending tines connected in pairs at their lower ends, means to lift the loop by or through tilting of the fork, and a stop to limit lifting movement of the loop.

3. A filling-fork for looms, comprising a tubular body, and a plurality of pairs of tines depending therefrom, each pair consisting of a U-shaped piece of metal having the free upper ends of its sides wound around and fixedly secured to the body, the tines of each pair being integrally connected at their lower ends and separated laterally from the adjacent pair of tines.

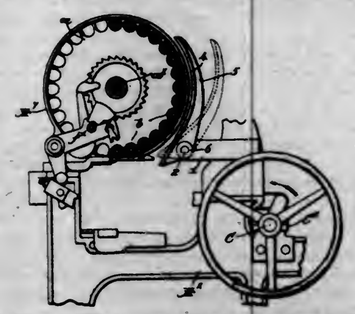
4. A filling-fork for looms, comprising a tubular body, and depending tines consisting of a plurality of U-shaped

pieces of wire wound around the tubular body at their upper ends and soldered fixedly thereto, the upper ends of the tines projecting above the body, and a loop fulcrumed independently of the fork and having an extension against which the upper ends of the tines engage, to prevent improper swing of the fork, the depending end of the extension slidingly engaging the tines between their fulcrum and their lower end.

5. In filling detecting mechanism for looms, a slide, a sheet metal loop fulcrumed thereon and having a depending, short extension adjacent its fulcrum, and a filling-fork separately fulcrumed on the slide and having pairs of wire tines connected at their lower ends, the extension of the loop slidingly engaging the tines between their fulcrum and their end.

[Claims 6 and 7 not printed in the Gazette.]

902,325. AUTOMATIC FILLING-REPLENISHING LOOM. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Jan. 11, 1908. Serial No. 410,335.



1. In a loom, filling-replenishing mechanism, including a rotatable filling-feeder adapted to contain a supply of filling-carriers and to hold the latter therein in relatively fixed position, and an oil-guard adjacent the rear side of the feeder and movably mounted independently thereof, to protect the filling-carriers in the feeder.

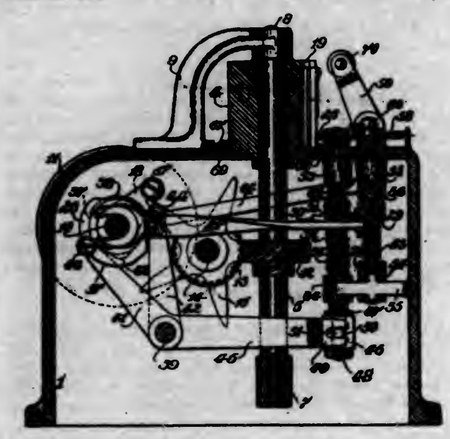
2. In a loom, filling-replenishing mechanism, including a filling-feeder adapted to contain a supply of filling-carriers, a curved, metallic oil-guard adjacent the back and independent of the feeder, and a fixed support for and on which the guard is pivotally mounted, whereby the oil-guard may be retracted from the back of the feeder to permit access thereto.

3. In a loom, filling-replenishing mechanism, including a filling-feeder adapted to contain a supply of filling-carriers, a curved, metallic oil-guard adjacent the back of the feeder, a fixed support independent of the feeder and on which the oil-guard is pivotally mounted, and a spring to yieldingly maintain the guard in position close to the feeder while permitting it to be retracted temporarily.

4. In a loom, filling-replenishing mechanism, including a rotatable filling-feeder adapted to contain a supply of filling-carriers, a curved, metallic oil-guard adjacent the back of the feeder, to prevent access of oil to the filling-carriers therein, a fixed support on which the guard is pivotally mounted independently of the feeder, a spring to normally maintain the guard in operative position while permitting retraction thereof temporarily, and means to limit angular movement of the guard in either direction.

902,326. MECHANISM FOR OPERATING ADJUSTABLE WORK-PERFORMING MEMBERS. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation, a Corporation of New Jersey. Filed Dec. 10, 1902. Serial No. 134,626.

1. The combination with a rotary die-carrier, of a series of dies movable upon the carrier; means for rotating the carrier and stopping the same with one of the dies adjacent to the working position; an arm for engaging the die; means for actuating the arm; means for raising the arm thereby to shift the die; and means for reinforcing the arm and pressing it more strongly into engagement with the die.



2. The combination with a rotary die-carrier; means for rotating the carrier; a series of die-slides individually shiftable upon the carrier; means for maintaining the dies normally in their idle position; a lug upon each slide; an arm mounted upon a reciprocatory rock-shaft and provided with an opening constructed to receive the lug of the slide; a sleeve surrounding the rock-shaft and connected therewith; means for oscillating the sleeve to rock the arm; and means for reciprocating the arm through the sleeve.

3. The combination with a rotary die-carrier; means for rotating the carrier; a series of die-slides individually shiftable upon the carrier; means for maintaining the dies normally in their idle position; a lug upon each slide; an arm mounted upon a reciprocatory rock-shaft and provided with an opening constructed to receive the lug of the slide; a sleeve surrounding the rock-shaft and connected therewith; means for oscillating the sleeve to rock the arm; means for reciprocating the arm through the sleeve; a reinforcing arm adjacent to the position occupied by the lug receiving arm at the limit of its excursion; and means actuated by the sleeve oscillating means for moving the reinforcing arm against the former arm.

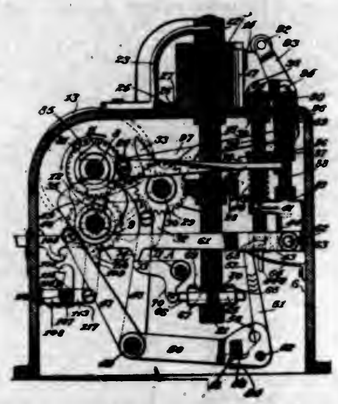
4. The combination with a die-carrier; a series of dies mounted upon the die-carrier; a die upon each slide; a continuously-operating cam-shaft; a cam thereon for intermittently rotating the carrier; an arm organized to engage the die-slide which is stopped adjacent thereto; means connected with the cam-shaft for pressing the arm against the slide; means actuated by a cam on the shaft for raising the arm; means actuated by the same cam-shaft for imparting locking pressure to the arm; and means actuated by the cam for lowering the arm.

5. The combination with a die mounted upon a slide; of an arm for engaging the slide; means for positively moving the arm into engagement with the slide; means for positively raising the arm; and means for positively lowering the arm.

[Claims 6 to 31 not printed in the Gazette.]

902,327. MECHANISM FOR OPERATING ADJUSTABLE WORK-PERFORMING MEMBERS. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation, a Corporation of New Jersey. Filed Dec. 18, 1902. Serial No. 135,668.

1. The combination of a plurality of working members arranged in arbitrary quotas; power-driven means for placing each quota *seriatim* into a position wherefrom any member thereof may be brought to working position; manually-actuated means for selecting a member thereof; automatic means for locking the selecting means; means for bringing the selected member to working position; power-driven means coöperative with the positioned member; and means controlled by the same power for automatically unlocking the selecting means.



2. The combination with a plurality of work-performing members, of several slides upon each of which an equal number of members is mounted, the respective positions upon the several slides having uniform relation to a working point; a coöperative member for working at such point; an arm; a finger thereon for each of the several positions and capable of shifting the slide; a selector for each finger; automatic means for locking the selector; and automatic means for actuating the coöperative means and unlocking the selector.

3. The combination with a carrier, of a plurality of slides shiftable thereon; a plurality of dies upon each slide, the die positions upon the several slides having uniform relation to a working point; means for moving the carrier step by step; means for engaging the slides individually in turn to shift the same; means to shift the engaging means; and means to be interposed therebetween to determine the die position shifted to the working point.

4. The combination with a plurality of dies, of an impressor coöperative therewith; power-driven means for actuating the impressor; manually-operative selectors for each die; means for locking each selector after its actuation; and means actuated by the impressor-driving means for unlocking the selector.

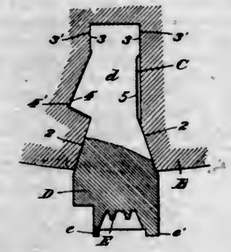
5. The combination with an arm carrying a number of movable members; a rock-shaft upon which the arm is mounted; a cam-shaft adjacent thereto; cams on the cam-shaft; a pair of arms carried by the rock-shaft; engaging cam faces upon opposite sides of the cam-shaft; a selector for each of the movable members; and means actuated by the selector for moving the selected member.

[Claims 6 to 32 not printed in the Gazette.]

902,328. MOUNTING FOR ADJUSTABLE WORKING MEMBERS. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation, a Corporation of New Jersey. Filed July 10, 1902, Serial No. 115,010. Renewed Sept. 16, 1908. Serial No. 453,287.

1. A bar combined with a support in a guideway of which the bar is shiftably mounted, said guideway having adjacent to its mouth a thrust-receiving face oblique to the line of depth of the guide-way and a separate pressure-resisting face adjacent to its bottom, which latter face is adapted to prevent the lateral movement of the inner edge of the bar, during the working of the latter.

2. A bar combined with a support in a guideway of which the bar is shiftably mounted, said guideway having adjacent to its mouth a pair of thrust-receiving faces at least one of which faces is oblique to the line of depth of the guide-way and a separate pair of pressure-resisting faces adjacent to its bottom, which latter faces are adapted to prevent the lateral movement of the inner edge of the bar during the working of the latter.



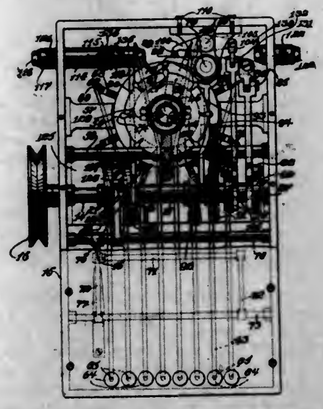
3. A bar combined with a support in a guideway of which the bar is shiftably mounted, said guideway having a pair of oppositely-inclined thrust-receiving faces adjacent to its mouth and a pair of relatively parallel pressure-resisting faces adjacent to its bottom, which latter faces are adapted to prevent the lateral movement of the inner edge of the bar during the working of the latter.

4. A bar combined with a support in a guideway of which the bar is shiftably mounted, said guideway having adjacent to its mouth a pair of oppositely-disposed thrust-receiving faces of similar inclination oblique to the line of depth of the guideway and a pair of relatively parallel pressure-resisting faces adjacent to its bottom, which latter faces are adapted to prevent the lateral movement of the inner edge of the bar during the working of the latter.

5. A bar combined with a support in a guideway of which the bar is shiftably mounted, said guideway having a pair of oppositely-inclined thrust-receiving faces adjacent to its mouth operating as stop faces during the ordinary working of the bar and a pair of relatively parallel pressure-resisting faces adjacent to its bottom, which latter faces are adapted to prevent the lateral movement of the inner edge of the bar during the working of the latter.

[Claims 6 to 31 not printed in the Gazette.]

902,329. MECHANICAL MOVEMENT. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation, a Corporation of New Jersey. Filed Apr. 23, 1903, Serial No. 153,938. Renewed Sept. 28, 1908. Serial No. 454,956.



1. The combination with a plurality of adjustable work-performing members, of a carrier, a plurality of slides

supporting said work-performing members and mounted on said carrier, means for selecting a slide to the exclusion of the others, means for shifting the said slide and locating the selected member thereon in the approximate working position of the said member, and a device for engaging the shifting means for accurately precisionizing the position of the slide and the work performing member and for rigidly holding the same during the working thereof.

2. The combination with a carrier, of a plurality of slides mounted to be freely shiftable thereon, a selective mechanism, a locator for shifting the selected slide to approximately a predetermined position, and a precisionizing device operative upon the shifting device for compelling the same to give to the selected slide its final position.

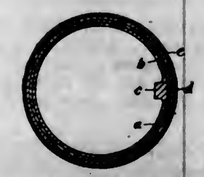
3. The combination with a carrier provided with a plurality of guideways each having convergent faces adjacent to its mouth, of a slide fitted to each guideway to be freely shiftable therethrough, a selective mechanism, a locatof for shifting the selected slide to approximately its predetermined position, and a precisionizing device for then engaging said locator for giving to the slide its final position and wedging it in the guideway.

4. The combination with an adjustable carrier provided with a plurality of guideways each having convergent faces adjacent to its mouth, of a slide fitted to each guideway to be freely shiftable therethrough, a selective mechanism, a locator for shifting the selected slide to approximately its predetermined position, and a precisionizing device for then engaging said locator for giving the slide its final position and wedging it in the guideway.

5. The combination with an adjustable carrier, of a plurality of slides mounted to be freely shiftable thereon, work performing members on the slides, a selective mechanism, locating means adapted to engage with a selected slide and shift the work performing member thereon to its approximate working position, a combined precisionizer and locker for then engaging the locating means and accurately positioning and rigidly holding the precisionized slide means and means for operating the locating means and the precisionizer in proper sequence.

[Claims 6 to 30 not printed in the Gazette.]

902,330. MANUFACTURE OF TENNIS AND SIMILAR PLAYING-BALLS. FRANK ROWLEY, Whaley Bridge, England. Filed July 15, 1908. Serial No. 443,621.



The improved manufacture of tennis and similar playing balls which consists in first forming a restraining shell of shaped segments of indiarubber proofed fabric sewn together, lining this shell internally with india-rubber, inflating the lined shell and coating it externally with india-rubber, while inflated, attaching an outer covering to the ball so formed, and vulcanising the ball.

902,331. LADDER FOR FREIGHT-CARS. JOHN A. RYAN, Washington, D. C. Filed June 6, 1908. Serial No. 437,124.

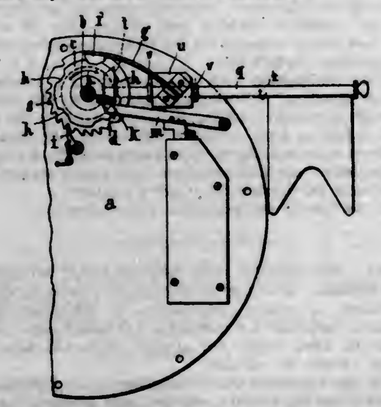
1. A ladder comprising a pair of angle bars each having each end thereof bent upon itself to constitute a spacing means, the point of junction between the bent portion and the remaining part of the rail being rounded, each of said bent portions provided with an opening to receive a holdfast device for fixedly securing the ladder in position, said angle bars constituting the side rails of the ladder, and rungs fixedly secured upon the outer face of the laterally extending portions of the angle bars.

2. A ladder comprising a pair of angle bars each having each end thereof bent upon itself to constitute a spacing means, the point of junction between the bent portion and the remaining part of the rail being rounded, each of said bent portions provided with an opening to receive a holdfast device for fixedly securing the ladder in position, said angle bars constituting the side rails of the ladder, a plurality of rungs positioned against the outer face of the laterally extending portions of the angle bars, each of said rungs having each end enlarged and formed with an opening, and means extending through said openings and engaging with the laterally extending portions of the angle bars for fixedly securing the rungs in position.



3. A ladder comprising a pair of angle bars constituting the side rails and each of which is bent upon itself at each end to constitute a spacing means for the ladder, each of said bent portions having the lateral part thereof provided with an opening through which is adapted to extend a holdfast device for fixedly securing the ladder to the support, and rungs fixedly secured to the laterally extending portions of the angle bars.

902,332. FARE INDICATOR AND REGISTER FOR VEHICLES. BERTHOLD SCHNEIDER, Berlin, Germany. Filed Sept. 14, 1906. Serial No. 334,657.



1. A fare indicator comprising a register setting shaft, a flag staff movable about an axis displaced relatively to said shaft and a gear connection between the staff and the shaft for operating the latter from the staff and allowing of the rotation of the staff through a complete revolution.

2. A fare indicator comprising a register setting shaft for the controlling mechanism, a flag staff, a second shaft to which the flag staff is connected, and a gear connection between the last-mentioned shaft and the register setting shaft, said operative connection adapted to impart movement to the register setting shaft when the flag staff is shifted.

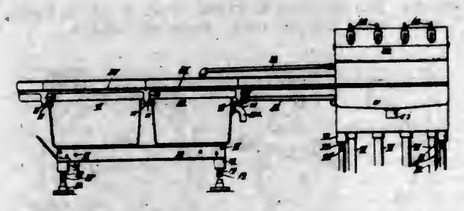
3. A fare indicator comprising a register setting shaft, a flag staff, a second shaft to which the flag staff is connected, and means carried by the last mentioned shaft and adapted to engage with the register setting shaft for imparting movement to the latter when the flag staff is shifted.

4. A fare indicator comprising a register setting shaft, a flag staff adjustable about a different axis relatively to said shaft, and mechanism for positively connecting the flag staff with the adjusting shaft, thereby imparting movement to the latter when the flag staff is shifted.

5. A fare indicator comprising a register setting shaft, a flag or signal staff rotatable about its longitudinal axis as a center, and an operative connection between said staff and shaft for transmitting motion between them and permitting a complete revolution of the staff.

[Claim 6 not printed in the Gazette.]

902,333. BEVERAGE COOLING AND DISPENSING APPARATUS. FREDRICK G. SCHNEIDER and WILLIAM C. L. ZIEHN, Chicago, Ill. Filed Oct. 29, 1907. Serial No. 399,780.

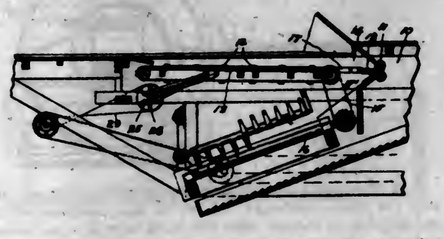


1. A receptacle for liquid made of sanitary material and open at both ends, a cap having an annular rim entered into the open end of the receptacle, a packing between the cap and the end of the receptacle, a discharge passage through the cap and rim, a supporting plate having a rim entered into the open end of the receptacle, a packing between the plate and the end of the receptacle, a supporting plate carrying the plate with the rim, and tie rods between the cap and the supporting plate for sealing the receptacle at each end, substantially as described.

2. In combination with a beverage cooling and dispensing apparatus, a liquid cooler having a beverage receptacle therein, a depending metallic pipe attached to the liquid cooler, a longitudinally disposed glass liquid conveying tube within the metallic pipe in communication with a keg or tank and the beverage receptacle, means for drawing off the liquid from the beverage receptacle, a water supply valve opening into the aforesaid depending metallic pipe for permitting water to flow within the metallic pipe about the liquid conveying tube, and means for carrying off the water, substantially as described.

3. In combination with a beverage cooling and dispensing apparatus, a liquid cooler having a beverage receptacle therein, a metallic pipe depending therefrom, a longitudinally disposed glass beverage conveying tube in direct communication with a keg or tank and the beverage receptacle, means for drawing off the beverage from the beverage receptacle, a water supply pipe opening into the aforesaid depending metallic pipe for permitting water to flow within the metallic pipe about the beverage conveying tube and the beverage receptacle, a rinsing tank, and means for permitting the water to drain off and be conducted to a rinsing tank, substantially as described.

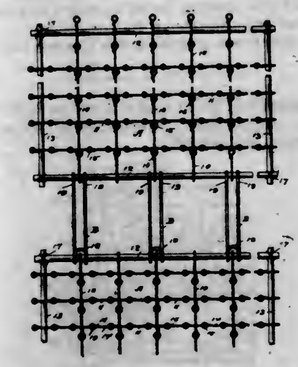
902,334. SHREDDER-FEEDER. JAMES B. SCHUMAN, Indianapolis, Ind., assignor to said James B. Schuman, Joseph K. Sharpe, Jr., and Theophilus King, Indianapolis, Ind., a Copartnership. Filed Feb. 11, 1907. Serial No. 356,889.



1. In a shredder, the combination, with the snapping rolls, of a plurality of endless carriers arranged side by side, a plurality of reciprocating plungers arranged between said carriers and bridging the space between the inner end of said carriers and the throat of the snapping rolls, housings arranged over said plungers and extending forward to bridge the space between the carriers and the snapping rolls, and means for reciprocating said plungers.

2. In a shredder, the combination, with the snapping rolls thereof, of a feeder adapted to carry material toward said snapping rolls, a throat being left between said feeding means and the snapping-roll-throat, reciprocating plungers arranged in said first mentioned throat, means for reciprocating said plungers toward and from the snapping-roll-throat, and fingers bridging the said first-mentioned throat and having their inner ends lower than the path of movement of the plungers.

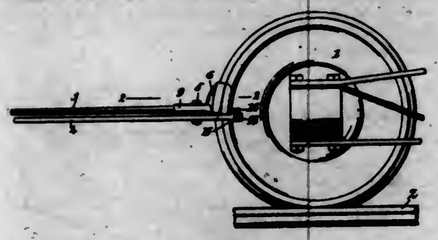
902,335. REINFORCE FOR CONCRETE STRUCTURES. JOHN M. SHERWOOD, Bridgeport, Conn., assignor to The Bridgeport Chain Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Dec. 9, 1907. Serial No. 405,710.



1. A reinforce section for concrete structures comprising a substantially rectangular frame of rods and a plurality of vertical chains, and a plurality of horizontal chains firmly secured to said frame whereby said chains are held against lateral movement relatively to each other and to the rods during progressive building.

2. A reinforce section for concrete structures comprising a substantially rectangular frame of rods and two sets of chains crossing each other and engaging at the points of intersection, the end and side rods of the frame firmly engaging the end links of the respective sets of chains, whereby said chains are held against lateral movement relatively to each other and to the rods during progressive building.

902,336. CAR-MOVER. CHARLES H. SHOTWELL, Akron, Ohio. Filed May 8, 1908. Serial No. 431,571.



1. A car mover composed of two members pivoted one over the other, means on one of the said members which are adapted to engage with the inner side of a car wheel to form a fulcrum, and a shoe on the other member which is disposed vertically of the members.

2. A car mover composed of two members pivoted one over the other, means on one of the said members which are adapted to engage with the inner side of a car wheel to form a fulcrum, a flange on the other arm, and a shoe secured to one of the arms.

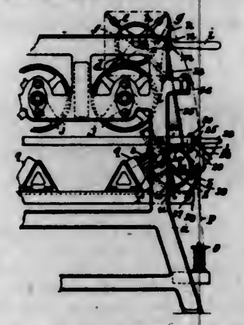
3. In a car mover, a member, a shoe and a flange secured thereto, the shoe being adapted to engage the tread of a car wheel and the flange being adapted to engage one side of the wheel, and another member which is pivoted to the first member and which is adapted to engage the opposite side of the wheel and thus clamp the car mover thereto.

4. In a car mover, a member, a shoe and a flange on the member, there being a groove in the shoe for the flange of the wheel and the shoe conforming in other respects to the wheel tread, and another member pivoted to the first member, the second member having means which together with the flange on the first member are adapted to clamp a car wheel.

5. In a car mover, a member having an arm, a shoe and a flange, the flange being adapted to fit against one side of a car wheel, the shoe conforming in configuration with the tread of the car wheel, and another member pivoted to the first member, the said other member having an arm and means which are adapted to fit against the other side of the car wheel and thus clamp it.

[Claims 6 to 9 not printed in the Gazette.]

902,337. MEASURING APPARATUS FOR WINDING-MACHINES. GRANT SIPP, Paterson, N. J. Filed Mar. 23, 1908. Serial No. 422,809.



1. The combination, with registering mechanism, of a rotary driving member for said mechanism having a circular periphery, said driving member being adapted to be rotated by the thread to be measured, and a pivoted thread-controlled braking device having a cam-like part engageable with the periphery of the driving member, said part having a relatively abrupt rise extending toward the periphery of the driving member, substantially as described.

2. The combination of a suitable support, a rotary toothed registry wheel mounted in said support, a driving member engaging the teeth of said wheel, said wheel being movable axially out of engagement with the driving member, and a pivoted pawl coöperating with said wheel and movable therewith in its axial movement, substantially as described.

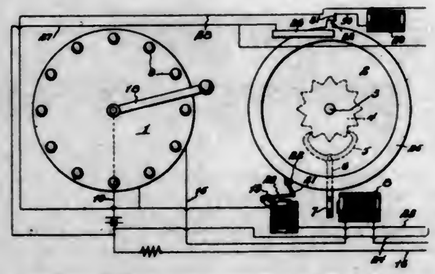
3. The combination of a suitable support, rotary toothed registry wheels mounted in said support substantially face to face, a driving member engaging the teeth of said wheels, said wheels being movable axially out of engagement with the driving member, and a bifurcated pivoted pawl coöperating with and straddling said wheels and movable therewith in their axial movement, substantially as described.

4. The combination, with the frame, of a thread-actuated clock arranged therein, a rotary part on which the thread is adapted to be wound, means for controlling the rotation of said rotary part, a thread-controlled brake for the clock, and means, operated from said first-named means, for rendering the brake inactive while said rotary part is being controlled, substantially as described.

5. The combination, with the frame, of a thread-actuated clock arranged therein, a rotary part on which the thread is adapted to be wound, a driving device for said rotary part, a controlling lever for said rotary part, a thread-controlled brake for the clock, and means, operative from said lever, for rendering the brake inactive on moving the lever, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

902,338. TELEPHONE SYSTEM. PAUL V. SMITH, Lyons, Kans. Filed Dec. 22, 1906. Serial No. 349,134.



1. The combination with a plurality of telephones, of a series of dials arranged in respective coöperation with said telephones, means for locking all the respective dials in normal position, a contact carried by each dial and adapted to close the bell circuit of the particular telephone with which the dial coöperates, the contacts of each of the dials having relatively different positions on each dial when the dials are within the influence of the locking means, a controlling dial carrying a fixed contact corresponding to each dial and a movable contact corresponding to all the dials, the fixed contact and movable contact forming the terminals of a circuit for imparting a step-by-step movement through all the telephone dials, and an additional fixed contact carried by the controlling dial and forming together with the movable contact the terminals of a circuit including the locking means for all telephone dials.

2. The combination with a plurality of telephones, of a series of dials arranged in respective coöperation with said telephones, means for locking all the respective dials in normal positions, a telephone bell circuit closing contact carried by each dial, said contacts having different positions on the respective dials when said dials are within the influence of the locking means, a controlling dial carrying a fixed contact for each of the telephone dials, and a movable contact corresponding to all of the telephone dials, said contacts forming the terminals of the circuit adapted to impart a step-by-step movement to all of the dials, a second fixed contact adapted in connection with the movable contact to form the terminals of a circuit and serving when energized to release the locking means of all of the telephone dials, and a push button normally engaging each of the first mentioned fixed contacts and adapted to be operated by the movable contact to engage the second fixed contact.

3. The combination with a plurality of telephones, of a series of dials arranged in respective coöperation with said telephones, means for locking all of the respective dials in normal position and a contact carried by each dial and arranged to close the bell circuit of the particular telephone, the contacts of each of the respective dials having a different position on each dial when the dials are in normal position, and a controlling dial carrying a fixed contact for each of the dials, and a movable contact corresponding to all of the dials, said contacts forming the terminals of a circuit adapted to impart a step-by-step movement to all of the dials, said controlling dial carrying a second fixed contact adapted for electrical connection with the movable contact for releasing the locking means of all of the dials, said movable contact and second fixed contact forming also the terminals of the respective telephone bell circuits.

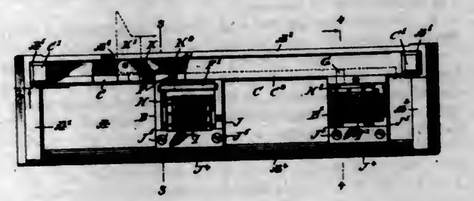
4. The combination with a plurality of normally open call circuits, of a series of dials each carrying a contact adapted when in position to close one of the call circuits, means for normally holding all of said dials in position to maintain their contacts out of call circuit closing position, a controlling dial carrying a fixed contact forming one terminal of a circuit including the locking means of all the dials, a second fixed contact carried by the controlling dial and forming one terminal of a dial operating circuit, means arranged in said operating circuit adjacent each dial for imparting a step-by-step movement to the dial in the energization of the circuit, an arm mounted on the controlling dial and forming the remaining terminal of the locking circuit and of the controlling circuit, and a series of push buttons carried by the controlling dial and adapted to be engaged by the arm, each of said push buttons being normally in electrical engagement with the first mentioned fixed contact and being adapted for movement by the arm to electrically engage the second fixed contact.

5. The combination with a plurality of normally open call circuits, of a series of dials each carrying a contact adapted when in position to close one of the call circuits, means for normally holding all of said dials in position to maintain their contacts out of call circuit closing position, a controlling dial carrying a fixed contact forming one terminal of a circuit including the locking means of all the dials, a second fixed contact carried by the controlling dial and forming one terminal of a dial operating circuit, means arranged in said operating circuit adjacent each dial for imparting a step-by-step movement to the dial in the energization of the circuit, an arm mounted on the controlling dial and forming the remaining terminal of the locking circuit and of the controlling circuit, and a series of push buttons carried by the controlling dial and adapted to be engaged by the arm, each of said push buttons being normally in electrical engagement with the first mentioned fixed contact and being adapted for movement by the arm to electrically engage the second fixed contact, the terminals of the respective call circuits including the movable arm and the second fixed contact.

902,339. CONSECUTIVE-NUMBERING APPARATUS. CHARLES SPIELMANN and FRANK W. WICHT, New York, N. Y. Filed Apr. 23, 1908. Serial No. 428,753.

1. A numbering apparatus, comprising a main frame, a spring-pressed plunger mounted to slide in the said frame, and a plurality of sets of numbering wheels each independently mounted in the frame and having its actuating member engaging the said plunger, one of the sets of numbering wheels having the axis of its numbering wheels arranged transversely, and another set having the axis of its numbering wheels arranged longitudinally relative to the frame.

2. A numbering apparatus, comprising a main frame having one of its side bars beveled at top and bottom, and a numbering device having its casing provided in one side with a dovetail groove receiving the said bar, the upper wall of the groove being separate from the casing and forming a clamping member, and means for securing the clamping member in position, whereby the numbering device may be adjusted and held in the position to which it has been adjusted by said clamping member.



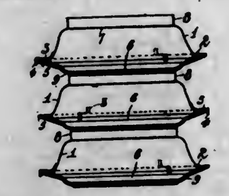
3. A numbering apparatus, comprising a main frame having its ends provided with guideways, a plunger mounted to slide in the said guideways and provided with a groove extending lengthwise of the plunger, springs interposed between the said plunger and one side of the said frame, and a numbering device mounted to slide on the other side of the said frame and having its actuating member extending into the said plunger groove, the latter having a portion of its bottom movable, and the plunger and the frame side adjacent to the plunger being provided with grooves registering with the said movable bottom portion.

4. A numbering apparatus provided with a plunger having a groove for engagement by the actuating member of a set of numbering wheels, a portion of the bottom wall of the groove being hinged to permit it to be swung to one side to form an opening for the passage of the said actuating member to and from the groove.

5. In a numbering apparatus, a frame having an opening in one side wall, a plunger mounted to slide in the frame and provided with a horizontal groove for the reception of the actuating member of a numbering device, and a movable member forming a portion of the bottom of the groove of the plunger and arranged opposite the opening of the frame, whereby provision is made for removing the numbering device.

[Claims 6 to 8 not printed in the Gazette.]

902,340. PLATE AND DISH COVER. FRANK STAINES, Melbourne, Victoria, Australia, assignor to John Clark Bowden, Melbourne, Australia. Filed June 14, 1907. Serial No. 379,052.



1. A cover for plates and dishes having a set of lugs extending downwardly below its lower edge to space the said edge of the cover above a support and adapted to project outwardly over the edge of the plate or dish to center and retain the cover thereon.

2. A cover for plates and dishes having a plurality of lugs projecting downwardly below the plate engaging edge thereof to provide spaced supports for the cover and adapted to project outwardly over the edge of the plate or dish to retain the cover thereon, and provided with an upwardly extending rim on the upper portion of the cover.

3. A cover for plates and dishes having lugs projecting laterally from the plate engaging edge thereof and adapted to coöperate with the periphery of a plate, and

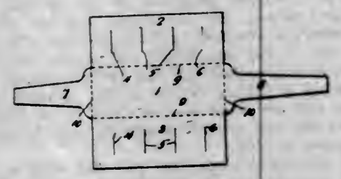
supplemental hooks on the lugs projecting outwardly and downwardly beyond the peripheral edge of the cover for accommodating plates or dishes of different sizes.

4. A cover for plates and dishes comprising a body of substantially concavo convex form having lugs projecting radially from its peripheral edge, the lugs being provided with downturned hooks extending below the said edge of the cover, and a rim projecting upwardly from the convex side of the body.

5. A cover for plates and dishes comprising a body flared outwardly towards the bottom edge and formed with a substantially flat top, a rim extending upwardly from the top of the body, and a set of lugs projecting below the bottom edge of the body and serving to support the latter with its bottom edge removed from the table or other support.

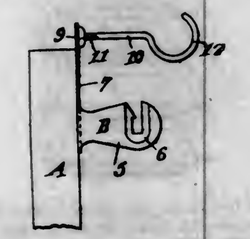
[Claim 6 not printed in the Gazette.]

902,341. ENVELOP. HARRY L. STALEY, Charleroi, Pa. Filed Feb. 6, 1907. Serial No. 356,059.
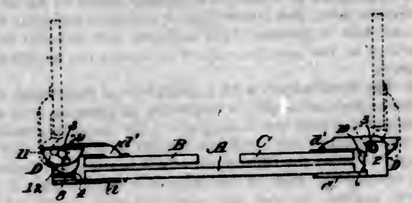


An envelop consisting of a body having side flaps extending from the longitudinal edges thereof and having tongues of reduced width projecting from the ends of the body, said tongues being of unequal length, each of said side flaps corresponding substantially in size with the body and each provided with a plurality of slits spaced apart at right angles to the body, the said side flaps adapted to be folded over onto said body and said tongues being each passed through a plurality of the slits in the side flaps with the longer of the tongues also passed through one of the slits occupied by the shorter of said tongues, and means extending through the tongues, the side flaps and the body for securing the parts against opening without destroying the same.

902,342. COMBINED SHADE AND CURTAIN BRACKET. ZACHARY J. STANDISH, Fort Scott, Kans. Filed Feb. 25, 1908. Serial No. 417,781.



A combined shade and curtain bracket comprising an elongated body strip or plate formed with sets of openings for passage of securing devices on opposite sides of its transverse center, said strips being provided at its outer end with a forwardly extending shade bracket and having a vertical arm projecting above said bracket and provided at its upper end with a screw-threaded socket, and a pole-supporting rod threaded at one end for engagement with said socket and extending forwardly from the arm and provided at its outer end with a hook projecting beyond the plane of the shade bracket.

902,343. HINGE-CLAMP. ROBERT V. D. STOUTENBURGH, Hollis, N. Y. Filed May 13, 1908. Serial No. 432,646.



1. In a hinge clamp for clothes presses, the combination of a member having a hinge pin, a member having a slot engaged by said pin and a cam rotatably mounted on one of said members and adapted to engage shoulders arranged upon the other member at opposite ends of said slot.

2. In a hinge clamp for clothes presses, the combination of a member having a hinge pin, a member having a slot engaged by said pin and a rotatable disk eccentrically mounted on one of said members and adapted to engage shoulders arranged upon the other member at opposite ends of said slot.

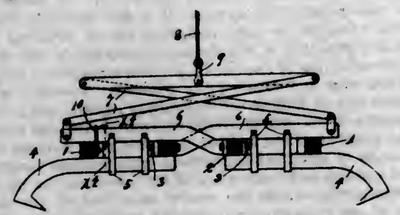
3. In a hinge clamp for clothes presses, the combination of a member having a hinge-pin, a cam rotatable about the axis of said pin, and a member having a slot engaged by said pin and having shoulders at the ends of said slot adapted to be engaged by said cam.

4. In a hinge clamp for clothes presses, the combination of a member having a hinge-pin, a disk eccentrically mounted upon said pin, and a member having a slot engaged by said pin and having shoulders at the ends of said slot adapted to be engaged by said disk.

5. A hinge clamp for clothes presses, comprising a member having a hinge pin and a stop and a member having a slot engaged by said pin, said latter member being adapted to engage the stop in the closed position of the clamp and a cam rotatable about the axis of said pin and adapted to move the slotted member relatively to the pin.

[Claims 6 to 9 not printed in the Gazette.]

902,344. LOG-FISHING GRAPPLE. JAMES T. TEARE, Stillwater, Minn. Filed Jan. 2, 1908. Serial No. 408,953.

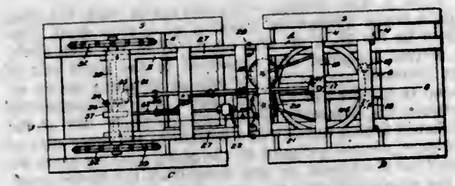


1. In a toggle action grapple, the combination with a main frame, of a pair of rocking bars pivoted to said frame parallel with each other and spaced apart equi-distant from the center line of said frame crosswise thereof, two pairs of grapple levers fixed to said rocking bars, one grapple lever being located near the end of each bar, and a pair of crossed pull-up levers fixed one to each of said bars, substantially midway between the two pairs of grapple levers, substantially as described.

2. In a toggle action grapple, the combination with a main frame, of a pair of rocking bars pivoted to said frame parallel with each other and spaced apart equi-distant from the center line of said frame crosswise thereof, two pairs of grapple levers fixed to said rocking bars, one grapple lever being located near the end of each bar, and the grapple irons of each lever being adjustably secured thereto, and a pair of crossed pull-up levers fixed one to each of said bars, substantially midway between the two pairs of grapple levers, substantially as described.

3. In a toggle action grapple, the combination with a main frame, of a pair of rocking bars pivoted thereto, two pairs of grapple levers fixed to said bars, located one near each end of each bar, a pair of crossed pull-up levers fixed one to each of said bars, substantially midway between the two pairs of grapple levers, a locking lever pivoted to said frame and engageable with one of said pull-up levers to lock all the grapple levers in open position, and a flexible releasing connection extending from said locking lever, substantially as described.

902,345. SELF-PROPELLED SLEIGH. CHARLES E. TETREAULT, Newport, Vt. Filed Apr. 3, 1908. Serial No. 424,974.



1. In a self-propelled sleigh, the combination of a body, bobs supporting the body, a frame supported on the body, means for pivoting the front of the frame to the body at a point between the bobs, an axle carried by the frame on the rear part thereof, surface-engaging driving wheels on the axle, a toggle device connected with the frame at a point adjacent the axle and with the body at a point above the axle, manually-controlled means connected with the toggle device for setting the driving wheels in different positions, and a brake device including a drum on the axle and manually-controlled means for engaging the drum.

2. In a self-propelled sleigh, the combination of a body, front and rear bobs for supporting the same, a swinging frame pivoted at its forward end on the body at a point between the bobs, a driving axle on the rear end of the frame and directly over the rear bob, means connected with the frame for raising and lowering the same, driving wheels on the axle, a driving shaft consisting of two parts, one part being mounted on the body and the other on the frame, and a universal joint between the sections and disposed in line with the pivot on which the frame swings.

3. In a self-propelled vehicle, the combination of a body, runners mounted thereon, a swinging frame, toggle elements hingedly connected with the frame and body, means connected with the elements for moving the frame, an axle carried by the frame, driving wheels on the axle, a driving shaft extending longitudinally of the body and geared to the axle and arranged to swing on a center concentric with the axis on which the frame swings and yielding devices arranged to urge the frame downwardly.

4. In a self-propelled vehicle, the combination of a body, a bob including runners each composed of spaced shoes, cross pieces connecting the shoes together, horizontal cross members connecting the runners together in fixed relation, a bodily moving driving axle and of such length as to extend from one runner to the other, driving wheels on the axle and disposed between the shoes of each runner, means for rotating the axle, and means for raising and lowering the axle for changing the set of the wheels.

5. In a self-propelled sleigh, the combination of a body, front and rear bobs supporting the same, a propelling mechanism, a king bolt, a rotatable element on the king bolt, a universal connection between the element and front bob, and a steering device operating through the element for moving the front bob, said connection including two pivots disposed at right angles to each other, and a connecting member between the pivots.

[Claim 6 not printed in the Gazette.]

902,346. GARMENT-HANGER. REGINALD C. THOMAS, New York, N. Y. Filed Feb. 29, 1908. Serial No. 418,432.



1. The combination of garment-supporting arms connected together, blocks adjustable on said arms, and shoulder-supporting loops adjustable on the blocks.

2. The combination of garment-supporting arms, each being composed of two strands of wire, a wedge-shaped block having its enlarged end arranged outwardly, adjustable on the strands of each arm, and a shoulder supporting member adjustable in the opposite edges of each block.

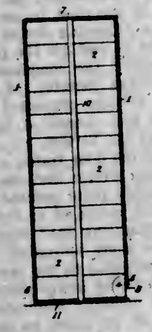
3. The combination of garment-supporting arms each consisting of two strands of wire twisted together at their inner ends and pivotally connected to the opposite arm, wedge-shaped blocks having grooves in which the wires of the arms are slidably retained, and shoulder-supporting loops passing into grooves formed in the opposite edges of the blocks.

4. The combination of shoulder-supporting arms each composed of two wires twisted together at their inner ends and pivotally and detachably connected to the inner end of the other arm, wedge-shaped blocks having their enlarged ends arranged outwardly, longitudinally adjustable on the arms, and a shoulder-supporting loop carried by each block.

5. The combination of garment supporting arms connected together, and blocks adjustable on said arms each having an adjustable and outwardly-extending wire loop, providing a shoulder support.

[Claims 6 to 11 not printed in the Gazette.]

902,347. VENDING CARTON OR PACKAGE. BENJAMIN C. TILLINGHAST, Philadelphia, Pa. Filed Jan. 17, 1908. Serial No. 139,419.



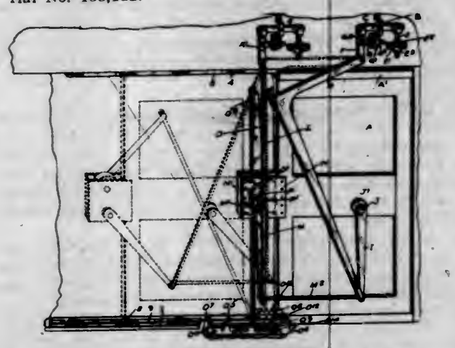
1. A multiple unit receptacle consisting of an inclosing carton adapted to contain a plurality of vendible units and having at one side of an end thereof an exit opening, the ends of said carton being closed by a plurality of flaps, and elastic means secured to the flaps at one end of the carton and arranged to be stretched over and band together vendible units contained within said carton and press the same toward said exit opening.

2. A multiple unit receptacle consisting of an inclosing carton adapted to contain a plurality of vendible units and having at one side of an end thereof an exit opening through which said units are laterally removable, the wall of the carton opposite its exit opening being perforated for the insertion of a finger to assist in the removal of the lowermost unit, the ends of said carton being closed by a plurality of flaps, and elastic means secured to the flaps at one end of the carton and arranged to be stretched over and band together vendible

units contained within said carton and press them toward said exit opening.

3. A multiple unit receptacle consisting of an inclosing carton having at one side of an end thereof an exit opening, a flap carried by the wall in which said opening is formed partially covering the same, said carton adapted to contain a plurality of vendible units, the ends of said carton being closed by a plurality of flaps, and elastic means secured to the flaps at one end of the carton and adapted to be stretched over and band together said vendible units and press them toward the exit opening, the side walls of said carton having cut-out portions joining the exit opening to facilitate the removal of the vendible units.

902,348. DOOR AND GATE HANGER. HUGH TODD, Toronto, Ontario, Canada. Filed May 15, 1908. Serial No. 433,112.



1. In a door hanger, the combination with the door and suitable guide-ways therefor, of a stub shaft journaled in the door, an arm connected to the stub shaft, a reverse L-shaped arm connected to the lower end of the aforesaid arm at the bottom, an adjusting device secured to the head of the door frame and a pivotal connection between the adjusting device and the upper end of the L-shaped arm as and for the purpose specified.

2. In a door hanger, the combination with the door and suitable guide-ways therefor, of a stub shaft journaled in the door, an arm connected to the stub shaft, a reverse L-shaped arm connected to the lower end of the aforesaid arm at the bottom, an adjusting device secured to the head of the door frame, a pivotal connection between the adjusting device and the upper end of the L-shaped arm, a double plate secured to the inner edge of the door, an arbor journaled in the plate, an arm on the arbor, a rod connecting such arm to the bottom of the arm on the stub shaft journaled in the door, a second rod pivotally connected to the lower end of the arm on the arbor and adjusting means secured to the head of the door frame and pivotally connected to the rod connected to the arms on the arbor as and for the purpose specified.

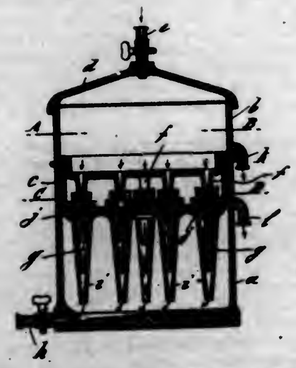
3. In a door hanger, the combination with the door and suitable guide-ways therefor, of a stub shaft journaled in the door, an arm connected to the stub shaft, a reverse L-shaped arm connected to the lower end of the aforesaid arm at the bottom, an adjusting device secured to the head of the door frame, a pivotal connection between the adjusting device and the upper end of the L-shaped arm, a double plate secured to the inner edge of the door, arbors journaled in the plate, meshing gears secured in the arbors, an arm secured on the lower arbor, a rod connecting the arm and lower arbor to the arm on the shaft journaled in the door, an adjusting device secured to the head of the frame, a rod connecting the arm on the lower arbor to the adjusting device, an arm on the upper arbor, a rod connected to the upper end of the arm and means for adjusting the rod vertically as and for the purpose specified.

4. In a door hanger, the combination with the door and suitable guide-ways therefor, of a stub shaft journaled in the door, an arm connected to the stub shaft, a reverse L-shaped arm connected to the lower end of the aforesaid arm at the bottom, and an adjusting device secured to the head of the door frame, a pivotal connection between the adjusting device and the upper end of the L-shaped arm, a double plate secured to the inner edge of the door, arbors journaled in the plate, meshing gears secured on the arbors, an arm secured on the lower arbor, a rod connecting the arm and lower arbor to the arm on the shaft journaled in the door, an adjusting device secured to the head of the frame, a rod connecting the arm on the lower arbor to the adjusting device, an arm on the upper arbor, a rod connected to the upper end of the arm, a bar supported in brackets and pivotally connected to the depending rod and means for adjusting said bar vertically as and for the purpose specified.

5. In a door hanger, the combination with the door and suitable guide-ways therefor, of a stub shaft journaled in the door, an arm connected to the stub shaft, a reverse L-shaped arm connected to the lower end of the aforesaid arm at the bottom, an adjusting device secured to the head of the door frame, a pivotal connection between the adjusting device and the upper end of the L-shaped arm, a double plate secured to the inner edge of the door, arbors journaled in the plate, meshing gears secured on the arbors, an arm secured on the lower arbor, a rod connecting the arm and lower arbor to the arm on the shaft journaled in the door, an adjusting device secured to the head of the frame, a rod connecting the arm on the lower arbor to the adjusting device, an arm on the upper arbor, a rod connected to the upper end of the arm, a bar supported in brackets and pivotally connected to the depending rod, a screw rod extending through a hole on the end of the bar and provided with a nut thereon underneath the bar as and for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

902,349. FILTER. VIRGINIA TONINETTI, Milan, Italy. Filed Feb. 18, 1907. Serial No. 357,874.



1. A filter comprising a plurality of vessels arranged one upon the other, the upper vessel having tubular outlets projecting from its bottom, and a plurality of conical holders for filtering material supported in the lower vessel below the tubular outlets of the upper vessel.

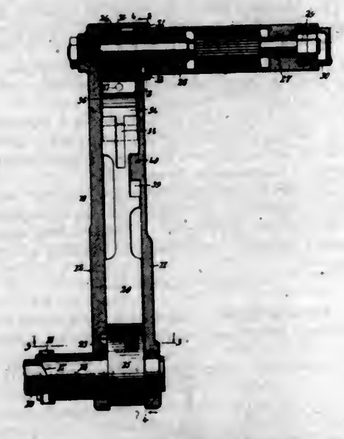
2. A filter comprising a plurality of vessels supported one upon the other, the upper vessel having a plurality of conical outlets projecting from its bottom, and a plurality of removable conical holders for paper filters supported in the lower vessel below the conical outlets of the upper vessel.

3. A filter comprising three vessels supported one upon the other, the upper one having a plurality of conical outlets projecting from its bottom, and the intermediate one provided with a plurality of removable supports for paper filters, said supports being in alinement with the outlets of the upper vessel.

4. A filter comprising three vessels supported one upon the other, the lower vessel having a discharge cock, the upper one having an inlet in its cover and provided with conical outlets projecting from its bottom and with an outlet pipe leading from its side, and the intermediate one having a plurality of removable conical holders for paper filters in alinement with the outlets of the upper vessel and an outlet pipe leading from one side.

5. In a filter, three vessels supported one upon the other, the upper one having outlets in its bottom, and the intermediate one carrying a plurality of holders for filtering material, the upper and intermediate vessels each being provided with an outlet pipe leading out through the side thereof.

902,350. ENGINE-STARTER. LOUIS S. TUTTLE. Eastport, N. Y. Filed Apr. 11, 1907. Serial No. 367,498.



1. In a starting device for internal combustion engines, the combination of a crank provided with a handle and having means adapted to engage with a shaft in starting the engine, a bolt slidably mounted on the crank for locking it to said means, and means normally engaging the said handle adapted to automatically release the bolt from said first-named means when the resistance of the shaft to the crank reaches a predetermined point.

2. In a starting device for internal combustion engines, the combination of a crank, means carried by the crank adapted to engage with a shaft in starting the engine, a bolt slidable within the crank for locking said means, a handle for revolving the crank, and revoluble means carried by the handle coöperating with means carried by the bolt, for releasing the bolt from said first-named means when the resistance of the shaft to the crank reaches a predetermined point.

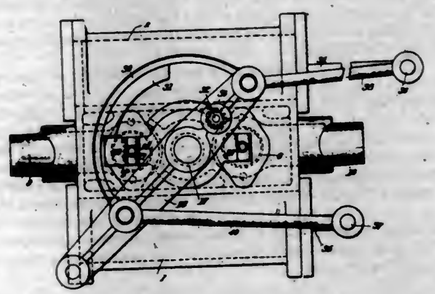
3. In a starting device for internal combustion engines, a crank, a clutch journaled in the crank, a cam carried by the clutch, a bolt slidably mounted on the crank adapted to be projected into the path of the cam, a handle for the crank, revoluble means carried by the handle, and means pivotally connected to the bolt coöperating with said revoluble means for locking the bolt in position.

4. In a starting device for internal combustion engines, a crank having a handle adapted to revolve a shaft, and means for automatically releasing the crank from the shaft when the resistance of the shaft reaches a predetermined point, said means including a revoluble member having a ratchet connection with the handle.

5. In a starting device for internal combustion engines, a crank having a handle adapted to revolve a shaft, and means for automatically releasing the crank from the shaft when the resistance of the shaft reaches a predetermined point, said means including a revoluble member having a differential ratchet connection with the handle.

[Claims 6 to 14 not printed in the Gazette.]

902,351. HYDRAULIC MOTOR. ANTON E. WEINGARTNER, Bethlehem, Pa. Filed Oct. 18, 1907. Serial No. 398,117.



1. In a motor of the character described, a cylinder, a piston in said cylinder, two valves controlling the supply and exhaust, an intermediately pivoted lever mounted to move in a vertical plane and having its ends operatively connected to said valves, a pivoted cross beam mounted to swing in a horizontal plane, and means carried by said cross beam to automatically reverse said lever at the end of each movement of said piston.

2. In a motor of the character described, a cylinder, a piston in said cylinder, two valves controlling the supply and exhaust, an intermediately pivoted lever mounted to move in a vertical plane and having its ends operatively connected to said valves, a pivoted cross beam mounted to swing in a horizontal plane, means carried by said cross beam to automatically reverse said lever at the end of each movement of said piston and to lock said lever during each movement of said piston.

3. In a motor of the character described, a cylinder, a piston in said cylinder, two valves controlling the supply and exhaust, an intermediately pivoted lever having its ends operatively connected to said valves, a pivoted cross beam, means carried by said cross beam to automatically reverse said lever at the end of each movement of said piston, and a segment on said cross beam provided with a ledge adapted to alternately engage the top and bottom of an extension of said lever whereby the latter is locked during each movement of said cross beam.

4. In a motor of the character described, a cylinder, a piston in said cylinder, two valves controlling the supply and exhaust, an intermediately pivoted lever having its ends operatively connected to said valves, a pivoted cross beam, a spring pressed stud carried by said cross beam and bearing upon said lever, and means to actuate said cross beam in accordance with the movement of said piston whereby said stud is alternately brought into engagement with said lever at each side of its pivot.

5. In a motor of the character described, a cylinder, a piston in said cylinder, two valves controlling the supply and exhaust, an intermediately pivoted lever having its ends operatively connected to said valves, a pivoted cross beam, a spring pressed stud carried by said cross beam and bearing upon said lever, a cross head on the piston rod and a connecting rod from said cross head to said cross beam whereby the latter is actuated to alternately bring said stud into engagement with said lever at each side of its pivot.

[Claims 6 to 11 not printed in the Gazette.]

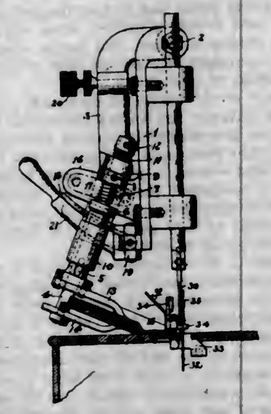
902,352. STUFFING-BOX. WILLIAM J. WEINMAN, Nicholasville, Ky. Filed Apr. 15, 1908. Serial No. 427,169.



1. A stuffing box comprising two sections or members each embodying a semi-cylindrical sleeve terminating at one end in a semi-circular flange and at the other end in a semi-circular casing of a greater diameter than the sleeve and having an apertured lug at each end, bolts connecting said apertured lugs, and a two-part follower mounted in said casing and having ship-lap tongues, and springs arranged between the ends of said follower and the inner wall of the casing.

2. The combination with a journal provided on one end with an annular apertured flange and a rotatable shaft extending into said journal, of a stuffing box comprising two counterpart sections each embodying a semi-cylindrical sleeve terminating at one end in a semi-circular flange and at the other end in a semi-circular casing, the latter provided with oppositely-disposed lugs, means for securing the lugs of said sections together, means for securing the flanged end of said stuffing box to the flanged end of said journal, and a spring-pressed two-part follower arranged within the casing end of said stuffing box to engage said shaft.

902,353. SEWING-MACHINE. FRITZ WEVER, Stuttgart, Germany. Filed Jan. 19, 1905. Serial No. 241,792.



1. The combination with stitch forming mechanism, of a back guide over which the material is folded, and a clamping member coöperating with said back guide and moving therewith, means for supporting said back guide from the head of the machine, whereby the body of the material folded over said back guide, may pass underneath said guide, and means for moving the same in a circular direction.

2. The combination with stitch forming mechanism, a back guide over which the material is folded, whereby the needle may enter and emerge from the same surface of the material, means for clamping the material to said back guide, means for supporting said back guide from the head of the machine, and means for moving said back guide in a circular direction.

3. In a sewing machine having an overhanging arm, the combination with stitch-forming mechanism, of a back guide over which the material is folded, means for supporting said back guide from the head of the machine means for clamping the material to said back guide, means for adjusting said guide relative to the needle, and means for moving said back guide in a circular direction; substantially as described.

4. In a sewing machine having an overhanging arm, the combination with stitch-forming mechanism, of a back guide over which the material is folded, means for supporting said back guide from the head of the machine means for yieldingly supporting said back guide, and means for moving said back guide in a circular direction and a clamping member coöperating with said back guide; substantially as described.

5. The combination with stitch-forming mechanism, a work support of a guide over which the material is folded, means for clamping the material to said back guide, means for yieldingly supporting said back guide above the work support whereby the body material may be passed underneath said guide and folded over on the same, and means for moving the same in a circular direction; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

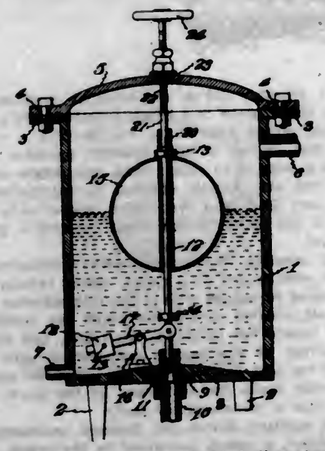
902,354. ELECTRODE FOR ARC-LAMPS. WILLIS R. WHITNEY, Boston, Mass., assignor to General Electric Company, a Corporation of New York. Filed Dec. 10, 1903. Serial No. 184,655.

1. An arc light electrode formed out of a pure metal having a melting point materially higher than iron and yielding a luminous or flaming arc.

2. An arc light electrode formed out of a substantially pure metal having good electrical conductivity, melting at a temperature exceeding two thousand degrees centigrade, and yielding a luminous or flaming arc.

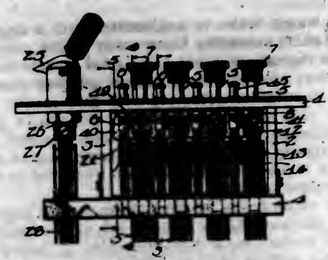
3. An arc light electrode containing as its principal constituent a metal in the pure state having good electrical conductivity, melting at a temperature exceeding two thousand degrees centigrade, and yielding a luminous or flaming arc.

902,355. STEAM-TRAP. THOMAS R. WHITTAKER, Lawrence, Mass. Filed Apr. 14, 1908. Serial No. 426,985.



A steam trap comprising a suitable hollow structure having an inlet at its upper portion and its bottom provided with an outlet, a valve arranged to govern the outlet, a stem extending upward from the valve, ears upon the bottom of the structure, an arm pivoted to the ears and connected with the valve stem, an adjustable weight upon the arm, said weight adapted to sustain the valve unseated, adjustable collars upon the stem, a float loose upon the stem between the collars, the upper collar being provided with a hollow extension, and a threaded stem provided upon the top of the structure to engage within the hollow extension to guide the valve stem.

902,356. FOUR-PARTY-LINE INDICATING RINGING KEY. CHARLES S. WINSTON, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 3, 1907. Serial No. 386,896.



1. In an operator's indicating key, the combination with a suitable supporting frame, of a plurality of switch actuating plungers, a plurality of auxiliary plungers, one associated with each of the actuating plungers adapted by their positions to indicate the last actuating plunger depressed, substantially as described.

2. In an operator's indicating key, the combination with a suitable supporting frame, of a plurality of switch actuating means, a plurality of reciprocating plungers, one associated with each of said means and adapted by their positions to indicate the last of said means actuated, substantially as described.

3. In an operator's indicating key, the combination with a plurality of switch actuating plungers having normal and actuating positions, of a plurality of auxiliary plungers, one associated with each of the actuating plungers and having normal and indicating positions, means to place the auxiliary plunger in its indicating position when an actuating plunger is moved to its actuating position, and means to return said indicating plunger to its normal position when another actuating plunger is moved to its actuating position, substantially as described.

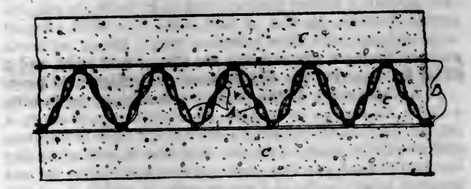
4. In an operator's indicating key, the combination with a plurality of switch actuating plungers, of a plurality of auxiliary plungers, one associated with each of the actuating plungers, a spring for each actuating plunger, and a spring for each indicating plunger normally holding the plungers in their uppermost positions, means for forcing the indicating plunger to its lower position when the actuating plunger is forced to its actuating position, and means for retaining the indicating plunger in its lower position after the actuating plunger has returned to its normal position, the retaining means being actuated by the depression of any other actuating plunger, whereby the first indicating plunger is released and allowed to return to its normal position, substantially as described.

5. In an operator's indicating key, the combination with a suitable supporting frame, of a plurality of switch actuating plungers, a plurality of auxiliary indicating plungers, one associated with each of the actuating plungers and mounted in said frame, a pivoted catch plate, means carried upon each of the auxiliary plungers engaged by said catch plate when the auxiliary plunger is depressed to its lower position, means to depress the auxiliary plunger to its lower position when its associated plunger is depressed to its actuating position, and means to move the catch plate to release said auxiliary plunger when any other actuating plunger is moved to its actuating position, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

902,357. FIREPROOF CONSTRUCTION. ADOLPH P. S. WOHLPART and PHILIP WOHLPART, New York, N. Y. Filed Apr. 29, 1907. Serial No. 371,030.

1. The combination with suitable beams and frame work of a building of a fireproof construction adapted to be supported thereby comprising corrugated foraminous sheets of metal and separated binding rods secured to the outer surfaces of the same, disposed at an angle thereto and rigidly connecting two or more corrugations.



2. The combination with suitable beams and framework of a building of fireproof construction adapted to be supported thereby comprising corrugated foraminous sheets of metal and separated binding rods rigidly secured to the apexes of the corrugations and spanning the intermediate portions.

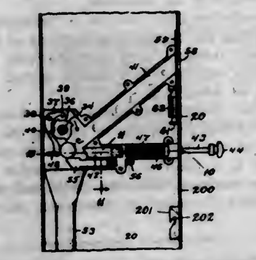
3. The combination with suitable beams and framework of a building of fireproof construction adapted to be supported thereby comprising corrugated foraminous sheets of metal and binding rods rigidly secured to the same and holding said corrugations against expansion or contraction and portions of said binding rods wound around portions of the corrugated metal.

4. In a fireproof construction the combination of a fabric composed of corrugated open metal sheets, binding rods extending at an angle to the corrugations and connecting the said sheets, the corrugations of each being disposed at an angle to those of other sheets the apexes of corrugations disposed at one angle having a different exterior surface area from the corrugations disposed at another angle on the same side of the fabric.

5. In a fireproof construction a fabric composed of corrugated open metal sheets, binding rods extending at an angle to the corrugations and connected to the said sheets, the said corrugations of each sheet being disposed at an angle to those of other sheets and to its edge.

[Claims 6 to 8 not printed in the Gazette.]

902,358. COIN CONTROLLED FOOD-DISPENSING APPARATUS. MARSTON WOODBURY, Brookline, and NATHANIEL W. ALDRICH, Boston, Mass. Filed Apr. 17, 1908. Serial No. 427,689.



1. An apparatus of the character described, comprising a shaft, dispensing mechanism controlled by said shaft, a ratchet fixed to said shaft, an escapement pawl controlling said ratchet, a spring retracted plunger movable toward said pawl, a slide, connections between said slide and plunger whereby a portion of the movement of the plunger is transmitted to said slide, said slide having a pin to which said pawl is connected, and a chute for directing a coin between the plunger and pawl.

2. An apparatus of the character described, comprising a shaft, dispensing mechanism controlled by said shaft, a ratchet fixed to said shaft, an escapement pawl controlling said ratchet, a slide having a pin engaging said pawl and having a slot, a spring retracted plunger having a pin entering the slot of said slide, and a chute for directing a coin between the plunger and pawl.

3. An apparatus of the character described, comprising a shaft, dispensing mechanism controlled by said shaft, a ratchet fixed to said shaft, an escapement pawl controlling said ratchet, a slotted member, said pawl having a pin projecting through the slot of said member, a slide engaged with said pin, said slide having a slot, a spring retracted plunger having a pin entering the slot of said slide, and a chute for directing the coin between the plunger and pawl.

4. An apparatus of the character described, comprising a shaft, dispensing mechanism controlled by said shaft, a ratchet fixed to said shaft, an escapement pawl controlling said ratchet, a guide, a plunger mounted in said guide and movable toward and from said plunger and having its end inclined downwardly and rearwardly, a spring normally retracting said plunger, an adjustable gage mounted in said guide below the plunger, a chute for directing a coin between the plunger and pawl, and connections for transmitting return movement of the plunger to the pawl.

5. An apparatus of the character described, comprising a shaft, dispensing mechanism controlled by said shaft, a ratchet fixed to said shaft, an escapement pawl controlling said ratchet, a spring retracted plunger movable toward said pawl, an adjustable gage for determining the diameter of a coin which may pass the lower end of the pawl, a chute for directing a coin onto the end of said gage, and connections for transmitting return movement of the plunger to the pawl.

[Claim 6 not printed in the Gazette.]

902,359. CACTUS LEATHER. FREDERICK C. WRIGHT, Tucson, Ariz. Filed Jan. 15, 1908. Serial No. 410,976.



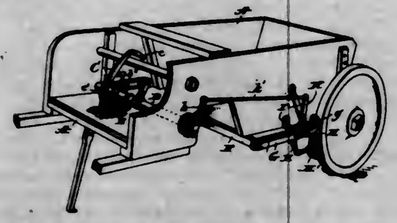
1. As a new article of manufacture, the imitation leather product obtained by treating cactus, substantially as set forth.

2. As a new article of manufacture, an artificial or imitation leather, consisting of sections of cactus plants treated substantially as described.

3. The herein described process of treating cactus consisting in cutting the cactus into sections of desired shape and form, then treating such sections with a preserving and toughening solution, and finally drying the product, substantially as described.

4. The herein described process of producing imitation leather from cactus, consisting in cutting the cactus plant into sections of the desired size and thickness, immersing such sections in a tanning bath or solution until cured, removing the sections from the bath and expelling the surplus moisture or solution therefrom, substantially as described.

902,360. WAGON-BRAKE. JOHN WULF, Omaha, Nebr. Filed May 10, 1907. Serial No. 372,943.



1. In a wagon brake, an actuating shaft provided with a ratchet and with an offset portion, an actuating lever fulcrumed in front of said actuating shaft provided with an upwardly curved lower portion, a connection between the curved end of said lever and the offset portion of the actuating shaft, and a pawl engaging the ratchet on the actuating shaft, said pawl being provided with a foot engaging portion.

2. In a wagon brake, in combination with a support, an actuating shaft extending transversely of the support and positioned thereabove, a ratchet carried by said actuating shaft, a pawl pivoted to said support adapted when in its operative position to coöperate with said ratchet and to rest upon said support when in its inoperative position, said pawl being provided adjacent the free end thereof with a laterally extending foot engaging portion adapted to lie in a plane above the support when the pawl is in its inoperative position.

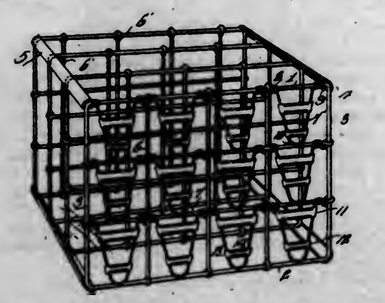
3. In a wagon brake, in combination with a support, an actuating shaft extending transversely of the support and positioned thereabove, a ratchet carried by said actuated shaft, and a gravity pawl pivoted to said support adapted when in operative position to coöperate with said ratchet and to rest upon said support when in inoperative position, said pawl being provided with a laterally extending foot engaging portion adapted to lie in a plane above the support when the pawl is in its inoperative position.

4. In a wagon brake, the combination with a support, an actuating shaft extending transversely of the support and journaled thereabove provided with an upwardly extending arm intermediate the ends thereof, an actuating lever pivoted on said support in front of said actuating shaft, said lever having a curved lower portion extending upwardly above the pivot point thereof and having its end bent inwardly towards the body portion of said lever, and a connection between the inwardly bent end of said lever and the free end of the arm extending from the actuating shaft.

5. In a wagon brake, the combination with a support, an actuating shaft extending transversely of the support and journaled thereabove provided with an upwardly extending arm intermediate the ends thereof, a foot lever pivoted on said support in front of said actuating shaft said lever having a curved lower portion extending upwardly above the pivot point thereof and inwardly towards the body portion of said lever, and a link pivotally connecting the inwardly bent extremity of the foot lever and the outer end of the arm carried by the actuating shaft.

[Claims 6 and 7 not printed in the Gazette.]

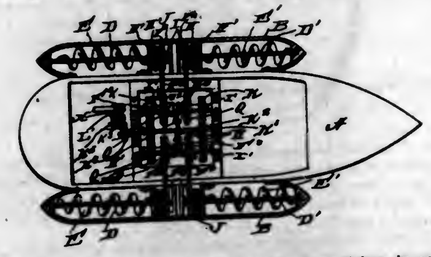
902,361. PHONOGRAPH-RECORD CASE. WARREN S. YELL, Wartrace, Tenn. Filed May 2, 1908. Serial No. 430,624.



1. A phonograph record-holding case comprising a series of rectangular frames embodying intermediate cross bars intersecting each other at right angles, corner stringers connecting said frames, and self-closing shutters mounted on one of the outside frames controlling the entrance to the record-holding compartments formed by said frames and the intersecting cross bars thereof, substantially as described.

2. A phonograph record-holding case embodying a plurality of record-holding compartments, in combination with a plurality of shutters one for each compartment, each shutter consisting of a piece of spring wire bent into substantially U shape and having the ends thereof coiled to form shutter-closing springs, one or more label holders for each shutter, each label holder consisting of a strip of sheet metal having the opposite ends thereof connected to the opposite portions of the shutters and provided with label retaining flanges, substantially as described.

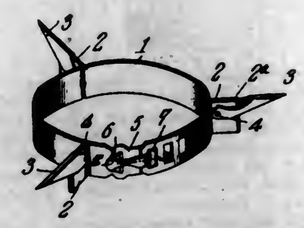
902,362. PROPELLER FOR BOATS. RINNERT ADNSON, Cleghorn, Iowa. Filed Mar. 3, 1908. Serial No. 419,003.



1. A propelling apparatus for boats comprising, in combination with a hull, longitudinal passageways along the opposite sides of the boat, said passageways tapering at their ends, propeller shafts journaled in each passageway, sprocket wheels fixed to the inner ends of said propeller shafts, housings over said sprocket wheels, shafts journaled in said housings, sprocket chains connecting the said shafts in the housings with said sprocket wheels upon the propelling shafts, and clutch mechanism for causing said propeller shafts to rotate, as set forth.

2. A propelling apparatus for boats comprising a hull having two passageways parallel to each other upon the opposite sides of the boat, the upper surfaces of said passageways being inclined toward the ends thereof, said passageways provided with vertical partitions which project above the passageways and form housings, propeller shafts journaled at their inner ends within said passageways, shafts journaled in the housings, sprocket wheel and chain connections between said shafts in the housings and said propeller shafts, clutch collars, and means for throwing the same into gear connection with one or another of the propeller shafts, as set forth.

902,363. ATTACHMENT FOR ICE-CREAM CANS. EUGENE G. APPLETON, Burlington, Iowa. Filed July 30, 1907. Serial No. 386,251.



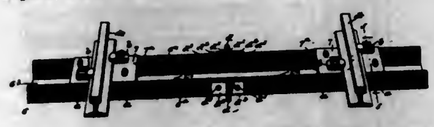
1. A device for centering cans comprising a band, means carried by the band for clamping the same about a can, lugs radiating from the band, and spurs pivotally mounted upon the lugs and disposed to coöperate with the walls of a receptacle to hold the can against movement in one direction.

2. A device for centering cans embodying a band adapted to encircle the can and having a set of radially extending lugs, and a set of spurs each having its inner end doubled to engage at opposite sides of its corresponding lug, and a pivot pin for connecting each lug and its corresponding spur to permit the latter to turn through a limited angle.

3. A device for centering cans embodying a band composed of flexible material having a set of alining apertures in one end and a lever pivotally attached to its opposite end and adapted to coöperate with any one of the said apertures, and a set of spurs on the band to engage the walls of the ice receptacle.

4. An attachment of the character described embodying a band composed of a strip of flexible metal having portions thereof folded to form outwardly extending radial lugs, means for clamping the band on the cans, and a set of spurs pivoted on the said lugs and adapted to move into and out of engagement with the walls of the ice receptacle.

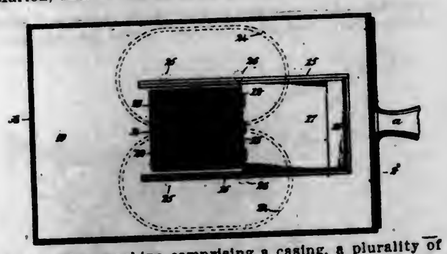
902,364. METALLIC RAILROAD-TIE. ARCHIE M. BAIRD, Topeka, Kans. Filed Apr. 14, 1908. Serial No. 426,935.



1. A tie comprising a channel shaped body, channel shaped rail stools, having their side walls inserted between the side walls of the tie body, and seating on the bottom wall of the tie body, said body having bent down projections on its bottom and lateral wings on its sides, each of said wings comprising a strip folded upon itself, and having its free ends bent laterally, and secured to the tie.

2. A tie comprising a channel shaped body, channel shaped rail stools, having their side walls inserted between the side walls of the tie body, and seating on the bottom wall of the tie body, said body having bent down projections on its bottom and lateral wings on its sides.

902,365. COMPUTING BALLOT-BOX. CHARLES A. BALL, Marion, Ind. Filed Sept. 23, 1907. Serial No. 394,104.



1. A voting machine comprising a casing, a plurality of registers in the casing, a series of register actuating ballots for each register, means, whereby the ballots of each series are successively and repeatedly brought into position to be operated, one at a time, and means for preventing the ballots of all the series from being simultaneously operated.

2. A voting machine comprising a casing, a plurality of registers therein, a plurality of series of register actuating ballots, one ballot for each series, being at all times visible, and means for confining and guiding each of said series within the machine casing to cause each ballot of the series when moved to repeatedly move past and operate its register.

3. A voting machine comprising a casing, a plurality of registers therein, a plurality of series of register actuating ballots, one series for each register, means for confining and guiding each of said series within the machine casing to cause each ballot of the series when moved to repeatedly move past and operate its register, means for

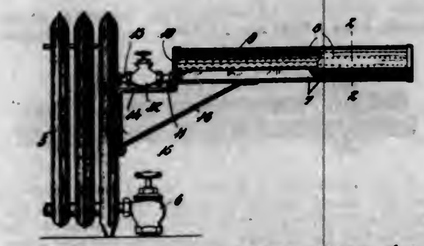
exposing the reading faces of the individual registering mechanisms, an alarm, and means for operating the alarm as each register actuating ballot is progressively moved.

4. A ballot box having an opening therein and a series of balls mounted for sliding and rolling movement below said opening, a single ball of one of the series appearing at said opening.

5. A ballot box having an opening therein and a series of balls mounted for sliding and rolling movement below said opening, a single ball of one of the series appearing at said opening, and an adding mechanism brought into action by the movement of the balls.

[Claims 6 to 17 not printed in the Gazette.]

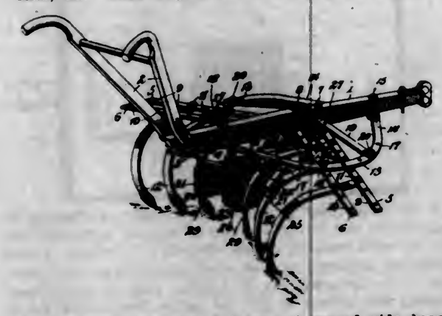
902,366. STEAMING APPARATUS. HERMAN E. BELZ. Chicago, Ill. Filed Jan. 3, 1908. Serial No. 409,132.



1. The combination with a steam-radiator, of a perforated casing secured thereto and projecting therefrom, and a valve controlled connection between the casing and the inside of the radiator.

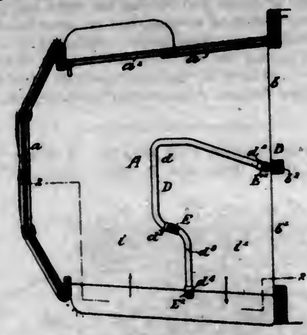
2. The combination with a steam-radiator, of a perforated casing secured thereto and projecting therefrom, a steam-supply connection from the radiator to the casing, a forward extension at the end of the casing adjacent the radiator and having at its extremity a downward bend engageable with the radiator, and a brace between said bent portion and the bottom of the casing.

902,367. COMBINED CULTIVATOR, HARROW, AND RAKE. ABBA BENTON and CHARLES D. JORDAN, Monticello, Ga. Filed Aug. 5, 1907. Serial No. 387,161.



The combination with a beam, of curved side braces secured to the beam, a transverse brace constructed of a single bar of metal and permanently arranged at right angles to the beam and extending therefrom to the side braces, laterally extending parallel bars arranged in pairs and pivoted at their inner ends to the beam, spaced sets of teeth carried by and connecting the members of each pair of laterally extending bars, the inner teeth of the sets being twisted at an intermediate point to arrange their soil-engaging portions at an angle to the line of draft and being interchangeable so as to throw the soil either toward or from the plants, the other teeth having their soil-engaging portions disposed in the same plane as the contiguous portions of the shanks.

902,368. GUARD-RAIL FOR PASSENGER-CARS. SAMUEL T. BOLE, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 18, 1908. Serial No. 449,135.



1. The combination in a passenger car, of a platform, a guard rail mounted above the platform and so dividing it as to form ingress and egress passageways, said guard rail being capable of being raised or lowered bodily into or out of position.

2. The combination in a passenger car, of a series of vertical posts, a guard rail vertically adjustable on said posts, and means for holding the guard rail in position to divide the platform into separate passageways.

3. The combination of a platform of a passenger car, a series of vertical posts, a guard rail adapted to slide vertically on said posts, means for retaining the guard rail in position about the waist line of a passenger, and means for retaining it in its raised position so as to provide an unobstructed passageway.

4. The combination of the platform of a passenger car, a series of posts, a guard rail when in one position dividing the platform into ingress and egress passageways, stops to limit the downward movement of the rail, and a catch adapted to retain the rail in its raised position.

902,369. TRACTION WHEEL. FRANK BOTTRILL, Tintinara, South Australia, Australia. Filed Oct. 15, 1907. Serial No. 397,484.



1. The combination with a wheel having a grooved rim, of a plurality of oscillatable bearers, and cables connecting the bearers to the wheel, the cables of each bearer crossing each other and pivoted to the ends of the bearers, one cable being pivoted at the center of width of the bearer and to the rim at the center of its groove, the other two cables being pivoted adjacent to the sides of the bearer and of the groove.

2. An improved road wheel, comprising a wheel rim formed with a central flange and two side flanges with grooves between the central and each of the side flanges said rim being formed of three annular portions connected together by short channel-shaped pieces, in combination with a series of oscillatable bearers arranged in two circles, the bearers in each circle being arranged end to end and each bearer being flexibly attached to the wheel rim by means of cable connections approximately the full length of the bearer, substantially as described.

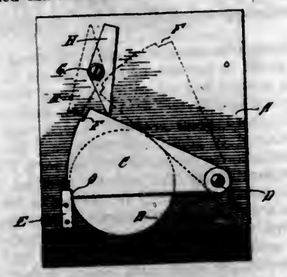
3. In an improved road wheel, the combination with a rim having a central flange and two side flanges, of a series of oscillatable bearers mounted end to end between such flanges in two sets or circles and flexibly attached to the rim, substantially as described.

4. A wheel having a rim formed of three rings or annular portions, and spaced pieces connecting the rings, said pieces being substantially U-shaped in cross section and provided at the ends of their side members with flanges, by means of which they are secured to the rings.

5. In an improved road wheel, a rim having a central flange and two side flanges with grooves between, a series of oscillatable bearers arranged end to end between such flanges in two sets or circles and cables attached at the one end to the wheel rim and at the other end to the bearers, substantially as described.

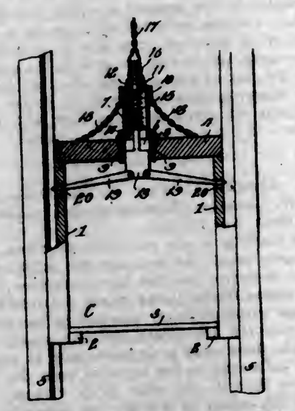
[Claim 6 not printed in the Gazette.]

902,370. TRAP-NEST. EDWIN M. BROWN, Ashtabula, Ohio. Filed Mar. 25, 1908. Serial No. 423,197.



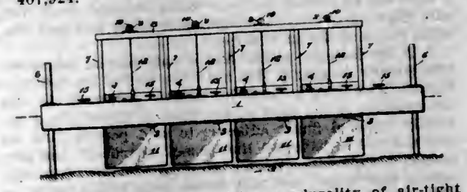
In combination with an apertured board, a trap door pivoted a short distance from the marginal edge of the opening in said board, a stop upon the latter to limit the downward throw of the door, the upper portion of the swinging end of the latter provided with a shoulder, a pawl pivotally mounted at one side of its center upon said board and having two operative ends, one being heavier than the other, the heavier end of the pawl adapted to engage said shoulder to hold the door upon said stop, said pawl being so mounted with respect to the door that the heavier end of the pawl will hold its opposite end against the door when the trap is set, as set forth.

902,371. ELEVATOR. SAMUEL BRUCE, Helvetia, Pa. Filed Oct. 17, 1907. Serial No. 397,862.



An elevator car having side members and a cap beam, the former provided with guide openings and the latter with an aperture, a cylindrical casing secured upon the cap beam in registry with the aperture, a screw threaded cap adjustably connected with the casing, a stem guided through the cap having an annular flange and a head or enlargement, the latter guided in the aperture in the cap beam, normally inclined dogs connected pivotally with the head or enlargement and slidably and pivotally mounted in the guide openings in the side members of the car, a spring coiled upon the stem between the annular flange and the adjustable cap of the casing, a flexible hoisting element connected with the upper end of the stem, and auxiliary flexible elements connecting the hoisting element with the cap beam.

902,372. MOVABLE DIKE. JAMES A. CAMERON, Memphis, Tenn., assignor of one-half to William King Burton, Memphis, Tenn. Filed Dec. 24, 1907. Serial No. 407,924.



1. A floating dike comprising a plurality of air-tight compartments, adjustable gates carried by the dike for changing the course of currents, and means for submerging and raising said dike.

2. In a device of the class described, a float, a plurality of compartments in the float, means intermediate the compartments for changing the course of the stream, and means for flooding the compartments.

3. In a device of the class described, a float, means for raising and lowering said float in the water, a plurality of vertically movable gates adapted to extend down to the bottom of the river from the float, means for raising and lowering the gates, means for submerging the float and means for holding the device in any pre-determined position in the stream.

902,373. SPARK-PLUG ATTACHMENT. FREDERICK D. CASEY, North Water Gap, Pa. Filed July 25, 1907. Serial No. 385,457.

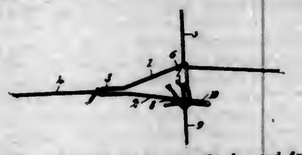


The combination with a spark plug, of a disk detachably connected therewith, and a cover for the plug, the edge of the cover frictionally engaging the edge of the disk, whereby to retain said cover in place, said cover having an opening to permit the passage of a conductor.

902,374. TIE-FASTENER. JOSEPH P. CHAMBERS, Chattanooga, Tenn. Filed Oct. 23, 1907. Serial No. 398,727.

1. A tie fastener, comprising a body having means for holding a line at one end of the latter, a part formed to engage the line intermediate the ends of the same to permit the direction of the line to be changed, and a second part having a tapered recess, for gripping the line near the free end thereof, said first part adjacent to said second part having a finger, said finger being upwardly bent to permit

the line to be looped thereabout before being inserted in said recess whereby a knot can be formed.



2. A tie fastener, comprising a body formed from a bent elongated member, and having means for permanently holding a line near one end of the latter, a portion curved to engage the line intermediate the ends of the same, a finger adjacent to said curved portion; and an arm separated from said finger and having a tapered recess, said finger being upwardly bent to permit the line to be passed thereabout before being inserted in said tapered recess, whereby a knot can be formed, said arm being inclined away from said finger, said curved portion, said finger and said arm being substantially in alinement.

3. A tie fastener, comprising a body having means for permanently holding a line near one end of the latter, a portion presenting a concavity adapted to retain the line intermediate of the ends of the same, a laterally and upwardly disposed finger adjacent to said portion, and an arm adapted to have the line passed thereabout and presenting a tapered recess for gripping the line, said concavity, said finger, and said recess lying substantially in alinement transversely of the length of the fastener.

4. A tie fastener, comprising an elongated body bent upon itself and adapted to be secured at the bend, said body having at one side of the bend a portion presenting a concavity adapted to retain the line intermediate of the ends of the same and a laterally and upwardly disposed finger adjacent to said concavity, said body further having at the other side of the bend an arm adapted to have the line passed thereabout and presenting a tapered recess for gripping the line.

902,375. ENVELOP. JOHN A. CHEAPE, Charlottesville, Va. Filed Oct. 19, 1907. Serial No. 398,273.



As an article of manufacture, an envelop having the usual flap and provided with a flexible auxiliary flap adapted to be inserted in the envelop and cover that portion of the interior of the envelop usually exposed between the upper edge of the back and the connecting line of the flap with the envelop, and the main flap provided with adhesive material at a point to adhere to the auxiliary flap when closed and not to the envelop, whereby said auxiliary flap is removed from the envelop with the main flap.

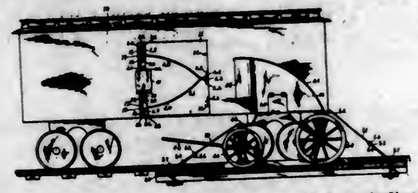
902,376. GAME-BOARD. MARTIN CHRISTOPHERSON, Grafton, N. D. Filed Mar. 20, 1908. Serial No. 422,325.



1. A game board comprising a table having a series of concavities or ball seats therein, a series of wickets secured to the table at different angles, a curved flange or cushion against which the ball is projected and converging flanges, said cushion and flanges having suitable holes therein.

2. A game board comprising a table portion having ball seats and wickets thereon, a curved cushion provided with ball holes and converging flanges provided with guards at their terminal ends.

902,377. MAIL-BAG-CATCHING APPARATUS. HERBERT W. CROOK, Chicago, Ill. Filed Oct. 26, 1907. Serial No. 399,243.



1. An apparatus for the purpose specified, including a frame attached to the side of a car, means for detachably supporting a mail bag on said frame, a receiving device coacting with said frame, said device consisting of a receptacle mounted upon traction wheels and having an opening adapted to admit said mail bag, the margins of said opening adapted to engage the supports of said bag.

2. An apparatus for the purpose specified, including a frame attached to the side of a car, means for detachably suspending a mail bag to said frame, a receiving apparatus coacting with said frame, said apparatus consisting of a receptacle mounted upon traction wheels and having an opening adapted to admit said bag, a curved surface arranged to receive the impact of the released mail bag, and means for anchoring said apparatus.

3. An apparatus for the purpose specified including a frame removably attached to the side of a car, a tripping device for detachably suspending a mail bag to said frame, a receiving receptacle mounted upon traction wheels and adapted to engage said tripping device for the purpose of disengaging said bag, and means for gradually lessening the momentum of the released bag.

4. A device for the purpose specified, including a frame attached to the side of a car, a tripping device for detachably suspending a bag from said frame, a receptacle arranged in the path of the said frame, said receptacle mounted upon traction wheels and coacting with the tripping device, to detach said bag, means for gradually lessening the momentum of the released bag, and means for anchoring said receptacle.

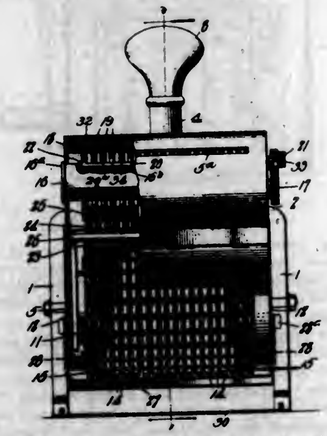
5. A device for the purpose specified, including a frame attached to the car, swiveled supports for a mail bag, a receiving truck mounted upon wheels, a body supported upon the truck and having an opening to receive a mail bag, the margins of said opening adapted to engage said swiveled supports when the car is in motion, and means for anchoring said truck in the path of said frame.

[Claims 6 to 9 not printed in the Gazette.]

902,378. STAMPING AND NUMBERING MACHINE. EVAN W. CROSSAN, Wilmington, Del. Filed June 23, 1906. Serial No. 323,022.

1. In a machine of the character described, a printing wheel, a gear wheel for rotating the printing wheel to bring into operative position the characters thereon, an inclosing casing for said gear wheel, a rotatable cylinder, a drive gear wheel rotatably mounted on the cylinder and meshing with the first-mentioned gear wheel, means for coupling the drive gear to said cylinder to rotate therewith, and indicating means mounted upon the drive gear to one side thereof, the same being viewable from the outside of the casing to indicate the respective positions of said printing wheel.

2. In a hand stamp, oppositely disposed upright supports, a reciprocating printing device including a cylindrical support having at opposite ends pintles arranged to pass through elongated slots in the respective upright supports, printing disks mounted upon said cylindrical support, means for imparting rotary movement to any of said printing disks including a series of disks mounted upon a suitable support, an inclosing casing for said printing disks and operating mechanism, a rod for imparting reciprocatory movement to said casing and the parts carried thereby, means arranged outside of the upright supports to detachably engage the protruding ends of the pintles of the cylindrical support for the printing disk, and a detachable connection between the rod and casing, whereby the parts may be disengaged from said supports.



3. In a hand stamp, a printing device, a reciprocating rod therefor, means for locking the rod intermediate its limits of movement, including a key arranged to pass through a slotted portion of said rod, the said key having a shoulder thereon arranged to engage with an enlarged portion intermediate the ends of the slot in the rod, an inking attachment for the printing device, means for spacing the inking attachment from the printing device when the rod is in locking position and for adjusting the printing device when the rod is in locking position.

4. In a hand stamp, a frame, a rotatable printing device, a cylindrical support therefor, a reciprocating rod therefor, the rod having a longitudinal slot therein for the passage of a transversely extending guide pin mounted on said frame, the said pin, a spring support for said rod, and the said pin having a part arranged to engage the rod to lock the rod with the parts carried thereby from movement relative to the frame, in combination with a rotatable member carried by the frame and coöperating gearing on the rotatable member and printing device for rotating the printing device, when the rod is locked from movement.

5. In a hand stamp, a frame, an inking pad, a printing device, a reciprocating support therefor, the support having a longitudinal slot therein for the passage of a transversely extending guide pin mounted on said frame, the said pin, the said support being spring pressed, and the said pin being movable and having a shoulder thereon arranged to engage with an enlarged portion intermediate the ends of the slot in the support to lock the same from movement at a point where the printing device will be spaced from the inking pad, and means for adjusting the printing device when thus separated.

[Claims 6 to 24 not printed in the Gazette.]

902,379. FLUE-CUTTER. CORNELIUS J. CROWLEY, Burlington, Iowa. Filed June 20, 1907. Serial No. 379,968.

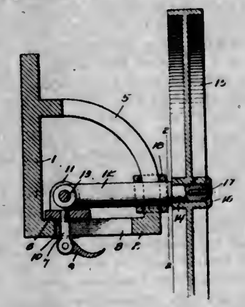
1. A flue cutter comprising a body portion counter-bored from the rear throughout a portion of its length and provided with a radial opening or aperture, the inner end of which is provided with a rounded auxiliary seat, of a cutter having a rounded portion which fits the auxiliary seat and turns thereon, and a holder or bolt inserted and removable from the rear end of the tool and extending through an opening in the cutter to retain the latter in position in the body of the tool.



2. A flue cutter comprising a body portion, the forward end of which is fluted, and counter-bored from the rear throughout a portion of its length and provided with a radial opening or aperture, the inner end of which is provided with a rounded auxiliary seat, of a cutter having a rounded portion which fits the auxiliary seat and turns thereon, and a holder or bolt inserted and removable from the rear end of the tool and extending through an opening in the cutter to retain the latter in position in the body of the tool.

3. In a flue cutter, the combination with a body portion having a counter-bore from the rear end forward on two different diameters and provided at the juncture of the two different counter-bores with a radial opening or aperture, the inner end of which is in the form of a rounded auxiliary seat, the rounded portion of which is coincident with the larger bore of the tool, of a cutter fitted to turn in the radial aperture with its inner end rounded to fit the auxiliary seat and provided with an opening adapted to coincide with the smaller bore in the body of the tool, and a holder removably inserted through the bore of the tool, said holder having two diameters corresponding to the large and small bore, the portion having the smaller diameter passing through the opening in the cutter whereby to retain the latter in position in the radial opening or aperture.

902,380. PLOW-HOLDER. BURTILLE S. CURTIS, Dexter, Me. Filed Apr. 21, 1908. Serial No. 428,318.



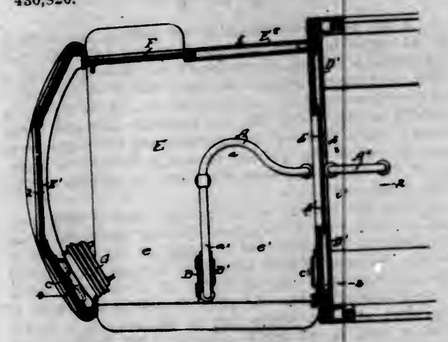
1. A plow holder comprising a bracket, a pivot block adjustably mounted upon the bracket, a shaft pivotally mounted on the block, means for securing the shaft in adjusted position and a wheel journaled on the shaft.

2. A plow holder comprising a bracket, a pivot block adjustably mounted upon the bracket, a shaft pivotally mounted on the block, a bearing block adjustably mounted on the bracket, said shaft passing through the bearing of the block, and a wheel journaled on the shaft.

3. A plow holder comprising a bracket, a pivot block adjustably mounted on the bracket, a shaft pivotally mounted on the block, an arm provided with notches, a bearing block adjustably mounted on the arm, the shaft passing through the bearing of the block, and a dog pivotally mounted upon the bearing block for engagement in one of said notches.

4. A plow holder comprising a bracket provided with an elongated slot, a pivot block, a bolt carried by the pivot block and passing through the slot, a cam mounted upon the bolt for engagement with the bracket, a shaft pivotally mounted upon the block, means for securing the shaft in adjusted position and a wheel journaled on the shaft.

902,381. PASSENGER-CAR. SAMUEL M. CURWEN, Haverford, and WARREN M. SMITH, Moores, Pa., assignors to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 4, 1906. Serial No. 430,820.



1. The combination in a passenger car, of a body portion, a platform, a transverse partition separating the platform from the body of the car, a doorway therein, doors adapted to close the doorway, a rail dividing the platform into ingress and egress sections, and a continuation of said rail extening into the body of the car beyond the doors.

2. The combination in a passenger car, of a body portion, a platform, a partition separating the platform from the body of the car and having a doorway therein, sliding doors for closing said doorway, and two rails dividing the doorway into ingress and egress sections, one rail being within the car and terminating at the door, the other rail being on the platform and terminating at the door.

3. The combination in a passenger car, of a body portion, a platform, a partition separating the platform from the body of the car and having a doorway therein, sliding doors for closing said doorway, and two rails dividing the doorway into ingress and egress sections, one rail being within the car and terminating at the door, the other rail being on the platform and extending at an angle from the door towards the side of the platform.

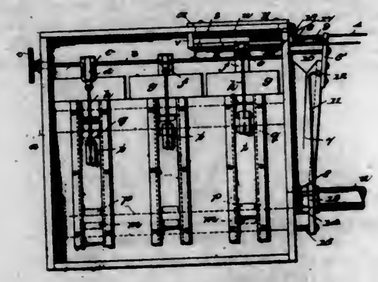
4. The combination in a passenger car, of a body portion, a platform, a transverse partition dividing the platform from the body of the car and having a doorway therein, sliding doors for closing said doorway, two rails, one on the inside of the car and the other on the platform and dividing the doorway into two passageways, the platform rail continuing at right angles towards one side of the platform and offset to increase the size of the egress section of the platform for the purpose described.

5. The combination in a passenger car, of a platform, a rail separating the platform into ingress and egress sections, a folding seat hung on said rail, and means for supporting the seat section in its extended position.

[Claim 6 not printed in the Gazette.]

902,382. AUTOPNEUMATIC MOTOR FOR SELF-PLAYING MUSICAL INSTRUMENTS. JOHN W. DARLEY, Jr., Baltimore, Md., assignor, by mesne assignments, to The American Piano Company, a Corporation of New Jersey. Filed Feb. 5, 1908. Serial No. 414,435.

1. In an auto-pneumatic motor for self-playing musical instruments, the combination of a motor, a source of power therefor an air-tight box inclosing said motor provided with an opening communicating with the atmosphere, a motor regulator consisting of a cut-off valve located over said opening in said box, a bellows connected with said source of power, and connections between said bellows and valve whereby the air pressure in said source of power governs the position of said valve, substantially as described.



2. In an auto-pneumatic motor for self-playing musical instruments, the combination of a motor, an air-tight box inclosing said motor and provided with an opening, an air pipe in communication with said motor a valve normally closing said opening, and means operated by the air pressure within said air pipe for automatically governing the position of said valve, substantially as described.

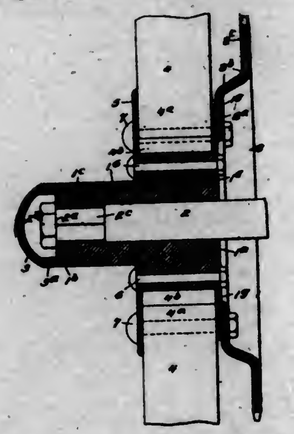
3. In an auto-pneumatic motor for self-playing musical instruments, the combination of a motor, a source of power therefor an air-tight box inclosing the same and provided with an opening communicating with the atmosphere, a valve adapted to open or close said opening, a bellows operatively connected with said source of power, a spring for normally holding said bellows distended, and connections between said bellows and said valve, whereby the air pressure in said source of power automatically governs the position of said valve, substantially as described.

4. In an auto-pneumatic motor for self-playing musical instruments, the combination of a motor, a source of power therefor an air-tight box inclosing said motor and provided with an opening communicating with the atmosphere, a valve adapted to close said opening, means whereby the air pressure in said source of power will automatically vary the position of said valve, a second box within said first named box provided with an opening leading into said first named box, and a tempo valve in said second named box adapted to slide over said last named opening, substantially as described.

5. In an auto-pneumatic motor for self-playing musical instruments, the combination of a motor, a source of power therefor an air-tight box inclosing the same, said box being provided with an opening communicating with the atmosphere, a valve adapted to close said opening, means whereby the air pressure in said source of power will govern the position of said valve, said box being provided with another opening communicating with the atmosphere, a spring-pressed valve normally closing said last named opening, and a wire for operating said valve, substantially as described.
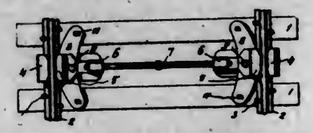
902,383. VEHICLE-WHEEL. ALVIN A. DAUGHERTY, New York, N. Y. Filed Jan. 5, 1907. Serial No. 351,023.

In a vehicle wheel, a series of flat spokes, a hub therefor, said hub having pockets and slots merging therewith, said spokes having their ends provided with cylindrical heads to fit in said pockets, with the spokes projecting through said slots, means for holding said spokes in the slots and pockets, said means comprising a web integrally formed with the hub, a plate removably secured to the hub over the spoke ends, said hub having slotted portions between the spoke slots, and bolts passing through said



last named slotted portions and the plate, for securing the plate in position.

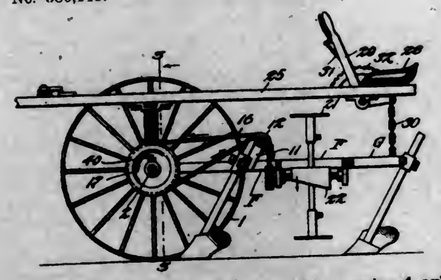
902,384. RAIL-RETAINER. TIMOTHY J. DONOVAN, East Pittsburg, Pa. Filed Apr. 20, 1908. Serial No. 428,189.



1. In a rail fastener, the combination with ties and rails supported thereby, of outer braces for engaging the outer base flanges of said rails, interiorly threaded sockets carried by said outer braces, a rod having threaded ends connecting said outer braces, cross heads secured to said ties and to said outer braces, and inner braces carried by said cross heads for engaging the inner base flanges of said rails, substantially as described.

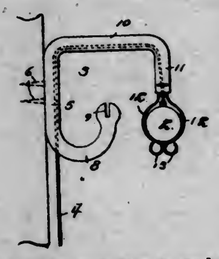
2. In a rail fastener, the combination with ties and rails supported thereby, of outer braces extending under said rails and engaging the outer sides thereof, adjustable connecting means between said outer braces, cross heads secured to said outer braces and connecting with said ties, and inner braces carried by said cross heads for engaging the inner sides of said rails.

902,385. COTTON CHOPPER AND CULTIVATOR. JAMES H. DUNN, Timothey, La. Filed June 21, 1907. Serial No. 380,115.



In a machine of the class described, a pair of axle boxes, an arch connecting the same, an axle journaled in the boxes and having carrying wheels fast thereon, a drive pulley on said axle, means for adjusting said pulley lengthwise of the axle, a main frame pivotally connected to said boxes and embodying side bars and parallel cross bars connecting the same and provided with bearings for interchangeable mechanical farming devices, uprights connected with the central portion of one of the cross bars, guide pulleys journaled on said uprights above the plane of the main frame, a driving band adapted for coöperation with said drive pulley and also adapted to be directed by said guide pulleys, shovels connected to said frame, a superimposed frame bar supported by the arch, and means connected to said frame bar and main frame for effecting the up and down adjustment on the main frame.

902,386. CURTAIN-FIXTURE. FRANK L. EGBERT, Manistee, Mich. Filed Dec. 6, 1907. Serial No. 405,434.



1. A curtain bracket comprising a pendent portion, and spring arms carried by said pendent portion and adapted to embrace and frictionally engage and support the pole while admitting of the removal of the pole therefrom by a downward pulling force exerted on the pole.

2. A curtain fixture embodying a pair of curtain pole supporting brackets, each of said brackets embodying a hollow arm and a pendent portion to which are connected pole embracing and supporting springs, a pole, and a flexible connection extending through the hollow arm of the bracket and adapted to be attached to said pole.

3. A curtain fixture embodying a pair of curtain pole supporting brackets, each of which is provided with parallel sets of oppositely arranged spring arms adapted to embrace and support a curtain pole and permit said pole to be moved out of engagement therewith and pole supporting flexible connections movable between the opposite spring arms of each set.

4. A curtain fixture consisting of a curtain pole bracket embodying a tubular bracket arm forming an inclosing guide for a pole operating cord, and pole embracing and supporting spring arms connected to said arm.

5. A curtain fixture embodying a bracket having an upturned portion provided with a socket for a curtain shade roller and having a pendent extremity, and curtain pole embracing and supporting spring arms connected to said pendent extremity and extending downward therefrom.

[Claim 6 not printed in the Gazette.]

902,387. DETACHABLE-BLADE SCREW-DRIVER. THOMAS J. FEGLEY, Philadelphia, Pa., assignor to North Bro's M'f'g Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 3, 1907. Serial No. 386,908.



1. The combination of a slotted shank having a cavity opening into its slot, a coiled spring mounted in said

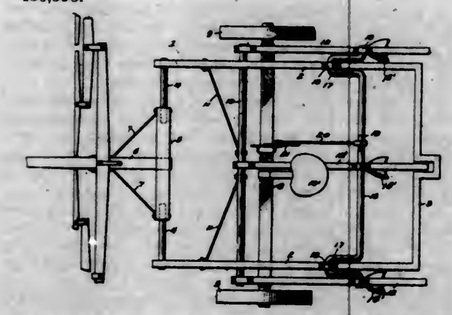
cavity, and a slotted blade entering said slot of the shank and engaging a portion of the side of said spring so as to be frictionally held in position thereby.

2. The combination of a shank slotted at each side leaving a central web, a forked blade adapted to the slots in the shank, and friction means mounted in the web between the slots and engaging the opposite edges of the forked portion of the blade.

3. The combination of a shank slotted at each side and at the end forming a central web, a transverse cavity extending through the web, a spring mounted in the cavity and extending beyond the walls of the web, a forked blade adapted to the slots in the shank, the space between the forks of the blade being narrower than the diameter of the spring so that when the blade is forced into the slots of the shank the spring will be compressed and will frictionally retain the blade in the shank, substantially as described.

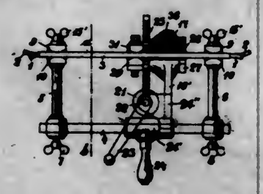
4. The combination of a shank slotted at each side and at the end forming a central web, a transverse cavity extending through the web, a coiled spring mounted in the cavity and free to elongate, the spring extending beyond the walls of the web, with a forked blade, the forks of the blade adapted to the side slots, the distance between the forks being less than the diameter of the spring so that when the blade is forced into the slots of the shank it will compress the spring, the spring retaining the blade in position, substantially as described.

902,388. FURROWING-MACHINE. WILLIAM FLENTJE, Muskegon, Mich. Filed May 2, 1908. Serial No. 430,598.



In a machine of the character described, a frame, an axle having wheels upon the frame, a shaft secured to the frame and having its ends projecting beyond the sides of the frame, plow beams secured to the projecting portions and to the center of the shaft, eyes upon the beams, a shaft for the eyes, eyes upon the sides of the frame, the shaft being provided with offsets engaging the eyes of the frame, an offset upon the shaft, a link for the offset connecting a lever having a spring pressed pawl engaging a toothed segment upon the axle of the machine.

902,389. APPARATUS FOR CONNECTING CONDUCTING AND OTHER WIRES. ANTHONY FODOR, Budapest, Austria-Hungary. Filed Nov. 14, 1907. Serial No. 402,222.



1. A mechanism for twisting lapped wires comprising in combination, a bar, wire holding devices removably and adjustably mounted on said bar and provided with means for locking said devices in their adjusted positions on said bar, and a device for twisting the lapped wires disposed between said holders.

2. A mechanism for twisting lapped wires comprising in combination, a bar, wire holding devices removably and adjustably mounted on said bar and adapted to hold one or both ends of a lapped joint of wire, said devices being provided with means for locking the same in their adjusted positions on said bar, and a device for twisting the lapped joint movably mounted on said bar and adapted to grip the joint centrally and form a right and left hand twist when both of said holding devices are employed, said twisting device serving when one of said holders is employed to grip one end of said joint and twist the wires in one direction.

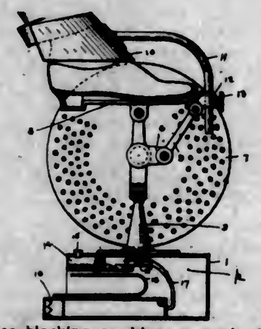
3. A mechanism for twisting lapped wires to join the same comprising in combination, a device for twisting said wires and adapted to engage the same at a central point, and pivotally mounted holders adapted to engage the ends of the lapped wires, the pivotal mountings of said holders permitting the same to turn to compensate for the shortening of the wires as the same are being twisted.

4. A mechanism for twisting lapped wires to join the same comprising in combination, a device for twisting said wires and adapted to engage the same at one end of the lapped joint, and a pivotally mounted holder adapted to engage the wires at the other end of the joint, the pivotal mounting of the holder permitting the same to turn to compensate for the shortening of the wires as the same are being twisted.

5. A mechanism for twisting lapped wires comprising in combination, a wire holding device, a wire twisting device coöperating therewith, means on which said holding and twisting devices are independently adjustable, and means for locking said holding device in adjusted positions.

[Claim 6 not printed in the Gazette.]

902,390. SHOE-BLACKING MACHINE. WILLIAM C. FORD, Lawrence, Mass. Filed July 15, 1907. Serial No. 383,765.

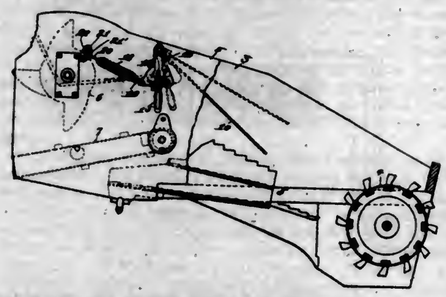


1. In a shoe blacking machine, a crank shaft, rotary brushes carried thereby, an intermediately pivoted foot rest disposed between the faces of the brushes, and an operative connection between said foot rest and the crank shaft.

2. In a shoe-blacking machine, a shaft having an intermediate crank, brushes carried by said shaft on opposite sides of said crank and having their bristles facing each other, an intermediately pivoted foot rest disposed between the bristle portions of said brushes, a connecting rod operatively connecting said foot rest and the crank of said shaft.

3. In a shoe-blacking machine, a rotary brush, a foot rest, an operative connection between said foot rest and the rotary brush whereby the movement of the former imparts movement to the latter, and an adjustable shield carried by said foot rest.

902,391. BAND-CUTTER AND FEEDER. WILLIAM J. FOOTITT, Carrington, N. D., assignor to Advance Thresher Co., Battle Creek, Mich., a Corporation of Michigan. Filed Feb. 12, 1907. Serial No. 357,109.



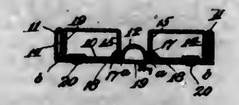
1. In a machine of the class described, the combination of a casing, an oscillatory plate having segmental slots, bushings fitted in said slots and extending outwardly beyond the outer and rear faces of the plate, bolts extending through the casing and bushings, nuts on the bolts to engage the outer ends of the bushings, a regulator, means for adjustably connecting the regulator with said plate, and a spring acting against said plate.

2. In a machine of the class described, the combination of a cylinder, a feeder for supplying material to the cylinder, a regulator coöperative with and adapted to regulate the supply of material to the feeder, a plate coöperative with and oscillatory relatively to the regulator, a hand-lever rigidly connected with the regulator, a detent supported by the hand-lever to engage the plate at different places to effect the angular adjustment of said regulator, and a spring acting against the plate to maintain the regulator yieldingly in its working position.

3. In a machine of the class described, the combination of a cylinder, a feeder for supplying material to the cylinder, an oscillatory regulator having a shaft to turn therewith, said regulator being adapted to regulate the supply of material to the feeder, a plate loosely supported by said shaft, a hand-lever rigidly connected with the shaft to swing the regulator, a detent supported by the hand-lever to engage the plate at different places to hold the regulator in its different angular adjusted positions, and a spring acting against the plate to yieldingly hold said regulator in its operative position.

4. In a machine of the class described, the combination of a cylinder, a feeder for supplying material to the cylinder, a regulator coöperative with and adapted to regulate the supply of material to the feeder, a plate coöperative with and oscillatory relatively to the regulator, a hand-lever rigidly connected with the regulator, a spring-actuated latch supported by the hand-lever, the plate having several slots or openings to receive the working portion of said detent, and the hand-lever being slotted for the passage of said detent, and a spring acting against the plate to hold the regulator in its different adjusted positions.

902,392. EXTENSION-TABLE SLIDE. ORRIN G. FRANKS, Chicago, Ill., assignor to The Seng Company, Chicago, Ill., a Corporation of Illinois. Filed May 4, 1908. Serial No. 430,783.



1. In an extension-table slide, the combination, of a center section having longitudinal rail portions, and end sections each having a rail portion interlocking with one of the rail-portions of the center section and a straight rail bearing on said center section.

2. In an extension-table slide, the combination, of a center section having longitudinal rail portions, and end sections having opposite rails bearing upon the center section and one of said rails shaped to interlock with a rail portion of said center section.

3. In an extension-table slide, the combination, of a center section having longitudinal rail portions, and end sections each having rails along its longitudinal edges bearing upon the center section, one of the rails of the end section being in interlocking slidable engagement with one of the rail portions of the center section.

4. In an extension-table slide, the combination, of a center section having longitudinal rail portions and an intermediate guide-rail, and end sections each having longitudinal rails spaced apart and bearing upon the center section, one of the rails of the end section interlocking with a rail-portion of the center section and the other rail of said end section bearing alongside the aforesaid guide-rail.

5. In an extension-table slide, the combination, of a center section having inverted U-shaped rail portions along its longitudinal edges, and end sections each having longitudinal rails spaced apart and bearing upon the center section, one of said rails on the end section being U-shaped in cross-section for interlocking slidable engagement with the corresponding rail portion of the center section.

[Claims 6 to 8 not printed in the Gazette.]

902,393. COMBINED POULTRY-ROOST AND VERMIN-TRAP. WILLIS W. FRANTZ, Waynesboro, Pa. Filed Apr. 28, 1908. Serial No. 429,708.

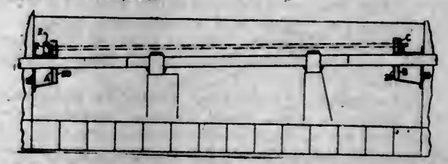


1. In a poultry roost, a frame having V-shaped grooves, a perch formed of a pair of loosely fitting superposed sections having openings, the lower section fitting within the V-shaped grooves, and pins extending through the openings in both sections and secured in the frame.

2. In a poultry roost, a frame having V-shaped grooves, pins extending upward from the bases of the grooves, and loosely fitting perch sections mounted on the pins, the lowermost section fitting within the grooves, and both sections having longitudinal grooves forming a vermin trap.

3. In a combined poultry roost and vermin trap, a perch formed of two longitudinal sections, the opposing faces of which are provided with longitudinal grooves, the upper section having openings communicating with said grooves, and steadying pins extending through the lowermost section and fitting loosely in the openings in the upper section.

902,394. APPARATUS FOR INDICATING THE MAGNITUDE OF THE TORQUE IN SHAFTING. JOSEPH H. GIBSON, Liscard, England, assignor of one-half to Restal Ratsey Bevis, Hamptoune, England. Filed Feb. 9, 1907. Serial No. 356,648.



1. In combination a shaft, an opaque member carried thereby having an opening, a source of light on one side of said member arranged to cast a beam of light through said opening longitudinally of the shaft, and a device carried by another portion of said shaft in the normal path of said beam and adapted to indicate by its displacement in relation to said beam the amount of torsional strain on the shaft.

2. In combination a shaft, an opaque member carried thereby having an opening, a source of light on one side of

said member arranged to cast a beam of light through said opening longitudinally of the shaft, and a device carried by another portion of said shaft in the normal path of said beam and adapted to indicate by its displacement in relation to said beam the amount of torsional strain on the shaft, and means for indicating the amount of displacement of said device.

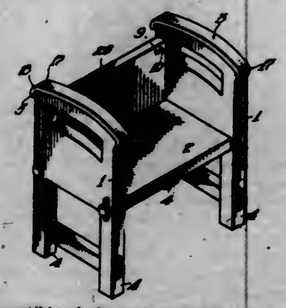
3. In combination;—a shaft, a source of light, a pair of disks attached to the shaft and provided with means for transmitting a beam of light from the said source, a sighting slit to receive the said beam of light, and means for moving and measuring the movement of the said sighting slit; substantially as described.

4. In combination;—a shaft, a source of light, a pair of disks attached to the shaft, each having a slit to transmit a beam of light from the said source, and means for indicating the change of direction of the said beam of light due to angular strain of the shaft; substantially as described.

5. In combination;—a shaft, a source of light, a pair of disks attached to the shaft each having a slit to transmit a beam of light from the said source, a sighting slit to receive the said beam of light, and means for moving and measuring the movement of the said sighting slit; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

902,395. COMBINATION ROCKER AND STANDARD CHAIR. ARTHUR L. HALEY, Los Angeles, Cal. Filed May 10, 1906. Serial No. 316,176.

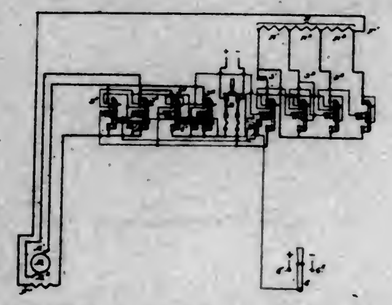


In an invertible chair, end standards, one end of each of which is rounded and extended to form a rocker, a seat rigidly secured to said standards, a movable back, a metallic sheath on each rocker extending substantially from end to end thereof and provided at one end with a perforation, said sheaths serving to form a protection when the rockers are down and an ornament when they are up, and a curved bar extensibly mounted in each sheath with one end projecting from said perforation.

902,396. CONTROLLING SYSTEM FOR ELECTRIC MOTORS. JAY H. HALL, Cleveland, Ohio, assignor to Electric Controller and Supply Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 13, 1906. Serial No. 305,746.

1. In a system for controlling motors, the combination of a master-controller, motor reversing mechanism governed thereby, a single conductor connecting said master-controller and said reversing mechanism, a resistance controlling switch, an electro-magnet having its winding in series with said conductor, and a circuit controlled by said magnet to control said resistance controlling switch.

2. In a system for controlling motors, the combination of a reversing switch, electro-magnets for operating the same, a resistance switch, an electro-magnet for operating the same, a master-controller, a single conductor from the master-controller to first electro-magnets, a relay in series with the single conductor, the relay switch, on energization of the relay magnet, being connected in circuit with said conductor, and means for preveting the operation of the reversing switch when the master-controller is thrown to off-position.



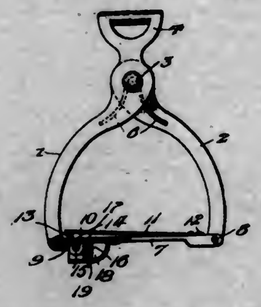
3. In a system for controlling motors, the combination of a reversing switch, electro-magnetic mechanism for operating the same, a plurality of resistance switches, electro-magnetic mechanism for operating the same, a master-controller connected to the electro-magnets of the said mechanisms, means for preventing the operation of the reversing switch when the master-controller is thrown to off-postion, means for deënergising the electro-magnets of the resistance switches when said controller is thrown to off-position, and a blow-out magnet for one of said resistance switches, the connections being such that the motor circuit is always opened at the switch having said blow-out magnet.

4. In a system for controlling motors, the combination of a plurality of motor units, each including a motor reversing mechanism, a speed-controlling mechanism and a master-controller, a single conductor between the said controller and the reversing and speed-controlling mechanism of the first unit, and a single conductor to connect each unit to the reversing mechanism of the succeeding unit.

5. In a system for controlling motors, the combination of a plurality of motor units, a pair of relay switches and a reversing mechanism in each unit, and a master-controller connected to the reversing mechanism of the first unit and the relay windings of the first unit, one relay switch in each unit controlling the resistance switches of the unit to which it belongs and the other relay switch connecting the unit to which it belongs to the succeeding unit.

[Claims 6 and 7 not printed in the Gazette.]

902,397. SAFETY-STIRRUP. SILAS A. HALL, Brooklyn, N. Y. Filed June 26, 1908. Serial No. 440,541.



1. A stirrup comprising pivoted side members, spring means for normally spreading the same, a bottom member pivoted to one of said side members, a locking device for normally connecting said bottom member to the other side member, a second locking device adapted to be thrown into action by pressure from the foot of the rider

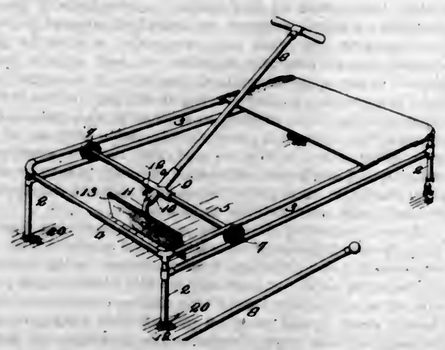
to retract the first-named locking device and maintain a locking engagement between the parts of the stirrup, and means for retracting said locking device upon the removal of the pressure therefrom.

2. A safety stirrup comprising an automatically opening frame, locking means for normally holding the frame closed, and auxiliary locking means for retracting the first-named locking means and maintaining the frame in closed condition, said auxiliary locking means being adapted to be thrown into action by the pressure of the foot of the rider and to be automatically retracted upon the removal of such pressure to permit the stirrup to open.

3. A stirrup comprising pivoted side members, means for spreading the same, a tread bar pivoted to one of said members, a locking device carried by said bar to engage the other pivoted member and hold the stirrup closed, an auxiliary locking device carried by said bar, and a spring member carrying the auxiliary locking device and adapted to be depressed by the pressure of the foot to throw said auxiliary locking device into action and retract the first-named locking device and move it to an inoperative position, whereby upon the removal of the pressure from said spring member the auxiliary locking device will be retracted to permit the stirrup to open.

4. A safety stirrup comprising pivoted side members, a spring for automatically spreading the same, a tread bar pivoted to one of said members and provided with an opening therein, a keeper upon the other member adapted to register with said opening, a spring-actuated locking device upon the underside of the spring bar adapted to engage said keeper and upon depression below the same to be automatically moved to an inoperative position by the spring, a spring plate carried by the tread bar, and an auxiliary locking pin carried by said plate and movable in the opening in said bar, said auxiliary locking pin adapted to be forced down into the keeper upon the depression of the plate to retract said locking device and to maintain locking engagement between the keeper and tread bar whereby upon the removal of pressure from said plate the pin will be retracted and the side members permitted to automatically open.

902,398. FLOOR-DRESSING MACHINE. WALTER S. HAVEN, Racine, Wis. Filed Apr. 25, 1907. Serial No. 370,270.



1. A portable manually operated floor dressing machine comprising a runway, a reciprocating carrier confined thereto, an actuating lever carried by and fulcrumed on said carrier, and a floor dressing tool carried by said lever and raised to and from the floor surface thereby.

2. A portable manually operated floor dressing machine comprising a frame adapted to rest on the floor and forming a slide-way over the floor surface, and a reciprocating vertically swingable tool carrying lever carried by and provided with a fulcrum movable along said slide-way.

3. A portable manually operated floor dressing machine comprising a frame adapted to rest on and be shifted along the floor to be dressed and provided with a slide-way and a reciprocating carrier confined to said slide-way and provided with a manually controlled operating lever swinging thereon and provided with a floor dressing tool.

4. A floor dressing machine comprising a frame, and a vertically movable manually operated lever at the lower free end adapted to receive a floor dressing tool, and provided with a movable fulcrum adapted to reciprocate along said frame.

5. A floor dressing machine comprising a frame adapted to rest on and be shifted along the floor to be dressed, a carrier adapted to reciprocate along said frame, and a manually operated lever carried by and fulcrumed on said carrier to rock vertically and adapted to carry and control a floor dressing tool.

[Claims 6 to 27 not printed in the Gazette.]

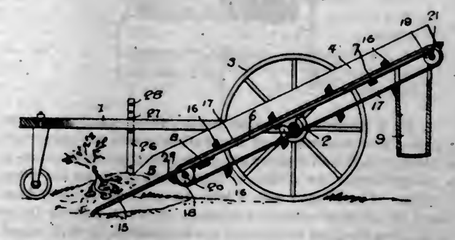
902,399. LACING-LOOP FOR SHOES, &c. WILLARD A. HAYDEN, Columbia Falls, Mont., assignor of one-fourth to Ward Skyles, Columbia Falls, Mont. Filed Feb. 29, 1908. Serial No. 418,564.



1. A blank for a shoe fastener formed to provide a body portion, a neck reduced in width relative to the width of the body portion projecting from each end of the body portion, and a disk head formed at the free end of each neck, said heads being of the same diameter and one of the heads being formed with a series of radial spurs, the body portion of the blank being formed with longitudinally alined spaced openings, said blank being adapted to be bent into U-form to arrange the respective heads and the respective openings in relative alinement.

2. A shoe fastener including spaced parallel walls connected at one end by a transverse portion integral with the walls, the opposing or free ends of the walls being each formed to provide a disk head, a roller revolubly mounted between the respective walls adjacent the transverse portion of the fastener, and spurs projecting from one head toward the other, said spurs being of greater length than the longitudinal dimension of the roller, whereby the free ends of the spurs may be engaged beneath the head opposing that from which said spurs project.

902,400. POTATO DIGGER AND SHAKER. MARTIN HEBTING, Kaw, Okla. Filed Feb. 18, 1908. Serial No. 416,504.



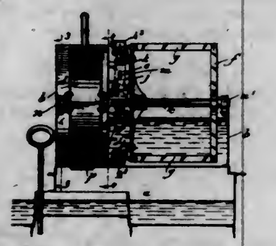
1. The combination with a frame and an axle rotatably mounted in said frame; of a chute pivoted on said axle, a cross bar adjacent the rear end of said chute, a plurality of agitating bars pivoted to said cross bar, a pitman pivotally secured adjacent the opposite ends of said bars, means to move said pitman longitudinally, whereby said agitating bars will be swung laterally on their pivots, a plow at the forward end of said chute, a plurality of slats adapted to travel over said agitating bars, chains to which said slats are secured, means to move said slats longitudinally of the

agitating bars, means between the plow and forward ends of the agitating bars to prevent the soil from descending between the plow and bars.

2. In a potato digger of the class described, the combination with a frame, an axle rotatably mounted on said frame and driving wheels at the ends of said axle; of a chute pivoted to said axle, a plow at the forward end of said chute and a receptacle at the opposite end thereof, a plurality of agitating bars, a cross bar adjacent the rear end of said chute, to which said bars are pivotally secured, a portion of said bars extending over said receptacle, a pitman secured to the opposite ends of said bars, a shaft adapted to move said pitman longitudinally and swing said bars laterally, a bevel gear fixed to said axle, a pinion on said shaft meshing with said gear, an endless belt adapted to move over said agitating bars, sprockets at each end of said belt, shafts supporting said sprockets, one of said shafts being extended from the chute, a sprocket on the extended end of said shaft, a sprocket chain extending around said sprocket, a driving sprocket loosely mounted on the axle and adapted to engage the opposite end of said sprocket chain, a bevel gear on the last mentioned sprocket adapted to be engaged and rotated by said pinion and pivoted means between said plow and the ends of the agitating bars to prevent the soil from descending between the plow and bars.

3. A potato digger of the class described, comprising the combination with an axle and driving wheels therefor; of a chute pivotally mounted on said axle, a cross bar adjacent one end of said chute, a plurality of agitating bars pivoted to said cross bar, a portion of said agitating bars being longer than the remainder of the bars, means to swing said agitating bars on their pivot points, an endless belt formed of slats and sprocket chains adapted to travel over said agitating bars, a plow at the forward end of said chute and a board pivotally mounted between said plow and the ends of the agitating bars, whereby said board will swing upwardly and permit the slats to pass from below to the upper surface of said bars and rest in a horizontal position when not engaged by said slats and prevent the descent of the soil between the plow and the ends of the agitating bars.

902,401. WATER-PURIFYING AND LIKE APPARATUS. ADOLPHE L. HELWIG, Paris, France. Filed Aug. 23, 1907. Serial No. 389,863.



1. In a measuring device for a water purifying apparatus, the combination of a rotating wheel provided with a rotary shaft and a plurality of measuring compartments; a water supply for filling said compartments as the wheel rotates; a tank into which said compartments discharge; stops d^2 on said wheel; a pivoted lever projecting in the path of said stops to control the movement of said wheel; means to control said lever; adjustable measuring cups means for pivotally mounting said cups on said shaft so they may revolve therewith and said cups adapted to hold predetermined quantities of chemicals; a chute having an inclined bottom into which said cups are adapted to discharge, and itself discharging into said tank; and an adjustable stop on said chute adapted to tip said cups as they revolve, whereby said compartments may discharge definite quantities of water, and said cups proportional quantities of chemicals into said tank, substantially as described.

2. In a measuring device for a water purifying apparatus, the combination of a rotating wheel provided with a rotary shaft and a plurality of compartments; a water supply for filling said compartments as the wheel rotates; a tank below said wheel into which said compartments discharge; stops on said wheel; a pivoted lever projecting in the path of said stops to control the movement of said wheel; a spring for controlling said lever; a screw for controlling the tension of said spring; adjustable measuring cups means for pivotally mounting said cups on said shaft so they may revolve therewith and said cups adapted to hold predetermined quantities of chemicals; a chute having an inclined bottom into which said cups are adapted to discharge, and itself discharging into said tank; and an adjustable stop on said chute adapted to tip said cups as they revolve, whereby said compartments may discharge definite quantities of water, and said cups proportional quantities of chemicals into said tank, substantially as described.

3. In a measuring device for a water purifying apparatus, the combination of a rotating wheel provided with a rotary shaft and a plurality of compartments; a water supply for filling said compartments as the wheel rotates; a tank below said wheel into which said compartments discharge; stops on said wheel; a pivoted lever projecting in the path of said stops to control the movement of said wheel; a spring for controlling said lever; a screw for controlling the tension of said spring; measuring cups screw threaded on their interior and provided with the screw threaded adjustable bottoms A^3 means for pivotally mounting said cups on said shaft, so they may revolve therewith and said cups adapted to hold predetermined quantities of chemicals; a chute having an inclined bottom into which said cups are adapted to discharge, and itself discharging into said tank; and an adjustable stop on said chute adapted to tip said cups as they revolve, whereby said compartments may discharge definite quantities of water, and said cups proportional quantities of chemicals into said tank, substantially as described.

4. In a measuring device for a water purifying apparatus, the combination of a rotating wheel provided with a rotary shaft and a plurality of compartments; a water supply for filling said compartments as the wheel rotates; a tank below said wheel into which said compartments discharge; stops on said wheel; a pivoted lever projecting in the path of said stops to control the movement of said wheel; a spring for controlling said lever; a screw for controlling the tension of said spring; a receptacle to hold chemicals; a stirrer mounted on said shaft adapted to rotate therewith and enter said receptacle; a plurality of measuring cups pivotally mounted on said stirrer and adapted to dip up predetermined quantities of chemicals as said shaft rotates; a chute having an inclined bottom into which said cups are adapted to discharge, and itself discharging into said tank; and an adjustable stop on said chute adapted to tip said cups as they revolve, whereby said compartments may discharge definite quantities of water, and said cups proportional quantities of chemicals into said tank, substantially as described.

5. In a measuring device for a water purifying apparatus, the combination of a rotating wheel provided with a rotary shaft and a plurality of compartments; a water supply for filling said compartments as the wheel rotates; a tank below said wheel into which said compartments discharge; stops on said wheel; a pivoted lever projecting in the path of said stops to control the movement of said wheel; a spring for controlling said lever; a screw for controlling the tension of said spring; a receptacle to hold chemicals; a stirrer mounted on said shaft adapted to rotate therewith and enter said receptacle; a plurality of measuring cups each pivotally mounted on said stirrer, provided with screw threads on their interiors and having screw threaded adjustable bottoms, and each adapted to dip up predetermined quantities of chemicals bearing a fixed ratio to the quantities of water in said compartments as said shaft rotates; a chute having an inclined bottom into which said cups are adapted to discharge, and itself discharging into said tank; and an adjustable stop on said chute adapted to tip said cups as they revolve, whereby said compartments may discharge definite quantities of water, and said cups proportional quantities of chemicals into said tank, substantially as described.

902,402. CAR-BODY. WILLIAM H. HEULINGS, Jr., Philadelphia, and WARREN M. SMITH, Moores, Pa., assignors to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 17, 1908. Serial No. 427,611.



1. The combination in a car body, of a series of window posts arranged a given distance apart, a lower panel section and letter board forming window openings, an upper and lower sash closing the window openings, a frame inclosing a pair of window openings and extending above the upper edge of the window openings, and a fixed sash extending from one side of the frame to the other in the space above the window openings.

2. The combination in a car body, of a series of window posts arranged a given distance apart and forming window openings, an upper and a lower sash for each window opening, a window frame inclosing a pair of window openings, a sash extending from one side of the window frame to the other and over the window openings, the glass of said sash being opaque so as to hide from view the letter board and the extension of the central window post.

3. The combination in a car body, of a series of window posts spaced a given distance apart to form window openings, a panel extending along the lower portion of the car body, a letter board extending along the upper portion of the car body, a series of frames each inclosing a pair of window openings, the upper portion of the frame being curved, a fixed sash extending from one side of each window frame to the other side thereof and from the upper edge of the window opening to the frame and hiding from view the upper portion of the window posts extending through the center of the frame and also the letter board above the window openings, a fixed upper sash for each window opening, and ways in the posts for the lower sash to slide in, said lower sash being larger than the upper sash.

4. The combination in a car body, of a series of vertical posts extending from the floor to the roof of the car, each alternate post being wider than the other posts, a side panel, a letter board, a window frame extending from the side panel to a point above the lower edge of the letter board and extending from one wide post to another and forming with the narrow posts two window openings, a sash within the upper portion of the frame extending from one edge of the frame to the other in front of the narrow posts and the letter board, and a sash in the two window openings.

902,403. PROCESS FOR THE PREPARATION OF COMMON SALT FOR DOMESTIC AND OTHER USES. GEORGE T. HOLLOWAY, London, England. Filed Jan. 2, 1906. Serial No. 294,245.

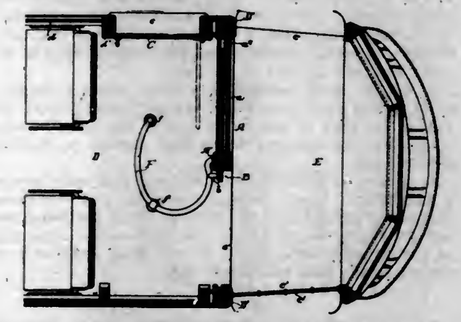
The process of preparing a table salt which consists in producing a dry granulated body of salt having granules of substantially uniform size, and coating said granules with a thin filmiform coating of finely powdered sodium carbonate.

902,404. COMPOUND FOR REMOVING PAINT. ALBERT J. HOOVER, Columbus, Ohio. Filed Nov. 8, 1907. Serial No. 401,320.

1. A liquid paint and a varnish remover consisting essentially of a composition of alcohol, benzol and Venice turpentine.

2. A liquid paint and varnish remover comprising a composition of alcohol, 64 parts, benzol, 64 parts, and Venice turpentine, 2 parts.

902,405. PASSENGER-CAR. HENRY HOWSON, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 12, 1908. Serial No. 432,537.



1. The combination in a passenger car, of a body portion, a platform, a transverse partition dividing the body portion from the platform, said partition having a doorway at one side, a panel closing the other side of the partition so as to prevent ingress or egress of passengers at that side, a door arranged to close the doorway, and a guard within the body of the car extending to a point adjacent to the doorway and inclosing a space for the conductor.

2. The combination in a passenger car, of a body portion, a platform, a partition dividing the body portion from the platform, a doorway at one side of the partition, a panel closing the other side of the partition, a channel in the panel, a sliding door adapted to the channel and arranged to close the doorway, and a guard within the body of the car adjacent to the doorway inclosing the space for the conductor.

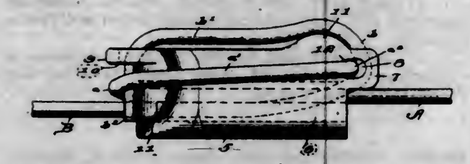
3. The combination in a passenger car, of a body portion, a platform, a transverse partition dividing the body portion from the platform, a center post in said partition, a doorway extending from said center post to a corner post on one side of the car, and a fixed panel extending from the said post to the corner post on the opposite side of the car, a sliding door adapted to close the doorway in the partition, a guard adapted to the center post and extending into the body of the car and separating the space to be occupied by the conductor from the body of the car.

4. The combination in a passenger car, of a body portion, a platform, a transverse partition separating the body of the car from the platform, a doorway in one side of the partition, a door adapted to close said doorway, a doorway in the side of the car near the transverse partition, and a door closing said doorway.

5. The combination in a passenger car, of a body portion, a platform, a transverse partition separating the body portion from the platform, a wide doorway at one side of the partition, a sliding door adapted to close said doorway, a guard within the car inclosing the space for the conductor, a doorway in the side of the car adjacent to the said transverse partition, a pivoted door closing said doorway, both doors being within easy reach of the conductor so as to be under his control.

[Claims 6 and 7 not printed in the Gazette.]

902,406. WIRE-SPLICE. WILLIAM E. HUBER, Carlos, Ind. Filed May 7, 1908. Serial No. 431,352.

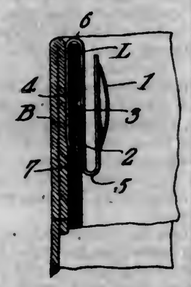


1. A splice comprising a body having a longitudinal bore and perforated ears at its ends, wires passing through the bores from opposite ends thereof, each wire having a return bend at the end of the bore opposite the end at which it enters the same, and a cross bend through the ear at the same end it enters the bore, the cross bend of one wire being gripped between the return bend of the other wire and the end of the body.

2. A wire splice comprising a body having a longitudinal bore to receive the wires, and perforated ears at the ends of the body to receive the ends of the wire, the ears projecting from the ends of the body parallel to the long axis thereof.

3. A wire splice comprising an elongated body having a longitudinal bore to receive the wires, and perforated ears at the ends of the body through which the respective ends of the wires are passed, the perforations extending at a right angle with respect to each other and also with respect to the long axis of the body.

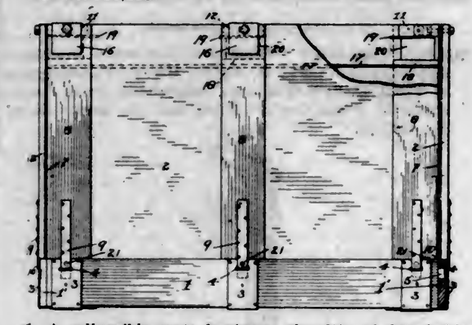
902,407. DRAWERS-SUPPORTER. EDWIN H. HUMPHREY, Lancaster, Pa., assignor of one-fourth to himself, one-fourth to Alice Humphrey, and one-half to Abraham B. Kauffman, Lancaster, Pa. Filed Jan. 9, 1908. Serial No. 410,061.



1. A drawers supporter comprising a head, a shank, and a pin, the shank being disposed in approximate parallelism with the head and with a portion of the pin, and being provided with an upward projecting prong disposed towards the pin, the point of the pin being curved to lie close to the shank.

2. A drawers supporter comprising a head, a shank bent to lie approximately parallel with the head to provide a loop engaging bend, and a pin bent in approximate parallelism with the shank to provide a trousers lining engaging bend, the shank being provided with an upwardly extending prong projected towards the pin and the point of the pin being bent toward the shank.

902,408. COLLAPSIBLE CRATE. HENRY C. HUNTER, Jersey City, N. J.; Agnes Hunter administratrix of said Henry C. Hunter, deceased. Filed Sept. 29, 1902. Serial No. 125,255.



1. A collapsible crate having a plurality of detachable members including a bottom portion and sides detachably engaging the said bottom portion and means for connecting the sides together and for pressing down upon the contents of the crate at any height whereby the sides are drawn up and locked firmly in connection with the bottom portion, substantially as described.

2. In combination, in a collapsible crate, a bottom portion, sides detachably connected therewith and adapted to be drawn up and locked firmly to the said bottom portion, cleats within the crate and connecting the upper portions of the sides, a sliding cover below the said cleats and within the box and means fitting between the cleats and sliding cover adapted to force the cover down upon the contents and draw the sides upwardly to lock with the bottom, substantially as described.

3. In combination, in a collapsible crate, a bottom portion, sides detachably connected therewith and means fitting within the sides, said means forcing the contents of the box downwardly and simultaneously drawing the sides upwardly to lock firmly with the bottom, the said means also serving to hold the sides together, substantially as described.

4. A collapsible crate having a tray bottom with sides extending on all sides thereof, detachable side walls, cleat means fitting within the side walls with through bolts for locking the same thereto, said tray bottom receiving within it the side walls when the crate is collapsed and having locked thereto within its sides the cleat means in precisely the same relation as the said cleat means occupied to the side walls when set up, said cleat means when the crate is collapsed overlying the contained side walls substantially as described.

5. In combination in a crate, a tray having sides and forming the bottom of the crate, detachable side walls adapted to lie wholly within the sides of the tray, means for holding the side walls at their upper ends, said means being adapted to be secured to the tray within its sides when the crate is knocked down to extend across the contained members and hold the members packed in the tray, substantially as described.

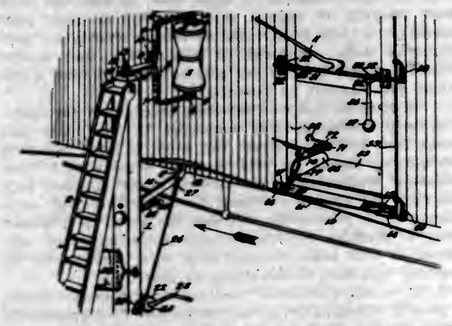
[Claims 6 to 15 not printed in the Gazette.]

902,409. MAIL-BAG-DELIVERY APPARATUS. CHARLES W. HUTZLER, Williamsport, Md., assignor of five twenty-fourths to Herman C. Heffner, five twenty-fourths to George A. Kerschner, and five twenty-fourths to Clarence P. C. Rinker, Martinsburg, W. Va. Filed Mar. 20, 1908. Serial No. 422,302.

1. Mail bag catching and delivering apparatus comprising a catcher wire set obliquely to the side of the track, a grapple adapted to be attached to a mail bag and to be engaged by said catcher wire which acts to snatch the bag off a moving car, and means for stretching and slacking the stretcher wire.

2. Mail bag catching and delivering apparatus comprising a catcher wire set obliquely to the side of the track,

a grapple adapted to be attached to a mail bag and to be engaged by the catcher wire which acts to snatch the bag off a moving car and means for moving a certain portion of said catcher wire toward and away from the track.



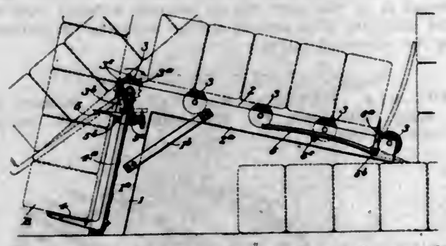
3. Mail bag catching and delivering apparatus comprising a catcher wire set obliquely to the side of the track, a grapple adapted to be attached to a mail bag and to be engaged by said catcher wire which acts to snatch the bag off a moving car, and a stretcher arm to which the catcher wire is connected adapted to move a certain portion of the wire toward and away from the track.

4. Mail bag catching and delivering apparatus comprising a catcher wire set obliquely to the side of the track, a grapple adapted to be attached to a mail bag and to be engaged by said catcher wire which acts to snatch the bag off a moving car, and a stretcher for the catcher wire embodying a movable arm, and means for moving said arm to stretch the wire and hold the same.

5. Mail bag catching and delivering apparatus comprising a catcher wire set obliquely to the side of the track, a grapple adapted to be attached to a mail bag and to be engaged by said catcher wire which acts to snatch the bag off a moving car, and a stretcher for the catcher wire embodying a movable arm, and a windlass and rope for moving said arm.

[Claims 6 to 19 not printed in the Gazette.]

902,410. MACHINE FOR LOADING COTTON. MARK P. JACKSON and AUDLEY D. MAXWELL, Montezuma, Ga. Filed Dec. 7, 1907. Serial No. 405,516.



1. A machine for use in storing cotton bales and the like, having a substantially vertical receiving portion, and a delivery portion connected to the upper end of the receiving portion and adapted to project over an underlying bale, the free end of the delivery portion being lower than its receiving end.

2. A machine for use in storing bales of cotton and the like having a receiving portion, a delivery portion extending away from the receiving portion and connected with the upper part thereof, said delivery portion being provided with devices to facilitate the movement of the bale thereupon; with devices for facilitating the tilting of a bale from the receiving portion onto the delivery portion.

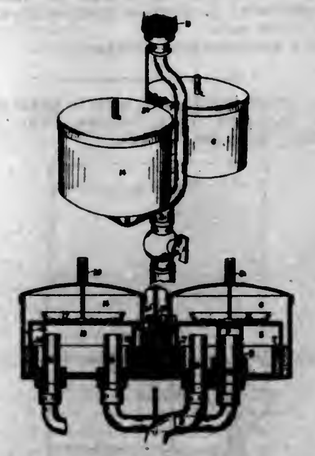
3. A machine for use in storing cotton bales and the like, having a substantially vertical receiving portion, and a delivery portion connected to the upper end of the receiving portion and adapted to project over an underlying bale, the free end of the delivery portion being lower than its receiving end, devices for facilitating the tilting of a bale from the receiving portion onto the delivery portion, and devices on the delivery portion to facilitate the movement of the bale thereupon.

4. A portable machine for use in storing bales of cotton and the like, comprising a substantially vertical receiving portion provided with a platform upon which the bale is up-ended, a downwardly inclined delivery portion connected to the upper end of the receiving portion and onto which the bale is tipped, and means to prevent backward slipping of the bale while being tipped onto the delivery portion.

5. A portable machine for use in storing bales of cotton and the like, comprising a substantially vertical receiving portion provided with a platform, a downwardly inclined delivery portion connected to the upper end of the receiving portion, devices on the delivery portion to facilitate the movement of the bale thereon, and means to prevent backward slipping of the bale while being tipped onto the delivery portion.

[Claims 6 to 18 not printed in the Gazette.]

902,411. APPARATUS FOR LIGHTING AND EXTINGUISHING GAS-LAMPS. HERBERT H. JOHNSON, Forbes, and EDWARD MOIN, Sydney, New South Wales, Australia. Filed May 15, 1907. Serial No. 373,839.



1. In a gas regulator, the combination of a pair of communicating gasometers, one of which is adapted to receive gas from a gas main and the other gasometer being adapted for attachment to an outlet pipe, a gas controlling device operable by the receiving gasometer for regulating the flow of gas therefrom to the other gasometer, and a device operable by the gasometer to be connected to the outlet pipe and adapted to coöperate with the gasometer which operates the gas controlling device for retaining the latter in open position during normal pressure in the main.

2. In an apparatus for lighting and extinguishing gas lamps, the combination of a pair of communicating gasometers of different cross sectional area, a guide rod, brackets carried by said gasometers, friction rollers on said brackets and adapted to travel on said guide rod, the said bracket carried by the larger gasometer being adapted to engage the bracket of the smaller gasometer and thereby maintain both of the gasometers in their raised position after the maximum pressure has been reduced to normal pressure in the main.

3. An apparatus for lighting and extinguishing gas lamps comprising a pair of communicating gasometers

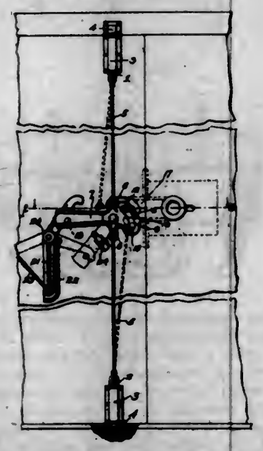
of different cross sectional area provided with seals, the smaller of which gasometers is provided with an internal hood and weighted to resist the normal pressure of the gas in the main, and the larger of which is weighted so as to descend into its seal at a predetermined pressure in the main and means operable by the larger gasometer for controlling the movement of the smaller gasometer.

4. In an apparatus for lighting and extinguishing gas lamps, the combination of a chamber, a pair of communicating gasometers of different cross sectional area, an inlet and an outlet for said chamber, seals for said gasometers, a coacting hood and seal mounted within the smaller gasometer for controlling the admission of gas, both of said gasometers being weighted, the smaller one to resist the normal pressure and the larger one to descend into the seal at a predetermined minimum pressure and means operable by the larger gasometer for retaining the said seal in open position during normal pressure in the main.

5. In an apparatus for lighting and extinguishing gas lamps, the combination of a chamber, a pair of communicating gasometers of different cross sectional area, means for guiding the gasometers, an inlet and an outlet for said chamber, seals for said gasometers, a coacting hood and seal mounted within the smaller gasometer for controlling the admission of gas, both of said gasometers being weighted, the smaller one to resist the normal pressure and the larger one to descend into the seal at a predetermined minimum pressure, and means operable by the larger gasometer for retaining the smaller gasometer in elevated position during normal pressure in the main.

[Claim 6 not printed in the Gazette.]

902,412. DOOR BOLT AND LATCH RELEASING DEVICE. LAWRENCE JONES, Jefferson, Ohio. Filed May 11, 1908. Serial No. 432,127.



1. In a bolt and latch releasing device, a releasing lever, means to operatively connect said lever to the bolts, and means operatively connected with the lever and adapted to impinge against the latch bolt of the opposite door, whereby when said lever is swung, said bolts will be retracted from their keepers.

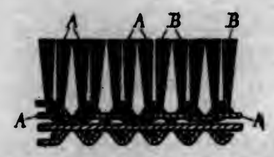
2. In a bolt and latch releasing device, a pivoted releasing lever having oppositely disposed arms, a head on one end of said lever, operating rods connected to said arms and to the bolts at the upper and lower ends of the door, a latch bolt retracting mechanism, means on said head to operate said latch retracting mechanism, a pivotally mounted operating lever engaged with said releasing lever, and means to actuate said operating lever from a distance, substantially as described.

3. In a bolt and latch releasing mechanism for doors, a pivoted releasing lever having oppositely projecting arms, a head formed on one end of said lever, said head having formed therein a cam slot, a latch retracting block slidably mounted in said door, a knob on said block adapted to engage the cam slot in said head whereby the block is operated to retract said latch, bolt-operating rods connected to said arms, and means whereby said releasing lever may be actuated from a distance, substantially as described.

4. In a latch and bolt releasing mechanism for doors, a pivoted releasing lever connected to the upper and lower door bolts to retract the same, a latch releasing mechanism, means on said lever to actuate said latch releasing mechanism, an operating lever engaged with the free end of said releasing lever, an operating cable connected to said lever whereby the latter is actuated from a distance to operate said releasing lever, and means to hold said releasing lever in a position for retracting said bolt, substantially as described.

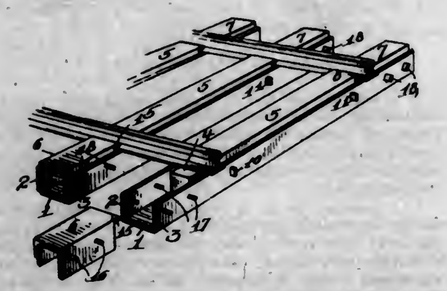
5. In a bolt and latch releasing mechanism for doors, a pivoted releasing lever, bolt retracting rods operatively connected to said lever, a head formed on one end of the latter, said head having formed therein a cam slot and latch engaging lug, a latch releasing block slidably mounted in the door, an operating knob on said block adapted to engage the slot in said head, a lug on the opposite end of said retracting lever, an operating lever having one end engaged with said lug, an operating cable on the opposite end of said lever, a casing to receive said end, and a catch to hold said releasing lever in position to retract said bolts, substantially as described.

902,413. MANUFACTURING WIRE PILE FABRICS FROM PRINTED WARPS. PAUL KAPPLER and CARL KAPPLER, Düren, Germany. Filed May 11, 1906. Serial No. 316,271.



A cut-pile-fabric comprising weft-threads, binder-warps, and two pile-warps having printed thereon identical patterns, said pile-warps being alternately selected and bound in by two weft threads whereby adjacent ends of the alternate piles present similar colors in the pattern of the completed fabric.

902,414. METALLIC RAILWAY-TIE. SAMUEL R. KEIM, Johnstown, Pa. Filed May 29, 1908. Serial No. 435,688.



1. A railway cross tie comprising a base member of channel form, and a rail locking and spacing member of channel form fitted into the base member to close the opening between its flanges and provided with means for locking said member in coöperative relation to both rails and base member.

2. A railway cross tie comprising a base member of channel form having its longitudinal flanges upturned, a set of rail locking members of channel form arranged in inverted relation to the base member and having their flanges arranged to coöperate with those of the base member, and means coöperating with the rail locking members to draw them into coöperative relation with the rails and the base member.

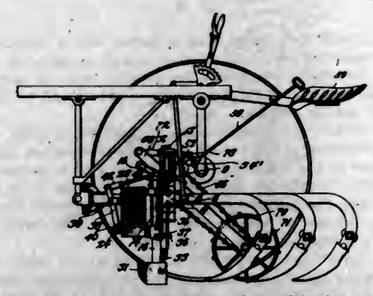
3. A metallic railway tie comprising a base member, a central locking member of a length sufficient to span the space between the rails and to engage the base flanges thereof, a pair of outer rail locking members mounted on the base member and adapted to engage with the outer sides of the rails, and means for securing the locking members in engagement with the rails.

4. A railway cross tie comprising a base member, a central locking member adapted to span the space between the rails and having jaws at its ends to coöperate with the base flanges of the respective rails, means for drawing said central locking member downwardly into engagement with the rails, a pair of outer locking members having jaws to engage the base flanges of the respective rails at their outer sides, and means for drawing the outer locking members into engagement with the respective rails by a diagonal movement both downwardly and inwardly.

5. A railway cross tie comprising a base member of channel form, a central locking member also of channel form and arranged in inverted relation within the vertical flanges of the base member, said central locking member being provided with rail engaging jaws at its opposite ends, wedges coöperating with the flanges of the base member and central locking member respectively for drawing the latter downwardly into locking engagement with the rails, a pair of outer locking members also of channel form having their flanges engaging within the flanges of the base member, the flanges of the outer locking members and the flanges of the base member being provided with diagonally arranged wedge openings, and wedges arranged to coöperate with said openings to draw the outer locking members into engagement with the respective rails by diagonal movements both inwardly and downwardly.

[Claim 6 not printed in the Gazette.]

902,415. CORN-PLANTER. DESIRE J. KERGER, St. Anne, Ill. Filed Jan. 21, 1908. Serial No. 411,951.



1. A seed planting attachment for cultivators and the like comprising a seed hopper, a horizontally sliding feeder movable in the bottom thereof, a cut off for the seed feeder, and a vertical reciprocating dropper provided with a cut off device and adapted to receive the seed from the feeder and discharge the same.

2. A seed planting attachment for cultivators comprising a seed hopper, a horizontally sliding feeder for discharging the seed therefrom, a cut off for said feeder, a vertically reciprocating seed dropper adapted to receive the seed from the feeder and discharge the same, and an automatic cut off for alternately opening and closing the discharge orifice of the seed dropper.

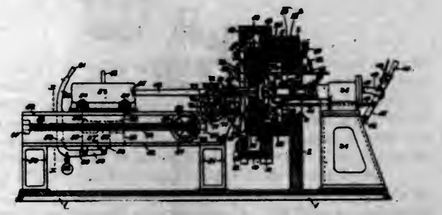
3. A seed planting attachment for cultivators comprising a hopper, means for discharging a predetermined number of seed therefrom in each cycle of operation of the mechanism, a vertical reciprocating seed dropper adapted to receive the seed from the hopper, an automatic cut off controlling the discharge orifice of the seed dropper, said cut off being movable with the seed dropper, and means for stopping said cut off at a suitable point in the throw of the seed dropper so as to uncover the discharge orifice thereof, substantially as described.

4. A seed planting attachment for cultivators comprising a hopper, a horizontally sliding feeder operating in the bottom thereof, a vertically reciprocating seed dropper adapted to receive the seed from the feeder and discharge the same, a vertically sliding cut off mounted on the seed dropper and controlling the discharge orifice thereof, a stem on said cut off, and a stop device associated with said stem whereby it is adapted to automatically cover and uncover the discharge orifice of the dropper during the up and down movement of the latter.

5. A seed planting attachment for cultivators comprising a hopper, a horizontally sliding feeder working in the bottom thereof, a vertical reciprocating dropper having a seed passage terminating in inlet and discharge orifices and adapted to receive the seed from the feeder, a shoe carried by said dropper, a vertically movable cut off mounted within said shoe and controlling the discharge orifice of the dropper, a dropper guide or casing in which the dropper moves, and means connecting said cut off with the casing whereby it is adapted to follow the up and down movements of the dropper for a limited distance and to open and close the discharge orifice of the dropper at predetermined points.

[Claims 6 to 8 not printed in the Gazette.]

902,416. APPARATUS FOR SHARPENING DRILLS OR DRILL-BITS. WALTER E. KIMBER, Johannesburg, Transvaal. Filed July 10, 1906. Serial No. 325,489.



1. In apparatus for sharpening rock-drills or bits, in combination, a plate constructed with a central aperture and a plurality of radial guideways, a plurality of forging and swaging tools arranged alternately in said guideways, a frame supporting the plate, yielding and adjustable stops carried by said frame, an oscillatory ring surrounding the plate and carrying means to actuate the tools, and a projection on the oscillating ring which is adapted to engage the adjustable resilient stops to regulate the stroke of the tools, as set forth.

2. In apparatus for sharpening rock-drills or bits, in combination, a disk provided with a plurality of radial guideways, a plurality of forging and swaging tools arranged alternately in said guideways, said disk being constructed with a plurality of holes, one for each guideway, grooves formed between the guideways and the tools on all sides and communicating with said holes, a ring fixed to the disk, said ring being constructed with an annular groove communicating with all of the aforesaid holes in the disk, and means for supplying lubricant and fluid under pressure to the annular groove in the ring.

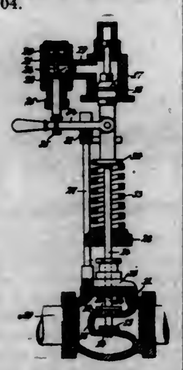
3. In apparatus for sharpening rock-drills or bits, in combination, a disk provided with a plurality of radial guideways, a plurality of forging and swaging tools arranged alternately in said guideways, said disk being constructed with a plurality of holes, one for each guideway, grooves formed between the guideways and the tools on

all sides and communicating with said holes, a ring fixed to the disk, said ring being constructed with an annular groove communicating with all of the aforesaid holes in the disk, a pipe communicating with the annular groove in the ring, a compressed fluid supply connected with said pipe, and a lubricant supply also connected with said pipe.

4. In apparatus for sharpening rock-drills or bits, in combination, a disk constructed with a central aperture and with a plurality of radial guideways, a plurality of forging and swaging tools arranged alternately in said guideways, means for actuating said tools, means for holding a drill or bit in said central aperture, a dolly adapted to operate on the end of a drill or bit when held in said central aperture in the disk, means for retracting the dolly to maintain it clear of the face of the drill when the forging and swaging tools are in operation, and means for disengaging said retracting means to maintain the dolly in contact with the end of the drill when the dolly is in operation.

5. In apparatus for sharpening rock-drills or bits, in combination, a disk constructed with a central aperture and with a plurality of radial guideways, a plurality of forging and swaging tools arranged alternately in said guideways, means for actuating said tools, means for holding a drill or bit in said central aperture, a dolly adapted to operate on the end of a drill or bit when held in said central aperture in the disk, a cylinder, a hammer piston therein adapted to strike the dolly, a spring engaging the dolly, means for retracting the dolly and placing said spring in compression, and means for locking the dolly in its retracted position, which locking means when released permit the spring to force the striking face of the dolly into contact with the end of the drill or bit in the aperture in the disk while the dolly is being struck by the hammer piston.

902,417. AUTOMATIC STARTING-VALVE. JOSEPH B. LANE, Glenwood Landing, N. Y. Filed May 5, 1908. Serial No. 430,904.



1. In combination, a conduit, a valve for controlling the same, means for retaining a fluid under pressure, the pressure being dependent on the flow of fluid through said conduit, a piston exposed to said fluid under pressure and operatively connected to said valve to hold the latter in closed position when said fluid exceeds a predetermined limit, and a valve for terminating the application of fluid pressure to the piston upon the opening of said first mentioned valve.

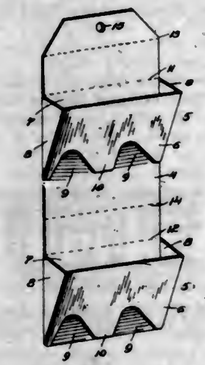
2. In combination, a conduit, a valve for controlling the same, means for retaining a fluid under pressure, the pressure being dependent on the flow of fluid through said conduit, a piston exposed to said fluid under pressure and operatively connected to said valve to hold the latter in closed position when said fluid exceeds a predetermined limit, and a valve for opening communication between said piston and the outside atmosphere upon the opening of the first mentioned valve.

3. In combination, a conduit, a valve for controlling the same, means for retaining a fluid under pressure, the pressure being dependent on the flow of fluid through said conduit, a piston operatively connected to said valve and exposed to said fluid under pressure, and a valve operated by said piston and controlling the application of fluid pressure thereto.

4. In combination, a conduit, a valve for controlling the same, means for retaining a fluid under pressure, the pressure being dependent on the flow of fluid through said conduit, a piston operatively connected to said valve and exposed to said fluid under pressure, a valve for controlling the application of fluid pressure to the piston, a lever having pivotal connection with said piston, a stationary fulcrum, and means connecting the opposite ends of said lever to said last-mentioned valve.

5. In combination, a conduit, a valve for controlling the same, means for retaining a fluid under pressure, the pressure being dependent on the flow of fluid through said conduit, a piston operatively connected to said valve and exposed to said fluid under pressure, a valve for controlling the application of fluid pressure to the piston, a standard adjacent the first-mentioned valve, a spring acting in opposition to said piston, a fulcrum carried by said standard, a lever having pivotal connection with said piston and in engagement with said fulcrum, and means connecting the second-mentioned valve to said lever.

902,418. MATCH-BOX. WALDEMAR LEE, Chicago, Ill. Filed Nov. 15, 1907. Serial No. 402,341.



1. A match box comprising a casing and a slide, said slide consisting of a plurality of match receptacles, and a web connecting the match receptacles, each of said receptacles being provided with finger openings and an intermediate spring tongue.

2. A match box comprising a casing and a slide, said slide consisting of a plurality of match receptacles having entrances and discharge openings, and a web connecting the match receptacles, said web being adapted to be bent to arrange the match receptacles in slide form, the respective discharge openings of the receptacles being arranged on opposite sides of the slide.

3. A match box comprising a casing and a slide, said slide consisting of a plurality of match receptacles having entrances and discharge openings, a web connecting the match receptacles, and a closure for one of the match receptacles, said web being adapted to be bent to arrange the match receptacles in slide form and to close the entrance of the other match receptacle, the respective discharge openings being arranged on opposite sides of the slide.

902,419. ATTACHMENT FOR SEINES. NELSON L. LEBILLE, Lockport, La. Filed Apr. 25, 1908. Serial No. 429,184.

1. An attachment for seines consisting of a stake which is adapted to be driven into submerged ground, and means at the lower end of the stake to hold the lead line of a seine close to the bottom, the said means being adapted to permit the seine being hauled.



2. An attachment for seines consisting of a stake which is adapted to be driven into submerged ground, means at the lower end of the stake which are adapted to hold the lead line of the seine close to the bottom and which will permit the seine being hauled past the said means, and means at the upper end of the stake to permit of the attachment thereto of an anchoring device.

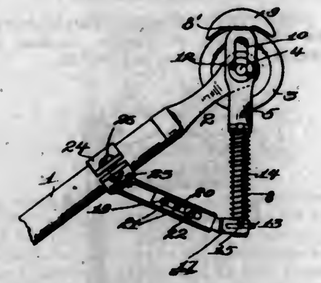
3. An attachment for seines consisting of a stake, a spindle secured thereto, and a spool mounted on the spindle.

4. An attachment for seines consisting of a stake, a spindle secured to the stake at its lower end, means at its upper end to fasten an anchoring device thereto, and a spool mounted on the spindle.

5. An attachment for seines consisting of a stake, two spindles secured to the stake, the spindles being disposed at an angle to each other, and spools mounted on the spindles respectively.

[Claim 6 not printed in the Gazette.]

902,420. TROLLEY-GUARD. WILLIAM D. LEWIS, Plymouth, Pa. Filed Apr. 11, 1908. Serial No. 426,592.



1. A trolley guard comprising a guard frame provided at one end with a segment-shaped enlargement, an adjustable supporting means for said frame, and means constituting a swiveled connection between the frame and the supporting means.

2. A trolley guard comprising a guard frame provided at one end with a segment-shaped enlargement, an adjustable supporting means for said frame, means constituting a swiveled connection between the frame and the supporting means, and a combined retaining and cushioning spring carried by the frame and abutting against the swiveled connection.

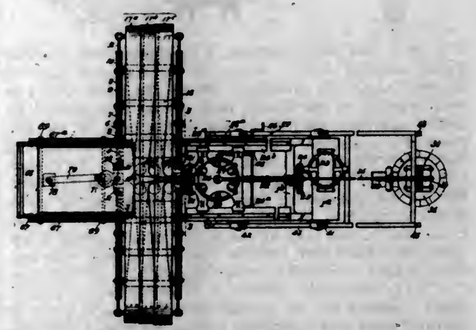
3. A trolley guard comprising a guard frame mounted upon the pivot of the trolley wheel and having its upper end projecting above the wheel, an adjustable supporting means for said frame, and a swiveled connection between the supporting means and the frame.

4. A trolley guard comprising a guard frame mounted upon the pivot of the trolley wheel and having its upper end projecting above the wheel, an adjustable supporting means for said frame, a swiveled connection between the supporting means and the frame, and a combined retaining and cushioning spring carried by the frame and abutting against said swiveled connection.

5. A trolley guard comprising a vertical shiftable slotted guard frame connected with the trolley harp and extending above the trolley wheel, an adjustable supporting means for said frame, said supporting means fixed to the trolley pole, and a swiveled connection between the guard frame and said supporting means.

[Claim 6 not printed in the Gazette.]

902,421. CONVEYER. WILLIAM K. LIGGETT, Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Jan. 30, 1906. Serial No. 298,658.



1. In a conveying apparatus, the combination of a frame, suitable rollers or pulleys, and a plurality of relatively movable carrying belts or aprons on the said rollers or pulleys arranged to have the material-carrying portions thereof situated side by side and with the edge of each belt nearest one side of said frame overlapping the adjacent edge of the adjoining belt, substantially as set forth.

2. In a conveying apparatus, the combination of a frame, suitable rollers or pulleys, and a plurality of relatively movable carrying aprons or belts on said pulleys or rollers, and arranged to have said carrying belts situated side by side and their driving parts overlapping one upon another, in series upon a common driving pulley substantially as set forth.

3. In a conveying apparatus, the combination of a frame, suitable supporting rollers or pulleys turned on horizontally disposed axles, a driving pulley or roller turning on an axis that is not horizontal, a carrying belt supported upon the horizontally disposed rollers or pulleys and passing around the driving pulley, and guides between the driving pulley and the said horizontal rollers or pulleys, substantially as set forth.

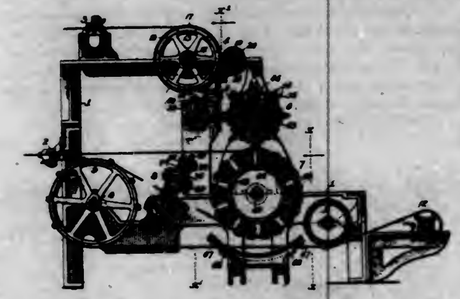
4. In a conveying apparatus, the combination of a frame, an endless conveying belt or apron, an extensible frame for the latter, rollers mounted in the said extensible frame turned on horizontal axes and arranged to support the conveying portion of the belt, a driving pulley in the supporting frame turning on an axis that is not horizontal and about which pulley the carrying belt passes, and guides for the belt between the driving pulley and the said horizontal rollers, substantially as set forth.

5. In a conveying apparatus, the combination of a frame, suitable rollers or pulleys turning on horizontal axes, a driving roller or pulley turning on an axis that is not horizontal, a plurality of carrying belts or aprons overlapping upon the said driving roller or pulley and lying side by side

on the horizontal pulleys, and guides between the driving pulley and the said horizontal rollers or pulleys, substantially as set forth.

[Claims 6 to 17 not printed in the Gazette.]

902,422. WIRE-FENCE MACHINE. WARD W. LINCOLN, Rock Falls, Ill., assignor to Joseph M. Denning, Cedar Rapids, Iowa. Filed Dec. 11, 1905. Serial No. 291,217.



1. In a wire fence machine, a revoluble frame, twister heads mounted on the surface of the frame in pairs of opposite rows and extending around the frame and also longitudinally of the frame, each twister head having an acting end face adapted to engage the ends of the sections of a transverse stay wire and coil said ends around the strand wires, and a rack-bar in mesh with the twister heads of each longitudinal row of twister heads, the rack-bars of two companion rows having reciprocating movements in opposite directions at the same time to actuate in succession two rows of companion twister heads in opposite directions and coil the ends of the stay wire sections around the strand wires, substantially as described.

2. In a wire fence machine, a revoluble frame, twister heads mounted on the surface of the frame in pairs of opposite rows and extending around the frame and also longitudinally of the frame, each twister head having an acting end face adapted to engage the ends of the sections of a transverse stay wire and coil said ends around the strand wires, a rack-bar in mesh with the twister heads of each longitudinal row of twister heads, the rack-bars of two companion rows having reciprocating movements in opposite directions at the same time to actuate in succession two rows of companion twister heads in opposite directions and coil the ends of the stay wire sections around the strand wires, and means for inaugurating the opposite movement of the successive pairs of rack-bars at the same point in their travel to facilitate the actuation of said twister heads, substantially as described.

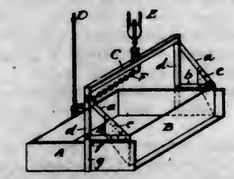
3. In a wire fence machine, a revoluble frame, a series of slotted twister-head brackets supported on said frame, two companion rack-bars longitudinally movable through each row of brackets, two opposite slotted twister heads revolubly mounted in each bracket and each in mesh with its operative rack-bar, each twister head having an acting end face adapted to engage the ends of the sections of a transverse stay wire and coil said ends around the strand wires, and means operating at a given point in the rotation of the frame for reciprocating the two companion rack-bars in opposite directions at the same time and thereby rotate the two companion twister heads in opposite directions for each twister head to coil the overlapping end of a transverse stay wire section around the strand wire, substantially as described.

4. In a wire fence machine, a revoluble frame comprising a revoluble shaft, supports fixedly mounted on said shaft to rotate therewith, a series of twister heads arranged in opposite pairs and mounted in circumferential rows on said supports, each twister head having an acting end face adapted to engage the ends of the sections of a transverse stay wire and coil said ends around the strand wires, a series of longitudinally movable rack-bars on said supports, two companion rack-bars in mesh with two companion series of twister heads, the two companion rack-bars having reciprocating movements in opposite directions to revolve the companion series of twister heads in opposite directions for coiling the ends of the transverse stay wire sections around the strand wires, and means for inaugurating the opposite movement of each pair of succeeding rack-bars at the same point in their travel, substantially as described.

5. In a machine of the class described, a revoluble frame, twisting devices journaled in said frame and disposed in opposite companion longitudinal rows, each twisting device having an acting end face adapted to engage the ends of the sections of a transverse stay wire and coil said ends around the strand wires, and rack bars reciprocally supported and arranged in pairs on said frame, each companion pair of rack bars adapted to actuate the twisting devices of companion series and operate companion twisting heads in opposite directions to coil the ends of the sections of the transverse stay wire around the strand wires, substantially as described.

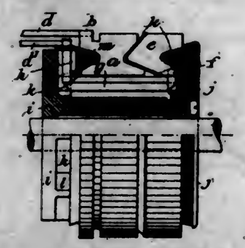
[Claims 6 to 197 not printed in the Gazette.]

902,423. DUMPING-SKIP. WILLARD D. LOCKWOOD, Schenectady, N. Y. Filed Apr. 20, 1908. Serial No. 428,179.



The combination, with a skip having an open top and front end, of a bail having its legs pivotally connected at their free ends to the side walls of the skip forwardly of the center of gravity of the latter; a door arranged to open and close said front end, the ends of the door being bent rearwardly to form wings; braces rigidly connecting each wing with the adjacent leg of the bail; a cable connected with the rear wall of the skip; a cable connected with the bight portion of the bail; and a flexible connection between said bight portion and said rear wall.

902,424. COMMUTATOR FOR DYNAMO-ELECTRIC MACHINES. FREDERICK H. LORING, London, England. Filed Dec. 31, 1907. Serial No. 408,733.



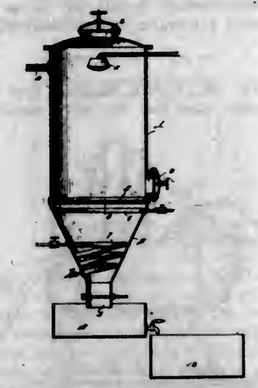
1. A commutator device comprising a supporting shell, a number of independent multi-bar commutators arranged side by side coaxially and externally to the said shell, integral projections being formed on the end face of one commutator and entering recesses in the end face of the adjoining commutator, an extension on said supporting shell having peripheral openings therein, and inner connections from one commutator brought through the said peripheral openings.

2. A commutator device comprising a supporting shell, two independent multi-bar commutators arranged side by side and externally to said supporting shell, a V-shaped projection integral with one commutator, a V-shaped recess in the adjoining commutator, insulation material between said V-shaped surfaces, an extension on said supporting shell formed integrally therewith and having peripheral openings therein, inner connections from one commutator brought through the said peripheral openings, and means to hold the assembled parts together.

3. The combination with a commutator device comprising independent multi-bar commutators arranged side by side on a common supporting shell and having projections on one commutator entering recesses in the adjoining commutator, of stationary concentric brush holder supports insulated from one another, and insulating blocks to which the said supports are attached, said insulating blocks being drawn toward each other against opposite seatings formed in a supporting arm.

4. The combination with a commutator device comprising two independent multi-bar commutators arranged side by side coaxially on a common supporting shell, one commutator having a V-shaped projection entering a corresponding recess in the adjoining commutator, and insulating material between said V-shaped surfaces, of stationary concentric brush holder supports comprising a solid stud screwed into an insulating block, an insulating sleeve thereon, a brush holder tube on said sleeve and a second insulating block into which the said sleeve is screwed, a supporting arm having openings, and means for clamping said insulating blocks in said openings.

902,425. PROCESS OF MAKING SOLUBLE PHOSPHATES. FLORENTINE J. MACHALSKE, Niagara Falls, N. Y., assignor to American Reduction Company, Pittsburg, Pa. Filed Nov. 6, 1907. Serial No. 400,947.

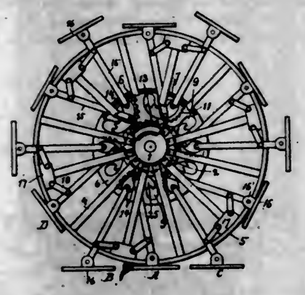


1. The method of making soluble phosphates which consists in reacting with sulfur dioxid gas in the presence of a limited proportion of water upon tri-calcium phosphate under conditions yielding a soluble phosphate and calcium sulfite, and leaching out the phosphate by a suitable solvent, thereby obtaining a strong solution of calcium phosphate containing a small proportion of calcium sulfite.

2. The method of making soluble phosphates which consists in reacting with sulfur dioxid gas in the presence of a limited proportion of water upon tri-calcium phosphate under conditions yielding a soluble phosphate and calcium sulfite, and leaching out the phosphate by a dilute solution of sulfur dioxid, thereby obtaining a strong solution of calcium phosphate containing a small proportion of calcium sulfite.

3. The cyclical method of making soluble phosphates which consists in reacting with sulfur dioxid gas on moistened tri-calcium phosphate, leaching out with a dilute solution of sulfur dioxid the soluble phosphate produced, thereby obtaining a strong solution of calcium phosphate containing a small proportion of calcium sulfite decomposing the residual calcium sulfite to produce sulfur dioxid, and utilizing said sulfur dioxid in the continuation of the process.

902,426. TRACTION-WHEEL. WILLIAM L. MARTIN, Chicago, Ill. Filed Jan. 16, 1907. Serial No. 352,549.



1. In a wheel, a rotatable frame, bearing members movable in respect thereto, a system of pivotally connected links between each two of pairs of said bearing members to which each member of the pair is pivotally connected and which is in turn pivotally carried by the rotatable frame, and positive motion transmitting means between corresponding parts of said link systems for causing the systems to operate synchronously, whereby the transfer of weight from one member to its adjacent member acts to maintain any two of said members in a straight line which is at a substantially constant distance from the center of the wheel.

2. In a wheel, a frame, a series of sectors mounted thereon, movable bearing members connected to said sectors, and motion transmitting means for said sectors whereby a plurality of said bearing members are maintained in a line substantially tangent to the periphery of said wheel, while said bearing members carry the weight of the wheel.

3. In a wheel, a frame, a plurality of rods carrying bearing members movable substantially radially relatively to said frame, and yielding means for permitting said rods to also move in a line substantially parallel to the axis of the wheel.

4. In a wheel, a frame, a series of movable sectors mounted concentrically thereon, spokes carrying bearing disks at their free ends, and a central gear meshing with each of said sectors, the spokes being connected to the sectors and adapted to impart an oscillatory motion thereto.

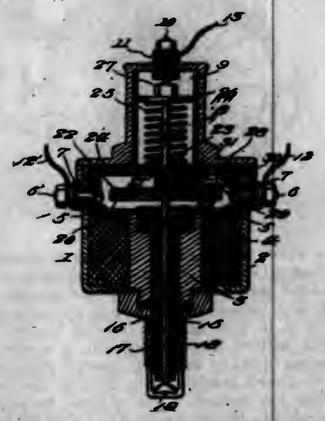
5. In a wheel, a frame, a series of movable sectors mounted concentrically thereon, spokes connected to said sectors and carrying bearing disks at their free ends, links connecting an intermediate point of each of said spokes to the periphery of the wheel frame, and means for connecting said sectors each to each.

[Claims 6 to 8 not printed in the Gazette.]

902,427. ELECTRIC SPARKING DEVICE. WILLIE H. R. MILDEBRATH, Jacksonville, Fla. Filed Jan. 20, 1906. Serial No. 297,082.

1. A spark plug comprising a stationary electrode, a rod mounted for longitudinal movement, one end constituting a movable electrode normally separated from the other electrode, a body of metal fixed on the rod and forming an armature, an electro-magnet surrounding the rod and operating on the armature to bring the electrodes into contact, a yielding element arranged to hold the electrodes separated, a binding post against which the rod is held by the said element and adapted to be connected with a high tension circuit, and means for connecting the electro magnet with a low tension circuit, said rod and binding post forming a path for high tension current when the electro magnet is out of service.

2. A spark plug comprising a casing, a core therein, a magnet winding around the core, a stationary electrode carried by the casing, a rod insulated from the casing and forming a movable electrode, an insulating lining fitted in the casing and disposed above the magnet, an armature secured to the said rod in coöperative relation with the electro magnet, means operating on the rod to hold the electrodes apart, a current conductor with which the rod is normally in contact when the electrodes are separated, and means within the casing for connecting the rod in circuit when the electro magnet is energized.



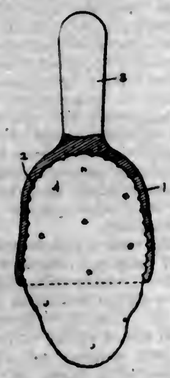
3. A spark plug comprising a grounded casing, a fixed electrode thereon, a movable electrode mounted in the casing, means for normally connecting the movable electrode in a high tension circuit, an electro magnet connected with the low tension circuit and arranged to bring the electrodes into contact, and means for connecting the movable electrode into the low tension circuit when the electro magnet is energized.

4. A spark plug comprising a casing, a core therein having a threaded portion extending out of the casing, a neck threaded on the core and exteriorly threaded for attachment to the cylinder of an engine, a stationary electrode on the neck, a rod forming a movable electrode extending through the core and neck, an insulating bushing extending around the rod for insulating the same from the core and neck, means for connecting the movable electrode normally in a high tension circuit, a magnet winding on the core, means for connecting the winding in a low tension circuit, an armature on the said rod for bringing the movable electrode into contact with the stationary electrode when the magnet is energized, and means for connecting the said rod in the low tension circuit when the said winding is energized.

5. A spark plug comprising a casing, a neck thereon for attaching the plug to an engine cylinder, a stationary electrode on the neck, a movable electrode in the form of a rod insulated from the neck and casing, an electro magnet within the casing, an armature on the rod arranged in coöperative relation with the magnet, a cover for the casing having a tubular extension, a lining of insulation arranged in the casing above the electro magnet, binding posts on the lining for connecting the electro magnet in a low tension circuit, a spring-pressed element mounted on and insulated from the said casing and electrically connected with one of the binding posts, a contact on the said rod normally insulated from the element and adapted to contact therewith when the electro magnet is energized, a spring housed in the tubular extension of the cover and connected with the rod for holding the latter separated from the stationary electrode, and a binding post on the extension for connecting the rod in a high tension circuit and with which the rod is normally held in engagement by the spring.

[Claims 6 to 9 not printed in the Gazette.]

902,428. VEGETABLE PEELER OR SCRAPER. EDWARD W. MILHADO, Mineral, Va. Filed Oct. 2, 1907. Serial No. 395,683.

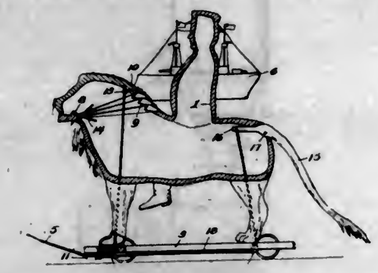


1. A device of the character described comprising a body portion to receive the article to be peeled, formed of elastic material and adapted to conform itself to the shape of the article inserted, and carrying upon its interior a plurality of scraping members.

2. A device of the character described, comprising a handle portion, a body portion formed of elastic material adapted to conform itself to the shape of the article inserted and to tightly grip the latter, and a plurality of peel-removing projections carried by the interior of said body portion.

3. A device of the character described, comprising a cup-shaped body-portion formed of rubber and having upon its interior a plurality of peel-removing projections.

902,429. TOY. WILLIAM S. MINERS, Fort William, Ontario, Canada. Filed Nov. 19, 1907. Serial No. 402,892.



1. A mechanical top embodying a wheel supported base board, a figure of a lion mounted on said board and comprising a movable head section, including the upper jaw, and a pull cord, connected with the base board and also connected with the movable head section, said cord operating on the head section to open the lion's jaw, substantially as described.

2. A mechanical toy embodying a base board mounted on wheels, the figure of a lion mounted on said base board and comprising a movable head section including the upper jaw and pivoted to the body adjacent the lower jaw, a covering of hair-like material extending over the joint between the head section and body, and a pull cord connected with the base board and head section and adapted to move the head section to open the jaws of the figure, substantially as described.

3. A toy embodying a wheeled base board, a lion's figure mounted thereon and embodying a pivotally mounted head section, a bellows joint connecting the head sections and body, a covering of hair-like material extending over said joint and a cord for pulling the base board along, said cord being connected with the movable head section, substantially as and for the purpose described.

4. A mechanical toy comprising a wheeled base board, a hollow lion's figure mounted on said base board and embodying a movable head section adapted to open at the jaw line, and a pivoted tail section, and a pull cord associated with the base board to draw the figure along and connected with the head section and tail section whereby in propelling the figure motion is imparted to the head and tail, substantially as described.

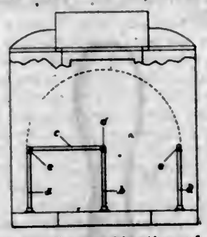
5. A toy embodying a wheeled base board, the figure of a lion mounted on said board, a figure representing John Bull mounted on the lion and representations of a battle ship and cannon carried beneath the arms of the figure, the figure of the lion embodying movable head and tail sections, and a pull cord connected with the head and tail sections and adapted to move the same relatively to the body of the lion in the act of drawing the toy.

902,430. FLASH-LIGHT FOR PHOTOGRAPHIC USE. EDGAR B. MOORE, Los Angeles, Cal. Filed Jan. 5, 1907. Serial No. 350,950.



A flash-light, consisting of a quick burning and light giving composition constructed in the form of an attenuated and indefinitely extended fuse having incorporated along the length of the same a continuous and non combustible binder.

902,431. PASSENGER-CAR. ROBERT H. MOORE and MARGUERITE E. MOORE, New York, N. Y. Filed July 15, 1908. Serial No. 443,645.

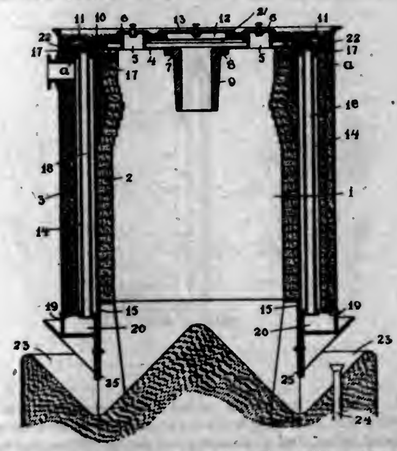


In a passenger-car, the combination of a wide doorway on each side of the ends of car, and a stanchion vertically adjusted to floor and located in the center or thereabout of each doorway, a socket in said stanchion, and a stanchion vertically adjusted to floor and centrally located between the stanchion in doorway on each side of car, and a bar one end of which is pivotally mounted to said centrally located stanchion, the free end of said bar being temporarily engaged in socket of stanchion on either side of car, for the purpose all substantially as set forth.

902,432. GAS-PRODUCER. CHARLES H. MORGAN, Worcester, Mass. Filed June 13, 1906. Serial No. 321,529.

1. In a gas producer, the combination with a gas producing chamber having an annular space surrounding said chamber, means for admitting gas from said chamber to said annular space, and a twyer for supplying air to the interior of said chamber, of a series of air pipes within said annular space, said pipes communicating with the outside air at one end and arranged to supply air to the twyer at the other end.

2. In a gas producer, the combination with a gas producing chamber having an annular space surrounding said chamber, means for admitting gas from said chamber to said annular space, and a twyer for supplying air to the interior of said chamber, of a series of pipes within said annular space, said pipes communicating with the outside air at one end and arranged to supply air to the twyer at the other end, and means for mixing steam with the air as it passes through the series of pipes.



3. In a gas producer, the combination with a gas producing chamber having a surrounding annular space, means for admitting gas from said chamber to said annular space, and a twyer for supplying air to the top of said gas producing chamber, of a series of vertical air pipes detachably held within said annular space and arranged to admit air at the lower end of said pipes and to deliver it to the twyer from the upper end of said pipes.

4. In a gas producer, the combination with a gas producing chamber having an annular space surrounding said chamber, and a twyer depending from the cover of said gas producing chamber, of a series of pipes within said annular space arranged to admit air at the lower end of said pipes and to deliver it to the twyer at the upper end of said pipes, means for admitting water to said pipes, and an annular water receptacle below the lower end of said pipes.

5. In a gas producer, the combination with a gas producing chamber having a wall, of an outer wall surrounding the wall of said chamber inclosing an annular space between said walls, with openings from said chamber into said annular space for the admission of gas, and an opening for conducting the gas away from said annular space, means for closing the ends of said annular space, air pipes passing through said annular space and detachably held therein, said pipes communicating with the outside air at their lower ends and with a twyer at their upper ends and a twyer for admitting air to the gas producing chamber.

[Claims 6 and 7 not printed in the Gazette.]

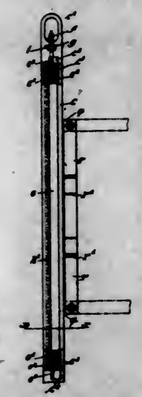
902,433. HOLDER FOR SHEETS OF ALL KINDS. HEINRICH MÜLLER and KARL SPECKER, St. Gallen, Switzerland. Filed June 15, 1908. Serial No. 438,652.

1. A holder for sheets of all kinds, comprising a supporting bar having a hollow for the sheets and an overlapping ledge, and a pinching-bar eccentrically pivoted in the supporting bar and having a pressure surface and means for actuating the bar, whereby the sheets may be pinched at one or at the other or at both edges of the pinching bar.

2. A holder for sheets of all kinds, comprising a supporting bar having a hollow for the sheets and an over-lapping ledge and a pinching-bar eccentrically pivoted and laterally movable in the supporting-bar, and having a pressure surface and means for actuating the bar.

3. A holder for sheets of all kinds, comprising a supporting bar having a hollow for the sheets and an overlapping ledge, and a pinching-bar eccentrically pivoted in

the supporting-bar and having a middle portion of semicircular section for pinching the sheets and cylindrical end portions for actuating the bar.

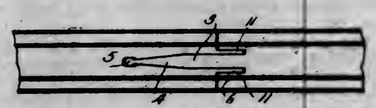


4. A holder for sheets of all kinds, comprising a supporting bar having a hollow for the sheets and an overlapping ledge, and a pinching-bar eccentrically pivoted in the supporting-bar and having a middle portion of semicircular section for pinching the sheets and cylindrical end portions having ribbed sockets for actuating the bar.

5. A holder for sheets of all kinds, comprising a supporting bar having a hollow for the sheets, an overlapping ledge and flat sockets fitted in slots of the bar, and a pinching-bar having eccentrical pivots freely carried by the said sockets, a pressure-surface and means for actuating the bar.

[Claims 6 to 10 not printed in the Gazette.]

902,434. RAILWAY-RAIL JOINT. JAMES M. MCCONNELL, Nickelsville, Va. Filed Apr. 7, 1908. Serial No. 425,778.



1. A rail joint comprising one rail having a projecting member, slots at the sides of said member, a rail end having a recess therein, and projecting lugs which fit the slots at the side of the projecting member.

2. A rail joint comprising one rail having a projecting member provided with oppositely beveled sides, a head of substantially circular form, oppositely beveled sides, a rail provided with a central recess for the extension member, and projecting lugs to fit the slots at the sides of said member and a recess of oval formation to receive the rounded head of the other member.

3. A rail joint comprising a rail having a projecting member, slots at opposite sides of said member, a base flange, said member having oppositely beveled sides and a rounded head, in combination with a rail end provided with a slot and an elliptical recess for the head of the other member, forwardly extending lugs to fit the slots of the other member, and a rail flange.

902,435. CHALK-HOLDER. HARRY T. MCCUNE, Braddock, Pa. Filed Mar. 31, 1908. Serial No. 424,387.

1. In a chalk holder, the combination of a casing adapted to receive the chalk, a housing carried by said casing, a spring pressed pin arranged in said housing for engaging in the chalk, a cable or chain attached to said housing, a resilient covering fitting upon said casing, a resilient covering fitting upon said housing, and a pin for engaging in said housing and holding said spring-pressed pin in an elevated position, while the chalk is placed within said casing.



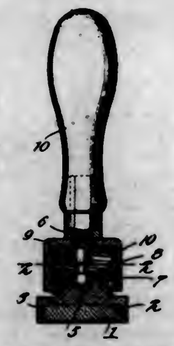
2. In a chalk holder, the combination of a casing adapted to receive the chalk, a housing carried by said casing, a spring pressed pin arranged in said housing for engaging the chalk, a cable or chain attached to said housing, a resilient covering fitting upon said casing, a resilient covering fitting upon said housing, and means for engaging in said housing and holding said pin in an elevated position, while the chalk is placed within said casing.

3. In a chalk holder, the combination of a casing adapted to receive the chalk, a housing carried by said casing, a spring pressed pin arranged in said housing and adapted to engage in the chalk, a covering for said casing, a covering for said housing, and a chain or cable attached to said holder.

4. In a chalk holder, the combination of a casing adapted to receive the chalk, a housing carried by said casing, a spring pressed pin arranged in said housing and adapted to engage in the chalk, a covering for said casing, and a covering for said housing.

5. In a chalk holder, the combination of a casing adapted to receive the chalk, a housing carried by said casing, and a spring pressed pin arranged in said housing and adapted to engage with said chalk.

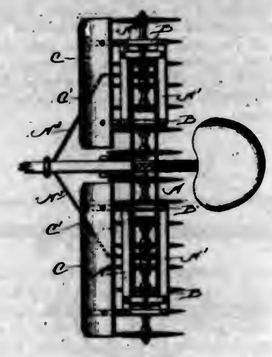
902,436. HAND CANCELING DEVICE. HARRY R. MCFARLAND, Newport News, Va. Filed Mar. 17, 1908. Serial No. 421,603.



In a device of the character described, a die receiving member and a die therefor, a projection upon the die receiving member having a semi-circular opening, a threaded member having a ball engaging the semi-circular opening of the member, a retaining plate having a semicircular opening upon its inner face and a concaved opening communicating with the semi-circular opening upon the projection, an inverted cup having a centrally threaded aperture engaging the threaded member, a helical spring within the cup and engaging the die receiving member, and an interiorly threaded handle engaging the projecting portion of the threaded member.

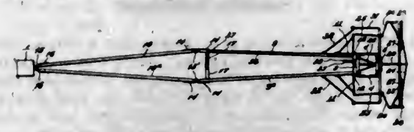
902,437. SAFETY-SHIELD FOR DISK HARROWS. CLAY E. MCMILLAN, Council Grove, Kans. Filed Jan. 21, 1908. Serial No. 411,885.

The combination with a sectional disk harrow, having tongue braces, of angled bars arranged in pairs, one pair being carried by each section of the harrow, shields carried by the angled portions of said bars, said shields being provided with oblique slots extending from their lower



forward edges, the tongue braces passing through said slots.

902,438. GATE. FRANCIS M. NEFF, Milford, Ind. Filed May 2, 1908. Serial No. 430,543.



1. In a gate structure, the combination of a supporting post, a gate composed of pivotally connected sections adapted to fold parallel with the gateway, crank arms upon the gate, a swinging lever upon the supporting post, elastic connections between said lever and the crank arms through which the motion of the lever is transmitted to the gate, and an equalizing connection between the parts of the gate for securing a uniform motion thereof.

2. In a gate structure, the combination of a supporting post, a gate formed of pivotally connected sections and adapted to fold to an open position parallel with the gateway, crank arms upon the gate, a lever pivotally mounted upon the post for movement in reverse directions to open and close the gate, and elastic connections between said lever and the respective crank arms for transmitting the motion of the lever to the gate sections.

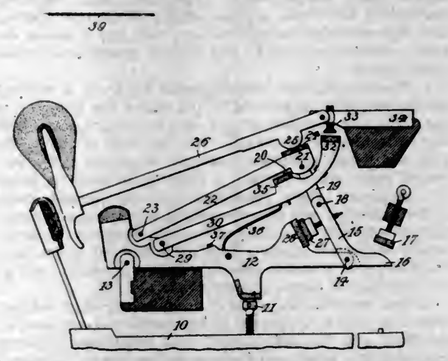
3. In a gate structure, the combination of a supporting post, a gate formed of pivotally connected sections and adapted to fold to an open position parallel with the gateway, crank arms upon the gate, a pivotally mounted lever on the post movable in reverse directions to open and close the gate, elastic connections between the crank arms and arms of the lever, and latch mechanism operated by the movements of the lever for locking the gate in open and closed positions.

4. In a gate structure, the combination of a supporting post, a gate composed of pivotally connected sections adapted to fold parallel with the gateway, crank arms upon the gate, a swinging lever upon the supporting post, springs connected with the crank arms, springs connected with the arms of the lever, and connections between the sets of springs.

5. In a gate structure, the combination of a supporting post, a gate composed of pivotally connected sections adapted to fold parallel with the gateway, crank arms upon the gate, a swinging lever upon the supporting post, elastic connections between said crank arms and the arms of the lever, a rock shaft upon the post provided with crank arms, and equalising links connecting said crank arms of the rock shaft with the gate in advance of the first-named crank arm.

[Claims 6 to 9 not printed in the Gazette.]

902,439. REPEATING ACTION FOR GRAND PIANOS. ADAM NICKEL, New York, N. Y., assignor to Wessell, Nickel & Gross, New York, N. Y., a Corporation of New York. Filed July 28, 1908. Serial No. 445,742.



1. A repeating action for grand pianos, comprising a support, a lower jack-member, an upper jack-member pivoted to the lower member, a repeating lever, and a spring-influenced auxiliary lever adapted to operatively engage said upper member, substantially as specified.

2. A repeating action for grand pianos, comprising a support, a lower jack-member, an upper jack-member pivoted to the lower member and having a tappet, a repeating lever, and a spring-influenced auxiliary lever adapted to engage said tappet, substantially as specified.

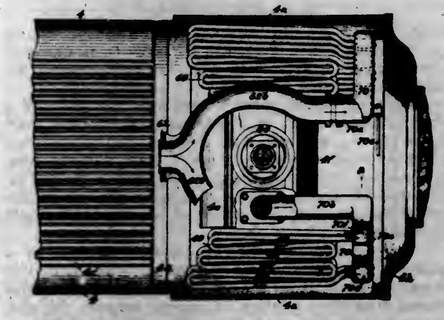
3. A repeating action for grand pianos, comprising a support, a lower jack-member, an upper jack-member pivoted to the lower member and having a tappet, a repeating lever, and a spring-influenced auxiliary lever having a shoulder adapted to engage said tappet, substantially as specified.

4. A repeating action for grand pianos, comprising a support, a lower jack-member, an upper jack-member pivoted to the lower member, a repeating lever, an auxiliary lever adapted to operatively engage said upper member, and a spring intermediate the support and auxiliary lever, substantially as specified.

5. A repeating action for grand pianos, comprising a support, a lower jack-member, an upper jack-member pivoted to the lower member, a repeating lever, a spring-influenced auxiliary lever adapted to operatively engage said upper member, and an abutment for said auxiliary lever, substantially as specified.

[Claims 6 to 11 not printed in the Gazette.]

902,440. SUPERHEATER. HENRY B. OATLEY, Schenectady, N. Y., assignor to American Locomotive Company, New York, N. Y., a Corporation of New York. Filed May 27, 1908. Serial No. 435,186.



1. The combination, with a steam boiler, of a vertical header or casing, supported in the smoke box adjacent to

the front and the side thereof, and comprising separate saturated and superheated steam compartments, a plurality of loops or bends of superheater pipes, connected, at their opposite ends, to the saturated and the superheated steam compartments, respectively, and extending rearwardly therefrom, a steam supply connection opening into the saturated steam compartment, and a steam delivery connection leading out of the superheated steam compartment.

2. The combination, with a steam boiler, of a vertical header or casing, supported in the smoke box adjacent to the front and the side thereof, and having its outer wall curved in general accordance with the wall of the smoke box, said header comprising separate saturated and superheated steam compartments, a plurality of loops or bends of superheater pipes, connected, at their opposite ends, to the saturated and the superheated steam compartments, respectively, and extending rearwardly therefrom, a steam supply connection opening into the saturated steam compartment, and a steam delivery connection leading out of the superheated steam compartment.

3. The combination, with a steam boiler, of a vertical header or casing, supported in the smoke box adjacent to the front and the side thereof, and comprising separate saturated and superheated steam compartments, a plurality of loops or bends of superheater pipes, each extending in alternate rearward and forward convolutions, and connected, at its opposite ends, to the saturated and the superheated steam compartments, respectively, a steam supply connection opening into the saturated steam compartment, and a steam delivery connection leading out of the superheated steam compartment.

4. The combination, with a steam boiler, of a vertical header or casing, supported in the smoke box adjacent to the front and the side thereof, and comprising separate saturated and superheated steam compartments, a plurality of loops or bends of superheater pipes, connected, at their opposite ends, to the saturated and the superheated steam compartments, respectively, and extending rearwardly therefrom, a steam supply connection opening into the saturated steam compartment, a steam delivery connection leading out of the superheated steam compartment, and a vertical partition plate extending longitudinally in the smoke box, on the inner side of the set of superheater pipes.

5. The combination, with a steam boiler, of a T head, branch steam supply pipes extending forwardly therefrom, a pair of vertical headers or casings, each supported in the smoke box adjacent to the front and one side thereof and comprising a saturated steam compartment connected to one of the branch steam supply pipes and a separate superheated steam compartment, a plurality of loops or bends of superheater pipes, each connected, at its opposite ends, to the saturated and superheated steam compartments, respectively, of one of the headers, and extending rearwardly therefrom, and branch steam delivery pipes each connected to the superheated steam compartment of one of the headers.

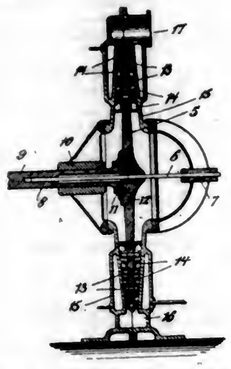
[Claims 6 and 7 not printed in the Gazette.]

902,441. ROTARY BLOWER OR COMPRESSOR. OSCAR P. OSTERGREN, New York, and CHARLES O. L. CARDELL, Pearl River, N. Y. Filed Apr. 11, 1906. Serial No. 311,051.

1. The combination with a rotatable element and a relatively heavy shaft, of a relatively light flexible shaft supporting the said rotatable element, and a universal joint connection between the heavy shaft and the rotatable element connecting the same together in driving relation but permitting relative movements of the rotatable element transversely of the axis of rotation of the said heavy shaft.

2. The combination with a rotatable element, of a relatively heavy drive shaft therefor, a loose connection between said relatively heavy shaft and said rotatable element permitting relative movements between the two, and a light flexible shaft supporting said rotatable element.

3. The combination with a rotatable element, of a relatively heavy drive shaft therefor, said shaft journaled on one side of said rotatable element and having a loose driving connection with said rotatable element permitting relative movements thereof transverse of the axis of rotation of the said shaft, and a light flexible shaft supporting said rotatable element, said flexible shaft having a bearing on one side in said heavy shaft, and journaled in a stationary bearing upon the other side of said rotatable element.

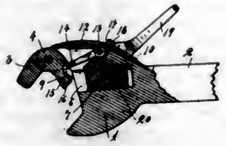


4. The combination with a driving and a driven member comprising a relatively heavy shaft and a rotatable element, of a plurality of pins upon one of the said members and a plurality of slots in which the said pins are freely received, in the other said member, and a light flexible shaft supporting the said rotatable element.

5. An impelling wheel having a series of transverse openings therethrough and provided with a corresponding series of members each comprising a central supporting portion fitted to a said opening and blades projecting in opposite directions from said central portion.

[Claims 6 to 8 not printed in the Gazette.]

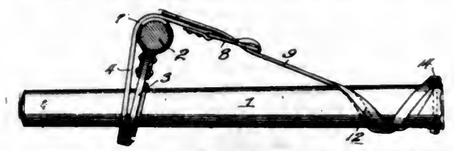
902,442. CAR-COUPLING. HENRY H. PAULSON, Marshfield, Wis. Filed Oct. 23, 1907. Serial No. 398,795.



1. In a car coupler, the combination with a coupler head, pivoted knuckle and vertically disposed lock dog, said lock dog having a depending lug, of a knuckle releasing arm pivotally mounted in said coupler head and having a projection, and a releasing lever pivotally connected to said coupler head and operative on the depending lug of said lock dog and on the projection of said releasing arm to move said dog into a releasing position and said knuckle into an open position, substantially as described.

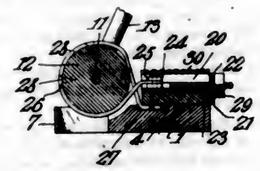
2. In a car coupler, the combination with a coupler head having a pivoted knuckle 3 and a gravity actuated lock dog 7, said dog being pivotally connected to said head near its upper end and having a depending lug 10 working through a slot in the bottom of said coupler head, of a shaft 13 mounted in said head, a knuckle releasing arm 14 carried by said shaft 13 and operative on the tail of the knuckle, a short arm 17 secured to the lower end of said shaft 13 and provided with an upturned lug 18, and a releasing lever 19 pivoted on the lower end of said shaft 13 and having a short arm 20, which arm 20 is operative on the lug 10 of said lock dog to move the same into a releasing position, and which lever 19, under continued movement, is engageable with the lug 18 of said arm 17 to oscillate said shaft 13 and arm 14 and cause the latter to move said knuckle into an open position, substantially as described.

902,443. NECK-YOKE HOLDER. JOSEPH PAULY, Harlem, Mont. Filed May 29, 1908. Serial No. 435,675.



A device for retaining neck yokes upon wagon poles comprising a member having one of its ends slit and the slit portions of the member wound around the pole and secured to the pole at their ends, and a member having a body portion provided with an opening adapted to engage the pole and a reduced portion having a buckle and adapted to engage the upper portion of the neck yoke center and to be secured to the member upon the pole.

902,444. DRUM-BEATING APPARATUS. ELMER E. PETTINGELL, Portland, Oreg. Filed Dec. 16, 1907. Serial No. 406,696.



1. In apparatus of the character described the combination with a pedal, a partly revoluble member journaled adjacent thereto, and a beating device extending from said member; of a flexible band surrounding said member and secured thereto at an intermediate point, the ends of said band being fastened to the pedal.

2. The combination with a movably supported pedal, a partly rotatable member supported adjacent thereto, and a beating device extending from said member; of a flexible band surrounding said member and fixedly secured at an intermediate point thereto and at one end to the pedal, and an adjustable connection between the other end of said band and the pedal.

3. In apparatus of the character described the combination with a movable pedal, a partly revoluble member, and a beating device extending from said member; of an adjusting device mounted upon the pedal, a flexible device fixedly secured at one end, and fastened at its other end to the adjusting device, said flexible device being secured at an intermediate point to the partly revoluble member.

4. The combination with a base, a bracket connected thereto, a partly revoluble member supported by the bracket, and a beating device extending from said member; of a pedal movably mounted upon the base, and a flexible band connected at its ends to the pedal and surrounding and secured at an intermediate point to, the partly revoluble member.

5. The combination with a base, a bracket connected thereto, a partly revoluble member supported by the bracket, and a beating device extending from said member; of a pedal movably mounted upon the base, a flexible band fixedly secured at an intermediate point to the partly revoluble member and at one end to the pedal, and an adjustable connection between the other end of the band and the pedal.

[Claim 6 not printed in the Gazette.]

902,445. TREATMENT OF WIRES, CORDS, THREADS, AND THE LIKE. WILLIAM A. PHILLIPS and FREDERICK HUTCHINS, London, England. Filed June 8, 1908. Serial No. 437,365.



1. In apparatus for the treatment of wires, cords threads and the like, the combination of means for moving the "wire" in the direction of its length, a rotatable rubber having a rubbing surface so disposed that it makes line-contact with the "wire" and displaces it out of coincidence with the axis of rotation of the rubber and means for rotating the rubber.

2. In apparatus for the treatment of wires, cords, threads and the like the combination of a rotatable spindle having an eccentric hole or channel, means for rotating the spindle and means for drawing the "wire" through said hole or channel in rubbing contact with the wall thereof.
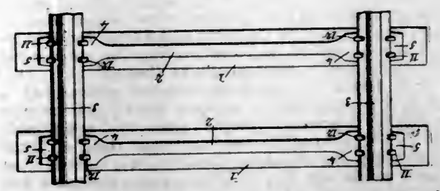
3. In apparatus for the treatment of wires, cords, threads and the like the combination of a rotatable tool having an eccentric spiral groove therein, means for rotating the tool and means for drawing the "wire" through said groove in rubbing contact with the wall thereof.

4. In apparatus for the treatment of wires, cords, threads and the like the combination of a rotatable tool having an eccentric spiral groove therein, means for rotating the spindle, a coating device, means for drawing the "wire" through the coating device and through the groove in the rotating tool in contact with the wall of said groove.

5. In apparatus for the treatment of wires, cords, threads and the like the combination of a rotatable tool having an eccentric spiral groove therein, means for rotating the tool, a coating device, a drying chamber, and means for drawing the "wire" through the coating device, the groove in the tool and the drying chamber, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

902,446. TIE-PLATE. FRANK A. PIPER, Redlands, Cal., assignor of one-half to James M. Whittemore, Redlands, Cal. Filed June 13, 1907. Serial No. 378,766.



1. A tie-plate having an end folded upon itself to form a shoulder to engage the outer edge of the rail base, an opening located inwardly from said shoulder for the passage of a spike to engage the inner edge of the rail base,

and a laterally located and downwardly disposed portion including a part of said folded end and constituting a spur for engaging a tie.

2. A tie-plate having an end folded upon itself to form a shoulder to engage the outer edge of the rail base and having an opening therethrough under said folded portion to receive a spike, said folded portion having a recess registering with said opening, whereby the opening through the tie-plate has a face of double thickness at the outer edge, and a laterally located and downwardly disposed portion including a part of said folded end and constituting a spur for engaging a tie.

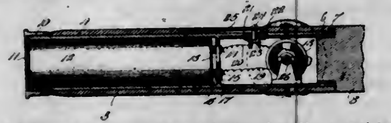
3. A tie-plate having an end folded upon itself to form a shoulder to engage the outer edge of the rail base, an opening located inwardly of said shoulder for the passage of a spike to engage the inner edge of the rail base, and an opening having the inner edge flush with the inner edge of said shoulder, for the passage of a spike to engage the outer edge of the rail base, said shoulder having a recess at the inner edge registering with said opening under said shoulder, and a laterally located and downwardly disposed portion including a part of said folded end and constituting a spur for engaging a tie.

4. A tie-plate having an end folded upon itself to form a shoulder to engage the outer edge of the rail base, and presenting an indentation at a lateral edge, said tie-plate being laterally located and downwardly disposed adjacent to said indentation and including a part of said folded end to form spurs to engage a tie.

5. A tie-plate having an end folded upon itself to form a shoulder to engage the outer edge of the rail base, and presenting projections at the lateral edges, said tie plate having portions adjacent to said projections and including a part of said folded end downwardly disposed to constitute spurs to engage a tie, the line of the bend of each downwardly disposed portion being at an angle with the line of the bend of the adjacent portion.

[Claims 6 to 8 not printed in the Gazette.]

902,447. FISHING-POLE. PAUL PIPER, Ladysmith, Wis. Filed May 8, 1908. Serial No. 431,672.



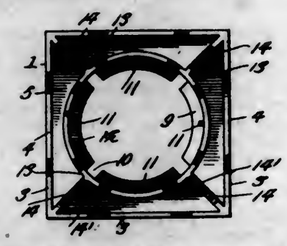
1. A fishing pole comprising a hollow handle, a reel having the shaft thereof journaled in the handle, and passing transversely therethrough, an electric motor associated with the reel shaft, a battery mounted in the handle and electrically connected with said motor, and a switch for throwing the motor into and out of operation, said switch being interposed in one of the current wires and embodying disconnected contact points, and a spring sustained button adapted to be moved into and out of contact with said points, substantially as described.

2. A fishing pole comprising a hollow handle, a reel having the shaft thereof entering said hollow handle, a hollow core mounted within the handle, an electric motor mounted within said core on the shaft of the reel, a cross piece within the core, a battery having the poles thereof passing through said cross piece, current wires passing from the poles of the battery to the motor, and a finger operated circuit closer arranged for operation from the exterior surface of the handle, substantially as described.

3. A fishing pole comprising jointed sections one of which is provided with a threaded thimble and the other of which is internally threaded to screw upon said thimble, one section constituting the handle and being of hollow construction and embodying a hollow core, a battery contained within said core, an electric motor associated with said battery and also mounted in the core, a circuit closer operable from the exterior of the handle, and a reel mounted exteriorly on the handle and fast upon the shaft of the electric motor, substantially as described.

4. A fishing pole comprising jointed sections one of which is provided with a reduced end having a threaded metal thimble thereon, another section being in the form of a hollow handle and comprising an inner hollow core internally threaded to screw upon the said thimble, a flanged core cap at the opposite end of the handle section provided with a packing disk on its inner face, a cross bar extending within the core, a battery interposed between said cross bar and the core cap, an electric motor arranged at the opposite side of the cross bar and electrically connected with the battery, a circuit closer operable from the exterior of the handle, and a reel mounted at one side of the handle and fast on the shaft of the motor, substantially as described.

902,448. COLUMN-BASE. GEOFFREY L. PREACHER, Augusta, Ga. Filed June 5, 1908. Serial No. 436,976.



1. A column base comprising a body embodying a top wall having an opening therein and depending supports for holding said top wall at an elevation, said top wall being provided with recesses in the margin of said opening and communicating therewith.

2. A column base having an elevated top wall provided with an opening therein and formed in the marginal edge of said opening with recesses.

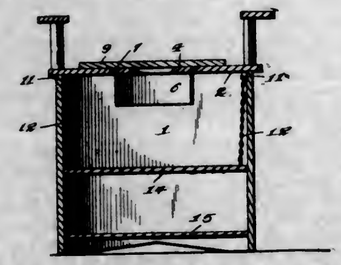
3. A column base having an elevated top wall provided with an opening therein, and formed with a raised portion beyond and surrounding the opening, and an extension projecting into the opening, said extension being provided at intervals with notches or recesses.

4. A column base having an elevated top wall and a cavity beneath the same, said top wall being provided with an opening communicating with the cavity and having a depressed flange surrounding and forming the margin of said opening, said flange being provided with notches or recesses.

5. A support for columns comprising a hollow base having an elevated top wall provided with an opening therein and provided with recesses communicating with said opening, and a column adapted to rest at its base upon said top wall and provided with projections adapted to be passed through said recesses and to engage beneath the top wall to interlock the base and column.

[Claims 6 to 9 not printed in the Gazette.]

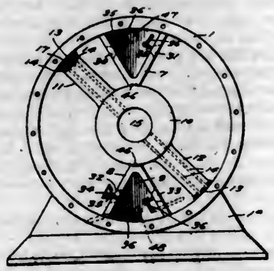
902,449. COMMODE. LOT W. PRICE, Whitten, Iowa. Filed Mar. 2, 1906. Serial No. 303,889.



The herein described portable commode, consisting of a casing having its front closed by means of a hinged door,

and having a flared opening in its top, and having arm rests and a hinged lid closing the said opening, a detachable step fitted to the door, a vertically adjustable shelf arranged within the casing, a cylinder having its upper end provided with a flared rim fitted within the aforesaid flared opening in the top of the casing to hold the cylinder suspended within the said opening and a crescent shaped auxiliary seat fitted within the flared rim of the cylinder to come flush with the top of the casing and admit of the lid fitting close thereto.

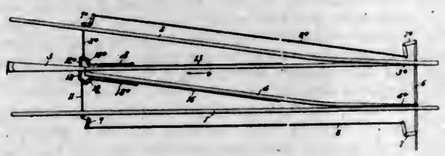
902,450. EXPLOSIVE-GAS ENGINE. ALFRED E. REMICK, Providence, R. I. Filed Mar. 22, 1907. Serial No. 363,861.



1. In a gas engine, a cylinder, heads fitted to said cylinder and provided with central openings, V-shaped abutments within said cylinder, a sleeve mounted in said heads, pistons carried by said sleeve, valves in the walls of the abutments, a pair of bars connected together and provided with lugs, links connected to said valves and to said bars, and cams for operating said bars.

2. In a gas engine, the combination of a cylinder, hollow V-shaped abutments therein having inclined walls, a sleeve mounted to oscillate in the cylinder heads, pistons carried by the sleeve, the walls of the abutments being provided with inlet and outlet ports, valves for opening and closing said inlet and outlet ports, links connected to said valves, bars for operating said links, said bars having lugs to engage said links, a shaft, cams on said shaft for lifting said bars, and springs connected to said links and bars for returning said valves after each operation.

902,451. SWITCH-FROG. HARRY F. ROACH, St. Louis, Mo., assignor to Continuous Rail & Safety Switch Co., St. Louis, Mo., a Corporation of New Jersey. Filed Apr. 2, 1908. Serial No. 424,770.



1. In a switch frog, a base having rigid stop projections, a movable tongue mounted on said base and coöperating with said projections, means for moving said tongue, and horizontally disposed locking devices pivotally mounted on the base and adapted to engage said tongue to lock it in operative position; substantially as described.

2. In a switch frog, a base having rigid overhanging stop projections, a movable tongue mounted on said base and provided with a recess or chamber, lateral projections on said tongue arranged inside of said recess and adapted to extend underneath the overhanging projections on the base, means for moving said tongue, and means for locking said tongue in its different positions; substantially as described.

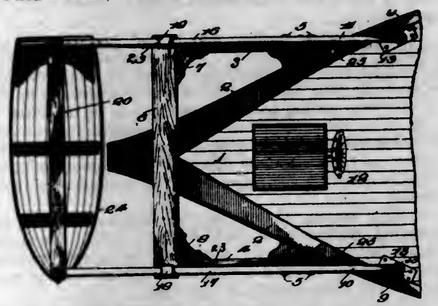
3. In a switch frog, a base having rigid overhanging stop projections, a tongue pivotally mounted on said base and having inclosed lugs which coöperate with said stop projections to lock said tongue against upward movement, means for moving said tongue, and locking devices adapted to engage said tongue and lock it against lateral movement; substantially as described.

4. In a switch frog, a base having integral projections to which the rail terminals are connected, said base also having a rigid stop projection, and a tongue pivotally mounted on said base and provided on its underneath side with a recess into which said rigid stop projection extends so as to limit the lateral movement of the tongue; substantially as described.

5. In a switch frog, a base, a movable tongue mounted on said base and provided on its underneath side with a chamber or recess, a stop extending up from said base into said recess for engaging said tongue in its different positions, and means for holding the tongue in engagement with said stop so as to lock the tongue in its different positions; substantially as described.

[Claims 6 to 69 not printed in the Gazette.]

902,452. DAVIT-SUPPORTING MEANS FOR SHARP-STERN BOATS. JOSEPH E. ROBBINS, Cambridge, Md. Filed Feb. 10, 1908. Serial No. 415,202.



1. The combination with a sharp stern vessel, of a davit-support carried by the said sharp stern, and projecting beyond the sides thereof, and davits attached to the said support and extending rearwardly from the support, and beyond the sharp stern of the vessel.

2. The combination with a sharp stern vessel, of a frame secured to the vessel and extending rearwardly beyond the sides of the vessel, a transverse beam forming a portion of the frame resting upon the upper face of the sharp stern, and davits supported by said frame and extending beyond the stern of the vessel.

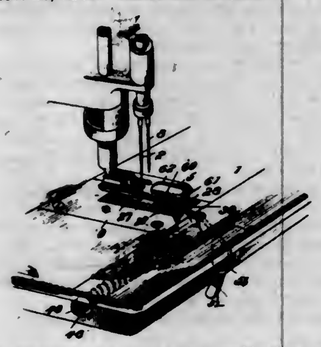
3. The combination with a sharp stern vessel, of beams secured to the outside of the gunwale and extending rearwardly, a transverse beam connecting the outer ends of said beams and resting upon the stern of the vessel, and davits secured to the vessel and supported by the frame intermediate the ends.

4. The combination with a sharp stern vessel, of beams secured to the gunwale and extending rearwardly parallel with each other, a transverse beam connecting the outer ends of the said beams, and resting upon the stern of the vessel, davits having their inner ends secured to the vessel, and brackets carried by the transverse beam and connected to the davits intermediate their ends.

5. The combination with a sharp stern vessel, of beams connected to the gunwale and extending rearwardly parallel with each other, a transverse beam connecting the outer ends of the side beams and resting upon the stern of the vessel, davits having their inner ends connected to the vessel, a bar connecting the outer ends of the davits, and brackets carried by the transverse beam and extending upwardly and connected to the davits intermediate their ends.

[Claims 6 to 8 not printed in the Gazette.]

902,453. SEWING AND TRIMMING MACHINE. GEORGE SCOTT, Amsterdam, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 26, 1904. Serial No. 234,392.



1. In a sewing machine and in combination with the stitching mechanism thereof, a throat plate, a fixed cutter detachably held in position and having one end loosely secured to said throat plate and its other end held in position by the throat-plate resting thereon, substantially as described.

2. In a sewing machine and in combination with the stitching mechanism thereof, a throat plate, a fixed cutter detachably held in position and having one end embracing said throat plate and its other end held in position by the throat plate resting thereon, substantially as described.

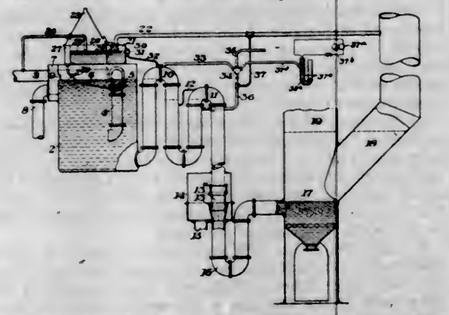
3. In a sewing machine and in combination with the stitching mechanism thereof, a fixed cutter, a movable cutter coacting with said fixed cutter and a finger yieldingly held against said movable cutter, substantially as described.

4. In a sewing machine and in combination with the stitching mechanism thereof, a fixed cutter, a movable cutter coacting therewith, a finger pressing said movable cutter against the fixed cutter, and a spring coacting with said finger, substantially as described.

5. In a sewing machine and in combination with the stitching mechanism thereof, a fixed cutter, a movable cutter coacting therewith, a spring pressed spindle, and a finger projecting from said spindle and holding the movable cutter against the fixed cutter, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

902,454. AUTOMATIC DEVICE FOR OPERATING WATER SEALS FOR GAS-MAINS. LEONARD SHAW, Chicago, Ill. Filed June 24, 1908. Serial No. 440,125.



1. In apparatus of the character described, a gas conduit or main having a valve-seating compartment, a valve supply therefor, siphon devices for controlling the valve supply, and means controlled by variations of the gas pressure for controlling the action of the siphon devices, substantially as described.

2. In apparatus of the character described, a gas conduit or main having a water-sealing compartment, a water-supply therefor, means for controlling the flow of water through said supply dependent upon variations of pressure in the system, and means whereby the water will be automatically discharged from the sealing compartment when the supply thereto is cut off; substantially as described.

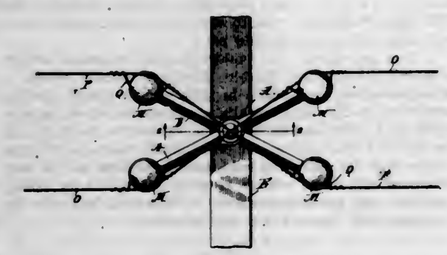
3. In apparatus of the character described, a gas conduit or main having a water-sealing compartment, a water-inlet therefor terminating in an open-overflow funnel, a water-supply pipe extending into said funnel, and means for controlling the flow of water in said pipe dependent on variations in the gas pressure; substantially as described.

4. In apparatus of the character described, a gas conduit or main having a water-sealing compartment, a water-inlet therefor terminating in an open-overflow portion, a water-supply pipe discharging into said portion, and means for controlling the flow of water in said pipe dependent on variations in the gas pressure; substantially as described.

5. In apparatus of the character described, a gas conduit or main having a water-sealing compartment, a water-inlet therefor terminating in an open-overflow funnel, a water-supply pipe discharging into said funnel, and means for controlling the flow of water in said pipe dependent on variations in the gas pressure, said pipe having a vertically adjustable discharge portion; substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

902,455. TRANSPOSITION-BRACKET FOR INSULATORS. JAMES E. SKINNER, Kingman, Kans. Filed June 17, 1908. Serial No. 438,942.



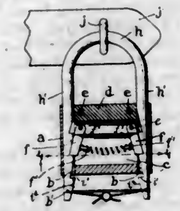
1. A transposition bracket for insulators, comprising two similar sections, each consisting of a hub, arms projecting in opposite directions from the hub, and bearings at the ends of the arms for receiving the insulator pins, the edge of one hub being provided with segmental notches and the other with similarly shaped projections fitting within the notches whereby to retain the sections at a predetermined angle with respect to each other, a bolt traversing the hubs for retaining the sections in position and for fixing them to a support.

2. A transposition bracket for insulators, comprising two similar sections, each consisting of a hub, arms projecting in opposite directions from the hub, and bearings at the ends of the arms for receiving the insulator pins, the edge of one hub having notches and the edge of the other projections engaging the notches for preventing angular movement of the hubs with respect to each other.

3. A transposition bracket for insulators, comprising sections each consisting of a hub, provided with projecting arms and with means at the ends of tne arms for receiving insulator pins, the edge of one hub being notched and the edge of the other having projections for engaging the notches whereby to prevent angular movement of the hubs with respect to each other.

4. A transposition bracket for insulators, comprising a pair of superimposed hubs, provided with radially projecting arms having bearings at the free ends thereof, and means in connection with the hubs for preventing angular movement of one with respect to the other.

902,456. SEAL-PADLOCK. OTTO SOHNI and HENRY MEHL, Buffalo, N. Y. Filed May 6, 1908. Serial No. 431,125.



1. In a seal padlock, the combination with a solid body provided with parallel longitudinal seats, a recess between said seats, a block seated in said recess and having connection with said body, and spring catch devices having bearing against said block, of a staple-form shackle having legs engaging said seats, and provided with notches having engagement with said catch devices.

2. In a seal padlock, the combination with a solid body provided with parallel longitudinal perforations, a recess between said perforations, a block seated in said recess and having connection with said body, and spring catch devices having bearing against said block, a staple-form shackle, having legs engaging the perforations of the padlock body and provided with notches having engagement with said catch devices.

3. In a seal padlock, the combination with a solid body provided with parallel longitudinal perforations, a recess between said perforations, a block seated in said recess and having connection with said body, and spring catch devices having bearing against the lower portion of said block, of a staple-form shackle having legs engaging the padlock perforations, adapted to project below the same, and provided with notches having engagement with said catch devices.

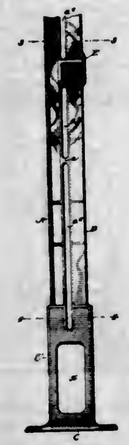
4. In a seal padlock, the combination with a body provided with parallel longitudinal seats, a recess between said seats, a block seated in said recess and having connection with said body; and pivoted pawl devices carried by said block and having spring means for holding the same normally separated, of a staple-form shackle having legs engaging said seats, and provided with notches having engagement with said pawl devices.

5. In a seal padlock, the combination with a body provided with parallel cylindrical perforations, a recess between said perforations, a block seated in said recess and having riveted connection with said body, and pivoted pawl devices carried by said block and having spring means for holding the same normally separated, of a staple-form shackle having cylindrical legs engaging said perforations and provided each with a plurality of notches for engagement with said pawl devices, said legs being adapted to project below the padlock body and having perforated end portions for connection of the usual wire and lead seal.

902,457. FENCE-POST. ALVIS M. WEATHERLY, Sr., Rome, Ga. Filed June 5, 1908. Serial No. 436,757.

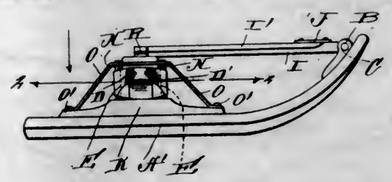
1. The improved metallic fence-post comprising a horizontal base, the connected vertical portion C' formed hollow, the body portion consisting of two parallel members A and B spaced apart but having webs connecting them at intervals, and each provided with horizontal partitions spaced apart vertically, the two members being provided with backs extending between the said partitions and cast integrally with the post body, the two series of pockets thus formed in the separate members being adapted for reception of ends of boards, and rails opening in different directions, as shown and described.

2. The improved metallic fence-post comprising a skeleton body having a horizontal base and provided at the middle with a bracket E formed integrally with the said body and comprising horizontal and vertical wings which project laterally from the body and are arranged at a



right angle to each other as shown, whereby said bracket is adapted for engagement of an inclined brace arranged in either of two positions at right angles to each other.

902,458. SLEIGH. CHARLES A. WETMORE, Watson, N. Y. Filed May 15, 1907. Serial No. 373,820.



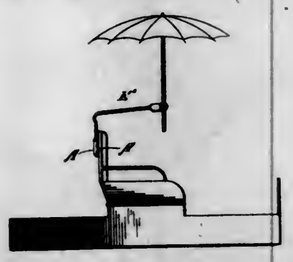
A sleigh comprising runners, a block mounted upon each of the latter, posts rising from said blocks, a truss bar fastened at its ends to each block and having a horizontally disposed and apertured portion through which the upper ends of said posts extend, a bolster recessed upon said opposite vertical faces adjacent to its ends, the inner ends of each recess terminating in shoulders, the upper and lower surfaces of the bolster intermediate the oppositely disposed recessed portions being convexed, a flangeless plate positioned in each recess and having its upper and lower edges curved to conform respectively with the convexed surfaces of said bolster, fastening means passing through the plates and adapted to hold the inner ends thereof against said shoulders, each plate having an outwardly projecting portion extending beyond the front and rear faces of the bolster and vertically grooved for the reception of said posts, the inner edges of the plate being concaved and flush with the opposite front and rear faces respectively of the bolster, the outer edges of the plates being concaved and flush with the convexed end of the bolster, as shown and described.

902,459. UMBRELLA-SUPPORT FOR CARRIAGES. JACOB C. WILLIAMS and ANGUS B. CONNER, Soperton, Ga. Filed May 25, 1908. Serial No. 434,986.

1. An umbrella supporting device for carriages comprising a socket plate having a hollow cylindrical portion provided with oppositely disposed wings, said cylindrical portion projecting at one end beyond said wings and having intersecting slots, a standard provided with a contracted

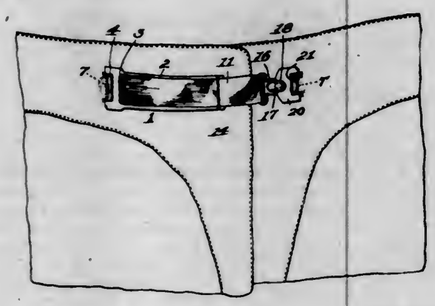
end extending through said cylindrical portion of the plate and having a flat shank portion terminating in shoulders adapted to rest in said slots, and means upon said standard for clamping an umbrella stick, as set forth.

2. An umbrella supporting device for carriages comprising a socket plate having a hollow cylindrical portion provided with oppositely disposed wings, said cylindrical portion projecting at one end beyond said wings and having intersecting slots, a standard provided with a contracted end extending through said cylindrical portion of the plate



and having a flat shank portion terminating in shoulders adapted to rest in said slots, the shank portion of said standard being concaved near one end thereof, a concaved slotted socket member seated in said concaved portion, and an umbrella stick holder passing through said member and aperture of the standard, as set forth.

902,460. DRAWERS ADJUSTER AND SUPPORTER. EUGENE H. WOOD, Roswell, Ga. Filed Oct. 29, 1907. Serial No. 399,692.



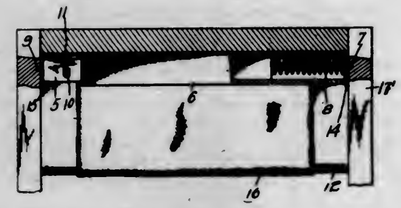
1. A device of the character described, comprising pairs of plates, one plate comprising a stud-plate, said stud-plate comprising a body provided with a stud, said body provided with a bifurcated portion, one of the sides of the bifurcated portion terminating in a hook, the other side of the bifurcated portion integral with a plurality of eyes or loops, a pin positioned in said eyes or loops and normally engaging the hook for securing the stud-plate to one of the parts of a garment, and the other plate provided with fastening means engaging the stud.

2. A device of the character described, comprising a curved plate provided near one end with a slot and a transversely-extending eye, fastening means extending transversely of said plate and positioned in said eye, said plate provided near its opposite end with a plurality of transverse slots and with a bifurcated portion, said bifurcated portion provided with sides, one of said sides integral with a plurality of eyes, a pin secured within said eyes, the opposite side of said bifurcated portion provided with a hook, said pin normally engaging said hook, a strap threaded through all of said elongated slots, and fastening means carried by said strap.

3. A device of the character described, comprising a plate provided at one end with a portion formed at an angle and having an opening or aperture therein, said plate provided at its opposite end with a hook and with an eye, a pin fixedly secured near one end in said eye and adapted to engage, near its opposite end, said hook, fastening means secured to the inner face of and intermediate the side edges of the plate near the angularly-disposed end, a strap threaded through the opening or aperture of the angularly-disposed end and passing around portions of the plate, and fastening means carried by said strap for attaching the same to a garment.

4. A device of the character described, comprising a plate provided at one end with an angularly-disposed portion, said portion provided with an elongated aperture or opening, a pin fixedly secured to said plate between the side edges thereof and contiguous to said elongated opening, said plate provided at its opposite end with a hook, a pin fixedly secured at one end to the plate and engaging said hook, and said plate provided near the end carrying the hook with transverse, elongated apertures or openings, a strap threaded through the aperture of the angularly-disposed portion and also through the transverse apertures near the opposite end, and garment attaching means carried by said strap.

902,461. STAIR-ROD. WALTER G. ALTLAND, York, Pa. Filed May 29, 1908. Serial No. 435,604.



1. In a device of the character described, a tubular member of triangular cross-section, a rod of triangular cross-section telescoping therein, an expansion spring adjacent to the inner end of the rod, and nipples or projections at the closed end of the tubular member and at the outer end of the rod.

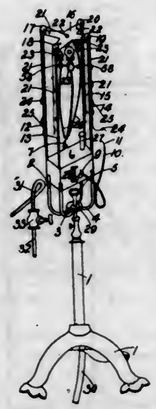
2. In a device of the character described, a tubular member triangular in cross-section, closed at one end and provided with a projecting nipple and with a flange adjacent to said closed end; an expansion spring in said tubular member, and a rod triangular in cross-section telescoping in the tubular member, said rod being provided at its outer end with a flange and with a nipple or projection.

3. In a device of the character described, a tubular member provided at its closed end with a flange and with an outwardly extending nipple, an expansion spring in said tubular member, and a rod telescoping in the tubular member and provided adjacent to its outer end with a lug or projection, a flange, and an outwardly extending nipple; in combination with a block having a nipple receiving recess in one of its faces, and means for securing the block in position.

4. In a device of the character described, a tubular member, and a spring actuated rod telescoping in the tubular member and having adjacent to its outer end a lug or projection provided with a notch forming a tool-seat in its outer side; said tubular member and rod being provided at their terminal ends with outwardly extending nipples.

902,462. METHOD OF TREATING TEETH FOR FILLING. FRANK ARMSTRONG, Dunedin, New Zealand. Filed Feb. 8, 1907. Serial No. 356,345.

Method of treating teeth which consists in making a suitable solution, heating the solution, spraying the solution on the tooth under operation, regulating the heat of the solution, preventing the solution from touching the



inside of the mouth of the patient, and draining the solution away substantially as described.

902,463. DENTAL APPARATUS. FRANK ARMSTRONG, Dunedin, New Zealand. Filed Feb. 8, 1907. Serial No. 356,346.



1. Dental apparatus comprising a receiver for a drug solution, means for heating said solution, means for controling the heat of said solution, means for spraying same on the tooth of a patient, and means for preventing same entering the mouth of a patient, and means for draining same away substantially as described.

2. A dental apparatus comprising a water boiling apparatus, a drug receiver suspended at a regulable distance above said apparatus, a dental spraying nozzle, and a tube leading from said drug receiver through said water boiler to said nozzle substantially as described.

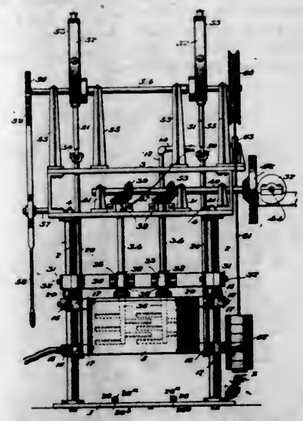
3. Dental apparatus comprising a water boiling apparatus, a stand above said water boiling apparatus, a drug receiver suspended from said stand at a regulable distance, a dental spraying nozzle, and a tube leading from said receiver through said water boiler to said nozzle substantially as described.

4. Dental apparatus comprising a receiver for a drug solution means for heating said solution, means for spraying same on the tooth of a patient and means for draining the solution away from the tooth substantially as described.

5. Dental apparatus comprising a water boiling apparatus, a drug receiver suspended at a regulable distance above said apparatus, a dental spraying nozzle, and a tube leading from said drug receiver through said water boiler to said nozzle, and means for draining the solution away from the tooth substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

902,464. MACHINE FOR MIXING EXPLOSIVES. HENRY AUCHU, Emporium, Pa. Filed Oct. 5, 1907. Serial No. 396,108.



1. In a machine for mixing explosives, the combination with a mixing bowl, of mixing means adapted to operate in said mixing bowl, said bowl and mixing means being adapted for relative raising and lowering independently of their operation for mixing purposes, and means for accomplishing the relative raising and lowering of said bowl and mixing means independently of their operation for mixing purposes comprising an eccentric, an eccentric strap, and means for turning the eccentric.

2. In a machine for mixing explosives, the combination with a mixing bowl, and mixing means adapted for operation in said mixing bowl, of means for raising and lowering the mixing bowl comprising an eccentric, an eccentric strap operatively connected to said mixing bowl, and means for turning the eccentric.

3. In a machine for mixing explosives, the combination with a mixing bowl, of mixing means adapted to operate in said mixing bowl, said bowl and mixing means being adapted for relative raising and lowering independently of their operation for mixing purposes, means for accomplishing the relative raising and lowering of said bowl and mixing means independently of their operation for mixing purposes comprising an eccentric, an eccentric strap, means for turning the eccentric, and means for balancing the movable elements aforesaid.

4. In a machine for mixing explosives, the combination with a mixing bowl, and mixing means adapted for operation in said mixing bowl, of means for raising and lowering the mixing bowl comprising an eccentric, an eccentric strap operatively connected to said mixing bowl, means for turning the eccentric, and means for balancing the mixing bowl.

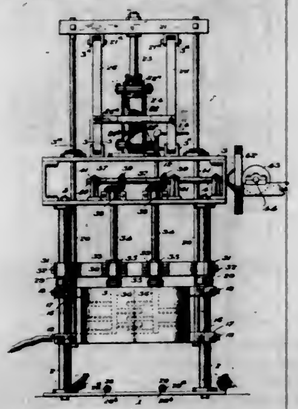
5. In a machine for mixing explosives, the combination with a mixing bowl, of mixing means adapted to operate in said mixing bowl, said bowl and mixing means being adapted for relative raising and lowerng independently of their operation for mixing purposes, means for accomplishing the relative raising and lowering of said bowl and mixing means independently of their operation for mixing purposes comprising an eccentric, an eccentric strap, means for turning the eccentric, and means for balancing the movable elements comprising a wheel connected to the eccentric, and a counter-weighted cable adapted to wind on said wheel.

[Claim 6 not printed in the Gazette.]

902,465. MACHINE FOR MIXING EXPLOSIVES. HENRY AUCHU, Emporium, Pa. Filed Oct. 5, 1907. Serial No. 396,109.

1. In a machine for mixing explosives, the combination with pillars, of a mixing bowl or receptacle adapted to be

raised and lowered which is guided by said pillars, mixing means sustained stationarily by the pillars, a motive fluid cylinder, having a piston and piston rod, and a rod connected to the bowl or receptacle and to the piston whereby the bowl or receptacle may be raised or lowered by the play of the piston under the influence of a motive fluid to thereby cause the mixing means to be positioned within the bowl or freed therefrom.



2. In a machine for mixing explosives the combination with a mixing bowl or receptacle adapted to be raised or lowered, of mixing means adapted for operation in the bowl or receptacle, means for raising or lowering the mixing bowl or receptacle and normally inactive means automatically acting when the mixing bowl has reached a predetermined height which secure it in raised position.

3. In a machine for mixing explosives, the combination with a mixing bowl or receptacle adapted to be raised or lowered, of mixing means adapted for operation in said bowl or receptacle, motive fluid operated means for raising and lowering the mixing bowl or receptacle, and means for securing the bowl or receptacle in raised position independent of the motive fluid operated means.

4. In a machine for mixing explosives, the combination with a mixing bowl or receptacle adapted to be raised or lowered, of mixing means adapted for operation in said bowl or receptacle, motive fluid operated means for raising and lowering the mixing bowl or receptacle, and normally inactive means independent of the motive fluid operated means adapted for automatically acting to secure the bowl or receptacle in raised position when said bowl reaches a predetermined height.

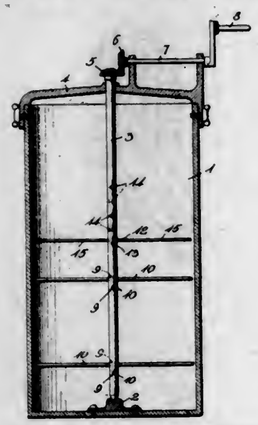
5. In a machine for mixing explosives, the combination with a mixing bowl or receptacle adapted to be raised or lowered, of cylindrical bumpers or buffers for said mixing bowl or receptacle which are disposed horizontally so that they may serve as stops for said bowl.

[Claims 6 to 8 not printed in the Gazette.]

902,466. POTATO PEELING AND CLEANING MACHINE. STEPHEN E. BAILEY, Colfax, Wash. Filed Nov. 18, 1907. Serial No. 402,735.

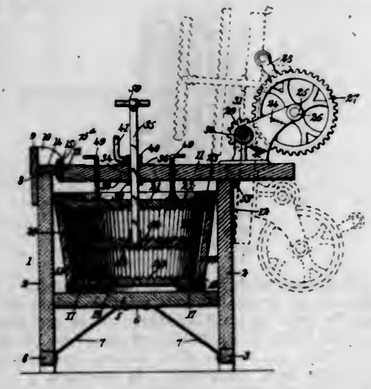
1. In a vegetable cleaning and peeling machine, the combination with a suitable receptacle, of an operating shaft mounted therein, a series of transversely disposed agitating rods or bars arranged through said shaft, and means adjustable on said shaft to hold the vegetables down into engagement with said rods and to permit the separation of the peelings from the vegetables after being removed therefrom.

2. In a vegetable peeling machine, the combination with a cylindrical receptacle adapted to contain water, of an operating shaft revolubly mounted in said receptacle, transversely disposed agitating rods arranged in pairs at right-angles to each other and suitably spaced apart on said shaft, an adjustable apertured plate on said shaft above said rods, means to hold said plate in its adjusted



position on the shaft, and means to operate the latter, substantially as described.

902,467. WASHING-MACHINE. JOHN BECKER, Canal Dover, Ohio. Filed Jan. 3, 1908. Serial No. 409,144.



1. In a washing machine, a tub having a bottom and a cover provided at the inner faces with transverse sharp edged corrugations, the wall of said tub at the inner side having sharp edged corrugations, an agitator between said bottom and said cover and provided with transverse sharp edged corrugations, and means for actuating said agitator, the corrugations of said cover and said bottom being inclined in opposite directions said cover being adjustable toward and away from said bottom.

2. In a washing machine, a tub having a cover provided at the inner face with transverse sharp edged corrugations, the wall of said tub at the inner side having sharp edged corrugations, an agitator under said cover and provided at the upper side with transverse sharp edged corrugations, and means for actuating said agitator, the corrugations of said cover and said agitator being inclined in opposite directions said cover being adjustable toward and away from said bottom.

3. In a washing machine, a tub having a bottom and a cover provided at the inner faces with transverse corrugations, an agitator between said bottom and said cover and provided at the opposite faces with transverse corrugations

inclined in opposite directions respectively to the corrugations of said bottom and said cover, and means for actuating said agitator said cover and said agitator being independently adjustable toward and away from said bottom.

4. In a washing machine, a tub, an agitator within said tub and adjustable with respect thereto, and a removable cover upon said tub and adjustable toward and away from the bottom of said tub.

5. In a washing machine, a frame having uprights, a tub carried by said frame, a transverse member pivoted upon one of said uprights and adapted to engage at the other of said uprights, an agitator within said tub and carried by said transverse member, said member extending beyond its pivotal point upon one of said uprights, means carried upon said extended portion of said member for actuating said agitator, said actuating means substantially balancing said agitator whereby said member can be easily swung upon its pivot, a cover upon said tub and carried by said transverse member, and means for independently adjusting said agitator and said cover toward and away from said transverse member.

[Claims 6 and 7 not printed in the Gazette.]

902,468. SPEAR FOR OIL-WELLS. WALTER C. BECKWITH, Fostoria, Ohio. Filed Apr. 18, 1907. Serial No. 368,954.



1. The combination with a well casing, a standing valve therein, a pump valve working above the standing valve, a spear carried by the lower end of the pump valve, a sleeve slidably surrounding said spear, means for normally holding the sleeve in its downward position, and means for locking the sleeve in its downward position.

2. The combination with a well casing, a standing valve therein, a pump valve working above the standing valve, a spear carried by the lower end of the pump valve, a sleeve slidably surrounding said spear, and means for locking the sleeve in its downward position.

3. The combination with a well casing, a standing valve therein, a piston valve working above the standing valve, a spear carried by the lower end of the piston valve, and an obliquely arranged spring-pressed member within the lower end of the spear for locking the same to the standing valve.

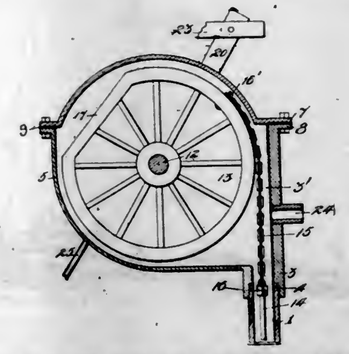
4. The combination with a well casing, a standing valve therein, a piston valve within the casing above the standing valve, a spear carried by the lower end of said piston valve, an obliquely arranged spring pressed member within the lower end of the spear for locking the same to the standing valve, a sleeve surrounding the spear and slidable thereon, and means for normally holding said sleeve in its downward position inclosing the spring-pressed member.

5. A device of the character described, comprising a spear, a downwardly and outwardly spring-pressed member therein, a sleeve slidably surrounding the spring-pressed member, and means for locking said sleeve in its downward position.

[Claims 6 to 30 not printed in the Gazette.]

902,469. PUMPING APPARATUS FOR OIL-WELLS. WALTER C. BECKWITH, Fostoria, Ohio. Filed Jan. 17, 1908. Serial No. 411,265.

1. The combination with a well casing, a piston rod therein, a tight housing secured upon the upper end of the casing, a drum within the casing and having a flexible connection with the piston rod, and said drum having a cut-away portion in its periphery, whereby the piston rod may be removed through the housing without disturbing the drum.



2. The combination with a well casing, a piston rod therein, a tight housing secured upon the upper end of the casing at one side, a drum within the casing and its outer periphery extending over the center of the well casing, a flexible connection between the drum and piston rod, and said drum having a cut-away portion in its periphery, whereby the piston can be removed through the housing without disturbing the working parts of the drum.

3. The combination with a well casing, of a tight housing secured upon the upper end of the casing, a shaft extending through the housing, a drum carried by the shaft within the housing, a sucker-rod within the casing, a chain having one end secured to the outer periphery of the drum and the other end secured to the sucker rod, and means carried by the shaft on the outside of the housing for rocking the same, the said drum having a cut-away portion which can be brought over the well-casing for removing the pump-piston therefrom.

4. The combination with a well casing, of a tight housing secured upon the upper end of the casing, a shaft extending through the housing, a drum carried by the shaft within the housing, the outer periphery of which is directly over the center of the well casing, a sucker-rod within the casing, and a chain having one end connected to the periphery of the drum and the opposite end connected to the sucker rod the said drum having a cut-away portion which can be brought over the well-casing for removing the pump-piston therefrom.

5. The combination with a well casing, of a tight housing formed in two sections and having its lower end at one side, a shaft mounted in the lower section and extending through the sides thereof, stuffing boxes carried by the housing and surrounding the shaft, a drum carried by the shaft within the housing and having a cut-away portion, a flexible connection between the drum and sucker rod, and means for operating the shaft.

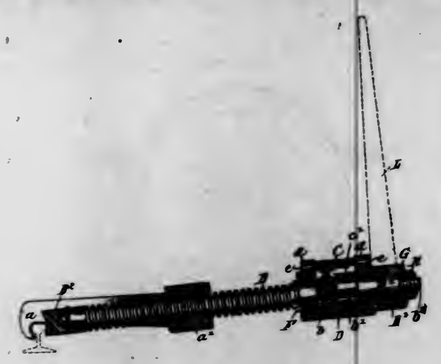
[Claims 6 to 11 not printed in the Gazette.]

902,470. RAIL-BENDER. DOMENICO BELLONI, Edri, Pa. Filed June 2, 1908. Serial No. 436,219.

1. In a metal bending machine, the combination with a screw stem having two series of oppositely pointing ratchet teeth, an oscillating pawl carrier swiveling thereon, having at the end an integral polygonal extension, a double toothed pawl pivoted on the carrier, and having at opposite ends oppositely pointing detent teeth arranged to operate in different planes.

2. In a metal bending machine, the combination with a screw stem having two series of oppositely pointing ratchet teeth, an oscillating pawl carrier swiveling thereon and of semicylindrical form provided with offsetting ears, and an integral polygonal extension at the end, and a double

toothed pawl pivoted between the ears and having at opposite ends oppositely pointing detent teeth arranged to operate in different planes.



3. A metal bending machine comprising a yoke having hooks at the ends thereof and an enlarged screw threaded middle part, a screw stem meshing therewith and having upon one end a swiveling seat and at the other end being formed with a smooth extension provided with two series of oppositely facing ratchet teeth, a fixed collar at one end of the smooth extension and a reduced screw stem at the other end provided with a nut, an oscillatory pawl carrier freely turning upon the extension of the screw stem and having a double acting pawl provided with oppositely facing detent teeth arranged in separate planes to act respectively upon the two series of oppositely facing ratchet teeth.

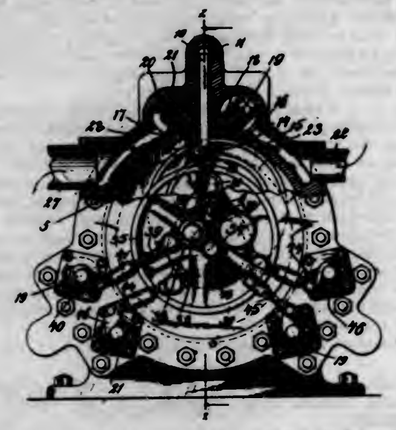
902,471. FOLDING CHAIR. JUDSON C. BENNETT, Brookton, N. Y. Filed Jan. 10, 1908. Serial No. 410,176.



1. A foldable chair for the purpose described comprising a back, a shoulder upon the back, side arms hinged to the back and resting upon said shoulder, a seat hinged to the back and having its rear end extending beneath and resting upon the lower portion of the back, front arms hinged to the side arms and seat, and a foot rest hingedly secured to the side arms.

2. A foldable chair for the purpose set forth, comprising a back having a shoulder, side arms provided with lips hingedly secured to the back and resting upon the shoulder, front arms hingedly secured to the side arms and provided with a shoulder and a projection adapted to contact the lips of the side arms, a seat hingedly connected to the side arms below the shoulder provided by the back, said seat hingedly secured to the back, and a foot rest hingedly secured to the front arms.

902,472. ROTARY ENGINE. HENRY W. N. COLE, Brooklyn, N. Y. Filed Feb. 12, 1908. Serial No. 415,563.



1. A rotary engine comprising a casing, a shaft provided with a crank portion arranged within the casing, a rotary piston loosely mounted upon the said crank portion within the casing, a plurality of sliding abutments dividing the space between the piston and the casing into a plurality of chambers, an inlet port for each such subdivision, an individual valve for each said inlet port, and common means for operating all the said valves.

2. A rotary engine comprising a casing, a shaft provided with a crank portion arranged within the casing, a rotary piston loosely mounted upon the said crank portion within the casing, a plurality of sliding abutments dividing the space between the piston and the casing into a plurality of chambers, an exhaust port for each such sub-division, an individual valve for each said exhaust port, and common means for operating all the said valves.

3. A rotary engine comprising a casing, a shaft provided with a crank portion arranged within the casing, a rotary piston loosely mounted upon the said crank portion within the casing, a plurality of sliding abutments dividing the space between the piston and the casing into a plurality of chambers, individual inlet and exhaust ports for each such sub-division, individual valves for each said inlet and exhaust port, common means for operating all of the said inlet valves, and common means for operating all of the said exhaust valves.

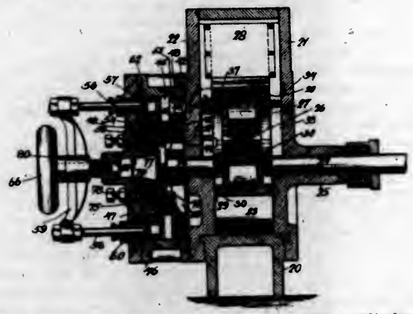
4. A rotary engine comprising a casing, a shaft provided with a crank portion arranged within the casing, a rotary piston loosely mounted upon the said crank portion within the casing, a plurality of sliding abutments dividing the space between the piston and the casing into a plurality of chambers, an inlet port for each such sub-division, an individual valve of the oscillatory type for each said inlet port, and common means for imparting oscillatory movements to all of the said valves.

5. A rotary engine comprising a casing, a shaft provided with a crank portion arranged within the casing, a rotary piston loosely mounted upon the said crank portion within the casing, a plurality of sliding abutments dividing the space between the piston and the casing into a plurality of chambers, an exhaust port for each such sub-division, an individual valve of the oscillatory type for each said exhaust port, and common means for imparting oscillatory movements to all of the said valves.

[Claims 6 to 11 not printed in the Gazette.]

902,473. ROTARY ENGINE. HENRY W. N. COLE, Brooklyn, N. Y. Filed Feb. 12, 1908. Serial No. 415,564.

1. In a rotary engine the combination with a cylinder or casing, a crank shaft, and a cylindrical piston freely mounted upon the crank portion of the shaft within the cylinder, of a sliding abutment operated by the crank shaft and piston, the said abutment being provided with an anti-friction roller which is engaged upon one side by the crank shaft and upon the other by the piston.



2. In a rotary engine the combination with a cylinder or casing, a crank shaft provided with a crank, and disks upon opposite sides thereof concentric with the said crank, said crank and disks located within the cylinder or casing, of a roller piston freely mounted upon the said crank, a sliding abutment, and anti-friction rollers carried by the said abutment, the said anti-friction rollers engaged upon one side by the said disks and upon the other side by concentric walls in the said piston.

3. In a rotary engine the combination with a cylinder or casing, a shaft therefor provided with a crank and two disks concentric with the said crank, the said crank and disks located within the cylinder, of a roller piston freely mounted upon the said crank within the cylinder, and arranged in rolling contact with the inner periphery of the said cylinder, the said piston provided with circular recesses for receiving the said disks, the walls of said recesses being arranged opposite to the circumferential edges of the said disks, whereby an annular space is provided between the periphery of each disk and the wall of its recesses, and a plurality of sliding abutments disposed radially with respect to the cylinder, each said abutment having arms which extend over the edges of the piston, and anti-friction rollers carried by the said arms which enter the said annular spaces substantially as set forth.

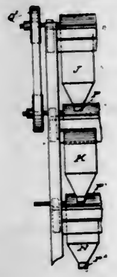
4. In a rotary engine the combination with a cylinder or casing, a shaft provided with a crank portion arranged within the casing, a rotary piston loosely mounted upon the said crank portion within the casing, and a sliding abutment for subdividing the steam space in the cylinder, of an inlet and exhaust port for the said cylinder and a single rotary valve mounted upon the shaft to one side of the cylinder for controlling both the said inlet and the said exhaust port.

5. In rotary engine the combination with a cylinder or casing, a shaft provided with a crank portion arranged within the casing, a rotary piston loosely mounted upon the said crank portion within the casing, and a plurality of sliding abutments for subdividing the steam space within the cylinder into the plurality of chambers, of an inlet and exhaust port for each such chamber, and a single rotary valve mounted upon the shaft to one side of the cylinder for controlling the said inlet ports and the said exhaust ports.

[Claims 6 to 19 not printed in the Gazette.]

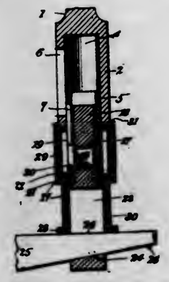
902,474. MECHANISM FOR CLEANING AND FINISHING GROUND COFFEE AFTER THE SAME HAS BEEN GRADED. FRANK CONNER, Los Angeles, Cal. Filed Nov. 20, 1906. Serial No. 344,341.

In a machine for finally cleansing pulverized seeds, the combination consisting of receivers, a horizontal stationary partition in each receiver between two movable partitions therein, a blower operating to discharge air between said partitions, the blower, the partition in each receiver above said stationary partition being adjustable, the partition beneath said stationary partition in each receiver being also adjustable, means for adjusting the position of the upper and lower partitions, a screen, a duct, means for driving the fan shaft and fans, said parts being situated beneath the grading parts of the mechanism, hoppers into which



the finally pulverized cleansed seeds are received and from which the pulverized cleansed material is withdrawn from time to time, the rapidly oscillating platform connected to and operated by the driving shaft of the fan, and guides for maintaining the oscillating platform in operative support, substantially as set forth.

902,475. DEVICE FOR EXTRACTING BUSHINGS. GEORGE M. COURSEN, Purdys, N. Y. Filed Feb. 1, 1907. Serial No. 355,321.



1. In a bushing puller, the combination of a pulling bar adapted to be inserted within the bushing and means for connecting the two together, an expansible abutment device adapted to be placed against the bushing, and means adapted to engage said pulling bar in said abutment and acting to draw the bar outwardly to extract the bushing.

2. A device for extracting a bushing, the same comprising a pulling bar adapted to be inserted within the bushing, means for connecting said bar and bushing together, a fulcrum or abutment located approximately near the end of said bushing toward which it is drawn, and a non-rotary wedge adapted to engage both said pulling bar and abutment and to be driven between the same transversely of said pulling bar to draw the bar outwardly.

3. A device for extracting a bushing, the same comprising a pulling-bar adapted to be inserted within the outer end of the bushing, means for connecting said bar and bushing together, means for engaging the said pulling bar and operating to wedge the same outwardly to extract the bushing, and an expansible fulcrum part adapted to be interposed between the part in which the bushing is mounted and said wedging means.

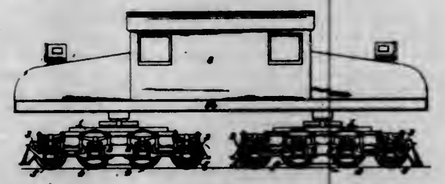
4. A device for extracting a bushing, the same comprising a pulling-bar adapted to be inserted within the outer end of the bushing, means for connecting said bar and bushing together, means for engaging the said pulling bar and operating to wedge the same outwardly to extract the bushing, and an expansible fulcrum part adapted to be interposed between the part in which the bushing is

mounted and comprising collars jointed to each other and capable of being expanded and contracted longitudinally.

5. A device for extracting a bushing, the same comprising a pulling-bar adapted to be inserted within the outer end of the bushing, means for connecting said bar and bushing together, means for engaging the said pulling-bar and operating to wedge the same outwardly to extract the bushing, and an expansible fulcrum part adapted to be interposed between the part in which the bushing is mounted and comprising collars jointed to each other and capable of being expanded and contracted longitudinally, the innermost collar being provided with a flange adapted to fit over the end of a drill-chuck or the part carrying the bushing.

[Claims 6 to 18 not printed in the Gazette.]

902,476. ELECTRIC LOCOMOTIVE. WILLIAM DALTON, Schenectady, N. Y., assignor to American Locomotive Company, New York, N. Y., a Corporation of New York. Filed July 22, 1907. Serial No. 385,013.

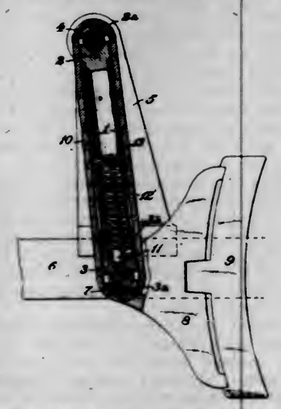


1. A swiveling truck for supporting an electric locomotive frame comprising a plurality of pairs of driving wheels, each fixed upon a motor driven driving axle, and guide wheel axles carrying pairs of guide wheels and journaled in bearings adjacent to the ends of the truck.

2. In an electric locomotive, the combination of a main frame, cab, and the ordinary accessories therein, and a truck pivotally connected thereto and provided with pairs of guide wheels journaled adjacent to its ends and a plurality of pairs of driving wheels journaled intermediate the guide wheels.

3. In an electric locomotive, the combination of a main frame, cab, and the ordinary accessories therein, and two trucks, each pivotally connected to said frame and provided with pairs of guide wheels journaled adjacent to its ends and a plurality of pairs of driving wheels journaled intermediate the guide wheels.

902,477. NON-CHATTERING BRAKE-HANGER. WILLIAM DALTON, Schenectady, N. Y., assignor to American Locomotive Company, New York, N. Y., a Corporation of New York. Filed June 16, 1908. Serial No. 438,722.



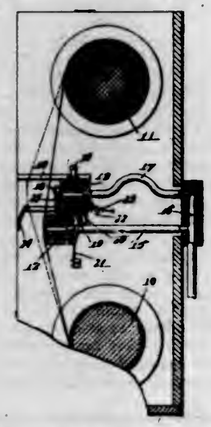
1. In a brake hanger, the combination of end bearing sections recessed to fit on brake hanger pins, a compression member imposing outward pressure upon said bearing sections, a tension member imposing inward pressure upon said bearing sections, and means for automatically increasing the operative length of the compression member in correspondence with wear of the parts.

2. In a brake hanger, the combination of end bearing sections recessed to fit on brake hanger pins, an intermediate strut interposed between said bearing sections, an inclosing strap forming the outer abutments of said bearing sections, and means for automatically increasing the operative length of the strut in correspondence with wear of the parts.

3. In a brake hanger, the combination of end bearing sections recessed to fit on brake hanger pins, a rotatable intermediate strut interposed between said bearing sections, an inclosing strap forming the outer abutments of said bearing sections, and means for automatically rotating said intermediate strut and thereby increasing its operative length in correspondence with wear of the parts.

4. In a brake hanger, the combination of end bearing sections recessed to fit on brake hanger pins, a strut interposed between the bearing sections, said strut being fitted to turn freely in a bearing section at one of its ends, and having a screw threaded engagement with a bearing section at its opposite end, and a helical spring connected at one end to the strut and at the other to the bearing section having a threaded connection with the strut.

902,478. TRACKER-BAR MECHANISM. THOMAS DANQUARD, New York, N. Y., assignor to Autopiano Company, New York, N. Y., a Corporation of New York. Filed July 23, 1906. Serial No. 327,264.



1. In a music playing device, the combination of a stationary tracker-bar, a movable tracker-bar, and a guide for the movable tracker-bar parallel therewith and extending both in front of and behind the front face of the stationary bar, whereby the movable bar may be advanced in front of or retracted behind the stationary bar.

2. In a music playing device, the combination of a stationary tracker-bar with a movable tracker-bar reciprocable parallel with and both in front of and behind the stationary tracker-bar.

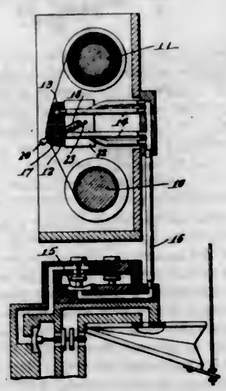
3. In a music playing device, the combination of a stationary tracker-bar, a tracker-bar movable to position in front of and behind the first bar, and means for automatically closing the channels in each tracker-bar when the other is beyond it.

4. In a music playing device, the combination of a set of primary pneumatics a stationary tracker-bar, and a movable independent tracker-bar, the channels of the two tracker-bars being connected with the set of primary pneumatics.

5. In a music playing device, the combination of a stationary tracker-bar with a movable tracker-bar reciprocable to a position in front of and behind the first named bar, and means for automatically closing the channels of the first bar when the movable bar is moved beyond it, and of the movable bar when it is retracted behind the first bar.

[Claims 6 to 16 not printed in the Gazette.]

902,479. TRACKER MECHANISM. THOMAS DANQUARD, New York, N. Y., assignor to The Autopiano Co., New York, N. Y., a Corporation of New York. Filed July 14, 1906, Serial No. 326,161. Renewed Aug. 24, 1908. Serial No. 450,055.



1. The combination of a pair of stationary tracker-bars, and means for simultaneously closing the channels of one bar and opening those of the other.

2. In a mechanical musical instrument, the combination of a pair of stationary tracker-bars, each having channels, and a cap plate for closing the channels of one bar and simultaneously opening those of the other.

3. The combination of a plurality of stationary tracker-bars, and a movable cap plate adapted to close the channels in all of the bars alternately.

4. The combination of two stationary tracker-bars, and a cap plate pivoted to swing between said bars and to alternately close the channels thereof.

5. The combination of two tracker-bars, a cap plate pivoted to swing between said bars and to alternately close the channels thereof, and means for yieldingly forcing the cap plate against the surfaces of the bars.

[Claims 6 to 9 not printed in the Gazette.]

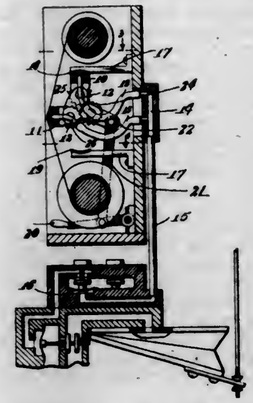
902,480. TRACKER-BAR-OPERATING MECHANISM. THOMAS DANQUARD, New York, N. Y., assignor to The Autopiano Co., New York, N. Y., a Corporation of New York. Filed July 14, 1906, Serial No. 326,162. Renewed Aug. 24, 1908. Serial No. 450,056.

1. In a device of the character described, the combination of a movable frame, a tracker-bar pivoted on said frame, and means for automatically swinging said tracker-bar on its pivot when the frame is moved.

2. A music playing instrument or attachment having a plurality of tracker-bars mounted to turn on different axes.

3. A music playing instrument or attachment having a plurality of tracker-bars mounted to turn on different axes, and means for swinging the axes and simultaneously turning the tracker-bars thereon.

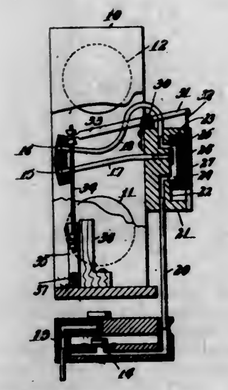
4. The combination of a tracker-bar, a swinging frame on which said bar is mounted, and means operable by the motion of the frame for swinging the bar through a greater angle than that traversed by the frame, said means comprising stationary gear teeth, and gear teeth



connected with the bar and meshing with the first named gear teeth.

[Claims 6 to 9 not printed in the Gazette.]

902,481. DOUBLE-SCALE PNEUMATIC MUSICAL INSTRUMENT. THOMAS DANQUARD, New York, N. Y., assignor to Autopiano Company, New York, N. Y., a Corporation of New York. Filed Feb. 1, 1908. Serial No. 413,727.



1. In a pneumatic musical instrument, the combination of a tracker box, a plurality of stationary trackers therein having a number of note channels, individual conduits connected with said channels, a block fixed on the rear of the tracker box and independent of the trackers and receiving said conduits, and a slide valve on the block for closing said conduits, and movable to a plurality of positions in each of which it connects the conduits of only one tracker with the conduits.

2. A pneumatic musical instrument comprising a plurality of sets of note conduits, and a movable valve for closing said conduits, said valve having a single series of passages adapted to be connected with the conduits of either set for opening them according to the position of the valve.

3. In a pneumatic musical instrument, the combination of a tracker box, a stationary block fixed to the rear thereof, a plurality of series of note conduits and a series of action conduits entering said block, a valve having means for controlling the connection of the note conduits

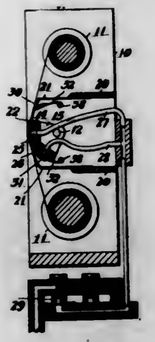
with the series of action conduits, and means for operating said valve having a handle or knob located within the tracker-box.

4. In a pneumatic musical instrument, the combination of a plurality of sets of note conduits, a block into which said note conduits enter, said block having a surface in which the conduits terminate, another set of conduits entering said block and terminating in the same surface for connecting the first named conduits with the action, and a valve movable along said surface for controlling the connection of the last set of conduits with any one of the sets of conduits.

5. In a pneumatic musical instrument, the combination of a tracker-box, a block fixed to the rear thereof, a plurality of sets of note channels passing into said block, said block having a surface in which said note conduits terminate, channels leading to the action from said block and terminating also in said surface, a slide valve having a series of openings always communicating with said conduits to the action in all positions of the valve, and having a series of passages communicating with said note conduits in different positions of the valve, and means for operating said valve.

[Claims 6 and 7 not printed in the Gazette.]

902,482. DOUBLE TRACKER MECHANISM. THOMAS DANQUARD, New York, N. Y., assignor to Autopiano Co., New York, N. Y., a Corporation of New York. Filed May 29, 1908. Serial No. 435,703.



1. In a tracker mechanism, the combination of a plurality of swinging blocks with a plurality of tracker bars each removably mounted on said blocks.

2. In a tracker mechanism, the combination of two swinging end blocks with two trackers supported at their ends on the end blocks and each independently removable therefrom; and means for turning the end blocks to move the trackers into and out of operative position.

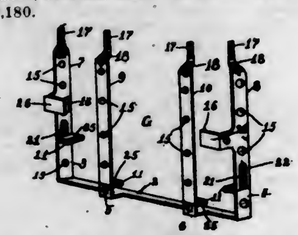
3. In a tracker mechanism, the combination of oscillating supports, with a plurality of trackers removably mounted thereon, conduits connected with said trackers, primary pneumatics with which said conduits communicate, and movable caps adapted to be turned against the trackers to close the conduits.

4. A tracker mechanism comprising a movable tracker having air channels, a cap adapted to close the channels, a spring for normally holding said cap away from the tracker, and means connected with the action for moving the cap against the tracker when the tracker is in position adjacent thereto.

5. A tracker mechanism comprising movable tracker, a stationary shield projecting over said tracker, a cap, means for yieldingly holding said cap against the shield away from the tracker and means whereby said cap will be turned against the face of the tracker.

[Claims 6 to 18 not printed in the Gazette.]

902,483. BOX. MILO H. DOYLE, Belleplaine, and WILLIAM H. SCHMITT, St. Paul, Minn. Filed Oct. 12, 1907. Serial No. 397,180.



1. A box, comprising a floor, ends, sides, cover, and a single piece hinge frame near each end of said box, the latter comprising a transverse strap secured across the floor, side leaves secured across the sides and hinged to the ends of said transverse strap, and leaves secured across the ends and pivotally attached to said transverse strap intermediate of its ends, means on the upper ends of said leaves for detachably securing the cover to said sides and ends when the box is unfolded and means on said strap for securing the cover when the box is folded, for the purposes specified.

2. A box, comprising a floor, ends secured to said floor by hinged means, sides secured to said floor by hinged means, and a cover detachably secured to said hinged means, said hinged means comprising a single piece frame on each end of the box having a transverse strap across the floor and leaves across the sides and ends pivotally secured to said strap respectively at or near its ends and at or near points intermediate of its ends, said leaves having upon their free ends shanks adapted to pass through said cover when the box is unfolded and said strap, having shanks upon the ends adapted to pass through said cover when the box is folded and means upon said shanks for securing said cover upon said ends.

3. A box, comprising a floor, ends and sides secured to said floor by hinged means, and a cover adapted to be detachably secured to said sides and ends, said hinged means comprising a transverse strap across each end of the bottom, leaves pivoted to said strap and extending across the sides and ends, shanks upon the upper ends of said leaves and upon the strap, means upon said shanks for securing said cover upon said sides and ends when the box is unfolded and for securing said cover upon the sides and ends when folded, and stops on the leaves extending across said sides adapted to limit the outward movement of said ends and provided with inturned impingements engaging said ends to limit the outward movement of said sides, for the purposes specified.

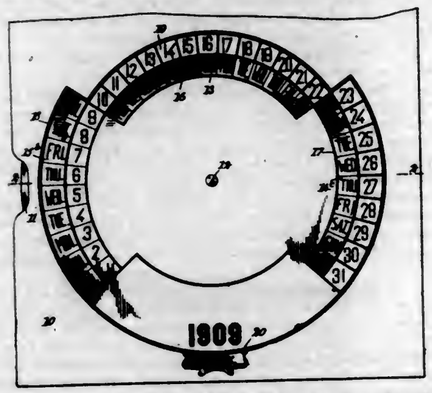
4. A box, having a floor, hinged sides and ends, a detachable cover and a single piece hinge frame upon each end of said box, comprising a transverse strap across the floor having offset branches extending upwardly and inwardly, leaves across said ends and sides provided with offset lower ends extending inwardly, pintle connections between said offset ends, substantially vertical shanks upon the offset ends of said transverse strap, and means on said shanks for securing said cover on said sides and ends when the latter are folded.

5. A box, comprising a floor, ends, sides, cover, and a hinge frame near each end of said box, the latter comprising a transverse strap secured across the floor and having inturned off-sets, side leaves secured across the sides and ends and having inturned off-sets hinged to the off-sets on said strap, and means for detachably securing said cover on said sides.

[Claim 6 not printed in the Gazette.]

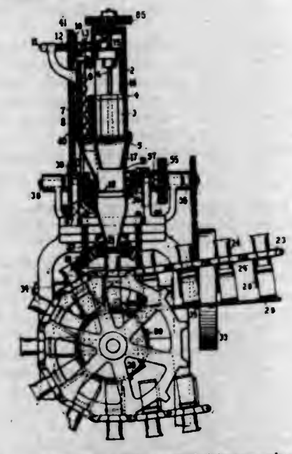
902,484. CALENDAR. JOAQUIN FERRERES, Habana, Cuba. Filed Jan. 6, 1908. Serial No. 409,455.

1. A calendar, comprising two relatively movable members, one of said members having a plurality of concentric rows of the days of the week, the names in each row appearing right side up in a different sector thereof, and the other of said members serving to conceal each row save the sector thereof in which said names appear right side up.



2. A calendar, comprising two relatively movable members, one of said members having a plurality of concentric rows of the days of the week, the names in each row appearing right side up in a different sector thereof, and the other of said members having a plurality of slots or openings through which the names appearing right side up are visible and also having the numerals of the days of the month disposed adjacent said slots or openings and arranged to register with said names, and one of said members having a row of the months of the year and the other of said members having an opening through which any one of said months may be brought to view, the numerals of the months and the days of the week being in proper registry for any particular month, when the name of that month is visible through said last-mentioned opening.

902,485. AUTOMATIC WEIGHING-MACHINE. DENIS A. FLAVELL, Jersey City, N. J. Filed Sept. 25, 1907. Serial No. 394,450.



1. The combination with a weighing-mechanism, of an inclosed filling-head, means for discharging a measured quantity of material from the filling-head, means for positively charging a measured quantity of air into the filling-head, a stirrer within the filling-head, and means for operating the stirrer.

2. The combination with a weighing-mechanism of an inclosed filling-head with fixed diaphragms having unalined inlet and outlet ports, a stirrer within the filling-head, means for operating the stirrer, a chambered block forming a measuring-chamber with an inlet and outlet the bounding lips of which contact with the diaphragms, and means for rotating the chambered block so as to bring the measuring-chamber alternately into communication with the inlet and outlet ports.

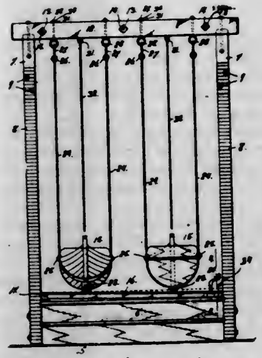
3. The combination with a weighing-mechanism, of a vertical cylindrically bored and inclosed filling-head with upper and lower diaphragms having unalined ports therethrough, a chambered block between the diaphragms forming with the filling-head a measuring-chamber, a shaft connected with the chambered block, a gear loosely mounted on the shaft, a stirrer connected with the gear, means for operating the stirrer through the gear, and means for operating the chambered block through its shaft.

4. The combination with a weighing-mechanism, of a filling-head, a chambered block forming with the filling-head a measuring-chamber, diaphragms with unalined inlet and outlet ports for the measuring-chamber, a by-pass around the measuring-chamber, a conveyer located in the by-pass, means for rotating the chambered block so as to bring the measuring-chamber alternately into communication with the inlet and the outlet ports, means for operating the conveyer, and means controlled by the weighing-mechanism for stopping the conveyer.

5. The combination with a weighing-mechanism, of a bucket supported by the weighing-mechanism having a discharge-valve and a discharge-opening below the valve, a support for a can to receive the bucket-load, means for effecting hermetical connection between the discharge-opening of the bucket and the mouth of the can, and means for operating the discharge-valve.

[Claims 6 to 10 not printed in the Gazette.]

902,486. SWING. JOSEPH FOLLMER and JOHN WLACOFSKY, Denver, Colo. Filed Mar. 2, 1908. Serial No. 418,765.



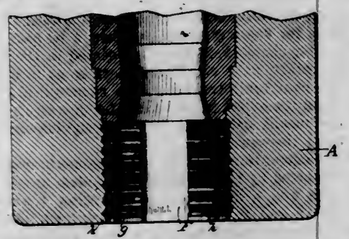
1. The combination with a frame work, of a swing composed of a body part mounted to oscillate, a brake beam, a screw shaft journaled in the frame work, a nut mounted in the brake beam and engaged by the screw shaft, the nut being loose to permit the latter an oscillating movement while the nut retains its position to harmonize with the position of the screw shaft, substantially as described.

2. The combination with a frame work, of a swing composed of a body part mounted to oscillate, a brake beam extending transversely of the body of the swing and occupying a position below the same, a screw shaft journaled in the frame work, a nut mounted in the brake beam and engaged by the screw shaft, the nut being loose in the beam to permit the latter an oscillating movement while the nut retains its position to harmonize with the position of the screw shaft, substantially as described.

3. In a swing, the combination with a suitable frame work, of a canoe-shaped body part, a pair of suspension rods on each side pivotally connected at their lower extremities with the body of the swing at suitably separated

points, their upper extremity being suitably connected with the frame work at a common point approximately, the pair of suspension rods on opposite sides being located in parallel planes, a pull rope connected with the frame work at a point directly above the center of the swing, a brake beam occupying a position below the swing, a screw shaft journaled in the frame work, a nut mounted on the brake beam and engaged by the screw shaft, the nut being loose in the beam to permit the latter an oscillating movement while the nut retains its position to harmonize with the position of the screw shaft, substantially as described.

902,487. BREECH MECHANISM. SIGARD A. S. HAMMAR, Bethlehem, Pa. Filed Sept. 10, 1906. Serial No. 334,073.



1. In a breech mechanism, the combination of a breech block and screw box, each of which is provided with eccentric circumferential ribs, each of which circumferential ribs is formed in a progressive series of steps.

2. In a breech mechanism, the combination of a breech block and screw box, each of which has eccentric circumferential ribs, each of which circumferential ribs is formed in a progressive series of steps, and also has plane surfaces adjacent to the lowest step of said circumferential ribs.

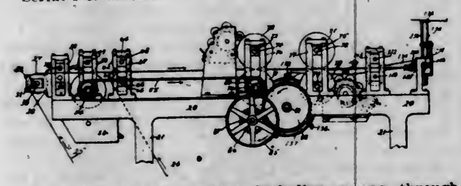
3. In a breech mechanism, the combination of a breech block and screw box, each of which has circumferential ribs, each of which circumferential ribs is formed in a progressive series of steps, and also has blank spaces between each two of said series.

4. In a breech mechanism, the combination of a breech block and screw box, each of which is provided with eccentric circumferential ribs, each of which circumferential ribs is formed in a series of steps of progressively greater radii.

5. In a breech mechanism, the combination of a breech block and screw box, each of which is provided with eccentric circumferential ribs, each of which circumferential ribs is formed in a series of steps of progressively greater radii, said block and screw box having blank spaces adjacent to the lowest of said steps.

[Claims 6 to 20 not printed in the Gazette.]

902,488. CARD-MAKING MACHINE. ALEXANDER L. HEMPHILL, Marion, Ind., assignor of one-half to Anthony Harmon, Indianapolis, Ind. Filed Jan. 25, 1907. Serial No. 354,144.

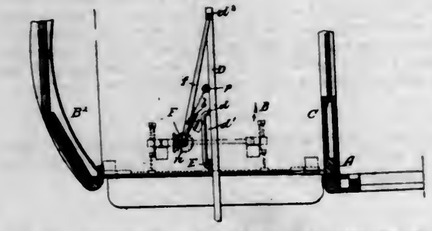


1. A card-making machine including means through which a sheet of paper is continuously passed for cutting slots therein, paste-applying rolls through which said strip subsequently passes and which are adapted to apply paste to one side thereof at points surrounding said slots, presser rolls through which said strip passes and also another strip of paper on the paste side of said first mentioned strip, whereby the two strips are formed into a combined strip, and means for subsequently cutting said strip into cards including one or more slotted compartments.

2. A card-making machine including means through which a sheet of paper is continuously passed for cutting slots therein, paste-applying rolls through which said strip subsequently passes and which are adapted to apply paste to one side thereof at points surrounding said slots, presser rolls through which said strip passes, and also another strip of paper on the paste side of said first mentioned strip, whereby the two strips are formed into a combined strip, means for longitudinally slitting said combined strip between the slotted compartments, and means for afterwards cutting said strips transversely between the slotted compartments to form coin-mailing cards.

3. A card-making machine including means for conveying a continuous strip of paper through the machine, means for slitting said strip, a roll for applying paste to one side of said strip, said roll having depressions in its surface so that no paste will be applied to portions of said strip, rolls through which said pasted strip and another strip of paper passes for pasting the two together, and means for subsequently cutting the combined strip into cards.

902,489. GATE FOR PASSENGER-CARS. WILLIAM H. HEULINGS, Jr., Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 18, 1908. Serial No. 449,144.



1. The combination of a platform of a passenger car, a gate at the side of the car, a pivot for the gate, said gate being adapted to turn and slide upon the pivot, with a movable step, and means connecting the step with the gate so that as the gate is opened or closed the step will be moved into and out of position.

2. The combination of a platform of a passenger car, a gate at the entrance to the platform, a pivot standard, the gate being slotted to receive the standard so that it can turn on and slide upon the pivot standard, with means for causing the gate to be retracted as it is moved from the closed to the open position.

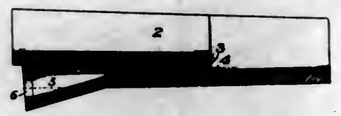
3. The combination of a car platform, a pivot standard at the side of the platform, a gate pivoted to the standard so that when in the open position there will be a passageway on each side of the gate, said gate being capable of sliding upon as well as turning on the pivot, a vertical shaft situated at one side of the pivot standard, an arm connected to the shaft and to the gate some distance from its pivot, so that when the gate is turned the arm will cause it to slide as well as to turn on the pivot.

4. The combination of a platform of a car, a vertical pivot standard, a gate mounted on the standard so as to turn and slide thereon, a shaft at one side of the pivot standard, an arm secured to the shaft and pivoted to the gate some distance from the pivot standard, a pivoted step, and mechanism between the step and the shaft so that, on moving the gate from the closed to the open position, the step will be actuated.

5. The combination of a car platform, a vertical pivot standard, a gate mounted on the standard so as to turn thereon and capable of a limited sliding movement, a vertical shaft at one side of the pivot standard, an arm secured to the shaft and attached to the gate some distance from its pivot point, a shaft under the platform and geared to the vertical shaft, a pivoted step, and arms on the last mentioned shaft connected to the step so that the said step will be raised and lowered on the movement of the gate.

[Claims 6 to 8 not printed in the Gazette.]

902,490. APPARATUS FOR GRANULATING SLAG. ISAAC C. HOFFMAN, South Chicago, Ill. Filed June 26, 1907. Serial No. 380,980.

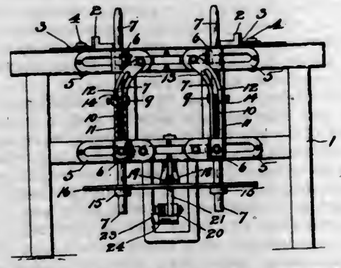


1. Apparatus for granulating molten slag comprising an open metal trough having its bottom surface in two substantially parallel planes with a step or off-set intermediate of its ends, and a water supply channel located in the bottom of said trough and having its discharge end terminating in a vertical wall forming the step or off-set, the supply channel being flattened to form a discharge opening wide in one dimension and relatively thin transof the trough; substantially as described.

2. Apparatus for granulating molten slag comprising an open metal trough having its bottom surface in two substantially parallel planes with a step or off-set intermediate of its ends, and a water supply channel located in the bottom of said trough and having its discharge end terminating in a vertical wall forming the step or off-set, the supply channel being flattened to form a discharge opening in one dimension and relatively thin transversely, the bottom wall of the flattened discharge opening being in the same horizontal plane as the bottom of the discharge end of the trough, substantially as described.

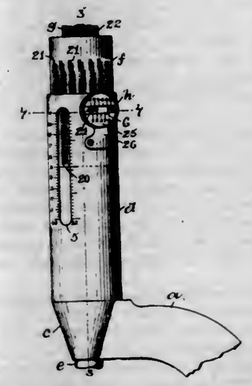
3. Apparatus for granulating molten slag comprising an open metal trough having upwardly and outwardly inclined sides connected by a curved bottom portion, the bottom surface of the trough being in two substantially parallel planes with a step or off-set intermediate its ends and with a water supply channel in the trough having its discharge end terminating in a vertical wall forming the step or off-set, the supply channel being flattened to form a discharge opening wide in one dimension and relatively thin transversely, the bottom of the flattened discharge opening being in the same curved plane as the bottom of the discharge end of the trough; substantially as described.

902,491. BOX-CLAMPING MACHINE. JAMES B. IRELAND, Broderick, Cal., assignor of one-half to Arthur C. Huston, Woodland, Cal. Filed Oct. 4, 1907. Serial No. 395,966.



In a box clamping machine, a frame, box rests having slotted projections secured thereto and extending therefrom and secured to the frame through the slots in said projections, slotted plates secured on said frame, journal bearings slidably mounted on said slotted plates, shafts slidably and revolubly mounted in said bearings, horizontal arms extending from said shafts, slotted plates secured to said bearings, each of said plates being given a quarter turn around the shaft, a pin secured to each shaft and riding in the slot in the adjacent plate, a spring to normally raise each shaft, a foot lever fulcrumed on said frame, an arm pivotally secured to the frame and operatively secured to the foot lever, and a rod having slots to receive said shafts and engaging said pivoted arm, substantially as shown and described.

902,492. MICROMETER-CALIPERS. FERNANDO O. JAQUES, Jr., Providence, R. I., assignor to Winsor & Jerauld Manufacturing Company, Providence, R. I., a Corporation of Maine. Filed June 11, 1907. Serial No. 378,337.



1. A micrometer caliper having, in combination, an internally screw-threaded part, a rotatable and endwise movable spindle having a threaded portion interacting therewith, a barrel movable with said spindle and provided on its periphery with figures forming numerals representing successive thousandths from 0 to 999 for indicating micrometric measurements, arranged in a spiral series corresponding with the screw thread and in longitudinal rows parallel to each other and to the axis of the barrel, and with longitudinal graduation lines dividing the periphery of the barrel into equal spaces each of which is the equivalent of one such thousandth, associated with the longitudinal rows of said figures, respectively, and an outer sleeve immovably connected with the part first named and provided with a transverse index opening through which the appropriate measurement indicating figures on said barrel and a portion of the graduation line associated therewith are exposed to view and with an index line adjacent to said opening arranged to aline with said graduation lines successively.

2. A micrometer caliper having, in combination, an internally screw-threaded part, a rotatable and endwise movable spindle having a threaded portion interacting therewith, a barrel movable with said spindle and provided on its periphery with figures forming numerals representing successive thousandths from 0 to 999 for indicating micrometric measurements, arranged in a spiral series corresponding with the screw thread and in longitudinal rows parallel to each other and to the axis of the barrel, and with longitudinal graduation lines dividing the periphery of the barrel into equal spaces each of which is the equivalent of one such thousandth, associated with the longitudinal rows of said figures, respectively, and an outer sleeve immovably connected with the part first named and provided with a transverse index opening through which the appropriate measurement in-

dicating figures on said barrel and a portion of the graduation line associated therewith are exposed to view, together with an index line adjacent to said opening arranged to aline with said graduation lines successively and also provided with scales the graduation lines of which are located adjacent to opposite transverse edges of said opening and are arranged to read with reference to said graduation lines on the barrel successively to indicate intermediate measurements.

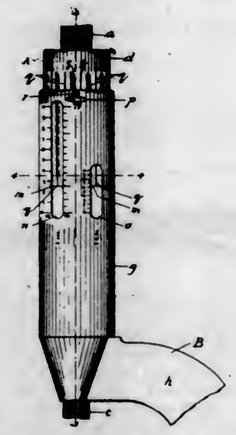
3. A micrometer caliper having, in combination, an internally screw-threaded part, a rotatable and endwise movable spindle having a threaded portion interacting therewith, a barrel movable with said spindle and provided on its periphery with figures forming numerals representing successive thousandths from 0 to 999 for indicating micrometric measurements, arranged in a spiral series corresponding with the screw thread and in longitudinal rows parallel to each other and to the axis of the barrel, and with longitudinal graduation lines dividing the periphery of the barrel into equal spaces each of which is the equivalent of one such thousandth, and associated with the longitudinal rows of said figures, respectively, an outer sleeve immovably connected with the part first named and provided with a transverse index opening through which the appropriate measurement indicating figures on said barrel and a portion of the graduation line associated therewith are exposed to view, together with an index line adjacent to said opening arranged to aline with said graduation lines successively and also provided with scales the graduation lines of which are located alternately adjacent to opposite transverse edges of said opening and arranged to read with reference to said graduation lines on the barrel successively to indicate intermediate measurements, and a magnifying glass secured to said sleeve in a position to locate its lens over said opening and over said lines adjacent thereto.

4. In a micrometer caliper, the combination with a frame *a*, a sleeve *d*, a spindle *e* having the stud 15 with the screw-threaded hole 16 in its end for a screw 17 and a barrel *f* on the spindle *e*, of a frictional turning member *g* consisting of a knurled thimble 22 having a central countersunk hole 23 through which the thimble is rotatably secured to the end of the stud 15 by the screw 17 and a left hand coiled spring 24 secured at one end to the thimble 22 by an outwardly-bent end on the spring entering a hole in the thimble and having a snug fit on the stud 15, as described.

5. In a micrometer caliper, the combination of the following instrumentalities: a U-shaped frame *a* having the anvil end *b* and the spindle end *c*, a sleeve *d* having a longitudinal opening 5 and a transverse opening 6 on the spindle end *c* of the frame *a*, an internal screw-threaded tube 7 on the spindle end *c* in the sleeve *d*, a screw-threaded spindle *e* in the tube 7 and extending through a hole in the spindle end c of the frame *a*, a barrel *f* on the spindle *e* in the sleeve *d* and having a transverse line, a series of longitudinal lines and numeral-forming figures reading from zero to 999 in a continuous spiral line on the peripheral face of the barrel, a frictional turning member *g* on the spindle *e*, and a magnifying glass *h* secured to the sleeve *d* in a position to bring the lens 25 over the transverse opening 6, as described.

902,493. MICROMETER-CALIPERS. FERNANDO O. JAQUES, Jr., Providence, R. I., assignor to Winsor & Jerauld Manufacturing Company, Providence, R. I., a Corporation of Maine. Filed Nov. 23, 1907. Serial No. 403,446.

1. A micrometer caliper composed of two relatively movable members, one of which is a rotatable and longitudinally movable spindle member having as parts thereof a micrometric screw and a barrel concentric with said screw the periphery of which is provided with measurement-indicating means; the other member having an internally screw-threaded portion to interact with said screw and an immovable barrel-protecting outer sleeve closely embracing said barrel and interacting therewith to inclose and protect said screw and said internally screw-threaded portion and provided with measurement-indicating means adapted to register with those on said barrel.



2. A micrometer caliper having, in combination, a rotatable and longitudinally movable spindle member constructed with a micrometric screw and a barrel concentric with said screw the periphery of which is provided with a circumferential index line at midlength of said barrel, and a frame member having an internally screw-threaded portion to interact with said screw and an immovable barrel-protecting outer sleeve embracing said barrel and provided with a longitudinal opening and with a longitudinal scale in juxtaposition thereto, which scale reads in connection with said circumferential index line on the barrel to indicate linear measurements.

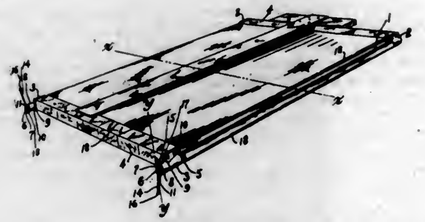
3. A micrometer caliper having, in combination, a rotatable and longitudinally movable spindle member constructed with a micrometric screw and a barrel concentric with said screw the periphery of which is provided with a circumferential index line, and a frame member having an internally screw-threaded portion to interact with said screw and an outer sleeve embracing said barrel and provided with a longitudinal opening and with scales differing from each other formed along the respective longitudinal edges of said opening, which read in connection with said index line on the barrel to indicate linear measurements.

4. A micrometer caliper having, in combination, a rotatable and longitudinally movable spindle member constructed with a micrometric screw and a barrel concentric with said screw the periphery of which is provided with a circumferential index line, and a frame member having an internally screw-threaded portion to interact with said screw and an outer sleeve embracing said barrel and provided with a plurality of longitudinal openings and with scales of different standards in juxtaposition to said openings respectively which read in connection with said index line on the barrel to indicate linear measurements of said standards, respectively.

5. A micrometer caliper having, in combination, a rotatable and longitudinally movable spindle member constructed with a micrometric screw and a barrel concentric with said screw the periphery of which is provided with a circumferential index line, and a frame member having an internally screw-threaded and longitudinally adjustable portion to interact with said screw and an outer sleeve embracing said barrel and provided with a longitudinal opening and with a longitudinal scale in juxtaposition thereto, which scale reads in connection with said index line on the barrel to indicate linear measurements, the longitudinal adjustment of said internally screw-threaded portion serving to adjust said spindle member lengthwise with reference to the proper alinement of said index line with the respective graduation lines of said scale, to insure accuracy.

[Claims 6 to 11 not printed in the Gazette.]

902,494. DEVICE FOR STRETCHING SHEETS UNIFORMLY. CHARLES G. JOHANNESMEYER, Cincinnati, Ohio. Filed June 3, 1907. Serial No. 376,925.



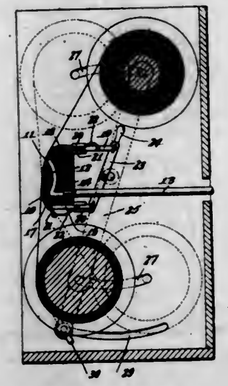
1. The combination with a drawing board having a straight edge, of a shaft adjacent to the straight edge and in the same horizontal plane as the drawing board and having a slot therein extending parallel to the straight edge of the drawing board, transversely through the shaft, bearings for the shaft, and an adjusting and holding device for the shaft adjacent to one of the bearings, the slot in the shaft terminating near the bearings, substantially as set forth and for the purposes specified.

2. In a device for stretching sheets uniformly, a shaft having a slot therein, bearings for said shaft, ratchet teeth on one of said bearings, a ratchet collar slidably mounted on said shaft and adapted to engage and disengage with said ratchet teeth on said bearing, and means for rotating said shaft whereby the tension of said sheet may be regulated, substantially as and for the purposes specified.

3. In a device for stretching sheets uniformly, a shaft having a slot extending transversely therethrough and longitudinally thereof, bearings for said shaft adjacent to which said slot terminates, ratchet teeth on one of said bearings, a journal for said shaft extending through said bearing, a ratchet collar mounted on said shaft, ratchet teeth on said ratchet collar adapted to engage with said ratchet teeth on said bearing, a recess in said journal, a pin extending through said recess and slidable therein, and a slot in said ratchet collar adapted to receive said pin whereby said ratchet collar may rotate with said shaft to regulate the tension of a sheet inserted into said slot in said shaft, or slide upon said shaft to release said ratchet teeth, substantially as and for the purposes specified.

4. In a device for stretching sheets uniformly, a shaft having a slot therein, bearings for said shaft, ratchet teeth on one of said bearings, a ratchet collar slidably mounted on said shaft and adapted to engage and disengage with said ratchet teeth of said bearings, means for rotating said shaft whereby the tension of said sheet may be regulated, a second shaft parallel to the above mentioned shaft, bearings for said second shaft adjacent to the above mentioned bearings, ratchet teeth on one of said bearings for said second shaft, a ratchet collar slidably mounted on said second shaft and adapted to engage and disengage with said ratchet teeth on said bearing for said second shaft, and means for rotating said second shaft without interfering with said means for rotating the first mentioned shaft whereby the tension of a sheet inserted into said slot in said first mentioned shaft may be regulated and whereby the tension of a second sheet inserted into said slot in said second shaft may be regulated and said second sheet secured over said first mentioned sheet without disturbing the position of the first mentioned sheet, substantially as and for the purposes specified.

902,495. TRACKER-BAR AND MUSIC-SHEET MECHANISM. WILLIAM J. KEELEY, New York, N. Y., assignor to The Autopiano Co., New York, N. Y., a Corporation of New York. Filed July 14, 1906. Serial No. 326,190. Renewed Aug. 24, 1908. Serial No. 450,053.



1. A tracker-bar having two sets of air conducting conduits opening in one face thereof, and a series of connecting channels located entirely within the bar and extending directly from one set of conduits to the other.

2. A tracker-bar having two sets of air conducting conduits opening in one face of the bar, one set containing a larger number of conduits than the other, and a series of channels located entirely within the bar and extending directly from each one of the smaller sets of channels to one of the channels in the larger set.

3. In a music playing device, the combination of a tracker-bar having two sets of tracker-bar conduits, channels entirely within the tracker-bar connecting the conduits of one set with the conduits of the other set, and a single means for simultaneously closing the open ends of one set of conduits and opening those of the other.

4. In a music playing device, the combination of two sets of tracker-bar conduits, cap-plates, one for covering each set of conduits, and means connected with both of said cap plates for simultaneously withdrawing one cap-plate and moving the other cap-plate in position to cover the conduits of one set.

5. In a music playing device, the combination of a plurality of sets of tracker-bar conduits, a corresponding number of cap-plates, and a single means connected with each of said cap plates for simultaneously moving one cap-plate over one set of conduits, and withdrawing another cap-plate from another set of conduits.

[Claims 6 to 8 not printed in the Gazette.]

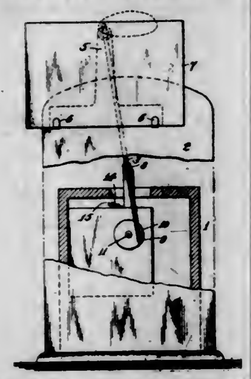
902,496. SIGN-DISPLAYING DEVICE. HARRY S. LAFOND, New York, N. Y. Filed Nov. 17, 1904. Serial No. 233,123.

1. In a sign-displaying device, the combination with means for holding a display sign, and agitating means therefor, of a power device for the said agitating means, another power device, a time train therefor, and means controlled by the time train for controlling the operation of the first said power device.

2. In a sign-displaying device, the combination with means for holding a display sign, agitating means therefor, and power means for the agitating means, of a cam controlling-wheel, and a trip for engaging a part movable with the said power device, said trip engaged by said cam controlling-wheel.

3. In a sign-displaying device, the combination with means for holding a display sign, and agitating means therefor, of a power device for the said agitating means, said power device including a train of gearing, a detent revoluble therewith, another power device, a time train of

gearing operated thereby, a cam controlling-wheel in said time train, and a trip engaged by said cam controlling-wheel, said trip, arranged to engage or disengage the said detent in accordance with its position.

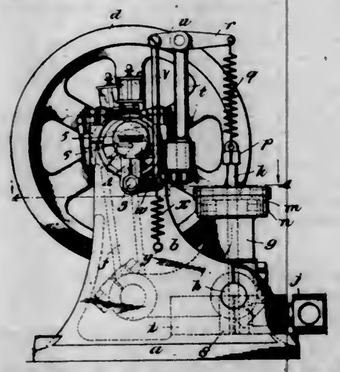


4. In a sign-displaying device, the combination with means for holding a display-sign, of agitating means therefor, comprising a revoluble crank pin, a rod pivoted thereto and to the sign-displaying device, and a guide for said rod.

5. In a sign-displaying device, the combination with means for holding a display sign, of agitating means therefor, comprising a revoluble crank pin, a rod pivoted thereto and to the sign-displaying device, and a pivoted guide for said rod engaging same intermediate its points of connection with the crank pin and the sign-holding means.

[Claims 6 to 16 not printed in the Gazette.]

902,497. TESTING-MACHINE. FRED K. LANDGRAF, Bridgeville, and WILLIAM L. TURNER, Pittsburg, Pa. Filed Apr. 8, 1908. Serial No. 425,894.



1. In a test machine the combination of means for holding a test piece, a hollow rocker through which said test piece projects and means for operating said rocker to alternately deflect one end of said test piece in one direction and then in the other, substantially as described.

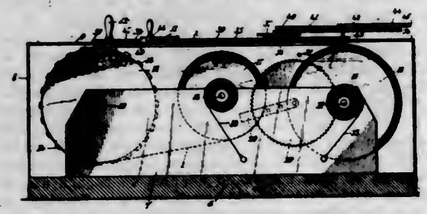
2. The combination of a supporting frame, means secured thereto for holding a test piece, a hollow rocker, a perforated adjustable die holder provided with a perforated adjustable die carried on the end of said rocker and through which said test piece is adapted to project, and means for operating said rocker, substantially as described.

3. In a test machine the combination of a supporting frame, a vise having adjustable jaws for holding a test piece, a hollow rocker arm through which said test piece is adapted to project and means for swinging said rocker arm so that said test piece will be subjected to impact and pressure alternately in opposite directions, substantially as described.

4. In a test machine the combination of a supporting frame, a vise for holding the test piece, a hollow rocker arm, through which said test piece projects, means for moving said test piece, a counter carried by said machine and connections whereby the deflections of said test piece will operate the counter until said test piece breaks, substantially as described.

5. In a test machine the combination of means for holding a test piece, a hollow rocker through which said test piece projects, means for operating said rocker to deflect said test piece alternately in opposite directions, a counter adapted to be operated by the movement of the rocker operating means when the test piece is unbroken, connections between the test piece and the counter supporting means for normally holding said counter in position to be operated, and a spring for moving said counter out of operative relation with the operating shaft as soon as the test piece breaks, substantially as described.

902,498. CALCULATING-MACHINE. ERNST LEDER, Berlin, Germany. Filed Jan. 18, 1908. Serial No. 411,380.



1. In a calculating machine, a logarithmic scale comprising a plurality of independent sections having successive graduations representing logarithmic values, and further having indicated thereon numbers corresponding to the logarithmic values.

2. In a calculating machine, a logarithmic scale comprising a plurality of independent sections each designated by a part of a logarithmic mantissa, and each having the remainder of the respective mantissæ indicated thereon by a graduation.

3. In a calculating machine, a logarithmic scale comprising a plurality of independent sections designated successively by the first two figures of logarithmic mantissæ, and each graduated to indicate figures of logarithmic mantissæ other than the first two figures.

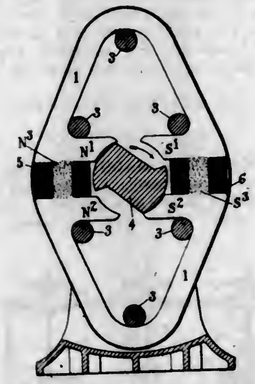
4. In a calculating machine, a logarithmic scale comprising a plurality of independent sections designated successively by the first two figures of logarithmic mantissæ, and each having graduations indicating the numbers from 000 to 999, said scale having indicated thereon numbers corresponding to the logarithms represented by the section designations and graduations.

5. In a calculating machine, a logarithmic scale comprising independent sections each designated by the first two figures of a logarithmic mantissa, each of said sections having one thousand graduations, whereby a number, the logarithm of which equals $\frac{x}{100}+\frac{y}{10,000}$ is found on the section designated by x, and at the y-graduations of said x section.

[Claims 6 to 30 not printed in the Gazette.]

902,499. INDUCTOR MAGNETO ALTERNATOR. LEON LE PONTOIS, New Rochelle, N. Y., assignor to Hurd & Haggin, a Corporation of New York. Filed Oct. 24, 1907. Serial No. 399,060.

1. In a magneto generator of the inductor type, the combination of a frame comprising an integral member, said member having two permanently magnetized portions of hardened iron and portions of soft iron connecting poles of like polarity and integral with said permanently magnetized portions, windings on said soft iron portions, and a rotor for controlling the paths of the magnetic flux.



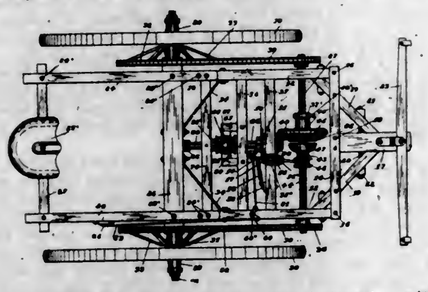
2. In a magneto generator of the inductor type, the combination of a frame comprising an integral member, said member having a permanently magnetized portion of hardened iron and a polar portion of soft iron integral therewith, a winding on said soft iron portion, and a rotor for controlling the paths of the magnetic flux.

3. In an inductor generator, the combination of a frame comprising a permanently magnetized portion of hardened iron and a polar portion of soft iron integral therewith, a winding on said latter portion, and a rotating element for reversing the magnetic flux through said winding.

4. In a magneto generator, the combination of an element comprising a permanently magnetized portion of hardened iron and a polar portion of soft iron integral therewith, a second element for controlling the path of the magnetic flux, and a winding on one of said elements.

5. In a magneto generator of the inductor type, the combination of a stationary frame comprising a plurality of iron parts, each of said parts having a plurality of permanently magnetized portions of hardened iron and a plurality of portions of soft iron connecting adjoining poles of like polarity of said permanently magnetized portions and integral therewith, windings on said soft iron portions, and a rotating element for reversing the direction of magnetic flux through said windings, said rotating element having polar faces of greater width than the space between like poles of said frame.

902,500. COTTON-CHOPPER. WILLIAM D. LINDSLEY, Waynoka, Okla. Filed May 5, 1908. Serial No. 430,970.



1. In a rotary cotton chopper, the combination with the main frame and the supporting wheels, and with suspensory devices upon said frame, of a rotary shaft upon said suspensory devices, and cotton chopping devices on said shaft, a main driving shaft on said frame, and power transmitting devices actuated by said shaft and transmitting power to the rotary shaft carrying the cotton chopping devices, and locking mechanism on said frame controlling the movement of said latter shaft.

2. In a rotary cotton chopper, the combination with the main frame and supporting wheels, and the main power transmitting, rotary shaft upon said frame, and with the horizontal rotary shaft beneath said frame, of cotton choppers on said shaft and a clutch member connecting the said latter shaft with the main power shaft a clutch operating lever, and locking mechanism for said lever.

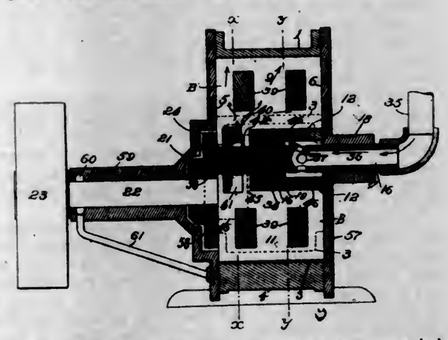
3. In a rotary cotton chopper, the combination with the main frame and supporting wheels, the main power transmitting, rotary shaft on said frame, power transmitting devices on said wheels connected with said shaft, a horizontal rotary shaft beneath said frame, and suspensory devices on said frame therefor, cotton chopping devices on said horizontal shaft, a vertical power shaft and power transmitting devices on said horizontal and vertical shafts connected with each other, and power transmitting devices upon the main power shaft connected with said vertical shaft, and a clutch member connecting the said power transmitting devices with the main shaft and mechanism controlling the disengagement of the clutch member automatically.

4. In a rotary cotton chopper, the combination with the main frame and supporting wheels, and with the main, power transmitting, rotary shaft actuated by said wheels, a rotary shaft beneath said frame, suspensory devices on said frame therefor, cotton choppers on said latter shaft, and a combined power transmitting wheel and clutch on said main shaft, a sliding portion of said clutch keyed on said shaft, and a lever adapted to operate said sliding portion of said clutch, a separate power shaft on said frame, and power transmitting devices thereon, transmitting power from said combined wheel and clutch to the rotary shaft carrying the cotton choppers, and a cam wheel adapted to impart motion to said clutch operating lever.

5. In a cotton chopper, a main frame and supporting wheels, and a main, power transmitting shaft, a frame connected with and depending from the main frame, and adjustable shaft supports thereon, and a rotary shaft mounted in said supports, and cotton chopping devices on said shaft, and a separate, power transmitting shaft, and an ajustable, sliding gear wheel on said latter shaft, communicating power from the main power shaft to the rotary shaft carrying said cotton chopping devices.

[Claims 6 to 12 not printed in the Gazette.]

902,501. PUMP, &c. FRITZ W. MACHLET, Elizabeth, N. J. Filed Nov. 20, 1907. Serial No. 402,957.



1. A rotary air or gas pump comprising a drum, a hollow cylinder revolving therein, a vane or piston sliding in and out of said cylinder and fitting to the interior of

the drum, and means for conducting liquid from the cylinder to the edges of the vane to form a seal or packing for the latter.

2. A rotary air or gas pump comprising a drum, a hollow cylinder revolving therein, vanes or pistons sliding in and out of said cylinder and fitting to the interior of the drum, means for supplying liquid to the interior of the cylinder, and means for conducting the liquid from the cylinder to the edges of the vanes to form seals or packings for the latter.

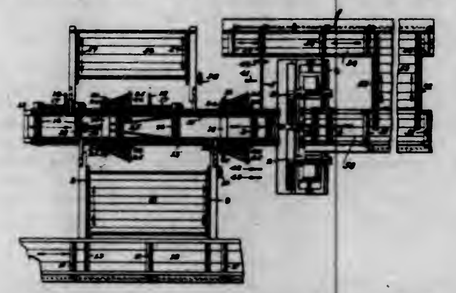
3. A rotary air or gas pump comprising a drum, a hollow cylinder revolving therein, means for supplying liquid to the interior of said cylinder, and a vane or piston sliding in and out of said cylinder and fitting to the interior of the drum, said vane having internal passages for the liquid from the cylinder to the edges of the vane.

4. A rotary air or gas pump comprising a drum, a hollow cylinder revolving therein, means for supplying liquid to the interior of said cylinder, a vane or piston sliding in and out of said cylinder and fitting to the interior of the drum, said vane comprising opposing plates slightly separated from each other, one of said plates having a port for the passage of liquid from the cylinder into the space between the plates, and suitable recesses or openings being provided at the edges of the vanes in communication with the space between the plates to enable the liquid to escape and form a seal or packing for the vane.

5. A vane or piston for a rotary air or gas pump, comprising two plates slightly separated from each other, to form an internal passage for a liquid from the hub portion of the vane to the edge portions thereof.

[Claims 6 to 38 not printed in the Gazette.]

902,502. CANT-CENTERING DEVICE FOR TWIN-SAW MILLS. ARNO MEREEN and ANDREW E. GAGNON, Minneapolis, Minn. Filed Nov. 20, 1905, Serial No. 288,256. Renewed May 16, 1907. Serial No. 373,978.



1. The combination of a saw, means for feeding a cant thereto, a longitudinally and laterally movable centering device, means for guiding said device laterally as it is moved longitudinally, and means for moving the device into operative and inoperative position for centering, substantially as described.

2. The combination of a saw, means for positively feeding a cant thereto, longitudinally and laterally movable centering rails to center a cant on the feeding means, positively actuated means for moving said rails forward and backward, and means for spreading the rails to and from each other in their forward and backward movements.

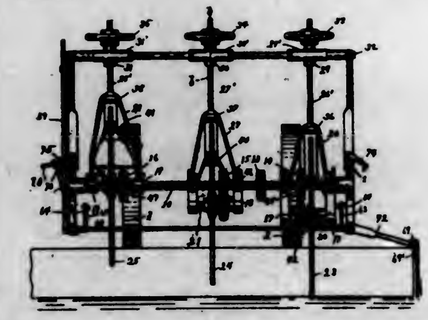
3. The combination with a saw, of means for feeding the cants thereto, centering rails having a combined lateral and longitudinal movement to center the cants upon said feeding means, said rails in centering the cant having a movement in the opposite direction to the travel of the cant to the saw, and means for primarily shifting the rails longitudinally to spread them apart or draw them towards each other.

4. The combination with the twin saws, of means for feeding the cants between them, clamping devices arranged to center the cants on said feeding means, and said clamping devices being arranged to yield lengthwise in the direction of movement of said feeding means, for the purpose specified.

5. The combination with twin saws, of means for feeding a cant between them, rails operating upon each side of said feeding means to center the cant thereon, said rails having a combined lengthwise and lateral movement, means for guiding said rails laterally in their longitudinal movement, and positively actuated means for moving said rails forward and backward, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

902,503. ICE-CUTTING MACHINE. JOHN J. MEGRILL, Newburyport, Mass., assignor of one-half to Benjamin Pearson, Byfield, Mass., and William F. Runnells, Newburyport, Mass. Filed Dec. 21, 1906. Serial No. 348,862.



An ice cutting machine comprising a frame having supports adapted to rest upon the ice, a series of rotary cutters mounted on said frame in parallel, composed of two end cutters disposed to engage the ice in lines outside the points of engagement of said supports with the ice and an intermediate cutter midway between said end cutters, means for independently adjusting each cutter to vary the depth of the cuts thereof and means for simultaneously rotating said cutters in their different positions of adjustment, substantially as described.

902,504. LIGHTING DEVICE OR TORCH. FRANK M. MOORE, Westfield, Mass., assignor to International Generator Company, Westfield, Mass., a Corporation of Massachusetts. Filed June 7, 1906. Serial No. 320,643.

1. A safety torch comprising a reflective sheet of perforated metal in tubular form having a closed lower end with an acetylene gas burner mounted therein and a handle attached thereto, the opposite end being closed by perforated sheet metal, the perforations being sufficiently small to prevent ignition outside the cage or cylinder from a flame within the same, and sufficient in number to admit air to the interior of the cage requisite for combustion at the burner therein, substantially as shown.

2. A lighting device comprising an acetylene gas burner, a supply conduit leading to the burner, and a perforated sheet-metal cage surrounding the burner, said cage having an inner polished surface between the perforations, substantially as shown.

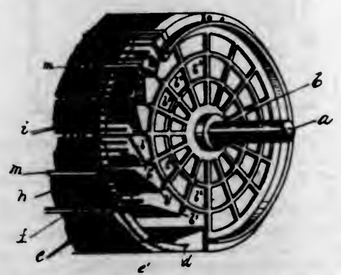
3. The combination, in a torch of the class described, of a suitable handle, a tube for gas extending through said handle, a burner connected with said tube, a support, provided with a screw-threaded part, also connected with the tube and having a lighting port therein, a shutter frictionally held between said handle and support and operatively connected with the handle, said shutter also having a lighting port therein, and a perforated cage having a screw-threaded part for engagement with the screw-threaded part of the support, the members being so

arranged that movement in the same direction is required to close the port in the support and to screw the cage and support together.



4. The combination, in a torch of the class described, of a suitable handle, a tube for gas extending through the same, a burner connected with said tube, a support also connected with the tube, said support having a lighting port therein, a shutter frictionally held between said handle and support and having a limited independent rotary movement, said shutter also having a lighting port therein, operating means between the handle and shutter for the latter, and means to frictionally retard the shutter intermediate of the limits of its independent movement.

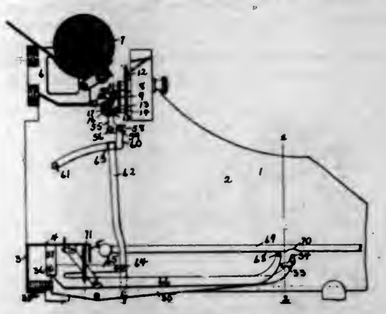
902,505. CYLINDER-MOLD FOR PAPER-MAKING MACHINES AND THE LIKE. HOWARD PARKER, Nashua, N. H., assignor to Improved Paper Machinery Company, Castine, Me., a Corporation of Maine. Filed Jan. 22, 1908. Serial No. 412,134.



1. In a roll of the character described a frame comprising a shaft and radial partitions extending lengthwise thereof and forming compartments, a shell for said frame, a screen of textile material stretched over said frame and lying on the edges of said partitions, a packing material located along the edges of said partitions immediately above said screen, and means for binding said screen between said packing material and the edges of said partitions.

2. In a roll of the character described a frame comprising a shaft and radial partitions extending lengthwise thereof and forming compartments, a shell for said frame, a screen of textile material stretched over said frame and lying on the edges of said partitions, and a packing material stretched along the edges of said partitions immediately over said screen, and a spirally wound wire binding said packing screen between said packing material and the edges of said partitions.

902,506. TYPE-WRITING MACHINE. JOHN W. PAUL, Kittanning, Pa. Filed May 10, 1907. Serial No. 372,841.



1. In a front strike typewriting machine the combination of a universal ribbon bar; ribbon bar levers carrying the ribbon bar; a link pivotally connected to the bar lever; a pivoted lever curved in an arc with the pivotal connection between the link and ribbon bar lever as a center; a connection between the curved lever and the link; a ribbon carrier slidingly mounted; a rock rod; a rock arm extending from the rod to the arm for reciprocating the carrier when the rod is oscillated; a cam arm on the rock rod; a bell crank lever, one end of which operated on the cam arm and the opposite end is connected to the curved lever.

2. In a front strike typewriting machine the combination with an escapement therefor; a universal bar for each side of the machine carrying said universal bar; a lever arranged to actuate the ribbon bar with each operation without actuating the universal bar; a ribbon carrier; and means actuated by the ribbon bar for actuating the carrier.

3. In a front strike typewriting machine the combination of the universal bar; a universal ribbon bar; levers at each side of the machine carrying said universal bar; a universal bar lever at each side of the machine carrying the universal ribbon bar; a key lever adapted to actuate the ribbon bar without actuating the universal bar; a ribbon carrier; and connections between the lever carrying the ribbon bar and the ribbon carrier for communicating the action of the ribbon bar to the carrier.

4. In a front strike typewriting machine the combination of the ribbon spools; an escapement wheel arranged near the bottom of the machine; a pinion controlled by the escapement wheel; a gear above the pinion and in mesh therewith; a ribbon drive controlled by said gear.

5. In a front strike typewriting machine the combination of the ribbon spools; an escapement wheel arranged near the bottom of the machine; a pinion controlled by the escapement wheel; a gear above the pinion; a ribbon drive controlled by said gear, comprising a pinion meshing with said gear; a drive shaft on which the pinion is mounted; a miter gear on said shaft; a cross shaft extending to the ribbon wheels at the sides of the machine; a miter gear in mesh with the first mentioned miter gear for driving said cross shaft; and driving connections between the cross shaft and the ribbon spools.

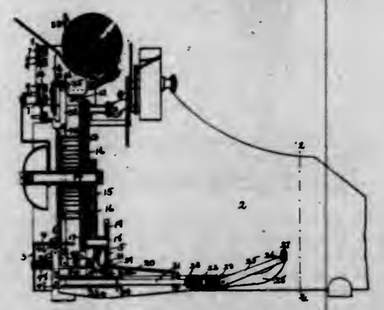
[Claims 6 to 11 not printed in the Gazette.]

902,507. TYPE-WRITING MACHINE. JOHN W. PAUL, Kittanning, Pa. Filed May 10, 1907. Serial No. 372,843.

1. In a typewriting machine the combination of a carriage escapement wheel; a reciprocating rod extending in a direction from front to rear of the machine; the universal bar; a link connecting the universal bar with the rod and arranged to act with the rod as a toggle lever and to communicate the movement of the universal bar to the rod; and dogs actuated by the rod for controlling the movement of the escapement wheel.

2. In a typewriting machine the combination of a carriage escapement wheel; a reciprocating rod extending in a

direction from front to rear of the machine; a universal bar swingingly mounted with its pivot toward the rear of the machine; a link connecting the rod with the universal bar, the pivot between the rod and the link being in front of the pivot of the universal bar the link connection forming with the bar a toggle lever; and dogs actuated by the rod for controlling the movement of the escapement wheel.



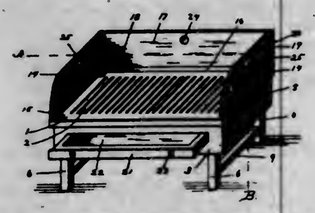
3. In a typewriting machine the combination of a carriage escapement wheel; a reciprocating rod extending in a direction from front to rear of the machine; a universal bar swingingly mounted with its pivot toward the rear of the machine; a link connecting the rod with the universal bar, the pivot between the rod and the link being in front of the pivot of the universal bar and its connection with the universal bar being in front of the connection with the rod said link forming a toggle lever; and dogs actuated by the rod for controlling the movement of the escapement wheel.

4. In a typewriting machine the combination of a carriage escapement wheel; a reciprocating rod extending in a direction from front to rear of the machine; the head 22 adjustably secured to the front of said rod; a connection between the head and the universal bar and arranged to communicate the movement of the universal bar to the rod; and dogs actuated by the rod for controlling the movement of the escapement wheel.

5. In a typewriting machine the combination of a carriage escapement wheel; a reciprocating rod extending in a direction from front to rear of the machine; the head 22 adustably secured to the front of said rod; a link connecting the universal bar with said head and arranged to act with the head and rod as a toggle lever and to communicate the movement of the universal bar to the rod.

[Claims 6 to 11 not printed in the Gazette.]

902,508. FOLDING ANIMAL-BENCH. RICHARD C. RATHBORNE, Newark, N. J., assignor to Spratt's Patent (America) Limited, Newark, N. J., a Corporation of Great Britain. Filed Aug. 28, 1907. Serial No. 390,436.



1. In a device of the class described, a bench formed with a perforated top; folding sides and back, hinged to said top; a frame supporting said top; a tray slidably mounted within said frame; braces forming part of said frame; legs hinged to said frame-braces; leg braces secured to said legs; and hooked stay-rods secured to the leg-braces.

2. A bench of the class described, having an integral, rectangular perforated top, upright sides and back hinged to the upper surface of said bench-top, a rectangular frame secured to the under surface of and supporting said bench-top; transverse end braces secured to said frame, a tray slidably mounted within said frame and resting upon said braces, legs hinged to said braces, a center brace secured to said frame, a center brace connecting each pair of legs and hooked stay-rods secured thereto.

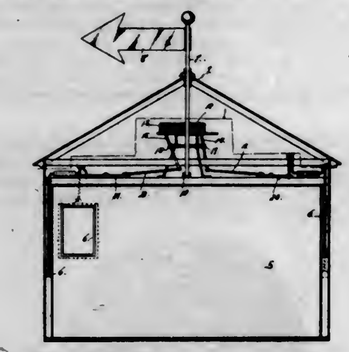
3. A bench of the class described, having a rectangular top, integral with perforation therein: sides hinged at their lower edges to the upper surface of said bench-top, at right angles to said surface when open, and adapted to fold inwardly upon said top when closed.

4. A bench of the class described having a perforated top, folding sides: a strip secured to the upper surface of said bench-top near its rear edge: a back hinged at its lower edge to the upper surface of said strip: said back standing at right angles to said bench-top when open, and being adapted to fold inwardly upon the folded sides of said bench.

5. A bench of the class described, having a perforated top, folding sides and back: hooks secured to the outer sides of said folding sides near their rear edges: eyes secured to the ends of the folding back near its top, adapted to be engaged by said hooks.

[Claims 6 and 7 not printed in the Gazette.]

902,509. AUTOMATIC MEANS FOR VENTILATING BUILDINGS. DAVID F. SPEER, Denver, Colo. Filed Feb. 12, 1906. Serial No. 300,788.

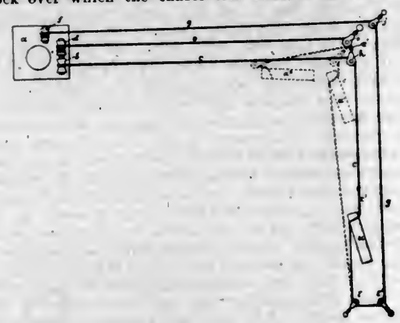


The combination with a building to be ventilated, of ventilating devices movably mounted thereon, a wind motor journaled in the top of the building and automatically operating the ventilating devices as the wind changes, suitable connections between the motor and the ventilating devices comprising a cam, levers having their upper extremities engaging the cam, intermediate rods connected with the other extremities of the said levers, spring actuated bell cranks connected with said rods, and rocker shafts connecting said bell cranks with the ventilating devices, substantially as described.

902,510. LOGGING-TACKLE. CORNELIUS TURPIN, Scappoose, Oreg., assignor of one-fourth to Orlando Hepworth, Scappoose, Oreg. Filed June 27, 1908. Serial No. 440,748.

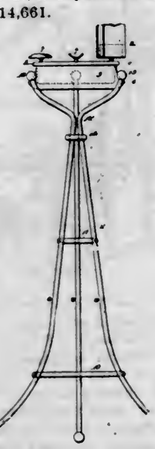
1. In a logging tackle, the combination of a hauling engine, and drums thereon, a main line, a choker, a haulback line, guide-blocks for said line, a chaser line, a guide block over which the chaser line runs, a movable block attached to the end of the chaser line, said main line running on said movable block, and said movable block being weighted so as to fulcrum and rest in substantially horizontal position on the main line when the pull on the chaser line is released.

2. In a logging tackle, the combination of a hauling engine, and drums thereon, a main line, a choker, a haulback line, guide-blocks for said line, a chaser line, a guide-block over which the chaser line runs, a movable block



attached to the end of the chaser line, said main line running on said movable block, and means arranged to prevent the fouling of said movable block with the main line when the pull on the chaser line is released.

902,511. ASH-RECEIVER. JOSEF VOSKA and CHARLES NELSON, Brooklyn, N. Y., assignors to S. Sternau & Company, New York, N. Y., a Copartnership. Filed Feb. 6, 1908. Serial No. 414,661.



1. The combination, with an ash receiver, of a stand, and locking means inseparable from the stand for securing the two together.

2. The combination, with an ash receiver, of a stand, the said stand having elastic legs, the said legs being separated at their upper portions to embrace the receiver, and means for simultaneously drawing all of the legs together into engagement with the receiver.

3. An ash receiver, comprising a receiver, the said receiver having a flange, and a stand having elastic legs, the said legs being separated at their upper ends to embrace the receiver, bosses on the upper ends of the legs, and means for simultaneously causing all of the bosses to engage with the flange.

4. An ash receiver, comprising a receiver, the said receiver having a flange, and a stand having elastic legs, the said legs being diverged at their upper ends to embrace the receiver, bosses on the upper ends of the legs, and means for simultaneously causing all of the bosses to engage over the flange, and to hold the receiver in engagement with the diverging portions of the legs.

5. An ash receiver, comprising a receiver with a flange thereon, a stand having elastic legs, the said legs being separated at their upper extremities, bosses on the legs, a ring surrounding the legs, and means for causing the ring to simultaneously draw all of the legs together, and engage the bosses with the flange.

[Claims 6 and 7 not printed in the Gazette.]

902,512. GAME-PIECE. FELIX WALLSTEIN, New York, N. Y. Original application filed Apr. 26, 1907, Serial No. 370,482. Divided and this application filed Nov. 20, 1907. Serial No. 403,010.



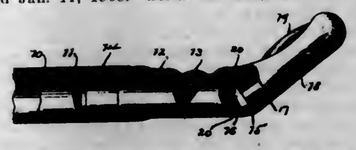
1. Pieces for playing chess, checkers and like games, each piece comprising a raised figure of translucent material and hollow on the under side to receive an illuminating device, a flat back oval in shape and carrying the figure, said back being of a greater size than the figure and extending entirely around the same, and means carried by the figure for engagement by a manually manipulated stick.

2. Pieces for playing chess, checkers and like games, each having a flat back, and a figure raised integrally on the face of the said back and having means for engagement by a manually manipulated stick, the said piece being made of a transparent or translucent material, and hollow on the under side to receive an illuminating device.

3. Pieces for playing chess, checkers and like games, each having a flat back and a figure raised integrally on the face of the said back, and an illuminating device carried by each of the said pieces.

4. Pieces for playing chess, checkers and like games, each having a flat back, and a figure raised integrally on the face of the said back, the said piece being hollow on the under side and made of a transparent or translucent material, and an illuminating device sustained in the hollow under side of each of the said pieces.

902,513. ENDOSCOPE. REINHOLD H. WAPPLER, New York, N. Y., assignor to Wappler Electric Controller Company, New York, N. Y., a Corporation of New York. Filed Jan. 11, 1908. Serial No. 410,386.



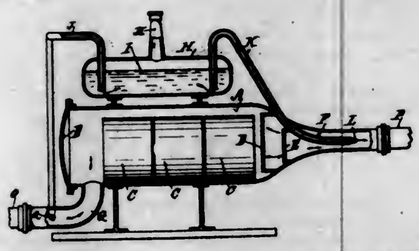
1. An endoscope comprising a tube, a lens therein, a sheath therefor and a light bulb attachment of separable parts secured to the extremity of the said tube in such a manner that when the parts of the said attachment are separated, the said sheath is removable from the tube.

2. An endoscope comprising a tube, lens therein, a sheath therefor, a socket member so shaped and secured in the end of the said tube as to permit the said sheath to pass over the socket member and so be withdrawn from the tube, and an electric light bulb tip adapted to be screwed into the said socket member.

3. An endoscope comprising a tube, lens therein, a sheath therefor, a semi-spherical socket member soldered in the end of the said tube in an offset position and an electric light bulb tip member adapted to be secured in the said socket member, the said socket member being so shaped and secured to the end of the tube that said sheath will pass over the said socket member and so be removable from the tube when the said light bulb tip is removed.

4. An endoscope comprising a tube, a lens therein, a sheath therefor, a socket member secured in the end of the said tube with its axis at an angle to the axis of the tube, the said socket member being so shaped that the said sheath will pass over the same, and a light bulb attachment adapted to be secured in the socket member.

902,514. GAS-PRODUCING APPARATUS FOR EXTINGUISHING FIRES AND OTHER PURPOSES. HORACE N. WILLIAMS, Providence, R. I. Filed Mar. 4, 1907. Serial No. 360,605. Renewed Mar. 25, 1908. Serial No. 423,270.



1. In an apparatus of the character described, the combination of the receiving chamber provided with a closely fitting cover, and the inlet pipe for directing the passage of the stream of water into the receiving chamber from a source of water supply under pressure, with the acid chamber having an inlet water pipe connected with the water supply pipe for the receiving chamber, and having an outlet pipe terminating within the cavity of the discharge outlet of the receiving chamber, for delivering the acid to the carbonate solution which flows from the receiving chamber whereby in the continual operation of the apparatus the contents of the acid chamber will be maintained under suitable water pressure.

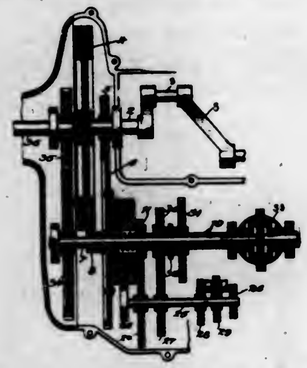
2. In an apparatus of the character described, the combination of the receiving chamber provided with a contracted delivering end, and with a closely fitting cover at the opposite end, the inlet pipe for directing the passage of the stream of water into the receiving chamber, with an elongated acid chamber having at one end an inlet water pipe connected with the water-supply pipe for the receiving chamber, and with an outlet pipe located at the opposite end of the acid chamber, the said outlet pipe connecting with the discharge outlet of the receiving chamber and terminating at a point centrally of the said outlet, whereby the acid will be delivered centrally of the flowing stream of the carbonate solution.

3. In an apparatus of the character described the combination of the elongated horizontally arranged receiving chamber, provided with a contracted delivering end, and with a closely fitting cover at the opposite end, and the inlet pipe for directing the stream of water into the receiving chamber, with the elongated horizontally arranged acid chamber placed above the receiving chamber and having at one end an inlet water pipe connected with the water supply pipe for the receiving chamber and with an outlet pipe located at the opposite end of the acid chamber, the said outlet pipe connecting with the discharge outlet of the receiving chamber.

4. In an apparatus of the character described, the combination of the receiving chamber provided with a closely fitting cover, and the inlet pipe for directing the passage of a stream of water into the receiving chamber from a source of water supply under pressure, with the acid chamber having an inlet water pipe connected with the water-supply pipe for the receiving chamber, and having an outlet pipe terminating within the cavity of the discharge outlet of the said receiving chamber and delivering the acid to the carbonate solution which flows from the receiving chamber, whereby in the operation of the apparatus, the contents of both the receiving and acid chambers will be held under suitable water pressure.

902,515. FRICTION-CLUTCH. MARTIN L. WILLIAMS, South Bend, Ind. Original application filed Dec. 26, 1905, Serial No. 293,290. Divided and this application filed Dec. 7, 1906. Serial No. 346,769.

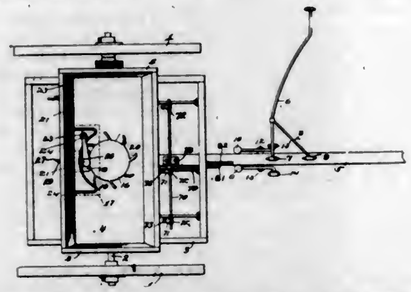
1. In a power transmission mechanism, a friction clutch mechanism comprising a gear body, a circular casing mounted on one side of said gear body, and provided at its outer edge with a closed side portion centrally apertured, a plurality of supporting rods arranged near the periphery of said casing, each rod having its ends seated respectively in the gear body and in said side portion, and all arranged to extend through said casing parallel with the axis of the rotation of the gear body, a set of friction disks, each having its periphery suitably apertured and movably fitted upon said supporting rods, a second gear body mounted concentric with the first gear body, a tubular supporting member mounted upon said second gear body and extending freely through the aperture in said circular casing member, and provided at its end remote from the second gear body with an annular out-turned flange, a set of supporting rods mounted adjacent to the periphery of said tubular member, each of said rods having its ends seated in the second gear body and in the annular flange of the tubular supporting member, a set of friction disks, each being suitably apertured and movably fitted upon said second set of supporting rods, the peripheral portions of said latter disks being interposed between and alternated with the perimetral portions of the first set of disks, and means for bodily shifting one of said gear bodies and the supports carried thereby axially from and toward the opposite gear body, whereby said friction disks are brought into, or carried out of, bearing engagement with each other.



2. In a power transmission mechanism, a friction clutch mechanism comprising a gear body, a casing mounted on one side of said gear body, and provided at its outer edge with an annular flange, a plurality of supporting rods, each rod having its ends seated respectively in the gear body and in said annular flange, a set of friction disks movably fitted upon said supporting rods, a second gear body mounted concentric with the first gear body, a tubular supporting member mounted upon said second gear body and extending freely through the opening formed by said annular flange, and provided at its end remote from the second gear body with an annular out-turned flange, a set of supporting rods, each of said rods having its ends seated in the second gear body and in the annular flange portion of the tubular supporting member, a set of friction disks movably fitted upon said second set of supporting rods, the friction disks of one set being arranged to overlap, and being alternated with the friction disks of the other set, and means for bodily shifting said disks into or out of bearing engagement with each other.

3. In a power transmission mechanism, a friction clutch mechanism comprising a gear body, a circular casing mounted on one side of said gear body and provided at its outer edge with an inturned annular flange, a plurality of supporting rods rigidly seated near the periphery of said casing and extending through said casing, a set of friction disks movably fitted upon said supporting rods, a second gear body mounted concentric with the first gear body, a tubular supporting member mounted upon said second gear body and extending through the opening formed by said annular flange, an annular out-turned flange upon the end of said tubular member remote from said second gear body, a plurality of supporting rods, each rod having its end seated in said second gear body and the out-turned flange of said tubular member, a set of friction disks movably fitted upon said second set of supporting rods and interjected with the first set of friction disks, a spring mechanism for holding said disks normally in operative frictional engagement, and a simple leverage mechanism for disengaging the sets of friction disks.

902,516. LISTER AND FERTILIZER-DISTRIBUTER. ROBERT G. WILSON, Madison, N. C. Filed Apr. 9, 1907. Serial No. 367,230.

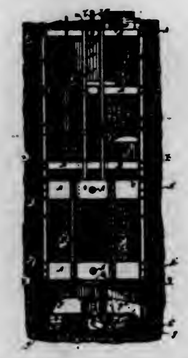


In a distributer of the class described, in combination, a hopper provided with a discharge opening, a fender arranged upon the floor of the hopper and having a wall extending in the arc of a circle, a wheel mounted for rotation within the hopper and provided on its periphery with a plurality of teeth curved in the direction of rotation of the wheel, said wheel rotating partly within the boundaries of the curved wall of the fender with its teeth passing above the discharge opening upon rotation of the wheel, the said curved wall of the fender being formed with a slot, and a weighted knocker consisting of a body portion having a curved shank extending from one end thereof, said shank being tapered from its junction with the body of the knocker, to its extremity, and having at said extremity, bent to form a hook, an eye member secured upon the floor of the hopper to the other side of the curved wall of the fender to that at which the wall is located, the said hooked end of the knocker shank being engaged with the said eye member with the shank extending through the slot in said curved wall of the fender and guarded by the vertical edges of said slot, the body of the knocker having its sides equally beveled, the under edge of the said body portion of the knocker being continued for a portion of its extent in a curve which is a continuation of the curve in which the shank of the knocker extends, the said under edge of the body of the knocker being continued for the remainder of its extent at an angle to the first mentioned portion.

902,517. SHAFT OR TUNNEL BORING MECHANISM. WILLIAM F. WITTICH, Erie, Pa., assignor to The Wittich Success Shaft Sinking and Tunnelling Machine Company, Erie, Pa., a Corporation of Arizona. Filed Dec. 20, 1907. Serial No. 407,404.

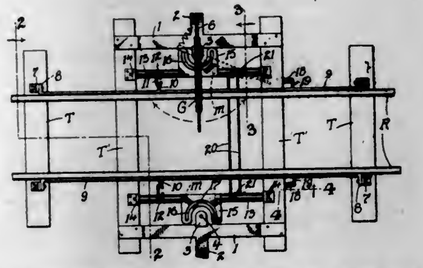
1. In a shaft or tunnel boring machine the combination of a frame, means to secure said frame to the side walls of the opening being bored, a hollow shaft mounted in said frame, a gear wheel upon said shaft secured against rotation thereon and mounted in said frame, means to rotate said gear-wheel and shaft, cutter arms secured to the end of said shaft, rotative cutters secured to said arms, a conveyer screw within said hollow shaft, and means to convey the material cut-away into the interior of said shaft, substantially as set forth.

2. In a shaft boring machine the combination of, a frame, means to secure said frame to the side walls of the shaft, a hollow shaft mounted in said frame so as to allow of rotative and longitudinal movement thereof, means to rotate said shaft, arms secured to the end of said shaft, rotative cutters secured to said arms, means attached to said arms to raise the cut-away material and carry the same into the central opening in the shaft, and means within the shaft to convey such material to the discharge end thereof, substantially as set forth.



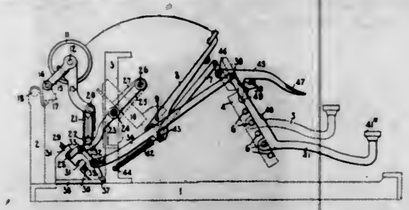
3. The combination in a shaft boring machine, of a frame, means to secure said frame to the side walls of the shaft, a hollow shaft mounted in said frame so as to allow of rotative and longitudinal movement, a gear wheel mounted in said frame and upon said shaft so as to rotate in the frame and rotate said shaft, means to rotate said gear-wheel and shaft, arms secured to the end of said shaft, rotative cutters secured to said arms, a spiral scoop secured to said arms adapted to raise liquid material and convey it into said shaft, a conveyer screw mounted in said hollow-shaft, and means to rotate said conveyer screw in a direction opposite to the direction of rotation of said hollow-shaft, substantially as set forth.

902,518. CATTLE-GUARD GATE. JOHN ADAMS, Washington, Mo. Filed Jan. 27, 1908. Serial No. 412,858.



In combination with a track-rail, a rock-rail mounted adjacent thereto and on the outside thereof, a rock-shaft mounted parallel to the rock-rail and coupled thereto, a semi-circularly slotted wing coupled to the rock-shaft, a folding gate having a basal member mounted to rotate in a horizontal plane, at a point adjacent and exterior to the wing aforesaid, a fixed arm or bracket, a spring connecting the outer end of said basal gate-member with said fixed arm, a finger forming an extension of one of the folding members of the gate and permanently engaging the slot of the wing, a spring for normally holding the rock-rail slightly elevated above the tread of the track-rail whereby the same may be engaged, and depressed by the tread of the wheel passing over the track-rail, the parts operating substantially as, and for the purpose set forth.

902,519. TYPE-WRITING MACHINE. EDWIN E. BARNEY, Syracuse, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Original application filed June 11, 1900, Serial No. 19,889. Divided and this application filed May 13, 1908. Serial No. 432,536.



1. A typewriting machine comprising a quadrant and type-bars mounted thereon, an impression platen, a lever for simultaneously shifting the quadrant and platen with relation to each other, and an independently movable locking lever, said levers having shoulders movable in intersecting arcs and adapted to interlock at the point of intersection for holding the quadrant and platen in their adjusted positions.

2. A typewriting machine comprising a quadrant and type-bars mounted thereon, a carriage, an impression platen mounted on the carriage, a lever for shifting the quadrant and platen with relation to each other, and an independently movable locking lever for engaging and rocking the former lever and holding the quadrant and platen in their adjusted positions.

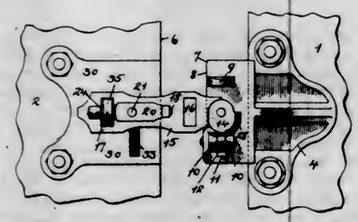
3. In a typewriting machine, the combination of a quadrant and type-bars mounted thereon, a carriage having an independently movable frame, a platen supported by the frame, a lever for simultaneously shifting the quadrant and frame in opposite directions, and an independently movable locking lever for engaging and rocking the former lever, said levers having shoulders adapted to interlock to hold the quadrant and frame in their shifted positions.

4. In a typewriting machine, the combination of a quadrant and type-bars mounted thereon; an impression platen, and means provided with a toggle-joint for simultaneously shifting the quadrant and platen with relation to each other.

5. In a typewriting machine, the combination of a quadrant and type-bars mounted thereon, a movable frame carrying an impression platen and means provided with a toggle-joint for shifting the quadrant and frame in opposite directions.

[Claims 6 to 25 not printed in the Gazette.]

902,520. LOCK FOR SLIDING DOORS. WILLIAM F. BENTLEY, Baltimore, Md., and GEORGE W. CHESSHER, Keyser, W. Va., assignors of one-third to Eugene B. Miller, Keyser, W. Va. Filed Apr. 12, 1907. Serial No. 367,866.



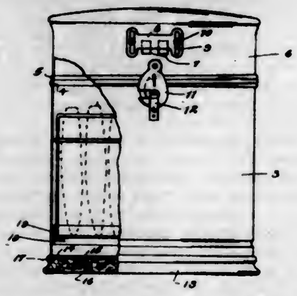
1. In a lock for sliding doors the combination with the stop plate having a staple, of a locking projection pivotally mounted to the stop plate; a locking plate on the door with which said pivoted locking projection engages; a hasp plate connected with the pivoted locking projection and having a slot to receive the staple on the stop plate, and a bolt carried by the hasp plate for engaging said staple on the stop plate.

2. In a lock for sliding doors the combination with the stop plate, of a locking projection pivotally mounted to the stop plate; a hasp plate pivotally connected with the pivoted locking projection and capable of a lateral movement independently of said projection; a locking plate on the door with which said pivoted locking projection engages; means for engaging the hasp plate with the stop plate to hold the locking projection engaged with the locking plate, and means to engage the hasp plate with the locking plate when the hasp plate is turned laterally.

3. In a lock for sliding doors the combination with the stop plate having a staple, of a locking plate on the door and also having a staple; a locking projection pivotally attached to the stop plate; a hasp pivotally connected to said projection and having two cross slots; and a bolt carried by and pivotally mounted on the hasp plate between said two cross slots.

4. In a lock for sliding doors the combination with the stop plate having a staple and a vertical slot, of a locking plate also having a staple and a vertical slot,—the staples on the two plates extending at right angles with respect to each other; a locking projection movably attached to the stop plate to enter the slots in the stop and locking plates when said slots are in register; a hasp pivoted with respect to the stop plate and having two cross slots, and a bolt slidably and pivotally mounted on the hasp plate and movable longitudinally on said plate between the two slots thereof.

902,521. RECEPTACLE FOR HOLDING CIGARS. JAY P. BERGERON, Chicago, Ill., assignor of one-half to J. Wyatt McGaffey, Chicago, Ill. Filed Nov. 20, 1907. Serial No. 404,322.

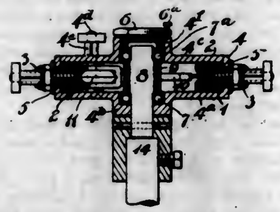


1. The combination with a receptacle for holding cigars or the like, of means within said receptacle for retaining moisture, a cover for said receptacle, and a removable rack or holder adapted to fit in said receptacle and to hold the cigars.

2. In a device of the character set forth, the combination of a body portion, an absorbent material in the bottom of said body portion, wire netting for holding said absorbent material, an inwardly-projecting ring in said body portion above said netting, and a perforated support for cigars or the like, resting on said ring.

3. In a device of the character set forth, the combination of a bottom portion, an absorbent material contained in said bottom portion, a wire netting over said absorbent material, said netting being held by the inturned upper edge of the bottom portion, a cylindrical body secured to said bottom portion, an inwardly-projecting ring in said body portion, a removable cigar rack resting on said ring, a screw cover for said body portion, a ventilator in said cover, and means for locking said cover in closed position.

902,522. ELECTRIC-CIRCUIT CONTROLLER FOR INTERNAL-COMBUSTION ENGINES. CHARLES CUNO, Oconomowoc, Wis., assignor to Connecticut Auto Engineering Corporation, Meriden, Conn., a Corporation of Connecticut. Filed Sept. 19, 1906. Serial No. 335,176.



1. In a device of the character described, a shaft, a contact arm carried thereby, a case including a removable part, bearings between the case and said shaft and arranged on opposite sides of the contact device, contact blocks carried by but insulated from said case and arranged in the path of the contact device, external terminals for said blocks and an adjusting device for said bearings, said adjusting device being carried by said removable part of said case.

2. In a device of the character described, a shaft, a contact arm carried thereby, a contact carried by said arm, means for forcing said contact outwardly, a case surrounding said shaft, arm and contact, part of said case being removable, bearings between said case and said shaft and arranged on opposite sides of the contact arm to balance the strain thereof, insulated contact blocks carried by said case and arranged in the path of the contact device, external terminals for said blocks and means external to said case for adjusting said bearings.

3. In a device of the character described, a case, a contact block carried thereby, a shaft supporting said case, a contact device carried by said shaft and arranged to traverse said block, bearings between said shaft and case on opposite sides of the contact device, carried by the shaft, and means for adjusting said bearings accessible from the outer side of the case.

4. In a device of the character described, a shaft, a case supported thereby, antifriction bearings between said shaft and said case, a contact arm carried by said shaft between said bearings, an insulated contact block carried by the case in the path of movement of said contact carried by the shaft and means external to the case for adjusting said bearings.

5. In a device of the character described, a shaft, a case supported thereby, antifriction bearings between said shaft and said case, a contact arm carried by said shaft between said bearings, an insulated contact block carried by the case in the path of movement of said contact carried by the shaft, and an adjusting device carried by the outer side of the case and arranged to relatively connect with said bearings for adjustment.

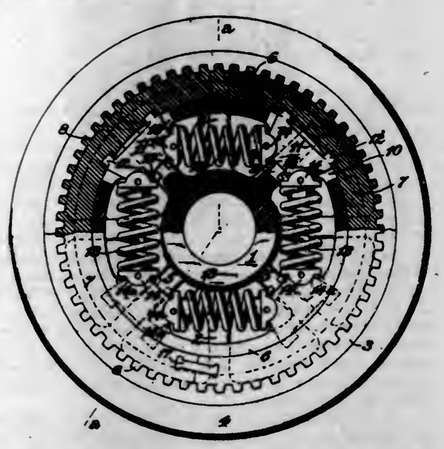
[Claim 6 not printed in the Gazette.]

902,523. FLEXIBLE DRIVING MECHANISM. WILLIAM DALTON, Schenectady, N. Y., assignor to American Locomotive Company, New York, N. Y., a Corporation of New York. Filed May 8, 1908. Serial No. 431,688.

1. In a driving mechanism, the combination of a driven member, a driving member, fitted with the capacity of independent circumferential movement thereon, a plurality of abutment blocks engaging the driving member, and springs interposed between said abutment blocks and bearing thereon and on the driven member.

2. In a driving mechanism, the combination of a driven member, a sectional driving member consisting of adjoining annuluses, fitted with the capacity of independent circumferential movement on the driven member, a plurality of abutment blocks engaging said annuluses, and springs interposed between said abutment blocks and bearing thereon and on the driven member.

3. In a driving mechanism, the combination of a driven member, an annular seat thereon, a driving member, fitted with the capacity of independent circumferential movement on said seat, a plurality of abutment blocks fitting in slots in said seat and engaging the driving member, and springs interposed between said abutment blocks and bearing thereon and on the driven member.

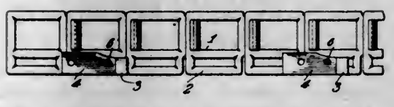


4. In a driving mechanism, the combination of a driven member, an annular seat thereon, a driving member, fitted with the capacity of independent circumferential movement on said seat, a plurality of abutment blocks fitting in slots in said seat and engaging the driving member, spring seats abutting against said abutment blocks and against the driven member, and springs interposed between and bearing on said spring seats.

5. In a driving mechanism, the combination of a driven member, an annular seat thereon, a driving member, fitted with the capacity of independent circumferential movement on said seat, a plurality of abutment blocks fitting in slots in said seat and engaging the driving member, spring seats abutting against said abutment blocks and against the driven member, lugs on said spring seats engaging the driven member and preventing lateral displacement of the spring seats, and springs interposed between and bearing on the spring seats.

[Claims 6 to 8 not printed in the Gazette.]

902,524. LINK-BELT ATTACHMENT. JOHN EKLUND, St. Joseph, Mich., assignor to St. Joseph Iron Works, St. Joseph, Mich. Filed June 3, 1908. Serial No. 436,516.

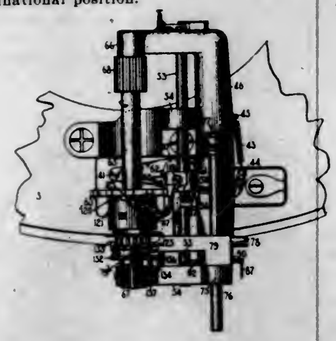


In a chain, a link having a side loop, a stop having a shank provided with spaced lugs adapted to enter the loop and engage the sides thereof and means for fixing the stop in an adjusted position upon the loop.

902,525. TYPE-WRITING MACHINE. WILLIAM C. FARNUM, Arlington, Vt., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed June 30, 1903. Serial No. 163,685.

1. In a typewriting machine and tabulating mechanism, the combination of a carriage, carriage feed mechanism including a feed rack and means for controlling the feed of the rack, and denominational tabulating devices that cooperate with a part of said means for controlling the feed

of the rack to effect an arrest of the carriage at the proper denominational position.



2. In a typewriting machine and tabulating mechanism, the combination of a carriage, carriage feed mechanism including a feed rack and means for controlling the feed of the rack, denominational tabulating devices that cooperate with a part of said means for controlling the feed of the rack to effect an arrest of the carriage at the proper denominational position, and means for automatically effecting a release of the carriage when said tabulating mechanism is actuated.

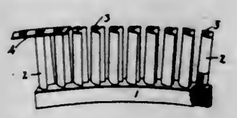
3. In a typewriting machine and tabulating mechanism, the combination of a carriage, a feed pinion therefor, and tabulating devices operative through the feed pinion to effect an arrest of the carriage at a predetermined position.

4. In a typewriting machine and tabulating mechanism, the combination of a carriage, a feed pinion therefor, tabulating devices operative through the feed pinion to effect an arrest of the carriage at a predetermined position, and means for automatically effecting a release of the carriage when said tabulating devices are actuated.

5. In a typewriting machine and tabulating mechanism, the combination of a carriage, carriage escapement devices including an escapement wheel, and tabulating devices for arresting said carriage at a predetermined point by effecting an arrest of the escapement wheel.

[Claims 6 to 100 not printed in the Gazette.]

902,526. APPARATUS FOR MANUFACTURING TURBINE-BUCKETS. EDMUND H. FARQUHAR, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Original application filed Jan. 2, 1906, Serial No 294,182. Divided and this application filed Feb. 11, 1907. Serial No. 356,763.



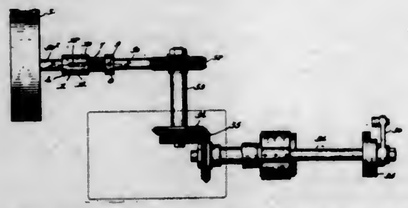
1. A means for casting separately formed turbine buckets to a segmental supporting base, comprising a flask, and a holder which holds the buckets in place while the sand is being rammed in the flask and is removed before the metal is poured, said holder including an arc-shaped segmental block with which the buckets engage at one end, spacing means carried by the block for separating the buckets by the desired pitch distance, a crown which engages the opposite ends of the buckets to maintain them in radial relation to the segmental block, and devices for clamping the buckets between the crown and the block.

2. A means for casting separately formed buckets to a supporting base, comprising a flask, and a holder for aligning the individual buckets in the flask while the sand is being rammed, said holder including a block with which the buckets engage at one end, spacing means carried by the block for separating the buckets by the desired pitch distance, a crown engaging the opposite ends of the buckets to preserve the alinement, and means for clamping the buckets between the crown and the block.

3. A means for casting separately formed buckets to a supporting base, comprising a flask, a means for temporarily holding the buckets in the flask while the sand is being rammed, comprising a block having a shallow groove to receive the ends of the buckets, removable spacers located in the groove between the buckets, and a crown engaging the opposite ends of the buckets to preserve the alinement, and devices for clamping the buckets between the crown and the block.

4. A means for casting separately formed buckets to a supporting base, comprising a flask, and a holder for aliing the individual buckets in the flask while the sand is being rammed, said holder including a block with which the buckets engage at one end, and spacing means for separating the buckets by the desired pitch distance, the block also forming a print for the core which determined the thickness of the base.

902,527. SAFETY-COUPLING FOR DRIVING AND DRIVEN MEMBERS. FRANK H. FRENCH, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Apr. 20, 1908. Serial No. 427,996.



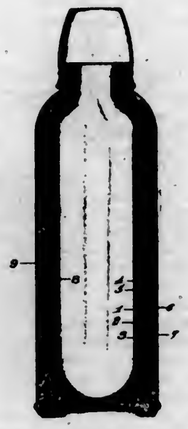
1. The combination, with driving and driven shafts, of a coupling normally connecting them to rotate in unison, said coupling comprising a sleeve rotatable with and longitudinally movable upon the driven shaft and having a beveled notch, a lug on the driving shaft to enter the notch, a spring to normally maintain the lug in the notch and effect rotation of the shafts in unison, said driven shaft having a locking recess, and a latch mounted on the sleeve and automatically moved into the locking recess to lock the sleeve in inoperative position when the resistance of the driven shaft overcomes the spring, the lug at such time riding up the side of and out of the notch and moving the sleeve into position to be locked by the latch and disconnecting the shafts.

2. The combination, with driving and driven shafts, of a coupling normally connecting them to rotate in unison, said coupling comprising a sleeve rotatable with and longitudinally movable upon the driven shaft and having one end cam-shaped and provided with a V-shaped notch at the low part of the cam end, a lug on the driving shaft to enter said notch, a spring to normally maintain the lug in the notch to thereby couple the shafts to rotate together, resistance to rotation of the driven shaft when greater than the action of the spring causing the lug to ride up out of the notch and onto the high part of the cam-end of the sleeve, moving the latter into inoperative position, and a spring-actuated latch carried by the sleeve to automatically engage the driven shaft and retain the sleeve inoperative when so positioned.

902,528. VACUUM-BOTTLE. PAUL O. E. FRIEDRICH, New York, N. Y., and JOHN G. LYMAN, Philadelphia, Pa., assignors, by direct and mesne assignments, to Caloris Manufacturing Company, a Corporation of Delaware. Filed Mar. 5, 1908. Serial No. 419,411.

1. In a device of the character described, inner and outer vessels having a vacuum therebetween, a coat of oxalic acid on the exterior of the vessels and a casing for said vessels.

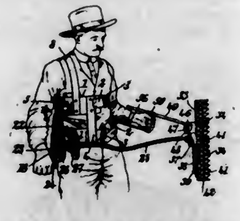
2. In a device of the character described, inner and outer vessels having a vacuum therebetween, a coat of paraffin upon the outer vessel and a casing for said vessels.



3. In a device of the character described, inner and outer vessels having a vacuum therebetween, oxalic acid on the outer vessel, paraffin exterior to said oxalic acid and a casing for said vessels.

4. In a device of the character described, inner and outer vessels having a vacuum therebetween, oxalic acid on the exterior of the outer vessel, paraffin surrounding said acid, a metallic casing for said vessels and a cushion between said paraffin and said casing.

902,529. HEDGE-TRIMMER. FRANK L. GILMAN, Eugene, Oreg. Filed Sept. 25, 1905, Serial No. 279,970. Renewed Mar. 30, 1908. Serial No. 424,116.



1. A hedge trimmer comprising a plurality of independent supports, trimming mechanism upon one of said supports, said support being provided with a hand grip, operating mechanism on the other support, means for attaching said support to the body of the operator, and a flexible shaft connecting the operating mechanism with the cutting mechanism.

2. A hedge trimmer comprising a plurality of independent supports, a hand grip upon one of the supports, cutting mechanism adjustably connected with the support, means for connecting the other support to the body of the operator, operating means for the cutting mechanism connected with said last named support, and a flexible shaft connecting the operating means and the cutting mechanism.

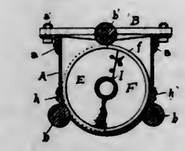
3. A hedge trimmer, comprising a plurality of independent supports, means of connecting one of said supports to the body of the operator, an arm extending from said support, a second arm pivoted to the free end of the first arm and provided with rack teeth, a pawl on said first named arm for engaging the rack teeth, whereby to adjust said arm with respect to the first named arm, cutting mechanism connected to the other support, operating mechanism for said cutting mechanism upon the adjustable arm of the first named support, and a flexible shaft connecting the operating mechanism and the cutting mechanism.

4. A hedge trimmer, comprising a plurality of independent supports, cutting mechanism connected with one of said supports, means for attaching the other of said supports to the body of the operator, an arm extending from said last named support, means for varying the position of the arm with respect to the support, operating means for the cutting mechanism supported by said arm, and a flexible shaft connecting the operating means and the cutting mechanism.

5. A hedge-trimmer, comprising means for attaching the same to the body of the operator, trimming-devices proper, motion-transmitting devices therefor, and a support for said last-named devices, embodying a forwardly disposed plate pivoted to a part of said means, a segmental-plate secured to said part and having openings therein, the plate first-named having an opening therein for registry with either of said openings in the segmental plate, and a member pivoted to said first-named plate, and having at the inner end thereof a series of teeth disposed on the arc of a circle, said forwardly disposed plate being provided with a spring pawl carrying a pin, as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

902,530. CONVEYER. CHARLES O. GUSTAVSEN, Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Original application filed Apr. 27, 1906, Serial No. 313,998. Divided and this application filed Feb. 5, 1907. Serial No. 355,927.



1. In a screw conveyer, the combination with a trough and a screw or helical conveyer arranged to rotate therein, of a rolling support or bearing situated in the lower part of the trough upon which the edge of the helical conveyer rests and by which it is supported, substantially as set forth.

2. In a screw conveyer, the combination with a trough and a screw or helical conveyer arranged to rotate therein, of a rolling support or bearing situated in the lower part of the trough upon which the edge of the helical conveyer rests and by which it is supported, and means for holding the helical conveyer down upon the said rolling bearing, substantially as set forth.

3. In a screw conveyer, the combination with a trough and a screw or helical conveyer arranged therein, of a pair of rollers situated in the lower part of the trough and upon opposite sides of the axis of the conveyer, upon which rollers the periphery or edge of the helical conveyer rests, and a roller situated above the axis of the conveyer and bearing upon the peripheral edge thereof for holding it down upon the said bearing rollers, substantially as set forth.

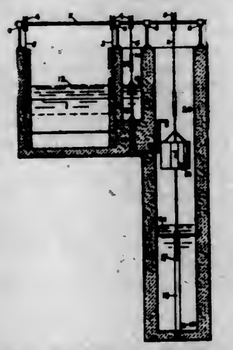
4. In a screw conveyer, the combination with two alining flight sections and a trough in which they are mounted, of a helical flight bearing interposed between the ends of the said flight sections and comprising a section of the helical conveyer, a rolling support carried by the trough upon which the said helical flight bearing rests, and means for holding the said bearing down upon the said rolling support, substantially as set forth.

5. In a screw conveyer, the combination with two alining flight sections and a trough in which they are mounted, of a helical flight bearing interposed between the ends of the flight sections and uniting them, the said

flight bearing being provided with a peripheral flange *f*, and a rolling bearing or support upon which the flange of the said flight bearing rests, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

902,531. AUTOMATIC CONSTANT-DISCHARGE WATER-GATE. FRANK W. HANNA, Defiance, Iowa, assignor of one-half to Joseph H. Root, Port Byron, N. Y. Filed Aug. 5, 1908. Serial No. 447,176.



1. The combination of a movable water gate, an intake mechanically connected therewith receiving water from the fluctuating water surface of a canal or reservoir and a mechanism hydraulically operated by water received through the said intake and likewise mechanically connected with the said gate, the whole producing automatically a constant discharge from the said canal or reservoir.

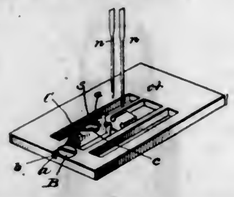
2. The combination of a movable water gate equipped with wheels to reduce friction and provided with stanch rods to prevent leakage, an intake mechanically connected therewith receiving water from the fluctuating water surface of a canal or reservoir and a mechanism hydraulically operated by water received through the said intake and likewise mechanically connected with the said gate, the whole producing automatically a constant discharge from the said canal or reservoir.

3. The combination of a movable water gate, an intake mechanically connected therewith at an adjustable height above the bottom of the discharge opening produced by the said gate receiving water from the fluctuating water surface of a canal or reservoir and a bucket likewise mechanically connected with the said gate communicating by means of a telescoping pipe or pipes with the said intake and provided with an adjustable outlet and a water cushion, the whole producing automatically a constant discharge from the said canal or reservoir.

4. The combination of a movable water gate, an intake mechanically connected therewith at an adjustable height above the bottom of the discharge opening produced by the said gate receiving water from the fluctuating water surface of a canal or reservoir and a bucket likewise mechanically connected with the said gate communicating by means of a telescoping pipe or pipes with the said intake and provided with an adjustable outlet and an adjustable water cushion with an adjustable outlet, the whole producing automatically a constant discharge from the said canal or reservoir.

902,532. SEWING AND TRIMMING MACHINE. JOHN HAYES, Jr., Amsterdam, and JOSEPH BERGER, Jr., Utica, N. Y., assignors to Union Special Sewing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 5, 1904. Serial No. 196,772.

1. In a sewing machine, and in combination with the stitching mechanism and feed dog thereof, a knife fixed in and located above the throat plate of the machine in advance of the stitching mechanism, and comprising a member projecting horizontally over the plane of the cloth plate, substantially in the line of feed, and a movable knife carried by said feed dog and coacting with said fixed knife; substantially as described.



2. In a sewing machine and in combination with the stitching mechanism thereof, a fixed cutter, comprising a member projecting forward over the plane of the throat plate, a feed dog, and a movable cutter supported by said feed dog and co-acting with said fixed cutter.

3. In a sewing machine and in combination with the stitching mechanism thereof, a fixed cutter comprising a member projecting forward over the plane of the throat plate, a feed dog, a pin or screw projecting therefrom, and a movable cutter carried by said pin or screw.

4. In a sewing machine, and in combination with the overstitching mechanism thereof, a trimming device comprising an upper stationary member having its forward end adapted to enter between two superposed layers of fabric and a lower member coöperating therewith to sever the lower layer of fabric, said trimming device being arranged in advance of the stitch forming mechanism and the stationary member being substantially in line with one edge of the overstitching, whereby only one of said cut edges is stitched.

5. In a sewing machine and in combination with the stitching mechanism thereof, comprising a pair of needles, a trimming device comprising an upper stationary member having its forward end adapted to enter between two superposed layers of fabric, and a lower member coöperating therewith to sever the lower layer of fabric, said trimming device being arranged in advance of the stitch forming mechanism, and the said stationary member being in the line of feed and in front of and in line with one of the needles.

[Claims 6 to 13 not printed in the Gazette.]

902,533. CENTRIFUGAL FAN OR PUMP. MOSES G. HUBBARD, Chatham, N. J., assignor to Mechanical Utilities Company, New York, N. Y., a Corporation of New York. Filed May 29, 1908. Serial No. 435,761.



1. In a fan or pump, the combination of a plurality of blades or leaves, with a uniting strip connected with all of said blades or leaves and bent between its connections with said blades or leaves to determine the relative position of said blades or leaves.

2. A centrifugal fan or pump having a rotary member comprising a plurality of blades or leaves connected with a uniting strip, which is bent alternately up and down in a zigzag form, as set forth.

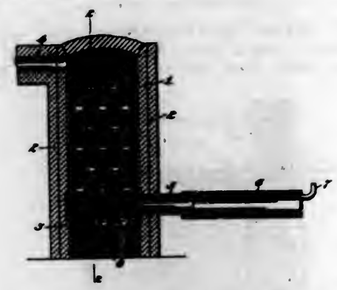
3. A centrifugal fan or pump having a rotary member comprising a suitable frame, a plurality of blades or leaves, corrugated uniting strips connecting said blades or leaves, and means for securing said connected blades or leaves within said frame.

4. A centrifugal fan or pump having a rotary member comprising a sheet of metal, having a series of transverse parallel cuts between its edges and bent to form a series of substantially parallel blades whose upper and lower edges are defined by said transverse cuts.

5. A centrifugal fan or pump having a rotary member comprising a sheet of metal having a series of transverse parallel cuts between its edges and two series of longitudinal cuts parallel with its edges, said sheet of metal being bent to form a series of substantially parallel blades whose upper and lower edges are defined by adjacent transverse cuts.

[Claims 6 to 15 not printed in the Gazette.]

902,534. METALLURGICAL CONDENSER. WOOLSEY M. JOHNSON, Hartford, Conn. Filed Jan. 8, 1908. Serial No. 409,860.



1. A metallurgical condenser comprising a condensing chamber, and means for maintaining therein a shower of molten metal.

2. A metallurgical condenser comprising a condensing chamber, and means for maintaining a continuous circulation of exposed molten metal in said chamber.

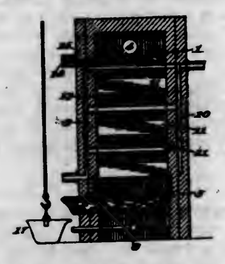
3. A metallurgical condenser comprising a condensing chamber, a receptacle for molten metal therein, and means for controlling the temperature of the metal in said receptacle.

4. A metallurgical condenser comprising a condensing chamber, a plurality of receptacles for molten metal therein, and means for controlling the temperature of the metal in said receptacles.

5. A metallurgical condenser comprising a condensing chamber, a plurality of receptacles for molten metal therein disposed in vertically staggered relation, and means for controlling the temperature of the metal in said receptacles.

[Claims 6 to 17 not printed in the Gazette.]

902,535. METHOD OF CONDENSING VOLATILE METALS. WOOLSEY M. JOHNSON, Hartford, Conn. Filed Jan. 8, 1908. Serial No. 409,861.



1. The method of condensing volatile metals which consists in bringing metallic vapors into contact with a body of molten metal, and controlling the conditions to secure substantially complete condensation of said vapors.

2. The method of condensing volatile metals which consists in bringing metallic vapors into contact with a body of molten metal, and regulating the mass of the molten metal in contact with the vapors to secure substantially complete condensation of said vapors.

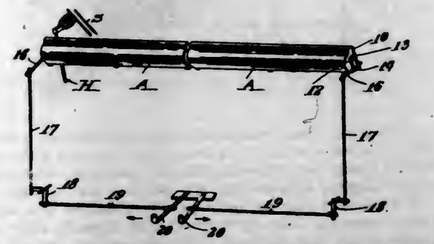
3. The method of condensing volatile metals which consists in bringing metallic vapors into contact with a body of molten metal, and regulating the temperature and mass of the molten metal in contact with the vapors to secure substantially complete condensation of said vapors.

4. The method of condensing metallic vapors which consists in exposing said vapors to a relatively large surface of a circulating molten metal.

5. The method of condensing metallic vapors which consists in exposing said vapors to a relatively large surface of a circulating molten metal and maintaining said metal at a temperature such that its vapor pressure is materially less than that of said metallic vapor.

[Claims 6 to 18 not printed in the Gazette.]

902,536. SECTIONAL MODULATING ATTACHMENT FOR MUSICAL INSTRUMENTS. WILLIAM J. KEELEY, New York, N. Y., assignor to Autopiano Company, New York, N. Y., a Corporation of New York. Filed Mar. 6, 1907. Serial No. 360,807.



1. The combination of a hammer rest rail and hammers, a sectional rail housed in the hammer rest rail, a spring normally keeping the sectional rail within the hammer rest rail, and operating means for projecting the sectional rail outwardly from the hammer rest rail to adjust the normal position of the hammers.

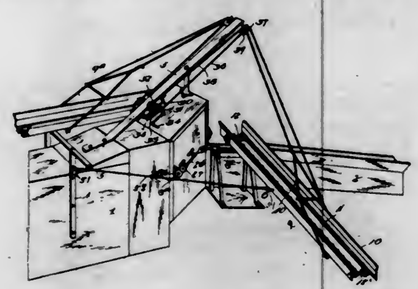
2. In a piano action, the combination of a stationary hammer rest-rail and hammers, a sectional rail in two parts housed within the hammer rest-rail and pivotally connected therewith, springs for normally holding the sectional rails within the body of the stationary rest-rail, an arm projecting from each section of the sectional rail, a link connected with each of said arms, a pneumatic connected with each of the links, a suction chamber connected with each pneumatic, each suction chamber having a double valve adapted to control the connection of the pneumatic with said suction chamber and with the outer air, a pneumatic for controlling the valve, and a push button for controlling the operation of the last named pneumatic.

3. In a piano, the combination with the hammers, of a stationary hammer rest-rail having an undercut lower portion, a sectional rail in two sections located in said undercut portion, each section having an arm projecting to the front of the stationary rail and movable with the section, a hinge member connected with said arm and with each section and pivoted at the bottom thereof to the stationary hammer rest-rail, and means for operating each of said projecting arms independently to force the sections of the sectional rail outwardly from the face of the stationary hammer rest-rail.

902,537. SWINGING CONVEYER FOR BAND CUTTERS AND FEEDERS OF THRESHERS. FRED S. PEABODY, Utica, Minn. Filed June 3, 1907. Serial No. 377,927.

1. In a conveying apparatus, the combination of a support, a conveyer connected thereto, a second conveyer arranged at one side of the first mentioned conveyer and mounted to swing vertically, a cable passed over a sheave on the support and connected with the second mentioned conveyer, means on the support for adjusting the cable, means on the support for holding the first mentioned means against retrograde movement, and a second cable passed over a sheave on the support and connected with the second mentioned means.

2. In a conveying apparatus, the combination of a support, a conveyer connected thereto, a second conveyer arranged at one side of the first mentioned conveyer and mounted to swing vertically, a cable passed over a sheave on the support and connected with the second mentioned conveyer, a drum mounted on the support and equipped with a ratchet; a crank connected to said cable, a lever pawl engaging the ratchet, and a second cable connected to the lever pawl and passed over a sheave on the support.



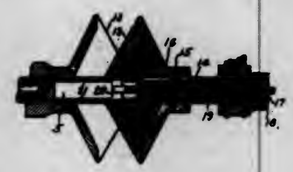
3. In a conveying apparatus, the combination of a support, a conveyer mounted to swing both laterally and vertically, a stay rod connected with the conveyer, and a universal coupling between said stay rod and the support.

4. In a conveying apparatus, the combination of a support, a conveyer mounted to swing both laterally and vertically, a stay rod connected with the conveyer, and a universal coupling between said stay rod and the support; said coupling being adjustably fixed to the stay rod.

5. In a conveying apparatus, the combination of a support, a conveyer mounted to swing both laterally and vertically, a stay rod connected with the conveyer, and a universal coupling between said stay rod and the support; said coupling having a ring receiving the stay rod and also having a set screw bearing in the ring and engaging the rod.

[Claims 6 to 8 not printed in the Gazette.]

902,538. SPEED-CHANGING DEVICE. JOHN RIDDELL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Original application filed July 9, 1904, Serial No. 215,882. Divided and this application filed July 6, 1905. Serial No. 268,325.

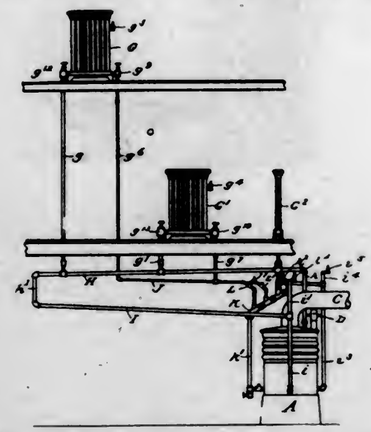


1. The combination with a tubular shaft having a longitudinal slot, of a pulley composed of similar halves having intermatching radial ribs and grooves, one part being fixed to the shaft and the other loose thereon, a screw-threaded sleeve rotatably secured in said shaft, a segment-nut secured to the movable half of the pulley and passing through said slot into engagement with the sleeve, and means for rotating said sleeve.

2. The combination with a tubular shaft having a longitudinal slot, of a pulley composed of similar halves having intermatching radial ribs and grooves, one part being fixed to the shaft and the other loose thereon, a screw-threaded sleeve rotatably secured in said shaft, a segment-nut secured to the movable half of the pulley and passing through said slot into engagement with the sleeve, and means for rotating said sleeve consisting of a longitudinally movable rod having screw threads of long pitch meshing with similar threads in the inside of said sleeve.

3. The combination with a tubular shaft having a longitudinal slot, a longitudinally movable part mounted on said shaft, an externally screw threaded sleeve mounted within said shaft and free to rotate therein but held from longitudinal movement relatively thereto, means operatively connecting said movable part and the screw thread of said sleeve, and means for rotating said sleeve independently of said shaft.

902,539. STEAM HEATING APPARATUS. MARSHALL F. SMITH, Lowell, Mass., assignor to Eddo V. Bates, Lowell, Mass. Filed June 11, 1903. Serial No. 161,033.



1. The combination of a boiler, a plurality of radiators connected therewith, a separate, downwardly inclined return-pipe for each radiator, a check-valve in each return-pipe, an inclined condensation-receiver, into which all said return-pipes enter, said condensation-receiver being arranged above the water-line of said boiler and being connected with said boiler below said water-line, an air-chamber leading out of the upper end of the condensation-receiver, and an automatic air-valve leading out of said air-chamber and arranged above all said check-valves.

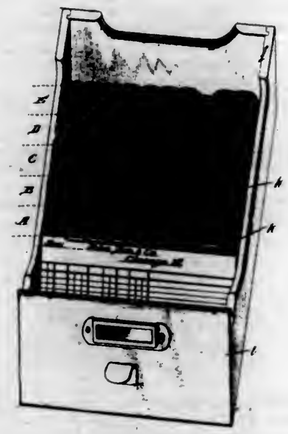
2. The combination of a boiler, a plurality of radiators connected therewith, a separate return-pipe for each radiator, all said return-pipes having an equal downward inclination, a check-valve in each return-pipe, all said check-valves being at the same level, an inclined condensation-receiver, into which all said return-pipes enter, said receiver being arranged above the water-line of said boiler and connected with said boiler below said water-line, and an air-chamber leading out of said receiver and having an automatic air-valve arranged above all said check-valves.

902,540. CONFECTIONER'S BOX. CHARLES E. HAWKHURST, Jr., New Haven, Conn., assignor to National Folding Box & Paper Co., New Haven, Conn., a Corporation of New Jersey. Filed Apr. 27, 1908. Serial No. 429,548.



A confectioner's box comprising a strip cut and folded to form an even number of integral tapered side sections one end of the strip formed with a flap which overlaps and is glued to the opposite end of the strip, a bottom formed integral with one of the side sections extending from a point within the lower edge of the strip, said bottom being larger than the bottom edge of the box and adapted to be turned upward between the parts when folded together, substantially as described.

902,541. CARD-INDEX FILE. OTTO W. HELBIG, Chicago, Ill., assignor to Otto W. Helbig Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 21, 1905. Serial No. 275,080.

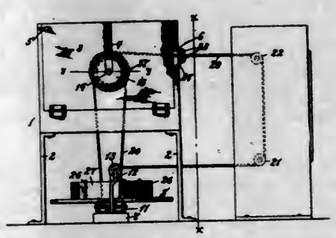


1. A device for use by a dealer in accounting for numerous consecutively numbered returnable packages comprising a set of record cards for each of several specified periods of time; the cards for each set being the same color and of a different color from the cards of all the other sets and having exposed tabs numbered consecutively to correspond with the successive numbers of the packages to be accounted for; and a plurality of places, spaces or receptacles convenient to the main groups of cards to each of which a customer's name may be applied and in which one of said numbered cards corresponding with the number of the package delivered to said customer taken from the set of cards of the color indicating the period of time in which delivery of said package is made to said customer may be placed.

2. A device for use by a dealer in accounting for numerous consecutively numbered returnable packages comprising: a set of record cards for each of several specified periods of time; the cards in each set being the same color and of a different color from the cards of all the other sets and having exposed tabs numbered consecutively to correspond with the successive numbers of the packages to be accounted for, the tabs on each ten or less successive cards being arranged step by step across the width of the cards with the lowest unit of the consecutive numbers of the tabs at the left and the same unit always in the same position on all the cards bearing that unit as described; and a plurality of places, spaces or receptacles convenient to the main groups of cards, to each of which a customer's name may be applied and in which one of said numbered cards corresponding with the number of the package delivered to said customer taken from the set of cards of the color indicating the period of time in which delivery of said package is made to said customer, may be placed in such a position that the numbered tabs on the cards of successive customers are exposed to view.

REISSUES.

12,869. MOVING-PICTURE APPARATUS. HENRY S. ISAACS, Braddock, and LEO ISAACS, Pittsburg, Pa., assignors to American Moving Picture Machine Company, a Corporation of New York. Filed Apr. 27, 1908. Serial No. 429,517. Original No. 845,551, dated Feb. 26, 1907, Serial No. 318,134.



1. Film-feeding mechanism for motion-picture machines, comprising a revoluble support for a coil or roll of films, and means for unwinding and receiving said coil from its center or inner convolution, comprising a receiving reel.

2. Film-feeding mechanism for motion-picture machines, comprising a revoluble support for a coil or roll of films, and means for unwinding and receiving said coil from its center or inner convolution, comprising a receiving reel constructed and arranged to facilitate removal of the wound coil from the receiving-reel.

3. Film-feeding mechanism for motion-picture machines, comprising a revoluble support for a coil or roll of films, means for guiding the strip or film in its passage through a projection lantern and means for unwinding and receiving said coil from its center or inner convolution comprising a receiving-reel constructed and arranged so as to facilitate removal of the coil or roll from the receiving-reel.

4. The combination with a motion-picture machine, of film-feeding mechanism comprising a revoluble support for a coil or roll of films, means for unwinding and receiving said coil from its center or inner convolution comprising a receiving-reel, and means for revolving said revoluble support, and said reel at the same speed.

5. Film-feeding mechanism for motion-picture machines, comprising a horizontally disposed feed-disk, to support a coil or roll of film, means for unwinding and receiving said coil from its center or inner convolution comprising a receiving-reel constructed and arranged so as to facilitate removal of the coil or roll from said reel, and means for revolving said disk and reel at the same speed.

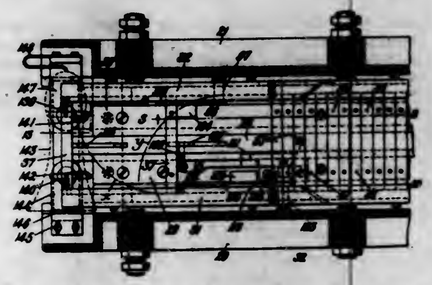
[Claims 6 to 11 not printed in the Gazette.]

12,870. MACHINE FOR TACKING SHOE-SHANKS. BRADFORD B. WATERMAN, East Bridgewater, Mass., assignor to American Shoe Finding Company, a Corporation of Maine. Filed Mar. 26, 1908. Serial No. 423,489. Original No. 842,984, dated Feb. 5, 1907, Serial No. 292,417.

1. In a machine for placing tacks in perforations in sheet material, a raceway provided with a plurality of grooves the bottoms of which lie in a plane intersecting said perforations, whereby tacks located in said raceway are adapted to be guided directly into said perforations, means for guiding said sheet material transversely of said grooves, whereby said perforations are maintained in alinement with said plane, and means for feeding said sheet material transversely of said grooves.

2. In a machine for placing tacks in perforations in sheet material, a raceway provided with a plurality of grooves, the bottoms of which lie in a plane which intersects said perforations, whereby tacks located in said raceway are adapted to be guided directly into said perforations, means for feeding tacks to said grooves, means for guiding said sheet material transversely of said grooves, whereby said perforations are maintained in alinement

with said plane, and means for feeding said sheet material transversely of said grooves.



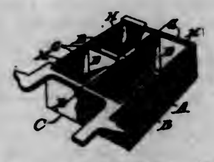
3. In a machine for placing tacks in perforations in sheet material, a raceway provided with a plurality of grooves, the bottoms of which lie in a plane which intersects said perforations, whereby tacks located in said raceway are adapted to be guided directly into said perforations, a rotary brush adapted to throw said tacks against said raceway, means for guiding said sheet material transversely of said grooves, whereby said perforations are maintained in alinement with said plane, and means for feeding said sheet material transversely of said grooves.

4. In a machine for placing tacks in perforations in sheet material, a raceway provided with a plurality of grooves, the bottoms of which lie in a plane which intersects said perforations, whereby tacks located in said raceway are adapted to be guided directly into said perforations, means for feeding tacks onto the upper surface of said sheet material, means for throwing said tacks from said surface against said raceway, means for guiding said material transversely of said grooves, whereby said perforations are maintained in alinement with said plane, and means for feeding said sheet material transversely of said grooves.

5. In a machine for tacking pieces of sheet material provided with perforations to non-perforated pieces of sheet material, a raceway provided with a plurality of grooves, the bottoms of which lie in a plane which intersects said perforations, whereby tacks located in said raceway are adapted to be guided directly into said perforations, means for feeding tacks to said grooves, means for guiding said perforated pieces transversely of said grooves, whereby said perforations are maintained in alinement with said plane, means for feeding said perforated pieces in a continuous row transversely of said grooves, means for separating said perforated pieces from said row one at a time, and mechanism for tacking one of said perforated pieces to one of said non-perforated pieces.

[Claims 6 to 40 not printed in the Gazette.]

12,871. PROCESS OF TREATING NEGATIVE-POLE PLATES. JOSEPH BIJUR, New York, N. Y., assignor to The General Storage Battery Company, a Corporation of New York. Filed Jan. 14, 1908. Serial No. 410,869. Original No. 485,391, dated Feb. 26, 1907, Serial No. 309,986. (Division A.)



1. The process of treating plates adapted for use as negative pole plates, which consists in soaking the plate in a solution capable of penetrating the pores of the plate and there depositing an inert substance.

2. The process of treating plates to be used as negative pole plates, which consists in soaking the plate in a solution of an organic substance capable of penetrating the pores of the plate and then drying and heating the organic substance and thereby depositing in the pores an inert substance.

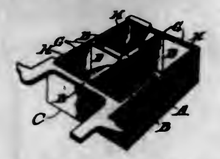
3. The process of treating plates to be used as negative pole plates, which consists in soaking the plate in a solution of sugar capable of penetrating the pores of the plate and there depositing an inert substance and ultimately subjecting the sugar to a carbonizing agent and thereby depositing said inert substance.

4. The process of treating plates adapted for use as negative pole plates, which consists of incorporating an inert substance in the pores of the active mass by treating said plate with a fluid capable of entering the pores and depositing inert material.

5. The process of treating plates adapted to be used as negative pole plates, which consists in soaking the plate in a solution of sugar capable of penetrating the pores of the plate and of there depositing at first sugar and ultimately carbon, then drying the plate to deposit sugar, and then heating the plate to carbonize the sugar and form the final inert deposit of carbon.

[Claims 6 to 16 not printed in the Gazette.]

12,872. NEGATIVE-POLE PLATE. JOSEPH BIJUR, New York, N. Y., assignor to The General Storage Battery Company, a Corporation of New York. Filed Jan. 14, 1908. Serial No. 410,870. Original No. 845,391, dated Feb. 26, 1907, Serial No. 309,986. (Division B.)



1. A negative-pole Planté plate having inert material incorporated within the active material.

2. A negative-pole Planté plate having inert material incorporated within the active material, and characterized by a brownish-gray color before use and a spongy appearance, an increased porosity of the active mass and a substantially sustained capacity in use.

3. A negative-pole Planté plate having inert material incorporated within the active material, and characterized by a brownish-gray color before use and a substantially sustained capacity in use.

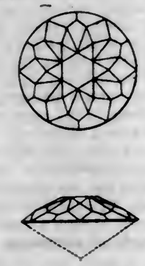
4. A negative-pole Planté plate having inert material in the form of carbon incorporated within the pores of the active mass.

5. A negative-pole Planté plate characterized by having inert material incorporated in the active material and a substantially sustained capacity in use.

[Claims 6 to 10 not printed in the Gazette.]

DESIGNS.

39,632. CUT STONE. ERNEST G. H. SCHENCK, Orange, N. J. Filed July 29, 1907. Serial No. 386,175. Term of patent 14 years.



The ornamental design for a cut stone as shown.

39,633. EMBLEM. BRIDGET ELLEN BURKE, Malone, N. Y. Filed Aug. 27, 1908. Serial No. 450,591. Term of patent 7 years.



The ornamental design for an emblem, substantially as shown.

39,634. EMBLEM OR SIMILAR ARTICLE. JACOB HOFFMANN, Cincinnati, Ohio. Filed July 23, 1908. Serial No. 445,058. Term of patent 7 years.



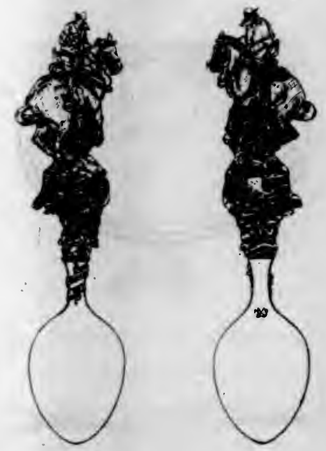
The ornamental design for an emblem, or similar article, as shown.

39,635. SPOON, FORK, OR SIMILAR ARTICLE. HENRIK HILLBOM, Wallingford, Conn., assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn., a Corporation. Filed Aug. 1, 1908. Serial No. 446,500. Term of patent 7 years.



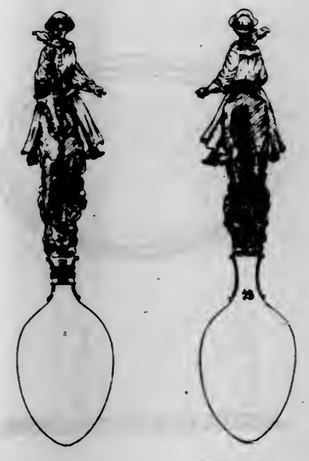
The ornamental design for a spoon, fork or similar article, as shown.

39,636. HANDLE OF SPOONS OR SIMILAR ARTICLES. JOSEPH MAYER, Seattle, Wash. Filed Aug. 17, 1908. Serial No. 449,002. Term of patent 3½ years.



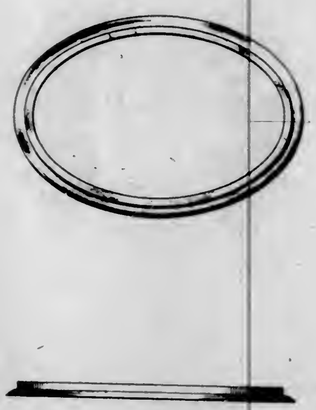
The ornamental design for the handle of a spoon, or similar article, as shown.

39,637. HANDLE OF SPOONS OR SIMILAR ARTICLES. JOSEPH MAYER, Seattle, Wash. Filed Aug. 17, 1908. Serial No. 449,003. Term of patent 3½ years.



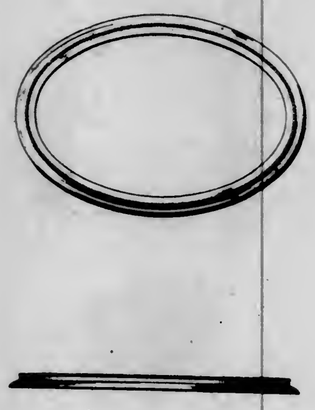
The ornamental design for the handle of a spoon, or similar article, as shown.

39,638. MIRROR OR PICTURE FRAME. JOHN P. EUSTIS, Newton, Mass. Filed July 6, 1908. Serial No. 442,262. Term of patent 14 years.



The ornamental design for a mirror or picture frame, substantially as shown.

39,639. MIRROR OR PICTURE FRAME. JOHN P. EUSTIS, Newton, Mass. Filed July 6, 1908. Serial No. 442,263. Term of patent 14 years.



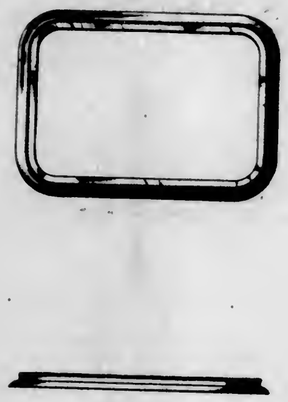
The ornamental design for a mirror or picture frame, substantially as shown.

39,640. MIRROR OR PICTURE FRAME. JOHN P. EUSTIS, Newton, Mass. Filed July 6, 1908. Serial No. 442,264. Term of patent 14 years.



The ornamental design for a mirror or picture frame, substantially as shown.

39,641. MIRROR OR PICTURE FRAME. JOHN P. EUSTIS, Newton, Mass. Filed July 6, 1908. Serial No. 442,265. Term of patent 14 years.



The ornamental design for a mirror or picture frame, substantially as shown.

39,642. CLOCK-STAND AND PICTURE-FRAME. GEORGE KEPPLER, New York, N. Y., assignor to The Western Clock Manufacturing Company, La Salle, Ill. Filed Aug. 20, 1908. Serial No. 449,569. Term of patent 7 years.



The ornamental design for a clock stand and picture frame, as shown.

39,643. GLASS VESSEL. ALBERT STEFFIN, New Bedford, Mass. Filed Nov. 29, 1907. Serial No. 404,469. Term of patent 7 years.



The ornamental design for a glass vessel as shown and described.

39,644. TOY BANK. JAMES H. BIGALOW, Ravenna, Ohio. Filed Aug. 3, 1908. Serial No. 446,819. Term of patent 14 years.



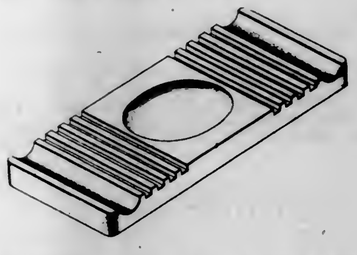
The ornamental design for a toy-bank as shown.

39,645. CANDLE-HOLDER. WILLIAM A. JAMESON, Niagara Falls, N. Y. Filed Feb. 21, 1908. Serial No. 417,179. Term of patent 7 years.



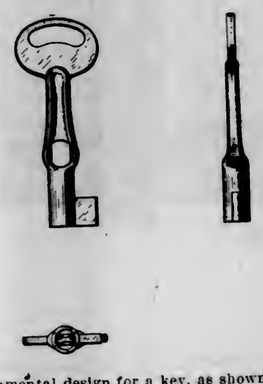
The ornamental design for the candle holder, as shown and described.

39,646. COPY-HOLDER. WALTER JONES WILLSON, Boston, and HENRY E. DIX, Arlington, Mass.; said Dix assignor to said Willson. Filed Mar. 26, 1908. Serial No. 423,491. Term of patent 14 years.



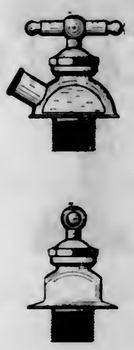
The ornamental design for a copy holder as shown and described.

39,647. KEY. CHARLES E. JOHNSON, New Britain, Conn., assignor to The Corbin Cabinet Lock Company, New Britain, Conn., a Corporation of Connecticut. Filed July 1, 1908. Serial No. 441,509. Term of patent 14 years.



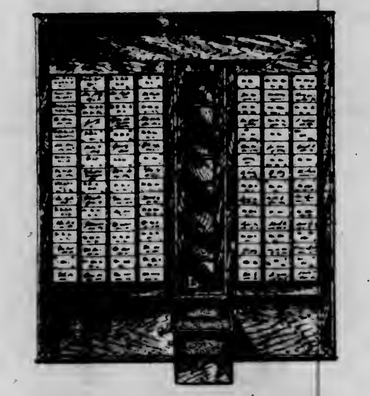
The ornamental design for a key, as shown.

39,648. WASHTRAY-BIB. WILLIAM H. DEHN, Cleveland, Ohio. Filed Aug. 3, 1908. Serial No. 446,822. Term of patent 7 years.



The ornamental design for a wash-tray bib as shown.

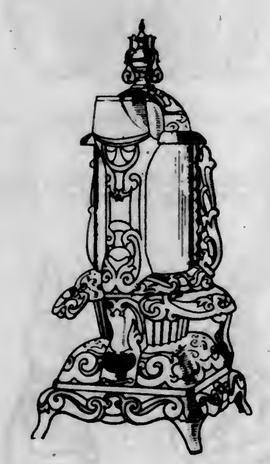
39,649. INFORMATION AND DIRECTORY CABINET. ELIJAH A. OVENSHIRE, Los Angeles, Cal. Filed July 1, 1908. Serial No. 441,510. Term of patent 7 years.



The ornamental design for an information and directory cabinet, as shown and described.

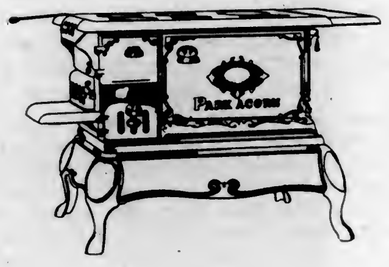
39,650. HEATING-STOVE. GEORGE ALIG, Indianapolis, Ind. Filed Nov. 27, 1907. Serial No. 404,179. Term of patent 7 years.





The ornamental design for a heating stove, as shown.

39,651. COOKING-STOVE. JAFEW S. VAN BUREN, Albany, N. Y., assignor to Rathbone, Sard & Company, Albany, N. Y., a Corporation of New York. Filed Aug. 20, 1908. Serial No. 449,575. Term of patent 3½ years.



The ornamental design for a cooking stove, as shown.

39,652. COOKING-STOVE. JAFEW S. VAN BUREN, Albany, N. Y., assignor to Rathbone, Sard & Company, Albany, N. Y., a Corporation of New York. Filed Aug. 20, 1908. Serial No. 449,576. Term of patent 3½ years.

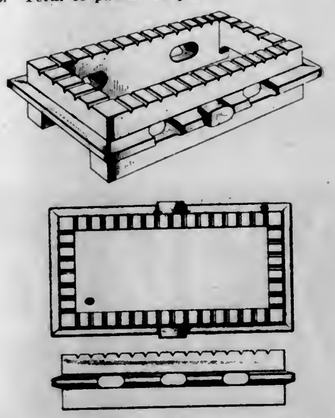
The ornamental design for a cooking stove, as shown.

39,653. STOVE. DANIEL T. TURNEY, New Albany, Ind., assignor to Anchor Stove & Range Co., New Albany, Ind., a Corporation of Indiana. Filed July 31, 1908. Serial No. 446,350. Term of patent 7 years.



The ornamental design for a stove, as shown and described.

39,654. SKELETON PAVING-BRICK. ANDREW A. MULLEN, New York, N. Y. Filed Dec. 8, 1906. Serial No. 346,996. Term of patent 14 years.



The ornamental design for a skeleton paving brick, as shown.

TRADE-MARKS

PUBLISHED OCTOBER 27, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 12,850. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) THE BARBER ASPHALT PAVING COMPANY, Philadelphia, Pa. Filed Sept. 21, 1905.

TITEKOTE

Particular description of goods.—Asphaltic Paints.

Ser. No. 20,398. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) CHARLES GRUNEBAUM, Baltimore, Md., and Atlantic City, N. J. Filed June 18, 1906.

Chagru

Particular description of goods.—Buckles, Combs, Barrettes, Tiaras, Hair-Pins, Hat-Pins, and Souvenir Spoons of Solid and Plated Precious-Metal Ware, and Jewelry for Personal Wear.

Ser. No. 23,893. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) PIERCE BUTLER & PIERCE MANUFACTURING COMPANY, Syracuse, N. Y. Filed Dec. 8, 1906.



Particular description of goods.—Steam and Hot-Water Heaters.

Ser. No. 23,969. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE PINEX COMPANY, Fort Wayne, Ind. Filed Dec. 12, 1906.

PINEX

Particular description of goods.—A Medicinal Remedy for Diseases of the Throat and Lungs.

Ser. No. 26,067. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) THE EASTERN DYNAMITE COMPANY, Kenvil, N. J., assignor to E. I. Du Pont De Nemours Powder Company, a Corporation of New Jersey. Filed Mar. 19, 1907. Used ten years.

VICTOR

Particular description of goods.—High Explosives and Blasting Caps and Fuses Intended to be Electrically Exploded by an Electric Current Acting to Heat a Material Therein Forming a Part of the Electric Circuit.

Ser. No. 27,733. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) F. J. MAMPE, Stargard, Germany. Filed May 28, 1907.



Particular description of goods.—Bitters.

Ser. No. 28,383. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALEXANDER VON POEHL, Lucka, near Leipzig, Germany. Filed June 25, 1907.

Poehlinum

Particular description of goods.—A Medicinal Product for Correcting the Hyperacidity of the System.

Ser. No. 29,756. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE A. B. CHASE COMPANY, Norwalk, Ohio. Filed Sept. 5, 1907.

Artiszlano.

Particular description of goods.—Pianos and Organs, Mechanically-Operated Musical Instruments, and Apparatus for Operating Said Instruments.

Ser. No. 30,000. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) CHESS BROTHERS, THE CENTRAL EXPANDED METAL COMPANY, Pittsburg, Pa. Filed Sept. 16, 1907.



Particular description of goods.—Expanded Metal.

Ser. No. 31,347. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) QUINIAULT CANNING CO., Moclips, Wash. Filed Nov. 25, 1907.



Particular description of goods.—Minced Clams.

Ser. No. 31,543. (CLASS 47. WINES, EXCEPT MEDICATED.) GIOVANNI AQUINO, New York, N. Y. Filed Dec. 4, 1907.



Particular description of goods.—Red Wine Made in Villanova.

Ser. No. 31,718. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AKTIESELSKABET STAVANGER BLIKEMBALLAGEFABRIK, Stavanger, Norway. Filed Dec. 14, 1907.



Particular description of goods.—Sardines.

Ser. No. 33,198. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) STÉ DES ETABLISSEMENTS GAUMONT, Paris, France. Filed Mar. 6, 1908.



Particular description of goods.—Photographic Cameras, Moving-Picture Machines, and Films.

Ser. No. 33,222. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RIGNEY & COMPANY, New York, N. Y. Filed Mar. 6, 1908.



Particular description of goods.—Pancake-Syrup, a Blend of Rock-Candy and Maple-Syrup, and Sugar-Cream, a Blend of Rock-Candy and Maple-Syrup Creamed.

Ser. No. 33,230. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) GEORGE SMITH GRANT, Inveraven, Scotland. Filed Mar. 7, 1908.



Particular description of goods.—Pure Malt Scotch Whisky.

Ser. No. 33,847. (CLASS 30. CROCKERY, EARTHENWARE, AND PORCELAIN.) C. G. SCHIERHOLZ & SOHN PORZELLAN-MANUFAKTUR PLANE, G. M. B. H., Schwarzburg-Sondershausen, Germany. Filed Apr. 3, 1908.



Particular description of goods.—Porcelain Articles of Ornament, Porcelain Toilet Articles, Kitchen and Table Crockery, and Kitchen and Table Earthenware.

Ser. No. 34,032. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOLVAY & CIE., Brussels, Belgium. Filed Apr. 11, 1908.



Particular description of goods.—Soda-Ash, Soda Crystals, Bicarbonate of Soda, Chlorid of Lime, Hydrochloric Acid, Ammonia, Sulfate of Ammonia, Chlorid of Ammonia.

Ser. No. 34,279. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) SHELTON J. BARNETT, Memphis, Tenn. Filed Apr. 22, 1908.

Phos-Fene

Particular description of goods.—Orange-Phosphate Syrup Used for Making Tonic Beverages.

Ser. No. 34,518. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) APPELBEE & NEUMAN, New York, N. Y. Filed May 1, 1908.



Particular description of goods.—Buttons and Buckles for Personal Wear.

Ser. No. 34,559. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SHREVEPORT SYRUP AND MOLASSES CO. LTD., Shreveport and New Orleans, La. Filed May 4, 1908.

EVANGELINE



Particular description of goods.—Compound of Cane and Corn Syrups.

Ser. No. 34,680. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CATTARAUGUS CUTLERY CO., Little Valley, N. Y. Filed May 11, 1908.



Particular description of goods.—Pocket-Knives, Table Knives and Forks, Shears, Scissors, Razors, Butcher-Knives, Carving-Knives, and Pruning-Knives.

Ser. No. 34,722. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ATLANTIC MACARONI CO., New York, N. Y. Filed May 13, 1908.



Particular description of goods.—Macaroni.

Ser. No. 34,823. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ROYAL WORCESTER CORSET CO., Worcester, Mass. Filed May 19, 1908.

Cellubone.

Particular description of goods.—Corset-Stiffeners.

Ser. No. 34,871. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) OHIO MINERAL WATER COMPANY, New Brighton, Pa. Filed May 21, 1908.



Particular description of goods.—Natural Mineral Water, Ginger-Ale, Sarsaparilla, Root-Beer, and Birch-Beer.

Ser. No. 35,265. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) MORRIS, MANN & REILLY, Chicago, Ill. Filed June 11, 1908.



Particular description of goods.—Ladies' Belts and Back Combs.

Ser. No. 35,342. (CLASS 39. CLOTHING.) TOOTLE CAMPBELL DRY GOODS CO., St. Joseph, Mo. Filed June 13, 1908.



Particular description of goods.—Overalls, Dress-Shirts, and Workingmen's Shirts, Hosiery, Knit Underwear, and Kid Gloves.

Ser. No. 35,399. (CLASS 39. CLOTHING.) MADAME IRÈNE, New York, N. Y. Filed June 15, 1908.



Particular description of goods.—Corsets.

Ser. No. 35,629. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SCOTT AND CO., Kankakee, Ill. Filed June 19, 1908.



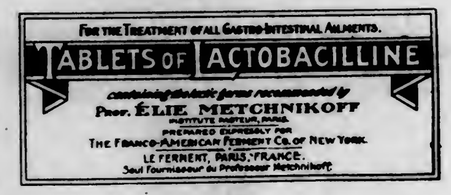
Particular description of goods.—Medicated Chest-Protectors.

Ser. No. 35,636. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE FRANCO-AMERICAN FERMENT COMPANY, New York, N. Y. Filed June 20, 1908.



Particular description of goods.—Medicines for Treatment of the Different Varieties of Enteritis, Typhoid Fever, Cholera, Dysentery, Diarrhea, Liver and Kidney Troubles, Albuminuria, Colic, Gout, Gravel, and Skin Troubles.

Ser. No. 35,637. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE FRANCO-AMERICAN FERMENT COMPANY, New York, N. Y. Filed June 20, 1908.



Particular description of goods.—Medicines for Treatment of the Different Varieties of Enteritis, Typhoid Fever, Cholera, Dysentery, Diarrhea, Liver and Kidney Troubles, Albuminuria, Colic, Gout, Gravel, and Skin Troubles.

Ser. No. 35,676. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RED WING MILLING CO., Red Wing, Minn. Filed June 22, 1908.



The word Bixota, the annular band, the inner and outer circular border, and the inner scroll-like border are blue and the circular field and the triangular fields within the scroll-like border are yellow.

Particular description of goods.—Wheat-Flour.

Ser. No. 35,741. (CLASS 39. CLOTHING.) THE CUTLER SHOE COMPANY, Chicago, Ill. Filed June 24, 1908.



Particular description of goods.—Boots, Shoes, Oxfords, and Slippers for Children, Men, and Women, Made of Leather, Rubber, and Cloth.

Ser. No. 35,794. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FULLER-GREENE COMPANY, Boston, Mass. Filed June 26, 1908.

Normel

Particular description of goods.—Chocolates.

Ser. No. 35,924. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) EDWARD & JOHN BURKE, LIMITED, Dublin, Ireland, and New York, N. Y. Filed July 3, 1908.



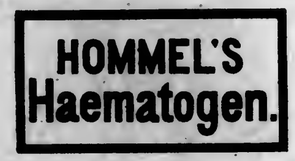
Particular description of goods.—Blended Irish Whisky, Tom Gin, Dry Gin, and Cognac.

Ser. No. 35,964. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HILMER COMMISSION CO., St. Louis, Mo. Filed July 6, 1908.



Particular description of goods.—Butter.

Ser. No. 35,970. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AKTIEN-GESELLSCHAFT-HOMMEL'S HAEMATOGEN, Zurich, Switzerland. Filed July 6, 1908.



Particular description of goods.—Blood-Forming and Blood-Improving Preparation.

Ser. No. 36,002. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FULLER-GREENE COMPANY, Boston, Mass. Filed July 8, 1908.



Particular description of goods.—Chocolates.

Ser. No. 36,003. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARY BLANCHE SPELLMAN, Indianapolis, Ind. Filed July 8, 1908.



Particular description of goods.—A Remedy in the Form of a Pastil for Diseases of the Womb and Vagina, Including Ulceration and Falling of the Womb, Inflammation, Leucorrhea, Congestion, Impaired Menstruation, Diseases of the Ovaries, and Diseases Peculiar to Women.

Ser. No. 36,038. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM D. BOWEN, Richmond, Va. Filed July 10, 1908.

Anti-Chilline
TRADE MARK

Particular description of goods.—A Medicine Used as an Antidote to Malarial, Typhoid, and Uric-Acid Poisons and as a Tonic Appetizer, Liver-Stimulant, Laxative, and Bowel-Antiseptic.

Ser. No. 36,051. (CLASS 48. MALT EXTRACTS AND LIQUORS.) M. B. FOSTER & SONS, LIMITED, London, England. Filed July 10, 1908.

PEG

Particular description of goods.—Beer.

Ser. No. 36,052. (CLASS 48. MALT EXTRACTS AND LIQUORS.) M. B. FOSTER & SONS, LIMITED, London, England. Filed July 10, 1908.

TOT

Particular description of goods.—Beer.

Ser. No. 36,100. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM MCMURRAY, St. Paul, Minn. Filed July 14, 1908.

"FORUM"

Particular description of goods.—Coffees.

Ser. No. 36,122. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WOOLSON SPICE COMPANY, Toledo, Ohio. Filed July 15, 1908.

KENTWOOD

Particular description of goods.—Blended Coffee.

Ser. No. 36,167. (CLASS 39. CLOTHING.) THE PRINTZ BIEDERMAN CO., Cleveland, Ohio. Filed July 17, 1908.

Yankee Printzess

Particular description of goods.—Ladies' and Misses' Coats, Capes, Jackets, Dresses, Dress-Skirts, and Dress-Waists.

Ser. No. 36,256. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STEVENS BROTHERS, Cedarville, N. J. Filed July 21, 1908.

ELDORA

Particular description of goods.—Canned Fruits and Canned Vegetables.

Ser. No. 36,265. (CLASS 32. FURNITURE AND UPHOLSTERY.) WILLIAM J. ABERNETHY, Chicago, Ill. Filed July 22, 1908. Used ten years.

ABERNETHY FOLDING SHADE

Particular description of goods.—Folding Window-Shades.

Ser. No. 36,306. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JNO. T. BARBEE & Co., Louisville, Ky. Filed July 24, 1908.

KENTUCKY KNIGHT

Particular description of goods.—Blended Whisky.

Ser. No. 36,346. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AUGUST MÜLLER, Strassburg, Germany. Filed July 27, 1908.

Vivil

Particular description of goods.—Peppermint Tablets.

Ser. No. 36,438. (CLASS 38. PUBLICATIONS.) THE CARTER'S INK COMPANY, Boston, Mass. Filed Aug. 3, 1908.

The Scribe

Particular description of goods.—A Magazine Containing Advertising and other Matter.

Ser. No. 36,449. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE C. F. STREIT MFG. CO., Cincinnati, Ohio. Filed Aug. 3, 1908.

Klumber

Particular description of goods.—Chairs and Davenports.

Ser. No. 36,472. (CLASS 37. PAPER AND STATIONERY.) C. H. DEXTER & SONS, Windsor Locks, Conn. Filed Aug. 4, 1908. Used ten years.

STAR

Particular description of goods.—Writing, Printing, and Tissue Paper.

Ser. No. 36,473. (CLASS 37. PAPER AND STATIONERY.) C. H. DEXTER & SONS, Windsor Locks, Conn. Filed Aug. 4, 1908. Used ten years.



Particular description of goods.—Writing, Printing, and Tissue Paper.

Ser. No. 36,496. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) CHARLES J. BRANCH, Philadelphia, Pa. Filed Aug. 5, 1908.



Particular description of goods.—Lamp Shades and Reflectors.

Ser. No. 36,529. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CAROLINE C. O'BEIRNE, New York, N. Y. Filed Aug. 7, 1908.

KISACO

Particular description of goods.—Disinfectants for Waste-Pipes and Sewers.

Ser. No. 36,568. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) CHARLES NEWMAN, East Orange, N. J., and New York, N. Y. Filed Aug. 8, 1908.

"HERCULES"

Particular description of goods.—Steel Music-Wire.

Ser. No. 36,620. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BIRMINGHAM MACARONI COMPANY, Birmingham, Ala. Filed Aug. 12, 1908.

EAGLE



Particular description of goods.—Macaroni and Spaghetti.

Ser. No. 36,638. (CLASS 39. CLOTHING.) CALIFORNIA GLOVE COMPANY, San Francisco, Cal. Filed Aug. 13, 1908.

MOCCASIN

Particular description of goods.—Leather Gloves.

Ser. No. 36,650. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

AURORA
BRAND



Particular description of goods.—Canned Salmon.

Ser. No. 36,683. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,700. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.



Particular description of goods.—Canned Salmon.

Ser. No. 36,706. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA PACKERS ASSOCIATION, San Francisco, Cal. Filed Aug. 14, 1908.

ROYAL TASTE

Particular description of goods.—Canned Salmon.

Ser. No. 36,725. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) TROY LAUNDRY MACHINERY COMPANY LIMITED, Troy, N. Y. Filed Aug. 14, 1908.



Particular description of goods.—Washing-Machines, Extracting-Machines, and Wringing Devices, Dry-Rooms, and Appliances Therefor, Dampening Machines and Presses, Starching-Machines, Ironing and Mangling Machines and Devices, Ironing-Boards and Supports, and Parts and Appliances for Use with Said Several Machines and Devices.

Ser. No. 36,726. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JOHN LONKE, New York, N. Y. Filed Aug. 14, 1908.



Particular description of goods.—Piece Goods Composed of Wool, Worsted, Hair, Cotton, Silk, Linen, and Mixtures or Combinations of These Materials.

Ser. No. 36,747. (CLASS 39. CLOTHING.) CALIFORNIA GLOVE COMPANY, San Francisco, Cal. Filed Aug. 15, 1908. Used ten years.

NAP-A-ITE

Particular description of goods.—Leather Gloves.

Ser. No. 36,748. (CLASS 39. CLOTHING.) CALIFORNIA GLOVE COMPANY, San Francisco, Cal. Filed Aug. 15, 1908.

I-D-L

Particular description of goods.—Leather Gloves.

Ser. No. 36,749. (CLASS 39. CLOTHING.) DAVID DAVIDOVITZ, New York, N. Y. Filed Aug. 15, 1908.



Particular description of goods.—Women's Leather Shoes.

Ser. No. 36,782. (CLASS 39. CLOTHING.) ALLEN-FOSTER-WILLETT CO., Lynn, Mass. Filed Aug. 17, 1908.



Particular description of goods.—Leather and Canvas Boots and Shoes for Women and Misses.

Ser. No. 36,820. (CLASS 39. CLOTHING.) WILLIAM FISCHMAN, New York, N. Y. Filed Aug. 18, 1908.



Particular description of goods.—Ladies' and Misses' Coats and Wraps.

Ser. No. 36,878. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE F. LEIPOLD, Baltimore, Md. Filed Aug. 21, 1908.

Simple Life

Particular description of goods.—Loaf Wheat-Bread.

Ser. No. 36,909. (CLASS 39. CLOTHING.) THE GOLLER SHOE CO., Lynn, Mass. Filed Aug. 24, 1908.



Particular description of goods.—Women's Leather Shoes and Oxfords.

Ser. No. 36,917. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM P. CABLER, Fort Wayne, Ind. Filed Aug. 24, 1908.



Particular description of goods.—A Medicinal Remedy for Dyspepsia, Nervousness, Bloating, Belching, Heartburn, Palpitation, Dizziness, Bad Blood, Constipation, Loss of Energy, and Despondency.

Ser. No. 36,941. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RIDGWAYS LIMITED, London, England. Filed Aug. 25, 1908.



Particular description of goods.—Tea.

Ser. No. 36,945. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANCO-AMERICAN FERMENT COMPANY, New York, N. Y. Filed Aug. 26, 1908.

LACTOBA CILLINE

Particular description of goods.—Milk.

Ser. No. 36,946. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE FRANCO-AMERICAN FERMENT COMPANY, New York, N. Y. Filed Aug. 26, 1908.

LACTOBACILLINE

Particular description of goods.—Medicines for Treatment of the Different Varieties of Enteritis, Typhoid Fever, Cholera, Dysentery Diarrhea, Liver and Kidney Troubles, Albuminuria, Colic, Gout, Gravel, and Skin Troubles.

Ser. No. 36,966. (CLASS 39. CLOTHING.) SANGER BROS., Dallas, Tex. Filed Aug. 26, 1908.

Dernier

Particular description of goods.—Corsets.

Ser. No. 37,012. (CLASS 39. CLOTHING.) DAVID DAVIDOVITZ, New York, N. Y. Filed Aug. 28, 1908.

Koh-i-noor

Particular description of goods.—Leather Boots, Shoes, and Slippers.

Ser. No. 37,014. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE GASSER COFFEE COMPANY, Toledo, Ohio. Filed Aug. 28, 1908.

KAR-A-VAN

Particular description of goods.—Spices.

Ser. No. 37,018. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE PREST-O-LITE COMPANY, Indianapolis, Ind. Filed Aug. 28, 1908.



Particular description of goods.—Acetylene-Gas Lamps.

Ser. No. 37,032. (CLASS 17. TOBACCO PRODUCTS.) LUCKETT-WAKE TOBACCO CO., Louisville, Ky., and Clarksville, Tenn. Filed Aug. 29, 1908.



Particular description of goods.—Leaf-Tobacco.

Ser. No. 37,042. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BORDEN'S CONDENSED MILK COMPANY, Jersey City, N. J., and New York, N. Y. Filed Aug. 31, 1908.

LAUREL (L) BRAND

Particular description of goods.—Caramel Paste.

Ser. No. 37,052. (CLASS 39. CLOTHING.) GOODYEAR RUBBER COMPANY, St. Paul, Minn. Filed Aug. 31, 1908.

SQUARE DEAL

Particular description of goods.—Rubber Boots and Shoes, Rubber Clothing, Oiled Clothing.

Ser. No. 37,054. (CLASS 39. CLOTHING.) HOOD RUBBER CO., Boston, Mass. Filed Aug. 31, 1908.



Particular description of goods.—Rubber Boots and Shoes, Rubber Overshoes, and Rubber-Soled Shoes.

Ser. No. 37,059. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. G. MCDONALD CANDY COMPANY, Salt Lake City, Utah. Filed Aug. 31, 1908.

PIPPINS

Particular description of goods.—Chocolate Creams.

Ser. No. 37,060. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. G. MCDONALD CANDY COMPANY, Salt Lake City, Utah. Filed Aug. 31, 1908.

Rainbow

Particular description of goods.—Chocolates.

Ser. No. 37,100. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) AMERICAN BRAKE SHOE AND FOUNDRY COMPANY, New York, N. Y. Filed Sept. 2, 1908.



Particular description of goods.—Manganese-Steel Castings.

Ser. No. 37,184. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) L. & E. STIRN, New York, N. Y. Filed Sept. 3, 1908.

Taffetas Directoire

Particular description of goods.—Taffeta Ribbons.

Ser. No. 37,202. (CLASS 39. CLOTHING.) SHAROOD SHOE CORPORATION, St. Paul, Minn. Filed Sept. 3, 1908.

SANITOS

Particular description of goods.—Leather Shoes.

Ser. No. 37,284. (CLASS 17. TOBACCO PRODUCTS.) THE DRAKNEL COMPANY, Wheeling, W. Va. Filed Sept. 9, 1908.



Particular description of goods.—Stogies and Cigars.

Ser. No. 37,313. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) WEBSTER C. ESTES, New York, N. Y. Filed Sept. 11, 1908.

OSMALTO

Particular description of goods.—Smalt.

Ser. No. 37,374. (CLASS 39. CLOTHING.) GEORGE A. Moss, San Francisco, Cal. Filed Sept. 14, 1908.

Particular description of goods.—Ladies', Men's, Boys', and Girls' Gloves Made Wholly or in Part of Leather, Kid, Knit, and Woven Material.

Ser. No. 37,380. (CLASS 39. CLOTHING.) THE STARNER COPELAND CO., Columbus, Ohio. Filed Sept. 14, 1908.



Particular description of goods.— Women's, Misses', Boys', and Children's Leather Boots and Shoes.

Ser. No. 37,382. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TROPON WORKS, New York, N. Y. Filed Sept. 14, 1908.

IRONTROPON

Particular description of goods.— Medicinal Preparations Containing Albumen.

Ser. No. 37,412. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) CROUSE-HINDS COMPANY, Syracuse, N. Y. Filed Sept. 16, 1908.



Particular description of goods.—Electric Switchboards and Switches, Electric-Arc Lamps, Sockets and Receptacles for Incandescent Electric Lamps, Panel-Boards, Rosettes, and Outlet-Boxes for Electric Wires, and Electrical Fittings Therefor.

Ser. No. 37,425. (CLASS 39. CLOTHING.) AMERICAN RUBBER COMPANY, Boston, Mass. Filed Sept. 17, 1908.



Particular description of goods.—Rubber Boots, Rubber Shoes, and Rubber Clothing.

Ser. No. 37,426. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) THE DALLMAN & COOPER SUPPLY COMPANY, Fond du Lac, Wis. Filed Sept. 17, 1908.



Particular description of goods.—Paints.

Ser. No. 37,472. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) PIONEER BRASS WORKS, Indianapolis, Ind. Filed Sept. 18, 1908.



Particular description of goods.—Cocks, Valves, and Hose-Couplings.

Ser. No. 37,502. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HENRY C. WATT, Philadelphia, Pa. Filed Sept. 19, 1908. Used ten years.



Particular description of goods.—Polish for Furniture, Musical Instruments, Floors, Office and Store Fixtures, Vehicles, Firearms, Sewing-Machines, Type-Writers, Golf-Clubs, and Like Articles.

Ser. No. 37,503. (CLASS 39. CLOTHING.) CIVILIAN SHOE CO., Boston, Mass. Filed Sept. 19, 1908.



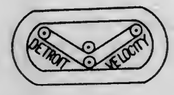
Particular description of goods.— Leather Boots and Shoes.

Ser. No. 37,536. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) LAUTER CO., Newark, N. J. Filed Sept. 22, 1908. Used ten years.

Lauter

Particular description of goods.— Pianos and Player-Pianos.

Ser. No. 37,570. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) DETROIT OAK BELTING CO., Detroit, Mich. Filed Sept. 24, 1908.



Particular description of goods.—Leather Belting.

TRADE-MARKS

REGISTERED OCTOBER 27, 1908.

71,006. FUR WEARING-APPAREL AND FUR ARTICLES. Louis D. Baer, New York, N. Y.
Filed June 3, 1908. Serial No. 35,108. PUBLISHED AUGUST 25, 1908.

71,007. FUR WEARING-APPAREL AND FUR ARTICLES. Louis D. Baer, New York, N. Y.
Filed June 3, 1908. Serial No. 35,110. PUBLISHED AUGUST 25, 1908.

71,008. JACKETS AND OUTER SKIRTS. William Bloom, New York, N. Y.
Filed June 6, 1908. Serial No. 35,184. PUBLISHED AUGUST 25, 1908.

71,009. EMBROCATIONS AND LOTIONS. C. W. Reginald Duncombe, Helmsley, London, England.
Filed April 11, 1908. Serial No. 34,027. PUBLISHED JULY 14, 1908.

71,010. POULTRY-MARKERS. Thomas Cadwallader, Salem, Ohio.
Filed July 23, 1908. Serial No. 36,281. PUBLISHED AUGUST 25, 1908.

71,011. SOAP. Consolidated Soap Company, New York, N. Y.
Filed June 20, 1908. Serial No. 35,643. PUBLISHED AUGUST 25, 1908.

71,012. SOIL-FUMIGANT. William Cooper & Nephews, Berkhamsted, England.
Filed June 11, 1908. Serial No. 35,267. PUBLISHED AUGUST 25, 1908.

71,013. PRESERVED FRUITS AND CANNED VEGETABLES. Curtice Brothers Company, Rochester, N. Y.
Filed June 6, 1908. Serial No. 35,198. PUBLISHED AUGUST 25, 1908.

71,014. INCUBATORS. Cyphers Incubator Company, Buffalo, N. Y.
Filed June 22, 1908. Serial No. 35,678. PUBLISHED AUGUST 25, 1908.

71,015. CERTAIN MEDICINES. The Dr. J. H. McLean Medicine Company, St. Louis, Mo.
Filed March 2, 1908. Serial No. 33,125. PUBLISHED JUNE 9, 1908.

71,016. SHOES. Walter Edelstein, Boston, Mass.
Filed June 29, 1908. Serial No. 35,834. PUBLISHED AUGUST 25, 1908.

71,017. REMEDY FOR CORNS AND BUNIONS. Thomas J. France, New York, N. Y.
Filed May 7, 1908. Serial No. 34,637. PUBLISHED AUGUST 25, 1908.

71,018. CANNED FRUITS AND CANNED VEGETABLES. G. S. Feeny Co., Wheeling, W. Va.
Filed March 11, 1908. Serial No. 33,303. PUBLISHED AUGUST 25, 1908.

71,019. CERTAIN TOILET PREPARATIONS. Harriet L. Galbraith, Washington, D. C.
Filed October 4, 1907. Serial No. 30,414. PUBLISHED AUGUST 25, 1908.

71,020. TASTELESS CASTOR-OIL. Gulf Chemical Co., Mobile, Ala.
Filed July 14, 1908. Serial No. 36,114. PUBLISHED AUGUST 25, 1908.

71,021. COLLARS AND CUFFS MADE OF TEXTILE MATERIAL. Hall, Hartwell & Co., Troy, N. Y.
Filed June 17, 1908. Serial No. 35,430. PUBLISHED AUGUST 25, 1908.

71,022. OUTER SHIRTS, COLLARS, AND CUFFS. Hall, Hartwell & Co., Troy, N. Y.
Filed June 17, 1908. Serial No. 35,431. PUBLISHED AUGUST 25, 1908.

71,023. WAISTS AND SHIRT-WAIST SUITS. Edward Isaacs & Co., New York, N. Y.
Filed June 6, 1908. Serial No. 35,196. PUBLISHED AUGUST 25, 1908.

71,024. WHEAT-FLOUR. John Hoffer Flouring Mill Company, Harrisburg, Pa.
Filed June 9, 1908. Serial No. 35,243. PUBLISHED AUGUST 25, 1908.

71,025. CANNED FRUITS AND VEGETABLES. Lauderdale Canning Company, Florence, Ala.
Filed June 17, 1908. Serial No. 35,435. PUBLISHED AUGUST 25, 1908.

71,026. SOAP AND SOAP POWDER. Lever Brothers Company, Portland, Me., and Cambridge, Mass.
Filed June 29, 1908. Serial No. 35,843. PUBLISHED AUGUST 25, 1908.

71,027. SALVE FOR VETERINARY USES. Adolf Liebmann, New York, N. Y., assignor to Maargunt Company, of New York, N. Y., a corporation of New York.
Filed June 9, 1908. Serial No. 35,231. PUBLISHED AUGUST 25, 1908.

71,028. INSECTICIDES. Adolph C. Meyer, Baltimore, Md.
Filed June 13, 1908. Serial No. 35,339. PUBLISHED AUGUST 25, 1908.

71,029. WHEAT-FLOUR. Missouri Valley Milling Company, Mandan, N. D.
Filed June 29, 1908. Serial No. 35,841. PUBLISHED AUGUST 25, 1908.

71,030. EYE-WATER. Robert Moulthrop, Eufaula, Ala.
Filed April 15, 1908. Serial No. 34,117. PUBLISHED JUNE 2, 1908.

71,031. EVAPORATED MILK. National Condensed Milk Co., Chicago, Ill.
Filed May 13, 1908. Serial No. 34,720. PUBLISHED AUGUST 25, 1908.

71,032. FLAVORING EXTRACTS. The Royal Remedy & Extract Co., Dayton, Ohio.
Filed February 27, 1908. Serial No. 33,023. PUBLISHED JUNE 2, 1908.

71,033. WASHING-BLUE. D. Schurr & Co., New York, N. Y.
Filed July 8, 1908. Serial No. 35,999. PUBLISHED AUGUST 25, 1908.

71,034. KID GLOVES. Steinberger & Kalisher, San Francisco, Cal.
Filed June 13, 1908. Serial No. 35,326. PUBLISHED AUGUST 25, 1908.

71,035. KID GLOVES. Steinberger & Kalisher, San Francisco, Cal.
Filed June 13, 1908. Serial No. 35,327. PUBLISHED AUGUST 25, 1908.

71,036. PLAY-SUITS OR ROMPERS. SWEET ORR & Co., New York, Newburgh, and Wappingers Falls, N. Y.; Joliet, Ill., and Brooklyn, N. Y.
Filed June 9, 1908. Serial No. 35,237. PUBLISHED AUGUST 25, 1908.

71,037. PLAY-SUITS OR ROMPERS. SWEET ORR & Co., New York, Newburgh, and Wappingers Falls, N. Y.; Joliet, Ill., and Brooklyn, N. Y.
Filed June 9, 1908. Serial No. 35,238. PUBLISHED AUGUST 25, 1908.

71,038. BAKING-POWDERS. GEORGE F. UPHAM, New York N. Y.
Filed April 23, 1908. Serial No. 34,295. PUBLISHED JUNE 9 1908.

71,039. TOOTH-CREAMS. WASHINGTON CHEMICAL & DENTIFRICE MFG. Co., Colville, Wash.
Filed April 29, 1908. Serial No. 34,469. PUBLISHED AUGUST 25, 1908.

71,040. BOOTS AND SHOES. WHITCOMB & PAINE Co., Holbrook and Boston, Mass.
Filed June 10, 1908. Serial No. 35,250. PUBLISHED AUGUST 25, 1908.

71,041. CARPETS AND RUGS. E. C. BEETEM & SON, Philadelphia, Pa.
Filed June 1, 1908. Serial No. 35,056. PUBLISHED AUGUST 25, 1908.

71,042. PUZZLES. WILLIAM A. BICKINGS, Washington, D. C.
Filed June 12, 1908. Serial No. 35,297. PUBLISHED AUGUST 25, 1908.

71,043. VACUUM CLEANING APPARATUS. BLACKALL AND BALDWIN COMPANY, New York, N. Y.
Filed June 15, 1908. Serial No. 35,370. PUBLISHED AUGUST 25, 1908.

71,044. HOSIERY. DAVIS HOSIERY MILLS, Chattanooga Tenn.
Filed April 20, 1908. Serial No. 34,227. PUBLISHED AUGUST 25, 1908.

71,045. WILTON RUGS. THOMAS DEVELON, Jr., Philadelphia, Pa.
Filed May 28, 1908. Serial No. 34,999. PUBLISHED AUGUST 25, 1908.

71,046. FOUNTAIN-PENS AND STYLOGRAPHIC PENS. EAGLE PENCIL COMPANY, New York, N. Y.
Filed July 1, 1908. Serial No. 35,885. PUBLISHED AUGUST 25, 1908.

71,047. LEAD-PENCILS. EAGLE PENCIL COMPANY, New York, N. Y.
Filed July 1, 1908. Serial No. 35,886. PUBLISHED AUGUST 25, 1908.

71,048. LEAD-PENCILS. EAGLE PENCIL COMPANY, New York, N. Y.
Filed July 17, 1908. Serial No. 36,197. PUBLISHED AUGUST 25, 1908.

71,049. ANVILS. HARRIET FISHER, Trenton, N. J.
Filed August 4, 1905. Serial No. 11,275. PUBLISHED AUGUST 25, 1908.

71,050. CERTAIN RUBBER TOYS. HANNOVERSCHE GUMMI-KAMM-COMPAGNIE ACTIEN-GESELLSCHAFT, Hanover-Limmer, Germany.
Filed August 3, 1907. Serial No. 29,190. PUBLISHED AUGUST 25, 1908.

71,051. COTTON SHEETINGS. INDIANA COTTON MILLS, Cannelton, Ind.
Filed March 30, 1908. Serial No. 33,740. PUBLISHED AUGUST 25, 1908.

71,052. COTTON DUCKS, DRILLINGS, AND SHEETINGS. J. SPENCER TURNER Co., New York, N. Y.
Filed June 6, 1908. Serial No. 35,204. PUBLISHED AUGUST 25, 1908.

71,053. PAPER, ENVELOPS, AND BLANK BOOKS. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed June 17, 1908. Serial No. 35,456. PUBLISHED AUGUST 25, 1908.

71,054. PAPER, ENVELOPS, AND BLANK BOOKS. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed June 17, 1908. Serial No. 35,458. PUBLISHED AUGUST 25, 1908.

71,055. PAPER, ENVELOPS, AND BLANK BOOKS. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed June 17, 1908. Serial No. 35,465. PUBLISHED AUGUST 25, 1908.

71,056. PAPER, ENVELOPS, AND BLANK BOOKS. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed June 17, 1908. Serial No. 35,466. PUBLISHED AUGUST 25, 1908.

71,057. PAPER, ENVELOPS, AND BLANK BOOKS. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed June 17, 1908. Serial No. 35,468. PUBLISHED AUGUST 25, 1908.

71,058. PAPER, ENVELOPS, AND BLANK BOOKS. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed June 17, 1908. Serial No. 35,469. PUBLISHED AUGUST 25, 1908.

71,059. PAPER, ENVELOPS, AND BLANK BOOKS. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed June 17, 1908. Serial No. 35,470. PUBLISHED AUGUST 25, 1908.

71,060. PAPER, ENVELOPS, AND BLANK BOOKS. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed June 17, 1908. Serial No. 35,471. PUBLISHED AUGUST 25, 1908.

71,061. PAPER, ENVELOPS, AND BLANK BOOKS. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed June 17, 1908. Serial No. 35,472. PUBLISHED AUGUST 25, 1908.

71,062. PAPER, ENVELOPS, AND BLANK BOOKS. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed June 17, 1908. Serial No. 35,473. PUBLISHED AUGUST 25, 1908.

71,063. PAPER, ENVELOPS, AND BLANK BOOKS. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed June 17, 1908. Serial No. 35,476. PUBLISHED AUGUST 25, 1908.

71,064. PAPER, ENVELOPS, AND BLANK BOOKS. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed June 17, 1908. Serial No. 35,584. PUBLISHED AUGUST 25, 1908.

71,065. PAPER, ENVELOPS, AND BLANK BOOKS. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed June 17, 1908. Serial No. 35,586. PUBLISHED AUGUST 25, 1908.

71,066. PAPER, ENVELOPS, AND BLANK BOOKS. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed June 17, 1908. Serial No. 35,588. PUBLISHED AUGUST 25, 1908.

71,067. CANDY. BENJAMIN F. JACKSON, Jersey City, N. J.
Filed June 6, 1908. Serial No. 35,199. PUBLISHED AUGUST 25, 1908.

71,068. AXES. LOUISVILLE AXE & TOOL COMPANY, Louisville and Highland Park, Ky.
Filed May 19, 1908. Serial No. 34,826. PUBLISHED JULY 14, 1908.

71,069. LUBRICATORS AND EJECTORS. PENBERTHY INJECTOR COMPANY, Detroit, Mich.
Filed May 22, 1908. Serial No. 34,889. PUBLISHED AUGUST 25, 1908.

71,070. STEAM-BOILER INJECTORS. PENBERTHY INJECTOR COMPANY, Detroit, Mich.
Filed June 12, 1908. Serial No. 35,304. PUBLISHED AUGUST 25, 1908.

71,071. NON-INTOXICATING BEER. SIOUX CITY BREWING COMPANY, Sioux City, Iowa.
Filed June 1, 1908. Serial No. 35,063. PUBLISHED AUGUST 25, 1908.

71,072. RUBBER BELTING, RUBBER HOSE, AND RUBBER PACKING. STEPHEN BALLARD RUBBER COMPANY, New York, N. Y.
Filed December 2, 1907. Serial No. 31,502. PUBLISHED AUGUST 25, 1908.

71,073. CERTAIN CUTLERY. THE STEPHEN RICHARD Co., Southbridge, Mass.
Filed June 17, 1908. Serial No. 35,426. PUBLISHED AUGUST 25, 1908.

71,074. [WITHDRAWN.]

71,075. PLOWS AND PARTS THEREOF. SYRACUSE CHILLED PLOW Co., Syracuse, N. Y.
Filed July 23, 1908. Serial No. 36,289. PUBLISHED AUGUST 25, 1908.

71,076. PLOWS AND PARTS THEREOF. SYRACUSE CHILLED PLOW Co., Syracuse, N. Y.
Filed July 23, 1908. Serial No. 36,290. PUBLISHED AUGUST 25, 1908.

71,077. SUSPENDERS, NECKTIES, AND NECKSCARFS. TOOTLE CAMPBELL DRY GOODS Co., St. Joseph, Mo.
Filed June 13, 1908. Serial No. 35,343. PUBLISHED AUGUST 25, 1908.

71,078. COTTON PIECE GOODS. TOOTLE CAMPBELL DRY GOODS Co., St. Joseph, Mo.
Filed June 13, 1908. Serial No. 35,344. PUBLISHED AUGUST 25, 1908.

71,079. PAPER-FASTENERS. TOWER M'F'G & NOV. Co. New York, N. Y.
Filed June 29, 1908. Serial No. 35,838. PUBLISHED AUGUST 25, 1908.

71,080. CERTAIN FOODS. UNION CONDENSED MILK COMPANY, New York, N. Y.
Filed March 7, 1908. Serial No. 33,245. PUBLISHED APRIL 28, 1908.

71,081. CERTAIN FOODS. UNION CONDENSED MILK COMPANY, New York, N. Y.
Filed March 7, 1908. Serial No. 33,246. PUBLISHED APRIL 28, 1908.

71,082. OPAQUE ENAMEL PAINT. UNITED STATES GUTTA PERCHA PAINT COMPANY, Saco, Me., and Providence, R. I.
Filed May 14, 1908. Serial No. 34,730. PUBLISHED AUGUST 25, 1908.

71,083. CERTAIN PIECE GOODS. BARNABY MANUFACTURING Co., Fall River, Mass.
Filed March 3, 1908. Serial No. 33,138. PUBLISHED AUGUST 25, 1908.

71,084. HOG-TONGS AND HOG-RINGERS. ALEXANDER C. DECKER, Keokuk, Iowa.
Filed July 16, 1908. Serial No. 36,165. PUBLISHED AUGUST 25, 1908.

71,085. ANIMAL-RINGS. ALEXANDER C. DECKER, Keokuk, Iowa.
Filed July 16, 1908. Serial No. 36,166. PUBLISHED AUGUST 25, 1908.

71,086. LAMP-CHIMNEYS, LANTERN-GLOBES, AND GLASS REFLECTORS. GILL BROTHERS COMPANY, Steubenville, Ohio.
Filed May 23, 1908. Serial No. 34,910. PUBLISHED AUGUST 25, 1908.

71,087. DYNAMITE. NATIONAL POWDER Co., New York, N. Y.
Filed October 8, 1907. Serial No. 30,489. PUBLISHED AUGUST 25, 1908.

71,088. RIDING-SADDLES AND HARNESS. THREEFOOT BROS. & Co., Meridian, Miss.
Filed January 16, 1908. Serial No. 32,250. PUBLISHED AUGUST 25, 1908.

71,089. SILKS AND SATINS. WILLIAM SKINNER MANUFACTURING Co., Holyoke and Boston, Mass.; New York, N. Y.; Chicago, Ill., and Philadelphia, Pa.
Filed June 15, 1908. Serial No. 35,402. PUBLISHED AUGUST 25, 1908.

LABELS

REGISTERED OCTOBER 27, 1908.

14,425.—*Title:* "DON GABRAL." (For Cigars.) GEORGE DÖTTLING, New York, N. Y. Filed September 24, 1908.

14,426.—*Title:* "GUARDAMOS." (For Cigars.) GEORGE DÖTTLING, New York, N. Y. Filed September 25, 1908.

14,427.—*Title:* "ACCEPTO." (For Cigars.) GEORGE DÖTTLING, New York, N. Y. Filed September 29, 1908.

14,428.—*Title:* "FAVORITAS." (For Cigars.) GEORGE DÖTTLING, New York, N. Y. Filed September 29, 1908.

14,429.—*Title:* "FIGARO." (For Cigars.) GEORGE DÖTTLING, New York, N. Y. Filed September 29, 1908.

14,430.—*Title:* "PERFECTOS." (For Cigars.) GEORGE DÖTTLING, New York, N. Y. Filed September 29, 1908.

14,431.—*Title:* "EXTRAS." (For Cigars.) GEORGE DÖTTLING, New York, N. Y. Filed September 29, 1908.

14,432.—*Title:* "PANETELAS." (For Cigars.) GEORGE DÖTTLING, New York, N. Y. Filed September 29, 1908.

14,433.—*Title:* "PERFERIDOS." (For Cigars.) GEORGE DÖTTLING, New York, N. Y. Filed September 29, 1908.

14,434.—*Title:* "UNIVERSALES." (For Cigars.) GEORGE DÖTTLING, New York, N. Y. Filed September 29, 1908.

14,435.—*Title:* "EL ARCAZO." (For Cigars.) A. C. HENSCHEL & Co., Chicago, Ill. Filed September 25, 1908.

14,436.—*Title:* "SORDELLO." (For Cigars.) GEORGE SCHLEGEL, New York, N. Y. Filed September 28, 1908.

14,437.—*Title:* "THE '400.'" (For Roasted Blended Coffee.) GITHENS REXSAMER & Co., Philadelphia, Pa. Filed September 8, 1908.

14,438.—*Title:* "CRISPO." (For Ice-Wafer.) FRANK MARCHIONY, Brooklyn, N. Y. Filed June 27, 1908.

14,439.—*Title:* "LA CREME 'DISINFECTINE' TOILET SOAP." (For Toilet Soap.) THE HYGIENIC PRODUCTS Co., Canton, Ohio. Filed September 4, 1908.

14,440.—*Title:* "THE GREKE BANDEAU CLASSIC STYLE." (For Hair-Retaining Bands, for Toilet Purposes, and Dressing the Hair.) FITCHBURG HORN GOODS Co., Fitchburg Mass. Filed September 29, 1908.

14,441.—*Title:* "DR. I. H. LEWKOWICZ'S ANTISEPTIC PLATE BRUSH." (For Plate-Brush for Artificial Teeth.) I. H. LEWKOWICZ, Sharon, Pa. Filed August 26, 1908.

14,442.—*Title:* "NEW BONE RAWHIDE WHIP." (For Whips.) L. H. BEALS & SON Co., Westfield, Mass. Filed September 11, 1908.

14,443.—*Title:* "LATEST QUEEN JAVA WHIP." (For Whips.) L. H. BEALS & SON Co., Westfield, Mass. Filed September 11, 1908.

14,444.—*Title:* "ALPHIA BRAND." (For Sweater-Coats.) MARTIN A. METZ, Philadelphia, Pa. Filed September 2, 1908.

PRINTS

REGISTERED OCTOBER 27, 1908.

2,366.—*Title:* "ALL WELL." (For Fine Wines and Liquors.) JAMES OLWELL & COMPANY, New York, N. Y. Filed September 26, 1908.

2,367.—*Title:* "NOW LET THEM COME." (For Flour.) WASHBURN CROSBY COMPANY, Minneapolis, Minn. Filed September 23, 1908.

2,368.—*Title:* "IT'S ALL IN THE SHREDS." (For Shredded Cereal Foods.) THE NATURAL FOOD COMPANY, Niagara Falls, N. Y. Filed September 26, 1907.

2,369.—*Title:* "WATCH GLASS ORDER SHEET." For Watch-Crystals.) A. C. BECKEN COMPANY, Chicago, Ill. Filed September 28, 1908.

2,370.—*Title:* "THE CHILD'S PRAYER FOR PERFECT FEET." (For Shoes.) W. D. WRIGHT, Boston, Mass. Filed September 18, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE FRANKMAN.

APPLICATION FOR PATENT.

Decided October 14, 1908.

DRAWINGS—MUTILATED DRAWING NOT ACCEPTED.

Mutilated drawings will not be accepted by the Office as a part of the permanent records. This rule is founded upon the necessity of preserving the records of the Office for an indefinite period and must be enforced.

ON PETITION.

MACHINE FOR UNEARTHING BEETS.

Messrs. van Oldenneel & Schoenlank for the applicant.

MOORE, *Commissioner:*

This is a petition from an action of the Primary Examiner holding that drawings forming a part of petitioner's application were mutilated and requiring new drawings to be substituted therefor. Petitioner asks that the Primary Examiner be directed to accept the drawings and proceed with the examination and consideration of the application.

Petitioner contends that as blue-prints which have been made from these drawings are satisfactory in every way and exhibit no indication that the original are mutilated the requirement was improperly made and should be withdrawn. The statement that a satisfactory reproduction may be made from these drawings appears to be true, but this is not the only thing to be taken into consideration. These drawings must not only be in condition at the present time to admit of reproduction, but they must remain in such condition for an indefinite period, as they constitute the originals from which all reproductions are to be made. An examination of these drawings discloses the fact that Sheets 1, 2, and 3, containing Figures 1, 2, 4, and 5, are broken at one or more points, and eventually, by reason of handling thereof, they will undoubtedly actually separate on the broken lines. The well-settled practice of the Office refusing to accept mutilated drawings is founded upon the necessity of preserving the records of the Office for an indefinite period and must be enforced.

The request that the Examiner be directed to proceed with the examination and consideration of the application is denied, as he has not refused to consider the application either as to merits or as to form. On the other hand, the case has received action by the Examiner and is now awaiting action on the part of the petitioner in response thereto.

The decision of the Primary Examiner is affirmed.

EX PARTE TENNESSEE BREWING COMPANY.

Decided October 22, 1908.

LABEL REFUSED REGISTRATION—LEGEND "GUARANTEED UNDER THE FOOD AND DRUGS ACT JUNE 30, 1906," UNQUALIFIED.

Held that a label should be refused registration where the legend "Guaranteed under the Food and Drugs Act, June 30, 1906," is so used as to be likely to indicate that the merchandise upon which the label is used is guaranteed by the Government.

ON APPEAL.

LABEL FOR BEER.

Messrs. Smith & Frazier for the applicant.

MOORE, *Commissioner:*

This is an appeal from the action of the Examiner refusing to register a label entitled "Brewette," which is to be used on non-alcoholic beverages. This label comprises the trade-mark of the Tennessee Brewing Company, beneath which appears the word "Brewette," surmounted by two sprays of barley. Beneath the word "Brewette" is a paraph bearing the legend "Contains less than ½ of 1% of alcohol." Under this legend is the statement:

This is a non-intoxicating beverage. Guaranteed under the Food and Drugs Act, June 30, '06, Serial No. 19733. Tennessee Brewing Co. Memphis, Tenn. Label registered.

Registration of this label was refused upon the ground that the inclusion of the guaranty clause in the manner shown in the label caused a likelihood of deception, in that the purchaser might be led to believe that the merchandise upon which the label was used was guaranteed by the Government. It was also suggested that the statement on the label, "Contains less than ½ of 1% of alcohol" immediately preceding the words "Guaranteed under the Food and Drugs Act, June 30, '06," and over the words "Label registered" would lead to the belief that the content of alcohol was also guaranteed by the Government of the United States. Attention was also called to the fact that the words "Label registered" appearing on the label were unwarranted, since this is not the form of notice required by the Copyright Act and Rule 46 of the Print and Label Rules.

It is contended on behalf of the appellant that the guaranty clause is in strict accordance with that pre-

scribed by the Food and Drugs Act of June 30, 1906, and that there is no likelihood that any purchaser using ordinary care would be misled by the appearance of this clause on the label in the manner shown. It is urged that the copyright covers merely the artistic matter, and it is contended that the Examiner's argument that the typographic matter upon the label is covered by copyright is manifestly erroneous, for such matter is the product not of the designer of the label, but of the Bureau of Chemistry, excepting the statement as to alcoholic contents, and that that statement is merely a statement of fact in common words, which any one has the right to use to state the same fact.

Registration of labels in the Patent Office is provided for by sections 3, 4, and 5 of the act of Congress relating to patents, trade-marks, and copyrights, approved June 18, 1874, (18 Stats. at Large, p. 78,) in which it is provided that the Commissioner of Patents shall be charged with the supervision and control of the entry and registry of labels and prints in conformity with the regulations provided by law as to the copyrights and prints. Under Rule 31 of the Print and Label Rules, promulgated under the authority conferred by section 4, the word "Label" is defined as—

an artistic and intellectual production impressed or stamped directly upon the article of manufacture, or upon a slip or piece of paper or other material, to be attached in any manner to manufactured articles or to bottles, boxes, and packages containing them, to indicate the article of manufacture.

Rule 32 provides that—

No print or label can be registered unless it properly belongs to an article of manufacture, and is descriptive thereof, and is as above defined, and unless the application is filed before the publication thereof.

Briefly summarized it is necessary that as a prerequisite to registration a label must be artistic and must describe the merchandise upon which it is placed. No further requirement is prescribed by statute. In the present instance the necessary features of the label comprise the artistic production, which includes the word "Brewette" and the statement that it is applied to a non-intoxicating beverage. In addition to this matter, however, there appears on the label, immediately under the phrase "This is a non-alcoholic beverage," the legend "Guaranteed under the Food and Drugs Act, June 30, '06, Serial No. 19733," and beneath the latter the name and address of the applicant and the words "Label registered."

This arrangement of subject-matter is in my opinion likely to cause a purchaser to believe that inasmuch as the label is registered by the Government the character or quality of the goods described as "Guaranteed under the Food and Drugs Act, June 30, '06, Serial No. 19733," is approved by the Government. It is insisted, however, that the guaranty clause above quoted is in the precise form prescribed by the "Rules and regulations for the enforcement of the Food and Drugs Act" and that the use of these words in the present form cannot be objected to. This contention is believed to be untenable. It is easily possible for the guarantor to so place the prescribed legend upon its labels that there can be no likelihood that its use will mislead the public in respect to the actual guaranty.

In my decision in *ex parte Alart and McGuire* (131 O. G., 2145) it is said:

At the time the Food and Drugs Act first became effective various manufacturers, either intentionally or indavertently, so included the guaranty clause with other printed matter upon their labels as to make it appear that the Government had guaranteed the purity of the articles upon which these labels were affixed. This having been called to the attention of the Secretary of Agriculture, the following order was issued by him:

"No other word should go upon this legend or accompany it in any way. Particular attention is called to the fact that nothing should be placed upon the label, or in any printed matter accompanying it, indicating that the guaranty is made by the Department of Agriculture. The appearance of the serial number with the phrase above mentioned upon a label does not exempt it from inspection nor its guarantor from prosecution in case the article in question be found in any way to violate the Food and Drugs Act of June 30, 1906."

It is believed that if the trade-mark now presented for registration should be registered in its present form and if the applicant should place in connection therewith the words "Registered in the U. S. Patent Office," as he is required to do by section 28 of the Trade-Mark Act of 1905, and as the specimen labels filed with his brief show he has done, the public would be led to believe that the Government had, by registering this trade-mark, guaranteed the purity of the article upon which it was used.

For the same reasons it is believed that a label should not be registered in which the guaranty clause is so located as to be susceptible of the interpretation that the Government is the guarantor of the merchandise contained in the receptacle to which the label is applied. It is believed that where the words "Guaranteed under the Food and Drugs Act" are placed upon a registered label they should be so qualified by the addition of the applicant's name that the true guarantor will be unmistakably identified—as, for example, "Guaranteed under the Food and Drugs Act, June 30, '06, Serial No. 19733, by the Tennessee Brewing Company." In this form the registration of the label would not be subject to the objections above noted.

It is urged that the words "Label registered" are not objectionable for the reason that under the law the label is really copyrighted, not registered, and a strict compliance with the law requires notice to be placed upon the label so copyrighted, that as the applicant has complied with the requirement of the law by presenting its application for registration it not only has the right to, but should, put such notice on its copies filed with the Patent Office.

The Copyright Act of June 30, 1874, prescribes distinctly that the notice of copyright should be made in the following terms: "Entered according to act of Congress in the year —— by —— in the office of the Librarian of Congress at Washington" or, alternatively: "Copyrighted 19—— by ——," naming the applicant for copyright.

It was held by the Supreme Court of the United States in the case of *Higgins* v. *Keuffel* (140 U. S., 428) that in order to maintain an action for infringement of the ownership of a label registered under the provisions of this act it was necessary that public notice of the registration should be given in the precise terms prescribed by the statute. It is further stated in that decision that—

The copyright is secured when the registration is completed and a certificate of registration is given by the Commissioner.

The use of the term "Label registered" therefore upon a label which has not been registered is not only unauthorized in the sense contended for by the appellant, but its appearance upon the label is insufficient to give the statutory notice required after the registration of the label, and it is believed that the sole function which can be ascribed to this statement is such as it might have in leading the public to believe that the registration of the label rendered the guaranty by the Government effective.

Holding the above views I directed the Examiner of Trade-Marks to refuse registration of all labels in which the guaranty clause was not so qualified as to identify the guarantor in the manner stated.

The decision of the Examiner of Trade-Marks is affirmed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

MEAD *v.* DAVIS AND VARNEY.

Decided June 9, 1908.

1. INTERFERENCE—PRIORITY—DILIGENCE.

Where the inventor of an apparatus for supporting insulating overhead-trolley conductors which are utilized for supplying high-voltage energy to high-speed alternating-current electric railways is not in a position to make an actual test of his invention, and the company which employs him is likewise not in a position to make such a test, he cannot be held lacking in diligence in reducing his invention to practice between March, 1904, and December 2, 1904, where he approached a railway company in March and endeavored to have his invention tried out, ordered an insulator which was one of the essential features of the apparatus and received the same in October, procured a visit from the officers of another electric railway company in September, and early in December attached a crude apparatus to the fence in the factory-yard to see how it would appear and operate.

2. SAME—SAME—DELAY IN FILING APPLICATION PERMITTED.

The inventor is entitled to a reasonable time to perfect his invention before applying for a patent, and what is a reasonable time is dependent upon the circumstances of the particular case.

Mr. F. T. Brown and *Mr. F. A. Hopkins* for the appellant.

Mr. W. G. Carr for the appellee.

SHEPARD, *C. J.*:

This is an appeal from a decision of the Commissioner of Patents in an interference proceeding having the following issue in seventeen counts:

1. In an overhead structure for electric railways, the combination with a pole and an arm projecting laterally therefrom, an inclined brace-rod between said arm and said pole, insulators adjustably mounted upon the laterally-projecting arm, a messenger-cable suspended from one of said insulators, a trolley-conductor suspended from said messenger-cable and a steadying-rod extending between the trolley-conductor and the other insulator.

2. In an overhead structure for electric railways, a trolley-conductor, a messenger wire or cable from which the trolley-conductor is suspended, a supporting structure embodying adjustable insulators, means for suspending the messenger wire or cable from one of said insulators, and a steadying-rod between the trolley-conductor and the other insulator.

3. The combination with an approximately horizontal rod or bar, of a circumferentially grooved, tubular insulator that is so mounted upon said arm or bar as to be longitudinally adjustable, and means for detachably clamping the insulator in any position to which it may be adjusted.

4. The combination with a circumferentially grooved insulator having a hole extending longitudinally through it, of a supporting member of less diameter than said hole upon which the insulator is mounted and means for clamping the insulator in any position to which it may be longitudinally adjusted.

5. A cylindrical porcelain insulator for an electric conductor having one or more circumferential grooves and provided with means for so clamping it to an internal support that it may be longitudinally adjusted thereon.

6. A tubular insulator having circumferential ridges and means for so clamping it to a supporting arm or bar that it may be longitudinally adjustable.

7. In a suspension device for trolley or other wires or conductors, an arm or bracket, an insulator sleeved thereon, a trolley or other wire or conductor supported by said insulator, and an insulated brace-rod connected to said wire or conductor.

8. In a suspension device for trolley or other wires or conductors, an arm or bracket, an insulator sleeved upon said arm or bracket, a trolley or other wire or conductor supported by said insulator, an auxiliary insulator, and a brace-rod connected to said auxiliary insulator and to said wire or conductor.

9. In a suspension device for trolley or other wires or conductors, an arm or bracket, an insulator sleeved thereon, an auxiliary insulator also sleeved upon said arm or bracket, a trolley or other wire or conductor supported by said first-mentioned insulator, and a brace-rod connected respectively to said auxiliary insulator and to the trolley or other wire or conductor.

10. In a suspension device for trolley or other wires or conductors, an arm or bracket, an insulator sleeved thereon, a messenger-wire supported by said insulator, a trolley or other wire or conductor suspended from said messenger-wire, an auxiliary insulator, and a brace-rod respectively connected to said auxiliary insulator and said trolley or other wire or conductor.

11. In a suspension device for trolley or other wires or conductors, an arm or bracket, means for supporting the same, an insulator carried by said arm or bracket, a messenger-wire supported by said insulator, a trolley or other wire or conductor suspended from said messenger-wire, an auxiliary insulator also mounted on said arm or bracket, and a brace-rod respectively connected to said auxiliary insulator and to said trolley or other wire or conductor.

12. The combination with a supporting-post, an arm or bracket supported at one end by said post, a brace connecting said arm or bracket and post, an insulator sleeved upon the free end of said arm or bracket, a trolley or other wire or conductor supported from said insulator, and means for bracing said trolley or other wire.

13. The combination with a supporting-post, an arm or bracket supported at one end upon said post, a brace connecting said arm or bracket and said post, an insulator sleeved upon said arm or bracket, a messenger-wire supported by said insulator, a trolley or other wire or conductor suspended from said messenger-wire, and means for bracing said trolley or other wire or conductor.

14. In a suspension device for trolley-wires or other conductors, an arm or bracket and means for supporting the same, in combination with a sleeve composed of insulating material into which said bracket passes, means passing around said sleeve for supporting a trolley-wire or conductor, and adjustable means on the bracket for holding the sleeve against longitudinal movement thereon.

15. In a suspension device for trolley-wires or other conductors, an arm or bracket, means for supporting the same, in combination with a sleeve composed of insulating material, and through which said bracket passes, the outer or free end of said bracket being of uniform diameter, whereby the sleeve may be adjusted longitudinally on said arm, the sleeve having means for supporting a trolley-wire and holding the wire against movement longitudinally of the sleeve, and adjustable means for holding the sleeve against movement longitudinally on said arm.

16. In a suspension device for trolley-wires or other conductors, an arm or bracket, and means for supporting the same in substantially a horizontal position, in combination with a sleeve composed of insulating material, through which said arm passes, the outer or free end of said arm being of smaller diameter than the passage through the sleeve, whereby the sleeve may be slipped over the outer end of the arm after the arm is fixed in place, or may be removed therefrom, and means for holding the sleeve against longitudinal movement on the arm.

17. In a suspension device for trolley-wires the combination with a supporting-post, of a bracket-support at one end of said post, a brace-rod supporting said bracket on the post, an insulator sleeved upon the free end of said bracket, a messenger-wire supported by said sleeve and a trolley-wire or other conductor suspended from said messenger-wire.

The invention of the issue is designed for supporting insulating overhead-trolley conductors which are utilized for supplying high-voltage energy to high-speed alternating-current electric railways, and embodies a specific arrangement of an adjustable insulator, and supports by means of which the trolley-wire is held in a position over the middle of and substantially parallel with the track. As stated by the Examiners-in-Chief, the counts may be arranged roughly in two groups or divisions, one embracing counts 3, 4, 5, 6, 14, 15, 16, and 17, and the other the remaining counts. The first-named group does not require means for bracing the trolley-conductor, defined in some of the counts on the steadying or brace rod, while the second does.

It is admitted that the real parties in interest, as the owners of the invention, claimed respectively, are the Ohio Brass Company and the Westinghouse Electric and Manufacturing Company. Davis and Varney are engineers in the employ of the Westinghouse Company, and their application was filed October 19, 1904. Mead is the engineer of the Ohio Brass Company, and filed December 2, 1904. In their preliminary statement, Davis and Varney allege the conception of count 1 and disclosure "between the 8th day of April and the 5th day of August, 1904," and reduction to practice "between the 5th day of August and the 1st day of October, 1904." They allege that counts 5 and 6 were conceived and disclosed "between the 1st day of March and the 6th day of April, 1904," and reduced to practice "between the 6th and 30th days of April, 1904." The conception and disclosure of counts 2, 3, 4, and 7

to 17 inclusive are alleged as "between the 1st day of March and the 20th of June, 1904;" reduction to practice "between the 20th day of June and the 15th day of July, 1904."

Mead's preliminary statement alleges the conception of the invention embraced in counts 1, 3, 4, 5, 6, 14, 15, 16, and 17 "in the latter part of February, 1904," and of counts 2, 7, 8, 9, 10, 11, 12, and 13 "in March, 1904." He alleged disclosure of the first group with sketches "on or before the second day of March, 1904," and the making of a drawing of the same "on the 3d day of March, 1904." He alleged the disclosure of the second group "in the month of March, 1904." He further alleged the disclosure of the entire issue "to Harry P. Davis and others connected with the Westinghouse Company in the spring or early summer of 1904." He further alleged the completion of a full-sized operating device capable of being used for the purposes intended, in December, 1904, and the subsequent manufacture and sale of several hundred of the devices embodying the counts of the issue.

The Examiner of Interferences found that Mead had the drawing made on March 3, 1904, which illustrates a horizontal arm attached to a pole, an adjustable insulator thereon, and a brace for the arm; and that he had a conception of all the counts by the last of March, 1904. He awarded conception to Davis and Varney as to all counts as early, at least, as April 21, 1904. He then held that Mead had failed to show disclosure of the invention to Davis and Varney in April, 1904, as alleged; that he had not reduced to practice prior to his filing date of December 2, 1904; and that he was not diligent in the prosecution of his invention at the time when Davis and Varney entered the field. He, therefore, awarded priority to the latter.

The Examiners-in-Chief held that Mead was the first to conceive as to counts 3, 4, 5, 6, 14, 15, 16, and 17. That Davis and Varney conceived as to all counts, save No. 1, as early as April 21, 1904, as to count 1, as early as July 20, 1904. They found that the evidence was insufficient to show that Davis and Varney obtained their information from Mead, and also that Mead was lacking in diligence. They, therefore, affirmed the decision of the Examiner of Interferences.

The Commissioner after reviewing the previous decisions said:

> The record before us leaves no doubt that Mead was the first to conceive the invention but the last to reduce the same to practice, and this seems not to be questioned.

He found, however, that Mead was lacking in diligence. He found it unnecessary to determine the exact date of conception by Davis and Varney which he said occurred some time before July 11, 1904. He also held the evidence insufficient to show communication by Mead to Davis and Varney, and affirmed the decision in their favor.

Without reviewing the evidence on the point, we concur in the finding that Mead was the first to conceive the invention of the issue.

Arthur L. Wilkinson, the secretary of the Ohio Brass Company, testified to calling upon L. A. Osborne, fourth vice-president of the Westinghouse Electric and Manufacturing Company, on April 5, 1904; that they conversed in regard to the new feature of high voltage then beginning to attract attention; and that he told him of Mead's invention. A suggestion was made that there should be a conference between their respective engineers. Osborne denied that the invention was communicated, but said that the conversation had relation only to the sale by the Ohio Brass Company of certain of its overhead constructions as shown in its catalogue, etc. On April 15, 1904, Osborne wrote to C. K. King, vice-president of the Ohio Brass Company, saying:

> Referring to our conversation to-day on the matter of overhead trolley material, and to your suggestion that your engineers meet with our engineer to discuss the subject; I have to advise that our Mr. Davis will be glad to see your Mr. Mead here one week from to-day, that is, the 22d inst.

This meeting was held as arranged. Mead says that he then showed his drawing of March 3, 1904, to Davis, and also marked on it showing the additional features, the drawing for which had not then been made, though in the hands of the draftsman. Davis denied that a drawing was shown him or any explanation made. He says that the conversation related to low-voltage currents, and to Mead's desire to influence him to recommend that the two companies join in the development of material for high-voltage currents. That Mead stated he would like to submit some designs for high-tension material, to which witness agreed. Mead left, "stating that as soon as these plans were developed he would advise me and return with them." That nothing was again heard from Mead until June or July when he showed some sketches, very elementary in character, showing a sleeve type of insulator. This—

> resembled so closely those which we had developed I felt confident that some information had been given to him of our designs. As we had already completed designs, manufactured models, and had a complete line of details developed and in process of manufacture, and had had a sample of the construction erected for some months, I felt that it was waste of time on both his part and my own to carry the matter along farther. I, therefore, did not go into details with him, but only briefly discussed his plans and brought the interview to a close.

There was no third person present at any of these interviews, and the burden is upon Mead to show what occurred.

In this conflict of statements there are circumstances which tend to corroborate the evidence of Wilkinson and Mead. The invention was known to Wilkinson when he visited Osborne, because he had seen and had explained to him the completed drawing of March 3, 1904. If the sole object of his interview was an arrangement for supplying his well-known materials, no reason appears why the matter should have been referred to the engineer for investigation and consideration, instead of to the purchasing agent. Nor does it appear why Osborne and Wilkinson were not competent to settle such a matter without the intervention of the engineers. On the other hand, it was quite natural to refer to the engineers any matter of contemplated construction and introduction.

Mead was in full possession of the invention, and it was one that his company was not prepared to put in actual practice. The best that it could do was to have the matter taken up by some one operating or controlling a railway, and then manufacture and furnish the several items of construction. Mead had, in March, explained his plans to parties engaged in constructing a railway, in which the Westinghouse Company was in some way concerned. There was every reason, therefore, why he should take his drawing with him

for exhibition to Davis, and none why he should have concealed it. And if the purpose was to secure a contract for making new material, there is no reason why Davis should have concealed his invention, especially on July 11, 1904, when, as he said, the patterns were being made. We do not find it necessary, however, in view of our conclusion as to the diligence of Mead, to determine this issue.

We cannot agree with the Commissioner that Mead, having been the first to conceive the invention, has lost his right to a patent for it by reason of negligence. The question of what is due diligence is a question of mixed law and fact. There is no hard and fast rule by which to determine its existence in a particular case. It must be determined by all the facts and surrounding circumstances in the particular case. (*O'Connell* v. *Schmidt*, 27 App. D. C., 77, 82.) The Ohio Brass Company was in no condition to make a practical test of the invention under conditions of actual use. It had no electrical railway plant and no interest in or control over one. The most it could do was to obtain its trial and adoption by some one constructing or controlling an electric railway using, or proposing to use, the high-voltage alternating current. In March, after his drawing had been made, Mead applied to the parties constructing the Indianapolis and Cincinnati Electric Railway to have them try his invention. They had one of their own in contemplation which they preferred to try, and, moreover, told Mead that the material used by them must first be approved by the Westinghouse Company. Passing by the interview with the Westinghouse people, it appears that an attempt was made to find some others engaged in the railway business who would use the invention; but without success. The Ohio Brass Company was not engaged in manufacture of porcelain, and in July concluded to have the adjustable insulators made. They gave an order to the Locke Porcelain Co. to make some, which were delivered in October, 1904. In September, 1904, they procured a visit from the officers of an electric road at Atlanta and tried to get them to adopt the invention. As they did not intend to use more than 1,000 or 2,000 volts, they thought it was unnecessary as it was more expensive than the old form for low voltage. Early in December they attached arms to a fence in the factory and put on their adjustable insulator with a view to see how it would appear and operate in that way without wires and electric current. Early in 1905, they manufactured and sold some of the appliances to the West Shore Railway, none of which have been reported as unsatisfactory. That it was no easy matter to manufacture and put the new invention in operation appears from the fact that the Westinghouse people, though claiming invention early in April, did not put it to actual test on their "interworks railway" until August or September. They first put it up, as their testimony tended to show, in a building without using a current, and when it was used on the interworks railway, two sections of the road were equipped with other devices, one of which was that devised by Jones for use on the Indianapolis and Cincinnati Railway, before referred to. The conditions presented by the evidence in this case make it quite different from those in *Laas & Sponenberg* v. *Scott*, (26 App. D. C., 354, 361,) which the Commissioner cited in support of his conclusion. In that case, the device was a comparatively simple one that could have been quickly made. Scott had sufficient means for the purpose, and was engaged in making some other inventions. From May 12, 1902, until late in the fall of 1903, he did nothing. For more than a year before his rival entered the field, he had done nothing but attempt to induce Walker, a capitalist, to join him in the exploitation of the invention. Walker was not willing to undertake it before October, 1903, when he agreed to a plan that was completed in December. Scott had sufficient means of his own to exploit the invention, though not on the large scale which he, perhaps, contemplated with the aid of Walker. For this reason, he was held wanting in due diligence.

It is true that Mead might have gone into the Patent Office and preserved his rights by constructive reduction to practice. As the invention was intended to apply in a business then beginning to develop, he was entitled to a reasonable time to perfect his invention before asking for a patent. The case of *Seeberger* v. *Dodge*, (24 App. D. C., 476,) also cited by the Commissioner, holds that where an inventor cannot reasonably reduce to actual practice, he should show diligence by applying for a patent. It was said there:

> Granting the contention that actual reduction to practice is preferable to that which is constructive, merely, as more to the interest of the public, and that reasonable diligence ought to be extended to one pursuing that course in good faith, yet, when the construction of an experimental device involves so great cost and risk that an inventor, though possessed of sufficient means, may well hesitate to undertake the same at his own expense, due diligence requires that he should then attempt to secure his right and promote the public interest by filing an application for a patent.

What was then said must be considered in connection with the facts to which it applied. The invention was of a very expensive device known as an escalator. Seeberger was a man of means and might have built and operated one; but the expense was so great that it was hardly reasonable to do so under the circumstances. He had conceived the invention in May, 1895, and shortly thereafter had a completed drawing. His evidence tended to show that he had tried at various times to have his escalator constructed and put in public use, but without success. He was interested in other patents, two of which he had applied for himself, one in December, 1895, and the other May 19, 1896. He had purchased an interest in Wheeler's patent. In this instance he delayed filing until October 22, 1901, while his rival had filed on January 22, 1898. He had seen Dodge's device in December, 1897, and had some talk with him about uniting their interests. In conclusion, the court said:

> The failure of Seeberger to make an application before, and especially after seeing Dodge's device and hearing his statement, can only be attributed, in our opinion, to his confidence in the scope of the Wheeler patent. He owned one-half of the later one of these by assignment made before issue, and in June, 1896, purchased a half interest in the earlier one. He made the last purchase because he had been advised that it was "necessary in order to control the field." And so essential to his interests did he regard the ownership of this patent that on August 13, 1896, he secured an option to secure Wheeler's remaining interest, which was finally exercised in 1897. For obvious reasons, his confidence in the dominating scope of the Wheeler patents is no excuse for delay. (*Platt* v. *Shipley*, 16 App. D. C., 576, 583.)

In the case at bar nine months, less one day, elapsed between the date of the first drawing on March 3, 1904, and the date of filing. The second drawing completing the entire invention of the issue was not com-

pleted until April. During the interval, efforts were made to secure the introduction of the invention, which, under all the circumstances, we think constituted sufficient diligence to entitle him to the benefit of his earlier conception. The facts and circumstances bring the case more nearly within the ruling made in *O'Connell* v. *Schmidt* (27 App. D. C., 77, 82) than that in the other cases mentioned. Probably, had Davis intimated to Mead, at their last meeting in July, 1904, that he had conceived the invention, the latter might have filed an earlier application.

We think it was error to award priority to Davis and Varney, and the decision will be reversed, and priority awarded to Mead. It is so ordered, and that the clerk certify this decision to the Commissioner of Patents. Reversed.

Amendment to Rules of the Court of Appeals of the District of Columbia.

The following amendment to the rules of the Court of Appeals of the District of Columbia is published for the information of those practicing before that court.

EDWARD B. MOORE,
Commissioner of Patents.

It is ordered that section 3 of Rule VIII of this court be, and is hereby, amended by adding thereto the following paragraph:

(4) Whenever a decision of this court, that has been published in the official reports of the court, shall be cited in a brief, the reference shall include the volume and page of the report wherein the same has been published.

This rule shall take effect on the first Tuesday in October, 1908, and apply to all cases submitted for hearing thereafter.

By the COURT,
June 9, 1908.

Test:

HENRY W. HODGES, *Clerk.*

Promulgated June 9, 1908.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 14, 1908.

Kinney Tobacco Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Falk Tobacco Company, of New York, N. Y and Richmond, Va., for registration of a trade-mark and a trade-mark registered to the Kinney Tobacco Company, of New York, N. Y., and the notice of said declaration sent by registered mail to the Kinney Tobacco Company was delivered to and receipted for by the American Tobacco Company, of New York, N. Y. The assignment records of this Office disclose that the Kinney Tobacco Company assigned to the American Tobacco Company the whole right, title, and interest in the said registered trade-mark. That assignment, however, does not include the good-will or business of the Kinney Tobacco Company, and is therefore of no force or effect.

Notice is accordingly hereby given to the said Kinney Tobacco Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 10, 1908.

A. Levy & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the applications of Sweet, Orr & Company, of 317 Broadway, New York, N. Y.; Wappinger Falls, N. Y.; Joliet, Ill.; and Brooklyn, N. Y., and Legler & Company, of East Bacon street, Dayton, Ohio, for registration of a trade-mark and a trade-mark registered to A. Levy & Company, of 610 Broadway, New York, N. Y., and the notice of said declaration sent by registered mail to the said A. Levy & Company having been returned undelivered, notice is hereby given to the said A. Levy & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents, in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default..

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 10, 1908.

E. F. Poulterer & Company, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Franklin & Hayes Brewing Company, of Pocatello, Idaho, for registration of a trade-mark and a trade-mark registered to E. F. Poulterer & Company, whose address of record is No. 1430 Montgomery avenue, Philadelphia, Pa., and the notice of said declaration sent by registered mail to said E. F. Poulterer & Company at the address above given has been returned by the Post-Office Department undelivered, with the statement "Removed" endorsed thereon.

Notice is therefore hereby given to the said E. F. Poulterer & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 19, 1908.

Koster & Bial, their assigns or legal representatives, take notice.

An interference having been declared by this Office between the application of Hugo Goldschmidt, of 506 South Main street Los Angeles, Cal., for registration of a trade-mark and a trade-mark registered to Koster & Bial, of 110 West Twenty-fourth street, New York, N. Y., and the notice of said declaration sent by registered mail to the said Koster & Bial having been returned undelivered, notice is hereby given to the said Koster & Bial, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

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DIGEST OF DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS

IN THE MATTER OF

PATENTS, TRADE-MARKS, ETC.

OFFICIAL GAZETTE—SEPTEMBER-OCTOBER, 1908.

DIGEST OF DECISIONS.

[Decisions of the United States courts are indicated by an asterisk (*).]

ABANDONED APPLICATIONS.

INTERFERENCE—PRIORITY—APPEAL TO COURT—STATUS OF REVIVED APPLICATION.

On an appeal on priority the court will not review the findings of the Commissioner upon the sufficiency of a showing to support a petition for the reinstatement of an abandoned application where there appears to have been no abuse of power on the part of the Commissioner.

[*Kinsman *v.* Strohm, 1769.

ABANDONED EXPERIMENTS.

(See Interference, 4, 8; Testimony, 4.)

ABANDONMENT.

(See Abandoned Applications; Construction of Statutes.)

1. INTERFERENCE—RULE 125.

A declaration of abandonment accompanied by a statement that applicant abandons certain counts because they are either limited or anticipated or are not applicable to the structure will not be accepted under Rule 125.

[Corrington *v.* Turner, 1067.

2. SAME—STRIKING FROM FILES.

A declaration of abandonment accompanied by reasons for filing the same will not be made the basis for judgment under Rule 125, but it should not be stricken from the files. [Id.

ACCESS TO PENDING APPLICATIONS.

SHOWING OF INTEREST.

Access will not be granted to a pending application referred to in a patent purporting to be a division of such application merely upon an affidavit by an attorney that suit has been brought on such patent against one of petitioner's customers, that petitioner is desirous of defending such suit, and that access to the prior application is deemed necessary in order that a proper defense may be made. The practice requires that access to pending applications will be refused except to parties showing proper interest therein, and the mere allegation of an attorney that the company for which he is counsel desires to defend a suit brought on a patent divided out of such application is not a sufficient showing of interest.

[*In re* Miami Cycle & Mfg. Company, 1067.

AFFIDAVITS OF ATTORNEY.

(See Access to Pending Applications.)

ANTICIPATION.

(See Invention, 1.)

APPEAL FROM FAVORABLE DECISION.

(See Public Use, 2.)

APPEAL TO THE COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

(See Abandoned Applications; Court of Appeals of the District of Columbia; Interference, 6, 7.)

APPLICANT AND PATENTEE.

(See Burden of Proof.)

APPLICATIONS.

(See Abandoned Applications; Access to Pending Applications; Construction of Statutes; Date of Filing Application; Delay in Filing Application; Drawings.)

ASSIGNMENT.

(See Grant of Patent.)

RESERVATION—LICENSE.

An instrument purporting to convey "an undivided one-sixth of all right, title and interest" in an invention, but reserving to the assignor the sole right to manufacture and sell the invention and providing that the assignee "shall not so manufacture and sell" except by assignor's consent, conveys nothing more than a right to use the invention. It is a mere license and not an assignment and is not such an interest as would warrant the issuance of the patent to the grantee notwithstanding the request in such instrument that the patent so issue.

Ex parte Taliaferro, 1531.

AUTHORITY OF THE COMMISSIONER OF PATENTS.

(See Date of Filing Application.)

BURDEN OF PROOF.

(See Trade-Marks, 11.)

INTERFERENCE—INADVERTENTLY-ISSUED PATENT.

Where a patent is inadvertently issued, while an application by another is pending, without an interference, no advantage accrues to the patentee on the question of burden of proof.

[*Cutler *v.* Leonard, 438.

CANCELATION OF TRADE-MARK REGISTRATION.

(See Trade-Marks, 4, 5, 6, 7, 9, 13.)

CERTIORARI.

REVIEW OF FACTS.

The concurrent finding of a circuit court and circuit court of appeals on questions of fact will not be disturbed by the Federal Supreme Court on certiorari unless clearly erroneous.

[*Continental Paper Bag Company *v.* Eastern Paper Bag Company, 1297.

CLASS OF GOODS.

(See Trade-Marks, 4.)

COMBINATION.

(See Invention, 1, 2.)

COMMISSIONER OF PATENTS.

(See Abandoned Applications; Construction of Statutes; Court of Appeals of the District of Columbia; Date of Filing Application; Interference; Public Use; Rules of Practice of the United States Patent Office; Trade-Marks, 8, 13.)

CONSTRUCTION OF CLAIMS.

1. LIMITATION BY DESCRIPTION.

An inventor must describe what he conceives to be the best mode of constructing his invention; but he is not confined to that if his claims are broad, particularly where he states in his specification that means other than the means shown may be employed.

[*Continental Paper Bag Company *v.* Eastern Paper Bag Company, 1297.

2. "MEANS" FOR PERFORMING CERTAIN FUNCTIONS.
The following claim: "In a paper-bag machine, the combination of a rotating cylinder provided with one or more pairs of side-forming fingers adapted to be moved toward or from each other, a forming-plate also provided with side-forming fingers adapted to be moved toward or from each other, means for operating said fingers at definite times during the formative action upon the bag-tube, operating means for the forming-plate adapted to cause the said plate to oscillate about its rear edge upon the surface of the cylinder during the rotary movement of said cylinder, the whole operating for the purpose of opening and forming the bottom of the bag-tube, and means to move the bag-tube with the cylinder," *Held* not merely for the function of the machine, but for mechanical means to bring into working relation the folding-plate and cylinder. [*Id.

CONSTRUCTION OF RULES.

(See Abandonment; Interference, 1.)

CONSTRUCTION OF STATUTES.

RENEWAL OF APPLICATION—ABANDONMENT—SECTION 4897, REVISED STATUTES.
Under section 4897, Revised Statutes, relating to the renewal of forfeited applications, providing that "upon the hearing of renewed applications preferred under this section, abandonment shall be considered as a question of fact," the question of abandonment is one to be determined upon proof of the facts and circumstances and will not be presumed from laches in filing the renewal application, although it may be within the power of the Commissioner, whenever he entertains a doubt as to whether there has been abandonment, to require an explanation of the delay. [*Cutler *v.* Leonard, 438.

CONSTRUCTION OF TRADE-MARK RULES.

(See Trade-Marks, 12.)

CONSTRUCTION OF TRADE-MARK STATUTES.

(See Trade-Marks, 12, 13.)

COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

APPEAL—CONSIDERATION OF QUESTION NOT RAISED BELOW.
Assignments of error by the Commissioner of Patents raising the question of the sufficiency of disclosure in appellee's applications will be given but passing notice by the court of appeals where such question was not raised before the tribunals of the Patent Office. It was incumbent upon appellant to "raise this question before the Primary Examiner, whose skill in the particular art peculiarly qualified him to consider it."
[*Cutler *v.* Leonard, 438.

DATE OF FILING APPLICATION.

APPLICATION—DATE OF FILING.
Where by reason of a foreign patent it was necessary that the applicant file his application in the United States Patent Office not later than March 15, 1908, and application papers were deposited in the mail at Paterson, N. J., on Friday, March 13, 1908, at five o'clock, but did not reach the Patent Office until Monday, March 16, *Held* that the Commissioner is without authority to give the application the date of March 14, 1908, as requested. [*Ex parte* Meier, 657.

DELAY.

(See Delay in Filing Application; Interference, 8, 9; Reduction to Practice, 1.)

DELAY IN FILING APPLICATION.

(See Construction of Statutes; Interference, 4, 5, 7, 9.)

INTERFERENCE—PRIORITY—DILIGENCE.
The inventor is entitled to a reasonable time to perfect his invention before applying for a patent, and what is a reasonable time is dependent upon the circumstances of the particular case.
[*Mead *v.* Davis and Varney, 2001.

DESCRIPTION.

(See Construction of Claims, 1.)

DILIGENCE.

(See Delay in Filing Application; Interference, 4, 5, 7, 8, 10; Reduction to Practice.)

DISCLOSURE OF INVENTION.

(See Court of Appeals of the District of Columbia; Interference, 2.)

DIVISIONAL APPLICATION.

(See Access to Pending Applications.)

DOUBLE USE.

(See Invention, 2.)

DRAWINGS.

1. APPLICATION.
The conclusion of the chief draftsman as to whether or not drawings forming a part of the application for patent shall be accepted will not be disturbed unless there is such palpable abuse of discretion on his part as would warrant the exercise of the supervisory authority of the Commissioner.
[*Ex parte* Mealus, 438.

2. MUTILATED DRAWING NOT ACCEPTED.
Mutilated drawings will not be accepted by the Office as a part of the permanent records. This rule is founded upon the necessity of preserving the records of the Office for an indefinite period and must be enforced. [*Ex parte* Frankman, 1999.

EMPLOYER AND EMPLOYEE.

(See Interference, 9.)

EQUIVALENTS.

(See Infringement.)

EVIDENCE.

(See Interference, 8; Public Use; Trade-Marks, 12.)

EXCLUSIVE USE.

(See Trade-Marks, 3, 12.)

FIRST AND ORIGINAL INVENTOR.

(See Reduction to Practice, 2; Testimony, 2, 3, 4.)

FOREIGN PATENTS.

(See Date of Filing Application.)

FOREIGN REGISTRATION OF TRADE-MARKS.

(See Trade-Marks, 12.)

FORMER DECISIONS CITED.

(See Grant of Patent; Trade-Marks, 6, 7.)

FUNCTION.

(See Construction of Claims, 2; Invention, 5.)

GRADE-MARKS.

(See Trade-Marks, 2.)

GRANT OF PATENT.

(See Assignment.)

PATENT SHOULD NOT ISSUE TO A MERE LICENSEE.
The Patent Office should not issue a patent to an alleged assignee where the inventor has reserved to himself the exclusive right to make or use or sell the invention covered by his application or any combination of these elements which limits the interests of the alleged assignee to an interest in the invention less than that defined as an assignment by the Supreme Court of the United States in the decision *Waterman* v. *McKenzie*, (54 O. G., 1562; 138 U. S., 252,) which defined an assignment to be either (1) the whole patent, comprising the exclusive right to make, use, and vend the invention throughout the United States, or (2) an undivided part or share of that exclusive right, or (3) the exclusive right under the patent within and throughout a specified part of the United States. [*Ex parte* Taliaferro, 1531.

INFRINGEMENT.

(See Certiorari; Construction of Claims.)

EQUIVALENTS—RANGE DEPENDS UPON NATURE OF INVENTION.
The range of equivalents depends upon the extent and nature of the invention. If the invention is broad and primary in its character, the range of equivalents will be correspondingly broad under the liberal construction which the courts give to such inventions.
[*Continental Paper Bag Company *v.* Eastern Paper Bag Company, 1297.

INJUNCTION.

(See Infringement.)

EFFECT OF NON-USE OF PATENTED INVENTION.
The non-use of a patented invention by the owner of the patent occasioned by a desire to save the expense incident to changing from an old type of machine to the patented device is not so unreasonable as to warrant a court in refusing injunctive relief during the latter part of the term of the patent, there being no question of a diminished supply of the product of such machine or of an increase of prices.
[*Continental Paper Bag Company *v.* Eastern Paper Bag Company, 1297.

INTERFERENCE.

(See Abandoned Applications; Abandonment; Burden of Proof; Court of Appeals of the District of Columbia; Public Use; Reduction to Practice; Testimony; Trade-Marks, 14.)

1. RIGHT TO MAKE CLAIMS—RULE 130.
Where a party to an interference does not bring a motion to dissolve on the ground that his opponents have no right to make the claims and no showing is made why such a motion was not brought, he is not entitled to urge the question under the provision of Rule 130; but the fact that such a motion was not brought does not prevent the tribunals of the Office from considering the question of their own motion when it appears that one or more of the parties have no right to make certain of the claims.
[Smith *v.* Foley *v.* Anderson *v.* Smith, 847.

2. TESTIMONY.
Where a witness, testifying as to disclosure of the invention, admits that he is testifying solely from memory as to a disclosure alleged to have been made many years previously and that he cannot recall the details of the invention nor remember any disclosure except this one, though many were called to his attention about the same time, his testimony is insufficient to establish that such disclosure was made. [Id.

3. PRIORITY.
The testimony considered and *Held* to afford no ground for disturbing the award of priority to Foley and Anderson.
[*Smith *v.* Foley *et al.*, 850.

4. REDUCTION TO PRACTICE—LACK OF DILIGENCE.
Where it appears that Kinsman installed mechanism embracing part of the issue in 1890 which was experimental in its nature and found to be unsuccessful, and immediately thereafter unsuccessfully tested a second experimental device, and in 1892 and 1893 installed a system embodying the invention which after being used for several months was taken out and discarded, and no further evidence of activity on the part of Kinsman was shown prior to the filing of his application in December, 1903, which was subsequent to the time Kintner entered the field and reduced the invention to practice, and during this time Kinsman was active in experimenting with other forms of invention, *Held* that he was lacking in diligence.
[*Kinsman *v.* Kintner, 1532.

5. SAME—SAME.
The object of the patent laws is to foster and protect invention for the universal benefit of mankind, and while every presumption will be resolved in favor of the inventor who delays filing an application until he has perfected his invention the object of the law would be lost to view should we permit the displacement of an inventor who has given the world the benefit of his discovery by one who has permitted his invention to lie dormant for a decade. [*Id.

6. APPEAL TO COURT ON PRIORITY—PATENTABILITY NOT CONSIDERED.
The question of the patentability of an invention is not one for determination by the court of appeals upon an appeal from a decision on priority. [*Meil *v.* Midgley, 1534.

7. SAME—REGULARITY OF COMMISSIONER'S ACTION.
After an adverse decision by the Primary Examiner upon a motion to dissolve decisions on priority were rendered by the Examiner of Interferences and the Examiners-in-Chief and appeal was taken to the Commissioner of Patents from the latter decision. Pending this appeal a successor of the Primary Examiner requested jurisdiction of the interference for the purpose of considering the patentability of the issue. Such request was granted, and the Primary Examiner dissolved the interference upon the ground that the issue was not patentable. Upon petition to the Commissioner the decision of the Primary Examiner was set aside and the interference was restored to its prior condition of appeal to the Commissioner on priority. On appeal to the court of appeals from the decision of the Commissioner *Held* that the regularity of the action of the Commissioner in setting aside the decision of the Primary Examiner dissolving the interference is not a question for the consideration of the court. [*Id.

8. ALLEGED REDUCTION TO PRACTICE—DELAY—EVIDENCE OF ABANDONED EXPERIMENT.
A delay of seven years by an inventor after an alleged reduction to practice, during which time he was active in developing a large number of other inventions, constitutes convincing evidence that the alleged reduction to practice amounted only to an abandoned experiment. [*Moore *v.* Hewitt, 1535.

9. ORIGINALITY—DELAY IN FILING APPLICATION.
Where the question is one of originality and the relation of employer and employee exists between the parties, the fact that the junior party, who was the employee, did not file his application till nearly a year after he knew of the issuance of the senior party's patent and has given no excuse for such delay justifies resolving any doubt as to who was the originator of the invention against him. [*McKillop *v.* Fetzer, 1770.

10. PRIORITY—DILIGENCE.
Where the inventor of an apparatus for supporting insulating overhead-trolley conductors which are utilized for supplying high-voltage energy to high-speed alternating-current electric railways is not in a position to make an actual test of his invention, and the company which employs him is likewise not in a position to make such a test, he cannot be held lacking in diligence in reducing his invention to practice between March, 1904, and December 2, 1904, where he approached a railway company in March and endeavored to have his invention tried out, ordered an insulator which was one of the essential features of the apparatus and received the same in October, procured a visit from the officers of another electric railway company in September, and early in December attached a crude apparatus to the fence in the factory-yard to see how it would appear and operate. [*Mead *v.* Davis and Varney, 2001.

INVENTION.

(See Construction of Claims; Infringement.)

1. PATENTABILITY—COMBINATION—ANTICIPATION.
The mere combination of articles disclosed in two former patents will not constitute invention unless it results in producing a new and useful article not applied by those familiar with the state of the art. A patent should not be issued when the alleged invention is a mere modification of the principle involved in former inventions or discoveries. [*In re* Faber, 229.

2. SAME—DOUBLE USE.
The mere combining of an ordinary calking tool or blade with an automatically-operating pneumatic hammer which is adapted to be controlled and adjusted by hand amounts to nothing more than an obvious double use that would naturally occur to one skilled in the art with mind directed to cheapening the cost of ship-calking and does not rise to the dignity of invention. [*In re* Mason, 441.

3. SAME—PRINTED MATTER—NON-INVENTION.
A claim for a guarantee credit book having certain designated columns for certain entries *Held* to involve no invention over the prior art which disclosed the general scheme, the only difference being the addition of certain columns for the purpose of keeping an account of liquidated damages.
[*In re* Taylor, 1767.

4. SAME—PROCESS.
A claim for a process of forming metal rings which differs from the references merely by the statement that a bead is formed centrally of the blank *Held* unpatentable.
[*In re* White, 1771.

5. SAME—SAME—FUNCTION OF MACHINE.
A claim for a process *Held* unpatentable when it does not appear that said process can be carried out by any other means than that invented for such purpose by appellant and for which he has obtained a patent. [*Id.

LABELS.

REFUSED REGISTRATION—LEGEND "GUARANTEED UNDER THE FOOD AND DRUGS ACT JUNE 30, 1906," UNQUALIFIED.
Held that a label should be refused registration where the legend "Guaranteed under the Food and Drugs Act, June 30, 1906," is so used as to be likely to indicate that the merchandise upon which the label is used is guaranteed by the Government.
[*Ex parte* Tennessee Brewing Company, 1999.

LACHES.

(See Construction of Statutes.)

LICENSES.

(See Assignment; Grant of Patent.)

MOTION TO DISSOLVE INTERFERENCE.

(See Interference, 1, 7.)

OPPOSITION.

(See Trade-Marks, 10.)

ORIGINALITY.

(See Interference, 9.)

PARTIES IN INTEREST.

(See Access to Pending Applications.)

PATENTABILITY.

(See Interference, 6, 7; Invention.)

PATENTEE AND APPLICANT.

(See Burden of Proof.)

PATENT INADVERTENTLY GRANTED.

(See Burden of Proof.)

POVERTY.

(See Reduction to Practice, 1.)

PRIORITY OF ADOPTION AND USE.

(See Trade-Marks, 1, 3, 8.)

PRIORITY OF INVENTION.

(See Abandoned Applications; Interference, 3, 6, 7, 10; Reduction to Practice.)

PRIOR REGISTRATION.

(See Trade-Marks, 7.)

PROCESS.

(See Invention, 4, 5.)

PUBLIC USE.

1. EVIDENCE—COMMISSIONER'S DECISION INSTITUTING PROCEEDINGS NOT CONCLUSIVE.
The fact that the Commissioner holds certain *ex parte* affidavits filed in support of a petition for the institution of public-use proceedings to be sufficient to make out a *prima facie* case of public use such as to warrant the taking of testimony does not preclude the Primary Examiner from ruling that the evidence taken in such proceedings is not sufficient to warrant the rejection of the claims. [*Ex parte* Hartley, 1767.

2. APPEAL NOT ALLOWED FROM PRIMARY EXAMINER'S FAVORABLE DECISION ON PUBLIC USE.
The action of the Examiner holding that testimony in public-use proceedings is insufficient to warrant the rejection of the applicant's claims will be reviewed only where such obvious error appears as will warrant the supervisory action of the Commissioner. [Id.

RECORDS OF THE PATENT OFFICE.

(See Drawings, 2.)

REDUCTION TO PRACTICE.

(See Interference, 4, 5, 8.)

1. INTERFERENCE—DILIGENCE.
Where the appellant established conception and disclosure of the invention in the summer of 1903, but took no steps toward reducing the invention to practice until April 21, 1904, when he instructed his attorney to prepare an application for patent, which was not, however, filed until September 19, 1904, while his opponents entered the field on March 1, 1904, and in excuse of his lack of diligence urged that his financial condition was such that it was impossible for him to reduce the invention to practice earlier, but the testimony showed that in the meantime he had enlarged his business and that his gross income amounted to about two hundred dollars a month, *Held* that the showing is insufficient to excuse the appellant's lack of diligence. [*McArthur *v.* Mygatt, 661.

2. SAME—PRIORITY—DILIGENCE.
Where the junior party had disclosed the invention to several persons and had ordered tools to manufacture the same prior to the entry of the senior party into the field and in a few months thereafter actually sold a small number which was followed a few months later by the manufacture and sale of large numbers of such devices, *Held* that he was diligent in reducing his invention to practice. [*Davis *v.* Horton, 1768.

REJECTION OF CLAIMS.

(See Public Use.)

RENEWAL OF FORFEITED APPLICATIONS.

(See Construction of Statutes.)

REVIVAL OF ABANDONED APPLICATION.

(See Abandoned Applications.)

RIGHT TO MAKE CLAIMS.

(See Interference, 1.)

RULES OF PRACTICE OF THE UNITED STATES PATENT OFFICE.

BINDING FORCE OF.
The Rules of Practice in the Patent Office when not in conflict with law have the full force and effect of statutes. As the approval of such rules by the Secretary of the Interior is necessary to the adoption and establishment of such rules, the contrary is true that where a rule of procedure is in force it can only be repealed, modified, or suspended by the Commissioner with the approval of the Secretary of the Interior. [*Mell *v.* Midgley, 1534.

SIMILARITY OF MARKS.

(See Trade-Marks, 6, 10, 11, 14.)

STATE OF THE ART.

(See Invention, 1, 3.)

SUPERVISORY AUTHORITY OF THE COMMISSIONER OF PATENTS.

(See Construction of Statutes; Drawings, 1; Public Use, 2.)

TEN-YEARS CLAUSE.

(See Trade-Marks, 5, 12.)

TESTIMONY.

(See Interference, 2, 3.)

1. INTERFERENCE—INVENTOR UNCORROBORATED.
It is well settled that the uncorroborated testimony of the junior party in interference is insufficient to overcome the presumption attaching to the prior filing date of the senior party. [*Durkee, Jr., *v.* Winquist and Turnstrom, 229.

2. SAME—CIRCUMSTANCES AND PRESUMPTION.
The testimony reviewed and *Held*, in view of the unquestioned facts of the case and the circumstances surrounding the transactions between L. and D., to sustain D.'s claim that he was the original inventor. [*Duff *v.* Latshaw, 658.

3. SAME—SAME.
K., who succeeded D. as superintendent of L.'s factory, filed an application for the invention in issue at L.'s suggestion and for his benefit, L.'s application not being filed until after the interference was declared between K. and D. *Held* that this strongly discredits L.'s claim to inventorship. [*Id.

4. SAME—ABANDONED EXPERIMENT.
D. constructed a model pulley embodying the invention in issue in 1895, but made no attempt to introduce the invention into commercial use or patent it, but passed it over in favor of another construction until 1904. *Held* that this model was nothing more than an abandoned experiment, which was unavailing as against a later conception by L. [*Id.

TRADE-MARKS.

1. PRIORITY.
The evidence reviewed and *Held* to establish that M. & Co. were the first to adopt and use the word "Eureka" as trade-mark for press-boards.
[Case Brothers *v.* E. W. Murphey & Company, 225.

2. GRADE-MARK.
Where it was impossible from the nature of the goods to put the trade-mark thereon, the fact that the mark was not placed on the cases in which the goods were shipped and that M. & Co. sent out a circular describing four grades of press-boards, of which "Eureka" was one, *Held* insufficient to establish that this mark was used merely to indicate grade or quality. [Id.

3. USE OF THE MARK ON SAMPLES A TRADE-MARK USE.
M. & Co. placed the mark "Eureka" on samples of press-boards which were distributed to the trade and which were identical with the boards furnished to customers in all respects except as to size. *Held* that this was such an association of the mark with the goods as to confer upon M. & Co. the exclusive right to the use thereof. [Id.

4. CANCELATION—USE OF MARK ON GOODS OF DIFFERENT DESCRIPTIVE PROPERTIES.
The use by the applicant for cancelation of a mark on a dyspepsia remedy furnishes no ground for canceling the registration of substantially the same mark for tooth-powder, since these articles are manifestly of different descriptive properties. [Graves *v.* Gunder, 227.

5. SAME—REGISTRATION UNDER THE "TEN-YEARS" CLAUSE—APPLICANT'S USE SUBSEQUENT TO THE PASSAGE OF THE TRADE-MARK ACT.
Where a mark was registered under the "ten-years" clause of the Trade-Mark Act, the use of that mark by the applicant for cancelation after the passage of that act is no ground for canceling the registration. [Id.

6. SAME—MARK USED NOT SAME AS MARK REGISTERED—UNESSENTIAL FEATURES.
The mark registered was "Graves Tooth Powder." *Held* that no ground for canceling said mark would be established by showing that the mark actually used was "Dr. E. L. Graves Tooth Powder." (*Standard Underground Cable Co.*, 123 O. G., 656; 27 App. D. C., 320.) [Id.

7. SAME—PRIOR REGISTRATION BY SAME PARTY.
The fact that a party registered the words "Dr. E. L. Graves Tooth Powder" and "Dr. E. L. Graves Unequalled Tooth Powder" does not constitute a ground for canceling his registration of the words "Graves Tooth Powder." (*Anheuser-Busch Brewing Association* v. *D. G. Yuengling et al.*, 129 O. G., 3501.) [Id.

8. PRIORITY.
Assuming, as held by the Commissioner of Patents, that the word "Eureka" is a valid trade-mark for press-boards and that its use on samples of such boards was a trade-mark use, the evidence is sufficient to justify the holding that M. & Co. were entitled to register this mark.
[*Case Brothers *v.* E. W. Murphey & Co., 228.

9. CANCELATION—WITHDRAWAL OF APPLICATION THEREFOR.
After pleadings have been filed, proofs taken, and the case ready for final hearing an applicant for cancelation will not be permitted to withdraw his application without prejudice to his right to file a new application.
[Outcault *v.* The New York Herald Company, 437.

10. OPPOSITION—"VICTORIA" ASSOCIATED WITH MEDALLION AND "VICTOR" UPON PEDESTAL SUPPORTING FIGURE OF MOUNTED KNIGHT—DISSIMILAR.
Held that a trade-mark consisting of the word "Victoria," associated with a medallion bearing the representation of the head of the late Queen Victoria and surmounted by a crown suspended from the letter "t" of said word, does not so nearly resemble the mark of the opponent, which consists of the figure of a knight on horseback resting upon an ornamental pedestal bearing the inscription "The Victor," as to be likely to cause confusion in the mind of the public.
[*Andrew McLean Company *v.* Adams Manufacturing Company, 440.

11. SAME—BURDEN OF PROOF.
Where the Patent Office has decided that the trade-mark of each party is registrable, the burden is on the opponent to show that as a matter of fact there is such similarity between the marks as to be likely to cause confusion and deceive ordinary purchasers. [*Id.

12. APPLICATION—DECLARATION.
The requirements of the sworn declaration prescribed by Rule 32 of the Trade-Mark Rules for marks sought to be registered under the ten-years proviso of section 5 of the act of 1905 must be complied with. The filing of a certified copy of registration in a foreign country for a stated period does not constitute evidence of exclusive use of the mark for ten years next preceding February 20, 1905, and is not the equivalent of the sworn statement of the applicant as to exclusive use during that period. [*Ex parte* Bechstein, 657.

13. CANCELATION—SECTION 13 OF THE TRADE-MARK ACT.
The Commissioner has no authority to cancel a certificate of registration of a trade-mark except in accordance with the provisions of section 13 of the Trade-Mark Act of February 20, 1905. [Case *v.* Quirk, 1531.

14. INTERFERENCE—MARKS INCLUDING STAR AS PRINCIPAL FEATURE.
Held that a trade-mark consisting of a six-pointed star with the letters "G E" inscribed in monogram in the center so nearly resembles the trade-mark consisting of a six-pointed star surrounded by two circles, having inscribed between the inner and outer circles the words "The Celebrated Star Lager Beer," as to cause confusion in the mind of the public and deceive purchasers. [*Ehret *v.* Star Brewery Company, 1533.

USE OF PATENTED MACHINES.

(See Injunction.)

WITHDRAWAL OF APPLICATION FOR CANCELATION.

(See Trade-Marks, 9.)

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF SEPTEMBER, 1908.

[Abbreviations: "Sp."=Monthly Volume of Specifications; "Dr."=Monthly Volume of Drawings; "Gaz."=Official Gazette.]

A. Ziegler & Sons Company. (See Ziegler, A. M., assignor.)
A. B. Chase Company. (See Cooper, W. F., assignor.)
A. B. Dick Company. (See Dick, A. B., assignor.)
Abbott, B. F., *et al.* (See Gordon, T. W., assignor.)
Abbott, K. E., *et al.* (See Gordon, T. W., assignor.)
Abbott, P., Oyster Bay, N. Y. Developing-box for photographic-film cartridges. No. 899,495; Sept. 29; Sp. p 4433; Dr. p. 952; Gaz. vol. 136; p. 855.
Abbott, W. G., Jr., Philadelphia, Pa. Apparatus for pumping air and gases. No. 899,820; Sept. 29; Sp. p. 5129; Dr. pp. 1097-8; Gaz. vol. 136; p. 963.
Abel, J. D. (See Cogswell and Abel.)
Abelli, M., Turin, Italy, assignor to Dinamite Nobel Societe Anonyme. Smokeless explosive. No. 899,855; Sept. 29; Sp. p. 5215; Gaz. vol. 136; p. 975.
Abrahams, M., New York, N. Y. Manufacture of oil-cloth. No. 899,821; Sept. 29; Sp. p. 5132; Gaz. vol. 136; p. 963.
Acken, T. M., *et al.* (See McCarty, W. F. M., assignor.)
Adair, A. (See Cooper, L. M., assignor.)
Adam, F. (See Planta and Adam.)
Adams, E. G., near Plain City, Ohio. Dust-receptacle. No. 899,937; Sept. 29; Sp. p. 5380; Dr. p. 1148; Gaz. vol. 136; p. 999.
Adams, G. D., *et al.* (See Rogers, J., assignor.)
Adams, S. S., Plainfield, N. J. Bellows package for distributing powder. No. 899,496; Sept. 29; Sp. p. 4438; Dr. p. 952; Gaz. vol. 136; p. 855.
Adcock, G. T., Burns, Tenn. Stove and heater attachment. No. 897,863; Sept. 8; Sp. p. 1273; Dr. p. 272; Gaz. vol. 136; p. 233.
Adelheim, C., assignor to himself and P. T. Harmon, Chicago, Ill. Amusement device. No. 899 497; Sept. 29; Sp p. 4440; Dr. pp. 952-3; Gaz. vol. 136: p. 855.
Adkins, W. J., Little Sandy, Ky. Spoke-machine. No. 898,622; Sept. 15; Sp. p. 2783; Dr. pp. 504-5: Gaz. vol. 136; p. 509.
Adler, A., assignor to R. Neufeld. Vienna, Austria-Hungary. Manufacturing elastic material. No. 897,334; Sept. 1; Sp. p. 170; Gaz. vol. 136; p. 25.
Aermotor Company. (See Noyes and Scholes, assignors.)
Affleck, D. S., Chicago, Ill. Air-brake valve. No. 897,696; Sept. 1; Sp. p. 924; Dr. p. 196; Gaz. vol. 136; p. 148.
Ahnfeldt, H., Butte, Mont. Pocket. No. 898,299; Sept. 8; Sp. p. 2153; Dr. p. 457; Gaz. vol. 136; p. 371.
Aiken, A. M., Cleveland, Ohio. Sanitary protector. No. 899,196; Sept. 22; Sp. p. 3865; Dr. p. 826; Gaz. vol. 136; p. 723.
Aiken, A. P., Braddock, assignor of two-thirds to J. F. Lewis and M. Killeen, Allegheny, Pa. Blast-furnace-charging apparatus. No. 898,818; Sept. 15; Sp. p. 3151; Dr. p. 674; Gaz. vol. 136; p. 572.
Ainsworth, M., Sedalia, Mo. Coaster-brake. No. 897,952; Sept. 8; Sp. p. 1480; Dr. p. 315; Gaz. vol. 136; p. 263.
Akins, H. (See Bird and Akins.)
Aktieselskabet det Norske Kvaelstofkompagni. (See Ribber, N., assignor.)
Aktieselskabet Stav. Bliktrykkeri og Maskinvaerksted, Firm of. (See Bache, H. M., assignor.).
Albert, L., assignor of one-half to H. S. Wynkoop, New York, N. Y. Combination bed and sofa. No. 898,399; Sept. 8; Sp. p. 2325; Dr. p. 494: Gaz. vol. 136: p. 405.
Albert, L., assignor of one-half to H. S. Wynkoop, New York N. Y. Clothes presser and hanger. No. 900,051; Sept. 29; Sp. p. 5636; Dr. p. 1203; Gaz. vol. 136; p. 1037.
Albin, J. W., assignor of one-fourth to D. C. Ricketts, Babylon, N. Y. Music-leaf turner. No. 899,938; Sept. 29; Sp. p. 5381; Dr. p. 1148; Gaz. vol. 136; p. 999.
Albright, H. F., Elizabeth, N. J., assignor to Western Electric Company, Chicago, Ill. Telephone-transmitter. No. 898,544; Sept. 15; Sp. p. 2640; Dr. p. 564; Gaz vol. 136; p. 484.
Alexanderson, E. F. W., Schenectady, N. Y., assignor to General Electric Company. Synchronous motor. No. 897,507; Sept. 1; Sp. p. 542; Dr. pp. 115-16; Gaz. vol. 136; p. 87.
Alexanderson, E. F. W., Schenectady, N. Y., assignor to General Electric Company. Alternating-current motor. No. 897,508; Sept. 1; Sp. p. 546; Dr. p. 116; Gaz. vol. 136; p. 87.
Alfrey, I. H., Mount Sterling, Ky. Wrench. No. 899,707; Sept. 29; Sp. p. 4871; Dr. p. 1045; Gaz. vol. 136; p. 922.
Allen, A., North English, Iowa. Roofing-tool. No. 899,016; Sept. 22; Sp. p. 3517; Dr. p. 753; Gaz. vol. 136; p. 665.
Allen, G. F., Granite City, Ill, assignor to E. R. Hoyt, St. Louis, Mo. Metallic product. No. 897,953; Sept. 8; Sp. p. 1483; Gaz. vol. 136; p. 264.
Allen, S. L., Moorestown, N. J. Blade for cultivators and similar agricultural implements. No. 898,419; Sept. 15; Sp. p. 2381; Dr. p 509; Gaz. vol. 136; p. 445.
Allen, W. E., San Diego, Cal. Vaginal syringe. No. 898,300; Sept. 8; Sp. p. 2154; Dr. p. 458; Gaz. vol. 136; p. 372.
Allis-Chalmers Company. (See De Wein, G. F., assignor.)
Allis-Chalmers Company *et al.* (See Field, A. B., assignor.)
Allis-Chalmers Company. (See Hetlesaeter, O., assignor.)
Allis-Chalmers Company. (See McKee, R. A., assignor.)
Allis-Chalmers Company. (See Pfau, A., assignor.)
Allis-Chalmers Company. (See Rankin, W. A., assignor.)
Allis-Chalmers Company. (See Rotter, M., assignor.)
Allis-Chalmers Company. (See Siegmund, R., assignor.)
Allis-Chalmers Company. (See Trout, W. H., assignor.)
Allis-Chalmers Company *et al.* (See Van Valkenburg, H. L., assignor.)
Allis-Chalmers Company. (See Walton, J., assignor.)
Allis-Chalmers Company *et al.* (See Wouters, A. H., assignor.)
Allison, H. W., assignor to W. T. Roberts, East Liverpool, Ohio. Wrench. No. 899,197; Sept. 22; Sp. p. 3866; Dr. p. 826; Gaz. vol. 136; p. 724.
Allison, J. E., assignor to Laclede Manufacturing Company, St. Louis, Mo. Coin-controlled vending-machine. No. 899,198; Sept. 22; Sp. p. 3867; Dr. p. 826; Gaz. vol. 136; p. 724.
Allith Manufacturing Company. (See Anderson, J., assignor.)
Almond, T. R., Yonkers, assignor to T. R. Almond Manufacturing Company, Brooklyn, N. Y. Drill-chuck. No. 897,335; Sept. 1; Sp. p. 171; Dr. p. 36; Gaz. vol. 136; p. 25.
Alphin, G. E., Mount Olive, N. C. Fertilizer-distributer. No. 899,646; Sept. 29; Sp. p. 4763; Dr. p. 1019; Gaz. vol. 136; p. 905.
Alvord, C., Worcester, Mass., assignor to Fabric Fire Hose Company. Woven hose. No. 899,092; Sept. 22; Sp. p. 3642; Dr. p. 781; Gaz. vol. 136; p. 689.
Ambrose, D. (See Walker, G. F., assignor.)
American Automotoneer Company. (See Du Bois, F. M., assignor.)
American Automotoneer Company. (See Ebersole, C. P., assignor.)
American Bacteria-ized Fertilizer Company. (See Coates, L. R., assignor.)
American Bridge Company. (See Riggs, M. J., assignor.)
American Can Company. (See Marcuse, I. J., assignor.)

American Circular Loom Company. (See Lutz, G. A., assignor.)
American Clay Machinery Company. (See Cunningham, W. R., assignor.)
American Couch Company. (See Luppino, J., assignor.)
American Diesel Engine Company. (See Macpherson, J. D., assignor.)
American Gas Light Company. (See Maas, J., assignor.)
American Lacing Hook Co. (See Perrault, J. E., assignor.)
American Numbering Machine Company. (See Conrad, B. B., assignor.)
American Optical Company. (See Laflin, S. C., assignor.)
American Process Company. (See Merz, R. G., assignor.)
American Steel Foundries. (See Kinne, E. P., assignor.)
American Steel Wheel Company. (See Welch, J. R., assignor.)
American Telephone and Telegraph Company. (See Shreeve, H. E., assignor.)
American Type Founders Company. (See Fiske, W., assignor.)
American Wood Working Machinery Co. (See Whipple, L. B., assignor.)
Ammerman, W. M., New Haven, Conn., assignor, by mesne assignments, to A. E. Avery, administratrix. Clutch. No. 900,052; Sept. 29; Sp. p. 5638; Dr. p. 1204; Gaz. vol. 136; p. 1037.
Amory, R., Boston, Mass. Manufacturing instruments for separating the cuticle from the nails. No. 897,810; Sept. 1; Sp. p. 1158; Dr. p. 247; Gaz. vol. 136; p. 184.
Amstalden, W., assignor of one-half to A. Weil, Amador City, Cal. Electric-light fixture. No. 898,083; Sept. 8; Sp. p. 1743; Dr. p. 371; Gaz. vol. 136; p. 305.
Anable, F. S., assignor to National Binding Machine Company, Boston, Mass. Strip-serving device. No. 897,509; Sept. 1; Sp. p. 549; Dr. p. 116; Gaz. vol. 136; p. 88.
Anable, F. S., assignor to National Binding Machine Company, Boston, Mass. Strip-serving device. No. 897,510; Sept. 1; Sp. p. 552; Dr. p. 116; Gaz. vol. 136; p. 88.
Anderegg, D. (See Pillmore and Anderegg.)
Andersen, N. M., Detroit, Mich. Bread-cutting device. No. 898,163; Sept. 8; Sp. p. 1896; Dr. p. 405; Gaz. vol. 136; p. 330.
Anderson, C. G. (See Pålsson, C. J., assignor.)
Anderson, E. L., Philadelphia, Pa. Automatic tramway-switch. No. 897,511; Sept. 1; Sp. p. 556; Dr. p. 117; Gaz. vol. 136; p. 88.
Anderson, E. M. (See Byrd and Anderson.)
Anderson, J., assignor to Allith Manufacturing Company, Hamilton, Ontario, Canada. Support for sliding-door tracks. No. 897,697; Sept. 1; Sp. p. 926; Dr. p. 196; Gaz. vol. 136; p. 148.
Anderson, R. H., Germiston, Transvaal. Rock-drill. No. 897,336; Sept. 1; Sp. p. 172; Dr. p. 36; Gaz. vol. 136; p. 26.
Anderson, S. P. A., Stockholm, Sweden. Churn. No. 897,698; Sept. 1; Sp. p. 927; Dr. p. 197; Gaz. vol. 136; p. 149.
Anderson, T. W., Seale, Ala. Mail-box. No. 899,781; Sept. 29; Sp. p. 5048; Dr. p. 1082; Gaz. vol. 136; p. 950.
Anderson, V. G., Worcester, Mass. Mail-arranging device. No. 898,164; Sept. 8; Sp. p. 1898; Dr. p. 406; Gaz. vol. 136; p. 330.
Andrew, J. T., Montgomery, Ala. Safety appliance for railways. No. 897,864; Sept. 8; Sp. p. 1274; Dr. p. 272; Gaz. vol. 136; p. 233.
Andrew, J. T., Montgomery, Ala. Safety appliance for railway-cars. No. 898,165; Sept. 8; Sp. p. 1900; Dr. p. 406; Gaz. vol. 136; p. 330.
Andrew, W. K., Milwaukee, Wis., assignor to International Harvester Company. Starting mechanism for gas-engines. No. 899,498; Sept. 29; Sp. p. 4441; Dr. p. 953; Gaz. vol. 136; p. 856.
Andrews, A. W., assignor to Andrews Wire & Iron Works, Rockford, Ill. Carpet-beater. No. 897,512; Sept. 1; Sp. p. 562; Dr. p. 118; Gaz. vol. 136; p. 89.
Andrews, C., Jr., assignor to Andrews Wire & Iron Works, Rockford, Ill. Toaster. No. 897,513; Sept. 1; Sp. p. 562; Dr. p. 118; Gaz. vol. 136; p. 89.
Andrews Wire & Iron Works. (See Andrews, A. W., assignor.)
Andrews Wire & Iron Works. (See Andrews, C., Jr., assignor.)
Anger, J. E. Preston, England. Car structure. No. 898,952; Sept. 15; Sp. p. 3384; Dr. p. 727; Gaz. vol. 136; p. 616.
Angove, J. B. (See Free and Angove.)
Applegarth, E. (See Quain, J. R., assignor.)
Applegate, J. S., Philadelphia, Pa. Fastener for envelops and the like. No. 898,819; Sept. 15; Sp. p. 3154; Dr. p. 674; Gaz. vol. 136; p. 572.
Appleton Machine Company. (See Saecker, H. G., assignor.)
Aptekman, L., Westcliff-on-Sea, England. Tool or apparatus for use in the manufacture of hand-made cigarettes. No. 897,699; Sept 1; Sp. p. 930; Dr. p. 197; Gaz. vol. 136; p. 149.
Arabol Manufacturing Company. (See Goodh, A. E., assignor.)
Ardengo, L., New York, N. Y., assignor to H. A. Thomsen, Madison, N. J. Support for flexible fire-escapes. No. 899,371; Sept. 22; Sp. p. 4200; Dr. p. 899; Gaz. vol. 136; p. 779.
Arms, R. M. (See Hoffman, A. J., assignor.)
Armstrong, D. C., and W. P. Fitzgerald, Princess Anne, Md. Rail-joint. No. 899,647; Sept. 29; Sp. p. 4765; Dr. p. 1019; Gaz. vol. 136; p. 905.
Armstrong, J. C., Newkirk, Okla. Stone-dressing machine. No. 898,820; Sept. 15; Sp. p. 3155; Dr. p. 675; Gaz. vol. 136; p. 573.
Arnhard, C. von, Munich, Germany. Making photographic copies of printed matter and the like. No. 897,954; Sept. 8; Sp. p. 1483; Dr. p. 315; Gaz. vol. 136; p. 264.
Arnold, G. J., assignor to himself and C. L. Bastian, Chicago, Ill. Bottle-soaking machine. No. 899,017; Sept. 22; Sp. p. 3518; Dr. p. 753; Gaz. vol. 136; p. 665.
Arras, P. D., Rawson, Ohio. Plow. No. 897,865; Sept. 8; Sp. p. 1277; Dr. p. 273; Gaz. vol. 136; p. 233.
Arrouquier, F. E., Westbrook, Me., assignor, by mesne assignments, to Goodall Matting Company. Selvage-forming mechanism for short-weft looms. No. 897,263; Sept. 1; Sp. p. 1; Dr. p. 1; Gaz. vol. 136; p. 3.
Arthur Koppel Company. (See Hansen, K. H., assignor.)
Ashbaugh, H., Indianapolis, Ind. Insulating-coupling. No. 897,700; Sept. 1; Sp. p. 932; Dr. p. 197; Gaz. vol. 136; p. 149.
Ashman, E. (See Ritter, I. B., assignor.)
Ashton, O., Lawrence, assignor to United Shoe Machinery Company, Boston, Mass. Machine for making and driving staples. No. 899,093; Sept. 22; Sp. p. 3643; Dr. pp. 781–3; Gaz. vol. 136; p. 689.
Asquith, S. A., Waterloo, Iowa. Power-transmission device. No. 899,283; Sept. 22; Sp. p. 4048; Dr. pp. 865–6; Gaz. vol. 136; p. 751.
Ast, H., assignor to Firm of Vulkan Maschinenfabriks-Actien-Gesellschaft, Vienna, Austria-Hungary. Clutch. No. 899,822; Sept. 29; Sp. p. 5134; Dr. p. 1098; Gaz. vol. 136; p. 903.
Atwood, G. F., East Orange, N. J., assignor to Western Electric Company, Chicago, Ill. Signaling apparatus. No. 897,866; Sept. 8; Sp. p. 1279; Dr. pp. 273–4; Gaz. vol. 136; p. 233.
Aucoc, G., Paris, France. Metallic web or fabric. No. 898,166; Sept. 8; Sp. p. 1902; Dr. p. 406; Gaz. vol. 136; p. 331.
Audiffren, M., Golbey and H. A. Singrün; said Singrün assignor to Societe des Etablissements Singrün, Epinal, France. Rotary refrigerating-machine. No. 898,400; Sept. 8; Sp. p. 2327; Dr. p. 494; Gaz. vol. 136; p. 405.
Augir, N. G., Brooklyn, N. Y. Street-signal for cars. No. 899,499; Sept. 29; Sp. p. 4443; Dr. p. 954; Gaz. vol. 136; p. 856.
Aurora Automatic Machinery Company. (See Levedahl, A., assignor.)
Austin, F. C. (See Bathrick, C. E., assignor.)
Austin, F. C. (See Stark, W. O., assignor.)
Austin, J., St. Regis, Mont. Shovel and support therefor. No. 898,623; Sept. 15; Sp. p. 2785; Dr. p. 595; Gaz. vol. 136; p. 510.
Auto Stopper Company. (See Hicks, J. M., assignor.)
Automatic Inventions Company. (See Stroock, S. M., assignor.)
Automatic Photograph Printing Machine Company. (See Ware and Rundle, assignors.)
Automatic Safety Pulley Block Manufacturing Company. (See Carter, F. W., assignor.)
Avery, A. E., administratrix. (See Ammerman, W. M., assignor.)
Avery Manufacturing Company. (See Springer, W. N., assignor.)
Avery, T. M., Ottumwa, Iowa, assignor, by mesne assignments, to Union Paper Bag Machine Company, Philadelphia, Pa. Body-forming mechanism of bag-machines. No. 898,167; Sept. 8; Sp. p. 1903; Dr. pp. 406–7; Gaz. vol. 136; p. 331.
Ayres, O. O., Olathe, Kans. Mail-bag catching and delivering apparatus. No. 897,443; Sept. 1; Sp. p. 419; Dr. pp. 89–90; Gaz. vol. 136; p. 65.
Ayres, W., Plainfield, N. J. Corn-popper. No. 898,953; Sept. 15; Sp. p. 3385; Dr. p. 727; Gaz. vol. 136; p. 616.
B. A. Ballou & Company. (See Morehouse, E. W., assignor.)
Baase, H. C., Indianapolis, Ind., assignor to Universal Automatic Carving Machine Co., Chicago, Ill. Retracting mechanism for automatic carving-machines. No. 898,168; Sept. 8; Sp. p. 1906; Dr. p. 408; Gaz. vol. 136; p. 331.
Babcock & Wilcox Company. (See Summers, L. L., assignor.)
Bache, H. M., assignor to Firm of Artieselskabet Stav. Blikt rykkeri og Maskinvaerksted, Stavanger, Norway. Joint for sheet-metal vessels. No. 899,587; Sept. 29; Sp. p. 4635; Dr. p. 995; Gaz. vol. 136; p. 887.
Bache, L. S., Boundbrook, N. J. Incubator. No. 898,301; Sept. 8; Sp. p. 2156; Dr. p. 458; Gaz. vol. 136; p. 372.
Backermann, H. G., Yoakum, Tex. Spring. No. 898,084; Sept. 8; Sp. p. 1745; Dr. p. 371; Gaz. vol. 136; p. 306.
Badische Anilin & Soda Fabrik. (See Bohn, R., assignor.)
Baggaley, R., Pittsburg, Pa. Slag-heated boiler. No. 898,302; Sept. 8; Sp. p. 2158; Dr. p. 458; Gaz. vol. 136; p. 373.

Bahret, G. H. (See Burnett and Bahret.)
Bailey, J. T. (See Kersey, R., assignor.)
Bains, E., *et al.* (See Barger, J. P., assignor.)
Baird, G. M., Oklahoma, Okla. Automatic grain-weigher. No. 898,420; Sept. 15; Sp. p. 2382; Dr. p. 509; Gaz. vol. 136; p. 445.
Baker, E. A., assignor to Rapid Removable Rim Company, New York, N. Y. Detachable rim for vehicle-wheel tires. No. 897,701; Sept. 1; Sp. p. 933; Dr. p. 198; Gaz. vol. 136; p. 150.
Baker, E. K., assignor of one-half to C. G. Hawley, Chicago, Ill. Convertible pneumatic-tire rim. No. 899,856; Sept. 29; Sp. p. 5217; Dr. p. 1116; Gaz. vol. 136; p. 975.
Baker, G. A., Jr., assignor to M. J. Baker, Chicago, Ill. Player-piano. No. 899,018; Sept. 22; Sp. p. 3520; Dr. p. 754; Gaz. vol. 136; p. 665.
Baker, J. M. (See Bartram, E. S., assignor.)
Baker, M. A., Los Angeles, Cal. Rope-sheave. No. 899,648; Sept. 29; Sp. p. 4766; Dr. p. 1020; Gaz. vol. 136; p. 905.
Baker, M. J. (See Baker, G. A., Jr., assignor.)
Baker, P. S., and O. E. Vance, Muscatine, Iowa. Machine for washing and scalding fruits, &c. No. 898,954; Sept. 15; Sp. p. 3387; Dr. p. 727; Gaz. vol. 136; p. 617.
Baker, T. T., Jonesboro, Ill. Fastening device for pump curbs or frames. No. 898,303; Sept. 8; Sp. p. 2159; Dr. p. 459; Gaz. vol. 136; p. 373.
Baker, W. L., Indianapolis, Ind. Combined scraper and drag. No. 898,421; Sept. 15; Sp. p. 2385; Dr. p. 510; Gaz. vol. 136; p. 446.
Baldwin, W. J., Brooklyn, N. Y. Centrifugal fan. No. 898,624; Sept. 15; Sp. p. 2788; Dr. p. 596; Gaz. vol. 136; p. 510.
Ball, F. H., North Plainfield, N. J. Connection for electric conductors. No. 899,708; Sept. 29; Sp. p. 4872; Dr. p. 1045; Gaz. vol. 136; p. 923.
Ball, H. P., New York, N. Y., assignor to General Incandescent Arc Light Company. Automatic circuit-breaker. No. 897,858; Sept. 1; Sp. p. 1262; Dr. pp. 270–1; Gaz. vol. 136; p. 199.
Ballard, F. W., assignor to Sherwin-Williams Company, Cleveland, Ohio. Can crimping and soldering machine. No. 897,337; Sept. 1; Sp. p. 173; Dr. pp. 36–8; Gaz. vol. 136; p. 26.
Ballif, D., Biel, Switzerland. Means for securing wheels on axles. No. 897,444; Sept. 1; Sp. p. 423; Dr. p. 90; Gaz. vol. 136; p. 66.
Ballod, K., Riga, Russia. Cycle-lock. No. 898,955; Sept. 15; Sp. p. 3389; Dr. p. 728; Gaz. vol. 136; p. 617.
Ballou, E. H., assignor to Lorraine Manufacturing Company, Pawtucket, R. I. Loom-dobby. No. 897,568; Sept. 1; Sp. p. 674; Dr p. 141; Gaz. vol. 136; p. 106.
Ballou, W. D., Belding, Mich. Packing-case. No. 898,169; Sept. 8; Sp. p. 1911; Dr. p. 408; Gaz. vol. 136; p. 332.
Balsinger, E. M. (See Bryan, Etheridge, and Balsinger.)
Bancroft, R. F., Tropico, Cal. Expression and feed control for piano-players, &c. No. 899,094; Sept. 22; Sp. p. 3655; Dr. p. 783; Gaz. vol. 136; p. 689.
Banks, J. D., Philadelphia, Pa. Hat-pin. No. 898,422; Sept. 15; Sp. p. 2386; Dr. p. 510; Gaz. vol. 136; p. 446.
Barabasz, M., Baltimore, Md. Buckle. (Reissue.) No. 12,855; Sept. 22; Sp. p. 4424; Dr. p. 950; Gaz. vol. 136; p. 819.
Barber, J. W., Newton, Mass. Packing and display case. No. 898,170; Sept. 8; Sp. p. 1912; Dr. p. 408; Gaz. vol. 136; p. 332.
Barbera, A. A., Philadelphia, Pa. Electric signal system. No. 897,702; Sept. 1; Sp. p. 934; Dr. p. 198; Gaz. vol. 136; p. 150.
Barbour, W. R., Terre Haute, Ind. Metallic tire. No. 898,029; Sept. 8; Sp. p. 1638; Dr. p. 349; Gaz. vol. 136; p. 288.
Barentzen, F. E., Malden, assignor to W. G. Burns, Boston, Mass. Means for producing artificial light for photographers' use. No. 897,569; Sept. 1; Sp. p. 677; Dr. p. 142; Gaz. vol. 136; p. 106.
Barger, C. C., *et al.* (See Barger, J. P., assignor.)
Barger, J. P., assignor of two-thirds to C. C. Barger, Bloomsburg, and E. Bains, Philadelphia, Pa. Winding attachment for looping-machines. No. 899,857; Sept. 29; Sp. p. 5218; Dr. p. 1116; Gaz. vol. 136; p. 975.
Barker, E. A., Bemidji, Minn. Watchmaker's pliers. No. 898,304; Sept. 8; Sp. p. 2161; Dr. p. 459; Gaz. vol. 136; p. 373.
Barker, J., Philadelphia, Pa. Grate. No. 899,372; Sept. 22; Sp. p. 4202; Dr. p. 900; Gaz. vol. 136; p. 779.
Barkmeier, H., *et al.* (See Heyenga, M. W., assignor.)
Barkmeier, M., *et al.* (See Heyenga, M. W., assignor.)
Barnes, A. G. (See Haley, T., assignor.)
Barnes, A. J., London, England. Apparatus for deodorizing and filtering petrol spirit. No. 898,545; Sept. 15; Sp. p. 2641; Dr. p. 564; Gaz. vol. 136; p. 485.
Barnes, B. C. (See Tangney and Barnes.)
Barnes, E. S., G. T. Williams, and C. B. Reynolds, Seattle, Wash. Means for securing artificial dentures. No. 898,546; Sept. 15; Sp. p. 2642; Dr. p. 565; Gaz. vol. 136; p. 485.
Barnes, N. E., Willis, Tex. Hot-box cooler and oiler. No. 899,939; Sept. 29; Sp. p. 5385; Dr. p. 1149; Gaz. vol. 136; p. 1000.
Barnett, O. R. (See Scott, J. M., assignor.)
Barney & Berry. (See Dodge, W. P., assignor.)
Barnhart, C. K. (See Wilson and Barnhart.)
Barnhart, J. C., Akron, Ohio. Swinging chair. No. 898,305; Sept. 8; Sp. p. 2162; Dr. p. 459; Gaz. vol. 136; p. 373.
Barr, S. U., New York, N. Y. Window. No. 897,703; Sept. 1; Sp. p. 937; Dr. p. 199; Gaz. vol. 136; p. 150.
Barrett, E. E., La Grange, Ill. Loading and unloading apparatus. No. 899,095; Sept. 22; Sp. p. 3658; Dr. pp. 783–4; Gaz. vol. 136; p. 690.
Barrett, H. N., Hope, N. D., and E. D. Wallace, Minneapolis, Minn. Attachment for graders. No. 897,955; Sept. 8; Sp. p. 1485; Dr. p. 316; Gaz. vol. 136; p. 264.
Barrett, H. N., Bayhridge, assignor to Medusa Concrete Waterproofing Company, Sandusky, Ohio. Manufacture of insoluble lime salts of fatty acids. No. 898,547; Sept. 15; Sp. p. 2644; Gaz. vol. 136; p. 485.
Barrett, J. H. (See Reagan, H. C., assignor.)
Barrie, R. C., Philadelphia, Pa. Automatic pneumatic-tire inflater. No. 897,811; Sept. 1; Sp. p. 1159; Dr. p. 247; Gaz. vol. 136; p. 184;
Barron, W. F., Jacksonburg, W. Va. Nut-lock. No. 899,940; Sept. 29; Sp. p. 5386; Dr. p. 1149; Gaz. vol. 136; p. 1000.
Bartelme, M. M., administratrix. (See Raymond, A.)
Bartels, A., Yonkers, N. Y. Carpenter's combination-tool. No. 897,867; Sept. 8; Sp. p. 1281; Dr. p. 274; Gaz. vol. 136; p. 234.
Barth, W. H., *et al.* (See Ridout, J. B., assignor.)
Bartholomäus, R., Dresden, Germany. Die-stock. No. 898,956; Sept. 15; Sp. p. 3391; Dr. p. 728; Gaz. vol. 136; p. 617.
Bartholomew, H. G., and H. M. Bussy, London, England. Apparatus for the production of process printing-plates. No. 899,019; Sept. 22; Sp. p. 3523; Dr. p. 754; Gaz. vol. 136; p. 666.
Bartholomew, W. H., East Orange, N. J., assignor to C. B. Hill, trustee, Montgomery, N. Y. Feed-water regulator. No. 898,625; Sept. 15; Sp. p. 2789; Dr. p. 596; Gaz. vol. 136; p. 510.
Bartlett, G. M., Ann Arbor, Mich. Flexible shaft-coupling. No. 898,423; Sept. 15; Sp. p. 2387; Dr. p. 510; Gaz. vol. 136; p. 446.
Bartlett, M. J., assignor to J. Silverman, Chicago, Ill. Wire-rod-bending machine. No. 898,424; Sept. 15; Sp. p. 2388; Dr. pp. 510–12; Gaz. vol. 136; p. 446.
Barton, C. J., Big Rapids, Mich. Gas-mantle support. No. 898,957; Sept. 15; Sp. p. 3392; Dr. p. 728; Gaz. vol. 136; p. 618.
Barton, E. L., Bloomsburg, Pa. Railway-cross-tie lift. No. 899,373; Sept. 22; Sp. p. 4203; Dr. p. 900; Gaz. vol. 136; p. 780.
Bartram, E. S., assignor of one-half to J. M. Baker, Selma, Ala. Drawers. No. 899,500; Sept. 29; Sp. p. 4446; Dr. p. 954; Gaz. vol. 136; p. 857.
Bartrum, C. W., assignor to Sweet, Orr & Company, Newburgh, N. Y. Apron. No. 897,445; Sept. 1; Sp. p. 423; Dr. p. 90; Gaz. vol. 136; p. 66.
Barzee, F. S., Everett, Wash. Automatic trap-nest. No. 899,709; Sept. 29; Sp. p. 4873; Dr. pp. 1045–6; Gaz. vol. 136; p. 923.
Bassell, J. Y., and F. C. Blenkner, Columbus, Ohio. Gun-sight. No. 899,020; Sept. 22; Sp. p. 3524; Dr. p. 754; Gaz. vol. 136; p. 666.
Bastian, C. L. (See Arnold, G. J., assignor.)
Bastian, C. O., and G. Calvert, London, England. Electric ignition device or sparking plug for internal-combustion motors. No. 897,868; Sept. 8; Sp. p. 1283; Dr. p. 274; Gaz. vol. 136; p. 234.
Bates Machine Company. (See Sawyer, W. W., assignor.)
Bathrick, C. E., assignor to F. C. Austin, Chicago, Ill. Automatic water-supply tank. No. 897,338; Sept. 1; Sp. p. 180; Dr. p. 38; Gaz. vol. 136; p. 26.
Bathrick, C. E., assignor to F. C. Austin, Chicago, Ill. Mixing-machine. No. 898,171; Sept. 8; Sp. p. 1914; Dr. pp. 409–10; Gaz. vol. 136; p. 332.
Bauer, E. H., Hammond, Ind., assignor to Simplex Railway Appliance Company, Chicago, Ill. Brake-beam strut and fulcrum. No. 897,570; Sept. 1; Sp. p. 679; Dr. p. 142; Gaz. vol. 136; p. 107.
Bauer, M. K., Evanston, assignor of one-half to J. Heinzen, Gross Point, Ill. Time-controlled mechanism. No. 900,053; Sept. 29; Sp. p. 5639; Dr. p. 1204; Gaz. vol. 136; p. 1038.
Bauer, W., Vohwinkel, near Elberfeld, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Making red vat dyes. No. 899,152; Sept. 22; Sp. p. 3772; Gaz. vol. 136; p. 710.
Baumgardner, W., Zelienople, Pa. Clutch-pulley. No. 897,704; Sept. 1; Sp. p. 939; Dr. p. 200; Gaz. vol. 136; p. 151.
Bay State Metal Wheel Company. (See Turner, O. N., assignor.)
Bayless, W. C., Jefferson City, Tenn. Plow. No. 899,021; Sept. 22; Sp. p. 3526; Dr. p. 754; Gaz. vol. 136; p. 666.
Bayley, W., Springfield, Ohio. Railing. No. 897,571; Sept. 1; Sp. p. 681; Dr. pp. 142–3; Gaz. vol. 136; p. 107.
Bayne, E. D. C., and L. A. Subers, Cleveland, Ohio. Automatic machine for winding fire-hose pipe and analogous tubing. No. 897,339; Sept. 1; Sp. p. 182; Dr. p. 39; Gaz. vol. 136; p. 27.

Beal, F. A., assignor to Beal & Hanscom, Haverhill, Mass. Turned shoe. No. 899,501; Sept. 29; Sp. p. 4447; Dr. p. 954; Gaz. vol. 136; p. 857.
Beal & Hanscom. (See Beal, F. A., assignor.)
Bean, O. U., New York, N. Y., assignor to Bunsen Smokeless Furnace Company of America. Boiler-furnace. No. 897,446; Sept. 1; Sp. p. 424; Dr. pp. 90–1; Gaz. vol. 136; p. 66.
Bean, R., Berea, Ohio. Torpedo-cane. No. 897,572; Sept. 1; Sp. p. 682; Dr. p. 143; Gaz. vol. 136; p. 107.
Beard, T. R., Malvern, Ark. Mall for driving posts into the ground. No. 897,573; Sept. 1; Sp. p. 684; Dr. p. 143; Gaz. vol. 136; p. 108.
Beasley, O., Columbia, Tenn. Plow. No. 897,447; Sept. 1; Sp. p. 426; Dr. p. 91; Gaz. vol. 136; p. 67.
Beatty, R. P., Cleveland, Ohio. Package. No. 898,821; Sept. 15; Sp. p. 3156; Dr. p. 675; Gaz. vol. 136; p. 573.
Bechman, H. F., assignor to Duplex Printing Press Company, Battle Creek, Mich. Stereotype-plate-casting apparatus. No. 899,374; Sept. 22; Sp. p. 4205; Dr. p. 900; Gaz. vol. 136; p. 780.
Becht, A., Paris, France. Valve mechanism for fluid-motors. No. 897,574; Sept. 1; Sp. p. 685; Dr. p. 144; Gaz. vol. 136; p. 108.
Beck, J. C., Sycamore, assignor of one-half to C. T. Brown, Chicago, Ill. Shock-absorber. No. 899,001; Sept. 15; Sp. p. 3472; Dr. pp. 743–4; Gaz. vol. 136; p. 632.
Becker, A., assignor to Ralston Steel Car Company, Columbus, Ohio. Underframe for cars. No. 899,649; Sept. 29; Sp. p. 4767; Dr. p. 1020; Gaz. vol. 136; p. 905.
Becker, A., assignor to Ralston Steel Car Company, Columbus, Ohio. Underframe for cars. No. 899,650; Sept. 29; Sp. p. 4768; Dr. p. 1020; Gaz. vol. 136; p. 906.
Becker, A., assignor to Ralston Steel Car Company, Columbus, Ohio. Underframe for cars. No. 899,651; Sept. 29; Sp. p. 4770; Dr. p. 1020; Gaz. vol. 136; p. 906.
Becket, F. M., Niagara Falls, N. Y., assignor to Electro Metallurgical Company, Chicago, Ill. Producing ferro-alloys. No. 898,173; Sept. 8; Sp. p. 1922; Gaz. vol. 136; p. 333.
Bedell, C. A. (See Foster, S. P., assignor.)
Beeman, W. S., Kansas City, Mo. Street-sweeper. No. 897,705; Sept. 1; Sp. p. 941; Dr. pp. 200–1; Gaz. vol. 136; p. 151.
Beeson, W. W., Redwood, Cal. Extension mining-caisson. No. 898,174; Sept. 8; Sp. p. 1924; Dr. p. 410; Gaz. vol. 136; p. 333.
Behr, P., Berlin, Germany, assignor to General Electric Company. Latch mechanism. No. 897,514; Sept. 1; Sp. p. 563; Dr. p. 118; Gaz. vol. 136; p. 89.
Behrendt, G. H., and A. Lindquist, Minneapolis, Minn. Grain-door construction. No. 897,264; Sept. 1; Sp. p. 6; Dr. p. 2; Gaz. vol. 136; p. 3.
Beilharz, W. E., San Francisco, Cal. Means for attaching bolts to concrete. No. 899,002; Sept. 15; Sp. p. 3474; Dr. p. 744; Gaz. vol. 136; p. 632.
Beinkamp, F. B., Cincinnati, Ohio, and L. L. Harding, Canon City, Colo. Combination vocal and instrumental music sheet. No. 897,340; Sept. 1; Sp. p. 187; Dr. p. 40; Gaz. vol. 136; p. 28.
Belcher, W. J., and W. M. Butler, assignors to Whitney Manufacturing Company, Hartford, Conn. Friction drive-chain. No. 897,515; Sept. 1; Sp. p. 566; Dr. p. 118; Gaz. vol. 136; p. 90.
Beler, A., assignor to Beler Water Heater Co., Pittsburg, Pa. Hydrocarbon-burner. No. 899,003; Sept. 15; Sp. p. 3475; Dr. p. 744; Gaz. vol. 136; p. 632.
Beler Water Heater Co. (See Beler, A., assignor.)
Belknap, E. D., East Orange, N. J. Address-bearing card. No. 898,425; Sept. 15; Sp. p. 2396; Dr. p. 512; Gaz. vol. 136; p. 447.
Bell, W. J., assignor to Los Angeles Switch and Signal Company, Los Angeles, Cal. Power-applying apparatus for operating switches, signals, and other devices. No. 897,516; Sept. 1; Sp. p. 567; Dr. p. 119; Gaz. vol. 136; p. 90.
Belt, W. E., Dodge Center, Minn. Power-transmission mechanism. No. 898,175; Sept. 8; Sp. p. 1925; Dr. p. 411; Gaz. vol. 136; p. 334.
Bendel, J., Paris, France. Apparatus for treatment of ramie and other textile substances. No. 897,956; Sept. 8; Sp. p. 1486; Dr. p. 316; Gaz. vol. 136; p. 264.
Bendmann, P., Berlin, Germany, assignor to General Electric Company. Inverse time-limit relay. No. 897,812; Sept. 1; Sp. p. 1160; Dr. p. 247; Gaz. vol. 136; p. 184.
Benedict, H. E., assignor to United States Smelting, Refining & Mining Company, Salt Lake City, Utah. Bag-house. No. 898,426; Sept. 15; Sp. p. 2397; Dr. pp. 512–14; Gaz. vol. 136; p. 447.
Beneventano, G. (See Bricker, J. W., assignor.)
Benford, R. B., assignor of two-thirds to J. T. Matthews, Pittsburg, and G. W. Jones, Sewickley, Pa. Cross-line buckle. No. 899,375; Sept. 22; Sp. p. 4208; Dr. p. 901; Gaz. vol. 136; p. 780.
Benjamin Electric Manufacturing Company. (See Benjamin, R. B., assignor.)
Benjamin, G. C., Barre, Vt. Self-oiling axle-box. No. 899,941; Sept. 29; Sp. p. 5387; Dr. p. 1149; Gaz. vol. 136; p. 1000.
Benjamin, L. N. (See Tyc and Benjamin.)
Benjamin, R. B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Plural lamp-socket. No. 898,822; Sept. 15; Sp. p. 3157; Dr. p. 675; Gaz. vol. 136; p. 573.
Benjamin, R. B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Plural lamp-socket. No. 898,823; Sept. 15; Sp. p. 3159; Dr. p. 676; Gaz. vol. 136; p. 574.
Benjamin, R. B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Plural lamp-socket. No. 898,824; Sept. 15; Sp. p. 3161; Dr. p. 676; Gaz. vol. 136; p. 574.
Benjamin, R. B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Plural lamp-socket. No. 898,825; Sept. 15; Sp. p. 3163; Dr. p. 676; Gaz. vol. 136; p. 574.
Benjamin, R. B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Plural lamp-socket. No. 898,826; Sept. 15; Sp. p. 3165; Dr. p. 677; Gaz. vol. 136; p. 575.
Benker, U. F., Clichy, France. Manufacture of sulfuric acid and sodium sulfate. No. 899,284; Sept. 22; Sp. p. 4051; Gaz. vol. 136; p. 752.
Benner, H. W., Chambersburg, Pa., assignor to International Gas Development Company. Manufacturing gas. No. 899,690; Sept. 29; Sp. p. 4841; Dr. p. 1037; Gaz. vol. 136; p. 918.
Bennett, A. B., Opelika, Ala. Baling-press. No. 899,502; Sept. 29; Sp. p. 4449; Dr. p. 955; Gaz. vol. 136; p. 857.
Bennett, B. B., Detroit, assignor, by mesne assignments, to Daisy Manufacturing Co., Plymouth, Mich. Air-gun. No. 897,813; Sept. 1; Sp. p. 1163; Dr. p. 248; Gaz. vol. 136; p. 185.
Bennett, C. L. (See Boylan and Bennett.)
Bennett, F. M., New York, N. Y. Incandescent lamp. No. 898,715; Sept. 15; Sp. p. 2962; Dr. p. 635; Gaz. vol. 136; p. 539.
Bennett, N. F., Sunderland, Ontario, Canada. Tongue-support for vehicles. No. 897,957; Sept. 8; Sp. p. 1488; Dr. p. 317; Gaz. vol. 136; p. 265.
Bennett, T. S., Attleboro, Mass. Band for bracelets. No. 897,860; Sept. 8; Sp. p. 1284; Dr. p. 275; Gaz. vol. 136; p. 235.
Bennett, W. B., Ross township, Allegheny county, assignor to Union Steel Casting Company, Pittsburg, Pa. Annealing-box. No. 898,172; Sept. 8; Sp. p. 1920; Dr. p. 410; Gaz. vol. 136; p. 333.
Benoist, H., Paris, France. Igniter for explosion-engines. No. 898,427; Sept. 15; Sp. p. 2399; Dr. p. 514; Gaz. vol. 136; p. 447.
Benson, J. C. P., Chicago, Ill. Roof. No. 899,022; Sept. 22; Sp. p. 3528; Dr. p. 755; Gaz. vol. 136; p. 667.
Bentley, J. (See George, Bentley, and Krough.)
Berg, C. (See Johnson, C. J. F., assignor.)
Berg, L. J., Chicago, Ill., assignor to Metallic Sheathing Company. Trap-door-operating mechanism. No. 899,443; Sept. 22; Sp. p. 4323; Dr. p. 929; Gaz. vol. 136; p. 801.
Berg, P. T. (See Stevens, R. H., assignor.)
Bergman, P. F., and H. W. Grimes, St. Paul, Minn. Mail-bag catcher. No. 897,265; Sept. 1; Sp. p. 8; Dr. p. 2; Gaz. vol. 136; p. 3.
Bergren, J. A., *et al.* (See Blom, C., assignor.)
Bergsträesser, O., Dresden, Germany. Cigarette-machine. No. 899,376; Sept. 22; Sp. p. 4209; Dr. p. 901; Gaz. vol. 136; p. 781.
Berkey, H. E., Monongahela, Pa., assignor to Pioneer Suspender Company. Clasp. No. 898,176; Sept. 8; Sp. p. 1929; Dr. p. 411; Gaz. vol. 136; p. 334.
Berlin Machine Works. (See Lane and Stevens, assignors.)
Bernard, P., Jefferson, S. D. Hog-waterer. No. 898,716; Sept. 15; Sp. p. 2963; Dr. p. 635; Gaz. vol. 136; p. 539.
Bernhard, K., Berlin, Germany. Iron structure for oven-buildings. No. 899,503; Sept. 29; Sp. p. 4453; Dr. p. 956; Gaz. vol. 136; p. 858.
Berry, W. A., Xenia, Ohio. Nipper-tube. No. 897,706; Sept. 1; Sp. p. 943; Dr. p. 201; Gaz. vol. 136; p. 151.
Besser, H., Alpena, Mich. Cement-pipe-making machine. No. 898,428; Sept. 15; Sp. p. 2400; Dr. pp. 514–15; Gaz. vol. 136; p. 448.
Bessler, F. E., Akron, Ohio. Movable stairway. No. 897,870; Sept. 8; Sp. p. 1285; Dr. p. 275; Gaz. vol. 136; p. 235.
Best, W. N., New York, N. Y. Heating-furnace. No. 899,285; Sept. 22; Sp. p. 4052; Dr. p. 866; Gaz. vol. 136; p. 752.
Bestor, G. W. (See Buehler, W., assignor.)
Bethleham Steel Company. (See Meigs and Gathmann, assignors.) (Reissue.)
Bettcher, G. L., *et al.* (See Mentzer, C. E., assignor.)
Bevan, A., Providence, R. I. Block-signal apparatus. No. 899,153; Sept. 22; Sp. p. 3773; Dr. pp. 808–9; Gaz. vol. 136; p. 710.
Bevins, C. L., Jamestown, R. I. Appliance for releasing boats. No. 899,942; Sept. 29; Sp. p. 5388; Dr. p. 1150; Gaz. vol. 136; p. 1000.
Biavati, A. F., Freeport, N. Y. Car for observation-wheels. No. 899,298; Sept. 22; Sp. p. 4064; Dr. p. 866; Gaz. vol. 136; p. 752.
Bickel, H., Franklin, Pa. Pulling-machine. No. 899,943; Sept. 29; Sp. p. 5390; Dr. p. 1150; Gaz. vol. 136; p. 1000.
Bickford, F. H., assignor, by mesne assignments, to National Cash Register Company, Dayton, Ohio. Cash-register. No. 897,575; Sept. 1; Sp. p. 687; Dr. pp. 144–5; Gaz. vol. 136; p. 108.
Bijur, J., New York, N. Y., assignor to General Storage Battery Company. System of regulation. No. 898,030; Sept. 8; Sp. p. 1640; Dr. pp. 349–50; Gaz. vol. 136; p. 268.

Billings, C. E., New Haven, Conn. Carpet-fastener. No. 899,377; Sept. 22; Sp. p. 4210; Dr. p. 901; Gaz. vol. 136; p. 781.
Billows, A. J., Brisbane, Queensland, Australia. Apparatus for carbonating and bottling liquids. No. 899,782; Sept. 29; Sp. p. 5050; Dr. p. 1082; Gaz. vol. 136; p. 950.
Bird, G. W., and H. Akins, Statesboro, Ga. Force-feed lubricator. No. 899,378; Sept. 22; Sp. p. 4212; Dr. p. 901; Gaz. vol. 136; p. 781.
Birmingham Iron Foundry. (See Bylund, W., assignor.)
Bischof, T. (See Fiedler and Bischof.)
Bishop, G. H., Lawrenceburg, Ind. Plasterer's trowel or float. No. 899,653; Sept. 29; Sp. p. 4773; Dr. p. 1021; Gaz. vol. 136; p. 907.
Bishop, J. W., Jr., Worcester, Mass., assignor to J. W. Bishop Company, Providence, R. I. Sash-adjuster. No. 899,783; Sept. 29; Sp. p. 5051; Dr. p. 1082; Gaz. vol. 136; p. 950.
Bissing, P., Topeka, Kans. Action for keyboard stringed musical instruments. No. 899,096; Sept. 22; Sp. p. 3659; Dr. p. 784; Gaz. vol. 136; p. 690.
Blair, G. W. (See Johnson, J. D., assignor.)
Blair, W. E., assignor to Buffalo Gasolene Motor Company, Buffalo, N. Y. Propeller-adjusting device. No. 897,341; Sept. 1; Sp. p. 189; Dr. p. 40; Gaz. vol. 136; p. 28.
Blake, D. C., Marshfield, Oreg. Motor vessel. No. 897,517; Sept. 1; Sp. p. 571; Dr. p. 119; Gaz. vol. 136; p. 90.
Blake, E., Kenora, Ontario, Canada. Piston-rod lubricator. No. 897,448; Sept. 1; Sp. p. 428; Dr. p. 91; Gaz. vol. 136; p. 67.
Blake, R. J. R., Vancouver, British Columbia, Canada. Thimble. No. 898,085; Sept. 8; Sp. p. 1746; Dr. p. 371; Gaz. vol. 136; p. 306.
Blakeley, O., Seattle, Wash. Combination-tool. No. 899,287; Sept. 22; Sp. p. 4055; Dr. p. 867; Gaz. vol. 136, p. 752.
Blakely, C. C., *et al.* (See Humphrey, E. H., assignor.)
Blakeslee, C. F., Rapatee, Ill. Harvester. No. 899,944; Sept. 29; Sp. p. 5394; Dr. p. 1151; Gaz. vol. 136; p. 1001.
Blanchard, G. W., St. Louis, Mo. Rail-splice. No. 897,707; Sept. 1; Sp. p. 944; Dr. p. 201; Gaz. vol. 136; p. 151.
Blanchard, S. R., assignor to Ottawa Banking & Trust Company, Ottawa, Ill. Pump. No. 899,784; Sept. 29; Sp. p. 5053; Dr. p. 1083; Gaz. vol. 136; p. 951.
Blancke, M. H., Merseburg, Germany. Semi-automatic revolving lathe with several mandrels. No. 900,007; Sept. 29; Sp. p. 5525; Dr. pp. 1177–8; Gaz. vol. 136; p. 1022.
Bleckley, F. W., Hazleton, Pa. Running-gear. No. 899,199; Sept. 22; Sp. p. 3869; Dr. p. 827; Gaz. vol. 136; p. 724.
Bleeck, W. A. F., Brisbane, Queensland, Australia. Primary battery. No. 899,823; Sept. 29; Sp. p. 5135; Dr. p. 1098; Gaz. vol. 136; p. 963.
Blenker, F. C. (See Bassell and Blenker.)
Blest, M. C., Bellevue, assignor to Pressed Steel Car Company, Pittsburg, Pa. Tank-car. No. 898,177; Sept. 8; Sp. p. 1930; Dr. p. 412; Gaz. vol. 136; p. 335.
Blom, C., assignor of two-thirds to J. A. Bergren and J. H. Moran, Lake Park, Minn. Grain-tank. No. 897,814; Sept. 1; Sp. p. 1165; Dr. p. 248; Gaz. vol. 136; p. 185.
Bloom, S. C., Philadelphia, Pa. Artificial-tooth mount. No. 897,518; Sept. 1; Sp. p. 574; Dr. p. 120; Gaz. vol. 136; p. 91.
Bloomer, C. T., Newark, N. Y. Folding box. No. 899,654; Sept. 29; Sp. p. 4774; Dr. pp. 1021–2; Gaz. vol. 136; p. 907.
Boardman, J. W., Josephine, assignor of one-half to L. E. Phillips and M. French, Harlem, Mont. Apparatus for recovering mineral values. No. 899,710; Sept. 29; Sp. p. 4875; Dr. p. 1046; Gaz. vol. 136; p. 923.
Bocorselski, F. E., Springfield, Mass. Turret tool-holder. No. 897,576; Sept. 1; Sp. p. 691; Dr. p. 145; Gaz. vol. 136; p. 109.
Bodenheim, G. S., *et al.* (See Humphrey, E. H., assignor.)
Bodenheim, S. H., *et al.* (See Humphrey, E. H., assignor.)
Bodenstein, J. G., Staatsburg, N. Y. Ice-cutting tool. No. 898,306; Sept. 8; Sp. p. 2163; Dr. p. 459; Gaz. vol. 136; p. 374.
Bodey, F. D., Philadelphia, Pa. Wrench. No. 897,266; Sept. 1; Sp. p. 10; Dr. p. 3; Gaz. vol. 136; p. 4.
Boegel, C. W. E., Lima, Ohio. Dust-separating apparatus. No. 897,342; Sept. 1; Sp. p. 191; Dr. p. 41; Gaz. vol. 136; p. 28.
Boehm, W., Berlin-Charlottenburg, Germany. Multiple electric fuse cut-out. No. 898,086; Sept. 8; Sp. p. 1747; Dr. p. 371; Gaz. vol. 136; p. 306.
Bogenberger, F., Milwaukee, Wis. Sash-pivot. No. 897,449; Sept. 1; Sp. p. 429; Dr. p. 92; Gaz. vol. 136; p. 67.
Bogle, W. L., Bentoak, assignor to W. C. McClure and J. T. Harrison, Columbus, Miss. Washtub. No. 898,087; Sept. 8; Sp. p. 1748; Dr. p. 372; Gaz. vol. 136; p. 306.
Bogushefsky, M., New York, N. Y. Car-fender. No. 897,708; Sept. 1; Sp. p. 945; Dr. p. 202; Gaz. vol. 136; p. 152.
Bohn, R., Mannheim, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Resinous product and making same. No. 898,307; Sept. 8; Sp. p. 2164; Gaz. vol. 136; p. 374.
Bolens, H. W., Port Washington, Wis. Revolving chair. No. 899,504; Sept. 29; Sp. p. 4454; Dr. p. 956; Gaz. vol. 136; p. 858.
Boll, G. W., Mount Hope, Kans. Storage-bin. No. 897,709; Sept. 1; Sp. p. 947; Dr. p. 202; Gaz. vol. 136; p. 152.
Bolte, E. F. (See Bolte, T. H., assignor.)
Bolte, T. H., Kearney, Nebr., assignor of one-half to E. F. Bolte, Eau Claire, Wis. Concrete-mixer. No. 898,958; Sept. 15; Sp. p. 3393; Dr. pp. 728–9; Gaz. vol. 136; p. 618.
Bolton, H., *et al.* (See Watson, W. C., assignor.)
Bolze, H. (See Nathan and Bolze.)
Bolze, H. A., Hanover, Germany. Boiler. No. 898,548; Sept. 15; Sp. p. 2645; Dr. p. 565; Gaz. vol. 136; p. 436.
Bommer, E., New York, N. Y. Double-acting spring-hinge. No. 898,031; Sept. 8; Sp. p. 1645; Dr. p. 350; Gaz. vol. 136; p. 288.
Bond Bottle Sealing Company. (See Bond, S. C., assignor.)
Bond, S. C., Wilmington, Del., assignor, by mesne assignments, to Bond Bottle Sealing Company. Mechanism for sealing and capping bottles. No. 898,959; Sept. 15; Sp. p. 3395; Dr. p. 729; Gaz. vol. 136; p. 618.
Bond, S. C., Wilmington, Del., assignor, by mesne assignments, to Bond Bottle Sealing Company. Sealing and capping bottles. No. 899,004; Sept. 15; Sp. p. 3477; Dr. p. 705; Gaz. vol. 136; p. 633.
Bonner, L., Ames, Colo. Rotary engine. No. 897,519; Sept. 1; Sp. p. 575; Dr. p. 120; Gaz. vol. 136; p. 91.
Bonroe, F. A., St. Louis, Mo. Flat-iron. No. 899,200; Sept. 22; Sp. p. 3870; Dr. p. 827; Gaz. vol. 136, p. 725.
Bonsall, S. W., New York, N. Y. Trunk. No. 898,549; Sept. 15; Sp. p. 2648; Dr. p. 566; Gaz. vol. 136; p. 436.
Booth, E. L., deceased, Cincinnati, Ohio; J. L. Booth, administrator, assignor to J. L. Booth, Cincinnati, Ohio. Gate-operating device. No. 897,267; Sept. 1; Sp. p. 11; Dr. p. 3; Gaz. vol. 136; p. 4.
Booth, J. J., Rockford, Ill. Shears and scissors. No. 898,401; Sept. 8; Sp. p. 2330; Dr. p. 495; Gaz. vol. 136; p. 405.
Booth, J. L. (See Booth, E. L., assignor.)
Bostwick Steel Lath Company. (See Hurlbert, W. G., assignor.)
Bottle Capping Machine Company. (See Cooper, W., assignor.)
Bötz, H. W., Ludwigshafen-on-the-Rhine, Germany. Apparatus for scouring and cleaning the interiors of pipes or tubes. No. 899,236; Sept. 22; Sp. p. 3998; Dr. p. 841; Gaz. vol. 136; p. 737.
Bour, J., Sedalia, Mo. Mail-crane. No. 897,268; Sept. 1; Sp. p. 12; Dr. p. 3; Gaz. vol. 136; p. 4.
Bourne, G. C., Worcester, Mass. Barrel-grip for revolvers and other pistols. No. 897,577; Sept. 1; Sp. p. 693; Dr. p. 145; Gaz. vol. 136; p. 109.
Bourne, G. C., Worcester, Mass. Combined grip and sight for firearms. No. 898,178; Sept. 8; Sp. p. 1933; Dr. p. 413; Gaz. vol. 136; p. 335.
Bowdle, F. A. (See Fogarty, Brock, and Bowdle.)
Bowen, A. F. W., San Francisco, Cal. Caster. No. 899,505; Sept. 29; Sp. p. 4456; Dr. p. 956; Gaz. vol. 136; p. 858.
Bowen, L. F., Jr., Baltimore, Md. Shirt. No. 899,154; Sept. 22; Sp. p. 3779; Dr. p. 809; Gaz. vol. 136; p. 710.
Bower, R. L., Blandburg, Pa. Railway-tie. No. 899,023; Sept. 22; Sp. p. 3529; Dr. p. 755; Gaz. vol. 136; p. 667.
Bowers, T. G., assignor to Gilbert Mfg. Co., New Haven, Conn. Corset. No. 899,100; Sept. 22; Sp. p. 3998; Dr. p. 785; Gaz. vol. 136; p. 692.
Bowker, T. F., assignor, by mesne assignments, to M. E. Johnson, trustee, Fitchburg, Mass. Revolver. No. 898,717; Sept. 15; Sp. p. 2964; Dr. p. 635; Gaz. vol. 136; p. 540.
Bowman, R. H., Canon City, Colo. Short-turn gear. No. 897,450; Sept. 1; Sp. p. 431; Dr. pp. 92–3; Gaz. vol. 136; p. 67.
Bowman, R. H., Canon City, Colo. Derrick or hoisting means. No. 897,451; Sept. 1; Sp. p. 434; Dr. p. 93; Gaz. vol. 136; p. 68.
Bowman, R. H., Canon City, Colo. Propelling mechanism. No. 898,626; Sept. 15; Sp. p. 2792; Dr. pp. 597–8; Gaz. vol. 136; p. 511.
Boyd, D. C., Galion, Ohio. Culvert. No. 898,088; Sept. 8; Sp. p. 1749; Dr. p. 372; Gaz. vol. 136; p. 307.
Boyer, J., St. Louis, Mo., assignor to Chicago Pneumatic Tool Company. Pneumatic hammer. No. 897,958; Sept. 8; Sp. p. 1489; Dr. p. 317; Gaz. vol. 136; p. 265.
Boylan, A. B. and C. F., and C. L. Bennett, Victor, Colo. Packing-case. No. 899,097; Sept. 22; Sp. p. 3662; Dr. p. 784; Gaz. vol. 136; p. 691.
Boylan, C. F. (See Boylan and Bennett.)
Boyle, T. V., Cleveland, Ohio. Nut-lock. No. 898,432; Sept. 15; Sp. p. 2410; Dr. p. 516; Gaz. vol. 136; p. 449.
Boyse, C. W., assignor of one-half to D. B. Carmichael, Chicago, Ill. Gas-lamp. No. 898,312; Sept. 8; Sp. p. 2171; Dr. p. 461; Gaz. vol. 136; p. 375.
Boyse, G. W., assignor of one-half to D. B. Carmichael, Chicago, Ill. Gas-lamp. No. 898,627; Sept. 15; Sp. p. 2798; Dr. p. 598; Gaz. vol. 136; p. 511.
Bozard, H. B., Lincoln, Nebr. Grain-distributer. No. 899,711; Sept. 29; Sp. p. 4879; Dr. p. 1047; Gaz. vol. 136; p. 924.
Brabrook, G. H., Taunton, Mass. Ring-spinning machine. No. 897,578; Sept. 1; Sp. p. 695; Dr. p. 146; Gaz. vol. 136; p. 109.

Bracken, H. W., assignor to Draper Company, Hopedale, Mass. Core-molding apparatus. No. 900,054; Sept. 29; Sp. p. 5643; Dr. p. 1205; Gaz. vol. 136; p. 1038.
Bradburn, F. C. (See Low, Bradburn, and Tyler.)
Bradbury, C. C., assignor to Kellogg Switchboard and Supply Company Chicago, Ill. Party-line-indicating key. No. 899,024; Sept. 22; Sp. p. 3530; Dr. p. 755, Gaz. vol. 136; p. 667.
Bradbury, C. C., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Party-line-indicating key. No. 899,379; Sept. 22; Sp. p. 4213; Dr. p. 902; Gaz. vol. 136; p. 782.
Braddock, S. E., assignor of one-half to A. D. Paul, Brooklyn, N. Y. Cork-extractor. No. 899,380; Sept. 22; Sp. p. 4216; Dr. p. 902; Gaz. vol. 136; p. 782.
Bradley, A. G., Edwardsville, Ill. Sewing-machine needle. No. 899,381; Sept. 22; Sp. p. 4217; Dr. p. 902; Gaz. vol. 136; p. 782.
Brady, V., McKeesport, Pa. Curtain-pole. No. 899,288; Sept. 22; Sp. p. 4055; Dr. p. 867; Gaz. vol. 136; p. 753.
Braemer, W. G. R., Buffalo, N. Y., assignor to Warren Webster & Company. Apparatus for purifying and humidifying air. No. 899,289; Sept. 22; Sp. p. 4056; Dr. p. 867; Gaz. vol. 136; p. 753.
Braen, J. (See Braen, P. and J.)
Braen, P. and J., North Paterson, N. J., assignors of three-fourths to C. D. Bunnell, Brooklyn, N. Y. Amusement apparatus. No. 897,710; Sept. 1; Sp. p. 949; Dr. p. 203; Gaz. vol. 136; p. 152.
Brage, C. O., St. Joseph, Mo. Spring construction. No. 898,429; Sept. 15; Sp. p. 2406; Dr. p. 515; Gaz. vol. 136; p. 448.
Braine, B. G., assignor to Rail Joint Company, New York, N. Y. Electrically-conductive railway-rail joint or connection. No. 898,430; Sept. 15; Sp. p. 2407; Dr. p. 515; Gaz. vol. 136; p. 448.
Braly, J. M., Villapark, N. J. Roller. No. 898,827; Sept. 15; Sp. p. 3167; Dr. p. 677; Gaz. vol. 136; p. 575.
Brameld, W., assignor of one-tenth to J. T. Jordan, Paterson, N. J. Elastic vehicle-tire. No. 898,402; Sept. 8; Sp. p. 2331; Dr. p. 495; Gaz. vol. 136; p. 406.
Brannan, J. E., Idagrove, Iowa. Bicycle handle-bar. No. 897,579; Sept. 1; Sp. p. 696; Dr. p. 146; Gaz. vol. 136; p. 110.
Brasseur, C. L. A., New York, N. Y. Making photographic prints. No. 897,815; Sept. 1; Sp. p. 1166; Dr. p. 248; Gaz. vol. 136; p. 185.
Brassington, I. S., Mount Carmel, Pa. Removable calk for horseshoes. No. 898,032; Sept. 8; Sp. p. 1648; Dr. p. 351; Gaz. vol. 136; p. 289.
Brauer, C., Hostomitz, near Teplitz, Austria-Hungary. Apparatus for automatically conveying bottles, &c., into annealing-furnaces. No. 898,179; Sept. 8; Sp. p. 1934; Dr. p. 413; Gaz. vol. 136; p. 335.
Brauer, J., Menasha, Wis. Shipping-case-cover fastener. No. 897,343; Sept. 1; Sp. p. 194; Dr. p. 41; Gaz. vol. 136; p. 29.
Bray, T. J., Pittsburg, Pa., and G. C. Shackleford, Youngstown, Ohio. Shear mechanism. No. 897,344; Sept. 1; Sp. p. 195; Dr. pp. 41–2; Gaz. vol. 136; p. 29.
Bray, W. C. (See Simpson and Bray.)
Braybrook, G., Fort Wayne, Ind. Beer-faucet. No. 899,201; Sept. 22; Sp. p. 3871; Dr. p. 827; Gaz. vol. 136; p. 725.
Brazil, A. (See Brazil, D. H. and A.)
Brazil, D. H. and A., Montgomery, Ala. Street-car fender. No. 897,345; Sept. 1; Sp. p. 196; Dr. p. 42; Gaz. vol. 136; p. 30.
Breen, G. T. (See Wilson, A. B., assignor.)
Breitenstein, F., Denver, Colo. Water-motor. No. 897,346; Sept. 1; Sp. p. 198; Dr. p. 42; Gaz. vol. 136; p. 30.
Breitenstein, J. G., assignor to Independent Button and Machine Company, Chicago, Ill Press for button-making and like purposes. No. 899,098; Sept. 22; Sp. p. 3664; Dr. pp. 784–5; Gaz. vol. 136; p. 691.
Breitenstein, J. G., assignor to Independent Button & Machine Company, Chicago, Ill. Button. No. 899,824; Sept. 29; Sp. p. 5136; Dr. p. 1098; Gaz. vol. 136; p. 964.
Brenner, J., Philadelphia, Pa. Table. No. 897,520; Sept. 1; Sp. p. 582; Dr. pp. 120–1; Gaz. vol. 136; p. 91.
Brewer, G. W., and J. K. Gibson, Clay Center, Nebr. Mechanical movement for washing-machines. No. 899,025; Sept. 22; Sp. p. 3532; Dr. p. 756; Gaz. vol. 136; p. 667.
Bricker, J. W., assignor of one-half to G. Benevantano, Wilmerding, Pa. Glass-holder. No. 899,290; Sept. 22; Sp. p. 4059; Dr. p. 867; Gaz. vol. 136; p. 753.
Bridgeport Hardware Manufacturing Corporation. (See Hobbs, W. F., assignor.)
Bridwell, G. T., Denver, Colo. Metallic railway-tie. No. 897,580; Sept. 1; Sp. p. 697; Dr. p. 146; Gaz. vol. 136; p. 110.
Briggs, F. A. (See Pierce, H., assignor.)
Briggs, M., St. Louis, Mo. Apparatus for preserving eggs. No. 899,382; Sept. 22; Sp. p. 4218; Dr. p. 903; Gaz. vol. 136; p. 782.
Bright, A. W., Washington, D. C., assignor to Morgan Engineering Company, Alliance, Ohio. Traveling crane. No. 899,712; Sept. 29; Sp. p. 4881; Dr. pp. 1047–8; Gaz. vol. 136; p. 924.
Brightman, L. H., Shelby, Ohio. Clutch for feeding metal rods or bars. No. 898,431; Sept. 15; Sp. p. 2408; Dr. p. 515; Gaz. vol. 136; p. 449.
Briner, C. K., and H. T. Fox, Veedersburg, Ind. Bottle. No. 898,628; Sept. 15; Sp. p. 2799; Dr. p. 599; Gaz. vol. 136; p. 512.
Broadwater, G. H., Thomas, W. Va. Wall-paper-measuring device. No. 898,308; Sept. 8; Sp. p. 2165; Dr. p. 460; Gaz. vol. 136; p. 374.
Brock, F. W. (See Fogarty, Brock, and Bowdle.)
Brockardt, P. L., Hamilton, assignor, by mesne assignments, to Ohio Laundry Machinery Co., Cincinnati, Ohio. Mangle. No. 897,859; Sept. 1; Sp. p. 1266; Dr. p. 271; Gaz. vol. 136; p. 199.
Broderick, D. F., New Britain, assignor of one-half to L. Sperry, South Windsor, Conn. Endless carrier. No. 898,550; Sept. 15; Sp. p. 2649; Dr. p. 566; Gaz. vol. 136; p. 436.
Bromund, E. A., New York, N. Y. Ironing wax-pad. No. 898,180; Sept. 8; Sp. p. 1937; Dr. p. 413; Gaz. vol. 136; p. 336.
Brooks, B. A., New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 897,269; Sept. 1; Sp. p. 13; Dr. pp. 3–4; Gaz. vol. 136; p. 5.
Broome, L., Trenton, N. J. Rotary press. No. 899,691; Sept. 29; Sp. p. 4842; Dr. p. 1037; Gaz. vol. 136; p. 918.
Brown, A. E., Cleveland, Ohio. Crane-boom. No. 899,005; Sept. 15; Sp. p. 3480; Dr. pp. 745–6; Gaz. vol. 136; p. 633.
Brown, A. L., Chicago, Ill. Self-supporting shelf for cook-stoves. No. 898,828; Sept. 15; Sp. p. 3160; Dr. pp. 677–8; Gaz. vol. 136; p. 576.
Brown, A. T. (See Stillman, G. F., assignor.)
Brown, C. C., Chambersburg, Pa. Cheese-cabinet. No. 899 945; Sept. 29; Sp. p. 5397; Dr. p. 1151; Gaz. vol. 136; p. 1001.
Brown, C. F., trustee. (See Reeve, S. A., assignor.)
Brown, C. P., Ronceverte, W. Va. Rail-joint. No. 899,655; Sept. 29; Sp. p. 4775; Dr. p. 1022; Gaz. vol. 136; p. 907.
Brown, C. T. (See Beck, J. C., assignor.)
Brown, C. T. (See Krause, H. C., assignor.)
Brown, E., Fort Hunter, N. Y. Broom. No. 898,629; Sept. 15; Sp. p. 2801; Dr. p. 599; Gaz. vol. 136; p. 512.
Brown, F. R., Pawnee City, Nebr. Manure-loader. No. 898,960; Sept. 15; Sp. p. 3399; Dr. pp. 729–30; Gaz. vol. 136; p. 619.
Brown, H. W., Waterbury, Conn. Time-switch for electric circuits. No. 897,711; Sept. 1; Sp. p. 951; Dr. pp. 203–4; Gaz. vol. 136; p. 153.
Brown, J. H., Keene, N. H. Vent-pipe attachment. No. 899,291; Sept. 22; Sp. p. 4060; Dr. p. 868; Gaz. vol. 136; p. 754.
Brown, J. I., Cripple Creek, Colo. Releasing mechanism for grinding-mills and disk pulverizers. No. 898,309; Sept. 8; Sp. p. 2167; Dr. p. 460; Gaz. vol. 136; p. 374.
Brown, L. P., Chicago, Ill. Box-machine. No. 899,506; Sept. 29; Sp. p. 4457; Dr. p. 957; Gaz. vol. 136; p. 859.
Brown, P., Wilmington, Del. Car-coupling. No. 898,961; Sept. 15; Sp. p. 3401; Dr. pp. 730–1; Gaz. vol. 136; p. 619.
Brown, R. B., Milwaukee, Wis. Furnace-charging machine. No. 898,089; Sept. 8; Sp. p. 1750; Dr. p. 372; Gaz. vol. 136; p. 307.
Brown, S. S., Waterville, Me. Fastening device for outside windows. No. 897,871; Sept. 8; Sp. p. 1288; Dr. p. 275; Gaz. vol. 136; p. 235.
Brown and Sharpe Manufacturing Company. (See Wingo, R. T., assignor.)
Brown-St. Onge Company. (See St. Onge, A., assignor.)
Brown, W. M., Gibsonburg, Ohio. Hoisting-machine. No. 897,581; Sept. 1; Sp. p. 699; Dr. p. 147; Gaz. vol. 136; p. 110.
Browne, G. E., Greenfield, Mich. Flower-support. No. 899,946; Sept. 29; Sp. p. 5400; Dr. p. 1152; Gaz. vol. 135; p. 1002.
Broyles, T. R., Marshfield, Mo. Buggy-tongue. No. 897,582; Sept. 1; Sp. p. 701; Dr. p. 147; Gaz. vol. 136; p. 111.
Brun, F., St. Petersburg, Russia. Apparatus for generating a solution for preventing incrustation in steam-boilers. No. 897,452; Sept. 1; Sp. p. 426; Dr. p. 94; Gaz. vol. 136; p. 68.
Brun, F. A., Trablaine, near Le Chambon-Feugerolles, France. Manufacture of gear-wheels. No. 897,872; Sept. 8; Sp. p. 1289; Dr. p. 276; Gaz. vol. 136; p. 256.
Brüning, H. (See Marmetschke, E., assignor.)
Brünler, O. H. U., Leipzig-Gohlis, Germany. Making nitric acid. No. 898,033; Sept. 8; Sp. p. 1649; Dr. p. 351; Gaz. vol. 136; p. 289.
Brunn, H., Munich, Germany. Card-chain for systematic filing of memoranda. No. 898,034; Sept. 8; Sp. p. 1650; Dr. p. 351; Gaz. vol. 136; p. 289.
Brunswick Refrigerating Company. (See Whitaker, R., assignor.)
Brunswick, W. F. (See Hough, Dietrich, and Brunswick.)
Brusseau, E., Jefferson, S. D. Automatic lamp-extinguisher. No. 897,712; Sept. 1; Sp. p. 952; Dr. p. 204; Gaz. vol. 136; p. 153.
Bryan, H. L., trustee. (See Doremus, W. D., assignor.)
Bryan, J., Pittsburg, and H. Etheridge, McKeesport, Pa. Trolley-wire hanger. No. 899,858; Sept. 29; Sp. p. 5219; Dr. p. 1117; Gaz. vol. 136; p. 975.
Bryan, J., Pittsburg, H. Etheridge, McKeesport, and E. M. Balsinger, Pittsburg, Pa. Aerial-trolley support. No. 899,859; Sept 29; Sp. p. 5220; Dr. p. 1117; Gaz. vol. 136; p. 975.

Bryant, W. (See Williams, W. E., assignor.)
Bryant, W. S. (See Staley, R. M., assignor.)
Bryce, W. J. (See Voisard, G. C., assignor.)
Buchanan, J. J. (See De Lancey and Buchanan.)
Buck, C. F., New York, N. Y., assignor of one-half to A. Heckscher, Huntington, N. Y. Apparatus for roasting and briqueting ores. No. 899,507; Sept. 29; Sp. p 4461; Dr. p. 958; Gaz. vol. 136; p. 859.
Buckham, G. T. (See Dawson and Buckham.)
Buckingham, F. W., Greensburg, assignor of two-fifths to J. H. Harrison, Pittsburg, Pa. Regulator for watches. No. 898,962; Sept. 15; Sp. p. 3404; Dr. p. 731; Gaz. vol. 136; p. 620.
Buckius, A. O., assignor to National Malleable Castings Company, Chicago, Ill. Pin and clevis device. No. 897,347; Sept. 1; Sp. p. 201; Dr. p. 43; Gaz. vol. 136; p. 30.
Buckley, E. W. (See Taylor and Buckley.)
Buckner, R. A., Nevada, Mo. Coffee-maker. No. 899,099; Sept. 22; Sp. p. 3666; Dr. p. 785; Gaz. vol. 136; p. 692.
Buck's Stove and Range Company. (See Van Cleave and Dewey, assignors.)
Buckwalter, C. L., Loudonville, Ohio. Audiphone. No. 898,035; Sept. 8; Sp. p. 1652; Dr. p. 351; Gaz. vol. 136; p. 289.
Buckwalter, T. V., Altoona, Pa. Universal joint. No. 898,829; Sept. 15; Sp. p. 3170; Dr. p. 678; Gaz. vol. 136; p. 576.
Budd, E. G. (See Kilburn and Budd.)
Buehler, W., assignor of one-half to G. W. Bestor, Minneapolis, Minn. Preserving wood. No. 899,237; Sept. 22; Sp. p. 3949; Dr. p. 842; Gaz. vol. 136; p. 737.
Buehler, W., assignor of one-half to G. W Bestor, Minneapolis, Minn. Preserving wood. No. 899,490; Sept. 22; Sp. p. 4393; Dr. p. 943; Gaz. vol. 136; p. 813.
Buffalo Gasolene Motor Company. (See Blair, W. E., assignor.)
Builders Iron Foundry. (See Connet, F. N., assignor.)
Bullock Electric Manufacturing Company *et al.* (See Field, A. B., assignor.)
Bullock Electric Manufacturing Company *et al.* (See Van Valkenburg, H. L., assignor.)
Bullock Electric Manufacturing Company *et al.* (See Wouters, A. H., assignor.)
Bulova, J., New York, N. Y. Bracelet. No. 898,181; Sept. 8; Sp. p. 1939; Dr. p. 413; Gaz. vol. 136; p. 336.
Bundsman, E. T., assignor to Point Loma Chemical Company, Point Loma, Cal. Sulfur dye and making same. No. 897,873; Sept. 8; Sp. p. 1290; Gaz. vol. 136; p. 256.
Bundy, W. H., Syracuse, N. Y. Time-recorder. No. 898,718; Sept. 15; Sp. p. 2965; Dr. p. 635; Gaz. vol. 136; p. 540.
Bunge, J. C., Amsterdam, Netherlands. Apparatus for punching music-strips. No. 899,228; Sept. 22; Sp. p. 3953; Dr. pp. 842–4; Gaz. vol. 136; p. 738.
Bunnell, C. D. (See Braen, P. and J., assignors.)
Bunsen Smokeless Furnace Company. (See Bean, O. U., assignor.)
Bunting, H. C., Dunbar, Pa. Hinge-seat gage. No. 899,947; Sept. 29; Sp. p. 5402; Dr. p. 1152; Gaz. vol. 136; p. 1002.
Burch, I. O. (See Mayer and Burch.)
Burckhardt, R. (See De la Harpe and Burckhardt.)
Burckhardt, R. (See De la Harpe, Burckhardt, and Zehntner.)
Buren, C. C., assignor of one-half to Q. F. and R. R. Robinson, Waterloo, Iowa. Lunch-heater. No. 899,026; Sept. 22; Sp. p. 3534; Dr. p. 756; Gaz. vol. 136; p. 668.
Burg, L., Dallas City, Ill. Vehicle-shaft. No. 898,036; Sept. 8; Sp. p. 1653; Dr. p. 352; Gaz. vol. 136; p. 290.
Burg, L., Dallas City, Ill. Nut-lock. No. 898,719; Sept. 15; Sp. p. 2967; Dr. p. 636; Gaz. vol. 136; p. 540.
Burke, P. W., Chicago, Ill. Water-tube-circulating steam-boiler. No. 899,948; Sept. 29; Sp. p. 5403; Dr. p. 1152; Gaz. vol. 136; p. 1003.
Burlingame, E. A., San Francisco, Cal., assignor to Burlingame Telegraphing Typewriter Company. Carriage-return mechanism for type-writers. No. 898,310; Sept. 8; Sp. p. 2168; Dr. p. 460; Gaz. vol. 136; p. 375.
Burlingame Telegraphing Typewriter Company. (See Burlingame, E. A., assignor.)
Burnet, H., Ottawa, Ontario, Canada. Manufacturing air-chambers for relief-valves. No. 899,656; Sept. 29; Sp. p. 4776; Dr. p. 1022; Gaz. vol. 136; p. 908.
Burnett, H. K., Hyde Park, and G. H. Bahret, Poughkeepsie, N. Y. Ice-cutting machine. No. 899,825; Sept. 29; Sp. p. 5137; Dr. p. 1099; Gaz. vol. 136; p. 964.
Burnham, J. F., Stoughton, Mass., assignor to Stoughton Rubber Company. Squeeze-roll for wool-washing machinery. No. 900,055; Sept. 29; Sp. p. 5645; Dr. p. 1205; Gaz. vol. 136; p. 1039.
Burns, A. J., Oswego, N. Y. Motor-starter. No. 897,713; Sept. 1; Sp. p. 953; Dr. pp. 204–5; Gaz. vol. 136; p. 153.
Burns, F. B., New York N. Y. Textile-fabric cover. No. 897,583; Sept. 1; Sp. p. 701; Dr. pp. 147–8; Gaz. vol. 136; p. 111.
Burns, J. F., Philadelphia, Pa. Junction-box for electrical conductors. No. 898,182; Sept. 8; Sp. p. 1939; Dr. p. 414; Gaz. vol. 136; p. 336.
Burns, W. G. (See Barentzen, F. E., assignor.)
Burr, C. C., Jersey City, N. J. Puzzle. No. 899,949; Sept. 29; Sp. p. 5405; Dr. p. 1152; Gaz. vol. 136; p. 1003.
Burroughs Adding Machine Company. (See Fisher, H. L., assignor.)
Burroughs Adding Machine Company. (See Horry, W. S., assignor.)
Burroughs Adding Machine Company. (See Streb, R. C., assignor.)
Burroughs Adding Machine Company. (See Vincent, J. G., assignor.)
Burton, G. F., assignor of one-fourth to L. A. Christian, Woodlawn, Ala. Rotary air-compressor. No. 899,027; Sept. 22; Sp. p. 3535; Dr. pp. 756–7; Gaz. vol. 136; p. 668.
Burtscher, G. E., Chicago, Ill. Hose-clamp tool. No. 899,657; Sept. 29; Sp. p. 4778; Dr. p. 1022; Gaz. vol. 136; p. 908.
Busch, A., Brunswick, Germany. Manufacturing new compounds of proteids with bismuth iodid. No. 898,311; Sept. 8; Sp. p. 2170; Gaz. vol. 136; p. 375.
Bussy, H. M. (See Bartholomew and Bussy.)
Butcher, W. R., *et al.* (See Mercer, A., assignor.)
Butler, J., St. Catherines, Ontario, Canada. Scraper. No. 898,183; Sept. 8; Sp. p. 1941; Dr. p. 414; Gaz. vol. 136; p. 337.
Butler, J. W., Hermitage, N. Y. Non-refillable bottle. No. 898,090; Sept. 8; Sp. p. 1751; Dr. p. 373; Gaz. vol. 136; p. 307.
Butler, L. C., Arion, Iowa. Boat-propeller. No. 898,551; Sept. 15; Sp. p. 2650; Dr. p. 567; Gaz. vol. 136; p. 487.
Butler, W. M. (See Belcher and Butler.)
Buttles, E. E., Blackcreek, Wis. Igniter. No. 899,950; Sept. 29; Sp. p. 5406; Dr. p. 1153; Gaz. vol. 136; p. 1003.
Byam, C. R., Chicago, Ill. Combined salt and pepper shaker. No. 897,453; Sept. 1; Sp. p. 437; Dr. p. 94; Gaz. vol. 136; p. 69.
Byers, F. T., Mount Pleasant, Pa. Means for ventilating mines and removing dust and gases therefrom. No. 899,508; Sept. 29; Sp. p. 4465; Dr. p. 959; Gaz. vol. 136; p. 859.
Byers, F. T., Mount Pleasant, Pa. Removing dust and gases from mines. No. 899,509; Sept. 29; Sp. p. 4467; Dr. p. 959; Gaz. vol. 136; p. 859.
Bylund, W., assignor to Birmingham Iron Foundry, Derby, Conn. Bottom-board tightener for molding-machines. No. 898,433; Sept. 15; Sp. p. 2411; Dr. p. 516; Gaz. vol. 136; p. 449.
Byrd, M. J., and E. M. Anderson, Chattanooga, Tenn. Stand, gage, and holder for crayons and blowpipes. No. 899,202; Sept. 22; Sp. p. 3873; Dr. p. 828; Gaz. vol. 136; p. 725.
Byrne, M., San Francisco, Cal. Heel-cushion. No. 897,874; Sept. 8; Sp. p. 1292; Dr. p. 276; Gaz. vol. 136; p. 236.
C. B. Cottrell & Sons Company. (See Cottrell, E. H., assignor.)
C. T. Ham Manufacturing Company. (See Macbeth, G. A., assignor.)
Cabot, S., Brookline, assignor to Stone Telegraph and Telephone Company, Boston, Mass. Signaling system. No. 899,239; Sept. 22; Sp. p. 3958; Dr. pp. 844–5; Gaz. vol. 136; p. 738.
Cabot, S., Brookline, assignor to Stone Telegraph and Telephone Company, Boston, Mass. Signaling system. No. 899,240; Sept. 22; Sp. p. 3966; Dr. pp. 845–6; Gaz. vol. 136; p. 738.
Cabot, S., Brookline, assignor to Stone Telegraph and Telephone Company, Boston, Mass. Signaling system. No. 899,241; Sept. 22; Sp. p. 3971; Dr. p. 846; Gaz. vol. 136; p. 739.
Cabot, S., Brookline, assignor to Stone Telegraph and Telephone Company, Boston, Mass. Signaling system. No. 899,242; Sept. 22; Sp. p. 3976; Dr. pp. 847–9; Gaz. vol. 136; p. 739.
Cabot, S., Brookline, assignor to Stone Telegraph and Telephone Company, Boston, Mass. Space telegraphy. No. 899,243; Sept. 22; Sp. p. 3987; Dr. p. 849; Gaz. vol. 136; p. 739.
Cahill, T., New York, N. Y., assignor to E. Spear, J. T. Schaaff, E. H. Jackson, and J. J. Darlington, trustees. Type-writing machine. No. 897,959; Sept. 8; Sp. p. 1494; Dr. pp. 317–18; Gaz. vol. 136; p. 265.
Cain, L., Richmond, Ind. Slip-box. No. 899,510; Sept. 29; Sp. p. 4469; Dr. p. 959; Gaz. vol. 136; p. 860.
Cain, W. D., and W. H. Williams, Durant, Okla. Electric recorder for ice plants. No. 898,313; Sept. 8; Sp. p. 2173; Dr. p. 461; Gaz. vol. 136; p. 376.
Caldwell, J. H., Philadelphia, Pa. Cluster-fixture for electric lights. No. 897,455; Sept. 1; Sp. p. 443; Dr. p. 95; Gaz. vol. 136; p. 70.
Caley, C. J. (See Voight and Caley.)
Calorio Fireless Cookstove Company. (See Tholts and Gronberg, assignors.)
Calvert, G. (See Bastian and Calvert.)
Cameron, J. (See Stewart, D. A., assignor.)
Camp Bros. & Co. (See Camp, J. E. and C. W., assignors.)
Camp, C. W. (See Camp, J. E. and C. W.)

Camp, J. E., Washington, and C. W. Camp, assignors to Camp Bros. & Co., Metamora, Ill. Portable grain-elevator. No. 898,552; Sept. 15; Sp. p. 2651; Dr. p. 567; Gaz. vol. 136; p. 487.
Campbell, A. C., Asheville, N. C. Coal-washer and ore-concentrator. No. 898,314; Sept. 8; Sp. p. 2174; Dr. pp. 461-2; Gaz. vol. 136; p. 376.
Campbell, F. M., Chicago, Ill., assignor to Home Gas Machine Manufacturing Company. Air-pump for gas-machines. No. 899,481; Sept. 22; Sp. p. 4396; Dr. pp. 943-4; Gaz. vol. 136; p. 814.
Campbell, H. G., assignor of one-half to C. C. Smith, Chicago, Ill. Moistener. No. 898,720; Sept. 15; Sp. p. 2969; Dr. p. 636; Gaz. vol. 136; p. 540.
Campbell, H. G., assignor of one-half to C. C. Smith, Chicago, Ill. Device for applying liquids. No. 898,963; Sept. 15; Sp. p. 3406; Dr. pp. 731-2; Gaz. vol. 136; p. 620.
Campbell, I. M. R., Chicago, Ill. Garment-measuring device. No. 899,785; Sept. 29; Sp. p. 5058; Dr. p. 1083; Gaz. vol. 136; p. 951.
Campbell Printing Press & Manufacturing Company. (See Wood, H. A. W., assignor.)
Campbell, V. E., assignor to Campbell's Automatic Safety Gas Burner Co., Portland, Oreg. Automatic gas cut-off. No. 897,816; Sept. 1; Sp. p. 1168; Dr. p. 249; Gaz. vol. 136; p. 185.
Campbell's Automatic Safety Gas Burner Co. (See Campbell, V. E., assignor.)
Canda, C. J., *et al.* (See Kretschmer, K. O., assignor.)
Canda, F. E., *et al.* (See Kretschmer, K. O., assignor.)
Cannift, L. E., Lansing, Mich. Table. No. 899,383; Sept. 22; Sp. p. 4219; Dr. p. 903; Gaz. vol. 136; p. 783.
Canton Culvert Company. (See Schlafly, J. H., assignor.)
Capitaine, P. M., Les Lilas, France. Electric-arc lamp. No. 897,960; Sept. 8; Sp. p. 1506; Dr. p. 319; Gaz. vol. 136; p. 266.
Capper, E. C., Alpha, Iowa. Device for paraffining vessels. No. 899,511; Sept. 29; Sp. p. 4470; Dr. p. 959; Gaz. vol. 136; p. 860.
Caputo, J., assignor of one-half to R. Cardone, Frostburg, Pa. Rail-joint. No. 899,951; Sept. 29; Sp. p. 5407; Dr. p. 1153; Gaz. vol. 136; p. 1003.
Cardone, R. (See Caputo, J., assignor.)
Cardwell, G. A., New York, N. Y., assignor to Telegraph Transmitting Instrument Company. Telegraphic transmitter. No. 897,454; Sept. 1; Sp. p. 438; Dr. pp. 94-5; Gaz. vol. 136; p. 99.
Carlin, J., Newton Falls, N. Y. Saw-jointing and saw-swaging implement. No. 898,964; Sept. 15; Sp. p. 3408; Dr. p. 734; Gaz. vol. 136; p. 620.
Carlin, W. H., Owensboro, Ky. Fish-plate. No. 897,961; Sep. 8; Sp. p. 1508; Dr. p. 319; Gaz. vol. 136; p. 266.
Carlson, A. E., assignor to E. Dannecker, Minneapolis, Minn. Window-cleaner attachment. No. 898,316; Sept. 8; Sp. p. 2180; Dr. p. 462; Gaz. vol. 136; p. 377.
Carlson, F. E., assignor to Stanley Rule & Level Company, New Britain, Conn. Bit extension. No. 899,203; Sept. 22; Sp. p. 3874; Dr. p. 828; Gaz. vol. 136; p. 726.
Carlson, V., Peoria, Ill. Wrench. No. 897,584; Sept. 1; Sp. p. 703; Dr. p. 148; Gaz. vol. 136; p. 111.
Carlton, W. F., Advance, Mo. Pneumatic drier and conveyer. No. 899,658; Sept. 29; Sp. p. 4779; Dr. p. 1023; Gaz. vol. 136; p. 908.
Carmichael, D. B. (See Boyse and Carmichael.)
Carmichael, D. B. ((See Boyse, C. W., assignor.)
Carney, M. J., Brookline, Mass. Ash-receptacle. No. 898,091; Sept. 8; Sp. p. 1753; Dr. p. 373; Gaz. vol. 136; p. 307.
Carpenter, E. P., Pawtucket, R. I. Rotary explosive-engine. No. 898,965; Sept. 15; Sp. p. 3409; Dr. p. 732; Gaz. vol. 136; p. 620.
Carpenter, H. L., Minneapolis, Minn. Fire-extinguisher. No. 899,952; Sept. 29; Sp. p. 5408; Dr. p. 1153; Gaz. vol. 136; p. 1004.
Carpenter, H. M. (See Smith, J., assignor.)
Carpenter, V. F., Cleveland, Ohio. Explosive-engine. No. 898,317; Sept. 8; Sp. p. 2180; Dr. p. 463; Gaz. vol. 136; p. 377.
Carpenter, W. H., Lehr, N. D. Combined clothes and clothes-pin receptacle. No. 898,315; Sept. 8; Sp. p. 2179; Dr. p. 462; Gaz. vol. 136; p. 377.
Carr, W. C., Buffalo, N. Y. Transportation system. No. 899,588; Sept. 29; Sp. p. 4636; Dr. p. 995; Gaz. vol. 136; p. 887.
Carrier, A., Alabaster, Mich. Level and compass. No. 898,092; Sept. 8; Sp. p. 1754; Dr. p. 373; Gaz. vol. 136; p. 307.
Carrington-Strang, M., Chicago, Ill. Abdominal supporter. No. 898,093; Sept. 8; Sp. p. 1755; Dr. p. 373; Gaz. vol. 136; p. 308.
Carroll, W. H., Jersey City, N. J. Transportation-check and holder. No. 898,630; Sept. 15; Sp. p. 2802; Dr. p. 599; Gaz. vol. 136, p. 512.
Carroll, W. J., assignor to Sargent & Company, New Haven, Conn. Lock. No. 898,434; Sept. 15; Sp. p. 2412; Dr. pp. 516-17; Gaz. vol. 136; p. 449.
Carson, W. L., and G. R. Couls, Seattle, Wash. Pattern-cutting device. No. 898,830; Sept. 15; Sp. p. 3171; Dr. p. 678; Gaz. vol. 136; p. 576.
Carter, C. L., Marion, Ind. Illuminated sign. No. 898,184; Sept. 8; Sp. p. 1942; Dr. p. 414; Gaz. vol. 136; p. 337.
Carter, E. L., Galesburg, Ill. Extensible pan. No. 899,292; Sept. 22; Sp. p. 4062; Dr. p. 868; Gaz. vol. 136; p. 754.
Carter, F. W., San Diego, Cal., assignor to Automatic Safety Pulley Block Manufacturing Company. Automatic safety pulley-lift. No. 898,318; Sept. 8; Sp. p. 2182; Dr. p. 463; Gaz. vol. 136; p. 377
Casein Company of America. (See Dunham, H. V., assignor.)
Casey, E. J., Springfield, Mass. Sheet-feeding apparatus. No. 898,831; Sept. 15; Sp. p. 3173; Dr. p. 679; Gaz. vol. 136; p. 577.
Casey, E. J., Chicago, Ill., assignor to Illinois Publishing and Printing Company. Telephone memorandum-pad. No. 898,553; Sept. 15; Sp. p. 2655; Dr. p. 568; Gaz. vol. 136; p. 488.
Casgrain, L. A., Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., and Boston, Mass. Machine for inserting metallic fastenings. No. 898,435; Sept. 15; Sp. p. 2416; Dr. pp. 517-18; Gaz. vol. 136; p. 450.
Cass, J. A., Brooklyn, N. Y. Sprinkler-head. No. 899,204; Sept. 22; Sp. p. 3878; Dr. p. 828; Gaz. vol. 136; p. 726.
Cass, R. G., Fitch Bay, Quebec, Canada. Mail-bag receiving and delivering apparatus. No. 897,521; Sept. 1; Sp. p. 583; Dr. p. 121; Gaz. vol. 136; p. 91.
Cauderay, J., Lausanne, Switzerland. Electric time-switch. No. 897,585; Sept. 1; Sp. p. 704; Dr. p. 148; Gaz. vol. 136; p. 112.
Central Brass Manufacturing Company. (See Mortimer, J. N., assignor.)
Central Laboratory Supply Company. (See Harris, J., assignor.)
Chadeloid Chemical Company. (See Hull, G. H., assignor.)
Chadwick Engineering Works. (See Chadwick, L. S., assignor.)
Chadwick, L. S., assignor to Chadwick Engineering Works, Philadelphia, Pa. Clutch mechanism for automobiles and the like. No. 899,953; Sept. 29; Sp. p. 5410; Dr. pp. 1153-4; Gaz. vol. 136; p. 1004.
Challenge Machinery Company. (See Stonemetz, J. H, assignor.)
Chamberlain, C. M., Pueblo, Colo. Extraction apparatus. No. 899,512; Sept. 29; Sp. p. 4472; Dr. p. 960; Gaz. vol. 136; p. 860.
Chamberlin, E. A., Worcester, assignor of two-thirds to J. H. and F. S. Wylie, Holyoke, Mass. Boring or reaming and grinding machine. No. 898,966; Sept. 15; Sp. p. 3413; Dr. p. 733; Gaz. vol. 136; p. 621.
Chambers, W. R. (See Gokey, Chambers, and Lapresse.)
Champ, J. H., Cleveland, Ohio. Pump. No. 899,513; Sept. 29; Sp. p. 4474; Dr. pp. 960-1; Gaz. vol. 136; p. 861.
Chandler, C. H. and C. L., Seattle, Wash. String-fastener. No. 898,319; Sept. 8; Sp. p. 2183; Dr. p. 463; Gaz. vol. 136; p. 378.
Chandler, C. L. (See Chandler, C. H. and C. L.)
Chapin, W. H., Springfield, Mass. Running-gear for vehicles. No. 897,270; Sept. 1; Sp. p. 16; Dr. p. 5; Gaz. vol. 136; p. 5.
Chaplin, J. A., Warwick, assignor to Waite Thresher Company, Providence, R. I. Cuff-pin. No. 897,348; Sept. 1; Sp. p. 202; Dr. p. 43; Gaz. vol. 136; p. 31.
Chapman, G., Arlington, N. J. Puzzle. No. 898,833; Sept. 15; Sp. p. 3177; Dr. p. 680; Gaz. vol. 136; p. 577.
Chary, F. J., Paris, France. Elastic tire for wheels. No. 898,832; Sept. 15; Sp. p. 3176; Dr. p. 679; Gaz. vol. 136; p. 577.
Chase, L. L., North Springfield, Vt. Combination-cooker. No. 899,244; Sept. 22; Sp. p. 3969; Dr. p. 850; Gaz. vol. 136; p. 740.
Chase Shawmut Company. (See Moore, H. P., assignor.
Chatfield, C. B., Grand Rapids, Mich. Under-water exhaust. No. 897,586; Sept. 1; Sp. p. 706; Dr. p. 148; Gaz. vol. 136; p. 112.
Chaumat, H. (See Steynis and Chaumat.)
Chavériat, V., Paris, France, assignor of one-half to J. P. O'Donnell, Westminster, England. Apparatus for adjusting railway-vehicle and like brakes. No. 897,817; Sept. 1; Sp. p. 1170; Dr. p. 249; Gaz. vol. 136; p. 185.
Cheesman, G. R., assignor to Dunn and McCarthy, Auburn, N. Y. Apparatus for feeding soles to cementing-machines. No. 898,721; Sept. 15; Sp. p. 2970; Dr. pp. 636-7; Gaz. vol. 136; p. 541.
Chemische Fabrik Actien-Gesellschaft vormals Moritz Milch & Co., Zweigniederlassung Danzig. (See Griesel, F., assignor.)
Chemische Fabrik Flörsheim Dr. H. Nordlinger, Firm of. (See Goldberg, P., assignor.)
Chesterman, W., Sheffield, England. Tape-measure. No. 898,320; Sept. 8; Sp. p. 2185; Dr. p. 463; Gaz. vol. 136; p. 378.
Chicago Pneumatic Tool Company. (See Boyer, J., assignor.)
Childs, G. W., New York, N. Y. Utilizing sapped tanning liquors. No. 899,006; Sept. 15; Sp. p. 3483; Gaz. vol. 136; p. 634.
Christensen, J. S., Norway Lake, Minn. Grain-cleaner for wild peas and cockle. No. 897,271; Sept. 1; Sp. p. 18; Dr. p. 5; Gaz. vol. 136; p. 6.
Christenson, J., Northport, Wash. Hasp. No. 898,824; Sept. 15; Sp. p. 3178; Dr. p. 680; Gaz. vol. 136; p. 578.
Christian, E., Waterbury, Conn. Picture-molding bracket. No. 898,835; Sept. 15; Sp. p. 3179; Dr. p. 680; Gaz. vol. 136; p. 578.
Christian, L. A. (See Burton, G. F., assignor.)
Church, C. P. (See Crouch and Church.)
Churchill, D., Chicago, Ill. Door for lockers. No. 899,589; Sept. 29; Sp. p. 4639; Dr. p. 996; Gaz. vol. 136; p. 887.
Churchward, J., New York, N. Y. Heat treatment and quenching of alloyed steels. No. 899,713; Sept. 29; Sp. p. 4883; Dr. p. 1048; Gaz. vol. 136; p. 925.

Ciociola, G., Fort Leavenworth, Kans. Legging. No. 899,590; Sept. 29; Sp. p. 4641; Dr. p. 996; Gaz. vol. 136; p. 888.
Claflin, C. A., Medford, Mass. Automatically-drained gate-valve. No. 898,722; Sept. 15; Sp. p. 2972; Dr. p. 637; Gaz. vol. 136; p. 541.
Clark, C. A., Hartford, Conn. Electric switch. No. 899,205; Sept. 22; Sp. p. 3880; Dr. p. 829; Gaz. vol. 136; p. 726.
Clark, E. J., Baltimore, Md. Insulated gage-plate. No. 898,037; Sept. 8; Sp. p. 1655; Dr. p. 352; Gaz. vol. 136; p. 290.
Clark, G. H., Allston, Mass. Lasting-machine. No. 897,587; Sept. 1; Sp. p. 709; Dr. p. 149; Gaz. vol. 136; p. 113.
Clark, J., assignor to S. R. Dresser Manufacturing Company, Bradford, Pa. Middle ring for pipe-couplings. No. 898,723; Sept. 15; Sp. p. 2974; Dr. p. 637; Gaz. vol. 136; p. 541.
Clark, J. W., Champlain, N. Y. Puzzle. No. 898,321; Sept. 8; Sp. p. 2186; Dr. p. 464; Gaz. vol. 136; p. 378.
Clark, M. A., Edmonton, Alberta, Canada. Mortising-plane. No. 898,556; Sept. 15; Sp. p. 2658; Dr. p. 568; Gaz. vol. 136; p. 488.
Clark, W., New Rochelle, N. Y. Angle-finder. No. 899,692; Sept. 29; Sp. p. 4844; Dr. p. 1037; Gaz. vol. 136; p. 918.
Clark, W. S., assignor of one-half to W. R. Meservie, Harrisville, W. Va. Cutter-bar for harvesters. No. 897,818; Sept. 1; Sp. p. 1174; Dr. p. 249; Gaz. vol. 136; p. 185.
Clarkson, W. R., Tenino, Wash. Hydraulic motor. No. 897,962; Sept. 8; Sp. p. 1509; Dr. pp. 319-20; Gaz. vol. 136; p. 266.
Clarus, B., Lüttich, Belgium. Recoil-operated firearm. No. 898,038; Sept. 8; Sp. p. 1656; Dr. pp. 352-3; Gaz. vol. 136; p. 290.
Clayton, D. E. and G. C., Newark, N. J. Pump. No. 897,963; Sept. 8; Sp. p. 1510; Dr. p. 320; Gaz. vol. 136; p. 267.
Clayton, F. T., assignor of one-half to R. A. Hammond, Sandwich, Mass. Boat-lashing device. No. 898,094; Sept. 8; Sp. p. 1756; Dr. p. 374; Gaz. vol. 136; p. 308.
Clayton, G. C. (See Clayton, D. E. and G. C.)
Clemens, H. A., Lederachsville, Pa. Apparatus for checking and unchecking horses. No. 897,875; Sept. 8; Sp. p. 1293; Dr. p. 276; Gaz. vol. 136; p. 256.
Clement, W., Traverse City, Mich. Railway cross-tie. No. 897,819; Sept. 1; Sp. p. 1175; Dr. p. 249; Gaz. vol. 136; p. 185.
Clements, B., Crookston, Minn. Ditching-machine. No. 898,557; Sept. 15; Sp. p. 2660; Dr. pp. 568-9; Gaz. vol. 136; p. 488.
Clementson, J. M. (See Magnett and Clementson.)
Cleveland Armature Works. (See Pifer, A. A., assignor.)
Cleveland Hardware Company. (See Martell, H. C., assignor.)
Cleveland Steel Tool Company. (See Doolittle, J. F., assignor.)
Clifford, H., New London, Conn., assignor to R. Clifford, Monson, Mass. Vehicle-wheel. No. 898,436; Sept. 15; Sp. p. 2421; Dr. p. 518; Gaz. vol. 136; p. 450.
Clifford, R. (See Clifford, H., assignor.)
Clifton, C. C., assignor of one-half to T. E. Picotte, Hailey, Idaho. Revolving lamp. No. 898,322; Sept. 8; Sp. p. 2186; Dr. p. 464; Gaz. vol. 136; p. 378.
Cline, W. A., Munhall, Pa. Railway-tie and rail-fastening. No. 898,323; Sept. 8; Sp. p. 2188; Dr. p. 464; Gaz. vol. 136; p. 379.
Clisbee, C. E., Revere, Mass. Tank for holding hot liquids. No. 898,186; Sept. 8; Sp. p. 1943; Dr. p. 415; Gaz. vol. 136; p. 337.
Cloyd, H. C., Union City, Ind. Traction-wheel. No. 899,954; Sept. 29; Sp. p. 5412; Dr. p. 1154; Gaz. vol. 136; p. 1005.
Clyde Iron Works. (See McGiffert, J. R., assignor.)
Coal and Coke By-Products Company. (See Ernst, A., assignor.)
Coates, G. H., Worcester, Mass. Flexible shaft. No. 897,349; Sept. 1; Sp. p. 203; Dr. p. 43; Gaz. vol. 136; p. 31.
Coates, L. R., Baltimore, Md., assignor to American Bacterialzed Fertilizer Company. Fertilizer. No. 899,155; Sept. 22; Sp. p. 3780; Gaz. vol. 136; p. 710.
Coates, L. R., Baltimore, Md., assignor to American Bacteria-ized Fertilizer Company. Fertilizer. No. 900,056; Sept. 29; Sp. p. 5646; Gaz. vol. 136; p. 1039.
Cochrane, A., Lowell, Mass. Electric stop-motion for motors and signal for the same. No. 897,350; Sept. 1; Sp. p. 204; Dr. p. 43; Gaz. vol. 136; p. 31.
Cochrane, H. P. (See Hetzel and Cochrane.)
Cochrane, J. N., Kettering, England. Stretcher or filler for boots, shoes, leggings, &c. No. 899,444; Sept. 22; Sp. p. 4325; Dr. p. 929; Gaz. vol. 136; p. 801.
Cockroft, J. F., San Francisco, Cal. Envelop. No. 898,967; Sept. 15; Sp. p. 3415; Dr. p. 733; Gaz. vol. 136; p. 621.
Coder, H. C., Kansas City, Mo. Current-motor. No. 897,876; Sept. 8; Sp. p. 1294; Dr. p. 277; Gaz. vol. 136; p. 256.
Coe, E. R., Wilkinsburg, assignor to Union Switch & Signal Company, Swissvale, Pa. Electric signaling system. No 898,324; Sept. 8; Sp. p. 2190; Dr. p. 465; Gaz. vol. 136; p. 379.
Coe, M., and R. Glass, Senecaville, Ohio. Torpedo-placer. No. 899,826; Sept. 29; Sp. p. 5138; Dr. p. 1099; Gaz. vol. 136; p. 964.
Cogswell, L. W., and J. D. Abel, Taylorville, Ill. Miner's cap and lamp. No. 897,588; Sept. 1; Sp. p. 713; Dr. p. 150; Gaz. vol. 136; p. 113.
Cohen, H., Brooklyn, N. Y. Gaiter. No. 897,714; Sept. 1; Sp. p. 959; Dr. p. 205; Gaz. vol. 136; p. 154.
Cohen, H., Brooklyn, N. Y. Leg-covering. No. 898,724; Sept. 15; Sp. p. 2976; Dr. p. 638; Gaz. vol. 136; p. 542.
Cohn, S., New York, N. Y. Inverted incandescent gas-mantle. No. 898,437; Sept. 15; Sp. p. 2422; Dr. p. 518; Gaz. vol. 136; p. 451.
Coker, D. H., Piedmont, and W. A. Scarbrough, Choccolocco, Ala. Signal. No. 898,968; Sept. 15; Sp. p. 3416; Dr. p. 734; Gaz. vol. 136; p. 622.
Colahan, M. H., Chicago, Ill. Producing a solvent to be used in the artificial retting of bast fibrous stalks or plants. No. 897,522; Sept. 1; Sp. p. 584; Gaz. vol. 136; p. 92.
Colburn, E. A. (See Dickson, J. T., assignor.)
Colby, F. G. (See Ohmer and Colby.)
Colby, J. H., Luffenholtz, Cal. Relief-grip for cables. No. 899,786; Sept. 29; Sp. p. 5059; Dr. p. 1083; Gaz. vol. 136; p. 952.
Cole, A. E., Chicago, Ill. Adding-machine. No. 897,877; Sept. 8; Sp. p. 1295; Dr. pp. 277-8; Gaz. vol. 136; p. 237.
Cole, E. M., Charlotte, N. C. Combined fertilizer-distributer and cultivator. No. 897,456; Sept. 1; Sp. p. 445; Dr. pp. 95-6; Gaz. vol. 136; p. 70.
Cole, F. W., Newton, Mass., assignor to Gamewell Fire-Alarm Telegraph Company, New York, N. Y. Signal-box. No. 898,095; Sept. 8; Sp. p. 1758; Dr. p. 374; Gaz. vol. 136; p. 308.
Cole, G. W., Niles, Ohio. Hardy attachment for anvils. No. 898,969; Sept. 15; Sp. p. 3418; Dr. p. 734; Gaz. vol. 136; p. 622.
Cole, J. H., Arkansas City, and J. R. Cole, Winfield, Kans. Air-brake coupling. No. 898,096; Sept. 8; Sp. p. 1766; Dr. p. 375; Gaz. vol. 136; p. 309.
Cole, J. R. (See Cole, J. H. and J. R.)
Cole, W. E., Norfolk, Va. Shaking-grate. No. 900,057; Sept. 29; Sp. p. 5647; Dr. pp. 1205-6; Gaz. vol. 136; p. 1039.
Coleman, C. J., Rockaway, N. J., assignor to C. Hubert, New York, N. Y. Engine-starter. No. 898,438; Sept. 15; Sp. p. 2423; Dr. pp. 518-19; Gaz. vol. 136; p. 451.
Coleman, J. P., Edgewood Park, assignor to Union Switch and Signal Company, Swissvale, Pa. Railway-signal. No. 898,325; Sept. 8; Sp. p. 2192; Dr. pp. 465-6; Gaz. vol. 136; p. 379.
Coleman, R. F., assignor to J. W. Ringrose Net Company, Philadelphia, Pa. Cutting-machine. No. 899,860; Sept. 29; Sp. p. 5222; Dr. p. 1117; Gaz. vol. 136; p. 976.
Coleman, T. P. J., New York, N. Y. Detachable saw-handle. No. 899,028; Sept. 22; Sp. p. 3538; Dr. p. 757; Gaz. vol. 136; p. 668.
Collier, W. D., Marco, Fla. Clam-digger. No. 897,351; Sept. 1; Sp. p. 206; Dr. p. 44; Gaz. vol. 136; p. 32.
Collin, F. J., Dortmund, Germany. Horizontal regenerative coke-oven, &c. No. 898,439; Sept. 15; Sp. p. 2425; Dr. p. 519; Gaz. vol. 136; p. 451.
Collins, H. G., assignor to Sargent & Company, New Haven, Conn. Lock. No. 899,955; Sept. 29; Sp. p. 5414; Dr. p. 1154; Gaz. vol. 136; p. 1005.
Collinson, J. (See Williamson and Collinson.)
Collison, D. W., and G. Matthews, Columbus, Ohio. Sash-fastener. No. 897,352; Sept. 1; Sp. p. 208; Dr. p. 44; Gaz. vol. 136; p. 32.
Colter, R. B., Marinette, Wis. Bottle-rack. No. 899,384; Sept. 22; Sp. p. 4220; Dr. p. 903; Gaz. vol. 136; p. 783.
Columbian Cutlery Company. (See Meis, A., assignor.)
Colyer, W. E. (See Gordon, W., assignor.)
Compagnie Française des Produits Tartriques. (See Garin and David, assignors.)
Conkell, E. W., Canton, Ohio. Controller for pneumatic pumps. No. 899,101; Sept. 22; Sp. p. 3668; Dr. p. 785; Gaz. vol. 136; p. 692.
Conklin, C. M. (See Lunken and Conklin.)
Connet, F. N., assignor to Builders Iron Foundry, Providence, R. I. Valve-position controlling and indicator device. No. 899,029; Sept. 22; Sp. p. 3541; Dr. p. 757; Gaz. vol. 136; p. 669.
Connevey, W. L., Lewisville, Ark. Fish-trap. No. 897,589; Sept. 1; Sp. p. 714; Dr. p. 150; Gaz. vol. 136; p. 113.
Connor, G. T., Stoneham, assignor to Hydrocarbon Chemical Company, Boston, Mass. Liquid-spraying truck. No. 900,058; Sept. 29; Sp. p. 5649; Dr. p. 1206; Gaz. vol. 136; p. 1039.
Connors, D. W., *et al.* (See Humphreys, E. H., assignor.)
Conover, C. H., Cambridge, and W. D. Murphy, Newton, Mass. Sound-deadening construction for elevated railways. No. 899,293; Sept. 22; Sp. p. 4064; Dr. p. 868; Gaz. vol. 136; p. 754.
Conrad, B. B., New York, N. Y., assignor to American Numbering Machine Company. Numbering-machine. No. 898,836; Sept. 15; Sp. p. 3180; Dr. pp. 680-1; Gaz. vol. 136; p. 578.
Conrath, G. B. (See Schneider and Conrath.)
Constantini, J., Tercio, Colo. Combined door-closer and fly-chaser. No. 898,326; Sept. 8; Sp. p. 2194; Dr. p. 466; Gaz. vol. 136; p. 380.
Continental Signal Company. (See Paine, G. H., assignor.)
Cook, C. B., Hartford, Conn. Loose-leaf binder. No. 897,878; Sept. 8; Sp. p. 1299; Dr. p. 278; Gaz. vol. 136; p 237.

Cook, F. B., Chicago, Ill. Substation-protector. No. 897,500; Sept. 1; Sp. p. 715; Dr. p. 150; Gaz. vol. 136; p. 113.
Cook, H. F., Colorado Springs, Colo. Display-rack. No. 898,970; Sept. 15; Sp. p. 3418; Dr. p. 734; Gaz. vol. 136; p. 622.
Cook, M. D., Springfield, Mass. Toy. No. 897,523; Sept. 1; Sp. p. 585; Dr. p. 121; Gaz. vol. 136; p. 92.
Cook, R. J. (See Harvey and Cook.)
Cooke, W. J., Oak Park, assignor to McGuire-Cummings Manufacturing Company, Chicago, Ill. Car-door. No. 899,385; Sept. 22; Sp. p. 4221; Dr. p. 904; Gaz. vol. 136; p. 783.
Coons, A. and G., New York, N. Y. Support for lavatories. No. 899,956; Sept. 29; Sp. p. 5415; Dr. p. 1154; Gaz. vol. 136; p. 1005.
Coons, G. (See Coons, A. and G.)
Cooper, A., *et al.* (See Gerstein, M., assignor.)
Cooper, B. J., London, England. Producing colored photographs. No. 898,554; Sept. 15; Sp. p. 2656; Gaz. vol. 136; p. 488.
Cooper, J. W., Boston, Mass. Automobile running-gear. No. 897,591; Sept. 1; Sp. p. 716; Dr. p. 151; Gaz. vol. 136; p. 114.
Cooper, J. W., Boston, Mass. Stringer and tie. No. 897,592; Sept. 1; Sp. p. 720; Dr. p. 152; Gaz. vol. 136; p. 114.
Cooper, L. M., assignor of one-half to A. Adair, Flint, Mich. Key-ring and door-securer. No. 898,725; Sept. 15; Sp. p. 2978; Dr. p. 638; Gaz. vol. 136; p. 542.
Cooper, W., Cincinnati, Ohio, assignor, by mesne assignments, to Bottle Capping Machine Company, New York, N. Y. Bottle-capping machine. No. 899,861; Sept. 29; Sp. p. 5223; Dr. p. 1117; Gaz. vol. 136; p. 976.
Cooper, W. F., assignor to A. B. Chase Company, Norwalk, Ohio. Mechanical playing apparatus. No. 897,820; Sept. 1; Sp. p. 1176; Dr. p. 250; Gaz. vol. 136; p. 187.
Copland, A. W., Detroit, Mich. Dough-feeding mechanism. No. 898,726; Sept. 15; Sp. p. 2979; Dr. pp. 638–9; Gaz. vol. 136; p. 542.
Copyograph Manufacturing Company. (See Shepard, F. P., assignor.)
Corbin, R., Champlain, N. Y. Paper-clip. No. 899,396; Sept. 22; Sp. p. 4223; Dr. p. 904; Gaz. vol. 136; p. 784.
Corbitt, T. S., Kirkland, Ga. Envelop. No. 898,157; Sept. 8; Sp. p. 1944; Dr. p. 415; Gaz. vol. 136; p. 337.
Corey, D. W., St. Louis, Mo., assignor to Union Special Machine Company, Chicago, Ill. Needle-guard for sewing-machines. No. 898,403; Sept. 8; Sp. p. 2332; Dr. p. 495; Gaz. vol. 136; p. 416.
Corey, F. B., Schenectady, N. Y., assignor to General Electric Company. Block-signal system. No. 897,524; Sept. 1; Sp. p. 586; Dr. p. 122; Gaz. vol. 136; p. 92.
Cornell, J. A., Youngs, N. Y. Milk-pail. No. 898,971; Sept. 15; Sp. p. 3420; Dr. p. 735; Gaz. vol. 136; p. 623.
Cornell, S. F., *et al.* (See Crepar, T. M., assignor.)
Cornwell, I., Northumberland, Pa. Body-hanger for vehicles. No. 898,555; Sept. 15; Sp. p. 2657; Dr. p. 568; Gaz. vol. 136; p. 488.
Corrigan, J. H. (See Nies, H., assignor.)
Corthell, W. M., assignor to F. M. Waterman, Chicago, Ill. Apparatus for attaching hooks and eyes to tape, &c. No. 898,558; Sept. 15; Sp. p. 2665; Dr. p. 570; Gaz. vol. 136; p. 489.
Cory, C., *et al.* (See Wood, F. W., assignor.)
Cory, J. M., *et al.* (See Wood, F. W., assignor.)
Coss, J. C., Cleveland, Ohio. Vehicle bow-socket. No. 898,837; Sept. 15; Sp. p. 3182; Dr. p. 681; Gaz. vol. 136; p. 578.
Costello, H. O., Providence, R. I. Quick-adjusting micrometer. No. 898,972; Sept. 15; Sp. p. 3421; Dr. p. 735; Gaz. vol. 136; p. 623.
Cotton, A., Newark, N. J. Air-regulator for furnaces. No. 899,102; Sept. 22; Sp. p. 3671; Dr. p. 786; Gaz. vol. 136; p. 662.
Cottrell, E. H., Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Antismutting device for printing machinery. No. 898,727; Sept. 15; Sp. p. 2983; Dr. pp. 639–40; Gaz. vol. 136; p. 543.
Couch, R. O., Charleston, W. Va. Variable-speed gear. No. 898,327; Sept. 8; Sp. p. 2196; Dr. p. 466; Gaz. vol. 136; p. 380.
Coulis, G. R. (See Carson and Coulis.)
Coulter, C. J., Longmont, Colo. Mechanical movement. No. 898,328; Sept. 8; Sp. p. 2198; Dr. p. 466; Gaz. vol. 136; p. 380.
Coulter, C. J., and E. Tuggy, Longmont, assignors of one-third to O. T. Ellis, Golden, Colo. Automatic hook. No. 898,329; Sept. 8; Sp. p. 2199; Dr. p. 467; Gaz. vol. 136; p. 381.
Country Hydrant Company. (See Johnson, J., assignor.)
Covey, C. H., Marietta, Ohio. Nut-lock. No. 898,188; Sept. 8; Sp. p. 1945; Dr. p. 416; Gaz. vol. 136; p. 338.
Cowey, L. E., Brondesbury, England. Apparatus for indicating or recording speed. No. 897,715; Sept. 1; Sp. p. 960; Dr. p. 206; Gaz. vol. 136; p. 154.
Cowper-Coles, S. O., London, England. Electrodeposition of alloys. No. 898,189; Sept. 8; Sp. p. 1947; Gaz. vol. 136; p. 338.
Cox, J. F., Watertown, Mass. Making molders' patterns. No. 898,728; Sept. 15; Sp. p. 2984; Dr. pp. 640–1; Gaz. vol. 136; p. 543.
Cox, J. W., Berwyn, assignor to S. W. Miller, Chicago, Ill. Apparatus for controlling the flow of liquids. No. 897,593; Sept. 1; Sp. p. 722; Dr. pp. 152–3; Gaz. vol. 136; p. 114.
Craddock, L. L., and J. McCleary, Sonora, Tex. Valve. No. 899,659; Sept. 29; Sp. p. 4780; Dr. p. 1023; Gaz. vol. 136; p. 908.
Craft, E. B., Wilmette, assignor to Western Electric Company, Chicago, Ill. Switchboard signal-lamp. No. 899,514; Sept. 29; Sp. p. 4476; Dr. p. 961; Gaz. vol. 136; p. 861.
Craig, R., Los Angeles, Cal. Wave-motor. No. 899,957; Sept. 29; Sp. p. 5416; Dr. p. 1155; Gaz. vol. 136; p. 1005.
Crane, G. W. (See Glase and Olsen, assignors.)
Craw, W. N., South Norwalk, Conn. Shipping-package. No. 897,594; Sept. 1; Sp. p. 727; Dr. p. 153; Gaz. vol. 136; p. 115.
Crawley, M. C., Orcutt, Cal. Adding-machine. No. 899,482; Sept. 22; Sp. p. 4398; Dr. p. 944; Gaz. vol. 136; p. 814.
Creamery Package Mfg. Company. (See Valerius, T. L., assignor.)
Crepar, T. M., Fargo, N. D., assignor of one-half to G. J. Hahn, Moorhead, Minn., and S. F. Cornell, Fargo, N. D. Car-wheel. No. 899,483; Sept. 22; Sp. p. 4402; Dr. p. 944; Gaz. vol. 136; p. 815.
Crocker, E. P., Rochester, N. Y., and A. B. Payne, Webster Groves, Mo.; said Crocker assignor to said Payne. Picture for stereoscopes and similar devices. No. 899,862; Sept. 29; Sp. p. 5228; Dr. p. 1118; Gaz. vol. 136; p. 977.
Croft, H. W., Pittsburg, and O. M. Reif, Allegheny, Pa. Kiln. No. 899,714; Sept. 29; Sp. p. 4885; Dr. pp. 1048–9; Gaz. vol. 136; p. 925.
Crombie, C. E., Minneapolis, Minn. Dental bridge. No. 898,559; Sept. 15; Sp. p. 2667; Dr. p. 570; Gaz. vol. 136; p. 489.
Crosby, B., Dayton township, Butler county, Iowa. Tiling. No. 898,560; Sept. 15; Sp. p. 2668; Dr. p. 570; Gaz. vol. 136; p. 489.
Crosby, J. D., *et al.* (See McClintock, E. H., assignor.)
Crosby Steam Gage and Valve Company. (See Spencer, G., assignor.)
Crouch, F. J., and C. P. Church, Seattle, Wash. Motor. No. 897,595; Sept. 1; Sp. p. 728; Dr. p. 153; Gaz. vol. 136; p. 115.
Crouch Manufacturing Jewelry Company. (See Liebert, E., assignor.)
Crowther, D., *et al.* (See Ridout, J. B., assignor.)
Crowther, G. A. (See Crowther, J. H. and G. A.)
Crowther, J. H. and G. A., Auburn, N. Y. Waste-saving device. No. 898,330; Sept. 8; Sp. p. 2201; Dr. p. 467; Gaz. vol. 136; p. 381.
Culley, J. S., Louisville, Ky. Wall for buildings. No. 897,353; Sept. 1; Sp. p. 209; Dr. p. 44; Gaz. vol. 136; p. 32.
Culver, L. F., Harvey, Ill. Stovepipe and flue-stopper fastener. No. 897,717; Sept. 1; Sp. p. 967; Dr. p. 206; Gaz. vol. 136; p. 155.
Cummings, A. G. (See Weber, J., assignor.)
Cunningham, F. H. (See Jones and Cunningham.)
Cunningham, W. R., assignor to American Clay Machinery Company, Bucyrus, Ohio. Brick and tile cutting machine. No. 897,596; Sept. 1; Sp. p. 729; Dr. pp. 154–5; Gaz. vol. 136; p. 115.
Curran, E. J., Alton, Ill. Ladder attachment. No. 898,373; Sept. 15; Sp. p. 3423; Dr. p. 735; Gaz. vol. 136; p. 623.
Curry, J. A., Key West, Fla. Lock. No. 897,597; Sept. 1; Sp. p. 734; Dr. p. 155; Gaz. vol. 136; p. 116.
Curtain Supply Company. (See Houghtaling, P. A., assignor.)
Curtain Supply Company. (See Whinery, D., assignor.)
Curtis, A. B. (See Scott and Curtis.)
Curtis, E. A., Decatur, Ill. Car-truck. No. 898,440; Sept. 15; Sp. p. 2428; Dr. pp. 519–20; Gaz. vol. 136; p. 451.
Curtis, J. T., Bement, Ill. Transmitter. No. 897,716; Sept. 1; Sp. p. 965; Dr. p. 206; Gaz. vol. 136; p. 155.
Curtis, L. E., Chicago, Ill., assignor to B. Jones, trustee, St. Louis, Mo. Manufacturing expanded metal. No. 897,879; Sept. 8; Sp. p. 1302; Dr. p. 279; Gaz. vol. 136; p. 238.
Curtis Publishing Company. (See Hergesheimer, J., assignor.)
Cushing, J. S., Norwood, Mass. Wheel-tire. No. 897,880; Sept. 8; Sp. p. 1303; Dr. p. 279; Gaz. vol. 136; p. 238.
Custer, E. A., Philadelphia, Pa. Means for automatically controlling the opening and closing of two-part casting-molds. No. 898,190; Sept. 8; Sp. p. 1948; Dr. p. 416; Gaz. vol. 136; p. 338.
Custer, E. A., Philadelphia, Pa. Mold-carrying turn-table. No. 898,191; Sept. 8; Sp. p. 1949; Dr. p. 416; Gaz. vol. 136; p. 338.
Custer, E. A., Philadelphia, Pa. Actuating mechanism for turn-table pipe-casting apparatus. No. 898,441; Sept. 15; Sp. p. 2429; Dr. p. 520; Gaz. vol. 136; p. 451.
Custer, E. A., Philadelphia, Pa. Metal-pouring mechanism for pipe-casting apparatus. No. 898,631; Sept. 15; Sp. p. 2807; Dr. p. 600; Gaz. vol. 136; p. 513.
Cutler, J. W., assignor to Cutler Manufacturing Company, Rochester, N. Y. Mail-chute. No. 899,156; Sept. 22; Sp. p. 3781; Dr. pp. 809–10; Gaz. vol. 136; p. 710.
Cutler, J. W., assignor to Cutler Manufacturing Company, Rochester, N. Y. Mail-chute. No. 899,157; Sept. 22; Sp. p. 3783; Dr. p. 810; Gaz. vol. 136; p. 711.
Cutler, J. W., assignor to Cutler Manufacturing Company, Rochester, N. Y. Mail-chute. No. 899,158; Sept. 22; Sp. p. 3787; Dr. p. 811; Gaz. vol. 136; p. 711.
Cutler Manufacturing Company. (See Cutler, J. W., assignor.)
Cutshaw, M. B. (See Olds, W. J., assignor.)
Cutter, F., Providence, R. I. Making ingots. No. 899,827; Sept. 29; Sp. p. 5140; Dr. p. 1100; Gaz. vol. 136; p. 964.

Cutter, G., South Bend, Ind. Hanger for electric lamps. No. 897,457; Sept. 1; Sp. p. 448; Dr. p. 96; Gaz. vol. 136; p. 71.
Czarnkowsky, E., Brooklyn, N. Y. Adjustable waist and skirt holder. No. 899,828; Sept. 29; Sp. p. 5141; Dr. p. 1100; Gaz. vol. 136; p. 965.
Daimler Motorengesellschaft, Firm of. (See Daimler, P., assignor.)
Daimler, P., assignor to firm of Daimler Motorengesellschaft, Untertürkheim, Germany. Lubricator. No. 897,598; Sept. 1; Sp. p. 736; Dr. p. 155; Gaz. vol. 136; p. 116.
Daisy Manufacturing Co. (See Bennett, B. B., assignor.)
Dake-American Steam Turbine Company. (See Dake, C. W., assignor.)
Dake, C. W., assignor to Dake-American Steam Turbine Company, Grand Rapids, Mich. Elastic-fluid generator. No. 897,354; Sept. 1; Sp. p. 210; Dr. p. 45; Gaz. vol. 136; p. 32.
Dale Company. (See Gervin, C. D., assignor.)
Daley, F. J., Chicago, Ill. Time-book. No. 898,442; Sept. 15; Sp. p. 2431; Dr. p. 521; Gaz. vol. 136; p. 452.
Dando, H. C. (See Lewis and Dando.)
Daniel, A. W., Owensboro, Ky. Explosive-engine. No. 898,974; Sept. 15; Sp. p. 3424; Dr. pp. 735–6; Gaz. vol. 136; p. 624.
Daniels, W. H., Chicago, Ill. Building block or brick. No. 899,958; Sept. 29; Sp. p. 5419; Dr. p. 1155; Gaz. vol. 136; p. 1006.
Daniels, W. R., New York, N. Y. Telephone instrument. No. 897,718; Sept. 1; Sp. p. 968; Dr. p. 207; Gaz. vol. 136; p. 155.
Dannecker, E. (See Carlson and Dannecker.)
Darkin, F. (See Scherr and Darkin.)
Darlington, J. J., *et al.*, trustees. (See Cahill, T., assignor.)
Darrow, W. E., Sutter Creek, Cal. Concentrating apparatus. No. 898,331; Sept. 8; Sp. p. 2203; Dr. pp. 467–8; Gaz. vol. 136; p. 382.
Daubaignan, R., St. Louis, assignor of one-half to R. H. Lear, Kirkwood, Mo. Sash-fastener. No. 897,719; Sept. 1; Sp. p. 970; Dr. p. 207; Gaz. vol. 136; p. 155.
Daughtrey, G. H., Chicago, Ill. Package-tie. No. 898,192; Sept. 8; Sp. p. 1950; Dr. p. 417; Gaz. vol. 136; p. 339.
Dauvergne, A., Lyon, France. Elastic wheel. No. 897,981; Sept. 8; Sp. p. 1304; Dr. p. 279; Gaz. vol. 136; p. 238.
Davey, J. F., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Eyeleting-machine. No. 898,729; Sept. 15; Sp. p. 2986; Dr. p. 641; Gaz. vol. 136; p. 543.
David, F. (See Garin and David.)
Davidson, R., assignor to Michigan Lubricator Co., Detroit, Mich. Lubricator. No. 897,599; Sept. 1; Sp. p. 737; Dr. pp. 155–6; Gaz. vol. 136; p. 117.
Davidson, R. M., Elmira, N. Y. Perforating mechanism. No. 898,193; Sept. 8; Sp. p. 1951; Dr. p. 417; Gaz. vol. 136; p. 339.
Davidson, S. C., Belfast, Ireland. Pedestal-bearing. No. 898,632; Sept. 15; Sp. p. 2811; Dr. p. 600; Gaz. vol. 136; p. 513.
Davidson, W. H., Boston, Mass. Ventilator. No. 898,838; Sept. 15; Sp. p. 3184; Dr. p. 681; Gaz. vol. 136; p. 579.
Davidson, W. H., Boston, assignor of one-half to W. O. Eddy, Middleboro, Mass. Ventilator. No. 898,730; Sept. 15; Sp. p. 2990; Dr. p. 641; Gaz. vol. 136; p. 544.
Davies, K. R., *et al.* (See Ericsson, A. N., assignor.)
Davis, A. N., St. Louis, Mo. Train-pipe coupling. No. 898,561; Sept. 15; Sp. p. 2669; Dr. p. 571; Gaz. vol. 136; p. 489.
Davis, C. I., Detroit, Mich. Automatic governor for pneumatic motors. No. 898,194; Sept. 8; Sp. p. 1953; Dr. p. 417; Gaz. vol. 136; p. 339.
Davis, C. S., *et al.* (See McNeal, L. C., assignor.)
Davis, C. W., Edgeworth, assignor to Standard Underground Cable Company, Pittsburg, Pa. Terminal for electric cables. No. 898,007; Sept. 8; Sp. p. 1767; Dr. pp. 375–6; Gaz. vol. 136; p. 309.
Davis, E., St. Louis, Mo. Index. No. 897,600; Sept. 1; Sp. p. 739; Dr. p. 156; Gaz. vol. 136; p. 117.
Davis, F. S., Detroit, Mich. Can-cover. No. 897,720; Sept. 1; Sp. p. 971; Dr. p. 207; Gaz. vol. 136; p. 156.
Davis, H. N., Independence, Mo. Friction-clutch. No. 898,332; Sept. 8; Sp. p. 2206; Dr. p. 468; Gaz. vol. 136; p. 382.
Davis, I. N., assignor of one-half to F. Welles, Wyalusing, Pa. Jar and cover holder. No. 899,031; Sept. 22; Sp. p. 3543; Dr. p. 755; Gaz. vol. 136; p. 669.
Davis, J. E. (See Prescott, C. H., assignor.)
Davis, J. W., assignor to Mills-Piddington Cab Signal Company, Los Angeles, Cal. Electric block-signaling system. No. 897,355; Sept. 1; Sp. p. 215; Dr. pp. 45–7; Gaz. vol. 136; p. 33.
Davis, M., Trenton, N. J. Stove implement. No. 897,721; Sept. 1; Sp. p. 972; Dr. p. 207; Gaz. vol. 136; p. 156.
Davis, M. S., Muncie, Ind. Baby-walker. No. 899,030; Sept. 22; Sp. p. 3543; Dr. p. 757; Gaz. vol. 136; p. 669.
Davis, O. C., assignor of one-half to R. G. Peters, Manistee, Mich. Check-hook. No. 898,443; Sept. 15; Sp. p. 2434; Dr. p. 521; Gaz. vol. 136; p. 452.
Davis, S. E., Minneapolis, Minn. Drill and seeder. No. 898,562; Sept. 15; Sp. p. 2670; Dr. p. 571; Gaz. vol. 136; p. 490.
Davitt, M. F., and L. J. Fenner, Dickson City, Pa. Combination-tool. No. 898,839; Sept. 15; Sp. p. 3187; Dr. p. 681; Gaz. vol. 136; p. 579.
Davy Brothers. (See Holmes, T. E., assignor.)
Dawes, A. W., New Hope, Cal. Nut-lock. No. 898,333; Sept. 8; Sp. p. 2207; Dr. p. 468; Gaz. vol. 136; p. 382.
Dawkins, W. E., O'Fallon, Ill. Automatic car-stop. No. 899,245; Sept. 22; Sp. p. 3991; Dr. p. 850; Gaz. vol. 136; p. 740.
Dawson, A. T., and G. T. Buckham, Westminster, assignors to Vickers Sons & Maxim Limited London, England. Recoil apparatus for guns. No. 897,821; Sept. 1; Sp. p. 1181; Dr. p. 250; Gaz. vol. 136; p. 187.
Dawson, A. T., and G. T. Buckham, assignors to Vickers Sons & Maxim Limited, London, England. Breech mechanism of guns. No. 898,840; Sept. 15; Sp. p. 3188; Dr. pp. 682–3; Gaz. vol. 136; p. 579.
Dawson, A. T., and G. T. Buckham, Westminster, assignors to Vickers Sons & Maxim Limited, London, England. Brake mechanism for recoiling guns. No. 899,206; Sept. 22; Sp. p. 3882; Dr. p. 829; Gaz. vol. 136; p. 727.
Dawson, A. T., and G. T. Buckham, Westminster, assignors to Vickers Sons & Maxim Limited, London, England. Sighting apparatus for guns. No. 899,207; Sept. 22; Sp. p. 3885; Dr. p. 830; Gaz. vol. 136; p. 727.
Dawson, F. E., executrix. (See Dawson, R.)
Dawson, R., deceased, Framingham, Mass.; F. E. Dawson, executrix. Machine for loosely packing fiber. No. 898,841; Sept. 15; Sp. p. 3191; Dr. pp. 683–4; Gaz. vol. 136; p. 580.
Day, A., Philadelphia, Pa. Exerciser. No. 897,722; Sept. 1; Sp. p. 973; Dr. p. 208; Gaz. vol. 136; p. 156.
Day, A. L., Wesley, Me. Self-rolling ball or globe. No. 898,334; Sept. 8; Sp. p. 2208; Dr. p. 468; Gaz. vol. 136; p. 382.
Day, C. L., Chicago, Ill. Bracket. No. 899,445; Sept. 22; Sp. p. 4326; Dr. p. 930; Gaz. vol. 136; p. 802.
Day, C. S., *et al.* (See McClintock, E. H., assignor.)
Day, D. T., Washington, D. C. Drying air for blast-furnaces. No. 897,356; Sept. 1; Sp. p. 221; Dr. p. 47; Gaz. vol. 136; p. 34.
Day, W. P., Altoona, Pa. Railway-tie and rail-fastening. No. 898,335; Sept. 8; Sp. p. 2208; Dr. p. 469; Gaz. vol. 136; p. 383.
Dayton Clothing Manufacturing Company. (See Richards, J. E., assignor.)
Dayton Hydraulic Machinery Company. (See Pirkl, J., assignor.)
De France, M. R., and A. E. Read, Bellevue, Pa. Trench-brace. No. 898,336; Sept. 8; Sp. p. 2210; Dr. p. 469; Gaz. vol. 136; p. 383.
De Julio, J., New York, N. Y., assignor to M. A. J. De Julio. Bridge for guitars. No. 897,964; Sept. 8; Sp. p. 1512; Dr. p. 321; Gaz. vol. 136; p. 267.
De Julio, M. A. J. (See De Julio, J., assignor.)
De Kleist, E., and F. L. McCormick, North Tonawanda, N. Y.; said McCormick assignor to said De Kleist. Adjustable spool for music-sheets. No. 899,993; Sept. 29; Sp. p. 5493; Dr. p. 1170; Gaz. vol. 136; p. 1017.
De la Harpe, C., assignor to Dye Works, formerly L. Durand, Huguenin & Co., Basel, Switzerland. Condensing gallocyanins with amins. No. 897,619; Sept. 1; Sp. p. 778; Gaz. vol. 136; p. 123.
De la Harpe, C., and R. Burckhardt, assignors to Firm of Dye Works, formerly L. Durand Huguenin & Co., Basel, Switzerland. Gallocyanin and making same. No. 898,040; Sept. 8; Sp. p. 1659; Gaz. vol. 136; p. 291.
De la Harpe, C., and R. Burckhardt, assignors to Firm of Dye Works, formerly L. Durand, Huguenin & Co., Basel, Switzerland. Gallocyanin dye and making same. No. 898,842; Sept. 15; Sp. p. 3196; Gaz. vol. 136; p. 580.
De la Harpe, C., K. Oswald, and E. Zehntner, assignors to Firm of Dye Works formerly L. Durand, Huguenin & Co., Basel, Switzerland. Condensation dye from gallocyanins and making same. No. 898,098; Sept. 8; Sp. p. 1769; Gaz. vol. 136; p. 309.
De la Harpe, C., R. Burckhardt, and E. Zehntner, assignors to Firm of Dye Works formerly L. Durand, Huguenin & Co., Basel, Switzerland. Gallocyanin dye and making same. No. 898,039; Sept. 8; Sp. p. 1658; Gaz. vol. 136; p. 291.
De Lancey, D., and J. J. Buchanan, assignors to Waterbury Buckle Co., Waterbury, Conn. Garment-supporter clasp. No. 897,295; Sept. 1; Sp. p. 51; Dr. p. 12; Gaz. vol. 136; p. 12.
De Lapp, L. L., Brookings, S. D. Shoe-cleaner. No. 899,515; Sept. 29; Sp. p. 4477; Dr. p. 961; Gaz. vol. 136; p. 861.
De Loach, A. A., Atlanta, Ga. Sawmill set-works. No. 899,159; Sept. 22; Sp. p. 3791; Dr. pp. 811–12; Gaz. vol. 136; p. 711.
De Long, A., Sr., Shamokin, Pa. Music-rack. No. 898,843; Sept. 15; Sp. p. 3197; Dr. pp. 684–5; Gaz. vol. 136; 581.
De Nyse, W. H. (See Howland and De Nyse.)
De Paris, F., Montreal, Quebec, Canada. Registering device. No. 897,725; Sept. 1; Sp. p. 979; Dr. pp. 208–9; Gaz. vol. 136; p. 157.
De Reamer, F. C., Schenectady, N. Y., assignor to General Electric Company. Electric switch. No. 897,525; Sept. 1; Sp. p. 588; Dr. p. 122; Gaz. vol. 136; p. 92.
De Vilbiss Manufacturing Company. (See De Vilbiss, T. A., assignor.)
De Vilbiss, T. A., assignor to De Vilbiss Manufacturing Company, Toledo, Ohio. Cap for atomizer-bottles or the like. No. 898,845; Sept. 15; Sp. p. 3198; Dr. p. 685; Gaz. vol. 136; p. 581.

De Vilbiss, T. A., assignor to De Vilbiss Manufacturing Company, Toledo, Ohio. Atomizer. No. 899,007; Sept. 15; Sp. p. 3484; Dr. p. 747; Gaz. vol. 136; p. 634.
De Wein, G. F., assignor to Allis-Chalmers Company, Milwaukee, Wis. Roasting-furnace. No. 899,591; Sept. 29; Sp. p. 4642; Dr. p. 996; Gaz. vol. 136; p. 888.
De Witt, W. B., Jacksonville, Fla. Mail-bag-delivery apparatus. No. 898,846; Sept. 15; Sp. p. 3199; Dr. pp. 685–6; Gaz. vol. 136; p. 581.
De Young, J., South Holland, Ill. Twine-cutter. No. 897,275; Sept. 1; Sp. p. 25; Dr. p. 6; Gaz. vol. 136; p. 7.
Dean, W. W., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Telephone system. No. 897,723; Sept. 1; Sp. p. 974; Dr. p. 208; Gaz. vol. 136; p. 157.
Dean, W. W., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Supervisory system for telephone-lines. No. 898,195; Sept. 8; Sp. p. 1954; Dr. p. 417; Gaz. vol. 136; p. 339.
Deathersage, I. (See Silger and Deatherage.)
Decerière, J., Reignier, France. Machine for filling and closing bottles. No. 898,563; Sept. 15; Sp. p. 2672; Dr. p. 571; Gaz. vol. 136; p. 490.
Decker, A. F., Evansville, Ind., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Type-writing machine. No. 897,272; Sept. 1; Sp. p. 20; Dr. pp. 5–6; Gaz. vol. 136; p. 6.
Decker, H. R., Houston, Tex. Drill-stem clamp for rotary drilling-machines. No. 899,208; Sept. 22; Sp. p. 3887; Dr. p. 830; Gaz. vol. 136; p. 728.
Deemer, W. M. (See Riley, M., assignor.)
Dees, M. A., St. Louis, Mo. Alternating mechanism for operating railway-switches or other devices. No. 899,032; Sept. 22; Sp. p. 3544; Dr. p. 758; Gaz. vol. 136; p. 670.
Degenhart, W. (See Delaney, M. G., assignor.)
Delaney, M. G., Detroit, Mich., assignor to W. Degenhart, Buffalo, N. Y. Trolley-catcher. No. 897,273; Sept. 1; Sp. p. 22; Dr. p. 6; Gaz. vol. 136; p. 6.
Delany, P. B., South Orange, N. J., assignor, by mesne assignments, to Telepost Company of Maine. Automatic telegraphy. No. 899,209; Sept. 22; Sp. p. 3888; Dr. pp. 830–1; Gaz. vol. 136; p. 728.
Denemark, S., New York, N. Y. Snow-melting apparatus. No. 897,601; Sept. 1; Sp. p. 741; Dr. pp. 156–7; Gaz. vol. 136; p. 117.
Denmead, J. W., Akron, Ohio, assignor to Diamond Match Company, New York, N. Y. Box-filling machine. No. 898,337; Sept. 8; Sp. p. 2212; Dr. pp. 469–70; Gaz. vol. 136; p. 383.
Dennis, D. D., San Antonio, Tex. Animal-trap. No. 898,041; Sept. 8; Sp. p. 1660; Dr. p. 353; Gaz. vol. 136; p. 291.
Dennis, G. P., Muncie, Ind. Bottle. No. 897,724; Sept. 1; Sp. p. 978; Dr. p. 208; Gaz. vol. 136; p. 157.
Denton, R. W. (See Denton, W. D. and R. W.)
Denton, W. D. and R. W., Wellesley, Mass. Butterfly-jewel. No. 897,274; Sept. 1; Sp. p. 23; Dr. p. 6; Gaz. vol. 136; p. 6.
Denzler, F. W., Zwickau, Germany. Mangling-machine. No. 898,844; Sept. 15; Sp. p. 3197; Dr. p. 685; Gaz. vol. 136; p. 581.
Derby Desk Company. (See Kennedy, W. J., assignor.)
Deselms, T., La Fayette, Ind. Towel and curtain-pole holder. No. 899,387; Sept. 22; Sp. p. 4224; Dr. p. 904; Gaz. vol. 136; p. 784.
Dessolle, E. L. (See Jullien and Dessolle.)
Desmond, T. E., Spokane, Wash. Currycomb. No. 897,882; Sept. 8; Sp. p. 1305; Dr. pp. 279–80; Gaz. vol. 136; p. 238.
Desoe, E. G., West Springfield, Mass., assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Automatic sanding apparatus for fluid-pressure brakes. No. 899,246; Sept. 22; Sp. p. 3992; Dr. p. 850; Gaz. vol. 136; p. 740.
Détré, L., Rheims, France. Apparatus for subjecting materials to the action of liquids under pressure. No. 898,444; Sept. 15; Sp. p. 2435; Dr. pp. 521–2; Gaz. vol. 136; p. 452.
Dewey, G. O. (See Van Cleave and Dewey.)
Dewhurst, J. C. (See Watkins, H., assignor.)
Dey Time Register Co. (See Ford, H. C., assignor.)
Dey Time Register Company. (See Rockwell, W., assignor.)
Diamond Match Company. (See Denmead, J. W., assignor.)
Dick, A. B., Lake Forest, assignor to A. B. Dick Company, Chicago, Ill. Printing-machine. No. 898,445; Sept. 15; Sp. p. 2439; Dr. pp. 522–3; Gaz. vol. 136; p. 453.
Dick, A. B., Lake Forest, assignor to A. B. Dick Company, Chicago, Ill. Printing apparatus. No. 898,446; Sept. 15; Sp. p. 2445; Dr. p. 523; Gaz. vol. 136; p. 453.
Dick, A. B., Lake Forest, assignor to A. B. Dick Company, Chicago, Ill. Sheet-feeding apparatus. No. 898,447; Sept. 15; Sp. p. 2446; Dr. p. 524; Gaz. vol. 136; p. 453.
Dick, A. B., Lake Forest, assignor to A. B. Dick Company, Chicago, Ill. Ribbon mechanism for type-printing machines. No. 899,160; Sept. 22; Sp. p. 3795; Dr. pp. 812–13; Gaz. vol. 136; p. 712.
Dickeson, O. E., Oskaloosa, Iowa. Measuring device. No. 897,458; Sept. 1; Sp. p. 450; Dr. p. 96; Gaz. vol. 136; p. 71.
Dickson, J. G., Little Rock, Ark. Cleaning mechanism for saw-gins. No. 897,883; Sept. 8; Sp. p. 1307; Dr. p. 280; Gaz. vol. 136; p. 239.
Dickson, J. T., assignor of one-half to E. A. Colburn, Denver, Colo. Control and fuel-feeding device for internal-combustion engines. No. 899,715; Sept. 29; Sp. p. 4887; Dr. pp. 1049–50; Gaz. vol. 136; p. 925.
Diefenbach, J. C., Cincinnati, Ohio. Adjustable schedule. No. 898,338; Sept. 8; Sp. p. 2215; Dr. p. 471; Gaz. vol. 136; p. 384.
Dietrich, A. J. (See Hough, Dietrich, and Brunswick.)
Dietz, G. (See Long and Dietz.)
Dilg, C. H. J., and J. O. Fowler, New York, N. Y. Comminuting frangible articles. No. 899,008; Sept. 15; Sp. p. 3485; Dr. p. 747; Gaz. vol. 136; p. 634.
Dillon, W. M., Sterling, Ill. Wire-fence tie. No. 898,339; Sept. 8; Sp. p. 2217; Dr. p. 471; Gaz. vol. 136; p. 384.
Dinamite Nobel Societe Anonyme. (See Abelil, M., assignor.)
Dingman, W., assignor of one-half to J. W. Lanning, Dresden, Ohio. Cushioned rocker. No. 898,340; Sept. 8; Sp. p. 2218; Dr. p. 471; Gaz. vol. 136; p. 384.
Dinsmoor, J. D. (See Russell and Dinsmoor.)
Dinsmore, F. A., Fredonia, N. Y. Salt-cellar. No. 899,716; Sept. 29; Sp. p. 4893; Dr. p. 1050; Gaz. vol. 136; p. 926.
Dion, L., Wilkes-Barre, Pa. Guard for channeled marine vessels. No. 900,008; Sept. 29; Sp. p. 5528; Dr. p. 1178; Gaz. vol. 136; p. 1022.
Ditson, S., Collingwood, Ontario, Canada. Cheese-cover and show-case. No. 899,103; Sept. 22; Sp. p. 3674; Dr. p. 786; Gaz. vol. 136; p. 693.
Divekey, J. J., and C. M. Genthner, Aurora, Ill. Water-heater. No. 899,388; Sept. 22; Sp. p. 4224; Dr. p. 904; Gaz. vol. 136; p. 784.
Divers, W. H., Aurora, assignor of one-half to W. R. Owen, Springfield, Mo. Fifth-wheel. No. 899,660; Sept. 29; Sp. p. 4781; Dr. pp. 1023–4; Gaz. vol. 136; p. 909.
Dixon, E. (See Pierce, C. A., assignor.)
Dodds, E. I., Avalon, assignor to Pressed Steel Car Company, Pittsburg, Pa. Structural metal part. No. 899,033; Sept. 22; Sp. p. 3547; Dr. p. 759; Gaz. vol. 136; p. 670.
Dodge, W. P., assignor to Barney & Berry, Springfield, Mass. Skate-frame. No. 898,099; Sept. 8; Sp. p. 1770; Dr. p. 376; Gaz. vol. 136; p. 310.
Dodson, C. I., Pittsburg, Kans. Apparatus for exploding mine charges. No. 898,847; Sept. 15; Sp. p. 3201; Dr. p. 686; Gaz. vol. 136; p. 582.
Dodson, C. I., Pittsburg, Kans. Means for exploding blast charges. No. 898,848; Sept. 15; Sp. p. 3204; Dr. p. 687; Gaz. vol. 136; p. 582.
Domville, J. W., Montreal, Quebec, Canada. Lubricator. No. 898,448; Sept. 15; Sp. p. 2450; Dr. p. 524; Gaz. vol. 136; p. 454.
Donaldson, W. I., Paulsboro, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Cartridge-loading machine. No. 899,592; Sept. 29; Sp. p. 4644; Dr. pp. 997–8; Gaz. vol. 136; p. 888.
Donnelly, F. V., Greensburg, Pa. Envelop. No. 898,849; Sept. 15; Sp. p. 3208; Dr. p. 687; Gaz. vol. 136; p. 583.
Donner, P. E., and M. W. Hogle, Pittsburg, Pa.; said Hogle assignor to said Donner. Matching mechanism. No. 897,526; Sept. 1; Sp. p. 589; Dr. pp. 122–4; Gaz. vol. 136; p. 93.
Doolittle, J. F., assignor to Cleveland Steel Tool Company, Cleveland, Ohio. Punch. No. 900,009; Sept. 29; Sp. p. 5529; Dr. p. 1179; Gaz. vol. 136; p. 1023.
Doolittle, R. E., New York, N. Y. Electrotype-block. No. 898,196; Sept. 8; Sp. p. 1958; Dr. p 418; Gaz. vol. 136; p. 340.
Doremus, W. D., assignor to H. L. Bryan, trustee, Washington, D. C. Autograph time-recorder. No. 900,059; Sept. 29; Sp. p. 5650; Dr. pp. 1206–8; Gaz. vol. 136; p. 1039.
Dorman, E. S., assignor of one-half to P. P. Hastings, Newark, N. J. Hose and garment supporter. No. 899,484; Sept. 22; Sp. p. 4404; Dr. p. 945; Gaz. vol. 136; p. 815.
Dorn, M. (See Gokey, Chambers, and Lapresse, assignors.)
Dornin, T. B., assignor of one-half to J. M. Umstadter, Norfolk, Va. Apparatus for testing fluid-meters. No. 899,959; Sept. 29; Sp. p. 5419; Dr. pp. 1155–6; Gaz. vol. 136; p. 1006.
Dornin, T. B., assignor of one-half to J. M. Umstadter, Norfolk, Va. Apparatus for testing fluid-meters. No. 899,960; Sept. 29; Sp. p. 5421; Dr. p. 1156; Gaz. vol. 136; p. 1006.
Double Body Bolster Company. (See Howard and Pflager, assignors.)
Dougherty, C. E., Elizabeth, N. J. Bottle-stopper. No. 898,564; Sept. 15; Sp. p. 2673; Dr. p. 571; Gaz. vol. 136; p. 490.
Dougherty, M. F., assignor of two-fifths to W. H. Whitesell, Los Angeles, Cal. Thread holder and waxer. No. 897,822; Sept. 1; Sp. p. 1183; Dr. p. 251; Gaz. vol. 136; p. 187.
Dove, H. A. (See Graves, R. R., assignor.)
Dover, G. W., Cranston, R. I. Mounting. No. 899,516; Sept. 29; Sp. p. 4478; Dr. p. 962; Gaz. vol. 136; p. 862.

Dowling, K. M., Little Rock, Ark. Child's waist. No. 898,449; Sept. 15; Sp. p. 2451; Dr. p. 524; Gaz. vol. 136; p. 454.
Downey, J. J., Gloucester, Mass. Car-seat cushion. No. 899,034; Sept. 22; Sp. p. 3548; Dr. p. 759; Gaz. vol. 136; p. 670.
Doxford, W., Sunderland, England. Cargo vessel. No. 897,884; Sept. 8; Sp. p. 1309; Dr. p. 280; Gaz. vol. 136; p. 239.
Doyle, P. J., Chicago, Ill. Pump-valve. No. 899,210; Sept. 22; Sp. p. 3894; Dr. p. 831; Gaz. vol. 136; p. 728.
Drake, E. R., De Land, Fla. Plant-protector. No. 898,341; Sept. 8; Sp. p. 2219; Dr. p. 471; Gaz. vol. 136; p. 385.
Drake, H. I., Ness City, Kans. Engine-gear. No. 899,247; Sept. 22; Sp. p. 3994; Dr. p. 851; Gaz. vol. 136; p. 741.
Drake, W. F. (See Gilbert and Drake.)
Draper Company. (See Bracken, H. W., assignor.)
Draper Company. (See Edwards, J. C., assignor.)
Draper Company. (See McCullough, P. E., assignor.)
Draper Company. (See Rhoades, A. E., assignor.)
Draper Company. (See Stone, M. L., assignor.)
Dreher, C. H., Stroudsburg, Pa. Puzzle. No. 898,342; Sept. 8; Sp. p. 2220; Dr. p. 472; Gaz. vol. 136; p. 385.
Drury, W., Swansea, Wales, England. Pneumatic tire. No. 898,850; Sept. 15; Sp. p. 3209; Dr. p. 687; Gaz. vol. 136; p. 583.
Du Bois, F. M., Syracuse, N. Y., assignor, by mesne assignments, to American Automotoneer Company, Philadelphia, Pa. Controller-regulator. No. 897,602; Sept. 1; Sp. p. 741; Dr. p. 157; Gaz. vol. 136; p. 117.
Dudgeon, W. M., executor. (See Nelson and Mathers, assignors.)
Duff, V., Burnside, Pa. Self-oiling wheel. No. 898,851; Sept. 15; Sp. p. 3210; Dr. p. 688; Gaz. vol. 136; p. 583.
Duggan, T. A., New Orleans, La. Insect-trap. No. 898,852; Sept. 15; Sp. p. 3211; Dr. p. 688; Gaz. vol. 136; p. 584.
Duisburger Maschinenbau Aktiengesellschaft vorm. Bechem & Keetman, Firm of. (See Kauermann, H. A., assignor.)
Duncan, C. A., Spokane, Wash. Combination caliper-gage. No. 898,565; Sept. 15; Sp. p. 2674; Dr. p. 572; Gaz. vol. 136; p. 491.
Duncan, F. B., assignor to Northern Electrical Manufacturing Company, Madison, Wis. Buffing and grinding apparatus. No. 897,603; Sept. 1; Sp. p. 744; Dr. p. 157; Gaz. vol. 136; p. 118.
Dunham, H. V., Bainbridge, assignor to Casein Company of America, New York, N. Y. Manufacture of casein. No. 897,885; Sept. 8; Sp. p. 1310; Gaz. vol. 136; p. 239.
Dunleavy, J. F., Newton, Mass. Index and filing system. No. 897,604; Sept. 1; Sp. p. 745; Dr. p. 158; Gaz. vol. 136; p. 118.
Dunn, C. E., assignor to Pilgrim Paper Company, New York, N. Y. Machine for the reduction of peat-turf into half-stuff. No. 898,450; Sept. 15; Sp. p. 2451; Dr. p. 525; Gaz. vol. 136; p. 454.
Dunn and McCarthy. (See Cheesman, G. R., assignor.)
Dunn, R. A., Stinesville, Ind. Letter-book. No. 899,035; Sept. 22; Sp. p. 3548; Dr. p. 759; Gaz. vol. 136; p. 670.
Dunwoody, H., U. S. Army. Wireless-telegraph apparatus. No. 898,197; Sept. 8; Sp. p. 1959; Dr. pp. 418–19; Gaz. vol. 136; p. 340.
Duplex Metals Company. (See Monnot, J. F., assignor.)
Duplex Printing Press Company. (See Beehman, H. F., assignor.)
Durack, P. H., El Paso, Tex. Air-lock for mines and tunnels. No. 898,343; Sept. 8; Sp. p. 2221; Dr. p. 472; Gaz. vol. 136; p. 385.
Durbin, F. H., *et al.* (See Shadall, C. E., assignor.)
Durst, G., Savannah, assignor of one-half to H. Wood, Atlanta, Ga. Gravity leveling and plumbing attachment. No. 898,853; Sept. 15; Sp. p. 3212; Dr. p. 688; Gaz. vol. 136; p. 584.
Dwight, G. C., Red Bank, N. J. Window-cleaner. No. 897,605; Sept. 1; Sp. p. 747; Dr. p. 158; Gaz. vol. 136; p. 119.
Dye Works, formerly L. Durand, Huguenin & Co. (See De la Harpe, C., assignor.)
Dye Works, formerly L. Durand, Huguenin & Co., Firm of. (See De la Harpe and Burckhardt, assignors.)
Dye Works, formerly L. Durand, Huguenin & Co., Firm of. (See De la Harpe, Burckhardt, and Zehntner, assignors.)
Dye Works formerly L. Durand, Huguenin & Co., Firm of. (See De la Harpe, Oswald, and Zehntner, assignors.)
Dyer, G. H., San Francisco, Cal. Spacing-machine. No. 899,294; Sept. 22; Sp. p. 4065; Dr. pp. 868–9; Gaz. vol. 136; p. 755.
Dyke, P. P., Sidney, Ohio. Shaft-bending machine. (Reissue.) No. 12,850; Sept. 8; Sp. p. 2376; Dr. p. 507; Gaz. vol. 136; p. 412.
Dykes, J. L. G., Milford, Ill. Vehicle-tire. No. 897,726; Sept. 1; Sp. p. 984; Dr. p. 209; Gaz. vol. 136; p. 158.
Dyson, A. H., assignor to M. G. Kellogg, Chicago, Ill. Telephone system. No. 899,787; Sept. 29; Sp. p. 5060; Dr. p. 1084; Gaz. vol. 136; p. 952.
E. Goldman & Co. (See Paul, J. T. H., assignor.)
E. A. Pflueger Company. (See Pflueger, E. A., assignor.)
E. I. du Pont de Nemours Powder Company. (See Donaldson, W. I., assignor.)
E. I. du Pont de Nemours Powder Company. (See Ortiz, J., assignor.)
Eagan, J. J., San Francisco, Cal. System for transmitting electric currents to cars. No. 897,965; Sept. 8; Sp. p. 1513; Dr. p. 321; Gaz. vol. 136; p. 267.
Earnest, W., Garyville, La. Cart. No. 898,344; Sept. 8; Sp. p. 2224; Dr. p. 472; Gaz. vol. 136; p. 386.
Eastman, C. J., Los Angeles, Cal. Cable-power. No. 900,060; Sept. 29; Sp. p. 5655; Dr. p. 1208; Gaz. vol. 136; p. 1040.
Eastman, L. K., Detroit, Mich. Device for dividing powder and filling wrappers with the same. No. 899,211; Sept. 22; Sp. p. 3895; Dr. pp. 831–2; Gaz. vol. 136; p. 729.
Eastwick, J. E., Philadelphia, Pa. Revitalizing discarded plaster-of-paris. No. 898,451; Sept. 15; Sp. p. 2455; Gaz. vol. 136; p. 455.
Eaton, G. O., *et al.* (See McCarty, W. F. M., assignor.)
Ebbe, L., Blaine, Wash. Bilge-water ejector. No. 899,248; Sept. 22; Sp. p. 3994; Dr. p. 851; Gaz. vol. 136; p. 741.
Eberle, J. A., assignor to Perfection Manufacturing Company, St. Louis, Mo. Umbrella. No. 899,718; Sept. 29; Sp. p. 4897; Dr. p. 1050; Gaz. vol. 136; p. 927.
Ebersole, C. P., Keokuk, Iowa, assignor, by mesne assignments, to American Automotoneer Company, Philadelphia, Pa. Controller-regulator. No. 899,717; Sept. 29; Sp. p. 4894; Dr. p. 1050; Gaz. vol. 136; p. 926.
Economic Engineering & Construction Company. (See Hawkins, S. A., assignor.)
Eddy, W. O. (See Davidson, W. H., assignor.)
Edgecomb, H. R., Braddock township, Allegheny county, Pa. Automatic musical instrument or player. No. 899,295; Sept. 22; Sp. p. 4067; Dr. p. 869; Gaz. vol. 136; p. 755.
Edgerton, C., Philadelphia, Pa. Digester. No. 899,961; Sept. 29; Sp. p. 5423; Dr. p. 1156; Gaz. vol. 136; p. 1007.
Edgerton, G. L., Goldsboro, N. C. Garment-creaser. No. 899,036; Sept. 22; Sp. p. 3549; Dr. p. 760; Gaz. vol. 136; p. 670.
Edington, T. B. (See Steele, R. G., assignor.)
Edison Storage Battery Company. (See Edison, T. A., assignor.)
Edison, T. A., Llewellyn Park, assignor to Edison Storage Battery Company, West Orange, N. J. Making articles by electroplating No. 898,404; Sept. 8; Sp. p. 2335; Dr. p. 496; Gaz. vol. 136; p. 406.
Edison, T. A., Llewellyn Park, Orange, assignor to Edison Storage Battery Company, West Orange, N. J. Filling apparatus for storage-battery jars, &c. No. 898,533; Sept. 15; Sp. p. 2811; Dr. p. 601; Gaz. vol. 136; p. 513.
Edmunds & Jones Mfg. Co. (See Jones, W. T., assignor.)
Edward P. Martin Company. (See Nelson, J., assignor.)
Edwards, E. N., Alva, Okla. Block-molding machine. No. 899,517; Sept. 29; Sp. p. 4480; Dr. p. 962; Gaz. vol. 136; p. 862.
Edwards, J. C., Brookline, assignor to Draper Company, Hopedale, Mass. Filling-end holder for weft-replenishing looms. No. 897,357; Sept. 1; Sp. p. 222; Dr. p. 47; Gaz. vol. 136; p. 34.
Edwards, V. E., assignor to Morgan Construction Company, Worcester, Mass. Twist-delivery guide for rolling-mills. No. 899,518; Sept. 29; Sp. p. 4482; Dr. p. 962; Gaz. vol. 136; p. 863.
Edwin B. Stimpson Company. (See Stimpson, E. B., assignor.)
Edzards, H. U., Paris, Tex. Scraper. No. 899,719; Sept. 29; Sp. p. 4898; Dr. p. 1051; Gaz. vol. 136; p. 927.
Eedson, J. M., assignor of one-half to W. A. McNair, Detroit, Mich. Seal-lock. No. 897,276; Sept. 1; Sp. p. 26; Dr. p. 7; Gaz. vol. 136; p. 7.
Egan, W. J., Chicago, assignor to E. P. Hatch, La Grange, Ill. Wood-carving machine. No. 899,519; Sept. 29; Sp. p. 4484; Dr. pp. 963–4; Gaz. vol. 136; p. 863.
Egberts, A. J. C., Chicago, Ill. Necktie. No. 898,198; Sept. 8; Sp. p. 1964; Dr. p. 419; Gaz. vol. 136; p. 340.
Ehlert, M., Hanover, Germany. Brake for carriages. No. 898,566; Sept. 15; Sp. p. 2677; Dr. p. 572; Gaz. vol. 136; p. 491.
Eicholz, J. A., assignor of one-third to E. Walton, Homestead, Pa. Rail-joint. No. 898,854; Sept. 15; Sp. p. 3214; Dr. p. 688; Gaz. vol. 136; p. 584.
Eigemann, H. (See Notbohn and Eigemann.)
Eisenhauer, J. H., Canton, Ohio. Safety attachment for gas-burners. No. 898,634; Sept. 15; Sp. p. 2813; Dr. p. 601; Gaz. vol. 136; p. 514.
Eisenmann, W., Ford City, Mich. Hose and pipe coupling. No. 898,199; Sept. 8; Sp. p. 1965; Dr. p. 419; Gaz. vol. 136; p. 341.
Ekstrom, G. H., Portland, Oreg. Hat-pin. No. 897,727; Sept. 1; Sp. p. 986; Dr. p. 210; Gaz. vol. 136; p. 158.
Elder, F., Vincennes, Ind. Air and gas compressor. No. 899,720; Sept. 29; Sp. p. 4900; Dr. pp. 1051–2; Gaz. vol. 136; p. 927.
Elder, H. L. (See Smither and Elder.)
Electric Safety Light Company. (See Hubbell, H. C., assignor.)
Electric Service Supplies Company. (See Knight, F. P. H., assignor.)
Electro Metallurgical Company. (See Becket, F. M., assignor.)
Electro Metallurgical Company. (See Seward and Kügelgen, assignors.)
Elevator Supply & Repair Company. (See Osmer, J. E., assignor.)
Elfreth, C. P. (See Elfreth, J. R. and C. P.)

Elfreth, J. R. and C. P., Philadelphia, Pa. Filter-valve. No. 897,606; Sept. 1; Sp. p. 749; Dr. p. 158; Gaz. vol. 136; p. 119.
Elgin Milk and Cream Company. (See Greick, W. P. M., assignor.)
Elkins, A. F., and H. Hunter, assignors of one-half to F. L. McCauley and T. J. Kennedy, Ironton, Ohio. Safety appliance for moving-picture apparatus. (Reissue.) No. 12,853; Sept. 15; Sp. p. 3512; Dr. p. 751; Gaz. vol. 136; p. 637.
Elliot, W. R., New York, N. Y. Mounting for precious stones. No. 899,296; Sept. 22; Sp. p. 4070; Dr. p. 869; Gaz. vol. 136; p. 756.
Elliott, R. C., Clapham, London, England, assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Type casting and composing machine. No. 897,358; Sept. 1; Sp. p. 225; Dr. pp. 47–50; Gaz. vol. 136; p. 35.
Elliott, R. W., Antioch, Cal. Liquid-dispensing apparatus. No. 897,359; Sept. 1; Sp. p. 242; Dr. p. 50; Gaz. vol. 136; p. 35.
Elliott, W. H., New York, N. Y. Automatic calling-on signal. No. 897,607; Sept. 1; Sp. p. 750; Dr. p. 159; Gaz. vol. 136; p. 119.
Ellis, F. F., Oneida, assignor to Oneida Community, Limited, Kenwood, N. Y. Device for setting animal-traps. No. 898,731; Sept. 15; Sp. p. 2992; Dr. p. 642; Gaz. vol. 136; p. 544.
Ellis, J., Lynn, Mass. Gasolene-filter. No. 898,567; Sept. 15; Sp. p. 2678; Dr. p. 572; Gaz. vol. 136; p. 491.
Ellis, L. S., Lexington, Ky. Crupper. No. 899,661; Sept. 29; Sp. p. 4783; Dr. p. 1024; Gaz. vol. 136; p. 909.
Ellis, O. T. (See Coulter and Tuggy, assignors.)
Ellsworth, E. R. (See McGowan and Ellsworth.)
Elsing, A. W., Lüneburg, Hanover, Germany. Guiding means for load-supporting ropes in cranes. No. 897,966; Sept. 8; Sp. p. 1514; Dr. p. 321; Gaz. vol. 136; p. 267.
Elsner, J., Berlin, and C. Guttwein, Aschersleben, Germany. Apparatus for drying green malt. No. 899,037; Sept. 22; Sp. p. 3550; Dr. p. 760; Gaz. vol. 136; p. 671.
Elsner, J., Berlin, Germany, assignor of one-half to G. Sonnenthal, London, England. Lifting and transporting apparatus. No. 900,061; Sept. 29; Sp. p. 5657; Dr. p. 1208; Gaz. vol. 136; p. 1040.
Ely, F. C., assignor to Florence Manufacturing Company, Northampton, Mass. Carton or display device. No. 897,608; Sept. 1; Sp. p. 759; Dr. p. 160; Gaz. vol. 136; p. 120.
Elzas, M., Los Angeles, Cal. Pantaloons-protector. No. 898,200; Sept. 8; Sp. p. 1967; Dr. p. 419; Gaz. vol. 136; p. 341.
Emmerson, C. N., Chicago, Ill. Calciminer's knife. No. 898,568; Sept. 15; Sp. p. 2680; Dr. p. 572; Gaz. vol. 136; p. 492.
Empire Wolverine Manufacturing Company. (See Shields, G., assignor.)
Endall, H., Southampton, England. Marine signaling-lamp and the like. No. 897,823; Sept. 1; Sp. p. 1184; Dr. p. 251; Gaz. vol. 136; p. 188.
Enders, C. C., Enders, Pa. Swingletree-hook. No. 899,104; Sept. 22; Sp. p. 3675; Dr. p. 787; Gaz. vol. 136; p. 693.
Engi, G. (See Kraft and Engi.)
Engi, G., and H. Kraft, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Trichlorindigo and making same. No. 899,863; Sept. 29; Sp. p. 5230; Gaz. vol. 136; p. 977.
Engi, G., and J. Fröhlich, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Vat-dye from indirubin and making same. No. 898,452; Sept. 15; Sp. p. 2455; Gaz. vol. 136; p. 455.
English, J. C., Camden, N. J., assignor to Victor Talking Machine Company. Sound-box for machines for recording and reproducing sound. No. 898,201; Sept. 8; Sp. p. 1968; Dr. p. 420; Gaz. vol. 136; p. 341.
Englund, A., Mountain View, Cal. Bread-slicer. No. 899,962; Sept. 29; Sp. p. 5425; Dr. p. 1157; Gaz. vol. 136; p. 1007.
Ensign, D F., and M. Hazard, assignors of one-third to J. Forshee, Willet, N. Y. Calk-grinder. No. 899,721; Sept. 29; Sp. p. 4902; Dr. p. 1052; Gaz. vol. 136; p. 928.
Ensor, A., Paterson, N. J. Toy. No. 897,527; Sept. 1; Sp. p. 595; Dr. p. 124; Gaz. vol. 136; p. 93.
Erben, W., *et al.* (See Shuman, F. and C., assignors.)
Erickson, E. H., Minneapolis, Minn. Clamp and buckle for joining webbing. No. 899,105; Sept. 22; Sp. p. 3676; Dr. p. 787; Gaz. vol. 136; p. 693.
Erickson, J., Fairdale, N. D. Engine. No. 899,297; Sept. 22; Sp. p. 4072; Dr. p. 870; Gaz. vol. 136; p. 756.
Ericsson, A. N., assignor of one-half to H. J. Purse and K. R. Davies, Detroit, Mich. Cash-register. No. 897,886; Sept. 8; Sp. p. 1311; Dr. pp. 280–1; Gaz. vol. 136; p. 240.
Ernst, A., Pittsburg, Pa., assignor to Coal and Coke By-Products Company. Cleaning gases. No. 900,062; Sept. 29; Sp. p. 5659; Dr. p. 1209; Gaz. vol. 136; p. 1040.
Ervin, E. E., Austin, Ind. Spindle-protector. No. 897,967; Sept. 8; Sp. p. 1515; Dr. p. 321; Gaz. vol. 136; p. 268.
Esselburn, W., Harrisville township, Medina county, Ohio. Coin-receptacle for rural mail-boxes. No. 898,453; Sept. 15; Sp. p. 2456; Dr. p. 525; Gaz. vol. 136; p. 455.
Essex Machine Company. (See Reed, J. H., assignor.)
Essig, J., Syracuse, N. Y. Manufacture of shoes. No. 899,788; Sept. 29; Sp. p. 5072; Dr. p. 1084; Gaz. vol. 136; p. 952.
Etheridge, H. (See Bryan and Etheridge.)
Etheridge, H. (See Bryan, Etheridge, and Balsinger.)
Etiman, J. M., Mapleton, N. D. Car-door. No. 899,389; Sept. 22; Sp. p. 4226; Dr. p. 905; Gaz. vol. 136; p. 784.
Eustis, J. P., Newton, Mass. Adjustable shaving-mirror. No. 898,454; Sept. 15; Sp. p. 2458; Dr. p. 525; Gaz. vol. 136; p. 455.
Evans, J. A. (See Evans, N. R., assignor.)
Evans, N. R., assignor to J. A. Evans, Richmond, Ind. Window-lifter. No. 899,009; Sept. 15; Sp. p. 3489; Dr. p. 747; Gaz. vol. 136; p. 634.
Evans, P., Philadelphia, Pa. Ventilator. No. 898,855; Sept. 15; Sp. p. 3215; Dr. p. 689; Gaz. vol. 136; p. 584.
Evans, P., assignor to International Sprinkler Co., Philadelphia, Pa. Dry-pipe valve. No. 898,856; Sept. 15; Sp. p. 3216; Dr. p. 689; Gaz. vol. 136; p. 585.
Everett, W. F., Hornbeck, La. Fly-trap. No. 898,857; Sept. 15; Sp. p. 3217; Dr. p. 689; Gaz. vol. 136; p. 585.
Everett, W. R., and E. J. Newton, Chicago, Ill. Pole-shoe. No. 897,824; Sept. 1; Sp. p. 1186; Dr. p. 251; Gaz. vol. 136; p. 188.
Eyth, L. J. (See Walker and Eyth.)
Fabric Fire Hose Company. (See Alvord, C., assignor.)
Fadum, L., Hamburg, Germany. Clothes-hanger. No. 898,455; Sept. 15; Sp. p. 2459; Dr. p. 526; Gaz. vol. 136; p. 456.
Faessler, J. W., Moberly, Mo. Boiler-tube expander. No. 898,202; Sept. 8; Sp. p. 1970; Dr. p. 420; Gaz. vol. 136; p. 342.
Faessler, J. W., Moberly, Mo. Boiler-tube expander. No. 898,203; Sept. 8; Sp. p. 1971; Dr. p. 420; Gaz. vol. 136; p. 342.
Fagan, W., Englewood, S. D. Animal-trap. No. 899,722; Sept. 29; Sp. p. 4903; Dr. p. 1053; Gaz. vol. 136; p. 928.
Fair, L., Liberty, Ky. Gearing. No. 897,908; Sept. 8; Sp. p. 1517; Dr. p. 322; Gaz. vol. 136; p. 268.
Fairbanks, Morse & Co. (See Stokes, A. G., assignor.)
Fairchild, E. N., assignor of one-half to M. A. Lehman, Minneapolis, Minn. Heating system. No. 897,609; Sept. 1; Sp. p. 761; Dr. p. 160; Gaz. vol. 136; p. 120.
Falk, B. J., New York, N. Y. Holder for viewing transparencies. No. 897,728; Sept. 1; Sp. p. 987; Dr. p. 210; Gaz. vol. 136; p. 150.
Fancher, R. I., Baldwinsville, N. Y. Flexible power-transmitting mechanism. No. 897,610; Sept. 1; Sp. p. 763; Dr. p. 161; Gaz. vol. 136; p. 120.
Farbenfabriken vorm. Friedr. Bayer & Co. (See Bauer, W., assignor.)
Farbenfabriken vorm. Friedr. Bayer & Co. (See Günther and Hesse, assignors.)
Farbenfabriken vorm. Friedr. Bayer & Co. (See König, W., assignor.)
Farbwerke vorm. Meister, Lucius & Brüning. (See Homolka, B., assignor.)
Faries, R., Williamsport, assignor of one-half to J. Luppert, South Williamsport, Pa. Pressure indicator and regulator. No. 899,446; Sept. 22; Sp. p. 4327; Dr. p. 930; Gaz. vol. 136; p. 802.
Faris, J. W. B., Skidmore, Tex. Singe-register. No. 898,509; Sept. 15; Sp. p. 2681; Dr. p. 573; Gaz. vol. 136; p. 492.
Faris, O. J., Cashmere, W. Va. Picture-hanger. No. 897,969; Sept. 8; Sp. p. 1518; Dr. p. 322; Gaz. vol. 136; p. 268.
Farnham, F. E., Rumford Falls, Me. Lifting-jack. No. 899,161; Sept. 22; Sp. p. 3799; Dr. p. 813; Gaz. vol. 136; p. 712.
Farnham, F. G., Honesdale, Pa. Billiard and pool bridge. No. 898,345; Sept. 8; Sp. p. 2225; Dr. p. 473; Gaz. vol. 136; p. 386.
Farnham, O. T., East Greenwich, R. I. Liquid measuring and transferring tube. No. 898,456; Sept. 15; Sp. p. 2460; Dr. p. 526; Gaz. vol. 136; p. 456.
Farra, J. M., Lancaster, Ky. Rail-tie and fastener. No. 899,390; Sept. 22; Sp. p. 4227; Dr. p. 905; Gaz. vol. 136; p. 784.
Farrand Company. (See Hintz, O. F., assignor.)
Farrand Company. (See Publow, W. J., assignor.)
Farrand Organ Company. (See Mack, O. E., assignor.)
Farrand Organ Company. (See Whitehead, A. E., assignor.)
Farrell, W. D., Ottumwa, Iowa. Hog grapple and conveyer. No. 899,391; Sept. 22; Sp. p. 4229; Dr. p. 905; Gaz. vol. 136; p. 785.
Faust, M., Berlin, Germany. Collapsible tube and the like. No. 897,970; Sept. 8; Sp. p. 1519; Dr. p. 322; Gaz. vol. 136; p. 269.
Fay, A., Louisville, Ky. Treating milk or cream and butter. No. 897,277; Sept. 1; Sp. p. 26; Gaz. vol. 136; p. 7.
Fein, N., New York, N. Y. Buckle. No. 897,360; Sept. 1; Sp. p. 244; Dr. p. 50; Gaz. vol. 136; p. 36.
Feibel, J., New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 898,635; Sept. 15; Sp. p. 2814; Dr. pp. 601–2; Gaz. vol. 136; p. 514.
Feibel, J., New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 898,636; Sept. 15; Sp. p. 2821; Dr. pp. 602–3; Gaz. vol. 136; p. 514.
Feldmann, C., Delft, Netherlands, and J. Herzog, Budapest, Austria-Hungary. Means of obviating the deleterious effects of oscillations. No. 898,858; Sept. 15; Sp. p. 3219; Dr. p. 690; Gaz. vol. 136; p. 586.
Felland, O. E., Stoughton, Wis. Pressing device. No. 898,570; Sept. 15; Sp. p. 2682; Dr. p. 573; Gaz. vol. 136; p. 492.

Feller, F. C., Cleveland, Ohio. Dump-cart. No. 898,204; Sept. 8; Sp. p. 1972; Dr. p. 420; Gaz. vol. 136; p. 342.
Fenner, L. J. (See Davitt and Fenner.)
Ferguson, T. M., Hattiesburg, Miss. Roller-skate. No. 899,963; Sept. 29; Sp. p. 5427; Dr. p. 1157; Gaz. vol. 136; p. 1007.
Ferranti, S. Z. de, Grindleford, England. Apparatus for the treatment of gases. No. 898,346; Sept. 8; Sp. p. 2227; Dr. pp. 473–4; Gaz. vol. 136; p. 386.
Ferris, H. G., Leavenworth, Kans. Automatic bottom-dumping and self-closing bucket. No. 897,361; Sept. 1; Sp. p. 246; Dr. p. 51; Gaz. vol. 136; p. 36.
Ferris Ink Company. (See Fitzsimmons, J. F., assignor.)
Fessenden, R. A., Washington, D. C. Wireless telegraphy. No. 897,278; Sept. 1; Sp. p. 27; Dr. p. 7; Gaz. vol. 136; p. 7.
Fessenden, R. A., Washington, D. C. Means for generating high-frequency electric oscillations. No. 897,279; Sept. 1; Sp. p. 28; Dr. p. 7; Gaz. vol. 136; p. 7.
Ficker, F. C., *et al.* (See Kasse, A., assignor.)
Fiedler, G. W., and T. Bischof, Bevier, Mo. Acetylene-gas generator. No. 899,964; Sept. 29; Sp. p. 5429; Dr. p. 1157; Gaz. vol. 136; p. 1008.
Field, A. B., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Dynamo-electric machine. No. 899,447; Sept. 22; Sp. p. 4330; Dr. p. 930; Gaz. vol. 136; p. 803.
Fieldhouse, G. W., Swissvale, Pa. Making twyers. No. 898,347; Sept. 8; Sp. p. 2229; Dr. pp. 474–5; Gaz. vol. 136; p. 387.
Fieldhouse, G. W., Oak Park, Ill. Apparatus for making twyers. No. 898,348; Sept. 8; Sp. p. 2231; Dr. pp. 475–6; Gaz. vol. 136; p. 387.
Fielding, W. H. L., New Orleans, La. Leveling device for crushing-rolls. No. 898,349; Sept. 8; Sp. p. 2233; Dr. p. 476; Gaz. vol. 136; p. 387.
Fiers, W. T., and L. Manor, Redkey, Ind. Tedder attachment for mowing-machines. No. 898,859; Sept. 15; Sp. p. 3220; Dr. p. 690; Gaz. vol. 136; p. 586.
Fillingham, J. P., assignor to Reo Motor Car Company, Lansing, Mich. Carriage-top. No. 900,063; Sept. 29; Sp. p. 5661; Dr. pp. 1209–10; Gaz. vol. 136; p. 1041.
Fiskow, K., New York, N. Y. Drainage system. No. 898,205; Sept. 8; Sp. p. 1973; Dr. p. 421; Gaz. vol. 136; p. 342.
Fischer, G., Geneva, Switzerland. Sewing-machine for sewing straw plaits. No. 899,392; Sept. 22; Sp. p. 4230; Dr. pp. 905–8; Gaz. vol. 136; p. 785.
Fisher, C., assignor to International Safe Company, Chicago, Ill. Savings-bank. No. 898,206; Sept. 8; Sp. p. 1974; Dr. p. 421; Gaz. vol. 136; p. 343.
Fisher, H. L., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 899,965; Sept. 29; Sp. p. 5431; Dr. p. 1158; Gaz. vol. 136; p. 1008.
Fishering, H. M., Canton, Ohio. Shade-trimmer. No. 898,732; Sept. 15; Sp. p. 2993; Dr. p. 642; Gaz. vol. 136; p. 544.
Fisk, W. B., Upton, Mass. Hair-retaining comb. No. 899,162; Sept. 22; Sp. p. 3801; Dr. p. 813; Gaz. vol. 136; p. 713.
Fiske, J. P. B., Newton, Mass. Brick-lift. No. 898,733; Sept. 15; Sp. p. 2996; Dr. p. 642; Gaz. vol. 136; p. 545.
Fiske, W., Medford, Mass., assignor to American Type Founders Company, New York, N. Y. Box-blank. No. 899,212; Sept. 22; Sp. p. 3897; Dr. p. 832; Gaz. vol. 136; p. 729.
Fitzgerald, J., Newark, N. J. Scissors-sharpener. No. 899,213; Sept. 22; Sp. p. 3898; Dr. p. 832; Gaz. vol. 136; p. 729.
Fitzgerald, W. P. (See Armstrong and Fitzgerald.)
Fitzsimmons, C. D. (See Fitzsimmons, R., assignor.)
Fitzsimmons, J. C., Oakland, Cal. Oil-burner. No. 897,611; Sept. 1; Sp. p. 765; Dr. p. 161; Gaz. vol. 136; p. 121.
Fitzsimmons, J. F., Hillsdale, Mich., assignor to Ferris Ink Company, Brooklyn, N. Y. Closure, fitting, and case for ink and like bottles or vessels. No. 899,015; Sept. 15; Sp. p. 3510; Dr. p. 751; Gaz. vol. 136; p. 636.
Fitzsimmons, J. J., Portland, Oreg. Changeable-dial watchman's timer. No. 898,405; Sept. 8; Sp. p. 2338; Dr. pp. 496–7; Gaz. vol. 136; p. 406.
Fitzsimmons, R., assignor to C. D. Fitzsimmons, Philadelphia, Pa. Interchangeable blowpipe. No. 898,860; Sept. 15; Sp. p. 3221; Dr. p. 690; Gaz. vol. 136; p. 586.
Fleming, R. E., Mexico, Mo. Churn-operating mechanism. No. 898,207; Sept. 8; Sp. p. 1977; Dr. pp. 421–2; Gaz. vol. 136; p. 343.
Flentje, E., Cambridge, Mass. Shock-absorber. No. 899,662; Sept. 29; Sp. p. 4784; Dr. p. 1024; Gaz. vol. 136; p. 909.
Flickinger, W. B., *et al.*, trustees. (See Pfadt, J. G., assignor.)
Florence Manufacturing Company. (See Ely, F. C., assignor.)
Flynn, M. J., New York, assignor of one-half to E. W. McCarty, Brooklyn, N. Y. Door-check. No. 897,825; Sept. 1; Sp. p. 1187; Dr. p. 252; Gaz. vol. 136; p. 188.
Flynn, M. L., Dallas, Tex. Copy-holder. No. 899,520; Sept. 29; Sp. p. 4488; Dr. p. 964; Gaz. vol. 136; p. 863.
Focatiis, A. de, New Orleans, La. Distilling apparatus and method of distillation. No. 898,861; Sept. 15; Sp. p. 3222; Dr. p. 691; Gaz. vol. 136; p. 586.
Fogarty, T. C., F. W. Brock, and F. A. Bowdle, Chatham, Ill. Electric railway-signal. No. 898,862; Sept. 15; Sp. p. 3226; Dr. pp. 691–2; Gaz. vol. 136; p. 587.
Foley, G. M., Chicago, Ill. Mail-pouch-catching device. No. 898,208; Sept. 8; Sp. p. 1978; Dr. p. 422; Gaz. vol. 136; p. 343.
Forbus, N. C., Hartford, Ark. Indicator. No. 899,966; Sept. 29; Sp. p. 5436; Dr. p. 1159; Gaz. vol. 136; p. 1009.
Ford, H. C., Syracuse, N. Y., assignor to Dey Time Register Co. Registration-controller for time-recorders. No. 898,042; Sept. 8; Sp. p. 1661; Dr. p. 353; Gaz. vol. 136; p. 291.
Fordyce, J. R., Little Rock, Ark. Plant for storing and compressing cotton. No. 897,971; Sept. 8; Sp. p. 1520; Dr. pp. 322–3; Gaz. vol. 136; p. 269.
Fordyce, J. R., Atlanta, Ga. Plant for handling baled cotton. No. 897,972; Sept. 8; Sp. p. 1523; Dr. pp. 323–4; Gaz. vol. 136; p. 269.
Foreman, L. M., Huntington, W. Va. Oil-can. No. 897,729; Sept. 1; Sp. p. 988; Dr. p. 210; Gaz. vol. 136; p. 159.
Forhan, H. L., Portland, Me. Revolver for processing canned goods. No. 900,064; Sept. 29; Sp. p. 5662; Dr. p. 1210; Gaz. vol. 136; p. 1041.
Forshee, J. (See Ensign and Hazard, assignors.)
Forsyth, R., and W. W. Hanscom, San Francisco, Cal. Automatic stoking-indicator mechanism. No. 897,280; Sept. 1; Sp. p. 29; Dr. pp. 7–8; Gaz. vol. 136; p. 8.
Foster, A. M., Santa Barbara, Cal. Game apparatus. No. 898,350; Sept. 8; Sp. p. 2235; Dr. p. 477; Gaz. vol. 136; p. 388.
Foster, A. T., assignor of one-half to F. G. Hurst, Fillmore, Ind. Switch. No. 899,967; Sept. 29; Sp. p. 5438; Dr. p. 1159; Gaz. vol. 136; p. 1009.
Foster, C. K., Centerville, R. I. Shock-absorber for vehicles. No. 898,043; Sept. 8; Sp. p. 1667; Dr. p. 354; Gaz. vol. 136; p. 292.
Foster, J. M. (See Morrow and Foster.)
Foster, S. P., Chattanooga, assignor of one-half to C. A. Bedell, East Chattanooga, Tenn. Releasing device for checkreins. No. 897,973; Sept. 8; Sp. p. 1525; Dr. p. 324; Gaz. vol. 136; p. 270.
Foster, T. D., Ottumwa, Iowa. Hog-hoisting apparatus. No. 898,209; Sept. 8; Sp. p. 1979; Dr. p. 422; Gaz. vol. 136; p. 344.
Fournier, E., Minneapolis, Minn. Rotary engine. No. 899,485; Sept. 22; Sp. p. 4406; Dr. p. 945; Gaz. vol. 136; p. 816.
Fowler, J. O. (See Dilg and Fowler.)
Fox, C. W., Saugus, Mass. Nursing-bottle. No. 898,975; Sept. 15; Sp. p. 3427; Dr. p. 736; Gaz. vol. 136; p. 624.
Fox, H. T. (See Briner and Fox.)
Frame, R. E., assignor to H. W. Wolff, St. Louis, Mo. Car-truck. No. 897,281; Sept. 1; Sp. p. 32; Dr. p. 8; Gaz. vol. 136; p. 8.
Franks, O. G., assignor to Seng Company, Chicago, Ill. Extension-table slide. No. 899,693; Sept. 29; Sp. p. 4845; Dr. p. 1038; Gaz. vol. 136; p. 918.
Franzmeier, L., Newton, Wis. Windrower. No. 898,571; Sept. 15; Sp. p. 2683; Dr. p. 573; Gaz. vol. 136; p. 493.
Fratcher, D. W., Detroit, Mich. Frame or protective casing for pictures. No. 899,393; Sept. 22; Sp. p. 4236; Dr. p. 908; Gaz. vol. 136; p. 786.
Frederick Osann Company. (See Plumley, R. L., assignor.)
Fredrickson, C. G. (See Linden and Lund, assignors.)
Free, W. C., Chicago, and J. B. Angove, Rockford, assignors to Illinois Sewing Machine Company, Chicago, Ill. Sewing-machine. No. 898,976; Sept. 15; Sp. p. 3429; Dr. p. 736; Gaz. vol. 136; p. 624.
Freeman, L. A., *et al.* (See Mentzer, C. E., assignor.)
French, M. (See Boardman, J. W., assignor.)
Freschl, A., Chicago, Ill. Seat. No. 897,282; Sept. 1; Sp. p. 34; Dr. p. 9; Gaz. vol. 136; p. 8.
Fresnaye, J. A. de la, Bagnolet, assignor to G. Philippart, Paris, France. Construction of toy or game implement. No. 898,210; Sept. 8; Sp. p. 1983; Dr. p. 423; Gaz. vol. 136; p. 344.
Frey, E. G., Pittsburg, Pa. Trundling toy. No. 898,351; Sept. 8; Sp. p. 2237; Dr. p. 477; Gaz. vol. 136; p. 388.
Frey, E. H., Cleveland, Ohio. Addressing-machine. No. 897,887; Sept. 8; Sp. p. 1316; Dr. p. 281; Gaz. vol. 136; p. 240.
Frey, E. H., Cleveland, Ohio. Addressing-machine. No. 897,888; Sept. 8; Sp. p 1318; Dr. p. 282; Gaz. vol. 136; p. 241.
Frey, J. (See Röttgen and Frey.)
Friedman, G., Jamestown, N. Y. Bread-mixer. No. 898,211; Sept. 8; Sp. p. 1984; Dr. p. 423; Gaz. vol. 136; p. 344.
Fröhlich, J. (See Engi and Fröhlich.)
Frost, W. H. (See Nix and Frost.)
Frost, W. H., and J. J. Nix, Los Angeles, Cal.; said Nix assignor to said Frost. Producing gas. No. 900,065; Sept. 29; Sp. p. 5663; Dr. p. 1210; Gaz. vol. 136; p. 1041.

Fruin, J. L., New York, N. Y. Plumbing system. No. 897,283; Sept. 1; Sp. p. 36; Dr. p. 9; Gaz. vol. 136; p. 9.
Fry, D. L. (See Huffman and Fry.)
Frye, P. A., Cleveland, Ohio. Bag and blank therefor. No. 899,723; Sept. 29; Sp. p. 4905; Dr. p. 1053; Gaz. vol. 136; p. 928.
Fryer, E. J., assignor of one-half to E. B. Roark, Claremont, Western Australia, Australia. Positive water-meter. No. 898,863; Sept. 15; Sp. p. 3230; Dr. p. 692; Gaz. vol. 136; p. 587.
Fuchs, W. L., Sardis, Ohio. Safety-stirrup. No. 897,974; Sept. 8; Sp. p. 1527; Dr. pp. 324–5; Gaz. vol. 136; p. 270.
Fulton Company. (See Fulton, W. M., assignor.)
Fulton, W. M., assignor to Fulton Company, Knoxville, Tenn. Device for utilizing the motion of flexible diaphragms. No. 897,730; Sept. 1; Sp. p. 989; Dr. p. 210; Gaz. vol. 136; p. 159.
Furman, T. H., Denver, Colo. Hair-drying comb. No. 899,038; Sept. 22; Sp. p. 3551; Dr. p. 760; Gaz. vol. 136; p. 671.
Furse, A. D., London, England. Disintegrating apparatus. No. 899,521; Sept. 29; Sp. p. 4491; Dr. p. 965; Gaz. vol. 136; p. 864.
Futterman, A., New York, N. Y. Gas-heated welding-tool. No. 898,864; Sept. 15; Sp. p. 3232; Dr. p. 693; Gaz. vol. 136; p. 588.
Futterman, A., New York, N. Y. Welding-tool. No. 899,864; Sept. 29; Sp. p. 5231; Dr. p. 1118; Gaz. vol. 136; p. 977.
Gaara, H., and E. Hem, Telemarken, Norway. Method of and apparatus for straining the waste water in paper-mills, wood-pulp factories, and the like. No. 898,212; Sept. 8; Sp. p. 1985; Dr. p. 423; Gaz. vol. 136; p. 344.
Gafney, J. A., Brooklyn, N. Y. Bottle. No. 899,214; Sept. 22; Sp. p. 3899; Dr. p. 832; Gaz. vol. 136; p. 729.
Gage, E. L., Toledo, Ohio. Truck-scale. No. 898,457; Sept. 15; Sp. p. 2461; Dr. p. 526; Gaz. vol. 136; p. 456.
Gage, F. V., near Downey, and H. T. Hazard, Los Angeles, Cal. Safety-pin. No. 899,106; Sept. 22; Sp. p. 3677; Dr. p. 787; Gaz. vol. 136; p. 694.
Gagnon, N. E., Woodland, Wash. Car-stake. No. 899,394; Sept. 22; Sp. p. 4237; Dr. p. 908; Gaz. vol. 136; p. 786.
Galarneau, P. D., and W. S. Newton, East St. Louis, Ill. Door opener and closer. No. 898,865; Sept. 15; Sp. p. 3233; Dr. p. 693; Gaz vol. 136; p. 588.
Galbreath, J. W., Auxvasse, Mo. Baling-press. No. 899,663; Sept. 29; Sp. p. 4786; Dr. pp. 1024–6; Gaz. vol. 136; p. 910.
Gallatin, D. S., Dalton, Ohio. Bridle-bit. No. 898,637; Sept. 15; Sp. p. 2827; Dr. p. 603; Gaz. vol. 136; p. 515.
Galusha, A. L., Dorchester, Mass. Appliance used in combination with gas-generating plants. No. 897,362; Sept. 1; Sp. p. 247; Dr. p. 51; Gaz. vol. 136; p. 37.
Gamble, J., assignor to G. A. Reach, Philadelphia, Pa. Base-ball mitt. No. 899,522; Sept. 29; Sp. p. 4493; Dr. p. 965; Gaz. vol. 136; p. 864.
Gamewell Fire-Alarm Telegraph Company. (See Cole, F. W., assignor.)
Gamewell Fire-Alarm Telegraph Company. (See Suren, N. H., assignor.)
Ganoe, E., Sloan, Iowa. Buggy-top attachment. No. 899,789; Sept. 29; Sp. p. 5073; Dr. p. 1085; Gaz. vol. 136; p. 953.
Gardner, G. B., and A. H. Higgins, Haverhill, Mass. Shoe-rack. No. 899,249; Sept. 22; Sp. p. 3996; Dr. pp. 851–2; Gaz. vol. 136; p. 741.
Gardner, T. W., Nashville, Tenn. Signaling device for telephone-exchanges. No. 897,731; Sept. 1; Sp. p. 991; Dr. p. 211; Gaz. vol. 136; p. 159.
Garin, V. J., Annemasse, and F. David, Cette, assignors to Compagnie Française des Produits Tartriques, Beziers, France. Treating substances containing crude tartar. No. 898,866; Sept. 15; Sp. p. 3234; Gaz. vol. 136; p. 588.
Gartside, W. N., Richmond, Ind. Core-forming machine. No. 898,734; Sept. 15; Sp. p. 2998; Dr. pp. 642–3; Gaz. vol. 136; p. 545.
Gathmann, E. (See Meigs and Gathmann.) (Reissue.)
Gautsch, C., Munich, Germany. Casting copper and copper alloys. No. 898,638; Sept. 15; Sp. p. 2828; Gaz. vol. 136; p. 515.
Gay, C. (See Hendrick, W., assignor.)
Gay, E. G., deceased, Oneida, N. Y.; J. M. Gay executrix. Railway cross-tie. No. 897,612; Sept. 1; Sp. p. 766; Dr. p. 161; Gaz. vol. 136; p. 121.
Gay, J. M., executrix. (See Gay, E. G.)
Geary, C. P. (See Maguire, F. R., assignor.)
Geer, H. S., Watervliet, N. Y. Trace-holder. No. 900,066; Sept. 29; Sp. p. 5667; Dr. p. 1210; Gaz. vol. 136; p. 1042.
Geiger, B. F., Los Angeles, Cal. Amalgamator. No. 897,975; Sept. 8; Sp. p. 1528; Dr. p. 325; Gaz. vol. 136; p. 270.
General Electric Company. (See Alexanderson, E. F. W., assignor.)
General Electric Company. (See Behr, P., assignor.)
General Electric Company. (See Bendmann, P., assignor.)
General Electric Company. (See Corey, F. B., assignor.)
General Electric Company. (See De Reamer, F. C., assignor.)
General Electric Company. (See Hawkins, L. A., assignor.)
General Electric Company. (See Holden, F., assignor.)
General Electric Company. (See Janisch and Naumann, assignors.)
General Electric Company. (See Kleser, W., assignor.)
General Electric Company. (See Kruh, O. O., assignor.)
General Electric Company. (See Latour, M. C. A., assignor.)
General Electric Company. (See Lindsay, C. F., assignor.)
General Electric Company. (See Merrill, W. L., assignor.)
General Electric Company. (See Milch, M., assignor.)
General Electric Company. (See Perham, J. C., assignor.)
General Electric Company. (See Pforr, P., assignor.)
General Electric Company. (See Rider, O. O., assignor.)
General Electric Company. (See Seabolt, F. J., assignor.)
General Electric Company. (See Siegel, A., assignor.)
General Electric Company. (See Steinmetz, C. P., assignor.)
General Electric Company. (See Taylor, W. B., assignor.)
General Electric Company. (See Troy, M. O., assignor.)
General Incandescent Arc Light Company. (See Ball, H. P., assignor.)
General Storage Battery Company. (See Bijur, J., assignor.)
Genthner, C. M. (See Divekey and Genthner.)
Gentieu, G. W., Peoria, Ill. Projectile-loading. No. 899,523; Sept. 29; Sp. p. 4494; Dr. p. 965; Gaz. vol. 136; p. 864.
Geometric Tool Company. (See Leonard, W. A., assignor.)
George, W., J. Bentley, and E. C. C. Krough, Los Angeles, Cal., said Krough assignor to said Bentley. Wave-motor. No. 899,652; Sept. 29; Sp. p. 4771; Dr. p. 1021; Gaz. vol. 136; p. 906
Geraghty, J. P., assignor to himself, C. H. Good, J. J. Goodlad, and E. Sullivan, Jersey City, N. J. Permutation-lock. No. 898,417; Sept. 8; Sp. p. 2368; Dr. p. 506; Gaz. vol. 136; p. 411.
Gerdes, H., Berlin, Germany. Gas heating-stove. No. 897,732; Sept. 1; Sp. p. 992; Dr. p. 211; Gaz. vol. 136; p. 160.
Gerhard, W. H., Austin, Tex. Folding bracket for desk-telephones, &c. No. 898,572; Sept. 15; Sp. p. 2685; Dr. p. 574; Gaz. vol. 136; p. 493.
Germann, W. H., Washington, D. C. Supporter for trousers and drawers. No. 897,976; Sept. 8; Sp. p. 1529; Dr. p. 325; Gaz. vol. 136; p. 271.
Germer, E. G., Erie, Pa. Fire-pot or lining. No. 900,011; Sept. 29; Sp. p. 5536; Dr. p. 1180; Gaz. vol. 136; p. 1023.
Gerner, H. J., assignor to M. Gerner, Canton, Ohio. Apparatus for making brine. No. 897,284; Sept. 1; Sp. p. 37; Dr. p. 9; Gaz. vol. 136; p. 9.
Gerner, M. (See Gerner, H. J., assignor.)
Gerrish, E. W., Jacksonville, Fla. Log hauling and loading machine. No. 897,613; Sept. 1; Sp. p. 767; Dr. pp. 161–2; Gaz. vol. 136; p. 121.
Gerstein, H., *et al.* (See Gerstein, M., assignor.)
Gerstein, M., assignor of two-thirds to H. Gerstein, Chelsea, and A. Cooper, South Boston, Mass. Range-boiler. No. 900,012; Sept. 29; Sp. p. 5537; Dr. p. 1180; Gaz. vol. 136; p. 1024.
Gervin, C. D., New York, N. Y., assignor to Dale Company. Cluster-lamp socket. No. 897,614; Sept. 1; Sp. p. 768; Dr. p. 162; Gaz. vol. 136; p. 121.
Geserich, M. F., St. Louis, Mo. Advertising device for vehicles. No. 897,615; Sept. 1; Sp. p. 770; Dr. p. 162; Gaz. vol. 136; p. 122.
Getaz, H., Schenectady, N. Y. Composite file. No. 898,352; Sept. 8; Sp. p. 2238; Dr. p. 477; Gaz. vol. 136; p. 388.
Giannelli, L., Boston, Mass. Milling-machine. No. 898,353; Sept. 8; Sp. p. 2239; Dr. pp. 477–8; Gaz. vol. 136; p. 388.
Gibbs, W. T., Louisville, Ga. Seed-planter. No. 899,039; Sept. 22; Sp. p. 3552; Dr. p. 761; Gaz. vol. 136; p. 671.
Gibney, J. W., assignor to W. P. Taylor Company, Buffalo, N. Y. Apparatus for making green-sand cores. No. 899,250; Sept. 22; Sp. p. 3998; Dr. pp. 852–3; Gaz. vol. 136; p. 742.
Gibson, A. H. C., Birmingham, England. Pressure-indicator. No. 898,213; Sept. 8; Sp. p. 1986; Dr. p. 423; Gaz. vol. 136; p. 345.
Gibson, J. K. (See Brewer and Gibson.)
Gibson, W. K. (See McLean and Gibson.)
Gilbert, H. J., assignor to William B. Mershon and Company, Saginaw, Mich. Driving mechanism. No. 897,826; Sept. 1; Sp. p. 1189; Dr. p. 252; Gaz. vol. 136; p. 189.
Gilbert, H. S., and W. F. Drake, Pueblo, Colo. Telephone cut-off. No. 899,524; Sept. 29; Sp. p. 4496; Dr. p. 965; Gaz. vol. 136; p. 865.
Gilbert, J. M., West Somers, N. Y. Dish-washer. No. 898,354; Sept. 8; Sp. p. 2242; Dr. p. 478; Gaz. vol. 136; p. 389.

Gilbert Mfg. Co. (See Bowers, T. G., assignor.)
Gilchrist, R. B., Newark, N. J. Corking-machine. No. 899,525; Sept. 29; Sp. p. 4498; Dr. p. 966; Gaz. vol. 136; p. 865.
Gilcrest, M. E., Mount Sterling, Ky. Rail-joint. No. 898,867; Sept. 15; Sp. p. 2235; Dr. p. 693; Gaz. vol. 136; p. 588.
Gill, J., Edinburgh, Scotland. Rotary engine. No. 899,040; Sept. 22; Sp. p. 3553; Dr. p. 761; Gaz. vol. 136; p. 671.
Gilleland, S. G., Spring Garden, Mo. Baling-press. No. 898,868; Sept. 15; Sp. p. 3236; Dr. p. 694; Gaz. vol. 136; p. 588.
Gillette-Vibber Co. (See Vibber, W. H., assignor.)
Gillmor, H. G., Bath, Me. Means of forming joints and bonds in rails. No. 898,869; Sept. 15; Sp. p. 3239; Dr. p. 674; Gaz. vol. 136; p. 589.
Gillson, C., Mapleton, Minn. Hay-rack. No. 897,363; Sept. 1; Sp. p. 249; Dr. pp. 51–2; Gaz. vol. 136; p. 37.
Gilroy, J. J., Lost Creek, Pa. Power-transmitting mechanism. No. 898,870; Sept. 15; Sp. p. 3246; Dr. p. 675; Gaz. vol. 136; p. 500.
Giroud, P. G., New York, N. Y. Skirt-supporter. No. 898,640; Sept. 15; Sp. p. 2830; Dr. p. 603; Gaz. vol. 136; p. 515.
Giuliani, B. G., *et al.* (See Rosati, T., assignor.)
Glaser, A. F., Jersey City, and J. Olsen, Whippany, assignors of one-third to G. W. Crane, Rahway, N. J. Transmission mechanism. No. 899,526; Sept. 29; Sp. p. 4505; Dr. pp. 966–7; Gaz. vol. 136; p. 866.
Glass, R. (See Coe and Glass.)
Glauber, J. H., Cleveland, Ohio. Waste and vent cock. No. 897,364; Sept. 1; Sp. p. 251; Dr. p. 52; Gaz vol. 136; p. 37.
Glenn, C. E., Evans City, Pa. Dump-wagon. No. 898,871; Sept. 15; Sp. p. 3248; Dr. p. 695; Gaz. vol. 136; p. 580.
Glidden, O. F., Grand Rapids, Mich. Supply-valve for flush-tanks. No. 899,486; Sept. 22; Sp. p. 4407; Dr. p. 946; Gaz. 136; p. 816.
Gloystein, C. F., Henderson, Ky. Manufacture of concentrated tobacco extract. No. 899,865; Sept. 29; Sp. p. 5232; Dr. p. 1118; Gaz. vol. 136; p. 977.
Goble, C., Beaverdam, Ohio. Lifting-jack. No. 897,827; Sept. 1; Sp. p. 1192; Dr. pp. 252–3; Gaz. vol. 136; p. 189.
Goddard, J., assignor to Seneca Camera Manufacturing Company, Rochester, N. Y. Camera. No. 897,733; Sept. 1; Sp. p. 994; Dr. pp. 211–12; Gaz. vol. 136; p. 160.
Goddu, G., Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for driving loose nails. No. 898,573; Sept. 15; Sp. p. 2687; Dr. pp. 514–15; Gaz. vol. 136; p. 494.
Godley, B. J., Romulus, N. Y. Means for tilling fields. No. 899,215; Sept. 22; Sp. p. 3900; Dr. p. 833; Gaz. vol. 136; p. 730.
Goerdes, F. W., assignor to C. H. Wright, Newark, N. J., and F. A. Russ, Greenwich, Conn. Buckle. No. 897,734; Sept. 1; Sp. p. 997; Dr. p. 212; Gaz. vol. 136; p. 160.
Goff, G., Millard, W. Va. Adjustable soap-holder. No. 898,872; Sept. 15; Sp. p. 3251; Dr. p. 695; Gaz. vol. 136; p. 591.
Goff, S. B., Camden, N. J. Bottle filling and closing device. No. 898,458; Sept. 15; Sp. p. 2463; Dr. pp. 526–7; Gaz. vol. 136; p. 456.
Gokey, F. F., and W. R. Chambers, Winooski, and W. E. Lapresc; said Lapresc assignor of one-third of his right to M. Dorn, Burlington, Vt. Carton. No. 898,355; Sept. 8; Sp. p. 2245; Dr. p. 478; Gaz. vol. 136; p. 389.
Gold, E. E., New York, N. Y. Automatic pipe-coupling for railway-cars. No. 898,214; Sept. 8; Sp. p. 1987; Dr. p. 424; Gaz. vol. 136; p. 345.
Goldberg, P., assignor to Firm of Chemische Fabrik Flörsheim Dr. H. Nordlinger, Flörsheim-on-the-Main, Germany. Freeing waste waters containing cyanids and sulfocyanids from poison. No. 897,735; Sept. 1; Sp. p. 999; Dr. p. 212; Gaz. vol. 136; p. 161.
Goldberg, S. H., Waukegan, Ill. Joint for roofing materials. No. 899,968; Sept. 29; Sp. p. 5439; Dr. p. 1159; Gaz. vol. 136; p. 1009.
Golden, J. S., Sylvester, Ga. Skimmer. No. 899,724; Sept. 29; Sp. p. 4906; Dr. p. 1053; Gaz. vol. 136; p. 929.
Goldenberg, W., Brooklyn, N. Y. Hat-pin. No. 898,873; Sept. 15; Sp. p. 3253; Dr. p. 696; Gaz. vol. 136; p. 591.
Goldman, A. P., and H. H. Stephens, assignors of one-third to J. W. Tobin, North Chillicothe, Ill. Car-coupling. No. 897,889; Sept. 8; Sp. p. 1323; Dr. p. 282; Gaz. vol. 136; p. 242.
Goldmann, P., New York, N. Y. Fire-escape. No. 898,874; Sept. 15; Sp. p. 3254; Dr. p. 696; Gaz. vol. 136; p. 591.
Goldsmith, W. M., Sparta, Mo. Guard-rail for beds. No. 898,875; Sept. 15; Sp. p. 3255; Dr. p. 696; Gaz. vol. 136; p. 591.
Golloday, I. N. (See Herrmann and Golloday.)
Gonon, P. E., New York, N. Y. Glass brick, tile, and building-block. No. 898,045; Sept. 8; Sp. p. 1669; Dr. p. 354; Gaz. vol 136; p. 292.
Gooch, A. E., Campello, Mass., assignor to Arabol Manufacturing Company, New York, N. Y. Composition of matter. No. 898,044; Sept. 8; Sp. p. 1668; Gaz. vol. 136; p. 292.
Good, A., Manhattan, Kans. Valve mechanism for engines. No. 897,736; Sept. 1; Sp. p. 1000; Dr. pp. 212–13; Gaz. vol. 136; p. 161.
Good, C. H., *et al.* (See Geraghty, J. P., assignor.)
Goodall Matting Company. (See Arrouquier, F. E., assignor.)
Goodier, G. W., assignor to Hygienic Floor Machine Company, Utica, N. Y. Floor-cleaning machine. No. 899,725; Sept. 29; Sp. p. 4908; Dr. p. 1054; Gaz. vol. 136; p. 929.
Goodier, G. W., assignor to Hygienic Floor Machine Company, Utica, N. Y. Floor duster and polisher. No. 899,726; Sept. 29; Sp. p. 4911; Dr. p. 1054; Gaz. vol. 136; p. 929.
Goodier, G. W., assignor to Hygienic Floor Machine Company, Utica, N. Y. Floor duster and polisher. No. 899,727; Sept. 29; Sp. p. 4913; Dr. p. 1055; Gaz. vol. 136; p. 930.
Goodlad, J. J., *et al.* (See Geraghty, J. P., assignor.)
Goodrich, H., Council Bluffs, Iowa. Collapsible chair. No. 897,737; Sept. 1; Sp. p. 1002; Dr. p. 213; Gaz. vol. 136; p. 161.
Goodrich, H. C., New Haven, Conn. Mount for hooks and eyes. No. 899,664; Sept. 29; Sp. p. 4793; Dr. p. 1026; Gaz. vol. 136; p. 910.
Goodwine, J., Jr., *et al.* (See Hall, F. M., assignor.)
Goodwine, U. S., *et al.* (See Hall, F. M., assignor.)
Goodykoontz, F. A., Sapulpa, Okla. Buckle. No. 899,969; Sept. 29; Sp. p. 5441; Dr. p. 1159; Gaz. vol. 136; p. 1009.
Gordon, J. F., Lowell, Mass. Winding-machine. No. 898,459; Sept. 15; Sp. p. 2465; Dr. pp. 527–8; Gaz. vol. 136; p. 457.
Gordon, T. W., Franklin, Me., assignor of one-fourth to B. F. and K. E. Abbott New York, N. Y. Pickax-guard. No. 899,487; Sept. 22; Sp. p. 4408; Dr. p. 946; Gaz. vol. 136; p. 816.
Gordon, W., Sharon Springs, assignor of one-half to W. E. Colyer, Argusville, N. Y. Flying-machine. No. 897,738; Sept. 1; Sp. p. 1003; Dr. pp. 213–14; Gaz. vol. 136; p. 162.
Gordon, W. W. (See Nokes and Gordon.)
Gormley, F. L., Boston, Mass. Screw-jack. No. 898,215; Sept. 8; Sp. p. 1989; Dr. p. 424; Gaz. vol. 136; p. 345.
Goss Printing Press Company. (See Husby, H. P., assignor.)
Goss Printing Press Company. (See Lang, H., assignor.)
Goss Printing Press Company. (See Walser, J. J., assignor.)
Gotchall, G. A., Manning, Iowa. Lid-remover. No. 898,574; Sept. 15; Sp. p. 2693; Dr. p. 575; Gaz. vol. 136; p. 494.
Gould, O. M., Montreal, Quebec, Canada. Water-cooling tower. No. 899,665; Sept. 29; Sp. p. 4793; Dr. p. 1026; Gaz. vol. 136; p. 910.
Gould Storage Battery Company. (See Hubbard, A. S., assignor.)
Gould Storage Battery Company. (See Turbayne, W. A., assignor.)
Gould, W. W., Bridgeport, Conn. Sewing-machine fly-wheel. No. 898,639; Sept. 15; Sp. p. 2829; Dr. p. 603; Gaz. vol. 136; p. 515.
Graetz, M., Berlin, Germany. Inverted incandescent gas-lamp. No. 897,616; Sept. 1; Sp. p. 771; Dr. p. 163; Gaz. vol. 136; p. 122.
Graf, J., West Chicago, Ill. Buckle-shield. No. 899,395; Sept. 22; Sp. p. 4238; Dr. p. 908; Gaz. vol. 136; p. 786.
Graham, F. B., Garnett, Kans. Animal-breeder's bag. No. 899,251; Sept. 22; Sp. p. 4001; Dr. p. 853; Gaz. vol. 136; p. 742.
Graham, F. B., Garnett, Kans. Impregnator. No. 899,728; Sept. 29; Sp. p. 4916; Dr. p. 1055; Gaz. vol. 136; p. 930.
Graham, S. T., Los Angeles, Cal. Ore-feeder. No. 899,527; Sept. 29; Sp. p. 4507; Dr. pp. 967–8; Gaz. vol. 136; p. 866.
Granger, E. E., Chicago, Ill. Electric-railway conduit. No. 898,216; Sept. 8; Sp. p. 1991; Dr. pp. 424–5; Gaz. vol. 136; p. 346.
Grant, B. J., Galena, Kans. Checkrein. No. 897,977; Sept. 8; Sp. p. 1530; Dr. p. 325; Gaz. vol. 136; p. 271.
Grant, F. W., trustees, *et al.* (See Pfadt, J. G., assignor.)
Grant, O. B., Davenport, Iowa. Track construction for railways. No. 899,041; Sept. 22; Sp. p. 3556; Dr. p. 761; Gaz. vol. 136; p. 671.
Grant, W. C., Queen City, Tex. Portable baker and broiler. No. 897,459; Sept. 1; Sp. p. 451; Dr. p. 96; Gaz. vol. 136; p. 71.
Grant, W. L. (See Martin, Grant, McGavock, Haynes, and Voorhies.)
Graves, R. R., assignor of one-half to H. A. Dove, Salem, Oreg. Bottle. No. 898,575; Sept. 15; Dr. p. 2694; Dr. p. 576; Gaz. vol. 136; p. 494.
Gray, D. C., Rahway, N. J. Paper-holding clamp. No. 898,460; Sept. 15; Sp. p. 2470; Dr. p. 528; Gaz. vol. 136; p. 457.
Green Engineering Company. (See Harrington, J., assignor.)
Green, V. E., Galva, Ill. Telephone-switch. No. 898,576; Sept. 15; Sp. p. 2695; Dr. p. 576; Gaz. vol. 136; p. 494.
Green, W. H., Chicago Heights, assignor to Kennicott Water Softener Company, Chicago, Ill. Water-purifier. No. 898,735; Sept. 15; Sp. p. 3002; Dr. p. 643; Gaz. vol. 136; p. 545.
Green, W. H., Chicago Heights, Ill., assignor to Kennicott Water Softener Company. Purifying water. No. 898,876; Sept. 15; Sp. p. 3256; Dr. pp. 696–7; Gaz. vol. 136; p. 592.
Greenaway, A. J., Detroit, Mich. Automatic valve. No. 897,285; Sept. 1; Sp. p. 38; Dr. p. 9; Gaz. vol. 136; p. 9.
Greenlaw Manufacturing Co. (See Greenlaw, W. A., assignor.)
Greenlaw Manufacturing Co. (See Greenlaw and Royce, assignors.)
Greenlaw, W. A., Melrose Highlands, assignor to Greenlaw Manufacturing Co., Boston, Mass. Flexible pipe-joint. No 897,460; Sept. 1; Sp. p. 453; Dr. p. 97; Gaz. vol. 136; p. 71.
Greenlaw, W. A., Melrose Highlands, and H. A. Royce, assignors to Greenlaw Manufacturing Co., Boston, Mass. Flexible pipe-joint. No. 897,461; Sept. 1; Sp. p. 454; Dr. p. 97; Gaz. vol. 136; p. 72.
Greenleaf, R. T., Philadelphia, Pa. Coal-chute. No. 898,977; Sept. 15; Sp. p. 3430; Dr. pp. 736–7; Gaz. vol. 136; p. 625.

Greenough, C. E. (See Tufts, E. R., assignor.)
Greenwood, J. W., Springfield, Ill. Bridle-bit. No. 899,298; Sept. 22; Sp. p. 4073; Dr. p. 870; Gaz. vol. 136; p. 756.
Greenwood, T., Wolverley, near Kidderminster, England. Loom for the manufacture of tufted or pile fabrics. No. 897,528; Sept. 1; Sp. p. 596; Dr. pp. 124–5; Gaz. vol. 136; p. 93.
Gregory, J. J., Jr., Punxsutawney, Pa. Stove-shield. No. 898,356; Sept. 8; Sp. p. 2246; Dr. p. 479; Gaz. vol. 136; p. 390.
Greiner, L. (See Wirth, E., assignor.)
Greist, H. M., New Haven, Conn., assignor to Greist Manufacturing Company. Sewing-machine-attachment holder. No. 900,067; Sept. 29; Sp. p. 5668; Dr. p. 1211; Gaz. vol. 136; p. 1042.
Greist, J. M., deceased; M. F. W. and P. R. Greist, New Haven, Conn, administrators, assignors to Greist Manufacturing Company. Tuck-creaser for sewing-machines. No. 900,068; Sept. 29; Sp. p. 5670; Dr. p. 1211; Gaz. vol. 136; p. 1042.
Greist, M. F. W., *et al.*, administrators. (See Greist, J. M.)
Greist Manufacturing Company. (See Greist, H. M., assignor.)
Greist Manufacturing Company. (See Greist, P. R., assignor.)
Greist, P. R., *et al.*, administrators. (See Greist, J. M.)
Greist, P. R., New Haven, Conn., assignor to Greist Manufacturing Company. Sewing-machine braider or corder. No. 900,069; Sept. 29; Sp. p. 5673; Dr. p. 1211; Gaz. vol. 136; p. 1043.
Greist, P. R., New Haven, Conn., assignor to Greist Manufacturing Company. Sewing-machine-attachment holder. No. 900,070; Sept. 29; Sp. p. 5674; Dr. p. 1212; Gaz. vol. 136; p. 1043.
Greick, W. P. M., assignor to Elgin Milk and Cream Company, Elgin, Ill. Vacuum-pump. No. 898,461; Sept. 15; Sp. p. 2472; Dr. p. 529; Gaz. vol. 136; p. 458.
Griesel, F., Schellmühl, near Danzig, assignor to Chemische Fabrik Actien-Gesellschaft vormals Moritz Milch & Co., Zweigniederlassung Danzig, Danzig, Germany. Apparatus for cutting up superphosphate masses. No. 899,042; Sept. 22; Sp. p. 3558; Dr. p. 762; Gaz. vol. 136; p. 672.
Griessmann, F. A., Berlin, Germany. Automatic balancing device for centrifugal pumps and the like. No. 898,462; Sept. 15; Sp. p. 2474; Dr. p. 529; Gaz. vol. 136; p. 458.
Griffith, N. B., assignor to Keystone Supply & Manufacturing Company, Philadelphia, Pa. Water-closet. No. 900,071; Sept. 29; Sp. p. 5676; Dr. p. 1212; Gaz. vol. 136; p. 1043.
Grimes, H. W. (See Bergman and Grimes.)
Grise, C. W. (See Lees and Grise.)
Griswold, D. C., assignor of one-half to W. H. Joy, North Wilbraham, Mass. Step-bearing device. No. 898,406; Sept. 8; Sp. p. 2341; Dr. p. 497; Gaz. vol. 136; p. 407.
Groat, N. A., Monte Vista, Colo. Belt-guide. No. 899,970; Sept. 29; Sp. p. 5442; Dr. p. 1160; Gaz. vol. 136; p. 1010.
Grobl, S., Chicago, Ill. Toy. No. 899,448; Sept. 22; Sp. p. 4332; Dr. p. 930; Gaz. vol. 136; p 803.
Gronberg, J. G. (See Tholts and Gronberg.)
Gross, W., Fall River, Mass. Warp-thread-detecting device. No. 898,357; Sept. 8; Sp. p. 2246; Dr. p. 479; Gaz. vol. 136; p. 390.
Gross, W., Fall River, Mass. Warp stop-motion for looms. No. 898,358; Sept. 8; Sp. p. 2249; Dr. p. 479; Gaz. vol. 136; p. 390.
Grote, F., Evansville, Ind. Automatic steam-heating system. No. 897,739; Sept. 1; Sp. p. 1005; Dr. p. 214; Gaz. vol. 136; p. 162
Grove, M. L., assignor of two-thirds to W. A. Wray, Tylersburg, and N. F. Hoover, Marienville, Pa. Automatic valve. No. 897,617; Sept. 1; Sp. p. 773; Dr. p. 163; Gaz. vol. 136; p. 122.
Grundel, E., San Francisco, Cal. Tobacco-pipe. No. 898,877; Sept. 15; Sp. p. 3257; Dr. p. 697; Gaz. vol. 136; p. 592.
Grünenwald, A., Hohentwiel, Germany. Suckling arrangement for pigs. No. 898,878; Sept. 15; Sp. p. 3258; Dr. p. 697; Gaz. vol. 136; p. 592.
Grüninger, J., New York, N. Y. Safety device for doors. No. 898,100; Sept. 8; Sp. p. 1771; Dr. p. 376; Gaz. vol. 136; p. 310.
Guidry, T., Church Point, La. Baling-press. No. 899,666; Sept. 29; Sp. p. 4795; Dr. p. 1027; Gaz. vol. 136; p. 910.
Gullixson, O. C. (See Gullixson, O. T. and O. C.)
Gullixson, O. T. and O. C., Bode, Iowa. Ditching-machine. No. 900,072; Sept. 29; Sp. p. 5677; Dr. pp. 1212–13; Gaz. vol. 136; p. 1044.
Gundrum, W. W. (See Otis and Gundrum.)
Günther, O., and L. Hesse, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. New disazo dye. No. 897,529; Sept. 1; Sp. p. 597; Gaz. vol. 136; p. 94.
Günther, O., and L. Hesse, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. New disazo dye. No. 898,217; Sept. 8; Sp. p. 2001; Gaz. vol. 136; p. 346.
Gunvalson, G. H., Minneapolis, Minn. Brace and plate. No. 898,046; Sept. 8; Sp. p. 1670; Dr. p. 354; Gaz. vol. 136; p. 292.
Gustafson, A. S., Chattanooga, Tenn. Car-wheel. No. 898,463; Sept. 15; Sp. p. 2476; Dr. p. 529; Gaz. vol. 136; p. 458.
Guttman, A. J., *et al.* (See McCarty, W. F. M., assignor.)
Guttwein, C. (See Elsner and Guttwein.)
H. C. Fry Glass Company. (See Richardson, S. O., Jr., assignor.)
Haan, P. C., Midland Park, N. J., assignor to himself and H. G. Stripe, New York, N. Y. Nut-lock. No. 898,464; Sept. 15; Sp. p. 2478; Dr. p. 530; Gaz. vol. 136; p. 459.
Haarmann, A., Osnabrück, Germany. Bed-plate for iron railway-sleepers. No. 899,107; Sept. 22; Sp. p. 3678; Dr. pp. 787–8; Gaz. vol 136; p. 694.
Hacking, J. T., Enfield, and C. Wilkinson, Providence, R. I. Knock-off guard for stop-motions. No. 899,163; Sept. 22; Sp. p. 3802; Dr. p. 814; Gaz. vol. 136; p. 713.
Hackney, L. S., St. Paul, Minn. Track or roadway. No. 899,252; Sept. 22; Sp. p. 4003; Dr. p. 854; Gaz. vol. 136; p. 742.
Hackney, L. S., St. Paul, Minn. Vehicle-guiding means. No. 899,253; Sept. 22; Sp. p. 4004; Dr. p. 854; Gaz. vol. 136; p. 743.
Hadley, A. N., Indianapolis, Ind. Warehouse. No. 898,465; Sept. 15; Sp. p. 2479; Dr. p. 530; Gaz. vol. 136; p. 459.
Hadlock, A. V. (See Mohme and Hadlock.)
Hafstad, T. B., Iron Mountain, Mont. Bottle-stopper. No. 898,359; Sept. 8; Sp. p. 2252; Dr. pp. 479–80; Gaz. vol. 136; p. 390.
Haggerty, J. W., New Britain, Conn. Door-closer. No. 898,736; Sept. 15; Sp. p. 3004; Dr. p. 644; Gaz. vol. 136; p. 546.
Haggerty, W. D. (See Peck and Haggerty.)
Hague, C. A., New York, N. Y. Air-pump. No. 899,971; Sept. 29; Sp. p. 5442; Dr. p. 1160; Gaz. vol. 136; p. 1010.
Hahn, E. L., Muscatine, Iowa. Fertilizer-distributer. No. 899,449; Sept. 22; Sp. p. 4334; Dr. p. 931; Gaz. vol. 136; p. 803.
Hahn, G. J., *et al.* (See Crepar, T. M., assignor.)
Haight, G. W. (See Hazlet and Haight.)
Hale-Kilburn Metal Company. (See Heintz, L. I., assignor.)
Hale-Kilburn Metal Company. (See Kilburn and Budd, assignors.)
Haley, T., Xenia, assignor of one-half to A. G. Barnes, Macedonia Depot, Ohio. Recording device for block-signal systems. No. 897,618; Sept. 1; Sp. p. 775; Dr. pp. 163–4; Gaz. vol. 136; p. 123.
Hall, A. (See Rosenbaum and Hall.)
Hall, A., Jersey City, N. J. Button. No. 899,528; Sept. 29; Sp. p. 4510; Dr. p. 968; Gaz. vol 136; p. 866.
Hall, F. M., assignor of two-thirds to J., Jr., and U. S. Goodwine, Potomac, Ill. Automatic switch. No. 898,879; Sept. 15; Sp. p. 3259; Dr. p. 697; Gaz. vol. 136; p. 593.
Hall, G. L., New York, N. Y. Guard-rail clamp. No. 899,694; Sept. 29; Sp. p. 4848; Dr. p. 1038; Gaz. vol. 136; p. 919.
Hall, J., North Monroe, N. H. Invalid-bed. No. 897,890; Sept. 8; Sp. p. 1324; Dr. p. 283; Gaz. vol. 136; p. 242.
Hall, J., North Monroe, N. H. Invalid-bed. No. 897,891; Sept. 8; Sp. p. 1326; Dr. p. 284; Gaz. vol. 136; p. 242.
Hall, O. A., Omaha, Nebr. Rail-fastener. No. 897,828; Sept. 1; Sp. p. 1193; Dr. pp. 253–5; Gaz. vol. 136; p. 190.
Halley, F., Chicago, Ill. Railway-crossing. No. 898,466; Sept. 15; Sp. p. 2480; Dr. p. 530; Gaz. vol. 136; p. 459.
Hamer, T. L., Newark, N. Y. Track-sanding machine. No. 899,529; Sept. 29; Sp. p. 4511; Dr. pp. 968–9; Gaz. vol. 136; p. 867.
Hamilton, A. L., Sugartown, La. Running-gear for vehicles. No. 899,700; Sept. 29; Sp. p. 5074; Dr. p. 1085; Gaz. vol 136; p. 953.
Hamilton, R. A., New York, N. Y. Fountain-pen. No. 897,892; Sept. 8; Sp. p. 1328; Dr. p. 284; Gaz. vol. 136; p. 243.
Hamilton, W. E., Columbus, Ohio. Loading and storing machine. No. 897,893; Sept. 8; Sp. p. 1329; Dr. pp. 284–7; Gaz. vol. 136; p. 243.
Hammer, L. F., Omaha, Nebr. Fastener. No. 899,972; Sept. 29; Sp. p. 5445; Dr. p. 1161; Gaz. vol. 136; p. 1010.
Hammett, W. T., Ringgold, La. Adjustable hoe. No. 899,791; Sept. 29; Sp. p. 5075; Dr. p. 1086; Gaz. vol. 136; p. 953.
Hammond, R. A. (See Clayton, F. T., assignor.)
Hanak, E., New Orleans, La. Portable stacking-elevator. No. 897,462; Sept. 1; Sp. p. 456; Dr. pp. 97–8; Gaz. vol. 136; p. 72.
Hanaway, F. M., Glen Mills, Pa. Hair-brush. No. 898,467; Sept. 15; Sp. p. 2480; Dr. p. 531; Gaz. vol. 136; p. 459.
Handlan-Buck Manufacturing Company. (See Rolfes, G. H., assignor.)
Handly, T. F., Allegheny, Pa. Pencil, penholder, and like article. No. 897,530; Sept. 1; Sp. p. 598; Dr. p. 125; Gaz. vol. 136; p. 94.
Hanlin, S., Pittsburg, Pa., and G. W. Rigney, Battle Creek, Mich. Brake-handle. No. 898,880; Sept. 15; Sp. p. 3261; Dr. p. 698; Gaz. vol. 136; p. 593.
Hanna, T., Columbus, Ohio. Globe for inverted burners. No. 898,881; Sept. 15; Sp. p. 3263; Dr. p. 698; Gaz. vol. 136; p. 593.
Hannah, A., Warrenpoint, N. J. Gauze-loom. No. 899,973; Sept. 29; Sp. p. 5446; Dr. p. 1161; Gaz. vol. 136; p. 1010.
Hanscom, W. W. (See Forsyth and Hanscom.)
Hansen, K. H., assignor to Arthur Koppel Company, Pittsburg, Pa. Dump-car. No. 899,108; Sept. 22; Sp. p. 3679; Dr. p. 788; Gaz. vol. 136; p. 694.
Hansen, T., Everett, assignor, by mesne assignments, to Standard Fibre Company, Incorporated, Somerville, Mass. Collapsible mandrel. No. 899,530; Sept. 29; Sp. p. 4512; Dr. p. 969; Gaz. vol. 136; p. 867.

Hanson, H. A., Grano, N. D. Out-trapping fly-escape screen. No. 897,894; Sept. 8; Sp. p. 1342; Dr. p. 287; Gaz. vol. 136; p. 244.
Hanson, H. E. (See Wegener and Hanson.)
Harcourt, R., Toronto, Ontario, assignor of one-half to H. H. Vaughan, Montreal, Canada. Smoke-jack. No. 899,667; Sept. 29; Sp. p. 4796; Dr. p. 1027; Gaz. vol. 136; p. 911.
Harden, D. L., Newaygo, Mich. Cuspidor. No. 898,577; Sept. 15; Sp. p. 2697; Dr. p. 576; Gaz. vol. 136; p. 495.
Hardin, E. T., Hot Springs, Ark. Switch-lock. No. 898,737; Sept. 15; Sp. p. 3005; Dr. p. 644; Gaz. vol. 136; p. 546.
Harding, C. H., *et al.* (See Shuman, F. and C., assignors.)
Harding, J. T., North Abington, Mass., assignor to Krentler-Arnold Hinge Last Company, Detroit, Mich. Last-lock. No. 898,407; Sept. 8; Sp. p. 2343; Dr. p. 497; Gaz. vol. 136; p. 407.
Harding, L. L. (See Beinkamp and Harding.)
Hardsogg, M., Ottumwa, Iowa. Pneumatic drill. No. 899,729; Sept. 29; Sp. p. 4918; Dr. pp. 1055–6; Gaz. vol. 136; p. 930.
Harford, T. J., Jersey City, N. J., assignor of one-half to J. J. Bamberger & Co. Adjustable frame. No. 898,047; Sept. 8; Sp. p. 1671; Dr. p. 355; Gaz. vol. 136; p. 293.
Harker, J. E., Spirit Lake, Iowa. Egg-case carrier. No. 899,531; Sept. 29; Sp. p. 4513; Dr. p. 969; Gaz. vol. 136; p. 867.
Harmon, P. T., *et al.* (See Adelhelm, C., assignor.)
Harper, H. N., Monroe, La. Fertilizer-distributer. No. 897,829; Sept. 1; Sp. p. 1198; Dr. p. 255; Gaz. vol. 136; p. 190.
Harrington, J. (See Poppenhusen and Harrington.)
Harrington, J., assignor to Green Engineering Company, Chicago, Ill. Traveling-grate furnace. No. 898,101; Sept. 8; Sp. p. 1773; Dr. pp. 376–7; Gaz. vol. 136; p. 310.
Harrington, J., assignor to Green Engineering Company, Chicago, Ill. Traveling-grate furnace. No. 898,468; Sept. 15; Sp. p. 2481; Dr. p. 531; Gaz. vol. 136; p. 459.
Harris, J., assignor to Central Laboratory Supply Company, La Fayette, Ind. Recording instrument. No. 899,043; Sept. 22; Sp. p. 3560; Dr. pp. 762–3; Gaz. vol. 136; p. 672.
Harris, S. J. (See Smith, W. A., assignor.)
Harrison, A., Chicago, Ill., assignor to Warren Webster and Company, Camden, N. J. Automatic water-relief valve. No. 897,895; Sept. 8; Sp. p. 1343; Dr. p. 287; Gaz. vol. 136; p. 244.
Harrison, A., Chicago, Ill. Automatic relief-valve. No. 899,532; Sept. 29; Sp. p. 4514; Dr. p. 969; Gaz. vol. 136; p. 867.
Harrison, J. H. (See Buckingham, F. W., assignor.)
Harrison, J. T., *et al.* (See Bogle, W. L., assignor.)
Harriss, L. E., Washington, D. C. Game or puzzle apparatus. No. 898,469; Sept. 15; Sp. p. 2485; Dr. p. 531; Gaz. vol. 136; p. 460.
Hart, A. L., Burlington, Iowa. Electrical piano-playing instrument. No. 898,218; Sept. 8; Sp. p. 2002; Dr. pp. 425–6; Gaz. vol. 136; p. 346.
Hart, F. R., Suisun City, Cal. Thermometer-case. No. 899,044; Sept. 22; Sp. p. 3562; Dr. p. 763; Gaz. vol. 136; p. 673.
Hart, J. H., Philadelphia, Pa. Ice-cream freezer. No. 898,048; Sept. 8; Sp. p. 1672; Dr. p. 355; Gaz. vol. 136; p. 293.
Hart, W. H., assignor of one-half to H. B. Leary, Washington, D. C. Camp-oven. No. 898,641; Sept. 15; Sp. p. 2831; Dr. p. 604; Gaz. vol. 136; p. 516.
Harter, N. S., Waukegan, Ill. Variable-speed and reversing mechanism. No. 899,974; Sept. 29; Sp. p. 5450; Dr. p. 1162; Gaz. vol. 136; p. 1011.
Harthan, F. E., assignor to L. C. Taylor, trustee, Trenton, N. J. Reversing-clutch mechanism. No. 899,396; Sept. 22; Sp. p. 4241; Dr. pp. 909–10; Gaz. vol. 136; p. 786.
Hartzell, E. O. (See Kutz, G., assignor.).
Harvey, H. D. (See Steele, D. R., assignor.)
Harvey, H. H., and R. J. Cook, Chicago, Ill. Construction of railway-cars. No. 897,896; Sept. 8; Sp. p. 1345; Dr. p. 288; Gaz. vol. 136; p. 244.
Hasbrouck, G. G., Nyack, N. Y. Piano-case construction. No. 898,470; Sept. 15; Sp. p. 2486; Dr. p. 532; Gaz. vol. 136; p. 460.
Hasen, G. M., St. Louis, Mo. Bag-cleaning machine. No. 899,397; Sept. 22; Sp. p. 4242; Dr. p. 910; Gaz. vol. 136; p. 787.
Haskell, E., New York, N. Y. Cleaning and polishing apparatus. No. 897,286; Sept. 1; Sp. p. 40; Dr. p. 10; Gaz. vol. 136; p. 10.
Hassler, F. J., Halltown, Ill. Running-gear for loading apparatus. No. 899,975; Sept. 29; Sp. p. 5452; Dr. pp. 1162–3; Gaz. vol. 136; p. 1011.
Hastings, P. P. (See Dorman, E. S., assignor.)
Hatch, E. P. (See Egan, W. J., assignor.)
Hatchett, A., Louisville, Ky. Phonograph attachment for telephones. No. 898,642; Sept. 15; Sp. p. 2833; Dr. pp. 604–5; Gaz. vol. 136; p. 516.
Haudenshield, S., Carnegie, Pa. Rotary engine. No. 900,013; Sept. 29; Sp. p. 5538; Dr. pp. 1180–1; Gaz. vol. 136; p. 1024.
Haugk, F. C. H., and J. F. Schoeppl, Baltimore, Md., assignors to said Schoeppl. Crate. No. 899,010; Sept. 15; Sp. p. 3490; Dr. pp. 747–8; Gaz. vol. 136; p. 634.
Haunty, E. M., Milton, Pa. Plumb rule and level. No. 899,730; Sept. 29; Sp. p. 4925; Dr. p. 1056; Gaz. vol. 136; p. 931.
Hauser, S., and E. S. Shepherd, New York, assignors to Leader Safety Razor & Strop Co., Brooklyn, N. Y. Razor-strop. No. 898,418; Sept. 8; Sp. p. 2370; Dr. p. 506; Gaz. vol. 136; p. 411.
Hausmann, B., San Francisco, Cal., assignor to Hausmann Sash Carrier Co. Slidable and swinging window-sash. No. 899,731; Sept. 29; Sp. p. 4927; Dr. pp. 1056–7; Gaz. vol. 136; p. 931.
Hausmann Sash Carrier Co. (See Hausmann, B., assignor.)
Hauvette, J. E., Clermont-Ferrand, France. Tension device for loom-shuttles. No. 898,102; Sept. 8; Sp. p. 1778; Dr. pp. 377–8; Gaz. vol. 136; p. 311.
Haverhill Channeling Machine Co. (See Webster, E. A., assignor.)
Hawkins, E. C., assignor of one-half to D. Roney, Allegheny, Pa. Device for reshaping and re-forming boots and shoes. No. 897,830; Sept. 1; Sp. p. 1200; Dr. p. 255; Gaz. vol. 136; p. 190.
Hawkins, L. A., Schenectady, N. Y., assignor to General Electric Company. Block-signal system. No. 897,531; Sept. 1; Sp. p. 599; Dr. p. 125; Gaz. vol. 136; p. 94.
Hawkins, S. A., assignor to Economic Engineering & Construction Company, Chicago, Ill. Elbow connection. No. 898,882; Sept. 15; Sp. p. 3263; Dr. p. 698; Gaz. vol. 136; p. 594.
Hawley, C. G. (See Baker, E. K., assignor.)
Hawley, R. P., Monongahela, Pa. Hinge. No. 898,360; Sept. 8; Sp. p. 2253; Dr. p. 480; Gaz. vol. 136; p. 391.
Hawley, W. S., Landing, N. J. Boiler. No. 899,299; Sept. 22; Sp. p. 4074; Dr. pp. 870–1; Gaz. vol. 136; p. 756.
Hawthorne & Sheble Manufacturing Company. (See Kraemer, T., assignor.)
Hayes, W. E., Frankfort, N. Y. Automatic third-rail contact-shoe guard. No. 899,593; Sept. 29; Sp. p. 4657; Dr. p. 998; Gaz. vol. 136; p. 889.
Haymond, W. O., and J. O. Potter, Muncie, Ind. Indicator. No. 898,643; Sept. 15; Sp. p. 2835; Dr. p. 605; Gaz. vol. 136; p. 516.
Haynes, R. E. (See Martin, Grant, McGavock, Haynes, and Voorhies.)
Hays Manufacturing Company. (See Hitchcock, O. G., assignor.)
Hays, W. O., Arlington, Oreg. Sash and screen fastener. No. 899,045; Sept. 22; Sp. p. 3563; Dr. p. 763; Gaz. vol. 136; p. 673.
Haywood, J. W., Baldwinsville, N. Y. Dump-wagon. No. 899,011; Sept. 15; Sp. p. 3492; Dr. p. 748; Gaz. vol. 136; p. 635.
Hazard, H. T. (See Gage and Hazard.)
Hazard, M. (See Ensign and Hazard.)
Hazlet, J. D., and G. W. Haight, Franklin, Pa. Railway-tie. No. 899,976; Sept. 29; Sp. p. 5455; Dr. p. 1163; Gaz. vol. 136; p. 1012.
Heard, W. H., London, Ontario, Canada. Pump. No. 898,471; Sept. 15; Sp. p. 2487; Dr. p. 532; Gaz. vol. 136; p. 460.
Hearn, J. T., Victory, Ga. Overshoe-fastener. No. 897,287; Sept. 1; Sp. p. 41; Dr. p. 10; Gaz. vol. 136; p. 10.
Heaton, H. E., Oroville, Cal. Spring-wheel. No. 899,668; Sept. 29; Sp. p. 4795; Dr. p. 1027; Gaz. vol. 136; p. 911.
Heckman, J. R., Ketchikan, Alaska. Fish-trap. No. 897,897; Sept. 8; Sp. p. 1347; Dr. p. 288; Gaz. vol. 136; p. 244.
Heckman, J. R., Ketchikan, Alaska. Fish-trap. No. 897,898; Sept. 8; Sp. p. 1351; Dr. p. 289; Gaz. vol. 136; p. 245.
Heckscher, A. (See Buck, C. F., assignor.)
Hedges, J. C., Des Moines, Iowa. Loose-leaf book. No. 899,594; Sept. 29; Sp. p. 4658; Dr. p. 998; Gaz. vol. 136; p. 889.
Heermans, T. W., Evanston, Ill. Explosion-engine. No. 898,103; Sept. 8; Sp. p. 1780; Dr. pp. 378–9; Gaz. vol. 136; p. 311.
Hegeler, H. (See Klink, W., assignor.)
Heiliger, W. H., Brazil, Ind. Whip-lock. No. 899,695; Sept. 29; Sp. p. 4850; Dr. p. 1039; Gaz. vol. 136; p. 919.
Heimsness, A. O., Fillmore, N. D. Whiffletree. No. 897,740; Sept. 1; Sp. p. 1006; Dr. p. 214; Gaz. vol. 136; p. 162.
Heiney, W. M., Huntington, Ind. Conveyer. No. 898,408; Sept. 8; Sp. p. 2344; Dr. pp. 497–8; Gaz. vol. 136; p. 407.
Heintz, L. I., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa. Metallic door. No. 899,164; Sept. 22; Sp. p. 3804; Dr. p. 814; Gaz. vol. 136; p. 713.
Heinz, N. L., La Salle, Ill. Recuperative spelter-furnace. No. 898,409; Sept. 8; Sp. p. 2345; Dr. p. 498; Gaz. vol. 136; p. 408.
Heinz, N. L., La Salle, Ill. Recuperative furnace. No. 898,410; Sept. 8; Sp. p. 2347; Dr. p. 499; Gaz. vol. 136; p. 408.
Heinze, R. H., Kellogg, Minn. Cultivator. No. 897,365; Sept. 1; Sp. p. 253; Dr. p. 52; Gaz. vol. 136; p. 38.
Heinzen, J. (See Bauer, M. K., assignor.)
Heissenberger, J. (See Reid and Heissenberger.)
Heitger, F. H., assignor to Speed Changing Pulley Company, Indianapolis, Ind. Carbureter. No. 898,361; Sept. 8; Sp. p. 2255; Dr. p. 480; Gaz. vol. 136; p. 391.

Heitger, F. H., assignor to Speed Changing Pulley Company, Indianapolis, Ind. Carburetor. No. 899,109; Sept. 22; Sp. p. 3681; Dr. p. 789; Gaz. vol. 136; p. 695.
Hellstrom, C. G., Hartford, Conn. Toy. No. 899,866; Sept. 29; Sp. p. 5233; Dr. p. 1118; Gaz. vol. 136; p. 978.
Helmond, W. F., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 897,366; Sept. 1; Sp. p. 255; Dr. p. 52; Gaz. vol. 136; p. 38.
Helwig, F. (See Marrero and Helwig.)
Hem, E. (See Gaara and Hem.)
Hemberger, T., St. Louis, Mo. Snare for drums or other musical instruments. No. 899,450; Sept. 22; Sp. p. 4336; Dr. p. 931; Gaz. vol. 136; p. 804.
Hemberger, T., St. Louis, Mo. Musical drum. No. 899,488; Sept. 22; Sp. p. 4409; Dr. p. 946; Gaz. vol. 136; p. 817.
Hempen, J. H., Alexandria, La. Seed-cleaner. No. 898,883; Sept. 15; Sp. p. 3265; Dr. p. 699; Gaz. vol. 136; p. 594.
Henderson, R., Washington, D. C. Circuit-closer for call-bells. No. 898,104; Sept. 8; Sp. p. 1785; Dr. p. 379; Gaz. vol. 136; p. 312.
Henderson, W. M., Steelton, Pa. Movable-point crossing. No. 898,644; Sept. 15; Sp. p. 2837; Dr. pp. 605–6; Gaz. vol. 136; p. 517.
Henderson, W. M., Steelton, Pa. Movable-point crossing. No. 898,645; Sept. 15; Sp. p. 2838; Dr. p. 606; Gaz. vol. 136; p. 517.
Henderson, W. M., Steelton, Pa. Heel-block for railway-frogs and the like. No. 898,646; Sept. 15; Sp. p. 2839; Dr. p. 606; Gaz. vol. 136; p. 517.
Henderson, W. R. (See Rodgers and Henderson.)
Hendrick, W., assignor to C. Gay, New Haven, Conn. Chaplet and shrine of the holy rosary. No. 899,977; Sept. 29; Sp. p. 5456; Dr. pp. 1163–4; Gaz. vol. 136; p. 1012.
Hendricks, A., Grand Rapids, Mich. Adding-machine stand. No. 897,367; Sept. 1; Sp. p. 258; Dr. p. 53; Gaz. vol. 136; p. 39.
Hendry, T. W., San Francisco, Cal. Internal-combustion engine. No. 899,216; Sept. 22; Sp. p. 3901; Dr. p. 833; Gaz. vol. 136; p. 730.
Hendryx, W. A., Denver, Colo. Combination agitator and decanting filter. No. 899,480; Sept. 22; Sp. p. 4411; Dr. pp. 946–7; Gaz. vol. 136; p. 817.
Henesey, M. H., Syracuse, N. Y. Valve-operating mechanism. No. 898,472; Sept. 15; Sp. p. 2489; Dr. p. 532; Gaz. vol. 136; p. 461.
Henn, E. C. (See Smith, O. A., assignor.)
Hennermann, F., Van Wert, Ohio. Display-rack. No. 900,014; Sept. 29; Sp. p. 5542; Dr. p. 1181; Gaz. vol. 136; p. 1025.
Henry, T., Jamestown, Ind. Road-grader. No. 898,884; Sept. 15; Sp. p. 3268; Dr. p. 699; Gaz. vol. 136; p. 594.
Henshaw, W., Springfield, N. J. Flower-stake. No. 899,046; Sept. 22; Sp. p. 3565; Dr. p. 763; Gaz. vol. 136; p. 673.
Herbst, W. B., Washington, D. C. Toy balloon. No. 898,105; Sept. 8; Sp. p. 1788; Dr. p. 380; Gaz. vol. 136; p. 312.
Herbst, W. E., Hartford, Conn. Rubber tread. No. 897,860; Sept. 1; Sp. p. 1267; Dr. p. 271; Gaz. vol. 136; p. 199.
Hergesheimer, J., assignor to Curtis Publishing Company, Philadelphia, Pa. Means for preventing offset in connection with printing. No. 897,331; Sept. 1; Sp. p. 1201; Dr. p. 256; Gaz. vol. 136; p. 191.
Herman, R., Crafton, Pa. Cooling device for explosive-engines. No. 897,532; Sept. 1; Sp. p. 601; Dr. pp. 125–6; Gaz. vol. 136; p. 94.
Heron, S. T. (See Snyder and Heron.)
Herr Dump Car Company. (See Herr, H. T., assignor.)
Herr, H. M., Lampeter, Pa. Hinge. No. 898,647; Sept. 15; Sp. p. 2840; Dr. p. 606; Gaz. vol. 136; p. 518.
Herr, H. T., assignor to Herr Dump Car Company, Denver, Colo. Dump-car. No. 897,463; Sept. 1; Sp. p. 458; Dr. p. 98; Gaz. vol. 136; p. 73.
Herr, H. T., Roanoke, Va., assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Fluid-pressure brake. No. 898,885; Sept. 15; Sp. p. 3270; Dr. pp. 699–700; Gaz. vol. 136; p. 595.
Herrmann, A., and I. N. Golloday, Colma, Cal. Gopher-trap. No. 899,595; Sept. 29; Sp. p. 4660; Dr. p. 998; Gaz. vol. 136; p. 889.
Herrnecker, G. H., Hornell, N. Y. Reflector. No. 897,464; Sept. 1; Sp. p. 463; Dr. p. 99; Gaz. vol. 136; p. 73.
Herzog, J. (See Feldmann and Herzog.)
Heskett, T. J. (See Moore, M., assignor.) (Reissue.)
Hess, E. B., New York, N. Y., assignor to Royal Typewriter Company, Hoboken, N. J. Type-writing machine. No. 897,533; Sept. 1; Sp. p. 604; Dr. p. 126; Gaz. vol. 136; p. 95.
Hesse, L. (See Günther and Hesse.)
Hessler, J., Sheboygan, Wis. Shoe. No. 899,978; Sept. 29; Sp. p. 5458; Dr. p. 1164; Gaz. vol. 136; p. 1012.
Hetherington, J., Benton Harbor, Mich. Ticket or coin holder. No. 899,217; Sept. 22; Sp. p. 3903; Dr. p. 834; Gaz. vol. 136; p. 730.
Hetlesaeter, O., assignor to Allis-Chalmers Company, Milwaukee, Wis. Frame-mounting. No. 899,596; Sept. 29; Sp. p. 4660; Dr. p. 999; Gaz. vol. 136; p. 890.
Hetlesaeter, O., assignor to Allis-Chalmers Company, Milwaukee, Wis. Excavating-machine. No. 899,597; Sept. 29; Sp. p. 4662; Dr. pp. 999–1000; Gaz. vol. 136; p. 890.
Hetzel, F. V., and H. P. Cochrane, Philadelphia, Pa., assignors to Link-Belt Company, Chicago, Ill. Adjustable chute. No. 898,886; Sept. 15; Sp. p. 3277; Dr. p. 701; Gaz. vol. 136; p. 595.
Hewitt, H. H. (See Sill, S. J., assignor.)
Heyenga, M. W., Riverdale, assignor of one-half to M. and H. Barkmeier, Chicago, Ill. Vehicle running-gear. No. 899,218; Sept. 22; Sp. p. 3904; Dr. p. 834; Gaz. vol. 136; p. 731.
Heyman, J. C., Minneapolis, Minn. Stump-puller. No. 898,887; Sept. 15; Sp. p. 3279; Dr. p. 701; Gaz. vol. 136; p. 595.
Heyn, F. H. C., Hamburg, Germany. Apparatus for recovering submerged objects. No. 897,620; Sept. 1; Sp. p. 779; Dr. p. 164; Gaz. vol. 136; p. 123.
Hicks, C. G., assignor of one-half to J. W. Kilmore, Chicago, Ill. Cable-suspension transportation system. No. 897,978; Sept. 8; Sp. p. 1532; Dr. p. 326; Gaz. vol. 136; p. 271.
Hicks Improved Engine Brake Company. (See Hicks, J. A., assignor.)
Hicks, J. A., assignor to Hicks Improved Engine Brake Company, Atlanta, Ga. Feed and quick-release valve. No. 897,741; Sept. 1; Sp. p. 1007; Dr. p. 214; Gaz. vol. 136; p. 163.
Hicks, J. M., Summit, N. J., assignor to Auto Stopper Company. Means for sealing vessels. No. 899,732; Sept. 29; Sp. p. 4928; Dr. p. 1057; Gaz. vol. 136; p. 931.
Higgins, A. H. (See Gardner and Higgins.)
Higgins, J. W., Somerville, Mass. Desk. No. 898,106; Sept. 8; Sp. p. 1789; Dr. p. 380; Gaz. vol. 136; p. 312.
High Duty Saw and Tool Company. (See Tindel, A., assignor.)
Higuchi, M., New York, N. Y. Electric clock. No. 898,648; Sept. 15; Sp. p. 2841; Dr. p. 607; Gaz. vol. 136; p. 518.
Higuchi, M., New York, N. Y. Electric clock. No. 898,649; Sept. 15; Sp. p. 2844; Dr. pp. 607–8; Gaz. vol. 136; p. 518.
Higuchi, M., New York, N. Y. Electric clock. No. 899,012; Sept. 15; Sp. p. 3494; Dr. p. 749; Gaz. vol. 136; p. 635.
Hildebrandt, A. P., Philadelphia, Pa. Music-leaf turner. No. 897,534; Sept. 1; Sp. p. 605; Dr. pp. 126–7; Gaz. vol. 136; p. 95.
Hilker, E., Chicago, Ill. Combined mop and wringer therefor. No. 897,465; Sept. 1; Sp. p. 465; Dr. p. 99; Gaz. vol. 136; p. 73.
Hill, C. B., trustee. (See Bartholomew, W. H., assignor.)
Hill, G. S., Bradford, assignor to Hill Motor Car Company, Haverhill, Mass. Heat-dissipating device for gas-engines. No. 898,107; Sept. 8; Sp. p. 1791; Dr. p. 380; Gaz. vol. 136; p. 312.
Hill, J., Williamsport, assignor of one-third to R. L. Signor, Wilkinsburg, Pa. Street-flushing apparatus. No. 900,015; Sept. 29; Sp. p. 5543; Dr. pp. 1181–2; Gaz. vol. 136; p. 1025.
Hill, L., assignor to Jones Improved Loose Leaf Specialty Company, Chicago, Ill. Loose-leaf binder. No. 897,535; Sept. 1; Sp. p. 607; Dr. p. 127; Gaz. vol. 136; p. 95.
Hill Motor Car Company. (See Hill, G. S., assignor.)
Hill, R. I., Elyria, Ohio. Coin-controlled vending-machine. No. 899,979; Sept. 29; Sp. p. 5458; Dr. p. 1164; Gaz. vol. 136; p. 1012.
Hill, W. H., Kushequa, Pa. Brick, block, or tile cutter or shaper. No. 899,980; Sept. 29; Sp. p. 5461; Dr. p. 1165; Gaz. vol. 136; p. 1013.
Hinchman, G. N., Webster Groves, Mo. Adding-machine. No. 899,398; Sept. 22; Sp. p. 4244; Dr. pp. 911–12; Gaz. vol. 136; p. 787.
Hinton, C. W. (See Ingram and Hinton.)
Hintz, E. G., Reading, Pa. Corset. No. 899,165; Sept. 22; Sp. p. 3906; Dr. p. 814; Gaz. vol. 136; p. 714.
Hintz, O. F., assignor to Farrand Company, Detroit, Mich. Expression attachment. No. 897,288; Sept. 1; Sp. p. 42; Dr. p. 10; Gaz. vol. 136; p. 10.
Hirsch, Dr., Firm of. (See Packscher, A., assignor.)
Hirsch, I. S., assignor to E. B. Meyrowitz, New York, N. Y. Spark-gap. No. 898,888; Sept. 15; Sp. p. 3280; Dr. pp. 701–2; Gaz. vol. 136; p. 596.
Hirschberg, S. C. (See Wilcox, H., assignor.)
Hirsh, H. M. (See Hirsh, J. F. and H. M.)
Hirsh, J. F. and H. M., St. Louis, Mo. Door-fastener. No. 898,650; Sept. 15; Sp. p. 2846; Dr. p. 608; Gaz. vol. 136; p. 519.
Hirth, C. A., Cannstatt, Germany. Feed mechanism. No. 899,981; Sept. 29; Sp. p. 5464; Dr. p. 1165; Gaz. vol. 136; p. 1013.
Hitchcock, O. G., assignor to Hays Manufacturing Company, Erie, Pa. Valve. No. 898,889; Sept. 15; Sp. p. 3282; Dr. p. 702; Gaz. vol. 136; p. 596.
Hitt, E. L., Weiser, Idaho. Catching and holding device. No. 898,890; Sept. 15; Sp. p. 3283; Dr. pp. 702–3; Gaz. vol. 136; p. 596.
Hoadley, F. M. (See Ransom, W. M., assignor.)
Hobbs, W. F., assignor to Bridgeport Hardware Manufacturing Corporation, Bridgeport, Conn. Nail-puller. No. 900,016; Sept. 29; Sp. p. 5547; Dr. p. 1182; Gaz. vol. 136; p. 1025.
Hoch, A., Providence, R. I., assignor to Wendling Hoch Adding Machine Company, San Francisco, Cal. Adding-machine. No. 898,411; Sept. 8; Sp. p. 2349; Dr. pp. 499–504; Gaz. vol. 136; p. 408.

Hochstaetter, V. R., New York, N. Y. Sewing-stand. No. 899,696; Sept. 29; Sp. p. 4851; Dr. p. 1039; Gaz. vol. 136; p. 919.
Hodell, F. G., Cleveland, Ohio. Machine for cutting butter, cheese, and the like. No. 899,533; Sept. 29; Sp. p. 4517; Dr. p. 970; Gaz. vol. 136; p. 868.
Hodgkinson, F., Edgewood Park, Pa., assignor to Westinghouse Machine Company. Valve-controlling mechanism. (Reissue.) No. 12,848; Sept. 8; Sp. p. 2371; Dr. pp. 506–7; Gaz. vol. 136; p. 411.
Hoenika, J. A., and J. R. Triplett, Akron, Ohio. Friction-clutch. No. 898,362; Sept. 8; Sp. p. 2257; Dr. p. 481; Gaz. vol. 136; p. 392.
Hoffer, J., Louisville, Ky. Railway-signal. No. 898,473; Sept. 15; Sp. p. 2490; Dr. p. 533; Gaz. vol. 136; p. 461.
Hoffman, A. J., assignor of one-sixth to R. M. Arms, Seattle, Wash. Clothes pressing and cleaning apparatus. No. 897,832; Sept. 1; Sp. p. 1202; Dr. pp. 256–7; Gaz. vol. 136; p. 191.
Hoffman, G. D., New York, N. Y., assignor to Norwall Manufacturing Company, Chicago, Ill. Automatic air-valve. No. 899,110; Sept. 22; Sp. p. 3684; Dr. p. 789; Gaz. vol. 136; p. 695.
Hoffman, G. D., New York, N. Y., assignor to Norwall Manufacturing Company, Chicago, Ill. Automatic air-valve. No. 899,111; Sept. 22; Sp. p. 3685; Dr. p. 790; Gaz. vol. 136; p. 695.
Hoffman, W. G., San Francisco, Cal. Hook and eye. No. 898,891; Sept. 15; Sp. p. 3285; Dr. p. 703; Gaz. vol. 136; p. 597.
Hoffmann, E. G., New Rochelle, N. Y. Universal joint. No. 899,534; Sept. 29; Sp. p. 4519; Dr. pp. 970–1; Gaz. vol. 136; p. 868.
Hogle, M. W. (See Donner and Hogle.)
Hogle, M. W., Pittsburg, Pa. Continuous engine-indicator. No. 898,474; Sept. 15; Sp. p. 2493; Dr. p. 534; Gaz. vol. 136; p. 461.
Hohlencamp, G., Denver, Colo. Traction-wheel. No. 899,047; Sept. 22; Sp. p. 3566; Dr. p. 764; Gaz. vol. 136; p. 673.
Hohner, A., Ottawa, Ill. Grader and cleaner for grain, beans, &c. No. 898,892; Sept. 15; Sp. p. 3286; Dr. p. 703; Gaz. vol. 136; p. 597.
Hohner, H., New York, N. Y. Accordion. No. 898,475; Sept. 15; Sp. p. 2495; Dr. p. 534; Gaz. vol. 136; p. 462.
Hoisington, F. R., New York, N. Y. Mechanical tag. No. 898,651; Sept. 15; Sp. p. 2848; Dr. p. 609; Gaz. vol. 136; p. 519.
Holden, F., London, England, assignor to General Electric Company. Mercury meter. No. 897,536; Sept. 1; Sp. p. 608; Dr. p. 127; Gaz. vol. 136; p. 96.
Holden, T. D. P. (See Wyatt, W., assignor.)
Holding, C. B., Toledo, Ohio. Handle for mattresses. No. 897,979; Sept. 8; Sp. p. 1537; Dr. p. 326; Gaz. vol. 136; p. 272.
Holdsworth, F. D., assignor to Sullivan Machinery Company, Claremont, N. H. Intercooler. No. 898,363; Sept. 8; Sp. p. 2261; Dr. p. 481; Gaz. vol. 136; p. 392.
Holker, A., Minneapolis, Minn. Barrel and basket cover. No. 898,364; Sept. 8; Sp. p. 2264; Dr. p. 481; Gaz. vol. 136; p. 393.
Holley, J. J., Holmen, Wis. Adjustable rake. No. 899,982; Sept. 29; Sp. p. 5466; Dr. p. 1165; Gaz. vol. 136; p. 1014.
Hollingshead, R. M., Camden, N. J. Screw-cap. No. 897,621; Sept. 1; Sp. p. 780; Dr. p. 164; Gaz. vol. 136; p. 124.
Hollingsworth, R. D. (See Hollingsworth, T. R. and R. D.)
Hollingsworth, T. R. and R. D., Waters, Ark. Cotton-harvester. No. 898,893; Sept. 15; Sp. p. 3288; Dr. p. 704; Gaz. vol. 136; p. 597.
Holmes, A. J., Tacoma, Wash. Electric heater. No. 898,578; Sept. 15; Sp. p. 2698; Dr. p. 577; Gaz. vol. 136; p. 495.
Holmes, T. E., assignor of one-half to Davy Brothers Limited, Sheffield, England. Hydraulic press. No. 898,365; Sept. 8; Sp. p. 2267; Dr. pp. 481–2; Gaz. vol. 136; p. 393.
Holmwood, J., Duluth, assignor of one-half to H. W. Lanners, West Duluth, Minn. Saw-guard. No. 899,300; Sept. 22; Sp. p. 4075; Dr. p. 871; Gaz. vol. 136; p. 757.
Holsman, H. K., Chicago, Ill. Automobile. No. 897,368; Sept. 1; Sp. p. 259; Dr. p. 53; Gaz. vol. 136; p. 39.
Holub, S., New York, N. Y. Water-cooler. No. 899,048; Sept. 22; Sp. p. 3568; Dr. p. 764; Gaz. vol. 136; p. 674.
Home Gas Machine Manufacturing Company. (See Campbell, F. M., assignor.)
Homolka, B., Frankfort-on-the-Main, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Oxid of thioindigo dyes. No. 898,738; Sept. 15; Sp. p. 3006; Gaz. vol. 136; p. 546.
Honor, F. J., Detroit, Mich. Book-case. No. 899,049; Sept. 22; Sp. p. 3569; Dr. p. 764; Gaz. vol. 136; p. 674.
Hooker, F., Toronto, Ontario, Canada. Aerial railway. No. 898,739; Sept. 15; Sp. p. 3007; Dr. p. 644; Gaz. vol. 136; p. 547.
Hoover, N. F., *et al.* (See Grove, M. L., assignor.)
Hopmann, C. H. and H. L. W., St. Louis, Mo. Fireproof-window fastener. No. 897,742; Sept. 1; Sp. p. 1011; Dr. p. 215; Gaz. vol. 136; p. 163.
Hopmann, H. L. W. (See Hopmann, C. H. and H. L. W.)
Horak, F. C., Stuart, Nebr. Mower. No. 899,490; Sept. 22; Sp. p. 4413; Dr. p. 947; Gaz. vol. 136; p. 817.
Horn, A. P., Hamburg, Germany. Ship's paint. No. 898,476; Sept 15; Sp. p. 2496; Gaz. vol. 136; p. 462.
Hornbeck, H. S., assignor of one-third to C. C. McBride, Elizabeth, N. J. Means for controlling expression in automatic pianos. No. 898,477; Sept. 15; Sp. p. 2496; Dr. p. 535; Gaz. vol. 136; p. 462.
Hornefler, F. L., *et al.* (See Shadall, C. E., assignor.)
Hornig, C. A., Milwaukee, Wis. Kitchen supply-cabinet. No. 899,399; Sept. 22; Sp. p. 4240; Dr. p. 912; Gaz. vol. 136; p. 788.
Horrell, C., Madison, Ill. Metal railway-tie. No. 898,108; Sept. 8; Sp. p. 1792; Dr. p. 380; Gaz. vol. 136; p. 313.
Horry, W. S., Niagara Falls, N. Y., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 899,983; Sept. 29; Sp. p. 5467; Dr. p. 1166; Gaz. vol. 136; p. 1014.
Hotchkiss, C. A., assignor to Ives Manufacturing Corporation, Bridgeport, Conn. Toy-railway switch. No. 897,622; Sept. 1; Sp. p. 781; Dr. p. 164; Gaz. vol. 136; p. 124.
Hottman, C. W., assignor of one-half to C. Offenhauser, Philadelphia, Pa. Machine for cutting cabbage. No. 898,109; Sept. 8; Sp. p. 1794; Dr. p. 381; Gaz. vol. 136; p. 313.
Houchin, E. A. (See Huber and Houchin.)
Hough, H. J., A. J. Dietrich, and W. F. Brunswick, Akron, Ohio. Stove and furnace. No. 898,367; Sept. 8; Sp. p. 2272; Dr. p. 483; Gaz. vol. 136; p. 394.
Hough, J., Guelph, Ontario, Canada. Belt-buckle. No. 898,366; Sept. 8; Sp. p. 2271; Dr. p. 483; Gaz. vol. 136; p. 394.
Houghtaling, P. A., Riverton, assignor to Curtain Supply Company, Newark, N. J. Curtain-fixture. No. 898,894; Sept. 15; Sp. p. 3289; Dr. p. 704; Gaz. vol. 136; p. 598.
Houseman, H. A., assignor to Standard Machine Company, Philadelphia, Pa. Circular-knitting machine. No. 898,110; Sept. 8; Sp. p. 1795; Dr. p. 381; Gaz. vol. 136; p. 313.
Houston, R. S., Emerson, Manitoba, Canada. Grain-treating apparatus. No. 897,899; Sept. 8; Sp. p. 1352; Dr. p. 289; Gaz. vol. 136; p. 245.
Hovis, H. D., Waterford, Pa. Attachment for horseshoes. No. 898,895; Sept. 15; Sp. p. 3291; Dr. p. 704; Gaz. vol. 136; p. 598.
Howard & Bullough American Machine Company. (See Riley, C. E., assignor.)
Howard, C., New York, N. Y. Preserving wood. No. 899,400; Sept. 22; Sp. p. 4250; Gaz. vol. 136; p. 788.
Howard, C., assignor to National Wood-Vulcanizing Company, New York, N. Y. Vulcanizing wood. No. 900,017; Sept. 29; Sp. p. 5549; Gaz. vol. 136; p. 1026.
Howard, C. H., and H. M. Pflager, assignors to Double Body Bolster Company, St. Louis, Mo. Car-truck. No. 899,401; Sept. 22; Sp. p. 4251; Dr. p. 912; Gaz. vol. 136; p. 788.
Howard, H. C., Conimicut, R. I. Valve recording and indicating device. No. 899,733; Sept. 29; Sp. p. 4929; Dr. p. 1057; Gaz. vol. 136; p. 932.
Howard, L. F., Edgewood Park, assignor to Union Switch and Signal Company, Swissvale, Pa. Solenoid-motor. No. 899,598; Sept. 29; Sp. p. 4663; Dr. p. 1000; Gaz. vol. 136; p. 890.
Howard, P., Wilberforce, Ohio. Fence. No. 899,112; Sept. 22; Sp. p. 3687; Dr. p. 790; Gaz. vol. 136; p. 696.
Howd, C. B., Belvidere, Ill. Corset. No. 899,113; Sept. 22; Sp. p. 3688; Dr. p. 790; Gaz. vol. 136; p. 696.
Howell, A. C. (See McMunn and Howell.)
Howell, R. D., Newark, N. J. Toy or puzzle. No. 899,402; Sept. 22; Sp. p. 4253; Dr. p. 912; Gaz. vol. 136; p. 788.
Howell, T. W., Mabton, Wash. Breast-pumping machine. No. 897,280; Sept. 1; Sp. p. 44; Dr. p. 11; Gaz. vol. 136; p. 10.
Howland, A. G., Christchurch, New Zealand. Window-fastener. No. 897,623; Sept. 1; Sp. p. 784; Dr. p. 165; Gaz. vol. 136; p. 124.
Howland, J. A., Sea Bright, and W. H. De Nyse, Long Branch, N. J. Sea-groin. No. 897,369; Sept. 1; Sp. p. 262; Dr. p. 54; Gaz. vol. 136; p. 39.
Howland, J. A., Sea Bright, and W. H. De Nyse, Long Branch, N. J. Bulkhead and jetty construction. No. 897,370; Sept. 1; Sp. p. 263; Dr. p. 54; Gaz. vol. 136; p. 40.
Hoyt, E. R. (See Allen, G. F., assignor.)
Hubbard, A. S., Belleville, N. J., assignor to Gould Storage Battery Company. Electrical system of distribution. No. 899,535; Sept. 29; Sp. p. 4521; Dr. p. 971; Gaz. vol. 136; p. 868.
Hubbard, W. S., Leicester, England. Apparatus for the analysis of gas mixtures. No. 897,900; Sept. 8; Sp. p. 1354; Dr. p. 290; Gaz. vol. 136; p. 245.
Hubbell, H. C., Orange, assignor to Portable Electric Safety Light Company, Newark, N. J. Reversible galvanic battery. No. 897,833; Sept. 1; Sp. p. 1206; Dr. p. 257; Gaz. vol. 136; p. 192.
Huber, A., and E. A. Houchin, Brooklyn, N. Y. Soap chiller and drier. No. 898,111; Sept. 8; Sp. p. 1796; Dr. pp. 381–2; Gaz. vol. 136; p. 314.
Huber, G. A., Waverly, Va. Combined hulling and cleaning device. No. 899,301; Sept. 22; Sp. p. 4077; Dr. p. 871; Gaz. vol. 136; p. 757.
Hubert, C. (See Coleman, C. J., assignor.)
Hübner, R., New York, N. Y. Desulfurizing-furnace. No. 899,403; Sept. 22; Sp. p. 4255; Dr. p. 913; Gaz. vol. 136; p. 789.
Hudson, E., assignor of one-half to J. H. Pittman, Camp Point, Ill. Metallic tie. No. 898,652; Sept. 15; Sp. p. 2849; Dr. p. 609; Gaz. vol. 136; p. 519.

Huebner, J. W., Brillion, Wis. Hall, convention, and camp-meeting settee. No. 897,371; Sept. 1; Sp. p. 265; Dr. p. 54; Gaz. vol. 136; p. 40.
Huff Electrostatic Separator Company. (See Wentworth, H. A., assignor.)
Huffaker, W. S., Kipton, Ohio. Corn-cutter. No. 897,901; Sept. 8; Sp. p. 1358; Dr. p. 291; Gaz. vol. 136; p. 246.
Huffman, W. H., Beaver Falls, Pa. Rail-brace. No. 899,302; Sept. 22; Sp. p. 4079; Dr. p. 872; Gaz. vol. 136; p. 757.
Huffman, W. P., and D. L. Fry, Hickory, N. C. Fire-escape. No. 899,984; Sept. 29; Sp. p. 5476; Dr. p. 1166; Gaz. vol. 136; p. 1014.
Hughes, W. B., Cleveland, Ohio. Gas-producer. No. 899,050; Sept. 22; Sp. p. 3569; Dr. p. 764; Gaz. vol. 136; p. 674.
Hughes, W. B., assignor to Wellman-Seaver-Morgan Company, Cleveland, Ohio. Gas-producer. No. 899,867; Sept. 29; Sp. p. 5234; Dr. p. 1119; Gaz. vol. 136; p. 978.
Huhn, G., Berlin, Germany. Hollow packing-ring for stuffing-boxes. No. 899,985; Sept. 29; Sp. p. 5477; Dr. p. 1166; Gaz. vol. 136; p. 1015.
Hull, G. H., Cranston, R. I., assignor to Chadeloid Chemical Company, New York, N. Y. Composition of matter for the removal of paint, varnish, and the like. No. 897,862; Sept. 1; Sp. p. 1270; Gaz. vol. 136; p. 200.
Hummel, G. F. (See Ritter, J. S., assignor.)
Humphrey, E. H., Battle Creek, assignor of five-sixths to C. C. Blakely and D. W. Connors, Albion, Mich., and S. H. and G. S. Bodenheim, New York, N. Y. Caster. No. 898,740; Sept. 15; Sp. p. 3009; Dr. p. 644; Gaz. vol. 136; p. 547.
Humphrey, E. R., Pittsburg, Pa., and W. B. Martin, Point Pleasant, W. Va. Metallic piston-packing. No. 899,303; Sept. 22; Sp. p. 4080; Dr. p. 872; Gaz. vol. 136; p. 757.
Humphries, G. E., Wellington, New Zealand. Scaffolding. No. 898,368; Sept. 8; Sp. p. 2274; Dr. p. 483; Gaz. vol. 136; p. 394.
Hunt, D. F., Antrim, N. H., assignor to Hunt Manufacturing Company. Fruit-parer. No. 900,018; Sept. 29; Sp. p. 5550; Dr. pp. 1182–3; Gaz. vol. 136; p. 1026.
Hunt, M. E., Waterville, Me. Rolling-door hanger. No. 899,051; Sept. 22; Sp. p. 3570; Dr. p. 765; Gaz. vol. 136; p. 675.
Hunt Manufacturing Company. (See Hunt, D. F., assignor.)
Hunter, A., administratrix. (See Hunter, H. C.)
Hunter, H. (See Elkins and Hunter.) (Reissue.)
Hunter, H. C., deceased, Jersey City, N. J.; A. Hunter, administratrix. Compounding-machine for manufacturing paper or pasteboard. No. 899,986; Sept. 29; Sp. p. 5478; Dr. pp. 1166–7; Gaz. vol. 136; p. 1015.
Hurlbert, W. G., assignor to Bostwick Steel Lath Company, Niles, Ohio. Metal lathing. No. 900,019; Sept. 29; Sp. p. 5554; Dr. p. 1183; Gaz. vol. 136; p. 1026.
Hurst, F. G. (See Foster, A. T., assignor.)
Hurt, W. N., Shawnee, Okla. Vehicle-top support. No. 899,669; Sept. 29; Sp. p. 4799; Dr. p. 1027; Gaz. vol. 136; p. 911.
Hurwood Manufacturing Company. (See Stendahl, K. L., assignor.)
Husby, H. P., assignor to Goss Printing Press Company, Chicago, Ill. Rotary folding mechanism for printing-presses. No. 899,734; Sept. 29; Sp. p. 4932; Dr. p. 1058; Gaz. vol. 136; p. 932.
Husted, L. J., assignor to National Rural Route Advertising Company, Denver, Colo. Advertising device. No. 898,579; Sept. 15; Sp. p. 2700; Dr. p. 577; Gaz. vol. 136; p. 495.
Hutchinson, J., New York, N. Y. Railway electric signaling. No. 898,219; Sept. 8; Sp. p. 2009; Dr. p. 427; Gaz. vol. 136; p. 347.
Hutchinson, J., New York N. Y. Contact-rail for electric railways. No. 898,220; Sept. 8; Sp. p. 2014; Dr. pp. 427–8; Gaz. vol. 136; p. 347.
Hutchinson, J., New York, N. Y. Railway electric signaling system. No. 898,221; Sept. 8; Sp. p. 2017; Dr. p. 428; Gaz. vol. 136; p. 347.
Hutchinson, M., Muskegon, Mich. Folding shipping-case. No. 898,049; Sept. 8; Sp. p. 1674; Dr. p. 355; Gaz. vol. 136; p. 293.
Huth, J., assignor of one-half to W. A. Huth, Canton, Ohio. Clothes-line holder. No. 899,166; Sept. 22; Sp. p. 3806; Dr. p. 814; Gaz. vol. 136; p. 714.
Huth, W. A. (See Huth, J., assignor.)
Hyde, T. R., Jr., assignor to Scovill Manufacturing Company, Waterbury, Conn. Snap-fastening slide-buckle. No. 899,670; Sept. 29; Sp. p. 4800; Dr. p. 1028; Gaz. vol. 136; p. 912.
Hydrocarbon Chemical Company. (See Connor, G. T., assignor.)
Hyer, M. W., New York, N. Y. Temporary binder. No. 898,560; Sept. 15; Sp. p. 2702; Dr. p. 577; Gaz. vol. 136; p. 495.
Hygienic Floor Machine Company. (See Goodier, G. W., assignor.)
I. E. Palmer Co. (See Palmer, I. E., assignor.)
Ideal Concrete. (See Tyc and Benjamin, assignors.)
Ihlder, J. D., New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Electric controlling system. No. 897,537; Sept. 1; Sp. p. 610; Dr. p. 127; Gaz. vol. 136; p. 96.
Illinois Pneumatic Transmission Co. (See Wolever, F. H., assignor.)
Illinois Publishing and Printing Company. (See Casey, E. J., assignor.)
Illinois Sewing Machine Company. (See Free and Angove, assignors.)
Imlay, W. L., Conestoga, Pa., assignor to William L. Imlay Rapid Cyanide Process Company. Lixiviator. No. 898,050; Sept. 8; Sp. p. 1677; Dr. p. 356; Gaz. vol. 136; p. 294.
Imperial Stopper Company. (See Kirkegaard, G., assignor.)
Imus, D. W., Los Angeles, Cal. Show-case for displaying pickles and the like. No. 899,052; Sept. 22; Sp. p. 3572; Dr. p. 765; Gaz. vol. 136; p. 675.
Inbusch, F. C. (See Miller, L. A., assignor.)
Independent Button & Machine Company. (See Breitenstein, J. G., assignor.)
Ingersoll, H. G., trustee. (See Noyes, H. W., assignor.)
Ingersoll-Rand Company. (See Parsons, F. W., assignor.)
Ingersoll-Rand Company. (See Prellwitz, W., assignor.)
Ingersoll-Rand Company. (See Taylor, A. H., assignor.)
Ingersoll-Sergeant Drill Company. (See Prellwitz, W., assignor.)
Ingram, W. E., and C. W. Hinton, Los Angeles, Cal. Recess-bed. No. 899,868; Sept. 29; Sp. p. 5235; Dr. p. 1119; Gaz. vol. 136; p. 978.
International Gas Development Company. (See Benner, H. W., assignor.)
International Harvester Company. (See Andrew, W. K., assignor.)
International Harvester Company. (See Stone, J. A., assignor.)
International Pavement Company. (See McCarter, L. N., assignor.)
International Safe Company. (See Fisher, C., assignor.)
International Sprinkler Co. (See Evans, P., assignor.)
International Steam Pump Company. (See Scott, C. N., assignor.)
International Telegraph Construction Company. (See Shoemaker, H., assignor.)
Isaacs, C. N., Newark, N. J. Timer. No. 897,743; Sept. 1; Sp. p. 1012; Dr. p. 215; Gaz. vol. 136; p. 163.
Isaacs, J. D., Chicago, Ill., assignor to Rifled Pipe Company, San Francisco, Cal. Helically-corrugated pipe-line. No. 898,741; Sept. 15; Sp. p. 3010; Dr. p. 645; Gaz. vol. 136; p. 547.
Isham, A. M., administratrix. (See Isham, S. L.)
Isham, S. L., deceased, St. Paul, Minn.; A. M. Isham, administratrix. Collar. No. 899,167; Sept. 22; Sp. p. 3807; Dr. p. 815; Gaz. vol. 136; p. 714.
Iten, A., Mountainview, Hawaii. Weed-burner. No. 899,404; Sept. 22; Sp. p. 4257; Dr. pp. 913–14; Gaz. vol. 136; p. 789.
Ives, F. E., Weehawken, N. J. Diffraction chromoscope. No. 898,369; Sept. 8; Sp. p. 2276; Dr. p. 484; Gaz. vol. 136; p. 395.
Ives Manufacturing Corporation. (See Hotchkiss, C. A., assignor.)
Ivins, Dietz & Metzger Company. (See Rochelle, F. W., assignor.)
J. A. Fay & Egan Company. (See Thomas and Meyers, assignors.)
J. J. Bamberger & Co. (See Harford, T. J., assignor.)
J. W. Bishop Company. (See Bishop, J. W., Jr., assignor.)
J. W. Ringrose Net Company. (See Coleman, R. F., assignor.)
Jackson, A. G., Philadelphia, Pa. Newspaper-selling machine. No. 897,744; Sept. 1; Sp. p. 1014; Dr. p. 215; Gaz. vol. 136; p. 164.
Jackson, E. H., *et al.*, trustees. (See Cahill, T., assignor.)
Jackson, F. M., Kansas City, Mo. Window-front construction. No. 897,372; Sept. 1; Sp. p. 267; Dr. p. 55; Gaz. vol. 136; p 40.
Jackson, G. W., Chicago, Ill. Tunnel and subway. No. 899,735; Sept. 29; Sp. p. 4934; Dr. pp. 1058–9; Gaz. vol. 136; p. 932.
Jackson, J. H., Blaydon-on-Tyne, England. Machine for forming or molding and lidding pies and the like. No. 898,478; Sept. 5; Sp. p. 2499; Dr. p. 535; Gaz. vol. 136; p. 462.
Jacob, H., Steglitz, assignor to Firm of Optische Anstalt C. P. Goerz Aktiengesellschaft, Friedenau, near Berlin, Germany. Prismatic double telescope. No. 898,653; Sept. 15; Sp. p. 2851; Dr. p. 609; Gaz. vol. 136; p. 519.
Jacobs, A. E., Lancaster, Pa. Pneumatic eye-protector. No. 897,290; Sept. 1; Sp. p. 45; Dr. p. 11; Gaz. vol. 136; p. 11.
Jacobs, H. W., Topeka, Kans. Machine for turning cranked axles. No. 899,536; Sept. 29; Sp. p. 4523; Dr. pp. 971–2; Gaz. vol. 136; p. 869.
Jacobson, E. B., assignor to Pittsfield Spark Coil Company, Pittsfield, Mass. High-tension magneto. No. 898,370; Sept. 8; Sp. p. 2279; Dr. pp. 484–5; Gaz. vol. 136; p. 395.
Jaeger, A., Philadelphia, Pa. Vending-machine. No. 898,371; Sept. 8; Sp. p. 2282; Dr. p. 485; Gaz. vol. 136; p. 396.
Jaeger, G., Philadelphia, Pa. Clock. No. 898,742; Sept. 15; Sp. p. 3012; Dr. p. 645; Gaz. vol. 136; p. 547.

Jaeger, J., Rutherford, N. J. Machine for molding blocks. No. 899,168; Sept. 22; Sp. p. 3809; Dr. pp. 815–16; Gaz. vol. 136; p. 715.
Jäger, B. M., Birkenhead, England. Filtering apparatus. No. 897,745; Sept. 1; Sp. p. 1015; Dr. p. 216; Gaz. vol. 136; p. 164.
James, W. D., Wales, Wis. Combined cattle stall and manger. No. 899,829; Sept. 29; Sp. p. 5142; Dr. p. 1100; Gaz. vol. 136; p. 965.
Janisch, L., and W. Naumann, Berlin, Germany, assignors to General Electric Company. System of motor control. No. 897,538; Sept. 1; Sp. p. 615; Dr. p. 128; Gaz. vol. 136; p. 96.
Janson, J., Lawrence, Mass. Paper-pulp-screen box. No. 899,169; Sept. 22; Sp. p. 3811; Dr. p. 816; Gaz. vol. 136; p. 715.
Jarboe, J. F., Chenaultt, Ky. Fertilizer. No. 897,624; Sept. 1; Sp. p. 785; Gaz. vol. 136; p. 124.
Jaubert, G. F., Paris, France. Manufacture of peroxid of potassium. No. 897,980; Sept. 8; Sp. p. 1538; Dr. p. 327; Gaz. vol. 136; p. 272.
Jay, A., Chicago, Ill. Furnace. No. 899,053; Sept. 22; Sp. p. 3573; Dr. pp. 765–6; Gaz. vol. 136; p. 675.
Jeanmairet, P. E., Mount Carroll, Ill. Escapement-wheel. No. 898,479; Sept. 15; Sp. p. 2500; Dr. p. 535; Gaz. vol. 136; p. 463.
Jeffery, T. B., Kenosha, Wis. Automobile. No. 899,537; Sept. 29; Sp. p. 4520; Dr. p. 972; Gaz. vol. 136; p. 869.
Jeffrey, H., Louisville, Ky., assignor to Ohio Malleable Iron Company, Columbus, Ohio. (Reissue.) Wrench. No. 12,854; Sept. 15; Sp. p. 3514; Dr. p. 752; Gaz. vol. 136; p. 537.
Jeffrey, H., Louisville, Ky. Nut-lock. No. 899,869; Sept. 29; Sp. p. 5237; Dr. p. 1119; Gaz. vol. 136; p. 978.
Jeffrey, J. R., Fairview, British Columbia, Canada. Current-motor. No. 899,987; Sept. 29; Sp. p. 5483; Dr. pp. 1167–8; Gaz. vol. 136; p. 1015.
Jenkins, F. C., Villisca, Iowa. Cigar-vending machine. No. 898,654; Sept. 15; Sp. p. 2852; Dr. pp. 609–10; Gaz. vol. 136; p. 520.
Jennings, C. S., assignor to United Store Service and Tube Company, Boston, Mass. Sending mechanism for pneumatic-despatch systems. No. 899,590; Sept. 29; Sp. p. 4665; Dr. p. 1001; Gaz. vol. 136; p. 891.
Jennings, S. J., Tremont, N. Y. Sleigh-runner for vehicles. No. 898,743; Sept. 15; Sp. p. 3013; Dr. p. 645; Gaz. vol. 136; p. 548.
Jennings, V. H., assignor to Mills Woven Cartridge Belt Company, Worcester, Mass. Cartridge-carrier. No. 898,372; Sept. 8; Sp. p. 2284; Dr. p. 485; Gaz. vol. 136; p. 396.
Jennings, V. H., assignor to Mills Woven Cartridge Belt Company, Worcester, Mass. Cartridge-carrier. No. 898,373; Sept. 8; Sp. p. 2284; Dr. p. 486; Gaz. vol. 136; p. 396.
Jensen, C., Palmyra, N. J. Cylinder for washing-machines. No. 899,988; Sept. 29; Sp. p. 5486; Dr. p. 1168; Gaz. vol. 136; p. 1016.
Jesse, C. R. and R. T. Ware, assignors to Owensboro Wagon Co. Inc., Owensboro, Ky. Vehicle. No. 899,989; Sept. 29; Sp. p. 5488; Dr. pp. 1168–9; Gaz. vol. 136; p. 1016.
Jessen, H. J. C., Nevada, Iowa. Tripod. No. 898,374; Sept. 8; Sp. p. 2286; Dr. p. 486; Gaz. vol. 136; p. 397.
Jincks, M., Cohocton, N. Y. Bridle-bit. No. 897,373; Sept. 1; Sp. p. 269; Dr. p. 55; Gaz. vol. 136; p. 41.
Joehnck, D. L., Rocky Ford, Colo. Apparatus for handling beets. No. 898,112; Sept. 8; Sp. p. 1801; Dr. p. 383; Gaz. vol. 136; p. 314.
Johan, F. A., Seattle, Wash. Rolling automatic car-fender. No. 898,375; Sept. 8; Sp. p. 2287; Dr. p. 486; Gaz. vol. 136; p. 397.
Johansson, K. A., Sandviken, Sweden. Desulfurizing ores. No. 899,219; Sept. 22; Sp. p. 3905; Gaz. vol. 136; p. 731.
John Douglas Company. (See McNeil, J., assignor.)
Johnson, C. J. F., assignor of one-half to C. Berg, Cleveland, Ohio. Billet-heating furnace. No. 897,746; Sept. 1; Sp. p. 1017; Dr. pp. 216–17; Gaz. vol. 136; p. 165.
Johnson, C. J. F., assignor of one-half to C. Berg, Cleveland, Ohio. Heating billets. No. 897,834; Sept. 1; Sp. p. 1207; Dr. pp. 257–8; Gaz. vol. 136; p. 192.
Johnson, E. E., White Bear, Minn. Well-strainer. No. 899,054; Sept. 22; Sp. p. 3575; Dr. p. 766; Gaz. vol. 136; p. 676.
Johnson, F., assignor of one-half to F. von Nessen, Chicago, Ill. Milk-bottle-locking device. No. 898,222; Sept. 8; Sp. p. 2023; Dr. p. 428; Gaz. vol. 136; p. 348.
Johnson, G. H., Roseville, Ill. Animal-trap. No. 898,581; Sept. 15; Sp. p. 2703; Dr. pp. 577–8; Gaz. vol. 136; p. 496.
Johnson, J., Overland Park, assignor to Country Hydrant Company, St. Louis, Mo. Automatic water-supply system. No. 898,480; Sept. 15; Sp. p. 2501; Dr. p. 536; Gaz. vol. 136; p. 463.
Johnson, J. B., Springfield, Mass. Trunk-lock. No. 898,744; Sept. 15; Sp. p. 3014; Dr. p. 645; Gaz. vol. 136; p. 548.
Johnson, J. D., Jeannette, assignor of three-fourths to G. W. Blair, Pittsburg, Pa. Mold for forming tiles. No. 898,223; Sept. 8; Sp. p. 2024; Dr. p. 429; Gaz. vol. 136; p. 348.
Johnson, J. M., assignor to Standard Specialty & Tube Company, New Brighton, Pa. Apparatus for printing tubular articles. No. 900,073; Sept. 29; Sp. p. 5681; Dr. p. 1213; Gaz. vol. 136; p. 1044.
Johnson, J. T., and W. M. Ray, Cleveland, Ohio. Load-trimmer. No. 899,538; Sept. 29; Sp. p. 4528; Dr. p. 973; Gaz. vol. 136; p. 869.
Johnson, M. E., trustee. (See Bowker, T. F., assignor.)
Johnson, O. W., Allendale, N. J., and E. A. Scott, New York, N. Y. Ink-eraser. No. 899,539; Sept. 29; Sp. p. 4531; Dr. p. 973; Gaz. vol. 136; p. 870.
Johnson, V., St. Louis, Mo. Variable-speed mechanism. No. 898,745; Sept. 15; Sp. p. 3016; Dr. p. 646; Gaz. vol. 136; p. 548.
Johnson, W. C., Colemans Hatch, England. Motor-cycle. No. 898,481; Sept. 15; Sp. p. 2504; Dr. p. 536; Gaz. vol. 136; p. 463.
Johnston, C. L., San Francisco, Cal., assignor to F. B. Redington, Chicago, Ill. Ink-roller trip for printing-presses. No. 897,902; Sept. 8; Sp. p. 1359; Dr. p. 291; Gaz. vol. 136; p. 246.
Joice, J. K., Chicago, Ill. Automatic razor. No. 899,870; Sept. 29; Sp. p. 5238; Dr. p. 1120; Gaz. vol. 136; p. 979.
Jones, A., Baltimore, Md. Cap-feeding mechanism for bottle-capping machines. No. 898,113; Sept. 8; Sp. p. 1804; Dr. p. 383; Gaz. vol. 136; p. 314.
Jones, A. E., assignor to Whitehead & Company, Fiume, Austria-Hungary. Immersion-regulator particularly adapted for torpedoes. No. 899,304; Sept. 22; Sp. p. 4081; Dr. p. 872; Gaz. vol. 136; p. 758.
Jones, B., trustee. (See Curtis, L. E., assignor.)
Jones, F. A., *et al.* (See Larsson, T., assignor.)
Jones, G. W., *et al.* (See Benford, R. B., assignor.)
Jones Improved Loose Leaf Specialty Company. (See Hill, L., assignor.)
Jones, J. C. (See Strickland, B., assignor.)
Jones, J. T., Iron Mountain, Mich., assignor of one-half to G. A. St. Clair, Duluth, Minn. Treating ore. No. 899,405; Sept. 22; Sp. p. 4259; Dr. p. 914; Gaz. vol. 136; p. 789.
Jones, J. W., New York, N. Y. Speedometer. No. 899,055; Sept. 22; Sp. p. 3578; Dr. p. 767; Gaz. vol. 136; p. 676.
Jones, R. J., and F. H. Cunningham, Sebring, Ohio. Wrench. No. 898,896; Sept. 15; Sp. p. 3292; Dr. p. 705; Gaz. vol. 136; p. 598.
Jones, W. T., assignor to Edmunds & Jones Mfg. Co., Detroit, Mich. Lamp-fount-attaching device. No. 900,020; Sept. 29; Sp. p. 5555; Dr. p. 1183; Gaz. vol. 136; p. 1026.
Jordan, J. T. (See Brameld, W., assignor.)
Jordan Machine Company. (See Rothong, E., assignor.)
Josse, E., Berlin, Germany. Double-acting wet-air pump. No. 898,746; Sept. 15; Sp. p. 3017; Dr. p. 646; Gaz. vol. 136; p. 549.
Joy, W. H. (See Griswold, D. C., assignor.)
Joyce, J., Toronto, Ontario, Canada. Support for edgewise-movable doors. No. 897,747; Sept. 1; Sp. p. 1020; Dr. p. 217; Gaz. vol. 136; p. 165.
Judge, J., Pittston, Pa. Safety device for air-brakes. No. 897,748; Sept. 1; Sp. p. 1022; Dr. p. 217; Gaz. vol. 136; p. 165.
Jullien, M. A., and E. L. Dessolle, Levallois-Perret, France. Rendering electrolytic copper homogeneous. No. 897,291; Sept. 1; Sp. p. 47; Dr. p. 11; Gaz. vol. 136; p. 11.
Jungclaus, P. H., Glencoe, Minn. Soap-holder. No. 898,897; Sept. 15; Sp. p. 3293; Dr. p. 705; Gaz. vol. 136; p. 598.
Junge, H., Baltimore, Md. Window-sash attachment. No. 899,406; Sept. 22; Sp. p. 4261; Dr. p. 914; Gaz. vol. 136; p. 790.
Jürgens, J. C. F., assignor to R. G. Witt, Hamburg, Germany. Device for producing intermitting light. No. 897,981; Sept. 8; Sp. p. 1540; Dr. p. 327; Gaz. vol. 136; p. 272.
Jury, L. F., Vernaison, France. Extraction apparatus. No. 898,482; Sept. 15; Sp. p. 2505; Dr. p. 537; Gaz. vol. 136; p. 463.
Kadushin, H., New Rochelle, N. Y. Fountain-brush. No. 899,305; Sept. 22; Sp. p. 4083; Dr. p. 872; Gaz. vol. 136; p. 758.
Kaffee-Handels-Aktiengesellschaft. (See Meyer, Rosellus, and Wimmer, assignors.)
Kahn, M. M., Louisville, Ky. Telephone-receiver support. No. 898,898; Sept. 15; Sp. p. 3295; Dr. p. 705; Gaz. vol. 136; p. 599.
Kahn, N. E., Woodbine, N. J., assignor to Stephenson & Co., Philadelphia, Pa. Flat knit cap. No. 898,376; Sept. 8; Sp. p. 2288; Dr. p. 487; Gaz. vol. 136; p. 397.
Kail, J. L., assignor to Winslow Brothers Company, Chicago, Ill. Hanging mechanism for laterally-movable doors. No. 898,224; Sept. 8; Sp. p. 2026; Dr. p. 429; Gaz. vol. 136; p. 348.
Kaller, A. E., Naperville, assignor of one-half to M. C. Morlock, Chicago, Ill. Mail-bag-delivery apparatus. No. 898,655; Sept. 15; Sp. p. 2854; Dr. p. 610; Gaz. vol. 136; p. 520.
Kain, A. H. (See Rittersbach, G. W., Jr., assignor.)
Kammer, B. von der. (See Kammer, J. von der, assignor.)
Kammer, J. von der, assignor to B. von der Kammer, Washington, D. C. Metabolism of seed. No. 899,306; Sept. 22; Sp. p. 4085; Gaz. vol. 136; p. 759.
Kampfe, O., New York, N. Y. Pocket implement. No. 899,407; Sept. 22; Sp. p. 4262; Dr. p. 914; Gaz. vol. 136; p. 790.
Kampfe, O., New York, N. Y. Combination implement. No. 899,408; Sept. 22; Sp. p. 4263; Dr. p. 915; Gaz. vol. 136; p. 790.
Kampfe, O., New York, N. Y. Eyeglasses. No. 899,409; Sept. 22; Sp. p. 4265; Dr. p. 915; Gaz. vol. 136; p. 791.
Kane, T. H., and A. J. Urtubees, Milwaukee, Wis. Step-cover for railway-coach vestibules. No. 899,540; Sept. 29; Sp. p. 4532; Dr. p. 974; Gaz. vol. 136; p. 870.
Kappler, G. E., *et al.* (See Rogers, J., assignor.)
Karns, J. H., Warren, Ind. Combined stop and check. No. 898,377; Sept. 8; Sp. p. 2290; Dr. p. 487; Gaz. vol. 136; p. 398.

Kasse, A., assignor of two-thirds to S. Manheimer and F. C. Ficker, New York, N. Y. Skirt. No. 898,747; Sept. 15; Sp. p. 3019; Dr. p. 646. Gaz. vol. 136; p. 549.
Kauermann, H. A., assignor to Firm of Duisburger Maschinenbau Aktiengesellschaft vorm. Bechem & Keetman, Duisburg, Germany. Coal-bunker for men-of-war. No. 897,374; Sept. 1; Sp. p. 270; Dr. pp. 55–6; Gaz. vol. 136; p. 41.
Kaufmann, W. (See Neutra, S., assignor.)
Kausen, C., New York, N. Y. Automatic electric safety device for boilers, &c. No. 899,220; Sept. 22; Sp. p. 3906; Dr. p. 834; Gaz. vol. 136; p. 731.
Kavanaugh, L., Waterford, N. Y. Cooling castings. No. 899,736; Sept. 29; Sp. p. 4937; Dr. p. 1059; Gaz. vol. 136; p. 933.
Kazimer, A. S., Fishkill-on-the-Hudson, N. Y. Metallic rail-tie. No. 899,990; Sept. 29; Sp. p. 5489; Dr. p. 1169; Gaz. vol. 136; p. 1016.
Keagle, R. E., Lodi, Cal. Building-block. No. 898,656; Sept. 15; Sp. p. 2857; Dr. p. 610; Gaz. vol. 136; p. 521.
Kearney, R. S., New York, N. Y. Spark-plug guard. No. 897,466; Sept. 1; Sp. p. 466; Dr. p. 99; Gaz. vol. 136; p. 74.
Keasbey & Mattison Company. (See Mattison, R. V., assignor.)
Keck, A., Schenectady, N. Y. Line-tightener. No. 898,899; Sept. 15; Sp. p. 3296; Dr. p. 705; Gaz. vol. 136; p. 599.
Keederle, F. M., Norwalk, Ohio. Coat-hanger. No. 897,302; Sept. 1; Sp. p. 48; Dr. p. 11; Gaz. vol. 136; p. 11.
Keel, C. E., Indianapolis, Ind. Lathe tool-holder. No. 897,625; Sept. 1; Sp. p. 786; Dr. p. 165; Gaz. vol. 136; p. 124.
Keen, S. S., Cottondale, Ala. Railway-spike. No. 899,991; Sept. 29; Sp. p. 5491; Dr. p. 1169; Gaz. vol. 136; p. 1017.
Keighley, F. C., Uniontown, Pa. Metallic beam. No. 897,539; Sept. 1; Sp. p. 617; Dr. p. 128; Gaz. vol. 136; p. 97.
Keighley, F. C., Uniontown, Pa. Composite beam. No. 897,982; Sept. 8; Sp. p. 1543; Dr. p. 327; Gaz. vol. 136; p. 273.
Keighley & Sons, C. (See Keighley, W. B., assignor.)
Keighley, W. B., assignor to C. Keighley & Sons, Vineland, N. J. Welt-beating machine. No. 897,626; Sept. 1; Sp. p. 787; Dr. p. 165; Gaz. vol. 136; p. 125.
Keil, H. F., Bronxville, N. Y. Lock. No. 898,748; Sept. 15; Sp. p. 3020; Dr. p. 647; Gaz. vol. 136; p. 549.
Keiper, F., Rochester, N. Y. Voting-machine interlock. No. 898,114; Sept. 8; Sp. p. 1805; Dr. p. 383; Gaz. vol. 136; p. 315.
Kellett, R. J., San Francisco, Cal. Means for operating car-fenders. No. 898,582; Sept. 15; Sp. p. 2704; Dr. p. 578; Gaz. vol. 136; p. 496.
Kelley, C., Toronto, Ontario, Canada. Closet. No. 898,225; Sept. 8; Sp. p. 2027; Dr. pp. 429–30; Gaz. vol. 136; p. 349.
Kelley, C. N., *et al.* (See Murray, C. F., assignor.)
Kelley, C. W., *et al.* (See Murray, C. F., assignor.)
Kellogg, M. G. (See Dyson, A. H., assignor.)
Kellogg Switchboard and Supply Company. (See Bradbury, C. C., assignor.)
Kellogg Switchboard and Supply Company. (See Dean, W. W., assignor.)
Kellom, C. F., Philadelphia, Pa. Spout for cans. No. 898,483; Sept. 15; Sp. p. 2509; Dr. p. 537; Gaz. vol. 136; p. 464.
Kellogg Switchboard & Supply Company. (See Weiss, A. H., assignor.)
Kelly, G. B., Jamaica Plain, Mass. Pedal mechanism. No. 897,375; Sept. 1; Sp. p. 274; Dr. p. 56; Gaz. vol. 136; p. 41.
Kelly, G. B., Jamaica Plain, Mass. Pedal mechanism. No. 897,376; Sept. 1; Sp. p. 275; Dr. p. 56; Gaz. vol. 136; p. 42.
Kemp & Burpee Manufacturing Company. (See Warner, W. E., assignor.)
Kendrick, F. J., Schenectady, N. Y. Tramway-switch. No. 897,627; Sept. 1; Sp. p. 790; Dr. p. 166; Gaz. vol. 136; p. 125.
Kennedy, J., assignor to Ogden Iron & Steel Manufacturing Company, New York, N. Y. Clamp. No. 897,903; Sept. 8; Sp. p. 1362; Dr. p. 291; Gaz. vol. 136; p. 247.
Kennedy, T. J., *et al.* (See Elkins and Hunter, assignors.) (Reissue.)
Kennedy, W. (See Kline, W. H., assignor.) (Reissue.)
Kennedy, W. J., assignor to Derby Desk Company, Somerville, Mass. Desk-lock. No. 897,467; Sept. 1; Sp. p. 467; Dr. pp. 99–100; Gaz. vol. 136; p. 74.
Kenney, B. D., assignor to R. Thomas and Sons Company, East Liverpool, Ohio. Mantle-ring mold. No. 899,871; Sept. 29; Sp. p. 5241; Dr. p. 1120; Gaz. vol. 136; p. 979.
Kennicott Water Softener Company. (See Green, W. H., assignor.)
Kennicott Water-Softener Company. (See Van Gundy, C. P., assignor.)
Kenshole, H. H., Ilford, England. Non-skidding device for wheels of vehicles. No. 899,056; Sept. 22; Sp. p. 3580; Dr. p. 767; Gaz. vol. 136; p. 676.
Kent, W. G., London, England. Liquid-meter. No. 897,904; Sept. 8; Sp. p. 1363; Dr. p. 292; Gaz. vol. 136; p. 247.
Kern, L. P. (See McCoy, W. C., assignor.)
Kersey, R., Lexington, assignor of one-half to J. T. Bailey, McBrayer, Ky. Mail-sack-exchange mechanism for railways. No. 899,170; Sept. 22; Sp. p. 3813; Dr. p. 817; Gaz. vol. 136; p. 715.
Kessler, B., Cabinet, Idaho. Pan-holder and stove-lid lifter. No. 899,992; Sept. 29; Sp. p. 5492; Dr. p. 1170; Gaz. vol. 136; p. 1017.
Keys, M., Fort Worth, Tex. Windmill-gearing. No. 899,872; Sept. 29; Sp. p. 5242; Dr. p. 1120; Gaz. vol. 135; p. 979.
Keystone Supply & Manufacturing Company. (See Griffith, N. B., assignor.)
Keystone Telephone Company. (See Wilson, C. E., assignor.)
Kiblinger, L., Jackson, La. Telegraph-sounder. No. 899,307; Sept. 22; Sp. p. 4086; Dr. p. 873; Gaz. vol. 136; p. 759.
Kidney, M., Dover, N. H. Grapple-fork. No. 899,308; Sept. 22; Sp. p. 4087; Dr. p. 873; Gaz. vol. 136; p. 759.
Kieser, W., Berlin, Germany, assignor to General Electric Company. Elastic-fluid turbine. No. 897,540; Sept. 1; Sp. p. 618; Dr. p. 128; Gaz. vol. 136; p. 97.
Kilbourne and Jacobs Manufacturing Company. (See Stagg, T. H., assignor.)
Kilbride, E. M., Jersey City, N. J. Tiling. No. 899,410; Sept. 22; Sp. p. 4266; Dr. p. 915; Gaz. vol. 136; p. 791.
Kilburn, J. B., and E. G. Budd, assignors to Hale-Kilburn Metal Company, Philadelphia, Pa. Cushion. No. 897,541; Sept. 1; Sp. p. 621; Dr. p. 129; Gaz. vol. 136; p. 97.
Killeen, M., *et al.* (See Aiken, A. P., assignor.)
Killion, J. H., Chicago, Ill. Barrel or receptacle. No. 898,484; Sept. 15; Sp. p. 2511; Dr. p. 538; Gaz. vol. 136; p. 464.
Kilmore, J. W. (See Hicks, C. G., assignor.)
Kimball, P. L., assignor to Vermont Farm Machine Company, Bellows Falls, Vt. Wrench. No. 898,657; Sept. 15; Sp. p. 2858; Dr. p. 611; Gaz. vol. 136; p. 521.
Kimber, W. E., Johannesburg, Transvaal. Apparatus for sharpening drills or drill-bits. No. 897,835; Sept. 1; Sp. p. 1209; Dr. p. 258; Gaz. vol. 136; p. 192.
Kimble, L. B., Chillicothe, Ill. Alarm attachment for baling-presses. No. 898,583; Sept. 15; Sp. p. 2705; Dr. p. 578; Gaz. vol. 136; p. 496.
Kimbler, H. R., Boerne, Tex. Pin-box and fastener. No. 899,411; Sept. 22; Sp. p. 4267; Dr. p. 915; Gaz. vol. 136; p. 791.
Kimche, F., Detroit, Mich. Pipe-fitting. No. 899,221; Sept. 22; Sp. p. 3908; Dr. p. 835; Gaz. vol. 136; p. 731.
King, C. S., Pawtucket, R. I. Packet for braid and other narrow fabrics. No. 897,628; Sept. 1; Sp. p. 792; Dr. p. 166; Gaz. vol. 136; p. 126.
King, E. R., Memphis, Tenn. Wood-boring-machine guard. No. 899,412; Sept. 22; Sp. p. 4269; Dr. p. 916; Gaz. vol. 136; p. 791.
King, J. Q. (See La Brake, M. J., assignor.)
King, R. W., assignor to S. A. King, Syracuse, N. Y. Trunk-lock. No. 897,377; Sept. 1; Sp. p. 276; Dr. p. 57; Gaz. vol. 136; p. 42.
King, S. A. (See King, R. W., assignor.)
Kinkade, E. S., Geneva, Nebr. Harrow. No. 897,905; Sept. 8; Sp. p. 1364; Dr. p. 293; Gaz. vol. 136; p. 247.
Kinne, E. P., Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y. Coupling. No. 899,413; Sept. 22; Sp. p. 4270; Dr. p. 916; Gaz. vol. 136; p. 792.
Kirby, G. J., Willimantic, Conn. Receptacle-closure. No. 897,983; Sept. 8; Sp. p. 1543; Dr. p. 328; Gaz. vol. 136; p. 273.
Kirkegaard, G., New York, N. Y., assignor to Imperial Stopper Company. Bottle-stopper. No. 897,542; Sept. 1; Sp. p. 624; Dr. p. 129; Gaz. vol. 136; p. 98.
Kirkegaard, G., New York, N. Y., assignor to Imperial Stopper Company. Bottle-stopper. No. 899,737; Sept. 29; Sp. p. 4938; Dr. p. 1059; Gaz. vol. 136; p. 933.
Kirkwood, W., Chicago, Ill. Double-acting power-pump. No. 899,541; Sept. 29; Sp. p. 4533; Dr. p. 974; Gaz. vol. 136; p. 870.
Kirkwood, W., Chicago, Ill. Evaporator. No. 899,738; Sept. 29; Sp. p. 4940; Dr. p. 1059; Gaz. vol. 136; p. 933.
Kitchen, W. M., Havana, Fla. Car-replacer. No. 898,226; Sept. 8; Sp. p. 2029; Dr. p. 430; Gaz. vol. 136; p. 350.
Kitselman, A. L., Muncie, Ind. Barb-wire-making machine. No. 899,542; Sept. 29; Sp. p. 4539; Dr. pp. 975–7; Gaz. vol. 136; p. 871.
Kleinschmidt, F., Bucharest, Roumania. Preserving live fish during long periods of transport or in store. No. 899,057; Sept. 22; Sp. p. 3581; Dr. p. 767; Gaz. vol. 136; p. 677.
Klemp, P., Dusseldorf, Germany. Turn-table. No. 898,115; Sept. 8; Sp. p. 1806; Dr. p. 384; Gaz. vol. 136; p. 315.
Klenk, H., assignor of one-half to H. Krebs, Hanau, Germany. Talking-machine. No. 899,491; Sept. 22; Sp. p. 4414; Dr. pp. 947–8; Gaz. vol. 136; p. 818.
Kline, W. H., Dunbar, assignor to W. Kennedy, Bellevue, Pa. Valve. (Reissue.) No. 12,857; Sept. 22; Sp. p. 4428; Dr. pp. 950–1; Gaz. vol. 136; p. 820.
Klink, W., Hamburg, assignor to H. Hegeler, Oldenburg, Germany. Piano-violin. No. 900,021; Sept. 29; Sp. p. 5557; Dr. p. 1183; Gaz. vol. 136; p. 1027.
Klos, M., Dyer, Ind. Device for delivering mail-bags from moving trains. No. 898,227; Sept. 8; Sp. p. 2030; Dr. p. 430; Gaz. vol. 136; p. 350.
Klotzbach, A., Cleveland, Ohio. Ball-caster. No. 899,013; Sept. 15; Sp. p. 3504; Dr. p. 750; Gaz. vol. 136; p. 636.
Knaak, G. A., Oshkosh, Wis. Kinetoscope. No. 899,543; Sept. 29; Sp. p. 4548; Dr. pp. 977–8; Gaz. vol. 136; p. 871.

Knapp, M., Dayton, N. Y. Thread and sewing-silk regulator for sewing-machines. No. 899,451; Sept. 22; Sp. p. 4338; Dr. p. 932; Gaz. vol. 136; p. 804.
Knight, F. P. H., Keokuk, Iowa, assignor to Electric Service Supplies Company, Camden, N. J. Lightning-arrester. No. 897,906; Sept. 8; Sp. p. 1366; Dr. p. 293; Gaz. vol. 136; p. 248.
Koch, E. J., Chicago, Ill. Harness-pad. No. 897,629; Sept. 1; Sp. p. 793; Dr. p. 167; Gaz. vol. 136; p. 126.
Koch, H. E., Hartington, Nebr. Obstetrical forceps. No. 899,222; Sept. 22; Sp. p. 3908; Dr. p. 835; Gaz. vol. 136; p. 732.
Kodjbanoff, B. G., New York, N. Y. Phosphorescent sign. No. 899,873; Sept. 29; Sp. p. 5243; Dr. p. 1121; Gaz. vol. 136; p. 980.
Koehring, P. A., Milwaukee, Wis. Concrete-mixer. No. 899,414; Sept. 22; Sp. p. 4272; Dr. pp. 916–17; Gaz. vol. 136; p. 792.
Koehring, P. A., Milwaukee, Wis. Concrete-mixing drum. No. 899,415; Sept. 22; Sp. p. 4273; Dr. p. 917; Gaz. vol. 136; p. 792.
Koester, C. F., Hoboken, N. J. Pedal-mounting. No. 899,739; Sept. 29; Sp. p. 4942; Dr. p. 1060; Gaz. vol. 136; p. 934.
Köhler, H., assignor to Firm of Rütgerswerke Actiengesellschaft, Berlin, Germany. Manufacture of sulfur, &c. No. 898,378; Sept. 8; Sp. p. 2291; Gaz. vol. 136; p. 398.
Kolischer, T. (See Knehl, H., assignor.)
König, W., assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Azo dye. No. 899,171; Sept. 22; Sp. p. 3819; Gaz. vol. 136; p. 716.
Koperski, E. (See Macherski and Koperski.)
Kops, D., New York, N. Y. Apparel-corset. No. 898,749; Sept. 15; Sp. p. 3021; Dr. p. 647; Gaz. vol. 136; p. 549.
Kops, D., New York, N. Y. Apparel-corset. No. 898,750; Sept. 15; Sp. p. 3024; Dr. p. 648; Gaz. vol. 136; p. 550.
Korpi, J. O., Soudan, Minn. Combination-tool. No. 897,293; Sept. 1; Sp. p. 49; Dr. p. 12; Gaz. vol. 136; p. 11.
Kottusch, E. W., New York, N. Y. Stopper. No. 897,294; Sept. 1; Sp. p. 49; Dr. p. 12; Gaz. vol. 136; p. 11.
Krabal, F., Chicago, Ill. Gas-burner. No. 899,600; Sept. 29; Sp. p. 4667; Dr. p. 1001; Gaz. vol. 136; p. 891.
Kraemer, T., assignor to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa. Talking-machine. No. 899,874; Sept. 29; Sp. p. 5244; Dr. p. 1121; Gaz. vol. 136; p. 980.
Krafft, E., New York, N. Y. Latch. No. 897,749; Sept. 1; Sp. p. 1025; Dr. p. 218; Gaz. vol. 136; p. 166.
Kraft, H. (See Engi and Kraft.)
Kraft, H., and G. Engi, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Violet vat dye and making same. No. 899,994; Sept. 29; Sp. p. 5494; Gaz. vol. 136; p. 1017.
Krakau, H. T., assignor to National Malleable Castings Company, Cleveland, Ohio. Radial draft-gear. No. 900,022; Sept. 29, Sp. p. 5558; Dr. p. 1184; Gaz. vol. 136; p. 1027.
Krakau, H. T., assignor to National Malleable Castings Company, Cleveland, Ohio. Draft-gear and buffing mechanism. No. 900,023; Sept. 29; Sp. p. 5559; Dr. pp. 1184–5; Gaz. vol. 136; p. 1027.
Krakau, H. T., assignor to National Malleable Castings Company, Cleveland, Ohio. Draft-gear. No. 900,024; Sept. 29; Sp. p. 5562; Dr. pp. 1185–6; Gaz. vol. 136; p. 1028.
Krakau, H. T., assignor to National Malleable Castings Company, Cleveland, Ohio. Radial draft-gear. No. 900,025; Sept. 29; Sp. p. 5563; Dr. pp. 1186–7; Gaz. vol. 136; p. 1028.
Krakau, H. T., assignor to National Malleable Castings Company, Cleveland, Ohio. Radial draft-gear. No. 900,026; Sept. 29; Sp. p. 5565; Dr. pp. 1187–8; Gaz. vol. 136; p. 1028.
Krakau, H. T., assignor to National Malleable Castings Company, Cleveland, Ohio. Draft-gear. No. 900,027; Sept. 29; Sp. p. 5568; Dr. pp. 1188–90; Gaz. vol. 136; p. 1029.
Krantz, H. (See Muller, E. W., assignor.)
Krantz, H., New York, N. Y. Conduit-coupling. No. 898,751; Sept. 15; Sp. p. 3026; Dr. pp. 648–9; Gaz. vol. 136; p. 550.
Krause, H. C., assignor of one-third to C. T. Brown, Chicago, Ill. Garment-holder. No. 898,978; Sept. 15; Sp. p. 3432; Dr. p. 737; Gaz. vol. 136; p. 625.
Krautschneider, H., Berlin, Germany. Process and apparatus for annealing and tempering metals. No. 899,452; Sept. 22; Sp. p. 4339; Gaz. vol. 136; p. 804.
Krebs, H. (See Klenk, H., assignor.)
Krentler-Arnold Hinge Last Company. (See Harding, J. T., assignor.)
Kretschmer, K. O., Elizabeth, N. J., assignor of two-thirds to C. J. and F. E. Canda, New York, N. Y. Refining metals. No. 898,116; Sept. 8; Sp. p. 1909; Gaz. vol. 136; p. 315.
Kron, R., Golzern, near Grimma, Germany. Manufacture of card-paper or the like from two simultaneously-produced single paper webs. No. 897,543; Sept. 1; Sp. p. 625; Dr. p. 129; Gaz. vol. 136; p. 98.
Kronenberg, R., Ohligs, Germany. Detachable rim. No. 897,630; Sept. 1; Sp. p. 794; Dr. p. 167; Gaz. vol. 136; p. 126.
Krough, E. C. C. (See Bentley and Krough.)
Krueger, G., Cincinnati, assignor to W. B. White, Cleveland, Ohio. Magazine cap-exploder. No. 897,631; Sept. 1; Sp. p. 795; Dr. p. 167; Gaz. vol. 136; p. 126.
Krueger, H. L. E., assignor to Tufting Machine Supply Company, Chicago, Ill. Upholsterer's button. No. 899,601; Sept. 29; Sp. p. 4668; Dr. p. 1001; Gaz. vol. 136; p. 891.
Krüger, F. C., Hanover, Germany. Rotary engine. No. 898,658; Sept. 15; Sp. p. 2859; Dr. p. 611; Gaz. vol. 136; p. 521.
Krüger, J., Berlin, Germany. Device for cutting figured iron. No. 897,984; Sept. 8; Sp. p. 1545; Dr. p. 328; Gaz. vol. 136; p. 173.
Kruh, O. O., Schenectady, N. Y., assignor to General Electric Company. Rectifier system. No. 897,544; Sept. 1; Sp. p. 626; Dr. p. 129; Gaz. vol. 136; p. 98.
Kubach, C., Abilene, Kans. Concrete fence-post. No. 897,632; Sept. 1; Sp. p. 797; Dr. p. 168; Gaz. vol. 136; p. 127.
Kubach, C., Abilene, Kans. Multiple mold for fence-posts. No. 899,416; Sept. 22; Sp. p. 4275; Dr. p. 917; Gaz. vol. 136; p. 793.
Kuck, H. G. (See Stuber, J., assignor.)
Kuehl, H., assignor of one-half to T. Kolischer, Philadelphia, Pa. Compressor. No. 898,659; Sept. 15; Sp. p. 2862; Dr. p. 611; Gaz. vol. 136; p. 521.
Kuensting, C., Woodburn, Oreg. Combined basket and support therefor. No. 897,750; Sept. 1; Sp. p. 1027; Dr. p. 218; Gaz. vol. 136; p. 166.
Kuert, A., *et al.* (See McCombe, R. H., assignor.)
Kügelgen, F. von. (See Seward and Kügelgen.)
Kühne, F. C., Charlottenburg, Germany. Train-arrester. No. 899,602; Sept. 29; Sp. p. 4669; Dr. p. 1001; Gaz. vol. 136; p. 891.
Kunkle, H. E., Vandergrift Heights, Pa. Sleeve-board. No. 898,228; Sept. 8; Sp. p. 2031; Dr. p. 431; Gaz. vol. 136; p. 350.
Kurtz, O., Vienna, Austria-Hungary. Piano-violin. No. 899,740; Sept. 29; Sp. p. 4943; Dr. pp. 1060–1; Gaz. vol. 136; p. 934.
Kutz, G., assignor of one-half to E. O. Hartzell, Easton, Pa. Incubator. No. 898,229; Sept. 8; Sp. p. 2032; Dr. p. 431; Gaz. vol. 136; p. 350.
Kuzel, H., Baden, near Vienna, Austria-Hungary. Metal filament for electric incandescent lamps. No. 898,752; Sept. 15; Sp. p. 3028; Dr. p. 649; Gaz. vol. 136; p. 551.
Kuzel, H., Baden, near Vienna, Austria-Hungary. Electrically connecting filaments to supply-wires in electric glow-lamps. No. 898,979; Sept. 15; Sp. p. 3433; Gaz. vol. 136; p. 625.
Kuzel, H., Baden, near Vienna, Austria-Hungary. Peptisating colloidal elements. No. 899,875; Sept. 29; Sp. p. 5246; Gaz. vol. 136; p. 980.
La Batt, H. C., assignor to W. J. Herrick, Chicago, Ill. Sheet-feeding machine. No. 899,995; Sept. 29; Sp. p. 5495; Dr. pp. 1170–2; Gaz. vol. 136; p. 1018.
La Bau, C. T., Indianapolis, Ind. Can-stacker. No. 898,584; Sept. 15; Sp. p. 2707; Dr. p. 578; Gaz. vol. 136; p. 497.
La Brake, M. J., Bloomingdale, assignor of one-half to J. Q. King, Gabriels, N. Y. Horse-detacher. No. 899,223; Sept. 22; Sp. p. 3909; Dr. p. 835; Gaz. vol. 136; p. 732.
La Madeleine, J. O., Montreal, Quebec, Canada. Refrigerator. No. 898,231; Sept. 8; Sp. p. 2033; Dr. p. 432; Gaz. vol. 136; p. 351.
La Société L'Acétylène dissous du Sud-Est. (See Le Chatelier, A. G., assignor.)
Lachance, M., St. Johnsbury, Vt. Rail-joint chair and fastening. No. 897,751; Sept. 1; Sp. p. 1028; Dr. p. 218; Gaz. vol. 136; p. 166.
Laclede Manufacturing Company. (See Allison, J. E., assignor.)
Laflin, S. C., assignor to American Optical Company, Southbridge, Mass. Bridge for eyeglasses. No. 897,468; Sept. 1; Sp. p. 469; Dr. p. 100; Gaz. vol. 136; p. 74.
Lager, C., Baldwinsville, N. Y. High-lift centrifugal pump. No. 897,469; Sept. 1; Sp. p. 470; Dr. p. 100; Gaz. vol. 136; p. 75.
Laird, C. W., Memphis, N. Y. Horseshoe. No. 899,417; Sept. 22; Sp. p. 4276; Dr. p. 917; Gaz. vol. 136; p. 793.
Lake, C. O., Shreve, Ohio. Gas-engine. No. 898,230; Sept. 8; Sp. p. 2034; Dr. p. 432; Gaz. vol. 136; p. 351.
Lamberton, A., Coatbridge, Scotland. Rolling plates. No. 898,900; Sept. 15; Sp. p. 3297; Dr. p. 706; Gaz. vol. 136; p. 599.
Lamberton, A., Coatbridge, Scotland. Rolling plates. No. 898,901; Sept. 15; Sp. p. 3298; Dr. pp. 706–7; Gaz. vol. 136; p. 600.
Land, G., Grants Pass, Oreg. Automatic flush-tank siphon. No. 897,378; Sept. 1; Sp. p. 281; Dr. p. 57; Gaz. vol. 136; p. 42.
Landers, Frary, and Clark. (See Warner, A. A., assignor.)
Landis, G. C., York, Pa. Electrolytic cell. No. 897,633; Sept. 1; Sp. p. 798; Dr. p. 168; Gaz. vol. 136; p. 127.
Landis Machine Company. (See Pedersen, C., assignor.)
Lane, F. L., and B. D. Stevens, assignors to Berlin Machine Works, Beloit, Wis. Belt-tightener. No. 899,741; Sept. 29; Sp. p. 4949; Dr. p. 1061; Gaz. vol. 136; p. 934.
Lane, W. O., Cleveland, Ohio. Device to prevent trolley-wheels from jumping. No. 898,485; Sept. 15; Sp. p. 2513; Dr. p. 538; Gaz. vol. 136; p. 465.
Lang, H., assignor to Goss Printing Press Company, Chicago, Ill. Rotary folding mechanism for printing-presses. No. 899,742; Sept. 29; Sp. p. 4951; Dr. p. 1062; Gaz. vol. 136; p. 935.

Lang, H., assignor to Goss Printing Press Company, Chicago, Ill. Rotary folding mechanism. No. 899,743; Sept. 29; Sp. p. 4954; Dr. pp. 1062–3; Gaz. vol. 136; p. 935.
Lang, H., assignor to Goss Printing Press Company, Chicago, Ill. Rotary folding mechanism. No. 899,744; Sept. 29; Sp. p. 4957; Dr. p. 1063; Gaz. vol. 136; p. 936.
Lang, J. F. (See Ranz, J., assignor.)
Lang, L. A., Cleveland, Ohio. Telemotor. No. 897,907; Sept. 8; Sp. p. 1369; Dr. p. 294; Gaz. vol. 136; p. 248.
Langenbach, A. A. (See Schlafly, J. H., assignor.)
Lanier, J. S., West Point, Ga. Mail receiving and delivering apparatus. No. 898,486; Sept. 15; Sp. p. 2514; Dr. p. 538; Gaz. vol. 136; p. 465.
Lanier, J. S., West Point, Ga. Mail receiving and delivering mechanism. No. 898,487; Sept. 15; Sp. p. 2517; Dr. p. 538; Gaz. vol. 136; p. 466.
Lanners, H. W. (See Holmwood, J., assignor.)
Lanning, J. W. (See Dingman, W., assignor.)
Lanston Monotype Machine Company. (See Elliott, R. C., assignor.)
Lapham, V., Chicago, Ill. Sprinkler-head for automatic fire-extinguishers. No. 897,908; Sept. 8; Sp. p. 1375; Dr. p. 294; Gaz. vol. 136; p. 248.
Laprese, W. E. (See Gokey, Chambers, and Laprese.)
Larocque, P. R. (See Parent, L. P., assignor.)
Larsson, T., Worcester, Mass., assignor to himself, W. E. D. Stokes, New York, N. Y., and F. A. Jones, Worcester, Mass. Hydraulic elevator. No. 899,224; Sept. 22; Sp. p. 3911; Dr. pp. 835–6; Gaz. vol. 136; p. 732.
Lathrop, E. G., *et al.* (See Revoir, B., assignor.)
Latour, M. C. A., Paris, France, assignor to General Electric Company. Single-phase commutator-motor. No. 897,545; Sept. 1; Sp. p. 627; Dr. p. 130; Gaz. vol. 136; p. 98.
Laubscher, A., Bridgeport, Conn., assignor to Singer Manufacturing Company. Hemmer for sewing-machines. No. 899,544; Sept. 29; Sp. p. 4551; Dr. pp. 978–9; Gaz. vol. 136; p. 871.
Laus, J., Jr., Oshkosh, Wis. Automobile-wheel. No. 899,876; Sept. 29; Sp. p. 5247; Dr. pp. 1121–2; Gaz. vol. 136; p. 980.
Le Chatelier, A. G., assignor to La Société L'Acétylène dissous du Sud-Est, Marseille, France. Blowpipe. No. 899,453; Sept. 22; Sp. p. 4341; Dr. p. 932; Gaz. vol. 136; p. 804.
Le Compte, J., assignor of one-half to A. D. Marble and S. C. Taylor, Oklahoma, Okla. Daylight film-developing apparatus. No. 899,545; Sept. 29; Sp. p. 4552; Dr. p. 979; Gaz. vol. 136; p. 872.
Le Gore, J. W., Le Gore, Md. Kiln. No. 898,902; Sept. 15; Sp. p. 3299; Dr. p. 707; Gaz. vol. 136; p. 600.
Leachey, M. J., Omaha, Nebr. Horseshoe. No. 898,488; Sept. 15; Sp. p. 2519; Dr. p. 539; Gaz. vol. 136; p. 466.
Leader Safety Razor & Strop Co. (See Hauser and Shepherd, assignors.)
Lear, R. H. (See Daubaignan, R., assignor.)
Leary, H. B. (See Hart, W. H., assignor.)
Lebeis, M., assignor to Regina Maschinenfabrik, G. M. B. H., Kalk, near Cologne, Germany. Ticket printing and registering apparatus. No. 899,671; Sept. 29; Sp. p. 4901; Dr. pp. 1028–9; Gaz. vol. 136; p. 912.
Lebram, P. G., Berlin, Germany. Preparing carbonic-acid baths. No. 897,546; Sept. 1; Sp. p. 630; Gaz. vol. 136; p. 98.
Lebri, G., Salem, Mass. Fire-escape. No. 897,634; Sept. 1; Sp. p. 799; Dr. pp. 168–9; Gaz. vol. 136; p. 127.
Lee, C. F. (See Lee, O. S. and C. F.)
Lee, O. S. and C. F., Youngstown, Ind. Baling-machine. No. 899,309; Sept. 22; Sp. p. 4089; Dr. pp. 873–6; Gaz. vol. 136; p. 759.
Leeds, E. F., and G. Rumpf, New York, N. Y.; said Rumpf assignor to said Leeds. Phonograph. No. 897,836; Sept. 1; Sp. p. 1211; Dr. pp. 258–9; Gaz. vol. 136; p. 192.
Lees, H. A. (See Lees and Grise.)
Lees, W. F. and H. A., and C. W. Grise, San Diego, Cal. Elastic-fluid turbine. No. 898,753; Sept. 15; Sp. p. 3029; Dr. pp. 649–50; Gaz. vol. 136; p. 551.
Lehman, M. A. (See Fairchild, E. N., assignor.)
Lehmann, E. P., Bradenburg, Germany. Candle-holder. No. 898,660; Sept. 15; Sp. p. 2865; Dr. p. 612; Gaz. vol. 136; p. 522.
Leighton, H. J., Syracuse, N. Y. Internal-combustion engine. No. 898,117; Sept. 8; Sp. p. 1811; Dr. p. 384; Gaz. vol. 136; p. 315.
Lemon, G. J. (See Lemon, J. M., assignor.)
Lemon, J. M., assignor of one-half to G. J. Lemon, Mono Mills, Ontario, Canada. Apparatus for drying clothes. No. 898,051; Sept. 8; Sp. p. 1679; Dr. p. 356; Gaz. vol. 136; p. 294.
Lenhart, C. H., Plymouth, Wis. Chair-seat. No. 899,745; Sept. 29; Sp. p. 4960; Dr. p. 1063; Gaz. vol. 136; p. 937.
Lenkey, F., and J. Szalay, New York, N. Y. Box-fastener. No. 897,837; Sept. 1; Sp. p. 1216; Dr. p. 259; Gaz. vol. 136; p. 193.
Leonard, A. L., Columbus, Ga. Heater. No. 899,546; Sept. 29; Sp. p. 4555; Dr. p. 979; Gaz. vol. 136; p. 872.
Leonard, W. A., assignor to Geometric Tool Company, New Haven, Conn. Roller feed mechanism. No. 899,492; Sept. 22; Sp. p. 4416; Dr. p. 948; Gaz. vol. 136; p. 818.
Lepley, D. F., Connellsville, Pa. Friction-clutch. No. 897,909; Sept. 8; Sp. p. 1378; Dr. p. 294; Gaz. vol. 136; p. 249.
Lester, I., Tuscola, Ill. Gate-hinge. No. 897,296; Sept. 1; Sp. p. 52; Dr. p. 12; Gaz. vol. 136; p. 12.
Leve, R. E., New York, N. Y. Electric-arc lamp. No. 898,052; Sept. 8; Sp. p. 1680; Dr. p. 315; Gaz. vol. 136; p. 295.
Levedahl, A., assignor to Aurora Automatic Machinery Company, Aurora, Ill. Driving-gear for motor-cycles. No. 899,746; Sept. 29; Sp. p. 4961; Dr. p. 1064; Gaz. vol. 136; p. 937.
Levin, N. D., Chicago, Ill. Coal-working apparatus. No. 898,661; Sept. 15; Sp. p. 2867; Dr. p. 612; Gaz. vol. 136; p. 522.
Levy, F., assignor of one-half to L. F. Vetter, Los Angeles, Cal. Combination coat and adjustable skirt hanger. No. 899,603; Sept. 29; Sp. p. 4670; Dr. p. 1002; Gaz. vol. 136; p. 892.
Levy, J. Z., Pittsburg, Pa. Amusement apparatus. No. 899,172; Sept. 22; Sp. p. 3820; Dr. p. 818; Gaz. vol. 136; p. 716.
Lewis, E. (See Seibert, J. W., assignor.)
Lewis, J., Lydney, assignor to R. Thomas & Co., Limited, Llanelly, England. Combined tinning and cleaning machine. No. 899,996; Sept. 29; Sp. p. 5502; Dr. pp. 1172–3; Gaz. vol. 136; p. 1018.
Lewis, J. A., Minneapolis, Minn. Broom attachment. No. 898,232; Sept. 8; Sp. p. 2039; Dr. p. 433; Gaz. vol. 136; p. 351.
Lewis, J. F., *et al.* (See Aiken, A. P., assignor.)
Lewis, J. H., Detroit, Mich. Rail tie and fastening. No. 900,028; Sept. 29; Sp. p. 5571; Dr. p. 1190; Gaz. vol. 136; p. 1029.
Lewis, J. S., Villisca, Iowa. Vehicle running-gear. No. 899,877; Sept. 29; Sp. p. 5249; Dr. p. 1122; Gaz. vol. 136; p. 931.
Lewis, L. C., assignor to Monarch Specialty Manufacturing Company, Columbus, Ohio. Water-motor. No. 899,058; Sept. 22; Sp. p. 3583; Dr. p. 768; Gaz. vol. 136; p. 677.
Lewis, T., and H. C. Dando, Derry, Pa. Envelop. No. 897,635; Sept. 1; Sp. p. 802; Dr. p. 169; Gaz. vol. 136; p. 128.
Liberman, B., Philadelphia, Pa. Cigar-wrapper cutter and rolling table. No. 897,547; Sept 1; Sp. p. 630; Dr. p. 130; Gaz. vol. 136; p. 99.
Liden, J., Rockford, Ill. Heel-plate. No. 898,118; Sept. 8; Sp. p. 1812; Dr. p. 384; Gaz. vol. 136; p. 316.
Liebert, E., Los Angeles, Cal., assignor, by mesne assignments, to Crouch Manufacturing Jewelry Company. Safety-catch for jewelry. No. 897,470; Sept. 1; Sp. p. 472; Dr. p. 101; Gaz. vol. 136; p. 75.
Liebhardt, L. F., Denver, Colo. Antisnoring device. No. 898,379; Sept. 8; Sp. p. 2292; Dr. p. 487; Gaz. vol. 136; p. 398.
Liesmann, L., Dixon, Mo. Farm-gate. No. 899,747; Sept. 29; Sp. p. 4967; Dr. p. 1065; Gaz. vol. 136; p. 937.
Lilleberg, C. L., assignor to J. B. Mallers, Jr., Chicago, Ill. Cyclometer. No. 897,379; Sept. 1; Sp. p. 283; Dr. p. 58; Gaz. vol. 136; p. 43.
Limerick, J., West Medford, Mass. Baffle for oil-burning furnaces in steam-engines. No. 898,662; Sept. 15; Sp. p. 2868; Dr. p. 613; Gaz. vol. 136; p. 522.
Lincoln, L., Buffalo, N. Y. Heel-protector. No. 898,233; Sept. 8; Sp. p. 2040; Dr. p. 433; Gaz. vol. 136; p. 352.
Lind, A. S., McKeesport, Pa. Rail connection. No. 899,697; Sept. 29; Sp. p. 4852; Dr. p. 1039; Gaz. vol. 136; p. 920.
Lind, T. E., Moose Jaw, Saskatchewan, Canada. Reaper. No. 899,878; Sept. 29; Sp. p. 5250; Dr. pp. 1122–3; Gaz. vol. 136; p. 931.
Lindberg, B. E., Faribault, Minn. Hand school-loom. No. 899,310; Sept. 22; Sp. p. 4098; Dr. p. 876; Gaz. vol. 136; p. 760.
Linden, C. A., and E. J. Lund, assignors of one-third to C. G. Fredrickson, Jamestown, N. Y. Sheet-metal bedstead. No. 899,173; Sept. 22; Sp. p. 3822; Dr. p. 818; Gaz. vol. 136; p. 716.
Lindgren, R. (See Renfors and Lindgren.)
Lindmark, T. G. E., Stockholm, Sweden. Marine turbine. No. 899,547; Sept. 29; Sp. p. 4556; Dr. p. 980; Gaz. vol. 136; p. 872.
Lindquist, A. (See Behrendt and Lindquist.)
Lindsay, C. F., Schenectady, N. Y., assignor to General Electric Company. Arc-light electrode and making the same. No. 897,548; Sept. 1; Sp. p. 631; Dr. p. 130; Gaz. vol. 136; p. 99.
Lindsay, C. W., Anthon, Iowa. Rotary gasoline-engine. No. 898,903; Sept. 15; Sp. p. 3301; Dr. pp. 707–8; Gaz. vol. 136; p. 600.
Lindsay, D., Paterson, N. J. Loom harness mechanism. No. 897,549; Sept. 1; Sp. p. 633; Dr. p. 130; Gaz. vol. 136; p. 99.
Link-Belt Company. (See Hetzel and Cochrane, assignors.)
Lins, W. R., Philadelphia, Pa. Ore separating or concentrating machine. No. 898,119; Sept. 8; Sp. p. 1813; Dr. pp. 384–5; Gaz. vol. 136; p. 316.
Lipp, E. S., Myrtle Point, Oreg. Animal-trap. No. 899,114; Sept. 22; Sp. p. 3690; Dr. p. 791; Gaz. vol. 136; p. 696.
Lipps, E. C., assignor to Peerless Electric Company, Warren, Ohio. Oscillating desk-fan. No. 897,752; Sept. 1; Sp. p. 1029; Dr. p. 219; Gaz. vol. 136; p. 167.
Lisenby, W. T., Longbeach, Cal. Waste-pipe cleaner. No. 898,234; Sept. 8; Sp. p. 2042; Dr. p. 433; Gaz. vol. 136; p. 352.
Litch, L. W., Lynn, Mass. Combination height-increaser, heel-cushion, and stocking-protector. No. 898,120; Sept. 8; Sp. p. 1814; Dr. p. 385; Gaz. vol. 136; p. 316.

Lithographic Stone and Marble Company. (See Thom, T. M., assignor.)
Littell, J. S., Brockport, N. Y. Educational appliance. No. 898,754; Sept. 15; Sp. p. 3031; Dr. p. 650; Gaz. vol. 136; p. 551.
Little, C. C., San Jose, Cal. Receptacle-holder. No. 898,755; Sept. 15; Sp. p. 3034; Dr. p. 650; Gaz. vol. 136; p. 551.
Little, W. B., New York, N. Y. Curtain-pole. No. 897,550; Sept. 1; Sp. p. 634; Dr. p. 131; Gaz. vol. 136; p. 99.
Littler, H. J., Vancouver, British Columbia, Canada. Logger's wire-rope sheave-block. No. 898,121; Sept. 8; Sp. p. 1815; Dr. p. 385; Gaz. vol. 136; p. 316.
Lloyd, E. L., Utica, N. Y. Holder. No. 899,311; Sept. 22; Sp. p. 4099; Dr. p. 876; Gaz. vol. 136; p. 760.
Lloyd, M. B., assignor to Lloyd Manufacturing Co., Menominee, Mich. Folding go-cart. No. 898,235; Sept. 8; Sp. p. 2043; Dr. p. 434; Gaz. vol. 136; p. 352.
Lloyd Manufacturing Co. (See Lloyd, M. B., assignor.)
Lockard, W. A., Philadelphia, Pa. Railway-tie. No. 899,174; Sept. 22; Sp. p. 3825; Dr. p. 819; Gaz. vol. 136; p. 717.
Locke, A. R., Chicago, Ill. Insulator for armature-conductors. No. 899,059; Sept. 22; Sp. p. 3584; Dr. p. 768; Gaz. vol. 136; p. 677.
Locke, B. H., New York, N. Y. Machine for sharpening rock-drills. No. 898,663; Sept. 15; Sp. p. 2869; Dr. p. 613; Gaz. vol. 136; p. 522.
Locke, F. M., Victor, N. Y. Making feldspar flux. No. 897,636; Sept. 1; Sp. p. 803; Gaz. vol. 136; p. 128.
Lockwood, B. D., Indianapolis, Ind., and F. M. Whyte, Tarrytown, N. Y. Brake-shoe. No. 899,454; Sept. 22; Sp. p. 4343; Dr. p. 932; Gaz. vol. 136; p. 805.
Loewer, H. F., Rochester, N. Y. Last. No. 898,664; Sept. 15; Sp. p. 2871; Dr. p. 613; Gaz. vol. 136; p. 523.
Lofthus, K. O., Brodhead, Wis. Rail-fastener. No. 898,053; Sept. 8; Sp. p. 1683; Dr. p. 357; Gaz. vol. 136; p. 295.
Logan, C. E., Mill Grove, Mo. Wire-fence-stretching clamp. No. 898,236; Sept. 8; Sp. p. 2046; Dr. p. 434; Gaz. vol. 136; p. 353.
Logan, J., *et al.*, administrators. (See Logan, L. L.)
Logan, L. L., deceased, New Haven, Pa.; J. Logan and W. P. Townsend administrators. Oiling attachment. No. 897,753; Sept. 1; Sp. p. 1030; Dr. p. 219; Gaz. vol. 136; p. 167.
Logue, T. D., assignor of one-half to N. Silin, Sinnamahoning, Pa. Lid-lifting attachment. No. 897,838; Sept. 1; Sp. p. 1217; Dr. p. 260; Gaz. vol. 136; p. 193.
London, A. L., Pittsburg, Pa. Buckle. No. 898,122; Sept. 8; Sp. p. 1817; Dr. p. 385; Gaz. vol. 136; p. 317.
Londress, G., Grafton, W. Va. Vehicle-brake. No. 898,904; Sept. 15; Sp. p. 3303; Dr. p. 708; Gaz. vol. 136; p. 601.
Long, A. D., and G. Dietz, assignors to Louden Machinery Company, Fairfield, Iowa. Conveyer. No. 897,380; Sept. 1; Sp. p. 287; Dr. p. 58; Gaz. vol. 136; p. 43.
Long, F. N., assignor of one-half to F. J. White, Oakland, Cal. Elevator-door-opening device. No. 897,910; Sept. 8; Sp. p. 1380; Dr. p. 295; Gaz. vol. 136; p. 249.
Long, J. B., and C. Wright, assignors to Long Manufacturing Company, Chicago, Ill. Radiator for automobiles. No. 898,237; Sept. 8; Sp. p. 2047; Dr. p. 434; Gaz. vol. 136; p. 353.
Long, J. B., and F. Todd, Chicago, Ill.; said Todd assignor to said Long. Radiator. No. 898,238; Sept. 8; Sp. p. 2048; Dr. p. 435; Gaz. vol. 136; p. 353.
Long Manufacturing Company. (See Long and Wright, assignors.)
Longwell, C. A., Pittsburg, Pa. Parlor bowling-alley. No. 899,115; Sept. 22; Sp. p. 3691; Dr. p. 791; Gaz. vol. 136; p. 697.
Loomis, G. P., Schenectady, N. Y. Match-making machine. No. 900,029; Sept. 29; Sp. p. 5573; Dr. pp. 1190–2; Gaz. vol. 136; p. 1029.
Lord, M. V., administratrix. (See Lord, P.)
Lord, P., deceased, Worcester, Mass.; M. V. Lord, administratrix. Respiration apparatus. No. 899,225; Sept. 22; Sp. p. 3914; Dr. p. 836; Gaz. vol. 136; p. 732.
Lorentz, H. E., Baltimore, Md. Garment-supporter clasp. No. 897,911; Sept. 8; Sp. p. 1382; Dr. p. 295; Gaz. vol. 136; p. 250.
Lorraine Manufacturing Company. (See Ballou, E. H., assignor.)
Los Angeles Switch and Signal Company. (See Bell, W. J., assignor.)
Lossius, D., Chicago, Ill. Tobacco-pipe cleaner. No. 899,418; Sept. 22; Sp. p. 4277; Dr. p. 918; Gaz. vol. 136; p. 793.
Lothrop, C. H., *et al.* (See Worthen, A. J., assignor.)
Louden Machinery Company. (See Long and Dietz, assignors.)
Louden Machinery Company. (See Neller, A. H., assignor.)
Louden, W., Fairfield, Iowa. Elevator and carrier. No. 897,381; Sept. 1; Sp. p. 288; Dr. p. 59; Gaz. vol. 136; p. 44.
Louden, W., Fairfield, Iowa. Feed-carrier. No. 898,489; Sept. 15; Sp. p. 2520; Dr. p. 539; Gaz. vol. 136; p. 466.
Loughner, R. C., Johnstown, Pa. Window-shade bracket. No. 899,116; Sept. 22; Sp. p. 3692; Dr. p. 791; Gaz. vol. 136; p. 697.
Low, J. B., F. C. Bradburn, and J. C. Tyler, Rochester, N. Y. Photographic apparatus. No. 899,792; Sept. 29; Sp. p. 5076; Dr. p. 1066; Gaz. vol. 136; p. 953.
Löwenstein, L., Vienna, Austria-Hungary. Fractional condensation of vapors. No. 898,980; Sept. 15; Sp. p. 3434; Dr. p. 737; Gaz. vol. 136; p. 625.
Lowrie, W. M., New York, N. Y. Collar and garment fastener. No. 898,239; Sept. 8; Sp. p. 2050; Dr. p. 435; Gaz. vol. 136; p. 354.
Lowry, W. D., St. Louis, Mo. Metallic railway-tie. No. 898,490; Sept. 15; Sp. p. 2523; Dr. pp. 539–40; Gaz. vol. 136; p. 467.
Lowry, W. D., St. Louis, Mo. Swing-motion car-truck. No. 897,912; Sept. 8; Sp. p. 1383; Dr. pp. 295–6; Gaz. vol. 136; p. 250
Loyola, F., Queretaro, Mexico. Finger-developing appliance. No. 897,471; Sept. 1; Sp. p. 473; Dr. p. 101; Gaz. vol. 136; p. 75.
Ludwig Spitz & Co., G. m. b. H. (See Rein, R., assignor.)
Luethi, A., Lakemills, Wis. Sad-iron. No. 897,913; Sept. 8; Sp. p. 1384; Dr. p. 296; Gaz. vol. 136; p. 250.
Luger-Hefel, K., Dornbirn, Austria-Hungary. Cooking-range. No. 899,254; Sept. 22; Sp. p. 4005; Dr. pp. 854–5; Gaz. vol. 136; p. 743.
Lund, E. J. (See Linden and Lund.)
Lundgren, J., Philadelphia, Pa., assignor to Samson Cordage Works, Boston, Mass. Braiding-machine. No. 897,382; Sept. 1; Sp. p. 291; Dr. pp. 59–60; Gaz. vol. 136; p. 44.
Lundgren, J., Philadelphia, Pa., assignor to Samson Cordage Works, Boston, Mass. Braiding-machine. No. 897,551; Sept. 1; Sp. p. 636; Dr. pp. 131–3; Gaz. vol. 136; p. 100.
Lungren, C. M., Bayonne, N. J., assignor to Railway Utilities Company. Projecting-lantern. No. 898,054; Sept. 8; Sp. p. 1684; Dr. pp. 357–8; Gaz. vol. 136; p. 295.
Lunken, E. H., and C. M. Conklin, Cincinnati, Ohio, assignors to Lunken Steel Window Company. Fireproof window construction. No. 897,297; Sept. 1; Sp. p. 53; Dr. p. 13; Gaz. vol. 136; p. 12.
Lunken Steel Window Company. (See Lunken and Conklin, assignors.)
Lunsford, J. H., Lakeside, Nebr. Combined center-delivery and dumping hay-rake. No. 898,240; Sept. 8; Sp. p. 2051; Dr. pp. 435–6; Gaz. vol. 136; p. 354.
Luppert, J. (See Farles, R., assignor.)
Luppino, J., assignor to American Couch Company, New York, N. Y. Sliding couch-bed. No. 898,981; Sept. 15; Sp. p. 3436; Dr. pp. 737–8; Gaz. vol. 136; p. 626.
Luther Brothers Company. (See Thompson, J. M., assignor.)
Lutz, G. A., New York, N. Y., assignor to American Circular Loom Company, Portland, Me. Outlet-box. No. 898,756; Sept. 15; Sp. p. 3035; Dr. p. 651; Gaz. vol. 136; p. 552.
Lutz, G. A., Plainfield, N. J., assignor to American Circular Loom Company, Portland, Me. Electroplating apparatus. No. 899,226; Sept. 22; Sp. p. 3915; Dr. p. 836; Gaz. vol. 136; p. 733.
Lynch, J. H., Red Bank, N. J. Can-opener. No. 900,030; Sept. 29; Sp. p. 5581; Dr. p. 1192; Gaz. vol. 136; p. 1030.
Lynch, M., Malta Bend, Mo. Scalding apparatus. No. 897,754; Sept. 1; Sp. p. 1032; Dr. pp. 219–20; Gaz. vol. 136; p. 167.
Lynchburg Foundry Company. (See McCahey, C. R., assignor.)
Lyon, W. L., Galesburg, Ill. Wire-uniting mechanism for baling-presses. No. 899,014; Sept. 15; Sp. p. 3505; Dr. pp. 750–1; Gaz. vol. 136; p. 636.
Lyster, F., assignor to Lyster Sheet Metal Company, Philadelphia, Pa. Fireproof metal window-frame. No. 899,227; Sept. 22; Sp. p. 3917; Dr. p. 836; Gaz. vol. 136; p. 733.
Lyster Sheet Metal Company. (See Lyster, F., assignor.)
Maas, J., assignor to American Gas Light Company, Kalamazoo, Mich. Gas-light fixture. No. 900,031; Sept. 29; Sp. p. 5583; Dr. p. 1193; Gaz. vol. 136; p. 1030.
MacFarland, R. B. (See Wilson and MacFarland.)
MacLeod, A. (See McCarthy and MacLeod.)
MacLeod, D. M., Los Angeles, Cal. Water-heater. No. 898,123; Sept. 8; Sp. p. 1818; Dr. p. 386; Gaz. vol. 136; p. 317.
MacMillan, W., assignor to E. Winkler and J. J. Walsh, New York, N. Y. Electric battery. No. 898,055; Sept. 8; Sp. p. 1689; Dr. pp. 358–9; Gaz. vol. 136; p. 296.
Macbeth, G. A., Pittsburg, Pa., assignor to C. T. Ham Manufacturing Company, Rochester, N. Y. Lens. No. 898,665; Sept. 15; Sp. p. 2872; Dr. p. 614; Gaz. vol. 136; p. 523.
Macdonald, A., Danville, Ill. Window-catch. No. 898,491; Sept. 15; Sp. p. 2524; Dr. p. 540; Gaz. vol. 136; p. 467.
Macdonald, G. C., Cambridge, Mass. Cracker-box. No. 898,241; Sept. 8; Sp. p. 2053; Dr. p. 436; Gaz. vol. 136; p. 354.
Macherski, T., and E. Koperski, Brest-Litovsk, Russia. Composition for decoloring oils, fats, &c., and making the same. No. 899,879; Sept. 29; Sp. p. 5251; Gaz. vol. 136; p. 931.
Mack, G. E., assignor to Farrand Organ Company, Detroit, Mich. Music-winding roll for perforated music-sheets. No. 897,383; Sept. 1; Sp. p. 294; Dr. p. 60; Gaz. vol. 136; p. 45.
Mackey, H. H., Durand, Mich. Adjustable exhaust for locomotives. No. 898,242; Sept. 8; Sp. p. 2054; Dr. p. 436; Gaz. vol. 136; p. 354.

Macpherson, J. D., assignor to American Diesel Engine Company, New York, N. Y. Fuel-pump for internal-combustion engines. No. 898,124; Sept. 8; Sp. p. 1819; Dr. p. 386; Gaz. vol. 136; p. 317.
Madden, H. E., Hebron, Ohio. Vegetable slicing or cutting machine. No. 897,637; Sept. 1; Sp. p. 804; Dr. p. 169; Gaz. vol. 136; p. 128.
Madden, P. J., Chicago, Ill. Plumbing-fixture. No. 897,914; Sept. 8; Sp. p. 1386; Dr. pp. 296-7; Gaz. vol. 136; p. 251.
Maddox, C. E. (See Singleton and Maddox.)
Magnett, A., and J. M. Clementson, Westfield, Iowa. Rim-compressor. No. 898,585; Sept. 15; Sp. p. 2708; Dr. p. 579; Gaz. vol. 136; p. 497.
Maguire, F. R., assignor of one-half to C. P. Geary, New Florence, Pa. Cue-chalking device. No. 898,905; Sept. 15; Sp. p. 3304; Dr. p. 708; Gaz. vol. 136; p. 601.
Maher, M. M., East Liverpool, Ohio, assignor of one-half to C. A. Smith, Chester, W. Va. Compound double-acting explosive-engine. No. 898,243; Sept. 8; Sp. p. 2055; Dr. p. 437; Gaz. vol. 136; p. 355.
Mahoney, D. J., Witoka, Minn. Gage for seed-planters and clamping means therefor. No. 897,839; Sept. 1; Sp. p. 1218; Dr. p. 260; Gaz. vol. 136; p. 193.
Main Automatic Mailing Machine Company. (See Simpson, R. D., assignor.)
Maitland, J., *et al.* (See Meres, C. R., assignor.)
Maize, H. G., Philadelphia, Pa. Dental casting-machine. No. 899,255; Sept. 22; Sp. p. 4006; Dr. p. 855; Gaz. vol. 136; p. 743.
Majette, M., Columbia, N. C. Log-car standard. No. 898,244; Sept. 8; Sp. p. 2058; Dr. p. 437; Gaz. vol. 136; p. 355.
Mallens, J. B., Jr. (See Lilleberg, C. L., assignor.)
Maloney, M. H., Chelsea, Mass. Spinning-ring. No. 897,384; Sept. 1; Sp. p. 295; Dr. p. 60; Gaz. vol. 136; p. 45.
Malloye, F., San Francisco, Cal. Combination fresh and salt water hydrant. No. 897,755; Sept. 1; Sp. p. 1033; Dr. p. 220; Gaz. vol. 136; p. 167.
Malsin, A., New York, N. Y. Amusement apparatus. No. 898,056; Sept. 8; Sp. p. 1693; Dr. p. 359; Gaz. vol. 136; p. 296.
Maltby, C. C., assignor to Twinlock Company, Cincinnati, Ohio. Temporary binder. No. 898,245; Sept. 8; Sp. p. 2060; Dr. p. 438; Gaz. vol. 136; p. 355.
Manheimer, S., *et al.* (See Kasse, A., assignor.)
Manley, R. H., Stockton, Cal. Concentrator. No. 899,312; Sept. 22; Sp. p. 4100; Dr. p. 876; Gaz. vol. 136; p. 760.
Manneschmidt, J., Jr., Brooklyn, N. Y. Blow-off device for domestic boilers No 899,830; Sept. 29; Sp. p. 5143; Dr. p. 1100; Gaz. vol. 136; p. 965.
Manor, L. (See Fiers and Manor.)
Marbie, A. D., *et al.* (See Le Compte, J., assignor.)
Marble, W. P., Cambridge, Mass. Valve-handle. No. 899,117; Sept. 22; Sp. p. 3693; Dr. p. 792; Gaz. vol. 136; p. 697.
Marble, W. P., Cambridge, Mass. Valve-handle. No. 899,118; Sept. 22; Sp. p. 3695; Dr. p. 792; Gaz. vol. 136; p. 698.
Marcuse, I. J., Richmond, Va., assignor to American Can Company, New York, N. Y. Sheet-metal pocket-box. No. 898,125; Sept. 8; Sp. p. 1822; Dr. p. 387; Gaz. vol. 136; p. 318.
Mark, J. S., Adel, Iowa. Band, band-fastener, and seal combined. No. 899,997; Sept. 29; Sp. p. 5504; Dr. p. 1173; Gaz. vol. 136; p. 1018
Markel, C., Clinton, Iowa. Pedestal for car-trucks. No. 898,906; Sept. 15; Sp. p. 3306; Dr. p. 709; Gaz. vol. 136; p. 601.
Marks, V., Campbellford, Ontario, Canada. Holder for pillow-shams. No. 898,126; Sept. 8; Sp. p. 1823; Dr. p. 387; Gaz. vol. 136; p. 318.
Markussen, H., assignor of one-half to P. Ratti, Flemington, N. J. Rail-joint. No. 898,412; Sept. 8; Sp. p. 2361; Dr. p. 504; Gaz. vol. 136; p. 409.
Marmetschke, E., assignor to H. Brüning, Schöpfurth, near Eberswalde, Germany. Impregnating timber and the like. No. 898,246; Sept. 8; Sp. p. 2061; Gaz. vol. 136; p. 356.
Marrero, A., and F. Helwig, New Orleans, La. Adjustable table. No. 899,548; Sept. 29; Sp. p. 4557; Dr. p. 980; Gaz. vol. 136; p. 873.
Marsh, N. E., Des Moines, Iowa. Concrete-mixer. No. 899,549; Sept. 29; Sp. p. 4559; Dr. p. 980; Gaz. vol. 136; p. 873.
Marshall, I. W., Yorklyn, Del. Soaking sheet fiber. No. 897,759; Sept. 1; Sp. p. 1041; Dr. p. 224; Gaz. vol. 136; p. 169.
Marshall, I. W., assignor of one-half to T. E. Marshall, Yorklyn, Del. Flexibly-intermittent chain-drive. No. 897,756; Sept. 1; Sp. p. 1034; Dr. pp. 220-1; Gaz. vol. 136; p. 168.
Marshall, I. W., assignor of one-half to T. E. Marshall, Yorklyn, Del. Sheet-combining machine. No. 897,757; Sept. 1; Sp. p. 1036; Dr. p. 221; Gaz. vol. 136; p. 168.
Marshall, I. W., assignor of one-half to T. E. Marshall, Yorklyn, Del. Manufacturing indurated fiber. No. 897,758; Sept. 1; Sp. p. 1038; Dr. pp. 222-3; Gaz. vol. 136; p. 168.
Marshall, T. E. (See Marshall, I. W., assignor.)
Martell, H. C., Flint, Mich., assignor to Cleveland Hardware Company, Cleveland, Ohio. Vehicle-seat. No. 899,748; Sept. 29; Sp. p. 4968; Dr. p. 1065; Gaz. vol. 136; p. 938.
Martelock, C., Oroville, Cal. Attachment for talking-machines. No. 899,880; Sept. 29; Sp. p. 5252; Dr. p. 1123; Gaz. vol. 136; p. 931.
Martin, A. S., *et al.* (See McClintock, E. H., assignor.)
Martin, E. B., *et al.* (See McClintock, E. H., assignor.)
Martin, J., Irvington, N. Y. Plant-shield. No. 897,760; Sept. 1; Sp. p. 1043; Dr. p. 224; Gaz. vol. 136; p. 169.
Martin, M., administratrix. (See Martin, T. A.)
Martin, T. A., deceased, Covington, Ky., (M. Martin, administratrix,) assignor of one-half to F. J. Warner, Memphis, Tenn. Toy. No. 897,638; Sept. 1; Sp. p. 806; Dr. p. 169; Gaz. vol. 136; p. 128.
Martin, W. B. (See Humphrey and Martin.)
Martin, W. E., W. L. Grant, R. J. McGavock, R. E. Haynes, and J. C. Voorhies, Columbia, Tenn. Delivering and catching device. No. 898,380; Sept. 8; Sp. p. 2294; Dr. p. 488; Gaz. vol. 136; p. 398.
Martocci, P., New York, N. Y. Mail and package collector. No. 899,881; Sept. 29; Sp. p. 5254; Dr. pp. 1123-4; Gaz. vol. 136; p. 931.
Márton, V., Cleveland, Ohio. Automatic car-coupling. No. 899,604; Sept. 29; Sp. p. 4671; Dr. p. 1002; Gaz. vol. 136; p. 892.
Marx, J., Buffalo, N. Y. Jar for storage batteries. No. 897,472; Sept. 1; Sp. p. 475; Dr. p. 101; Gaz. vol. 136; p. 75.
Mason, J., Sebastopol, Cal. Gate-latch. No. 898,247; Sept. 8; Sp. p. 2062; Dr. p. 438; Gaz. vol. 136; p. 356.
Mastele, K., Pittsburg, Pa. Belt and belt-fastener. No. 899,831; Sept. 29; Sp. p. 5145; Dr. p. 1101; Gaz. vol. 136; p. 966.
Mastick, E. A., Jr., Cleveland, Ohio. Advertising device. No. 898,757; Sept. 15; Sp. p. 3036; Dr. p. 651; Gaz. vol. 136; p. 552.
Mathers, W. H. (See Nelson and Mathers.)
Matheson, P. M., San Juan, Porto Rico. Card-holder. No. 898,758; Sept. 15; Sp. p. 3037; Dr. p. 651; Gaz. vol. 136; p. 552.
Mathison, A., Rockford, S. D. Sparkless smoke-stack for traction-engines. No. 897,385; Sept. 1; Sp. p. 297; Dr. p. 61; Gaz. vol. 136; p. 45.
Matthews, C., Mattoon, Ill. Perch-support. No. 898,586; Sept. 15; Sp. p. 2710; Dr. p. 579; Gaz. vol. 136; p. 497.
Matthews, F. C. (See Wehrlen and Matthews.)
Matthews, G. (See Collison and Matthews.)
Matthews, J. L., Baltimore, Md. Smoke-cleaning device. No. 899,882; Sept. 29; Sp. p. 5256; Dr. p. 1124; Gaz. vol. 136; p. 982.
Matthews, J. T., *et al.* (See Benford, R. B., assignor.)
Matthews, L., Paris, Tenn. Splash-pan for bathing-tubs. No. 897,639; Sept. 1; Sp. p. 807; Dr. p. 170; Gaz. vol. 136; p. 128.
Matthias, M. C., Van Wert, Ohio. Game-board. No. 898,587; Sept. 15; Sp. p. 2710; Dr. p. 579; Gaz. vol. 136; p. 498.
Mattison, R. V., Upper Dublin, assignor to Keasbey & Mattison Company, Ambler, Pa. Artificial flooring. No. 898,381; Sept. 8; Sp. p. 2295; Dr. p. 488; Gaz. vol. 136; p. 399.
Mattson, J., Dresser Junction, Wis. Butter-packing machine. No. 899,119; Sept. 22; Sp. p. 3696; Dr. pp. 792-3; Gaz. vol. 136; p. 698.
Maurer, H. W., assignor to Taylor Instrument Companies, Rochester, N. Y. Device for attaching thermometers to tanks, vats, or the like. No. 899,313; Sept. 22; Sp. p. 4103; Dr. p. 877; Gaz. vol. 136; p. 761.
Maxwell, J. G., Washington, Pa. Steering mechanism. No. 898,249; Sept. 8; Sp. p. 2065; Dr. p. 438; Gaz. vol. 136; p. 356.
May, D., Philadelphia, Pa. Bulkhead-door. No. 898,666; Sept. 15; Sp. p. 2873; Dr. p. 614; Gaz. vol. 136; p. 523.
May, E., Shryock, W. Va. Rail-joint. No. 899,883; Sept. 29; Sp. p. 5258; Dr. p. 1124; Gaz. vol. 136; p. 982.
Mayer, T. A., Washington, D. C. Safety apparatus for cars. No. 899,228; Sept. 22; Sp. p. 3918; Dr. p. 837; Gaz. vol. 136; p. 733.
Mayer, W. H., and I. O. Burch, Kansas, Ill. Rail-tie. No. 898,982; Sept. 15; Sp. p. 3440; Dr. p. 738; Gaz. vol. 136; p. 626.
Mayhorn, H. D., Coal Center, Pa. Curtain-pole. No. 898,248; Sept. 8; Sp. p. 2064; Dr. p. 438; Gaz. vol. 136; p. 356.
Mayo, R. D., Toledo, Ohio. Life-boat. No. 899,672; Sept. 29; Sp. p. 4811; Dr. p. 1030; Gaz. vol. 136; p. 912.
Mays, J. F., Birmingham, Ala. Listing-machine. No. 899,229; Sept. 22; Sp. p. 3920; Dr. pp. 837-8; Gaz. vol. 136; p. 734.
Mazlin, J., Herberton, Queensland, Australia. Pick-head usable with removable points. No. 899,455; Sept. 22; Sp. p. 4344; Dr. p. 932; Gaz. vol. 136; p. 805.
McArthur, C. J., Newark, N. J. Side guide for printing-presses. No. 899,834; Sept. 29; Sp. p. 5148; Dr. p. 1102; Gaz. vol. 136; p. 966.
McArthur, M. J., Cleveland, Ohio. Fire-escape ladder. No. 899,552; Sept. 29; Sp. p. 4566; Dr. p. 981; Gaz. vol. 136; p. 874.
McBride, C. C. (See Hornbeck, H. S., assignor.)
McCaleb, J. L., Carrizo Springs, Tex. Shutter attachment. No. 899,889; Sept. 29; Sp. p. 5268; Dr. p. 1127; Gaz. vol. 136; p. 984.
McCall, W. W., Kansas City, Mo. Piano-flange. No. 899,064; Sept. 22; Sp. p. 3592; Dr. p. 769; Gaz. vol. 136; p. 679.
McCambridge, A., Williamstown, N. J. Bottle-neck and closure therefor. No. 898,769; Sept. 15; Sp. p. 3063; Dr. p. 656; Gaz. vol. 136; p. 556.
McCarter, L. N., Norristown, Pa., assignor to International Pavement Company, Hartford, Conn. Drying and heating apparatus for stone. No. 900,032; Sept. 29; Sp. p. 5586; Dr. p. 1194; Gaz. vol. 136; p. 1031.
McCarthy, J. V., Waverley, and A. MacLeod, Watertown, Mass. Vending-machine. No. 897,999; Sept. 8; Sp. p. 1553; Dr. p. 330; Gaz. vol. 136; p. 275.

McCarty, E. W. (See Flynn, M. J., assignor.)
McCarty, W. F. M., Pleasantville, assignor of one-half to G. O. Eaton and T. M. Acken and one-thirtieth to A. J. Guttman, New York, N. Y. Producing ingots free from blow-holes. No. 898,770; Sept. 15; Sp. p. 3064; Dr. pp. 656-7; Gaz. vol. 136; p. 557.
McCauley, F. L., *et al.* (See Elkins and Hunter, assignors.) (Reissue.)
McClafferty, H. (See O'Donnell and McClafferty.)
McClain, E., Paris, Tex. Voting-machine. No. 898,910; Sept. 15; Sp. p. 3314; Dr. pp. 710-11; Gaz. vol. 136; p. 602.
McCleary, J. (See Craddock and McCleary.)
McClellan, J. E., Los Angeles, Cal. Chase. No. 898,591; Sept. 15; Sp. p. 2715; Dr. p. 581; Gaz. vol. 136; p. 499.
McClintock, E. H., West Somerville, assignor of three-fourths to E. B. Martin, J. D. Crosby, C. S. Day, and A. S. Martin, Boston, Mass. Cementitious building-block. No. 897,552; Sept. 1; Sp. p. 641; Dr. p. 133; Gaz. vol. 136; p. 100.
McCloud, E. H., Columbus, Ohio. Flexible fire-resisting shutter and slat therefor. No. 897,990; Sept. 8; Sp. p. 1557; Dr. p. 330; Gaz. vol. 136; p. 276.
McCloud, E. H., Columbus, Ohio. Fire-resisting curtain. No. 899,460; Sept. 22; Sp. p. 4354; Dr. pp. 934-5; Gaz. vol. 136; p. 806.
McClure, W. C., *et al.* (See Bogle, W. L., assignor.)
McCollough, W. A., Marshalltown, Iowa. Rack for feeding-troughs. No. 899,125; Sept. 22; Sp. p. 3713; Dr. p. 796; Gaz. vol. 136; p. 700.
McCombe, A. C., *et al.* (See McCombe, R. H., assignor.)
McCombe, R. H., Waverly, Md., assignor of three-fourths to A. Knert, Philadelphia, Pa., and A. E. McCombe, Waverly, Md. Extensible post or prop. No. 897,843; Sept. 1; Sp. p. 1224; Dr. p. 261; Gaz. vol. 136; p. 194.
McCormick, F. L. (See De Kleist and McCormick.)
McCoy, W. C., assignor of one-half to L. P. Kern, Great Bend, Kans. Spoke-puller. No. 897,991; Sept. 8; Sp. p. 1558; Dr. p. 331; Gaz. vol. 136; p. 276.
McCullock, W. F., Washington, D. C. Jack. No. 897,644; Sept. 1; Sp. p. 814; Dr. p. 171; Gaz. vol. 136; p. 130.
McCullough, P. E., assignor to Draper Company, Hopedale, Mass. Bobbin-driving means for rotatable spindles. No. 899,179; Sept. 22; Sp. p. 3833; Dr. p. 820; Gaz. vol. 136; p. 718.
McDonald, J. T., Little Rock, Ark. Cotton-picker. No. 899,835; Sept. 29; Sp. p. 5150; Dr. pp. 1102-3; Gaz. vol. 136; p. 966.
McDougall, J., Greenwich Park, England. Making tartaric acid. No. 898,253; Sept. 8; Sp. p. 2070; Gaz. vol. 136; p. 357.
McEachron, G., Forsyth, Mich. Animal-trap. No. 897,301; Sept. 1; Sp. p. 60; Dr. p. 15; Gaz. vol. 136; p. 13.
McFadden, B. B., Binghamton, N. Y. Folding file. No. 898,498; Sept. 15; Sp. p. 2535; Dr. pp. 543-4; Gaz. vol. 136; p. 469.
McFarlane, M. D., Aspen, Colo. Irrigating device. No. 898,964; Sept. 15; Sp. p. 3442; Dr. p. 738; Gaz. vol. 136; p. 626.
McGahey, C. R., assignor to Lynchburg Foundry Company, Lynchburg, Va. Plow-moldboard. No. 899,755; Sept. 29; Sp. p. 4980; Dr. p. 1067; Gaz. vol. 136; p. 940.
McGavock, R. J. (See Martin, Grant, McGavock, Haynes, and Voorhies.)
McGiffert, J. R., assignor to Clyde Iron Works, Duluth, Minn. Log-loading machine. No. 899,180; Sept. 22; Sp. p. 3834; Dr. pp. 820-1; Gaz. vol. 136; p. 718.
McGill, J., Terre Haute, Ind. Bottle. No. 899,493; Sept. 22; Sp. p. 4419; Dr. p. 948; Gaz. vol. 136; p. 818.
McGowan, H. E., and E. R. Ellsworth, New York, N. Y. Combination electric-service cut-out and meter-panel. No. 898,771; Sept. 15; Sp. p. 3067; Dr. p. 657; Gaz. vol. 136; p. 557.
McGrath, W. J., and M. H. Scheift, Cleveland, Ohio. Means for operating car-deck windows. No. 897,386; Sept. 1; Sp. p. 298; Dr. p. 61; Gaz. vol. 136; p. 45.
McGuire-Cummings Manufacturing Company. (See Cooke, W. J., assignor.)
McIntosh, W., Plainfield, N. J., assignor to Transom Draft Gear Company, St. Louis, Mo. Draft-gear for railway-cars. No. 898,772; Sept. 15; Sp. p. 3070; Dr. p. 657; Gaz. vol. 136; p. 557.
McIntyre, F. P., Philadelphia, Pa. Cushion for boots and shoes. No. 897,920; Sept. 8; Sp. p. 1402; Dr. p. 299; Gaz. vol. 136; p. 253.
McIntyre, J. D., Newman, Ill. Electric gas-lighter. No. 899,181; Sept. 22; Sp. p. 3837; Dr. p. 821; Gaz. vol. 136; p. 719.
McIntyre, J. D., Newman, Ill. Turbine. No. 897,992; Sept. 8; Sp. p. 1559; Dr. p. 331; Gaz. vol. 136; p. 276.
McKee, R. A., assignor to Allis-Chalmers Company, Milwaukee, Wis. Blade-fastening. No. 899,607; Sept. 29; Sp. p. 4676; Dr. p. 1003; Gaz. vol. 136; p. 893.
McKenzie, A. R., Great Falls, Mont. Smelting. No. 897,993; Sept. 8; Sp. p. 1560; Dr. p. 332; Gaz. vol. 136; p. 277.
McKenzie, J. S., Atlanta, Ga. Dust and cinder shield and guard for car-windows. No. 897,994; Sept. 8; Sp. p. 1561; Dr. p. 332; Gaz. vol. 136; p. 277.
McKinney, L. P., assignor of one-half to J. L. Snow, Boston, Mass. Spare-tire holder. No. 899,126; Sept. 22; Sp. p. 3714; Dr. p. 796; Gaz. vol. 136; p. 700.
McKown, T. D., Pittsburg, Ga. Shaving-mug. No. 898,773; Sept. 15; Sp. p. 3071; Dr. p. 657; Gaz. vol. 136; p. 558.
McLean, A. B., Mansfield, Ohio. Clip. No. 897,645; Sept. 1; Sp. p. 815; Dr. p. 171; Gaz. vol. 136; p. 130.
McLean, R. K., and W. K. Gibson, Belfast, Ireland. Safety-reflector for vehicles. No. 899,698; Sept. 29; Sp. p. 4853; Dr. p. 1040; Gaz. vol. 136; p. 920.
McMullen, G. W., Chicago, Ill. Sugar-reducing product. No. 898,592; Sept. 15; Sp. p. 2716; Gaz. vol. 136; p. 499.
McMullen, L., Altoona, Pa. Knockdown box or crate. No. 898,062; Sept. 8; Sp. p. 1707; Dr. pp. 361-2; Gaz. vol. 136; p. 298.
McMunn, G. W., and A. C. Howell, Pittsburg, Pa. Air-brake. No. 899,318; Sept. 22; Sp. p. 4110; Dr. p. 879; Gaz. vol. 136; p. 762.
McNair, W. A. (See Edson, J. M., assignor.)
McNamara, M. H., Baltimore, Md. Cane-stool. No. 899,553; Sept. 29; Sp. p. 4567; Dr. p. 981; Gaz. vol. 136; p. 875.
McNamee, J., Amsterdam, N. Y. Knit fabric. No. 898,985; Sept. 15; Sp. p. 3443; Dr. p. 739; Gaz. vol. 136; p. 626.
McNaull, W. D., Toledo, Ohio. Wheel for vehicles. No. 899,699; Sept. 29; Sp. p. 4854; Dr. p. 1040; Gaz. vol. 136; p. 920.
McNeal, L. C., assignor of one-fourth to H. L. Osgood and C. S. Davis, Rochester, N. Y. Temporary binder for loose sheets. No. 898,385; Sept. 8; Sp. p. 2301; Dr. p. 489; Gaz. vol. 136; p. 400.
McNeil, J., assignor to John Douglas Company, Cincinnati, Ohio. Paper-roll holder. No. 899,461; Sept. 22; Sp. p. 4356; Dr. p. 935; Gaz. vol. 136; p. 807.
McQuilkin, J. E., Westmoreland county, Pa. Resilient wheel. No. 899,425; Sept. 22; Sp. p. 4293; Dr. p. 921; Gaz. vol. 136; p. 796.
McVoy, C. L., Pensacola, Fla. Rail-joint. No. 897,921; Sept. 8; Sp. p. 1404; Dr. p. 299; Gaz. vol. 136; p. 253.
McVoy, C. L., Pensacola, Fla. Device for preventing spreading of rails. No. 899,426; Sept. 22; Sp. p. 4294; Dr. p. 922; Gaz. vol. 136; p. 796.
Mead, G. A., Mansfield, Ohio. Rail-bond. No. 899,120; Sept. 22; Sp. p. 3702; Dr. pp. 793-4; Gaz. vol. 136; p. 698.
Mears, B. B., Baltimore, Md. Fire-alarm. No. 899,749; Sept. 29; Sp. p. 4969; Dr. p. 1065; Gaz. vol. 136; p. 938.
Medler, E. L., Albuquerque, N. Mex. Ter. Keyhole-guard and key-lock. No. 897,473; Sept. 1; Sp. p. 475; Dr. p. 101; Gaz. vol. 136; p. 76.
Medusa Concrete Waterproofing Company. (See Barrett, H. N., assignor.)
Meigs, J. F., and E. Gathmann, assignors to Bethlehem Steel Company, South Bethlehem, Pa. Explosive projectile. (Reissue.) No. 12,849; Sept. 8; Sp. p. 2374; Dr. p. 507; Gaz. vol. 136; p. 412.
Meinhardt, C., Washington, D. C. Buckle. No. 899,121; Sept. 22; Sp. p. 3704; Dr. p. 794; Gaz. vol. 136; p. 699.
Meis, A., assignor to Columbian Cutlery Company, Reading, Pa. Manufacture of scythes. No. 897,298; Sept. 1; Sp. p. 55; Dr. p. 14; Gaz. vol. 136; p. 13.
Meissner, J. H., Pittsburg, Pa. Superheater. No. 899,060; Sept. 22; Sp. p. 3586; Dr. p. 768; Gaz. vol. 136; p. 677.
Meixell, J. W., Lewisburg, Pa. Wheel. No. 898,057; Sept. 8; Sp. p. 1696; Dr. p. 360; Gaz. vol. 136; p. 297.
Mekeel, D. L., Sewickley, Pa. Ingot-manipulator. No. 899,832; Sept. 29; Sp. p. 5145; Dr. p. 1101; Gaz. vol. 136; p. 966.
Melavin, J. H., Cambridge, Mass. Hose-nozzle. No. 898,759; Sept. 15; Sp. p. 3038; Dr. p. 652; Gaz. vol. 136; p. 552.
Melick, J. C., Canajoharie, N. Y. Webbing-attacher. No. 898,983; Sept. 15; Sp. p. 3441; Dr. p. 738; Gaz. vol. 136; p. 626.
Mell, T. J., assignor to Republic Rubber Company, Youngstown, Ohio. Tire for vehicle-wheels. No. 898,907; Sept. 15; Sp. p. 3308; Dr. p. 709; Gaz. vol. 136; p. 601.
Melton, J. I., Cincinnati, Ohio. Combination-tool. No. 898,667; Sept. 15; Sp. p. 2874; Dr. p. 615; Gaz. vol. 136; p. 524.
Mentzel, H. F., Tarentum, and J. H. Moser, Parnassus, Pa. Sanding device. No. 897,985; Sept. 8; Sp. p. 1546; Dr. p. 328; Gaz. vol. 136; p. 274.
Mentzer, C. E., assignor of two-thirds to L. A. Freeman and G. L. Bettcher, Denver, Colo. Indicating fuse plug and holder. No. 897,474; Sept. 1; Sp. p. 477; Dr. p. 102; Gaz. vol. 136; p. 76.
Menz, A., Newport News, Va. Animal-trap. No. 897,761; Sept. 1; Sp. p. 1044; Dr. pp. 224-5; Gaz. vol. 136; p. 169.
Mercer, A., assignor of one-half to H. E. Page and W. R. Butcher, Norfolk, Va. Lock. No. 898,767; Sept. 15; Sp. p. 3059; Dr. p. 656; Gaz. vol. 136; p. 555.
Merchen, C. E., Bloomfield, Nebr. Fence-machine. No. 899,419; Sept. 22; Sp. p. 4278; Dr. p. 918; Gaz. vol. 136; p. 794.
Meres, C. R., assignor to J. Maitland and J. F. Williams, Lorain, Ohio. Boiler. No. 899,314; Sept. 22; Sp. p. 4104; Dr. p. 877; Gaz. vol. 136; p. 761.
Merralls, W. A., San Francisco, Cal. Vise. No. 898,413; Sept. 8; Sp. p. 2362; Dr. pp. 504-5; Gaz. vol. 136; p. 409.
Merralls, W. A., San Francisco, Cal. Stamp-mill. No. 898,414; Sept. 8; Sp. p. 2364; Dr. p. 505; Gaz. vol. 136; p. 410.
Merralls, W. A., San Francisco, Cal. Metallurgical apparatus. No. 898,415; Sept. 8; Sp. p. 2365; Dr. p. 505; Gaz. vol. 136; p. 410.
Merrell, A. (See Merrell, E. M. and A.)
Merrell, E. M. and A., Soda Springs, Idaho. Soldering compound. No. 899,673; Sept. 29; Sp. p. 4815; Gaz. vol. 136; p. 913.
Merrill, J. C., San Martin, Cal. Box-fastener. No. 897,986; Sept. 8; Sp. p. 1547; Dr. p. 329; Gaz. vol. 136; p. 274.
Merrill, W. L., Schenectady, N. Y., assignor to General Electric Company. Means for regulating dynamo-electric machines. No. 898,068; Sept. 8; Sp. p. 1698; Dr. p. 360; Gaz. vol. 136; p. 297.

Merriman, R. M., Youngstown, Ohio. Vehicle-tire. No. 899,061; Sept. 22; Sp. p. 3588; Dr. p. 769; Gaz. vol. 136; p. 678.
Mertens, L., London, England. Means for preventing distortion of cartridge-shells. No. 898,908; Sept. 15; Sp. p. 3310; Dr. p. 709; Gaz. vol. 136; p. 602.
Merwin, F. N., Kansas City, Mo. Photomicrographical apparatus. No. 899,793; Sept. 29; Sp. p. 5079; Dr. p. 1087; Gaz. vol. 136; p. 954.
Merz, R. G., Newark, N. J., assignor to American Process Company, New York, N. Y. Continuous-screw press. No. 898,760; Sept. 15; Sp. p. 3039; Dr. pp. 652–3; Gaz. vol. 136; p. 553.
Meservie, W. R. (See Clark, W. S., assignor.)
Metallic Sheathing Company. (See Berg, L. J., assignor.)
Metzler, C., Fresno, Cal. Passenger-recorder. No. 897,762; Sept. 1; Sp. p. 1045; Dr. p. 225; Gaz. vol. 136; p. 169.
Meyer, E., and E. C. Schiffers, San Antonio, Tex. Axle-lubricator. No. 897,915; Sept. 8; Sp. p. 1392; Dr. p. 297; Gaz. vol. 136; p. 251.
Meyer, H., New York, N. Y. Pneumatic action. No. 898,761; Sept. 15; Sp. p. 3043; Dr. p. 653; Gaz. vol. 136; p. 553.
Meyer, H., New York, N. Y. Speed-controlling device for note-sheets. No. 898,762; Sept. 15; Sp. p. 3045; Dr. p. 653; Gaz. vol. 136; p. 553.
Meyer, J., Berlin, Germany. Preparing substitutes for shellac. No. 898,382; Sept. 8; Sp. p. 2296; Gaz. vol. 136; p. 399.
Meyer, J., Cologne, Germany. Float-controlled device for measuring vessels, &c. No. 899,884; Sept. 29; Sp. p. 5259; Dr. p. 1125; Gaz. vol. 136; p. 982.
Meyer, J. A. (See Romsos, O. T., assignor.)
Meyer, J. F., Jr., and K. Wimmer, Bremen, Germany. Tea product and making same. No. 897,764; Sept. 1; Sp. p. 1048; Gaz. vol. 136; p. 170.
Meyer, J. F., Jr., L. Roselius, and K. H. Wimmer, assignors to Kaffee-Handels-Aktiengesellschaft, Bremen, Germany. Preparation of coffee. No. 897,840; Sept. 1; Sp. p. 1219; Gaz. vol. 136; p. 193.
Meyer, J. F., Jr., L. Roselius, and K. Wimmer, Bremen, Germany. Treatment of coffee. No. 897,763; Sept. 1; Sp. p. 1047; Gaz. vol. 136; p. 170.
Meyer, W., Chicago, Ill. Speculum. No. 899,175; Sept. 22; Sp. p. 3825; Dr. p. 819; Gaz. vol. 136; p. 717.
Meyer, W. G., Loganville, Wis. Vehicle-axle. No. 898,588; Sept. 15; Sp. p. 2711; Dr. pp. 579–80; Gaz. vol. 136; p. 498.
Meyers, J. J. (See Thomas and Meyers.)
Meyers, J. T., Delphos, Ohio. Back-rest for turning-lathes. No. 898,589; Sept. 15; Sp. p. 2712; Dr. p. 580; Gaz. vol. 136; p. 498.
Meyrowitz, E. B. (See Hirsch, I. S., assignor.)
Mezger, E. J., Yolo, Cal. Measuring device. No. 897,987; Sept. 8; Sp. p. 1549; Dr. p. 329; Gaz. vol. 136; p. 274.
Michael, J., Pottsville, Pa. Cloth attachment for ironing-boards. No. 899,675; Sept. 29; Sp. p. 4818; Dr. p. 1031; Gaz. vol. 136; p. 913.
Michaud, J. O., Fort Kent, Me. Power-transmission mechanism. No. 899,420; Sept. 22; Sp. p. 4279; Dr. p. 919; Gaz. vol. 136; p. 794.
Michigan Lubricator Co. (See Davidson, R., assignor.)
Middleton, B. W., Union City, Pa. Knockdown chair. No. 898,668; Sept. 15; Sp. p. 2875; Dr. p. 615; Gaz. vol. 136; p. 524.
Middleton, M. S. (See Stanley, I., assignor.)
Migrath, J. W., Chicago, Ill. Clamp-fan attachment for machinery. No. 898,492; Sept. 15; Sp. p. 2525; Dr. p. 540; Gaz. vol. 136; p. 467.
Mileh, M., Schenectady, N. Y., assignor to General Electric Company. Alternating-current motor. No. 897,475; Sept. 1; Sp. p. 479; Dr. p. 102; Gaz. vol. 136; p. 76.
Millen, R. H., Clay Center, Kans. Mail-sack catcher. No. 899,456; Sept. 22; Sp. p. 4345; Dr. p. 933; Gaz. vol. 136; p. 805.
Miller, A. J., Manawa, Wis. Hay and cattle rack. No. 899,315; Sept. 22; Sp. p. 4105; Dr. p. 877; Gaz. vol. 136; p. 761.
Miller, A. L. J., Newburgh, N. Y. Wicket fence or guard. No. 899,605; Sept. 29; Sp. p. 4673; Dr. p. 1002; Gaz. vol. 136; p. 892.
Miller, C. H., Cleveland, Ohio. Combined coal and gas range. No. 899,885; Sept. 29; Sp. p. 5260; Dr. p. 1125; Gaz. vol. 136; p. 983.
Miller, G. O., North Tonawanda, N. Y. Adjustable stand. No. 898,059; Sept. 8; Sp. p. 1700; Dr. p. 360; Gaz. vol. 136; p. 297.
Miller, L., Elwood, Ind. Stove. No. 899,122; Sept. 22; Sp. p. 3705; Dr. p. 794; Gaz. vol. 136; p. 699.
Miller, L. A., assignor of one-half to F. C. Inbusch, Milwaukee, Wis. Railway-tie. No. 898,590; Sept. 15; Sp. p. 2714; Dr. p. 581; Gaz. vol. 136; p. 498.
Miller, L. G., New York, N. Y. Window-lock. No. 898,763; Sept. 15; Sp. p. 3047; Dr. p. 653; Gaz. vol. 136; p. 554.
Miller Lock Company. (See Soley, F., assignor.)
Miller Pasteurizing Machine Company. (See Pfouts, L. S., assignor.) (Reissue.)
Miller, S. F., Chicago, Ill. Apparatus for discharging the contents of septic or settling tanks. No. 899,750; Sept. 29; Sp. p. 4971; Dr. p. 1066; Gaz. vol. 136; p. 938.
Miller, S. W. (See Cox, J. W., assignor.)
Miller, W. H., Cleveland, Ohio. Car-truck. No. 899,674; Sept. 29; Sp. p. 4816; Dr. pp. 1030–1; Gaz. vol. 136; p. 913.
Milliken, R. L., Stanford University, Cal. Clasp for overshoes. No. 897,476; Sept. 1; Sp. p. 483; Dr. p. 103; Gaz. vol. 136; p. 77.
Mills, C., Newton Upper Falls, Mass., assignor to W. C. Swift, Fitzwilliam, N. H. Grinding-machine. No. 899,421; Sept. 22; Sp. p. 4283; Dr. pp. 919–20; Gaz. vol. 136; p. 794.
Mills, F. B., Longbeach, Cal. Target-pigeon. No. 899,123; Sept. 22; Sp. p. 3706; Dr. p. 794; Gaz. vol. 136; p. 699.
Mills-Piddington Cab Signal Company. (See Davis, J. W., assignor.)
Mills Woven Cartridge Belt Company. (See Jennings, V. H., assignor.)
Milne, C. K., Hamilton, Ontario, Canada. Treating and preserving metal patterns from corrosion. No. 897,062; Sept. 22; Sp. p. 3589; Gaz. vol. 136; p. 678.
Minett, J., Springfield, Mass. Wrench. No. 879,640; Sept. 1; Sp. p. 808; Dr. p. 170; Gaz. vol. 136; p. 129.
Minor, A. J., Canton, S. D. Draft device for plows. No. 898,764; Sept. 15; Sp. p. 3048; Dr. p. 654; Gaz. vol. 136; p. 554.
Minter, H. L., London, England. Spanner or wrench. No. 899,833; Sept. 29; Sp. p. 5147; Dr. p. 1102; Gaz. vol. 136; p. 966.
Mitchell, A. W., assignor to New England Paper Box Machine Co., New Haven, Conn. Paper-box machine. No. 898,250; Sept. 8; Sp. p. 2066; Dr. p. 439; Gaz. vol. 136; p. 357.
Mitchell, C., Jr., Milwaukee, Wis. Ignition-controlling apparatus. No. 899,751; Sept. 29; Sp. p. 4974; Dr. p. 1066; Gaz. vol. 136; p. 939.
Mitchell, T. J., Connellsville, Pa. Coke-oven. No. 899,886; Sept. 29; Sp. p. 5262; Dr. pp. 1125–6; Gaz. vol. 136; p. 983.
Mittendorf, W. R., Dayton, Ohio. Dispensing apparatus. No. 899,124; Sept. 22; Sp. p. 3708; Dr. p. 795; Gaz. vol. 136; p. 700.
Mobley, E. H., Hillside, Pa. Sound-box for talking-machines. No. 899,256; Sept. 22; Sp. p. 4006; Dr. p. 855; Gaz. vol. 136; p. 743.
Mognet, C. N., Trent, Pa. Gate. No. 898,060; Sept 8; Sp. p. 1702; Dr. pp. 360–1; Gaz. vol. 136; p. 297.
Mohme, G., and A. V. Hadlock, Chicago, Ill. Tire-tool. No. 897,841; Sept. 1; Sp. p. 1221; Dr. pp. 260–1; Gaz. vol. 136; p. 194.
Molloy, J. F., West Haven, Conn. Garment-supporter clasp. No. 897,299; Sept. 1; Sp. p. 57; Dr. p. 14; Gaz. vol. 136; p. 13.
Monarch Specialty Manufacturing Company. (See Lewis, L. C., assignor.)
Monitor Manufacturing Company of Baltimore City. (See O'Brien, W. C., assignor.)
Monnot, J. F., assignor to Duplex Metals Company, New York, N. Y. Making bimetallic ingots, plates, sheets, tubes, wires, and like products. No. 897,842; Sept. 1; Sp. p. 1222; Dr. p. 261; Gaz. vol. 136; p. 194.
Montgomery, H. M., Chicago, Ill. Rotary air-pump. No. 898,493; Sept. 15; Sp. p. 2526; Dr. p. 541; Gaz. vol. 136; p. 467.
Montgomery, S. D., *et al.* (See Silvey, G. F., assignor.)
Moody, J. N., South Boston, Va. Ventilating-canopy for beds. No. 899,257; Sept. 22; Sp. p. 4010; Dr. p. 856; Gaz. vol. 136; p. 744.
Mooers, L. P., Cleveland, Ohio. Carbureter. No. 898,494; Sept. 15; Sp. p. 2528; Dr. pp. 541–2; Gaz. vol. 136; p. 468.
Mooers, L. P., Cleveland, Ohio. Carbureter. No. 898,495; Sept. 15; Sp. p. 2531; Dr. p. 542; Gaz. vol. 136; p. 468.
Moore, A. R., Charlotte, Mich. Coin-separator. No. 899,550; Sept. 29; Sp. p. 4561; Dr. p. 980; Gaz. vol. 136; p. 873.
Moore, C. T., Colt, Ark. Railway cross-tie. No. 897,918; Sept. 8; Sp. p. 1399; Dr. p. 298; Gaz. vol. 136; p. 252.
Moore Carving Machine Co. (See Yarnell, C. S., assignor.)
Moore, G. T. (See Moore, J. T. and G. T.)
Moore, H. P., Newburyport, assignor to Chase Shawmut Company, Boston, Mass. Fuse-box. No. 898,061; Sept. 8; Sp. p. 1704; Dr. p. 361; Gaz. vol. 136; p. 598.
Moore, J. T. and G. T., Rahway, N. J. Bookmark. No. 898,669; Sept. 15; Sp. p. 2876; Dr. p. 615; Gaz. vol. 136; p. 524.
Moore, M., Melbourne, and T. J. Heskett, Brunswick, Victoria, Australia. Treating ferruginous ore for the manufacture of iron and steel therefrom. (Reissue.) No. 12,856; Sept. 22; Sp. p. 4425; Dr. p. 950; Gaz. vol. 136; p. 819.
Moore, M. R., Indianapolis, Ind. Turbine. No. 898,127; Sept. 8; Sp. p. 1825; Dr. pp. 387–8; Gaz. vol. 136; p. 318.
Moran, J. H., *et al.* (See Blom, C., assignor.)
Morehead, C., Rugby, England. Stove for drying molds. No. 899,752; Sept. 29; Sp. p. 4976; Dr. p. 1066; Gaz. vol. 136; p. 939.
Morehouse, E. W., assignor to B. A. Ballou & Company, Incorporated, Providence, R. I. Pin and pin-joint. No. 898,670; Sept. 15; Sp. p. 2877; Dr. p. 615; Gaz. vol. 136; p. 524.
Morey, W. W., Columbus, Ohio. Metal-covered door. No. 899,422; Sept. 22; Sp. p. 4286; Dr. p. 920; Gaz. vol. 136; p. 795.
Morgan Construction Company. (See Edwards, V. E., assignor.)
Morgan Engineering Company. (See Bright, A. W., assignor.)
Morgan Engineering Company. (See Taylor, C. L., assignor.)
Morgan, J., New Bedford, Mass. Bill or bag holder. No. 898,251; Sept. 8; Sp. p. 2068; Dr. p. 439; Gaz. vol. 136; p. 357.
Morgan, T., Pensacola, Fla. Fish-trap. No. 899,457; Sept. 22; Sp. p. 4347; Dr. p. 933; Gaz. vol. 136; p. 806.
Morin, G., Habana, Cuba. Multiple telegraphone system. No. 897,765; Sept. 1; Sp. p. 1049; Dr. pp. 225–7; Gaz. vol. 136; p. 170.
Morlock, M. C. (See Kaller, A. E., assignor.)
Morris, C. C., Philadelphia, Pa. Garment-supporter. No. 899,316; Sept. 22; Sp. p. 4106; Dr. p. 877; Gaz. vol. 136; p. 762.
Morris, C. E., assignor of one-half to T. D. Morrow, Lane, Kans. Vending-machine. No. 898,765; Sept. 15; Sp. p. 3049; Dr. pp. 654–5; Gaz. vol. 136; p. 554.

Morris, H. B., Grand Rapids, Mich. Weighing apparatus. No. 899,551; Sept. 29; Sp. p. 4563; Dr. p. 981; Gaz. vol. 136; p. 874.
Morrison, C. H., New Haven, Conn., assignor to Union Switch & Signal Company, Swissvale, Pa. Rail-lock for drawbridges. No. 898,252; Sept. 8; Sp. p. 2068; Dr. p. 440; Gaz. vol. 136; p. 357.
Morrow, T. M., and J. M. Foster, Wasco, Oreg. Winding-machine. No. 899,423; Sept. 22; Sp. p. 4288; Dr. pp. 920–1; Gaz. vol. 136; p. 795.
Morrow, T. D. (See Morris, C. E., assignor.)
Mortimer, J. N., assignor to Central Brass Manufacturing Company, Cleveland, Ohio. Stop and waste valve. No. 898,383; Sept. 8; Sp. p. 2298; Dr. p. 488; Gaz. vol. 136; p. 399.
Moser, J. H. (See Mentzel and Moser.)
Moses, C. L., Hilltop, W. Va. Metal-working tool. No. 897,641; Sept. 1; Sp. p. 810; Dr. p. 170; Gaz. vol. 136; p. 129.
Moss, C. E., Boston, Mass. Machine for washing sheet material. No. 899,424; Sept. 22; Sp. p. 4290; Dr. p. 921; Gaz. vol. 136; p. 795.
Mott, J. V., New York, N. Y. Electric switch and system of control. No. 898,766; Sept. 15; Sp. p. 3054; Dr. p. 655; Gaz. vol. 136; p. 555.
Mousseau, E., Green Bay, Wis. Kettle-tilter. No. 897,477; Sept. 1; Sp. p. 484; Dr. p. 103; Gaz. vol. 136; p. 77.
Mueller, O. H., Camberwell, England, assignor to H. R. Worthington. Counter-current condenser. No. 899,063; Sept. 22; Sp. p. 3590; Dr. p. 769; Gaz. vol. 136; p. 678.
Mueller, W. M., Los Angeles, Cal. Crushing-mill. No. 899,176; Sept. 22; Sp. p. 3828; Dr. p. 819; Gaz. vol. 136; p. 717.
Muhlfeld, F. J., New York, N. Y. Manufacture of one-piece felt hats. No. 899,887; Sept. 29; Sp. p. 5263; Dr. p. 1126; Gaz. vol. 136; p. 983.
Mulcahy, D., *et al.* (See Watson, W. C., assignor.)
Mulder, H. J., Alton, Iowa. Brooder. No. 899,177; Sept. 22; Sp. p. 3830; Dr. p. 820; Gaz. vol. 136; p. 717.
Mullen, W. W., Bunker Hill, Ind. Wagon-standard. No. 899,178; Sept. 22; Sp. p. 3832; Dr. p. 820; Gaz. vol. 136; p. 718.
Mullenbach, J. K., Marshall, Mo. Milliner's pliers. No. 898,496; Sept. 15; Sp. p. 2533; Dr. p. 543; Gaz. vol. 136; p. 468.
Muller, E. P., Brooklyn, N. Y. Electric cigar-lighter. No. 897,766; Sept. 1; Sp. p. 1055; Dr. p. 227; Gaz. vol. 136; p. 171.
Muller, E. W., assignor to H. Krantz, Brooklyn, N. Y. Electric-cable clamp. No. 897,300; Sept. 1; Sp. p. 57; Dr. pp. 14–15; Gaz. vol. 136; p. 13.
Muller, G. A. H., St. John, New Brunswick, Canada. Means for exterminating insects and other vermin. No. 897,919; Sept. 8; Sp. p. 1401; Dr. p. 298; Gaz. vol. 136; p. 253.
Muller, G. A. H., Montreal, Quebec, Canada. Means for exterminating insects and other vermin. No. 897,988; Sept. 8; Sp. p. 1552; Dr. p. 329; Gaz. vol. 136; p. 275.
Muller, T., New York, N. Y. Device for the protection of meters. No. 898,384; Sept. 8; Sp. p. 2299; Dr. p. 489; Gaz. vol. 136; p. 400.
Müller, W., Philadelphia, Pa. Automobile-tire. No. 898,497; Sept. 15; Sp. p. 2534; Dr. p. 543; Gaz. vol. 136; p. 469.
Munce, H. R. and R. J., Washington, Pa. Wrench. No. 897,767; Sept. 1; Sp. p. 1056; Dr. p. 227; Gaz. vol. 136; p. 171.
Munce, R. J. (See Munce, H. R. and R. J.)
Munn, M. C., Sycamore, Ill. Apparatus for molding bases on fence-posts. No. 898,671; Sept. 15; Sp. p. 2879; Dr. p. 616; Gaz. vol. 136; p. 524.
Munsell, W. W., Chicago, Ill. Fastening for lacings. No. 899,888; Sept. 29; Sp. p. 5266; Dr. p. 1127; Gaz. vol. 136; p. 984.
Munson, E. G., Garrettsville, Ohio. Cultivator-fender. No. 899,753; Sept. 29; Sp. p. 4977; Dr. p. 1067; Gaz. vol. 136; p. 940.
Murdock, G. J., Newark, N. J. Pumping apparatus. No. 899,458; Sept. 22; Sp. p. 4349; Dr. pp. 933–4; Gaz. vol. 136; p. 806.
Murff, J. M., Sweetwater, Tex. Insect-destroyer. No. 898,909; Sept. 15; Sp. p. 3311; Dr. pp. 709–10; Gaz. vol. 136; p. 602.
Murphy, G. F., Jersey City, N. J. Two-cycle Diesel engine. No. 898,768; Sept. 15; Sp. p. 3061; Dr. p. 656; Gaz. vol. 136; p. 556.
Murphy, J. F., Paterson, N. J. Rotary snow-plow. No. 899,606; Sept. 29, Sp. p. 4674; Dr. p. 1002; Gaz. vol. 136; p. 892.
Murphy, J. M., Pittsburg, Pa. Barb-forming machine. No. 899,317; Sept. 22; Sp. p. 4107; Dr. p. 878; Gaz. vol. 136; p. 762.
Murphy, W. D. (See Conover and Murphy.)
Murray, C. F., Chicago, Ill., assignor to C. W. and C. N. Kelley, Madison, Wis. Pulley. No. 899,754; Sept. 29; Sp. p. 4978; Dr. p. 1067; Gaz. vol. 136; p. 940.
Murray, E. T., Colorado Springs, Colo. Single-delivery match-box. No. 897,642; Sept. 1; Sp. p. 811; Dr. p. 170; Gaz. vol. 136; p. 129.
Murray, W. E., Los Angeles, Cal. Steady-floating structure. No. 898,128; Sept. 8; Sp. p. 1830; Dr. p. 389; Gaz. vol. 136; p. 319.
Mussell, J., Homedale, Idaho. Elevator mechanism. No. 898,672; Sept. 15; Sp. p. 2880; Dr. p. 616; Gaz. vol. 136; p. 525.
Myer Bridges Company. (See Stocker, L., assignor.)
Myers, H. A., Goshen, Ind. High-speed rotary device. No. 897,916; Sept. 8; Sp. p. 1394; Dr. p. 297; Gaz. vol. 136; p. 251.
Myers, H. A., Goshen, Ind. High-speed rotary device. No. 897,917; Sept. 8; Sp. p. 1397; Dr. p. 298; Gaz. vol. 136; p. 252.
Myers, H. K., Swissvale, Pa. Rail-fastening. No. 899,230; Sept. 22; Sp. p. 3928; Dr. p. 839; Gaz. vol. 136; p. 734.
Myers, J. S., Sacramento, Cal. Sheet-music turner. No. 899,459; Sept. 22; Sp. p. 4353; Dr. p. 934; Gaz. vol. 136; p. 806.
Myhre, J. O., Hatton, N. D. Chimney-cap. No. 897,643; Sept. 1; Sp. p. 813; Dr. p. 171; Gaz. vol. 136; p. 130.
Nageleisen, H., Arion, Ohio. Machine for rolling cigar-wrappers. No. 899,998; Sept. 29; Sp. p. 5505; Dr. p. 1173; Gaz. vol. 136; p. 1019.
Nagle, J. G., assignor to Nagle, Zane & Nagle, Niles, Mich. Angle-cock. No. 898,386; Sept. 8; Sp. p. 2302; Dr. p. 489; Gaz. vol. 136; p. 400.
Nagle, Zane & Nagle. (See Nagle, J. G., assignor.)
Napierala, P. W., Detroit, Minn. Hame-fastener. No. 899,890; Sept. 29; Sp. p. 5270; Dr. p. 1127; Gaz. vol. 136; p. 984.
Nathan, L., Zurich, Switzerland, and H. Bolze, Mannheim, Germany; said Bolze assignor to said Nathan. Brewing beer. No. 899,756; Sept. 29; Sp. p. 4981; Dr. p. 1068; Gaz. vol. 136; p. 940.
National Binding Machine Company. (See Anable, F. S., assignor.)
National Cash Register Company. (See Bickford, F. H., assignor.)
National Malleable Castings Company. (See Buckius, A. O., assignor.)
National Malleable Castings Company. (See Krakau, H. T., assignor.)
National Rural Route Advertising Company. (See Husted, L. J., assignor.)
National Wood Vulcanizing Company. (See Howard, C., assignor.)
Naughton, J. P., Lawrence, Mass. Arch-supporter for shoes. No. 899,182; Sept. 22; Sp. p. 3838; Dr. p. 821; Gaz. vol. 136; p. 719.
Naumann, W. (See Janisch and Naumann.)
Nazarian, J., Syracuse, N. Y. Let-off mechanism for looms. No. 899,183; Sept. 22; Sp. p. 3839; Dr. p. 821; Gaz. vol. 136; p. 719.
Neeley, W. C., Pueblo, Colo. Concrete-molding device. No. 898,911; Sept. 15; Sp. p. 3319; Dr. p. 711; Gaz. vol. 136; p. 603.
Neller, A. H., assignor to Louden Machinery Company, Fairfield, Iowa. Stop for elevated carriers. No. 897,387; Sept. 1; Sp. p. 300; Dr. p. 61; Gaz. vol. 136; p. 46.
Neller, A. H., assignor to Louden Machinery Company, Fairfield, Iowa. Track-hanger. No. 897,388; Sept. 1; Sp. p. 301; Dr. p. 62; Gaz. vol. 136; p. 46.
Neller, A. H., assignor to Louden Machinery Company, Fairfield, Iowa. Wire-twisting tool. No. 898,912; Sept. 15; Sp. p. 3321; Dr. p. 712; Gaz. vol. 136; p. 603.
Nelson, A. P., *et al.* (See Thunborg, A. O., assignor.)
Nelson, C. L., Seattle, Wash. Calculating-machine. No. 897,768; Sept. 1; Sp. p. 1057; Dr. pp. 228–30; Gaz. vol. 136; p. 171.
Nelson, E. A., assignor to W. J. Newton and C. J. Woodall, Detroit, Mich. Two-cycle gas-engine. No. 898,913; Sept. 15; Sp. p. 3322; Dr. p. 712; Gaz. vol. 136; p. 603.
Nelson, E. A., assignor to W. J. Newton and C. J. Woodall, Detroit, Mich. Transmission-gear for motor-vehicles. No. 899,258; Sept. 22; Sp. p. 4011; Dr. p. 856; Gaz. vol. 136; p. 744.
Nelson, J., assignor to Edward P. Martin Company, Chicago, Ill. Balance. No. 897,389; Sept. 1; Sp. p. 302; Dr. p. 62; Gaz. vol. 136; p. 46.
Nelson, J., assignor to Edward P. Martin Company, Chicago, Ill. Barometer. No. 889,836; Sept. 29; Sp. p. 5155; Dr. p. 1104; Gaz. vol. 136; p. 967.
Nelson, J. W., New York, N. Y. Hydraulic pump. No. 899,463; Sept. 22; Sp. p. 4359; Dr. p. 936; Gaz. vol. 136; p. 807.
Nelson, J. W., and W. H. Mathers, New York, N. Y., assignors to W. M. Dudgeon, executor. Air-valve for hydraulic jacks. No. 899,462; Sept. 22; Sp. p. 4357; Dr. p. 936; Gaz. vol. 136; p. 807.
Nelson, L., Oakland, Cal. Corset-waist. No. 897,646; Sept. 1; Sp. p. 816; Dr. p. 171; Gaz. vol. 136; p. 131.
Nelson, N. H., Willmar, Minn. Digging and loading machine. No. 898,593; Sept. 15; Sp. p. 2718; Dr. pp. 581–2; Gaz. vol. 136; p. 499.
Nessen, F. von. (See Johnson, F., assignor.)
Nettleship, S., Fayetteville, Ark. Pea-harvester. No. 897,844; Sept. 1; Sp. p. 1225; Dr. pp. 261–2; Gaz. vol. 136; p. 195.
Neu, L., Lille, France. Means for protecting high-tension overhead electric conductors. No. 899,127; Sept. 22; Sp. p. 3715; Dr. p. 796; Gaz. vol. 136; p. 700.
Neufeld, R. (See Adler, A., assignor.)
Neutra, S., assignor to W. Kaufmann, Vienna, Austria-Hungary. Water-gage. No. 900,033; Sept. 29; Sp. p. 5591; Dr. p. 1194; Gaz. vol. 136; p. 1031.
New England Paper Box Machine Co. (See Mitchell, A. W., assignor.)
New Haven Clock Co. (See Porter, W. E., assignor.)
Newbold, S., Philadelphia, Pa. Metal-cutting tool. No. 899,608; Sept. 29; Sp. p. 4677; Dr. p. 1003; Gaz. vol. 136; p. 893.
Newhall, H. B., Plainfield, N. J. Cable-clamp. No. 899,757; Sept. 29; Sp. p. 4984; Dr. p. 1068; Gaz. vol. 136; p. 941.
Newsam, T., Jr., Farmington, Ill. Car-loading device. No. 898,594; Sept. 15; Sp. p. 2722; Dr. pp. 582–3; Gaz. vol. 136; p. 499.
Newton, A. S., Providence, R. I. Antirattling device. No. 897,478; Sept. 1; Sp. p. 485; Dr. p. 103; Gaz. vol. 136; p. 77.
Newton, E. J. (See Everett and Newton.)
Newton, J. V., Los Angeles, Cal. Clasp. No. 900,034; Sept. 29; Sp. p. 5593; Dr. p. 1194; Gaz. vol. 136; p. 1032.
Newton, W. J., *et al.* (See Nelson, E. A., assignor.)
Newton, W. S. (See Galarneau and Newton.)
Ney Manufacturing Company. (See Thurston, M., assignor.)

Nichol, J. D., Amadore, Mich. Air-brake system. No. 899,427; Sept. 22; Sp. p. 4296; Dr. p. 922; Gaz. vol. 136; p. 796.
Nichols, E. B., Mount Airy, N. C. Match-box. No. 898,914; Sept. 15; Sp. p. 3323; Dr. p. 712; Gaz. vol. 136; p. 604.
Nichols, H. G., Ymir, British Columbia, Canada. Slimes-separator. No. 899,428; Sept. 22; Sp. p. 4298; Dr. p. 922; Gaz. vol. 136; p. 797.
Nickerson, J., Athol, Mass. Sole-edge trimmer. No. 897,479; Sept. 1; Sp. p. 485; Dr. p. 103; Gaz. vol. 136; p. 77.
Nickum, C., Logansport, Ind. Machine for sharpening pencils. No. 897,647; Sept. 1; Sp. p. 817; Dr. p. 172; Gaz. vol. 136; p. 131.
Niclausse, A. (See Niclausse, J. and A.)
Niclausse, J. and A., Paris, France. Axle for motor road-vehicles. No. 899,891; Sept. 29; Sp. p. 5292; Dr. p. 1127; Gaz. vol. 136; p. 985.
Niemann, H., New York, N. Y. Automatic gas cut-off. No. 899,184; Sept. 22; Sp. p. 3842; Dr. p. 822; Gaz. vol. 136; p. 719.
Nies, H., assignor of one-half to J. H. Corrigan, Baltimore, Md. Graphophone sound-box. No. 899,464; Sept. 22; Sp. p. 4364; Dr. p. 936; Gaz. vol. 136; p. 808.
Nikoloff, S., Worcester, Mass. Grinding-machine. No. 898,673; Sept. 15; Sp. p. 2882; Dr. pp. 616–17; Gaz. vol. 136; p. 525
Niles-Bement-Pond Company. (See Reiss, G. T., assignor.)
Nivar, J. M., Chicago, Ill. Dust-pan. No. 898,774; Sept. 15; Sp. p. 3072; Dr. p. 658; Gaz. vol. 136; p. 558.
Nix, J. J. (See Frost and Nix.)
Nix, J. J., and W. H. Frost, Los Angeles, Cal.; said Nix assignor to said Frost. Apparatus for producing gas. No. 900,010; Sept. 29; Sp. p. 5531; Dr. p. 1179; Gaz. vol. 136; p. 1023.
Noblett, E. J., Chicago, Ill. Splice-coupling for cables. No. 898,595; Sept. 15; Sp. p. 2725; Dr. p. 583; Gaz. vol. 136; p. 500.
Noethe, J., Elkton, S. D. Lubricator. No. 899,892; Sept. 29; Sp. p. 5274; Dr. p. 1128; Gaz. vol. 136; p. 985.
Nokes, R. A., and W. W. Gordon, Washington, D. C. Striking-machine. No. 898,129; Sept. 8; Sp. p. 1832; Dr. p. 390; Gaz. vol. 136; p. 319.
Nolen, J. G., and J. Shepherd; said Nolen assignor to J. E. Shepherd, Chicago, Ill. Vehicle-spring. No. 899,837; Sept. 29; Sp. p. 5156; Dr. p. 1104; Gaz. vol. 136; p. 967.
Nopenz, F. A., Chicago, Ill. Cooling-box. No. 899,231; Sept. 22; Sp. p. 3930; Dr. p. 839; Gaz. vol. 136; p. 734.
Nordeen, A. P., Missouri Valley, Iowa. Protector for draft-timbers. No. 899,554; Sept. 29; Sp. p. 4569; Dr. p. 982; Gaz. vol. 136; p. 875.
Norgrave, G. B., Peabody, Mass. Roof-joint. No. 897,995; Sept. 8; Sp. p. 1563; Dr. p. 332; Gaz. vol. 136; p. 277.
Norquist, E. E., Kansas City, Mo. Stock and poultry drinking-fountain. No. 899,128; Sept. 22; Sp. p. 3717; Dr. p. 796; Gaz. vol. 136; p. 701.
Norquist, E. E., Kansas City, Mo. Guard and cleaning attachment for stock-watering troughs. No. 899,129; Sept. 22; Sp. p. 3719; Dr. p. 797; Gaz. vol. 136; p. 701.
Norris, H. M., Cincinnati, Ohio. Variable-speed driving mechanism. No. 897,861; Sept. 1; Sp. p. 1269; Dr. p. 271; Gaz. vol. 136; p. 200.
North, R. B., Soho, England. Electric signaling or telegraph apparatus for use on vehicles. No. 898,915; Sept. 15; Sp. p. 3325; Dr. pp. 712–13; Gaz. vol. 136; p. 604.
Northern Electrical Manufacturing Company. (See Duncan, F. B., assignor.)
Northrup, E. (See Northrup, I. O., E., and M.)
Northrup, I. O. and E., Kingston, Ark., and M. Northrup, Leavenworth, Wash. Safety device for sight-glasses. No. 898,254; Sept. 8; Sp. p. 2070; Dr. p. 440; Gaz. vol. 136; p. 358.
Northrup, M. (See Northrup, I. O., E., and M.)
Norton, E., Lake Placid, N. Y. Air conveyer. No. 898,775; Sept. 15; Sp. p. 3073; Dr. p. 658; Gaz. vol. 136; p. 558.
Norwall Manufacturing Company. (See Hoffman, G. D., assignor.)
Norwall Manufacturing Company. (See Rowe, J. W., assignor.)
Nothohm, C., Caternberg, and H. Elgemann, Essen-on-the-Ruhr, Germany. Controlling device for hoisting apparatus. No. 899,794; Sept. 29; Sp. p. 5083; Dr. pp. 1087–8; Gaz. vol. 136; p. 954.
Noyes, C., Washington, D. C. Pad for bottle-caps. No. 899,429; Sept. 22; Sp. p. 4300; Dr. p. 922; Gaz. vol. 136; p. 797.
Noyes, H. W., West Haven, Conn., assignor to H. G. Ingersoll, trustee. Pocket cork-extractor. No. 898,387; Sept. 8; Sp. p. 2304; Dr. p. 489; Gaz. vol. 136; p. 401.
Noyes, L. W., Chicago, Ill. Windmill-frame. No. 897,390; Sept. 1; Sp. p. 304; Dr. p. 63; Gaz. vol. 136; p. 47.
Noyes, L. W., and D. R. Scholes; said Scholes assignor to Aermotor Company, Chicago, Ill. Draw-bench. No. 897,922; Sept. 8; Sp. p. 1405; Dr. pp. 299–300; Gaz. vol. 136; p. 253.
Noyes, M. E., Hyde Park, Mass., assignor to W. F. Pinkham, Wolfboro, N. H. Labeling-machine. No. 897,845; Sept. 1; Sp. p. 1227; Dr. pp. 262–4; Gaz. vol. 136; p. 195.
Nuhring, C., Cincinnati, Ohio. Hose-rack. No. 899,465; Sept. 22; Sp. p. 4365; Dr. p. 937; Gaz. vol. 136; p. 808.
Nyborg, M. J. C., Minneapolis, Minn. Sewing-needle. No. 897,769; Sept. 1; Sp. p. 1077; Dr. p. 231; Gaz. vol. 136; p. 172.
Nyce, A. W., Jr., Washington, D. C. Copy-holder. No. 898,596; Sept. 15; Sp. p. 2729; Dr. p. 583; Gaz. vol. 136; p. 500.
Nyholm, J. C., Bremen, Germany. Hydraulic device for movable closing organs in waterways with falls. No. 899,700; Sept. 29; Sp. p. 4855; Dr. p. 1041; Gaz. vol. 136; p. 920.
O'Brian, H. R., assignor of one-half to J. T. Vanness, Oxford, Ohio. Feed-water regulator. No. 898,255; Sept. 8; Sp. p. 2072; Dr. p. 440; Gaz. vol. 136; p. 358.
O'Brien, J. D., Phœnixville, Pa. Thill-detacher. No. 898,130; Sept. 8; Sp. p. 1837; Dr. p. 391; Gaz. vol. 136; p. 319.
O'Brien, T. F., Perth Amboy, N. J. Safety-regulator for braiding-machine bobbins. No. 897,648; Sept. 1; Sp. p. 821; Dr. p. 172; Gaz. vol. 136; p. 131.
O'Brien, W. C., assignor to Monitor Manufacturing Company of Baltimore City, Baltimore, Md. Electric-motor starter. No. 900,035; Sept. 29; Sp. p. 5594; Dr. p. 1194; Gaz. vol. 136; p. 1032.
O'Donnell, J. H., and H. McClafferty, Litzenberg, Pa. Coal-burner for cement-kilns. No. 898,131; Sept. 8; Sp. p. 1838; Dr. p. 391; Gaz. vol. 136; p. 320.
O'Donnell, J. J., Paducah, Ky. Rotary pump. No. 898,499; Sept. 15; Sp. p. 2537; Dr. p. 544; Gaz. vol. 136; p. 469.
O'Donnell, J. P. (See Chavériat, V., assignor.)
O'Donnell, L., Scranton, Pa. Amusement device. No. 898,674; Sept. 15; Sp. p. 2883; Dr. p. 617; Gaz. vol. 136; p. 525.
O'Leary, T., Gunnison, Colo. Trout fly, hook, and leader box. No. 899,466; Sept. 22; Sp. p. 4367; Dr. p. 937; Gaz. vol. 136; p. 808.
O'Leary, W., Chicago, Ill. Holder for labels or the like. No. 897,996; Sept. 8; Sp. p. 1566; Dr. p. 333; Gaz. vol. 136; p. 278.
Odenwalder, J. G., *et al.* (See Worthen, A. J., assignor.)
Offenhauser, C. (See Hottman, C. W., assignor.)
Ogden Iron & Steel Manufacturing Company. (See Kennedy, J., assignor.)
Ohashi, H., New York, N. Y. Type-writer backing-sheet. No. 898,916; Sept. 15; Sp. p. 3327; Dr. p. 713; Gaz. vol. 136; p. 604.
Ohio Laundry Machinery Co. (See Brockandt, P. L., assignor.)
Ohio Malleable Iron Company. (See Jeffrey, H., assignor.) (Reissue.)
Ohlin, R. F. (See Swanson, N. E., assignor.)
Ohmer Fare Register Company. (See Ohmer and Colby, assignors.)
Ohmer, J. F., and F. G. Colby, Dayton, Ohio, assignors to Ohmer Fare Register Company, Rochester, N. Y. Operating mechanism for fare-registers. No. 897,391; Sept. 1; Sp. p. 306; Dr. p. 63; Gaz. vol. 136; p. 47.
Ohnstrand, E., assignor to Ohnstrand Metal Furniture Company, Jamestown, N. Y. Sheet-metal-frame construction. No. 899,259; Sept. 22; Sp. p. 4014; Dr. p. 857; Gaz. vol. 136; p. 744.
Ohnstrand Metal Furniture Company. (See Ohnstrand, E., assignor.)
Okazaki, K., assignor of one-half to H. Yenjo, Tokyo, Japan. Nitrogenous food product. No. 897,392; Sept. 1; Sp. p. 308; Dr. p. 64; Gaz. vol. 136; p. 47.
Oldendorph, H., St. Louis, Mo. Nut-lock. No. 897,770; Sept. 1; Sp. p. 1078; Dr. p. 231; Gaz. vol. 136; p. 172.
Olds, F. E., administratrix. (See Olds, W. J.)
Olds, W. J., deceased, Denver, Colo.; F. E. Olds, administratrix, assignor to M. B. Cutshaw, Denver, Colo. Roller-clutch. No. 897,846; Sept. 1; Sp. p. 1232; Dr. p. 264; Gaz. vol. 136; p. 195.
Olmstead, C. L., assignor to Olmstead Quaboag Corset Company, West Brookfield, Mass. Corset. No. 897,480; Sept. 1; Sp. p. 486; Dr. p. 104; Gaz. vol. 136; p. 77.
Olmstead Quaboag Corset Company. (See Olmstead, C. L., assignor.)
Olsen, J. (See Glaser and Olsen.)
Olsen, T., Iron River, Mich. Rail-joint. No. 898,917; Sept. 15; Sp. p. 3329; Dr. p. 713; Gaz. vol. 136; p. 605.
Olson, C., Hector, Minn. Animal-trap. No. 897,302; Sept. 1; Sp. p. 61; Dr. p. 15; Gaz. vol. 136; p. 14.
Olson, C. S., *et al.* (See Rakowsky, G. A., assignor.)
Olson, J., Belgrade, Minn. Wire-stretcher. No. 898,500; Sept. 15; Sp. p. 2538; Dr. p. 544; Gaz. vol. 136; p. 469.
Olson, J. G., Harrington, Wash. Rotary weed-cutting machine. No. 898,256; Sept. 8; Sp. p. 2073; Dr. pp. 440–1; Gaz. vol. 136; p. 358.
Olson, P., Stoughton, Wis. Tamping-machine. No. 897,771; Sept. 1; Sp. p. 1079; Dr. p. 231; Gaz. vol. 136; p. 172.
Oneida Community. (See Ellis, F. F., assignor.)
Onondaga Pottery Company. (See Pass, J., assignor.)
Optische Anstalt C. P. Goerz Aktiengesellschaft, Firm of. (See Jacob, H., assignor.)
Ortiz, J., Greenville, assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Preserving explosives. No. 897,923; Sept. 8; Sp. p. 1409; Dr. pp. 300–1; Gaz. vol. 136; p. 254.
Orvis, J. K. (See Wood, A. C., assignor.)
Osgood, H. L., *et al.* (See McNeal, L. C., assignor.)

Osmer, J. E., assignor to Elevator Supply & Repair Company, Chicago, Ill. Fluid-pressure motor. No. 899,795; Sept. 29; Sp. p. 5087; Dr. p. 1088; Gaz. vol. 136; p. 954.
Osmer, J. E., assignor to Elevator Supply & Repair Company, Chicago, Ill. Door-operating mechanism. No. 899,796; Sept. 29; Sp. p. 5089; Dr. p. 1088; Gaz. vol. 136; p. 955.
Osmer, J. E., assignor to Elevator Supply & Repair Company, Chicago, Ill. Door-operating mechanism. No. 899,999; Sept. 29; Sp. p. 5507; Dr. p. 1174; Gaz. vol. 136; p. 1019.
Ostick, R. J., Covington, Ky. Rail-bond. No. 897,997; Sept. 8; Sp. p. 1508; Dr. p. 333; Gaz. vol. 136; p. 278.
Oswald, K. (See De la Harpe, Oswald, and Zehntner.)
Oswald, P. E., Los Angeles, Cal. Hair crimper and curler. No. 898,063; Sept. 8; Sp. p. 1708; Dr. p. 362; Gaz. vol. 136; p. 299.
Oswald, R. W., Pittsburg, Pa. Truck. No. 899,797; Sept. 29; Sp. p. 5090; Dr. p. 1089; Gaz. vol. 136; p. 955.
Otis Elevator Company. (See Ihlder, J. D., assignor.)
Otis, R. C., and W. W. Gumdrum, Casey, Iowa. Operating mechanism for washing-machines. No. 898,132; Sept. 8; Sp. p. 1840; Dr. p. 391; Gaz. vol. 136; p. 320.
Ott, F. E., Indianapolis, Ind. Road-drag. No. 899,798; Sept. 29; Sp. p. 5091; Dr. p. 1089; Gaz. vol. 136; p. 955.
Ottawa Banking & Trust Company. (See Blanchard, S. R., assignor.)
Otto, A. S., St. Louis, Mo. Bottle-washing machine. No. 897,998; Sept. 8; Sp. p. 1569; Dr. pp. 333–5; Gaz. vol. 136; p. 278.
Ottosson, O. A., Strömsund, Sweden. Spittoon. No. 899,130; Sept. 22; Sp. p. 3720; Dr. p. 797; Gaz. vol. 136; p. 702.
Overlack, A. (See Overlack, B. and A.)
Overlack, B., Sr., Plainfield, and A. Overlack, Newark, N. J. Loader and hauler. No. 897,847; Sept. 1; Sp. p. 1234; Dr. p. 264; Gaz. vol. 136; p. 196.
Owen, J. (See Wood, J., assignor.)
Owen, L., Bloomington, Ill. Fan. No. 899,555; Sept. 29; Sp. p. 4570; Dr. p. 982; Gaz. vol. 136; p. 875.
Owen, M. H. and W., Chicago, Ill. Railway-switch. No. 897,393; Sept. 1; Sp. p. 311; Dr. p. 64; Gaz. vol. 136; p. 48.
Owen, O. L., assignor to Whitin Machine Works, Whitinsville, Mass. Thread-board for spinning-machines. No. 899,609; Sept. 29; Sp. p. 4679; Dr. p. 1004; Gaz. vol. 136; p. 893.
Owen, O. L., assignor to Whitin Machine Works, Whitinsville, Mass. Reel. No. 899,676; Sept. 29; Sp. p. 4819; Dr. p. 1032; Gaz. vol. 136; p. 914.
Owen, W. (See Owen, M. H. and W.)
Owen, W. R. (See Divers, W. H., assignor.)
Owensboro Wagon Co. (See Jesse and Ware, assignors.)
Pack, A. J, Brighton, England. Means for raising vehicle-bodies. No. 899,430; Sept. 22; Sp. p. 4301; Dr. p. 923; Gaz. vol. 136; p. 797.
Packer, E. R., Chicago Heights, assignor to Quincy, Manchester, Sargent Company, Chicago, Ill. Ratchet-tool. No. 897,772; Sept. 1; Sp. p. 1081; Dr. p. 232; Gaz. vol. 136; p. 172.
Packscher, A., Berlin, assignor to Firm of Dr. Hirsch, Lichtenberg, near Berlin, Germany. Iron-frame window. No. 899,610; Sept. 29; Sp. p. 4680; Dr. p. 1004; Gaz. vol. 136; p. 894.
Page, H. E., *et al.* (See Mercer, A., assignor.)
Pagel, A., Racine, Wis. Fence-post. No. 897,773; Sept. 1; Sp. p. 1083; Dr. p. 232; Gaz. vol. 136; p. 173.
Paine, G. H., assignor to Continental Signal Company, Chicago, Ill. Interlocking switch and signal mechanism. No. 898,918; Sept. 15; Sp. p. 3330; Dr. pp. 713–14; Gaz. vol. 136; p. 605.
Palmer, I. E., assignor to I. E. Palmer Co., Middletown, Conn. Woven fabric. No. 900,036; Sept. 29; Sp. p. 5596; Dr. p. 1195; Gaz. vol. 136; p. 1032.
Pälsson, C. J., Christiania, Norway, assignor to C. G. Anderson, Göttenborg, Sweden. Sewing machinery. No. 897,553; Sept. 1; Sp. p. 643; Dr. pp. 133–5; Gaz. vol. 136; p. 101.
Parent, L. P., assignor of one-half to P. R. Larocque, Waterbury, Conn. Spoke-extractor. No. 899,701; Sept. 29; Sp. p. 4857; Dr. p. 1041; Gaz. vol. 136; p. 921.
Parham, W. H., Paducah, Ky. Wheel. No. 899,611; Sept. 29; Sp. p. 4681; Dr. p. 1004; Gaz. vol. 136; p. 894;
Parker, F., Chicago, Ill. Knockdown picture-frame. No. 899,556; Sept. 29; Sp. p. 4571; Dr. p. 982; Gaz. vol. 136; p. 876.
Parkinson, H. C., Berkeley, Cal. Cold knob for pot-covers. No. 899,260; Sept. 22; Sp. p. 4015; Dr. p. 857; Gaz. vol. 136; p. 745.
Parmenter, O. L., assignor to Racine Paper Goods Company, Racine, Wis. Packing cigars. No. 897,925; Sept. 8; Sp. p. 1417; Dr. p. 302; Gaz. vol. 136; p. 254.
Parr, W. E., Sparta, Mo. Passenger-recording system for trains. No. 898,675; Sept. 15; Sp. p. 2885; Dr. pp. 617–19; Gaz. vol. 136; p. 526.
Parsons, C. A., and G. G. Stoney, Newcastle-upon-Tyne, England; said Stoney assignor to said Parsons. Turbine. No. 898,257; Sept. 8; Sp. p. 2075; Dr. p. 441; Gaz. vol. 136; p. 358.
Parsons, C. A., and G. G. Stoney, Newcastle-upon-Tyne, England; said Stoney assignor to said Parsons. Turbine. No. 899,319; Sept. 22; Sp. p. 4112; Dr. p. 879; Gaz. vol. 136; p. 762.
Parsons, F. W., Tarrytown, assignor to Ingersoll-Rand Company, New York, N. Y. Drill-bit. No. 898,388; Sept. 8; Sp. p. 2305; Dr. p. 490; Gaz. vol. 136; p. 401.
Parsons, F. W., Tarrytown, assignor to Ingersoll-Rand Company, New York, N. Y. Air-compressor. No. 898,389; Sept. 8; Sp. p. 2307; Dr. p. 490; Gaz. vol. 136; p. 401.
Pass, J. Geddes, assignor to Onondaga Pottery Company, Syracuse, N. Y. China-cleaning. No. 899,893; Sept. 29; Sp. p. 5275; Dr. p. 1128; Gaz. vol. 136; p. 986.
Patch, A. H., Clarksville, Tenn. Corn-sheller. No. 897,649; Sept. 1; Sp. p. 824; Dr. pp. 172–3; Gaz. vol. 136; p. 132.
Patch, F. R., Rutland, Vt. Derrick. No. 899,758; Sept. 29; Sp. p. 4985; Dr. p. 1068; Gaz. vol. 136; p. 941.
Patric, C. E., Springfield, Ohio. Planting-machine. No. 899,557; Sept. 29; Sp. p. 4573; Dr. p. 983; Gaz. vol. 136; p. 876.
Patrick, J. G., St. Charles, Iowa. Game apparatus. No. 899,895; Sept. 29; Sp. p. 5280; Dr. p. 1129; Gaz. vol. 136; p. 986.
Patten, G. T., Piqua, Ohio. Insect-exterminator. No. 897,650; Sept. 1; Sp. p. 825; Dr. p. 173; Gaz. vol. 136; p. 132.
Patten, G. W., Wimbledon, N. D. Oiling device for wheels. No. 897,999; Sept. 8; Sp. p. 1571; Dr. p. 335; Gaz. vol. 136; p. 279.
Patterson, S., and J. W. Wiseman, Gonzales county, assignors of one-third to O. T. Payne, Lavaca county, Tex. Signal-lock for mail-boxes. No. 898,000; Sept. 8; Sp. p. 1572; Dr. p. 335; Gaz. vol. 136; p. 279.
Patterson, W. J., Colorado Springs, Colo. Sound-box for talking-machines. No. 897,774; Sept. 1; Sp. p. 1084; Dr. p. 232; Gaz. vol. 136; p. 173.
Pattinson, B. W., Manitou, Colo. Child's portable commode-chair. No. 898,597; Sept. 15; Sp. p. 2730; Dr. p. 584; Gaz. vol. 136; p. 500.
Pattinson, B. W., Manitou, Colo. Folding cot and bath-tub cabinet. No. 898,598; Sept. 15; Sp. p. 2732; Dr. p. 584; Gaz. vol. 136; p. 501.
Patton, E. J., Three Oaks, Mich. Means for delivering mail-bags from moving trains. No. 899,894; Sept. 29; Sp. p. 5276; Dr. p. 1128; Gaz. vol. 136; p. 986.
Paul, A. D. (See Braddock, S. E., assignor.)
Paul, A. G., Boston, Mass. Heating system. No. 899,838; Sept. 29; Sp. p. 5157; Dr. p. 1104; Gaz. vol. 136; p. 967
Paul, A. G., Boston, Mass. Heating system. No. 899,839; Sept. 29; Sp. p. 5161; Dr. p. 1105; Gaz. vol. 136; p. 968.
Paul, J. T. H. Chicago, Ill., assignor to E. Goldman & Co. Inc. Mechanical movement. No. 897,651; Sept. 1; Sp. p. 827; Dr. pp. 173–5; Gaz. vol. 136; p. 132.
Paul, J. W., Kittanning, Pa. Type-writing machine. No. 898,676; Sept. 15; Sp. p. 2895; Dr. pp. 619–20; Gaz. vol. 136; p. 527.
Pauling, H., assignor to Firm of Salpetersäure-Industrie-Gesellschaft, G. m. b. H., Gelsenkirchen, Germany. Apparatus for producing voltaic high-current arcs. No. 898,133; Sept. 8; Sp. p. 1841; Dr. p. 392; Gaz. vol. 136; p. 320.
Pauling, H., assignor to Firm of Salpetersäure-Industrie-Gesellschaft, G. m. b. H., Gelsenkirchen, Germany. Concentrating nitrosulfuric waste acid. No. 898,390; Sept. 8; Sp. p. 2309; Dr. p. 491; Gaz. vol. 136; p. 402.
Paulson, J. E., Forestón, Minn. Motion-converting device. No. 897,652; Sept. 1; Sp. p. 830; Dr. p. 175; Gaz. vol. 136; p. 133.
Paulson, W. S., Pittsburg, Pa. Ice-walker. No. 899,065; Sept. 22; Sp. p. 3593; Dr. p. 769; Gaz. vol. 136; p. 679.
Pauly, A. A., Youngstown, Ohio. Apparatus for forming building-blocks and artificial stone from plastic material. No. 899,789; Sept. 29; Sp. p. 5093; Dr. pp. 1089–90; Gaz. vol. 136; p. 956.
Payne, A. B. (See Crocker and Payne.)
Payne, B. N. (See Young, J. T., assignor.)
Payne, C. E., Laquin, Pa. Device for grinding band-wheels. No. 899,896; Sept. 29; Sp. p. 5282; Dr. p. 1129; Gaz. vol. 136; p. 987.
Payne, E. E. M., Aylesbury, assignor of one-half to W. H. Staynes, J. H. Smith, and W. H. Sturges, Leicester, England. Tanning extract from peat. No. 899,800; Sept. 29; Sp. p. 5096; Gaz. vol. 136; p. 956.
Payne, J. W. (See Preble and Payne.)
Payne, O. T. (See Patterson and Wiseman, assignors.)
Pearce, H., Salcombe, Bowdon, England. Pendulograph. No. 898,599; Sept. 15; Sp. p. 2735; Dr. p. 585; Gaz. vol. 136; p. 501.
Pearson, R. H., Mariner Harbor, N. Y., assignor to Travelers Insurance Company, Hartford, Conn. Clearance device for punch-presses. No. 899,131; Sept. 22; Sp. p. 3722; Dr. p. 797; Gaz. vol. 136; p. 702.
Pease, F. B., Rochester, N. Y. Fruit-sorting machine. No. 898,600; Sept. 15; Sp. p. 2737; Dr. p. 585; Gaz. vol. 136; p. 502.
Pease, W. C., assignor of one-half to L. V. Rood, Marietta, Ohio. Churn. No. 897,481; Sept. 1; Sp. p. 487; Dr. p. 104; Gaz. vol. 136; p. 78.
Peck, I. H., and W. D. Haggerty, Derby, Conn. Automatic trap. No. 897,554; Sept. 1; Sp. p. 646; Dr. p. 135; Gaz. vol. 136; p. 101.
Pedersen, C., assignor to Landis Machine Company, St. Louis, Mo. Thread-measuring mechanism for sewing-machines. No. 898,776; Sept. 15; Sp. p. 3075; Dr. p. 658; Gaz. vol. 136; p. 558.

Pederson, R., Parkersburg, Iowa. Wagon-loading device. No. 898,501; Sept. 15; Sp. p. 2540; Dr. pp. 544–5; Gaz. vol. 136; p. 470.
Péducasse, B., Lyon, France. Brake-lock for bicycles. No. 897,926; Sept. 8; Sp. p. 1419; Dr. pp. 302–3; Gaz. vol. 136; p. 255.
Peerless Electric Company. (See Lipps, E. C., assignor.)
Pehrman, O., Stenbacken, Sweden. Ice-velocipede. No. 899,132; Sept. 22; Sp. p. 3723; Dr. p. 797; Gaz. vol. 136; p. 702.
Pein, W., Chicago, Ill. Binder for books, journals, paper, music, &c. No. 899,066; Sept. 22; Sp. p. 3595; Dr. p. 770; Gaz. vol. 136; p. 679.
Peirce, J. R., New York, N. Y., assignor to Royden Marble Machinery Company. Coping-machine. No. 897,303; Sept. 1; Sp. p. 62; Dr. pp. 15–16; Gaz. vol. 136; p. 14.
Pellarin, P., Detroit, Mich. Laying mosaic, granolithic, and similar floors. No. 898,001; Sept. 8; Sp. p. 1573; Dr. p. 335; Gaz. vol. 136; p. 279.
Pellow, N., Grand Rapids, Mich. Key-guard. No. 899,801; Sept. 29; Sp. p. 5097; Dr. p. 1090; Gaz. vol. 136; p. 956.
Pendlebury, J. T., Manchester, England. Watch. No. 899,897; Sept. 29; Sp. p. 5284; Dr. p. 1130; Gaz. vol. 136; p. 987.
Penfound, A. L., Toronto, Ontario, Canada. Awning. No. 897,775; Sept. 1; Sp. p. 1085; Dr. pp. 232–3; Gaz. vol. 136; p. 173.
Perfection Manufacturing Company. (See Eberle, J. A., assignor.)
Perham, J. C., Glenville township, Schenectady county, N. Y., assignor to General Electric Company. Blue-printing machine. No. 897,482; Sept. 1; Sp. p. 489; Dr. p. 104; Gaz. vol. 136; p. 78.
Perky, H. D., deceased; L. Sparks, administrator, assignor to Shredded Wheat Company, Niagara Falls, N. Y. Apparatus for continuous cooking. No. 898,777; Sept. 15; Sp. p. 3077; Dr. pp. 658–9; Gaz. vol. 136; p. 559.
Permutation Lock and Novelty Manufacturing Company. (See Quaintance, E. E., assignor.)
Perrault, J. E., Waltham, Mass., assignor to American Lacing Hook Co. Lacing-hook-setting machine. No. 899,067; Sept. 22; Sp. p. 3596; Dr. p. 770; Gaz. vol. 136; p. 680.
Perry, J. A., Chicago, Ill. Attachment for couches. No. 899,431; Sept. 22; Sp. p. 4302; Dr. p. 922; Gaz. vol. 136; p. 797.
Peters, C. O., Winthrop, Mass. Electromagnetic locking device. No. 897,394; Sept. 1; Sp. p. 313; Dr. p. 65; Gaz. vol. 136; p. 48.
Peters, R. D., Knox, Ind. Suspensory undershirt. No. 898,258; Sept. 8; Sp. p. 2077; Dr. p. 442; Gaz. vol. 136; p. 358.
Peters, R. G. (See Davis, O. C., assignor.)
Petersen, C. E., Copenhagen, Denmark. Advertising apparatus. No. 899,467; Sept. 22; Sp. p. 4369; Dr. p. 938; Gaz. vol. 136; p. 809.
Petersen, H., Wilmersdorf, near Berlin, Germany. Filling for reaction-chambers, &c. No. 899,898; Sept. 29; Sp. p. 5285; Dr. p. 1130; Gaz. vol. 136; p. 987.
Petersen, H., Wilmersdorf, near Berlin, Germany. Filling material for reaction-chambers. No. 899,899; Sept. 29; Sp. p. 5287; Dr. p. 1130; Gaz. vol. 136; p. 988.
Peterson, A. T., Racine, Wis. Pencil-sharpener. No. 898,502; Sept. 15; Sp. p. 2544; Dr. p. 545; Gaz. vol. 136; p. 470.
Peterson, O., assignor of one-half to T. D. Temple, De Kalb, Ill. Chandelier-hanging device. No. 898,391; Sept. 8; Sp. p. 2310; Dr. p. 491; Gaz. Vol. 136; p. 402.
Petru, E. J., and J. Zidek, Chicago, Ill. Hose-nozzle cart. No. 897,395; Sept. 1; Sp. p. 315; Dr. pp. 65–7; Gaz. vol. 136; p. 48.
Petsche, G. B., assignor to Southwark Foundry and Machine Company, Philadelphia, Pa. Blowing-engine. No. 899,558; Sept. 29; Sp. p. 4576; Dr. p. 984; Gaz. vol. 136; p. 876.
Pettibone, H., New Rochelle, N. Y., assignor to Power and Mining Machinery Company. Manufacturing gas. No. 898,601; Sept. 15; Sp. p. 2739; Dr. p. 586; Gaz. vol. 136; p. 502.
Pettijohn, J. W., Montesano, Wash. Undercut-saw guide. No. 898,677; Sept. 15; Sp. p. 2899; Dr. p. 620; Gaz. vol. 136; p. 527.
Petze, W. R., Brooklyn, N. Y. Spring-repairer. No. 899,468; Sept. 22; Sp. p. 4370; Dr. p. 938; Gaz. vol. 136; p. 809.
Pfadt, J. G., trustees, *et al.* (See Pfadt, J. G., assignor.)
Pfadt, J. G., assignor to W. B. Flickinger, F. W. Grant, and J. G. Pfadt, trustees, Erie, Pa. Centrifugal pump. No. 897,483; Sept. 1; Sp. p. 491; Dr. p. 104; Gaz. vol. 136; p. 78.
Pfau, A., assignor to Allis-Chalmers Company, Milwaukee, Wis. Turbine. No. 899,559; Sept. 29; Sp. p. 4580; Dr. pp. 984–5; Gaz. vol. 136; p. 877.
Pflager, H. M. (See Howard and Pflager.)
Pfleghar, F. P., New Haven, Conn. Mechanical seal. No. 897,776; Sept. 1; Sp. p. 1086; Dr. p. 233; Gaz. vol. 136; p. 173.
Pflueger, E. A., assignor to E. A. Pflueger Company, Akron, Ohio. Display-closure. No. 897,777; Sept. 1; Sp. p. 1088; Dr. p. 233; Gaz. vol. 136; p. 174.
Pforr, P., Berlin, Germany, assignor to General Electric Company. Pneumatic control system. No. 897,484; Sept. 1; Sp. p. 492; Dr. p. 105; Gaz. vol. 136; p. 79.
Pfouts, L. S., assignor to Miller Pasteurizing Machine Company, Canton, Ohio. Pasteurizing apparatus. (Reissue.) No. 12,858; Sept. 29; Sp. p. 5683; Dr. p. 1213; Gaz. vol. 136; p. 1045.
Phelan, A. P., Alliance, Nebr. Table. No. 898,778; Sept. 15; Sp. p. 3078; Dr. p. 659; Gaz. vol. 136; p. 559.
Philip, A., and L. J. Steele, Portsmouth, England. Apparatus for detecting inflammable gases in air. No. 899,068; Sept. 22; Sp. p. 3599; Dr. pp. 770–1; Gaz. vol. 136; p. 680.
Philippart, G. (See Fresnaye, J. A. de la, assignor.)
Phillips, J. C., Akron, Ohio. Combined railway rail and bed-plate. No. 898,986; Sept. 15; Sp. p. 3446; Dr. p. 739; Gaz. vol. 136; p. 627.
Phillips, L. E. (See Boardman, J. W., assignor.)
Phillips, L. J., Choteau, Okla. Sack or bag fastener. No. 899,612; Sept. 29; Sp. p. 4683; Dr. p. 1005; Gaz. vol. 136; p. 894.
Picken, A., Norfolk, Va. Counting and canceling apparatus. No. 897,485; Sept. 1; Sp. p. 494; Dr. p. 105; Gaz. vol. 136; p. 79.
Picotte, T. E. (See Clifton, C. C., assignor.)
Pierce, C. A., Manchester, N. H., assignor to E. Dixon, Bristol, Tenn. Top-roll saddle and stirrup. No. 898,919; Sept. 15; Sp. p. 3332; Dr. p. 714; Gaz. vol. 136; p. 605.
Pierce, H., Kansas City, Kans., assignor of one-half to F. A. Briggs, Kansas City, Mo. Valve system and tracker-board. No. 899,409; Sept. 22; Sp. p. 4372; Dr. p. 938; Gaz. vol. 136; p. 809.
Pierce, H., Kansas City, Kans., assignor of one-half to F. A. Briggs, Kansas City, Mo. Music-sheet. No. 899,470; Sept. 22; Sp. p. 4375; Dr. p. 939; Gaz. vol. 136; p. 810.
Pierce, W. Z., Dexter, Tex. Trap. No. 897,306; Sept. 1; Sp. p. 321; Dr. p. 67; Gaz. vol. 136; p. 49.
Pierpont, F. H., Horley, England, assignor to United Bottle Machinery Co. Machine for the manufacture of glass bottles and other vessels. No. 900,037; Sept. 29; Sp. p. 5599; Dr. p. 1195; Gaz. vol. 136; p. 1033.
Pierson, G. S., Kalamazoo, Mich. Carbureter. No. 898,920; Sept. 15; Sp. p. 3334; Dr. p. 714; Gaz. vol. 136; p. 606.
Pifer, A. A., assignor to Cleveland Armature Works, Cleveland, Ohio. Cable-drum. No. 899,613; Sept. 29; Sp. p. 4684; Dr. p. 1005; Gaz. vol. 136; p. 894.
Piggins, C. R., assignor of one-half to F. Piggins, Racine, Wis. Casing and cylinder construction for gas-engines and the like. No. 898,678; Sept. 15; Sp. p. 2901; Dr. pp. 620–1; Gaz. vol. 136; p. 527.
Piggins, F. (See Piggins, C. R., assignor.)
Pilgrim Paper Company. (See Dunn, C. E., assignor.)
Pillmore, W. F., and D. Anderegg, Westernville, N. Y. Canning apparatus. No. 898,002; Sept. 8; Sp. p. 1574; Dr. p. 336; Gaz. vol. 136; p. 279.
Pinkham, W. F. (See Noyes, M. E., assignor.)
Pioneer Suspender Company. (See Berkey, H. E., assignor.)
Piper, J. (See Piper, J. W., assignor.)
Piper, J. W., Lowell, Mass., assignor of one-half to J. Piper, Brooklyn, N. Y. Vertically-adjustable grate. No. 899,677; Sept. 29; Sp. p. 4820; Dr. p. 1032; Gaz. vol. 136; p. 914.
Pirkl, J., assignor to Dayton Hydraulic Machinery Company, Dayton, Ohio. Centrifugal pump and water-wheel. No. 897,397; Sept. 1; Sp. p. 322; Dr. pp. 67–9; Gaz. vol. 136; p. 49.
Pitney, J. M., Jr., Lorain, Ohio. Continuous track-light and automatic signal. No. 897,304; Sept. 1; Sp. p. 65; Dr. p. 16; Gaz. vol. 136; p. 15.
Pfttman, J. H. (See Hudson, E., assignor.)
Pittsfield Spark Coil Company. (See Jacobson, E. B., assignor.)
Pizlczik, S., assignor of one-half to J. Roesser, Baltimore, Md. Railway signal device. No. 899,840; Sept. 29; Sp. p. 5164; Dr. pp. 1105–6; Gaz. vol. 136; p. 968.
Plamondon, C. A., *et al.* (See Prinz, W. H., assignor.)
Plamondon, G., *et al.* (See Prinz, W. H., assignor.)
Plank, W. C. Las Flores, Lower California, Mexico. Gas-engine igniter. No. 898,779; Sept. 15; Sp. p. 3079; Dr. p. 659; Gaz. vol. 136; p. 559.
Plankinton, W. W. (See Silverston, A. R., assignor.)
Planta, E. v., and F. Adam, Berne, Switzerland. Brake mechanism. No. 899,069; Sept. 22; Sp. p. 3602; Dr. p. 771; Gaz. vol. 136; p. 680.
Pleins, R. C., assignor to Western Car Seal Company, St. Paul, Minn. Car-seal. No. 897,848; Sept. 1; Sp. p. 1236; Dr. p. 265; Gaz. vol. 136; p. 196.
Plough, E. K., Chambersburg, Pa. Calendar. No. 899,614; Sept. 29; Sp. p. 4685; Dr. p. 1005; Gaz. vol. 136; p. 895.
Plumley, R. L., Wilmington, Del., assignor to Frederick Osann Company, New York, N. Y. Overseaming sewing-machine. No. 897,486; Sept. 1; Sp. p. 498; Dr. pp. 105–6; Gaz. vol. 136; p. 79.
Plummer, J. M., Elk City, Kans. Overshoe-holder and trousers-supporter. No. 898,503; Sept. 15; Sp. p. 2546; Dr. p. 546; Gaz. vol. 136; p. 471.
Pocock, A. J., Dayton, Ohio. Valve-gear. No. 897,654; Sept. 1; Sp. p. 831; Dr. pp. 175–6; Gaz. vol. 136; p. 133.

Pohle, J., Lansdale, Pa. Measuring device for dressmakers and the like. No. 899,802; Sept. 29; Sp. p. 5098; Dr. p. 1090; Gaz. vol. 136; p. 956.
Point Loma Chemical Company. (See Bundsman, E. T., assignor.)
Poll, J. J., Cincinnati, Ohio. Combination collar cap and fastener. No. 899,803; Sept. 29; Sp. p. 5099; Dr. p. 1090; Gaz vol. 136; p. 957.
Pollak, L., assignor of one-half to A. Redlich, Wilsdorf, near Bodenbach, Austria-Hungary. Treating extracts of quebracho. No. 900,038; Sept. 29; Sp. p. 5599; Gaz. vol. 136; p. 1033.
Pollard, J. A., Jr., *et al.* (See Watkins, B. G., assignor.)
Pollard, J. A., *et al.* (See Watkins, B. G., assignor.)
Pons, A., Buffalo, N. Y. Fiber-cleaning machine. No. 899,070; Sept. 22; Sp. p. 3604; Dr. p. 772; Gaz. vol. 136; p. 681.
Pool, M. W., New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 899,616; Sept. 29; Sp. p. 4695; Dr. pp 1006–7; Gaz. vol. 136; p. 895.
Pool, M. W., New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 899,615; Sept. 29; Sp. p. 4687; Dr. pp. 1005–6; Gaz. vol. 136; p. 895.
Poppenhusen, H. A., Evanston, and J. Harrington, Chicago, Ill. Burning coal. No. 898,134; Sept. 8; Sp. p. 1843; Dr. p. 392; Gaz. vol. 136; p. 321.
Portee, W. M., Murphysboro, Ill. Mail-bag catching and delivering appliance. No. 898,504; Sept. 15; Sp. p. 2547; Dr. pp. 546–7; Gaz. vol. 136; p. 471.
Porter, A. A., Waterbury, Conn. Water-current motor. No. 899,320; Sept. 22; Sp. p. 4113; Dr. p. 879; Gaz. vol. 136; p. 763.
Porter, J. L. Columbus, Mont. Box for buggy-hubs. No. 899,900; Sept. 29; Sp. p. 5289; Dr. p. 1130; Gaz. vol. 136; p. 988.
Porter, W. E., assignor to New Haven Clock Co., New Haven, Conn. Pocket coin-bank. No. 899,678; Sept. 29; Sp. p. 4822; Dr. p. 1032; Gaz. vol. 136; p. 914.
Posson, E., Chicago, Ill. Nut-lock. No. 898,003; Sept. 8; Sp. p. 1576; Dr. p. 336; Gaz. vol. 136; p. 280.
Post, G. W., Fond du Lac, Wis. Envelop. No. 897,778; Sept. 1; Sp. p. 1088; Dr. p. 233; Gaz. vol. 136; p. 174.
Poth, H., Brooklyn, N. Y. Rheostat. No. 898,987; Sept. 15; Sp. p. 3447; Dr. pp. 739–40; Gaz. vol. 136; p. 627.
Potter, J. O. (See Haymond and Potter.)
Potter, W. M., assignor to E. C. Stearns & Co., Syracuse, N. Y. Saw-set. No. 898,780; Sept. 15; Sp. p. 3082; Dr. p. 660; Gaz. vol. 136; p. 560.
Poulsen, V., Copenhagen, Denmark. Receiver for wireless signaling. No. 897,779; Sept. 1; Sp. p. 1089; Dr. p. 234; Gaz. vol. 136; p. 174.
Power and Mining Machinery Company. (See Pettibone, H., assignor.)
Powers, E. J., Chicago, Ill. Chuck used in broom-making. No. 899,679; Sept. 29; Sp. p. 4824; Dr. p. 1032; Gaz. vol. 136; p. 914.
Powers, L. J., assignor to Powers Manufacturing Company, Waterloo, Iowa. Horse-collar. No. 899,560; Sept. 29; Sp. p. 4583; Dr. p. 985; Gaz. vol. 136; p. 877.
Powers Manufacturing Company. (See Powers, L. J., assignor.)
Prahar, L. B., New York, N. Y. Gas-lighter. No. 897,780; Sept. 1; Sp. p. 1090; Dr. p. 234; Gaz. vol. 136; p. 174.
Pratt, H. G. (See Tolman and Pratt.)
Pratt, L. L., Philadelphia, Pa. Rotary pump. No. 897,655; Sept. 1; Sp. p. 835; Dr. p. 176; Gaz. vol. 136; p. 133.
Pratt & Whitney Company. (See Valentine, A. L., assignor.)
Preble, H. T., and J. W. Payne, Stockton, Cal.; said Payne assignor to said Preble. Tilting sidehill-harvester. No. 899,432; Sept. 22; Sp. p. 4303; Dr. pp. 923–4; Gaz. vol. 136; p. 798.
Prellwitz, W., Easton, Pa., assignor to Ingersoll-Sergeant Drill Company, New York, N. Y. Valve-operating device for compressors. No. 898,135; Sept. 8; Sp. p. 1847; Dr. pp. 393–4; Gaz. vol. 136; p. 321.
Prellwitz, W., Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Brace attachment for fluid-pressure-operated tools. No. 898,679; Sept. 15; Sp. p. 2902; Dr. p. 621; Gaz. vol. 136; p. 528.
Prentice, T., New Britain, Conn. Rule-tip. No. 897,927; Sept. 8; Sp. p. 1420; Dr. p. 303; Gaz. vol. 136; p. 255.
Prescott, C. H., East Liverpool, Ohio. Grease-cup. No. 897,849; Sept. 1; Sp. p. 1237; Dr. p. 265; Gaz. vol. 136; p. 196.
Prescott, C. H., East Liverpool, Ohio. Boiler-cleaner. No. 899,261; Sept. 22; Sp. p. 4016; Dr. p. 857; Gaz. vol. 136; p. 745.
Prescott, C. H., assignor of one-half to J. E. Davis, East Liverpool, Ohio. Machine for molding butter. No. 897,487; Sept. 1; Sp. p. 503; Dr. p. 107; Gaz. vol. 136; p. 80.
Prescott, C. H., assignor of one-half to J. E. Davis, East Liverpool, Ohio. Sawing apparatus. No. 897 488; Sept. 1; Sp. p. 505; Dr. p. 107; Gaz. vol. 136; p. 80.
Pressed Steel Car Company. (See Blest, M. C., assignor.)
Pressed Steel Car Company. (See Dodds, E. I., assignor.)
Pressed Steel Car Company. (See Streib, J. F., assignor.)
Preston, A. F., Boston, Mass. Machine for grading patterns. No. 897,555; Sept. 1; Sp. p. 648; Dr. p. 136; Gaz. vol. 136; p. 101.
Preston, A. F., Boston, Mass. Cutting and edge-compacting member for cutting-machines. No. 898,259; Sept. 8; Sp. p. 2078; Dr. p. 442; Gaz. vol. 136; p. 359.
Preston, E. L., Dawn, Mo. Automatic gas-valve. No. 898,260; Sept. 8; Sp. p. 2080; Dr. p. 442; Gaz. vol. 136; p. 359.
Prevot, J., Green Bay, Wis. Life-boat detaching device. No. 898,004; Sept. 8; Sp. p. 1577; Dr. p. 336; Gaz. vol. 136; p. 280.
Price, J. W., Konawa, Okla. Firearm. No. 898,988; Sept. 15; Sp. p. 3454; Dr. p. 740; Gaz. vol. 136; p. 628.
Prindle, E. J., Washington, D. C. Last-block. No. 898,989; Sept. 15; Sp. p. 3456; Dr. p. 740; Gaz. vol. 136; p. 628.
Prinz, F., Milwaukee, Wis. Grain and seed separator. No. 897,489; Sept. 1; Sp. p. 506; Dr. p. 108; Gaz. vol. 136; p. 81.
Prinz, W. H., Oak Park, assignor of two-thirds to C. A. and G. Plamondon, Chicago, Ill. Malt-kiln. No. 897,781; Sept. 1; Sp. p. 1092; Dr. p. 234; Gaz. vol. 136; p. 175.
Prouty, T. C., assignor to Wilcox Manufacturing Company, Aurora, Ill. Lock. No. 897,924; Sept. 8; Sp. p. 1411; Dr. p. 301; Gaz. vol. 136; p. 254.
Prouty, T. C., Aurora, Ill., assignor to T. C. Prouty Company, Limited, Albion, Mich. Pneumatic hammer. No. 898,505; Sept. 15; Sp. p. 2549; Dr. p. 547; Gaz. vol. 136; p. 471.
Pryor, C. E., Binghamton, N. Y. Touch-regulator for pianos. No. 897,556; Sept. 1; Sp. p. 653; Dr. p. 137; Gaz. vol. 136; p. 102.
Pryor, C. E., Binghamton, N. Y. Fall-board mechanism for pianos. No. 898,781; Sept. 15; Sp. p. 3083; Dr. p. 660; Gaz. vol. 136; p. 560.
Pryor, D. (See Wilson, A. H., assignor.)
Publow, W. J., assignor to Farrand Company, Detroit, Mich. Self-playing musical instrument. No. 897,656; Sept. 1; Sp. p. 836; Dr. p. 176; Gaz. vol. 136; p. 134.
Pulliam, O. S., Pittsburg, Pa. Car-wheel. No. 899,680; Sept. 29; Sp. p. 4825; Dr. p. 1033; Gaz. vol. 136; p. 914.
Purcell, B. W. (See Purcell, R. W. and B. W.)
Purcell, R. W. and B. W., Dawn, Mo. Hog-trap. No. 899,901; Sept. 29; Sp. p. 5290; Dr. p. 1131; Gaz. vol. 136; p. 989.
Purdy, E. A., Amboy, Ill. Socket for use in concrete work. No. 899,185; Sept. 22; Sp. p. 3844; Dr. p. 822; Gaz. vol. 136; p. 720.
Purple, T. H., Constantine, Mich. Curtain-stretcher. No. 897,398; Sept. 1; Sp. p. 325; Dr. p. 69; Gaz. vol. 136; p. 50.
Purse, H. J., *et al.* (See Ericsson, A. N., assignor.)
Purves, T. F., Wandsworth, and J. Sinnott, East Finchley, London, England. Insulator. No. 898,921; Sept. 15; Sp. p. 3335; Dr. p. 715; Gaz. vol. 136; p. 606.
Purviance, N. M., Spokane, Wash. Magazine tack-hammer. No. 897,399; Sept. 1; Sp. p. 327; Dr. p. 69; Gaz. vol. 136; p. 50.
Purvis, T., North Birmingham, Ala. Self-heating sad-iron. No. 898,922; Sept. 15; Sp. p. 3337; Dr. pp. 715–16; Gaz. vol. 136; p. 607.
Putnam, J. P., Boston, Mass. Sewer-gas trap. No. 898,136; Sept. 8; Sp. p. 1850; Dr. p. 394; Gaz. vol. 136; p. 322.
Quain, J. R., assignor of one-half to E. Applegarth, London, England. Apparatus for the production of ozone. No. 898,506; Sept. 15; Sp. p. 2553; Dr. p. 547; Gaz. vol. 136; p. 472.
Quaintance, E. E., assignor to Permutation Lock and Novelty Manufacturing Company, Denver, Colo. Adjustable shade-roller bracket. No. 897,305; Sept. 1; Sp. p. 66; Dr. p. 17; Gaz. vol. 136; p. 15.
Quincy, Manchester, Sargent Company. (See Packer, E. R., assignor.)
R. Thomas and Sons Company. (See Kenney, B. D., assignor.)
Rabedew, J. N., and E. A. Vernal, Minturn, Colo. Wire bed-bottom and frame. No. 899,681; Sept. 29; Sp. p. 4826; Dr. p. 1033; Gaz. vol. 136; p. 915.
Rabsilber, W., New York, N. Y. Internal-combustion engine. No. 899,186; Sept. 22; Sp. p. 3845; Dr. pp. 822–3; Gaz. vol. 136; p. 720.
Raby, E. M., Berkley, Va. Peanut-sheller. No. 899,433; Sept. 22; Sp. p. 4305; Dr. p. 924; Gaz. vol. 136; p. 798.
Racine Paper Goods Company. (See Parmenter, O. L., assignor.)
Raiford, A. T., New York, N. Y. Wrench. No. 898,990; Sept. 15; Sp. p. 3457; Dr. p. 741; Gaz. vol. 136; p. 628.
Rail Joint Company. (See Braine, B. G., assignor.)
Railway Utilities Company. (See Lungren, C. M., assignor.)
Rainey, T. S., New Orleans, La. Closure for the necks of bottles. No. 898,261; Sept. 8; Sp. p. 2081; Dr. p. 442; Gaz. vol. 136; p. 359.
Rakerd, J. L., Kansas City, Mo. Heel-making machine. No. 898,680; Sept. 15; Sp. p. 2904; Dr. pp. 621–2; Gaz. vol. 136; p. 528.
Rakowsky, G. A., assignor of two-thirds to V. Rakowsky and C. S. Olson, Duluth, Minn. Dumping device. No. 899,682; Sept. 29; Sp. p. 4827; Dr. pp. 1033–4; Gaz. vol. 136; p. 915.
Rakowsky, V., *et al.* (See Rakowsky, G. A., assignor.)
Ralph, J. G., Aurora, Ill. Storm or screen sash fastener. No. 898,923; Sept. 15; Sp. p. 3339; Dr. p. 716; Gaz. vol. 136; p. 607.
Ralston Steel Car Company. (See Becker, A., assignor.)
Randall, J. A., assignor to United States Concrete Machine Co., Detroit, Mich. Cement or concrete mixer. No. 899,071; Sept. 22; Sp. p. 3612; Dr. p. 773; Gaz. vol. 136; p. 681.
Randle, W. G., Chester, Pa. Releasing device for boats. No. 899,072; Sept. 22; Sp. p. 3614; Dr. pp. 773–4; Gaz. vol. 136; p. 682.

Randolph, G. B., Anniston, Ala. Land-marker. No. 898,602; Sept. 15; Sp. p. 2743; Dr. p. 586; Gaz. vol. 136; p. 502.
Rankin, W. A., assignor to Allis-Chalmers Company, Milwaukee, Wis. Roasting-furnace. No. 899,561; Sept. 29; Sp. p. 4584; Dr. p. 985; Gaz. vol. 136; p. 878.
Rankin, W. A., assignor to Allis-Chalmers Company, Milwaukee, Wis. Roasting-furnace. No. 899,562; Sept. 29; Sp. p. 4585; Dr. p. 986; Gaz. vol. 136; p. 878.
Rankin, W. K., assignor to J. E. Reyburn, Philadelphia, Pa. Electric and pneumatic governor. No. 897,657; Sept. 1; Sp. p. 837; Dr. p. 177; Gaz. vol. 136; p. 134.
Ransom, W. M., Warren, assignor of one-half to F. M. Hoadley, Providence, R. I. Dam. No. 899,703; Sept. 29; Sp. p. 4860; Dr. pp. 1042–3; Gaz. vol. 136; p. 921.
Ranz, J., assignor of one-half to J. F. Lang, St. Louis, Mo. Sheet-feeding mechanism. No. 899,133; Sept. 22; Sp. p. 3725; Dr. p. 798; Gaz. vol. 136; p. 703.
Rapid Removable Rim Company. (See Baker, E. A., assignor.)
Rasmus, G., New York, N. Y. Electric hoist. No. 898,782; Sept. 15; Sp. p. 3084; Dr. p. 660; Gaz. vol. 136; p. 560.
Rathgeber, I., Rock Island, Ill. Fore-masher. No. 899,841; Sept. 29; Sp. p. 5166; Dr. p. 1107; Gaz. vol. 136; p. 969.
Ratti, P. (See Markussen, H., assignor.)
Rauk, O. K., Racine, Wis. Exhaust-regulator. No. 899,471; Sept. 22; Sp. p. 4376; Dr. p. 939; Gaz. vol. 136; p. 810.
Raupach, F. W., London, England. Supporting-frame for neckties. No. 899,902; Sept. 29; Sp. p. 5292; Dr. p. 1131; Gaz. vol. 136; p. 989.
Ray, J., Koran, La. Plow. No. 898,991; Sept. 15; Sp. p. 3458; Dr. p. 741; Gaz. vol. 136; p. 629.
Ray, J. B., Flatcreek, Tenn. Swinging gate. No. 899,472; Sept. 22; Sp. p. 4377; Dr. p. 939; Gaz. vol. 136; p. 810.
Ray, W. M. (See Johnson and Ray.)
Raymond, A., deceased, Chicago, Ill.; M. M. Barteime, administratrix. Centrifugal mill. No. 897,400; Sept. 1; Sp. p. 329; Dr. pp. 70–1; Gaz. vol. 136; p. 50.
Reach, G. A. (See Gamble, J., assignor.)
Read, A. E. (See De France and Read.)
Reagan, H. C., Butler, assignor of one-half to J. H. Barrett, Mars, Pa. Electric signaling system. No. 897,401; Sept. 1; Sp. p. 334; Dr. p. 71; Gaz. vol. 136; p. 51.
Regan, P. J., Iowa City, Iowa. Vending-machine. No. 898,681; Sept. 15; Sp. p. 2909; Dr. p. 623; Gaz. vol. 136; p. 528.
Reaser, H., assignor to L. Reaser, Reading, Pa. Damper-regulator. No. 897,490; Sept. 1; Sp. p. 509; Dr. p. 108; Gaz. vol. 136; p. 81.
Reaser, L. (See Reaser, H.)
Rebar, J., Smithdale, Pa. Fender for locomotives and street-cars. No. 897,658; Sept. 1; Sp. p. 839; Dr. p. 177; Gaz. vol. 136; p. 134.
Redington, F. B. (See Johnston, C. L., assignor.)
Redlich, A. (See Pollak, L., assignor.)
Reed, A. M., Washington, D. C. Obstetrical appliance. No. 899,434; Sept. 22; Sp. p. 4307; Dr. p. 925; Gaz. vol. 136; p. 798.
Reed, J. C., Akron, Ohio. Railway-tie. No. 899,262; Sept. 22; Sp. p. 4017; Dr. p. 858; Gaz. vol. 136; p. 745.
Reed, J. H., assignor to Essex Machine Company, Lynn, Mass. Beating-out machine. No. 899,232; Sept. 22; Sp. p. 3932; Dr. pp. 839–40; Gaz. vol. 136; p. 735.
Reed, J. H., Lancaster, Wis. Cream-separating device. No. 899,804; Sept. 29; Sp. p. 5102; Dr. p. 1091; Gaz. vol. 136; p. 957.
Reed, J. P., Muncie, Ind. Trolley-finder. No. 897,402; Sept. 1; Sp. p. 339; Dr. p. 72; Gaz. vol. 136; p. 51.
Reeve, S. A., Worcester, assignor to C. F. Brown, trustee, Reading, Mass. Internal-combustion engine. No. 899,842; Sept. 29; Sp. p. 5168; Dr. pp. 1107–8; Gaz. vol. 136; p. 969.
Regina Company. (See Sampere, J., assignor.)
Regina Maschinenfabrik, G. M. B. H. (See Lebnis, M., assignor.)
Reichert, J., Racine, Wis. Horse-blanket fastening. No. 898,924; Sept. 15; Sp. p. 3340; Dr. p. 716; Gaz. vol. 136; p. 607.
Reid, C. E., and J. Heissenberger, New York, N. Y. Mail-delivery apparatus. No. 899,903; Sept. 29; Sp. p. 5294; Dr. p. 1132; Gaz. vol. 136; p. 989.
Reif, J., Jr., Hebron, Ind. Wrench. No. 899,805; Sept. 29; Sp. p. 5103; Dr. p. 1091; Gaz. vol. 136; p. 958.
Reif, O. M. (See Croft and Reif.)
Reilley, F. A., Port Chester, N. Y. Heater for applying and melting waxes, paraffins, solders, and similar substances. No. 897,782; Sept. 1; Sp. p. 1094; Dr. p. 235; Gaz. vol. 136; p. 175.
Reilly, P. C., Indianapolis, Ind. Preserved wood. No. 899,904; Sept. 29; Sp. p. 5297; Gaz. vol. 136; p. 989.
Reilly, P. C., Indianapolis, Ind. Preserved wood. No. 899,905; Sept. 29; Sp. p. 5298; Gaz. vol. 136; p. 989.
Reimers, J. C., Stella, Nebr. Lawn-mower. No. 898,925; Sept. 15; Sp. p. 3342; Dr. p. 717; Gaz. vol. 136; p. 608.
Rein, R., Schlachtensee, near Berlin, assignor, by mesne assignments, to Ludwig Spitz & Co. G. m. b. H., Berlin, Germany. Calculating-machine. No. 897,659; Sept. 1; Sp. p. 842; Dr. p. 178; Gaz. vol. 136; p. 135.
Reiss, G. T., Hamilton, Ohio, assignor to Niles-Bement-Pond Company, Jersey City, N. J. Reamer-tap. No. 899,759; Sept. 29; Sp. p. 4988; Dr. p. 1069; Gaz. vol. 136; p. 941.
Reiter, E. C., Rockville, Conn. Heat-retainer and drip-pan. No. 897,928; Sept. 8; Sp. p. 1421; Dr. p. 303; Gaz. vol. 136; p. 255.
Reix, J., Paris, France. Advertising apparatus. No. 899,321; Sept. 22; Sp. p. 4115; Dr. p. 880; Gaz. vol. 136; p. 763.
Remington, J. P., assignor to Remington Manufacturing Company, Inc., Philadelphia, Pa. Capsule-placing device. No. 899,760; Sept. 29; Sp. p. 4989; Dr. p. 1069; Gaz. vol. 136; p. 942.
Remington, J. P., assignor to Remington Manufacturing Company, Inc., Philadelphia, Pa. Capsule-filling mechanism. No. 899,761; Sept. 29; Sp. p. 4991; Dr. p. 1070; Gaz. vol. 136; p. 942.
Remington Manufacturing Company. (See Remington, J. P., assignor.)
Renfors, H., and R. Lindgren, Kajana, Russia. Clasp for fastening firearms to supports. No. 899,617; Sept. 29; Sp. p. 4704; Dr. pp. 1007–8; Gaz. vol. 136; p. 896.
Renken, A. F., Kramer, Nebr. Gopher-trap. No. 898,262; Sept. 8; Sp. p. 2082; Dr. p. 443; Gaz. vol. 136; p. 360.
Renstrom, N. A., assignor of one-half to E. Thorp, Omaha, Nebr. Acetylene-gas apparatus. No. 897,491; Sept. 1; Sp. p. 510; Dr. p. 108; Gaz. vol. 136; p. 81.
Reo Motor Car Company. (See Fillingham, J. P., assignor.)
Republic Rubber Company. (See Mell, T. J., assignor.)
Revoir, B., assignor of two-thirds to R. B. Smith and E. G. Lathrop, Syracuse, N. Y. Door lock and latch mechanism. No. 897,660; Sept. 1; Sp. p. 845; Dr. pp. 178–9; Gaz. vol. 136; p. 136.
Reyburn, J. E. (See Rankin, W. K., assignor.)
Reyer, S. C., Carthage, Ill. Skewer. No. 898,926; Sept. 15; Sp. p. 3343; Dr. p. 717; Gaz. vol. 136; p. 608.
Reynolds, A. J., Cleveland, Ohio. Ticket. No. 897,783; Sept. 1; Sp. p. 1096; Dr. p. 235; Gaz. vol. 136; p. 175.
Reynolds, C. B. (See Barnes, Williams, and Reynolds.)
Reynolds, F., Syracuse, N. Y. Starting device for gasolene-engines. No. 899,618; Sept. 29; Sp. p. 4705; Dr. pp. 1008–9; Gaz. vol. 136; p. 896.
Rhoades, A. E., assignor to Draper Company, Hopedale, Mass. Shuttle-feeler for filling-replenishing looms. No. 897,403; Sept. 1; Sp. p. 341; Dr. p. 72; Gaz. vol. 136; p. 52.
Rhoades, A. E., assignor to Draper Company, Hopedale, Mass. Thread-parting mechanism for looms. No. 897,404; Sept. 1; Sp. p. 343; Dr. p. 72; Gaz. vol. 136; p. 52.
Rhode Island Fiber Spool Company. (See Wood, F. B., assignor.)
Rhodes, A. B., Marion, Ohio. Mail-box. No. 898,507; Sept. 15; Sp. p. 2555; Dr. p. 548; Gaz. vol. 136; p. 472.
Rhoult, J. A., assignor of one-half to H. W. Spaulding, Haverhill, Mass. Molding-machine. No. 899,073; Sept. 22; Sp. p. 3616; Dr. pp. 774–5; Gaz. vol. 136; p. 682.
Rice, G. F., Holliston, Mass. Holdback or breaching strap. No. 897,557; Sept. 1; Sp. p. 654; Dr. p. 137; Gaz. vol. 136; p. 102.
Rice, G. M., Worcester, Mass. Treating complex ores containing zinc and other volatilizable metals for the production of oxids. No. 899,322; Sept. 22; Sp. p. 4116; Dr. p. 880; Gaz. vol. 136; p. 763.
Rice, J. W., Atlanta, Ga. Adjustable stand. No. 898,263; Sept. 8; Sp. p. 2084; Dr. p. 443; Gaz. vol. 136; p. 360.
Richman, W. C., Vermillion, S. D. Auxiliary heater. No. 897,661; Sept. 1; Sp. p. 848; Dr. p. 179; Gaz. vol. 136; p. 136.
Richmond, M., Parkfield, Cal. Watch and key chain guard. No. 897,405; Sept. 1; Sp. p. 346; Dr. p. 73; Gaz. vol. 136; p. 53.
Richards, F. H., Hartford, Conn. Variable-speed mechanism for chainless bicycles. No. 898,783; Sept. 15; Sp. p. 3085; Dr. pp. 661–2; Gaz. vol. 136; p. 561.
Richards, F. H., Hartford, Conn. Milk-can. No. 899,762; Sept. 29; Sp. p. 4996; Dr. pp. 1070–1; Gaz. vol. 136; p. 943.
Richards, G. M., Erie, Pa. Automatic pressure-governor. No. 899,263; Sept. 22; Sp. p. 4019; Dr. p. 858; Gaz. vol. 136; p. 745.
Richards, J. E., Dayton, Ohio, assignor to Dayton Clothing Manufacturing Company. Union suit. No. 899,187; Sept. 22; Sp. p. 3850; Dr. pp. 823–4; Gaz. vol. 136; p. 720.
Richardson, F. E., Manchester, Iowa. Door-fastener. No. 899,323; Sept. 22; Sp. p. 4119; Dr. p. 880; Gaz. vol. 136; p. 764.
Richardson, S. O., Jr., Toledo, Ohio, assignor, by mesne assignments, to H. C. Fry Glass Company, Rochester, Pa. Process and apparatus for fire-polishing glass. No. 899,473; Sept. 22; Sp. p. 4379; Dr. p. 939; Gaz. vol. 136; p. 811.
Richardson, W. C., Lynn, Mass. Shoe-form. No. 898,137; Sept. 8; Sp. p. 1851; Dr. p. 394; Gaz. vol. 136; p. 322.
Richmond, G. E., assignor of one-half to F. B. Weeks, Houston, Tex. Band-cutter and feeder. No. 898,603; Sept. 15; Sp. p. 2744; Dr. p. 587; Gaz. vol. 136; p. 503.
Richter, C. P. (See Small, T., assignor.)
Ricketts, D. C. (See Albin, J. W., assignor.)

Rickmire, A. P., Waterloo, Iowa. Electric signaling system for railways. No. 899,134; Sept. 22; Sp. p. 3729; Dr. pp. 798–9; Gaz. vol. 136; p. 703.
Riddle, J. B., Sacramento, Cal. Vacuum mining device. No. 898,927; Sept. 15; Sp. p. 3343; Dr. p. 717; Gaz. vol. 136; p. 608.
Rider, O. O., Schenectady, N. Y., assignor to General Electric Company. Electric switch. No. 897,492; Sept. 1; Sp. p. 513; Dr. p. 109; Gaz. vol. 136; p. 82.
Ridout, G. H., Luling, Tex. Detachable shelf for store-ladders. No. 897,929; Sept. 8; Sp. p. 1422; Dr. p. 304; Gaz. vol. 136; p. 255.
Ridout, J. B., St. Paul, Minn., assignor of two-thirds to D. Crowther and W. H. Barth. Hydraulic air-pump. No. 898,264; Sept. 8; Sp. p. 2085; Dr. p. 443; Gaz. vol. 136; p. 360.
Riebe, A., Berlin, Germany. Ball-bearing for vertical shafts. No. 899,563; Sept. 29; Sp. p. 4586; Dr. p. 986; Gaz. vol. 136; p. 878.
Rieder, L., Nuremberg, Germany. Parcel-carrier. No. 899,806; Sept. 29; Sp. p. 5105; Dr. p. 1091; Gaz. vol. 136; p. 958.
Riesch, A., Munich, Germany. Artificial marble and making same. No. 897,493; Sept. 1; Sp. p. 516; Gaz. vol. 136; p. 82.
Riffle, J. W., Kansas City, Mo. Gearing. No. 898,682; Sept. 15; Sp. p. 2911; Dr. p. 623; Gaz. vol. 136; p. 529.
Rifled Pipe Company. (See Isaacs, J. D., assignor.)
Riggs, J. C., Berkeley, Cal. Track-rail joint. No. 897,784; Sept. 1; Sp. p. 1097; Dr. p. 235; Gaz. vol. 136; p. 176.
Riggs, M. J., Toledo, Ohio, assignor to American Bridge Company, Pittsburg, Pa. Punching-machine. No. 899,324; Sept. 22; Sp. p. 4120; Dr. p. 881; Gaz. vol. 136; p. 764.
Rigney, G. W. (See Hanlin and Rigney.)
Rilber, C. N., Christiania, Norway, assignor to Aktieselskabet det Norske Kvaelstofkompagni. Production of nitrites. No. 899,705; Sept. 29; Sp. p. 4868; Gaz. vol. 136; p. 922.
Riley, C. E., Newton, Mass., assignor to Howard & Bullough American Machine Company, Limited, Pawtucket, R. I. Top roll for speeders or spinning-machines. No. 899,807; Sept. 29; Sp. p. 5106; Dr. p. 1092; Gaz. vol. 136; p. 958.
Riley, M., assignor of one-half to W. M. Deemer, Braeburn, Pa. Clothes-retainer for infants' beds. No. 899,325; Sept. 22; Sp. p. 4122; Dr. p. 881; Gaz. vol. 136; p. 764.
Riley, T. B., Louisville, Ky. Safety-stirrup. No. 898,683; Sept. 15; Sp. p. 2911; Dr. p. 623; Gaz. vol. 136; p. 529.
Rinderman, E., Page, N. D. Attachment for smut-machines. No. 897,785; Sept. 1; Sp. p. 1098; Dr. p. 236; Gaz. vol. 136; p. 176.
Ring, E., Kingston, Wis. Draft-rigging for carriers. No. 899,435; Sept. 22; Sp. p. 4307; Dr. p. 925; Gaz. vol. 136; p. 798.
Rittenhouse, J. B., Toronto, Ontario, Canada. Game-board. No. 898,684; Sept. 15; Sp. p. 2912; Dr. p. 624; Gaz. vol. 136; p. 529.
Ritter, F. J., Chapman, Nebr. Railway track-motor. No. 897,406; Sept. 1; Sp. p. 346; Dr. p. 73; Gaz. vol. 136; p. 53.
Ritter, I. B., assignor to E. Ashman, Philadelphia, Pa. Machine for rolling metal rings. No. 899,436; Sept. 22; Sp. p. 4308; Dr. p. 925; Gaz. vol. 136; p. 799.
Ritter, J. S., assignor of one-half to G. F. Hummel, Allentown, Pa. Combined lock-nut and bushing for connection-boxes. No. 899,906; Sept. 29; Sp. p. 5299; Dr. p. 1133; Gaz. vol. 136; p. 989.
Ritter, S. N., Allentown, Pa. Door-fastening device. No. 898,685; Sept. 15; Sp. p. 2914; Dr. p. 624; Gaz. vol. 136; p. 530.
Rittersbach, G. W., Jr., assignor of one-fourth to A. H. Kain, Philadelphia, Pa. Spike-extractor. No. 898,064; Sept. 8; Sp. p. 1710; Dr. p. 362; Gaz. vol. 136; p. 299.
Rivers, F. A., Helena, Mont. Mop-head. No. 899,437; Sept. 22; Sp. p. 4310; Dr. p. 926; Gaz. vol. 136; p. 799.
Rivers, J., Detroit, Mich. Adjustable clamp. No. 898,604; Sept. 15; Sp. p. 2746; Dr. p. 587; Gaz. vol. 136; p. 503.
Roark, E. B. (See Fryer, E. J., assignor.)
Roberts, A. M., Buffalo, N. Y. Telegraphic selective system. No. 897,662; Sept. 1; Sp. p. 849; Dr. pp. 180–1; Gaz. vol. 136; p. 137.
Roberts, D., Grantham, England. Internal-combustion engine. No. 898,139; Sept. 8; Sp. p. 1853; Dr. pp. 395–6; Gaz. vol. 136; p. 322.
Roberts, D. A., Elmira, N. Y. Pole-socket. No. 898,138; Sept. 8; Sp. p. 1852; Dr. p. 394; Gaz. vol. 136; p. 322.
Roberts, L., Jackson, Mich. Type setting and distributing machine. No. 899,843; Sept. 29; Sp. p. 5172; Dr. pp. 1108–9; Gaz. vol. 136; p. 970.
Roberts, R. G., North Yamhill, Oreg. Axle-nut lock. No. 899,188; Sept. 22; Sp. p. 3851; Dr. p. 824; Gaz. vol. 136; p. 721.
Roberts, W. T. (See Allison, H. W., assignor.)
Robertson, A., assignor to Waite Thresher Company, Providence, R. I. Cuff-pin. No. 897,407; Sept. 1; Sp. p. 349; Dr. p. 73; Gaz. vol. 136; p. 53.
Robinson, E. T., assignor to St. Louis Car Company, St. Louis, Mo. Convertible automobile-body. No. 897,663; Sept. 1; Sp. p. 857; Dr. pp. 181–3; Gaz. vol. 136; p. 137.
Robinson, E. T., assignor to St. Louis Car Company, St. Louis, Mo. Disappearing luggage-carrier for automobiles. No. 897,664; Sept. 1; Sp. p. 860; Dr. pp. 183–4; Gaz. vol. 136; p. 138.
Robinson, E. T., assignor to St. Louis Car Company, St. Louis, Mo. Railway-car. No. 899,763; Sept. 29; Sp. p. 4999; Dr. p. 1071; Gaz. vol. 136; p. 943.
Robinson, J. A., Denver, Colo. Alarm. No. 898,992; Sept. 15; Sp. p. 3459; Dr. p. 741; Gaz. vol. 136; p. 629.
Robinson, Q. F., *et al.* (See Buren, C. C., assignor.)
Robinson, R. R., *et al.* (See Buren, C. C., assignor.)
Robinson, W., Ottumwa, Iowa. Mail-bag catcher. No. 898,265; Sept. 8; Sp. p. 2086; Dr. p. 443; Gaz. vol. 136; p. 361.
Robiyer, W. W., Clearwater, Kans. Automatic change-maker. No. 899,704; Sept. 29; Sp. p. 4862; Dr. pp. 1043–4; Gaz. vol. 136; p. 921.
Rochelle, F. W., assignor to Ivins, Dietz & Metzger Company, Philadelphia, Pa. Pile-wire supporter for looms. No. 898,928; Sept. 15; Sp. p. 3345; Dr. pp. 717–18; Gaz. vol. 136; p. 608.
Rockstroh, M., Klein-Sedlitz, near Pirna, Germany. Blanket-holding attachment. No. 899,326; Sept. 22; Sp. p. 4123; Dr. p. 881; Gaz. vol. 136; p. 765.
Rockwell, W., assignor to Dey Time Register Company, Syracuse, N. Y. Workman's time-controller. No. 898,508; Sept. 15; Sp. p. 2556; Dr. p. 548; Gaz. vol. 136; p. 472.
Rodemeyer, E. D., Latimer, Iowa. Attachment for grain-binders. No. 899,619; Sept. 29; Sp. p. 4713; Dr. p. 1009; Gaz. vol. 136; p. 897.
Rodgers, L. J., assignor to Rose, Rodgers & Rose, Chicago, Ill. Coat-collar. No. 898,140; Sept. 8; Sp. p. 1855; Dr. p. 396; Gaz. vol. 136; p. 322.
Rodgers, R. A., and W. R. Henderson, Steubenville, Ohio. Can-opener. No. 898,605; Sept. 15; Sp. p. 2748; Dr. p. 587; Gaz. vol. 136; p. 503.
Rodler, F. W., assignor to Victor Safe & Lock Company, Cincinnati, Ohio. Gravitating hinge for day-gates. No. 898,005; Sept. 8; Sp. p. 1578; Dr. p. 337; Gaz. vol. 136; p. 280.
Roehr, C. G., Chicago, Ill. Wave, tide, and current motor. No. 897,930; Sept. 8; Sp. p. 1423; Dr. pp. 304–5; Gaz. vol. 136; p. 255.
Rossser, J. (See Pizicalk, S., assignor.)
Rogers, H. C., St. Louis, Mo. Barrel-heater. No. 898,065; Sept. 8; Sp. p. 1711; Dr. p. 363; Gaz. vol. 136; p. 299.
Rogers, J., assignor of one-half to G. D. Adams and G. E. Kappler, Cleveland, Ohio. Bag filling and tying machine. No. 899,764; Sept. 29; Sp. p. 5000; Dr. pp. 1071–3; Gaz. vol. 136; p. 943.
Rogers, J., assignor of one-half to G. E. Kappler and G. D. Adams, Cleveland, Ohio. Bag-tier shears. No. 899,765; Sept. 29; Sp. p. 5007; Dr. p. 1073; Gaz. vol. 136; p. 944.
Rogers, J., assignor of one-half to G. E. Kappler and G. D. Adams, Cleveland, Ohio. Bag-closing mechanism. No. 899,766; Sept. 29; Sp. p. 5009; Dr. pp. 1073–4; Gaz. vol. 136; p. 944.
Rogers, W. H., Lookout Mountain, Tenn. Mail-bag deliverer and catcher. No. 899,074; Sept. 22; Sp. p. 3618; Dr. p. 775; Gaz. vol. 136; p. 683.
Rohrbacher, E. J., Blaine, Wash. Automatic governor for fluid-compressors. No. 898,606; Sept. 15; Sp. p. 2749; Dr. pp. 587–8; Gaz. vol. 136; p. 504.
Rolfe, C. A., Adrian, Mich., assignor, by mesne assignments, to Rolfe Electric Co., Rochester, N. Y. Electrical-circuit protector. No. 898,509; Sept. 15; Sp. p. 2462; Dr. p. 548; Gaz. vol. 136; p. 473.
Rolfe Electric Co. (See Rolfe, C. A., assignor.)
Rolfes, G. H., assignor to Handian-Buck Manufacturing Company, St. Louis, Mo. Combined base-ring and bracket for signal-lamps. No. 899,808; Sept. 29; Sp. p. 5108; Dr. p. 1092; Gaz. vol. 136; p. 959.
Rollins, G. D., Philadelphia, Pa. Metallic packing. No. 898,066; Sept. 8; Sp. p. 1712; Dr. p. 363; Gaz. vol. 136; p. 299.
Romeos, O. T., assignor of one-half to J. A. Meyer, Saries, N. D. Display-cabinet. No. 897,786; Sept. 1; Sp. p. 1100; Dr. p. 236; Gaz. vol. 136; p. 176.
Roney, D. (See Hawkins, E. C., assignor.)
Rood, L. V. (See Pease, W. C., assignor.)
Roovers, A. W., Brooklyn, N. Y. Abrading-machine. No. 897,408; Sept. 1; Sp. p. 350; Dr. p. 74; Gaz. vol. 136; p. 54.
Rosati, T., Florence, Italy, assignor of one-fourth to F. R. Sari and B. G. Giuliani, Washington, D. C. Electric bell. No. 898,686; Sept. 15; Sp. p. 2915; Dr. p. 624; Gaz. vol. 136; p. 530.
Rose, G. F. (See Thompson, J., assignor.)
Rose, Rodgers & Rose. (See Rodgers, L. J., assignor.)
Rosellus, L. (See Meyer, Rosellus, and Wimmer.)
Rosemergey, J., Sr. (See Rosemergey, J. T. A., assignor.)
Rosemergey, J. T. A., assignor of one-half to J. Rosemergey, Sr., Calumet, Mich. Advertising device. No. 898,993; Sept. 15; Sp. p. 3461; Dr. p. 741; Gaz. vol. 136; p. 629.
Rosenbaum, M., and A. Hall, Melrose, Mass. Neck-protecting garment. No. 899,907; Sept. 29; Sp. p. 5300; Dr. p. 1133; Gaz. vol. 136; p. 990.
Rosenberg, H. M., Atlanta, Ga. Car-coupling. No. 899,438; Sept. 22; Sp. p. 4311; Dr. p. 926; Gaz. vol. 136; p. 799.

Rosenberg, W. von, Jr., Austin, Tex. Fishing-float. No. 898,784; Sept. 15; Sp. p. 3091; Dr. p. 662; Gaz. vol. 136; p. 501.
Rosenbluth, E. M., Philadelphia, Pa. Acetylene-gas generator. No. 899,809; Sept. 29; Sp. p. 5109; Dr. pp. 1092–3; Gaz. vol. 136; p. 959.
Rosenfeld, J., Detroit, Mich. Glove. No. 897,306; Sept. 1; Sp. p. 68; Dr. p. 17; Gaz. vol. 136; p. 15.
Rosenfeld, J., Detroit, Mich. Glove. No. 897,409; Sept. 1; Sp. p. 352; Dr. p. 74; Gaz. vol. 136; p. 54.
Rosenstein, F., Los Angeles, Cal. Filter. No. 899,075; Sept. 22; Sp. p. 3619; Dr. p. 775; Gaz. vol. 136; p. 683.
Ross, D. C., administrator. (See Ross, P. J.)
Ross, J., Landlock, Alaska. Ore-chute. No. 899,076; Sept. 22; Sp. p. 3620; Dr. p. 775; Gaz. vol. 136; p. 683.
Ross, O. A., Chicago, Ill. Carbon-holder. No. 897,410; Sept. 1; Sp. p. 353; Dr. p. 74; Gaz. vol. 136; p. 54.
Ross, P. J., deceased, Trevor, Wis., D. C. Ross, administrator, Rydner, N. D. Tire-inflater for automobiles. No. 899,620; Sept. 29; Sp. p. 4714; Dr. p. 1009; Gaz. vol. 136; p. 897.
Rosson, W. L., Milford, Tex. Device for killing boll-weevils. No. 897,850; Sept. 1; Sp. p. 1238; Dr. p. 265; Gaz. vol. 136; p. 196.
Rost, J., Milwaukee, Wis. Pin and guide for molding-flasks. No. 898,929; Sept. 15; Sp. p. 3346; Dr. p. 718; Gaz. vol. 136; p. 609.
Rosvold, J. A., Nome, Alaska. Wave-breaker. No. 898,266; Sept. 8; Sp. p. 2067; Dr. p. 444; Gaz. vol.136; p. 361.
Roth, H. R., South Allentown, Pa. Rail-joint. No. 897,851; Sept. 1; Sp. p. 1240; Dr. pp. 265–6; Gaz. vol. 136; p. 197.
Rothong, E., assignor to Jordan Machine Company, Philadelphia, Pa. Automatic glue feeder and spreader for box-machines. No. 899,621; Sept. 29; Sp. p. 4716; Dr. p. 1010; Gaz. vol. 136; p. 897.
Rothweiler, H. N., Seattle, Wash. Wrench. No. 898,267; Sept. 8; Sp. p. 2083; Dr. p. 444; Gaz. vol. 136; p. 361.
Rotter, M., assignor to Allis-Chalmers Company, Milwaukee, Wis. Blade-fastening. No. 899,622; Sept. 29; Sp. p. 4718; Dr. p. 1010; Gaz. vol. 136; p. 898.
Röttgen, J., Klettenberg, and J. Frey, Sülz, near Cologne, Germany. Exposure-plate for copying apparatus. No. 899,908; Sept. 29; Sp. p. 5301; Dr. p. 1133; Gaz. vol. 136; p. 990.
Rounds, E. L. (See Rounds, L. L., assignor.)
Rounds, L. L., Orange, N. J., assignor to E. L. Rounds, New York, N. Y. Harness-buckle. No. 899,327; Sept. 22; Sp. p. 4123; Dr. p. 882; Gaz. vol. 136; p. 765.
Rourke, F. O., Shawnee, Ohio. Plumb and level. No. 897,411; Sept. 1; Sp. p. 355; Dr. p. 75; Gaz. vol. 136; p. 54.
Row, P. W., Hillsboro, Ill. Rail-joint. No. 898,006; Sept. 8; Sp. p. 1580; Dr. p. 337; Gaz. vol. 136; p. 280.
Rowbotham, J., Center Square, Pa. Apparatus for discharging packages from moving vehicles. No. 897,412; Sept. 1; Sp. p. 357; Dr. p. 75; Gaz. vol. 136; p. 55.
Rowe, D. M., Oglesby, Ill. Egg-crate. No. 898,007; Sept. 8; Sp. p. 1581; Dr. p. 337; Gaz. vol. 136; p. 281.
Rowe, J. W., Somerville, Mass., assignor to Norwall Manufacturing Company, New York, N. Y. Relief-valve. No. 899,077; Sept. 22; Sp. p. 3622; Dr. p. 776; Gaz. vol. 136; p. 683.
Royal Typewriter Company. (See Hess, E. B., assignor.)
Royce, H. A. (See Greenlaw and Royce.)
Royden Marble Machinery Company. (See Peirce, J. R., assignor.)
Royer, G. F., Wilkes-Barre, Pa. Flexible pipe. No. 899,623; Sept. 29; Sp. p. 4719; Dr. p. 1011; Gaz. vol. 136; p. 898.
Rugg, D., Catskill, N. Y. Automatic wrench. No. 897,665; Sept. 1; Sp. p. 861; Dr. p. 184; Gaz. vol. 136; p. 138.
Rugh, H. O., Sandwich, Ill. Signaling-circuit. No. 897,413; Sept. 1; Sp. p. 360; Dr. p. 75; Gaz. vol. 136; p. 55.
Rugh, H. O., Sandwich, Ill. Selective signaling system. No. 899,564; Sept. 29; Sp. p. 4587; Dr. p. 986; Gaz. vol. 136; p. 879.
Rumpf, G. (See Leeds and Rumpf.)
Rundle, T. W. (See Ware and Rundle.)
Runyon, A., Muscatine, Iowa. Vending-machine. No. 898,930; Sept. 15; Sp. p. 3348; Dr. pp. 718–19; Gaz. vol. 136; p. 609.
Rupp, L., Brooklyn, N. Y. Fleshing-machine. No. 899,253; Sept. 22; Sp. p. 3936; Dr. p. 840; Gaz. vol. 136; p. 735.
Rush, J. M., Neosho, Mo. Car-door construction. No. 899,909; Sept. 29; Sp. p. 5302; Dr. pp. 1133–4; Gaz. vol. 136; p. 990.
Russ, F. A., *et al.* (See Goerdes, F. W. assignor.)
Russell, A., and J. D. Dinsmoor, St. Marys, W. Va. Reversing mechanism. No. 898,268; Sept. 8; Sp. p. 2089; Dr. p. 444; Gaz. vol. 136; p. 362.
Russell, C. E., Cambridge, assignor to Stone Telegraph and Telephone Company, Boston, Mass. Oscillation-detector. No. 899,264, Sept. 22; Sp. p. 4021; Dr. pp. 858–9; Gaz. vol. 136; p. 746.
Russell & Erwin Manufacturing Company. (See Voight, H. G., assignor.)
Russell & Erwin Manufacturing Company. (See Voight and Caley, assignors.)
Russell, W. A., Kent, Ohio. Hand-controlled power-operative meat-saw. No. 898,067; Sept. 8; Sp. p. 1713; Dr. p. 363; Gaz. vol. 136; p. 300.
Rütgers-werke Actiengesellschaft, Firm of. (See Köhler, H., assignor.)
Ruthenburg, M., Lockport, N. Y. Metal-rolling process and mill. No. 897,931; Sept. 8; Sp. p. 1427; Dr. p. 305; Gaz. vol. 136; p. 256.
Ruthenburg, M., Philadelphia, Pa. Smelting iron. No. 898,068; Sept. 8; Sp. p. 1714; Gaz. vol. 136; p. 300.
Ruthenburg, M., Lockport, N. Y. Electrolytic apparatus. No. 898,785; Sept. 15; Sp. p. 3092; Dr. p. 662; Gaz. vol. 136; p. 502.
Rutherford, M. B. (See Talley, B. F., assignor.)
Ryan, J. J., Memphis, Tenn. Shore-anchor. No. 897,787; Sept. 1; Sp. p. 1103; Dr. p. 237; Gaz. vol. 136; p. 176.
Ryerson, E. J., Jackson, Mich. Ornamental fabric and producing the same. No. 898,269; Sept. 8; Sp. p. 2091; Dr. p. 445; Gaz. vol. 136; p. 362.
S. R. Dresser Manufacturing Company. (See Clark, J., assignor.)
S. R. Smythe Company. (See Smythe and Shinn, assignors.)
Sachs Company. (See Sachs, J., assignor.)
Sachs, J., assignor to Sachs Company, Hartford, Conn. Safety-fuse. No. 897,852; Sept. 1; Sp. p. 1241; Dr. p. 266; Gaz. vol. 136; p. 197.
Saecker, H. G., assignor to Appleton Machine Company, Appleton, Wis. Wood-splitting machine. No. 899,328; Sept. 22; Sp. p. 4124; Dr. p. 882; Gaz. vol. 136; p. 765.
Sager, J. M., Burtlake, Mich. Dust-trap for hot-air furnaces. No. 899,810; Sept. 29; Sp. p. 5112; Dr. p. 1093; Gaz. vol. 136; p. 959.
Sahulka, J., Vienna, Austria-Hungary. Electromotor controlling and operating system for electric railways and power plants. No. 899,189; Sept. 22; Sp. p. 3852; Dr. p. 824; Gaz. vol. 136; p. 721.
Sallee, F., Kildare, Okla. Railway-switch. No. 898,687; Sept. 15; Sp. p. 2918; Dr. p. 625; Gaz. vol. 136; p. 530.
Salmon, H., Cassopolis, Mich. Heating system. No. 899,078; Sept. 22; Sp. p. 3624; Dr. p. 776; Gaz. vol. 136; p. 684.
Salpetersäure-Industrie-Gesellschaft, G. m. b. H., Firm of. (See Pauling, H., assignor.)
Sampere, J., New York, N. Y., assignor to Regina Company, Rahway, N. J. Door for automatic pianos. No. 898,688; Sept. 15; Sp. p. 2919; Dr. p. 625; Gaz. vol. 136; p. 531.
Sampson, R., Montreal, Quebec, Canada. Tire-plug. No. 897,932; Sept. 8; Sp. p. 1429; Dr. p. 305; Gaz. vol. 136; p. 256.
Samson Cordage Works. (See Lundgren, J., assignor.)
Samson Cordage Works. (See Tolman and Pratt, assignors.)
Sanders, E. A., Oakland, Cal. Metal window-sash. No. 897,414; Sept. 1; Sp. p. 362; Dr. p. 76; Gaz. vol. 136; p. 56.
Sandusky, H. C., Newcastle, Ind. Rail-joint. No. 899,190; Sept. 22; Sp. p. 3855; Dr. p. 824; Gaz. vol. 136; p. 722.
Sanitary Hair Goods Co. (See Stephens, B. E., assignor.)
Santa, G., San Francisco, Cal. Mining-machine. No. 897,415; Sept. 1; Sp. p. 364; Dr. p. 76; Gaz. vol. 136; p. 56.
Sargent & Company. (See Carroll, W. J., assignor.)
Sargent & Company. (See Collins, H. G., assignor.)
Sargent and Company. (See Shaw, J. H., assignor.)
Sarl, F. R., *et al.* (See Rosati, T., assignor.)
Sarvalla, M., and W. W. Smith, De Kalb, Ill. Jar-opener. No. 899,683; Sept. 29; Sp. p. 4830; Dr. p. 1034; Gaz. vol. 136; p. 916.
Saunders, J., East McKeesport, Pa. Packing device. No. 898,786; Sept. 15; Sp. p. 3094; Dr. p. 663; Gaz. vol. 136; p. 562.
Sawyer, F. L., Americus, Ga. Hopper-valve. No. 898,689; Sept. 15; Sp. p. 2920; Dr. p. 625; Gaz. vol. 136; p. 531.
Sawyer, W. W., assignor to Bates Machine Company, New York, N. Y. Engraving-machine. No. 898,141; Sept. 8; Sp. p. 1856; Dr. pp. 396–7; Gaz. vol. 136; p. 323.
Sawyers, D. A., Unionville, Iowa. Wringer. No. 898,787; Sept. 15; Sp. p. 3095; Dr. p. 663; Gaz. vol. 136; p. 562.
Sayer, R. C., Redland, Bristol, England. Vehicle and junction and crossing therefor. No. 898,008; Sept. 8; Sp. p. 1582; Dr. pp. 337–9; Gaz. vol. 136; p. 281.
Sayre, E. P., Montclair, N. J. Labeling-machine. No. 897,933; Sept. 8; Sp. p. 1431; Dr. p. 306; Gaz. vol. 136; p. 256.
Sayre, J. J., Cincinnati, Ohio. Printing device. No. 899,624; Sept. 29; Sp. p. 4721; Dr. p. 1011; Gaz. vol. 136; p. 898.
Sborigi, L., New York, N. Y. Frame. No. 899,329; Sept. 22; Sp. p. 4126; Dr. p. 883; Gaz. vol. 136; p. 765.
Scarbrough, W. A. (See Coker and Scarbrough.)
Schaaff, J. T., *et al.*, trustees. (See Cahill, T., assignor.)
Schaal, K., Seward, Nebr. Vegetable-peeler. No. 898,931; Sept. 15; Sp. p. 3351; Dr. p. 719; Gaz. vol. 136; p. 609.
Schaarschmidt, A., assignor to Society of Chemical Industry in Basle, Basel, Switzerland. Orange to orange-yellow vat dye and making same. No. 899,845; Sept. 29; Sp. p. 5185; Gaz. vol. 136; p. 971.
Schefft, M. H. (See McGrath and Schefft.)
Scheib, L., Jr. (See Scheib, L., Sr., and L., Jr.)
Scheib, L., Sr., and L., Jr., Kaiserslautern, Germany. Central-buffer claw-coupling. No. 899,565; Sept. 29; Sp. p. 4593; Dr. p. 986; Gaz. vol. 136; p. 879.
Scheidt, H. J., vom, Buffalo, N. Y. Truck. No. 897,853; Sept. 1; Sp. p. 1243; Dr. p. 266; Gaz. vol. 136; p. 197.

Scheif, C. A., Pittsburg, Pa. Curtain-fixture. No. 898,788; Sept. 15; Sp. p. 3098; Dr. p. 663; Gaz. vol. 136; p. 563.
Scherl, R., Berlin, Germany. Support for monotrack-vehicles. No. 897,558; Sept. 1; Sp. p. 655; Dr. p. 137; Gaz. vol. 136; p. 102.
Scherr, F., Roosevelt, N. Y., and F. Darkin, Passaic, N. J. Machine for preparing vegetable fibers. No. 899,846; Sept. 29; Sp. p. 5186; Dr. p. 1111; Gaz. vol. 136; p. 971.
Schiavone, M., Ferrandina, Italy. Controlling air-ships. No. 897,666; Sept. 1; Sp. p. 862; Dr. pp. 184–6; Gaz. vol. 136; p. 138.
Schickerling, A., New York, N. Y. Loving-cup. No. 898,142; Sept. 8; Sp. p. 1858; Dr. p. 397; Gaz. vol. 136; p. 323.
Schierloh, J. D., Jersey City, N. J. Fire-nozzle attachment for valves. No. 899,330; Sept. 22; Sp. p. 4127; Dr. p. 883; Gaz. vol. 136; p. 766.
Schiffers, E. C. (See Meyer and Schiffers.)
Schlafly, J. H., assignor to Canton Culvert Company, Canton, Ohio. Culvert and connection. No. 897,416; Sept. 1; Sp. p. 366; Dr. p. 77; Gaz. vol. 136; p. 57.
Schlafly, J. H., assignor to E. A. Langenbach, Canton, Ohio. Connection for culvert-sections. No. 898,510; Sept. 15; Sp. p. 2564; Dr. p. 549; Gaz. vol. 136; p. 473.
Schlafly, J. H., assignor to Canton Culvert Company, Canton, Ohio. Culvert. No. 900,039; Sept. 29; Sp. p. 5601; Dr. p. 1195; Gaz. vol. 136; p. 1033.
Schleicher, W. A., Cleveland, Ohio. Snap-hook. No. 898,789; Sept. 15; Sp. p. 3099; Dr. p. 664; Gaz. vol. 136; p. 563.
Schlenter, J. G., Toledo, Ohio. Clothes-line fastener. No. 899,566; Sept. 29; Sp. p. 4594; Dr. p. 987; Gaz. vol. 136; p. 880.
Schlüter, T., Jr., Foerderstedt, near Magdeburg, Germany. Production of a digestible flour from bran. No. 897,854; Sept. 1; Sp. p. 1244; Gaz. vol. 136; p. 197.
Schmidl, S., Brünn, Austria-Hungary. Seal-lock. No. 897,494; Sept. 1; Sp. p. 517; Dr. pp. 109–10; Gaz. vol. 136; p. 82.
Schmidt, J., Frankfort-on-the-Main, Germany. Illuminating apparatus. No. 898,607; Sept. 15; Sp. p. 2752; Dr. p. 588; Gaz. vol. 136; p. 504.
Schmidt, J. B., Scribner, assignor of one-half to West Brothers, Wisner, Nebr. Speed-regulator for gas-engines. No. 899,265; Sept. 22; Sp. p. 4023; Dr. p. 859; Gaz. vol. 136; p. 746.
Schmidt, P. F., Jersey City Heights, N. J. Non-refillable bottle. No. 897,934; Sept. 8; Sp. p. 1436; Dr. p. 307; Gaz. vol. 136; p. 257.
Schmidt, W. F., Hastings-upon-Hudson, N. Y. Saw-clamp. No. 897,788; Sept. 1; Sp. p. 1105; Dr. p. 237; Gaz. vol. 136; p. 177.
Schmitt, O., Davenport, Wash. Lunch-box. No. 898,143; Sept. 8; Sp. p. 1858; Dr. p. 397; Gaz. vol. 136; p. 323.
Schmittner, F. J., Germania, Pa. Trip-stake and bolster for logging-cars. No. 900,040; Sept. 29; Sp. p. 5603; Dr p. 1195; Gaz. vol. 136; p. 1033.
Schneider, A. M., New York, N. Y. Skirt. No. 898,511; Sept. 15; Sp. p. 2565; Dr. p. 549; Gaz. vol. 136; p. 474.
Schneider, C., Jersey City Heights, N. J. Extension-roll for silk and other looms. No. 898,270; Sept. 8; Sp. p. 2093; Dr. p. 445; Gaz. vol. 136; p. 362.
Schneider, E. A., Custer, Okla. Match-safe. No. 897,789; Sept. 1; Sp. p. 1106; Dr. p. 237; Gaz. vol. 136; p. 177.
Schneider, F., and G. B. Conrath, Erie, Pa. Engine. No. 899,625; Sept. 29; Sp. p. 4723; Dr. pp. 1011–13; Gaz. vol. 136; p. 899.
Schnug, J. J. B., Saginaw, Mich. Stovepipe-drum. No. 898,932; Sept. 15; Sp. p. 3352; Dr. pp. 719–20; Gaz. vol. 136; p. 610.
Schoeppl, J. F. (See Haugk and Schoeppl.)
Schoeppl, J. F., Baltimore, Md. Hook and eye. No. 898,069; Sept. 8; Sp. p. 1716; Dr. p. 364; Gaz. vol. 136; p. 300.
Schofield, H., Sheffield, England. Grate for the furnaces of steam-boilers. No. 899,910; Sept. 29; Sp. p. 5304; Dr. p. 1134; Gaz. vol. 136; p. 990.
Scholes, D. R. (See Noyes and Scholes.)
Schön, L., Vienna, Austria-Hungary. Safety device for the mouths of vessels containing volatile combustible liquids. No. 899,911; Sept. 29; Sp. p. 5305; Dr. p. 1134; Gaz. vol. 136; p. 991.
Schouboe, J. P. (See Wonsmos and Schouboe.)
Schreber, K. E., Greifswald, Germany. Working explosive-engines. No. 898,512; Sept. 15; Sp. p. 2566; Dr. p. 549; Gaz. vol. 136; p. 474.
Schreidt, F. (See Thompson, G., assignor.)
Schriver, F. R., Wilkinsburg, Pa. Jar-lid clamp. No. 897,790; Sept. 1; Sp. p. 1107; Dr. p. 237; Gaz. vol. 136; p. 177.
Schubert, G., Fort Worth, Tex. Safety device or saw-guard. No. 899,567; Sept. 29; Sp. p. 4595; Dr. p. 987; Gaz. vol. 136; p. 880.
Schulte, F. C., St. Louis, Mo. Rotary setting-up keg form and table. No. 899,191; Sept. 22; Sp. p. 3856; Dr. p. 825; Gaz. vol. 136; p. 722.
Schulthess, W., Paris, France. Apparatus for the production of hydrate of lime. No. 897,495; Sept. 1; Sp. p. 519; Dr. pp. 110–11; Gaz. vol. 136; p. 82.
Schultz, C. P., Munich, Germany. Tooth-cleaning device. No. 899,626; Sept. 29; Sp. p. 4734; Dr. p. 1013; Gaz. vol. 136; p. 899.
Schultz, F. H., Treynor, Iowa. Nailing-machine. No. 899,767; Sept. 29; Sp. p. 5011; Dr. p. 1074; Gaz. vol. 136; p. 944.
Schultz, G., Munich, Germany. Nitrating solvent naphtha. No. 898,144; Sept. 8; Sp. p. 1859; Gaz. vol. 136; p. 323.
Schultz, J. F., Brooklyn, N. Y. Boot and shoe. No. 898,145; Sept. 8; Sp. p. 1861; Dr. p. 398; Gaz. vol. 136; p. 324.
Schulze, E. H., Kansas City, Mo. Street-car fender. No. 898,146; Sept. 8; Sp. p. 1863; Dr. p. 398; Gaz. vol. 136; p. 324.
Schum, A., Mariah Hill, Ind. Pressure-regulator. No. 899,912; Sept. 29; Sp. p. 5306; Dr. p. 1135; Gaz. vol. 136; p. 991.
Schupinsky, A. A., Milwaukee, Wis. Chimney cap and ventilator. No. 898,790; Sept. 15; Sp. p. 3100; Dr. p. 664; Gaz. vol. 136; p. 563.
Schwan, J., New York, N. Y. Sound-reproducing machine. No. 898,791; Sept. 15; Sp. p. 3101; Dr. p. 664; Gaz. vol. 136; p. 563.
Schwank, C. W., Kansas City, Mo. Disk-record attachment for sound-reproducing machines. No. 898,792; Sept. 15; Sp. p. 3102; Dr. p. 665; Gaz. vol. 136; p. 564.
Schwanke, G. A., Brunswick, Nebr. Lid-holder. No. 899,627; Sept. 29; Sp. p. 4734; Dr. p. 1013; Gaz. vol. 136; p. 899.
Schwartz, W. S., Amity, Oreg. Lemon-squeezer. No. 898,690; Sept. 15; Sp. p. 2922; Dr. p. 626; Gaz. vol. 136; p. 531.
Schwarz, O., Granger, Tex. Cotton-topper. No. 897,935; Sept. 8; Sp. p. 1438; Dr. pp. 307–8; Gaz. vol. 136; p. 257.
Scott, C. D., Topeka, Kans. Automatic weighing-machine. No. 897,855; Sept. 1; Sp. p. 1246; Dr. pp. 266–9; Gaz. vol. 136; p. 198.
Scott, C. N., Buffalo, assignor to International Steam Pump Company, New York, N. Y. Internal-combustion engine. No. 898,271; Sept. 8; Sp. p. 2094; Dr. pp. 445–6; Gaz. vol. 136; p. 363.
Scott, E. A. (See Johnson and Scott.)
Scott, J. F., and A. B. Curtis, assignors of one-third to J. H. Smith, Toledo, Ohio. Box and pail fastener. No. 898,994; Sept. 15; Sp. p. 3462; Dr. p. 742; Gaz. vol. 136; p. 630.
Scott, J. M., Racine, Wis., assignor to O. R. Barnett, Chicago, Ill. Rail-stay. No. 897,307; Sept. 1; Sp. p. 70; Dr. p. 18; Gaz. vol. 136; p. 15.
Scott, L. C., Minneapolis, Minn. Stovepipe. No. 899,135; Sept. 22; Sp. p. 3733; Dr. p. 800; Gaz. vol. 136; p. 704.
Scott, R. W., Leeds Point, N. J., assignor of one-half to L. N. D. Williams, Ogontz, Pa. Narrowed-knitted web, hosiery made therefrom, and making same. No. 897,496; Sept. 1; Sp. p. 522; Dr. p. 111; Gaz. vol. 136; p. 83.
Scott, R. W., Leeds Point, N. J., assignor of one-half to L. N. D. Williams, Ogontz, Pa. Ribbed knitted web. No. 899,439; Sept. 22; Sp. p. 4312; Dr. p. 926; Gaz. vol. 136; p. 799.
Scott, W. W., Montreal, Quebec, Canada. Floor-planing tool. No. 898,793; Sept. 15; Sp. p. 3106; Dr. p. 665; Gaz. vol. 136; p. 564.
Scovill Manufacturing Company. (See Hyde, T. R., Jr., assignor.)
Scrymgour, W. H., London, England. Wheel for vehicles. No. 899,331; Sept. 22; Sp. p. 4129; Dr. p. 883; Gaz. vol. 136; p. 766.
Scrymgour, W. H., London, England. Spring-wheel for vehicles. No. 899,332; Sept. 22; Sp. p. 4130; Dr. p. 884; Gaz. vol. 136; p. 766.
Scudder, I. C., New York, N. Y. Vehicle-wheel. No. 899,333; Sept. 22; Sp. p. 4132; Dr. p. 884; Gaz. vol. 136; p. 767.
Seabolt, F. J., Schenectady, N. Y., assignor to General Electric Company. Starting and speed-regulating rheostat. No. 897,497; Sept. 1; Sp. p. 525; Dr. p. 111; Gaz. vol. 136; p. 83.
Seeber, J. A., Portland, Oreg. Vibrating bed. No. 897,791; Sept. 1; Sp. p. 1108; Dr. p. 238; Gaz. vol. 136; p. 177.
Seeberger, C. D., Yonkers, N. Y. Elevator. No. 897,856; Sept. 1; Sp. p. 1258; Dr. pp. 269–70; Gaz. vol. 136; p. 198.
Seeberger, C. D., Yonkers, N. Y. Elevator. No. 898,009; Sept. 8; Sp. p. 1587; Dr. p. 339; Gaz. vol. 136; p. 281.
Seeberger, C. D., Yonkers, N. Y. Conveyer. No. 898,794; Sept. 15; Sp. p. 3107; Dr. pp. 665–6; Gaz. vol. 136; p. 565.
Seeberger, C. D., Yonkers, N. Y. Conveyer. No. 900,000; Sept. 29; Sp. p. 5509; Dr. pp. 1174–5; Gaz. vol. 136; p. 1019.
Seeland, J. C., Enumclaw, Wash. Wire-lifter. No. 898,010; Sept. 8; Sp. p. 1592; Dr. p. 340; Gaz. vol. 136; p. 282.
Seemen, E. von, Rheinfelden, Switzerland. Evaporator. No. 898,147; Sept. 8; Sp. p. 1868; Dr. p. 398; Gaz. vol. 136; p. 324.
Seewald, C., Williamsport, Pa. Vehicle-wheel. No. 898,608; Sept. 15; Sp. p. 2753; Dr. pp. 588–9; Gaz. vol. 136; p. 505.
Segschneider, G., Yonkers, N. Y. Machine for welting and rounding hat-brims. No. 900,001; Sept. 29; Sp. p. 5515; Dr. pp. 1175–6; Gaz. vol. 136; p. 1020.
Seibert, J. W., assignor of one-half to E. Lewis, Washington, Pa. Trolley-wheel. No. 899,474; Sept. 22; Sp. p. 4380; Dr. p. 940; Gaz. vol. 136; p. 811.
Seim, F., Louisville, Ky. Butter granulator and purifier. No. 898,011; Sept. 8; Sp. p. 1593; Dr. p. 340; Gaz. vol. 136; p. 282.
Seim, F., Louisville, Ky. Granulating and purifying butter. No. 898,070; Sept. 8; Sp. p. 1718; Dr. p. 364; Gaz. vol. 136; p. 301.
Seltzman, I., New York, N. Y. Hat or cap. No. 899,334; Sept. 22; Sp. p. 4134; Dr. p. 885; Gaz. vol. 136; p. 767.
Self, J. D., Hamilton, Ga. Anchorage for telegraph-poles. No. 897,417; Sept. 1; Sp. p. 368; Dr. p. 77; Gaz. vol. 136; p. 57.
Selg, O., New York, N. Y. Fan. No. 899,684; Sept. 29; Sp. p. 4832; Dr. p. 1034; Gaz. vol. 136; p. 916.
Seneca Camera Manufacturing Company. (See Goddard, J., assignor.)
Seng Company. (See Franks, O. G., assignor.)
Sepulchre, F., Liege, Belgium. Apparatus for removing solid and liquid particles from gases. No. 899,628; Sept. 29; Sp. p. 4736; Dr. p. 1013; Gaz. vol. 136; p. 899.
Settle, T., Philadelphia, Pa. Hinge-support. No. 898,933; Sept. 15; Sp. p. 3353; Dr. p. 720; Gaz. vol. 136; p. 610.

Seward, G. O., and F. von Kügelgen, Holcombs Rock, Va., assignors, by mesne assignments, to Electro Metallurgical Company. Electric-furnace process. No. 898,691; Sept. 15; Sp. p. 2925; Dr. p. 626; Gaz. vol. 136; p. 532.
Seyfried, E., Philadelphia, Pa. Hat-fastener. No. 899,685; Sept. 29; Sp. p. 4832; Dr. p. 1035; Gaz. vol. 136; p. 916.
Seymour-Jones, A., Pendower, Wrexham, England, assignor to Turner Tanning Machinery Company, Peabody, Mass. Shaving-machine. No. 900,002; Sept. 29; Sp. p. 5518; Dr. p. 1176; Gaz. vol. 136; p. 1020.
Shackleford, G. C. (See Bray and Shackleford.)
Shadall, C. E., assignor of one-half to F. L. Horneffer, Milwaukee, and F. H. Durbin, Wauwatosa, Wis. Internal-combustion engine. No. 899,136; Sept. 22; Sp. p. 3734; Dr. p. 800; Gaz. vol. 136; p. 704.
Shank, S. H., Chicago, Ill. Lock. No. 899,266; Sept. 22; Sp. p. 4024; Dr. pp. 859–60; Gaz. vol. 136; p. 746.
Shannon, M. J., Steelton, Pa. Charging apparatus for blast-furnaces. No. 898,012; Sept. 8; Sp. p. 1595; Dr. p. 340; Gaz. vol. 136; p. 282.
Shannon, M. J., Steelton, Pa. Charging apparatus for blast-furnaces. No. 898,071; Sept. 8; Sp. p. 1719; Dr. pp. 364–5; Gaz. vol. 136; p. 301.
Sharon, J., Canaseraga, N. Y. Stove-base. No. 899,335; Sept. 22; Sp. p. 4135; Dr. p. 885; Gaz. vol. 136; p. 767.
Sharp, E. P., Buffalo, N. Y. Trolley-wheel. No. 897,667; Sept. 1; Sp. p. 809; Dr. p. 186; Gaz. vol. 136; p. 138.
Shaw, A. L., Corinne, Utah. Wrench. No. 899,336; Sept. 22; Sp. p. 4137; Dr. p. 886; Gaz. vol. 136; p. 767.
Shaw, H. C. Glenshaw, Pa. Mold. No. 898,795; Sept. 15; Sp. p. 3109; Dr. p. 666; Gaz. vol. 136; p. 565.
Shaw, H. R., Rosseau, Ontario, Canada. Power-transmission universal joint. No. 899,913; Sept. 29; Sp. p. 5308; Dr. p. 1135; Gaz. vol. 136; p. 991.
Shaw, J., Dauphin, Manitoba, Canada. Rotary engine. No. 898,272; Sept. 8; Sp. p. 2097; Dr. pp. 446–7; Gaz. vol. 136; p. 363.
Shaw, J. H., assignor to Sargent and Company, New Haven, Conn. Food-chopper. No. 899,702; Sept. 29; Sp. p. 4859; Dr. p. 1041; Gaz. vol. 136; p. 921.
Sheahan, C. J., Batavia, Ill. Boiler attachment. No. 899,192; Sept. 22; Sp. p. 3857; Dr. p. 825; Gaz. vol. 136; p. 722.
Sheehan, R. M., Sacramento, Cal. Table. No. 899,267; Sept. 22; Sp. p. 4028; Dr. p. 860; Gaz. vol. 136; p. 747.
Sheldon, S. B., Buffalo, N. Y. Refining iron. No. 898,513; Sept. 15; Sp. p. 2569; Gaz. vol. 136; p. 474.
Shepard, A. J., College Corner, assignor of one-third to H. Shepard, Hamilton, Ohio. Drain-inlet guard. No. 899,568; Sept. 29; Sp. p. 4596; Dr. p. 987; Gaz. vol. 136; p. 880.
Shepard, C. H., New York, assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Type-writing machine. No. 897,308; Sept. 1; Sp. p. 71; Dr. p. 18; Gaz. vol. 136; p. 16.
Shepard, F. P., Edmond, Okla., assignor, by mesne assignments, to Copyograph Manufacturing Company. Copy-holder. No. 898,692; Sept. 15; Sp. p. 2927; Dr. p. 626; Gaz. vol. 136; p. 532.
Shepard, H. (See Shepard, A. J., assignor.)
Shepard, M., Wayne, Mich. Egg-carrier. No. 898,514; Sept. 15; Sp. p. 2571; Dr. p. 549; Gaz. vol. 136; p. 474.
Shepherd, E. S. (See Hauser and Shepherd.)
Shepherd, J. (See Nolen and Shepherd.)
Shepherd, J. E. (See Nolen and Shepherd, assignors.)
Shepherd, M. L., assignor of one-half to D. M. Smith, Newark, Ohio. Railway signal system. No. 898,693; Sept. 15; Sp. p. 2929; Dr. p. 627; Gaz. vol. 136; p. 533.
Sheppard, J. M., Crowell, Tex. Cotton-cleaner and gin-feeder. No. 898,072; Sept. 8; Sp. p. 1721; Dr. pp. 365–6; Gaz. vol. 136; p. 301.
Sheret, A., Victoria, British Columbia, Canada. Drain-board bracket. No. 899,337; Sept. 22; Sp. p. 4138; Dr. p. 886; Gaz. vol. 136; p. 768.
Sheridan, A. J., assignor to J. C. Wilson, Kansas City, Mo. Filter. No. 897,418; Sept. 1; Sp. p. 369; Dr. p. 77; Gaz. vol. 136; p. 57.
Sherman, T. H., Traverse City, Mich. Merchandise-ticket. No. 898,694; Sept. 15; Sp. p. 2931; Dr. p. 627; Gaz. vol. 136; p. 533.
Sherrard, W. J., Cotton Gin, Tex. Vegetable-separator. No. 898,515; Sept. 15; Sp. p. 2572; Dr. p. 550; Gaz. vol. 136; p. 475.
Sherwin-Williams Company. (See Ballard, F. W., assignor.)
Shevlin, J. P., Denver, Colo. Water-motor. No. 898,516; Sept. 15; Sp. p. 2573; Dr. p. 550; Gaz. vol. 136; p. 475.
Shields, F. E., Massena, Iowa. Manure-spreader. No. 898,934; Sept. 15; Sp. p. 3355; Dr. pp. 720–1; Gaz. vol. 136; p. 610.
Shields, G., Brooklyn, assignor to Empire Wolverine Manufacturing Company, New York, N. Y. Receptacle. No. 899,338; Sept. 22; Sp. p. 4139; Dr. p. 886; Gaz. vol. 136; p. 768.
Shine, D. J., Las Vegas, Nev. Automatic electrical measuring apparatus. No. 899,193; Sept. 22; Sp. p. 3859; Dr. p. 825; Gaz. vol. 136; p. 722.
Shinn, E. W. (See Smythe and Shinn.)
Shoemaker, H., Jersey City, N. J., assignor to International Telegraph Construction Company. Converter. No. 899,629; Sept. 29; Sp. p. 4736; Dr. p. 1014; Gaz. vol. 136; p. 900.
Shoemaker, L. M., Pittsburg, Pa. Plate-holder. No. 897,668; Sept. 1; Sp. p. 870; Dr. p. 186; Gaz. vol. 136; p. 139.
Shredded Wheat Company. (See Perky, H. D., assignor.)
Shreeve, H. E., Wyoming, N. J., assignor to American Telephone and Telegraph Company. Apparatus for speech transmission. No. 898,073; Sept. 8; Sp. p. 1724; Dr. p. 366; Gaz. vol. 136; p. 302.
Shuman, C. (See Shuman, F. and C.)
Shuman, F., Philadelphia, Pa. Concrete pile and constructing the same. No. 898,517; Sept. 15; Sp. p. 2576; Dr. pp. 550–1; Gaz. vol. 136; p. 475.
Shuman, F. and C., assignors to said F. Shuman, W. Erben, and C. H. Harding, Philadelphia, Pa. Extracting grease and potash salts from wool. No. 899,339; Sept. 22; Sp. p. 4140; Dr. pp. 886–7; Gaz. vol. 136; p. 768.
Shuman, F. and C., assignors to said F. Shuman, W. Erben, and C. H. Harding, Philadelphia, Pa. Apparatus for extracting grease and potash salts from wool. No. 899,440; Sept. 22; Sp. p. 4314; Dr. p. 927; Gaz. vol. 136; p. 800.
Siegel, A., Berlin, Germany, assignor to General Electric Company. Multistage pump for producing a vacuum or compressing gases. No. 897,498; Sept. 1; Sp. p. 527; Dr. p. 112; Gaz. vol. 136; p. 84.
Siegmund, R., assignor to Allis-Chalmers Company, Milwaukee, Wis. Governor. No. 899,569; Sept. 29; Sp. p. 4597; Dr. pp. 987–8; Gaz. vol. 136; p. 880.
Siegmund, R., assignor to Allis-Chalmers Company, Milwaukee, Wis. Centrifugal governor. No. 899,570; Sept. 29; Sp. p. 4601; Dr. p. 988; Gaz. vol. 136; p. 881.
Siegwart, F. J., Pittsburg, Pa. Insulator. No. 897,669; Sept. 1; Sp. p. 871; Dr. p. 186; Gaz. vol. 136; p. 139.
Siemens & Halske, A. G. (See Tanke, E., assignor.)
Signor, R. L. (See Hill, J., assignor.)
Silger, C., and I. Deatherage, Duluth, Minn. Cigar-banding device. No. 898,273; Sept. 8; Sp. p. 2102; Dr. p. 447; Gaz. vol. 136; p. 364.
Silin, N. (See Logue, T. D., assignor.)
Sill, S. J., assignor of one-third to H. H. Hewitt, Buffalo, N. Y. Vulcanizing-mandrel for rubber hose. No. 897,309; Sept. 1; Sp. p. 75; Dr. p. 18; Gaz. vol. 136; p. 16.
Silverman, J. (See Bartlett, M. J., assignor.)
Silverston, A. R., assignor of one-half to W. W. Plankinton, Milwaukee, Wis. Air-ship. No. 900,041; Sept. 29; Sp. p. 5605; Dr. pp. 1196–7; Gaz. vol. 136; p. 1034.
Silvey, G. F., assignor of five-eighths to S. D. and S. W. Montgomery, Alexandria, Ind. Gas-generator. No. 897,792; Sept. 1; Sp. p. 1109; Dr. p. 238; Gaz. vol. 136; p. 178.
Simplex Railway Appliance Company. (See Bauer, E. H., assignor.)
Simpson, L. G., Rochester, N. Y. Paring-machine. No. 899,340; Sept. 22; Sp. p. 4144; Dr. p. 887; Gaz. vol. 136; p. 769.
Simpson, R. D., assignor to Main Automatic Mailing Machine Company, Columbus, Ohio. Mailing or stamping machine. No. 898,609; Sept. 15; Sp. p. 2754; Dr. p. 589; Gaz. vol. 136; p. 505.
Simpson, R. D., assignor to W. T. Wells, Columbus, Ohio. Coin-controlled vending-machine. No. 898,995; Sept. 15; Sp. p. 3463; Dr. p. 742; Gaz. vol. 136; p. 630.
Simpson, W., Quincy, and W. C. Bray, Newton, assignors to Tubular Rivet & Stud Company, Boston, Mass. Machine for setting lacing-hooks. No. 899,137; Sept. 22; Sp. p. 3737; Dr. pp. 800–1; Gaz. vol. 136; p. 704.
Siner, J. M., Brooklyn, N. Y. Garment-clasp. No. 897,793; Sept. 1; Sp. p. 1110; Dr. p. 238; Gaz. vol. 136; p. 178.
Singer Manufacturing Company. (See Laubscher, A., assignor.)
Singer Manufacturing Company. (See Towers, C. H., assignor.)
Singleton, L. M., and C. E. Maddox, Alpharetta, Ga. Rotary engine. No. 898,274; Sept. 8; Sp. p. 2103; Dr. p. 447; Gaz. vol. 136; p. 364
Singrün, H. A. (See Audiffren and Singrün.)
Sinkler, E. B., New York, N. Y. Valve-stem case. No. 897,936; Sept. 8; Sp. p. 1440; Dr. p. 308; Gaz. vol. 136; p. 258.
Sinnott, J. (See Purves and Sinnott.)
Sivadie, J. M., Orofino, Idaho. Soil-pulverizer. No. 897,310; Sept. 1; Sp. p. 76; Dr. p. 19; Gaz. vol. 136; p. 16.
Skahen, P. D., Syracuse, N. Y. Malleable handle. No. 897,419; Sept. 1; Sp. p. 370; Dr. pp. 77–8; Gaz. vol. 136; p. 58.
Skinner, F. W., New York, N. Y. Piling and constructing the same. No. 898,013; Sept. 8; Sp. p. 1596; Dr. p. 341; Gaz. vol. 136; p. 283.
Sladek, A., and L. Stone, Paris, Mo.; said Sladek assignor to said Stone. Gas-generator. No. 898,935; Sept. 15; Sp. p. 3357; Dr. p. 721; Gaz. vol. 136; p. 611.
Sleeper, C. F. (See Sleeper, C. T., assignor.)
Sleeper, C. T., Chicago, assignor of four-fifths to C. F. Sleeper, Evanston, Ill. Hasp-lock. No. 899,138; Sept. 22; Sp. p. 3741; Dr. p. 801; Gaz. vol. 136; p. 705.

Sloan, A. K., Jr., Brooklyn, N. Y. Electrical impulse-recorder. No. 897,670; Sept. 1; Sp. p. 872; Dr. p. 187; Gaz. vol. 136; p. 139.
Sloan, F. E., Baltimore, Md. Sheet-metal pulley-casing. No. 898,275; Sept. 8; Sp. p. 2105; Dr. p. 448; Gaz. vol. 136; p. 364.
Sloan, F. E., Baltimore, Md. Making sheet-metal pulley-casings. No. 898,276; Sept. 8; Sp. p. 2106; Dr. p. 448; Gaz. vol. 136; p. 365.
Small, C. T., assignor to Small, Townsend Manufacturing Company, St. Louis, Mo. Can-filling machine. No. 897,420; Sept. 1; Sp. p. 371; Dr. p. 78; Gaz. vol. 136; p. 58.
Small, N. K., Los Angeles, Cal. Hook and eye. No. 898,936; Sept. 15; Sp. p. 3359; Dr. p. 721; Gaz. vol. 136; p. 611.
Small, T., assignor of one-half to C. P. Richter, Camden, N. J. Device for truing bowling-pins. No. 897,937; Sept. 8; Sp. p. 1441; Dr. p. 308; Gaz. vol. 136; p. 258.
Small, Townsend Manufacturing Company. (See Small, C. T., assignor.)
Smith, C. A. (See Maher, M. M., assignor.)
Smith, C. C. (See Campbell, H. G., assignor.)
Smith, C. E., New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 899,847; Sept. 29; Sp. p. 5189; Dr. p. 1112; Gaz. vol. 136; p. 971.
Smith, D. M. (See Shepherd, M. L., assignor.)
Smith, D. W., Oyster Bay, N. Y. Cotter-pin. No. 898,277; Sept. 8; Sp. p. 2108; Dr. p. 448; Gaz. vol. 136; p. 365.
Smith, D. W., Oyster Bay, N. Y. Steering-gear. No. 898,278; Sept. 8; Sp. p. 2109; Dr. p. 449; Gaz. vol. 136; p. 365.
Smith, F. A., Hartford, Conn. Fishing-rod tip. No. 899,914; Sept. 29; Sp. p. 5309; Dr. p. 1135; Gaz. vol. 136; p. 991.
Smith, F. U., McGinnis, Md. Corn-cutting machine. No. 898,518; Sept. 15; Sp. p. 2579; Dr. p. 551; Gaz. vol. 136; p. 476.
Smith, G. S., Washington, D. C. Sketching outfit. No. 897,794; Sept. 1; Sp. p. 1112; Dr. p. 239; Gaz. vol. 136; p. 178.
Smith, J., assignor of one-third to H. M. Carpenter, Hope, N. D. Tying appliance. No. 897,795; Sept. 1; Sp. p. 1114; Dr. p. 239; Gaz. vol. 136; p. 179.
Smith, J. E., Kansas City, Kans. Drum-cylinder motor. No. 899,341; Sept. 22; Sp. p. 4147; Dr. pp. 887–8; Gaz. vol. 136; p. 769.
Smith, J. G., Wahoo, Nebr. Cushion-tire. No. 899,139; Sept. 22; Sp. p. 3743; Dr. p. 802; Gaz. vol. 136; p. 705.
Smith, J. H., *et al.* (See Payne, E. E. M., assignor.)
Smith, J. H. (See Scott and Curtis, assignors.)
Smith, N. A., Grand Rapids, Mich. Box-fastener. No. 898,279; Sept. 8; Sp. p. 2110; Dr. p. 449; Gaz. vol. 136; p. 365.
Smith, O. A., assignor to E. C. Henn, Cleveland, Ohio. Nut-tapping machine. No. 899,915; Sept. 29; Sp. p. 5310; Dr. pp. 1135–6; Gaz. vol. 136; p. 992.
Smith, O. A., assignor to E. C. Henn, Cleveland, Ohio. Tap. No. 899,916; Sept. 29; Sp. p. 5314; Dr. p. 1136; Gaz. vol. 136; p. 992.
Smith, O. A., assignor to E. C. Henn, Cleveland, Ohio. Tapping nut-blanks. No. 900,042; Sept. 29; Sp. p. 5611; Dr. p. 1197; Gaz. vol. 136; p. 1034.
Smith, O. L., Philadelphia, Pa. Display-rack. No. 899,342; Sept. 22; Sp. p. 4150; Dr. p. 888; Gaz. vol. 136; p. 770.
Smith, O. L., Philadelphia, Pa. Display-rack. No. 899,475; Sept. 22; Sp. p. 4382; Dr. p. 940; Gaz. vol. 136; p. 811.
Smith, P. E., McKeesport, Pa. Whirligig. No. 899,686; Sept. 29; Sp. p. 4834; Dr. p. 1035; Gaz. vol. 136; p. 916.
Smith, R. B., *et al.* (See Revoir, B., assignor.)
Smith, W. A., assignor of one-half to S. J. Harris, Union, S. C. Nut-lock. No. 899,630; Sept. 29; Sp. p. 4739; Dr. p. 1014; Gaz. vol. 136; p. 900.
Smith, W. H., Reed City, Mich. Perambulator. No. 899,343; Sept. 22; Sp. p. 4152; Dr. p. 888; Gaz. vol. 136; p. 770.
Smith, W. W. (See Sarvalla and Smith.)
Smith & Wesson. (See Wesson, J. H., assignor.)
Smither, J. W., and H. L. Elder, Nicholasville, Ky. Combined stirrup and spur. No. 899,344; Sept. 22; Sp. p. 4153; Dr. p. 889; Gaz. vol. 136; p. 770.
Smythe, H. E., Oakmont, and E. W. Shinn, assignors to S. R. Smythe Company, Pittsburg, Pa. Charger and stirrer for gas-producers. No. 899,572; Sept. 29; Sp. p. 4605; Dr. pp. 989–90; Gaz. vol. 136; p. 881.
Snell, H. B., Toledo, Ohio. Time-actuated mechanism. No. 899,571; Sept. 29; Sp. p. 4604; Dr. p. 988; Gaz. vol. 136; p. 881.
Snell, H. D., Mawrglen, Pa. Valve. No. 899,079; Sept. 22; Sp. p. 3625; Dr. p. 776; Gaz. vol. 136; p. 684.
Snell, I., Little Falls, N. Y. Vehicle-wheel. No. 898,280; Sept. 8; Sp. p. 2113; Dr. p. 449; Gaz. vol. 136; p. 366
Snelling, A. H., London, England. Display device. No. 898,519; Sept. 15; Sp. p. 2582; Dr. p. 552; Gaz. vol. 136; p. 476.
Snow, J. L. (See McKinney, L. P., assignor.)
Snyder, L. B., Chattanooga, Tenn. Bedstead-fastening. No. 899,345; Sept. 22; Sp. p. 4154; Dr. p. 889; Gaz. vol. 136; p. 771.
Snyder, L. B., and S. T. Heron, Chattanooga, Tenn. Metal bedstead. No. 897,671; Sept. 1; Sp. p. 873; Dr. p. 187; Gaz. vol. 136; p. 139.
Snyder, W. E., Nazareth, Pa. Manufacture of cement. No. 897,938; Sept. 8; Sp. p. 1445; Dr. p. 309; Gaz. vol. 136; p. 258.
Societe des Etablissements Singrün. (See Audiffren and Singrün, assignors.)
Society of Chemical Industry in Basle. (See Engi and Fröhlich, assignors.)
Society of Chemical Industry in Basle. (See Engi and Kraft, assignors.)
Society of Chemical Industry in Basle. (See Kraft and Engi, assignors.)
Society of Chemical Industry in Basle. (See Schaarschmidt, A., assignor.)
Soley, F., assignor to Miller Lock Company, Philadelphia, Pa. Padlock-shackle. No. 899,268; Sept. 22; Sp. p. 4029; Dr. p. 860; Gaz. vol. 136; p. 747.
Solomon, S. D., Syracuse, N. Y. Megaphone-holder for phonograph-cabinets. No. 898,520; Sept. 15; Sp. p. 2584; Dr. p. 552; Gaz. vol. 136; p. 477.
Soltész, C., New York, N. Y. Cultivating-machine. No. 899,917; Sept. 29; Sp. p. 5316; Dr. pp. 1136–7; Gaz. vol. 136; p. 992.
Sonneborn, S. S., New York, N. Y. Telephone set. No. 898,796; Sept. 15; Sp. p. 3110; Dr. p. 666; Gaz. vol. 136; p. 565.
Sonnenthal, G. (See Elsner, J., assignor.)
Soper, C. H., Canton, Ill. Hub-attaching device. No. 899,346; Sept. 22; Sp. p. 4154; Dr. p. 889; Gaz. vol. 136; p. 771.
Sörensen, T. C., Copenhagen, Denmark. Washing-machine. No. 899,918; Sept. 29; Sp. p. 5319; Dr. p. 1137; Gaz. vol. 136; p. 993.
Sosa, F. R., Buenos Ayres, Argentina. Harrow. No. 898,695; Sept. 15; Sp. p. 2932; Dr. pp. 627–8; Gaz. vol. 136; p. 533.
Southwark Foundry and Machine Company. (See Petsche, G. B., assignor.)
Southwick, E. L. (See Wilson and Southwick.)
Southwick, I. M. (See Wilson and Southwick.)
Southworth, C. F., Cambridge, Mass. Electric-light-bulb changer. No. 898,696; Sept. 15; Sp. p. 2933; Dr. p. 628; Gaz. vol. 136; p. 533.
Spafford, E. H., Oak Park, Ill. Shears-sharpener. No. 899,140; Sept. 22; Sp. p. 3744; Dr. p. 802; Gaz. vol. 136; p. 705.
Spafford, W. E., Toronto, Ontario, Canada. Horseshoe. No. 899,631; Sept. 29; Sp. p. 4740; Dr. p. 1015; Gaz. vol. 136; p. 900.
Spangler, W. F., Greenfield Ind. Air-lift pump. No. 898,015; Sept. 8; Sp. p. 1602; Dr. p. 342; Gaz vol. 136; p. 283.
Sparks, L., administrator. (See Perky, H. D.)
Sparks, W. A., St. Marys, W. Va. Hoe. No. 898,521; Sept. 15; Sp. p. 2586; Dr. p. 552; Gaz. vol. 136; p. 477.
Spaulding, B. R., Buffalo, assignor of one-half to S. E. Spaulding, Springville, N. Y. Bit-brace wrench. No. 897,857; Sept. 1; Sp. p. 1261; Dr. p. 270; Gaz. vol. 136; p. 198.
Spaulding, H. W. (See Rhoulf, J. A., assignor.)
Spaulding, S. E. (See Spaulding, B. R., assignor.)
Spear, E., *et al.*, trustees. (See Cahill, T., assignor.)
Speed Changing Pulley Company. (See Heitger, F. H., assignor.)
Spencer, G., Medford, assignor to Crosby Steam Gage and Valve Company, Boston, Mass. Pressure-recorder. No. 897,311; Sept. 1; Sp. p. 77; Dr. p. 19; Gaz. vol. 136; p. 17.
Spencer, G., Medford, assignor to Crosby Steam Gage and Valve Company, Boston, Mass. Pressure-gage. No. 898,148; Sept. 8; Sp. p. 1869; Dr. p. 399; Gaz. vol. 136; p. 325.
Spencer, W. J., Waterbury, Conn. Power air-pump. No. 898,522; Sept. 15; Sp. p. 2587; Dr. p. 553; Gaz. vol. 136; p. 477.
Sperry, E. A., Brooklyn, N. Y. Electric locomotive. No. 897,312; Sept. 1; Sp. p. 78; Dr. p. 20; Gaz. vol. 136; p. 17.
Sperry, E. A., Brooklyn, N. Y. Preparing merchantable iron and tin compound from tin-plate scrap. No. 897,796; Sept. 1; Sp. p. 1115; Dr. pp. 239–40; Gaz. vol. 136; p. 179.
Sperry, L. (See Broderick, D. F., assignor.)
Spicer, M. J., Fairfield, Nebr. Incubator-heater. No. 899,347; Sept. 22; Sp. p. 4156; Dr. p. 889; Gaz. vol. 136; p. 771.
Spiltoir, G. E., New York, N. Y. Door-lock. No. 898,014; Sept. 8; Sp. p. 1600; Dr. p. 341; Gaz. vol. 136; p. 283.
Spitt, J. F., McKees Rocks, Pa. Tool for cutting pipe and the like. No. 898,097; Sept. 15; Sp. p. 2934; Dr. p. 628; Gaz. vol. 136; p. 534.
Sprague, G. P., Arlington, Mass. Nut-wrench. No. 898,996; Sept. 15; Sp. p. 3466; Dr. p. 742; Gaz. vol. 136; p. 630.
Sprague, G. P., Arlington, Mass. Nut-wrench. No. 898,997; Sept. 15; Sp. p. 3467; Dr. p. 742; Gaz. vol. 136; p. 630.
Springer, W. N., Peoria, Ill. Corn-husking machine. No. 898,392; Sept. 8; Sp. p. 2311; Dr. pp. 491–2; Gaz vol. 136; p. 402.
Springer, W. N., assignor to Avery Manufacturing Company, Peoria, Ill. Governor and reversing-gear for engines. No. 898,074; Sept. 8; Sp. p. 1726; Dr. p. 366; Gaz. vol. 136; p. 302.
Spurgeon, J. S., Jericho, Ky. Valve-gear for engines. No. 898,797; Sept. 15; Sp. p. 3111; Dr. pp. 666–7; Gaz. vol. 136; p. 566.
St. Clair, A. A., assignor to St. Clair Air Brake Company, Indianapolis, Ind. Air-brake. No. 899,844; Sept. 29; Sp. p. 5176; Dr. pp. 1109–11; Gaz. vol. 136; p. 970.
St. Clair, A. A., assignor to St. Clair Air Brake Company, Indianapolis, Ind. Brake-release. No. 899,919; Sept. 29; Sp. p. 5320; Dr. p. 1137; Gaz. vol. 136; p. 993.
St. Clair Air Brake Company. (See St. Clair, A. A., assignor.)
St. Clair, G. A. (See Jones, J. T., assignor.)

St. Louis Car Company. (See Robinson, E. T., assignor.)
St. Onge, A., Providence, R. I., assignor to Brown-St. Onge Company. Cotton-picker machine. No. 897,320; Sept. 1; Sp. p. 126; Dr. p. 27; Gaz. vol. 136; p. 20.
Stables, G., Philadelphia, Pa. Brake for automobiles. No. 897,421; Sept. 1; Sp. p. 377; Dr. p. 79; Gaz. vol. 136; p. 58.
Stagg, T. H., assignor to Kilbourne and Jacobs Manufacturing Company, Columbus, Ohio. Dump-car. No. 899,573; Sept. 29; Sp. p. 4608; Dr. p. 990; Gaz. vol. 136; p. 882.
Staley, R. M., assignor of one-half to W. S. Bryant, Centerville, Iowa. Clinometer. No. 899,269; Sept. 22; Sp. p. 4030; Dr. p. 861; Gaz. vol. 136; p. 747.
Stanbon, C. P., Lynn, Mass. Channel-flap-turning machine. No. 898,016; Sept. 8; Sp. p. 1604; Dr. p. 342; Gaz. vol. 136; p. 284.
Standard Fibre Company. (See Hansen, T., assignor.)
Standard Machine Company. (See Houseman, H. A., assignor.)
Standard Specialty & Tube Company. (See Johnson, J. M., assignor.)
Standard Underground Cable Company. (See Davis, C. W., assignor.)
Stanley, I., New York, assignor to M. S. Middleton, Brooklyn, N. Y. Shock-absorber for automobiles. No. 898,798; Sept. 15; Sp. p. 3113; Dr. p. 667; Gaz. vol. 136; p. 566.
Stanley Rule & Level Company. (See Carlson, F. E., assignor.)
Stapleton, J. T., Jersey City, N. J. Sheet-music turner. No. 898,149; Sept. 8; Sp. p. 1870; Dr. p. 399; Gaz. vol. 136; p. 325.
Stapleton, J. T., Jersey City, N. J. Salt and pepper holder. No. 898,150; Sept. 8; Sp. p. 1872; Dr. p. 399; Gaz. vol. 136; p. 325.
Stark, C. W., Asbury Park, N. J. Nut-lock. No. 899,080; Sept. 22; Sp. p. 3626; Dr. p. 776; Gaz. vol. 136; p. 684.
Stark, W. O., assignor to F. C. Austin, Chicago, Ill. Mixing-machine. No. 897,313; Sept. 1; Sp. p. 83; Dr. pp. 20–1; Gaz. vol. 136; p. 17.
Stauffer, W. W., Nappanee, Ind. Cultivator. No. 899,270; Sept. 22; Sp. p. 4031; Dr. p. 861; Gaz. vol. 136; p. 747.
Staynes, W. H., *et al.* (See Payne, E. E. M., assignor.)
Stearns & Co., E. C. (See Potter, W. M., assignor.)
Stebbings, F., Walthamstow, England. Means of using newspaper and like stands for advertising purposes. No. 899,081; Sept. 22; Sp. p. 3628; Dr. p. 777; Gaz. vol. 136; p. 685.
Stebbins, C. E., Iola, Kans. Magnetic ore-separator. No. 899,348; Sept. 22; Sp. p. 4157; Dr. p. 890; Gaz. vol. 136; p. 771.
Stebbins, F. E., Washington, D. C. Car construction. No. 897,314; Sept. 1; Sp. p. 85; Dr. pp. 21–2; Gaz. vol. 136; p. 18.
Stebbins, F. E., Washington, D. C. Car construction. No. 897,315; Sept. 1; Sp. p. 95; Dr. pp. 23–5; Gaz. vol. 136; p. 18.
Stebbins, F. E., Washington, D. C. Alcove sleeping-car. No. 897,797; Sept. 1; Sp. p. 1124; Dr. pp. 240–1; Gaz. vol. 136; p. 179.
Stebbins, F. E., Washington, D. C. Sleeping-car. No. 897,798; Sept. 1; Sp. p. 1133; Dr. pp. 241–3; Gaz. vol. 136; p. 180.
Steele, D. R., assignor of one-half to H. D. Harvey, Baltimore, Md. Furnace-tilting mechanism. No. 900,043; Sept. 29; Sp. p. 5614; Dr. p. 1198; Gaz. vol. 136; p. 1034.
Steele, E. G. (See Sutton and Steele.)
Steele, L. J. (See Philip and Steele.)
Steele, R. G., assignor of one-half to T. B. Edington, Rutherford, Cal. Gold-saving apparatus. No. 899,271; Sept. 22; Sp. p. 4032; Dr. p. 861; Gaz. vol. 136; p. 747.
Steele, W. F., New York, N. Y. Combined producer-gas and carbureting system. No. 897,799; Sept. 1; Sp. p. 1140; Dr. p. 243; Gaz. vol. 136; p. 180.
Steele, W. L. (See Sutton and Steele.)
Steen, W. B., Millcreek township, Erie county, Pa. Hose-coupling. No. 898,017; Sept. 8; Sp. p. 1607; Dr. p. 343; Gaz. vol. 136; p. 284.
Steiber, C. F., New York, N. Y. Built-up post. No. 899,349; Sept. 22; Sp. p. 4160; Dr. p. 890; Gaz. vol. 136; p. 772.
Steiff, F., Glengen, Germany. Toy in form of an animal. No. 898,018; Sept. 8; Sp. p. 1608; Dr. p. 343; Gaz. vol. 136; p. 284.
Steiger, A. W., New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 899,848; Sept. 29; Sp. p. 5193; Dr. pp. 1112–13; Gaz. vol. 136; p. 972.
Stein, G. W., Chicago, Ill. Fly-escape. No. 898,281; Sept. 8; Sp. p. 2114; Dr. p. 449; Gaz. vol. 136; p. 366.
Stein, J. M., Washington, D. C. Shoulder-presser form. No. 897,422; Sept. 1; Sp. p. 378; Dr. pp. 79–80; Gaz. vol. 136; p. 59.
Steingässer, J. L., Mombach, near Mainz, Germany. Universally-extensible tool-shaft. No. 899,082; Sept. 22; Sp. p. 3628; Dr. p. 777; Gaz. vol. 136; p. 685.
Steinhaus, E. E., Chicago, Ill. Dirigible flying-machine. No. 899,350; Sept. 22; Sp. p. 4161; Dr. p. 891; Gaz. vol. 136; p. 772.
Steinman, B., Scranton, Pa. Device for closing gates and doors. No. 899,920; Sept. 29; Sp. p. 5322; Dr. pp. 1137–8; Gaz. vol. 136; p. 993.
Steinmetz, C. P., Schenectady, N. Y., assignor to General Electric Company. Lightning-arrester. No. 897,800; Sept. 1; Sp. p. 1143; Dr. p. 243; Gaz. vol. 136; p. 181.
Stenberg, H. C., Sheyenne, N. D. Door-fastener. No. 897,423; Sept. 1; Sp. p. 381; Dr. p. 80; Gaz. vol. 136; p. 59.
Stendahl, K. L., assignor to Hurwood Manufacturing Company, Bridgeport, Conn. Tubular lantern. No. 898,393; Sept. 8; Sp. p. 2315; Dr. pp. 492–3; Gaz. vol. 136; p. 403.
Stephens, B. E., assignor to Sanitary Hair Goods Co., Chicago, Ill. Sanitary hair-pin holder. No. 897,672; Sept. 1; Sp. p. 874; Dr. p. 187; Gaz. vol. 136; p. 139.
Stephens, H. H. (See Goldman and Stephens.)
Stephenson & Co. (See Kahn, N. E., assignor.)
Stephenson, J. F., Glenferrie, Victoria, Australia. Combination bedstead and mattress. No. 899,351; Sept. 22; Sp. p. 4164; Dr. p. 891; Gaz. vol. 136; p. 773.
Stephenson, W. M., Batson, Tex. Well-pumping apparatus. No. 899,921; Sept. 29; Sp. p. 5324; Dr. pp. 1138–9; Gaz. vol. 136; p. 994.
Stevens, B. D. (See Lane and Stevens.)
Stevens, C. E., East Orange, N. J. Hat-block. No. 899,141; Sept. 22; Sp. p. 3746; Dr. pp. 802–3; Gaz. vol. 136; p. 706.
Stevens, F. M., Waterbury, Conn., assignor to Veroform Hygienic Company. Soap-dispenser. No. 899,812; Sept. 29; Sp. p. 5114; Dr. p. 1094; Gaz. vol. 136; p. 960.
Stevens, L. B., Rutherford, N. J. Switch. No. 897,559; Sept. 1; Sp. p. 656; Dr. p. 138; Gaz. vol. 136; p. 103.
Stevens, R. H., Munhall, Pa., assignor of one-half to P. T. Berg, Stockholm Sweden. Dumping-car. No. 897,499; Sept. 1; Sp. p. 529; Dr. p. 112; Gaz. vol. 136; p. 84.
Stevenson, H. M., Barnet, Vt. Curtain-fixture. No. 898,151; Sept. 8; Sp. p. 1873; Dr. p. 400; Gaz. vol. 136; p. 326.
Stewart, B. F., Andalusia, Ala. Rotary cultivator or harrow. No. 899,632; Sept. 29; Sp. p. 4741; Dr. p. 1015; Gaz. vol. 136; p. 901.
Stewart, C., New York, N. Y. Lubricating-cup. No. 899,352; Sept. 22; Sp. p. 4165; Dr. p. 892; Gaz. vol. 136; p. 773.
Stewart, D. A., Roslyn, assignor of one-half to J. Cameron, Dunedin, New Zealand. Cup and saucer. No. 899,811; Sept. 29; Sp. p. 5113; Dr. p. 1093; Gaz. vol. 136; p. 959.
Stewart, G. H., Los Angeles, Cal. Can-soldering machine. No. 898,937; Sept. 15; Sp. p. 3360; Dr. pp. 721–2; Gaz. vol. 136; p. 611.
Stewart, J. D., Chicago, Ill. Refrigerator-car. No. 897,424; Sept. 1; Sp. p. 382; Dr. p. 80; Gaz. vol. 136; p. 59.
Stewart, J. K., Chicago, Ill. Swivel-jointed shaft. No. 897,316; Sept. 1; Sp. p. 112; Dr. p. 25; Gaz. vol. 136; p. 18.
Stewart Jail-Works Company. (See Stewart, R. C. and W. A., assignors.)
Stewart, R. C. and W. A., assignors to Stewart Jail-Works Company, Covington, Ky. Cell-door operating and locking means. No. 897,317; Sept. 1; Sp. p. 116; Dr. pp. 25–6; Gaz. vol. 136; p. 19.
Stewart, W. A. (See Stewart, R. C. and W. A.)
Steynis, J., New York, N. Y., and H. Chaumat, Paris, France. Ozonizer. No. 897,318; Sept. 1; Sp. p. 124; Dr. p. 26; Gaz. vol. 136; p. 19.
Stillman, G. F., assignor to A. T. Brown, Syracuse, N. Y. Type-writing machine. No. 897,425; Sept. 1; Sp. p. 384; Dr. p. 81; Gaz. vol. 136; p. 60.
Stimpson, E. B., New York, N. Y., assignor to Edwin B. Stimpson Company. Stud or rivet. No. 897,319; Sept. 1; Sp. p. 125; Dr. p. 26; Gaz. vol. 136; p. 19.
Stine, S. R., McVeytown, Pa. Range. No. 899,813; Sept. 29; Sp. p. 5116; Dr. p. 1094; Gaz. vol. 136; p. 960.
Stitzell, J. D., Pittsburg, Pa. Rail-joint. No. 898,799; Sept. 15; Sp. p. 3114; Dr. p. 667; Gaz. vol. 136; p. 566.
Stivers, J. O., Denver, Colo. Fuse-box. No. 898,698; Sept. 15; Sp. p. 2935; Dr. p. 629; Gaz. vol. 136; p. 534.
Stocker, L., Knoxville, Tenn., assignor to Myer Bridges Company, Louisville, Ky. Machine for making mops and brushes. No. 898,019; Sept. 8; Sp. p. 1610; Dr. pp. 343–4; Gaz. vol. 136; p. 284.
Stocking, B. A., Audubon, Iowa. Ironing-cabinet. No. 899,633; Sept. 29; Sp. p. 4742; Dr. p. 1015; Gaz. vol. 136; p. 901.
Stokely, W. R., St. Augustine, Fla. Fastener or stay. No. 898,800; Sept. 15; Sp. p. 3115; Dr. p. 667; Gaz. vol. 136; p. 566.
Stokely, W. R., St. Augustine, Fla. Car ventilation. No. 898,801; Sept. 15; Sp. p. 3116; Dr. p. 668; Gaz. vol. 136; p. 566.
Stokes, A. G., Beloit, Wis., assignor to Fairbanks, Morse & Co., Chicago, Ill. Steam-actuated valve for engines. No. 899,849; Sept. 29; Sp. p. 5200; Dr. pp. 1113–14; Gaz. vol. 136; p. 972.
Stokes, W. E. D., *et al.* (See Larsson, T., assignor.)
Stone, J. A., Chicago, Ill., assignor to International Harvester Company. Corn-harvester. No. 899,142; Sept. 22; Sp. p. 3747; Dr. pp. 803–4; Gaz. vol. 136; p. 706.
Stone, J. S., Cambridge, assignor to W. W. Swan, trustee, Brookline, Mass. Apparatus for determining the direction of space-telegraph signals. No. 899,272; Sept. 22; Sp. p. 4034; Dr. p. 862; Gaz. vol. 136; p. 748.
Stone, L. (See Sladek and Stone.)
Stone, M. L., Lewiston, Me., assignor to Draper Company, Hopedale, Mass. Filling-end holder for weft-replenishing looms. No. 897,426; Sept. 1; Sp. p. 388; Dr. p. 82; Gaz. vol. 136; p. 60.
Stone, M. L., Lewiston, Me., assignor to Draper Company, Hopedale, Mass. Filling-end holder for weft-replenishing looms. No. 897,427; Sept. 1; Sp. p. 389; Dr. p. 82; Gaz. vol. 136; p. 60.

Stone Telegraph and Telephone Company. (See Cabot, S., assignor.)
Stone Telegraph and Telephone Company. (See Russell, C. E., assignor.)
Stonemetz, J. H., assignor to Challenge Machinery Company, Grand Haven, Mich. Printing-press. No. 898,075; Sept. 8; Sp. p. 1728; Dr. p. 367; Gaz. vol. 136; p. 302.
Stoney, G. G. (See Parsons and Stoney.)
Storms, S. B., Minneapolis, Minn. Window-sash support. No. 899,273; Sept. 22; Sp. p. 4036; Dr. p. 862; Gaz. vol. 136; p. 748.
Stosick, J. J., South Milwaukee, Wis. Chain hoist. No. 897,560; Sept. 1; Sp. p. 658; Dr. p. 138; Gaz. vol. 136; p. 103.
Stoughton Rubber Company. (See Burnham, I. F., assignor.)
Strache, H., Vienna, Austria-Hungary. Generating water-gases. No. 898,803; Sept. 15; Sp. p. 3121; Dr. p. 668; Gaz. vol. 136; p. 567.
Streb, R. C., Buffalo, N. Y., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 898,282; Sept. 8; Sp. p. 2115; Dr. p. 450; Gaz. vol. 136; p. 366.
Streib, J. F., Avalon, assignor to Pressed Steel Car Company, Pittsburg, Pa. Tank-car. No. 898,152; Sept. 8; Sp. p. 1874; Dr. p. 400; Gaz. vol. 136; p. 326.
Stribeck, R. H., Grunewald, near Berlin, Germany. Means for securing percussion-caps in cartridges. No. 898,802; Sept. 15; Sp. p. 3120; Dr. p. 668; Gaz. vol. 136; p. 567.
Strickland, B., Compass Lake, assignor of one-half to J. C. Jones, Greenhead, Fla. Car-replacer. No. 897,673; Sept. 1; Sp. p. 875; Dr. p. 187; Gaz. vol. 136; p. 139.
Stripe, H. G., *et al.* (See Haan, P. C., assignor.)
Strnad, A. (See Wagner and Strnad.)
Stromgren, G. A. (See Stromgren, G. A. and G. A.)
Stromgren, G. A. and G. A., Oakland, Cal. Rtoary drawer. No. 898,153; Sept. 8; Sp. p. 1876; Dr. p. 401; Gaz. vol. 136; p. 326.
Strong, F. F., Boston, Mass. Portable telephone apparatus. No. 898,699; Sept. 15; Sp. p. 2936; Dr. p. 629; Gaz. vol. 136; p. 534.
Strook, S. M., Philadelphia, Pa., assignor to Automatic Inventions Company. Vending-machine. No. 897,801; Sept. 1; Sp. p. 1144; Dr. p. 244; Gaz. vol. 136; p. 181.
Struble, J. B., assignor to Union Switch & Signal Company, Swissvale, Pa. Centrifugally-actuated train-stop. No. 897,321; Sept. 1; Sp. p. 132; Dr. p. 27; Gaz. vol. 136; p. 20.
Struble, J. B., assignor to Union Switch & Signal Company, Swissvale, Pa. Alternating-current block-signaling system. No. 899,353; Sept. 22; Sp. p. 4166; Dr. p. 892; Gaz. vol. 136; p. 773.
Stuart, H. R., Wheeling, W. Va. Telegraphone. No. 898,283; Sept. 8; Sp. p. 2118; Dr. pp. 450–1; Gaz. vol. 136; p. 367.
Stubenrauch, H. F., Chicago, Ill. Shoe-brush. No. 898,998; Sept. 15; Sp. p. 3468; Dr. p. 743; Gaz. vol. 136; p. 631.
Stuber, J., assignor of one-half to H. G. Kuck, Peoria, Ill. Culinary vessel. No. 898,284; Sept. 8; Sp. p. 2123; Dr. p. 451; Gaz. vol. 136; p. 367.
Sturges, W. H., *et al.* (See Payne, E. E. M., assignor.)
Subers, L. A. (See Bayne and Subers.)
Sullivan, E., *et al.* (See Geraghty, J. P., assignor.)
Sullivan, J. T., Newcastle, New Brunswick, Canada. Belt-tightener. No. 898,523; Sept. 15; Sp. p. 2589; Dr. p. 553; Gaz. vol. 136; p. 478.
Sullivan Machinery Company. (See Holdsworth, F. D., assignor.)
Sullivan, P. H., Detroit, Mich. Device for supplying firemen with fresh air. No. 898,524; Sept. 15; Sp. p. 2590; Dr. p. 553; Gaz. vol. 136; p. 478.
Summers, L. L., Barberton, Ohio, assignor to Babcock & Wilcox Company, New York, N. Y. Water-tube boiler. No. 897,322; Sept. 1; Sp. p. 133; Dr. pp. 27–8; Gaz. vol. 136; p. 21.
Suren, N. H., Needham, Mass., assignor to Gamewell Fire-Alarm Telegraph Company, New York, N. Y. Signal-box. No. 898,076; Sept. 8; Sp. p. 1731; Dr. p. 367; Gaz. vol. 136; p. 303.
Surmann, W., Cologne, Germany. Press for manufacturing briquets, blocks, artificial stone, and the like. No. 898,525; Sept. 15; Sp p. 2591; Dr. pp. 553–4; Gaz. vol. 136; p. 478.
Sutherland, G. W., Newport, Wash. Rail-chair. No. 899,354; Sept. 22; Sp. p. 4170; Dr. p. 892; Gaz. vol. 136; p. 774.
Sutton, H. M., W. L. and E. G. Steele, Dallas, Tex. Separating-table. No. 898,020; Sept. 8; Sp. p. 1615; Dr. pp. 344–6; Gaz. vol. 136; p. 285.
Swales, F., East Sheen, England. Bit. No. 898,394; Sept. 8; Sp. p. 2317; Dr. p. 993; Gaz. vol. 136; p. 403.
Swan, C., Corry, Pa. Machine for forming packing-cups. No. 898,526; Sept. 15; Sp. p. 2596; Dr. p. 554; Gaz. vol. 136; p. 478.
Swan, F. A., Cliftondale, Mass. Terminal for electric fittings. No. 897,674; Sept. 1; Sp. p. 876; Dr. p. 188; Gaz. vol. 136; p. 140.
Swan, W. W., trustee. (See Stone, J. S., assignor.)
Swanson, N. E., assignor of one-half to R. F. Ohlin, Denver, Colo. Hollow auger. No. 900,044; Sept. 29; Sp. p. 5615; Dr. p. 1198; Gaz. vol. 136; p. 1034.
Sweet, A. J., Jackson, assignor of one-half to G. W. Sweet, Ann Arbor, Mich. Self-closing measuring-valve. No. 898,999; Sept. 15; Sp. p. 3469; Dr. p. 743; Gaz. vol. 136; p. 631.
Sweet, G. W. (See Sweet, A. J., assignor.)
Sweet, Orr & Company. (See Bartrum, C. W., assignor.)
Swenson, F. O., Manor, Tex. Match-safe. No. 897,428; Sept. 1; Sp. p. 391; Dr. p. 82; Gaz. vol. 136; p. 61.
Swift, W. C. (See Mills, C., assignor.)
Szalay, J. (See Lenkey and Szalay.)
Szperkowsky, A. B., Berlin, Germany. Automatic valve. No. 899,768; Sept. 29; Sp. p. 5014; Dr. p. 1075; Gaz. vol. 136; p. 945.
T. C. Prouty Company. (See Prouty, T. C., assignor.)
T. J. Thorp Manufacturing Company. (See Thorp, T. J., assignor.)
T. R. Almond Manufacturing Company. (See Almond, T. R., assignor.)
Talbot, T. F., Jr., Cheyenne, Wyo. Safety-gate for railway-cars. No. 899,494; Sept. 22; Sp. p. 4420; Dr. p. 949; Gaz. vol. 136; p. 819.
Talley, B. F., assignor of one-half to M. B. Rutherford, Wakita, Okla. Pruning implement. No. 899,687; Sept. 29; Sp. p. 4835; Dr. p. 1035; Gaz. vol. 136; p. 917.
Tangney, J., and B. C. Barnes, Colton, Cal. Safety railway-switch device. No. 898,154; Sept. 8; Sp. p. 1876; Dr. p. 401; Gaz. vol. 136; p. 326.
Tanke, E., assignor to Siemens & Halske A. G., Berlin, Germany. Telephone-exchange apparatus. No. 899,850; Sept. 29; Sp. p. 5203; Dr. p. 1114; Gaz. vol. 136; p. 973.
Tanner, L., Grand Rapids, Mich. Belt. No. 898,700; Sept. 15; Sp. p. 2938; Dr. p. 630; Gaz. vol. 136; p. 535.
Tate, C. L., Connersville, Ind. Liquid-measure. No. 898,701; Sept. 15; Sp. p. 2939; Dr. p. 630; Gaz. vol. 136; p. 535.
Taylor, A., London, England. Suitable apparatus for concentrating and washing minerals. No. 899,441; Sept. 22; Sp. p. 4318; Dr. pp. 927–8; Gaz. vol. 136; p. 800.
Taylor, A. H., Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Hammer-drill. No. 898,702; Sept. 15; Sp. p. 2941; Dr. p. 630; Gaz. vol. 136; p. 535.
Taylor, C. G., Sibley, Iowa. Seed-corn tester. No. 899,000; Sept. 15; Sp. p. 3470; Dr. p. 743; Gaz. vol. 136; p. 631.
Taylor, C. L., assignor to Morgan Engineering Company, Alliance, Ohio. Charging-crane. No. 899,083; Sept. 22; Sp. p. 3629; Dr. p. 777; Gaz. vol. 136; p. 685.
Taylor, E., New York, N. Y., assignor to Taylor Herrick Rotary Engine Company. Control-valve for rotary engines. No. 899,814; Sept. 29; Sp. p. 5118; Dr. pp. 1094–5; Gaz. vol. 136; p. 960.
Taylor Herrick Rotary Engine Company. (See Taylor, E., assignor.)
Taylor, I. (See Taylor, J. H. and I.)
Taylor Instrument Companies. (See Maurer, H. W., assignor.)
Taylor, J., and E. W. Buckley, Newton Heath, Manchester, England. Mechanical warp stop-motion for weaving-looms, warping-machines, and the like. No. 897,429; Sept. 1; Sp. p. 392; Dr. pp. 82–4; Gaz. vol. 136; p. 61.
Taylor, J. H. and I., Philadelphia, Pa. Hair-waver. No. 897,323; Sept. 1; Sp. p. 135; Dr. p. 28; Gaz. vol. 136; p. 21.
Taylor, L. C., trustee. (See Harthan, F. E., assignor.)
Taylor, S. C., *et al.* (See Le Compte, J., assignor.)
Taylor, W. B., Lynn, Mass., assignor to General Electric Company. Condenser. No. 897,500; Sept. 1; Sp. p. 530; Dr. pp. 112–13; Gaz. vol. 136; p. 85.
Teasdale, G. W., St. Louis, Mo. Carton. No. 899,922; Sept. 29; Sp. p. 5333; Dr. p. 1139; Gaz. vol. 136; p. 994.
Telegraph Transmitting Instrument Company. (See Cardwell, G. A., assignor.)
Telepost Company of Maine. (See Delany, P. B., assignor.)
Temple, T. D. (See Peterson, O., assignor.)
Terry, D. S., Ofahoma, Miss. Well-bucket. No. 897,324; Sept. 1; Sp. p. 138; Dr. p. 29; Gaz. vol. 136; p. 21.
Tetrault, D. H., Rouses Point, N. Y. Stove-polish. No. 897,430; Sept. 1; Sp. p. 395; Gaz. vol. 136; p. 61.
Textile Machine Works. (See Thun, F., assignor.)
Therien, J. O., Minneapolis, Minn. Cigar-tip. No. 899,355; Sept. 22; Sp. p. 4171; Dr. p. 893; Gaz. vol. 136; p. 774.
Thoits, A. T., and J. G. Gronberg, assignors to Caloric Fireless Cookstove Company, Grand Rapids, Mich. Fireless baker. No. 898,527; Sept. 15; Sp. p. 2599; Dr. p. 555; Gaz. vol. 136; p. 479.
Thoits, A. T., and J. G. Gronberg, assignors to Caloric Fireless Cook Stove Company, Grand Rapids, Mich. Box-fastener. No. 899,064; Sept. 22; Sp. p. 3631; Dr. p. 778; Gaz. vol. 136; p. 686.

Thom, T. M., Woodlands, Cheshunt, assignor to Lithographic Stone and Marble Company Limited, London, England. Manufacture of stone or marble artificially. No. 898,703; Sept. 15; Sp. p. 2943; Gaz. vol. 136; p. 535.
Thomas, C. C., Ithaca, N. Y. Steam-calorimeter. No. 898,610; Sept. 15; Sp. p. 2756; Dr. p. 589; Gaz. vol. 136; p. 505.
Thomas & Co., R. (See Lewis, J., assignor.)
Thomas, H. M., Colorado Springs, Colo. Guy-anchor. No. 899,274; Sept. 22; Sp. p. 4037; Dr. p. 862; Gaz. vol. 136; p. 749.
Thomas, J. R., and J. J. Meyers, assignors to J. A. Fay & Egan Company, Cincinnati, Ohio. Feeding device for woodworking machinery. No. 899,143; Sept. 22; Sp. p. 3751; Dr. pp. 804–5; Gaz. vol. 136; p. 706.
Thomas, W. O., Riverside, Ill. Governor. No. 900,045; Sept. 29; Sp. p. 5616; Dr. p. 1198; Gaz. vol. 136; p. 1035.
Thome, M., Chicago, Ill. Hair-drier. No. 897,675; Sept. 1; Sp. p. 878; Dr. p. 188; Gaz. vol. 136; p. 140.
Thompson, G., assignor of one-half to F. Schreidt, Mansfield, Ohio. Fluid-feeding-pressure mechanism. No. 897,676; Sept. 1; Sp. p. 879; Dr. p. 188; Gaz. vol. 136; p. 141.
Thompson, H. W., Philadelphia, Pa. Bedstead. No. 897,677; Sept. 1; Sp. p. 882; Dr. pp. 188–9; Gaz. vol. 136; p. 141.
Thompson, J., Garretson, S. D., assignor of one-half to G. F. Rose, Colorado Springs, Colo. Grain-car door. No. 897,678; Sept. 1; Sp. p. 883; Dr. p. 189; Gaz. vol. 136; p. 141.
Thompson, J. M., assignor to Luther Brothers Company, North Milwaukee, Wis. Grinding and polishing machine. No. 8 6,528; Sept. 15; Sp. p. 2601; Dr. p. 555; Gaz. vol. 136; p. 479.
Thompson, W., New York, N. Y. Album. No. 897,679; Sept. 1; Sp. p. 885; Dr. p. 189; Gaz. vol. 136; p. 142.
Thomsen, H. A. (See Ardengo, L., assignor.)
Thordarson, C. H., Chicago, Ill. Electrical laboratory apparatus. No. 898,529; Sept. 15; Sp. p. 2602; Dr. p. 555; Gaz. vol. 136; p. 479.
Thordarson, C. H., Chicago, Ill. High-potential spark-coil. No. 899,634; Sept. 29; Sp. p. 4744; Dr. pp. 1015–16; Gaz. vol. 136; p. 901.
Thoreson, S., *et al.* (See Thunborg, A. O., assignor.)
Thorn, H. P., New York, N. Y. Life-preserver. No. 899,635; Sept. 29; Sp. p. 4747; Dr. p. 1016; Gaz. vol. 136; p. 901.
Thoroman, W. E., Dayton, Ohio. Collapsible shipping-crate. No. 897,325; Sept. 1; Sp. p. 139; Dr. p. 29; Gaz. vol. 136; p. 22.
Thorp, E. (See Renstrom, N. A., assignor.)
Thorp, T. J., assignor to T. J. Thorp Manufacturing Company, Corvallis, Oreg. Mowing and raking machine. No. 898,155; Sept. 8; Sp. p. 1878; Dr. pp. 401–2; Gaz. vol. 136; p. 327.
Thorp, T. J., assignor to T. J. Thorp Manufacturing Company, Corvallis, Oreg. Motor-vehicle. No. 898,156; Sept. 8; Sp. p. 1881; Dr. pp. 402–3; Gaz. vol. 136; p. 327.
Threewits, A. M., Centerville, Ind. Railway-switch frog. No. 898,804; Sept. 15; Sp. p. 3123; Dr. p. 609; Gaz. vol. 136; p. 567.
Thron, J. E., Philadelphia, Pa. Oiler. No. 897,561; Sept. 1; Sp. p. 661; Dr. p. 138; Gaz. vol. 136; p. 103.
Thun, F., assignor to Textile Machine Works, Wyomissing, Pa. Cord-braiding machine. No. 898,938; Sept. 15; Sp. p. 3362; Dr. p. 722; Gaz. vol. 136; p. 612.
Thun, F., assignor to Textile Machine Works, Wyomissing, Pa. Braiding-machine. No. 898,939; Sept. 15; Sp. p. 3364; Dr. pp. 722–3; Gaz. vol. 136; p. 612
Thunborg, A. O., Webster, assignor of one-third to A. P. Nelson and S. Thoreson, Grantsburg, Wis. Railway-tie. No. 898,287; Sept. 8; Sp. p. 2126; Dr. p. 452; Gaz. vol. 136; p. 368.
Thurston, M., Stryker, assignor to Ney Manufacturing Company, Canton, Ohio. Hay-carrier. No. 899,688; Sept. 29; Sp. p. 4836; Dr. p. 1036; Gaz. vol. 136; p. 917.
Thwing, A., Newton, Mass. Mail-bag-delivering apparatus. No. 898,157; Sept. 8; Sp. p. 1885; Dr. p. 404; Gaz. vol. 136; p. 328.
Tideman, H., Menominee, Mich. Mechanism of the lazy-tong genus. No. 899,769; Sept. 29; Sp. p. 5015; Dr. p. 1075; Gaz. vol. 136; p. 945.
Tiemann, F., Berlin, Germany. Filter. No. 899,194; Sept. 22; Sp. p. 3963; Dr. p. 825; Gaz. vol. 136; p. 723.
Tille, H. G., Dysart, Iowa. Combined stock and hay rack for wagons. No. 900,046; Sept. 29; Sp. p. 5619; Dr. p. 1199; Gaz. vol. 136; p. 1035.
Tindel, A., Philadelphia, Pa., assignor to High Duty Saw and Tool Company. Metal-sawing mechanism. No. 900,047; Sept. 29; Sp. p. 5622; Dr. pp. 1199–1200; Gaz. vol. 136; p. 1035.
Tinsey, J. Q. A., Terry, Miss. Switch. No. 898,285; Sept. 8; Sp. p. 2124; Dr. pp. 451–2; Gaz. vol. 136; p. 367.
Tobin, J. W. (See Goldman and Stephens, assignors.)
Todd, F. (See Long and Todd.)
Tolman, J. P., and H. G. Pratt, Newton, assignors to Samson Cordage Works, Boston, Mass. Cord-making machine. No. 897,680; Sept. 1; Sp. p. 887; Dr. pp. 190–1; Gaz. vol. 136; p. 142.
Tomkins, A., Pittsburg, Pa. Valve. No. 898,805; Sept. 15; Sp. p. 3126; Dr. pp. 669–70; Gaz. vol. 136; p. 568.
Toolen, J. J., The Hague, Netherlands. Safety-coffin. No. 898,021; Sept. 8; Sp. p. 1624; Dr. p. 346; Gaz. vol. 136; p. 285.
Torrey, J. R., Worcester, Mass. Razor-blade holder. No. 898,704; Sept. 15; Sp. p. 2944; Dr. p. 631; Gaz. vol. 136; p. 536.
Torrey, J. R., Worcester, Mass. Razor-stropping device. No. 898,705; Sept. 15; Sp. p. 2945; Dr. p. 631; Gaz. vol. 136; p. 536.
Touceda, E. A., Albany, N. Y. Alloy for bearing metal. No. 897,431; Sept. 1; Sp. p. 395; Gaz. vol. 136; p. 61.
Toupin, A., St. Agathe, Manitoba, Canada. Bracket for building construction. No. 898,286; Sept. 8; Sp. p. 2125; Dr. p. 452; Gaz. vol. 136; p. 367.
Towers, C. H., Baltimore, Md., assignor, by mesne assignments, to Singer Manufacturing Company. Sewing-machine throat-plate. No. 899,574; Sept. 29; Sp. p. 4609; Dr. p. 900; Gaz. vol. 136; p. 882.
Townsend, L. A. Fort Dodge, Iowa. Auscusta-phone. No. 899,815; Sept. 29; Sp. p. 5121; Dr. p. 1095; Gaz. vol. 136; p. 961.
Townsend, W. P., *et al.*, administrators. (See Logan, L. L.)
Transom Draft Gear Company. (See McIntosh, W., assignor.)
Transom Draft Gear Company. (See Westlake, C. T., assignor.)
Travelers Insurance Company. (See Pearson, R. H., assignor.)
Treadwell, C. M., London, England. Appliance for practicing golf. No. 898,530; Sept. 15; Sp. p. 2604; Dr. p. 556; Gaz. vol. 136; p. 480.
Trevor Manufacturing Company. (See Trevor, W. W., assignor.)
Trevor, W. W., assignor to Trevor Manufacturing Company, Lockport, N. Y. Machine for shaping oar-blades. No. 899,356; Sept. 22; Sp. p. 4172; Dr. pp. 853–4; Gaz. vol. 136; p. 774.
Triplett, J. R. (See Hoenika and Triplett.)
Tripp, C. A., Los Angeles, Cal. Fluid-pressure brake. No. 898,022; Sept. 8; Sp. p. 1628; Dr. p. 347; Gaz. vol. 136; p. 285.
Trout, W. H., assignor to Allis-Chalmers Company, Milwaukee, Wis. Band-saw mill. No. 899,575; Sept. 29; Sp. p. 4610; Dr. pp. 990–1; Gaz. vol. 136; p. 882.
Troy, M. O., Schenectady, N. Y., assignor to General Electric Company. System of electrical distribution. No. 897,501; Sept. 1; Sp. p. 532; Dr. p. 113; Gaz. vol. 136; p. 85.
Truitt, C., Moscow, Idaho. Telephone-switch. No. 897,681; Sept. 1; Sp. p. 890; Dr. p. 191; Gaz. vol. 136; p. 142.
Trumbull, R. A., Hicksville, Ohio. End-gate. No. 898,940; Sept. 15; Sp. p. 3366; Dr. p. 723; Gaz. vol. 136; p. 612.
Tubular Rivet & Stud Company. (See Simpson and Bray, assignors.)
Tufting Machine Supply Company. (See Kreeger, H. L. E., assignor.)
Tufts, E. R., Pittsburg, Pa., assignor of one-half to C. E. Greenough, New York, N. Y. Sight for firearms. No. 898,531; Sept. 15; Sp. p. 2605; Dr. p. 556; Gaz. vol. 136; p. 480.
Tufts, E. R., Pittsburg, Pa., assignor of one-half to C. E. Greenough, New York, N. Y. Sight for firearms. No. 898,532; Sept. 15; Sp. p. 2606; Dr. p. 556; Gaz. vol. 136; p. 480.
Tuggle, J., Watertown, Tenn. Planter and fertilizer-dropper. No. 899,144; Sept. 22; Sp. p. 3755; Dr. p. 805; Gaz. vol. 136; p. 707.
Tuggy, E. (See Coulter and Tuggy.)
Tuorto, L., Lancaster, Pa. Purse-clasp-locking device. No. 897,562; Sept. 1; Sp. p. 662; Dr. p. 139; Gaz. vol. 136; p. 104.
Turbayne, W. A., Lancaster, N. Y., assignor to Gould Storage Battery Company. Electrical system of distribution. No. 899,145; Sept. 22; Sp. p. 3756; Dr. p. 805; Gaz. vol. 136; p. 707.
Turcotte, J. H., Springfield, Mass. Ring cutter. No. 897,563; Sept. 1; Sp. p. 664; Dr. p. 139; Gaz. vol. 136; p. 104.
Turnbull, W. W., Columbus, Ohio. Machine for making popcorn balls. No. 897,682; Sept. 1; Sp. p. 892; Dr. p. 191; Gaz. vol. 136; p. 143.
Turner, F., Cleveland, Ohio. Takeapart baby-carriage. No. 897,502; Sept. 1; Sp. p. 534; Dr. p. 113; Gaz. vol. 136; p. 85.
Turner, J. M., Philadelphia, Pa. Collapsible step-ladder. No. 898,706; Sept. 15; Sp. p. 2946; Dr. p 631; Gaz. vol. 136; p. 536.
Turner, O. N., Templeton, assignor to Bay State Metal Wheel Company, East Templeton, Mass. Folding carriage. No. 899,851; Sept. 29; Sp. p. 5205; Dr. pp. 1114–15; Gaz. vol. 136; p. 973.
Turner Tanning Machinery Company. (See Seymour-Jones, A., assignor.)
Turton, J., Johannesburg, Transvaal. Extraction of metals from their ores. No. 899,146; Sept. 22; Sp. p. 3761; Gaz. vol. 136; p. 707.
Twinlock Company. (See Maltby, C. C., assignor.)
Tyc, L. A., and L. N. Benjamin, assignors to Ideal Concrete, Limited, Montreal, Quebec, Canada. Making a composition of matter for masonry work. No. 897,939; Sept. 8; Sp. p. 1443; Gaz. vol. 136; p. 259.
Tyler, J. H. (See Low, Bradburn, and Tyler.)
Umstadter, J. M. (See Dornin T. B., assignor.)
Underwood Typewriter Company. (See Helmond, W. F., assignor.)
Unger, J., Louisville, Colo. Whiffletree attachment. No. 899,923; Sept. 29; Sp. p. 5334; Dr. p. 1139; Gaz. vol. 136; p. 994.
Union Paper Bag Machine Company. (See Avery, T. M., assignor.)
Union Special Machine Company. (See Corey, D. W., assignor.)
Union Special Sewing Machine Company. (See Woodward, R. G., assignor.)

Union Steel Casting Company. (See Bennett, W. B., assignor.)
Union Switch & Signal Company. (See Coe, E. R., assignor.)
Union Switch and Signal Company. (See Coleman, J. P., assignor.)
Union Switch and Signal Company. (See Howard, L. F., assignor.)
Union Switch & Signal Company. (See Morrison, C. H., assignor.)
Union Switch & Signal Company. (See Struble, J. B., assignor.)
Union Switch and Signal Company. (See Winsor, P., assignor.)
Union Typewriter Company. (See Brooks, B. A., assignor.)
Union Typewriter Company. (See Felbel, J., assignor.)
Union Typewriter Company. (See Pool, M. W., assignor.)
Union Typewriter Company. (See Smith, C. E., assignor.)
Union Typewriter Company. (See Steiger, A. W., assignor.)
United Bottle Machinery Co. (See Pierpont, F. H., assignor.)
United Shoe Machinery Company. (See Ashton, O., assignor.)
United Shoe Machinery Company. (See Casgrain, L. A., assignor.)
United Shoe Machinery Company. (See Davey, J. F., assignor.)
United Shoe Machinery Company. (See Goddu, G., assignor.)
United States Concrete Machine Co. (See Randall, J. A., assignor.)
United States Smelting, Refining, and Mining Company. (See Benedict, H. E., assignor.)
United Store Service and Tube Company. (See Jennings, C. S., assignor.)
Universal Automatic Carving Machine Co. (See Baase, H. C., assignor.)
Unruh, S. C., St. Joseph, Mich. Sign. No. 898,077; Sept. 8; Sp. p. 1732; Dr. p. 364; Gaz. vol. 136; p. 303.
Urtubees, A. J. (See Kane and Urtubees.)
Utigard, W., Thellman, Minn. Spoon-holding sugar-bowl. No. 899,357; Sept. 22; Sp. p. 4177; Dr. p. 894; Gaz. vol. 136; p. 775.
V. & W. Up-Hang Company. (See Van Nortwick, F. W., assignor.)
Vail, W. L., Jr., Pantano, Ariz. Ter. Rail-fastening. No. 898,611; Sept. 15; Sp. p. 2761; Dr. p. 590; Gaz. vol. 136; p. 506.
Valentine, A. L., assignor to Pratt & Whitney Company, Hartford, Conn. Cutter-holder. No. 898,395; Sept. 8; Sp. p. 2319; Dr. p. 493; Gaz. vol. 136; p. 403.
Valerius, T. L., Fort Atkinson, Wis., assignor to Creamery Package Mfg. Company, Chicago, Ill. Bottle-case. No. 899,924; Sept. 29; Sp. p. 5335; Dr. p. 1140; Gaz. vol. 136; p. 994.
Valerius, T. L., Fort Atkinson, Wis., assignor to Creamery Package Mfg. Company, Chicago, Ill. Ice-cream freezer. No. 899,925; Sept. 29; Sp. p. 5337; Dr. p. 1140; Gaz. vol. 136; p. 995.
Valerius, T. L., Fort Atkinson, Wis., assignor to Creamery Package Mfg. Company, Chicago, Ill. Ice-cream freezer. No. 899,926; Sept. 29; Sp. p. 5340; Dr. p. 1140; Gaz. vol. 136; p. 995.
Valerius, T. L., Fort Atkinson, Wis., assignor to Creamery Package Mfg. Company, Chicago, Ill. Cased-bottle-washing machine. No. 899,927; Sept. 29; Sp. p. 5343; Dr. pp. 1141–2; Gaz. vol. 136; p. 995.
Valerius, T. L., Fort Atkinson, Wis., assignor to Creamery Package Mfg. Company, Chicago, Ill. Ice-cream freezer. No. 899,928; Sept. 29; Sp. p. 5352; Dr. pp. 1142–3; Gaz. vol. 136; p. 996.
Van Cleave, L. W., and G. O. Dewey, assignors to Buck's Stove and Range Company, St. Louis, Mo. Hinged match-plate for flasks. No. 898,158; Sept. 8; Sp. p. 1888; Dr. p. 404; Gaz. vol. 136; p. 328.
Van Deusen, C. H., Verona, Ill. Dumping-wagon. No. 898,533; Sept. 15; Sp. p. 2607; Dr. pp. 556–7; Gaz. vol. 136; p. 480.
Van Gundy, C. P., Catonsville, Md., assignor to Kennicott Water-Softener Company, Chicago, Ill. Water-purifying apparatus. No. 897,940; Sept. 8; Sp. p. 1449; Dr. p. 309; Gaz. vol. 136; p. 259.
Van Nortwick, F. W., assignor to V. & W. Up-Hang Company, Cleveland, Ohio. Garment-hanger. No. 899,929; Sept. 29; Sp. p. 5363; Dr. p. 1143; Gaz. vol. 136; p. 996.
Van Valkenburg, H. L., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Arrangement of protective apparatus. No. 899,358; Sept. 22; Sp. p. 4178; Dr. p. 894; Gaz. vol. 136; p. 775.
Vance, J. A., Columbus, Ohio. Compressed-air washing device. No. 898,612; Sept. 15; Sp. p. 2762; Dr. p. 590; Gaz. vol. 136; p. 506.
Vance, O. E. (See Baker and Vance.)
Vankirk, I. C., Huffman, Nebr. Churn. No. 899,085; Sept. 22; Sp. p. 3632; Dr. p. 778; Gaz. vol. 136; p. 686.
Vanness, J. T. (See O'Brian, H. R., assignor.)
Varley Duplex Magnet Company. (See Varley, R., assignor.)
Varley, R., Englewood, N. J., assignor to Varley Duplex Magnet Company. Ignition system for explosion-engines. No. 899,770; Sept. 29; Sp. p. 5017; Dr. p. 1075; Gaz. vol. 136; p. 945.
Varnum, C. E. Lawrence, Kans. Heater. No. 898,613; Sept. 15; Sp. p. 2763; Dr. p. 590; Gaz. vol. 136; p. 506.
Varnum, J. E., Eldon, Iowa. Crupper-fastener for harness. No. 899,576; Sept. 29; Sp. p. 4612; Dr. p. 991; Gaz. vol. 136; p. 883.
Vaughan, H. H. (See Harcourt, R., assignor.)
Veitch, L. W., Des Moines, Iowa. Coal-mining machine. No. 900,003; Sept. 29; Sp. p. 5519; Dr. p. 1176; Gaz. vol. 136; p. 1020.
Vermont Farm Machine Company. (See Kimball, P. L., assignor.)
Vernal, E. A. (See Rabedew and Vernal.)
Veroform Hygienic Company. (See Stevens, F. M., assignor.)
Verona Chemical Company. (See Wack, A., assignor.)
Vetter, L. F. (See Levy, F., assignor.)
Vibber, W. H., assignor to Gillette-Vibber Co., New London, Conn. Conduit-cap for electric installation. No. 897,683; Sept. 1; Sp. p. 894; Dr. p. 191; Gaz. vol. 136; p. 143.
Vibber, W. H., assignor to Gillette-Vibber Co., New London, Conn. Grounding-clamp for electric wires. No. 899,636; Sept. 29; Sp. p. 4749; Dr. p. 1016; Gaz. vol. 136; p. 902.
Vibber, W. H., assignor to Gillette-Vibber Co., New London, Conn. Electric-installation molding-box. No. 899,637; Sept. 29; Sp. p. 4750; Dr. p. 1016; Gaz. vol. 136; p. 902.
Vibber, W. H., assignor to Gillette-Vibber Co., New London, Conn. Combined bushing and coupling for electric installation. No. 899,638; Sept. 29; Sp. p. 4751; Dr. p. 1017; Gaz. vol. 136; p. 902.
Vibber, W. H., assignor of one-half to Gillette-Vibber Co., New London, Conn. Box-connector for electric installation. No. 899,639; Sept. 29; Sp. p. 4752; Dr. p. 1017; Gaz. vol. 136; p. 902.
Vickers Sons & Maxim. (See Dawson and Buckham, assignors.)
Victor Electric Company. (See Wantz, J. B., assignor.)
Victor Safe & Lock Company. (See Rodier, F. W., assignor.)
Victor Talking Machine Company. (See English, J. C., assignor.)
Vincent, J. G., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 897,941; Sept. 8; Sp. p. 1452; Dr. p. 310; Gaz. vol. 136; p. 259.
Voell, L. J. (See Wallace, O., assignor.)
Vogel, E. J., Lawrence, Mass. Fabric. No. 898,941; Sept. 15; Sp. p. 3367; Dr. p. 723; Gaz. vol. 136; p. 613.
Vogt, A., London, England. Increasing the volumetric efficiency of cylinder and piston machines. No. 899,706; Sept. 29; Sp. p. 4869; Dr. pp. 1044–5; Gaz. vol. 136; p. 922.
Vogt, F. A., Anderson, Ind. Cheese-cover. No. 897,684; Sept. 1; Sp. p. 896; Dr. p. 192; Gaz. vol. 136; p. 143.
Voight, H. G., New Britain, Conn., assignor to Russell & Erwin Manufacturing Company. Adjustable cylinder-lock. No. 897,685; Sept. 1; Sp. p. 897; Dr. p. 192; Gaz. vol. 136; p. 144.
Voight, H. G., New Britain, Conn., assignor to Russell & Erwin Manufacturing Company. Lock construction. No. 897,686; Sept. 1; Sp. p. 898; Dr. pp. 192–3; Gaz. vol. 136; p. 144.
Voight, H. G., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn. Cylinder-lock. No. 898,078; Sept. 8; Sp. p. 1733; Dr. p. 368; Gaz. vol. 136; p. 303.
Voight, H. G., and C. J. Caley, assignors to Russell & Erwin Manufacturing Company, New Britain, Conn. Lock construction. No. 897,802; Sept. 1; Sp. p. 1147; Dr. p. 244; Gaz. vol. 136; p. 181.
Voisard, G. C., assignor of one-half to W. J. Bryce, New York, N. Y. Sales checking and record cabinet. No. 898,534; Sept. 15; Sp. p. 2612; Dr. p. 557; Gaz. vol. 136; p. 481.
Volckening, C. K., New York, N. Y. Bottle-washer brush. No. 898,288; Sept. 8; Sp. p. 2129; Dr. p. 452; Gaz. vol. 136; p. 368.
Volckmann, H., assignor to Washington Cutlery Company, Watertown, Wis. Sickle. No. 898,535; Sept. 15; Sp. p. 2615; Dr. p. 558; Gaz. vol. 136; p. 481.
Voorhies, C. R., Portland, Oreg. Fluting or beading machine. No. 898,289; Sept. 8; Sp. p. 2130; Dr. p. 453; Gaz. vol. 136; p. 368.
Voorhies, J. C. (See Martin, Grant, McGavock, Haynes, and Voorhies.)
Voss, W. H., Davenport, Iowa. Mechanical movement for washing-machines. No. 897,432; Sept. 1; Sp. p. 397; Dr. p. 85; Gaz. vol. 136; p. 62.
"Vulkan" Maschinenfabriks-Actien-Gesellschaft, Firm of. (See Ast, H., assignor.)
W. P. Taylor Company. (See Gibney J. W., assignor.)
Wachtel, C. W., Jamaica, N. Y. Electric switch. No. 900,005; Sept. 29; Sp. p. 5522; Dr. p. 1177; Gaz. vol. 136; p. 1021.
Wachtel, C. W., Jamaica, N. Y. Push-button. No. 900,006; Sept. 29; Sp. p. 5524; Dr. p. 1177; Gaz. vol. 136; p. 1021.
Wack, A., Belleville, assignor to Verona Chemical Company, Newark, N. J. Making aromatic carbonyl derivatives. No. 898,942; Sept. 15; Sp. p. 3369; Gaz. vol. 136; p. 613.

Wack, A., Belleville, assignor to Verona Chemical Company, Newark, N. J. Making camphor. No. 898,943; Sept. 15; Sp. p. 3370; Gaz. vol. 136; p. 613.
Wadagaki, Y., Sasebo, Japan. Marine propulsion. No. 899,359; Sept. 22; Sp. p. 4180; Dr. p. 895; Gaz. vol. 136; p. 775.
Wade, G. H., Atlanta, Ga. Electric heat unit or device. No. 897,326; Sept. 1; Sp. p. 141; Dr. p. 29; Gaz. vol. 136; p. 22.
Wade, O. W., Atlanta, La. Detachable log-retaining device for cars. No. 899,816; Sept. 29; Sp. p. 5122; Dr. p. 1096; Gaz. vol. 136; p. 961.
Wadsworth, G. H., Lyndhurst, England. Producing gelatinized nitrocellulose explosives. No. 899,577; Sept. 29; Sp. p. 4613; Gaz. vol. 136; p. 883.
Wagner, C. A., Brooklyn, N. Y. Cigar-lighter. No. 897,687; Sept. 1; Sp. p. 899; Dr. p. 193; Gaz. vol. 136; p. 144.
Wagner, E. F., New York, N. Y. Color-study device. No. 898,290; Sept. 8; Sp. p. 2131; Dr. p. 453; Gaz. vol. 136; p. 368.
Wagner, J., and A. Strnad, Cleveland, Ohio. Water-motor for washing-machines. No. 897,433; Sept. 1; Sp. p. 400; Dr. p. 85; Gaz. vol. 136; p. 62.
Wahl, F. S., Olean, N. Y. Panel-box. No. 897,564; Sept. 1; Sp. p. 665; Dr. pp. 139–40; Gaz. vol. 136; p. 104.
Waite Thresher Company. (See Chaplin, J. A., assignor.)
Waite Thresher Company. (See Robertson, A., assignor.)
Walden, W. H., East Macon, Ga. Railway-track fastener. (Reissue.) No. 12,852; Sept. 8; Sp. p. 2378; Dr. p. 508; Gaz. vol. 136; p. 412.
Walker, C., Chicago, Ill. Rope halter. No. 897,565; Sept. 1; Sp. p. 669; Dr. p. 140; Gaz. vol. 136; p. 105.
Walker, G. F., assignor to D. Ambrose, Ambridge, Pa. Car-fender. No. 899,049; Sept. 29; Sp. p. 4830; Dr. p. 1036; Gaz. vol. 136; p. 917.
Walker, J., Alexandria, Va. Brick-handling device for brick-machines. No. 899,086; Sept. 22; Sp. p. 3633; Dr. p. 779; Gaz. vol. 136; p. 686.
Walker, J., Alexandria, Va. Rotary brick-machine. No. 899,087; Sept. 22; Sp. p. 3634; Dr. p. 779; Gaz. vol. 136; p. 687.
Walker, J. H., Lexington, Ky. Trolley-pole catcher. No. 899,578; Sept. 29; Sp. p. 4615; Dr. pp. 991–2; Gaz. vol. 136; p. 883.
Walker, W. L., and L. J. Eyth, Butler, Pa. Rail-fastener. No. 898,291; Sept. 8; Sp. p. 2133; Dr. p. 453; Gaz. vol. 136; p. 369.
Walker, W. P., Edmonton, Alberta, Canada. Ratchet-wrench. No. 898,806; Sept. 15; Sp. p. 3127; Dr. p. 670; Gaz. vol. 136; p. 568.
Wallace, E. D. (See Barrett and Wallace.)
Wallace, O., assignor of one-half to L. J. Voell, Elmwood Place, Ohio. Clamp. No. 898,396; Sept. 8; Sp. p. 2320; Dr. p. 493; Gaz. vol. 136; p. 404.
Wallis, J. T., Philadelphia, Pa. Crane-door. No. 899,930; Sept. 29; Sp. p. 5364; Dr. pp. 1143–4; Gaz. vol. 136; p. 997.
Walser, J. J., assignor to Goss Printing Press Company, Chicago, Ill. Rotary folding mechanism for printing-presses. No. 899,771; Sept. 29; Sp. p. 5020; Dr. p. 1076; Gaz. vol. 136; p. 946.
Walser, J. J., assignor to Goss Printing Press Company, Chicago, Ill. Rotary folding mechanism for printing-presses. No. 899,772; Sept. 29; Sp. p. 5022; Dr. p. 1077; Gaz. vol. 136; p. 946.
Walsh, J. J., *et al.* (See MacMillan, W., assignor.)
Walsh, J. J., Elizabeth, N. J. Resetting device for adding-machines. No. 897,688; Sept. 1; Sp. p. 900; Dr. p. 193; Gaz. vol. 136; p. 145.
Walther, C., Oakdale, Cal. Rake. No. 897,689; Sept. 1; Sp. p. 903; Dr. pp. 193–4; Gaz. vol. 136; p. 145.
Walton, E. (See Eicholz, J. A., assignor.)
Walton, F., London, England. Apparatus for embossing and coloring or printing lincrusta or like material. No. 898,292; Sept. 8; Sp. p. 2134; Dr. p. 454; Gaz. vol. 136; p. 369.
Walton, J., assignor to Allis-Chalmers Company, Milwaukee, Wis. Stop mechanism for sawmill set-works. No. 899,579; Sept. 29; Sp. p. 4618; Dr. p. 992; Gaz. vol. 136; p. 883.
Waltrip, H. B., Cleaton, Ky. Dinner-pail. No. 899,360; Sept. 22; Sp. p. 4182; Dr. p. 895; Gaz. vol. 136; p. 776.
Waltz, D. A., Salt Lake City, Utah. Bed-pan. No. 897,434; Sept. 1; Sp. p. 402; Dr. p. 86; Gaz. vol. 136; p. 62.
Wangelin, W. H., Belleville, Ill. Sand-feeding device for molding-machines. No. 897,942; Sept. 8; Sp. p. 1458; Dr. p. 310; Gaz. vol. 136; p. 260.
Wangelin, W. H., Belleville, Ill. Sand-mold-charging apparatus. No. 899,640; Sept. 29; Sp. p. 4753; Dr. p. 1017; Gaz. vol. 136; p. 903.
Wantz, J. B., assignor to Victor Electric Company, Chicago, Ill. Massaging instrument. No. 899,234; Sept. 22; Sp. p. 3937; Dr. p. 840; Gaz. vol. 136; p. 735.
Ward, B. T., Saratoga, N. Y. Ironing-board. No. 898,707; Sept. 15; Sp. p. 2949; Dr. p. 632; Gaz. vol. 136; p. 536.
Ward, C., Chicago, Ill. Picture-frame. No. 898,614; Sept. 15; Sp. p. 2765; Dr. p. 590; Gaz. vol. 136; p. 507.
Ward, M. E., Chicago, Ill. Car-roof. No. 899,817; Sept. 29; Sp. p. 5124; Dr. p. 1096; Gaz. vol. 136; p. 962.
Wardner, C. A., Brushton, N. Y. Pleasurephone. No. 899,641; Sept. 29; Sp. p. 4754; Dr. p. 1018; Gaz. vol. 136; p. 903.
Ware, J. F., and T. W. Rundle, Denver, Colo., assignors to Automatic Photograph Printing Machine Company. Automatic fluid-controlled variable-time-exposure valve mechanism for photoprinting-machines. No. 899,235; Sept. 22; Sp. p. 3940; Dr. p. 841; Gaz. vol. 136; p. 736.
Ware, R. T. (See Jesse and Ware.)
Wareham, J. L., Atlantic City, N. J. Salver. No. 899,642; Sept. 29; Sp. p. 4758; Dr. p. 1018; Gaz. vol. 136; p. 904.
Warlick, B. A., Atlanta, Ga. Window. No. 897,435; Sept. 1; Sp. p. 403; Dr. p. 86; Gaz. vol. 136; p. 62.
Warner, A. A., assignor to Landers, Frary and Clark, New Britain, Conn. Lamp-stove. No. 898,150; Sept. 8; Sp. p. 1890; Dr. p. 404; Gaz. vol. 136; p. 328.
Warner, F. J. (See Martin, T. A., assignor.)
Warner, W. A., Bridgeport, Conn. Artificial flower. No. 899,852; Sept. 29; Sp. p. 5210; Dr. p. 1115; Gaz. vol. 136; p. 974.
Warner, W. E., assignor to Kemp & Burpee Manufacturing Company, Syracuse, N. Y. Fertilizer-distributer. No. 899,580; Sept. 29; Sp. p. 4620; Dr. pp. 992–3; Gaz. vol. 136; p. 884.
Warren, C. W., Marion, assignor to Warren Mfg. Co., Veedersburg, Ind. Container. No. 898,293; Sept. 8; Sp. p. 2137; Dr. p. 454; Gaz. vol. 136; p. 369.
Warren, F. A., Canon City, Colo. Centrifugal-oiling bearing for wheels. No. 897,943; Sept. 8; Sp. p. 1460; Dr. p. 311; Gaz. vol. 136; p. 260.
Warren Featherbone Company of Michigan. (See Webster, W., assignor.)
Warren Mfg. Co. (See Warren, C. W., assignor.)
Warren Webster & Company. (See Braemer, W. G. R., assignor.)
Warren Webster and Company. (See Harrison, A., assignor.)
Washington Cutlery Company. (See Volckmann, H., assignor.)
Wassam, J. J., Cabool, Mo. Bed-protector. No. 899,361; Sept. 22; Sp. p. 4184; Dr. p. 895; Gaz. vol. 136; p. 776.
Waterbury Buckle Co. (See De Lancey and Buchanan, assignors.)
Waterman, F. M. (See Corthell, W. M., assignor.)
Waters, A. T., Regina, Saskatchewan, Canada. Soap-holder. No. 897,690; Sept. 1; Sp. p. 905; Dr. p. 194; Gaz. vol. 136; p. 146.
Waters Engine Company. (See Waters, F. J., assignor.)
Waters, F. J., Providence, R. I., assignor to Waters Engine Company, Saco, Me. Boring-machine. No. 897,944; Sept. 8; Sp. p. 1462; Dr. pp. 311–12; Gaz. vol. 136; p. 261.
Watkins, B. G., assignor of two-thirds to J. A. Pollard, Jr., and J. A. Pollard, Nehawka, Nebr. Trolley-switch. No. 899,773; Sept. 29; Sp. p. 5025; Dr. pp. 1077–8; Gaz. vol. 136; p. 947.
Watkins, H., Utica, assignor of one-half to J. C. Dewhurst, Deerfield, N. Y. Lawn-trimmer. No. 897,436; Sept. 1; Sp. p. 406; Dr. p. 86; Gaz. vol. 136; p. 63.
Watson, H., Washington, D. C. Safety-elevator. No. 899,362; Sept. 22; Sp. p. 4185; Dr. p. 896; Gaz. vol. 136; p. 776.
Watson, W. C., Cottesloe, assignor of two-thirds to H. Bolton and D. Mulcahy, Fremantle, Western Australia, Australia. Drop-lever brake for railway-vehicles. No. 898,416; Sept. 8; Sp. p. 2367; Dr. p. 505; Gaz. vol. 136; p. 410.
Watson, W. H., Lakeport, N. H. Calipers. No. 897,437; Sept. 1; Sp. p. 408; Dr. p. 87; Gaz. vol. 136; p. 63.
Watson, W. S., Memphis, Tenn. Automatic button cutting and shaping machine. No. 897,691; Sept. 1; Sp. p. 907; Dr. pp. 194–5; Gaz. vol. 136; p. 146.
Watts, J. C., Van Wert, Ohio. Mail catcher and deliverer. No. 897,803; Sept. 1; Sp. p. 1149; Dr. p. 245; Gaz. vol. 136; p. 182.
Warland, C. A., South Knoxville, Tenn. Printing-frame. No. 899,363; Sept. 22; Sp. p. 4188; Dr. p. 897; Gaz. vol. 136; p. 777.
Wayrynen, W. L., Dolph, S. D. Valve mechanism for engines. No. 898,807; Sept. 15; Sp. p. 3128; Dr. p. 670; Gaz. vol. 136; p. 568.
Weatherhead, A. L. (See Weatherhead, C. B. and A. L.)
Weatherhead, C. B. and A. L., Denver, Colo. Waxing device for laundry-irons. No. 897,804; Sept. 1; Sp. p. 1151; Dr. p. 245; Gaz. vol. 136; p. 182.
Weaver, F. H., Griffin, Ga. Cultivating implement. No. 900,004; Sept. 29; Sp. p. 5520; Dr. pp. 1176–7; Gaz. vol. 136; p. 1021.
Weber, J., Jasonville, assignor of one-half to A. G. Cummings, Terre Haute, Ind. Powder-can. No. 898,944; Sept. 15; Sp. p. 3371; Dr. p. 724; Gaz. vol. 136; p. 613.
Weber, J. W., Pittsburg, Pa. Manipulator. (Reissue.) No. 12,859; Sept. 29; Sp. p. 5686; Dr. p. 1214; Gaz. vol. 136; p. 1045.
Weber, T. W., St. Louis, Mo. Halter. No. 897,329; Sept. 1; Sp. p. 154; Dr. p. 31; Gaz. vol. 136; p. 24.
Webster, E. A., Groveland, assignor to Haverhill Channeling Machine Company, Haverhill, Mass. Sole-channeling machine. No. 897,327; Sept. 1; Sp. p. 143; Dr. p. 30; Gaz. vol. 136; p. 23.
Webster, E. A., Groveland, assignor to Haverhill Channeling Machine Company, Portland, Me. Shoe-channeling machine. No. 897,328; Sept. 1; Sp. p. 150; Dr. p. 31; Gaz. vol. 136; p. 23.
Webster, E. A., Groveland, assignor to Haverhill Channeling Machine Co., Haverhill, Mass. Channeling-machine. No. 897,438; Sept 1; Sp. p. 409; Dr. p. 87; Gaz. vol. 136; p. 64.

Webster, W., London, Ontario, Canada, assignor, by mesne assignments, to Warren Featherbone Company of Michigan, Three Oaks, Mich. Machine for treating quill substances. No. 900,048; Sept. 29; Sp. p. 5623; Dr. pp. 1200–3; Gaz. vol. 136; p. 1036.
Wedekind, C., St. Jean-sur-Mer, France. Gaseous-fluid turbine. No. 897,503; Sept. 1; Sp. p. 535; Dr. pp. 113–14; Gaz. vol. 136; p. 86.
Weeks, F. B. (See Richmond, G. E., assignor.)
Wegelin, G., Kalscheuren, near Cologne, Germany. Apparatus for making lampblack. No. 897,439; Sept. 1; Sp. p. 411; Dr. p. 87; Gaz. vol. 136; p. 64.
Wegener, C. R., and H. E. Hanson, Winona, Minn. Cabinet. No. 899,147; Sept. 22; Sp. p. 3764; Dr. pp. 805–6; Gaz. vol. 136; p. 708.
Wegner, W. F., assignor to S. T. Williams, New York, N. Y. Incandescent-lamp socket. No. 897,805; Sept. 1; Sp. p. 1152; Dr. p. 245; Gaz. vol. 136; p. 182.
Wehrlen, B., and F. C. Matthews, Pompton Lakes, N. J. Take-up for looms. No. 899,931; Sept. 29; Sp. p. 5366; Dr. p. 1144; Gaz. vol. 136; p. 997.
Weibel-Mullsch, J., Zurich, assignor to A. Wild-Siegfried, Thalwil, near Zurich, Switzerland. Ball-bearing. No. 898,945; Sept. 15; Sp. p. 3373; Dr. p. 724; Gaz. vol. 136; p. 614.
Welchelt, C. L., Philadelphia, Pa. Governor for dynamos. No. 899,088; Sept. 22; Sp. p. 3636; Dr. p. 779; Gaz. vol. 136; p. 687.
Weidemann, W., Dusseldorf, Germany. Wrench. No. 898,708; Sept. 15; Sp. p. 2949; Dr. p. 632; Gaz. vol. 136; p. 537.
Weil, A. (See Amstalden, W., assignor.)
Weinman, G. G., Columbus, Ohio. Gas-burning attachment for furnaces. No. 899,275; Sept. 22; Sp. p. 4038; Dr. p. 863; Gaz. vol. 136; p. 749.
Weisenborn, G. P. A., Clarence, Mo. Fence-weaving machine. No. 898,294; Sept. 8; Sp. p. 2138; Dr. pp. 454–5; Gaz. vol. 136; p. 370.
Weiss, A. H., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Hinge for boxes. No. 899,818; Sept. 29; Sp. p. 5126; Dr. p. 1096; Gaz. vol. 136; p. 962.
Welss, L., Budapest, Austria-Hungary. Producing solid hard pieces from pulverulent material of any origin. No. 899,581; Sept. 29; Sp. p. 4623; Gaz. vol. 136; p. 884.
Welch, J. R., assignor, by mesne assignments, to American Steel Wheel Company, Alexandria, Ind. Metal wheel-spoke. No. 899,476; Sept. 22; Sp. p. 4384; Dr. p. 940; Gaz. vol. 136; p. 812.
Welch, J. R., assignor to American Steel Wheel Company, Alexandria, Ind. Laminated metal wheel-spoke. No. 900,049; Sept. 29; Sp. p. 5633; Dr. p. 1203; Gaz. vol. 136; p. 1036.
Welles, F. (See Davis, I. N., assignor.)
Wellman-Seaver-Morgan Company. (See Hughes, W. B., assignor.)
Wellnitz, C. O., Milwaukee, Wis. Score-keeper. No. 899,819; Sept. 29; Sp. p. 5127; Dr. p. 1097; Gaz. vol. 136; p. 962.
Wells, W. T. (See Simpson, R. D., assignor.)
Wendling, G., Dayton, Ohio. Fish-plate. No. 897,945; Sept. 8; Sp. p. 1468; Dr. p. 312; Gaz. vol. 136; p. 261.
Wendling Hoch Adding Machine Company. (See Hoch, A., assignor.)
Wentworth, H. A., Lynn, assignor to Huff Electrostatic Separator Company, Boston, Mass. Electric separator. No. 899,364; Sept. 22; Sp. p. 4190; Dr. p. 897; Gaz. vol. 136; p. 777.
Werner, T. O., Bangor, Pa. Friction-clutch. No. 898,946; Sept. 15; Sp. p. 3374; Dr. pp. 724–5; Gaz. vol. 136; p. 614.
Weser, J. A., New York, N. Y. Piano. No. 898,160; Sept. 8; Sp. p. 1891; Dr. p. 404; Gaz. vol. 136; p. 329.
Wesson, J. H., assignor to Smith & Wesson, Springfield, Mass. Safety firing-pin. No. 897,806; Sept. 1; Sp. p. 1153; Dr. p. 246; Gaz. vol. 136; p. 183.
West Brothers. (See Schmidt, J. B., assignor.)
West, J., Southport, England. Discharging-machine for gas-retorts. No. 898,537; Sept. 15; Sp. p. 2618; Dr. p. 559; Gaz. vol. 136; p. 482.
West, J., Southport, England. Charging-machine for gas-retorts. No. 898,538; Sept. 15; Sp. p. 2621; Dr. pp. 560–2; Gaz. vol. 136; p. 482.
West, J. R., Peoria, Ill. Bar-counter. No. 898,536; Sept. 15; Sp. p. 2616; Dr. p. 558; Gaz. vol. 136; p. 481.
Westbrook, J. G., Ogdensburg, N. Y. Clutch-throwing mechanism. No. 897,330; Sept. 1; Sp. p. 155; Dr. p. 32; Gaz. vol. 136; p. 24.
Westbrook, W. B., Cliff, Ky. Metallic core for railway-ties. No. 899,089; Sept. 22; Sp. p. 3638; Dr. p. 780; Gaz. vol. 136; p. 688.
Western Car Seal Company. (See Pleins, R. C., assignor.)
Western Electric Company. (See Albright, H. F., assignor.)
Western Electric Company. (See Atwood, G. F., assignor.)
Western Electric Company. (See Craft, E. B., assignor.)
Westinghouse Air Brake Company. (See Desoe, E. G., assignor.)
Westinghouse Air Brake Company. (See Herr, H. T., assignor.)
Westinghouse Machine Company. (See Hodgkinson, F., assignor.) (Reissue.)
Westlake, C. T., assignor to Transom Draft Gear Company, St. Louis, Mo. Draft-gear for railway-cars. No. 899,090; Sept 22; Sp. p. 3639; Dr. p. 780; Gaz. vol. 136; p. 688.
Weston, E. M., Brakpan, Transvaal. Water-supplying device for rock-drilling machines. No. 899,582; Sept. 29; Sp. p. 4625; Dr. p. 993; Gaz. vol. 136; p. 884.
Weston, T. B., Wenona, Ill. Store-cabinet. No. 899,195; Sept. 22; Sp. p. 3864; Dr. p. 826; Gaz. vol. 136; p. 723.
Westover, H. J., New York, N. Y. Apparatus for analyzing gases. No. 899,774; Sept. 29; Sp. p. 5029; Dr. pp. 1078–9; Gaz. vol. 136; p. 947.
Westrich, A. L., Vantrent, Cal., assignor to Westrich Manufacturing and Supply Company. Rotary engine. No. 899,148; Sept. 22; Sp. p. 3766; Dr. p. 806; Gaz. vol. 136; p. 708.
Westrich Manufacturing and Supply Company. (See Westrich, A. L., assignor.)
Westrup, A. B., Habana, Cuba. Kitchen utensil. No. 899,365; Sept. 22; Sp. p. 4193; Dr. p. 897; Gaz. vol. 136; p. 777.
Wheeler, E. S., Detroit, Mich. Pressure-gage. No. 899,932; Sept. 29; Sp. p. 5367; Dr. p. 1145; Gaz. vol. 136; p. 997.
Wheeler, G. A., New York, N. Y. Moving stairway. No. 899,933; Sept. 29; Sp. p. 5369; Dr. pp. 1145–6; Gaz. vol. 136; p. 998.
Wheeler, W. J., Duluth, Minn. Trap-gun. No. 898,023; Sept. 8; Sp. p. 1630; Dr. p. 347; Gaz. vol. 136; p. 286.
Wheelock, E. W., Arlington, Mass. Bottle-closure. No. 898,615; Sept. 15; Sp. p. 2766; Dr. p. 591; Gaz. vol. 136; p. 507.
Whinery, D., Hoboken, assignor to Curtain Supply Company, Newark, N. J. Shade-fixture. No. 898,947; Sept. 15; Sp. p. 3378; Dr. p. 725; Gaz. vol. 136; p. 615.
Whipple, L. B., assignor to American Wood Working Machinery Co., Rochester, N. Y. Sectional feed-roll for planing and other machines. No. 899,276; Sept. 22; Sp. p. 4040; Dr. p. 863; Gaz. vol. 136; p. 749.
Whitacre, J. J., Canton, Ohio. Floor construction. No. 899,775; Sept. 29; Sp. p. 5034; Dr. p. 1079; Gaz. vol. 136; p. 948.
Whitacre, J. J., Canton, Ohio. Floor construction. No. 899,776; Sept. 29; Sp. p. 5037; Dr. p. 1079; Gaz. vol. 136; p. 948.
Whitaker, R., New Brunswick, N. J., assignor to Brunswick Refrigerating Company. Gas-pump. No. 899,583; Sept. 29; Sp. p. 4627; Dr. p. 993; Gaz. vol. 136; p. 885.
Whitaker, R., New Brunswick, N. J., assignor to Brunswick Refrigerating Company. Valve for gas-pumps. No. 899,584; Sept. 29; Sp. p. 4628; Dr. pp. 993–4; Gaz. vol. 136; p. 885.
Whitaker, R., New Brunswick, N. J., assignor to Brunswick Refrigerating Company. Gas-pump. No. 899,585; Sept. 29; Sp. p. 4631; Dr. p. 994; Gaz. vol. 136; p. 886.
Whitbred, A. A., Altoona, Pa. Railway-tie. No. 898,709; Sept. 15; Sp. p. 2950; Dr. p. 632; Gaz. vol. 136; p. 537.
White, F. J. (See Long, F. N., assignor.)
White, J. A., Philadelphia, Pa. Window-screen. No. 898,539; Sept. 15; Sp. p. 2625; Dr. p. 562; Gaz. vol. 136; p. 482.
White, J. F., Mount Morris, N. Y. Corn-husking machine. No. 899,777; Sept. 29; Sp. p. 5040; Dr. p. 1080; Gaz. vol. 136; p. 949.
White, L. Q., Brockton, Mass. Shoe. No. 898,710; Sept. 15; Sp. p. 2952; Dr. p. 632; Gaz. vol. 136; p. 537.
White, V. A., Aliceville, Ala. Means for connecting parallel railway-rails. No. 899,366; Sept. 22; Sp. p. 4194; Dr. p. 898; Gaz. vol. 136; p. 778.
White, W. B. (See Krueger, G., assignor.)
Whitehead, A. E., assignor to Farrand Organ Company, Detroit, Mich. Mechanical musical instrument. No. 897,331; Sept. 1; Sp. p. 157; Dr. pp. 32–3; Gaz. vol. 136; p. 24.
Whitehead & Company. (See Jones, A. E., assignor.)
Whitehorne Organ Action Company. (See Whitehorne, W. R., assignor.)
Whitehorne, W. R., Brooklyn, N. Y., assignor to Whitehorne Organ Action Company, Jersey City, N. J. Electric organ-action. No. 897,692; Sept. 1; Sp. p. 913; Dr. p. 195; Gaz. vol. 136; p. 146.
Whitesell, W. H. (See Dougherty, M. F., assignor.)
Whitin Machine Works. (See Owen, O. L., assignor.)
Whitney Manufacturing Company. (See Belcher and Butler, assignors.)
Whitney Manufacturing Company, W. A. (See Whitney, W. A., assignor.)
Whitney, W. A., assignor to W. A. Whitney Manufacturing Company, Rockford, Ill. Punch. No. 898,397; Sept. 8; Sp. p. 2322; Dr. p. 494; Gaz. vol. 136; p. 404.
Whyte, F. M. (See Lockwood and Whyte.)
Wiard, H., Syracuse, N. Y. Plow. No. 898,711; Sept. 15; Sp. p. 2953; Dr. p. 633; Gaz. vol. 136; p. 537.
Wiebke, C., New York, N. Y. Gearing. No. 899,277; Sept. 22; Sp. p. 4041; Dr. p. 863; Gaz. vol. 136; p. 750.
Wiench, C., Shevlin, Minn. Guard-rail. No. 897,946; Sept. 8; Sp. p. 1469; Dr. p. 312; Gaz. vol. 136; p. 261.
Wiesebrock, F. W. A., New York, N. Y. Safety device for conveyances. No. 897,566; Sept. 1; Sp. p. 670; Dr. p. 140; Gaz. vol. 136; p. 105.
Wilcox, E. B., Meriden, Conn. Electrical fitting. No. 898,540; Sept. 15; Sp. p. 2628; Dr. p. 562; Gaz. vol. 136; p. 483.

Wilcox, H., Newark, N. J., assignor, by mesne assignments, to S. C. Hirschberg, New York, N. Y. Nail-clipper. No. 898,808; Sept. 15; Sp. p. 3131; Dr. p. 671; Gaz. vol. 136; p. 569.
Wilcox Manufacturing Company. (See Prouty, T. C., assignor.)
Wild-Siegfried, A. (See Weibel-Mulisch, J., assignor.)
Wilder, W. H., Caledonia, N. Y. Bunching device for harvesters. No. 898,161; Sept. 8; Sp. p. 1893; Dr. p. 405; Gaz. vol. 136; p. 329
Wilderman, J., New York, N. Y. Amusement device. No. 898,948; Sept. 15; Sp. p. 3380; Dr. p. 725; Gaz. vol. 136; p. 615.
Willey, A. R., Denver, Colo. Roasting-furnace. No. 898,024; Sept. 8; Sp. p. 1631; Dr. pp. 347–8; Gaz. vol. 136; p. 286.
Wilkinson, C. (See Hacking and Wilkinson.)
Wilkinson, T. G., South Williamsport, Pa. Pneumatic vehicle-spring. No. 898,712; Sept. 15; Sp. p. 2955; Dr. p. 634; Gaz. vol. 136; p. 538.
Wilks, C. T., Woodlawn, Ala. Advertising device. No. 898,949; Sept. 15; Sp. p. 3381; Dr. p. 726; Gaz. vol. 136; p. 615.
Willard, O. H., Chicago, Ill. Covering for barbers' chairs. No. 899,853; Sept. 29; Sp. p. 5211; Dr. p. 1115; Gaz. vol. 136; p. 974.
William B. Mershon and Company. (See Gilbert, H. J., assignor.)
William L. Imlay Rapid Cyanide Process Company. (See Imlay, W. L., assignor.)
Williams, C., Turney, Mo. Cultivator-fender. No. 898,809; Sept. 15; Sp. p. 3133; Dr. p. 671; Gaz. vol. 136; p. 569.
Williams, G. T. (See Barnes, Williams, and Reynolds.)
Williams, J. F., *et al.* (See Meres, C. R., assignor.)
Williams, L. N. D. (See Scott, R. W., assignor.)
Williams, M. C., Gary, Ind. Railway-tie. No. 899,643; Sept. 29; Sp. p. 4759; Dr. p. 1018; Gaz. vol. 136; p. 904.
Williams, R. N., Jr., Baltimore, Md. Clay-excavator. No. 898,079; Sept. 8; Sp. p. 1735; Dr. pp. 368–9; Gaz. vol. 136; p. 304.
Williams, S. T. (See Wegner, W. F., assignor.)
Williams, W., Detroit, Mich. Match-box. No. 897,693; Sept. 1; Sp. p. 916; Dr. p. 195; Gaz. vol. 136; p. 147.
Williams, W. E., assignor of one-half to W. Bryant, Massillon, Ohio. Dilator and applicator. No. 899,477; Sept. 22; Sp. p. 4385; Dr. p. 941; Gaz. vol. 136; p. 812.
Williams, W. H. (See Cain and Williams.)
Williamson, J., Chicago, Ill. Fire-grate. No. 899,442; Sept. 22; Sp. p. 4320; Dr. pp. 928–9; Gaz. vol. 136; p. 900.
Williamson, J. M., Moundsville, W. Va. Base-board heater. No. 898,616; Sept. 15; Sp. p. 2768; Dr. p. 591; Gaz. vol. 136; p. 507.
Williamson, W., and J. Collinson, Manchester, England. Weft-replenishing mechanism for looms. No. 899,586; Sept. 29; Sp. p. 4633; Dr. p. 994; Gaz. vol. 136; p. 886.
Wilshusen, H., Stafford, Kans. Lister-cultivator. No. 898,162; Sept. 8; Sp. p. 1894; Dr. p. 405; Gaz. vol. 136; p. 329.
Wilson, A. B., assignor of one-half to G. T. Breen, St. Louis, Mo. Light-fixture. No. 897,947; Sept. 8; Sp. p. 1470; Dr. pp. 312–13; Gaz. vol. 136; p. 262.
Wilson, A. E., Newlands, Glasgow, Scotland. Teapot. No. 898,713; Sept. 15; Sp. p. 2957; Dr. p. 634; Gaz. vol. 136; p. 538.
Wilson, A. F. and E. L., and I. M. Southwick, Medo, Minn. Transmission mechanism. No. 898,025; Sept. 8; Sp. p. 1633; Dr. p. 348; Gaz. vol. 136; p. 287.
Wilson, A. H., assignor of one-half to D. Pryor, Loogootee, Ill. Wheelwright-machine. No. 898,811; Sept. 15; Sp. p. 3135; Dr. pp. 671–2; Gaz. vol. 136; p. 570.
Wilson, A. V., Bar Harbor, Me. Flying-machine. No. 897,504; Sept. 1; Sp. p. 537; Dr. pp. 114–15; Gaz. vol. 136; p. 86.
Wilson, C., Hackettstown, N. J. Fire alarm and extinguisher. No. 898,295; Sept. 8; Sp. p. 2141; Dr. p. 455; Gaz. vol. 136; p. 370.
Wilson, C. E., assignor to Keystone Telephone Company of Philadelphia, Philadelphia, Pa. Telephone-switchboard. No. 899,278; Sept. 22; Sp. p. 4042; Dr. p. 864; Gaz. vol. 136; p. 750.
Wilson, H., and R. B. MacFarland, Conneaut, Ohio. Stretcher. No. 899,279; Sept. 22; Sp. p. 4044; Dr. p. 864; Gaz. vol. 136; p. 750.
Wilson, J. C. (See Sheridan, A. J., assignor.)
Wilson, J. T., Jersey Shore, Pa. Packing for piston-valves and pistons. No. 898,541; Sept. 15; Sp. p. 2629; Dr. p. 562; Gaz. vol. 136; p. 483.
Wilson, J. T., Jersey Shore, Pa. Packing for pistons and piston-rods. No. 898,617; Sept. 15; Sp. p. 2771; Dr. p. 592; Gaz. vol. 136; p. 508.
Wilson, M. C., New Haven, Conn. Trunk-lining. No. 898,026; Sept. 8; Sp. p. 1635; Dr. p. 348; Gaz. vol. 136; p. 287.
Wilson, W. F., Jeannette, and C. K. Barnhart, McKees Rocks, Pa. Metallic tie and rail-joint. No. 898,810; Sept. 15; Sp. p. 3134; Dr. p. 671; Gaz. vol. 136; p. 569.
Wilson, W. J., Homestead, Pa. Metal railway-tie. No. 898,080; Sept. 8; Sp. p. 1738; Dr. p. 370; Gaz. vol. 136; p. 304.
Wilson, W. R., Saginaw, Mich. Order-holder. No. 897,332; Sept. 1; Sp. p. 160; Dr. p. 34; Gaz. vol. 136; p. 25.
Wimer, E., Crabbottom, Va. Sash-lock. No. 897,807; Sept. 1; Sp. p. 1155; Dr. p. 246; Gaz. vol. 136; p. 183
Wimmer, K. (See Meyer, Roselius, and Wimmer.)
Wimmer, K. (See Meyer and Wimmer.)
Wimmer, K. H. (See Meyer, Roselius, and Wimmer.)
Winchell, F. J., Lynn, Mass. Foot-arch. No. 899,367; Sept. 22; Sp. p. 4195; Dr. p. 898; Gaz. vol. 136; p. 778.
Windsor, A., Edinburgh, Scotland. Means for locking doors and the like. No. 897,948; Sept. 8; Sp. p. 1472; Dr. p. 313; Gaz. vol. 136; p. 262.
Wingo, R. T., assignor to Brown and Sharpe Manufacturing Company, Providence, R. I. Metal-working machine. No. 897,440; Sept. 1; Sp. p. 412; Dr. p. 88; Gaz. vol. 136; p. 64.
Wininger, W., Alfordsville, Ind. Post-hole digger. No. 899,644; Sept. 29; Sp. p. 4761; Dr. p. 1019; Gaz. vol. 136; p. 904.
Winkler, E., *et al.* (See MacMillan, W., assignor.)
Winslow Brothers Company. (See Kall, J. L., assignor.)
Winsor, P., Weston, Mass., assignor to Union Switch and Signal Company, Swissvale, Pa. System for controlling trains. No. 898,296; Sept. 8; Sp. p. 2142; Dr. pp. 455–6; Gaz. vol. 136; p. 370.
Winter, E. C. (See Winter, J. R. and E. C.)
Winter, J. R. and E. C., Detroit, Mich. Nut. No. 899,368; Sept. 22; Sp. p. 4195; Dr. p. 898; Gaz. vol. 136; p. 778.
Wirth, E., Schopfheim, Germany, assignor to L. Greiner, Toledo, Ohio. Belt-shifting means. No. 897,441; Sept. 1; Sp. p. 416; Dr p. 88; Gaz. vol. 136; p. 65.
Wise Brothers. (See Wise, L. H., assignor.)
Wise, L. H., assignor to Wise Brothers, New York, N. Y. Overalls. No. 900,050; Sept. 29; Sp. p. 5634; Dr. p. 1203; Gaz. vol. 136; p. 1036.
Wiseman, J. W. (See Patterson and Wiseman.)
Witt, R. G. (See Jürgens, J. C. F., assignor.)
Wittstein, C. T., Newark, N. J. Jeweler's tag. No. 899,778; Sept. 29; Sp. p. 5043; Dr. p. 1060; Gaz. vol. 136; p. 949.
Witz, A. A., Garrison, N. D. Gate. No. 897,949; Sept. 8; Sp. p. 1473; Dr. p. 313; Gaz. vol. 136; p. 262.
Wolever, F. H., assignor to Illinois Pneumatic Transmission Co., Chicago, Ill. Pneumatic-despatch-tube system. No. 898,542; Sept. 15; Sp. p. 2631; Dr. pp. 563–4; Gaz. vol. 136; p. 484.
Wolf, D. L., Archer City, Tex. Propelling device for aerial ships. No. 898,081; Sept. 8; Sp. p. 1740; Dr. p. 370; Gaz. vol. 136; p. 304.
Wolf, J. D., London, England. Separation of metals from their ores. No. 899,149; Sept. 22; Sp. p. 3767; Dr. p. 807; Gaz. vol. 136; p. 709.
Wolf, J. D., London, England. Separating metals from their ores. No. 899,478; Sept. 22; Sp. p. 4387; Dr. pp. 941–2; Gaz. vol. 136; p. 812.
Wolf, W., Philadelphia, Pa. Hook and eye. No. 899,369; Sept. 22; Sp. p. 4196; Dr. p. 899; Gaz. vol. 136; p. 778.
Wolfe, C. H., Charlotte, N. C. Steam-shovel. No. 898,618; Sept. 15; Sp. p. 2773; Dr. p. 592; Gaz. vol. 136; p. 508.
Wolfe, S. C., Angola, Ind. Anchoring and tension device for tire-protectors. No. 898,714; Sept. 15; Sp. p. 2959; Dr. p. 634; Gaz. vol. 136; p. 538.
Wolfe, W., Patton, Pa. Brake for vehicles. No. 898,082; Sept. 8; Sp. p. 1741; Dr. p. 370; Gaz. vol. 136; p. 305.
Wolfensberger, F., Mülheim-on-the-Rhine, Germany. Device for the support of work. No. 897,808; Sept. 1; Sp. p. 1156; Dr. p. 246; Gaz. vol. 136; p. 183.
Wolff, H. W. (See Frame, R. E., assignor.)
Wolke, G., Jacksonville, Ill. Wheel. No. 899,934; Sept. 29; Sp. p. 5375; Dr. p. 1146; Gaz. vol. 136; p. 998.
Wonsmos, M. B., and J. P. Schonboe, Audubon, Iowa. Ironing-board. No. 899,091; Sept. 22; Sp. p. 3640; Dr. p. 780; Gaz. vol. 136; p. 688.
Wood, A. C., assignor of one-half to J. K. Orvis, Waukegan, Ill. Turbine. No. 897,567; Sept. 1; Sp. p. 671; Dr. p. 141; Gaz. vol. 136; p. 105.
Wood, E. L., Long Island City, N. Y. Self-lubricating shaft. No. 898,297; Sept. 8; Sp. p. 2150; Dr. p. 457; Gaz. vol. 136; p. 371.
Wood, F. B., Providence, R. I., assignor to Rhode Island Fiber Spool Company, Boston, Mass. Spool. No. 898,398; Sept. 8; Sp. p. 2323; Dr. p. 494; Gaz. vol. 136; p. 404.
Wood, F. W., Newport News, Va., assignor to C. and J. M. Cory, New York, N. Y. Telephone apparatus. No. 898,619; Sept. 15; Sp. p. 2776; Dr. p. 592; Gaz. vol. 136; p. 508.
Wood, F. W., Newport News, Va., assignor to C. and J. M. Cory, New York, N. Y. Telephonic apparatus. No. 898,620; Sept. 15; Sp. p. 2778; Dr. p. 592; Gaz. vol. 136; p. 509.
Wood, F. W., Newport News, Va., assignor to C. and J. M. Cory, New York, N. Y. Automatic contact mechanism for electric revolution-indicators. No. 898,621; Sept. 15; Sp. p. 2780; Dr. p. 594; Gaz. vol. 136; p. 509.
Wood, H. (See Durst, G., assignor.)
Wood, H. A. W., assignor to Campbell Printing Press & Manufacturing Company, New York, N. Y. Associating and collecting mechanism. No. 897,333; Sept. 1; Sp. p. 161; Dr. pp. 34–5; Gaz. vol. 136; p. 25.

Wood, J., assignor of one-half to J. Owen, Noblesville, Ind. Mail-bag catcher and deliverer. No. 898,812; Sept. 15; Sp. p. 3139; Dr. p. 672; Gaz. vol. 136; p. 570.
Woodall, C. J., *et al.* (See Nelson, E. A., assignor.)
Woodbridge, J. L., Philadelphia, Pa. System of electrical distribution. No. 897,950; Sept. 8; Sp. p. 1474; Dr. p. 314; Gaz. vol. 136; p. 262.
Woodbury, G. E., San Francisco, Cal. Butter-box fastener. No. 897,442; Sept. 1; Sp. p. 418; Dr. p. 89; Gaz. vol. 136; p. 65.
Woodward, R. G., Waukegan, assignor to Union Special Sewing Machine Company, Chicago, Ill. Device for controlling the needle-loop on overseaming sewing-machines. No. 899,479; Sept. 22; Sp. p. 4390; Dr. p. 943; Gaz. vol. 136; p. 813.
Woolnough, A. E., New York, N. Y. Toy. No. 898,813; Sept. 15; Sp. p. 3142; Dr. p. 673; Gaz. vol. 136; p. 570.
Worth, W. O., Evansville, Ind. Spring suspension. No. 897,694; Sept. 1; Sp. p. 918; Dr. p. 196; Gaz. vol. 136; p. 147.
Worthen, A. J., assignor of two-thirds to J. G. Odenwalder, St. Louis, Mo., and C. H. Lothrop, Everett, Mass. Safety-elevator. No. 898,298; Sept. 8; Sp. p. 2151; Dr. p. 457; Gaz. vol. 136; p. 371.
Worthington, H. R. (See Mueller, O. H., assignor.)
Worthington, R. L., Philadelphia, Pa. Street-cleaner. No. 897,505; Sept. 1; Sp. p. 539; Dr. p. 115; Gaz. vol. 136; p. 86.
Wouters, A. H., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Dynamo-electric machine of the inclosed type. No. 899,370; Sept. 22; Sp. p. 4198; Dr. p. 899; Gaz. vol. 136; p. 779.
Wray, W. A., *et al.* (See Grove, M. L., assignor.)
Wright, C. (See Long and Wright.)
Wright, C. H., *et al.* (See Goerdes, F. W., assignor.)
Wright, C. S., Grand Haven, Mich. Folding bellows-pedal. No. 899,935; Sept. 29; Sp. p. 5376; Dr. pp. 1146–7; Gaz. vol. 136; p. 998.
Wright, C. W., Baltimore, Md. Filter. No. 899,645; Sept. 29; Sp. p. 4762; Dr. p. 1019; Gaz. vol. 136; p. 904
Wyatt, W., Sydney, assignor to T. D. P. Holden, Redfern, near Sydney, New South Wales, Australia. Wedge for securing the handles of axes, hammers, &c. No. 898,950; Sept. 15; Sp. p. 3382; Dr. p. 726; Gaz. vol. 136; p. 615.
Wyckoff, Seamans & Benedict. (See Decker, A. F., assignor.)
Wyckoff, Seamans & Benedict. (See Shepard, C. H., assignor.)
Wylie, F. S., *et al.* (See Chamberlin, E. A., assignor.)
Wylie, J. H., *et al.* (See Chamberlin, E. A., assignor.)
Wynkoop, H. S. (See Albert, L., assignor.)
Yarnell, C. S., assignor to Moore Carving Machine Co., Minneapolis, Minn. Rubbing and polishing machine. No. 897,951; Sept. 8; Sp. p. 1477; Dr. pp. 314–15; Gaz. vol. 136; p. 263.
Yeager, F. A., Thornburg, Pa. Weather-strip. No. 899,150; Sept. 22; Sp. p. 3770; Dr. p. 808; Gaz. vol. 136; p. 709.
Yendall, W. R., Jr., Aurora, Ill. Stove. No. 899,936; Sept. 29; Sp. p. 5379; Dr. p. 1147; Gaz. vol. 136; p. 999.
Yenjo, H. (See Okazaki, K., assignor.)
Yoder, J. E., Haven, Kans. Valve-gear. No. 898,543; Sept. 15; Sp. p. 2639; Dr. p. 564; Gaz. vol. 136; p. 484.
Yorke, P., Washington, Pa. Derrick. No. 898,027; Sept. 8; Sp. p. 1636; Dr. p. 349; Gaz. vol. 136; p. 287.
Yost, G. M., Mechanicsburg, Pa. Vise. No. 899,779; Sept. 29; Sp. p. 5045; Dr. pp. 1060–1; Gaz. vol. 136; p. 949.
Young, A., Northampton, assignor of one-half to D. H. Young, Holyoke, Mass. Faller-bar. No. 899,280; Sept. 22; Sp. p. 4045; Dr. p. 864; Gaz. vol. 136; p. 751.
Young, D. H. (See Young, A., assignor.)
Young, J. N., Alameda, Cal. Heating apparatus. No. 897,506; Sept. 1; Sp. p. 540; Dr. p. 115; Gaz. vol. 136; p. 87.
Young, J. R., Norfolk, Va. Making fertilizers. No. 897,695; Sept. 1; Sp. p. 920; Gaz. vol. 136; p. 147.
Young, J. T., assignor of one-half to B. N. Payne, Elmira, N. Y. Glass-cutting grinder. No. 898,028; Sept. 8; Sp. p. 1636; Dr. p. 349; Gaz. vol. 136; p. 287.
Younkman, G. W., Denver, Colo. Freight-conveyer. No. 899,854; Sept. 29; Sp. p. 5212; Dr. p. 1116; Gaz. vol. 136; p. 974.
Yung, F. X., Binghamton, N. Y. Extension-step. No. 899,151; Sept. 22; Sp. p. 3771; Dr. p. 808; Gaz. vol. 136; p. 709.
Zacharias, S., Detroit, Mich. Glass tile. No. 897,809; Sept. 1; Sp. p. 1157; Dr. p. 246; Gaz. vol. 136; p. 183.
Zdziarski, V., New York, N. Y. Running-gear for vehicles. No. 899,780; Sept. 29; Sp. p. 5046; Dr. p. 1081; Gaz. vol. 136; p. 949.
Zehntner, E. (See De la Harpe, Burckhardt, and Zehntner.)
Zehntner, E. (See De la Harpe, Oswald, and Zehntner.)
Zehring, J. H., Columbus, Ohio. Broiling-stove. No. 898,814; Sept. 15; Sp. p. 3143; Dr. p. 673; Gaz. vol. 136; p. 571.
Zeller, M. E., Gilboa, Ohio. Overdraw check-loop for bridles. No. 899,281; Sept. 22; Sp. p. 4046; Dr. p. 865; Gaz. vol. 136; p. 751.
Zeller, M. E., Gilboa, Ohio. Rein-buckle. No. 899,282; Sept. 22; Sp. p. 4047; Dr. p. 865; Gaz. vol. 136; p. 751.
Zidek, J. (See Petru and Zidek.)
Ziegler, A. M., assignor to A. Ziegler & Sons Company, Boston, Mass. Separable fastener. No. 898,815; Sept. 15; Sp. p. 3145; Dr. p. 673; Gaz. vol. 136; p. 571.
Ziegler, A. M., assignor to A. Ziegler & Sons Company, Boston, Mass. Garment-clasp. No. 898,816; Sept. 15; Sp. p. 3147; Dr. p. 673; Gaz. vol. 136; p. 571.
Ziegler, A. M., assignor to A. Ziegler & Sons Company, Boston, Mass. Stocking-supporter. No. 898,817; Sept. 15; Sp. p. 3149; Dr. p. 674; Gaz. vol. 136; p. 572.
Zooboavch, J., Brooklyn, N. Y. Spring attachment for shoes. No. 898,951; Sept. 15; Sp. p. 3383; Dr. p. 726; Gaz. vol. 136; p. 616.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF SEPTEMBER, 1908.

Abdominal supporter. M. Carrington-Strang. No. 898,093; Sept. 8; Sp. p. 1755; Dr. p. 373; Gaz. vol. 136; p. 308.
Abrading-machine. A. W. Roovers. No. 897,408; Sept. 1; Sp. p. 350; Dr. p. 74; Gaz. vol. 136; p. 54.
Accordion. H. Hohner. No. 898,475; Sept. 15; Sp. p. 2495; Dr. p. 534; Gaz. vol. 136; p. 462.
Acid and sodium sulfate, Manufacture of sulfuric. U. F. Benker. No. 899,284; Sept. 22; Sp. p. 4051; Gaz. vol. 136; p. 752.
Acid baths, Preparing carbonic-. P. G. Lebram. No. 897,546; Sept. 1; Sp. p. 630; Gaz. vol. 136; p. 98.
Acid, Concentrating nitrosulfuric waste. H. Pauling. No. 898,390; Sept. 8; Sp. p. 2309; Dr. p. 491; Gaz. vol. 136; p. 402.
Acid, Making nitric. O. H. U. Brünler. No. 898,033; Sept. 8; Sp. p. 1649; Dr. p. 351; Gaz. vol. 136; p. 289.
Acid, Making tartaric. J. McDougall. No. 898,253; Sept. 8; Sp. p. 2070; Gaz. vol. 136; p. 357.
Acids, Manufacture of insoluble lime salts of fatty. H. N. Barrett. No. 898,547; Sept. 15; Sp. p. 2644; Gaz. vol. 136; p. 485.
Adding-machine. A. E. Cole. No. 897,877; Sept. 8; Sp. p. 1295; Dr. pp. 277–8; Gaz. vol. 136; p. 237.
Adding-machine. J. G. Vincent. No. 897,941; Sept. 8; Sp. p. 1452; Dr. p. 310; Gaz. vol. 136; p. 259.
Adding-machine. R. C. Streb. No. 898,282; Sept. 8; Sp. p. 2115; Dr. p. 450; Gaz. vol. 136; p. 366.
Adding-machine. A. Hoch. No. 898,411; Sept. 8; Sp. p. 2349; Dr. pp. 499–504; Gaz. vol. 136; p. 408.
Adding-machine. G. N. Hinchman. No. 899,398; Sept. 22; Sp. p. 4244; Dr. pp. 911–12; Gaz. vol. 136; p. 787.
Adding-machine. M. C. Crawley. No. 899,482; Sept. 22; Sp. p. 4398; Dr. p. 944; Gaz. vol. 136; p. 814.
Adding-machine. H. L. Fisher. No. 899,965; Sept. 29; Sp. p. 5431; Dr. p. 1158; Gaz. vol. 136; p. 1008.
Adding-machine. W. S. Horry. No. 899,983; Sept. 29; Sp. p. 5467; Dr. p. 1166; Gaz. vol. 136; p. 1014.
Adding-machine resetting device. J. J. Walsh. No. 897,688; Sept. 1; Sp. p. 900; Dr. p. 193; Gaz. vol. 136; p. 145.
Adding-machine stand. A. Hendricks. No. 897,367; Sept. 1; Sp. p. 258; Dr. p. 53; Gaz. vol. 136; p. 39.
Addressing-machine. E. H. Frey. No. 897,887; Sept. 8; Sp. p. 1316; Dr. p. 281; Gaz. vol. 136; p. 240.
Addressing-machine. E. H. Frey. No. 897,888; Sept. 8; Sp. p. 1318; Dr. p. 282; Gaz. vol. 136; p. 241.
Adjustable clamp. J. Rivers. No. 898,604; Sept. 15; Sp. p. 2746; Dr. p. 587; Gaz. vol. 136; p. 503.
Adjustable frame. T. J. Harford. No. 898,047; Sept. 8; Sp. p. 1671; Dr. p. 355; Gaz. vol. 136; p. 293.
Adjustable rake. J. J. Holley. No. 899,982; Sept. 29; Sp. p. 5466; Dr. p. 1165; Gaz. vol. 136; p. 1014.
Adjustable stand. G. O. Miller. No. 898,059; Sept. 8; Sp. p. 1700; Dr. p. 360; Gaz. vol. 136; p. 297.
Adjustable stand. J. W. Rice. No. 898,263; Sept. 8; Sp. p. 2084; Dr. p. 443; Gaz. vol. 136; p. 360.
Adjustable table. A. Marrero and F. Ilelwig. No. 899,548; Sept. 29; Sp. p. 4557; Dr. p. 980; Gaz. vol. 136; p. 873.
Advertising apparatus. J. Relx. No. 899,321; Sept. 22; Sp. p. 4115; Dr. p. 880; Gaz. vol. 136; p. 763.
Advertising apparatus. C. E. Petersen. No. 899,467; Sept. 22; Sp. p. 4369; Dr. p. 938; Gaz. vol. 136; p. 809.
Advertising device. L. J. Husted. No. 898,579; Sept. 15; Sp. p. 2700; Dr. p. 577; Gaz. vol. 136; p. 495.
Advertising device. E. A. Mastick, Jr. No. 898,757; Sept. 15; Sp. p. 3036; Dr. p. 651; Gaz. vol. 136; p. 552.
Advertising device. C. T. Wilks. No. 898,949; Sept. 15; Sp. p. 3381; Dr. p. 726; Gaz. vol. 136; p. 615.
Advertising device. J. T. A. Rosemergey. No. 898,993; Sept. 15; Sp. p. 3461; Dr. p. 741; Gaz. vol. 136; p. 629.
Advertising device for vehicles. M. F. Geserich. No. 897,615; Sept. 1; Sp. p. 770; Dr. p. 162; Gaz. vol. 136; p. 122.
Advertising purposes, Means of using newspaper and like stands for. F. Stebbings. No. 899,081; Sept. 22; Sp. p. 3628; Dr. p. 777; Gaz. vol. 136; p. 685.
Aerial ships, Propelling device for. D. L. Wolf. No. 898,081; Sept. 8; Sp. p. 1740; Dr. p. 370; Gaz. vol. 136; p. 304.
Agitator and decanting filter, Combination. W. A. Hendryx. No. 899,489; Sept. 22; Sp. p. 4411; Dr. pp. 946–7; Gaz. vol. 136; p. 817.
Air and gas compressor. F. Elder. No. 899,720; Sept. 29; Sp. p. 4900; Dr. pp. 1051–2; Gaz. vol. 136; p. 927.
Air-brake. G. W. McMunn and A. C. Howell. No. 899,318; Sept. 22; Sp. p. 4110; Dr. p. 879; Gaz. vol. 136; p. 762.
Air-brake. A. A. St. Clair. No. 899,844; Sept. 29; Sp. p. 5176; Dr. pp. 1109–11; Gaz. vol. 136; p. 970.
Air-brake coupling. J. H. and J. R. Cole. No. 898,096; Sept. 8; Sp. p. 1766; Dr. p. 375; Gaz. vol. 136; p. 309.
Air-brake safety device. J. Judge. No. 897,748; Sept. 1; Sp. p. 1022; Dr. p. 217; Gaz. vol. 136; p. 165.
Air-brake system. J. D. Nichol. No. 899,427; Sept. 22; Sp. p. 4296; Dr. p. 922; Gaz. vol. 136; p. 796.
Air-brake valve. D. S. Affleck. No. 897,666; Sept. 1; Sp. p. 924; Dr. p. 196; Gaz. vol. 136; p. 148.
Air-compressor. F. W. Parsons. No. 898,389; Sept. 8; Sp. p. 2307; Dr. p. 490; Gaz. vol. 136; p. 401.
Air-compressor, Rotary. G. F. Burton. No. 899,027; Sept. 22; Sp. p. 3535; Dr. pp. 756–7; Gaz. vol. 136; p. 668.
Air conveyer. E. Norton. No. 898,775; Sept. 15; Sp. p. 3073; Dr. p. 658; Gaz. vol. 136; p. 558.
Air purifying and humidifying apparatus. W. G. R. Braemer. No. 899,289; Sept. 22; Sp. p. 4056; Dr. p. 867; Gaz. vol. 136; p. 753.
Air-ship. A. R. Silverston. No. 900,041; Sept. 29; Sp. p. 5605; Dr. pp. 1196–7; Gaz. vol. 136; p. 1034.
Air-ships, Controlling. M. Schiavone. No. 897,666; Sept. 1; Sp. p. 862; Dr. pp. 184–6; Gaz. vol. 136; p. 138.
Alarm: *See* Fire-alarm.
Alarm. J. A. Robinson. No. 898,992; Sept. 15; Sp. p. 3459; Dr. p. 741; Gaz. vol. 136; p. 629.
Album. W. Thompson. No. 897,679; Sept. 1; Sp. p. 885; Dr. p. 189; Gaz. vol. 136; p. 142.
Alloy for bearing metals. E. A. Touceda. No. 897,431; Sept. 1; Sp. p. 395; Gaz. vol. 136; p. 61.
Alloys, Electrodeposition of. S. O. Cowper-Coles. No. 898,189; Sept. 8; Sp. p. 1947; Gaz. vol. 136; p. 338.
Alloys, Producing ferro. F. M. Becket. No. 898,173; Sept. 8; Sp. p. 1922; Gaz. vol. 136; p. 333.
Amalgamator. B. F. Geiger. No. 897,975; Sept. 8; Sp. p. 1528; Dr. p. 325; Gaz. vol. 136; p. 270.
Amusement apparatus. P. and J. Braen. No. 897,710; Sept. 1; Sp. p. 940; Dr. p. 203; Gaz. vol. 136; p. 152.
Amusement apparatus. A. Malsin. No. 898,056; Sept. 8; Sp. p. 1693; Dr. p. 359; Gaz. vol. 136; p. 296.
Amusement apparatus. J. Z. Levy. No. 899,172; Sept. 22; Sp. p. 3820; Dr. p. 818; Gaz. vol. 136; p. 716.
Amusement device. L. O'Donnell. No. 898,674; Sept. 15; Sp. p. 2883; Dr. p. 617; Gaz. vol. 136; p. 525.
Amusement device. J. Wilderman. No. 898,948; Sept. 15; Sp. p. 3380; Dr. p. 725; Gaz. vol. 136; p. 615.
Amusement device. C. Adelheim. No. 899,497; Sept. 29; Sp. p. 4440; Dr. pp. 952–3; Gaz. vol. 136; p. 855.
Anchor, Guy-. H. M. Thomas. No. 899,274; Sept. 22; Sp. p. 4037; Dr. p. 862; Gaz. vol. 136; p. 749.
Anchor, Shore-. J. J. Ryan. No. 897,787; Sept. 1; Sp. p. 1103; Dr. p. 237; Gaz. vol. 136; p. 176.
Angle-finder. W. Clark. No. 899,092; Sept. 29; Sp. p. 4844; Dr. p. 1037; Gaz. vol. 136; p. 918.
Animal-breeder's bag. F. B. Graham. No. 899,251; Sept. 22; Sp. p. 4001; Dr. p. 853; Gaz. vol. 136; p. 742.
Animal-trap. G. McEachron. No. 897,301; Sept. 1; Sp. p. 60; Dr. p. 15; Gaz. vol. 136; p. 13.
Animal-trap. C. Olson. No. 897,302; Sept. 1; Sp. p. 61; Dr. p. 15; Gaz. vol. 136; p. 14.
Animal-trap. A. Menz. No. 897,761; Sept. 1; Sp. p. 1044; Dr. pp. 224–5; Gaz. vol. 136; p. 169.
Animal-trap. D. D. Dennis. No. 898,041; Sept. 8; Sp. p. 1660; Dr. p. 353; Gaz. vol. 136; p. 291.
Animal-trap. G. H. Johnson. No. 898,581; Sept. 15; Sp. p. 2703; Dr. pp. 577–8; Gaz. vol. 136; p. 496.
Animal-trap. E. S. Lipp. No. 899,114; Sept. 22; Sp. p. 3690; Dr. p. 791; Gaz. vol. 136; p. 696.
Animal-trap. W. Fagan. No. 899,722; Sept. 29; Sp. p. 4903; Dr. p. 1053; Gaz. vol. 136; p. 928.
Annealing and tempering metals, Process and apparatus for. H. Krautschneider. No. 899,452; Sept. 22; Sp. p. 4339; Gaz. vol. 136; p. 804.
Annealing-box. W. B. Bennett. No. 898,172; Sept. 8; Sp. p. 1920; Dr. p. 410; Gaz. vol. 136; p. 333.
Antirattling device. A. S. Newton. No. 897,478; Sept. 1; Sp. p. 485; Dr. p. 103; Gaz. vol. 136; p. 77.
Antisnoring device. L. F. Liebhardt. No. 898,379; Sept. 8; Sp. p. 2292; Dr. p. 487; Gaz. vol. 136; p. 398.
Anvils, Hardy attachment for. G. W. Cole. No. 898,969; Sept. 15; Sp. p. 3418; Dr. p. 734; Gaz. vol. 136; p. 622.
Apron. C. W. Bartrum. No. 897,445; Sept. 1; Sp. p. 423; Dr. p. 90; Gaz. vol. 136; p. 66.
Aromatic carbonyl derivatives, Making. A. Wack. No. 898,942; Sept. 15; Sp. p. 3369; Gaz. vol. 136; p. 613.

Ash-receptacle. M. J. Carney. No. 898,091; Sept. 8; Sp. p. 1753; Dr. p. 373; Gaz. vol. 136; p. 307.
Associating and collecting mechanism. H. A. W. Wood. No. 897,333; Sept. 1; Sp. p. 161; Dr. pp. 34–5; Gaz. vol. 136; p. 25.
Atomizer. T. A. De Vilbiss. No. 899,007; Sept. 15; Sp. p. 3484; Dr. p. 747; Gaz. vol. 136; p. 634.
Audiphone. C. L. Buckwalter. No. 898,035; Sept. 8; Sp. p. 1652; Dr. p. 351; Gaz. vol. 136; p. 289.
Auger, Hollow. N. E. Swanson. No. 900,044; Sept. 29; Sp. p. 5615; Dr. p. 1198; Gaz. vol. 136; p. 1034.
Auscults-phone. L. A. Townsend. No. 899,815; Sept. 29; Sp. p. 5121; Dr. p. 1095; Gaz. vol. 136; p. 961.
Automatic hook. C. J. Coulter and E. Tuggy. No. 898,329; Sept. 8; Sp. p. 2199; Dr. p. 467; Gaz. vol. 136; p. 381.
Automatic switch. F. M. Hall. No. 898,819; Sept. 15; Sp. p. 3259; Dr. p. 697; Gaz. vol. 136; p. 593.
Automatic trap. I. H. Peck and W. D. Haggerty. No. 897,554; Sept. 1; Sp. p. 646; Dr. p. 135; Gaz. vol. 136; p. 101.
Automatic wrench. D. Rugg. No. 897,665; Sept. 1; Sp. p. 861; Dr. p. 184; Gaz. vol. 136; p. 138.
Automobile. H. K. Holsman. No. 897,368; Sept. 1; Sp. p. 259; Dr. p. 53; Gaz. vol. 136; p. 39.
Automobile. T. B. Jeffery. No. 899,537; Sept. 29; Sp. p. 4526; Dr. p. 972; Gaz. vol. 136; p. 869.
Automobile-body, Convertible. E. T. Robinson. No. 897,663; Sept. 1; Sp. p. 857; Dr. pp. 181–3; Gaz. vol. 136; p. 137.
Automobile-brake. G. Stables. No. 897,421; Sept. 1; Sp. p. 377; Dr. p. 79; Gaz. vol. 136; p. 58.
Automobile-radiator. J. B. Long and C. Wright. No. 898,237; Sept. 8; Sp. p. 2047; Dr. p. 434; Gaz. vol. 136; p. 353.
Automobile running-gear. J. W. Cooper. No. 897 591; Sept. 1; Sp. p. 716; Dr. p. 151; Gaz. vol. 136; p. 114.
Automobile shock-absorber. I. Stanley. No. 898,798; Sept. 15; Sp. p. 3113; Dr. p. 667; Gaz. vol. 136; p. 566.
Automobile-tire. W. Müller. No. 898,497; Sept. 15; Sp. p. 2534; Dr. p. 543; Gaz. vol. 136; p. 469.
Automobile-wheel. J. Laus, Jr. No. 899,876; Sept. 29; Sp. p. 5247; Dr. pp. 1121–2; Gaz. vol. 136; p. 980.
Automobiles, Disappearing luggage-carrier for. E. T. Robinson. No. 897,664; Sept. 1; Sp. p. 860; Dr. pp. 183–4; Gaz. vol. 136; p. 138.
Auxiliary heater. W. C. Richman. No. 897,661; Sept. 1; Sp. p. 848; Dr. p. 179; Gaz. vol. 136; p. 136.
Awning. A. L. Penfound. No. 897,775; Sept. 1; Sp. p. 1085; Dr. pp. 232–3; Gaz. vol. 136; p. 173.
Axle-box, Self-oiling. G. C. Benjamin. No. 899,941; Sept. 29; Sp. p. 5387; Dr. p. 1149; Gaz. vol. 136; p. 1000.
Axle for motor road-vehicles. J. and A. Nicluasse. No. 897,901; Sept. 29; Sp. p. 5272; Dr. p. 1127; Gaz. vol. 136; p. 985.
Axle-lubricator. E. Meyer and E. C. Schiffers. No. 897,915; Sept. 8; Sp. p. 1362; Dr. p. 297; Gaz. vol. 136; p. 251.
Axle, Vehicle-. W. G. Meyer. No. 898,588; Sept. 15; Sp. p. 2711; Dr. pp. 579–80; Gaz. vol. 136; p. 498.
Axles, Machine for turning cranked. H. W. Jacobs. No. 899,536; Sept. 29; Sp. p. 4523; Dr. pp. 971–2; Gaz. vol. 136; p. 869.
Baby-walker. M. S. Davis. No. 899,030; Sept. 22; Sp. p. 3543; Dr. p. 757; Gaz. vol. 136; p. 609.
Bag: *See* Animal-breeder's bag.
Bag and blank therefor. P. A. Frye. No. 899,723; Sept. 29; Sp. p. 4905; Dr. p. 1053; Gaz. vol. 136; p. 928.
Bag-cleaning machine. G. M. Hasen. No. 899,397; Sept. 22; Sp. p. 4242; Dr. p. 910; Gaz. vol. 136; p. 787.
Bag-closing mechanism. J. Rogers. No. 899,766; Sept. 29; Sp. p. 5009; Dr. p. 1073; Gaz. vol. 136; p. 944.
Bag filling and tying machine. J. Rogers. No. 899,764; Sept. 29; Sp. p. 5000; Dr. pp. 1071–3; Gaz. vol. 136; p. 943.
Bag-house. H. E. Benedict. No. 898,426; Sept. 15; Sp. p. 2397; Dr. pp. 512–14; Gaz. vol. 136; p. 447.
Bag-machines, Body-forming mechanism of. T. M. Avery. No. 898,167; Sept. 8; Sp. p. 1903; Dr. pp. 406–7; Gaz. vol. 136; p. 331.
Bag-tier shears. J. Rogers. No. 899,765; Sept. 29; Sp. p. 5007; Dr. p. 1073; Gaz. vol. 136; p. 944.
Baker and broiler, Portable. W. C. Grant. No. 897,459; Sept. 1; Sp. p. 451; Dr. p. 96; Gaz. vol. 136; p. 71.
Baker, Fireless. A. T. Tholts and J. G. Gronberg. No. 898,527; Sept. 15; Sp. p. 2599; Dr. p. 555; Gaz. vol. 136; p. 479.
Balance. J. Nelson. No. 897,389; Sept. 1; Sp. p. 302; Dr. p. 62; Gaz. vol. 136; p. 46.
Baling-machine. O. S. and C. F. Lee. No. 899,309; Sept. 22; Sp. p. 4089; Dr. pp. 873–6; Gaz. vol. 136; p. 759.
Baling-press. S. G. Gilleland. No. 898,868; Sept. 15; Sp. p. 3236; Dr. p. 694; Gaz. vol. 136; p. 588.
Baling-press. A. B. Bennett. No. 899,502; Sept. 29; Sp. p. 4449; Dr. p. 955; Gaz. vol. 136; p. 857.
Baling-press. J. W. Galbreath. No. 899,663; Sept. 29; Sp. p. 4786; Dr. pp. 1024–6; Gaz. vol. 136; p. 910.
Baling-press. T. Guidry. No. 899,666; Sept. 29; Sp. p. 4795; Dr. p. 1027; Gaz. vol. 136; p. 910.
Baling-presses, Alarm attachment for. L. B. Kimble. No. 898,583; Sept. 15; Sp. p. 2705; Dr. p. 578; Gaz. vol. 136; p. 496.
Baling-presses, Wire-uniting mechanism for. W. L. Lyon. No. 899,014; Sept. 15; Sp. p. 3505; Dr. pp. 750–1; Gaz. vol. 136; p. 636.
Ball: *See* Self-rolling ball.
Band, band-fastener, and seal combined. J. S. Mark. No. 899,997; Sept. 29; Sp. p. 5504; Dr. p. 1173; Gaz. vol. 136; p. 1018.
Band-cutter and feeder. G. E. Richmond. No. 898,603; Sept. 15; Sp. p. 2744; Dr. p. 587; Gaz. vol. 136; p. 503.
Bank, Pocket coin-. W. E. Porter. No. 899,478; Sept. 29; Sp. p. 4822; Dr. p. 1032; Gaz. vol. 136; p. 914.
Bank, Savings-. C. Fisher. No. 898,206; Sept. 8; Sp. p. 1974; Dr. p. 421; Gaz. vol. 136; p. 343.
Bar: *See* Bicycle handle-bar; Faller-bar; Harvester cutter-bar.
Barb-forming machine. J. M. Murphy. No. 899,317; Sept. 22; Sp. p. 4107; Dr. p. 878; Gaz. vol. 136; p. 762.
Barometer. J. Nelson. No. 899,836; Sept. 29; Sp. p. 5155; Dr. p. 1104; Gaz. vol. 136; p. 967.
Barrel and basket cover. A. Holker. No. 898,364; Sept. 8; Sp. p. 2264; Dr. p. 481; Gaz. vol. 136; p. 393.
Barrel-heater. H. C. Rogers. No. 898,065; Sept. 8; Sp. p. 1711; Dr. p. 363; Gaz. vol. 136; p. 299.
Barrel or receptacle. J. H. Killion. No. 898,494; Sept. 15; Sp. p. 2511; Dr. p. 538; Gaz. vol. 136; p. 464.
Base-board heater. J. M. Williamson. No. 898,616; Sept. 15; Sp. p. 2768; Dr. p. 591; Gaz. vol. 136; p. 507.
Basket and support therefor, Combined. C. Kuensting. No. 897,750; Sept. 1; Sp. p. 1027; Dr. p. 218; Gaz. vol. 136; p. 166.
Bathing-tub splash-pan. L. Matthews. No. 897,639; Sept. 1; Sp. p. 807; Dr. p. 170; Gaz. vol. 136; p. 128.
Battery: *See* Electric battery; Galvanic battery; Primary battery.
Battery jar, Storage-. J. Marx. No. 897,472; Sept. 1; Sp. p. 475; Dr. p. 101; Gaz. vol. 136; p. 75.
Battery jars, &c., Filling apparatus for storage-. T. A. Edison. No. 898,633; Sept. 15; Sp. p. 2811; Dr. p. 601; Gaz. vol. 136; p. 513.
Beam, Composite. F. C. Keighley. No. 897,982; Sept. 8; Sp. p. 1543; Dr. p. 327; Gaz. vol. 136; p. 273.
Beam, Metallic. F. C. Keighley. No. 897,539; Sept. 1; Sp. p. 617; Dr. p. 128; Gaz. vol. 136; p. 97.
Bearing, Ball-. J. Weibel-Mulisch. No. 898,945; Sept. 15; Sp. p. 3323; Dr. p. 724; Gaz. vol. 136; p. 614.
Bearing device, Step-. D. C. Griswold. No. 898,406; Sept. 8; Sp. p. 2341; Dr. p. 497; Gaz. vol. 136; p. 407.
Bearing for vertical shafts, Ball-. A. Riebe. No. 899,563; Sept. 29; Sp. p. 4586; Dr. p. 986; Gaz. vol. 136; p. 878.
Bearing for wheels, Centrifugal-oiling. F. A. Warren. No. 897,943; Sept. 8; Sp. p. 1460; Dr. p. 311; Gaz. vol. 136; p. 260.
Bearing, Pedestal-. S. C. Davidson. No. 898,632; Sept. 15; Sp. p. 2811; Dr. p. 600; Gaz. vol. 136; p. 513.
Beating-out machine. J. H. Reed. No. 899,232; Sept. 22; Sp. p. 3932; Dr. pp. 839–40; Gaz. vol. 136; p. 735.
Bed and sofa, Combination. L. Albert. No. 898,399; Sept. 8; Sp. p. 2325; Dr. p. 494; Gaz. vol. 136; p. 405.
Bed-bottom and frame, Wire. J. N. Rabedew and E. A. Vernal. No. 899,681; Sept. 29; Sp. p. 4826; Dr. p. 1033; Gaz. vol. 136; p. 915
Bed-canopy, Ventilating. J. N. Moody. No. 899,257; Sept. 22; Sp. p. 4010; Dr. p. 856; Gaz. vol. 136; p. 744.
Bed clothes-retainer, Infant's-. M. Riley. No. 899,325; Sept. 22; Sp. p. 4122; Dr. p. 881; Gaz. vol. 136; p. 764.
Bed guard-rail. W. M. Goldsmith. No. 898,875; Sept. 15; Sp. p. 3255; Dr. p. 696; Gaz. vol. 136; p. 591.
Bed, Invalid-. J. Hall. No. 897,890; Sept. 8; Sp. p. 1324; Dr. p. 283; Gaz. vol. 136; p. 242.
Bed, Invalid-. J. Hall. No. 897,891; Sept. 8; Sp. p. 1326; Dr. p. 284; Gaz. vol. 136; p. 242.
Bed-pan. D. A. Waltz. No. 897,434; Sept. 1; Sp. p. 402; Dr. p. 86; Gaz. vol. 136; p. 62.
Bed-protector. J. J. Wassam. No. 899,361; Sept. 22; Sp. p. 4184; Dr. p. 895; Gaz. vol. 136; p. 776.
Bed, Recess-. W. E. Ingram and C. W. Hintan. No. 899,868; Sept. 29; Sp. p. 5235; Dr. p. 1119; Gaz. vol. 136; p. 978.
Bed, Sliding couch-. J. Luppino. No. 898,981; Sept. 15; Sp. p. 3436; Dr. pp. 737–8; Gaz. vol. 136; p. 626.
Bed, Vibrating. J. A. Seeber. No. 897,791; Sept. 1; Sp. p. 1108; Dr. p. 238; Gaz. vol. 136; p. 177.
Bedstead. H. W. Thompson. No. 897,677; Sept. 1; Sp. p. 882; Dr. pp. 188–9; Gaz. vol. 136; p. 141.
Bedstead and mattress, Combination. J. F. Stephenson. No. 899,351; Sept. 22; Sp. p. 4164; Dr. p. 891; Gaz. vol. 136; p. 773.
Bedstead-fastening. L. B. Snyder. No. 899,345; Sept. 22; Sp. p. 4154; Dr. p. 889; Gaz. vol. 136; p. 771.
Bedstead, Metal. L. B. Snyder and S. T. Heron. No. 897,671; Sept. 1; Sp. p. 873; Dr. p. 187; Gaz. vol. 136; p. 139.
Bedstead, Sheet-metal. C. A. Linden and E. J. Lund. No. 899,173; Sept. 22; Sp. p. 3822; Dr. p. 818; Gaz. vol. 136; p. 716.
Beer, Brewing. L. Nathan and H. Bolze. No. 899,756; Sept. 29; Sp. p. 4981; Dr. p. 1068; Gaz. vol. 136; p. 940.
Beet-handling apparatus. D. L. Joehnck. No. 898,112; Sept. 8; Sp. p. 1801; Dr. p. 383; Gaz. vol. 136; p. 314.
Bell, Electric. T. Rosati. No. 898,686; Sept. 15; Sp. p. 2915; Dr. p. 624; Gaz. vol. 136; p. 530.
Bells, Circuit-closer for call-. R. Henderson. No. 898,104; Sept. 8; Sp. p. 1785; Dr. p. 379; Gaz. vol. 136; p. 312.
Bellows package for distributing powder. S. S. Adams. No. 899,496; Sept. 29; Sp. p. 4438; Dr. p. 952; Gaz. vol. 136; p. 855.
Bellows-pedal, Folding. C. S. Wright. No. 899,935; Sept. 29; Sp. p. 5376; Dr. pp. 1146–7; Gaz. vol. 136; p. 998.
Belt. L. Tanner. No. 898,700; Sept. 15; Sp. p. 2938; Dr. p. 630; Gaz. vol. 136; p. 535.
Belt and belt-fastener. K. Mastele. No. 899,831; Sept. 29; Sp. p. 5145; Dr. p. 1101; Gaz. vol. 136; p. 966.
Belt-guide. N. A. Groat. No. 899,970; Sept. 29; Sp. p. 5442; Dr. p. 1160; Gaz. vol. 136; p. 1010.
Belt-shifting means. E. Wirth. No. 897,441; Sept. 1; Sp. p. 416; Dr. p. 88; Gaz. vol. 136; p. 65.
Belt-tightener. J. T. Sullivan. No. 898,523; Sept. 15; Sp. p. 2589; Dr. p. 553; Gaz. vol. 136; p. 478.
Belt-tightener. F. L. Lane and B. D. Stevens. No. 899,741; Sept. 29; Sp. p. 4949; Dr. p. 1061; Gaz. vol. 136; p. 934.
Bench: *See* Draw-bench.
Bicycle brake-lock. B. Péducasse. No. 897,926; Sept. 8; Sp. p. 1419; Dr. pp 302–3; Gaz. vol. 136; p. 255.
Bicycle handle-bar. J. E. Brannan. No. 897,579; Sept. 1; Sp. p. 696; Dr. p. 146; Gaz. vol. 136; p. 110.
Bicycles, Variable-speed mechanism for chainless. F. H. Richards. No. 898,783; Sept. 15; Sp. p. 3085; Dr. pp. 661–2; Gaz. vol. 136; p. 561.
Bilge-water ejector. L. Ebbe. No. 899,248; Sept. 22; Sp. p. 3904; Dr. p. 851; Gaz. vol. 136; p. 741.
Bill or bag holder. J. Morgan. No. 898,251; Sept. 8; Sp. p. 2068; Dr. p. 439; Gaz. vol. 136; p. 357.

Billet-heating furnace. C. J. F. Johnson. No. 897,746; Sept. 1; Sp. p. 1017; Dr. pp. 216–17; Gaz. vol. 136; p. 165.
Billets, Heating. C. J. F. Johnson. No. 897,834; Sept. 1; Sp. p. 1207; Dr. pp. 257–8; Gaz. vol. 136; p. 192.
Billiard and pool bridge. F. G. Farnham. No. 898,345; Sept. 8; Sp. p. 2225; Dr. p. 473; Gaz. vol. 136; p. 386.
Bin: *See* Storage-bin.
Binder for loose sheets, Temporary. L. C. McNeal. No. 898,385; Sept. 8; Sp. p. 2301; Dr. p. 489; Gaz. vol. 136; p. 400.
Binder, Loose-leaf. L. Hill. No. 897,535; Sept. 1; Sp. p. 607; Dr. p. 127; Gaz. vol. 136; p. 95.
Binder, Loose-leaf. C. B. Cook. No. 897,878; Sept. 8; Sp. p. 1299; Dr. p. 278; Gaz. vol. 136; p. 237.
Binder, Temporary. C. C. Maltby. No. 898,245; Sept. 8; Sp. p. 2060; Dr. p. 438; Gaz. vol. 136; p. 355.
Binder, Temporary. M. W. Hyer. No. 898,580; Sept. 15; Sp. p. 2702; Dr. p. 577; Gaz. vol. 136; p. 495.
Bit: *See* Bridle-bit; Drill-bit.
Bit. F. Swales. No. 898,394; Sept. 8; Sp. p. 2317; Dr. p. 493; Gaz. vol. 136; p. 403.
Bit-brace wrench. B. R. Spaulding. No. 897,857; Sept. 1; Sp. p. 1261; Dr. p. 270; Gaz. vol. 136; p. 198.
Bit extension. F. E. Carlson. No. 899,203; Sept. 22; Sp. p. 3874; Dr. p. 828; Gaz. vol. 136; p. 726.
Blade-fastening. R. A. McKee. No. 899,607; Sept. 29; Sp. p. 4676; Dr. p. 1003; Gaz. vol. 136; p. 893.
Blade-fastening. M. Rotter. No. 899,622; Sept. 29; Sp. p. 4718; Dr. p. 1010; Gaz. vol. 136; p. 898.
Blanket-holding attachment. M. Rockstroh. No. 899,326; Sept. 22; Sp. p. 4123; Dr. p. 881; Gaz. vol. 136; p. 765.
Block: *See* Building-block; Electrotype-block; Hat-block; Last-block.
Block-molding machine. J. Jaeger. No. 899,168; Sept. 22; Sp. p. 3809; Dr. pp. 815–16; Gaz. vol. 136; p. 715.
Block-molding machine. E. N. Edwards. No. 899,517; Sept. 29; Sp. p. 4480; Dr. p. 962; Gaz. vol. 136; p. 862.
Block-signal apparatus. A. Bevan. No. 899,153; Sept. 22; Sp. p. 3773; Dr. pp. 808–9; Gaz. vol. 136; p. 710.
Block-signal system. F. B. Corey. No. 897,524; Sept. 1; Sp. p. 586; Dr. p. 122; Gaz. vol. 136; p. 92.
Block-signal system. L. A. Hawkins. No. 897,531; Sept. 1; Sp. p. 599; Dr. p. 125; Gaz. vol. 136; p. 94.
Block-signal-system recording device. T. Haley. No. 897,618; Sept. 1; Sp. p. 775; Dr. pp. 163–4; Gaz. vol. 136; p. 123.
Block-signaling system, Alternating-current. J. B. Struble. No. 899,353; Sept. 22; Sp. p. 4166; Dr. p. 892; Gaz. vol. 136; p. 773.
Block-signaling system, Electric. J. W. Davis. No. 897,355; Sept. 1; Sp. p. 215; Dr. pp. 45–7; Gaz. vol. 136; p. 33.
Blowpipe. A. G. Le Chatelier. No. 899,453; Sept. 22; Sp. p. 4341; Dr. p. 932; Gaz. vol. 136; p. 804.
Blowpipe, Interchangeable. R. Fitzsimmons. No. 898,860; Sept. 15; Sp. p. 3221; Dr. p. 693; Gaz. vol. 136; p. 586.
Blowing-engine. G. B. Petsche. No. 899,558; Sept. 29; Sp. p. 4576; Dr. p. 984; Gaz. vol. 136; p. 876.
Board: *See* Game-board; Ironing-board; Sleeve-board.
Boat detaching device, Life-. J. Prevot. No. 898,004; Sept. 8; Sp. p. 1577; Dr. p. 336; Gaz. vol. 136; p. 280.
Boat-lashing device. F. T. Clayton. No. 898,094; Sept. 8; Sp. p. 1756; Dr. p. 374; Gaz. vol. 136; p. 308.
Boat, Life-. R. D. Mayo. No. 899,672; Sept. 29; Sp. p. 4811; Dr. p. 1030; Gaz. vol. 136; p. 912.
Boat-releasing appliance. C. L. Bevins. No. 899,942; Sept. 29; Sp. p. 5388; Dr. p. 1150; Gaz. vol. 136; p. 1000.
Boat-releasing device. W. G. Randle. No. 899,072; Sept. 22; Sp. p. 3614; Dr. pp. 773–4; Gaz. vol. 136; p. 682.
Bobbin-driving means for rotatable spindles. P. E. McCullough. No. 899,179; Sept. 22; Sp. p. 3833; Dr. p. 820; Gaz. vol. 136; p. 718.
Boiler: *See* Range-boiler; Slag-heated boiler; Steam-boiler; Water-tube boiler.
Boiler. H. A. Bolze. No. 898,548; Sept. 15; Sp. p. 2645; Dr. p. 565; Gaz. vol. 136; p. 486.
Boiler. W. S. Hawley. No. 899,290; Sept. 22; Sp. p. 4074; Dr. pp. 870–1; Gaz. vol. 136; p. 756.
Boiler. C. R. Meres. No. 899,314; Sept. 22; Sp. p. 4104; Dr. p. 877; Gaz. vol. 136; p. 761.
Boiler attachment. C. J. Sheahan. No. 899,192; Sept. 22; Sp. p. 3857; Dr. p. 825; Gaz. vol. 136; p. 722.
Boiler blow-off device, Domestic-. J. Manneschmidt, Jr. No. 899,830; Sept. 29; Sp. p. 5143; Dr. p. 1100; Gaz. vol. 136; p. 965.
Boiler-cleaner. C. H. Prescott. No. 899,261; Sept. 22; Sp. p. 4016; Dr. p. 857; Gaz. vol. 136; p. 745.
Boiler-furnace. O. U. Bean. No. 897,446; Sept. 1; Sp. p. 424; Dr. pp. 90–1; Gaz. vol. 136; p. 66.
Boiler-tube expander. J. W. Faessler. No. 898,202; Sept. 8; Sp. p. 1970; Dr. p. 420; Gaz. vol. 136; p. 342.
Boiler-tube expander. J. W. Faessler. No. 898,203; Sept. 8; Sp. p. 1971; Dr. p. 420; Gaz. vol. 136; p. 342.
Boilers, Apparatus for generating a solution for preventing incrustation in steam-. F. Brun. No. 897,452; Sept. 1; Sp. p. 436; Dr. p. 94; Gaz. vol. 136; p. 68.
Boilers, &c., Automatic electric safety device for. C. Kausen. No. 899,220; Sept. 22; Sp p. 3906; Dr. p. 834; Gaz. vol. 136; p. 731.
Boll-weevils, Device for killing. W. L. Rosson. No. 897,850; Sept. 1; Sp. p. 1238; Dr. p. 265; Gaz. vol. 136; p. 196.
Bolts to concrete, Means for attaching. W. E. Beilharz. No. 899,002; Sept. 15; Sp. p. 3474; Dr. p. 744; Gaz. vol. 136; p. 632.
Book, Letter-. R. A. Dunn. No. 899,035; Sept. 22; Sp. p. 3548; Dr. p. 759; Gaz. vol. 136; p. 670.
Book, Loose-leaf. J. C. Hedges. No. 899,594; Sept. 29; Sp. p. 4658; Dr. p. 998; Gaz. vol. 136; p. 889.
Book-mark. J. T. and G. T. Moore. No. 898,669; Sept. 15; Sp. p. 2876; Dr. p. 615; Gaz. vol. 136; p. 524.
Book, Time-. F. J. Daley. No. 898,442; Sept. 15; Sp. p. 2431; Dr. p. 521; Gaz. vol. 136; p. 452.
Books, journals, paper, music, &c., Binder for. W. Pein. No. 899,066; Sept. 22; Sp. p. 3565; Dr. p. 770; Gaz. vol. 136; p. 679.
Bookcase. F. J. Honor. No. 899,049; Sept. 22; Sp. p. 3569; Dr. p. 764; Gaz. vol. 136; p. 674.
Boot and shoe. J. F. Schultz. No. 898,145; Sept. 8; Sp. p. 1861; Dr. p. 398; Gaz. vol. 136; p. 324.
Boot and shoe cushion. F. P. McIntyre. No. 897,920; Sept. 8; Sp. p. 1402; Dr. p. 299; Gaz. vol. 136; p. 253.
Boots and shoes, Device for reshaping and re-forming. E. C. Hawkins. No. 897,830; Sept. 1; Sp. p. 1200; Dr. p. 255; Gaz. vol. 136; p. 190.
Boots, shoes, leggings, &c., Stretcher or filler for. J. N. Cochrane. No. 899,444; Sept. 22; Sp. p. 4325; Dr. p. 929; Gaz. vol. 136; p. 801.
Boring-machine. F. J. Waters. No. 897,944; Sept. 8; Sp. p. 1462; Dr. pp. 311–12; Gaz. vol. 136; p. 261.
Boring or reaming and grinding machine. E. A. Chamberlin. No. 898,966; Sept. 15; Sp. p. 3413; Dr. p. 733; Gaz. vol. 136; p. 621.
Bottle. G. P. Dennis. No. 897,724; Sept. 1; Sp. p. 978; Dr. p. 208; Gaz. vol. 136; p. 157.
Bottle. R. R. Graves. No. 898,575; Sept. 15; Sp. p. 2694; Dr. p. 576; Gaz. vol. 136; p. 494.
Bottle. C. K. Briner and H. T. Fox. No. 898,628; Sept. 15; Sp. p. 2799; Dr. p. 599; Gaz. vol. 136; p. 512.
Bottle. J. A. Gafney. No. 899,214; Sept. 22; Sp. p. 3899; Dr. p. 832; Gaz. vol. 136; p. 729.
Bottle. J. McGill. No. 899,493; Sept. 22; Sp. p. 4419; Dr. p. 948; Gaz. vol. 136; p. 818.
Bottle-cap pad. C. Noyes. No. 899,429; Sept. 22; Sp. p. 4300; Dr. p. 922; Gaz. vol. 136; p. 797.
Bottle-capping machine. W. Cooper. No. 899,861; Sept. 29; Sp. p. 5223; Dr. p. 1117; Gaz. vol. 136; p. 976.
Bottle-capping machines, Cap-feeding mechanism for. A. Jones. No. 898,113; Sept. 8; Sp. p. 1804; Dr. p. 383; Gaz. vol. 136; p. 314.
Bottle-case. T. L. Valerius. No. 899,924; Sept. 29; Sp. p. 5385; Dr. p. 1140; Gaz. vol. 136; p. 994.
Bottle-closure. T. S. Rainey. No. 898,261; Sept. 8; Sp. p. 2081; Dr. p. 442; Gaz. vol. 136; p. 359.
Bottle-closure. E. W. Wheelock. No. 195,615; Sept. 15; Sp. p. 2766; Dr. p. 591; Gaz. vol. 136; p. 507.
Bottle filling and closing machine. J. Decerier. No. 898,563; Sept. 15; Sp. p. 2672; Dr. p. 571; Gaz. vol. 136; p. 490.
Bottle filling and closure device. S. B. Goff. No. 898,458; Sept. 15; Sp. p. 2563; Dr. pp. 526–7; Gaz. vol. 136; p. 456.
Bottle-locking device, Milk-. F. Johnson. No. 898,222; Sept. 8; Sp. p. 2023; Dr. p. 428; Gaz. vol. 136; p. 348.
Bottle-neck and closure therefor. A. McCambridge. No. 898,769; Sept. 15; Sp. p. 3063; Dr. p. 656; Gaz. vol. 136; p. 556.
Bottle, Non-refillable. P. F. Schmidt. No. 897,934; Sept. 8; Sp. p. 1436; Dr. p. 307; Gaz. vol. 136; p. 257.
Bottle, Non-refillable. J. W. Butler. No. 898,090; Sept. 8; Sp. p. 1751; Dr. p. 373; Gaz. vol. 136; p. 307.
Bottle, Nursing-. C. W. Fox. No. 898,975; Sept. 15; Sp. p. 3427; Dr. p. 736; Gaz. vol. 136; p. 624.
Bottle-rack. R. B. Colter. No. 899,384; Sept. 22; Sp. p. 4220; Dr. p. 903; Gaz. vol. 136; p. 783.
Bottle-soaking machine. G. J. Arnold. No. 899,017; Sept. 22; Sp. p. 3518; Dr. p. 753; Gaz. vol. 136; p. 665.
Bottle-stopper. G. Kirkegaard. No. 897,542; Sept. 1; Sp. p. 624; Dr. p. 129; Gaz. vol. 136; p. 98.
Bottle-stopper. T. B. Halstad. No. 898,359; Sept. 8; Sp. p. 2252; Dr. pp. 479–80; Gaz. vol. 136; p. 390.
Bottle-stopper. C. E. Dougherty. No. 898,564; Sept. 15; Sp. p. 2673; Dr. p. 571; Gaz. vol. 136; p. 490.
Bottle-stopper. G. Kirkegaard. No. 899,737; Sept. 29; Sp. p. 4938; Dr. p. 1050; Gaz. vol. 136; p. 933.
Bottle-washing machine. A. S. Otto. No. 897,998; Sept. 8; Sp. p. 1569; Dr. pp. 333–5; Gaz. vol. 136; p. 278.
Bottle-washing machine, Cased-. T. L. Valerius. No. 899,927; Sept. 29; Sp. p. 5343; Dr. pp. 1141–2; Gaz. vol. 136; p. 995.
Bottles or the like, Cap for atomizer-. T. A. De Vilbiss. No. 898,845; Sept. 15; Sp. p. 3198; Dr. p. 685; Gaz. vol. 136; p. 581.
Bottles or vessels, Closure, fitting, and case for ink and like. J. F. Fitzsimmons. No. 899,015; Sept. 15; Sp. p. 3510; Dr. p. 751; Gaz. vol. 136; p. 636.
Bowling-alley, Parlor. C. A. Longwell. No. 899,115; Sept. 22; Sp. p. 3691; Dr. p. 791; Gaz. vol. 136; p. 697.
Bowling-pin-truing device. T. Small. No. 897,937; Sept. 8; Sp. p. 1441; Dr. p. 308; Gaz. vol. 136; p. 258.
Box: *See* Annealing-box; Axle-box; Cooling-box; Cracker-box; Electric-installation molding-box; Fly, hook, and leader box; Folding box; Fuse-box; Graphophone-box; Hub-box; Knockdown box; Lunch-box; Mail-box; Match-box; Outlet-box; Panel-box; Paper-pulp-screen box; Pin-box; Pocket-box, Signal-box; Slip-box; Sound-box; Talking-machine sound-box.
Box and pail fastener. J. F. Scott and A. B. Curtis. No. 898,994; Sept. 15; Sp. p. 3462; Dr. p. 742; Gaz. vol. 136; p. 630.
Box-blank. W. Fiske. No. 899,212; Sept. 22; Sp. p. 3897; Dr. p. 832; Gaz. vol. 136; p. 729.
Box-fastener. F. Lenkey and J. Szalay. No. 897,837; Sept. 1; Sp. p. 1216; Dr. p. 259; Gaz. vol. 136; p. 193.
Box-fastener. J. C. Merrill. No. 897,986; Sept. 8; Sp. p. 1547; Dr. p. 329; Gaz. vol. 136; p. 274.
Box-fastener. N. A. Smith. No. 898,279; Sept. 8; Sp. p. 2110; Dr. p. 449; Gaz. vol. 136; p. 365.
Box-fastener. A. T. Tholts and J. G. Gronberg. No. 899,084; Sept. 22; Sp. p. 3731; Dr. p. 778; Gaz. vol. 136; p. 686.
Box-filling machine. J. W. Denmead. No. 898,337; Sept. 8; Sp. p. 2212; Dr. pp. 469–70; Gaz. vol. 136; p. 383.
Box-machine. L. P. Brown. No. 899,506; Sept. 29; Sp. p. 4457; Dr. p. 957; Gaz. vol. 136; p. 859.
Box-machines, Automatic glue feeder and spreader for. E. Rothong. No. 899,021; Sept. 29; Sp. p. 4716; Dr. p. 1010; Gaz. vol. 136; p. 897.
Brace: *See* Rail-brace; Trench-brace.

Brace and plate. G. H. Gunvalson. No. 898,046; Sept. 8; Sp. p. 1670; Dr. p. 354; Gaz. vol. 136; p. 292.
Bracelet. J. Bulova. No. 898,181; Sept. 8; Sp. p. 1239; Dr. p. 413; Gaz. vol. 136; p. 336.
Bracelet-band. T. S. Bennett. No. 897,869; Sept. 8; Sp. p. 1284; Dr. p. 275; Gaz. vol. 136; p. 235.
Bracket: *See* Drain-board bracket; Folding bracket; Picture-molding bracket; Shade-bracket; Shade-roller bracket.
Bracket. C. L. Day. No. 899,445; Sept. 22; Sp. p. 4326; Dr. p. 930; Gaz. vol. 136; p. 802.
Braid and other narrow fabrics, Packet for. C. S. King. No. 897,628; Sept. 1; Sp. p. 792; Dr. p. 166; Gaz. vol. 136; p. 126.
Braiding-machine. J. Lundgren. No. 897,362; Sept. 1; Sp. p. 291; Dr. pp. 59–60; Gaz. vol. 136; p. 44.
Braiding-machine. J. Lundgren. No. 897,561; Sept. 1; Sp. p. 636; Dr. pp. 131–3; Gaz. vol. 136; p. 100.
Braiding-machine. F. Thun. No. 898,939; Sept. 15; Sp. p. 3364; Dr. pp. 722–3; Gaz. vol. 136; p. 612.
Braiding-machine bobbins, Safety-regulator for. T. F. O'Brien. No. 897,648; Sept. 1; Sp. p. 821; Dr. p. 172; Gaz. vol. 136; p. 131.
Braiding machine, Cord-. F. Thun. No. 898,938; Sept. 15; Sp. p. 3362; Dr. p. 722; Gaz. vol. 136; p. 612.
Brake: *See* Air-brake; Automobile-brake; Carriage-brake; Coaster-brake; Fluid-pressure brake; Vehicle-brake.
Brake adjusting apparatus, Railway-vehicle and like. V. Chavériat. No. 897,817; Sept. 1; Sp. p. 1170; Dr. p. 249; Gaz. vol. 136; p. 186.
Brake-beam strut and fulcrum. E. H. Bauer. No. 897,570; Sept. 1; Sp. p. 679; Dr. p. 142; Gaz. vol. 136; p. 107.
Brake-handle. S. J. Hanlin and G. W. Rigney. No. 898,880; Sept. 15; Sp. p. 3261; Dr. p. 698; Gaz. vol. 136; p. 593.
Brake-release. A. A. St. Clair. No. 899,919; Sept. 29; Sp. p. 5320; Dr. p. 1137; Gaz. vol. 136; p. 993.
Brake mechanism. E. v. Planta and F. Adam. No. 899,069; Sept. 22; Sp. p. 3602; Dr. p. 771; Gaz. vol. 136; p. 680.
Brake-shoe. B. D. Lockwood and F. M. Whyte. No. 899,454; Sept. 22; Sp. p. 4343; Dr. p. 932; Gaz vol. 136; p. 805.
Brakes, Automatic sanding apparatus for fluid-pressure. E. G. Desoe. No. 899,246; Sept. 22; Sp. p. 3992; Dr p. 850; Gaz. vol. 136; p. 746.
Bread-cutting device. N. M. Andersen. No. 898,163; Sept. 8; Sp. p. 1896; Dr. p. 405; Gaz. vol. 136; p. 330.
Bread-mixer. G. Friedman. No. 898,211; Sept. 8; Sp. p. 1984; Dr. p. 423; Gaz. vol. 136; p. 344.
Brick and tile cutting machine. W. R. Cunningham. No. 897,596; Sept. 1; Sp. p. 729; Dr. pp. 154–5; Gaz. vol. 136; p. 115.
Brick, block, or tile cutter or shaper. W. H. Hill. No. 899,980; Sept. 29; Sp. p. 5461; Dr. p. 1165; Gaz. vol. 136; p. 1013.
Brick-lift. J. P. B. Fiske. No. 898,733; Sept. 15; Sp. p. 2996; Dr. p. 642; Gaz. vol. 136; p. 545.
Brick-machine, Rotary. J. Walker. No. 899,087; Sept. 22; Sp. p. 3634; Dr. p. 779; Gaz. vol. 136; p. 687.
Brick-machines, Brick-handling device for. J. Walker. No. 899,086; Sept. 22; Sp. p. 3633; Dr. p. 779; Gaz. vol. 136; p. 686.
Bridge rail-lock, Draw-. C. H. Morrison. No. 898,252; Sept. 8; Sp. p. 2068; Dr. p. 440; Gaz. vol. 136; p. 357.
Bridle-bit. M. Jincks. No. 897,373; Sept. 1; Sp. p. 260; Dr. p. 55; Gaz. vol. 136; p. 41.
Bridle-bit. D. S. Gallatin. No. 898,637; Sept. 15; Sp. p. 2827; Dr. p. 603; Gaz. vol. 136; p. 515.
Bridle-bit. J. W. Greenwood. No. 899,298; Sept. 22; Sp. p. 4073; Dr. p. 870; Gaz. vol. 136; p. 756.
Bridles, Overdraw check-loop for. M. E. Zeller. No. 899,281; Sept. 22; Sp. p. 4046; Dr. p. 865; Gaz. vol. 136; p. 751.
Brine-making apparatus. H. J. Gerner. No. 897,284; Sept. 1; Sp. p. 37; Dr. p. 9; Gaz. vol. 136; p. 9.
Briquets, blocks, artificial stone, and the like, Press for manufacturing. W. Surmann. No. 898,525; Sept. 15; Sp. p. 2591; Dr. pp. 553–4; Gaz. vol. 136; p. 478.
Brooder. H. J. Mulder. No. 899,177; Sept. 22; Sp. p. 3830; Dr. p. 820; Gaz. vol. 136; p. 717.
Broom. E. Brown. No. 898,629; Sept. 15; Sp. p. 2801; Dr. p. 599; Gaz. vol. 136; p. 512.
Broom attachment. J. A. Lewis. No. 898,232; Sept. 8; Sp. p. 2039; Dr. p. 433; Gaz. vol. 136; p. 351.
Broom-making chuck. E. J. Powers. No. 899,679; Sept. 29; Sp p. 4824; Dr. p. 1032; Gaz. vol. 136; p. 914.
Brush, Bottle-washer. C. K. Volckening. No. 898,288; Sept. 8; Sp. p. 2129; Dr. p. 452; Gaz. vol. 136; p. 368.
Brush, Fountain-. H. Kadushin. No. 899,305; Sept. 22; Sp. p. 4063; Dr. p. 872; Gaz. vol. 136; p. 758.
Brush, Hair-. F. M. Hanaway. No. 898,467; Sept. 15; Sp. p. 2480; Dr. p. 531; Gaz. vol. 136; p. 459.
Brush, Shoe-. H. F. Stubenrauch. No. 898,998; Sept. 15; Sp. p. 3468; Dr. p. 743; Gaz. vol. 136; p. 631.
Bucket, Automatic bottom-dumping and self-closing. H. G. Ferris. No. 897,361; Sept. 1; Sp. p. 246; Dr. p. 51; Gaz. vol. 136; p. 30.
Bucket, Well-. D. S. Terry. No. 897,324; Sept. 1; Sp. p. 138; Dr. p. 29; Gaz. vol. 136; p. 21.
Buckle. N. Fein. No. 897,360; Sept. 1; Sp. p. 244; Dr. p. 50; Gaz. vol. 136; p. 36.
Buckle. F. W. Goerdes. No. 897,734; Sept. 1; Sp. p. 997; Dr. p. 212; Gaz. vol. 136; p. 160.
Buckle. A. L. London. No. 898,122; Sept. 8; Sp. p. 1817; Dr. p. 385; Gaz. vol. 136; p. 317.
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Buckle, Cross-line. R. B. Benford. No. 899,375; Sept. 22; Sp. p. 4208; Dr. p. 901; Gaz. vol. 136; p. 780.
Buckle, Harness-. L. L. Rounds. No. 899,327; Sept. 22; Sp. p. 4123; Dr. p. 882; Gaz. vol. 136; p. 765.
Buckle, Rein-. M. E. Zeller. No. 899,282; Sept. 22; Sp. p. 4047; Dr. p. 865; Gaz. vol. 136; p. 751.
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Buckle, Snap-fastening slide-. T. R. Hyde, Jr. No. 899,670; Sept. 29; Sp. p. 4800; Dr. p. 1028; Gaz. vol. 136; p. 912.
Buffing and grinding apparatus. F. B. Duncan. No. 897,603; Sept. 1; Sp. p. 744; Dr. p. 157; Gaz. vol. 136; p. 118.
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Building-block. R. E. Keagle. No. 898,656; Sept. 15; Sp. p. 2857; Dr. p. 610; Gaz. vol. 136; p. 521.
Building-block, Cementitious. E. H. McClintock. No. 897,552; Sept. 1; Sp. p. 641; Dr. p. 133; Gaz. vol. 136; p. 100.
Building block or brick. W. H. Daniels. No. 899,958; Sept. 29; Sp. p. 5419; Dr. p. 1155; Gaz. vol. 136; p. 1006.
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Building-construction bracket. A. Toupin. No. 898,286; Sept. 8; Sp. p. 2125; Dr. p. 452; Gaz. vol. 136; p. 367.
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Bulkhead and jetty construction. J. A. Howland and W. H. De Nyse. No. 897,370; Sept. 1; Sp. p. 263; Dr. p. 54; Gaz. vol. 136; p. 40.
Burner: *See* Gas-burner; Hydrocarbon-burner; Oil-burner; Weed-burner.
Burners, Globe for inverted. T. Hanna. No. 898,881; Sept. 15; Sp. p. 3263; Dr. p. 698; Gaz. vol. 136; p. 593.
Butter-box fastener. G. E. Woodbury. No. 897,442; Sept. 1; Sp. p. 418; Dr. p. 89; Gaz. vol. 136; p. 65.
Butter, cheese, and the like, Machine for cutting. F. G. Hodell. No. 899,533; Sept. 29; Sp. p. 4517; Dr. p. 970; Gaz. vol. 136; p. 868.
Butter, Granulating and purifying. F. Seim. No. 898,070; Sept. 8; Sp. p. 1718; Dr. p. 364; Gaz. vol. 136; p. 301.
Butter granulator and purifier. F. Seim. No. 898,011; Sept. 8; Sp. p. 1593; Dr. p. 340; Gaz. vol. 136; p. 282.
Butter-molding machine. C. H. Prescott. No. 897,487; Sept. 1; Sp. p. 503; Dr. p. 107; Gaz. vol. 136; p. 80.
Butter-packing machine. J. Mattson. No. 899,119; Sept. 22; Sp. p. 3696; Dr. pp. 792–3; Gaz. vol. 136; p. 698.
Button. A. Hall. No. 899,528; Sept. 29; Sp. p. 4510; Dr. p. 968; Gaz. vol. 136; p. 866.
Button. J. G. Breitenstein. No. 899,824; Sept. 29; Sp. p. 5136; Dr. p. 1098; Gaz. vol. 136; p. 964.
Button cutting and shaping machine, Automatic. W. S. Watson. No. 897,691; Sept. 1; Sp. p. 907; Dr. pp. 194–5; Gaz. vol. 136; p. 146.
Button-making and like purposes, Press for. J. G. Breitenstein. No. 899,098; Sept. 22; Sp. p. 3664; Dr. pp. 784–5; Gaz. vol. 136; p. 691.
Button, Upholsterer's. H. L. E. Krueger. No. 899,601; Sept. 29; Sp. p. 4668; Dr. p. 1001; Gaz. vol. 136; p. 891.
Cabbage-cutting machine. C. W. Hottman. No. 898,109; Sept. 8; Sp. p. 1794; Dr. p. 381; Gaz. vol. 136; p. 313.
Cabinet. C. R. Wegener and H. E. Hanson. No. 899,147; Sept. 22; Sp. p. 3764; Dr. pp. 805–6; Gaz. vol. 136; p. 708.
Cabinet, Cheese-. C. C. Brown. No. 899,945; Sept. 29; Sp. p. 5397; Dr. p. 1151; Gaz. vol. 136; p. 1001.
Cabinet, Ironing-. B. A. Stocking. No. 899,633; Sept. 29; Sp. p. 4742; Dr. p. 1015; Gaz. vol. 136; p. 901.
Cabinet, Kitchen supply-. C. A. Hornig. No. 899,399; Sept. 22; Sp. p. 4249; Dr. p. 912; Gaz. vol. 136; p. 788.
Cabinet, Sales checking and record. G. C. Voisard. No. 898,534; Sept. 15; Sp. p. 2612; Dr. p. 557; Gaz. vol. 136; p. 481.
Cabinet, Store-. T. B. Weston. No. 899,195; Sept. 22; Sp. p. 3864; Dr. p. 826; Gaz. vol. 136; p. 723.
Cable-clamp. H. B. Newhall. No. 899,757; Sept. 29; Sp. p. 4984; Dr. p. 1068; Gaz. vol. 136; p. 941.
Cable-drum. A. A. Pifer. No. 899,613; Sept. 29; Sp. p. 4684; Dr. p. 1005; Gaz. vol. 136; p. 894.
Cable-power. C. J. Eastman. No. 900,060; Sept. 29; Sp. p. 5655; Dr. p. 1208; Gaz. vol. 136; p. 1040.
Cables, Relief-grip for. J. H. Colby. No. 899,786; Sept. 29; Sp. p. 5059; Dr. p. 1063; Gaz. vol. 136; p. 952.
Cables, Splice-coupling for. E. J. Noblett. No. 898,595; Sept. 15; Sp. p. 2725; Dr. p. 583; Gaz. vol. 136; p. 500.
Calciminer's knife. C. N. Emmerson. No. 898,568; Sept. 15; Sp. p. 2680; Dr. p. 572; Gaz. vol. 136; p. 492.
Calculating-machine. R. Rein. No. 897,659; Sept. 1; Sp. p. 842; Dr. p. 178; Gaz. vol. 136; p. 135.
Calculating-machine. C. L. Nelson. No. 897,768; Sept. 1; Sp. p. 1057; Dr. pp. 228–30; Gaz. vol. 136; p. 171.
Calendar. E. K. Plough. No. 899,614; Sept. 29; Sp. p. 4685; Dr. p. 1005; Gaz. vol. 136; p. 895.
Caliper-gage, Combination. C. A. Duncan. No. 898,565; Sept. 15; Sp. p. 2674; Dr. p. 572; Gaz. vol. 136; p. 491.
Calipers. W. H. Watson. No. 897,437; Sept. 1; Sp. p. 408; Dr. p. 87; Gaz. vol. 136; p. 83.
Calling-on signal, Automatic. W. H. Elliott. No. 897,607; Sept. 1; Sp. p. 750; Dr. p. 159; Gaz. vol. 136; p. 119.
Calorimeter, Steam-. C. C. Thomas. No. 898,610; Sept. 15; Sp. p. 2756; Dr. p. 589; Gaz. vol. 136; p. 505.
Camera. J. Goddard. No. 897,733; Sept. 1; Sp. p. 994; Dr. pp. 211–12; Gaz. vol. 136; p. 160.
Camphor, Making. A. Wack. No. 898,943; Sept. 15; Sp. p. 3370; Gaz. vol. 136; p. 613.
Can: *See* Milk-can; Oil-can; Powder-can.
Can-cover. F. S. Davis. No. 897,720; Sept. 1; Sp. p. 971; Dr. p. 207; Gaz. vol. 136; p. 156.
Can crimping and soldering machine. F. W. Ballard. No. 897,337; Sept. 1; Sp. p. 173; Dr. pp. 36–8; Gaz. vol. 136; p. 26.
Candle-holder. E. P. Lehmann. No. 898,660; Sept. 15; Sp. p. 2865; Dr. p. 612; Gaz. vol. 136; p. 522.
Cane, Torpedo-. R. Bean. No. 897,572; Sept. 1; Sp. p. 682; Dr. p. 143; Gaz. vol. 136; p. 107.
Can-filling machine. C. T. Small. No. 897,420; Sept. 1; Sp. p. 371; Dr. p. 78; Gaz. vol. 136; p. 58.

Can-opener. R. A. Rodgers and W. R. Henderson. No. 898,605; Sept. 15; Sp. p. 2748; Dr. p. 587; Gaz. vol. 136; p. 503.
Can-opener. J. H. Lynch. No. 900,030; Sept. 29; Sp. p. 5581; Dr. p. 1192; Gaz. vol. 136; p. 1030.
Can-spout. C. F. Kellom. No. 898,483; Sept. 15; Sp. p. 2509; Dr. p. 537; Gaz. vol. 136; p. 464.
Can-stacker. C. T. La Bau. No. 898,584; Sept. 15; Sp. p. 2707; Dr. p. 578; Gaz. vol. 136; p. 497.
Canned goods, Revolver for processing. H. L. Forhan. No. 900,004; Sept. 29; Sp. p. 5602; Dr. p. 1210; Gaz. vol. 136; p. 1041.
Canning apparatus. W. F. Pillmore and D. Anderegg. No. 898,002; Sept. 8; Sp. p. 1574; Dr. p. 336; Gaz. vol. 136; p. 279.
Cap-exploder, Magazine. G. Krueger. No. 897,131; Sept. 1; Sp. p. 795; Dr. p. 167; Gaz. vol. 136; p. 126.
Capsule-filling mechanism. J. P. Remington. No. 899,761; Sept. 29; Sp. p. 4991; Dr. p. 1070; Gaz. vol. 136; p. 942.
Capsule-placing device. J. P. Remington. No. 899,760; Sept. 29; Sp. p. 4989; Dr. p. 1069; Gaz. vol. 136; p. 942.
Car, Alcove sleeping-. F. E. Stebbins. No. 897,797; Sept. 1; Sp. p. 1124; Dr. pp. 240–1; Gaz. vol. 136; p. 179.
Car construction. F. E. Stebbins. No. 897,314; Sept. 1; Sp. p. 85; Dr. pp. 21–2; Gaz. vol. 136; p. 18.
Car construction. F. E. Stebbins. No. 897,315; Sept. 1; Sp. p. 95; Dr. pp. 23–5; Gaz. vol. 136; p. 18.
Car construction, Railway-. H. H. Harvey and R. J. Cook. No. 897,856; Sept. 8; Sp. p. 1345; Dr. p. 288; Gaz. vol. 136; p. 244.
Car-coupling. A. P. Goldman and H. H. Stephens. No. 897,889; Sept. 8; Sp. p. 1323; Dr. p. 282; Gaz. vol. 136; p. 242.
Car-coupling. P. Brown. No. 898,961; Sept. 15; Sp. p. 3401; Dr. pp. 730–1; Gaz. vol. 136; p. 619.
Car-coupling. H. M. Rosenberg. No. 899,438; Sept. 22; Sp. p. 4311; Dr. p. 926; Gaz. vol. 136; p. 799.
Car-coupling, Automatic. V. Márton. No. 899,604; Sept. 29; Sp. p. 4671; Dr. p. 1002; Gaz. vol. 136; p. 892.
Car-deck windows, Means for operating. W. J. McGrath and M. H. Schefft. No. 897,386; Sept. 1; Sp. p. 298; Dr. p. 61; Gaz. vol. 136; p. 45.
Car-door. W. J. Cooke. No. 899,385; Sept. 22; Sp. p. 4221; Dr. p. 904; Gaz. vol. 136; p. 783.
Car-door. J. M. Etiman. No. 899,339; Sept. 22; Sp. p. 4226; Dr. p. 905; Gaz. vol. 136; p. 784.
Car-door construction. J. M. Rush. No. 899,909; Sept. 29; Sp. p. 5302; Dr. pp. 1133–4; Gaz. vol. 136; p. 990.
Car door, Grain-. J. Thompson. No. 897,678; Sept. 1; Sp. p. 883; Dr. p. 189; Gaz. vol. 136; p. 141.
Car draft-gear, Railway-. W. McIntosh. No. 898,772; Sept. 15; Sp. p. 3070; Dr. p. 657; Gaz. vol. 136; p. 557.
Car draft-gear, Railway-. C. T. Westlake. No. 899,090; Sept. 22; Sp. p. 3699; Dr. p. 780; Gaz. vol. 136; p. 688.
Car, Dump-. H. T. Herr. No. 897,463; Sept. 1; Sp. p. 458; Dr. p. 98; Gaz. vol. 136; p. 73.
Car, Dump-. K. H. Hansen. No. 899,108; Sept. 22; Sp. p. 3679; Dr. p. 788; Gaz. vol. 136; p. 694.
Car, Dump-. T. H. Stagg. No. 899,573; Sept. 29; Sp. p. 4608; Dr. p. 990; Gaz. vol. 136; p. 882.
Car, Dumping-. R. H. Stevens. No. 897,499; Sept. 1; Sp. p. 529; Dr. p. 112; Gaz. vol. 136; p. 84.
Car-fender. M. Bogushefsky. No. 897,708; Sept. 1; Sp. p. 945; Dr. p. 202; Gaz. vol. 136; p. 152.
Car-fender. G. F. Walker. No. 899,689; Sept. 29; Sp. p. 4839; Dr. p. 1036; Gaz. vol. 136; p. 917.
Car-fender, Rolling automatic. F. A. Johan. No. 898,375; Sept. 8; Sp. p. 2287; Dr. p. 486; Gaz. vol. 136; p. 397.
Car fender, Street-. D. H. and A. Brazil. No. 897,345; Sept. 1; Sp. p. 196; Dr. p. 42; Gaz. vol. 136; p. 30.
Car fender, Street-. E. H. Schulze. No. 898,146; Sept. 8; Sp. p. 1803; Dr. p. 398; Gaz. vol. 136; p. 324.
Car-fenders, Means for operating. R. J. Kellett. No. 898,582; Sept. 15; Sp. p. 2704; Dr. p. 578; Gaz. vol. 136; p. 496.
Car for observation-wheels. A. F. Biavati. No. 899,296; Sept. 22; Sp. p. 4054; Dr. p. 866; Gaz. vol. 136; p. 752.
Car-loading device. T. Newsam, Jr. No. 898,594; Sept. 15; Sp. p. 2722; Dr. pp. 582–3; Gaz. vol. 136; p. 499.
Car, Railway-. E. T. Robinson. No. 899,763; Sept. 29; Sp. p. 4999; Dr. p. 1071; Gaz. vol. 136; p. 943.
Car-replacer. B. Strickland. No. 897,673; Sept. 1; Sp. p. 875; Dr. p. 187; Gaz. vol. 136; p. 140.
Car-replacer. W. M. Kitchen. No. 898,226; Sept. 8; Sp. p. 2029; Dr. p. 430; Gaz. vol. 136; p. 350.
Car-roof. M. E. Ward. No. 899,817; Sept. 29; Sp. p. 5124; Dr. p. 1096; Gaz. vol. 136; p. 962.
Car safety apparatus. T. A. Mayer. No. 899,228; Sept. 22; Sp. p. 3918; Dr. p. 837; Gaz. vol. 136; p. 733.
Car safety appliance, Railway-. J. T. Andrew. No. 898,165; Sept. 8; Sp. p. 1900; Dr. p. 406; Gaz. vol. 136; p. 330.
Car safety-gate, Railway-. T. F. Talbot, Jr. No. 899,494; Sept. 22; Sp. p. 4420; Dr. p. 949; Gaz. vol. 136; p. 819.
Car-seat cushion. J. J. Downey. No. 899,034; Sept. 22; Sp. p. 3548; Dr. p. 759; Gaz. vol. 136; p. 670.
Car, Sleeping-. F. E. Stebbins. No. 897,798; Sept. 1; Sp. p. 1133; Dr. pp. 241–3; Gaz. vol. 136; p. 180.
Car-stake. N. E. Gaguon. No. 899,394; Sept. 22; Sp. p. 4237; Dr. p. 905; Gaz. vol. 136; p. 786.
Car standard, Log-. M. Majette. No. 898,244; Sept. 8; Sp. p. 2058; Dr. p. 437; Gaz. vol. 136; p. 355.
Car-stop, Automatic. W. E. Dawkins. No. 899,245; Sept. 22; Sp. p. 3991; Dr. p. 850; Gaz. vol. 136; p. 740.
Car structure. J. E. Anger. No. 898,952; Sept. 15; Sp. p. 3384; Dr. p. 727; Gaz. vol. 136; p. 616.
Car, Tank-. J. F. Streib. No. 898,152; Sept. 8; Sp. p. 1874; Dr. p. 400; Gaz. vol. 136; p. 326.
Car, Tank-. M. C. Blest. No. 898,177; Sept. 8; Sp. p. 1930; Dr. p. 412; Gaz. vol. 136; p. 335.
Car-underframe. A. Becker. No. 899,649; Sept. 29; Sp. p. 4767; Dr. p. 1020; Gaz. vol. 136; p. 905.
Car-underframe. A. Becker. No. 899,650; Sept. 29; Sp. p. 4768; Dr. p. 1020; Gaz. vol. 136; p. 906.
Car-underframe. A. Becker. No. 899,651; Sept. 29; Sp. p. 4770; Dr. p. 1020; Gaz. vol. 136; p. 906.
Car ventilation. W. R. Stokely. No. 898,801; Sept. 15; Sp. p. 3116; Dr. p. 668; Gaz. vol. 136; p. 566.
Car-wheel. A. S. Gustafson. No. 898,463; Sept. 15; Sp. p. 2476; Dr. p. 529; Gaz. vol. 136; p. 458.
Car-wheel. T. M. Crepar. No. 899,483; Sept. 22; Sp. p. 4402; Dr. p. 944; Gaz. vol. 136; p. 815.
Car-wheel. O. S. Pulliam. No. 899,680; Sept. 29; Sp. p. 4825; Dr. p. 1033; Gaz. vol. 136; p. 914.
Car-windows, Dust and cinder shield and guard for. J. S. McKenzie. No. 897,994; Sept. 8; Sp. p. 1561; Dr. p. 332; Gaz. vol. 136; p. 277
Cars, Automatic pipe-coupling for railway-. E. E. Gold. No. 898,214; Sept. 8; Sp. p. 1987; Dr. p. 424; Gaz. vol. 136; p. 345.
Cars, Detachable log-retaining device for. O. W. Wade. No. 899,816; Sept. 29; Sp. p. 5122; Dr. p. 1096; Gaz. vol. 136; p. 961.
Cars, Street-signal for. N. G. Augir. No. 899,499; Sept. 29; Sp. p. 4443; Dr. p. 954; Gaz. vol. 136; p. 856.
Cars, Trip-stake and bolster for logging-. F. J. Schmittner. No. 900,040; Sept. 29; Sp. p. 5603; Dr. p. 1195; Gaz. vol. 136; p. 1033.
Carbon-holder. O. A. Ross. No. 897,410; Sept. 1; Sp. p. 353; Dr. p. 74; Gaz. vol. 136; p. 54.
Carbonating and bottling apparatus, Liquid. A. J. Billows. No. 899,782; Sept. 29; Sp. p. 5050; Dr. p. 1062; Gaz. vol. 136; p. 950.
Carbureter. F. H. Heitger. No. 898,361; Sept. 8; Sp. p. 2255; Dr. p. 480; Gaz. vol. 136; p. 391.
Carbureter. L. P. Moores. No. 898,494; Sept. 15; Sp. p. 2528; Dr. pp. 541–2; Gaz. vol. 136; p. 468.
Carbureter. L. P. Moores. No. 898,495; Sept. 15; Sp. p. 2531; Dr. p. 542; Gaz. vol. 136; p. 468.
Carbureter. G. S. Pierson. No. 898,920; Sept. 15; Sp. p. 3334; Dr. p. 714; Gaz. vol. 136; p. 606.
Carbureter. F. H. Heitger. No. 899,109; Sept. 22; Sp. p. 3681; Dr. p. 789; Gaz. vol. 136; p. 695.
Card, Address-bearing. E. D. Belknap. No. 898,425; Sept. 15; Sp. p. 2396; Dr. p. 512; Gaz. vol. 136; p. 447.
Card-holder. P. M. Matheson. No. 898,758; Sept. 15; Sp. p. 3037; Dr. p. 651; Gaz. vol. 136; p. 552.
Carpenter's combination-tool. A. Bartels. No. 897,867; Sept. 8; Sp. p. 1281; Dr. p. 274; Gaz. vol. 136; p. 234.
Carpet-beater. A. W. Andrews. No. 897,512; Sept. 1; Sp. p. 562; Dr. p. 118; Gaz. vol. 136; p. 80.
Carpet-fastener. C. E. Billings. No. 899,377; Sept. 22; Sp. p. 4210; Dr. p. 901; Gaz. vol. 136; p. 781.
Carriage-brake. M. Ehlert. No. 898,566; Sept. 15; Sp. p. 2677; Dr. p. 572; Gaz. vol. 136; p. 491.
Carriage, Folding. O. N. Turner. No. 899,851; Sept. 29; Sp. p. 5205; Dr. pp. 1114–15; Gaz. vol. 136; p. 973.
Carriage, Take-apart baby-. F. Turner. No. 897,502; Sept. 1; Sp. p. 534; Dr. p. 113; Gaz. vol. 136; p. 85.
Carriage-top. J. P. Fillingham. No. 900,063; Sept. 29; Sp. p. 5661; Dr. pp. 1209–10; Gaz. vol. 136; p. 1041.
Carrier: *See* Cartridge-carrier; Egg-carrier; Egg-case carrier; Endless carrier; Feed-carrier; Hay-carrier; Parcel-carrier
Carrier stop, Elevated-. A. H. Neller. No. 897,387; Sept. 1; Sp. p. 300; Dr. p. 61; Gaz. vol. 136; p. 46.
Carrier's draft-rigging. E. Ring. No. 899,435; Sept. 22; Sp. p. 4307; Dr. p. 925; Gaz. vol. 136; p. 798.
Cart. W. Earnest. No. 898,344; Sept. 8; Sp. p. 2224; Dr. p. 472; Gaz. vol. 136; p. 386.
Cart, Dump-. F. C. Feller. No. 898,204; Sept. 8; Sp. p. 1972; Dr. p. 420; Gaz. vol. 136; p. 342.
Carton. F. F. Gokey, W. R. Chambers, and W. E. Laprese. No. 898,355; Sept. 8; Sp. p. 2245; Dr. p. 478; Gaz. vol. 136; p. 389.
Carton. G. W. Teasdale. No. 899,922; Sept. 29; Sp. p. 5333; Dr. p. 1139; Gaz. vol. 136; p. 994
Carton or display device. F. C. Ely. No. 897,606; Sept. 1; Sp. p. 759; Dr. p. 160; Gaz. vol. 136; p. 120.
Cartridge-carrier. V. H. Jennings. No. 898,372; Sept. 8; Sp. p. 2284; Dr. p. 485; Gaz. vol. 136; p. 396.
Cartridge-carrier. V. H. Jennings. No. 898,373; Sept. 8; Sp. p. 2284; Dr. p. 486; Gaz. vol. 136; p. 396.
Cartridge-loading machine. W. I. Donaldson. No. 899,592; Sept. 29; Sp. p. 4644; Dr. pp. 997–8; Gaz. vol. 136; p. 888.
Cartridge-shells, Means for preventing distortion of. L. Mertens. No. 898,908; Sept. 15; Sp. p. 3310; Dr. p. 709; Gaz. vol. 136; p. 602.
Cartridges, Means for securing percussion-caps in. R. H. Stribeck. No. 898,802; Sept. 15; Sp. p. 3120; Dr. p. 668; Gaz. vol. 136; p. 567.
Carving-machines, Retracting mechanism for automatic. H. C. Baase. No. 898,168; Sept. 8; Sp. p. 1906; Dr. p. 408; Gaz. vol. 136; p. 331.
Case: *See* Bookcase; Bottle-case; Packing-case; Packing and display case; Shipping-case; Show-case; Thermometer-case; Valve-stem case.
Casein, Manufacture of. H. V. Dunham. No. 897,885; Sept. 8; Sp. p. 1310; Gaz. vol. 136; p. 239.
Cash-register. F. H. Bickford. No. 897,575; Sept. 1; Sp. p. 687; Dr. pp. 144–5; Gaz. vol. 136; p. 108.
Cash-register. A. N. Ericsson. No. 897,886; Sept. 8; Sp. p. 1311; Dr. pp. 280–1; Gaz. vol. 136; p. 240.
Caster. E. H. Humphrey. No. 898,740; Sept. 15; Sp. p. 3009; Dr. p. 644; Gaz. vol. 136; p. 547.
Caster. A. F. W. Bowen. No. 899,505; Sept. 29; Sp. p. 4456; Dr. p. 950; Gaz. vol. 136; p. 858.
Caster, Ball-. A. Klotzbach. No. 899,013; Sept. 15; Sp. p. 3504; Dr. p. 750; Gaz. vol. 136; p. 636.
Casting apparatus, Actuating mechanism for turn-table pipe-. E. A. Custer. No. 898,441; Sept. 15; Sp. p. 2429; Dr. p. 520; Gaz. vol. 136; p. 451.
Casting apparatus, Metal-pouring mechanism for pipe-. E. A. Custer. No. 898,631; Sept. 15; Sp. p. 2807; Dr. p. 600; Gaz. vol. 136; p. 513.

Casting copper and copper alloys. C. Gautsch. No. 898,638; Sept. 15; Sp. p. 2823; Gaz. vol. 136; p. 515.
Casting-molds, Means for automatically controlling the opening and closing of two-part. E. A. Custer. No. 898,190; Sept. 8; Sp. p. 1948; Dr. p. 416; Gaz. vol. 136; p. 338.
Castings, Cooling. L. Kavanaugh. No. 899,736; Sept. 29; Sp. p. 4937; Dr. p. 1059; Gaz. vol. 136; p. 933.
Catching and holding device. E. L. Hitt. No. 898,890; Sept. 15; Sp. p. 3283; Dr. pp. 702–3; Gaz. vol. 136; p. 596.
Cement Manufacture of. W. E. Snyder. No. 897,938; Sept. 8; Sp. p. 1445; Dr. p. 309; Gaz. vol. 136; p. 258.
Cement or concrete mixer. J. A. Randall. No. 899,071; Sept. 22; Sp. p. 3612; Dr. p. 773; Gaz. vol. 136; p. 681.
Cement-pipe-making machine. H. Besser. No. 898,428; Sept. 15; Sp. p. 2400; Dr. pp. 514–15; Gaz. vol. 136; p. 448.
Cementing-machines, Apparatus for feeding soles to. G. R. Cheesman. No. 898,721; Sept. 15; Sp. p. 2970; Dr. pp. 636–7; Gaz. vol. 136; p. 541.
Central-buffer claw-coupling. L., Sr., and L. Scheib, Jr. No. 899,555; Sept. 29; Sp. p. 4593; Dr. p. 986; Gaz. vol. 136; p. 879.
Centrifugal mill. A. Raymond. No. 897,400; Sept. 1; Sp. p. 329; Dr. pp. 70–1; Gaz. vol. 136; p. 50.
Chain-drive, Flexibly-intermittent. I. W. Marshall. No. 897,756; Sept. 1; Sp. p. 1034; Dr. pp. 220–1; Gaz. vol. 136; p. 168.
Chain, Friction drive-. W. J. Belcher and W. M. Butler. No. 897,515; Sept. 1; Sp. p. 506; Dr. p. 118; Gaz. vol. 136; p. 90.
Chain guard, Watch and key. M. Richmond. No. 897,405; Sept. 1; Sp. p. 346; Dr. p. 73; Gaz. vol. 136; p. 53.
Chair: *See* Collapsible chair; Commode-chair; Knockdown chair; Rail-chair; Rail-joint chair; Revolving chair; Swinging chair.
Chair covering, Barber's-. O. H. Willard. No. 899,853; Sept. 29; Sp. p. 5211; Dr. p. 1115; Gaz. vol. 136; p. 974.
Chair-seat. C. H. Lenhart. No. 899,745; Sept. 29; Sp. p. 4960; Dr. p. 1063; Gaz. vol. 136; p. 937.
Chandelier-hanging device. O. Peterson. No. 898,391; Sept. 8; Sp. p. 2310; Dr. p. 491; Gaz. vol. 136; p. 402.
Change-maker, Automatic. W. W. Roblyer. No. 899,704; Sept. 29; Sp. p. 4862; Dr. pp. 1043–4; Gaz. vol. 136; p. 921.
Channel-flap-turning machine. C. P. Stanbon. No. 898,016; Sept. 8; Sp. p. 1604; Dr. p. 342; Gaz. vol. 136; p. 284.
Channeling-machine. E. A. Webster. No. 897,438; Sept. 1; Sp. p. 409; Dr. p. 87; Gaz. vol. 136; p. 64.
Chaplet and shrine of the holy rosary. W. Hendrick. No. 899,977; Sept. 29; Sp. p. 5456; Dr. pp. 1163–4; Gaz. vol. 136; p. 1012.
Chase. J. E. McClellan. No. 898,501; Sept. 15; Sp. p. 2715; Dr. p. 581; Gaz. vol. 136; p. 499.
Check and holder, Transportation-. W. H. Carroll. No. 898,630; Sept. 15; Sp. p. 2802; Dr. p. 599; Gaz. vol. 136; p. 512.
Check-hook. O. C. Davis. No. 898,443; Sept. 15; Sp. p. 2434; Dr. p. 521; Gaz. vol. 136; p. 452.
Checkrein. B. J. Grant. No. 897,977; Sept. 8; Sp. p. 1530; Dr. p. 325; Gaz. vol. 136; p. 271.
Checkrein-releasing device. S. P. Foster. No. 897,973; Sept. 8; Sp. p. 1525; Dr. p. 324; Gaz. vol. 136; p. 270.
Cheese-cover. F. A. Vogt. No. 897,684; Sept. 1; Sp. p. 896; Dr. p. 192; Gaz. vol. 136; p. 143.
Cheese-cover and show-case. S. Ditson. No. 899,103; Sept. 22; Sp. p. 3674; Dr. p. 786; Gaz. vol. 136; p. 693.
Chimney-cap. J. O. Myhre. No. 897,643; Sept. 1; Sp. p. 813; Dr. p. 171; Gaz. vol. 136; p. 130.
Chimney cap and ventilator. A. A. Schupinsky. No. 898,790; Sept. 15; Sp. p. 3100; Dr. p. 664; Gaz. vol. 136; p. 563.
China-cleaning. J. Pass. No. 899,893; Sept. 29; Sp. p. 5275; Dr. p. 1128; Gaz. vol. 136; p. 986.
Chopper: *See* Food-chopper.
Chromoscope, Diffraction. F. E. Ives. No. 898,369; Sept. 8; Sp. p. 2276; Dr. p. 484; Gaz. vol. 136; p. 395.
Chuck, Drill-. T. R. Almond. No. 897,335; Sept. 1; Sp. p. 171; Dr. p. 36; Gaz. vol. 136; p. 25.
Churn. W. C. Pease. No. 897,481; Sept. 1; Sp. p. 487; Dr. p. 104; Gaz. vol. 136; p. 78.
Churn. S. P. A. Andersson. No. 897,696; Sept. 1; Sp. p. 927; Dr. p. 197; Gaz. vol. 136; p. 149.
Churn. I. C. Yankirk. No. 899,085; Sept. 22; Sp. p. 3632; Dr. p. 778; Gaz. vol. 136; p. 686.
Churn-operating mechanism. R. E. Fleming. No. 898,207; Sept. 8; Sp. p. 1977; Dr. pp. 421–2; Gaz. vol. 136; p. 343.
Chute, Adjustable. F. V. Hetzel and H. P. Cochrane. No. 898,886; Sept. 15; Sp. p. 3277; Dr. p. 701; Gaz. vol. 136; p. 595.
Chute, Coal-. R. T. Greenleaf. No. 898,977; Sept. 15; Sp. p. 3430; Dr. pp. 736–7; Gaz. vol. 136; p. 625.
Chute, Ore-. J. Ross. No. 899,076; Sept. 22; Sp. p. 3620; Dr. p. 775; Gaz. vol. 136; p. 683.
Cigar-banding device. C. Silger and I. Deatherage. No. 898,273; Sept. 8; Sp. p. 2102; Dr. p. 447; Gaz. vol. 136; p. 364.
Cigar-lighter. C. A. Wagner. No. 897,687; Sept. 1; Sp. p. 899; Dr. p. 193; Gaz. vol. 136; p. 144.
Cigar-lighter, Electric. E. P. Muller. No. 897,766; Sept. 1; Sp. p. 1055; Dr. p. 227; Gaz. vol. 136; p. 171.
Cigar-tip. J. O. Therien. No. 899,355; Sept. 22; Sp. p. 4171; Dr. p. 893; Gaz. vol. 136; p. 774.
Cigar-wrapper cutter and rolling table. B. Liberman. No. 897,547; Sept. 1; Sp. p. 630; Dr. p. 130; Gaz. vol. 136; p. 99.
Cigar-wrapper-rolling machine. H. Nageleisen. No. 899,998; Sept. 29; Sp. p. 5505; Dr. p. 1173; Gaz. vol. 136; p. 1019.
Cigars, Packing. O. L. Parmenter. No. 897,925; Sept. 8; Sp. p. 1417; Dr. p. 302; Gaz. vol. 136; p. 254.
Cigarette-machine. O. Bergsträsser. No. 899,376; Sept. 22; Sp. p. 4209; Dr. p. 901; Gaz. vol. 136; p. 781.
Cigarettes, Tool or apparatus for use in the manufacture of hand-made. L. Aptekman. No. 897,699; Sept. 1; Sp. p. 930; Dr. p. 197; Gaz. vol. 136; p. 149.
Circuit-breaker, Automatic. H. P. Ball. No. 897,858; Sept. 1; Sp. p. 1262; Dr. pp. 270–1; Gaz. vol. 136; p. 199.
Clam-digger. W. D. Collier. No. 897,351; Sept. 1; Sp. p. 206; Dr. p. 44; Gaz. vol. 136; p. 32.
Clamp: *See* Adjustable clamp; Cable-clamp; Electric-cable clamp; Fence-stretching clamp; Jar-lid clamp; Paper-holding clamp; Rail-clamp; Saw-clamp.
Clamp. J. Kennedy. No. 897,903; Sept. 8; Sp. p. 1362; Dr. p. 291; Gaz. vol. 136; p. 247.
Clamp. O. Wallace. No. 898,396; Sept. 8; Sp. p. 2320; Dr. p. 493; Gaz. vol. 136; p. 404.
Clamp and buckle for joining webbing. E. H. Erickson. No. 899,105; Sept. 22; Sp. p. 3676; Dr. p. 787; Gaz. vol. 136; p. 693.
Clasp: *See* Garment-clasp; Garment-supporter clasp; Overshoe-clasp.
Clasp. H. E. Berkey. No. 898,176; Sept. 8; Sp. p. 1929; Dr. p. 411; Gaz. vol. 136; p. 334.
Clasp. J. V. Newton. No. 900,034; Sept. 29; Sp. p. 5593; Dr. p. 1194; Gaz. vol. 136; p. 1032.
Cleaner: *See* Boiler-cleaner; Cotton-cleaner; Grain-cleaner; Pipe-cleaner; Seed-cleaner; Shoe-cleaner; Street-cleaner; Tobacco-pipe cleaner; Window-cleaner.
Cleaning and polishing apparatus. E. Haskell. No. 897,286; Sept. 1; Sp. p. 40; Dr. p. 10; Gaz. vol. 136; p. 10.
Clinometer. R. M. Staley. No. 899,269; Sept. 22; Sp. p. 4030; Dr. p. 861; Gaz. vol. 136; p. 747.
Clip: *See* Paper-clip.
Clip. A. B. McLean. No. 897,645; Sept. 1; Sp. p. 815; Dr. p. 171; Gaz. vol. 136; p. 130.
Clock. G. Jaeger. No. 898,742; Sept. 15; Sp. p. 3012; Dr. p. 645; Gaz. vol. 136; p. 547.
Clock, Electric. M. Higuchi. No. 898,648; Sept. 15; Sp. p. 2841; Dr. p. 607; Gaz. vol. 136; p. 518.
Clock, Electric. M. Higuchi. No. 898,649; Sept. 15; Sp. p. 2844; Dr. pp. 607–8; Gaz. vol. 136; p. 518.
Clock, Electric. M. Higuchi. No. 899,012; Sept. 15; Sp. p. 3494; Dr. p. 749; Gaz. vol. 136; p. 635.
Closet: *See* Water-closet.
Closet. C. Kelley. No. 898,225; Sept. 8; Sp. p. 2027; Dr. pp. 429–30; Gaz. vol. 136; p. 349.
Clothes and clothes-pin receptacle, Combined. W. H. Carpenter. No. 898,315; Sept. 8; Sp. p. 2179; Dr. p. 462; Gaz. vol. 136; p. 377.
Clothes-drying apparatus. J. M. Lemon. No. 898,051; Sept. 8; Sp. p. 1679; Dr. p. 356; Gaz. vol. 136; p. 294.
Clothes-hanger. L. Fadum. No. 898,455; Sept. 15; Sp. p. 2459; Dr. p. 526; Gaz. vol. 136; p. 456.
Clothes-line fastener. J. G. Schlenter. No. 899,598; Sept. 29; Sp. p. 4594; Dr. p. 987; Gaz. vol. 136; p. 880.
Clothes-line holder. J. Huth. No. 899,166; Sept. 22; Sp. p. 3806; Dr. p. 814; Gaz. vol. 136; p. 714.
Clothes presser and hanger. L. Albert. No. 900,051; Sept. 29; Sp. p. 5636; Dr. p. 1203; Gaz. vol. 136; p. 1037.
Clothes pressing and cleaning apparatus. A. J. Hoffman. No. 897,832; Sept. 1; Sp. p. 1202; Dr. pp. 256–7; Gaz. vol. 136; p. 191.
Clutch. H. Ast. No. 899,822; Sept. 29; Sp. p. 5134; Dr. p. 1098; Gaz. vol. 136; p. 963.
Clutch. W. M. Ammerman. No. 900,052; Sept. 29; Sp. p. 5638; Dr. p. 1204; Gaz. vol. 136; p. 1037.
Clutch for feeding metal rods or bars. L. H. Brightman. No. 898,431; Sept. 15; Sp. p. 2408; Dr. p. 515; Gaz. vol. 136; p. 449.
Clutch, Friction-. D. F. Lepley. No. 897,900; Sept. 8; Sp. p. 1378; Dr. p. 294; Gaz. vol. 136; p. 249.
Clutch, Friction-. H. N. Davis. No. 898,332; Sept. 8; Sp. p. 2206; Dr. p. 468; Gaz. vol. 136; p. 382.
Clutch, Friction-. J. A. Hoenika and J. R. Triplett. No. 898,362; Sept. 8; Sp. p. 2257; Dr. p. 481; Gaz. vol. 136; p. 392.
Clutch, Friction-. T. O. Werner. No. 898,946; Sept. 15; Sp. p. 3374; Dr. pp. 724–5; Gaz. vol. 136; p. 614.
Clutch mechanism for automobiles and the like. L. S. Chadwick. No. 899,953; Sept. 29; Sp. p. 5410; Dr. pp. 1153–4; Gaz. vol. 136; p. 1004.
Clutch mechanism, Reversing-. F. E. Harthan. No. 899,396; Sept. 22; Sp. p. 4241; Dr. pp. 909–10; Gaz. vol. 136; p. 786.
Clutch, Roller-. W. J. Olds. No. 897,846; Sept. 1; Sp. p. 1232; Dr. p. 264; Gaz. vol. 136; p. 195.
Clutch-throwing mechanism. J. G. Westbrook. No. 897,330; Sept. 1; Sp. p. 155; Dr. p. 32; Gaz. vol. 136; p. 24.
Coal-bunker for men-of-war. H. A. Kauermann. No. 897,374; Sept. 1; Sp. p. 270; Dr. pp. 55–6; Gaz. vol. 136; p. 41.
Coal, Burning. H. A. Poppenhusen and J. Harrington. No. 898,134; Sept. 8; Sp. p. 1843; Dr. p. 392; Gaz. vol. 136; p. 321.
Coal-washer and ore-concentrator. A. C. Campbell. No. 898,314; Sept. 8; Sp. p. 2174; Dr. pp. 461–2; Gaz. vol. 136; p. 376.
Coal-working apparatus. N. D. Levin. No. 898,661; Sept. 15; Sp. p. 2867; Dr. p. 612; Gaz. vol. 136; p. 522.
Coaster-brake. M. Ainsworth. No. 897,962; Sept. 8; Sp. p. 1480; Dr. p. 315; Gaz. vol. 136; p. 263.
Coat and adjustable skirt hanger, Combination. F. Levy. No. 899,603; Sept. 29; Sp. p. 4670; Dr. p. 1002; Gaz. vol. 136; p. 892.
Coat-collar. L. J. Rodgers. No. 898,140; Sept. 8; Sp. p. 1855; Dr. p. 396; Gaz. vol. 136; p. 322.
Coat-hanger. F. M. Keederle. No. 897,292; Sept. 1; Sp. p. 48; Dr. p. 11; Gaz. vol. 136; p. 11.
Cock, Angle-. J. G. Nagle. No. 898,386; Sept. 8; Sp. p. 2302; Dr. p. 489; Gaz. vol. 136; p. 400.
Cock, Waste and vent. J. H. Glauber. No. 897,364; Sept. 1; Sp. p. 251; Dr. p. 52; Gaz. vol. 136; p. 37.
Coffee-maker. R. A. Buckner. No. 899,090; Sept. 22; Sp. p. 3646; Dr. p. 785; Gaz. vol. 136; p. 692.
Coffee, Preparation of. J. F. Meyer, Jr., L. Roselius, and K. Wimmer. No. 897,840; Sept. 1; Sp. p. 1219; Gaz. vol. 136; p. 193.

Coffee, Treatment of. J. F. Meyer, Jr., L. Roselius, and K. Wimmer. No. 897,763; Sept. 1; Sp. p. 1047; Gaz. vol. 136; p. 170.
Coffin, Safety-. J. J. Toolen. No. 898,021; Sept. 8; Sp. p. 1624; Dr. p. 346; Gaz. vol. 136; p. 285.
Coin-separator. A. R. Moore. No. 899,550; Sept. 29; Sp. p. 4561; Dr. p. 980; Gaz. vol. 136; p. 873.
Coke-oven. T. J. Mitchell. No. 899,886; Sept. 29; Sp. p. 5262; Dr. pp. 1125–6; Gaz. vol. 136; p. 983.
Coke-oven, &c., Horizontal regenerative. F. J. Collin. No. 898,439; Sept. 15; Sp. p. 2425; Dr. p. 519; Gaz. vol. 136; p. 451.
Collapsible chair. H. Goodrich. No. 897,737; Sept. 1; Sp. p. 1002; Dr. p. 213; Gaz. vol. 136; p. 161.
Collapsible tube and the like. M. Faust. No. 897,970; Sept. 8; Sp. p. 1519; Dr. p. 322; Gaz. vol. 136; p. 269.
Collar. S. L. Isham. No. 899,167; Sept. 22; Sp. p. 3807; Dr. p. 815; Gaz. vol. 136; p. 714.
Collar and garment fastener. W. M. Lowrie. No. 898,239; Sept. 8; Sp. p. 2050; Dr. p. 435; Gaz. vol. 136; p. 354.
Collar cap and fastener, Combination. J. J. Poll. No. 899,803; Sept. 29; Sp. p. 5099; Dr. p. 1090; Gaz. vol. 136; p. 957.
Collar, Horse-. L. J. Powers. No. 899,560; Sept. 29; Sp. p. 4583; Dr. p. 985; Gaz. vol. 136; p. 877.
Color-study device. E. F. Wagner. No. 898,290; Sept. 8; Sp. p. 2131; Dr. p. 453; Gaz. vol. 136; p. 368.
Comb: *See* Curry-comb; Hair-drying comb; Hair-retaining comb.
Comminuting frangible articles. C. H. J. Dilg and J. O. Fowler. No. 899,008; Sept. 15; Sp. p. 3485; Dr. p. 747; Gaz. vol. 136; p. 634.
Commode-chair, Child's portable. B. W. Pattinson. No. 898,597; Sept. 15; Sp. p. 2730; Dr. p. 584; Gaz. vol. 136; p. 500.
Commutator-motor, Single-phase. M. C. A. Latour. No. 897,545; Sept. 1; Sp. p. 627; Dr. p. 130; Gaz. vol. 136; p. 98.
Composition of matter. A. E. Gooch. No. 898,044; Sept. 8; Sp. p. 1668; Gaz. vol. 136; p. 292.
Compressor. H. Kuehl. No. 898,659; Sept. 15; Sp. p. 2862; Dr. p. 611; Gaz. vol. 136; p. 521.
Concentrating apparatus. W. E. Darrow. No. 898,331; Sept. 8; Sp. p. 2203; Dr. pp. 467–8; Gaz. vol. 136; p. 382.
Concentrator. R. H. Manley. No. 899,312; Sept. 22; Sp. p. 4100; Dr. p. 876; Gaz. vol. 136; p. 760.
Concrete fence-post. C. Kubach. No. 897,632; Sept. 1; Sp. p. 797; Dr. p. 168; Gaz. vol. 136; p. 127.
Concrete-mixer. T. H. Bolte. No. 898,958; Sept. 15; Sp. p. 3393; Dr. pp. 728–9; Gaz. vol. 136; p. 618.
Concrete-mixer. P. A. Koehring. No. 899,414; Sept. 22; Sp. p. 4272; Dr. pp. 916–17; Gaz. vol. 136; p. 792.
Concrete-mixer. N. E. Marsh. No. 899,549; Sept. 29; Sp. p. 4559; Dr. p. 980; Gaz. vol. 136; p. 873.
Concrete-mixing drum. P. A. Koehring. No. 899,415; Sept. 22; Sp. p. 4273; Dr. p. 917; Gaz. vol. 136; p. 792.
Concrete-molding device. W. C. Neeley. No. 898,911; Sept. 15; Sp. p. 3319; Dr. p. 711; Gaz. vol. 136; p. 603.
Concrete pile and constructing the same. F. Shuman. No. 898,517; Sept. 15; Sp. p. 2576; Dr. pp. 550–1; Gaz. vol. 136; p. 475.
Concrete work, Socket for use in. E. A. Purdy. No. 899,185; Sept. 22; Sp. p. 3844; Dr. p. 822; Gaz. vol. 136; p. 720.
Condenser. W. B. Taylor. No. 897,500; Sept. 1; Sp. p. 530; Dr. pp. 112–13; Gaz. vol. 136; p. 85.
Condenser, Counter-current. O. H. Mueller. No. 899,903; Sept. 22; Sp. p. 3590; Dr. p. 769; Gaz. vol. 136; p. 678.
Conduit-coupling. H. Krantz. No. 898,751; Sept. 15; Sp. p. 2026; Dr. pp. 648–9; Gaz. vol. 136; p. 550.
Container. C. W. Warren. No. 898,293; Sept. 8; Sp. p. 2137; Dr. p. 454; Gaz. vol. 136; p. 369.
Controller-regulator. F. M. Du Bois. No. 897,602; Sept. 1; Sp. p. 741; Dr. p. 157; Gaz. vol. 136; p. 117.
Controller-regulator. C. P. Ebersole. No. 899,717; Sept. 29; Sp. p. 4895; Dr. p. 1050; Gaz. vol. 136; p. 926.
Converter. H. Shoemaker. No. 899,629; Sept. 29; Sp. p. 4736; Dr. p. 1014; Gaz. vol. 136; p. 900.
Conveyance safety device. F. W. A. Wiesebrock. No. 897,596; Sept. 1; Sp. p. 670; Dr. p. 140; Gaz. vol. 136; p. 105.
Conveyer. A. D. Long and G. Dietz. No. 897,380; Sept. 1; Sp. p. 287; Dr. p. 58; Gaz. vol. 136; p. 43.
Conveyer. W. M. Heiney. No. 898,408; Sept. 8; Sp. p. 2344; Dr. pp. 497–8; Gaz. vol. 136; p. 407.
Conveyer. C. D. Seeberger. No. 898,794; Sept. 15; Sp. p. 3107; Dr. pp. 665–6; Gaz. vol. 136; p. 565.
Conveyer. C. D. Seeberger. No. 900,000; Sept. 29; Sp. p. 5509; Dr. pp. 1174–5; Gaz. vol. 136; p. 1019.
Cooker, Combination-. L. L. Chase. No. 899,244; Sept. 22; Sp. p. 3999; Dr. p. 850; Gaz. vol. 136; p. 740.
Cooking apparatus, Continuous. H. D. Perky. No. 898,777; Sept. 15; Sp. p. 3077; Dr. pp. 658–9; Gaz. vol. 136; p. 559.
Cooler: *See* Hot-box cooler; Water-cooler.
Cooling-box. F. A. Nopenz. No. 899,231; Sept. 22; Sp. p. 3930; Dr. p. 839; Gaz. vol. 136; p. 734.
Coping-machine. J. R. Peirce. No. 897,313; Sept. 1; Sp. p. 62; Dr. pp. 15–16; Gaz. vol. 136; p. 14.
Copper homogeneous, Rendering electrolytic. M. A. Juillen and E. L. Dessolle. No. 897,291; Sept. 1; Sp. p. 47; Dr. p. 11; Gaz. vol 136; p. 11.
Copy-holder. A. W. Nyce, Jr. No. 898,596; Sept. 15; Sp. p. 2729; Dr. p. 583; Gaz. vol. 136; p. 500.
Copy-holder. F. P. Shepard. No. 898,692; Sept. 15; Sp. p. 2927; Dr. p. 626; Gaz. vol. 136; p. 532.
Copy-holder. M. L. Flynn. No. 899,520; Sept. 29; Sp. p. 4488; Dr. p. 964; Gaz. vol. 136; p. 863.
Copying apparatus, Exposure-plate for. J. Röttgen and J. Frey. No. 899,938; Sept. 29; Sp. p. 5301; Dr. p. 1133; Gaz. vol. 136; p. 990.
Cord-making machine. J. P. Tolman and H. G. Pratt. No. 897,680; Sept. 1; Sp. p. 887; Dr. pp. 190–1; Gaz. vol. 136; p. 142.
Core-forming machine. W. N. Gartside. No. 898,734; Sept. 15; Sp. p. 2998; Dr. pp. 642–3; Gaz. vol. 136; p. 545.
Core-making apparatus, Green-sand-. J. W. Gibney. No. 899,250; Sept. 22; Sp. p. 3998; Dr. pp. 852–3; Gaz. vol. 136; p. 742.
Core-molding apparatus. H. W. Bracken. No. 900,054; Sept. 29; Sp. p. 5643; Dr. p. 1205; Gaz. vol. 136; p. 1038.
Cork-extractor. S. E. Braddock. No. 899,380; Sept. 22; Sp. p. 4216; Dr. p. 902; Gaz. vol. 136; p. 782.
Cork-extractor, Pocket. H. W. Noyes. No. 898,387; Sept. 8; Sp. p. 2304; Dr. p. 489; Gaz. vol. 136; p. 401.
Corking-machine. R. B. Gilchrist. No. 899,525; Sept. 29; Sp. p. 4498; Dr. p. 966; Gaz. vol. 136; p. 865.
Corn-cutter. W. S. Huffaker. No. 897,901; Sept. 8; Sp. p. 1358; Dr. p. 291; Gaz. vol. 136; p. 246.
Corn-cutting machine. F. U. Smith. No. 898,518; Sept. 15; Sp. p. 2579; Dr. p. 551; Gaz. vol. 136; p. 476.
Corn-husking machine. W. N. Springer. No. 898,392; Sept. 8; Sp. p. 2311; Dr. pp. 491–2; Gaz. vol. 136; p. 402.
Corn-husking machine. J. F. White. No. 899,777; Sept. 29; Sp. p. 5040; Dr. p. 1080; Gaz. vol. 136; p. 949.
Corn-popper. W. Ayres. No. 898,953; Sept. 15; Sp. p. 3385; Dr. p. 727; Gaz. vol. 136; p. 616.
Corn-sheller. A. H. Patch. No. 897,649; Sept. 1; Sp. p. 824; Dr. pp. 172–3; Gaz. vol. 136; p. 132.
Corn tester, Seed-. C. G. Taylor. No. 899,000; Sept. 15; Sp. p. 3470; Dr. p. 743; Gaz. vol. 136; p. 631.
Corset. C. L. Olmstead. No. 897,480; Sept. 1; Sp. p. 486; Dr. p. 104; Gaz. vol. 136; p. 77.
Corset. T. G. Bowers. No. 899,100; Sept. 22; Sp. p. 3668; Dr. p. 785; Gaz. vol. 136; p. 692.
Corset. C. B. Howd. No. 899,113; Sept. 22; Sp. p. 3688; Dr. p. 790; Gaz. vol. 136; p. 696.
Corset. E. G. Hintz. No. 899,165; Sept. 22; Sp. p. 3806; Dr. p. 814; Gaz. vol. 136; p. 714.
Corset, Apparel-. D. Kops. No. 898,749; Sept. 15; Sp. p. 3021; Dr. p. 647; Gaz. vol. 136; p. 549.
Corset, Apparel-. D. Kops. No. 898,750; Sept. 15; Sp. p. 3024; Dr. p. 648; Gaz. vol. 136; p. 550.
Corset-waist. L. Nelson. No. 897,646; Sept. 1; Sp. p. 816; Dr. p. 171; Gaz. vol. 136; p. 131.
Cot and bath-tub cabinet, Folding. B. W. Pattinson. No. 898,598; Sept. 15; Sp. p. 2732; Dr. p. 584; Gaz. vol. 136; p. 501.
Cotter-pin. D. W. Smith. No. 898,277; Sept. 8; Sp. p. 2108; Dr. p. 448; Gaz. vol. 136; p. 365.
Cotton-cleaner and gin-feeder. J. M. Sheppard. No. 898,072; Sept. 8; Sp. p. 1721; Dr. pp. 365–6; Gaz. vol. 136; p. 301.
Cotton-picker. J. T. McDonald. No. 899,835; Sept. 29; Sp. p. 5150; Dr. pp. 1102–3; Gaz. vol. 136; p. 966.
Cotton-picker machine. A. St. Onge. No. 897,320; Sept. 1; Sp. p. 126; Dr. p. 27; Gaz. vol. 136; p. 20.
Cotton, Plant for handling baled. J. R. Fordyce. No. 897,972; Sept. 8; Sp. p. 1523; Dr. pp. 323–4; Gaz. vol. 136; p. 269.
Cotton, Plant for storing and compressing. J. R. Fordyce. No. 897,971; Sept. 8; Sp. p. 1520; Dr. pp. 322–3; Gaz. vol. 136; p. 269.
Cotton-topper. O. Schwarz. No. 897,935; Sept. 8; Sp. p. 1438; Dr. pp. 307–8; Gaz. vol. 136; p. 257.
Couch attachment. J. A. Perry. No. 899,431; Sept. 22; Sp. p. 4302; Dr. p. 923; Gaz. vol. 136; p. 797.
Counter, Bar-. J. R. West. No. 898,536; Sept. 15; Sp. p. 2616; Dr. p. 558; Gaz. vol. 136; p. 481.
Counting and canceling apparatus. A. Picken. No. 897,485; Sept. 1; Sp. p. 494; Dr. p. 105; Gaz. vol. 136; p. 79.
Coupling: *See* Air-brake coupling; Car-coupling; Central-buffer claw-coupling; Conduit-coupling; Hose-coupling; Hose and pipe coupling; Insulating-coupling; Pipe-coupling; Shaft-coupling.
Coupling. E. P. Kline. No. 899,413; Sept. 22; Sp. p. 4270; Dr. p. 916; Gaz. vol. 136; p. 792.
Cracker-box. G. C. Macdonald. No. 898,241; Sept. 8; Sp. p. 2053; Dr. p. 436; Gaz. vol. 136; p. 354.
Crane-boom. A. E. Brown. No. 899,005; Sept. 15; Sp. p. 3480; Dr. pp. 745–6; Gaz. vol. 136; p. 633.
Crane, Charging-. C. L. Taylor. No. 899,083; Sept. 22; Sp. p. 3629; Dr. p. 777; Gaz. vol. 136; p. 685.
Crane, Traveling. A. W. Bright. No. 899,712; Sept. 29; Sp. p. 4881; Dr. pp. 1047–8; Gaz. vol. 136; p. 924.
Cranes, Guiding means for load-supporting ropes in. A. W. Elsing. No. 897,966; Sept. 8; Sp. p. 1514; Dr. p. 321; Gaz. vol. 136; p. 267.
Crate. F. C. H. Haugk and J. F. Schoeppl. No. 899,010; Sept. 15; Sp. p. 3490; Dr. pp. 747–8; Gaz. vol. 136; p. 634.
Crate, Collapsible shipping-. W. E. Thoroman. No. 897,325; Sept. 1; Sp. p. 139; Dr. p. 29; Gaz. vol. 136; p. 22.
Crate, Egg-. D. M. Rowe. No. 898,007; Sept. 8; Sp. p. 1581; Dr. p. 337; Gaz. vol. 136; p. 281.
Crayons and blowpipes, Stand, gage, and holder for. M. J. Byrd and E. M. Anderson. No. 899,202; Sept. 22; Sp. p. 3873; Dr. p. 828; Gaz. vol. 136; p. 725.
Cream-separating device. J. H. Reed. No. 899,804; Sept. 29; Sp. p. 5102; Dr. p. 1091; Gaz. vol. 136; p. 957.
Crossing, Movable-point. W. M. Henderson. No. 898,644; Sept. 15; Sp. p. 2837; Dr. pp. 605–6; Gaz. vol. 136; p. 517.
Crossing, Movable-point. W. M. Henderson. No. 898,645; Sept. 15; Sp. p. 2838; Dr. p. 606; Gaz. vol. 136; p. 517.
Crupper. L. S. Ellis. No. 899,661; Sept. 29; Sp. p. 4783; Dr. p. 1024; Gaz. vol. 136; p. 909.
Crushing-mill. W. M. Mueller. No. 899,176; Sept. 22; Sp. p. 3828; Dr. p. 819; Gaz. vol. 136; p. 717.
Crushing-rolls, Leveling device for. W. H. L. Fielding. No. 898,349; Sept. 8; Sp. p. 2233; Dr. p. 476; Gaz. vol. 136; p. 387.
Cue-chalking device. F. R. Maguire. No. 898,905; Sept. 15; Sp. p. 3304; Dr. p. 708; Gaz. vol. 136; p. 601.
Cuff-pin. J. A. Chaplin. No. 897,348; Sept. 1; Sp. p. 202; Dr. p. 43; Gaz. vol. 136; p. 31.
Cuff-pin. A. Robertson. No. 897,407; Sept. 1; Sp. p. 349; Dr. p. 73; Gaz. vol. 136; p. 53.
Culinary vessel. J. Stuber. No. 898,284; Sept. 8; Sp. p. 2123; Dr. p. 451; Gaz. vol. 136; p. 367.

Cultivating implement. F. H. Weaver. No. 900,004; Sept. 29; Sp. p. 5520; Dr. pp. 1176–7; Gaz. vol. 136; p. 1021.
Cultivating-machine. C. Soltész. No. 899,917; Sept. 29; Sp. p. 5316; Dr. pp. 1136–7; Gaz. vol. 136; p. 992.
Cultivator. R. H. Heinze. No. 897,365; Sept. 1; Sp. p. 253; Dr. p. 52; Gaz. vol. 136; p. 38.
Cultivator. W. W. Stauffer. No. 899,270; Sept. 22; Sp. p. 4031; Dr. p. 861; Gaz. vol. 136; p. 747.
Cultivator-fender. C. Williams. No. 898,809; Sept. 15; Sp. p. 3133; Dr. p. 671; Gaz. vol. 136; p. 509.
Cultivator-fender. E. G. Munson. No. 899,753; Sept. 29; Sp. p. 4977; Dr. p. 1067; Gaz. vol. 136; p. 940.
Cultivator, Lister-. H. Wilshusen. No. 898,162; Sept. 8; Sp. p. 1894; Dr. p. 405; Gaz. vol. 136; p. 329.
Cultivator or harrow, Rotary. B. F. Stewart. No. 899,632; Sept. 29; Sp. p. 4741; Dr. p. 1015; Gaz. vol. 136; p. 901.
Cultivators and similar agricultural implements, Blade for. S. L. Allen. No. 898,419; Sept. 15; Sp. p. 2381; Dr. p. 509; Gaz. vol. 136; p. 445.
Culvert. D. C. Boyd. No. 898,088; Sept. 8; Sp. p. 1749; Dr. p. 372; Gaz. vol 136; p. 307.
Culvert. J. H. Schlafly. No. 900,039; Sept. 29; Sp. p. 5601; Dr. p. 1195; Gaz. vol. 136; p. 1033.
Culvert and connection. J. H. Schlafly. No. 897,416; Sept. 1; Sp. p. 366; Dr. p. 77; Gaz. vol. 136; p. 57.
Culvert-sections, Connection for. J. H. Schlafly. No. 898,510; Sept. 15; Sp. p. 2564; Dr. p. 549; Gaz. vol. 136; p. 473.
Cup: *See* Grease-cup; Loving-cup; Lubricating-cup.
Cup and saucer. D. A. Stewart. No. 899,811; Sept. 29; Sp. p. 5113; Dr. p. 1093; Gaz. vol. 136; p. 959.
Current-motor. H. C. Coder. No. 897,876; Sept. 8; Sp. p. 1294; Dr. p. 277; Gaz. vol. 136; p. 236.
Current-motor. J. R. Jeffrey. No. 899,987; Sept. 29; Sp. p. 5483; Dr. pp. 1167–8; Gaz. vol. 136; p. 1015.
Current motor, Alternating-. M. Milch. No. 897,475; Sept. 1; Sp. p. 479; Dr. p. 102; Gaz. vol. 136; p. 76.
Current motor, Alternating-. E. F. W. Alexanderson. No. 897,508; Sept. 1; Sp. p. 546; Dr. p. 116; Gaz. vol. 136; p. 87.
Currycomb. T. E. Desmond. No. 897,882; Sept. 8; Sp. p. 1305; Dr. pp. 279–80; Gaz. vol. 136; p. 238.
Curtain-fixture. H. M. Stevenson. No. 898,151; Sept. 8; Sp. p. 1873; Dr. p. 400; Gaz. vol. 136; p. 326.
Curtain-fixture. C. A. Scheil. No. 898,788; Sept. 15; Sp. p. 3098; Dr. p. 663; Gaz. vol. 136; p. 503.
Curtain-fixture. P. A. Houghtaling. No. 898,894; Sept. 15; Sp. p. 3289; Dr. p. 704; Gaz. vol. 136; p. 598.
Curtain-pole. W. B. Little. No. 897,550; Sept. 1; Sp. p. 634; Dr. p. 131; Gaz. vol. 136; p. 99.
Curtain-pole. H. D. Mayhorn. No. 898,248; Sept. 8; Sp. p. 2064; Dr. p. 438; Gaz. vol. 136; p. 356.
Curtain-pole. V. Bradv. No. 899,288; Sept. 22; Sp. p. 4055; Dr. p. 867; Gaz. vol. 136; p. 753.
Curtain-stretcher. T. H. Purple. No. 897,398; Sept. 1; Sp. p. 325; Dr. p. 69; Gaz. vol. 136; p. 50.
Cushion: *See* Boot and shoe cushion; Car-seat cushion; Heel-cushion.
Cushion. J. B. Kilburn and E. G. Budd. No. 897,541; Sept. 1; Sp. p. 621; Dr. p. 129; Gaz. vol. 136; p. 97.
Cuspidor. D. L. Harden. No. 898,577; Sept. 15; Sp. p. 2697; Dr. p. 576; Gaz. vol. 136; p. 495.
Cutter: *See* Band-cutter; Brick, block, or tile cutter; Cigar-wrapper cutter; Corn-cutter; Ring-cutter; Twine-cutter.
Cutter-holder. A. L. Valentine. No. 898,395; Sept. 8; Sp. p. 2319; Dr. p. 493; Gaz. vol. 136; p. 403.
Cutting-machine. R. F. Coleman. No. 899,860; Sept. 29; Sp. p. 5222; Dr. p. 1117; Gaz. vol. 136; p. 976.
Cutting-machines, Cutting and edge-compacting member for. A. F. Preston. No. 898,259; Sept. 8; Sp. p. 2078; Dr. p. 442; Gaz. vol. 136; p. 359.
Cycle Diesel engine, Two-. G. F. Murphy. No. 898,768; Sept. 15; Sp. p. 3061; Dr. p. 656; Gaz. vol. 136; p. 556.
Cycle driving-gear, Motor-. A. Levedahl. No. 899,746; Sept. 29; Sp. p. 4961; Dr. p. 1064; Gaz. vol. 136; p. 937.
Cycle-lock. K. Ballod. No. 898,955; Sept. 15; Sp. p. 3389; Dr. p. 725; Gaz. vol. 136; p. 617.
Cycle, Motor-. W. C. Johnson. No. 898,481; Sept. 15; Sp. p. 2504; Dr. p. 536; Gaz. vol. 136; p. 463.
Cyclometer. C. L. Lilleberg. No. 897,379; Sept. 1; Sp. p. 283; Dr. p. 58; Gaz. vol. 136; p. 43.
Cylinder and piston machines, Increasing the volumetric efficiency of. A. Vogt. No. 899,706; Sept. 29; Sp. p. 4869; Dr. pp. 1044–5; Gaz vol. 136; p. 922.
Cylinder-lock. H. G. Voight. No. 898,078; Sept. 8; Sp. p. 1733; Dr. p. 368; Gaz. vol. 136; p. 303.
Cylinder-lock, Adjustable. H. G. Voight. No. 897,685; Sept. 1; Sp. p. 897; Dr. p. 192; Gaz. vol. 136; p. 144.
Dam. W. M. Ransom. No. 899,703; Sept. 29; Sp. p. 4860; Dr. p. 1042–3; Gaz. vol. 136; p. 921.
Damper-regulator. H. Reaser. No. 897,490; Sept. 1; Sp. p. 509; Dr. p. 108; Gaz. vol. 136; p. 81.
Decoloring oils, fats, &c., and making the same, Composition for. T. Macherski and E. Koperski. No. 899,879; Sept. 29; Sp. p. 5251; Gaz. vol. 136; p. 981.
Delivering and catching device. W. E. Martin, W. L. Grant, R. J. McGavock, R. E. Haynes, and J. C. Voorhies. No. 898,380; Sept. 8; Sp. p. 2294; Dr. p. 488; Gaz. vol. 136; p. 394.
Dental bridge. C. E. Crombie. No. 898,559; Sept. 15; Sp. p. 2667; Dr. p. 570; Gaz. vol. 136; p. 489.
Dental casting-machine. H. G. Maize. No. 899,255; Sept. 22; Sp. p. 4006; Dr. p. 855; Gaz. vol. 136; p. 743.
Dentures, Means for securing artificial. E. S. Barnes, G. T. Williams, and C. B. Reynolds. No. 898,546; Sept. 15; Sp. p. 2642; Dr. p. 565; Gaz. vol. 136; p. 485.
Derrick. P. Yorke. No. 898,027; Sept. 8; Sp. p. 1636; Dr. p. 349; Gaz. vol. 136; p. 287.
Derrick. F. R. Patch. No. 899,758; Sept. 29; Sp. p. 4985; Dr. p. 1068; Gaz. vol. 136; p. 941.
Derrick or hoisting means. R. H. Bowman. No. 897,451; Sept. 1; Sp. p 434; Dr. p. 93; Gaz. vol. 136; p. 68.
Desk. J. W. Higgins. No. 898,106; Sept. 8; Sp. p. 1789; Dr. p. 380; Gaz. vol. 136; p. 312.
Desk-lock. W. J. Kennedy. No. 897,467; Sept. 1; Sp. p. 467; Dr. pp. 99–100; Gaz. vol. 136; p. 74.
Desulfurizing-furnace. R. Hübner. No. 899,403; Sept. 22; Sp. p. 4255; Dr. p. 913; Gaz. vol. 136; p. 789.
Die-stock. R. Bartholomäus. No. 898,956; Sept. 15; Sp. p. 3391; Dr. p. 728; Gaz. vol. 136; p. 617.
Digester. C. Edgerton. No. 899,961; Sept. 29; Sp. p. 5423; Dr. p. 1156; Gaz. vol. 136; p. 1007.
Digger: *See* Clam-digger; Post-hole digger.
Digging and loading machine. N. H. Nelson. No. 898,593; Sept. 15; Sp. p. 2718; Dr. pp. 581–2; Gaz. vol. 136; p. 499.
Dilator and applicator. W. E. Williams. No. 899,477; Sept. 22; Sp. p. 4385; Dr. p. 941; Gaz. vol. 136; p. 812.
Dish-washer. J. M. Gilbert. No. 898,354; Sept. 8; Sp. p. 2242; Dr. p. 478; Gaz. vol. 136; p. 389.
Disintegrating apparatus. A. D. Furse. No. 899,521; Sept. 29; Sp. p. 4491; Dr. p. 965; Gaz. vol. 136; p. 864.
Dispensing apparatus. W. R. Mittendorf. No. 899,124; Sept. 22; Sp. p. 3708; Dr. p. 795; Gaz. vol. 136; p. 700.
Display-cabinet. O. T. Romsos. No. 897,786; Sept. 1; Sp. p. 1100; Dr. p. 236; Gaz. vol. 136; p. 176.
Display-closure. E. A. Pflueger. No. 897,777; Sept. 1; Sp. p. 1088; Dr. p. 233; Gaz. vol. 136; p. 174.
Display device. A. H. Snelling. No. 898,519; Sept. 15; Sp. p. 2582; Dr. p. 552; Gaz. vol. 136; p. 476.
Display-rack. H. F. Cook. No. 898,970; Sept. 15; Sp. p. 3418; Dr. p. 734; Gaz. vol. 136; p. 622.
Display-rack. O. L. Smith. No. 899,342; Sept. 22; Sp. p. 4150; Dr. p. 888; Gaz. vol. 136; p. 770.
Display-rack. O. L. Smith. No. 899,475; Sept. 22; Sp. p. 4382; Dr. p. 940; Gaz. vol. 136; p. 811.
Display-rack. F. Hennermann. No. 900,014; Sept. 29; Sp. p. 5542; Dr. p. 1181; Gaz. vol. 136; p. 1025.
Distilling apparatus and method of distillation. A. de Focatiis. No. 898,861; Sept. 15; Sp. p. 3222; Dr. p. 691; Gaz. vol. 136; p. 586.
Ditching-machine. B. Clements. No. 898,557; Sept. 15; Sp. p. 2660; Dr. pp. 568–9; Gaz. vol. 136; p. 488.
Ditching-machine. O. T. and O. C. Gullixson. No. 900,072; Sept. 29; Sp. p. 5677; Dr. pp. 1212–13; Gaz. vol. 136; p. 1044.
Door, Bulkhead-. D. May. No. 898,666; Sept. 15; Sp. p. 2873; Dr. p. 614; Gaz. vol. 136; p. 523.
Door-check. M. J. Flynn. No. 897,825; Sept. 1; Sp. p. 1187; Dr. p. 252; Gaz. vol. 136; p. 188.
Door-closer. J. W. Hagearty. No. 898,736; Sept. 15; Sp. p. 3004; Dr. p. 644; Gaz. vol. 136; p. 546.
Door-closer and fly-chaser, Combined. J. Costantini. No. 898,326; Sept. 8; Sp. p. 2194; Dr. p. 466; Gaz vol. 136; p. 380.
Door construction, Grain-. G. H. Behrendt and A. Lindquist. No. 897,264; Sept. 1; Sp. p. 6; Dr. p. 2; Gaz. vol. 136; p. 3.
Door, Crane-. J. T. Wallis. No. 899,933; Sept. 29; Sp. p. 5364; Dr. pp. 1143–4; Gaz. vol. 136; p. 997.
Door-fastener. H. C. Stenberg. No. 897,423; Sept. 1; Sp. p. 381; Dr. p. 80; Gaz. vol. 136; p. 59.
Door-fastener. J. F. and H. M. Hirsh. No. 898,450; Sept. 15; Sp. p. 2846; Dr. p. 608; Gaz. vol. 136; p. 519.
Door-fastener. F. E. Richardson. No. 899,323; Sept. 22; Sp. p. 4119; Dr. p. 880; Gaz. vol. 136; p. 764.
Door-fastening device. S. N. Ritter. No. 898,686; Sept. 15; Sp. p. 2914; Dr. p. 624; Gaz. vol. 136; p. 530.
Door for lockers. D. Churchill. No. 899,589; Sept. 29; Sp. p. 4639; Dr. p. 996; Gaz. vol. 136; p. 887.
Door hanger, Rolling-. M. E. Hunt. No. 899,051; Sept. 22; Sp. p. 3570; Dr. p. 765; Gaz. vol. 136; p. 675.
Door-lock. G. E. Spiltoir. No. 898,014; Sept. 8; Sp. p. 1600; Dr. p. 341; Gaz. vol. 136; p. 283.
Door, Metal-covered. W. W. Morey. No. 899,422; Sept. 22; Sp. p. 4286; Dr. p. 920; Gaz. vol. 136; p. 795.
Door, Metallic. L. I. Heintz. No. 899,164; Sept. 22; Sp. p. 3804; Dr. p. 814; Gaz. vol. 136; p. 713.
Door opener and closer. P. D. Galarneau and W. S. Newton. No. 898,865; Sept. 15; Sp. p. 3233; Dr. p. 693; Gaz. vol. 136; p. 588.
Door operating and locking means, Cell-. R. C. and W. A. Stewart. No. 897,317; Sept. 1; Sp. p. 116; Dr. pp. 25–6; Gaz. vol. 136; p. 19.
Door-operating mechanism. J. E. Osmer. No. 899,796; Sept. 29; Sp. p. 5089; Dr. p. 1088; Gaz. vol. 136; p. 955.
Door-operating mechanism. J. E. Osmer. No. 899,999; Sept. 29; Sp. p. 5507; Dr. p. 1174; Gaz. vol. 136; p. 1019.
Door safety device. J. Grüninger. No. 898,100; Sept. 8; Sp. p. 1771; Dr. p. 376; Gaz. vol. 136; p. 310.
Door support, Edgewise-movable-. J. Joyce. No. 897,747; Sept. 1; Sp. p. 1020; Dr. p. 217; Gaz. vol. 136; p. 165.
Door tracks, Support for sliding-. J. Anderson. No. 897,697; Sept. 1; Sp. p. 926; Dr. p. 196; Gaz. vol. 136; p. 148.
Doors, Hanging mechanism for laterally-movable. J. L. Kall. No. 898,224; Sept. 8; Sp. p. 2026; Dr. p. 429; Gaz. vol 136; p. 348.
Dough-feeding mechanism. A. W. Copland. No. 898,726; Sept. 15; Sp. p. 2979; Dr. pp. 638–9; Gaz. vol. 136; p. 542.
Draft-gear. H. T. Krakau. No. 900,024; Sept. 29; Sp. p. 5562; Dr. pp. 1185–6; Gaz. vol. 136; p. 1028.
Draft-gear. H. T. Krakau. No. 900,027; Sept. 29; Sp. p. 5568; Dr. pp. 1188–90; Gaz. vol. 136; p. 1029.
Draft-gear and buffing mechanism. H. T. Krakau. No. 900,023; Sept. 29; Sp. p. 5559; Dr. pp. 1184–5; Gaz. vol. 136; p. 1027.

Draft-gear, Radial. H. T. Krakau. No. 900,022; Sept. 29; Sp. p. 5558; Dr. p. 1184; Gaz. vol. 136; p. 1027.
Draft-gear, Radial. H. T. Krakau. No. 900,025; Sept. 29; Sp. p. 5563; Dr. pp. 1185–7; Gaz. vol. 136; p. 1028.
Draft-gear, Radial. H. T. Krakau. No. 900,026; Sept. 29; Sp. p. 5565; Dr. pp. 1187–8; Gaz. vol. 136; p. 1028.
Draft-timber protector. A. P. Nordeen. No. 899,554; Sept. 29; Sp. p. 4569; Dr. p. 982; Gaz. vol. 136; p. 875.
Drag, Road-. F. E. Ott. No. 899,798; Sept. 29; Sp. p. 5091; Dr. p. 1098; Gaz. vol. 136; p. 955.
Drain-board bracket. A. Sheret. No. 899,337; Sept. 22; Sp. p. 4138; Dr. p. 886; Gaz. vol. 136; p. 768.
Drain-inlet guard. A. J. Shepard. No. 899,568; Sept. 29; Sp. p. 4590; Dr. p. 987; Gaz. vol. 136; p. 889.
Drainage system. K. Fliskow. No. 898,205; Sept. 8; Sp. p. 1973; Dr. p. 421; Gaz. vol. 136; p. 342.
Draw-bench. L. W. Noyes and D. R. Scholes. No. 897,922; Sept. 8; Sp. p. 1405; Dr. pp. 299–300; Gaz. vol. 136; p. 253.
Drawer, Rotary. G. A. and G. A. Stromgren. No. 898,153; Sept. 8; Sp. p. 1876; Dr. p. 401; Gaz. vol. 136; p. 326.
Drawers. E. S. Bartram. No. 899,500; Sept. 29; Sp. p. 4446; Dr. p. 954; Gaz. vol. 136; p. 857.
Drier: *See* Hair-drier; Pneumatic drier.
Drill: *See* Hammer-drill; Pneumatic drill; Rock-drill.
Drill and seeder. S. E. Davis. No. 898,562; Sept. 15; Sp. p. 2670; Dr. p. 571; Gaz. vol. 136; p. 490.
Drill-bit. F. W. Parsons. No. 898,388; Sept. 8; Sp. p. 2305; Dr. p. 490; Gaz. vol. 136; p. 401.
Drilling-machines, Drill-stem clamp for rotary. H. R. Decker. No. 899,208; Sept. 22; Sp. p. 3887; Dr. p. 830; Gaz. vol. 136; p. 728.
Drinking-fountain, Stock and poultry. E. E. Norquist. No. 899,128; Sept. 22; Sp. p. 3717; Dr. p. 796; Gaz. vol. 136; p. 701.
Driving mechanism. H. J. Glibert. No. 897,836; Sept. 1; Sp. p. 1189; Dr. p. 252; Gaz. vol. 136; p. 189.
Driving mechanism, Variable-speed. H. M. Norris. No. 897,861; Sept. 1; Sp. p. 1269; Dr. p. 271; Gaz. vol. 136; p. 200.
Drum-cylinder motor. J. E. Smith. No. 899,341; Sept. 22; Sp. p. 4147; Dr. pp. 887–8; Gaz. vol. 136; p. 769.
Drum, Musical. T. Hemberger. No. 899,488; Sept. 22; Sp. p. 4409; Dr. p. 946; Gaz. vol. 136; p. 817.
Drum, Stovepipe-. L. J. B. Schnug. No. 898,932; Sept. 15; Sp. p. 3352; Dr. pp. 719–20; Gaz. vol. 136; p. 610.
Drums or other musical instruments, Snare for. T. Hemberger. No. 899,450; Sept. 22; Sp. p. 4336; Dr. p. 931; Gaz. vol. 136; p. 804.
Dumping device. G. A. Rakowsky. No. 899,682; Sept. 29; Sp. p. 4827; Dr. pp. 1033–4; Gaz. vol. 136; p. 915.
Dust-pan. J. M. Niver. No. 898,774; Sept. 15; Sp. p. 3072; Dr. p. 658; Gaz. vol. 136; p. 558.
Dust-receptacle. E. G. Adams. No. 899,937; Sept. 29; Sp. p. 5380; Dr. p. 1148; Gaz. vol. 136; p. 999.
Dust-separating apparatus. C. W. E. Boegel. No. 897,342; Sept. 1; Sp. p. 191; Dr. p. 41; Gaz. vol. 136; p. 28.
Duster and polisher, Floor. G. W. Goodier. No. 899,726; Sept. 29; Sp. p. 4911; Dr. p. 1054; Gaz. vol. 136; p. 929.
Duster and polisher, Floor. G. W. Goodier. No. 899,727; Sept. 29; Sp. p. 4913; Dr. p. 1055; Gaz. vol. 136; p. 930.
Dye and making same, Gallocyanin. C. De la Harpe, R. Burckhardt, and E. Zehntner. No. 898,039; Sept. 8; Sp. p. 1658; Gaz. vol. 136; p. 291.
Dye and making same, Gallocyanin. C. De la Harpe and R. Burckhardt. No. 898,842; Sept. 15; Sp. p. 3196; Gaz. vol. 136; p. 580.
Dye and making same, Orange to orange-yellow vat. A. Schaarschmidt. No. 899,845; Sept. 29; Sp. p. 5185; Gaz. vol. 136; p. 971.
Dye and making same, Sulfur. E. T. Bundsman. No. 897,873; Sept. 8; Sp. p. 1290; Gaz. vol. 136; p. 236.
Dye and making same, Violet vat-. H. Kraft and G. Engi. No. 899,994; Sept. 29; Sp. p. 5494; Gaz. vol. 136; p. 1017.
Dye, Azo. W. König. No. 899,171; Sept. 22; Sp. p. 3819; Gaz. vol. 136; p. 716.
Dye from gallocyanins and making same, Condensation. C. De la Harpe, K. Oswald, and E. Zehntner. No. 898,098; Sept. 8; Sp. p. 1769; Gaz. vol. 136; p. 308.
Dye from indirubin and making same, Vat-. G. Engi and J. Fröhlich. No. 898,452; Sept. 15; Sp. p. 2455; Gaz. vol. 136; p. 455.
Dye, New disazo. O. Günther and L. Hesse. No. 897,529; Sept. 1; Sp. p. 597; Gaz. vol. 136; p. 94.
Dye, New disazo. O. Günther and L. Hesse. No. 898,217; Sept. 8; Sp. p. 2001; Gaz. vol. 136; p. 346.
Dyes, Making red vat-. W. Bauer. No. 899,152; Sept. 22; Sp. p. 3772; Gaz. vol. 136; p. 710.
Dyes, Oxid of thioindigo. B. Homolka. No. 898,738; Sept. 15; Sp. p. 3006; Gaz. vol. 136; p. 546.
Dynamo-governor. C. L. Weicheit. No. 899,088; Sept. 22; Sp. p. 3630; Dr. p. 779; Gaz. vol. 136; p. 687.
Educational appliance. J. S. Littell. No. 898,754; Sept. 15; Sp. p. 3031; Dr. p. 650; Gaz. vol. 136; p. 551.
Egg-carrier. M. Shepard. No. 898,514; Sept. 15; Sp. p. 2571; Dr. p. 549; Gaz. vol. 136; p. 474.
Egg-case carrier. J. E. Harker. No. 899,541; Sept. 29; Sp. p. 4513. Dr. p. 969; Gaz. vol. 136; p. 867.
Egg-preserving apparatus. M. Briggs. No. 899,382; Sept. 22; Sp. p. 4218; Dr. p. 903; Gaz. vol. 136; p. 782.
Elastic material, Manufacturing. A. Adler. No. 897,334; Sept. 1; Sp. p. 170; Gaz. vol. 136; p. 25.
Elastic wheel. A. Dauvergne. No. 897,881; Sept. 8; Sp. p. 1304; Dr. p. 279; Gaz. vol. 136; p. 238.
Elbow connection. S. A. Hawkins. No. 898,882; Sept. 15; Sp. p. 3263; Dr. p. 698; Gaz. vol. 136; p. 594.
Electric battery. W. MacMillan. No. 898,055; Sept. 8; Sp. p. 1689; Dr. pp. 358–9; Gaz. vol. 136; p. 296.
Electric-cable clamp. E. W. Muller. No. 897,300; Sept. 1; Sp. p. 57; Dr. pp. 14–15; Gaz. vol. 136; p. 13.
Electric-cable terminal. C. W. Davis. No. 898,097; Sept. 8; Sp. p. 1767; Dr. pp. 375–6; Gaz. vol. 136; p. 309.
Electric-circuit time-switch. H. W. Brown. No. 897,711; Sept. 1; Sp. p. 951; Dr. pp. 203–4; Gaz. vol. 136; p. 153.
Electric conductors, Connection for. F. H. Ball. No. 899,708; Sept. 29; Sp. p. 4872; Dr. p. 1045; Gaz. vol. 136; p. 923.
Electric conductors, Means for protecting high-tension overhead. L. Neu. No. 899,127; Sept. 22; Sp. p. 3715; Dr. p. 796; Gaz. vol. 136; p. 700.
Electric controlling system. J. D. Ihlder. No. 897,537; Sept. 1; Sp. p. 610; Dr. p. 127; Gaz. vol. 136; p. 96.
Electric currents to cars, System for transmitting. J. J. Eagan. No. 897,965; Sept. 8; Sp. p. 1513; Dr. p. 321; Gaz. vol. 136; p. 267.
Electric fittings, Terminal for. F. A. Swan. No. 897,674; Sept. 1; Sp. p. 876; Dr. p. 188; Gaz. vol. 136; p. 140.
Electric heat unit or device. G. H. Wade. No. 897,326; Sept. 1; Sp. p. 141; Dr. p. 29; Gaz. vol. 136; p. 22.
Electric heater. A. J. Holmes. No. 898,578; Sept. 15; Sp. p. 2698; Dr. p. 577; Gaz. vol. 136; p. 495.
Electric installation, Box-connector for. W. H. Vibber. No. 899,639; Sept. 29; Sp. p. 4752; Dr. p. 1017; Gaz. vol. 136; p. 902.
Electric installation, Combined bushing and coupling for. W. H. Vibber. No. 899,638; Sept. 29; Sp. p. 4751; Dr. p. 1017; Gaz. vol. 136; p. 902.
Electric installation, Conduit-cap for. W. H. Vibber. No. 897,683; Sept. 1; Sp. p. 894; Dr. p. 191; Gaz. vol. 136; p. 143.
Electric-installation molding-box. W. H. Vibber. No. 899,637; Sept. 29; Sp. p. 4750; Dr. p. 1016. Gaz. vol. 136; p. 902.
Electric-light-bulb changer. C. F. Southworth. No. 898,696; Sept. 15; Sp. p. 2933; Dr. p. 628; Gaz. vol. 136; p. 533.
Electric-light cluster-fixture. J. H. Caldwell. No. 897,455; Sept. 1; Sp. p. 443; Dr. p. 95; Gaz. vol. 136; p. 70.
Electric-light fixture. W. Amstalden. No. 898,083; Sept. 8; Sp. p. 1743; Dr. p. 371; Gaz. vol. 136; p. 305.
Electric machine, Dynamo-. A. B. Field. No. 899,447; Sept. 22; Sp. p. 4330; Dr. p. 930; Gaz. vol. 136; p. 803.
Electric machine of the inclosed type, Dynamo-. A. H. Wouters. No. 899,370; Sept. 22; Sp. p. 4198; Dr. p. 899; Gaz. vol. 136; p. 779.
Electric machines, Means for regulating dynamo-. W. L. Merrill. No. 898,058; Sept. 8; Sp. p. 1698; Dr. p. 360; Gaz. vol. 136; p. 297.
Electric oscillations, Means for generating high-frequency. R. A. Fessenden. No. 897,279; Sept. 1; Sp. p. 28; Dr. p. 7; Gaz. vol. 136; p. 7.
Electric separator. H. A. Wentworth. No. 899,364; Sept. 22; Sp. p. 4190; Dr. p. 897; Gaz. vol. 136; p. 777.
Electric-service cut-out and meter-panel. H. E. McGowan and E. R. Ellsworth. No. 898,771; Sept. 15; Sp. p. 3067; Dr. p. 657; Gaz. vol. 136; p. 557.
Electric switch. O. O. Rider. No. 897,492; Sept. 1; Sp. p. 513; Dr. p. 109; Gaz. vol. 136; p. 82.
Electric switch. F. C. De Reamer. No. 897,525; Sept. 1; Sp. p. 588; Dr. p. 122; Gaz. vol. 136; p. 92.
Electric switch. C. A. Clark. No. 899,205; Sept. 22; Sp. p. 3880; Dr. p. 829; Gaz. vol. 136; p. 726.
Electric switch. C. W. Wachtel. No. 900,005; Sept. 29; Sp. p. 5522; Dr. p. 1177; Gaz. vol. 136; p. 1021.
Electric switch and system of control. J. V. Mott. No. 898,766; Sept. 15; Sp. p. 3054; Dr. p. 655; Gaz. vol. 136; p. 555.
Electric time-switch. J. Cauderay. No. 897,585; Sept. 1; Sp. p. 704; Dr. p. 148; Gaz. vol. 136; p. 112.
Electric wires, Grounding-clamp for. W. H. Vibber. No. 899,636; Sept. 29; Sp. p. 4749; Dr. p. 1016; Gaz. vol. 136; p. 902.
Electrical-circuit protector. C. A. Rolfe. No. 898,509; Sept. 15; Sp. p. 2562; Dr. p. 548; Gaz. vol. 136; p. 473.
Electrical conductors, Junction-box for. J. F. Burns. No. 898,182; Sept. 8; Sp. p. 1939; Dr. p. 414; Gaz. vol. 136; p. 336.
Electrical-distribution system. M. O. Troy. No. 897,501; Sept. 1; Sp. p. 532; Dr. p. 113; Gaz. vol. 136; p. 85.
Electrical-distribution system. J. L. Woodbridge. No. 897,950; Sept. 8; Sp. p. 1474; Dr. p. 314; Gaz. vol. 136; p. 262.
Electrical distribution system. W. A. Turbayne. No. 899,145; Sept. 22; Sp. p. 3756; Dr. p. 805; Gaz. vol. 136; p. 707.
Electrical-distribution system. A. S. Hubbard. No. 899,535; Sept. 29; Sp. p. 4521; Dr. p. 971; Gaz. vol. 136; p. 868.
Electrical fitting. E. B. Wilcox. No. 898,540; Sept. 15; Sp. p. 2628; Dr. p. 562; Gaz. vol. 136; p. 483.
Electrical impulse-recorder. A. K. Sloan, Jr. No. 897,670; Sept. 1; Sp. p. 872; Dr. p. 187; Gaz. vol. 136; p. 139.
Electrode and making the same, Arc-light. C. F. Lindsay. No. 897,548; Sept. 1; Sp. p. 631; Dr. p. 130; Gaz. vol. 136; p. 99.
Electrolytic cell. G. C. Landis. No. 897,633; Sept. 1; Sp. p. 798; Dr. p. 168; Gaz. vol. 136; p. 127.
Electrolytic apparatus. M. Ruthenburg. No. 898,785; Sept. 15; Sp. p. 3092; Dr. p. 662; Gaz. vol. 136; p. 562.
Electroplating apparatus. G. A. Lutz. No. 899,226; Sept. 22; Sp. p. 3915; Dr. p. 836; Gaz. vol. 136; p. 733.
Electroplating, Making articles by. T. A. Edison. No. 898,404; Sept. 8; Sp. p. 2335; Dr. p. 496; Gaz. vol. 136; p. 406.
Electrotype-block. R. E. Doolittle. No. 898,196; Sept. 8; Sp. p. 1958; Dr. p. 418; Gaz. vol. 136; p. 340.
Elevator: *See* Grain-elevator; Hydraulic elevator; Safety-elevator; Stacking-elevator.
Elevator. C. D. Seeberger. No. 897,856; Sept. 1; Sp. p. 1258; Dr. pp. 269–70; Gaz. vol. 136; p. 198.
Elevator. C. D. Seeberger. No. 898,009; Sept. 8; Sp. p. 1587; Dr. p. 339; Gaz. vol. 136; p. 281.
Elevator and carrier. W. Louden. No. 897,381; Sept. 1; Sp. p. 288; Dr. p. 59; Gaz. vol. 136; p. 44.
Elevator-door-opening device. F. N. Long. No. 897,910; Sept. 8; Sp. p. 1380; Dr. p. 295; Gaz. vol. 136; p. 249.
Elevator mechanism. J. Mussell. No. 898,672; Sept. 15; Sp. p. 2880; Dr. p. 616; Gaz. vol. 136; p. 525.

Embossing and coloring or printing incrusta or like material, Apparatus for. F. Walton. No. 898,292; Sept. 8; Sp. p. 2134; Dr. p. 454; Gaz. vol. 136; p. 369.
End-gate. R. A. Trumbull. No. 898,940; Sept. 15; Sp. p. 3366; Dr. p. 723; Gaz. vol. 136; p. 612.
Endless carrier. D. F. Broderick. No. 898,550; Sept. 15; Sp. p. 2649; Dr. p. 566; Gaz. vol. 136; p. 486.
Engine: *See* Blowing-engine; Explosive-engine; Gas-engine; Internal-combustion engine; Rotary engine; Rotary explosive-engine; Rotary gasolene-engine.
Engine. J. Erickson. No. 899,297; Sept. 22; Sp. p. 4072; Dr. p. 870; Gaz. vol. 136; p. 756.
Engine. F. Schneider and G. B. Conrath. No. 899,625; Sept. 29; Sp. p. 4723; Dr. pp. 1011–13; Gaz. vol. 136; p. 898.
Engine cooling device, Explosive-. R. Herman. No. 897,532; Sept. 1; Sp. p. 601; Dr. pp. 125–6; Gaz. vol. 136; p. 94.
Engine-gear. H. I. Drake. No. 899,247; Sept. 22; Sp. p. 3994; Dr. p. 851; Gaz. vol. 136; p. 741.
Engine igniter, Explosion-. H. Benoist. No. 898,427; Sept. 15; Sp. p. 2399; Dr. p. 514; Gaz. vol. 136; p. 447.
Engine igniter, Gas-. W. C. Plank. No. 898,779; Sept. 15; Sp. p. 3079; Dr. p. 659; Gaz. vol. 136; p. 559.
Engine ignition system, Explosion-. R. Varley. No. 899,770; Sept. 29; Sp. p. 5017; Dr. p. 1075; Gaz. vol. 136; p. 945.
Engine-indicator, Continuous. M. W. Hogle. No. 898,474; Sept. 15; Sp. p. 2493; Dr. p. 534; Gaz. vol. 136; p. 461.
Engine speed-regulator, Gas-. J. B. Schmidt. No. 899,265; Sept. 22; Sp. p. 4023; Dr. p. 859; Gaz. vol. 136; p. 746.
Engine-starter. C. J. Coleman. No. 898,438; Sept. 15; Sp. p. 2423; Dr. pp. 518–19; Gaz. vol. 136; p. 451.
Engine starting device, Gasolene-. F. Reynolds. No. 899,618; Sept. 29; Sp. p. 4705; Dr. pp. 1008–9; Gaz. vol. 136; p. 896.
Engine starting mechanism, Gas-. W. K. Andrew. No. 899,498; Sept. 29; Sp. p. 4441; Dr. p. 953; Gaz. vol. 136; p. 856.
Engines and the like, Casing and cylinder construction for gas-. C. R. Piggins. No. 898,678; Sept. 15; Sp. p. 2901; Dr. pp. 620–1; Gaz. vol. 136; p. 527.
Engines, Control and fuel-feeding device for internal-combustion. J. T. Dickson. No. 899,715; Sept. 29; Sp. p. 4887; Dr. pp. 1049–50; Gaz. vol. 136; p. 925.
Engines, Fuel-pump for internal-combustion. J. D. Macpherson. No. 898,124; Sept. 8; Sp. p. 1819; Dr. p. 386; Gaz. vol. 136; p. 317.
Engines, Heat-dissipating device for gas-. G. B. Hill. No. 898,107; Sept. 8; Sp. p. 1791; Dr. p. 380; Gaz. vol. 136; p. 312.
Engines, Sparkless smoke-stack for traction-. A. Mathison. No. 897,385; Sept. 1; Sp. p. 297; Dr. p. 61; Gaz. vol. 136; p. 45.
Engines, Working explosive-. K. E. Schreber. No. 898,512; Sept. 15; Sp. p. 2566; Dr. p. 549; Gaz. vol. 136; p. 474.
Engraving-machine. W. W. Sawyer. No. 898,141; Sept. 8; Sp. p. 1856; Dr. pp. 396–7; Gaz. vol. 136; p. 323.
Envelop. T. Lewis and H. C. Dando. No. 897,635; Sept. 1; Sp. p. 802; Dr. p. 169; Gaz. vol. 136; p. 128.
Envelop. G. W. Post. No. 897,778; Sept. 1; Sp. p. 1068; Dr. p. 233; Gaz. vol. 136; p. 174.
Envelop. T. S. Corbitt. No. 898,187; Sept. 8; Sp. p. 1944; Dr. p. 415; Gaz. vol. 136; p. 337.
Envelop. F. V. Donnelly. No. 898,849; Sept. 15; Sp. p. 3208; Dr. p. 687; Gaz. vol. 136; p. 583.
Envelop. J. E. Cockroft. No. 898,967; Sept. 15; Sp. p. 3415; Dr. p. 733; Gaz. vol. 136; p. 621.
Envelops and the like, Fastener for. J. S. Applegate. No. 898,819; Sept. 15; Sp. p. 3154; Dr. p. 674; Gaz. vol. 136; p. 572.
Eraser, Ink-. O. W. Johnson and E. A. Scott. No. 899,539; Sept. 29; Sp. p. 4531; Dr. p. 973; Gaz. vol. 136; p. 870.
Escapement-wheel. P. E. Jeanmaire. No. 898,479; Sept. 15; Sp. p. 2500; Dr. p. 535; Gaz. vol. 136; p. 463.
Evaporator. E. von Seemen. No. 898,147; Sept. 8; Sp. p. 1868; Dr. p. 398; Gaz. vol. 136; p. 324.
Evaporator. W. Kirkwood. No. 899,738; Sept. 29; Sp. p. 4940; Dr. p. 1059; Gaz. vol. 136; p. 933.
Excavating-machine. O. Hetlesaeter. No. 899,597; Sept. 29; Sp. p. 4662; Dr. pp. 999–1000; Gaz. vol. 136; p. 890.
Excavator, Clay-. R. N. Williams, Jr. No. 898,079; Sept. 8; Sp. p. 1735; Dr. pp. 368–9; Gaz. vol. 136; p. 304.
Exerciser. A. Day. No. 897,722; Sept. 1; Sp. p. 973; Dr. p. 208; Gaz. vol. 136; p. 156.
Exhaust-regulator. O. K. Rauk. No. 899,471; Sept. 22; Sp. p. 4376; Dr. p. 939; Gaz. vol. 136; p. 810.
Exhaust, Under-water. C. B. Chatfield. No. 897,586; Sept. 1; Sp. p. 706; Dr. p. 148; Gaz. vol. 136; p. 112.
Exploding blast charges, Means for. C. I. Dodson. No. 898,848; Sept. 15; Sp. p. 3204; Dr. p. 687; Gaz. vol. 136; p. 582.
Exploding mine charges, Apparatus for. C. I. Dodson. No. 898,847; Sept. 15; Sp. p. 3201; Dr. p. 686; Gaz. vol. 136; p. 582.
Explosion-engine. T. W. Heermans. No. 898,103; Sept. 8; Sp. p. 1780; Dr. pp. 378–9; Gaz. vol. 136; p. 311.
Explosive-engine. V. F. Carpenter. No. 898,317; Sept. 8; Sp. p. 2180; Dr. p. 463; Gaz. vol. 136; p. 377.
Explosive-engine. A. W. Daniel. No. 898,974; Sept. 15; Sp. p. 3424; Dr. pp. 735–6; Gaz. vol. 136; p. 624.
Explosive-engine, Compound double-acting. M. M. Maher. No. 898,243; Sept. 8; Sp. p. 2055; Dr. p. 437; Gaz. vol. 136; p. 355.
Explosive, Smokeless. M. Abelli. No. 899,855; Sept. 29; Sp. p. 5215; Gaz. vol. 136; p. 975.
Explosives, Preserving. J. Ortiz. No. 897,923; Sept. 8; Sp. p. 1409; Dr. pp. 300–1; Gaz. vol. 136; p. 254.
Explosives, Producing gelatinized nitrocellulose. G. H. Wadsworth. No. 899,577; Sept. 29; Sp. p. 4613; Gaz. vol. 136; p. 883.
Expression attachment. O. F. Hintz. No. 897,288; Sept. 1; Sp. p. 42; Dr. p. 10; Gaz. vol. 136; p. 10.
Extensible pan. E. L. Carter. No. 899,292; Sept. 22; Sp. p. 4062; Dr. p. 868; Gaz. vol. 136; p. 754.
Extensible post or prop. R. H. McCombe. No. 897,843; Sept. 1; Sp. p. 1224; Dr. p. 261; Gaz. vol. 136; p. 194.
Extraction apparatus. L. F. Jury. No. 898,492; Sept. 15; Sp. p. 2505; Dr. p. 537; Gaz. vol. 136; p. 463.
Extraction apparatus. C. M. Chamberlain. No. 899,512; Sept. 29; Sp. p. 4472; Dr. p. 960; Gaz. vol. 136; p. 860.
Extractor: *See* Cork-extractor; Spike-extractor; Spoke-extractor.
Eye-protector, Pneumatic. A. E. Jacobs. No. 897,290; Sept. 1; Sp. p. 45; Dr. p. 11; Gaz. vol. 136; p. 11.
Eyeglass-bridge. S. C. Laflin. No. 897,468; Sept. 1; Sp. p. 469; Dr. p. 100; Gaz. vol. 136; p. 74.
Eyeglasses. O. Kampfe. No. 899,409; Sept. 22; Sp. p. 4265; Dr. p. 915; Gaz. vol. 136; p. 791.
Eyeleting-machine. J. F. Davey. No. 898,729; Sept. 15; Sp. p. 2966; Dr. p. 641; Gaz. vol. 136; p. 543.
Fabric: *See* Knit fabric; Ornamental fabric; Woven fabric.
Fabric. E. J. Vogel. No. 898,941; Sept. 15; Sp. p. 3367; Dr. p. 723; Gaz. vol. 136; p. 613.
Fabric cover, Textile-. F. B. Burns. No. 897,583; Sept. 1; Sp. p. 701; Dr. pp. 147–8; Gaz. vol. 136; p. 111.
Faller-bar. A. Young. No. 899,280; Sept. 22; Sp. p. 4045; Dr. p. 864; Gaz. vol. 136; p. 751.
Fan. L. Owen. No. 899,555; Sept. 29; Sp. p. 4570; Dr. p. 982; Gaz. vol. 136; p. 875.
Fan. O. Selg. No. 899,684; Sept. 29; Sp. p. 4832; Dr. p. 1034; Gaz. vol. 136; p. 916.
Fan attachment for machinery, Clamp-. J. W. Migrath. No. 898,492; Sept. 15; Sp. p. 2525; Dr. p. 540; Gaz. vol. 136. p. 467.
Fan, Centrifugal. W. J. Baldwin. No. 898,624; Sept. 15; Sp. p. 2788; Dr. p. 596; Gaz. vol. 136; p. 510.
Fan, Oscillating desk-. E. C. Lipps. No. 897,752; Sept. 1; Sp. p. 1029; Dr. p. 219; Gaz. vol. 136; p. 167.
Fare-register-operating mechanism. J. F. Ohmer and F. G. Colby. No. 897,391; Sept. 1; Sp. p. 306; Dr. p. 63; Gaz. vol. 136; p. 47.
Farm-gate. L. Liesmann. No. 899,747; Sept. 29; Sp. p. 4967; Dr. p. 1065; Gaz. vol. 136; p. 937.
Fastener. L. F. Hammer. No. 899,972; Sept. 29; Sp. p. 5445; Dr. p. 1161; Gaz. vol. 136; p. 1010.
Fastener or stay. W. R. Stokely. No. 898,800; Sept. 15; Sp. p. 3115; Dr. p. 667; Gaz. vol. 136; p. 566.
Fastener, Separable. A. M. Ziegler. No. 898,515; Sept. 15; Sp. p. 3145; Dr. p. 673; Gaz. vol. 136; p. 571.
Fastenings, Machine for inserting metallic. L. A. Casgrain. No. 898,435; Sept. 15; Sp. p. 2416; Dr. pp. 517–18; Gaz. vol. 136; p. 450.
Faucet, Beer-. G. Braybrook. No. 899,201; Sept. 22; Sp. p. 3871; Dr. p. 827; Gaz. vol. 136; p. 725.
Feed-carrier. W. Louden. No. 898,489; Sept. 15; Sp. p. 2520; Dr. p. 539; Gaz. vol. 136; p. 466.
Feed mechanism. C. A. Hirth. No. 899,981; Sept. 29; Sp. p. 5464; Dr. p. 1165; Gaz. vol. 136; p. 1013.
Feed mechanism, Roller. W. A. Leonard. No. 899,492; Sept. 22; Sp. p. 4416; Dr. p. 948; Gaz. vol. 136; p. 818.
Feed-water regulator. H. R. O'Brian. No. 898,255; Sept. 8; Sp. p. 2072; Dr. p. 440; Gaz. vol. 136; p. 358.
Feed-water regulator. W. H. Bartholomew. No. 898,525; Sept. 15; Sp. p. 2789; Dr. p. 596; Gaz. vol. 136; p. 510.
Feeding-trough rack. W. A. McCollough. No. 899,125; Sept. 22; Sp. p. 3713; Dr. p. 796; Gaz. vol. 136; p. 700.
Feldspar flux, Making. F. M. Locke. No. 897,636; Sept. 1; Sp. p. 803; Gaz. vol. 136; p. 128.
Fence. P. Howard. No. 899,112; Sept. 22; Sp. p. 3687; Dr. p. 790; Gaz. vol. 136; p. 696.
Fence-machine. C. E. Merchen. No. 899,419; Sept. 22; Sp. p. 4278; Dr. p. 918; Gaz. vol. 136; p. 794.
Fence or guard, Wicket. A. L. J. Miller. No. 899,105; Sept. 29; Sp. p. 4673; Dr. p. 1002; Gaz. vol. 136; p. 892.
Fence-post. A. Page. No. 897,773; Sept. 1; Sp. p. 1063; Dr. p. 232; Gaz. vol. 136; p. 173.
Fence post multiple mold. C. Kubach. No. 899,416; Sept. 22; Sp. p. 4275; Dr. p. 917; Gaz. vol. 136; p. 793.
Fence-posts, Apparatus for molding bases on. M. C. Munn. No. 898,671; Sept. 15; Sp. p. 2879; Dr. p. 616; Gaz. vol. 136; p. 524.
Fence-stretching clamp, Wire-. C. E. Logan. No. 898,236; Sept. 8; Sp. p. 2046; Dr. p. 434; Gaz. vol. 136; p. 353.
Fence tie, Wire-. W. M. Dillon. No. 898,339; Sept. 8; Sp. p. 2217; Dr. p. 471; Gaz. vol. 136; p. 384.
Fence-weaving machine. G. P. A. Weisenborn. No. 898,294; Sept. 8; Sp. p. 2138; Dr. pp. 454–5; Gaz. vol. 136; p. 370.
Fender: *See* Car-fender; Cultivator-fender; Locomotive and street-car fender.
Fertilizer. J. F. Jarboe. No. 897,624; Sept. 1; Sp. p. 785; Gaz. vol. 136; p. 124.
Fertilizer. L. R. Coates. No. 899,155; Sept. 22; Sp. p. 3780; Gaz. vol. 136; p. 710.
Fertilizer. L. R. Coates. No. 900,056; Sept. 29; Sp. p. 5646; Gaz. vol. 136; p. 1049.
Fertilizer-distributer. H. N. Harper. No. 897,829; Sept. 1; Sp. p. 1198; Dr. p. 255; Gaz. vol. 136; p. 190.
Fertilizer-distributer. E. L. Hahn. No. 899,449; Sept. 22; Sp. p. 4334; Dr. p. 931; Gaz. vol. 136; p. 803.
Fertilizer-distributer. W. E. Warner. No. 899,580; Sept. 29; Sp. p. 4620; Dr. pp. 992–3; Gaz. vol. 136; p. 884.
Fertilizer-distributer. G. E. Alphin. No. 899,546; Sept. 29; Sp. p. 4763; Dr. p. 1019; Gaz. vol. 136; p. 905.
Fertilizer-distributer and cultivator, Combined. E. M. Cole. No. 897,456; Sept. 1; Sp. p. 445; Dr. pp. 95–6; Gaz. vol. 136; p. 70.
Fertilizers, Making. J. R. Young. No. 897,695; Sept. 1; Sp. p. 920; Gaz. vol. 136; p. 147.
Fiber-cleaning machine. A. Pons. No. 899,070; Sept. 22; Sp. p. 3604; Dr. p. 772; Gaz. vol. 136; p. 681.
Fiber, Machine for loosely packing. R. Dawson. No. 898,841; Sept. 15; Sp. p. 3191; Dr. pp. 683–4; Gaz. vol. 136; p. 580.
Fiber, Manufacturing indurated. I. W. Marshall. No. 897,758; Sept. 1; Sp. p. 1038; Dr. pp. 222–3; Gaz. vol. 136; p. 168.

Fiber, Soaking sheet. I. W. Marshall. No. 897,759; Sept. 1; Sp. p. 1041; Dr. p. 224; Gaz. vol. 136; p. 169.
Fibers, Machine for preparing vegetable. F. Scherr and F. Darkin. No. 899,846; Sept. 29; Sp. p. 5186; Dr. p. 1111; Gaz. vol. 136; p. 971.
Fibrous stalks or plants, Producing a solvent for retting of bast. M. H. Colahan. No. 897,522; Sept. 1; Sp. p. 584; Gaz. vol. 136; p. 92.
Fifth-wheel. W. H. Divers. No. 899,840; Sept. 29; Sp. p. 4781; Dr. pp. 1023–4; Gaz. vol. 136; p. 909.
File, Composite. H. Getaz. No. 898,352; Sept. 8; Sp. p. 2238; Dr. p. 477; Gaz. vol. 136; p. 388.
File, Folding. B. B. Mc-adden. No. 898,498; Sept. 15; Sp. p. 2535; Dr. pp. 543–4; Gaz. vol. 136; p. 469.
Filing of memoranda, Card-chain for systematic. H. Brunn. No. 898,034; Sept. 8; Sp. p. 1650; Dr. p. 351; Gaz. vol. 136; p. 289.
Film-developing apparatus, Daylight. J. Le Compte. No. 899,545; Sept. 29; Sp. p. 4552; Dr. p. 979; Gaz. vol. 136; p. 872.
Filter. A. J. Sheridan. No. 897,418; Sept. 1; Sp. p. 369; Dr. p. 77; Gaz. vol. 136; p. 57.
Filter. F. Rosenstein. No. 899,075; Sept. 22; Sp. p. 3619; Dr. p. 775; Gaz. vol. 136; p. 683.
Filter. F. Tiemann. No. 899,194; Sept. 22; Sp. p. 3863; Dr. p. 825; Gaz. vol. 136; p. 723.
Filter. C. W. Wright. No. 899,645; Sept. 29; Sp. p. 4762; Dr. p. 1019; Gaz. vol. 136; p. 904.
Filter, Gasolene-. J. Ellis. No. 898,567; Sept. 15; Sp. p. 2678; Dr. p. 572; Gaz. vol. 136; p. 491.
Filtering apparatus. B. M. Jäger. No. 897,745; Sept. 1; Sp. p. 1015; Dr. p. 216; Gaz. vol. 136; p. 164.
Finger-developing appliance. F. Loyola. No. 897,471; Sept. 1; Sp. p. 473; Dr. p. 101; Gaz. vol. 136; p. 75.
Fire-alarm. B. B. Mears. No. 899,749; Sept. 29; Sp. p. 4949; Dr. p. 1065; Gaz. vol. 136; p. 938.
Fire alarm and extinguisher. C. Wilson. No. 898,295; Sept. 8; Sp. p. 2141; Dr. p. 455; Gaz. vol. 136; p. 370.
Fire-escape. G. Lebri. No. 897,634; Sept. 1; Sp. p. 799; Dr. pp. 168–9; Gaz. vol. 136; p. 127.
Fire-escape. P. Goldmann. No. 898,874; Sept. 15; Sp. p. 3254; Dr. p. 696; Gaz. vol. 136; p. 591.
Fire-escape. W. P. Huffman and D. L. Fry. No. 899,984; Sept. 29; Sp. p. 5476; Dr. p. 1166; Gaz. vol. 136; p. 1014.
Fire-escape ladder. M. J. McArthur. No. 899,552; Sept. 29; Sp. p. 4566; Dr. p. 981; Gaz. vol. 136; p. 874.
Fire-escapes, Support for flexible. L. Ardengo. No. 899,371; Sept. 22; Sp. p. 4200; Dr. p. 899; Gaz. vol. 136; p. 779.
Fire-extinguisher. H. L. Carpenter. No. 899,952; Sept. 29; Sp. p. 5408; Dr. p. 1153; Gaz. vol. 136; p. 1004.
Fire-extinguishers, Sprinkler-head for automatic. V. Lapham. No. 897,908; Sept. 8; Sp. p. 1375; Dr. p. 294; Gaz. vol. 136; p. 248.
Fire-hose pipe and analogous tubing, Automatic machine for winding. E. D. C. Bayne and L. A. Subers. No. 897,339; Sept. 1; Sp. p. 182; Dr. p. 39; Gaz. vol. 136; p. 27.
Fire-nozzle attachment for valves. J. D. Schierioh. No. 899,330; Sept. 22; Sp. p. 4127; Dr. p. 883; Gaz. vol. 136; p. 766.
Fire-pot or lining. E. G. Germer. No. 900,011; Sept. 29; Sp. p. 5536; Dr. p. 1180; Gaz. vol. 136; p. 1023.
Fire-resisting curtain. E. H. McCloud. No. 899,460; Sept. 22; Sp. p. 4354; Dr. pp. 934–5; Gaz. vol. 136; p. 806.
Fire-resisting shutter and slat therefor, Flexible. E. H. McCloud. No. 897,990; Sept. 8; Sp. p. 1557; Dr. p. 330; Gaz. vol. 136; p. 276.
Firearm. J. W. Price. No. 898,986; Sept. 15; Sp. p. 3454; Dr. p. 740; Gaz. vol. 136; p. 628.
Firearm, Recoil-operated. B. Clarus. No. 898,035; Sept. 8; Sp. p. 1656; Dr. pp. 352–3; Gaz. vol. 136; p. 290.
Firearm-sight. E. R. Tufts. No. 898,531; Sept. 15; Sp. p. 2605; Dr. p. 556; Gaz. vol. 136; p. 480.
Firearm-sight. E. R. Tufts. No. 898,532; Sept. 15; Sp. p. 2606; Dr. p. 556; Gaz. vol. 136; p. 480.
Firearms, Combined grip and sight for. G. C. Bourne. No. 898,178; Sept. 8; Sp. p. 1933; Dr. p. 413; Gaz. vol. 136; p. 335.
Firearms to supports, Clasp for fastening. H. Renfors and R. Lindgren. No. 899,617; Sept. 29; Sp. p. 4704; Dr. pp. 1007–8; Gaz. vol. 136; p. 896.
Firemen with fresh air, Device for supplying. P. H. Sullivan. No. 898,524; Sept. 15; Sp. p. 2590; Dr. p. 553; Gaz. vol 136; p. 478.
Fireproof metal window-frame. F. Lyster. No. 899,227; Sept. 22; Sp. p. 3917; Dr. p. 836; Gaz. vol. 136; p. 733.
Fireproof-window construction. E. H. Lunken and C. M. Conklin. No. 897,297; Sept. 1; Sp. p. 53; Dr. p. 13; Gaz. vol. 136; p. 12.
Fireproof-window fastener. C. H. and H. L. W. Hopmann. No. 897,742; Sept. 1; Sp. p. 1011; Dr. p. 215; Gaz. vol. 136; p. 163.
Firing-pin, Safety. J. H. Wesson. No. 897,806; Sept. 1; Sp. p. 1153; Dr. p. 246; Gaz. vol. 136; p. 183.
Fish during long periods of transport or in store, Preserving live. F. Kleinschmidt. No. 899,057; Sept. 22; Sp. p. 3581; Dr. p. 767; Gaz. vol. 136; p. 677.
Fish-plate. G. Wendling. No. 897,945; Sept. 8; Sp. p. 1468; Dr. p. 312; Gaz. vol. 136; p. 261.
Fish-plate. W. H. Carlin. No. 897,961; Sept. 8; Sp. p. 1508; Dr. p. 319; Gaz. vol. 136; p. 266.
Fish-trap. W. L. Connevey. No. 897,589; Sept. 1; Sp. p. 714; Dr. p. 150; Gaz. vol. 136; p. 113.
Fish-trap. J. R. Heckman. No. 897,897; Sept. 8; Sp. p. 1347; Dr. p. 288; Gaz. vol. 136; p. 244.
Fish-trap. J. R. Heckman. No. 897,898; Sept. 8; Sp. p. 1351; Dr. p. 289; Gaz. vol. 136; p. 245.
Fish-trap. T. Morgan. No. 899,457; Sept. 22; Sp. p. 4347; Dr. p. 933; Gaz. vol. 136; p. 806.
Fishing-float. W. von Rosenberg, Jr. No. 898,754; Sept. 15; Sp. p. 3091; Dr. p. 662; Gaz. vol. 136; p. 561.
Fishing-rod tip. F. A. Smith. No. 899,914; Sept. 29; Sp. p. 5309; Dr. p. 1135; Gaz. vol. 136; p. 991.
Flasks, Hinged match-plate for. L. W. Van Cleave and G. O. Dewey. No. 898,158; Sept. 8; Sp. p. 1888; Dr. p. 404; Gaz. vol. 136; p. 328.
Flat-iron. F. A. Bonroe. No. 899,200; Sept. 22; Sp. p. 3870; Dr. p. 827; Gaz. vol. 136; p. 725.
Fleshing-machine. L. Rupp. No. 899,233; Sept. 22; Sp. p. 3936; Dr. p. 840; Gaz. vol. 136; p. 735.
Flexible pipe. G. F. Royer. No. 899,623; Sept. 29; Sp. p. 4719; Dr. p. 1011; Gaz. vol. 136; p. 898.
Floating structure, Steady-. W. E. Murray. No. 898,128; Sept. 8; Sp. p. 1830; Dr. p. 389; Gaz. vol. 136; p. 319.
Floor-cleaning machine. G. W. Goodier. No. 899,725; Sept. 29; Sp. p. 4908; Dr. p. 1054; Gaz. vol. 136; p. 929.
Floor construction. J. J. Whitacre. No. 899,775; Sept. 29; Sp. p. 5034; Dr. p. 1079; Gaz. vol. 136; p. 948.
Floor construction. J. J. Whitacre. No. 899,776; Sept. 29; Sp. p. 5037; Dr. p. 1079; Gaz. vol. 136; p. 948.
Floors, Laying mosaic, granolithic, and similar. P. Pellarin. No. 898,001; Sept. 8; Sp. p. 1573; Dr. p. 335; Gaz. vol. 136; p. 279.
Flooring, Artificial. R. V. Mattison. No. 898,381; Sept. 8; Sp. p. 2295; Dr. p. 488; Gaz. vol. 136; p. 399.
Flour from bran, Production of a digestible. T. Schlüter, Jr. No. 897,854; Sept. 1; Sp. p. 1244; Gaz. vol. 136; p. 197.
Flower, Artificial. W. A. Warner. No. 899,852; Sept. 29; Sp. p. 5210; Dr. p. 1115; Gaz. vol. 136; p. 974.
Flower-stake. W. Henshaw. No. 899,046; Sept. 22; Sp. p. 3565; Dr. p. 763; Gaz. vol. 136; p. 673.
Flower-support. G. E. Browne. No. 899,946; Sept. 29; Sp. p. 5400; Dr. p. 1152; Gaz. vol. 136; p. 1002.
Fluid-compressors, Automatic governor for. E. J. Rohrbacher. No. 898,606; Sept. 15; Sp. p. 2749; Dr. pp. 587–8; Gaz. vol. 136; p. 504.
Fluid generator, Elastic-. C. W. Dake. No. 897,354; Sept. 1; Sp. p. 210; Dr. p. 45; Gaz. vol. 136; p. 32.
Fluid-meter-testing apparatus. T. B. Dornin. No. 899,959; Sept. 29; Sp. p. 5419; Dr. pp. 1155–6; Gaz. vol. 136; p. 1006.
Fluid-meter-testing apparatus. T. B. Dornin. No. 899,960; Sept. 29; Sp. p. 5421; Dr. p. 1156; Gaz. vol. 136; p. 1006.
Fluid-pressure brake. C. A. Tripp. No. 898,022; Sept. 8; Sp. p. 1628; Dr. p. 347; Gaz. vol. 136; p. 285.
Fluid-pressure brake. H. T. Herr. No. 898,885; Sept. 15; Sp. p. 3270; Dr. pp. 699–700; Gaz. vol. 136; p. 595.
Fluid-pressure motor. J. E. Osmer. No. 899,795; Sept. 29; Sp. p. 5087; Dr. p. 1088; Gaz. vol. 136; p. 954.
Flushing apparatus, Street-. J. Hill. No. 900,015; Sept. 29; Sp. p. 5543; Dr. pp. 1181–2; Gaz. vol. 136; p. 1025.
Fluting or beading machine. C. R. Voorhies. No. 898,289; Sept. 8; Sp. p. 2130; Dr. p. 453; Gaz. vol. 136; p. 368.
Fly-escape. G. W. Stein. No. 898,281; Sept. 8; Sp. p. 2114; Dr. p. 449; Gaz. vol. 136; p. 366.
Fly-escape screen, Out-trapping. H. A. Hanson. No. 897,894; Sept. 8; Sp. p. 1342; Dr. p. 287; Gaz. vol. 136; p. 244.
Fly, hook, and leader box, Trout. T. O'Leary. No. 899,466; Sept. 22; Sp. p. 4367; Dr. p. 937; Gaz. vol. 136; p. 808.
Fly-trap. W. P. Everett. No. 898,857; Sept. 15; Sp. p. 3217; Dr. p. 683; Gaz. vol. 136; p. 585.
Flying-machine. A. V. Wilson. No. 897,504; Sept. 1; Sp. p. 537; Dr. pp. 114–15; Gaz. vol. 136; p. 86.
Flying-machine. W. Gordon No. 897,738; Sept. 1; Sp. p. 1003; Dr. pp. 213–14; Gaz. vol. 136; p. 162.
Flying-machine, Dirigible. E. E. Steinhaus. No. 899,350; Sept. 22; Sp. p. 4161; Dr. p. 891; Gaz. vol. 136; p. 772.
Folding box. C. T. Bloomer. No. 899,654; Sept. 29; Sp. p. 4774; Dr. pp. 1021–2; Gaz. vol. 136; p. 907.
Folding bracket for desk-telephones, &c. W. H. Gerhard. No. 898,572; Sept. 15; Sp. p. 2685; Dr. p. 574; Gaz. vol. 136; p. 493.
Folding mechanism, Rotary. H. Lang. No. 899,743; Sept. 29; Sp. p. 4954; Dr. pp. 1062–3; Gaz. vol. 136; p. 935.
Folding mechanism, Rotary. H. Lang. No. 899,744; Sept. 29; Sp. p. 4957; Dr. p. 1063; Gaz. vol. 136; p. 936.
Food-chopper. J. H. Shaw. No. 899,702; Sept. 29; Sp. p. 4839; Dr. p. 1041; Gaz. vol. 136; p. 921.
Food product, Nitrogenous. K. Okazaki. No. 897,392; Sept. 1; Sp. p. 308; Dr. p. 64; Gaz. vol. 136; p. 47.
Foot-arch. F. J. Winchell. No. 899,367; Sept. 22; Sp. p. 4195; Dr. p. 898; Gaz. vol. 136; p. 778.
Force feed lubricator. G. W. Bird and H. Akins. No. 899,378; Sept. 22; Sp. p. 4212; Dr. p. 901; Gaz. vol. 136; p. 781.
Forceps, Obstetrical. H. E. Koch. No. 899,222; Sept. 22; Sp. p. 3906; Dr. p. 835; Gaz. vol. 136; p. 732.
Fore-masher. I. Rathgeber. No. 899,841; Sept. 29; Sp. p. 5166; Dr. p. 1107; Gaz. vol. 136; p. 969.
Fork: *See* Grapple-fork.
Form, Shoulder-presser. J. M. Stein. No. 897,422; Sept. 1; Sp. p. 378; Dr. pp. 79–80; Gaz. vol. 136; p. 59.
Fountain: *See* Drinking-fountain.
Frame: *See* Adjustable frame; Fireproof metal window-frame; Necktie-supporting frame; Picture-frame; Printing-frame; Skate-frame; Windmill-frame.
Frame. L. Sborigi. No. 899,329; Sept. 22; Sp. p. 4126; Dr. p. 883; Gaz. vol. 136; p. 765.
Frame-mounting. O. Hetlesaeter. No. 899,596; Sept. 29; Sp. p. 4660; Dr. p. 999; Gaz. vol. 136; p. 890.
Freight-conveyer. G. W. Younkman. No. 899,854; Sept. 29; Sp. p. 5212; Dr. p. 1116; Gaz. vol. 136; p. 974.
Fruit-sorting machine. F. B. Pease. No. 898,600; Sept. 15; Sp. p. 2737; Dr. p. 585; Gaz. vol. 136; p. 502.
Fruits, &c., Machine for washing and scalding. P. S. Baker and O. E. Vance. No. 898,954; Sept. 15; Sp. p. 3387; Dr. p. 727; Gaz. vol. 136; p. 617.
Furnace: *See* Billet-heating furnace; Boiler-furnace; Desulfurizing-furnace; Heating-furnace; Recuperative furnace; Roasting-furnace; Spelter-furnace; Traveling-grate furnace.
Furnace. A. Jay. No. 899,053; Sept. 22; Sp. p. 3573; Dr. pp. 765–6; Gaz. vol. 136; p. 675.

Furnace-charging apparatus, Blast-. M. J. Shannon. No. 898,012; Sept. 8; Sp. p. 1595; Dr. p. 340; Gaz. vol. 136; p. 282.
Furnace-charging apparatus, Blast-. M. J. Shannon. No. 898,071; Sept. 8; Sp. p. 1719; Dr. pp. 364–5; Gaz. vol. 136; p. 301.
Furnace-charging apparatus, Blast-. A. P. Aiken. No. 898,818; Sept. 15; Sp. p. 3151; Dr. p. 674; Gaz. vol. 136; p. 572.
Furnace-charging machine. R. B. Brown. No. 898,089; Sept. 8; Sp. p. 1750; Dr. p. 372; Gaz. vol. 136; p. 307.
Furnace grate, Steam-boiler-. H. Schofield. No. 899,910; Sept. 29; Sp. p. 5304; Dr. p. 1134; Gaz. vol. 136; p. 990.
Furnace process, Electric-. G. O. Seward and F. von Kügelgen. No. 898,691; Sept. 15; Sp. p. 2925; Dr. p. 626; Gaz. vol. 136; p. 532.
Furnace-tilting mechanism. D. R. Steele. No. 900,043; Sept. 29; Sp. p. 5514; Dr. p. 1196; Gaz. vol. 136; p. 1034.
Furnaces, Air-regulator for. A. Cotton. No. 899,102; Sept. 22; Sp. p. 3071; Dr. p. 780; Gaz. vol. 136; p. 692.
Furnaces, Apparatus for automatically conveying bottles, &c., into annealing-. C. Brauer. No. 898,179; Sept. 8; Sp. p. 1934; Dr. p. 413; Gaz. vol. 136; p. 335.
Furnaces, Drying air for blast-. D. T. Day. No. 897,356; Sept. 1; Sp. p. 221; Dr. p. 47; Gaz. vol. 136; p. 34.
Furnaces, Dust-trap for hot-air. J. M. Sager. No. 899,810; Sept. 29; Sp. p. 5112; Dr. p. 1093; Gaz. vol. 136; p. 959.
Furnaces, Gas-burning attachment for. G. G. Weinman. No. 899,275; Sept. 22; Sp. p. 4038; Dr. p. 863; Gaz. vol. 136; p. 749.
Furnaces in steam-engines, Baffle for oil-burning. J. Limerick. No. 898,662; Sept. 15; Sp. p. 2868; Dr. p. 613; Gaz. vol. 136; p. 522.
Fuse-box. H. P. Moore. No. 898,061; Sept. 8; Sp. p. 1704; Dr. p. 361; Gaz. vol. 136; p. 298.
Fuse-box. J. O. Stivers. No. 898,688; Sept. 15; Sp. p. 2935; Dr. p. 629; Gaz. vol. 136; p. 534.
Fuse cut-out, Multiple electric. W. Boehm. No. 898,086; Sept. 8; Sp. p. 1747; Dr. p. 371; Gaz. vol. 136; p. 306.
Fuse plug and holder, Indicating. C. E. Mentzer. No. 897,474; Sept. 1; Sp. p. 477; Dr. p. 102; Gaz. vol. 136; p. 76.
Fuse, Safety-. J. Sachs. No. 897,852; Sept. 1; Sp. p. 1241; Dr. p. 266; Gaz. vol. 136; p. 197.
Gage: *See* Caliper-gage; Hinge-seat gage; Pressure-gage; Water-gage.
Gaiter. H. Cohen. No. 897,714; Sept. 1; Sp. p. 959; Dr. p. 205; Gaz. vol. 136; p. 154.
Gallocyanin and making same. C. De la Harpe and R. Burckhardt. No. 898,040; Sept. 8; Sp. p. 1659; Gaz. vol. 136; p. 291.
Gallocyanins with amins, Condensing. C. De la Harpe. No. 897,619; Sept. 1; Sp. p. 778; Gaz. vol. 136; p. 123.
Galvanic battery, Reversible. H. C. Hubbell. No. 897,833; Sept. 1; Sp. p. 1206; Dr. p. 257; Gaz. vol. 136; p. 192.
Game apparatus. A. M. Foster. No. 898,350; Sept. 8; Sp. p. 2235; Dr. p. 477; Gaz. vol. 136; p. 388.
Game apparatus. J. G. Patrick. No. 899,895; Sept. 29; Sp. p. 5280; Dr. p. 1129; Gaz. vol. 136; p. 986.
Game-board. M. C. Matthias. No. 898,587; Sept. 15; Sp. p. 2710; Dr. p. 579; Gaz. vol. 136; p. 498.
Game-board. J. B. Rittenhouse. No. 898,684; Sept. 15; Sp. p. 2912; Dr. p. 624; Gaz. vol. 136; p. 529.
Game or puzzle apparatus. L. E. Harriss. No. 898,469; Sept. 15; Sp. p. 2485; Dr. p. 531; Gaz. vol. 136; p. 460.
Garment-clasp. J. M. Siner. No. 897,793; Sept. 1; Sp. p. 1110; Dr. p. 238; Gaz. vol. 136; p. 178.
Garment-clasp. A. M. Ziegler. No. 898,816; Sept. 15; Sp. p. 3147; Dr. p. 673; Gaz. vol. 136; p. 571.
Garment-creaser. G. L. Edgerton. No. 899,036; Sept. 22; Sp. p. 3549; Dr. p. 760; Gaz. vol. 136; p. 670.
Garment-hanger. F. W. Van Nortwick. No. 899,929; Sept. 29; Sp. p. 5363; Dr. p. 1143; Gaz. vol. 136; p. 996.
Garment-holder. H. C. Krause. No. 898,978; Sept. 15; Sp. p. 3432; Dr. p. 737; Gaz. vol. 136; p. 625.
Garment, Neck-protecting. M. Rosenbaum and A. Hall. No. 899,907; Sept. 29; Sp. p. 5300; Dr. p. 1133; Gaz. vol. 136; p. 990.
Garment-supporter. C. C. Morris. No. 899,316; Sept. 22; Sp. p. 4106; Dr. p. 877; Gaz. vol. 136; p. 702.
Garment-supporter clasp. D. De Lancey and J. J. Buchanan. No. 897,295; Sept. 1; Sp. p. 51; Dr. p. 12; Gaz. vol. 136; p. 12.
Garment-supporter clasp. J. F. Molloy. No. 897,299; Sept. 1; Sp. p. 57; Dr. p. 14; Gaz. vol. 136; p. 13.
Garment-supporter clasp. H. E. Lorentz. No. 897,911; Sept. 8; Sp. p. 1382; Dr. p. 295; Gaz. vol. 136; p. 250.
Gas-analyzing apparatus. H. J. Westover. No. 899,774; Sept. 29; Sp. p. 5029; Dr. pp. 1078–9; Gaz. vol. 136; p. 947.
Gas and carbureting system, Combined producer-. W. F. Steele. No. 897,799; Sept. 1; Sp. p. 1140; Dr. p. 243; Gaz. vol. 136; p. 180.
Gas apparatus, Acetylene-. N. A. Renstrom. No. 897,491; Sept. 1; Sp. p. 510; Dr. p. 108; Gaz. vol. 136; p. 81.
Gas-burner. F. Krabal. No. 899,600; Sept. 29; Sp. p. 4667; Dr. p. 1001; Gaz. vol. 136; p. 891.
Gas-burner safety attachment. J. H. Eisenhauer. No. 898,634; Sept. 15; Sp. p. 2813; Dr. p. 601; Gaz. vol. 136; p. 514.
Gas cut-off, Automatic. V. E. Campbell. No. 897,816; Sept. 1; Sp. p. 1168; Dr. p. 249; Gaz. vol. 136; p. 185.
Gas cut-off, Automatic. H. Niemann. No. 899,184; Sept. 22; Sp. p. 3842; Dr. p. 822; Gaz. vol. 136; p. 719.
Gas-engine. C. O. Lake. No. 898,230; Sept. 8; Sp. p. 2034; Dr. p. 432; Gaz. vol. 136; p. 351.
Gas-engine, Two-cycle. E. A. Nelson. No. 898,913; Sept. 15; Sp. p. 3322; Dr. p. 712; Gaz. vol. 136; p. 603.
Gas-generating plants, Appliance used in combination with. A. L. Galusha. No. 897,362; Sept. 1; Sp. p. 247; Dr. p. 51; Gaz. vol. 136; p. 37.
Gas, Generating water-. H. Strache. No. 898,803; Sept. 15; Sp. p. 3121; Dr. p. 668; Gaz. vol. 136; p. 567.
Gas-generator. G. F. Silvey. No. 897,792; Sept. 1; Sp. p. 1109; Dr. p. 238; Gaz. vol. 136; p. 178.
Gas-generator. A. J. Sladek and L. Stone. No. 898,935; Sept. 15; Sp. p. 3357; Dr. p. 721; Gaz. vol. 136; p. 611.
Gas generator, Acetylene-. E. M. Rosenbluth. No. 899,809; Sept. 29; Sp. p. 5109; Dr. pp. 1092–3; Gaz. vol. 136; p. 959.
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Gas-light fixture. J. Maas. No. 900,031; Sept. 29; Sp. p. 5583; Dr. p. 1193; Gaz. vol. 136; p. 1030.
Gas-lighter. L. B. Prahar. No. 897,780; Sept. 1; Sp. p. 1060; Dr. p. 234; Gaz. vol. 136; p. 174.
Gas-lighter, Electric. J. D. McIntyre. No. 899,181; Sept. 22; Sp. p. 3837; Dr. p. 821; Gaz. vol. 136; p. 719.
Gas-machines, Air-pump for. F. M. Campbell. No. 899,481; Sept. 22; Sp. p. 4396; Dr. pp. 943–4; Gaz. vol. 136; p. 814.
Gas-mantle, Inverted incandescent. S. Cohn. No. 898,437; Sept. 15; Sp. p. 2422; Dr. p. 518; Gaz. vol. 136; p. 451.
Gas-mantle support. C. J. Barton. No. 898,957; Sept. 15; Sp. p. 3392; Dr. p. 728; Gaz. vol. 136; p. 618.
Gas, Manufacturing. H. Pettibone. No. 898,601; Sept. 15; Sp. p. 2739; Dr. p. 586; Gaz. vol. 136; p. 502.
Gas, Manufacturing. H. W. Benner. No. 899,690; Sept. 29; Sp. p. 4841; Dr. p. 1037; Gaz. vol. 136; p. 918.
Gas mixtures, Apparatus for the analysis of. W. S. Hubbard. No. 897,900; Sept. 8; Sp. p. 1354; Dr. p. 290; Gaz. vol. 136; p. 245.
Gas-producer. W. B. Hughes. No. 899,050; Sept. 22; Sp. p. 3559; Dr. p. 764; Gaz. vol. 136; p. 674.
Gas-producer. W. B. Hughes. No. 899,867; Sept. 29; Sp. p. 5234; Dr. p. 1119; Gaz. vol. 136; p. 978.
Gas-producers, Charger and stirrer for. H. E. Smythe and E. W. Shinn. No. 899,572; Sept. 29; Sp. p. 4605; Dr. pp. 989–90; Gaz. vol. 136; p. 881.
Gas, Producing. W. H. Frost and J. J. Nix. No. 900,065; Sept. 29; Sp. p. 5663; Dr. p. 1210; Gaz. vol. 136; p. 1041.
Gas-producing apparatus. J. J. Nix and W. H. Frost. No. 900,010; Sept. 29; Sp. p. 5531; Dr. p. 1179; Gaz. vol. 136; p. 1023.
Gas-retort charging-machine. J. West. No. 898,538; Sept. 15; Sp. p. 2621; Dr. pp. 560–2; Gaz. vol. 136; p. 482.
Gas-retort discharging-machine. J. West. No. 898,537; Sept. 15; Sp. p. 2618; Dr. p. 559; Gaz. vol. 136; p. 482.
Gas trap, Sewer-. J. P. Putnam. No. 898,130; Sept. 8; Sp. p. 1850; Dr. p. 394; Gaz. vol. 136; p. 322.
Gases, Apparatus for removing solid and liquid particles from. F. Sepulchre. No. 899,628; Sept. 29; Sp. p. 4736; Dr. p. 1013; Gaz. vol. 136; p. 899.
Gases, Apparatus for the treatment of. S. Z. de Ferranti. No. 898,346; Sept. 8; Sp. p. 2227; Dr. pp. 473–4; Gaz. vol. 136; p. 386.
Gases, Cleaning. A. Ernst. No. 900,062; Sept. 29; Sp. p. 5659; Dr. p. 1209; Gaz. vol. 136; p. 1040.
Gases in air, Apparatus for detecting inflammable. A. Philip and L. J. Steele. No. 899,068; Sept. 22; Sp. p. 3599; Dr. pp. 770–1; Gaz. vol. 136; p. 680.
Gate: *See* Car safety-gate; End-gate; Farm-gate; Swinging gate.
Gate. A. A. Witz. No. 897,949; Sept. 8; Sp. p. 1473; Dr. p. 313; Gaz. vol. 136; p. 262.
Gate. C. N. Mognet. No. 898,060; Sept. 8; Sp. p. 1702; Dr. pp. 360–1; Gaz. vol. 136; p. 297.
Gate and door closing device. B. Steinman. No. 899,920; Sept. 29; Sp. p. 5322; Dr. pp. 1137–8; Gaz. vol. 136; p. 993.
Gate-operating device. E. L. Booth. No. 897,267; Sept. 1; Sp. p. 11; Dr. p. 3; Gaz. vol. 136; p. 4.
Gear for motor-vehicles, Transmission-. E. A. Nelson. No. 899,278; Sept. 22; Sp. p. 4011; Dr. p. 856; Gaz. vol. 136; p. 744.
Gear, Short-turn. R. H. Bowman. No. 897,450; Sept. 1; Sp. p. 431; Dr. pp. 92–3; Gaz. vol. 136; p. 67.
Gear, Variable-speed. R. O. Couch. No. 898,327; Sept. 8; Sp. p. 2196; Dr. p. 466; Gaz. vol. 136; p. 380.
Gear-wheels, Manufacture of. F. A. Brun. No. 897,872; Sept. 8; Sp. p. 1289; Dr. p. 276; Gaz. vol. 136; p. 236.
Gearing. L. Fair. No. 897,968; Sept. 8; Sp. p. 1517; Dr. p. 322; Gaz. vol. 136; p. 268.
Gearing. J. W. Riffle. No. 898,682; Sept. 15; Sp. p. 2911; Dr. p. 623; Gaz. vol. 136; p. 529.
Gearing. C. Wiebke. No. 899,277; Sept. 22; Sp. p. 4041; Dr. p. 863; Gaz. vol. 136; p. 750.
Generator: *See* Fluid-generator; Gas-generator.
Gin-cleaning mechanism, Saw-. J. G. Dickson. No. 897,883; Sept. 8; Sp. p. 1307; Dr. p. 280; Gaz. vol. 136; p. 238.
Glass bottles and other vessels, Machine for the manufacture of. F. H. Pierpont. No. 900,037; Sept. 29; Sp. p. 5599; Dr. p. 1195; Gaz. vol. 136; p. 1033.
Glass brick, tile, and building-block. P. E. Gonon. No. 898,045; Sept. 8; Sp. p. 1609; Dr. p. 354; Gaz. vol. 136; p. 292.
Glass fire-polishing process and apparatus. S. O. Richardson, Jr. No. 899,473; Sept. 22; Sp. p. 4379; Dr. p. 939; Gaz. vol. 136; p. 811.
Glass-holder. J. W. Bricker. No. 899,290; Sept. 22; Sp. p. 4059; Dr. p. 867; Gaz. vol. 136; p. 753.
Glass tile. S. Zacharias. No. 897,809; Sept. 1; Sp. p. 1157; Dr. p. 246; Gaz. vol. 136; p. 183.
Glove. J. Rosenfeld. No. 897,306; Sept. 1; Sp. p. 68; Dr. p. 17; Gaz. vol. 136; p. 15.
Glove. J. Rosenfeld. No. 897,409; Sept. 1; Sp. p. 352; Dr. p. 74; Gaz. vol. 136; p. 54.
Go-cart, Folding. M. B. Lloyd. No. 898,235; Sept. 8; Sp. p. 2043; Dr. p. 434; Gaz. vol. 136; p. 352.
Gold-saving apparatus. R. G. Steele. No. 899,271; Sept. 22; Sp. p. 4032; Dr. p. 861; Gaz. vol. 136; p. 747.
Golf, Appliance for practicing. C. M. Treadwell. No. 898,530; Sept. 15; Sp. p. 2604; Dr. p. 556; Gaz. vol. 136; p. 480.
Gopher-trap. A. F. Renken. No. 898,262; Sept. 8; Sp. p. 2082; Dr. p. 443; Gaz. vol. 136; p. 360.
Gopher-trap. A. Herrmann and I. N. Golloday. No. 899,595; Sept. 29; Sp. p. 4660; Dr. p. 998; Gaz. vol. 136; p. 889.
Governor. R. Siegmund. No. 899,569; Sept. 29; Sp. p. 4597; Dr. pp. 987–8; Gaz. vol. 136; p. 880.

Governor. W. O. Thomas. No. 900,045; Sept. 29; Sp. p. 5616; Dr. p. 1198; Gaz. vol. 136; p. 1035.
Governor and reversing-gear for engines. W. N. Springer. No. 898,074; Sept. 8; Sp. p. 1726; Dr. p. 366; Gaz. vol. 136; p. 302.
Governor, Centrifugal. R. Siegmund. No. 899,570; Sept. 29; Sp. p. 4601; Dr. p. 988; Gaz. vol. 136; p. 881.
Governor, Electric and pneumatic. W. K. Rankin. No. 897,657; Sept. 1; Sp. p. 837; Dr. p. 177; Gaz. vol. 136; p. 134.
Grader attachment. H. N. Barrett and E. D. Wallace. No. 897,955; Sept. 8; Sp. p. 1485; Dr. p 316; Gaz. vol. 136; p. 264.
Grader, Road-. T. Henry. No. 898,884; Sept. 15; Sp. p. 3268; Dr. p. 699; Gaz. vol. 136; p. 594.
Grain and seed separator. F. Prinz. No. 897,489; Sept. 1; Sp. p. 506; Dr. p. 108; Gaz. vol. 136; p. 81.
Grain, beans, &c., Grader and cleaner for. A. Hohner. No. 898,892; Sept. 15; Sp. p. 3286; Dr. p. 703; Gaz. vol. 136; p. 597.
Grain-binder attachment. E. D. Rodemeyer. No. 899,619; Sept. 29; Sp. p. 4713; Dr. p. 1009; Gaz. vol. 136; p. 897.
Grain-cleaner for wild peas and cockle. J. S. Christensen. No. 897,271; Sept. 1; Sp. p. 18; Dr. p. 5; Gaz. vol. 136; p. 6.
Grain-distributer. H. B. Bozard. No. 899,711; Sept. 29; Sp. p. 4879; Dr. p. 1047; Gaz. vol. 136; p. 924.
Grain-elevator, Portable. J. E. and C. W. Camp. No. 898,552; Sept. 15; Sp. p. 2651; Dr. p. 567; Gaz. vol. 136; p. 487.
Grain-tank. C. Blom. No. 897,814; Sept. 1; Sp. p. 1165; Dr. p. 248; Gaz. vol. 136; p. 185.
Grain-treating apparatus. R. S. Houston. No. 897,899; Sept. 8; Sp. p. 1352; Dr. p. 289; Gaz. vol. 136; p. 245.
Graphophone sound-box. H. Nies. No. 899,404; Sept. 22; Sp. p. 4364; Dr. p. 936; Gaz. vol. 136; p. 808.
Grapple-fork. M. Kidney. No. 899,308; Sept. 22; Sp. p. 4087; Dr. p. 873; Gaz. vol. 136; p. 759.
Grate. J. Barker. No. 899,372; Sept. 22; Sp. p. 4262; Dr. p. 900; Gaz. vol. 136; p. 779.
Grate, Fire-. J. Williamson. No. 899,442; Sept. 22; Sp. p. 4320; Dr. pp. 928–9; Gaz. vol. 136; p. 800.
Grate, Shaking-. W. E. Cole. No. 900,057; Sept. 29; Sp. p. 5647; Dr. pp. 1205–6; Gaz. vol. 136; p. 1039.
Grate, Vertically-adjustable. J. W. Piper. No. 899,677; Sept. 29; Sp. p. 4820; Dr. p. 1032; Gaz. vol. 136; p. 914.
Grease-cup. C. H. Prescott. No. 897,849; Sept. 1; Sp. p. 1237; Dr. p. 265; Gaz. vol. 136; p. 196.
Grinder, Calk-. D F. Ensign and M. Hazard. No. 899,721; Sept. 29; Sp. p. 4902; Dr. p. 1052; Gaz. vol. 136; p. 928.
Grinder, Glass-cutting. J. T. Young. No. 898,028; Sept. 8; Sp. p. 1636; Dr. p. 349; Gaz. vol. 136; p. 287.
Grinding and polishing machine. J. M. Thompson. No. 898,528; Sept. 15; Sp. p. 2601; Dr. p. 555; Gaz. vol. 136; p. 479.
Grinding band-wheels, Device for. C. E. Payne. No. 899,896; Sept. 29; Sp. p. 5282; Dr. p. 1129; Gaz. vol. 136; p. 987.
Grinding-machine. S. Nikoloff. No. 898,673; Sept. 15; Sp. p. 2882; Dr. pp. 616–17; Gaz. vol. 136; p. 525.
Grinding-machine. C Mills. No. 899,421; Sept. 22; Sp. p. 4283; Dr. pp. 919–20; Gaz. vol. 136; p. 794.
Grinding-mills and disk pulverizers, Releasing mechanism for. J. I. Brown. No. 898,309; Sept. 8; Sp. p. 2167; Dr. p. 460; Gaz. vol. 136; p. 374.
Guitar-bridge. J. De Julio. No. 897,964; Sept. 8; Sp. p. 1512; Dr. p. 321; Gaz. vol. 136; p. 267.
Gun, Air-. B. B. Bennett. No. 897,813; Sept. 1; Sp. p. 1163; Dr. p. 248; Gaz. vol. 136; p. 185.
Gun-sight. J. Y. Bassell and F. C. Blenkner. No. 899,020; Sept. 22; Sp. p. 3524; Dr. p. 754; Gaz. vol. 136; p. 666.
Gun-sighting apparatus. A. T. Dawson and G. T. Buckham. No. 899,207; Sept. 22; Sp. p. 3885; Dr. p. 830; Gaz. vol. 136; p. 727.
Gun, Trap-. W. J. Wheeler. No. 898,023; Sept. 8; Sp. p. 1630; Dr. p. 347; Gaz. vol. 136; p. 286.
Guns, Brake mechanism for recoiling. A. T. Dawson and G. T. Buckham. No. 899,206; Sept. 22; Sp. p. 3882; Dr. p. 829; Gaz. vol. 136; p. 727.
Guns, Breech mechanism of. A. T. Dawson and G. T. Buckham. No. 898,840; Sept. 15; Sp. p. 3188; Dr. pp. 682–3; Gaz. vol. 136; p. 579.
Guns, Recoil apparatus for. A. T. Dawson and G. T. Buckham. No. 897,821; Sept. 1; Sp. p. 1181; Dr. p. 250; Gaz. vol. 136; p. 187.
Hair crimper and curler. P. E. Oswald. No. 898,063; Sept. 8; Sp. p. 1708; Dr. p. 362; Gaz. vol. 136; p. 299.
Hair-drier. M. Thome. No. 897,675; Sept. 1; Sp. p. 878; Dr. p. 188; Gaz. vol. 136; p. 140.
Hair-drying comb. T. H. Furman. No. 899,038; Sept. 22; Sp. p. 3551; Dr. p. 760; Gaz. vol. 136; p. 671.
Hair-pin holder, Sanitary. B. E. Stephens. No. 897,672; Sept. 1; Sp. p. 874; Dr. p. 187; Gaz. vol. 136; p. 139.
Hair-retaining comb. W. B. Fisk. No. 899,162; Sept. 22; Sp. p. 3801; Dr. p. 813; Gaz. vol. 136; p. 713.
Hair-waver. J. H. and I. Taylor. No. 897,323; Sept. 1; Sp. p. 135; Dr. p. 28; Gaz. vol. 136; p. 21.
Halter. T. W. Weber. No. 897,329; Sept. 1; Sp. p. 154; Dr. p. 31; Gaz. vol. 136; p. 24.
Halter, Rope. C. Walker. No. 897,555; Sept. 1; Sp. p. 699; Dr. p. 140; Gaz. vol. 136; p. 105.
Hame-fastener. F. W. Napierala. No. 899,890; Sept. 29; Sp. p. 5270; Dr. p. 1127; Gaz. vol. 136; p. 984.
Hammer-drill. A. H. Taylor. No. 898,702; Sept. 15; Sp. p. 2941; Dr. p. 630; Gaz. vol. 136; p. 535.
Hammer, Magazine tack-. N. M. Purviance. No. 897,399; Sept. 1; Sp. p. 327; Dr. p. 69; Gaz. vol. 136; p. 50.
Hammer, Pneumatic. J. Boyer. No. 897,958; Sept. 8; Sp. p. 1489; Dr. p. 317; Gaz. vol. 136; p. 265.
Hammer, Pneumatic. T. C. Prouty. No. 898,505; Sept. 15; Sp. p. 2549; Dr. p. 547; Gaz. vol. 136; p. 471.
Handle: *See* Brake-handle; Malleable handle; Mattress-handle; Saw-handle; Valve-handle.
Hanger: *See* Clothes-hanger; Coat-hanger; Coat and adjustable skirt hanger; Door-hanger; Garment-hanger; Lamp-hanger; Picture-hanger; Track-hanger; Trolley-wire hanger; Vehicle-body hanger.
Harness, Crupper-fastener for. J. E. Varnum. No. 899,576; Sept. 29; Sp. p. 4612; Dr. p. 991; Gaz. vol. 136; p. 883.
Harness-pad. E. J. Koch. No. 897,629; Sept. 1; Sp. p. 793; Dr. p. 167; Gaz. vol. 136; p. 126.
Harrow. E. S. Kinkade. No. 897,935; Sept. 8; Sp. p. 1364; Dr. p. 293; Gaz. vol. 136; p. 247.
Harrow. F. R. Sosa. No. 898,695; Sept. 15; Sp. p. 2932; Dr. pp. 627–8; Gaz. vol. 136; p. 533.
Harvester. C. F. Blakeslee. No. 899,944; Sept. 29; Sp. p. 5394; Dr. p. 1151; Gaz. vol. 136; p. 1001.
Harvester bunching device. W. H. Wilder. No. 898,161; Sept. 8; Sp. p. 1893; Dr. p. 405; Gaz. vol. 136; p. 329.
Harvester, Corn-. J. A. Stone. No. 899,142; Sept. 22; Sp. p. 3747; Dr. pp. 803–4; Gaz. vol. 136; p. 706.
Harvester, Cotton-. T. R. and R. D. Hollingsworth. No. 898,893; Sept. 15; Sp. p. 3288; Dr. p. 704; Gaz. vol. 136; p. 597.
Harvester cutter-bar. W. S. Clark. No. 897,818; Sept. 1; Sp. p. 1174; Dr. p. 249; Gaz. vol. 136; p. 186.
Harvester, Pea-. S. Nettleship. No. 897,844; Sept. 1; Sp. p. 1225; Dr. pp. 261–2; Gaz. vol. 136; p. 195.
Harvester, Tilting sidehill-. H. T. Preble and J. W. Payne. No. 899,432; Sept. 22; Sp. p. 4303; Dr. pp. 923–4; Gaz. vol. 136; p. 798.
Hasp. J. Christenson. No. 898,834; Sept. 15; Sp. p. 3178; Dr. p. 680; Gaz. vol. 136; p. 578.
Hasp-lock. C. T. Sleeper. No. 899,138; Sept. 22; Sp. p. 3741; Dr. p. 801; Gaz. vol. 136; p. 705.
Hat-block. C. E. Stevens. No. 899,141; Sept. 22; Sp. p. 3746; Dr. pp. 802–3; Gaz. vol. 136; p. 706.
Hat-brim welting and rounding machine. G. Segschneider. No. 900,001; Sept. 29; Sp. p. 5515; Dr. pp. 1175–6; Gaz. vol. 136; p. 1020.
Hat-fastener. E. Seyfried. No. 899,685; Sept. 29; Sp. p. 4832; Dr. p. 1035; Gaz. vol. 136; p. 916.
Hat or cap. I. Seitzman. No. 899,334; Sept. 22; Sp. p. 4134; Dr. p. 885; Gaz. vol. 136; p. 767.
Hat-pin. G. H. Ekstrom. No. 897,727; Sept. 1; Sp. p. 986; Dr. p. 210; Gaz. vol. 136; p. 158.
Hat-pin. J. D. Banks. No. 898,422; Sept. 15; Sp. p. 2386; Dr. p. 510; Gaz. vol. 136; p. 446.
Hat-pin. W. Goldenberg. No. 898,873; Sept. 15; Sp. p. 3253; Dr. p. 696; Gaz. vol. 136; p. 591.
Hats, Manufacture of one-piece felt. F. J. Muhlfeld. No. 899,887; Sept. 29; Sp. p. 5263; Dr. p. 1126; Gaz. vol. 136; p. 983.
Hay and cattle rack. A. J. Miller. No. 899,315; Sept. 22; Sp. p. 4105; Dr. p. 877; Gaz. vol. 136; p. 761.
Hay-carrier. M. Thurston. No. 899,688; Sept. 29; Sp. p. 4836; Dr. p. 1036; Gaz. vol. 136; p. 917.
Hay-rack. C. Gillson. No. 897,363; Sept. 1; Sp. p. 249; Dr. pp. 51–2; Gaz. vol. 136; p. 37.
Hay-rake, Combined center-delivery and dumping. J. H. Lunsford. No. 898,240; Sept. 8; Sp. p. 2051; Dr. pp. 435–6; Gaz. vol. 136; p. 354.
Heat-retainer and drip-pan. E. C. Reiter. No. 897,928; Sept. 8; Sp. p. 1421; Dr. p. 303; Gaz. vol. 136; p. 255.
Heater: *See* Auxiliary heater; Barrel-heater; Base-board heater; Electric heater; Incubator-heater; Lunch-heater; Water-heater.
Heater. C. E. Varnum. No. 898,613; Sept. 15; Sp. p. 2763; Dr. p. 590; Gaz. vol. 136; p. 506.
Heater. A. L. Leonard. No. 899,546; Sept. 29; Sp. p. 4555; Dr. p. 979; Gaz. vol. 136; p. 872.
Heating apparatus. J. N. Young. No. 897,506; Sept. 1; Sp. p. 540; Dr. p. 115; Gaz. vol. 136; p. 87.
Heating-furnace. W. N. Best. No. 899,285; Sept. 22; Sp. p. 4052; Dr. p. 866; Gaz. vol. 136; p. 752.
Heating system. E. N. Fairchild. No. 897,609; Sept. 1; Sp. p. 761; Dr. p. 160; Gaz. vol. 136; p. 120.
Heating system. H. Salmon. No. 899,078; Sept. 22; Sp. p. 3624; Dr. p. 776; Gaz. vol. 136; p. 684.
Heating system. A. G. Paul. No. 899,838; Sept. 29; Sp. p. 5157; Dr. p. 1104; Gaz. vol. 136; p. 967.
Heating system. A. G. Paul. No. 899,839; Sept. 29; Sp. p. 5161; Dr. p. 1105; Gaz. vol. 136; p. 968.
Heating system, Automatic steam-. F. Grote. No. 897,739; Sept. 1; Sp. p. 1005; Dr. p. 214; Gaz. vol. 136; p. 162.
Heel-cushion. M. Byrne. No. 897,874; Sept. 8; Sp. p. 1292; Dr. p. 276; Gaz. vol. 136; p. 236.
Heel-making machine. J. L. Rakerd. No. 898,680; Sept. 15; Sp. p. 2904; Dr. pp. 621–2; Gaz. vol. 136; p. 528.
Heel-plate. J. Liden. No. 898,118; Sept. 8; Sp. p. 1812; Dr. p. 384; Gaz. vol. 136; p. 316.
Heel-protector. I. Lincoln. No. 898,233; Sept. 8; Sp. p. 2040; Dr. p. 433; Gaz. vol. 136; p. 352.
Height-increaser, heel-cushion, and stocking-protector, Combination. L. W. Litch. No. 898,120; Sept. 8; Sp. p. 1814; Dr. p. 385; Gaz. vol. 136; p. 316.
Hinge. R. P. Hawley. No. 898,360; Sept. 8; Sp. p. 2253; Dr. p. 480; Gaz. vol. 136; p. 391.
Hinge. H. M. Herr. No. 898,647; Sept. 15; Sp. p. 2840; Dr. p. 606; Gaz. vol. 136; p. 518.
Hinge, Box-. A. H. Weiss. No. 899,818; Sept. 29; Sp. p. 5126; Dr. p. 1096; Gaz. vol. 136; p. 962.
Hinge, Double-acting spring-. E. Bommer. No. 898,031; Sept. 8; Sp. p. 1645; Dr. p. 350; Gaz. vol. 136; p. 288.
Hinge for day-gates, Gravitating. F. W. Rodler. No. 898,005; Sept. 8; Sp. p. 1578; Dr. p. 337; Gaz. vol. 136; p. 280.
Hinge, Gate-. I. Lester. No. 897,296; Sept. 1; Sp. p. 52; Dr. p. 12; Gaz. vol. 136; p. 12.
Hinge-seat gage. H. C. Bunting. No. 899,947; Sept. 29; Sp. p. 5402; Dr. p. 1152; Gaz. vol. 136; p. 1002.
Hinge-support. T. Settle. No. 898,933; Sept. 15; Sp. p. 3353; Dr. p. 720; Gaz. vol. 136; p. 610.
Hoe. W. A. Sparks. No. 898,521; Sept. 15; Sp. p. 2586; Dr. p. 552; Gaz. vol. 136; p. 477.

Hoe, Adjustable. W. T. Hammett. No. 899,291; Sept. 29; Sp. p. 5075; Dr. p. 1086; Gaz. vol. 136; p. 953.
Hog grapple and conveyer. W. D. Farrell. No. 899,391; Sept. 22; Sp. p. 4229; Dr. p. 905; Gaz. vol. 136; p. 785.
Hog-hoisting apparatus. T. D. Foster. No. 898,209; Sept. 8; Sp. p. 1979; Dr. p. 422; Gaz. vol. 136; p. 344.
Hog-trap. R. W. and B. W. Purcell. No. 899,901; Sept. 29; Sp. p. 5290; Dr. p. 1131; Gaz. vol. 136; p. 988.
Hoist, Chain. J. J. Stosick. No. 897,560; Sept. 1; Sp. p. 658; Dr. p. 138; Gaz. vol. 136; p. 103.
Hoist, Electric. G. Rasmus. No. 898,782; Sept. 15; Sp. p. 3084; Dr. p. 660; Gaz. vol. 136; p. 560.
Hoisting-apparatus controlling device. C. Notbohm and H. Elgemann. No. 899,794; Sept. 29; Sp. p. 5083; Dr. pp. 1087–8; Gaz. vol. 136; p. 954.
Hoisting-machine. W. M. Brown. No. 897,581; Sept. 1; Sp. p. 699; Dr. p. 147; Gaz. vol. 136; p. 110.
Holdback or breeching strap. G. F. Rice. No. 897,557; Sept. 1; Sp. p. 654; Dr. p. 137; Gaz. vol. 136; p. 102.
Holder. E. L. Lloyd. No. 899,311; Sept. 22; Sp. p. 4099; Dr. p. 876; Gaz. vol. 136; p. 760.
Hook: *See* Automatic hook; Check-hook; Snap-hook; Swingletree-hook.
Hook and eye. J. F. Schoeppl. No. 898,069; Sept. 8; Sp. p. 1716; Dr. p. 369; Gaz. vol. 136; p. 300.
Hook and eye. W. G. Hoffman. No. 898,891; Sept. 15; Sp. p. 3285; Dr. p. 703; Gaz. vol. 136; p. 597.
Hook and eye. N. K. Small. No. 898,936; Sept. 15; Sp. p. 3359; Dr. p. 721; Gaz. vol. 136; p. 611.
Hook and eye. W. Wolf. No. 899,369; Sept. 22; Sp. p. 4196; Dr. p. 899; Gaz. vol. 136; p. 778.
Hook-and eye mount. H. C. Goodrich. No. 899,664; Sept. 29; Sp. p. 4793; Dr. p. 1026; Gaz. vol. 136; p. 910.
Hooks and eyes to tape, &c., Apparatus for attaching. W. M. Corthell. No. 898,558; Sept. 15; Sp. p. 2665; Dr. p. 570; Gaz. vol. 136; p. 489.
Horse-blanket fastening. J. Reichert. No. 898,924; Sept. 15; Sp. p. 3340; Dr. p. 716; Gaz. vol. 136; p. 607.
Horse checking and unchecking apparatus. H. A. Clemens. No. 897,875; Sept. 8; Sp. p. 1293; Dr. 276; Gaz. vol. 136; p. 236.
Horse-detacher. M. J. La Brake. No. 899,223; Sept. 22; Sp. p. 3909; Dr. p. 835; Gaz. vol. 136; p. 732.
Horseshoe. M. J. Leachey. No. 898,488; Sept. 15; Sp. p. 2519; Dr. p. 539; Gaz. vol. 136; p. 466.
Horseshoe. C. W. Laird. No. 899,417; Sept. 22; Sp. p. 4276; Dr. p. 917; Gaz. vol. 136; p. 793.
Horseshoe. W. E. Spafford. No. 899,631; Sept. 29; Sp. p. 4740; Dr. p. 1015; Gaz. vol. 136; p. 900.
Horseshoe attachment. H. D. Hovis. No. 898,895; Sept. 15; Sp. p. 3291; Dr. p. 704; Gaz. vol. 136; p. 598.
Horseshoe-calk, Removable. I. S. Brassington. No. 898,032; Sept. 8; Sp. p. 1648; Dr. p. 351; Gaz. vol. 136; p. 289.
Hose and garment supporter. E. S. Dorman. No. 899,484; Sept. 22; Sp. p. 4404; Dr. p. 945; Gaz. vol. 136; p. 815
Hose and pipe coupling. W. Eisenmann. No. 898,199; Sept. 8; Sp. p. 1905; Dr. p. 409; Gaz. vol. 136; p. 341.
Hose-clamp tool. G. E. Burtscher. No. 899,057; Sept. 29; Sp. p. 4778; Dr. p. 1022; Gaz. vol. 136; p. 908.
Hose-coupling. W. B. Steen. No. 898,017; Sept. 8; Sp. p. 1607; Dr. p. 343; Gaz. vol. 136; p. 284.
Hose-nozzle. J. H. Melavin. No. 898,759; Sept. 15; Sp. p. 3038; Dr. p. 652; Gaz. vol. 136; p. 552.
Hose-nozzle cart. E. J. Petru and J. Zidek. No. 897,395; Sept. 1; Sp. p. 315; Dr. pp. 65–7; Gaz. vol. 136; p. 48.
Hose-rack. C. Nuhring. No. 899,465; Sept. 22; Sp. p. 4365; Dr. p. 937; Gaz. vol. 136; p. 808.
Hose, Woven. C. Alvord. No. 899,092; Sept. 22; Sp. p. 3642; Dr. p. 781; Gaz. vol. 136; p. 689.
Hot-box cooler and oiler. N. E. Barnes. No. 899,939; Sept. 29; Sp. p. 5385; Dr. p. 1149; Gaz. vol. 136; p. 1000.
House: *See* Bag-house.
Hub-attaching device. C. H. Soper. No. 899,346; Sept. 22; Sp. p. 4154; Dr. p. 889; Gaz. vol. 136; p. 771.
Hub box, Buggy-. J. L. Porter. No. 899,900; Sept. 29; Sp. p. 5289; Dr. p. 1130; Gaz. vol. 136; p. 988.
Hulling and cleaning device, Combined. G. A. Huber. No. 899,301; Sept. 22; Sp. p. 4077; Dr. p. 871; Gaz. vol. 136; p. 757.
Hydrant, Combination fresh and salt water. F. Malloye. No. 897,755; Sept. 1; Sp. p. 1038; Dr. p. 220; Gaz. vol. 136; p. 167.
Hydraulic elevator. T. Larsson. No. 899,224; Sept. 22; Sp. p. 3911; Dr. pp. 835–6; Gaz. vol. 136; p. 732.
Hydraulic motor. W. R. Clarkson. No. 897,902; Sept. 8; Sp. p. 1509; Dr. pp. 319–20; Gaz. vol. 136; p. 266.
Hydraulic press. T. E. Holmes. No. 898,365; Sept. 8; Sp. p. 2267; Dr. pp. 481–2; Gaz. vol. 136; p. 395.
Hydrocarbon-burner. A. Beler. No. 899,003; Sept. 15; Sp. p. 3475; Dr. p. 744; Gaz. vol. 136; p. 632.
Ice-cream freezer. J. H. Hart. No. 898,048; Sept. 8; Sp. p. 1672; Dr. p. 355; Gaz. vol. 136; p. 293.
Ice-cream freezer. T. L. Valerius. No. 899,925; Sept. 29; Sp. p. 5337; Dr. p. 1140; Gaz. vol. 136; p. 995.
Ice-cream freezer. T. L. Valerius. No. 899,926; Sept. 29; Sp. p. 5340; Dr. p. 1140; Gaz. vol. 136; p. 995.
Ice-cream freezer. T. L. Valerius. No. 899,928; Sept. 29; Sp. p. 5352; Dr. pp. 1142–3; Gaz. vol. 136; p. 996.
Ice-cutting machine. H. K. Burnett and G. H. Bahret. No. 899,825; Sept. 29; Sp. p. 5137; Dr. p. 1099; Gaz. vol. 136; p. 964.
Ice-cutting tool. J. G. Bolenstein. No. 898,306; Sept. 8; Sp. p. 2163; Dr. p. 459; Gaz. vol. 136; p. 374.
Ice plants, Electric recorder for. W. D. Cain and W. H. Williams. No. 898,313; Sept. 8; Sp. p. 2173; Dr. p. 461; Gaz. vol. 136; p. 376.
Ice-walker. W. S. Paulson. No. 899,065; Sept. 22; Sp. p. 3593; Dr. p. 769; Gaz. vol. 136; p. 679.
Igniter. E. E. Buttles. No. 899,950; Sept. 29; Sp. p. 5406; Dr. p. 1153; Gaz. vol. 136; p. 1003.
Ignition-controlling apparatus. C. Mitchell, Jr. No. 899,751; Sept. 29; Sp. p. 4974; Dr. p. 1066; Gaz. vol. 136; p. 939.
Illuminating apparatus. J. Schmidt. No. 898,607; Sept. 15; Sp. p. 2752; Dr. p. 588; Gaz. vol. 136; p. 504.
Implement, Combination. O. Kampfe. No. 899,408; Sept. 22; Sp. p. 4263; Dr. p. 915; Gaz. vol. 136; p. 790.
Implement, Pocket. O. Kampfe. No. 899,407; Sept. 22; Sp. p. 4262; Dr. p. 914; Gaz. vol. 136; p. 790.
Impregnator. F. B. Graham. No. 899,728; Sept. 29; Sp. p. 4916; Dr. p. 1055; Gaz. vol. 136; p. 930.
Incubator. G. Kutz. No. 898,229; Sept. 8; Sp. p. 2032; Dr. p. 431; Gaz. vol. 136; p. 350.
Incubator. L. S. Bache. No. 898,301; Sept. 8; Sp. p. 2156; Dr. p. 458; Gaz. vol. 136; p. 372.
Incubator-heater. M. J. Spicer. No. 899,347; Sept. 22; Sp. p. 4156; Dr. p. 889; Gaz. vol. 136; p. 771.
Index. E. Davis. No. 897,600; Sept. 1; Sp. p. 739; Dr. p. 156; Gaz. vol. 136; p. 117.
Index and filing system. J. F. Dunleavy. No. 897,604; Sept. 1; Sp. p. 745; Dr. p. 158; Gaz. vol. 136; p. 118.
Indicator: *See* Engine-indicator; Pressure-indicator.
Indicator. W. O. Haymond and J. O. Potter. No. 898,643; Sept. 15; Sp. p. 2835; Dr. p. 605; Gaz. vol. 136; p. 516.
Indicator. N. C. Forbus. No. 899,966; Sept. 29; Sp. p. 5436; Dr. p. 1159; Gaz. vol. 136; p. 1009.
Ingot-manipulator. D. L. Mekeel. No. 899,882; Sept. 29; Sp. p. 5145; Dr. p. 1101; Gaz. vol. 136; p. 966.
Ingots free from blow-holes, Producing. W. F. M. McCarty. No. 898,770; Sept. 15; Sp. p. 3064; Dr. pp. 656–7; Gaz. vol. 136; p. 557.
Ingots, Making. F. Cutter. No. 899,827; Sept. 29; Sp. p. 5140; Dr. p. 1100; Gaz. vol. 136; p. 964.
Ingots, plates, sheets, tubes, wires, and like products, Making bimetallic. J. F. Monnot. No. 897,842; Sept. 1; Sp. p. 1222; Dr. p. 261; Gaz. vol. 136; p. 194.
Insect-destroyer. J. M. Murff. No. 898,909; Sept. 15; Sp. p. 3311; Dr. pp. 709–10; Gaz. vol. 136; p. 602.
Insect-exterminator. G. T. Patten. No. 897,650; Sept. 1; Sp. p. 825; Dr. p. 173; Gaz. vol. 136; p. 132.
Insect-trap. T. A. Duggan. No. 898,852; Sept. 15; Sp. p. 3211; Dr. p. 688; Gaz. vol. 136; p. 584.
Insects and other vermin, Means for exterminating. G. A. H. Muller. No. 897,919; Sept. 8; Sp. p. 1401; Dr. p. 298; Gaz. vol. 136; p. 253.
Insects and other vermin, Means for exterminating. G. A. H. Muller. No. 897,988; Sept. 8; Sp. p. 1552; Dr. p. 329; Gaz. vol. 136; p. 275.
Insulated gage-plate. E. J. Clark. No. 898,027; Sept. 8; Sp. p. 1655; Dr. p. 352; Gaz. vol. 136; p. 290.
Insulating-coupling. H. Ashbaugh. No. 897,700; Sept. 1; Sp. p. 932; Dr. p. 197; Gaz. vol. 136; p. 149.
Insulator. F. J. Siegwart. No. 897,669; Sept. 1; Sp. p. 871; Dr. p. 186; Gaz. vol. 136; p. 139.
Insulator. T. F. Purves and J. Sinnott. No. 898,921; Sept. 15; Sp. p. 3335; Dr. p. 715; Gaz. vol. 136; p. 606.
Insulator for armature-conductors. A. R. Locke. No. 899,059; Sept. 22; Sp. p. 3584; Dr. p. 768; Gaz. vol. 136; p. 677.
Intercooler. F. D. Holdsworth. No. 898,303; Sept. 8; Sp. p. 2261; Dr. p. 481; Gaz. vol. 136; p. 392.
Internal-combustion engine. H. J. Leighton. No. 898,117; Sept. 8; Sp. p. 1811; Dr. p. 384; Gaz. vol. 136; p. 315.
Internal-combustion engine. D. Roberts. No. 898,139; Sept. 8; Sp. p. 1853; Dr. pp. 395–6; Gaz. vol. 136; p. 322.
Internal-combustion engine. C. N. Scott. No. 898,271; Sept. 8; Sp. p. 2094; Dr. pp. 445–6; Gaz. vol. 136; p. 363.
Internal-combustion engine. C. E. Shadall. No. 899,136; Sept. 22; Sp. p. 3734; Dr. p. 800; Gaz. vol. 136; p. 704.
Internal-combustion engine. W. Rabsilber. No. 899,186; Sept. 22; Sp. p. 3845; Dr. pp. 822–3; Gaz. vol. 136; p. 720.
Internal-combustion engine. T. W. Hendry. No. 899,216; Sept. 22; Sp. p. 3901; Dr. p. 833; Gaz. vol. 136; p. 730.
Internal-combustion engine. S. A. Reeve. No. 899,842; Sept. 29; Sp. p. 5168; Dr. pp. 1107–8; Gaz. vol. 136; p. 969.
Iron: *See* Chair-iron; Flat-iron; Sad-iron; Smelting iron.
Iron and steel therefrom, Treating ferruginous ore for the manufacture of. M. Moore and T. J. Heskett. (Reissue.) No. 12,856; Sept. 22; Sp. p. 4425; Dr. p. 950; Gaz. vol. 136; p. 819.
Iron and tin compounds from tin-plate scrap, Preparing merchantable. E. A. Sperry. No. 897,796; Sept. 1; Sp. p. 1115; Dr. pp. 239–40; Gaz. vol. 136; p. 179.
Iron, Device for cutting figured. J. Krüger. No. 897,984; Sept. 8; Sp. p. 1545; Dr. p. 328; Gaz. vol. 136; p. 273.
Iron, Refining. S. B. Sheldon. No. 898,513; Sept. 15; Sp. p. 2569; Gaz. vol. 136; p. 474.
Ironing-board. B. T. Ward. No. 898,707; Sept. 15; Sp. p. 2949; Dr. p. 632; Gaz. vol. 136; p. 536.
Ironing-board. M. B. Wonsmos and J. P. Schonboe. No. 899,091; Sept. 22; Sp. p. 3640; Dr. p. 780; Gaz. vol. 136; p. 688.
Ironing-board cloth attachment. J. Michael. No. 899,675; Sept. 29; Sp. p. 4818; Dr. p. 1031; Gaz. vol. 136; p. 913.
Irrigating device. M. D. McFarlane. No. 898,984; Sept. 15; Sp. p. 3442; Dr. p. 738; Gaz. vol. 136; p. 626.
Jack: *See* Lifting-jack; Screw-jack; Smoke-jack.
Jack. W. F. McCullock. No. 897,644; Sept. 1; Sp. p. 814; Dr. p. 171; Gaz. vol. 136; p. 130.
Jar: *See* Battery-jar.
Jar and cover holder. J. N. Davis. No. 899,031; Sept. 22; Sp. p. 3543; Dr. p. 758; Gaz. vol. 136; p. 669.
Jar-lid clamp. F. R. Schriver. No. 897,790; Sept. 1; Sp. p. 1107; Dr. p. 237; Gaz. vol. 136; p. 177.

Jar-opener. M. Sarvalla and W. W. Smith. No. 899,683; Sept. 29; Sp. p. 4830; Dr. p. 1034; Gaz. vol. 136; p. 916.
Jewel, Butterfly-. W. D. and R. W. Denton. No. 897,274; Sept. 1; Sp. p. 23; Dr. p. 6; Gaz. vol. 136; p. 6.
Jewelry safety-catch. E. Liebert. No. 897,470; Sept. 1; Sp. p. 472; Dr. p. 101; Gaz. vol. 136; p. 75.
Joint: *See* Pipe-joint; Rail-joint; Railway-rail joint; Roof-joint; Roofing-material joint; Sheet-metal-vessel joint; Universal joint.
Keg form and table, Rotary setting-up. F. C. Schnitz. No. 899,191; Sept. 22; Sp. p. 3856; Dr. p. 825; Gaz. vol. 136; p. 722.
Kettle-tilter. E. Mousseau. No. 897,477; Sept. 1; Sp. p. 484; Dr. p. 103; Gaz. vol. 136; p. 77.
Key: *See* Party-line-indicating key.
Key-guard. N. Pellow. No. 899,801; Sept. 29; Sp. p. 5097; Dr. p. 1090; Gaz. vol. 136; p. 956.
Key-ring and door-securer. L. M. Cooper. No. 898,725; Sept. 15; Sp. p. 2978; Dr. p. 638; Gaz. vol. 136; p. 542.
Keyhole-guard and key-lock. E. L. Medler. No. 897,473; Sept. 1; Sp. p. 475; Dr. p. 101; Gaz. vol. 136; p. 76.
Kiln: *See* Malt-kiln.
Kiln. J. W. Le Gore. No. 898,902; Sept. 15; Sp. p. 3299; Dr. p. 707; Gaz. vol. 136; p. 600.
Kiln. H. W. Croft and O. M. Relf. No. 899,714; Sept. 29; Sp. p. 4885; Dr. pp. 1048–9; Gaz. vol. 136; p. 925.
Kilns, Coal-burner for cement-. J. H. O'Donnell and H. McClafferty. No. 898,131; Sept. 8; Sp. p. 1838; Dr. p. 391; Gaz. vol. 136; p. 320.
Kinetoscope. G. A. Knaak. No. 899,543; Sept. 29; Sp. p. 4548; Dr. pp. 977–8; Gaz. vol. 136; p. 871.
Kitchen utensil. A. B. Westrup. No. 899,365; Sept. 22; Sp. p. 4193; Dr. p. 897; Gaz. vol. 136; p. 777.
Knife: *See* Calciminer's knife.
Knit cap, Flat. N. E. Kahn. No. 898,376; Sept. 8; Sp. p. 2288; Dr. p. 487; Gaz. vol. 136; p. 397.
Knit fabric. J. McNamee. No. 898,985; Sept. 15; Sp. p. 3443; Dr. p. 739; Gaz. vol. 136; p. 626.
Knitted web, hosiery made therefrom, and making same, Narrowed-. R. W. Scott. No. 897,496; Sept. 1; Sp. p. 522; Dr. p. 111; Gaz. vol. 136; p. 83.
Knitted web, Ribbed. R. W. Scott. No. 899,439; Sept. 22; Sp. p. 4312; Dr. p. 926; Gaz. vol. 136; p. 799.
Knitting machine, Circular-. H. A. Houseman. No. 898,110; Sept. 8; Sp. p. 1795; Dr. p. 381; Gaz. vol. 136; p. 313.
Knob for pot-covers, Cold. H. C. Parkinson. No. 899,200; Sept. 22; Sp. p. 4015; Dr. p. 857; Gaz. vol. 136; p. 745.
Knockdown box or crate. L. McMullen. No. 898,062; Sept. 8; Sp. p. 1707; Dr. pp. 361–2; Gaz. vol. 136; p. 298.
Knockdown chair. B. W. Middleton. No. 898,668; Sept. 15; Sp. p. 2875; Dr. p. 615; Gaz. vol. 136; p. 524.
Labeling-machine. M. E. Noyes. No. 897,845; Sept. 1; Sp. p. 1227; Dr. pp. 262–4; Gaz. vol. 136; p. 195.
Labeling-machine. E. P. Sayre. No. 897,933; Sept. 8; Sp. p. 1431; Dr. p. 306; Gaz. vol. 136; p. 256.
Labels or the like, Holder for. W. O'Leary. No. 897,996; Sept. 8; Sp. p. 1566; Dr. p. 333; Gaz. vol. 136; p. 278.
Laboratory apparatus, Electrical. C. H. Thordarson. No. 898,529; Sept. 15; Sp. p. 2602; Dr. p. 555; Gaz. vol. 136; p. 479.
Lacing-fastening. W. W. Munsell. No. 899,888; Sept. 29; Sp. p. 5266; Dr. p. 1127; Gaz. vol. 136; p. 984.
Lacing-hook-setting machine. J. E. Perrault. No. 899,067; Sept. 22; Sp. p. 3596; Dr. p. 770; Gaz. vol. 136; p. 680.
Lacing-hook-setting machine. W. Simpson and W. C. Bray. No. 899,137; Sept. 22; Sp. p. 3737; Dr. pp. 800–1; Gaz. vol. 136; p. 704.
Ladder attachment. E. J. Curran. No. 898,973; Sept. 15; Sp. p. 3423; Dr. p. 735; Gaz. vol. 136; p. 623.
Ladder, Collapsible step-. J. M. Turner. No. 898,706; Sept. 15; Sp. p. 2946; Dr. p. 631; Gaz. vol. 136; p. 536.
Ladders, Detachable shelf for step-. G. H. Ridout. No. 897,929; Sept. 8; Sp. p. 1422; Dr. p. 304; Gaz. vol. 136; p. 255.
Lamp and the like, Marine signaling-. H. Endall. No. 897,823; Sept. 1; Sp. p. 1184; Dr. p. 251; Gaz. vol. 136; p. 188.
Lamp, Electric-arc. P. M. Capitaine. No. 897,940; Sept. 8; Sp. p. 1506; Dr. p. 319; Gaz. vol. 136; p. 266.
Lamp, Electric-arc. R. E. Leve. No. 898,052; Sept. 8; Sp. p. 1680; Dr. p. 356; Gaz. vol. 136; p. 295.
Lamp-extinguisher, Automatic. E. Brusseau. No. 897,712; Sept. 1; Sp. p. 952; Dr. p. 204; Gaz. vol. 136; p. 153.
Lamp-fount-attaching device. W. T. Jones. No. 900,020; Sept. 29; Sp. p. 5555; Dr. p. 1183; Gaz. vol. 136; p. 1026.
Lamp, Gas-. C. W. Boyse. No. 898,312; Sept. 8; Sp. p. 2171; Dr. p. 461; Gaz. vol. 136; p. 375.
Lamp, Gas-. C. W. Boyse. No. 898,627; Sept. 15; Sp. p. 2798; Dr. p. 598; Gaz. vol. 136; p. 511.
Lamp hanger, Electric-. G. Cutter. No. 897,457; Sept. 1; Sp. p. 448; Dr. p. 96; Gaz. vol. 136; p. 71.
Lamp, Incandescent. F. M. Bennett. No. 898,715; Sept. 15; Sp. p. 2962; Dr. p. 635; Gaz. vol. 136; p. 539.
Lamp, Inverted incandescent gas-. M. Graetz. No. 897,616; Sept. 1; Sp. p. 771; Dr. p. 163; Gaz. vol. 136; p. 122.
Lamp, Revolving. C. C. Clifton. No. 898,322; Sept. 8; Sp. p. 2186; Dr. p. 464; Gaz. vol. 136; p. 378.
Lamp socket, Cluster-. C. D. Gervin. No. 897,614; Sept. 1; Sp. p. 768; Dr. p. 162; Gaz. vol. 136; p. 121.
Lamp socket, Incandescent-. W. F. Wegner. No. 897,805; Sept. 1; Sp. p. 1152; Dr. p. 245; Gaz. vol. 136; p. 182.
Lamp-socket, Plural. R. B. Benjamin. No. 898,822; Sept. 15; Sp. p. 3157; Dr. p. 675; Gaz. vol. 136; p. 573.
Lamp-socket, Plural. R. B. Benjamin. No. 898,823; Sept. 15; Sp. p. 3159; Dr. p. 676; Gaz. vol. 136; p. 574.
Lamp-socket, Plural. R. B. Benjamin. No. 898,824; Sept. 15; Sp. p. 3161; Dr. p. 676; Gaz. vol. 136; p. 574.
Lamp-socket, Plural. R. B. Benjamin. No. 898,825; Sept. 15; Sp. p. 3163; Dr. p. 676; Gaz. vol. 136; p. 574.
Lamp-socket, Plural. R. B. Benjamin. No. 898,826; Sept. 15; Sp. p. 3165; Dr. p. 677; Gaz. vol. 136; p. 575.
Lamp, Switchboard signal-. E. B. Craft. No. 899,514; Sept. 29; Sp. p. 4476; Dr. p. 961; Gaz. vol. 136; p. 861.
Lamps, Combined base-ring and bracket for signal-. G. H. Roifes. No. 899,808; Sept. 29; Sp. p. 5108; Dr. p. 1092; Gaz. vol. 136; p. 959.
Lamps, Electrically connecting filaments to supply-wires in electric glow-. H. Kuzel. No. 898,979; Sept. 15; Sp. p. 3433; Gaz. vol. 136; p. 625.
Lamps, Metal filament for electric incandescent. H. Kuzel. No. 898,752; Sept. 15; Sp. p. 3028; Dr. p. 649; Gaz. vol. 136; p. 551.
Lampblack-making apparatus. G. Wegelin. No. 897,439; Sept. 1; Sp. p. 411; Dr. p. 87; Gaz. vol. 136; p. 64.
Lantern, Projecting-. C. M. Lungren. No. 898,054; Sept. 8; Sp. p. 1684; Dr. pp. 357–8; Gaz. vol. 136; p. 295.
Lantern, Tubular. K. L. Stendahl. No. 898,393; Sept. 8; Sp. p. 2315; Dr. pp. 492–3; Gaz. vol. 136; p. 403.
Last. H. F. Loewer. No. 898,664; Sept. 15; Sp. p. 2871; Dr. p. 613; Gaz. vol. 136; p. 523.
Last-block. E. J. Prindle. No. 898,989; Sept. 15; Sp. p. 3456; Dr. p. 740; Gaz. vol. 136; p. 628.
Last-lock. J. T. Harding. No. 898,407; Sept. 8; Sp. p. 2343; Dr. p. 497; Gaz. vol. 136; p. 407.
Lasting-machine. G. H. Clark. No. 897,587; Sept. 1; Sp. p. 709; Dr. p. 149; Gaz. vol. 136; p. 113.
Latch. E. Krafft. No. 897,749; Sept. 1; Sp. p. 1025; Dr. p. 218; Gaz. vol. 136; p. 166.
Latch, Gate-. J. Mason. No. 898,247; Sept. 8; Sp. p. 2062; Dr. p. 438; Gaz. vol. 136; p. 356.
Latch mechanism. P. Behr. No. 897,514; Sept. 1; Sp. p. 563; Dr. p. 118; Gaz. vol. 136; p. 89.
Lathe tool-holder. C. E. Keel. No. 897,625; Sept. 1; Sp. p. 786; Dr. p. 165; Gaz. vol. 136; p. 124.
Lathe with several mandrels, Semi-automatic revolving. M. H. Blancke. No. 900,007; Sept. 29; Sp. p. 5525; Dr. pp. 1177–8; Gaz. vol. 136; p. 1022.
Lathes, Back-rest for turning-. J. T. Meyers. No. 898,589; Sept. 15; Sp. p. 2712; Dr. p. 580; Gaz. vol. 136; p. 498.
Lathing, Metal. W. G. Hurlbert. No. 900,019; Sept. 29; Sp. p. 5554; Dr. p. 1183; Gaz. vol. 136; p. 1026.
Lavatory-support. A. and G. Coons. No. 899,956; Sept. 29; Sp. p. 5415; Dr. p. 1154; Gaz. vol. 136; p. 1005.
Lawn-trimmer. H. Watkins. No. 897,436; Sept. 1; Sp. p. 406; Dr. p. 86; Gaz. vol. 136; p. 63.
Lazy-tong genus, Mechanism of the. H. Tideman. No. 899,769; Sept. 29; Sp. p. 5015; Dr. p. 1075; Gaz. vol. 136; p. 945.
Leg-covering. H. Cohen. No. 898,724; Sept. 15; Sp. p. 2976; Dr. p. 638; Gaz. vol. 136; p. 542.
Legging. G. Ciociola. No. 899,590; Sept. 29; Sp. p. 4641; Dr. p. 986; Gaz. vol. 136; p. 888.
Lemon-squeezer. W. S. Schwartz. No. 898,690; Sept. 15; Sp. p. 2922; Dr. p. 626; Gaz. vol. 136; p. 531.
Lens. G. A. Macbeth. No. 898,665; Sept. 15; Sp. p. 2872; Dr. p. 614; Gaz. vol. 136; p. 523.
Level and compass. A. Carrier. No. 898,092; Sept. 8; Sp. p. 1754; Dr. p. 373; Gaz. vol. 136; p. 307.
Leveling and plumbing attachment, Gravity. G. Durst. No. 898,853; Sept. 15; Sp. p. 3212; Dr. p. 688; Gaz. vol. 136; p. 584.
Lid-holder. G. A. Schwanke. No. 899,627; Sept. 29; Sp. p. 4734; Dr. p. 1013; Gaz. vol. 136; p. 899.
Lid-lifting attachment. T. D. Logue. No. 897,838; Sept. 1; Sp. p. 1217; Dr. p. 260; Gaz. vol. 136; p. 193.
Lid-remover. G. A. Gotchall. No. 898,574; Sept. 15; Sp. p. 2693; Dr. p. 575; Gaz. vol. 136; p. 494.
Life-preserver. H. P. Thorn. No. 899,635; Sept. 29; Sp. p. 4747; Dr. p. 1016; Gaz. vol. 136; p. 901.
Lifter: *See* Window-lifter; Wire-lifter.
Lifting and transporting apparatus. J. Eisner. No. 900,061; Sept. 29; Sp. p. 5657; Dr. p. 1208; Gaz. vol. 136; p. 1040.
Lifting-jack. C. Goble. No. 897,827; Sept. 1; Sp. p. 1192; Dr. pp. 252–3; Gaz. vol. 136; p. 189.
Lifting-jack. F. E. Farnham. No. 899,161; Sept. 22; Sp. p. 3799; Dr. p. 813; Gaz. vol. 136; p. 712.
Light: *See* Track-light.
Light-fixture. A. B. Wilson. No. 897,947; Sept. 8; Sp. p. 1470; Dr. pp. 312–13; Gaz. vol. 136; p. 262.
Light-producing device, Intermitting-. J. C. F. Jürgens. No. 897,981; Sept. 8; Sp. p. 1540; Dr. p. 327; Gaz. vol. 136; p. 272.
Lightning-arrester. C. P. Steinmetz. No. 897,800; Sept. 1; Sp. p. 1143; Dr. p. 243; Gaz. vol. 136; p. 181.
Lightning-arrester. F. P. H. Knight. No. 897,906; Sept. 8; Sp. p. 1366; Dr. p. 293; Gaz. vol. 136; p. 248.
Lime hydrate, Apparatus for the production of. W. Schulthess. No. 897,495; Sept. 1; Sp. p. 519; Dr. pp. 110–11; Gaz. vol. 136; p. 82.
Line-tightener. A. Keck. No. 898,899; Sept. 15; Sp. p. 3296; Dr. p. 705; Gaz. vol. 136; p. 599.
Liquid-applying device. H. G. Campbell. No. 898,963; Sept. 15; Sp. p. 3406; Dr. pp. 731–2; Gaz. vol. 136; p. 620.
Liquid-dispensing apparatus. R. W. Elliott. No. 897,359; Sept. 1; Sp. p. 242; Dr. p. 50; Gaz. vol. 136; p. 35.
Liquid-holding tank, Hot-. C. E. Clisbee. No. 898,196; Sept. 8; Sp. p. 1943; Dr. p. 415; Gaz. vol. 136; p. 337.
Liquid-meter. W. G. Kent. No. 897,904; Sept. 8; Sp. p. 1363; Dr. p. 292; Gaz. vol. 136; p. 247.
Liquids, Apparatus for controlling the flow of. J. W. Cox. No. 897,593; Sept. 1; Sp. p. 722; Dr. pp. 152–3; Gaz. vol. 136; p. 114.
Liquids, Safety device for the mouths of vessels containing volatile combustible. L. Schön. No. 899,911; Sept. 29; Sp. p. 5305; Dr. p. 1134; Gaz. vol. 136; p. 991.

Liquids under pressure, Apparatus for subjecting materials to the action of. L. Détré. No. 898,444; Sept. 15; Sp. p. 2435; Dr. pp. 521–2; Gaz. vol. 136; p. 452.
Listing-machine. J. F. Mays. No. 899,229; Sept. 22; Sp. p. 3920; Dr. pp. 837–8; Gaz. vol. 136; p. 734.
Lixiviator. W. L. Imlay. No. 898,050; Sept. 8; Sp. p. 1677; Dr. p. 356; Gaz. vol. 136; p. 294.
Load-trimmer. J. T. Johnson and W. M. Ray. No. 899,538; Sept. 29; Sp. p. 4528; Dr. p. 973; Gaz. vol. 136; p. 869.
Loader and hauler. B., Sr., and A. Overlack. No. 897,847; Sept. 1; Sp. p. 1234; Dr. p. 264; Gaz. vol. 136; p. 166.
Loading and storing machine. W. E. Hamilton. No. 897,893; Sept. 8; Sp. p. 1329; Dr. pp. 284–7; Gaz. vol. 136; p. 243.
Loading and unloading apparatus. E. E. Barrett. No. 899,095; Sept. 22; Sp. p. 3658; Dr. pp. 783–4; Gaz. vol. 136; p. 690.
Loading apparatus running-gear. F. J. Hassler. No. 899,975; Sept. 29; Sp. p. 5452; Dr. pp. 1162–3; Gaz. vol. 136; p. 1011.
Loading device, Wagon-. R. Pederson. No. 898,501; Sept. 15; Sp. p. 2540; Dr. pp. 544–5; Gaz. vol. 136; p. 470.
Lock: *See* Bicycle-lock; Bridge rail-lock; Cycle-lock; Cylinder-lock; Desk-lock; Door-lock; Hasp-lock; Last-lock; Mail-box signal-lock; Nut-lock; Permutation-lock; Sash-lock; Seal-lock; Switch-lock; Trunk-lock; Whip-lock; Window-lock.
Lock. J. A. Curry. No. 897,597; Sept. 1; Sp. p. 734; Dr. p. 155; Gaz. vol. 136; p. 116.
Lock. T. C. Prouty. No. 897,924; Sept. 8; Sp. p. 1411; Dr. p. 301; Gaz. vol. 136; p. 254.
Lock. W. J. Carroll. No. 898,434; Sept. 15; Sp. p. 2412; Dr. pp. 516–17; Gaz. vol. 136; p. 449.
Lock. H. F. Keil. No. 898,748; Sept. 15; Sp. p. 3020; Dr. p. 647; Gaz. vol. 136; p. 549.
Lock. A. Mercer. No. 898,767; Sept. 15; Sp. p. 3059; Dr. p. 656; Gaz. vol. 136; p. 555.
Lock. S. H. Shank. No. 899,266; Sept. 22; Sp. p. 4024; Dr. pp. 859–60; Gaz. vol. 136; p. 746.
Lock. H. G. Collins. No. 899,955; Sept. 29; Sp. p. 5414; Dr. p. 1154; Gaz. vol. 136; p. 1005.
Lock and latch mechanism, Door. B. Revoir. No. 897,660; Sept. 1; Sp. p. 845; Dr. pp. 178–9; Gaz. vol. 136; p. 136.
Lock construction. H. G. Voight. No. 897,686; Sept. 1; Sp. p. 898; Dr. pp. 192–3; Gaz. vol. 136; p. 144.
Lock construction. H. G. Voight and C. J. Caley. No. 897,802; Sept. 1; Sp. p. 1147; Dr. p. 244; Gaz. vol. 136; p. 181.
Locking device, Electromagnetic. C. O. Peters. No. 897,394; Sept. 1; Sp. p. 313; Dr. p. 65; Gaz. vol. 136; p. 48.
Locking doors and the like, Means for. A. Windsor. No. 897,948; Sept. 8; Sp. p. 1472; Dr. p. 313; Gaz. vol. 136; p. 262.
Locomotive and street-car fender. J. Rebar. No. 897,658; Sept. 1; Sp. p. 839; Dr. p. 177; Gaz. vol. 136; p. 134.
Locomotive, Electric. E. A. Sperry. No. 897,312; Sept. 1; Sp. p. 78; Dr. p. 20; Gaz. vol. 136; p. 17.
Locomotives, Adjustable exhaust for. H. H. Mackey. No. 898,242; Sept. 8; Sp. p. 2054; Dr. p. 436; Gaz. vol. 136; p. 354.
Log hauling and loading machine. E. W. Gerrish. No. 897,613; Sept. 1; Sp. p. 767; Dr. pp. 161–2; Gaz. vol. 136; p. 121.
Log-loading machine. J. R. McGiffert. No. 899,180; Sept. 22; Sp. p. 3834; Dr. pp. 820–1; Gaz. vol. 136; p. 718.
Logger's wire-rope sheave-block. H. J. Littler. No. 898,121; Sept. 8; Sp. p. 1815; Dr. p. 385; Gaz. vol. 136; p. 316;
Loom-dobby. E. H. Ballou. No. 897,568; Sept. 1; Sp. p. 674; Dr. p. 141; Gaz. vol. 136; p. 106.
Loom for the manufacture of tufted or pile fabrics. T. Greenwood. No. 897,528; Sept. 1; Sp. p. 596; Dr. pp. 124–5; Gaz. vol. 136; p. 93.
Loom, Gauze-. A. Hannah. No. 899,973; Sept. 29; Sp. p. 5446; Dr. p. 1161; Gaz. vol. 136; p. 1010.
Loom, Hand school-. B. E. Lindberg. No. 899,310; Sept. 22; Sp. p. 4098; Dr. p. 876; Gaz. vol. 136; p. 760.
Loom harness mechanism. D. Lindsay. No. 897,549; Sept. 1; Sp. p. 633; Dr. p. 130; Gaz. vol. 136; p. 99.
Loom let-off mechanism. J. Nazarian. No. 899,183; Sept. 22; Sp. p. 3839; Dr. p. 821; Gaz. vol. 136; p. 719.
Loom-shuttle tension device. J. E. Hauvette. No. 898,102; Sept. 8; Sp. p. 1778; Dr. pp. 377–8; Gaz. vol. 136; p. 311.
Loom take-up. B. Wehrlen and F. C. Matthews. No. 899,931; Sept. 29; Sp. p. 5306; Dr. p. 1144; Gaz. vol. 136; p. 997.
Loom thread-parting mechanism. A. E. Rhoades. No. 897,404; Sept. 1; Sp. p. 343; Dr. p. 72; Gaz. vol. 136; p. 52.
Loom warp stop-motion. W. Gross. No. 898,358; Sept. 8; Sp. p. 2249; Dr. p. 479; Gaz. vol. 136; page 390.
Loom weft-replenishing mechanism. W. Williamson and J. Collinson. No. 899,586; Sept. 29; Sp. p. 4633; Dr. p. 994; Gaz. vol. 136; p. 886.
Looms, Extension-roll for silk and other. C. Schneider. No. 898,270; Sept. 8; Sp. p. 2093; Dr. p. 445; Gaz. vol. 136; p. 362.
Looms, Filling-end holder for weft-replenishing. J. C. Edwards. No. 897,357; Sept. 1; Sp. p. 222; Dr. p. 47; Gaz. vol. 136; p. 34.
Looms, Filling-end holder for weft-replenishing. M. L. Stone. No. 897,426; Sept. 1; Sp. p. 388; Dr. p. 82; Gaz. vol. 136; p. 60.
Looms, Filling-end holder for weft-replenishing. M. L. Stone. No. 897,427; Sept. 1; Sp. p. 389; Dr. p. 82; Gaz. vol. 136; p. 60.
Looms, Pile-wire supporter for. F. W. Rochelle. No. 898,928; Sept. 15; Sp. p. 3345; Dr. pp. 717–18; Gaz. vol. 136; p. 608.
Looms, Selvage-forming mechanism for short-weft. F. E. Arrouqnier. No. 897,263; Sept. 1; Sp. p. 1; Dr. p. 1; Gaz. vol. 136; p. 3.
Looms, Shuttle-feeler for filling-replenishing. A. E. Rhoades. No. 897,403; Sept. 1; Sp. p. 341; Dr. p. 72; Gaz. vol. 136; p. 52.
Looms, warping-machines, and the like, Mechanical warp stop-motion for weaving-. J. Taylor and E. W. Buckley. No. 897,429; Sept. 1; Sp. p. 392; Dr. pp. 82–4; Gaz. vol. 136; p. 61.
Looping-machine winding attachment. J. P. Barger. No. 899,857; Sept. 29; Sp. p. 5218; Dr. p. 1116; Gaz. vol. 136; p. 975.
Loving-cup. A. Schiekerling. No. 898,142; Sept. 8; Sp. p. 1858; Dr. p. 397; Gaz. vol. 136; p. 323.
Lubricating-cup. C. Stewart. No. 899,352; Sept. 22; Sp. p. 4165; Dr. p. 892; Gaz. vol. 136; p. 773.
Lubricator: *See* Axle-lubricator; Force-feed lubricator; Piston-rod lubricator.
Lubricator. P. Daimler. No. 897,598; Sept. 1; Sp. p. 736; Dr. p. 155; Gaz. vol. 136; p. 116.
Lubricator. R. Davidson. No. 897,599; Sept. 1; Sp. p. 737; Dr. pp. 155–6; Gaz. vol. 136; p. 117.
Lubricator. J. W. Domville. No. 898,448; Sept. 15; Sp. p. 2450; Dr. p. 524; Gaz. vol. 136; p. 454.
Lubricator. J. Noethe. No. 899,892; Sept. 29; Sp. p. 5274; Dr. p. 1128; Gaz. vol. 136; p. 985.
Lunch-box. O. Schmitt. No. 898,143; Sept. 8; Sp. p. 1858; Dr. p. 397; Gaz. vol. 136; p. 323.
Lunch-heater. C. C. Buren. No. 899,026; Sept. 22; Sp. p. 3534; Dr. p. 756; Gaz. vol. 136; p. 668.
Magneto, High-tension. E. B. Jacobson. No. 898,370; Sept. 8; Sp. p. 2279; Dr. pp. 484–5; Gaz. vol. 136; p. 395.
Mail and package collector. P. Martocci. No. 899,881; Sept. 29; Sp. p. 5254; Dr. pp. 1123–4; Gaz. vol. 136; p. 931.
Mail-arranging device. V. G. Anderson. No. 898,164; Sept. 8; Sp. p. 1898; Dr. p. 406; Gaz. vol. 136; p. 330.
Mail-bag catcher. P. F. Bergman and H. W. Grimes. No. 897,265; Sept. 1; Sp. p. 8; Dr. p. 2; Gaz. vol. 136; p. 3.
Mail-bag catcher. W. Robinson. No. 898,265; Sept. 8; Sp. p. 2086; Dr. p. 443; Gaz. vol. 136; p. 361.
Mail-bag catcher and deliverer. J. Wood. No. 898,812; Sept. 15; Sp. p. 3139; Dr. p. 672; Gaz. vol. 136; p. 570.
Mail-bag catching and delivering apparatus. O. O. Ayres. No. 897,443; Sept. 1; Sp. p. 419; Dr. pp. 89–90; Gaz. vol. 136; p. 65.
Mail-bag catching and delivering appliance. W. M. Portee. No. 898,504; Sept. 15; Sp. p. 2547; Dr. pp. 546–7; Gaz. vol. 136; p. 471.
Mail-bag deliverer and catcher. W. H. Rogers. No. 899,074; Sept. 22; Sp. p. 3618; Dr. p. 775; Gaz. vol. 136; p. 683.
Mail-bag-delivering apparatus. A. Thwing. No. 898,157; Sept. 8; Sp. p. 1885; Dr. p. 404; Gaz. vol. 136; p. 328.
Mail-bag-delivery apparatus. A. E. Kaller. No. 898,655; Sept. 15; Sp. p. 2854; Dr. p. 610; Gaz. vol. 136; p. 520.
Mail-bag-delivery apparatus. W. B. De Witt. No. 898,846; Sept. 15; Sp. p. 3199; Dr. pp. 685–6; Gaz. vol. 136; p. 581.
Mail-bag receiving and delivering apparatus. R. G. Cass. No. 897,521; Sept. 1; Sp. p. 583; Dr. p. 121; Gaz. vol. 136; p. 91.
Mail-bags from moving trains, Device for delivering. M. Klos. No. 898,227; Sept. 8; Sp. p. 2030; Dr. p. 430; Gaz. vol. 136; p. 350.
Mail-bags from moving trains, Means for delivering. E. J. Patton. No. 899,894; Sept. 29; Sp. p. 5276; Dr. p. 1128; Gaz. vol. 136; p. 986.
Mail-box. A. B. Rhodes. No. 898,507; Sept. 15; Sp. p. 2555; Dr. p. 548; Gaz. vol. 136; p. 472.
Mail-box. T. W. Anderson. No. 899,781; Sept. 29; Sp. p. 5048; Dr. p. 1062; Gaz. vol. 136; p. 950.
Mail-box coin-receptacle, Rural-. W. Esselburn. No. 898,453; Sept. 15; Sp. p. 2456; Dr. p. 525; Gaz. vol. 136; p. 455.
Mail-box signal-lock. S. Patterson and J. W. Wiseman. No. 898,000; Sept. 8; Sp. p. 1572; Dr. p. 335; Gaz. vol. 136; p. 279.
Mail catcher and deliverer. J. C. Watts. No. 897,803; Sept. 1; Sp. p. 1149; Dr. p. 245; Gaz. vol. 136; p. 182.
Mail-chute. J. W. Cutler. No. 899,156; Sept. 22; Sp. p. 3781; Dr. pp. 809–10; Gaz. vol. 136; p. 710.
Mail-chute. J. W. Cutler. No. 899,157; Sept. 22; Sp. p. 3783; Dr. p. 810; Gaz. vol. 136; p. 711.
Mail-chute. J. W. Cutler. No. 899,158; Sept. 22; Sp. p. 3787; Dr. p. 811; Gaz. vol. 136; p. 711.
Mail-crane. J. Bour. No. 897,268; Sept. 1; Sp. p. 12; Dr. p. 3; Gaz. vol. 136; p. 4.
Mail-delivery apparatus. C. E. Reid and J. Heissenberger. No. 899,903; Sept. 29; Sp. p. 5294; Dr. p. 1132; Gaz. vol. 136; p. 989.
Mail-pouch-catching device. G. M. Foley. No. 898,208; Sept. 8; Sp. p. 1978; Dr. p. 422; Gaz. vol. 136; p. 343.
Mail receiving and delivering apparatus. J. S. Lanier. No. 898,486; Sept. 15; Sp. p. 2514; Dr. p. 538; Gaz. vol. 136; p. 465.
Mail receiving and delivering mechanism. J. S. Lanier. No. 898,487; Sept. 15; Sp. p. 2517; Dr. p. 538; Gaz. vol. 136; p. 466.
Mail-sack catcher. R. H. Millen. No. 899,456; Sept. 22; Sp. p. 4345; Dr. p. 933; Gaz. vol. 136; p. 805.
Mail-sack-exchange mechanism for railways. R. Kersey. No. 899,170; Sept. 22; Sp. p. 3813; Dr. p. 817; Gaz. vol. 136; p. 715.
Mailing or stamping machine. R. D. Simpson. No. 898,609; Sept. 15; Sp. p. 2754; Dr. p. 589; Gaz. vol. 136; p. 505.
Mall for driving posts into the ground. T. R. Beard. No. 897,573; Sept. 1; Sp. p. 684; Dr. p. 143; Gaz. vol. 136; p. 108.
Malleable handle. P. D. Skahen. No. 897,419; Sept. 1; Sp. p. 370; Dr. pp. 77–8; Gaz. vol. 136; p. 58.
Malt-drying apparatus, Green-. J. Elsner and C. Guttwein. No. 899,037; Sept. 22; Sp. p. 3550; Dr. p. 760; Gaz. vol. 136; p. 671.
Malt-kiln. W. H. Prinz. No. 897,781; Sept. 1; Sp. p. 1092; Dr. p. 234; Gaz. vol. 136; p. 175.
Mandrel, Collapsible. T. Hansen. No. 899,580; Sept. 29; Sp. p. 4512; Dr. p. 969; Gaz. vol. 136; p. 867.
Mangle. P. L. Brockardt. No. 897,859; Sept. 1; Sp. p. 1266; Dr. p. 271; Gaz. vol. 136; p. 199.
Mangling-machine. F. W. Denzler. No. 898,344; Sept. 15; Sp. p. 3197; Dr. p. 685; Gaz. vol. 136; p. 581.
Manipulator. J. W. Weber. (Reissue.) No. 12,859; Sept. 29; Sp. p. 5686; Dr. p. 1214; Gaz. vol. 136; p. 1045.
Mantle-ring mold. B. D. Kenney. No. 899,371; Sept. 29; Sp. p. 5241; Dr. p. 1120; Gaz. vol. 136; p. 979.
Manure-loader. F. R. Brown. No. 898,960; Sept. 15; Sp. p. 3399; Dr. pp. 729–30; Gaz. vol. 136; p. 619.
Manure-spreader. F. E. Shields. No. 898,934; Sept. 15; Sp. p. 3355; Dr. pp. 720–1; Gaz. vol. 136; p. 610.
Marble and making the same, Artificial. A. Riesch. No. 897,493; Sept. 1; Sp. p. 516; Gaz. vol. 136; p. 82.
Marker, Land-. G. B. Randolph. No. 898,662; Sept. 15; Sp. p. 2743; Dr. p. 586; Gaz. vol. 136; p. 502.
Masonry-work, Making a composition of matter for. L. A. Tyc and L. N. Benjamin. No. 897,939; Sept. 8; Sp. p. 1448; Gaz. vol. 136; p. 259.

Massaging instrument. J. B. Wantz. No. 899,234; Sept. 22; Sp. p. 3937; Dr. p. 840; Gaz. vol. 136; p. 735.
Match-box. W. Williams. No. 897,693; Sept. 1; Sp. p. 916; Dr. p. 195; Gaz. vol. 136; p. 147.
Match-box. E. B. Nichols. No. 898,914; Sept. 15; Sp. p. 3323; Dr. p. 712; Gaz. vol. 136; p. 604.
Match-box, Single-delivery. E. T. Murray. No. 899,642; Sept. 1; Sp. p. 811; Dr. p. 170; Gaz. vol. 136; p. 129.
Match-making machine. G. P. Loomis. No. 900,029; Sept. 29; Sp. p. 5373; Dr. pp. 1190–2; Gaz. vol. 136; p. 1029.
Match-safe. F. O. Swenson. No. 897,428; Sept. 1; Sp. p. 391; Dr. p. 82; Gaz. vol. 136; p. 61.
Match-safe. E. A. Schneider. No. 897,789; Sept. 1; Sp. p. 1106; Dr. p. 237; Gaz. vol. 136; p. 177.
Matching mechanism. P. E. Donner and M. W. Hogle. No. 897,526; Sept. 1; Sp. p. 589; Dr. pp. 122–4; Gaz. vol. 136; p. 93.
Mattress-handle. C. B. Holding. No. 897,979; Sept. 8; Sp. p. 1537; Dr. p. 326; Gaz. vol. 136; p. 272.
Measure, Liquid-. C. L. Tate. No. 898,701; Sept. 15; Sp. p. 2939; Dr. p. 630; Gaz. vol. 136; p. 535.
Measure, Tape-. W. Chesterman. No. 898,320; Sept. 8; Sp. p. 2185; Dr. p. 463; Gaz. vol. 136; p. 378.
Measuring and transferring tube, Liquid. O. T. Farnham. No. 898,456; Sept. 15; Sp. p. 2460; Dr. p. 526; Gaz. vol. 136; p. 456.
Measuring apparatus, Automatic electrical. D. J. Shine. No. 899,193; Sept. 22; Sp. p. 3859; Dr. p. 825; Gaz. vol. 136; p. 722.
Measuring device. O. E. Dickeson. No. 897,458; Sept. 1; Sp. p. 450; Dr. p. 96; Gaz. vol. 136; p. 71.
Measuring device. E. J. Mezger. No. 897,987; Sept. 8; Sp. p. 1549; Dr. p. 329; Gaz. vol. 136; p. 274.
Measuring device for dressmakers and the like. J. Pohle. No. 899,802; Sept. 29; Sp. p. 5098; Dr. p. 1090; Gaz. vol. 136; p. 956.
Measuring device, Garment-. I. M. R. Campbell. No. 899,785; Sept. 29; Sp. p. 5058; Dr. p. 1083; Gaz. vol. 136; p. 951.
Measuring device, Wall-paper-. G. H. Broadwater. No. 898,308; Sept. 8; Sp. p. 2165; Dr. p. 460; Gaz. vol. 136; p. 374.
Measuring vessels, &c., Float-controlled device for. J. Meyer. No. 899,884; Sept. 29; Sp. p. 5259; Dr. p. 1125; Gaz. vol. 136; p. 982.
Meat-saw, Hand-controlled power-operative. W. A. Russell. No. 898,067; Sept. 8; Sp. p. 1713; Dr. p. 363; Gaz. vol. 136; p. 300.
Mechanical movement. J. T. H. Paul. No. 897,651; Sept. 1; Sp. p. 827; Dr. pp. 173–5; Gaz. vol. 136; p. 132.
Mechanical movement. C. J. Coulter. No. 898,328; Sept. 8; Sp. p. 2198; Dr. p. 466; Gaz. vol. 136; p. 380.
Mechanical playing apparatus. W. F. Cooper. No. 897,820; Sept. 1; Sp. p. 1176; Dr. p. 250; Gaz. vol. 136; p. 187.
Mercury meter. F. Holden. No. 897,536; Sept. 1; Sp. p. 608; Dr. p. 127; Gaz. vol. 136; p. 96.
Metal-cutting tool. S. Newbold. No. 899,008; Sept. 29; Sp. p. 4677; Dr. p. 1003; Gaz. vol. 136; p. 893.
Metal, Manufacturing expanded. L. E. Curtis. No. 897,879; Sept. 8; Sp. p. 1302; Dr. p. 279; Gaz. vol. 136; p. 238.
Metal part, Structural. E. I. Dodds. No. 899,033; Sept. 22; Sp. p. 3547; Dr. p. 759; Gaz. vol. 136; p. 670.
Metal patterns from corrosion, Treating and preserving. C. K. Milne. No. 899,092; Sept. 22; Sp. p. 3589; Gaz. vol. 136; p. 678.
Metal-sawing mechanism. A. Tindel. No. 900,047; Sept. 29; Sp. p. 5422; Dr. pp. 1199–1200; Gaz. vol. 136; p. 1035.
Metal-working machine. R. T. Wingo. No. 897,440; Sept. 1; Sp. p. 412; Dr. p. 88; Gaz. vol. 136; p. 64.
Metal-working tool. C. L. Moses. No. 897,641; Sept. 1; Sp. p. 810; Dr. p. 170; Gaz. vol. 136; p. 129.
Metals from their ores, Extraction of. J. Turton. No. 899,146; Sept. 22; Sp. p. 3761; Gaz. vol. 136; p. 707.
Metals from their ores, Separating. J. D. Wolf. No. 899,478; Sept. 22; Sp. p. 4387; Dr. pp. 941–2; Gaz. vol. 136; p. 812.
Metals from their ores, Separation of. J. D. Wolf. No. 899,149; Sept. 22; Sp. p. 3767; Dr. p. 807; Gaz. vol. 136; p. 709.
Metals, Refining. K. O. Kretschmer. No. 898,116; Sept. 8; Sp. p. 1809; Gaz. vol. 136; p. 315.
Metallic product. G. F. Allen. No. 897,953; Sept. 8; Sp. p. 1483; Gaz. vol. 136; p. 264.
Metallic tie. E. Hudson. No. 898,652; Sept. 15; Sp. p. 2849; Dr. p. 609; Gaz. vol. 136; p. 519.
Metallic tie and rail-joint. W. F. Wilson and C. K. Barnhart. No. 898,810; Sept. 15; Sp. p. 3134; Dr. p. 671; Gaz. vol. 136; p. 569.
Metallic web or fabric. G. Aucoc. No. 898,166; Sept. 8; Sp. p. 1902; Dr. p. 406; Gaz. vol. 136; p. 331.
Metallurgical apparatus. W. A. Merralls. No. 898,415; Sept. 8; Sp. p. 2365; Dr. p. 505; Gaz. vol. 136; p. 410.
Meter: *See* Liquid-meter; Mercury meter; Water-meter.
Meters, Device for the protection of. T. Muller. No. 898,384; Sept. 8; Sp. p. 2292; Dr. p. 489; Gaz. vol. 136; p. 400.
Micrometer, Quick-adjusting. H. O. Costello. No. 898,972; Sept. 15; Sp. p. 3421; Dr. p. 735; Gaz. vol. 136; p. 623.
Milk-can. F. H. Richards. No. 899,762; Sept. 29; Sp. p. 4996; Dr. pp. 1070–1; Gaz. vol. 136; p. 943.
Milk or cream and butter, Treating. A. Fay. No. 897,277; Sept. 1; Sp. p. 26; Gaz. vol. 136; p. 7.
Mill: *See* Centrifugal mill; Crushing-mill; Sawmill; Stamp-mill.
Milling-machine. L. Giannelli. No. 898,353; Sept. 8; Sp. p. 2239; Dr. pp. 477–8; Gaz. vol. 136; p. 388.
Mineral values, Apparatus for recovering. J. W. Boardman. No. 899,710; Sept. 29; Sp. p. 4875; Dr. p. 1046; Gaz. vol. 136; p. 923.
Minerals, Suitable apparatus for concentrating and washing. A. Taylor. No. 899,441; Sept. 22; Sp. p. 4318; Dr. pp. 927–8; Gaz. vol. 136; p. 800.
Miner's cap and lamp. L. W. Cogswell and J. D. Abel. No. 897,588; Sept. 1; Sp. p. 713; Dr. p. 150; Gaz. vol. 136; p. 113.
Mines and removing dust and gases therefrom, Means for ventilating. F. T. Byers. No. 899,508; Sept. 29; Sp. p. 4465; Dr. p. 959; Gaz vol. 136; p. 859.
Mines and tunnels, Air-lock for. P. H. Durack. No. 898,343; Sept. 8; Sp. p. 2221; Dr. p. 472; Gaz. vol. 136; p. 385.
Mines, Removing dust and gases from. F. T. Byers. No. 899,509; Sept. 29; Sp. p. 4467; Dr. p. 959; Gaz. vol. 136; p. 859.
Mining-caisson, Extension. W. W. Beeson. No. 898,174; Sept. 8; Sp. p. 1924; Dr. p. 411; Gaz. vol. 136; p. 333.
Mining device, Vacuum. J. B. Riddle. No. 898,927; Sept. 15; Sp. p. 3343; Dr. p. 717; Gaz. vol. 136; p. 608.
Mining-machine. G. Sánta. No. 897,415; Sept. 1; Sp. p. 364; Dr. p. 76; Gaz. vol. 136; p. 56.
Mining machine, Coal-. L. W. Veitch. No. 900,003; Sept. 29; Sp. p. 5519; Dr. p. 1176; Gaz. vol. 136; p. 1020.
Mirror, Adjustable shaving-. J. P. Eustis. No. 898,454; Sept. 15; Sp. p. 2458; Dr. p. 525; Gaz. vol. 136; p. 455.
Mitt, Base-ball. J. Gamble. No. 899,522; Sept. 29; Sp. p. 4493; Dr. p. 965; Gaz. vol. 136; p. 864.
Mixer: *See* Bread-mixer; Cement or concrete mixer; Concrete-mixer.
Mixing-machine. W. O. Stark. No. 897,313; Sept. 1; Sp. p. 83; Dr. pp. 20–1; Gaz. vol. 136; p. 17.
Mixing-machine. C. E. Bathrick. No. 898,171; Sept. 8; Sp. p. 1914; Dr. pp. 409–10; Gaz. vol. 136; p. 332.
Moistener. H. G. Campbell. No. 898,720; Sept. 15; Sp. p. 2969; Dr. p. 636; Gaz. vol. 136; p. 540.
Mold: *See* Fence-post multiple mold; Mantle-ring mold; Tile-forming mold.
Mold. H. C. Shaw. No. 898,795; Sept. 15; Sp. p. 3109; Dr. p. 666; Gaz. vol. 136; p. 565.
Molders' patterns, Making. J. F. Cox. No. 898,728; Sept. 15; Sp. p. 2984; Dr. pp. 640–1; Gaz. vol. 136; p. 543.
Molding-flask pin and guide. J. Rost. No. 898,929; Sept. 15; Sp. p. 3346; Dr. p. 718; Gaz. vol. 136; p. 609.
Molding-machine. J. A. Rhoult. No. 899,073; Sept. 22; Sp. p. 3616; Dr. pp. 774–5; Gaz. vol. 136; p. 682.
Molding-machine bottom-board tightener. W. Bylund. No. 898,435; Sept. 15; Sp. p. 2411; Dr. p. 516; Gaz. vol. 136; p. 449.
Molding-machines, Sand-feeding device for. W. H. Wangelin. No. 897,942; Sept. 8; Sp. p. 1458; Dr. p. 310; Gaz. vol. 136; p. 260.
Mop and brush making machine. L. Stocker. No. 898,019; Sept. 8; Sp. p. 1610; Dr. pp. 343–4; Gaz. vol. 136; p. 284.
Mop and wringer therefor, Combined. E. Hilker. No. 897,465; Sept. 1; Sp. p. 465; Dr. p. 99; Gaz. vol. 136; p. 73.
Mop-head. F. A. Rivers. No. 899,437; Sept. 22; Sp. p. 4310; Dr. p. 926; Gaz. vol. 136; p. 799.
Motion-converting device. J. E. Paulson. No. 897,652; Sept. 1; Sp. p. 830; Dr. p. 175; Gaz. vol. 136; p. 133.
Motion of flexible diaphragms, Device for utilizing the. W. M. Fulton. No. 897,730; Sept. 1; Sp. p. 989; Dr. p. 210; Gaz. vol. 136; p. 159.
Motor: *See* Commutator-motor; Current-motor; Drum-cylinder motor; Fluid-pressure motor; Hydraulic motor; Railway-track motor; Solenoid-motor; Synchronous motor; Water-motor; Wave-motor; Wave, tide, and current motor.
Motor. F. J. Crouch and C. P. Church. No. 897,595; Sept. 1; Sp. p. 728; Dr. p. 153; Gaz. vol. 136; p. 115.
Motor-control system. L. Janisch and W. Naumann. No. 897,535; Sept. 1; Sp. p. 615; Dr. p. 128; Gaz. vol. 136; p. 96.
Motor-starter. A. J. Burns. No. 897,713; Sept. 1; Sp. p. 953; Dr. pp. 204–5; Gaz. vol. 136; p. 153.
Motor starter, Electric-. W. C. O'Brien. No. 900,035; Sept. 29; Sp. p. 5594; Dr. p. 1194; Gaz. vol. 136; p. 1032.
Motors and signal for the same, Electric stop-motion for. A. Cochrane. No. 897,350; Sept. 1; Sp. p. 204; Dr. p. 43; Gaz. vol. 136; p. 31.
Motors, Automatic governor for pneumatic. C. L. Davis. No. 898,194; Sept. 8; Sp. p. 1953; Dr. p. 417; Gaz. vol. 136; p. 339.
Motors, Electric ignition device or sparking plug for internal-combustion. C. O. Bastian and G. Calvert. No. 897,868; Sept. 8; Sp. p. 1293; Dr. p. 274; Gaz. vol. 136; p. 234.
Mounting. G. W. Dover. No. 899,516; Sept. 29; Sp. p. 4478; Dr. p. 962; Gaz. vol. 136; p. 862.
Mower. F. C. Horak. No. 899,490; Sept. 22; Sp. p. 4413; Dr. p. 947; Gaz. vol. 136; p. 817.
Mower, Lawn-. J. C. Reimers. No. 898,925; Sept. 15; Sp. p. 3342; Dr. p. 717; Gaz. vol. 136; p. 608.
Mowing and raking machine. T. J. Thorp. No. 898,155; Sept. 8; Sp. p. 1878; Dr. pp. 401–2; Gaz. vol. 136; p. 327.
Mowing-machine tedder attachment. W. T. Fiers and L. Manor. No. 898,859; Sept. 15; Sp. p. 3220; Dr. p. 690; Gaz. vol. 136; p. 586.
Mug, Shaving-. T. D. McKown. No. 898,773; Sept. 15; Sp. p. 3071; Dr. p. 657; Gaz. vol. 136; p. 558.
Music-leaf turner. A. P. Hildebrandt. No. 897,534; Sept. 1; Sp. p. 605; Dr. pp. 126–7; Gaz. vol. 136; p. 95.
Music-leaf turner. J. W. Albin. No. 899,938; Sept. 29; Sp. p. 5381; Dr. p. 1148; Gaz. vol. 136; p. 999.
Music-rack. A. De Long, Sr. No. 898,843; Sept. 15; Sp. p. 3197; Dr. pp. 684–5; Gaz. vol. 136; p. 581.
Music-sheet. H. Pierce. No. 899,470; Sept. 22; Sp. p. 4375; Dr. p. 939; Gaz. vol. 136; p. 810.
Music sheet, Combination vocal and instrumental. F. B. Beinkamp and L. L. Harding. No. 897,340; Sept. 1; Sp. p. 187; Dr. p. 40; Gaz. vol. 136; p. 28.
Music-sheets, Adjustable spool for. E. De Kleist and F. L. McCormick. No. 899,993; Sept. 29; Sp. p. 5493; Dr. p. 1170; Gaz. vol. 136; p. 1017.
Music-strip-punching apparatus. J. C. Bunge. No. 899,238; Sept. 22; Sp. p. 3953; Dr. pp. 842–4; Gaz. vol. 136; p. 738.
Music turner, Sheet-. J. T. Stapleton. No. 898,149; Sept. 8; Sp. p. 1870; Dr. p. 399; Gaz. vol. 136; p. 325.
Music turner, Sheet-. J. S. Myers. No. 899,459; Sept. 22; Sp. p. 4353; Dr. p. 934; Gaz. vol. 136; p. 806.
Music-winding roll for perforated music-sheets. G. E. Mack. No. 897,383; Sept. 1; Sp. p. 294; Dr. p. 60; Gaz. vol. 136; p. 45.
Musical instrument, Mechanical. A. E. Whitehead. No. 897,331; Sept. 1; Sp. p. 157; Dr. pp. 32–3; Gaz. vol. 136; p. 24.

Musical instrument or player, Automatic. H. R. Edgecomb. No. 899,295; Sept. 22; Sp. p. 4067; Dr. p. 869; Gaz. vol. 136; p. 755.
Musical instrument, Self-playing. W. J. Publow. No. 897,656; Sept. 1; Sp. p. 836; Dr. p. 176; Gaz. vol. 136; p. 134.
Musical instruments, Action for keyboard stringed. P. Blasing. No. 899,096; Sept. 22; Sp. p. 3650; Dr. p. 784; Gaz. vol. 136; p. 690.
Nail-clipper. H. Wilcox. No. 898,808; Sept. 15; Sp. p. 3131; Dr. p. 671; Gaz. vol. 136; p. 569.
Nail-puller. W. F. Hobbs. No. 900,016; Sept. 29; Sp. p. 5547; Dr. p. 1182; Gaz. vol. 136; p. 1025.
Nails, Machine for driving loose. G. Goddu. No. 898,573; Sept. 15; Sp. p. 2687; Dr. pp. 574–5; Gaz. vol. 136; p. 494.
Nails, Manufacturing instruments for separating the cuticle from the. R. Amory. No. 897,810; Sept. 1; Sp. p. 1158; Dr. p. 247; Gaz. vol. 136; p. 184.
Nailing-machine. F. H. Schultz. No. 899,767; Sept. 29; Sp. p. 5011; Dr. p. 1074; Gaz. vol. 136; p. 944.
Naphtha, Nitrating solvent. G. Schultz. No. 898,144; Sept. 8; Sp. p. 1859; Gaz. vol. 136; p. 323.
Necktie. A. J. C. Egberts. No. 898,198; Sept. 8; Sp. p. 1964; Dr. p. 419; Gaz. vol. 136; p. 340.
Necktie-supporting frame. F. W. Raupach. No. 899,902; Sept. 29; Sp. p. 5292; Dr. p. 1131; Gaz. vol. 136; p. 989.
Needle, Sewing-. M. J. C. Nyborg. No. 897,769; Sept. 1; Sp. p. 1077; Dr. p. 231; Gaz. vol. 136; p. 172.
Nest, Automatic trap-. F. S. Barzee. No. 899,709; Sept. 29; Sp. p. 4873; Dr. pp. 1045–6; Gaz. vol. 136; p. 923.
Nipper-tube. W. A. Berry. No. 897,706; Sept. 1; Sp. p. 943; Dr. p. 201; Gaz. vol. 136; p. 151.
Nitrites, Production of. C. N. Riiber. No. 899,705; Sept. 29; Sp. p. 4868; Gaz. vol. 136; p. 922.
Note-sheets, Speed-controlling device for. H. Meyer. No. 898,762; Sept. 15; Sp. p. 3045; Dr. p. 653; Gaz. vol. 136; p. 553.
Numbering-machine. B. B. Conrad. No. 898,836; Sept. 15; Sp. p. 3180; Dr. pp. 680–1; Gaz. vol. 136; p. 578.
Nut. J. R. and E. C. Winter. No. 899,368; Sept. 22; Sp. p. 4195; Dr. p. 898; Gaz. vol. 136; p. 778.
Nut and bushing for connection-boxes, Combined lock-. J. S. Ritter. No. 899,906; Sept. 29; Sp. p. 5299; Dr. p. 1133; Gaz. vol. 136; p. 989.
Nut-blanks, Tapping. O. A. Smith. No. 900,042; Sept. 29; Sp. p. 5611; Dr. p. 1197; Gaz. vol. 136; p. 1034.
Nut-lock. H. Oldendorph. No. 897,770; Sept. 1; Sp. p. 1078; Dr. p. 231; Gaz. vol. 136; p. 172.
Nut-lock. E. Posson. No. 898,003; Sept. 8; Sp. p. 1576; Dr. p. 336; Gaz. vol. 136; p. 280.
Nut-lock. C. H. Covey. No. 898,188; Sept. 8; Sp. p. 1945; Dr. p. 416; Gaz. vol. 136; p. 338.
Nut-lock. A. W. Dawes. No. 898,333; Sept. 8; Sp. p. 2207; Dr. p. 468; Gaz. vol. 136; p. 382.
Nut-lock. T. V. Boyle. No. 898,432; Sept. 15; Sp. p. 2410; Dr. p. 516; Gaz. vol. 136; p. 449.
Nut-lock. P. C. Haan. No. 898,464; Sept. 15; Sp. p. 2478; Dr. p. 530; Gaz. vol. 136; p. 459.
Nut-lock. L. Burg. No. 898,719; Sept. 15; Sp. p. 2967; Dr. p. 636; Gaz. vol. 136; p. 540.
Nut-lock. C. W. Stark. No. 899,080; Sept. 22; Sp. p. 3626; Dr. p. 776; Gaz. vol. 136; p. 684.
Nut-lock. W. A. Smith. No. 899,630; Sept. 29; Sp. p. 4739; Dr. p. 1014; Gaz. vol. 136; p. 900.
Nut-lock. H. Jeffrey. No. 899,869; Sept. 29; Sp. p. 5237; Dr. p. 1119; Gaz. vol. 136; p. 978.
Nut-lock. W. F. Barron. No. 899,940; Sept. 29; Sp. p. 5386; Dr. p. 1149; Gaz. vol. 136; p. 1000.
Nut lock, Axle-. R. G. Roberts. No. 899,188; Sept. 22; Sp. p. 3851; Dr. p. 824; Gaz. vol. 136; p. 721.
Nut-tapping machine. O. A. Smith. No. 899,915; Sept. 29; Sp. p. 5310; Dr. pp. 1133–6; Gaz. vol. 136; p. 992.
Nut-wrench. G. P. Sprague. No. 898,996; Sept. 15; Sp. p. 3466; Dr. p. 742; Gaz. vol. 136; p. 630.
Nut-wrench. G. P. Sprague. No. 898,997; Sept. 15; Sp. p. 3467; Dr. p. 742; Gaz. vol. 136; p. 630.
Oar-blade-shaping machine. W. W. Trevor. No. 899,356; Sept. 22; Sp. p. 4172; Dr. pp. 893–4; Gaz. vol. 136; p. 774.
Obstetrical appliance. A. M. Reed. No. 899,434; Sept. 22; Sp. p. 4307; Dr. p. 925; Gaz. vol. 136; p. 798.
Oil-burner. J. C. Fitzsimmons. No. 897,611; Sept. 1; Sp. p. 765; Dr. p. 161; Gaz. vol. 136; p. 121.
Oil-can. L. M. Foreman. No. 897,729; Sept. 1; Sp. p. 988; Dr. p. 210; Gaz. vol. 136; p. 159.
Oil-cloth, Manufacture of. M. Abrahams. No. 899,821; Sept. 29; Sp. p. 5132; Gaz. vol. 136; p. 963.
Oiler. J. E. Thron. No. 897,561; Sept. 1; Sp. p. 661; Dr. p. 138; Gaz. vol. 136; p. 103.
Oiling attachment. L. L. Logan. No. 897,753; Sept. 1; Sp. p. 1030; Dr. p. 219; Gaz. vol. 136; p. 167.
Oiling device, Wheel-. G. W. Patten. No. 897,999; Sept. 8; Sp. p. 1571; Dr. p. 335; Gaz. vol. 136; p. 279.
Order-holder. W. R. Wilson. No. 897,332; Sept. 1; Sp. p. 160; Dr. p. 34; Gaz. vol. 136; p. 25.
Ore-feeder. S. T. Graham. No. 899,527; Sept. 29; Sp. p. 4507; Dr. pp. 967–8; Gaz. vol. 136; p. 866.
Ore roasting and briqueting apparatus. C. F. Buck. No. 899,507; Sept. 29; Sp. p. 4461; Dr. p. 958; Gaz. vol. 136; p. 859.
Ore separating or concentrating machine. W. R. Lins. No. 898,119; Sept. 8; Sp. p. 1813; Dr. pp. 384–5; Gaz. vol. 136; p. 316.
Ore-separator, Magnetic. C. F. Stebbins. No. 899,348; Sept. 22; Sp. p. 4157; Dr. p. 890; Gaz. vol. 136; p. 771.
Ore, Treating. J. T. Jones. No. 899,405; Sept. 22; Sp. p. 4230; Dr. p. 914; Gaz. vol. 136; p. 789.
Ores containing zinc and other volatilizable metals for the production of oxids, Treating complex. G. M. Rice. No. 899,322; Sept. 22; Sp. p. 4116; Dr. p. 880; Gaz. vol. 136; p. 763.
Ores, Desulfurizing. K. A. Johansson. No. 899,219; Sept. 22; Sp. p. 3905; Gaz. vol. 136; p. 731.
Organ-action, Electric. W. R. Whitehorne. No. 897,692; Sept. 1; Sp. p. 913; Dr. p. 195; Gaz. vol. 136; p. 146.
Ornamental fabric and producing the same. E. J. Ryerson. No. 898,269; Sept. 8; Sp. p. 2091; Dr. p. 445; Gaz. vol. 136; p. 362.
Oscillation-detector. C. E. Russell. No. 899,264; Sept. 22; Sp. p. 4021; Dr. pp. 858–9; Gaz. vol. 136; p. 746.
Oscillations, Means of obviating the deleterious effects of. C. Feldmann and J. Herzog. No. 898,858; Sept. 15; Sp. p. 3219; Dr. p. 690; Gaz. vol. 136; p. 586.
Outlet-box. G. A. Lutz. No. 898,756; Sept. 15; Sp. p. 3035; Dr. p. 651; Gaz. vol. 136; p. 552.
Oven-buildings, Iron structure for. K. Bernhard. No. 899,503; Sept. 29; Sp. p. 4453; Dr. p. 956; Gaz. vol. 136; p. 858.
Oven, Camp-. W. H. Hart. No. 898,641; Sept. 15; Sp. p. 2831; Dr. p. 604; Gaz. vol. 136; p. 516.
Overalls. L. H. Wise. No. 900,050; Sept. 29; Sp. p. 5634; Dr. p. 1203; Gaz. vol. 136; p. 1036.
Overshoe-clasp. R. L. Milliken. No. 897,476; Sept. 1; Sp. p. 483; Dr. p. 103; Gaz. vol. 136; p. 77.
Overshoe-fastener. J. T. Hearn. No. 897,287; Sept. 1; Sp. p. 41; Dr. p. 10; Gaz. vol. 136; p. 10.
Overshoe-holder and trousers-supporter. J. M. Plummer. No. 897,503; Sept. 8; Sp. p. 2546; Dr. p. 546; Gaz. vol. 136; p. 471.
Ozone, Apparatus for the production of. J. R. Quain. No. 898,506; Sept. 15; Sp. p. 2553; Dr. p. 547; Gaz. vol. 136; p. 472.
Ozonizer. J. Steynis and H. Chaumat. No. 897,318; Sept. 1; Sp. p. 124; Dr. p. 26; Gaz. vol. 136; p. 19.
Package. R. P. Beatty. No. 898,821; Sept. 15; Sp. p. 3156; Dr. p. 675; Gaz. vol. 136; p. 573.
Package-tie. G. H. Daughtrey. No. 898,192; Sept. 8; Sp. p. 1950; Dr. p. 417; Gaz. vol. 136; p. 339.
Packing and display case. J. W. Barber. No. 898,170; Sept. 8; Sp. p. 1912; Dr. p. 408; Gaz. vol. 136; p. 332.
Packing-case. W. D. Ballou. No. 898,169; Sept. 8; Sp. p. 1911; Dr. p. 408; Gaz. vol. 136; p. 332.
Packing-case. A. B. and C. F. Boylan and C. L. Bennett. No. 899,097; Sept. 22; Sp. p. 3662; Dr. p. 784; Gaz. vol. 136; p. 691.
Packing-cups, Machine for forming. C. Swan. No. 898,526; Sept. 15; Sp. p. 2596; Dr. p. 554; Gaz. vol. 136; p. 478.
Packing device. J. Saunders. No. 898,786; Sept. 15; Sp. p. 3094; Dr. p. 663; Gaz. vol. 136; p. 562.
Packing for piston-valves and pistons. J. T. Wilson. No. 898,541; Sept. 15; Sp. p. 2629; Dr. p. 562; Gaz. vol. 136; p. 483.
Packing for pistons and piston-valves. J. T. Wilson. No. 898,617; Sept. 15; Sp. p. 2771; Dr. p. 592; Gaz. vol. 136; p. 508.
Packing, Metallic. G. D. Rollins. No. 898,066; Sept. 8; Sp. p. 1712; Dr. p. 363; Gaz. vol. 136; p. 299.
Packing, Metallic piston-. E. R. Humphrey and W. B. Martin. No. 899,303; Sept. 22; Sp. p. 4080; Dr. p. 872; Gaz. vol. 136; p. 757.
Packing-ring for stuffing-boxes, Hollow. G. Huhn. No. 899,985; Sept. 29; Sp. p. 5477; Dr. p. 1166; Gaz. vol. 136; p. 1015.
Pad: *See* Bottle-cap pad; Harness-pad; Telephone memorandum-pad; Wax-pad.
Pail, Dinner-. H. B. Waltrip. No. 899,360; Sept. 22; Sp. p. 4182; Dr. p. 895; Gaz. vol. 136; p. 776.
Pail, Milk-. J. A. Cornell. No. 898,971; Sept. 15; Sp. p. 3420; Dr. p. 735; Gaz. vol. 136; p. 623.
Paint, Ship's. A. P. Horn. No. 898,476; Sept. 15; Sp. p. 2496; Gaz. vol. 136; p. 462.
Paint, varnish, and the like, Composition of matter for the removal of. G. H. Hull. No. 897,862; Sept. 1; Sp. p. 1270; Gaz. vol. 136; p. 200.
Pan: *See* Bed-pan; Dust-pan; Extensible pan.
Pan-holder and stove-lid lifter. B. Kessler. No. 899,992; Sept. 29; Sp. p. 5492; Dr. p. 1170; Gaz. vol. 136; p. 1017.
Panel-box. F. S. Wahl. No. 897,564; Sept. 1; Sp. p. 665; Dr. pp. 139–40; Gaz. vol. 136; p. 104.
Pantaloons-protector. M. Elzas. No. 898,200; Sept. 8; Sp. p. 1967; Dr. p. 419; Gaz. vol. 136; p. 341.
Paper-box machine. A. W. Mitchell. No. 898,250; Sept. 8; Sp. p. 2066; Dr. p. 439; Gaz. vol. 136; p. 357.
Paper-clip. R. Corbin. No. 899,386; Sept. 22; Sp. p. 4223; Dr. p. 904; Gaz. vol. 136; p. 784.
Paper, &c., from two single paper webs, Manufacture of card-. R. Kron. No. 897,543; Sept. 1; Sp. p. 625; Dr. p. 129; Gaz. vol. 136; p. 98.
Paper-holding clamp. D. C. Gray. No. 898,460; Sept. 15; Sp. p. 2470; Dr. p. 528; Gaz. vol. 136; p. 457.
Paper-mills, wood-pulp factories, and the like, Method of and apparatus for straining the waste water in. H. Gaara and E. Hem. No. 898,212; Sept. 8; Sp. p. 1985; Dr. p. 423; Gaz. vol. 136; p. 344.
Paper or pasteboard, Compounding-machine for manufacturing. H. C. Hunter. No. 899,986; Sept. 29; Sp. p. 5478; Dr. p. 1166; Gaz. vol. 136; p. 1015.
Paper-pulp-screen box. J. Janson. No. 899,169; Sept. 22; Sp. p. 3811; Dr. p. 816; Gaz. vol. 136; p. 715.
Paper-roll holder. J. McNeil. No. 899,461; Sept. 22; Sp. p. 4356; Dr. p. 935; Gaz. vol. 136; p. 807.
Paraffining vessels, Device for. E. C. Capper. No. 899,511; Sept. 29; Sp. p. 4470; Dr. p. 959; Gaz. vol. 136; p. 860.
Parcel-carrier. L. Rieder. No. 899,806; Sept. 29; Sp. p. 5105; Dr. p. 1091; Gaz. vol. 136; p. 958.
Parer, Fruit-. D. F. Hunt. No. 900,018; Sept. 29; Sp. p. 5550; Dr. pp. 1182–3; Gaz. vol. 136; p. 1026.
Paring-machine. L. G. Simpson. No. 899,340; Sept. 22; Sp. p. 4144; Dr. p. 887; Gaz. vol. 136; p. 769.
Party-line-indicating key. C. C. Bradbury. No. 899,024; Sept. 22; Sp. p. 3530; Dr. p. 755; Gaz. vol. 136; p. 667.
Party-line-indicating key. C. C. Bradbury. No. 899,379; Sept. 22; Sp. p. 4213; Dr. p. 902; Gaz. vol. 136; p. 782.
Passenger-recorder. C. Metzler. No. 897,762; Sept. 1; Sp. p. 1045; Dr. p. 225; Gaz. vol. 136; p. 169.

Passenger-recording system for trains. W. E. Parr. No. 898,675; Sept. 15; Sp. p. 2885; Dr. pp. 617–18; Gaz. vol. 136; p. 526.
Pasteurizing apparatus. L. S. Pfouts. (Reissue.) No. 12,858; Sept. 29; Sp. p. 5683; Dr. p. 1213; Gaz. vol. 136; p. 1045.
Pattern-cutting device. W. L. Carson and G. R. Couls. No. 898,850; Sept. 15; Sp. p. 3171; Dr. p. 678; Gaz. vol. 136; p. 576.
Pattern-grading machine. A. F. Preston. No. 897,555; Sept. 1; Sp. p. 648; Dr. p. 136; Gaz. vol. 136; p. 101.
Peanut-sheller. E. M. Raby. No. 899,433; Sept. 22; Sp. p. 4305; Dr. p. 924; Gaz. vol. 136; p. 798.
Peat-turf into half-stuff, Machine for the reduction of. C. E. Dunn. No. 898,450; Sept. 15; Sp. p. 2451; Dr. p. 525; Gaz. vol. 136; p. 454.
Pedal mechanism. G. B. Kelly. No. 897,375; Sept. 1; Sp. p. 274; Dr. p. 56; Gaz. vol. 136; p. 41.
Pedal mechanism. G. B. Kelly. No. 897,376; Sept. 1; Sp. p. 275; Dr. p. 56; Gaz. vol. 136; p. 42.
Pedal-mounting. C. F. Koester. No. 899,739; Sept. 29; Sp. p. 4942; Dr. p. 1060; Gaz. vol. 136; p. 934.
Peeler, Vegetable-. K. Schaal. No. 898,931; Sept. 15; Sp. p. 3351; Dr. p. 719; Gaz. vol. 136; p. 609.
Pen, Fountain-. R. A. Hamilton. No. 897,892; Sept. 8; Sp. p. 1328; Dr. p. 284; Gaz. vol. 136; p. 243.
Pencil, penholder, &c. T. F. Handly. No. 897,530; Sept. 1; Sp. p. 598; Dr. p. 125; Gaz. vol. 136; p. 94.
Pencil-sharpener. A. T. Peterson. No. 898,502; Sept. 15; Sp. p. 2544; Dr. p. 545; Gaz. vol. 136; p. 470.
Pencil-sharpening machine. C. Niekum. No. 897,647; Sept. 1; Sp. p. 817; Dr. p. 172; Gaz. vol. 136; p. 131.
Pendulograph. H. Pearce. No. 898,599; Sept. 15; Sp. p. 2735; Dr. p. 585; Gaz. vol. 136; p. 501.
Peptisating colloidal elements. H. Kuzel. No. 899,875; Sept. 29; Sp. p. 5246; Gaz. vol. 136; p. 980.
Perambulator. W. H. Smith. No. 899,343; Sept. 22; Sp. p. 4152; Dr. p. 888; Gaz. vol. 136; p. 770.
Perch-support. C. Matthews. No. 898,586; Sept. 15; Sp. p. 2701; Dr. p. 579; Gaz. vol. 136; p. 497.
Perforating mechanism. R. M. Davidson. No. 898,193; Sept. 8; Sp. p. 1951; Dr. p. 417; Gaz. vol. 136; p. 339.
Permutation-lock. J. P. Geraghty. No. 898,417; Sept. 8; Sp. p. 2368; Dr. p. 506; Gaz. vol. 136; p. 411.
Peroxid of potassium, Manufacture of. G. F. Jaubert. No. 897,980; Sept. 8; Sp. p. 1538; Dr. p. 327; Gaz. vol. 136; p. 272.
Petrol spirit, Apparatus for deodorizing and filtering. A. J. Barnes. No. 898,545; Sept. 15; Sp. p. 2641; Dr. p. 564; Gaz. vol. 136; p. 485.
Phonograph. E. F. Leeds and G. Rumpf. No. 897,836; Sept. 1; Sp. p. 1210; Dr. pp. 258–9; Gaz. vol. 136; p. 192.
Phonograph-cabinets, Megaphone-holder for. S. D. Solomon. No. 898,520; Sept. 15; Sp. p. 2584; Dr. p. 552; Gaz. vol. 136; p. 477.
Photographers' use, Means for producing artificial light for. F. E. Barentzen. No. 897,569; Sept. 1; Sp. p. 677; Dr. p. 142; Gaz. vol. 136; p. 106.
Photographic apparatus. J. B. Low, F. C. Bradburn and J. H. Tyler. No. 899,792; Sept. 29; Sp. p. 5076; Dr. p. 1086; Gaz. vol. 136; p. 953.
Photographic copies of printed matter and the like, Making. C. von Arnhard. No. 897,954; Sept. 8; Sp. p. 1483; Dr. p. 315; Gaz. vol. 136; p. 264.
Photographic-film cartridges, Developing-box for. P. Abbott. No. 899,495; Sept. 29; Sp. p. 4433; Dr. p. 952; Gaz. vol. 136; p. 855.
Photographic prints, Making. C. L. A. Brasseur. No. 897,815; Sept. 1; Sp. p. 1166; Dr. p. 248; Gaz. vol. 136; p. 185.
Photographs, Producing colored. B. J. Cooper. No. 898,554; Sept. 15; Sp. p. 2656; Gaz. vol. 136; p. 488.
Photomicrographical apparatus. F. N. Merwin. No. 899,793; Sept. 29; Sp. p. 5079; Dr. p. 1087; Gaz. vol. 136; p. 954.
Photoprinting-machines, Automatic fluid-controlled variable-time-exposure valve mechanism for. J. F. Ware and T. W. Rundle. No. 899,235; Sept. 22; Sp. p. 3940; Dr. p. 841; Gaz. vol. 136; p. 736.
Piano. J. A. Weser. No. 898,160; Sept. 8; Sp. p. 1891; Dr. p. 404; Gaz. vol. 136; p. 329.
Piano-case construction. G. G. Hasbrouck. No. 898,470; Sept. 15; Sp. p. 2486; Dr. p. 532; Gaz. vol. 136; p. 460.
Piano-flange. W. W. McCall. No. 899,064; Sept. 22; Sp. p. 3592; Dr. p. 769; Gaz. vol. 136; p. 679.
Piano, Player-. G. A. Baker, Jr. No. 899,018; Sept. 22; Sp. p. 3520; Dr. p. 754; Gaz. vol. 136; p. 665.
Piano-players, &c., Expression and feed control for. R. F. Bancroft. No. 899,094; Sept. 22; Sp. p. 3655; Dr. p. 783; Gaz. vol. 136; p. 689.
Piano-playing instrument, Electrical. A. L. Hart. No. 898,218; Sept. 8; Sp. p. 2002; Dr. pp. 425–6; Gaz. vol. 136; p. 346.
Piano touch-regulator. C. E. Pryor. No. 897,556; Sept. 1; Sp. p. 653; Dr. p. 137; Gaz. vol. 136; p. 102.
Piano-violin. G. Kurtz. No. 899,740; Sept. 29; Sp. p. 4943; Dr. pp. 1060–1; Gaz. vol. 136; p. 934.
Piano-violin. W. Klink. No. 900,021; Sept. 29; Sp. p. 5557; Dr. p. 1183; Gaz. vol. 136; p. 1027.
Pianos, Door for automatic. J. Sampere. No. 898,688; Sept. 15; Sp. p. 2919; Dr. p. 625; Gaz. vol. 136; p. 531.
Pianos, Fall-board mechanism for. C. E. Pryor. No. 898,781; Sept. 15; Sp. p. 3083; Dr. p. 660; Gaz. vol. 136; p. 560.
Pianos, Means for controlling expression in automatic. H. S. Hornbeck. No. 898,477; Sept. 15; Sp. p. 2496; Dr. p. 535; Gaz. vol. 136; p. 462.
Pick-head usable with removable points. J. Mazlin. No. 899,455; Sept. 22; Sp. p. 4344; Dr. p. 932; Gaz. vol. 136; p. 805.
Pickax-guard. T. W. Gordon. No. 899,487; Sept. 22; Sp. p. 4408; Dr. p. 946; Gaz. vol. 136; p. 816.
Picker: *See* Cotton-picker.
Picture apparatus, Safety appliance for moving-. A. F. Elkins and H. Hunter. (Reissue.) No. 12,853; Sept. 15; Sp. p. 3512; Dr. p. 751; Gaz. vol. 136; p. 637.
Picture for stereoscopes and similar devices. E. P. Crocker and A. B. Payne. No. 899,862; Sept. 29; Sp. p. 5228; Dr. p. 1118; Gaz. vol. 136; p. 977.
Picture-frame. C. Ward. No. 898,614; Sept. 15; Sp. p. 2765; Dr. p. 590; Gaz. vol. 136; p. 507.
Picture-frame, Knockdown. F. Parker. No. 899,556; Sept. 29; Sp. p. 4571; Dr. p. 982; Gaz. vol. 136; p. 876.
Picture frame or protective casing. D. W. Fratcher. No. 899,393; Sept. 22; Sp. p. 4236; Dr. p. 908; Gaz. vol. 136; p. 786.
Picture-hanger. O. J. Faris. No. 897,909; Sept. 8; Sp. p. 1518; Dr. p. 322; Gaz. vol. 136; p. 268.
Picture-molding bracket. E. Christian. No. 898,835; Sept. 15; Sp. p. 3179; Dr. p. 680; Gaz. vol. 136; p. 578.
Pies and the like, Machine for forming or molding and lidding. J. H. Jackson. No. 898,478; Sept. 15; Sp. p. 2499; Dr. p. 535; Gaz. vol. 136; p. 462.
Piling and constructing the same. F. W. Skinner. No. 898,013; Sept. 8; Sp. p. 1596; Dr. p. 341; Gaz. vol. 136; p. 283.
Pillow-sham holder. V. Marks. No. 898,126; Sept. 8; Sp. p. 1823; Dr. p. 387; Gaz. vol. 136; p. 318.
Pin: *See* Cotter-pin; Cuff-pin; Firing-pin; Hat-pin; Molding-flask pin; Safety-pin.
Pin and clevis device. A. O. Bucklus. No. 897,347; Sept. 1; Sp. p. 201; Dr. p. 43; Gaz. vol. 136; p. 30.
Pin and pin-joint. E. W. Morehouse. No. 898,670; Sept. 15; Sp. p. 2877; Dr. p. 615; Gaz. vol. 136; p. 524.
Pin-box and fastener. H. R. Kimbler. No. 899,411; Sept. 22; Sp. p. 4267; Dr. p. 915; Gaz. vol. 136; p. 791.
Pipe: *See* Blowpipe; Flexible pipe; Tobacco-pipe.
Pipe and the like, Tool for cutting. J. F. Spitt. No. 898,697; Sept. 15; Sp. p. 2934; Dr. p. 628; Gaz. vol. 136; p. 534.
Pipe cleaner, Waste-. W. T. Lisenby. No. 898,234; Sept. 8; Sp. p. 2042; Dr. p. 433; Gaz. vol. 136; p. 352.
Pipe coupling, Train-. A. N. Davis. No. 898,561; Sept. 15; Sp. p. 2669; Dr. p. 571; Gaz. vol. 136; p. 489.
Pipe-couplings, Middle ring for. J. Clark. No. 898,723; Sept. 15; Sp. p. 2974; Dr. p. 637; Gaz. vol. 136; p. 541.
Pipe-fitting. F. Kimche. No. 899,221; Sept. 22; Sp. p. 3908; Dr. p. 835; Gaz. vol. 136; p. 731.
Pipe-joint, Flexible. W. A. Greenlaw. No. 897,460; Sept. 1; Sp. p. 453; Dr. p. 97; Gaz. vol. 136; p. 71.
Pipe-joint, Flexible. W. A. Greenlaw and H. A. Royce. No. 897,461; Sept. 1; Sp. p. 454; Dr. p. 97; Gaz. vol. 136; p. 72.
Pipe-line, Helically-corrugated. J. D. Isaacs. No. 898,741; Sept. 15; Sp. p. 3010; Dr. p. 645; Gaz. vol. 136; p. 547.
Pipes or tubes, Apparatus for scouring or cleaning the interiors of. H. W. Bötz. No. 899,236; Sept. 22; Sp. p. 3948; Dr. p. 841; Gaz. vol. 136; p. 737.
Piston-rod lubricator. E. Blake. No. 897,448; Sept. 1; Sp. p. 428; Dr. p. 91; Gaz. vol. 136; p. 67.
Plane, Mortising-. M. A. Clark. No. 898,556; Sept. 15; Sp. p. 2658; Dr. p. 568; Gaz. vol. 136; p. 488.
Planing and other machines, Sectional feed-roll for. L. B. Whipple. No. 899,276; Sept. 22; Sp. p. 4040; Dr. p. 863; Gaz. vol. 136; p. 749.
Planing tool, Floor-. W. W. Scott. No. 898,793; Sept. 15; Sp. p. 3106; Dr. p. 665; Gaz. vol. 136; p. 564.
Plant-protector. E. R. Drake. No. 898,341; Sept. 8; Sp. p. 2219; Dr. p. 471; Gaz. vol. 136; p. 385.
Plant-shield. J. Martin. No. 897,760; Sept. 1; Sp. p. 1043; Dr. p. 224; Gaz. vol. 136; p. 169.
Planter and fertilizer-dropper. J. Tuggle. No. 899,144; Sept. 22; Sp. p. 3755; Dr. p. 805; Gaz. vol. 136; p. 707.
Planter, Seed-. W. T. Gibbs. No. 899,039; Sept. 22; Sp. p. 3552; Dr. p. 761; Gaz. vol. 136; p. 671.
Planters and clamping means therefor, Gage for seed-. D. J. Mahoney. No. 897,839; Sept. 1; Sp. p. 1218; Dr. p. 260; Gaz. vol. 136; p. 193.
Planting-machine. C. E. Patric. No. 899,557; Sept. 29; Sp. p. 4573; Dr. p. 983; Gaz. vol. 136; p. 876.
Plaster-of-paris, Revitalizing discarded. J. E. Fastwick. No. 898,451; Sept. 15; Sp. p. 2455; Gaz. vol. 136; p. 455.
Plate-holder. L. M. Shoemaker. No. 897,608; Sept. 1; Sp. p. 870; Dr. p. 186; Gaz. vol. 136; p. 139.
Pleasurephone. C. A. Wardner. No. 899,641; Sept. 29; Sp. p. 4754; Dr. p. 1018; Gaz. vol. 136; p. 903.
Pliers, Milliner's. J. K. Mullenbach. No. 898,496; Sept. 15; Sp. p. 2533; Dr. p. 543; Gaz. vol. 136; p. 468.
Pliers, Watchmaker's. E. A. Barker. No. 898,304; Sept. 8; Sp. p. 2161; Dr. p. 459; Gaz. vol. 136; p. 373.
Plow. O. Beasley. No. 897,447; Sept. 1; Sp. p. 426; Dr. p. 91; Gaz. vol. 136; p. 67.
Plow. P. D. Arras. No. 897,865; Sept. 8; Sp. p. 1277; Dr. p. 273; Gaz. vol. 136; p. 233.
Plow. H. Wiard. No. 898,711; Sept. 15; Sp. p. 2953; Dr. p. 633; Gaz. vol. 136; p. 537.
Plow. J. Ray. No. 898,991; Sept. 15; Sp. p. 3458; Dr. p. 741; Gaz. vol. 136; p. 629.
Plow. W. C. Bayless. No. 899,021; Sept. 22; Sp. p. 3525; Dr. p. 754; Gaz. vol. 136; p. 666.
Plow draft device. A. J. Minor. No. 898,764; Sept. 15; Sp. p. 3048; Dr. p. 654; Gaz. vol. 136; p. 554.
Plow-moldboard. C. R. McGahey. No. 899,755; Sept. 29; Sp. p. 4980; Dr. p. 1067; Gaz. vol. 136; p. 940.
Plumb and level. F. O. Rourke. No. 897,411; Sept. 1; Sp. p. 355; Dr. p. 75; Gaz. vol. 136; p. 54.
Plumbing-fixture. P. J. Madden. No. 897,914; Sept. 8; Sp. p. 1386; Dr. pp. 296–7; Gaz. vol. 136; p. 251.
Plumbing system. J. L. Fruin. No. 897,283; Sept. 1; Sp. p. 36; Dr. p. 9; Gaz. vol. 136; p. 9.
Pneumatic action. H. Meyer. No. 898,761; Sept. 15; Sp. p. 3043; Dr. p. 653; Gaz. vol. 136; p. 553.
Pneumatic control system. P. Pforr. No. 897,484; Sept. 1; Sp. p. 492; Dr. p. 105; Gaz. vol. 136; p. 79.

Pneumatic-despatch systems, Sending mechanism for. C. S. Jennings. No. 899,599; Sept. 29; Sp. p. 4665; Dr. p. 1001; Gaz. vol. 136; p. 891.
Pneumatic-despatch-tube system. F. H. Wolever. No. 898,542; Sept. 15; Sp. p. 2631; Dr. pp. 563–4; Gaz. vol. 136; p. 484.
Pneumatic drier and conveyer. W. F. Carlton. No. 899,658; Sept. 29; Sp. p. 4779; Dr. p. 1023; Gaz. vol. 136; p. 908.
Pneumatic drill. M. Hardsocg. No. 899,729; Sept. 29; Sp. p. 4918; Dr. pp. 1055–6; Gaz. vol. 136; p. 930.
Pocket. H. Ahnfeldt. No. 898,299; Sept. 8; Sp. p. 2153; Dr. p. 457; Gaz. vol. 136; p. 371.
Pocket-box, Sheet-metal. I. J. Marcuse. No. 898,125; Sept. 8; Sp. p. 1822; Dr. p. 387; Gaz. vol. 136; p. 318.
Pole-shoe. W. R. Everett and E. J. Newton. No. 897,824; Sept. 1; Sp. p. 1186; Dr. p. 251; Gaz. vol. 136; p. 188.
Pole-socket. D. A. Roberts. No. 898,138; Sept. 8; Sp. p. 1852; Dr. p. 394; Gaz. vol. 136; p. 322.
Pop-corn balls, Machine for making. W. W. Turnbull. No. 897,682; Sept. 1; Sp. p. 892; Dr. p. 191; Gaz. vol. 136; p. 143.
Post: *See* Built-up post; Concrete fence-post; Extensible-post; Fence-post.
Post-hole digger. W. Wininger. No. 899,644; Sept. 29; Sp. p. 4761; Dr. p. 1019; Gaz. vol. 136; p. 904.
Pot: *See* Fire-pot; Teapot.
Powder and for filling wrappers with the same, Device for dividing. L. K. Eastman. No. 899,211; Sept. 22; Sp. p. 3895; Dr. pp. 831–2; Gaz. vol. 136; p. 729.
Powder-can. J. Weber. No. 898,944; Sept. 15; Sp. p. 3371; Dr. p. 724; Gaz. vol. 136; p. 613.
Power: *See* Cable-power.
Power-transmission device. S. A. Asquith. No. 899,283; Sept. 22; Sp. p. 4048; Dr. pp. 865–6; Gaz. vol. 136; p. 751.
Power-transmission mechanism. W. E. Belt. No. 898,175; Sept. 8; Sp. p. 1925; Dr. p. 411; Gaz. vol. 136; p. 334.
Power-transmission mechanism. J. O. Michaud. No. 899,420; Sept. 22; Sp. p. 4279; Dr. p. 919; Gaz. vol. 136; p. 794.
Power-transmitting mechanism. J. J. Gilroy; No. 898,870; Sept. 15; Sp. p. 3246; Dr. p. 695; Gaz. vol. 136; p. 590.
Power-transmitting mechanism, Flexible. R. I. Fancher. No. 897,616; Sept. 1; Sp. p. 763; Dr. p. 161; Gaz. vol. 136; p. 120.
Precious stones, Mounting for. W. R. Elliot. No. 899,296; Sept. 22; Sp. p. 4070; Dr. p. 869; Gaz. vol. 136; p. 756.
Press: *See* Baling-press; Hydraulic press; Printing-press; Rotary press; Screw-press.
Pressing device. O. E. Felland. No. 898,570; Sept. 15; Sp. p. 2682; Dr. p. 573; Gaz. vol. 136; p. 492.
Pressure-gage. G. Spencer. No. 898,148; Sept. 8; Sp. p. 1869; Dr. p. 399; Gaz. vol. 136; p. 325.
Pressure-gage. E. S. Wheeler. No. 899,932; Sept. 29; Sp. p. 5367; Dr. p. 1144; Gaz. vol. 136; p. 997.
Pressure-governor, Automatic. G. M. Richards. No. 899,263; Sept. 22; Sp. p. 4019; Dr. p. 858; Gaz. vol. 136; p. 745.
Pressure-indicator. A. H. C. Gibson. No. 898,313; Sept. 8; Sp. p. 1986; Dr. p. 424; Gaz. vol. 136; p. 345.
Pressure indicator and regulator. R. Faries. No. 899,446; Sept. 22; Sp. p. 4327; Dr. p. 930; Gaz. vol. 136; p. 802.
Pressure mechanism, Fluid-feeding-. G. Thompson. No. 897,676; Sept. 1; Sp. p. 879; Dr. p. 188; Gaz. vol. 136; p. 141.
Pressure-recorder. G. Spencer. No. 897,311; Sept. 1; Sp. p. 77; Dr. p. 19; Gaz. vol. 136; p. 17.
Pressure-regulator. A. Schum. No. 899,912; Sept. 29; Sp. p. 5306; Dr. p. 1135; Gaz. vol. 136; p. 991.
Primary battery. W. A. F. Bleeck. No. 899,823; Sept. 29; Sp. p. 5135; Dr. p. 1098; Gaz. vol. 136; p. 963.
Printing and registering apparatus, Ticket. M. Lebels. No. 899,671; Sept. 29; Sp. p. 4801; Dr. pp. 1028–9; Gaz. vol. 136; p. 912.
Printing apparatus. A. B. Dick. No. 898,446; Sept. 15; Sp. p. 2445; Dr. p. 523; Gaz. vol. 136; p. 453.
Printing device. J. J. Sayre. No. 899,624; Sept. 29; Sp. p. 4721; Dr. p. 1011; Gaz. vol. 136; p. 898.
Printing-frame. C. A. Wayland. No. 899,303; Sept. 22; Sp. p. 4188; Dr. p. 897; Gaz. vol. 136; p. 777.
Printing-machine. A. B. Dick. No. 898,445; Sept. 15; Sp. p. 2439; Dr. pp. 522–3; Gaz. vol. 136; p. 453.
Printing-machine, Blue-. J. C. Perham. No. 897,482; Sept. 1; Sp. p. 489; Dr. p. 104; Gaz. vol. 136; p. 78.
Printing machines, Ribbon mechanism for type-. A. B. Dick. No. 899,160; Sept. 22; Sp. p. 3795; Dr. pp. 812–13; Gaz. vol. 136; p. 712.
Printing machinery, Antismutting device for. E. H. Cottrell. No. 898,727; Sept. 15; Sp. p. 2983; Dr. pp. 639–40; Gaz. vol. 136; p. 543.
Printing, Means for preventing offset in connection with. J. Hergesheimer. No. 897,831; Sept. 1; Sp. p. 1201; Dr. p. 256; Gaz. vol. 136; p. 191.
Printing-plates, Apparatus for the production of process. H. G. Bartholomew and H. M. Bussy. No. 899,019; Sept. 22; Sp. p. 3523; Dr. p. 754; Gaz. vol. 136; p. 666.
Printing-press. J. H. Stonemetz. No. 898,075; Sept. 8; Sp. p. 1728; Dr. p. 367; Gaz. vol. 136; p. 302.
Printing-press ink-roller trip. C. L. Johnston. No. 897,902; Sept. 8; Sp. p. 1359; Dr. p. 291; Gaz. vol. 136; p. 246.
Printing-press rotary folding mechanism. H. P. Husby. No. 899,734; Sept. 29; Sp. p. 4932; Dr. p. 1058; Gaz. vol. 136; p. 932.
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Printing-press side guide. C. J. McArthur. No. 899,834; Sept. 29; Sp. p. 5148; Dr. p. 1102; Gaz. vol. 136; p. 966.
Printing tubular articles, Apparatus for. J. M. Johnson. No. 900,073; Sept. 29; Sp. p. 5681; Dr. p. 1213; Gaz. vol. 136; p. 1044.
Projectile, Explosive. J. F. Meigs and E. Gathmann. (Reissue.) No. 12,849; Sept. 8; Sp. p. 2374; Dr. p. 507; Gaz. vol. 136; p. 412.
Projectile-loading. G. W. Gentieu. No. 899,523; Sept. 29; Sp. p. 4494; Dr. p. 965; Gaz. vol. 136; p. 864.
Propeller-adjusting device. W. E. Blair. No. 897,341; Sept. 1; Sp. p. 189; Dr. p. 40; Gaz. vol. 136; p. 28.
Propeller, Boat-. L. C. Butler. No. 898,551; Sept. 15; Sp. p. 2650; Dr. p. 567; Gaz. vol. 136; p. 487.
Propelling mechanism. R. H. Bowman. No. 898,626; Sept. 15; Sp. p. 2792; Dr. pp. 597–8; Gaz. vol. 136; p. 511.
Propulsion, Marine. Y. Wadagaki. No. 899,359; Sept. 22; Sp. p. 4180; Dr. p. 895; Gaz. vol. 136; p. 775.
Protective apparatus, Arrangement of. H. L. Van Valkenburg. No. 899,358; Sept. 22; Sp. p. 4178; Dr. p. 894; Gaz. vol. 136; p. 775.
Proteids with bismuth iodid, Manufacturing new compounds of. A. Busch. No. 898,311; Sept. 8; Sp. p. 2170; Gaz. vol. 136; p. 375.
Pruning implement. B. F. Talley. No. 899,687; Sept. 29; Sp. p. 4835; Dr. p. 1035; Gaz. vol. 136; p. 917.
Puller: *See* Nail-puller; Spoke-puller; Stump-puller.
Pulling-machine. H. Bickel. No. 899,943; Sept. 29; Sp. p. 5390; Dr. p. 1150; Gaz. vol. 136; p. 1000.
Pulley. C. F. Murray. No. 899,754; Sept. 29; Sp. p. 4978; Dr. p. 1067; Gaz. vol. 136; p. 940.
Pulley-casing, Sheet-metal. F. E. Sloan. No. 898,275; Sept. 8; Sp. p. 2105; Dr. p. 448; Gaz. vol. 136; p. 364.
Pulley-casings, Making sheet-metal. F. E. Sloan. No. 898,276; Sept. 8; Sp. p. 2106; Dr. p. 448; Gaz. vol. 136; p. 365.
Pulley, Clutch-. W. Baumgardner. No. 897,704; Sept. 1; Sp. p. 939; Dr. p. 200; Gaz. vol. 136; p. 151.
Pulley-lift, Automatic safety. F. W. Carter. No. 898,318; Sept. 8; Sp. p. 2182; Dr. p. 463; Gaz. vol. 136; p. 377.
Pulverizer, Soil-. J. M. Sivadle. No. 897,310; Sept. 1; Sp. p. 76; Dr. p. 19; Gaz. vol. 136; p. 16.
Pulverulent material, Producing solid hard pieces from. L. Weiss. No. 899,581; Sept. 29; Sp. p. 4623; Gaz. vol. 136; p. 884.
Pump. D. E. and G. C. Clayton. No. 897,963; Sept. 8; Sp. p. 1510; Dr. p. 320; Gaz. vol. 136; p. 267.
Pump. W. H. Heard. No. 898,471; Sept. 15; Sp. p. 2487; Dr. p. 532; Gaz. vol. 136; p. 460.
Pump. J. H. Champ. No. 899,513; Sept. 29; Sp. p. 4474; Dr. pp. 960–1; Gaz. vol. 136; p. 861.
Pump. S. R. Blanchard. No. 899,784; Sept. 29; Sp. p. 5053; Dr. p. 1083; Gaz. vol. 136; p. 951.
Pump, Air-. C. A. Hague. No. 899,971; Sept. 29; Sp. p. 5442; Dr. p. 1160; Gaz. vol. 136; p. 1010.
Pump, Air-lift. W. F. Spangler. No. 898,015; Sept. 8; Sp. p. 1602; Dr. p. 342; Gaz. vol. 136; p. 283.
Pump and water-wheel, Centrifugal. J. Pirkl. No. 897,397; Sept. 1; Sp. p. 322; Dr. pp. 67–9; Gaz. vol. 136; p. 49.
Pump, Centrifugal. J. G. Pfadt. No. 897,483; Sept. 1; Sp. p. 491; Dr. p. 104; Gaz. vol. 136; p. 78.
Pump controller, Pneumatic-. E. W. Conkell. No. 899,101; Sept. 22; Sp. p. 3668; Dr. p. 785; Gaz. vol. 136; p. 692.
Pump curbs or frames, Fastening device for. T. T. Baker. No. 898,303; Sept. 8; Sp. p. 2159; Dr. p. 459; Gaz. vol. 136; p. 373.
Pump, Double-acting power-. W. Klrkwood. No. 899,541; Sept. 29; Sp. p. 4533; Dr. p. 974; Gaz. vol. 136; p. 870.
Pump, Double-acting wet-air. E. Josse. No. 898,746; Sept. 15; Sp. p. 3017; Dr. p. 646; Gaz. vol. 136; p. 549.
Pump for producing a vacuum or compressing gases, Multistage. A. Siegel. No. 897,498; Sept. 1; Sp. p. 527; Dr. p. 112; Gaz. vol. 136; p. 84.
Pump, Gas-. R. Whitaker. No. 899,583; Sept. 29; Sp. p. 4627; Dr. p. 993; Gaz. vol. 136; p. 885.
Pump, Gas-. R. Whitaker. No. 899,585; Sept. 29; Sp. p. 4631; Dr. p. 994; Gaz. vol. 136; p. 886.
Pump, High-lift centrifugal. C. Lager. No. 897,469; Sept. 1; Sp. p. 470; Dr. p. 100; Gaz. vol. 136; p. 75.
Pump, Hydraulic. J. W. Nelson. No. 899,463; Sept. 22; Sp. p. 4359; Dr. p. 936; Gaz. vol. 136; p. 807.
Pump, Hydraulic air-. J. B. Ridout. No. 898,264; Sept. 8; Sp. p. 2085; Dr. p. 443; Gaz. vol. 136; p. 360.
Pump, Power air-. W. J. Spencer. No. 898,522; Sept. 15; Sp. p. 2587; Dr. p. 553; Gaz. vol. 136; p. 477.
Pump, Rotary. L. L. Pratt. No. 897,655; Sept. 1; Sp. p. 835; Dr. p. 176; Gaz. vol. 136; p. 133.
Pump, Rotary. J. J. O'Donnell. No. 898,499; Sept. 15; Sp. p. 2537; Dr. p. 544; Gaz. vol. 136; p. 469.
Pump, Rotary air-. H. M. Montgomery. No. 898,493; Sept. 15; Sp. p. 2526; Dr. p. 541; Gaz. vol. 136; p. 467.
Pump, Vacuum-. W. P. M. Grelck. No. 898,461; Sept. 15; Sp. p. 2472; Dr. p. 529; Gaz. vol. 136; p. 458.
Pump-valve. P. J. Doyle. No. 899,210; Sept. 22; Sp. p. 3894; Dr. p. 831; Gaz. vol. 136; p. 728.
Pump valve, Gas-. R. Whitaker. No. 899,584; Sept. 29; Sp. p. 4628; Dr. pp. 993–4; Gaz. vol. 136; p. 885.
Pumps and the like, Automatic balancing device for centrifugal. F. A. Griessmann. No. 898,402; Sept. 15; Sp. p. 2474; Dr. p. 529; Gaz. vol. 136; p. 458.
Pumping air and gases, Apparatus for. W. G. Abbott, Jr. No. 899,820; Sept. 29; Sp. p. 5129; Dr. pp. 1097–8; Gaz. vol. 136; p. 963.
Pumping apparatus. G. J. Murdock. No. 899,458; Sept. 22; Sp. p. 4349; Dr. pp. 933–4; Gaz. vol. 136; p. 806.
Pumping apparatus, Well-. W. M. Stephenson. No. 899,921; Sept. 29; Sp. p. 5324; Dr. pp. 1138–9; Gaz. vol. 136; p. 994.
Pumping machine, Breast-. T. W. Howell. No. 897,289; Sept. 1; Sp. p. 44; Dr. p. 11; Gaz. vol. 136; p. 10.
Punch. W. A. Whitney. No. 898,397; Sept. 8; Sp. p. 2322; Dr. p. 494; Gaz. vol. 136; p. 404.
Punch. J. F. Doolittle. No. 900,009; Sept. 29; Sp. p. 5529; Dr. p. 1179; Gaz. vol. 136; p. 1023.
Punch-presses, Clearance device for. R. H. Pearson. No. 899,131; Sept. 22; Sp. p. 3722; Dr. p. 797; Gaz. vol. 136; p. 702.

Punching-machine. M. J. Riggs. No. 899,324; Sept. 22; Sp. p. 4120; Dr. p. 881; Gaz. vol. 136; p. 764.
Purse-clasp-locking device. L. Tuorto. No. 897,562; Sept. 1; Sp. p. 662; Dr. p. 139; Gaz. vol. 136; p. 104.
Push-button. C. W. Wachtel. No. 900,006; Sept. 29; Sp. p. 5524; Dr. p. 1177; Gaz. vol. 136; p. 1021.
Puzzle. J. W. Clark. No. 898,321; Sept. 8; Sp. p. 2186; Dr. p. 464; Gaz. vol. 136; p. 378.
Puzzle. C. H. Dreher. No. 898,342; Sept. 8; Sp. p. 2220; Dr. p. 472; Gaz. vol. 136; p. 385.
Puzzle. G. Chapman. No. 898,833; Sept. 15; Sp. p. 3177; Dr. p. 680; Gaz. vol. 136; p. 577.
Puzzle. C. C. Burr. No. 899,949; Sept. 29; Sp. p. 5405; Dr. p. 1152; Gaz. vol. 136; p. 1003.
Quebracho, Treating extracts of. L. Pollak. No. 900,038; Sept. 29; Sp. p. 5599; Gaz. vol. 136; p. 1033.
Quill substances, Machine for treating. W. Webster. No. 900,048; Sept. 29; Sp. p. 5623; Dr. pp. 1200–3; Gaz. vol. 136; p. 1036.
Rack: *See* Bottle-rack; Display-rack; Feeding-trough rack; Hay-rack; Hay and cattle rack; Hose-rack; Music-rack; Shoe-rack; Stock and hay rack.
Radiator. J. B. Long and F. Todd. No. 898,238; Sept. 8; Sp. p. 2048; Dr. p. 435; Gaz. vol. 136; p. 353.
Rail-bond. R. J. Ostick. No. 897,997; Sept. 8; Sp. p. 1568; Dr. p. 333; Gaz. vol. 136; p. 278.
Rail-bond. G. A. Mead. No. 899,120; Sept. 22; Sp. p. 3702; Dr. pp. 793–4; Gaz. vol. 136; p. 698.
Rail-brace. W. H. Huffman. No. 899,302; Sept. 22; Sp. p. 4079; Dr. p. 872; Gaz. vol. 136; p. 757.
Rail-chair. G. W. Sutherland. No. 899,354; Sept. 22; Sp. p. 4170; Dr. p. 892; Gaz. vol. 136; p. 774.
Rail clamp, Guard-. G. L. Hall. No. 899,694; Sept. 29; Sp. p. 4848; Dr. p. 1038; Gaz. vol. 136; p. 919.
Rail connection. A. S. Lind. No. 899,607; Sept. 29; Sp. p. 4852; Dr. p. 1039; Gaz. vol. 136; p. 920.
Rail contact-shoe guard, Automatic third-. W. E. Hayes. No. 899,503; Sept. 29; Sp. p. 4657; Dr. p. 998; Gaz. vol. 136; p. 889.
Rail-fastener. O. A. Hall. No. 897,828; Sept. 1; Sp. p. 1193; Dr. pp. 253–5; Gaz. vol. 136; p. 190.
Rail-fastener. K. O. Lofthus. No. 898,053; Sept. 8; Sp. p. 1683; Dr. p. 357; Gaz. vol. 136; p. 295.
Rail-fastener. W. L. Walker and L. J. Eyth. No. 898,291; Sept. 8; Sp. p. 2133; Dr. p. 453; Gaz. vol. 136; p. 369.
Rail-fastening. W. L. Vail, Jr. No. 898,611; Sept. 15; Sp. p. 2761; Dr. p. 590; Gaz. vol. 136; p. 506.
Rail-fastening. H. K. Myers. No. 899,230; Sept. 22; Sp. p. 3928; Dr. p. 839; Gaz. vol. 136; p. 734.
Rail, Guard-. C. Wiench. No. 897,946; Sept. 8; Sp. p. 1469; Dr. p. 312; Gaz. vol. 136; p. 261.
Rail-joint. H. R. Roth. No. 897,851; Sept. 1; Sp. p. 1240; Dr. pp. 265–6; Gaz. vol. 136; p. 197.
Rail-joint. C. L. McVoy. No. 897,921; Sept. 8; Sp. p. 1404; Dr. p. 299; Gaz. vol. 136; p. 253.
Rail-joint. P. W. Row. No. 898,006; Sept. 8; Sp. p. 1580; Dr. p. 337; Gaz. vol. 136; p. 280.
Rail-joint. H. Markussen. No. 898,412; Sept. 8; Sp. p. 2361; Dr. p. 504; Gaz. vol. 136; p. 409.
Rail-joint. J. D. Stitzell. No. 898,799; Sept. 15; Sp. p. 3114; Dr. p. 667; Gaz. vol. 136; p. 566.
Rail-joint. J. A. Elcholz. No. 898,854; Sept. 15; Sp. p. 3214; Dr. p. 688; Gaz. vol. 136; p. 584.
Rail-joint. M. E. Gilcrest. No. 898,867; Sept. 15; Sp. p. 3235; Dr. p. 693; Gaz. vol. 136; p. 588.
Rail-joint. T. Olsen. No. 898,917; Sept. 15; Sp. p. 3329; Dr. p. 713; Gaz. vol. 136; p. 605.
Rail-joint. H. C. Sandusky. No. 899,190; Sept. 22; Sp. p. 3855; Dr. p. 824; Gaz. vol. 136; p. 722.
Rail-joint. D. C. Armstrong and W. P. Fitzgerald. No. 899,647; Sept. 29; Sp. p. 4765; Dr. p. 1019; Gaz. vol. 136; p. 905.
Rail-joint. C. P. Brown. No. 899,655; Sept. 29; Sp. p. 4775; Dr. p. 1022; Gaz. vol. 136; p. 907.
Rail-joint. E. May. No. 899,883; Sept. 29; Sp. p. 5258; Dr. p. 1124; Gaz. vol. 136; p. 982.
Rail-joint. J. Caputo. No. 899,951; Sept. 29; Sp. p. 5407; Dr. p. 1153; Gaz. vol. 136; p. 1003.
Rail-joint chair and fastening. M. Lachance. No. 897,751; Sept. 1; Sp. p. 1028; Dr. p. 218; Gaz. vol. 136; p. 166.
Rail joint, Track-. J. C. Riggs. No. 897,784; Sept. 1; Sp. p. 1097; Dr. p. 235; Gaz. vol. 136; p. 176.
Rail-splice. G. W. Blanchard. No. 897,707; Sept. 1; Sp. p. 944; Dr. p. 201; Gaz. vol. 136; p. 151.
Rail-stay. J. M. Scott. No. 897,307; Sept. 1; Sp. p. 70; Dr. p. 18; Gaz. vol. 136; p. 15.
Rail-tie. W. H. Mayer and I. O. Burch. No. 898,982; Sept. 15; Sp. p. 3440; Dr. p. 738; Gaz. vol. 136; p. 626.
Rail tie and fastener. J. M. Farra. No. 899,390; Sept. 22; Sp. p. 4227; Dr. p. 905; Gaz. vol. 136; p. 784.
Rail tie and fastening. J. H. Lewis. No. 900,028; Sept. 29; Sp. p. 5571; Dr. p. 1190; Gaz. vol. 136; p. 1029.
Rail-tie, Metallic. A. S. Kazimer. No. 899,990; Sept. 29; Sp. p. 5489; Dr. p. 1169; Gaz. vol. 136; p. 1016.
Rail-tie, Metallic. C. L. McVoy. No. 899,426; Sept. 22; Sp. p. 4294; Dr. p. 922; Gaz. vol. 136; p. 796.
Rails, Device for preventing spreading of. C. L. McVoy. No. 899,426; Sept. 22; Sp. p. 4294; Dr. p. 922; Gaz. vol. 136; p. 796.
Rails, Means of forming joints and bonds in. H. G. Gillmor. No. 898,869; Sept. 15; Sp. p. 3239; Dr. p. 694; Gaz. vol. 136; p. 589.
Railing. W. Bayley. No. 897,571; Sept. 1; Sp. p. 681; Dr. pp. 142–3; Gaz. vol. 136; p. 107.
Railway, Aerial. F. Hooker. No. 898,739; Sept. 15; Sp. p. 3007; Dr. p. 644; Gaz. vol. 136; p. 547.
Railway-brake, Drop-lever. W. C. Watson. No. 898,416; Sept. 8; Sp. p. 2367; Dr. p. 505; Gaz. vol. 136; p. 410.
Railway-coach vestibules, Step-cover for. T. H. Kane and A. J. Urtubees. No. 899,540; Sept. 29; Sp. p. 4532; Dr. p. 974; Gaz. vol. 136; p. 870.
Railway conduit, Electric-. E. E. Granger. No. 898 216; Sept. 8; Sp. p. 1991; Dr. pp. 424–5; Gaz. vol. 136; p. 346.
Railway cross-tie. E. G. Gay. No. 897,612; Sept. 1; Sp. p. 766; Dr. p. 161; Gaz. vol. 136; p. 121.
Railway cross-tie. W. Clement. No. 897,819; Sept. 1; Sp. p. 1175; Dr. p. 249; Gaz. vol. 136; p. 186.
Railway cross-tie. C. T. Moore. No. 897,918; Sept. 8; Sp. p. 1399; Dr. p. 298; Gaz. vol. 136; p. 252.
Railway-cross-tie lift. E. L. Barton. No. 899,373; Sept. 22; Sp. p. 4203; Dr. p. 900; Gaz. vol. 136; p. 780.
Railway-crossing. F. Halley. No. 898,466; Sept. 15; Sp. p. 2480; Dr. p. 530; Gaz. vol. 136; p. 459.
Railway electric signaling. J. Hutchinson. No. 898,219; Sept. 8; Sp. p. 2009; Dr. p. 427; Gaz. vol. 136; p. 347.
Railway electric signaling system. J. Hutchinson. No. 898,221; Sept. 8; Sp. p. 2017; Dr. p. 428; Gaz. vol. 136; p. 347.
Railway electric signaling system. A. P. Rickmire. No. 899,134; Sept. 22; Sp. p. 3729; Dr. pp. 798–9; Gaz. vol. 136; p. 703.
Railway-frogs and the like, Heel-block for. W. M. Henderson. No. 898,646; Sept. 15; Sp. p. 2839; Dr. p. 606; Gaz. vol. 136; p. 517.
Railway rail and bed-plate, Combined. J. C. Phillips. No. 898,986; Sept. 15; Sp. p. 3446; Dr. p. 739; Gaz. vol. 136; p. 627.
Railway-rail joint or connection, Electrically-conductive. B. G. Braine. No. 898,430; Sept. 15; Sp. p. 2407; Dr. p. 515; Gaz. vol. 136; p. 448.
Railway-rails, Means for connecting parallel. V. A. White. No. 899,366; Sept. 22; Sp. p. 4194; Dr. p. 898; Gaz. vol. 136; p. 778.
Railway safety appliance. J. T. Andrew. No. 897,864; Sept. 8; Sp. p. 1274; Dr. p. 272; Gaz. vol. 136; p. 233.
Railway-signal. J. P. Coleman. No. 898,325; Sept. 8; Sp. p. 2192; Dr. pp. 465–6; Gaz. vol. 136; p. 379.
Railway-signal. J. Hoffer. No. 898,473; Sept. 15; Sp. p. 2490; Dr. p. 533; Gaz. vol. 136; p. 461.
Railway signal device. S. Pizlczik. No. 899,840; Sept. 29; Sp. p. 5164; Dr. pp. 1105–6; Gaz. vol. 136; p. 968.
Railway-signal, Electric. T. C. Fogarty, F. W. Brock, and F. A. Bowdle. No. 898,862; Sept. 15; Sp. p. 3226; Dr. pp. 691–2; Gaz. vol. 136; p. 587.
Railway signal system. M. L. Shepherd. No. 898,693; Sept. 15; Sp. p. 2929; Dr. p. 627; Gaz. vol. 136; p. 533.
Railway-sleepers, Bed-plate for iron. A. Haarmann. No. 899,107; Sept. 22; Sp. p. 3678; Dr. pp. 787–8; Gaz. vol. 136; p. 694.
Railway-spike. S. S. Keen. No. 899,991; Sept. 29; Sp. p. 5491; Dr. p. 1169; Gaz. vol. 136; p. 1017.
Railway-switch. M. H. and W. Owen. No. 897,393; Sept. 1; Sp. p. 311; Dr. p. 64; Gaz. vol. 136; p. 48.
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Railway-switch device, Safety. J. Tangney and B. C. Barnes. No. 898,154; Sept. 8; Sp. p. 1876; Dr. p. 401; Gaz. vol. 136; p. 326.
Railway-switch frog. A. M. Threewits. No. 898,804; Sept. 15; Sp. p. 3123; Dr. p. 669; Gaz. vol. 136; p. 567.
Railway-switches or other devices, Alternating mechanism for operating. M. A. Dees. No. 899,032; Sept. 22; Sp. p. 3544; Dr. p. 758; Gaz. vol. 136; p. 670.
Railway-tie. A. O. Thunborg. No. 898,287; Sept. 8; Sp. p. 2126; Dr. p. 452; Gaz. vol. 136; p. 368.
Railway-tie. L. A. Miller. No. 898,590; Sept. 15; Sp. p. 2714; Dr. p. 581; Gaz. vol. 136; p. 498.
Railway-tie. A. A. Whitbred. No. 898,709; Sept. 15; Sp. p. 2950; Dr. p. 632; Gaz. vol. 136; p. 537.
Railway-tie. R. L. Bower. No. 899,023; Sept. 22; Sp. p. 3529; Dr. p. 755; Gaz. vol. 136; p. 607.
Railway-tie. W. A. Lockard. No. 899,174; Sept. 22; Sp. p. 3825; Dr. p. 819; Gaz. vol. 136; p. 717.
Railway-tie. J. C. Reed. No. 899,262; Sept. 22; Sp. p. 4017; Dr. p. 858; Gaz. vol. 136; p. 745.
Railway-tie. M. C. Williams. No. 899,643; Sept. 29; Sp. p. 4759; Dr. p. 1018; Gaz. vol. 136; p. 904.
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Railway-tie and rail-fastening. W. A. Cline. No. 898,323; Sept. 8; Sp. p. 2188; Dr. p. 464; Gaz. vol. 136; p. 379.
Railway-tie and rail-fastening. W. P. Day. No. 898,335; Sept. 8; Sp. p. 2208; Dr. p. 469; Gaz. vol. 136; p. 383.
Railway-tie, Metal. W. J. Wilson. No. 898,080; Sept. 8; Sp. p. 1738; Dr. p. 370; Gaz. vol. 136; p. 304.
Railway-tie, Metal. C. Horrell. No. 898,108; Sept. 8; Sp. p. 1792; Dr. p. 380; Gaz. vol. 136; p. 313.
Railway-tie, Metallic. G. T. Bridwell. No. 897,580; Sept. 1; Sp. p. 697; Dr. p. 146; Gaz. vol. 136; p. 110.
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Railway-ties, Metallic core for. W. B. Westbrook. No. 899,089; Sept. 22; Sp. p. 3638; Dr. p. 780; Gaz. vol. 136; p. 688.
Railway track construction. O. B. Grant. No. 899,041; Sept. 22; Sp. p. 3556; Dr. p. 761; Gaz. vol. 136; p. 671.
Railway-track fastener. W. H. Walden. (Reissue.) No. 12,852; Sept. 8; Sp. p. 2378; Dr. p. 508; Gaz. vol. 136; p. 412.
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Railways and power plants, Electromotor controlling and operating system for electric. J. Sahulka. No. 899,189; Sept. 22; Sp. p. 3852; Dr. p. 824; Gaz. vol. 136; p. 721.
Railways, Contact-rail for electric. J. Hutchinson. No. 898,220; Sept. 8; Sp. p. 2014; Dr. pp. 427–8; Gaz. vol. 136; p. 347.
Railways, Sound-deadening construction for elevated. C. H. Conover and W. D. Murphy. No. 899,293; Sept. 22; Sp. p. 4064; Dr. p. 868; Gaz. vol. 136; p. 754.
Rake: *See* Adjustable rake; Hay-rake.

Rake. C. Walther. No. 897,689; Sept. 1; Sp. p. 903; Dr. pp. 193–4; Gaz. vol. 136; p. 145.
Ramie and other textile substances, Apparatus for treatment of. J. Bendel. No. 897,956; Sept. 8; Sp. p. 1486; Dr. p. 316; Gaz. vol. 136; p. 264.
Range. S. R. Stine. No. 899,813; Sept. 29; Sp. p. 5116; Dr. p. 1094; Gaz. vol. 136; p. 960.
Range-boiler. M. Gerstein. No. 900,012; Sept. 29; Sp. p. 5537; Dr. p. 1180; Gaz. vol. 136; p. 1024.
Range, Combined coal and gas. C. H. Miller. No. 899,885; Sept. 29; Sp. p. 5260; Dr. p. 1125; Gaz. vol. 136; p. 983.
Range, Cooking-. K. Luger-Hefel. No. 899,254; Sept. 22; Sp. p. 4005; Dr. pp. 854–5; Gaz. vol. 136; p. 743.
Ratchet-tool. E. R. Packer. No. 897,772; Sept. 1; Sp. p. 1081; Dr. p. 232; Gaz. vol. 136; p. 172.
Ratchet-wrench. W. P. Walker. No. 898,804; Sept. 15; Sp. p. 3127; Dr. p. 670; Gaz. vol. 136; p. 568.
Razor, Autom atic. J. K. Joice. No. 899,870; Sept. 29; Sp. p. 5238; Dr. p. 1120; Gaz. vol. 136; p. 979.
Razor-blade holder. J. R. Torrey. No. 898,704; Sept. 15; Sp. p. 2944; Dr. p. 631; Gaz. vol. 136; p. 535.
Razor-strop. S. Hauser and E. S. Shepherd. No. 898,418; Sept. 8; Sp. p. 2370; Dr. p. 506; Gaz. vol. 136; p. 411.
Razor-stropping device. J. R. Torrey. No. 898,705; Sept. 15; Sp. p. 2945; Dr. p. 631; Gaz. vol. 136; p. 536.
Reaction-chambers, &c., Filling for. H. Petersen. No. 899,898; Sept. 29; Sp. p. 5285; Dr. p. 1130; Gaz. vol. 136; p. 987.
Reaction-chambers, Filling material for. H. Petersen. No. 899,899; Sept. 29; Sp. p. 5287; Dr. p. 1130; Gaz. vol. 136; p. 988.
Reamer-tap. G. T. Reiss. No. 899,759; Sept. 29; Sp. p. 4988; Dr. p. 1069; Gaz. vol. 136; p. 941.
Reaper. T. E. Lind. No. 899,878; Sept. 29; Sp. p. 5250; Dr. pp. 1122–3; Gaz. vol. 136; p. 981.
Receptacle. G. Shields. No. 899,338; Sept. 22; Sp. p. 4139; Dr. p. 886; Gaz. vol. 136; p. 768.
Receptacle-closure. G. J. Kirby. No. 897,983; Sept. 8; Sp. p. 1543; Dr. p. 328; Gaz. vol. 136; p. 273.
Receptacle-holder. C. C. Little. No. 898,755; Sept. 15; Sp. p. 3034; Dr. p. 651; Gaz. vol. 136; p. 551.
Recorder: *See* Electrical impulse-recorder; Passenger-recorder; Pressure-recorder; Time-recorder.
Recording instrument. J. Harris. No. 899,043; Sept. 22; Sp. p. 3560; Dr. pp. 762–3; Gaz. vol. 136; p. 672.
Rectifier system. O. O. Kruh. No. 897,544; Sept. 1; Sp. p. 626; Dr. p. 129; Gaz. vol. 136; p. 98.
Recuperative furnace. N. L. Heinz. No. 898,410; Sept. 8; Sp. p. 2347; Dr. p. 499; Gaz. vol. 136; p. 408.
Reel. O. P. Owen. No. 899,676; Sept. 29; Sp. p. 4819; Dr. p. 1032; Gaz. vol. 136; p. 913.
Reflector. G. H. Herrnecker. No. 897,464; Sept. 1; Sp. p. 463; Dr. p. 99; Gaz. vol. 136; p. 73.
Refrigerating-machine, Rotary. M. Audiffren and H. A. Singrün. No. 898,400; Sept. 8; Sp. p. 2327; Dr. p. 494; Gaz. vol. 136; p. 405.
Refrigerator. J. O. La Madeleine. No. 898,231; Sept. 8; Sp. p. 2038; Dr. p. 432; Gaz. vol. 136; p. 351.
Refrigerator-car. J. D. Stewart. No. 897,424; Sept. 1; Sp. p. 382; Dr. p. 80; Gaz. vol. 136; p. 59.
Register: *See* Cash-register; Singe-register.
Registering device. F. De Paris. No. 897,725; Sept. 1; Sp. p. 979; Dr. pp. 208–9; Gaz. vol. 136; p. 157.
Regulation system. J. Biljur. No. 898,030; Sept. 8; Sp. p. 1640; Dr. pp. 349–50; Gaz. vol. 136; p. 288.
Regulator: *See* Controller-regulator; Damper-regulator; Engine speed-regulator; Exhaust-regulator; Feed-water regulator; Piano-touch regulator; Pressure-regulator; Watch-regulator.
Relay, Inverse time-limit. P. Bendmann. No. 897,812; Sept. 1; Sp. p. 1160; Dr. p. 247; Gaz. vol. 136; p. 184.
Resilient wheel. J. E. McQuilkin. No. 899,425; Sept. 22; Sp. p. 4293; Dr. p. 921; Gaz. vol. 136; p. 796.
Resinous product and making same. R. Bohn. No. 898,307; Sept. 8; Sp. p. 2164; Gaz. vol. 136; p. 374.
Respiration apparatus. P. Lord. No. 899,225; Sept. 22; Sp. p. 3914; Dr. p. 836; Gaz. vol. 136; p. 732.
Reversing mechanism. A. Russell and J. D. Dinsmoor. No. 898,268; Sept. 8; Sp. p. 2089; Dr. p. 444; Gaz. vol. 136; p. 362.
Revolution-indicators, Automatic contact mechanism for electric. F. W. Wood. No. 898,621; Sept. 15; Sp. p. 2780; Dr. p. 594; Gaz. vol. 136; p. 509.
Revolver. T. F. Bowker. No. 898,717; Sept. 15; Sp. p. 2964; Dr. p. 635; Gaz. vol. 136; p. 540.
Revolvers and other pistols, Barrel-grip for. G. C. Bourne. No. 897,577; Sept. 1; Sp. p. 693; Dr. p. 145; Gaz. vol. 136; p. 109.
Revolving chair. H. W. Bolens. No. 899,504; Sept. 29; Sp. p. 4454; Dr. p. 956; Gaz. vol. 136; p. 858.
Rheostat. H. Poth. No. 898,987; Sept. 15; Sp. p. 3447; Dr. pp. 739–40; Gaz. vol. 136; p. 627.
Rheostat, Starting and speed-regulating. F. J. Seabolt. No. 897,407; Sept. 1; Sp. p. 525; Dr. p. 111; Gaz. vol. 136; p. 83.
Rim-compressor. A. Magnett and J. M. Clementson. No. 898,585; Sept. 15; Sp. p. 2708; Dr. p. 579; Gaz. vol. 136; p. 497.
Rim, Detachable. R. Kronenberg. No. 897,630; Sept. 1; Sp. p. 794; Dr. p. 167; Gaz. vol. 136; p. 126.
Ring: *See* Key-ring; Packing-ring; Spinning-ring.
Ring cutter. J. H. Turcotte. No. 897,563; Sept. 1; Sp. p. 664; Dr. p. 139; Gaz. vol. 136; p. 104.
Roasting-furnace. A. R. Willey. No. 898,024; Sept. 8; Sp. p. 1631; Dr. pp. 347–8; Gaz. vol. 136; p. 286.
Roasting-furnace. W. A. Rankin. No. 899,541; Sept. 29; Sp. p. 4584; Dr. p. 985; Gaz. vol. 136; p. 878.
Roasting-furnace. W. A. Rankin. No. 899,542; Sept. 29; Sp. p. 4585; Dr. p. 986; Gaz. vol. 136; p. 878.
Roasting-furnace. G. F. De Wein. No. 899,541; Sept. 29; Sp. p. 4642; Dr. p. 996; Gaz. vol. 136; p. 888.
Rock-drill. R. H. Anderson. No. 897,336; Sept. 1; Sp. p. 172; Dr. p. 36; Gaz. vol. 136; p. 26.
Rock-drilling machines, Water-supplying device for. E. M. Weston. No. 899,582; Sept. 29; Sp. p. 4625; Dr. p. 993; Gaz. vol. 136; p. 884.
Rocker, Cushioned. W. Dingman. No. 898,340; Sept. 8; Sp. p. 2218; Dr. p. 471; Gaz. vol. 136; p. 384.
Roller. J. M. Braly. No. 898,827; Sept. 15; Sp. p. 3167; Dr. p. 677; Gaz. vol. 136; p. 575.
Rolling metal rings, Machine for. I. B. Ritter. No. 899,436; Sept. 22; Sp. p. 4308; Dr. p. 925; Gaz. vol. 136; p. 798.
Rolling-mills, Twist-delivery guide for. V. E. Edwards. No. 899,518; Sept. 29; Sp. p. 4482; Dr. p. 962; Gaz. vol. 136; p. 863.
Rolling plates. A. Lamberton. No. 898,900; Sept. 15; Sp. p. 3297; Dr. p. 706; Gaz. vol. 136; p. 599.
Rolling plates. A. Lamberton. No. 898,901; Sept. 15; Sp. p. 3298; Dr. pp. 706–7; Gaz. vol. 136; p. 600.
Rolling process and mill, Metal-. M. Ruthenburg. No. 897,931; Sept. 8; Sp. p. 1427; Dr. p. 305; Gaz. vol. 136; p. 256.
Roof. J. C. P. Benson. No. 899,022; Sept. 22; Sp. p. 3528; Dr. p. 755; Gaz. vol. 136; p. 667.
Roof-joint. G. B. Norgrave. No. 897,995; Sept. 8; Sp. p. 1563; Dr. p. 332; Gaz. vol. 136; p. 277.
Roofing-material joint. S. H. Goldberg. No. 899,968; Sept. 29; Sp. p. 5439; Dr. p. 1159; Gaz. vol. 136; p. 1009.
Roofing-tool. A. Allen. No. 899,016; Sept. 22; Sp. p. 3517; Dr. p. 753; Gaz. vol. 136; p. 665.
Rope-sheave. M. A. Baker. No. 899,648; Sept. 29; Sp. p. 4766; Dr. p. 1020; Gaz. vol. 136; p. 905.
Rotary device, High-speed. H. A. Myers. No. 897,916; Sept. 8; Sp. p. 1394; Dr. p. 297; Gaz. vol. 136; p. 251.
Rotary device, High-speed. H. A. Myers. No. 897,917; Sept. 8; Sp. p. 1397; Dr. p. 298; Gaz. vol. 136; p. 252.
Rotary engine. L. Bonner. No. 897,519; Sept. 1; Sp. p. 575; Dr. p. 120; Gaz. vol. 136; p. 91.
Rotary engine. J. Shaw. No. 898,272; Sept. 8; Sp. p. 2097; Dr. pp. 446–7; Gaz. vol. 136; p. 363.
Rotary engine. L. M. Singleton and C. E. Maddox. No. 898,274; Sept. 8; Sp. p. 2103; Dr. p. 447; Gaz. vol. 136; p. 364.
Rotary engine. F. C. Krüger. No. 898,658; Sept. 15; Sp. p. 2859; Dr. p. 611; Gaz. vol. 136; p. 521.
Rotary engine. J. Gill. No. 899,040; Sept. 22; Sp. p. 3553; Dr. p. 761; Gaz. vol. 136; p. 671.
Rotary engine. A. L. Westrich. No. 899,148; Sept. 22; Sp. p. 3766; Dr. p. 806; Gaz. vol. 136; p. 708.
Rotary engine. E. Fournier. No. 899,455; Sept. 22; Sp. p. 4406; Dr. p. 945; Gaz. vol. 136; p. 816.
Rotary engine. S. Haudenshield. No. 900,014; Sept. 29; Sp. p. 5538; Dr. pp. 1180–1; Gaz. vol. 136; p. 1024.
Rotary explosive-engine. E. P. Carpenter. No. 898,665; Sept. 15; Sp. p. 3409; Dr. p. 732; Gaz. vol. 136; p. 620.
Rotary gasolene-engine. C. W. Lindsay. No. 898,903; Sept. 15; Sp. p. 3301; Dr. pp. 707–8; Gaz. vol. 136; p. 600.
Rotary press. I. Broome. No. 899,691; Sept. 29; Sp. p. 4842; Dr. p. 1037; Gaz. vol. 136; p. 918.
Rubber hose, Vulcanizing-mandrel for. S. J. Sill. No. 897,309; Sept. 1; Sp. p. 75; Dr. p. 18; Gaz. vol. 136; p. 16.
Rubber tread. W. E. Herbst. No. 897,890; Sept. 1; Sp. p. 1267; Dr. p. 271; Gaz. vol. 136; p. 199.
Rubbing and polishing machine. C. S. Yarnell. No. 897,951; Sept. 8; Sp. p. 1477; Dr. pp. 314–15; Gaz. vol. 136; p. 263.
Rule and level, Plumb. E. M. Hauntv. No. 899,730; Sept. 29; Sp. p. 4925; Dr. p. 1056; Gaz. vol. 136; p. 931.
Rule-tip. T. Prentice. No. 897,927; Sept. 8; Sp. p. 1420; Dr. p. 303; Gaz. vol. 136; p. 255.
Running-gear. F. W. Bleckley. No. 899,199; Sept. 22; Sp. p. 3809; Dr. p. 827; Gaz. vol. 136; p. 724.
Sack or bag fastener. L. J. Phillips. No. 899,512; Sept. 29; Sp. p. 4683; Dr. p. 1005; Gaz. vol. 136; p. 894.
Sad-iron. A. Luethi. No. 897,913; Sept. 8; Sp. p. 1384; Dr. p. 296; Gaz. vol. 136; p. 250.
Sad-iron, Self-heating. T. Purvis. No. 898,922; Sept. 15; Sp. p. 3337; Dr. pp. 715–16; Gaz. vol. 136; p. 607.
Safety device or saw-guard. G. Schubert. No. 899,567; Sept. 29; Sp. p. 4595; Dr. p. 987; Gaz. vol. 136; p. 880.
Safety-elevator. A. J. Worthen. No. 898,288; Sept. 8; Sp. p. 2151; Dr. p. 457; Gaz. vol. 136; p. 371.
Safety-elevator. H. Watson. No. 899,362; Sept. 22; Sp. p. 4185; Dr. p. 896; Gaz. vol. 136; p. 776.
Safety-pin. F. V. Gage and H. T. Hazard. No. 899,106; Sept. 22; Sp. p. 3677; Dr. p. 787; Gaz. vol. 136; p. 694.
Salt and pepper holder. J. T. Stapleton. No. 898,150; Sept. 8; Sp. p. 1872; Dr. p. 399; Gaz. vol. 136; p. 325.
Salt and pepper shaker, Combined. C. R. Byam. No. 897,453; Sept. 1; Sp. p. 437; Dr. p. 94; Gaz. vol. 136; p. 69.
Salt-cellar. F. A. Dinsmore. No. 899,716; Sept. 29; Sp. p. 4893; Dr. p. 1050; Gaz. vol. 136; p. 926.
Salver. J. L. Wareham. No. 899,642; Sept. 29; Sp. p. 4758; Dr. p. 1018; Gaz. vol. 136; p. 904.
Sand-mold-charging apparatus. W. H. Wangelin. No. 899,640; Sept. 29; Sp. p. 4753; Dr. p. 1017; Gaz. vol. 136; p. 903.
Sanding device. H. F. Mentzel and J. H. Moser. No. 897,965; Sept. 8; Sp. p. 1546; Dr. p. 328; Gaz. vol. 136; p. 274.
Sanitary protector. A. M. Aiken. No. 899,196; Sept. 22; Sp. p. 3805; Dr. p. 826; Gaz. vol. 136; p. 723.
Sash-adjuster. J. W. Bishop, Jr. No. 899,753; Sept. 29; Sp. p. 5051; Dr. p. 1082; Gaz. vol. 136; p. 950.
Sash and screen fastener. W. O. Hays. No. 899,045; Sept. 22; Sp. p. 3563; Dr. p. 763; Gaz. vol. 136; p. 673.
Sash attachment, Window-. H. Junge. No. 899,406; Sept. 22; Sp. p. 4261; Dr. p. 914; Gaz. vol. 136; p. 790.
Sash-fastener. D. W. Collison and G. Matthews. No. 897,352; Sept. 1; Sp. p. 208; Dr. p. 44; Gaz. vol. 136; p. 32.
Sash-fastener. R. Daubalgnan. No. 897,719; Sept. 1; Sp. p. 970; Dr. p. 207; Gaz. vol. 136; p. 155.

Sash fastener, Storm or screen. J. G. Ralph. No. 898,923; Sept. 15; Sp. p. 3339; Dr. p. 716; Gaz. vol. 136; p. 607.
Sash-lock. E. Wimer. No. 897,807; Sept. 1; Sp. p. 1155; Dr. p. 246; Gaz. vol. 136; p. 183.
Sash, Metal window-. E. A. Sanders. No. 897,414; Sept. 1; Sp. p. 362; Dr. p. 76; Gaz. vol. 136; p. 56.
Sash-pivot. F. Bogenberger. No. 897,449; Sept. 1; Sp. p. 429; Dr. p. 92; Gaz. vol. 136; p. 67.
Sash, Slidable and swinging window-. B. Hausmann. No. 899,731; Sept. 29; Sp. p. 4927; Dr. pp. 1056–7; Gaz. vol. 136; p. 931.
Sash support, Window-. S. B. Storms. No. 899,273; Sept. 22; Sp. p. 4036; Dr. p. 862; Gaz. vol. 136; p. 748.
Saw-clamp. W. F. Schmidt. No. 897,788; Sept. 1; Sp. p. 1105; Dr. p. 237; Gaz. vol. 136; p. 177.
Saw-guard. J. Holmwood. No. 899,300; Sept. 22; Sp. p. 4075; Dr. p. 871; Gaz. vol. 136; p. 757.
Saw guide, Undercut-. J. W. Pettijohn. No. 898,677; Sept. 15; Sp. p. 2899; Dr. p. 620; Gaz. vol. 136; p. 527.
Saw-handle, Detachable. T. P. J. Coleman. No. 899,028; Sept. 22; Sp. p. 3538; Dr. p. 757; Gaz. vol. 136; p. 668.
Saw jointing and swaging implement. J. Carlin. No. 898,964; Sept. 15; Sp. p. 3408; Dr. p. 732; Gaz. vol. 136; p. 620.
Saw mill, Band-. W. H. Trout. No. 899,575; Sept. 29; Sp. p. 4610; Dr. pp. 990–1; Gaz. vol. 136; p. 882.
Sawmill set-works. A. A. De Loach. No. 899,159; Sept. 22; Sp. p. 3791; Dr. pp. 811–12; Gaz. vol. 136; p. 711.
Sawmill set-works, Stop mechanism for. J. Walton. No. 899,579; Sept. 29; Sp. p. 4618; Dr. p. 992; Gaz. vol. 136; p. 883.
Saw-set. W. M. Potter. No. 898,780; Sept. 15; Sp. p. 3082; Dr. p. 660; Gaz. vol. 136; p. 560.
Sawing apparatus. C. H. Prescott. No. 897,488; Sept. 1; Sp. p. 505; Dr. p. 107; Gaz. vol. 136; p. 80.
Scaffolding. G. E. Humphries. No. 898,468; Sept. 8; Sp. p. 2274; Dr. p. 483; Gaz. vol. 136; p. 394.
Scalding apparatus. M. Lynch. No. 897,754; Sept. 1; Sp. p. 1032; Dr. pp. 219–20; Gaz. vol. 136; p. 167
Scale, Truck-. E. L. Gage. No. 898,457; Sept. 15; Sp. p. 2461; Dr. p. 526; Gaz. vol. 136; p. 456.
Schedule, Adjustable. J. C. Diefenbach. No. 898,338; Sept. 8; Sp. p. 2215; Dr. p. 471; Gaz. vol. 136; p. 384.
Score-keeper. C. O. Wellnitz. No. 899,819; Sept. 29; Sp. p. 5127; Dr. p. 1097; Gaz. vol. 136; p. 962.
Scraper. J. Butler. No. 898,183; Sept. 8; Sp. p. 1941; Dr. p. 414; Gaz. vol. 136; p. 337.
Scraper. H. U. Edzards. No. 899,719; Sept. 29; Sp. p. 4895; Dr. p. 1051; Gaz. vol. 136; p. 927.
Scraper and drag, Combined. W. L. Baker. No. 898,421; Sept. 15; Sp. p. 2385; Dr. p. 510; Gaz. vol. 136; p. 446.
Screen: *See* Fly-escape screen; Window-screen.
Screw-cap. R. M. Hollingshead. No. 897,621; Sept. 1; Sp. p. 780; Dr. p. 164; Gaz. vol. 136; p. 124.
Screw-jack. F. L. Gormley. No. 898,215; Sept. 8; Sp. p. 1989; Dr. p. 424; Gaz. vol. 136; p. 345.
Screw press, Continuous-. R. G. Merz. No. 898,760; Sept. 15; Sp. p. 3039; Dr. pp. 652–3; Gaz. vol. 136; p. 553.
Scythes, Manufacture of. A. Meis. No. 897,298; Sept. 1; Sp. p. 55; Dr. p. 14; Gaz. vol. 136; p. 13.
Sea-grotn. J. A. Howland and W. H. De Nyse. No. 897,309; Sept. 1; Sp. p. 262; Dr. p. 54; Gaz. vol. 136; p. 39.
Seal, Car-. R. C. Pleins. No. 897,848; Sept. 1; Sp. p. 1236; Dr. p. 265; Gaz. vol. 136; p. 196.
Seal-lock. J. M. Eedson. No. 897,276; Sept. 1; Sp. p. 26; Dr. p. 7; Gaz. vol. 136; p. 7.
Seal-lock. S. Schmidl. No. 897,494; Sept. 1; Sp. p. 517; Dr. pp. 109–10; Gaz. vol. 136; p. 82.
Seal, Mechanical. F. P. Pfleghar. No. 897,776; Sept. 1; Sp. p. 1086; Dr. p. 233; Gaz. vol. 136; p. 173.
Sealing and capping bottles. S. C. Bond. No. 899,004; Sept. 15; Sp. p. 3477; Dr. p. 745; Gaz. vol. 136; p. 633.
Sealing and capping mechanism, Bottle. S. C. Bond. No. 898,959; Sept. 15; Sp. p. 3395; Dr. p. 729; Gaz. vol. 136; p. 618.
Sealing means, Vessel-. J. M. Hicks. No. 899,732; Sept. 29; Sp. p. 4928; Dr. p. 1057; Gaz. vol. 136; p. 931.
Seat: *See* Chair-seat; Vehicle-seat.
Seat. A. Freschl. No. 897,282; Sept. 1; Sp. p. 34; Dr. p. 9; Gaz. vol. 136; p. 8.
Seed-cleaner. J. H. Hempen. No. 898,883; Sept. 15; Sp. p. 3265; Dr. p. 699; Gaz. vol. 136; p. 594.
Seed, Metabolism of. J. von der Kammer. No. 899,306; Sept. 22; Sp. p. 4085; Gaz. vol. 136; p. 759.
Self-oiling wheel. V. Duff. No. 898,851; Sept. 15; Sp. p. 3210; Dr. p. 683; Gaz. vol. 136; p. 583.
Self-rolling ball or globe. A. L. Day. No. 898,334; Sept. 8; Sp. p. 2206; Dr. p. 468; Gaz. vol. 136; p. 382.
Selling machine, Newspaper-. A. G. Jackson. No. 897,744; Sept. 1; Sp. p. 1014; Dr. p. 215; Gaz. vol. 136; p. 164.
Separating-table. H. M. Sutton, W. L. and E. G. Steele. No. 898,020; Sept. 8; Sp. p. 1615; Dr. pp. 344–6; Gaz. vol. 136; p. 285.
Separator: *See* Coin-separator; Electric separator; Grain and seed separator; Ore-separator; Slimes-separator; Vegetable-separator
Settee, Hall, convention, and camp-meeting. J. W. Huebner. No. 897,371; Sept. 1; Sp. p. 265; Dr. p. 54; Gaz. vol. 136; p. 40.
Sewing-machine. W. C. Free and J. B. Angove. No. 898,976; Sept. 15; Sp. p. 3429; Dr. p. 736; Gaz. vol. 136; p. 624.
Sewing-machine-attachment holder. H. M. Greist. No. 900,067; Sept. 29; Sp. p. 5668; Dr. p. 1211; Gaz. vol. 136; p.1042.
Sewing-machine-attachment holder. P. R. Greist. No. 900,070; Sept. 29; Sp. p. 5674; Dr. p. 1212; Gaz. vol. 136; p. 1043.
Sewing-machine braider or corder. P. R. Greist. No. 900,069; Sept. 29; Sp. p. 5673; Dr. p. 1211; Gaz. vol. 136; p. 1043.
Sewing-machine fly-wheel. W. W. Gould. No. 898,639; Sept. 15; Sp. p. 2829; Dr. p. 603; Gaz. vol. 136; p. 515.
Sewing-machine for sewing straw plait. G. Fischer. No. 899,392; Sept. 22; Sp. p. 4230; Dr. pp. 905–8; Gaz. vol. 136; p. 785.
Sewing-machine hemmer. A. Laubscher. No. 899,544; Sept. 29; Sp. p. 4551; Dr. pp. 978–9; Gaz. vol. 136; p. 871.
Sewing-machine needle. A. G. Bradley. No. 899,381; Sept. 22; Sp. p. 4217; Dr. p. 902; Gaz. vol. 136; p. 782.
Sewing-machine needle-guard. D. W. Corey. No. 898,403; Sept. 8; Sp. p. 2332; Dr. p. 495; Gaz. vol. 136; p. 406.
Sewing-machine, Overseaming. R. L. Plumley. No. 897,486; Sept. 1; Sp. p. 498; Dr. pp. 105–6; Gaz. vol. 136; p. 79.
Sewing-machine thread-measuring mechanism. C. Pedersen. No. 898,776; Sept. 15; Sp. p. 3075; Dr. p. 658; Gaz. vol. 136; p. 558.
Sewing-machine throat-plate. C. H. Towers. No. 899,574; Sept. 29; Sp. p. 4609; Dr. p. 990; Gaz. vol. 136; p. 882.
Sewing-machine tuck-creaser. J. M. Greist. No. 900,068; Sept. 29; Sp. p. 5670; Dr. p. 1211; Gaz. vol. 136; p. 1042.
Sewing-machine, Device for controlling the needle-loop on overseaming. R. G. Woodward. No. 899,479; Sept. 22; Sp. p. 4390; Dr. p. 943; Gaz. vol. 136; p. 813.
Sewing-machines, Thread and sewing-silk regulator for. M. Knapp. No. 899,451; Sept. 22; Sp. p. 4338; Dr. p. 932; Gaz. vol. 136; p. 804.
Sewing machinery. C. J. Palsson. No. 897,553; Sept. 1; Sp. p. 643; Dr. pp. 133–5; Gaz. vol. 136; p. 101.
Sewing-stand. V. R. Hochstaetter. No. 899,696; Sept. 29; Sp. p. 4851; Dr. p. 1039; Gaz. vol. 136; p. 919.
Shackle, Padlock-. F. Soley. No. 899,268; Sept. 22; Sp. p. 4029; Dr. p. 860; Gaz. vol. 136; p. 747.
Shade bracket, Window-. R. C. Loughner. No. 899,116; Sept. 22; Sp. p. 3692; Dr. p. 791; Gaz. vol. 136; p. 697.
Shade-fixture. D. Whinery. No. 898,947; Sept. 15; Sp. p. 3378; Dr. p. 725; Gaz. vol. 136; p. 615.
Shade-roller bracket, Adjustable. E. E. Quaintance. No. 897,305; Sept. 1; Sp. p. 66; Dr. p. 17; Gaz. vol. 136; p. 15.
Shade-trimmer. H. M. Fishering. No. 898,732; Sept. 15; Sp. p. 2993; Dr. p. 642; Gaz. vol. 136; p. 544.
Shaft-bending machine. P. P. Dyke. (Reissue.) No. 12,850; Sept. 8; Sp. p. 2376; Dr. p. 507; Gaz. vol. 136; p. 412.
Shaft-coupling, Flexible. G. M. Bartlett. No. 898,423; Sept. 15; Sp. p. 2387; Dr. p. 510; Gaz. vol. 136; p. 446.
Shaft, Flexible. G. H. Coates. No. 897,349; Sept. 1; Sp. p. 203; Dr. p. 43; Gaz. vol. 136; p. 31.
Shaft, Self-lubricating. E. L. Wood. No. 898,297; Sept. 8; Sp. p. 2150; Dr. p. 457; Gaz. vol. 136; p. 371.
Shaft, Swivel-jointed. J. K. Stewart. No. 897,316; Sept. 1; Sp. p. 112; Dr. p. 25; Gaz. vol. 136; p. 18.
Shaft, Universally-extensible tool-. J. L. Steingässer. No. 899,082; Sept. 22; Sp. p. 3628; Dr. p. 777; Gaz. vol. 136; p. 685.
Shaft, Vehicle-. L. Burg. No. 898,036; Sept. 8; Sp. p. 1653; Dr. p. 352; Gaz. vol. 136; p. 290.
Sharpener, Scissors-. J. Fitzgerald. No. 899,213; Sept. 22; Sp. p. 3808; Dr. p. 832; Gaz. vol. 136; p. 729.
Sharpener, Shears-. E. H. Spafford. No. 899,140; Sept. 22; Sp. p. 3744; Dr. p. 802; Gaz. vol. 136; p. 705.
Sharpening drills or drill-bits, Apparatus for. W. E. Kimber. No. 897,835; Sept. 1; Sp. p. 1209; Dr. p. 258; Gaz. vol. 136; p. 192.
Sharpening machine, Rock-drill-. B. H. Locke. No. 898,603; Sept. 15; Sp. p. 2869; Dr. p. 613; Gaz. vol. 136; p. 522.
Shaving-machine. A. Seymour-Jones. No. 900,002; Sept. 29; Sp. p. 5518; Dr. p. 1176; Gaz. vol. 136; p. 1020.
Shear mechanism. T. J. Bray and G. C. Shackleford. No. 897,344; Sept. 1; Sp. p. 195; Dr. pp. 41–2; Gaz. vol. 136; p. 29.
Shears: *See* Bag-tier shears.
Shears and scissors. J. J. Booth. No. 898,401; Sept. 8; Sp. p. 2330; Dr. p. 495; Gaz. vol. 136; p. 405.
Sheet-combining machine. I. W. Marshall. No. 897,757; Sept. 1; Sp. p. 1036; Dr. p. 221; Gaz. vol. 136; p. 168.
Sheet-feeding apparatus. A. B. Dick. No. 898,447; Sept. 15; Sp. p. 2446; Dr. p. 524; Gaz. vol. 136; p. 453.
Sheet-feeding apparatus. E. J. Casey. No. 898,831; Sept. 15; Sp. p. 3173; Dr. p. 679; Gaz. vol. 136; p. 577.
Sheet-feeding machine. H. C. La Batt. No. 899,995; Sept. 29; Sp. p. 5495; Dr. pp. 1170–2; Gaz. vol. 136; p. 1018.
Sheet-feeding mechanism. J. Ranz. No. 899,133; Sept. 22; Sp. p. 3725; Dr. p. 798; Gaz. vol. 136; p. 703.
Sheet-metal-frame construction. E. Ohnstrand. No. 899,259; Sept. 22; Sp. p. 4014; Dr. p. 857; Gaz. vol. 136; p. 744.
Sheet-metal-vessel joint. H. M. Bache. No. 899,587; Sept. 29; Sp. p. 4635; Dr. p. 995; Gaz. vol. 136; p. 887.
Shellac, Preparing substitutes for. J. Meyer. No. 898,382; Sept. 8; Sp. p. 2296; Gaz. vol. 136; p. 396.
Sheller: *See* Corn-sheller; Peanut-sheller.
Shipping-case-cover fastener. J. Brauer. No. 897,343; Sept. 1; Sp. p. 194; Dr. p. 41; Gaz. vol. 136; p. 29.
Shipping-case, Folding. M. Hutchinson. No. 898,040; Sept. 8; Sp. p. 1674; Dr. p. 355; Gaz. vol. 136; p. 293.
Shipping-package. W. N. Craw. No. 897,504; Sept. 1; Sp. p. 727; Dr. p. 153; Gaz. vol. 136; p. 115.
Shirt. L. F. Bowen, Jr. No. 899,154; Sept. 22; Sp. p. 3779; Dr. p. 809; Gaz. vol. 136; p. 710.
Shock-absorber. J. C. Beck. No. 899,001; Sept. 15; Sp. p. 3472; Dr. pp. 743–4; Gaz. vol. 136; p. 632.
Shock-absorber. E. Flentje. No. 899,662; Sept. 29; Sp. p. 4784; Dr. p. 1024; Gaz. vol. 136; p. 909.
Shoe. L. Q. White. No. 898,710; Sept. 15; Sp. p. 2952; Dr. p. 632; Gaz. vol. 136; p. 537.
Shoe. J. Hessler. No. 899,978; Sept. 29; Sp. p. 5458; Dr. p. 1164; Gaz. vol. 136; p. 1012.
Shoe-channeling machine. E. A. Webster. No. 897,328; Sept. 1; Sp. p. 150; Dr. p. 31; Gaz. vol. 136; p. 23.
Shoe-cleaner. L. L. De Lapp. No. 899,515; Sept. 29; Sp. p. 4477; Dr. p. 961; Gaz. vol. 136; p. 861.
Shoe-form. W. C. Richardson. No. 898,137; Sept. 8; Sp. p. 1851; Dr. p. 394; Gaz. vol. 136; p. 322.
Shoe-rack. G. B. Gardner and A. H. Higgins. No. 899,249; Sept. 22; Sp. p. 3996; Dr. pp. 851–2; Gaz. vol. 136; p. 741.

Shoe, Turned. F. A. Beal. No. 899,501; Sept. 29; Sp. p. 4447; Dr. p. 954; Gaz. vol. 136; p. 857.
Shoes, Arch-supporter for. J. P. Naughton. No. 899,182; Sept. 22; Sp. p. 3838; Dr. p. 821; Gaz. vol. 136; p. 719.
Shoes, Manufacture of. J. Essig. No. 899,788; Sept. 29; Sp. p. 5072; Dr. p. 1084; Gaz. vol. 136; p. 952.
Shoes, Spring attachment for. J. Zooboavch. No. 898,951; Sept. 15; Sp. p. 3383; Dr. p. 726; Gaz. vol. 136; p. 616.
Shovel: *See* Steam-shovel.
Shovel and support therefor. J. Austin. No. 898,623; Sept. 15; Sp. p. 2785; Dr. p. 595; Gaz. vol. 136; p. 510.
Show-case for displaying pickles and the like. D. W. Imus. No. 899,052; Sept. 22; Sp. p. 3572; Dr. p. 765; Gaz. vol. 136; p. 675.
Shutter attachment. J. L. McCaleb. No. 899,889; Sept. 29; Sp. p. 5268; Dr. p. 1127; Gaz. vol. 136; p. 984.
Sickle. H. Volckmann. No. 898,535; Sept. 15; Sp. p. 2615; Dr. p. 558; Gaz. vol. 136; p. 481.
Sight-glasses, Safety device for. I. O., E., and M. Northup. No. 898,254; Sept. 8; Sp. p. 2070; Dr. p. 440; Gaz. vol. 136; p. 358.
Sign. S. C. Unruh. No. 898,077; Sept. 8; Sp. p. 1732; Dr. p. 367; Gaz. vol. 136; p. 303.
Sign, Illuminated. C. L. Carter. No. 898,184; Sept. 8; Sp. p. 1942; Dr. p. 414; Gaz. vol. 136; p. 337.
Sign, Phosphorescent. B. G. Kodjbanoff. No. 899,873; Sept. 29; Sp. p. 5243; Dr. p. 1121; Gaz. vol. 136; p. 980.
Signal: *See* Railway-signal.
Signal. D. H. Coker and W. A. Scarbrough. No. 898,968; Sept. 15; Sp. p. 3416; Dr. p. 734; Gaz. vol. 136; p. 622.
Signal-box. N. H. Suren. No. 898,076; Sept. 8; Sp. p. 1731; Dr. p. 367; Gaz. vol. 136; p. 303.
Signal-box. F. W. Cole. No. 898,095; Sept. 8; Sp. p. 1758; Dr. p. 374; Gaz. vol. 136; p. 308.
Signal system, Electric. A. A. Barbera. No. 897,702; Sept. 1; Sp. p. 934; Dr. p. 198; Gaz. vol. 136; p. 150.
Signaling apparatus. G. F. Atwood. No. 897,846; Sept. 8; Sp. p. 1279; Dr. pp. 273–4; Gaz. vol. 136; p. 233.
Signaling-circuit. H. O. Rugh. No. 897,413; Sept. 1; Sp. p. 360; Dr. p. 75; Gaz. vol. 136; p. 55.
Signaling or telegraph apparatus for use on vehicles, Electric. R. B. North. No. 898,915; Sept. 15; Sp. p. 3325; Dr. pp. 712–13; Gaz. vol. 136; p. 604.
Signaling receiver, Wireless-. V. Poulsen. No. 897,779; Sept. 1; Sp. p. 1089; Dr. p. 234; Gaz. vol. 136; p. 174.
Signaling system. S. Cabot. No. 899,239; Sept. 22; Sp. p. 3958; Dr. pp. 844–5; Gaz. vol. 136; p. 738.
Signaling system. S. Cabot. No. 899,240; Sept. 22; Sp. p. 3966; Dr. pp. 845–6; Gaz. vol. 136; p. 738.
Signaling system. S. Cabot. No. 899,241; Sept. 22; Sp. p. 3971; Dr. p. 846; Gaz. vol. 136; p. 739.
Signaling system. S. Cabot. No. 899,242; Sept. 22; Sp. p. 3976; Dr. pp. 847–9; Gaz. vol. 136; p. 739.
Signaling system, Electric. H. C. Reagan. No. 897,401; Sept. 1; Sp. p. 334; Dr. p. 71; Gaz. vol. 136; p. 51.
Signaling system, Electric. E. R. Coe. No. 898,324; Sept. 8; Sp. p. 2190; Dr. p. 465; Gaz. vol. 136; p. 379.
Signaling system, Selective. H. O. Rugh. No. 899,564; Sept. 29; Sp. p. 4587; Dr. p. 986; Gaz. vol. 136; p. 879.
Singe-register. J. W. B. Faris. No. 898,569; Sept. 15; Sp. p. 2681; Dr. p. 573; Gaz. vol. 136; p. 492.
Siphon, Automatic flush-tank. G. Land. No. 897,378; Sept. 1; Sp. p. 281; Dr. p. 57; Gaz. vol. 136; p. 42.
Skate-frame. W. P. Dodge. No. 898,090; Sept. 8; Sp. p. 1770; Dr. p. 376; Gaz. vol. 136; p. 310.
Skate, Roller-. T. M. Ferguson. No. 899,963; Sept. 29; Sp. p. 5427; Dr. p. 1157; Gaz. vol. 136; p. 1007.
Sketching outfit. G. S. Smith. No. 897,794; Sept. 1; Sp. p. 1112; Dr. p. 239; Gaz. vol. 136; p. 178.
Skewer. S. C. Reyer. No. 898,926; Sept. 15; Sp. p. 3343; Dr. p. 717; Gaz. vol. 136; p. 608.
Skimmer. J. S. Golden. No. 899,724; Sept. 29; Sp. p. 4906; Dr. p. 1053; Gaz. vol. 136; p. 928.
Skirt. A. M. Schneider. No. 898,511; Sept. 15; Sp. p. 2565; Dr. p. 549; Gaz. vol. 136; p. 474.
Skirt. A. Kasse. No. 898,747; Sept. 15; Sp. p. 3019; Dr. p. 646; Gaz. vol. 136; p. 549.
Skirt-supporter. P. G. Giroud. No. 898,640; Sept. 15; Sp. p. 2830; Dr. p. 603; Gaz. vol. 136; p. 515.
Slag-heated boiler. R. Baggaley. No. 898,302; Sept. 8; Sp. p. 2158; Dr. p. 458; Gaz. vol. 136; p. 373.
Sleeve-board. H. E. Kunkle. No. 898,228; Sept. 8; Sp. p. 2031; Dr. p. 431; Gaz. vol. 136; p. 350.
Slicer, Bread-. A. Englund. No. 899,962; Sept. 29; Sp. p. 5425; Dr. p. 1157; Gaz. vol. 136; p. 1007.
Slicing or cutting machine, Vegetable. H. E. Madden. No. 897,637; Sept. 1; Sp. p. 804; Dr. p. 169; Gaz. vol. 136; p. 128.
Slimes-separator. H. G. Nichols. No. 899,428; Sept. 22; Sp. p. 4298; Dr. p. 922; Gaz. vol. 136; p. 797.
Slip-box. L. Cain. No. 899,510; Sept. 29; Sp. p. 4469; Dr. p. 959; Gaz. vol. 136; p. 860.
Smelting. A. R. McKenzie. No. 897,993; Sept. 8; Sp. p. 1560; Dr. p. 332; Gaz. vol. 136; p. 277.
Smelting iron. M. Ruthenburg. No. 898,068; Sept. 8; Sp. p. 1714; Gaz. vol. 136; p. 300.
Smoke-cleaning device. J. L. Matthews. No. 899,882; Sept. 29; Sp. p. 5256; Dr. p. 1124; Gaz. vol. 136; p. 982.
Smoke-jack. R. Harcourt. No. 899,607; Sept. 29; Sp. p. 4796; Dr. p. 1027; Gaz. vol. 136; p. 911.
Smut-machine attachment. E. Rinderman. No. 897,785; Sept. 1; Sp. p. 1098; Dr. p. 236; Gaz. vol. 136; p. 176.
Snap-hook. W. A. Scheicher. No. 898,789; Sept. 15; Sp. p. 3099; Dr. p. 664; Gaz. vol. 136; p. 563.
Snow-melting apparatus. S. Denemark. No. 897,601; Sept. 1; Sp. p. 741; Dr. pp. 156–7; Gaz. vol. 136; p. 117.
Snow-plow, Rotary. J. F. Murphy. No. 899,606; Sept. 29; Sp. p. 4674; Dr. p. 1002; Gaz. vol. 136; p. 902.
Soap chiller and drier. A. Huber and E. A. Houchin. No. 898,111; Sept. 8; Sp. p. 1796; Dr. pp. 381–2; Gaz. vol. 136; p. 314.
Soap-dispenser. F. M. Stevens. No. 899,812; Sept. 29; Sp. p. 5114; Dr. p. 1094; Gaz. vol. 136; p. 960.
Soap-holder. A. T. Waters. No. 897,690; Sept. 1; Sp. p. 905; Dr. p. 194; Gaz. vol. 136; p. 146.
Soap-holder. P. H. Jungclaus. No. 898,897; Sept. 15; Sp. p. 3293; Dr. p. 705; Gaz. vol. 136; p. 598.
Soap-holder, Adjustable. G. Goff. No. 898,872; Sept. 15; Sp. p. 3251; Dr. p. 695; Gaz. vol. 136; p. 591.
Soldering compound. E. M. and A. Merrell. No. 899,673; Sept. 29; Sp. p. 4815; Gaz. vol. 136; p. 913.
Soldering machine, Can-. G. H. Stewart. No. 898,937; Sept. 15; Sp. p. 3360; Dr. pp. 721–2; Gaz. vol. 136; p. 611.
Sole-channeling machine. E. A. Webster. No. 897,327; Sept. 1; Sp. p. 143; Dr. p. 30; Gaz. vol. 136; p. 23.
Sole-edge trimmer. J. Nickerson. No. 897,479; Sept. 1; Sp. p. 485; Dr. p. 103; Gaz. vol. 136; p. 77.
Solenoid-motor. L. F. Howard. No. 899,598; Sept. 29; Sp. p. 4663; Dr. p. 1000; Gaz. vol. 136; p. 890.
Sound-box for machines for recording and reproducing sound. J. C. English. No. 898,201; Sept. 8; Sp. p. 1968; Dr. p. 420; Gaz. vol. 136; p. 341.
Sound-reproducing machine. J. Schwan. No. 898,791; Sept. 15; Sp. p. 3101; Dr. p. 664; Gaz. vol. 136; p. 563.
Sound-reproducing machines, Disk-record attachment for. C. W. Schwank. No. 898,792; Sept. 15; Sp. p. 3102; Dr. p. 665; Gaz. vol. 136; p. 564.
Spacing-machine. G. H. Dyer. No. 899,294; Sept. 22; Sp. p. 4065; Dr. pp. 868–9; Gaz. vol. 136; p. 755.
Spanner or wrench. H. L. Minter. No. 899,833; Sept. 29; Sp. p. 5147; Dr. p. 1102; Gaz. vol. 136; p. 966.
Spark-coil, High-potential. C. H. Thordarson. No. 899,634; Sept. 29; Sp. p. 4744; Dr. pp. 1015–16; Gaz. vol. 136; p. 901.
Spark-gap. I. S. Hirsch. No. 898,888; Sept. 15; Sp. p. 3280; Dr. pp. 701–2; Gaz. vol. 136; p. 596.
Spark-plug guard. R. S. Kearney. No. 897,406; Sept. 1; Sp. p. 466; Dr. p. 99; Gaz. vol. 136; p. 74.
Speculum. W. Meyer. No. 899,175; Sept. 22; Sp. p. 3825; Dr. p. 819; Gaz. vol. 136; p. 717.
Speech transmission, Apparatus for. H. E. Shreeve. No. 898,073; Sept. 8; Sp. p. 1724; Dr. p. 366; Gaz. vol. 136; p. 302.
Speed and reversing mechanism, Variable-. N. S. Harter. No. 899,974; Sept. 29; Sp. p. 5450; Dr. p. 1162; Gaz. vol. 136; p. 1011.
Speed indicating or recording apparatus. L. E. Cowey. No. 897,715; Sept. 1; Sp. p. 960; Dr. p. 208; Gaz. vol. 136; p. 154.
Speed mechanism, Variable-. V. Johnson. No. 898,745; Sept. 15; Sp. p. 3016; Dr. p. 646; Gaz. vol. 136; p. 548.
Speeders or spinning-machines, Top roll for. C. E. Riley. No. 899,807; Sept. 29; Sp. p. 5106; Dr. p. 1092; Gaz. vol. 136; p. 958.
Speedometer. J. W. Jones. No. 899,055; Sept. 22; Sp. p. 3578; Dr. p. 767; Gaz. vol. 136; p. 676.
Spelter-furnace, Recuperative. N. L. Heinz. No. 898,409; Sept. 8; Sp. p. 2345; Dr. p. 498; Gaz. vol. 136; p. 408.
Spike-extractor. G. W. Rittersbach, Jr. No. 898,064; Sept. 8; Sp. p. 1710; Dr. p. 302; Gaz. vol. 136; p. 299.
Spindle-protector. E. E. Ervin. No. 897,967; Sept. 8; Sp. p. 1515; Dr. p. 321; Gaz. vol. 136; p. 268.
Spinning machine, Ring-. G. H. Brabrook. No. 897,578; Sept. 1; Sp. p. 695; Dr. p. 146; Gaz. vol. 136; p. 109.
Spinning-machines, Thread-board for. O. L. Owen. No. 899,609; Sept. 29; Sp. p. 4679; Dr. p. 1004; Gaz. vol. 136; p. 893.
Spinning-ring. M. H. Maloney. No. 897,384; Sept. 1; Sp. p. 295; Dr. p. 60; Gaz. vol. 136; p. 45.
Spittoon. O. A. Ottosson. No. 899,130; Sept. 22; Sp. p. 3720; Dr. p. 797; Gaz. vol. 136; p. 702.
Spoke-extractor. L. P. Parent. No. 899,701; Sept. 29; Sp. p. 4857; Dr. p. 1041; Gaz. vol. 136; p. 921.
Spoke, Laminated metal wheel-. J. R. Welch. No. 900,049; Sept. 29; Sp. p. 5633; Dr. p. 1203; Gaz. vol. 136; p. 1036.
Spoke-machine. W. J. Adkins. No. 898,622; Sept. 15; Sp. p. 2783; Dr. pp. 594–5; Gaz. vol. 136; p. 509.
Spoke, Metal wheel-. J. R. Welch. No. 899,476; Sept. 22; Sp. p. 4384; Dr. p. 940; Gaz. vol. 136; p. 812.
Spoke-puller. W. C. McCoy. No. 897,991; Sept. 8; Sp. p. 1558; Dr. p. 331; Gaz. vol. 136; p. 276.
Spool. F. B. Wood. No. 898,398; Sept. 8; Sp. p. 2323; Dr. p. 494; Gaz. vol. 136; p. 404.
Spring: *See* Vehicle-spring.
Spring. H. G. Backermann. No. 898,084; Sept. 8; Sp. p. 1745; Dr. p. 371; Gaz. vol. 136; p. 306.
Spring construction. C. O. Brage. No. 898,429; Sept. 15; Sp. p. 2400; Dr. p. 515; Gaz. vol. 136; p. 448.
Spring-repairer. W. R. Petze. No. 899,468; Sept. 22; Sp. p. 4370; Dr. p. 938; Gaz. vol. 136; p. 809.
Spring suspension. W. O. Worth. No. 897,694; Sept. 1; Sp. p. 918; Dr. p. 196; Gaz. vol. 136; p. 147.
Spring-wheel. H. E. Heaton. No. 899,668; Sept. 29; Sp. p. 4798; Dr. p. 1027; Gaz. vol. 136; p. 911.
Sprinkler-head. J. A. Cass. No. 899,204; Sept. 22; Sp. p. 3878; Dr. p. 828; Gaz. vol. 136; p. 726.
Stacking-elevator, Portable. E. Hanak. No. 897,462; Sept. 1; Sp. p. 456; Dr. pp. 97–8; Gaz. vol. 136; p. 72.
Stairway, Movable. F. E. Bessler. No. 897,870; Sept. 8; Sp. p. 1285; Dr. p. 275; Gaz. vol. 136; p. 235.
Stairway, Moving. G. A. Wheeler. No. 899,934; Sept. 29; Sp. p. 5360; Dr. pp. 1145–6; Gaz. vol. 136; p. 998.
Stall and manger, Combined cattle. W. D. James. No. 899,829; Sept. 29; Sp. p. 5142; Dr. p. 1100; Gaz. vol. 136; p. 965.
Stamp-mill. W. A. Merralls. No. 898,414; Sept. 8; Sp. p. 2364; Dr. p. 505; Gaz. vol. 136; p. 410.

Stand: *See* Adding-machine stand; Adjustable stand; Sewing-stand.
Staple making and driving machine. O. Ashton. No. 899,093; Sept. 22; Sp. p. 3643; Dr. pp. 781–2; Gaz. vol. 136; p. 689.
Steam-boiler, Water-tube-circulating. P. W. Burke. No. 899,948; Sept. 29; Sp. p. 5403; Dr. p. 1152; Gaz. vol. 136; p. 1003.
Steam-shovel. C. H. Wolfe. No. 898,618; Sept. 15; Sp. p. 2773; Dr. p. 592; Gaz. vol. 136; p. 508.
Steels, Heat treatment and quenching of alloyed. J. Churchward. No. 899,713; Sept. 29; Sp. p. 4883; Dr. p. 1048; Gaz. vol. 136; p. 925.
Steering-gear. D. W. Smith. No. 898,278; Sept. 8; Sp. p. 2109; Dr. p. 449; Gaz. vol. 136; p. 365.
Steering mechanism. J. G. Maxwell. No. 898,249; Sept. 8; Sp. p. 2065; Dr. p. 438; Gaz. vol. 136; p. 356.
Step, Extension-. F. X. Yung. No. 899,151; Sept. 22; Sp. p. 3771; Dr. p. 808; Gaz. vol. 136; p. 709.
Stereotype-plate-casting apparatus. H. F. Beckman. No. 899,374; Sept. 22; Sp. p. 4295; Dr. p. 900; Gaz. vol. 136; p. 780.
Stirrup and spur, Combined. J. W. Smither and H. L. Elder. No. 899,344; Sept. 22; Sp. p. 4153; Dr. p. 888; Gaz. vol. 136; p. 770.
Stirrup, Safety-. W. L. Fuchs. No. 897,974; Sept. 8; Sp. p. 1527; Dr. pp. 324–5; Gaz. vol. 136; p. 270.
Stirrup, Safety-. T. B. Riley. No. 898,683; Sept. 15; Sp. p. 2911; Dr. p. 623; Gaz. vol. 136; p. 529.
Stock and hay rack for wagons, Combined. H. G. Tille. No. 900,046; Sept. 29; Sp. p. 5619; Dr. p. 1199; Gaz. vol. 136; p. 1035.
Stocking-supporter. A. M. Ziegler. No. 898,817; Sept. 15; Sp. p. 3149; Dr. p. 674; Gaz. vol. 136; p. 572.
Stoking-indicator mechanism, Automatic. R. Forsyth and W. W. Hanscom. No. 897,280; Sept. 1; Sp. p. 29; Dr. pp. 7–8; Gaz. vol. 136; p 8.
Stone-dressing machine. J. C. Armstrong. No. 898,820; Sept. 15; Sp. p. 3155; Dr. p. 675; Gaz. vol. 136; p. 573.
Stone drying and heating apparatus. L. N. McCarter. No. 900,032; Sept. 29; Sp. p. 5586; Dr. p. 1194; Gaz. vol. 136; p. 1031.
Stone or marble artificially, Manufacture of. T. M. Thom. No. 898,703; Sept. 15; Sp. p. 2943; Gaz. vol. 136; p. 535.
Stool, Cane-. M. H. McNamara. No. 899,553; Sept. 29; Sp. p. 4567; Dr. p. 981; Gaz. vol. 136; p. 875.
Stop and check, Combined. J. H. Karns. No. 898,377; Sept. 8; Sp. p. 2290; Dr. p. 487; Gaz. vol. 136; p. 398.
Stop-motions, Knock-off guard for. J. T. Hacking and C. Wilkinson. No. 899,163; Sept. 22; Sp. p. 3802; Dr. p. 814; Gaz. vol. 136; p. 713.
Stopper: *See* Bottle-stopper.
Stopper. E. W. Kottusch. No. 897,294; Sept. 1; Sp. p. 49; Dr. p. 12; Gaz. vol. 136; p. 11.
Storage-bin. G. W. Boll. No. 897,709; Sept. 1; Sp. p. 947; Dr. p. 202; Gaz. vol. 136; p. 152.
Stove. L. Miller. No. 899,122; Sept. 22; Sp. p. 3705; Dr. p. 794; Gaz. vol. 136; p. 699.
Stove. W. R. Yendall, Jr. No. 899,936; Sept. 29; Sp. p. 5379; Dr. p. 1147; Gaz. vol. 136; p. 999.
Stove and furnace. H. J. Hough, A. J. Dietrich, and W. F. Brunswick. No. 898,367; Sept. 8; Sp. p. 2272; Dr. p. 483; Gaz. vol. 136; p. 394.
Stove-base. J. Sharon. No. 899,335; Sept. 22; Sp. p. 4135; Dr. p. 885; Gaz. vol. 136; p. 767.
Stove, Broiling-. J. H. Zehring. No. 898,814; Sept. 15; Sp. p. 3143; Dr. p. 673; Gaz. vol. 136; p. 571.
Stove for drying molds. C. Morehead. No. 899,752; Sept. 29; Sp. p. 4976; Dr. p. 1066; Gaz. vol. 136; p. 939.
Stove, Gas heating-. H. Gerdes. No. 897,732; Sept. 1; Sp. p. 992; Dr. p. 211; Gaz. vol. 136; p. 160.
Stove implement. M. Davis. No. 897,721; Sept. 1; Sp. p. 972; Dr. p. 207; Gaz. vol. 136; p. 156.
Stove, Lamp-. A. A. Warner. No. 898,159; Sept. 8; Sp. p. 1890; Dr. p. 404; Gaz. vol. 136; p. 328.
Stove or heater attachment. G. T. Adcock. No. 897,863; Sept. 8; Sp. p. 1273; Dr. p. 272; Gaz. vol. 136; p. 233.
Stove-polish. D. H. Tetrault. No. 897,430; Sept. 1; Sp. p. 395; Gaz. vol. 136; p. 61.
Stove-shield. J. J. Gregory, Jr. No. 898,356; Sept. 8; Sp. p. 2246; Dr. p. 479; Gaz. vol. 136; p. 390.
Stoves, Self-supporting shelf for cook-. A. L. Brown. No. 898,828; Sept. 15; Sp. p. 3169; Dr. pp. 677–8; Gaz. vol. 136; p. 576.
Stovepipe. L. C. Scott. No. 899,135; Sept. 22; Sp. p. 3733; Dr. p. 800; Gaz. vol. 136; p. 704.
Stovepipe and flue-stopper fastener. L. F. Culver. No. 897,717; Sept. 1; Sp. p. 967; Dr. p. 206; Gaz. vol. 136; p. 155.
Strap: *See* Holdback or breeching strap.
Street-cleaner. R. L. Worthington. No. 897,505; Sept. 1; Sp. p. 539; Dr. p. 115; Gaz. vol. 136; p. 86.
Street-sweeper. W. S. Beeman. No. 897,705; Sept. 1; Sp. p. 941; Dr. pp. 200–1; Gaz. vol. 136; p. 151.
Stretcher. H. Wilson and R. B. MacFarland. No. 899,279; Sept. 22; Sp. p. 4044; Dr. p. 864; Gaz. vol. 136; p. 750.
Striking-machine. R. A. Nokes and W. W. Gordon. No. 898,129; Sept. 8; Sp. p. 1832; Dr. p. 390; Gaz. vol. 136; p. 319.
String-fastener. C. H. and C. L. Chandler. No. 898,319; Sept. 8; Sp. p. 2183; Dr. p. 463; Gaz. vol. 136; p. 378.
Stringer and tie. J. W. Cooper. No. 897,592; Sept. 1; Sp. p. 720; Dr. p. 152; Gaz. vol. 136; p. 114.
Strip-serving device. F. S. Anable. No. 897,509; Sept. 1; Sp. p. 549; Dr. p. 116; Gaz. vol. 136; p. 88.
Strip-serving device. F. S. Anable. No. 897,510; Sept. 1; Sp. p. 552; Dr. p. 116; Gaz. vol. 136; p. 88.
Stud or rivet. E. B. Stimpson. No. 897,319; Sept. 1; Sp. p. 125; Dr. p. 26; Gaz. vol. 136; p. 19.
Stump-puller. J. C. Heyman. No. 898,887; Sept. 15; Sp. p. 3279; Dr. p. 701; Gaz. vol. 136; p. 595.
Submerged objects, Apparatus for recovering. F. H. C. Heyn. No. 897,620; Sept. 1; Sp. p. 779; Dr. p. 164; Gaz. vol. 136; p. 123.
Substation-protector. F. B. Cook. No. 897,560; Sept. 1; Sp. p. 715; Dr. p. 150; Gaz. vol. 136; p. 113.
Suckling arrangement for pigs. A. Grünenwald. No. 898,878; Sept. 15; Sp. p. 3258; Dr. p. 697; Gaz. vol. 136; p. 592.
Sugar-bowl, Spoon-holding. W. Utigard. No. 899,357; Sept. 22; Sp. p. 4177; Dr. p. 894; Gaz. vol. 136; p. 775.
Sugar-producing product. G. W. McMullen. No. 898,592; Sept. 15; Sp. p. 2716; Gaz. vol. 136; p. 499.
Sulfur, &c., Manufacture of. H. Köhler. No. 898,378; Sept. 8; Sp. p. 2291; Gaz. vol. 136; p. 398.
Superheater. J. H. Meissner. No. 899,060; Sept. 22; Sp. p. 3586; Dr. p. 768; Gaz. vol. 136; p. 677.
Superphosphate masses, Apparatus for cutting up. F. Griesel. No. 899,042; Sept. 22; Sp. p. 3558; Dr. p. 762; Gaz. vol. 136; p 672.
Swinging chair. J. C. Barnhart. No. 898,305; Sept. 8; Sp. p. 2162; Dr. p. 459; Gaz. vol. 136; p. 373.
Swinging gate. J. B. Ray. No. 899,472; Sept. 22; Sp. p. 4377; Dr. p. 939; Gaz. vol. 136; p. 810.
Swingletree-hook. C. C. Enders. No. 899,104; Sept. 22; Sp. p. 3675; Dr. p. 787; Gaz. vol. 136; p. 693.
Switch: *See* Automatic switch; Electric switch; Electric-circuit time-switch; Railway-switch; Telephone-switch; Toy-railway switch; Tramway-switch; Trolley-switch.
Switch. L. B. Stevens. No. 897,559; Sept. 1; Sp. p. 656; Dr. p. 138; Gaz. vol. 136; p. 103.
Switch. J. Q. A. Tinsey. No. 898,285; Sept. 8; Sp. p. 2124; Dr. pp. 451–2; Gaz. vol. 136; p. 367.
Switch. A. T. Foster. No. 899,967; Sept. 29; Sp. p. 5438; Dr. p. 1159; Gaz. vol. 136; p. 1009.
Switch and signal mechanism, Interlocking. G. H. Paine. No. 898,918; Sept. 15; Sp. p. 3330; Dr. pp. 713–14; Gaz. vol. 136; p. 605.
Switch-lock. E. T. Hardin. No. 898,737; Sept. 15; Sp. p. 3005; Dr. p. 644; Gaz. vol. 136; p. 546.
Switches, signals, &c., Power-applying apparatus for operating. W. J. Bell. No. 897,516; Sept. 1; Sp. p. 567; Dr. p. 119; Gaz. vol. 136; p. 90.
Synchronous motor. E. F. W. Alexanderson. No. 897,507; Sept. 1; Sp. p. 542; Dr. pp. 115–16; Gaz. vol. 136; p. 87.
Syringe, Vaginal. W. E. Allen. No. 898,300; Sept. 8; Sp. p. 2154; Dr. p. 458; Gaz. vol. 136; p. 372.
Table: *See* Adjustable table; Separating-table; Turn-table.
Table. J. Brenner. No. 897,520; Sept. 1; Sp. p. 582; Dr. pp. 120–1; Gaz. vol. 136; p. 91.
Table. A. B. Phelan. No. 898,778; Sept. 15; Sp. p. 3078; Dr. p. 659; Gaz. vol. 136; p. 569.
Table. R. M. Sheehan. No. 899,267; Sept. 22; Sp. p. 4028; Dr. p. 860; Gaz. vol. 136; p. 747.
Table. L. E. Canniff. No. 899,383; Sept. 22; Sp. p. 4219; Dr. p. 903; Gaz. vol. 136; p. 783.
Table slide, Extension-. O. G. Franks. No. 899,693; Sept. 29; Sp. p. 4845; Dr. p. 1038; Gaz. vol. 136; p. 918.
Tag, Jeweler's. C. T. Wittstein. No. 899,778; Sept. 29; Sp. p. 5043; Dr. p. 1080; Gaz. vol. 136; p. 949.
Tag, Mechanical. F. R. Holsington. No. 898,651; Sept. 15; Sp. p. 2848; Dr. p. 609; Gaz. vol. 136; p. 519.
Talking-machine. H. Klenk. No. 899,491; Sept. 22; Sp. p. 4414; Dr. pp. 947–8; Gaz. vol. 136; p. 818.
Talking-machine. T. Kraemer. No. 899,874; Sept. 29; Sp. p. 5244; Dr. p. 1121; Gaz. vol. 136; p. 980.
Talking-machine attachment. C. Martelock. No. 899,880; Sept. 29; Sp. p. 5252; Dr. p. 1123; Gaz. vol. 136; p. 981.
Talking-machine sound-box. W. J. Patterson. No. 897,774; Sept. 1; Sp. p. 1084; Dr. p. 232; Gaz. vol. 136; p. 173.
Talking-machine sound-box. E. H. Mobley. No. 899,256; Sept. 22; Sp. p. 4008; Dr. p. 855; Gaz. vol. 136; p. 743.
Tamping-machine. P. Olson. No. 897,771; Sept. 1; Sp. p. 1079; Dr. p. 231; Gaz. vol. 136; p. 172.
Tank: *See* Grain-tank; Liquid-holding tank; Water-supply tank.
Tanks, Apparatus for discharging the contents of septic or settling. S. F. Miller. No. 899,750; Sept. 29; Sp. p. 4971; Dr. p. 1066; Gaz. vol. 136; p. 938.
Tanning extract from peat. E. E. M. Payne. No. 899,800; Sept. 29; Sp. p. 5096; Gaz. vol. 136; p. 956.
Tanning liquors, Utilizing sapped. G. W. Childs. No. 899,006; Sept. 15; Sp. p. 3483; Gaz. vol. 136; p. 634.
Tap. O. A. Smith. No. 899,916; Sept. 29; Sp. p. 5314; Dr. p. 1136; Gaz. vol. 136; p. 992.
Target-pigeon. F. B. Mills. No. 899,123; Sept. 22; Sp. p. 3706; Dr. p. 794; Gaz. vol. 136; p. 699.
Tartar, Treating substances containing crude. V. J. Garin and F. David. No. 898,866; Sept. 15; Sp. p. 3234; Gaz. vol. 136; p. 588.
Tea product and making same. J. F. Meyer, Jr., and K. Wimmer. No. 897,764; Sept. 1; Sp. p. 1048; Gaz. vol. 136; p. 170.
Teapot. A. E. Wilson. No. 898,713; Sept. 15; Sp. p. 2957; Dr. p. 634; Gaz. vol. 136; p. 538.
Telegraph apparatus, Wireless-. H. Dunwoody. No. 898,197; Sept. 8; Sp. p. 1959; Dr. pp. 418–19; Gaz. vol. 136; p. 340.
Telegraph-poles, Anchorage for. J. D. Self. No. 897,417; Sept. 1; Sp. p. 368; Dr. p. 77; Gaz. vol. 136; p. 57.
Telegraph signals, Apparatus for determining the direction of space-. J. S. Stone. No. 899,272; Sept. 22; Sp. p. 4034; Dr. p. 862; Gaz. vol. 136; p. 748.
Telegraph-sounder. L. Kiblinger. No. 899,307; Sept. 22; Sp. p. 4086; Dr. p. 873; Gaz. vol. 136; p. 759.
Telegraphic selective system. A. M. Roberts. No. 897,662; Sept. 1; Sp. p. 849; Dr. pp. 180–1; Gaz. vol. 136; p. 137.
Telegraphic transmitter. G. A. Cardwell. No. 897,454; Sept. 1; Sp. p. 438; Dr. pp. 94–5; Gaz. vol. 136; p. 69.
Telegraphone. H. R. Stuart. No. 898,283; Sept. 8; Sp. p. 2118; Dr. pp. 450–1; Gaz. vol. 136; p. 307.
Telegraphone system, Multiple. G. Morin. No. 897,765; Sept. 1; Sp. p. 1049; Dr. pp. 225–7; Gaz. vol. 136; p. 170.

Telegraphy, Automatic. P. B. Delany. No. 899,209; Sept. 22; Sp. p. 3888; Dr. pp. 830-1; Gaz. vol. 136; p. 728.
Telegraphy, Space. S. Cabot. No. 899,243; Sept. 22; Sp. p. 3987; Dr. p. 849; Gaz. vol. 136; p. 739.
Telegraphy, Wireless. R. A. Fessenden. No. 897,278; Sept. 1; Sp. p. 27; Dr. p. 7; Gaz. vol. 136; p. 7.
Telemotor. L. A. Lang. No. 897,907; Sept. 8; Sp. p. 1369; Dr. p. 294; Gaz. vol. 136; p. 248.
Telephone apparatus. F. W. Wood. No. 898,619; Sept. 15; Sp. p. 2776; Dr. p. 592; Gaz. vol. 136; p. 508.
Telephone apparatus, Portable. F. F. Strong. No. 898,699; Sept. 15; Sp. p. 2936; Dr. p. 629; Gaz. vol. 136; p. 534.
Telephone cut-off. H. S. Gilbert and W. F. Drake. No. 899,524; Sept. 29; Sp. p. 4496; Dr. p. 965; Gaz. vol. 136; p. 865.
Telephone-exchange apparatus. E. Tanke. No. 899,850; Sept. 29; Sp. p. 5203; Dr. p. 1114; Gaz. vol. 136; p. 973.
Telephone-exchange signaling device. T. W. Gardner. No. 897,731; Sept. 1; Sp. p. 991; Dr. p. 211; Gaz. vol. 136; p. 159.
Telephone instrument. W. R. Daniels. No. 897,718; Sept. 1; Sp. p. 968; Dr. p. 207; Gaz. vol. 136; p. 155.
Telephone-lines, Supervisory system for. W. W. Dean. No. 898,195; Sept. 8; Sp. p. 1954; Dr. p. 417; Gaz. vol. 136; p. 339.
Telephone memorandum-pad. E. J. Casey. No. 898,553; Sept. 15; Sp. p. 2655; Dr. p. 568; Gaz. vol. 136; p. 488.
Telephone-receiver support. M. M. Kahn. No. 898,898; Sept. 15; Sp. p. 3295; Dr. p. 705; Gaz. vol. 136; p. 599.
Telephone set. S. S. Sonneborn. No. 898,796; Sept. 15; Sp. p. 3110; Dr. p. 606; Gaz. vol. 136; p. 565.
Telephone-switch. C. Truitt. No. 897,681; Sept. 1; Sp. p. 890; Dr. p. 191; Gaz. vol. 136; p. 142.
Telephone-switch. V. E. Green. No. 898,576; Sept. 15; Sp. p. 2695; Dr. p. 576; Gaz. vol. 136; p. 494.
Telephone-switchboard. C. E. Wilson. No. 899,278; Sept. 22; Sp. p. 4042; Dr. p. 864; Gaz. vol. 136; p. 750.
Telephone system. W. W. Dean. No. 897,723; Sept. 1; Sp. p. 974; Dr. p. 208; Gaz. vol. 136; p. 157.
Telephone system. A. H. Dyson. No. 899,787; Sept. 29; Sp. p. 5060; Dr. p. 1084; Gaz. vol. 136; p. 952.
Telephone-transmitter. H. F. Albright. No. 898,544; Sept. 15; Sp. p. 2640; Dr. p. 564; Gaz. vol. 136; p. 484.
Telephones, Phonograph attachment for. A. Hatchett. No. 898,642; Sept. 15; Sp. p. 2833; Dr. pp. 604-5; Gaz. vol. 136; p. 516.
Telephonic apparatus. F. W. Wood. No. 898,620; Sept. 15; Sp. p. 2778; Dr. p. 593; Gaz. vol. 136; p. 509.
Telescope, Prismatic double. H. Jacob. No. 898,653; Sept. 15; Sp. p. 2851; Dr. p. 609; Gaz. vol. 136; p. 519.
Thermometer-case. F. R. Hart. No. 899,044; Sept. 22; Sp. p. 3562; Dr. p. 763; Gaz. vol. 136; p. 675.
Thermometers to tanks, vats, or the like, Device for attaching. H. W. Maurer. No. 899,313; Sept. 22; Sp. p. 4103; Dr. p. 877; Gaz. vol. 136; p. 761.
Thill-detacher. J. D. O'Brien. No. 898,130; Sept. 8; Sp. p. 1837; Dr. p. 391; Gaz. vol. 136; p. 319.
Thimble. R. J. R. Blake. No. 898,085; Sept. 8; Sp. p. 1746; Dr. p. 371; Gaz. vol. 136; p. 306.
Thread holder and waxer. M. F. Dougherty. No. 897,822; Sept. 1; Sp. p. 1183; Dr. p. 251; Gaz. vol. 136; p. 187.
Ticket. A. J. Reynolds. No. 897,783; Sept. 1; Sp. p. 1096; Dr. p. 235; Gaz. vol. 136; p. 175.
Ticket, Merchandise-. T. H. Sherman. No. 898,694; Sept. 15; Sp. p. 2931; Dr. p. 627; Gaz. vol. 136; p. 533.
Ticket or coin holder. J. Hetherington. No. 899,217; Sept. 22; Sp. p. 3903; Dr. p. 834; Gaz. vol. 136; p. 730.
Tie: *See* Fence-tie; Metallic tie; Package-tie; Rail-tie; Railway-tie; Railway cross-tie.
Tile-forming mold. J. D. Johnson. No. 898,223; Sept. 8; Sp. p. 2024; Dr. p. 429; Gaz. vol. 136; p. 348.
Tiling. B. Crosby. No. 898,560; Sept. 15; Sp. p. 2668; Dr. p. 570; Gaz. vol. 136; p. 489.
Tiling. E. M. Kilbride. No. 899,410; Sept. 22; Sp. p. 4266; Dr. p. 915; Gaz. vol. 136; p. 791.
Tilling fields, Means for. B. J. Godley. No. 899,215; Sept. 22; Sp. p. 3900; Dr. p. 833; Gaz. vol. 136; p. 730.
Timber and the like, Impregnating. E. Marmetschke. No. 898,246; Sept. 8; Sp. p. 2061; Gaz. vol. 136; p. 356.
Time-actuated mechanism. H. B. Snell. No. 899,571; Sept. 29; Sp. p. 4604; Dr. p. 988; Gaz. vol. 136; p. 881.
Time-controlled mechanism. M. K. Bauer. No. 900,053; Sept. 29; Sp. p. 5639; Dr. p. 1204; Gaz. vol. 136; p. 1038.
Time-controller, Workman's. W. Rockwell. No. 898,508; Sept. 15; Sp. p. 2556; Dr. p. 548; Gaz. vol. 136; p. 472.
Time-recorder. W. H. Bundy. No. 898,718; Sept. 15; Sp. p. 2965; Dr. p. 635; Gaz. vol. 136; p. 540.
Time-recorder, Autograph. W. D. Doremus. No. 900,059; Sept. 29; Sp. p. 5650; Dr. pp. 1206-8; Gaz. vol. 136; p. 1039.
Time-recorders, Registration-controller for. H. C. Ford. No. 898,042; Sept. 8; Sp. p. 1661; Dr. p. 353; Gaz. vol. 136; p. 291.
Timer. C. N. Isaacs. No. 897,743; Sept. 1; Sp. p. 1012; Dr. p. 215; Gaz. vol. 136; p. 163.
Timer, Changeable-dial watchman's. J. J. Fitzsimmons. No. 898,405; Sept. 8; Sp. p. 2338; Dr. pp. 496-7; Gaz. vol. 136; p. 406.
Tinning and cleaning machine, Combined. J. Lewis. No. 899,996; Sept. 29; Sp. p. 5502; Dr. pp. 1172-3; Gaz. vol. 136; p. 1018.
Tire, Cushion-. J. G. Smith. No. 899,139; Sept. 22; Sp. p. 3743; Dr. p. 802; Gaz. vol. 136; p. 705.
Tire, Elastic vehicle-. W. Brameid. No. 898,402; Sept. 8; Sp. p. 2331; Dr. p. 495; Gaz. vol. 136; p. 406.
Tire for wheels, Elastic. F. J. Chary. No. 898,832; Sept. 15; Sp. p. 3176; Dr. p. 679; Gaz. vol. 136; p. 577.
Tire holder, Spare-. L. P. McKinney. No. 899,126; Sept. 22; Sp. p. 3714; Dr. p. 796; Gaz. vol. 136; p. 700.
Tire inflater, Automatic pneumatic-. R. C. Barrie. No. 897,811; Sept. 1; Sp. p. 1159; Dr. p. 247; Gaz. vol. 136; p. 184.
Tire-inflater for automobiles. P. J. Ross. No. 899,620; Sept. 29; Sp. p. 4714; Dr. p. 1009; Gaz. vol. 136; p. 897.
Tire, Metallic. W. R. Barbour. No. 898,029; Sept. 8; Sp. p. 1638; Dr. p. 349; Gaz. vol. 136; p. 288.
Tire-plug. R. Sampson. No. 897,932; Sept. 8; Sp. p. 1429; Dr. p. 305; Gaz. vol. 136; p. 256.
Tire, Pneumatic. W. Drury. No. 898,850; Sept. 15; Sp. p. 3209; Dr. p. 687; Gaz. vol. 136; p. 583.
Tire-protectors, Anchoring and tension device for. S. C. Wolfe. No. 898,714; Sept. 15; Sp. p. 2959; Dr. p. 634; Gaz. vol. 136; p. 538.
Tire rim, Convertible pneumatic-. E. K. Baker. No. 899,856; Sept. 29; Sp. p. 5217; Dr. p. 1116; Gaz. vol. 136; p. 975.
Tire-tool. G. Mohme and A. V. Hadlock. No. 897,841; Sept. 1; Sp. p. 1221; Dr. pp. 260-1; Gaz. vol. 136; p. 194.
Tire, Vehicle-. J. L. G. Dykes. No. 897,726; Sept. 1; Sp. p. 984; Dr. p. 209; Gaz. vol. 136; p. 158.
Tire, Vehicle-. R. M. Merriman. No. 899,061; Sept. 22; Sp. p. 3588; Dr. p. 769; Gaz. vol. 136; p. 678.
Tire, Vehicle-wheel. T. J. Mell. No. 898,907; Sept. 15; Sp. p. 3308; Dr. p. 709; Gaz. vol. 136; p. 601.
Tire, Wheel-. J. S. Cushing. No. 897,880; Sept. 8; Sp. p. 1303; Dr. p. 279; Gaz. vol. 136; p. 238.
Tires, Detachable rim for vehicle-wheel. E. A. Baker. No. 897,701; Sept. 1; Sp. p. 933; Dr. p. 198; Gaz. vol. 136; p. 150.
Toaster. C. Andrews, Jr. No. 897,513; Sept. 1; Sp. p. 562; Dr. p. 118; Gaz. vol. 136; p. 89.
Tobacco extract, Manufacture of concentrated. C. F. Gloystein. No. 899,865; Sept. 29; Sp. p. 5232; Dr. p. 1118; Gaz. vol. 136; p. 977.
Tobacco-pipe. E. Grundel. No. 898,877; Sept. 15; Sp. p. 3257; Dr. p. 697; Gaz. vol. 136; p. 592.
Tobacco-pipe cleaner. D. Lossius. No. 899,418; Sept. 22; Sp. p. 4277; Dr. p. 918; Gaz. vol. 136; p. 793.
Tongue, Buggy-. T. R. Broyles. No. 897,582; Sept. 1; Sp. p. 701; Dr. p. 147; Gaz. vol. 136; p. 111.
Tongue support, Vehicle-. N. F. Bennett. No. 897,957; Sept. 8; Sp. p. 1488; Dr. p. 317; Gaz. vol. 136; p. 265.
Tool, Combination-. J. O. Korpi. No. 897,293; Sept. 1; Sp. p. 49; Dr. p. 12; Gaz. vol. 136; p. 11.
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Tool-holder, Turret. F. E. Bocorselski. No. 897,576; Sept. 1; Sp. p. 691; Dr. p. 145; Gaz. vol. 136; p. 109.
Tools, Brace attachment for fluid-pressure-operated. W. Prellwitz. No. 898,679; Sept. 15; Sp. p. 2902; Dr. p. 621; Gaz. vol. 136; p. 528.
Tooth-cleaning device. C. P. Schultz. No. 899,026; Sept. 29; Sp. p. 4734; Dr. p. 1013; Gaz. vol. 136; p. 899.
Tooth mount, Artificial-. S. S. Bloom. No. 897,518; Sept. 1; Sp. p. 574; Dr. p. 120; Gaz. vol. 136; p. 91.
Top-roll saddle and stirrup. C. A. Pierce. No. 898,919; Sept. 15; Sp. p. 3332; Dr. p. 714; Gaz. vol. 136; p. 605.
Torpedo-placer. M. Coe and R. Glass. No. 899,826; Sept. 29; Sp. p. 5138; Dr. p. 1099; Gaz. vol. 136; p. 964.
Torpedoes, Immersion-regulator particularly adapted for. A. E. Jones. No. 899,304; Sept. 22; Sp. p. 4081; Dr. p. 872; Gaz. vol. 136; p. 758.
Towel and curtain-pole holder. T. Deselms. No. 899,387; Sept. 22; Sp. p. 4224; Dr. p. 904; Gaz. vol. 136; p. 784.
Toy. M. D. Cook. No. 897,523; Sept. 1; Sp. p. 585; Dr. p. 121; Gaz. vol. 136; p. 92.
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Toy. S. Grobl. No. 899,448; Sept. 22; Sp. p. 4332; Dr. p. 930; Gaz. vol. 136; p. 803.
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Toy animal. F. Steiff. No. 898,018; Sept. 8; Sp. p. 1608; Dr. p. 343; Gaz. vol. 136; p. 284.
Toy balloon. W. P. Herbst. No. 898,105; Sept. 8; Sp. p. 1788; Dr. p. 380; Gaz. vol. 136; p. 312.
Toy or game implements, Construction of. J. A. de la Fresnaye. No. 898,210; Sept. 8; Sp. p. 1983; Dr. p. 423; Gaz. vol. 136; p. 344.
Toy or puzzle. R. D. Howell. No. 899,402; Sept. 22; Sp. p. 4253; Dr. p. 912; Gaz. vol. 136; p. 788.
Toy-railway switch. C. A. Hotchkiss. No. 897,622; Sept. 1; Sp. p. 781; Dr. p. 164; Gaz. vol. 136; p. 124.
Toy, Trundling. E. G. Frey. No. 898,351; Sept. 8; Sp. p. 2237; Dr. p. 477; Gaz. vol. 136; p. 388.
Trace-holder. H. S. Geer. No. 900,056; Sept. 29; Sp. p. 5647; Dr. p. 1210; Gaz. vol. 136; p. 1042.
Track-hanger. A. H. Neller. No. 897,388; Sept. 1; Sp. p. 301; Dr. p. 62; Gaz. vol. 136; p. 46.
Track-light and automatic signal, Continuous. J. M. Pitney, Jr. No. 897,304; Sept. 1; Sp. p. 65; Dr. p. 16; Gaz. vol. 136; p. 14.
Track or roadway. L. S. Hackney. No. 899,232; Sept. 22; Sp. p. 4003; Dr. p. 854; Gaz. vol. 136; p. 742.
Track-sanding machine. T. L. Hamer. No. 899,529; Sept. 29; Sp. p. 4511; Dr. pp. 968-9; Gaz. vol. 136; p. 867.
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Traction-wheel. H. C. Cloyd. No. 899,954; Sept. 29; Sp. p. 5412; Dr. p. 1154; Gaz. vol. 136; p. 1005.
Train-arrester. F. C. Kühne. No. 899,602; Sept. 29; Sp. p. 4669; Dr. p. 1001; Gaz. vol. 136; p. 891.
Train-controlling system. F. Winsor. No. 898,296; Sept. 8; Sp. p. 2142; Dr. pp. 455-6; Gaz. vol. 136; p. 370.
Train-stop, Centrifugally-actuated. J. B. Struble. No. 897,321; Sept. 1; Sp. p. 132; Dr. p. 27; Gaz. vol. 136; p. 20.
Tramway-switch. F. J. Kendrick. No. 897,627; Sept. 1; Sp. p. 790; Dr. p. 166; Gaz. vol. 136; p. 125.

Tramway-switch, Automatic. E. L. Anderson. No. 897,511; Sept. 1; Sp. p. 556; Dr. p. 117; Gaz. vol. 136; p. 88.
Transmission mechanism. A. F. Wilson, E. L. and I. M. Southwick. No. 898,025; Sept. 8; Sp. p. 1633; Dr. p. 348; Gaz. vol. 136; p. 287.
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Transmitter. J. T. Curtis. No. 897,716; Sept. 1; Sp. p. 965; Dr. p. 206; Gaz. vol. 136; p. 155.
Transparencies, Holder for viewing. B. J. Falk. No. 897,728; Sept. 1; Sp. p. 987; Dr. p. 210; Gaz. vol. 136; p. 159.
Transportation system. W. C. Carr. No. 899,588; Sept. 29; Sp. p. 4636; Dr. p. 995; Gaz. vol. 136; p. 887.
Transportation system, Cable-suspension. C. G. Hicks. No. 897,978; Sept. 8; Sp. p. 1532; Dr. p. 326; Gaz. vol. 136; p. 271.
Trap: *See* Animal-trap; Automatic trap; Fish-trap; Fly-trap; Gas-trap; Gopher-trap; Hog-trap; Insect-trap.
Trap. W. Z. Pierce. No. 897,396; Sept. 1; Sp. p. 321; Dr. p. 67; Gaz. vol. 136; p. 49.
Trap-door-operating mechanism. L. J. Berg. No. 899,443; Sept. 22; Sp. p. 4323; Dr. p. 929; Gaz. vol. 136; p. 801.
Trap-setting device, Animal-. F. F. Ellis. No. 898,731; Sept. 15; Sp. p. 2992; Dr. p. 642; Gaz. vol. 136; p. 544.
Traveling-grate furnace. J. Harrington. No. 898,101; Sept. 8; Sp. p. 1773; Dr. pp. 376-7; Gaz. vol. 136; p. 310.
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Trench-brace. M. R. De France and A. E. Read. No. 898,336; Sept. 8; Sp. p. 2210; Dr. p. 469; Gaz. vol. 136; p. 383.
Trichlorindigo and making same. G. Engi and H. Kraft. No. 899,863; Sept. 29; Sp. p. 5230; Gaz. vol. 136; p. 977.
Trimmer: *See* Lawn-trimmer; Load-trimmer; Shade-trimmer; Sole-edge trimmer.
Tripod. H. J. C. Jessen. No. 898,374; Sept. 8; Sp. p. 2286; Dr. p. 486; Gaz. vol. 136; p. 397.
Trolley-catcher. M. G. Delaney. No. 897,273; Sept. 1; Sp. p. 22; Dr. p. 6; Gaz. vol. 136; p. 6.
Trolley-finder. J. P. Reed. No. 897,402; Sept. 1; Sp. p. 339; Dr. p. 72; Gaz. vol. 136; p. 51.
Trolley-pole catcher. J. H. Walker. No. 899,578; Sept. 29; Sp. p. 4615; Dr. pp. 991-2; Gaz. vol. 136; p. 883.
Trolley support, Aerial-. J. Bryan, H. Etheridge, and E. M. Balsinger. No. 899,859; Sept. 29; Sp. p. 5220; Dr. p. 1117; Gaz. vol. 136; p. 975.
Trolley-switch. B. G. Watkins. No. 899,773; Sept. 29; Sp. p. 5025; Dr. pp. 1077-8; Gaz. vol. 136; p. 947.
Trolley-wheel. E. P. Sharp. No. 897,667; Sept. 1; Sp. p. 859; Dr. p. 186; Gaz. vol. 136; p. 138.
Trolley-wheel. J. W. Seibert. No. 899,474; Sept. 22; Sp. p. 4380; Dr. p. 940; Gaz. vol. 136; p. 811.
Trolley-wheels from jumping, Device to prevent. W. O. Lane. No. 898,485; Sept. 15; Sp. p. 2513; Dr. p. 538; Gaz. vol. 136; p. 465.
Trolley-wire hanger. J. Bryan and H. Etheridge. No. 899,858; Sept. 29; Sp. p. 5219; Dr. p. 1117; Gaz. vol. 136; p. 975.
Trousers and drawers supporter. W. H. Germann. No. 897,976; Sept. 8; Sp. p. 1529; Dr. p. 325; Gaz. vol. 136; p. 271.
Trowel or float, Plasterer's. G. H. Bishop. No. 899,653; Sept. 29; Sp. p. 4773; Dr. p. 1021; Gaz. vol. 136; p. 907.
Truck. H. J. vom Scheidt. No. 897,853; Sept. 1; Sp. p. 1243; Dr. p. 266; Gaz. vol. 136; p. 197.
Truck. R. W. Oswald. No. 899,797; Sept. 29; Sp. p. 5090; Dr. p. 1089; Gaz. vol. 136; p. 955.
Truck, Car-. R. E. Frame. No. 897,281; Sept. 1; Sp. p. 32; Dr. p. 8; Gaz. vol. 136; p. 8.
Truck, Car-. E. A. Curtis. No. 898,440; Sept. 15; Sp. p. 2428; Dr. pp. 519-20; Gaz. vol. 136; p. 451.
Truck, Car-. C. H. Howard and H. M. Pflager. No. 899,401; Sept. 22; Sp. p. 4251; Dr. p. 912; Gaz. vol. 136; p. 788.
Truck, Car-. W. H. Miller. No. 899,674; Sept. 29; Sp. p. 4816; Dr. pp. 1030-1; Gaz. vol. 136; p. 913.
Truck, Liquid-spraying. G. T. Connor. No. 900,058; Sept. 29; Sp. p. 5649; Dr. p. 1206; Gaz. vol. 136; p. 1039.
Truck pedestal, Car-. C. Markel. No. 898,906; Sept. 15; Sp. p. 3306; Dr. p. 709; Gaz. vol. 136; p. 601.
Truck, Swing-motion car-. W. D. Lowry. No. 897,912; Sept. 8; Sp. p. 1353; Dr. pp. 295-6; Gaz. vol. 136; p. 250.
Trunk. S. W. Bonsall. No. 898,549; Sept. 15; Sp. p. 2648; Dr. p. 566; Gaz. vol. 136; p. 486.
Trunk-lining. M. C. Wilson. No. 898,026; Sept. 8; Sp. p. 1635; Dr. p. 348; Gaz. vol. 136; p. 287.
Trunk-lock. R. W. King. No. 897,377; Sept. 1; Sp. p. 276; Dr. p. 57; Gaz. vol. 136; p. 42.
Trunk-lock. J. B. Johnson. No. 898,744; Sept. 15; Sp. p. 3014; Dr. p. 645; Gaz. vol. 136; p. 548.
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Tunnel and subway. G. W. Jackson. No. 899,735; Sept. 29; Sp. p. 4934; Dr. pp. 1058-9; Gaz. vol. 136; p. 932.
Turbine. A. C. Wood. No. 897,567; Sept. 1; Sp. p. 671; Dr. p. 141; Gaz. vol. 136; p. 105.
Turbine. N. McKee. No. 897,992; Sept. 8; Sp. p. 1559; Dr. p. 331; Gaz. vol. 136; p. 276.
Turbine. M. R. Moore. No. 898,127; Sept. 8; Sp. p. 1825; Dr. pp. 387-8; Gaz. vol. 136; p. 318.
Turbine. C. A. Parsons and G. G. Stoney. No. 898,257; Sept. 8; Sp. p. 2075; Dr. p. 441; Gaz. vol. 136; p. 358.
Turbine. C. A. Parsons and G. G. Stoney. No. 899,319; Sept. 22; Sp. p. 4112; Dr. p. 879; Gaz. vol. 136; p. 762.
Turbine. A. Pfau. No. 899,559; Sept. 29; Sp. p. 4580; Dr. pp. 984-5; Gaz. vol. 136; p. 877.
Turbine, Elastic-fluid. W. Kieser. No. 897,540; Sept. 1; Sp. p. 618; Dr. p. 128; Gaz. vol. 136; p. 97.
Turbine, Elastic-fluid. W. F. and H. A. Lees and C. W. Grise. No. 898,753; Sept. 15; Sp. p. 3029; Dr. pp. 649-50; Gaz. vol. 136; p. 551.
Turbine, Gaseous-fluid. C. Wedekind. No. 897,503; Sept. 1; Sp. p. 535; Dr. pp. 113-14; Gaz. vol. 136; p. 86.
Turbine, Marine. T. G. E. Lindmark. No. 899,547; Sept. 29; Sp. p. 4556; Dr. p. 980; Gaz. vol. 136; p. 872.
Turn-table. P. Klemp. No. 898,115; Sept. 8; Sp. p. 1808; Dr. p. 384; Gaz. vol. 136; p. 315.
Turn-table, Mold-carrying. E. A. Custer. No. 898,191; Sept. 8; Sp. p. 1949; Dr. p. 416; Gaz. vol. 136; p. 338.
Twine-cutter. J. De Young. No. 897,275; Sept. 1; Sp. p. 25; Dr. p. 6; Gaz. vol. 136; p. 7.
Twyers, Apparatus for making. G. W. Fieldhouse. No. 898,348; Sept. 8; Sp. p. 2231; Dr. pp. 475-6; Gaz. vol. 136; p. 387.
Twyers, Making. G. W. Fieldhouse. No. 898,347; Sept. 8; Sp. p. 2229; Dr. pp. 474-5; Gaz. vol. 136; p. 387.
Tying appliance. J. Smith. No. 897,795; Sept. 1; Sp. p. 1114; Dr. p. 239; Gaz. vol. 136; p. 179.
Type casting and composing machine. R. C. Elliott. No. 897,358; Sept. 1; Sp. p. 225; Dr. pp. 47-50; Gaz. vol. 136; p. 35.
Type setting and distributing machine. L. Roberts. No. 899,843; Sept. 29; Sp. p. 5172; Dr. pp. 1108-9; Gaz. vol. 136; p. 970.
Type-writer backing-sheet. H. Ohashi. No. 898,916; Sept. 15; Sp. p. 3327; Dr. p. 713; Gaz. vol. 136; p. 604.
Type-writer carriage-return mechanism. E. A. Burlingame. No. 898,310; Sept. 8; Sp. p. 2168; Dr. p. 460; Gaz. vol. 136; p. 375.
Type-writing machine. B. A. Brooks. No. 897,269; Sept. 1; Sp. p. 13; Dr. pp. 3-4; Gaz. vol. 136; p. 5.
Type-writing machine. A. F. Decker. No. 897,272; Sept. 1; Sp. p. 20; Dr. pp. 5-6; Gaz. vol. 136; p. 6.
Type-writing machine. C. H. Shepard. No. 897,308; Sept. 1; Sp. p. 71; Dr. p. 18; Gaz. vol. 136; p. 16.
Type-writing machine. W. F. Helmond. No. 897,366; Sept. 1; Sp. p. 255; Dr. p. 52; Gaz. vol. 136; p. 38.
Type-writing machine. G. F. Stillman. No. 897,425; Sept. 1; Sp. p. 384; Dr. p. 81; Gaz. vol. 136; p. 59.
Type-writing machine. E. B. Hess. No. 897,533; Sept. 1; Sp. p. 604; Dr. p. 126; Gaz. vol. 136; p. 95.
Type-writing machine. T. Cahill. No. 897,950; Sept. 8; Sp. p. 1494; Dr. pp. 317-18; Gaz. vol. 136; p. 265.
Type-writing machine. J. Felbel. No. 898,635; Sept. 15; Sp. p. 2814; Dr. pp. 601-2; Gaz. vol. 136; p. 514.
Type-writing machine. J. Felbel. No. 898,636; Sept. 15; Sp. p. 2821; Dr. pp. 602-3; Gaz. vol. 136; p. 514.
Type-writing machine. J. W. Paul. No. 898,676; Sept. 15; Sp. p. 2895; Dr. pp. 619-20; Gaz. vol. 136; p. 527.
Type-writing machine. M. W. Pool. No. 899,615; Sept. 29; Sp. p. 4687; Dr. pp. 1005-6; Gaz. vol. 136; p. 895.
Type writing machine. M. W. Pool. No. 899,616; Sept. 29; Sp. p. 4695; Dr. pp. 1006-7; Gaz. vol. 136; p. 895.
Type-writing machine. C. E. Smith. No. 899,847; Sept. 29; Sp. p. 5189; Dr. p. 1112; Gaz. vol. 136; p. 971.
Type-writing machine. A. W. Steiger. No. 899,848; Sept. 29; Sp. p. 5193; Dr. pp. 1112-13; Gaz. vol. 136; p. 972.
Umbrella. J. A. Eberle. No. 899,718; Sept. 29; Sp. p. 4897; Dr. p. 1050; Gaz. vol. 136; p. 927.
Undershirt, Suspensory. R. D. Peters. No. 898,258; Sept. 8; Sp. p. 2077; Dr. p. 442; Gaz. vol. 136; p. 358.
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Universal joint. T. V. Buckwalter. No. 898,829; Sept. 15; Sp. p. 3170; Dr. p. 678; Gaz. vol. 136; p. 576.
Universal joint. E. G. Hoffmann. No. 899,534; Sept. 29; Sp. p. 4519; Dr. pp. 970-1; Gaz. vol. 136; p. 868.
Universal joint, Power-transmission. H. R. Shaw. No. 899,913; Sept. 29; Sp. p. 5308; Dr. p. 1135; Gaz. vol. 136; p. 991.
Valve. A. Tomkins. No. 898,805; Sept. 15; Sp. p. 3126; Dr. pp. 669-70; Gaz. vol. 136; p. 568.
Valve. O. G. Hitchcock. No. 898,889; Sept. 15; Sp. p. 3282; Dr. p. 702; Gaz. vol. 136; p. 596.
Valve. H. D. Snell. No. 899,079; Sept. 22; Sp. p. 3625; Dr. p. 776; Gaz. vol. 136; p. 684.
Valve. W. H. Kline. (Reissue.) No. 12,857; Sept. 22; Sp. p. 4428; Dr. pp. 950-1; Gaz. vol. 136; p. 820.
Valve, L. L. Craddock and J. McCleary. No. 899,659; Sept. 29; Sp. p. 4780; Dr. p. 1023; Gaz. vol. 136; p. 908.
Valve, Automatic. A. J. Greenaway. No. 897,285; Sept. 1; Sp. p. 38; Dr. p. 9; Gaz. vol. 136; p. 9.
Valve, Automatic. M. L. Grove. No. 897,617; Sept. 1; Sp. p. 773; Dr. p. 163; Gaz. vol. 136; p. 122.
Valve, Automatic. A. B. Szperkowsky. No. 899,768; Sept. 29; Sp. p. 5014; Dr. p. 1075; Gaz. vol. 136; p. 945.
Valve, Automatic air-. G. D. Hoffman. No. 899,110; Sept. 22; Sp. p. 3684; Dr. p. 790; Gaz. vol. 136; p. 695.
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Valve, Automatic relief-. A. Harrison. No. 899,532; Sept. 29; Sp. p. 4514; Dr. p. 969; Gaz. vol. 136; p. 867.
Valve, Automatic water-relief. A. Harrison. No. 897,895; Sept. 8; Sp. p. 1343; Dr. p. 287; Gaz. vol. 136; p. 244.
Valve, Automatically-drained gate-. C. A. Claflin. No. 898,722; Sept. 15; Sp. p. 2972; Dr. p. 637; Gaz. vol. 136; p. 541.
Valve-controlling mechanism. F. Hodgkinson. (Reissue.) No. 12,848; Sept. 8; Sp. p. 2371; Dr. pp. 506-7; Gaz. vol. 136; p. 411.
Valve, Dry-pipe. P. Evans. No. 898,856; Sept. 15; Sp. p. 3216; Dr. p. 689; Gaz. vol. 136; p. 585.
Valve, Feed and quick-release. J. A. Hicks. No. 897,741; Sept. 1; Sp. p. 1007; Dr. p. 214; Gaz. vol. 136; p. 163.
Valve, Filter-. J. R. and C. P. Elfreth. No. 897,606; Sept. 1; Sp. p. 749; Dr. p. 158; Gaz. vol. 136; p. 119.
Valve for engines, Steam-actuated. A. G. Stokes. No. 899,849; Sept. 29; Sp. p. 5200; Dr. pp. 1113-14; Gaz. vol. 136; p. 972.
Valve for flush-tanks, Supply-. O. F. Glidden. No. 899,486; Sept. 22; Sp. p. 4407; Dr. p. 946; Gaz. vol. 136; p. 816.
Valve for hydraulic jacks, Air-. J. W. Nelson and W. H. Mathers. No. 899,462; Sept. 22; Sp. p. 4357; Dr. p. 936; Gaz. vol. 136; p. 807.
Valve for rotary engines, Control-. E. Taylor. No. 899,814; Sept. 29; Sp. p. 5118; Dr. pp. 1004-5; Gaz. vol. 136; p. 960.

Valve-gear. A. J. Pocock. No. 897,654; Sept. 1; Sp. p. 831; Dr. pp. 175–6; Gaz. vol. 136; p. 133.
Valve-gear. J. E. Yoder. No. 898,543; Sept. 15; Sp. p. 2639; Dr. p. 564; Gaz. vol. 136; p. 484.
Valve-gear, Engine. J. S. Spurgeon. No. 898,707; Sept. 15; Sp. p. 3111; Dr. pp. 666–7; Gaz. vol. 136; p. 566.
Valve-handle. W. P. Marbie. No. 899,117; Sept. 22; Sp. p. 3693; Dr. p. 792; Gaz. vol. 136; p. 697.
Valve-handle. W. P. Marbie. No. 899,118; Sept. 22; Sp. p. 3695; Dr. p. 792; Gaz. vol. 136; p. 698.
Valve, Hopper-. F. L. Sawyer. No. 898,689; Sept. 15; Sp. p. 2920; Dr. p. 625; Gaz. vol. 136; p. 531.
Valve mechanism, Engine. A. Good. No. 897,736; Sept. 1; Sp. p. 1000; Dr. pp. 212–13; Gaz. vol. 136; p. 161.
Valve mechanism, Engine. W. L. Wayrynen. No. 898,807; Sept. 15; Sp. p. 3128; Dr. p. 670; Gaz. vol. 136; p. 568.
Valve mechanism for fluid-motors. A. Becht. No. 897,574; Sept. 1; Sp. p. 685; Dr. p. 144; Gaz. vol. 136; p. 108.
Valve-operating device for compressors. W. Prellwitz. No. 898,135; Sept. 8; Sp. p. 1847; Dr. pp. 393–4; Gaz. vol. 136; p. 321.
Valve-operating mechanism. M. H. Henesey. No. 898,472; Sept. 15; Sp. p. 2489; Dr. p. 532; Gaz. vol. 136; p. 461.
Valve-position controlling and indicator device. F. N. Connet. No. 899,029; Sept. 22; Sp. p. 3541; Dr. p. 757; Gaz. vol. 136; p. 669.
Valve recording and indicating device. H. C. Howard. No. 899,733; Sept. 29; Sp. p. 4929; Dr. p. 1057; Gaz. vol. 136; p. 932.
Valve, Relief-. J. W. Rowe. No. 899,077; Sept. 22; Sp. p. 3622; Dr. p. 776; Gaz. vol. 136; p. 683.
Valve, Self-closing measuring-. A. J. Sweet. No. 898,999; Sept. 15; Sp. p. 3469; Dr. p. 743; Gaz. vol. 136; p. 631.
Valve-stem case. E. B. Sinkler. No. 897,935; Sept. 8; Sp. p. 1440; Dr. p. 308; Gaz. vol. 136; p. 258.
Valve, Stop and waste. J. N. Mortimer. No. 898,383; Sept. 8; Sp. p. 2298; Dr. p. 488; Gaz. vol. 136; p. 399.
Valve system and tracker-board. H. Pierce. No. 899,469; Sept. 22; Sp. p. 4372; Dr. p. 938; Gaz. vol. 136; p. 809.
Valves, Manufacturing air-chambers for relief-. H. Burnet. No. 899,656; Sept. 29; Sp. p. 4776; Dr. p. 1022; Gaz. vol. 136; p. 908.
Vapors, Fractional condensation of. L. Löwenstein. No. 898,980; Sept. 15; Sp. p. 3434; Dr. p. 737; Gaz. vol. 136; p. 625.
Vegetable-separator. W. J. Sherrard. No. 898,515; Sept. 15; Sp. p. 2572; Dr. p. 550; Gaz. vol. 136; p. 475.
Vehicle. C. R. Jesse and R. T. Ware. No. 899,989; Sept. 29; Sp. p. 5458; Dr. pp. 1168–9; Gaz. vol. 136; p. 1016.
Vehicle and junction and crossing therefor. R. C. Sayer. No. 898,008; Sept. 8; Sp. p. 1582; Dr. pp. 337–9; Gaz. vol. 136; p. 281.
Vehicle-bodies, Means for raising. A. J. Pack. No. 899,430; Sept. 22; Sp. p. 4301; Dr. p. 923; Gaz. vol. 136; p. 797.
Vehicle-body hanger. I. Cornwell. No. 898,553; Sept. 15; Sp. p. 2657; Dr. p. 568; Gaz. vol. 136; p. 488.
Vehicle bow-socket. J. C. Coss. No. 898,837; Sept. 15; Sp. p. 3182; Dr. p. 681; Gaz. vol. 136; p. 578.
Vehicle-brake. W. Wolfe. No. 898,682; Sept. 8; Sp. p. 1741; Dr. p. 370; Gaz. vol. 136; p. 305.
Vehicle-brake. G. Londress. No. 898,904; Sept. 15; Sp. p. 3303; Dr. p. 708; Gaz. vol. 136; p. 601.
Vehicle-guiding means. L. S. Hackney. No. 899,253; Sept. 22; Sp. p. 4004; Dr. p. 854; Gaz. vol. 136; p. 743.
Vehicle, Motor-. T. J. Thorp. No. 898,156; Sept. 8; Sp. p. 1881; Dr. pp. 402–3; Gaz. vol. 136; p. 327.
Vehicle running-gear. W. H. Chapin. No. 897,270; Sept. 1; Sp. p. 16; Dr. p. 5; Gaz. vol. 136; p. 5.
Vehicle running-gear. M. W. Heyenga. No. 899,218; Sept. 22; Sp. p. 3904; Dr. p. 834; Gaz. vol. 136; p. 731.
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Vehicle running-gear. J. S. Lewis. No. 899,877; Sept. 29; Sp. p. 5249; Dr. p. 1122; Gaz. vol. 136; p. 981.
Vehicle safety-reflector. R. K. McLean and W. K. Gibson. No. 899,698; Sept. 29; Sp. p. 4853; Dr. p. 1040; Gaz. vol. 136; p. 920.
Vehicle-seat. H. C. Martell. No. 899,748; Sept. 29; Sp. p. 4968; Dr. p. 1065; Gaz. vol. 136; p. 938.
Vehicle shock-absorber. C. K. Foster. No. 898,043; Sept. 8; Sp. p. 1667; Dr. p. 354; Gaz. vol. 136; p. 292.
Vehicle-spring. J. G. Nolen and J. Shepherd. No. 899,837; Sept. 29; Sp. p. 5156; Dr. p. 1104; Gaz. vol. 136; p. 967.
Vehicle-spring, Pneumatic. T. G. Wilkinson. No. 898,712; Sept. 15; Sp. p. 2955; Dr. p. 634; Gaz. vol. 136; p. 538.
Vehicle spring-wheel. W. H. Serymgour. No. 899,332; Sept. 22; Sp. p. 4130; Dr. p. 884; Gaz. vol. 136; p. 766.
Vehicle support, Monotrack-. R. Scherl. No. 897,558; Sept. 1; Sp. p. 655; Dr. p. 137; Gaz. vol. 136; p. 102.
Vehicle-top support. W. N. Hurt. No. 899,669; Sept. 29; Sp. p. 4799; Dr. p. 1027; Gaz. vol. 136; p. 911.
Vehicle-wheel. I. Snell. No. 898,280; Sept. 8; Sp. p. 2113; Dr. p. 449; Gaz. vol. 136; p. 366.
Vehicle-wheel. H. Clifford. No. 898,436; Sept. 15; Sp. p. 2421; Dr. p. 518; Gaz. vol. 136; p. 450.
Vehicle-wheel. C. Seewald. No. 898,608; Sept. 15; Sp. p. 2753; Dr. pp. 588–9; Gaz. vol. 136; p. 505.
Vehicle-wheel. W. H. Serymgour. No. 899,331; Sept. 22; Sp. p. 4129; Dr. p. 883; Gaz. vol. 136; p. 766.
Vehicle-wheel. I. C. Scudder. No. 899,333; Sept. 22; Sp. p. 4132; Dr. p. 884; Gaz. vol. 136; p. 767.
Vehicle-wheel. W. D. McNaull. No. 899,699; Sept. 29; Sp. p. 4854; Dr. p. 1040; Gaz. vol. 136; p. 920.
Vehicles, Apparatus for discharging packages from moving. J. Rowbotham. No. 897,412; Sept. 1; Sp. p. 357; Dr. p. 75; Gaz. vol. 136; p. 55.
Vehicles, Sleigh-runner for. S. J. Jennings. No. 898,743; Sept. 15; Sp. p. 3013; Dr. p. 645; Gaz. vol. 136; p. 548.
Velocipede, Ice-. O. Pehrman. No. 899,132; Sept. 22; Sp. p. 3723; Dr. p. 797; Gaz. vol. 136; p. 702.
Vending-machine. S. M. Stroock. No. 897,801; Sept. 1; Sp. p. 1144; Dr. p. 244; Gaz. vol. 136; p. 181.
Vending-machine. J. V. McCarthy and A. MacLeod. No. 897,989; Sept. 8; Sp. p. 1553; Dr. p. 330; Gaz. vol. 136; p. 275.
Vending-machine. A. Jaeger. No. 898,371; Sept. 8; Sp. p. 2282; Dr. p. 485; Gaz. vol. 136; p. 396.
Vending-machine. P. J. Regan. No. 898,681; Sept. 15; Sp. p. 2909; Dr. p. 623; Gaz. vol. 136; p. 528.
Vending-machine. C. E. Morris. No. 898,765; Sept. 15; Sp. p. 3049; Dr. pp. 654–5; Gaz. vol. 136; p. 554.
Vending-machine. A. Runyon. No. 898,930; Sept. 15; Sp. p. 3348; Dr. pp. 718–19; Gaz. vol. 136; p. 609.
Vending machine, Cigar-. F. C. Jenkins. No. 898,654; Sept. 15; Sp. p. 2852; Dr. pp. 609–10; Gaz. vol. 136; p. 520.
Vending-machine, Coin-controlled. R. D. Simpson. No. 898,995; Sept. 15; Sp. p. 3463; Dr. p. 742; Gaz. vol. 136; p. 630.
Vending-machine, Coin-controlled. J. E. Allison. No. 899,196; Sept. 22; Sp. p. 3867; Dr. p. 826; Gaz. vol. 136; p. 724.
Vending-machine, Coin-controlled. R. I. Hill. No. 899,979; Sept. 29; Sp. p. 5458; Dr. p. 1164; Gaz. vol. 136; p. 1012.
Vent-pipe attachment. J. H. Brown. No. 899,291; Sept. 22; Sp. p. 4060; Dr. p. 868; Gaz. vol. 136; p. 754.
Ventilator. W. H. Davidson. No. 898,730; Sept. 15; Sp. p. 2990; Dr. p. 641; Gaz. vol. 136; p. 544.
Ventilator. W. H. Davidson. No. 898,838; Sept. 15; Sp. p. 3184; Dr. p. 681; Gaz. vol. 136; p. 579.
Ventilator. P. Evans. No. 898,855; Sept. 15; Sp. p. 3215; Dr. p. 689; Gaz. vol. 136; p. 584.
Vessel, Cargo. W. Doxford. No. 897,884; Sept. 8; Sp. p. 1309; Dr. p. 280; Gaz. vol. 136; p. 239.
Vessel, Motor. D. C. Blake. No. 897,517; Sept. 1; Sp. p. 571; Dr. p. 119; Gaz. vol. 136; p. 90.
Vessels, Guard for channeled marine. L. Dion. No. 900,008; Sept. 29; Sp. p. 5528; Dr. p. 1178; Gaz. vol. 136; p. 1022.
Vise. W. A. Merralls. No. 898,413; Sept. 8; Sp. p. 2362; Dr. pp. 504–5; Gaz. vol. 136; p. 409.
Vise. G. M. Yost. No. 899,779; Sept. 29; Sp. p. 5045; Dr. pp. 1080–1; Gaz. vol. 136; p. 949.
Voltaic high-current ares, Apparatus for producing. H. Pauling. No. 898,133; Sept. 8; Sp. p. 1841; Dr. p. 392; Gaz. vol. 136; p. 320.
Voting-machine. E. McClain. No. 898,910; Sept. 15; Sp. p. 3314; Dr. pp. 710–11; Gaz. vol. 136; p. 602.
Voting-machine interlock. F. Kelser. No. 898,114; Sept. 8; Sp. p. 1805; Dr. p. 383; Gaz. vol. 136; p. 315.
Wagon, Dump-. C. E. Glenn. No. 898,871; Sept. 15; Sp. p. 3248; Dr. p. 695; Gaz. vol. 136; p. 590.
Wagon, Dump-. J. W. Haywood. No. 899,011; Sept. 15; Sp. p. 3492; Dr. p. 748; Gaz. vol. 136; p. 635.
Wagon, Dumping-. C. H. Van Deusen. No. 898,533; Sept. 15; Sp. p. 2607; Dr. pp. 556–7; Gaz. vol. 136; p. 480.
Wagon-standard. W. W. Mullen. No. 899,178; Sept. 22; Sp. p. 3832; Dr. p. 820; Gaz. vol. 136; p. 718.
Waist and skirt holder, Adjustable. E. Czarnkowsky. No. 899,828; Sept. 29; Sp. p. 5141; Dr. p. 1100; Gaz. vol. 136; p. 965.
Waist, Child's. K. M. Dowling. No. 898,449; Sept. 15; Sp. p. 2451; Dr. p. 524; Gaz. vol. 136; p. 454.
Wall, Building-. J. S. Culley. No. 897,353; Sept. 1; Sp. p. 209; Dr. p. 44; Gaz. vol. 136; p. 32.
Warehouse. A. N. Hadley. No. 898,465; Sept. 15; Sp. p. 2479; Dr. p. 530; Gaz. vol. 136; p. 459.
Warp-thread-detecting device. W. Gross. No. 898,357; Sept. 8; Sp. p. 2246; Dr. p. 479; Gaz. vol. 136; p. 390.
Washer: *See* Coal-washer; Dish-washer.
Washing device, Compressed-air. J. A. Vance. No. 898,612; Sept. 15; Sp. p. 2762; Dr. p. 590; Gaz. vol. 136; p. 506.
Washing-machine. T. C. Sörensen. No. 899,318; Sept. 29; Sp. p. 5319; Dr. p. 1137; Gaz. vol. 136; p. 993.
Washing-machine cylinder. C. Jensen. No. 899,988; Sept. 29; Sp. p. 5486; Dr. p. 1168; Gaz. vol. 136; p. 1016.
Washing-machine-operating mechanism. R. C. Otis and W. W. Gundrum. No. 898,132; Sept. 8; Sp. p. 1840; Dr. p. 391; Gaz. vol. 136; p. 320.
Washing-machines, Mechanical movement for. W. H. Voss. No. 897,432; Sept. 1; Sp. p. 397; Dr. p. 85; Gaz. vol. 136; p. 62.
Washing-machines, Mechanical movement for. G. W. Brewer and J. K. Gibson. No. 899,025; Sept. 22; Sp. p. 3532; Dr. p. 756; Gaz. vol. 136; p. 667.
Washing-machines, Water-motor for. J. Wagner and A. Strnad. No. 897,433; Sept. 1; Sp. p. 400; Dr. p. 85; Gaz. vol. 136; p. 62.
Washing sheet material, Machine for. C. E. Moss. No. 899,424; Sept. 22; Sp. p. 4290; Dr. p. 921; Gaz. vol. 136; p. 795.
Washtub. W. L. Bogle. No. 898,087; Sept. 8; Sp. p. 1748; Dr. p. 372; Gaz. vol. 136; p. 306.
Waste-saving device. J. H. and G. A. Crowther. No. 898,330; Sept. 8; Sp. p. 2201; Dr. p. 467; Gaz. vol. 136; p. 381.
Waste waters containing cyanids and sulfocyanids from poison, Freeing. P. Goldberg. No. 897,735; Sept. 1; Sp. p. 999; Dr. p. 212; Gaz. vol. 136; p. 161.
Watch. J. T. Pendlebury. No. 899,897; Sept. 29; Sp. p. 5284; Dr. p. 1130; Gaz. vol. 136; p. 987.
Watch-regulator. F. W. Buckingham. No. 898,962; Sept. 15; Sp. p. 3404; Dr. p. 731; Gaz. vol. 136; p. 620.
Water-closet. N. B. Griffith. No. 900,071; Sept. 29; Sp. p. 5676; Dr. p. 1212; Gaz. vol. 136; p. 1043.
Water-cooler. S. Holub. No. 899,048; Sept. 22; Sp. p. 3568; Dr. p. 764; Gaz. vol. 136; p. 674.
Water-cooling tower. O. M. Gould. No. 899,665; Sept. 29; Sp. p. 4793; Dr. p. 1026; Gaz. vol. 136; p. 910.
Water-current motor. A. A. Porter. No. 899,320; Sept. 22; Sp. p. 4113; Dr. p. 879; Gaz. vol. 136; p. 763.
Water-gage. S. Neutra. No. 900,033; Sept. 29; Sp. p. 5591; Dr. p. 1194; Gaz. vol. 136; p. 1031.

Water-heater. D. M. MacLeod. No. 898,123; Sept. 8; Sp. p. 1818; Dr. p. 386; Gaz. vol. 136; p. 317.
Water-heater. J. J. Divekey and C. M. Genthner. No. 899,388; Sept. 22; Sp. p. 4224; Dr. p. 904; Gaz. vol. 136; p. 784.
Water-meter, Positive. E. J. Fryer. No. 898,863; Sept. 15; Sp. p. 3230; Dr. p. 692; Gaz. vol. 136; p. 587.
Water-motor. F. Breitenstein. No. 897,346; Sept. 1; Sp. p. 198; Dr. p. 42; Gaz. vol. 136; p. 30.
Water-motor. J. P. Shevlin. No. 898,516; Sept. 15; Sp. p. 2573; Dr. p. 550; Gaz. vol. 136; p. 475.
Water-motor. L. C. Lewis. No. 899,056; Sept. 22; Sp. p. 3583; Dr. p. 768; Gaz. vol. 136; p. 677.
Water-purifier. W. H. Green. No. 898,735; Sept. 15; Sp. p. 3002; Dr. p. 643; Gaz. vol. 136; p. 545.
Water, Purifying. W. H. Green. No. 898,876; Sept. 15; Sp. p. 3256; Dr. pp. 696–7; Gaz. vol. 136; p. 592.
Water-purifying apparatus. C. P. Van Gundy. No. 897,940; Sept. 8; Sp. p. 1449; Dr. p. 309; Gaz. vol. 136; p. 259.
Water-supply system, Automatic. J. Johnson. No. 898,480; Sept. 15; Sp. p. 2501; Dr. p. 536; Gaz. vol. 136; p. 463.
Water-supply tank, Automatic. C. E. Bathrick. No. 897,338; Sept. 1; Sp. p. 180; Dr. p. 38; Gaz. vol. 136; p. 26.
Water-tube boiler. L. L. Summers. No. 897,322; Sept. 1; Sp. p. 133; Dr. pp. 27–8; Gaz. vol. 136; p. 21.
Waterer, Hog-. P. Bernard. No. 898,716; Sept. 15; Sp. p. 2963; Dr. p. 635; Gaz. vol. 136; p. 539.
Watering troughs, Guard and cleaning attachment for stock-. E. E. Norquist. No. 899,129; Sept. 22; Sp. p. 3719; Dr. p. 797; Gaz. vol. 136; p. 701.
Waterways with falls, Hydraulic device for movable closing organs in. J. C. Nyholm. No. 899,700; Sept. 29; Sp. p. 4855; Dr. p. 1041; Gaz. vol. 136; p. 920.
Wave-breaker. J. A. Rosvoid. No. 898,266; Sept. 8; Sp. p. 2087; Dr. p. 444; Gaz. vol. 136; p. 361.
Wave-motor. W. G. J. Bentley and E. C. C. Krough. No. 899,652; Sept. 29; Sp. p. 4771; Dr. p. 1021; Gaz. vol. 136; p. 906.
Wave-motor. R. Craig. No. 899,957; Sept. 29; Sp. p. 5416; Dr. p. 1155; Gaz. vol. 136; p. 1005.
Wave, tide, and current motor. C. G. Roehr. No. 897,930; Sept. 8; Sp. p. 1423; Dr. pp. 304–5; Gaz. vol. 136; p. 255.
Wax-pad, Ironing-. E. A. Bronnund. No. 898,180; Sept. 8; Sp. p. 1937; Dr. p. 413; Gaz. vol. 136; p. 336.
Waxes, paraffins, solders, &c., Heater for applying and melting. F. A. Reilley. No. 897,782; Sept. 1; Sp. p. 1094; Dr. p. 235; Gaz. vol. 136; p. 175.
Waxing device, Laundry-iron. C. B. and A. L. Weatherhead. No. 897,804; Sept. 1; Sp. p. 1151; Dr. p. 245; Gaz. vol. 136; p. 182.
Weather-strip. F. A. Yeager. No. 899,150; Sept. 22; Sp. p. 3770; Dr. p. 808; Gaz. vol. 136; p. 709.
Webbing-attacher. J. C. Melick. No. 898,983; Sept. 15; Sp. p. 3441; Dr. p. 738; Gaz. vol. 136; p. 626.
Wedge for securing the handles of axes, hammers, &c. W. Wyatt. No. 898,950; Sept. 15; Sp. p. 3382; Dr. p. 726; Gaz. vol. 136; p. 615.
Weed-burner. A. Iten. No. 899,404; Sept. 22; Sp. p. 4257; Dr pp. 913–14; Gaz. vol. 136; p. 789.
Weed-cutting machine, Rotary. J. G. Olson. No. 898,256; Sept. 8; Sp. p. 2073; Dr. pp. 440–1; Gaz. vol. 136; p. 358.
Weigher, Automatic grain-. G. M. Baird. No. 898,420; Sept. 15; Sp. p. 2382; Dr. p. 509; Gaz. vol. 136; p. 445.
Weighing apparatus. H. B. Morris. No. 899,551; Sept. 29; Sp. p. 4563; Dr. p. 981; Gaz. vol. 136; p. 874.
Weighing-machine, Automatic. C. D. Scott. No. 897,855; Sept. 1; Sp. p. 1246; Dr. pp. 266–9; Gaz. vol. 136; p. 198.
Welding-tool. A. Futterman. No. 899,864; Sept. 29; Sp. p. 5231; Dr. p. 1118; Gaz. vol. 136; p. 977.
Welding-tool, Gas-heated. A. Futterman. No. 898,864; Sept. 15; Sp. p. 3232; Dr. p. 693; Gaz. vol. 136; p. 588.
Well-strainer. E. E. Johnson. No. 899,054; Sept. 22; Sp. p. 3575; Dr. p. 766; Gaz. vol. 136; p. 676.
Welt-beating machine. W. B. Keighley. No. 897,626; Sept. 1; Sp. p. 787; Dr. p. 165; Gaz. vol. 136; p. 125.
Wheel: *See* Automobile-wheel; Car-wheel; Elastic wheel; Escapement-wheel; Fifth-wheel; Resilient wheel; Self-oiling wheel; Sewing-machine fly-wheel; Spring-wheel; Traction-wheel; Trolley-wheel; Vehicle-wheel; Vehicle spring-wheel.
Wheel. J. W. Meixell. No. 898,057; Sept. 8; Sp. p. 1696; Dr. p. 360; Gaz. vol. 136; p. 296.
Wheel. W. H. Parham. No. 899,611; Sept. 29; Sp. p. 4681; Dr. p. 1004; Gaz. vol. 136; p. 894.
Wheel. G. Wolke. No. 899,934; Sept. 29; Sp. p. 5375; Dr. p. 1146; Gaz. vol. 136; p. 998.
Wheels of vehicles, Non-skidding device for. H. H. Kenshole. No. 899,056; Sept. 22; Sp. p. 3580; Dr. p. 767; Gaz. vol. 136; p. 676.
Wheels on axles, Means for securing. D. Ballif. No. 897,444; Sept. 1; Sp. p. 423; Dr. p. 90; Gaz. vol. 136; p. 66.
Wheelwright-machine. A. H. Wilson. No. 898,811; Sept. 15; Sp. p. 3135; Dr. pp. 671–2; Gaz. vol. 136; p. 570.
Whiffletree. A. O. Helmsness. No. 897,740; Sept. 1; Sp. p. 1000; Dr. p. 214; Gaz. vol. 136; p. 162.
Whiffletree attachment. J. Unger. No. 899,923; Sept. 29; Sp. p. 5334; Dr. p. 1139; Gaz. vol. 136; p. 994.
Whip-lock. W. H. Heiliger. No. 899,695; Sept. 29; Sp. p. 4850; Dr. p. 1039; Gaz. vol. 136; p. 919.
Whirligig. P. E. Smith. No. 899,686; Sept. 29; Sp. p. 4834; Dr. p. 1035; Gaz. vol. 136; p. 916.
Winding-machine. J. F. Gordon. No. 898,459; Sept. 15; Sp. p. 2465; Dr. pp. 527–8; Gaz. vol. 136; p. 457.
Winding-machine. L. M. Morrow and J. M. Foster. No. 899,423; Sept. 22; Sp. p. 4288; Dr. pp. 920–1; Gaz. vol. 136; p. 795.
Windmill-gearing. M. Keys. No. 899,872; Sept. 29; Sp. p. 5242; Dr. p. 1120; Gaz. vol. 136; p. 979.
Windmill-frame. L. W. Noyes. No. 897,390; Sept. 1; Sp. p. 304; Dr. p. 63; Gaz. vol. 136; p. 47.
Window. B. A. Warlick. No. 897,435; Sept. 1; Sp. p. 403; Dr. p. 86; Gaz. vol. 136; p. 62.
Window. S. U. Barr. No. 897,703; Sept. 1; Sp. p. 937; Dr. p. 199; Gaz. vol. 136; p. 150.
Window-catch. A. Macdonald. No. 898,491; Sept. 15; Sp. p. 2524; Dr. p. 540; Gaz. vol. 136; p. 467.
Window-cleaner. G. C. Dwight. No. 897,605; Sept. 1; Sp. p. 747; Dr. p. 158; Gaz. vol. 136; p. 119.
Window-cleaner attachment. A. E. Carlson. No. 898,316; Sept. 8; Sp. p. 2180; Dr. p. 402; Gaz. vol. 136; p. 377.
Window-fastener. A. G. Howland. No. 897,623; Sept. 1; Sp. p. 784; Dr. p. 165; Gaz. vol. 136; p. 124.
Window-fastening device, Outside-. S. S. Brown. No. 897,871; Sept. 8; Sp. p. 1288; Dr. p. 275; Gaz. vol. 136; p. 235.
Window-front construction. F. M. Jackson. No. 897,372; Sept. 1; Sp. p. 267; Dr. p. 55; Gaz. vol. 136; p. 40.
Window, Iron-frame. A. Packscher. No. 899,610; Sept. 29; Sp. p. 4680; Dr. p. 1004; Gaz. vol. 136; p. 894.
Window-lifter. N. R. Evans. No. 899,009; Sept. 15; Sp. p. 3489; Dr. p. 747; Gaz. vol. 136; p. 634.
Window-lock. L. G. Miller. No. 898,763; Sept. 15; Sp. p. 3047; Dr. p. 653; Gaz. vol. 136; p. 554.
Window-screen. J. A. White. No. 898,539; Sept. 15; Sp. p. 2625; Dr. p. 562; Gaz. vol. 136; p. 482.
Windrower. L. Franzmeier. No. 898,571; Sept. 15; Sp. p. 2683; Dr. p. 573; Gaz. vol. 136; p. 493.
Wire-lifter. J. C. Seeland. No. 898,010; Sept. 8; Sp. p. 1592; Dr. p. 340; Gaz. vol. 136; p. 282.
Wire-making machine, Barb-. A. L. Kitselman. No. 899,542; Sept. 29; Sp. p. 4539; Dr. pp. 975–7; Gaz. vol. 136; p. 871.
Wire-rod-bending machine. M. J. Bartlett. No. 898,424; Sept. 15; Sp. p. 2388; Dr. pp. 510–12; Gaz. vol. 136; p. 446.
Wire-stretcher. J. Olson. No. 898,500; Sept. 15; Sp. p. 2538; Dr. p. 544; Gaz. vol. 136; p. 470.
Wire-twisting tool. A. H. Neller. No. 898,912; Sept. 15; Sp. p. 3221; Dr. p. 712; Gaz. vol. 136; p. 603.
Wood-boring-machine guard. E. R. King. No. 899,412; Sept. 22; Sp. p. 4269; Dr. p. 916; Gaz. vol. 136; p. 791.
Wood-carving machine. W. J. Egan. No. 899,519; Sept. 29; Sp. p. 4454; Dr. pp. 963–4; Gaz. vol. 136; p. 863.
Wood, Preserved. P. C. Reilly. No. 899,904; Sept. 29; Sp. p. 5297; Gaz. vol. 136; p. 989.
Wood, Preserved. P. C. Reilly. No. 899,905; Sept. 29; Sp. p. 5298; Gaz. vol. 136; p. 989.
Wood, Preserving. W. Buehler. No. 899,237; Sept. 22; Sp. p. 3949; Dr. p. 842; Gaz. vol. 136; p. 737.
Wood, Preserving. C. Howard. No. 899,400; Sept. 22; Sp. p. 4250; Gaz. vol. 136; p. 788.
Wood, Preserving. W. Buehler. No. 899,480; Sept. 22; Sp. p. 4393; Dr. p. 943; Gaz. vol. 136; p. 813.
Wood-splitting machine. H. G. Saecker. No. 899,328; Sept. 22; Sp. p. 4124; Dr. p. 882; Gaz. vol. 136; p. 765.
Wood, Vulcanizing. C. Howard. No. 900,017; Sept. 29; Sp. p. 5549; Gaz. vol. 136; p. 1026.
Woodworking machinery, Feeding device for. J. R. Thomas and J. J. Meyers. No. 899,143; Sept. 22; Sp. p. 3751; Dr. pp. 804–5; Gaz. vol. 136; p. 706.
Wool, Apparatus for extracting grease and potash salts from. F. and C. Shuman. No. 899,440; Sept. 22; Sp. p. 4314; Dr. p. 927; Gaz. vol. 136; p. 800.
Wool, Extracting grease and potash salts from. F. and C. Shuman. No. 899,339; Sept. 22; Sp. p. 4140; Dr. pp. 886–7; Gaz. vol. 136; p. 768.
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Work, Device for the support of. F. Wolfensberger. No. 897,808; Sept. 1; Sp. p. 1156; Dr. p. 246; Gaz. vol. 136; p. 183.
Woven fabric. I. E. Palmer. No. 900,036; Sept. 29; Sp. p. 5590; Dr. p. 1195; Gaz. vol. 136; p. 1032.
Wrench: *See* Automatic wrench; Bit-brace wrench; Nut-wrench; Ratchet-wrench.
Wrench. F. D. Bodey. No. 897,266; Sept. 1; Sp. p. 10; Dr. p. 3; Gaz. vol. 136; p. 4.
Wrench. V. Carlson. No. 897,584; Sept. 1; Sp. p. 703; Dr. p. 148; Gaz. vol. 136; p. 111.
Wrench. J. Minett. No. 897,640; Sept. 1; Sp. p. 808; Dr. p. 170; Gaz. vol. 136; p. 128.
Wrench. H. R. and R. J. Munce. No. 897,767; Sept. 1; Sp. p. 1056; Dr. p. 227; Gaz. vol. 136; p. 171.
Wrench. H. N. Rothweiler. No. 898,267; Sept. 8; Sp. p. 2088; Dr. p. 444; Gaz. vol. 136; p. 361.
Wrench. P. L. Kimball. No. 898,657; Sept. 15; Sp. p. 2858; Dr. p. 611; Gaz. vol. 136; p. 521.
Wrench. W. Weidemann. No. 898,708; Sept. 15; Sp. p. 2949; Dr. p. 632; Gaz. vol. 136; p. 537.
Wrench. R. J. Jones and F. H. Cunningham. No. 898,896; Sept. 15; Sp. p. 3292; Dr. p. 705; Gaz. vol. 136; p. 598.
Wrench. A. T. Ralford. No. 898,990; Sept. 15; Sp. p. 3457; Dr. p. 741; Gaz. vol. 136; p. 628.
Wrench. H. Jeffrey. (Reissue.) No. 12,854; Sept. 15; Sp. p. 3514; Dr. p. 752; Gaz. vol. 136; p. 637.
Wrench. H. W. Allison. No. 899,197; Sept. 22; Sp. p. 3866; Dr. p. 826; Gaz. vol. 136; p. 724.
Wrench. A. L. Shaw. No. 899,336; Sept. 22; Sp. p. 4137; Dr. p. 886; Gaz. vol. 136; p. 767.
Wrench. I. H. Alfrey. No. 899,707; Sept. 29; Sp. p. 4871; Dr. p. 1045; Gaz. vol. 136; p. 922.
Wrench. J. Reif, Jr. No. 899,805; Sept. 29; Sp. p. 5103; Dr. p. 1091; Gaz. vol. 136; p. 958.
Wringer. D. A. Sawyers. No. 898,787; Sept. 15; Sp. p. 3095; Dr. p. 663; Gaz. vol. 136; p. 562.

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF OCTOBER, 1908.

[Abbreviations: "Sp."=Monthly Volume of Specifications; "Dr."=Monthly Volume of Drawings; "Gaz."=Official Gazette.]

Abbott, C. C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Interlocking member for voting-machines. No. 900,905; Oct. 13; Sp. p. 1776; Dr. p. 360; Gaz. vol. 136; p. 1373.

Abbott, C. C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Grouping mechanism for voting-machines. No. 900,906; Oct. 13; Sp. p. 1781; Dr. p. 360; Gaz. vol. 136; p. 1373.

Abbott, C. C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Detachable leg for voting-machines. No. 900,907; Oct. 13; Sp. p. 1786; Dr. pp. 360–1; Gaz. vol. 136; p. 1374.

Acken, T. M., *et al.* (See McCarty, W. F. M., assignor.)

Ackerman, A. A., Chicago, Ill., assignor, by mesne assignments, to Warren Featherbone Company of Michigan, Three Oaks, Mich. Stiffening-strip. No. 902,194; Oct. 27; Sp. p. 4438; Dr. p. 898; Gaz. vol. 136; p. 1858.

Adams, C. E., Scrubgrass, assignor of one-half to B. H. Osborne, Franklin, Pa. Pipe-wrench. No. 902,041; Oct. 27; Sp. p. 4139; Dr. p. 838; Gaz. vol. 136; p. 1810.

Adams, J., Washington, Mo. Cattle-guard gate. No. 902,518; Oct. 27; Sp. p. 5152; Dr. p. 1043; Gaz. vol. 136; p. 1967.

Adams, V. B., Cincinnati, Ohio, and G. J. Schaller, Covington, Ky. Soap-holder for washboards. No. 901,768; Oct. 20; Sp. p. 3582; Dr. p. 725; Gaz. vol. 136; p. 1692.

Adder Machine Company. (See McFarland, C. N., assignor.)

Adder Machine Company. (See Wales, C., assignor.)

Addressograph Company. (See Duncan, J. S., assignor.)

Adelson, M. (See Adelson, S. L., assignor.)

Adelson, S. L., assignor of one-half to M. Adelson, New York, N. Y. Safety apparatus for railways. No. 901,668; Oct. 20; Sp. p. 3338; Dr. p. 686; Gaz. vol. 136; p. 1657.

Aden, J., Greensboro, N. C. Axle-lubricator. No. 900,252; Oct. 6; Sp. p. 368; Dr. p. 76; Gaz. vol. 136; p. 1132.

Aderer, J., New York, N. Y. Nut-lock. No. 900,462; Oct. 6; Sp. p. 844; Dr. p. 171; Gaz. vol. 136; p. 1202.

Admiral Hay Press Co. (See Tallman, H. M., assignor.)

Adnson, R., Cleghorn, Iowa. Propeller for boats. No. 902,362; Oct. 27; Sp. p. 4805; Dr. p. 970; Gaz. vol. 136; p. 1915.

Adrian Wire Fence Co. (See Sturtevant, O. S., assignor.)

Advance Thresher Co. (See Footitt, W. J., assignor.)

Ahlm, C. E. F. (See Pifer and Ahlm.)

Aiken, H., Pittsburg, Pa. Truck side frame. No. 900,463; Oct. 6; Sp. p. 845; Dr. p. 171; Gaz. vol. 136; p. 1203.

Aikman, B., Chicago, Ill., assignor to National Brake and Electric Company, Milwaukee, Wis. Air-brake system. No. 900,639; Oct. 6; Sp. p. 1214; Dr. pp. 249–50; Gaz. vol. 136; p. 1259.

Aktiebolaget Separator. (See Ericsson, A. J., assignor.)

Albertson, O. L., assignor of three-fourths to C. H. Reid, Richmond, Va. Car-coupling. No. 901,863; Oct. 20; Sp. p. 3752; Dr. p. 763; Gaz. vol. 136; p. 1721.

Albree, E. C., Swampscott, Mass. Accounting system. No. 901,579; Oct. 20; Sp. p. 3171; Dr. p. 647; Gaz. vol. 136; p. 1629.

Albright, R. D., Reynoldsville, Pa. Water-fixture and controlling means therefor. No. 900,818; Oct. 13; Sp. p. 1601; Dr. p. 324; Gaz. vol. 136; p. 1346.

Alden, J. S., assignor of one-half to M. E. Fichte, Nickleville, Pa. Thill-coupling. No. 901,274; Oct. 13; Sp. p. 2485; Dr. p. 508; Gaz. vol. 136; p. 1491.

Aldrich, N. W. (See Woodbury and Aldrich.)

Alexander, H., Berlin, Germany, assignor to General Electric Company. System of motor control. No. 901,514; Oct. 20; Sp. p. 3048; Dr. p. 622; Gaz. vol. 136; p. 1609.

Alexanderson, E. F. W., Schenectady, N. Y., assignor to General Electric Company. Induction-motor control. No. 901,513; Oct. 20; Sp. p. 3043; Dr. pp. 621–2; Gaz. vol. 136; p. 1608.

Alexanderson, E. F. W., Schenectady, N. Y., assignor to General Electric Company. Telephone-relay. No. 902,195; Oct. 27; Sp. p. 4440; Dr. p. 898; Gaz. vol. 136; p. 1858.

Alford, W. J. (See Rutherford and Alford.)

Alfred, C. J., New York, N. Y. Spool-case. No. 900,464; Oct. 6; Sp. p. 847; Dr. p. 172; Gaz. vol. 136; p. 1203.

Allen, C. M. (See Baggaley, Allen, and Lindquist.)

Allen, H., Barre, Mass. Driving mechanism for spindles. No. 901,515; Oct. 20; Sp. p. 3051; Dr. p. 623; Gaz. vol. 136; p. 1609.

Allen J. D., and J. A. Conly, Philadelphia, Pa. Motor-vehicle. No. 901,055; Oct. 13; Sp. p. 2074; Dr. p. 422; Gaz. vol. 136; p. 1422.

Allen, S. T., Detroit, Mich. Can-opener. No. 901,412; Oct. 20; Sp. p. 2811; Dr. p. 574; Gaz. vol. 136; p. 1574.

Alley, C. J., Farndon, New Zealand. Machine for use in chiming, crozing, and howelling barrels. No. 900,253; Oct. 6; Sp. p. 369; Dr. p. 77; Gaz. vol. 136; p. 1133.

Allis-Chalmers Company *et al.* (See Behrend, B. A., assignor.)

Allis-Chalmers Company *et al.* (See Elshoff, B., assignor.)

Allis-Chalmers Company *et al.* (See Elshoff, H. F., assignor.)

Allis-Chalmers Company *et al.* (See Field, A. B., assignor.)

Allis-Chalmers Company *et al.* (See McHugh, A. L., assignor.)

Allis-Chalmers Company. (See Moon, W. T., assignor.)

Allis-Chalmers Company *et al.* (See Pomeroy, W. D., assignor.)

Allis-Chalmers Company. (See Richards, W. J., assignor.)

Allis-Chalmers Company. (See Stull, E. W., assignor.)

Allsop, T., and W. W. Sibson, assignors to Philadelphia Drying Machinery Company, Philadelphia, Pa. Drying-machine. No. 901,769; Oct. 20; Sp. p. 3584; Dr. p. 725; Gaz. vol. 136; p. 1692.

Alsop, H. T. (See Michaelson, M., assignor.)

Alsop, S., Bellingham, Wash. Door closer and check. No. 900,973; Oct. 13; Sp. p. 1925; Dr. p. 392; Gaz. vol. 136; p. 1395.

Altenberg, G. P., Cincinnati, Ohio. Double-walled vessel. No. 900,075; Oct. 6; Sp. p. 4; Dr. p. 1; Gaz. vol. 136; p. 1075.

Altland, W. G., York, Pa. Stair-rod. No. 902,461; Oct. 27; Sp. p. 5015; Dr. pp. 1013–14; Gaz. vol. 136; p. 1946.

American Attachment Company. (See Stevens, G. J., assignor.)

American Callaphone Company. (See Kaufman and Lippmann, assignors.)

American Can Company. (See Kohke, J., assignor.)

American Can Company. (See Swangren, E. V., assignor.)

American Clay Machinery Co. (See Cunningham, W. R., assignor.)

American Lacing Hook Co. (See Taft, S. E., assignor.)

American Lithographic Company. (See Pancoast, G. E., assignor.)

American Locomotive Company. (See Dalton, W., assignor.)

American Locomotive Company. (See Oatley, H. B., assignor.)

American Mahogany Company. (See Hall, W. A., assignor.)

American Metal Edge Box Company. (See Lewis, R. B., assignor.)

American Moving Picture Machine Company. (See Isaacs, H. S. and L., assignors.) (Reissue.)

American Pad & Textile Company. (See McClain, E. L., assignor.)

American Piano Company. (See Darley, J. W., Jr., assignor.)

American Promoting Company. (See Mayhew, T., assignor.)
American Reduction Company. (See Machalske, F. J., assignor.)
American Sales Book Company. (See Metzger, W. C., assignor.)
American Shoe Finding Company. (See Waterman, B. B., assignor.) (Reissue.)
American Steam Gauge and Valve Manufacturing Company. (See Hopkins, F. H., assignor.)
American Steel & Wire Company. (See Daniels and Sturdevant, assignors.)
American Steel & Wire Company. (See Davis, D., assignor.)
American Telegraphone Company. (See Pedersen and Poulsen, assignors.)
American Tobacco Company. (See Tucker, B. W., assignor.)
American Type Founders Company. (See Baas, I., assignor.)
American Typographic Corporation. (See Richards, F. H., assignor.)
Amphion Piano Player Company. (See Doman, L. B., assignor.)
Anderson, A. G., assignor, by mesne assignments, to Worcester Pressed Steel Company, Worcester, Mass. Making screw-nuts. No. 900,341; Oct. 6; Sp. p. 565; Dr. p. 118; Gaz. vol. 136; p. 1161.
Anderson, E. E. (See Elzy and Anderson.)
Anderson, E. V., Monessen, Pa. Valve. No. 901,222; Oct. 13; Sp. p. 2370; Dr. p. 485; Gaz. vol. 136; p. 1473.
Anderson, F. A. (See Harris and Anderson.)
Anderson, F. P., Columbus, Ohio. Desk-telephone support. No. 900,640; Oct. 6; Sp. p. 1221; Dr. p. 250; Gaz. vol. 136; p. 1260.
Anderson, G. A., assignor to Geiser Manufacturing Company, Waynesboro, Pa. Universal coupling. No. 901,864; Oct. 20; Sp. p 3754; Dr. p. 763; Gaz. vol. 136; p. 1721.
Anderson, H., Haddonfield, N. J. Electric fire-alarm. No. 900,641; Oct. 6; Sp. p. 1223; Dr. p. 250; Gaz. vol. 136; p. 1261.
Anderson, H. C. (See Falk and Anderson.)
Anderson, J. N., assignor to C. W. Hoffman, New York, N. Y. Safety device for elevators. No. 900,074; Oct. 6; Sp. p. 1; Dr. p. 1; Gaz. vol. 136; p. 1075.
Anderson, N. L., Winston Salem, N. C. Type-writer carriage-return mechanism. No. 900,642, Oct. 6; Sp. p. 1224; Dr. p. 251; Gaz. vol. 136; p. 1261.
Anderson, S. (See Jose and Anderson.)
Andrazyk, T. Q., Chicago, Ill. Cut-out box. No. 901,939; Oct. 27; Sp. p. 3911; Dr. p. 798; Gaz. vol. 136; p. 1777.
Andrews, A. H. (See Lipscomb and Andrews.)
Andrews, J. S., New York, N. Y. Freight-car. No. 901,413; Oct. 20; Sp. p. 2812; Dr. p. 574; Gaz. vol. 136; p. 1574.
Andrews, T., assignor to Thomas Andrews Manufacturing Company, Rockaway, N. J. Coupling. No. 900,974; Oct. 13; Sp. p. 1926; Dr. p. 392; Gaz. vol. 136; p. 1396.
Andrews, T., assignor to Thomas Andrews Manufacturing Company, Rockaway, N. J. Tube-cleaner. No. 901,940; Oct. 27; Sp. p. 3912; Dr. p. 798; Gaz. vol. 136; p. 1777.
Andrick, M. T., Terre Haute, Ind., Hose-bridge. No. 900,690; Oct. 13; Sp. p. 1335; Dr. p. 272; Gaz. vol. 136; p. 1305.
Anner, H., Phillipsburg, N. J., assignor to Standard Silk Company. Apparatus for dyeing. No. 902,271; Oct. 27; Sp. p. 4595; Dr. p. 933; Gaz. vol. 136; p. 1883.
Ansted, W. H., Dundee, Mich. Gate construction. No. 901,865; Oct. 20; Sp. p. 3755; Dr. p. 764; Gaz. vol. 136; p. 1722.
Anthony, D. S., Durango, Mexico. Grinding-mill. No. 901,770; Oct. 20; Sp. p. 3590; Dr. p. 726; Gaz. vol. 136; p. 1693.
Appleton, E. G., Burlington, Iowa. Attachment for ice-cream cans. No. 902,363; Oct. 27; Sp. p. 4807; Dr. p. 970; Gaz. vol. 136; p. 1915.
Arburn, D. F. (See King and Arburn.)
Argo, H. E. (See Stott, D. M., assignor.)
Armstrong, C. C., Marysville, Ohio. Frame for holding wire-cloth or other fabric. No. 900,691; Oct. 13; Sp. p. 1336; Dr. p. 272; Gaz. vol. 136; p. 1305.
Armstrong, F., Dunedin, New Zealand. Treating teeth for filling. No. 902,462; Oct. 27; Sp. p. 5016; Dr. p. 1014; Gaz. vol. 136; p. 1946.
Armstrong, F., Dunedin, New Zealand. Dental apparatus. No. 902,463; Oct. 27; Sp. p. 5018; Dr. p. 1015; Gaz. vol. 136; p. 1947.
Armstrong, L. (See Richards, C. H., assignor.)
Arnett, W. J., Margerum, Ala. Whip-lock. No. 902,129; Oct. 27; Sp. p. 4303; Dr. p. 872; Gaz. vol. 136; p. 1837.
Arnold, T. H. (See Parks, S. E., assignor.)
Arrouquier, F. E., Westbrook, assignor to Goodall Matting Company, Kennebunk, Me. Selvage-forming mechanism for short-weft looms. No. 901,941; Oct. 27; Sp. p. 3914; Dr. pp. 798–9; Gaz. vol. 136; p. 1777.
Arthur Colton Company. (See Scott, B. W., assignor.)
Asbell, S. J., Paterson, N. J. Beer-dispensing apparatus. No. 900,076; Oct. 6; Sp. p. 5; Dr. pp. 1–2; Gaz. vol. 136; p. 1075.
Ashenfelter, J. B., Olex, Oreg. Equalizer-hook for vehicle draft apparatus. No. 902,042; Oct. 27; Sp. p. 4140; Dr. p. 839; Gaz. vol. 136; p. 1810.
Ashley, F. M., New York, N. Y. Transmission of power. No. 900,342; Oct. 6; Sp. p. 566; Dr. p. 118; Gaz. vol. 136; p. 1161.
Astrom, J., Milwaukee, Wis. Condensing-apparatus pump. No. 901,580; Oct. 20; Sp. p. 3176; Dr. p. 648; Gaz. vol. 136; p. 1630.
Atkins, E. F. (See Atkins, F. K. and E. F.)
Atkins, F. K. and E. F., Denver, Colo.; said E. F. Atkins assignor to said F. K. Atkins. Machine for separating solids from liquids. No. 901,056; Oct. 13; Sp. p. 2077; Dr. pp. 423–4; Gaz. vol. 136; p. 1422.
Atkinson, H., Charleston, W. Va. Self-lubricating wheel. No. 901,866; Oct. 20; Sp. p. 3758; Dr. p. 764; Gaz. vol. 136; p. 1722.
Atlas Portland Cement Company. (See Kühl, H., assignor.)
Atwater, H., Chattanooga, Tenn. Sash-fastener. No. 901,771; Oct. 20; Sp. p. 3591; Dr. p. 726; Gaz. vol. 136; p. 1693.
Atwood, G. F., East Orange, N. J., assignor to Western Electric Company, Chicago, Ill. Telephone-transmitter. No. 902,043; Oct. 27; Sp. p. 4141; Dr. p. 839; Gaz. vol. 136; p. 1810.
Auchu, H., Emporium, Pa. Machine for mixing explosives. No. 902,464; Oct. 27; Sp. p. 5020; Dr. pp. 1015–16; Gaz. vol. 136; p. 1947.
Auchu, H., Emporium, Pa. Machine for mixing explosives. No. 902,465; Oct. 27; Sp. p. 5022; Dr. pp. 1016–17; Gaz. vol. 136; p. 1947.
Augenbraun, P. F., assignor to Yale & Towne Manufacturing Company, Stamford, Conn. Lock. No. 902,044; Oct. 27; Sp. p. 4143; Dr. p. 839; Gaz. vol. 136; p. 1811.
Auld, J. H., De Haven, Pa. Overshoe-fastener. No. 900,465; Oct. 6; Sp. p. 848; Dr. p. 172; Gaz. vol. 136; p. 1203.
Aumann, F. X., Jr., Manitowoc, Wis. Folding hat-rack and kneeling-stool for pews. No. 902,130; Oct. 27; Sp. p. 4305; Dr. p. 872; Gaz. vol. 136; p. 1838.
Austin, C. O., Kansas City, Kans. Automatic folding chair. No. 901,581; Oct. 20; Sp. p. 3178; Dr. p. 648; Gaz. vol. 136; p. 1630.
Austin, N. E., Danbury, Conn. Drainage and irrigation tile. No. 901,582; Oct. 20; Sp. p. 3180; Dr. p. 648; Gaz. vol. 136; p. 1631.
Autenrieth, W., Cincinnati, Ohio. Grapple. No. 901,057; Oct. 13; Sp. p. 2084; Dr. p. 424; Gaz. vol. 136; p. 1423.
Automatic Trolley Guard Company. (See Nolan, F. J., assignor.)
Autopiano Company. (See Danquard, T., assignor.)
Autopiano Company. (See Keeley, W. J., assignor.)
Avant, L. W., Atascosa, Tex. Extracting honey. No. 900,643; Oct. 6; Sp. p. 1230; Dr. pp. 251–2; Gaz. vol. 136; p. 1262.
Averill, C. S. (See Setzer, G. A., assignor.)
Avery, W. G., Painesville, Ohio. Cylindrical cask. No. 900,692; Oct. 13; Sp. p. 1337; Dr. p. 272; Gaz. vol. 136; p. 1305.
Ayars, C. H., assignor to Ayars Machine Company, Salem, N. J. Can-fluxing machine. No. 901,867; Oct. 20; Sp. p. 3761; Dr. p. 765; Gaz. vol. 136; p. 1723.
Ayars Machine Company. (See Ayars, C. H., assignor.)
Aylsworth, A. W., Fostoria, Ohio. Match-box. No. 900,819; Oct. 13; Sp. p. 1602; Dr. p. 324; Gaz. vol. 136; p. 1346.
Aze, E., assignor of one-half to H. Bjelland, Minneapolis, Minn. Differential mechanism. No. 902,045; Oct. 27; Sp. p. 4144; Dr. p. 839; Gaz. vol. 136; p. 1811.
B. Roth Tool Company. (See Brooks, C. E., assignor.)
B. F. Barnes Company. (See Milne, R., assignor.)
Baas, I., Newark, assignor to American Type Founders Company, Jersey City, N. J. Type-mold. No. 902,196; Oct. 27; Sp. p. 4442; Dr. p. 899; Gaz. vol. 136; p. 1859.
Baas, I., Newark, assignor to American Type Founders Company, Jersey City, N. J. Mold for casting type. No. 902,197; Oct. 27; Sp. p. 4443; Dr. p. 899; Gaz. vol. 136; p. 1859.
Babb, J. M., assignor of three-fourths to W. B. Oldham, L. W. Drake, and J. E. Johnston, Elida, N. Mex. Ter. Apparatus for raising liquids. No. 901,414; Oct. 20; Sp. p. 2814; Dr. p. 575; Gaz. vol. 136; p. 1575.
Babcock, C. D., assignor to United Wireless Telegraph Company, New York, N. Y. Wave-responsive device. No. 901,942; Oct. 27; Sp. p. 3919; Dr. p. 799; Gaz. vol. 136; p. 1777.
Babcock, G., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Multiparty-line telephone-exchange system. No. 901,669; Oct. 20; Sp. p. 3341; Dr. p. 686; Gaz. vol. 136; p. 1657.
Babcock, W. I., New York, N. Y. Anchor for vessels. No. 902,046; Oct. 27; Sp. p. 4145; Dr. p. 840; Gaz. vol. 136; p. 1811.
Bachmann, C. H., Guelph, Ontario, Canada. Super for beehives. No. 901,068; Oct. 13; Sp. p. 2085; Dr. p. 424; Gaz. vol. 136; p. 1433.
Badeau, C. C., Schenectady, N. Y., assignor to General Electric Company. Circuit-breaker. No. 900,693; Oct. 13; Sp. p. 1338; Dr. p. 273; Gaz. vol. 136; p. 1305.
Baeyer, H. von, Munich, Germany. Dispensing vessel. No. 900,644; Oct. 6; Sp. p. 1233; Dr. p. 252; Gaz. vol. 136; p. 1262.
Baggaley, R., Pittsburg, Pa. Smelting ores. No. 900,466; Oct. 6; Sp. p. 849; Dr. pp. 172–3; Gaz. vol. 136; p. 1203.

Baggaley, R., Pittsburg, Pa. Recovering values from flue-dust and fines. No. 900,467; Oct. 6; Sp. p. 851; Dr. p. 173; Gaz. vol. 136; p. 1204.
Baggaley, R., Pittsburg, Pa., C. M. Allen, Lo Lo, Mont., and E. W. Lindquist, Chicago, Ill. Liquation-furnace. No. 902,047; Oct. 27; Sp. p. 4146; Dr. pp. 840–1; Gaz. vol. 136; p. 1812.
Bailey, E. R., Clarinda, Iowa. Journal-bearing. No. 901,140; Oct. 13; Sp. p. 2231; Dr. p. 454; Gaz. vol. 136; p. 1448.
Bailey, H. T., North Scituate, Mass. Crayon-holder. No. 900,143; Oct. 6; Sp. p. 149; Dr. p. 31; Gaz. vol. 136; p. 1097.
Bailey, S. E., Colfax, Wash. Potato peeling and cleaning machine. No. 902,466; Oct. 27; Sp. p. 5025; Dr. p. 1017; Gaz. vol. 136; p. 1948.
Baird, A. M., Topeka, Kans. Metallic railway-tie. No. 902,364; Oct. 27; Sp. p. 4808; Dr. p. 971; Gaz. vol. 136; p. 1915.
Baird, A. W., Marne, Iowa. Bundle-tie. No. 900,645; Oct. 6; Sp. p. 1234; Dr. p. 252; Gaz. vol. 136; p. 1262.
Baker, M. J., Buffalo, N. Y. Apparatus for washing clothes. No. 901,313; Oct. 20; Sp. p. 2575; Dr. p. 530; Gaz. vol. 136; p. 1539.
Baker, W., Aberdeen, S. D. Steam-valve. No. 901,141; Oct. 13; Sp. p. 2232; Dr. p. 454; Gaz. vol. 136; p. 1448.
Baker, W., Aberdeen, S. D. Soft-plug valve. No. 901,142; Oct. 13; Sp. p. 2234; Dr. p. 454; Gaz. vol. 136; p. 1449.
Baker, W., Aberdeen, S. D. Soft-plug valve. No. 901,142; Oct. 13; Sp. p. 2234; Dr. p. 454; Gaz. vol. 136; p. 1449.
Ball, A. A., Jr., Lynn, Mass., assignor, by mesne assignments, to General Electric Company. Hydrocarbon-burner. No. 901,415; Oct. 20; Sp. p. 2818; Dr. pp. 575–6; Gaz. vol. 136; p. 1575.
Ball, C., assignor to Kelly Axe Mfg. Co., Alexandria, Ind. Scythe-grinder. No. 901,059; Oct. 13; Sp. p. 2087; Dr. p. 424; Gaz. vol. 136; p. 1424.
Ball, C. A., Marion, Ind. Computing ballot-box. No. 902,365; Oct. 27; Sp. p. 4809; Dr. pp. 971–2; Gaz. vol. 136; p. 1915.
Ball, C. F., Richmond Hill, assignor to Ball & Jewell, Brooklyn, N. Y. Rotary cutter. No. 900,254; Oct. 6; Sp. p. 372; Dr. p. 77; Gaz. vol. 136; p. 1133.
Ball, C. F., Richmond Hill, assignor to Ball & Jewell, Brooklyn, N. Y. Rotary cutter. No. 900,255; Oct. 6; Sp. p. 373; Dr. p. 77; Gaz. vol. 136; p. 1133.
Ball, H. P., New York, N. Y., assignor of one-half to S. Insull, Chicago, Ill. Music-roll and apparatus to be used in connection therewith. No. 901,275; Oct. 13; Sp. p. 2486; Dr. p. 509; Gaz. vol. 136; p. 1491.
Ball & Jewell. (See Ball, C. F., assignor.)
Balloco, A., assignor to Societe Anonyme "Itala" Fabrica di Automobili, Turin, Italy. Steering means for automobiles. No. 900,975; Oct. 13; Sp. p. 1927; Dr. p. 392; Gaz. vol. 136; p. 1396.
Balloco, A., assignor to Societe Anonyme "Itala" Fabrica di Automobili, Turin, Italy. Brake mechanism. No. 901,670; Oct. 20; Sp. p. 3349; Dr. p. 686; Gaz. vol. 136; p. 1658.
Bals, C. A. (See Corwin and Bals.)
Bancroft, J. H., New York, N. Y. Hot-egg opener and holder. No. 900,906; Oct. 13; Sp. p. 1788; Dr. p. 361; Gaz. vol. 136; p. 1374.
Bang, S. H., Copenhagen, Denmark. Device for automatic firing of self-loading arms. No. 901,143; Oct. 13; Sp. p. 2236; Dr. pp. 454–5; Gaz. vol. 136; p. 1449.
Banger, J. E. A. (See Cromer, T. S., assignor.)
Barber, E. A., Quincy, assignor to Standard Rivet Company, Boston, Mass. Spot-setting machine. No. 900,694; Oct. 13; Sp. p. 1339; Dr. pp. 273–4; Gaz. vol. 136; p. 1305.
Barber, J. C., Chicago, Ill. Antifriction center bearing for cars. No. 901,223; Oct. 13; Sp. p. 2372; Dr. p. 485; Gaz. vol. 136; p. 1474.
Barbian, F. S. (See Barnickle, F. E., assignor.)
Barbleux, A., Mecca, Ind. Safety-brake for elevators and mine-cages. No. 901,314; Oct. 20; Sp. p. 2576; Dr. p. 530; Gaz. vol. 136; p. 1539.
Barco Brass and Joint Company. (See Hawley, C. G., assignor.)
Barco Brass and Joint Company. (See Silk, E. E., assignor.)
Bariow, A. E., assignor to Wright Wire Company, Worcester, Mass. Wire-netting machine. No. 902,198; Oct. 27; Sp. p. 4446; Dr. pp. 899–900; Gaz. vol. 136; p. 1859.
Barnes, D., and C. W. Hunt, Ossining, N. Y.; said Hunt assignor to said Barnes. Combination-tool. No. 900,144; Oct. 6; Sp. p. 150; Dr. p. 31; Gaz. vol. 136; p. 1097.
Barnes, E. A., Fort Wayne, Ind., assignor to General Electric Company. Oil-furnace. No. 900,695; Oct. 13; Sp. p. 1343; Dr. p. 274; Gaz. vol. 136; p. 1306.
Barnes, H. C., *et al.* (See Marsellis, F., assignor.)
Barnes, W. H., Homewood, Miss. Surgical instrument. No. 900,343; Oct. 6; Sp. p. 571; Dr. p. 118; Gaz. vol. 136; p. 1162.
Barnett, O. R. (See Bryan, S. R., assignor.) (Reissue.)
Barnett, W. O., Americus, Ga. Back-band and hook attachment therefor. No. 901,060; Oct. 13; Sp. p. 2089; Dr. p. 425; Gaz. vol. 136; p. 1424.
Barney, E. E., Syracuse, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 902,519; Oct. 27; Sp. p. 5153; Dr. p. 1044; Gaz. vol. 136; p. 1968.
Barnickle, F. E., assignor to F. S. Barbian, Rochester, N. H. Reclining attachment for chairs. No. 900,077; Oct. 6; Sp. p. 9; Dr. p. 2; Gaz. vol. 136; p. 1076.
Barrett, E. E., La Grange, Ill. Automatic hoisting device. No. 901,943; Oct. 27; Sp. p. 3922; Dr. pp. 799–800; Gaz. vol. 136; p. 1778.
Barrett, G. J., assignor to Smith Premier Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 902,131; Oct. 27; Sp. p. 4307; Dr. p. 873; Gaz. vol. 136; p. 1838.
Barrett, L. M. (See Burgess, J. C., assignor.)
Barringer, L. E., Schenectady, N. Y., assignor to General Electric Company. Molded resistance. No. 902,048; Oct. 27; Sp. p. 4151; Gaz. vol. 136; p. 1812.
Barry, J. M. (See Gill and Barry.)
Barry, J. M., *et al.* (See Gill and Barry, assignors.)
Bartels, A., assignor of one-half to R. Hug, Los Angeles, Cal. Magnetic operating means for camera-shutters. No. 900,344; Oct. 6; Sp. p. 572; Dr. p. 118; Gaz. vol. 136; p. 1162.
Bash, J. S., Champaign, Ill. Account-cabinet. No. 900,646; Oct. 6; Sp. p. 1235; Dr. p. 253; Gaz. vol. 136; p. 1262.
Bass, J., McKees Rocks, Pa. Sheave-block. No. 901,144; Oct. 13; Sp. p. 2238; Dr. p. 455; Gaz. vol. 136; p. 1450.
Batallie, J. J., East Orange, N. J. Pump-primer. No. 900,468; Oct. 6; Sp. p. 852; Dr. p. 173; Gaz. vol. 136; p. 1204.
Batchelder, A. F., Schenectady, N. Y., assignor to General Electric Company. Car-truck. No. 901,944; Oct. 27; Sp. p. 3924; Dr. p. 800; Gaz. vol. 136; p. 1779.
Batchelder, J. H., Keene, N. H. Composition. No. 900,256; Oct. 6; Sp. p. 374; Gaz. vol. 136; p. 1133.
Bateman, F., assignor to Bateman Manufacturing Company, Grenloch, N. J. Potato-digging machine. No. 901,145; Oct. 13; Sp. p. 2240; Dr. p. 455; Gaz. vol. 136; p. 1450.
Bateman Manufacturing Company. (See Bateman, F., assignor.)
Bateman Manufacturing Company. (See Willis, L., assignor.)
Bateman, T. A., Springfield, Mo. Seed-cabinet. No. 901,868; Oct. 20; Sp. p. 3764; Dr. p. 765; Gaz. vol. 136; p. 1723.
Bates, E. V. (See Smith, M. F., assignor.)
Bauer, W. N., Cincinnati, Ohio. Shield for the post-holes in planing-machine tables. No. 900,976; Oct. 13; Sp. p. 1929; Dr. p. 393; Gaz. vol. 136; p. 1396.
Bauger, J. E. (See Cromer, T. S., assignor.)
Baum, J., Cincinnati, Ohio. Safe. No. 900,696; Oct. 13; Sp. p. 1344; Dr. p. 275; Gaz. vol. 136; p. 1306.
Baumgarten, J., New York, N. Y. Protector for telephone-transmitters. No. 901,869; Oct. 20; Sp. p. 3765; Dr. p. 765; Gaz. vol. 136; p. 1723.
Baumgartner, E., deceased; F. Baumgartner, administrator, Fairview, assignor to Excelsior Garden Tool Company, Erie, Pa. Cultivator. No. 901,938; Oct. 20; Sp. p. 3903; Dr. p. 796; Gaz. vol. 136; p. 1747.
Baumgartner, F., administrator. (See Baumgartner, E.)
Baumgartner, J. P., Philadelphia, Pa. Hook and eye. No. 900,469; Oct. 6; Sp. p. 853; Dr. p. 174; Gaz. vol. 136; p. 1204.
Bayer, F. X., St. Louis, Mo. Boiler-cleaner. No. 900,078; Oct. 6; Sp. p. 10; Dr. p. 2; Gaz. vol. 136; p. 1076.
Beal, A. R. (See Hettel, A., assignor.)
Bear, G. (See Dettmann, F. H., assignor.)
Beard, G. M., Hanover, Pa. Mail-delivering device. No. 900,647; Oct. 6; Sp. p. 1236; Dr. p. 253; Gaz. vol. 136; p. 1263.
Becker, J., Canal Dover, Ohio. Washing-machine. No. 902,467; Oct. 27; Sp. p. 5026; Dr. p. 1017; Gaz. vol. 136; p. 1948.
Becker, M. B., Chicago, Ill. Amusement riding device. No. 900,820; Oct. 13; Sp. p. 1604; Dr. p. 325; Gaz. vol. 136; p. 1347.
Beckwith, W. C., Fostoria, Ohio. Spear for oil-wells. No. 902,468; Oct. 27; Sp. p. 5028; Dr. p. 1018; Gaz. vol. 136; p. 1949.
Beckwith, W. C., Fostoria, Ohio. Pumping apparatus for oil-wells. No. 902,469; Oct. 27; Sp. p. 5032; Dr. p. 1018; Gaz. vol. 136; p. 1949.
Bedient, C. E., Chicago, Ill. Metallic fabric. No. 900,697; Oct. 13; Sp. p. 1346; Dr. p. 275; Gaz. vol. 136; p. 1307.
Beebe, N. H. (See Brockett and Beebe.)
Beecher, W. N., Chicago, Ill. Wind-shield for vehicles. No. 902,199; Oct. 27; Sp. p. 4449; Dr. p. 900; Gaz. vol. 136; p. 1860.
Beeson, W. W., Redwood City, Cal. Telescope mining-pipe. No. 900,470; Oct. 6; Sp. p. 854; Dr. p. 174; Gaz. vol. 136; p. 1204.
Behrend, B. A., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Dynamo-electric machine. No. 900,977; Oct. 13; Sp. p. 1930; Dr. p. 393; Gaz. vol. 136; p. 1396.
Belcher, G. L., Oakland, Cal. Paste-receptacle. No. 901,061; Oct. 13; Sp. p. 2090; Dr. p. 425; Gaz. vol. 136; p. 1424.
Bell, J. A., Bagleys Mills, Va. Device for steaming tobacco. No. 901,224; Oct. 13; Sp. p. 2373; Dr. p. 485; Gaz. vol. 136; p. 1474.
Bell, R. W., *et al.* (See Gill and Barry, assignors.)
Bell, T. A., and E. J. Uhle, New York, N. Y. Safety-razor. No. 901,062; Oct. 13; Sp. p. 2091; Dr. p. 425; Gaz. vol. 136; p. 1424.
Belleville Baler Company. (See Wehrenberg, C. E., assignor.) (Reissue.)

Bellias & Morcom. (See Jude and Morcom, assignors.)
Belloni, D., Edri, Pa. Rail-bender. No. 902,470; Oct. 27; Sp. p. 5034; Dr. p. 1019; Gaz. vol. 136; p. 1949.
Belz, H. E., Chicago, Ill. Steaming apparatus. No. 902,366; Oct. 27; Sp. p. 4813; Dr. p. 972; Gaz. vol. 136; p. 1916.
Benas, M. B. (See Mayers and Benas.)
Bender, O., Neu-Babelsberg, Germany. Making nitric acid. No. 900,471; Oct. 6; Sp. p. 856; Dr. p. 174; Gaz. vol. 136; p. 1205.
Bender, O., Neu-Babelsberg, near Berlin, Germany. Making sulfuric acid. No. 900,688; Oct. 6; Sp. p. 1327; Dr. p. 271; Gaz. vol. 136; p. 1276.
Benedict, H. J. (See Chelson and Benedict.)
Benjamin Eastwood Company. (See Eastwood and Schibler, assignors.)
Benjamin, G. H., New York, N. Y. Bessemerizing copper matte. No. 900,345; Oct. 6; Sp. p. 573; Dr. p. 119; Gaz. vol. 136; p. 1162.
Benjamin, G. H., New York, N. Y. Smelting copper ores. No. 900,346; Oct. 6; Sp. p. 575; Dr. p. 119; Gaz. vol. 136; p. 1163.
Bennetch, H. C., Cocalico, Pa. Railway-tie. No. 900,648; Oct. 6; Sp. p. 1239; Dr. p. 254; Gaz. vol. 136; p. 1263.
Bennett, A., Raquette Lake, N. Y. Water-scoop for locomotive-tenders. No. 901,315; Oct. 20; Sp. p. 2577; Dr. p. 530; Gaz. vol. 136; p. 1539.
Bennett, F. A. and S. L., Moline, Ill. Bread, cake, and pie lifter. No. 901,671; Oct. 20; Sp. p. 3350; Dr. p. 687; Gaz. vol. 136; p. 1658.
Bennett, J. C., Brookton, N. Y. Folding chair. No. 902,471; Oct. 27; Sp. p. 5035; Dr. p. 1019; Gaz. vol. 136; p. 1950.
Bennett, J. H., Worcester, Mass. Ferrule for handles. No. 901,063; Oct. 13; Sp. p. 2093; Dr. p. 425; Gaz. vol. 136; p. 1425.
Bennett, S. L. (See Bennett, F. A. and S. L.)
Benson, A., assignor to L. E. Curtis, Chicago, Ill. Cutting sheet metal. No. 901,772; Oct. 20; Sp. p. 3593; Dr. p. 727; Gaz. vol. 136; p. 1693.
Benson, A., assignor to L. E. Curtis, Chicago, Ill. Machine for cutting sheet metal. No. 901,773; Oct 20; Sp. p. 3595; Dr. p. 727; Gaz. vol. 136; p. 1694.
Benteen, W. H. (See Pinkerton, H. J., assignor.)
Bentley, W. F., Baltimore, Md., and G. W. Chessher, assignors of one-third to E. B. Miller, Keyser, W. Va. Lock for sliding doors. No. 902,520; Oct. 27; Sp. p. 5157; Dr. p. 1044; Gaz. vol. 136; p. 1968.
Benton, A., and C. D. Jordan, Monticello, Ga. Combined cultivator, harrow, and rake. No. 902,367; Oct. 27; Sp. p. 4814; Dr. p. 972; Gaz. vol. 136; p. 1916.
Benton, G. H., Metuchen, N. J. Gate-valve. No. 901,146; Oct. 13; Sp. p. 2242; Dr. p. 456; Gaz. vol. 136; p. 1451.
Berg, C. (See Doty, A. J., assignor.)
Berger, J. (See Hayes and Berger, assignors.)
Berger, W. A., Boston, Mass. Mine-transit. No. 902,272; Oct. 27; Sp. p. 4598; Dr. p. 934; Gaz. vol. 136; p. 1883.
Bergeron, J. P., assignor of one-half to J. W. McGaffey, Chicago, Ill. Receptacle for holding cigars. No. 902,521; Oct. 27; Sp. p. 5159; Dr. p. 1045; Gaz. vol. 136; p. 1968.
Bergquist, J. A., Mason, Wis. Railway-tie. No. 901,316; Oct. 20; Sp. p. 2579; Dr. p. 531; Gaz. vol. 136; p. 1540.
Bern, E. A. (See Harold, J. J., assignor.)
Bernhard, R. (See Lowry and Bernhard.)
Bernstrom, E. (See Edlund, C. A., assignor.)
Berry, D. D., Springfield, Mo. Stove or range. No. 900,821; Oct. 13; Sp. p. 1606; Dr. p. 325; Gaz. vol. 136; p. 1347.
Berry, R. E., Ashgrove, Va. Guiding attachment for cultivators. No. 900,698; Oct. 13; Sp. p. 1347; Dr. p. 275; Gaz. vol. 136; p. 1307.
Berry, W. G., assignor to Colonial Company, Mechanic Falls, Me. Perforating-machine. No. 900,257; Oct. 6; Sp. p. 375; Dr. p. 78; Gaz. vol. 136; p. 1134.
Berry, W. P., Washington, Pa. Laundry-cabinet. No. 900,347; Oct. 6; Sp. p. 577; Dr. pp. 119–20; Gaz. vol. 136; p. 1163.
Berry-Wood Piano Player Co. (See Wood, F. W., assignor.)
Bertels, C. H., Brussels, Belgium, assignor to Standard Sugar Process Company, Limited, London, England. Purification of sugar-juices. No. 901,147; Oct. 13; Sp. p. 2243; Gaz. vol. 136; p. 1451.
Berthet, G., and V. Berthonnet, assignors to Ste. Ame. de Blanchiment, Teintures, Impressions et Apprêts de St. Julien, St. Julien, near Troyes, France. Fabric-printing machine. No. 900,978; Oct. 13; Sp. p. 1932; Dr. pp. 393–4; Gaz. vol. 136; p. 1397.
Berthonnet, V. (See Berthet and Berthonnet.)
Best, M. E., Lewisburg, Pa. Swing. No. 900,649; Oct. 6; Sp. p. 1240; Dr. p. 254; Gaz. vol. 136; p. 1263.
Best, T. C., Chicago, Ill. Boiler-hanger. No. 901,416; Oct. 20; Sp. p. 2823; Dr. p. 576; Gaz. vol. 136; p. 1576.
Bethlehem Steel Company. (See Meigs and Jakobsson, assignors.)
Bethlehem Steel Company. (See Meigs and Stout, assignors.)
Betts, J. C., Philadelphia, Pa. Dental plugger. No. 901,276; Oct. 13; Sp. p. 2489; Dr. p. 509; Gaz. vol. 136; p. 1491.
Beum, S. D., Cleveland, Ohio. Soil-pulverizer. No. 900,822; Oct. 13; Sp. p. 1607; Dr. p. 326; Gaz. vol. 136; p. 1347.
Bevan, A., Providence, R. I. Circuit-controller. No. 900,699; Oct. 13; Sp. p. 1349; Dr. p. 276; Gaz. vol. 136; p. 1307.
Bevis, R. R. (See Gibson, J. H., assignor.)
Bigney and Company, S. O. (See Wallenthin, W., assignor.)
Bijur, J., New York, N. Y., assignor to General Storage Battery Company. Treating negative-pole plates. (Reissue.) No. 12,871; Oct. 27; Sp. p. 5224; Dr. p. 1055; Gaz. vol. 136; p. 1976.
Bijur, J., New York, N. Y., assignor to General Storage Battery Company. Negative-pole piste. (Reissue.) No. 12,872; Oct. 27; Sp. p. 5227; Dr. p. 1055; Gaz. vol. 136; p. 1976.
Biller, J. W., Summit Point, W. Va. Railway-tie. No. 901,870; Oct. 20; Sp. p. 3766; Dr. p. 766; Gaz. vol. 136; p. 1724.
Billings, A., Cudahy, Wis. Window-pane fastener. No. 901,148; Oct. 13; Sp. p. 2245; Dr. p. 456; Gaz. vol. 136; p. 1451.
Billingsley, P. F., *et al.* (See Wiens, J. J., assignor.)
Billow, N. K., Columbus, Ohio. Bed-spring. No. 901,516; Oct. 20; Sp. p. 3052; Dr. p. 623; Gaz. vol. 136; p. 1610.
Binnington, T. H. (See Porter and Binnington.)
Bird & Son, F. W. (See Wyman, G. R., assignor.)
Birdsall, C. A., assignor of one-half to R. H. Tatlow, Holden, Mo. Photographic vignetter. No. 900,650; Oct. 6; Sp. p. 1241; Dr. p. 254; Gaz. vol. 136; p. 1263.
Birsfield, J. A., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Multiple-switchboard jack. No. 901,672; Oct. 20; Sp. p. 3352; Dr. p. 687; Gaz. vol. 136; p. 1659.
Birsfield, J. A., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Spreading device. No. 901,673; Oct. 20; Sp. p. 3554; Dr. p. 687; Gaz. vol. 136; p. 1659.
Bittorf, L. A., Sterling, Ill. Sash-fastener. No. 900,079; Oct. 6; Sp. p. 11; Dr. p. 2; Gaz. vol. 136; p. 1076.
Bjelland & Co., C., *et al.* (See Rasmussen and Olsen, assignors.)
Bjelland, H. (See Ase, E., assignor.)
Black, H., *et al.* (See Modlin, T. B., assignor.)
Blackledge, E. E., and J. Chaplin, Newton, Iowa. Clothes-line reel. No. 900,823; Oct. 13; Sp. p. 1608; Dr. p. 326; Gaz. vol. 136; p. 1347.
Blake, G. W., Bellingham, Wash. Package-carrier for bicycles. No. 900,080; Oct. 6; Sp. p. 13; Dr. p. 3; Gaz. vol. 136; p. 1077.
Blake & Knowles Steam Pump Works. (See Bourne, P. P., assignor.)
Blake, W. F., Harvey, assignor, by mesne assignments, to Paragon Mfg. Co., Chicago, Ill. Washing-machine. No. 900,258; Oct. 6; Sp. p. 377; Dr. p. 78; Gaz. vol. 136; p. 1134.
Blakeslee, G. S., Chicago, Ill. Ice-cutting machine. No. 902,200; Oct. 27; Sp. p. 4451; Dr. p. 900; Gaz. vol. 136; p. 1860.
Blanchard, G. N., assignor of one-half to Electric Manufacturing Co., San Francisco, Cal. Electric heater and drier. No. 901,871; Oct. 20; Sp. p. 3768; Dr. p. 766; Gaz. vol. 136; p. 1724.
Blanchard, V. W., and V. W. Blanchard, guardian, New York, N. Y. Hydrocarbon-burner. No. 900,652; Oct. 6; Sp. p. 1244; Dr. p. 255; Gaz. vol. 136; p. 1264.
Blanchard, V. W., guardian. (See Blanchard, V. W.)
Blankenship, D., Raven, Va. Wrench. No. 900,651; Oct. 6; Sp. p. 1244; Dr. p. 255; Gaz. vol. 136; p. 1264.
Blau, F., and H. Remané, assignors to Deutsche Gasglühlicht Aktiengesellschaft, (Auergesellschaft,) Berlin, Germany. Electric glow-lamp, &c. No. 900,909; Oct. 13; Sp. p. 1790; Dr. p. 361; Gaz. vol. 136; p. 1374.
Blumhard, C. A., *et al.* (See Gravelle, J., assignor.)
Bluntach, A. J., assignor to C. O. Goss, Winona, Minn. Self-playing instrument. No. 900,824; Oct. 13; Sp. p. 1609; Dr. pp. 326–7; Gaz. vol. 136; p. 1348.
Bockelman, H. H., Sylvan Grove, Kans. Band-cutter and feeder. No. 901,674; Oct. 20; Sp. p. 3356; Dr. p. 688; Gaz. vol. 136; p. 1659.
Boettcher, H. P., assignor of one-third to F. C. Braun, Jersey City, N. J. Universal indicator. No. 900,472; Oct. 6; Sp. p. 857; Dr. pp. 174–5; Gaz. vol. 136; p. 1205.
Bohlen, R., Canton, Ohio. Safety device for elevators. No. 900,473; Oct. 6; Sp. p. 859; Dr. p. 175; Gaz. vol. 136; p. 1205.
Bohlig, M., assignor to Bohlig Manufacturing Company, St. Paul, Minn. Device for filling ice-cream cornets. No. 900,348; Oct. 6; Sp. p. 579; Dr. p. 120; Gaz. vol. 136; p. 1163.
Bohlig Manufacturing Company. (See Bohlig, M., assignor.)
Boles, E. M. and W. W., Yarmouth, Iowa. Machine for scouring eggs. No. 901,774; Oct. 20; Sp. p. 3597; Dr. p. 728; Gaz. vol. 136; p. 1694.
Boles, W. W. (See Boles, E. M. and W. W.)
Boldt, F. H., *et al.* (See Wiens, J. J., assignor.)
Bole, S. T., assignor to J. G. Brill Company, Philadelphia, Pa. Guard-rail for passenger-cars. No. 902,368; Oct. 27; Sp. p. 4816; Dr. p. 973; Gaz. vol. 136; p. 1916.

Bole, W. A., Pittsburg, Pa., assignor to The Westinghouse Machine Company. Turbine-rotor. No. 900,700; Oct. 13; Sp. p. 1352; Dr. p. 276; Gaz. vol. 136; p. 1307.
Bond, I. M., North Tazewell, Va. Fire-cracker. No. 901,317; Oct. 20; Sp. p. 2581; Dr. p. 531; Gaz. vol. 136; p. 1540.
Bonesteele, H. F., Shannon, Mont. Wire stretcher and splicer. No. 901,775; Oct. 20; Sp. p. 3600; Dr. pp. 728–9; Gaz. vol. 136; p. 1694.
Bongartz, C., Mielershof, near Dülken, Germany. Hoeing-machine. No. 902,201; Oct. 27; Sp. p. 4454; Dr. p. 901; Gaz. vol. 136; p. 1861.
Böniger, M., assignor to Chemical Works, formerly Sandoz, Basel, Switzerland. Yellow azo dye and making same. No. 901,675; Oct. 20; Sp. p. 3359; Gaz. vol. 136; p. 1660.
Bonnell, H. D., Norfolk, Va. Sampler for granular material. No. 902,049; Oct. 27; Sp. p. 4152; Dr. p. 841; Gaz. vol. 136; p. 1812.
Bonom, A., New York, N. Y. Safety apparatus for railways. No. 900,474; Oct. 6; Sp. p. 860; Dr. p. 176; Gaz. vol. 136; p. 1206.
Book, A. F., Chalfont, Pa. Packing. No. 900,653; Oct. 6; Sp. p. 1246; Dr. p. 255; Gaz. vol. 136; p. 1264.
Boone, B. S., Paxton, Ill. Ventilator attachment. No. 900,349; Oct. 6; Sp. p. 580; Dr. p. 120; Gaz. vol. 136; p. 1164.
Boss, M. P., San Francisco, Cal. Stamp-mill tappet. No. 901,417; Oct. 20; Sp. p. 2825; Dr. p. 577; Gaz. vol. 136; p. 1576.
Bosse, C. (See Scoville, E. M., assignor.)
Bottrill, F., Tintinara, South Australia, Australia. Traction-wheel. No. 902,369; Oct. 27; Sp. p. 4817; Dr. p. 973; Gaz. vol. 136; p. 1916.
Bourn, A. O., Providence, R. I. Rubber sandal. No. 901,064; Oct. 13; Sp. p. 2094; Dr. p. 426; Gaz. vol. 136; p. 1425.
Bourne, J. C., and G. H. Rees, London, England. Valve for internal-combustion engines. No. 901,277; Oct. 13; Sp. p. 2490; Dr. p. 509; Gaz. vol. 136; p. 1491.
Bourne, P. P., Somerville, Mass., assignor to Blake & Knowles Steam Pump Works. Air-pump. No. 901,945; Oct. 27; Sp. p. 3926; Dr. p. 801; Gaz. vol. 136; p. 1779.
Bousman, W. F., Grand Rapids, Mich. Oil-filter. No. 901,418; Oct. 20; Sp. p. 2825; Dr. p. 577; Gaz. vol. 136; p. 1576.
Bousquet, J. A. (See Hochuli and Bousquet.)
Bowden, J. C. (See Staines, F., assignor.)
Bowman, C. T. (See Davis and Bowman.)
Bowman, G. A., and C. L. Harmeyer, assignors of one-third to F. B. Ladd, Fort Wayne, Ind. Brake-head. No. 901,572; Oct. 20; Sp. p. 3769; Dr. p. 766; Gaz. vol. 136; p. 1724.
Bowman, R. H., Canon City, Colo. Combined box-press and box-making apparatus. No. 901,676; Oct. 20; Sp. p. 3360; Dr. pp. 688–9; Gaz. vol. 136; p. 1660.
Bowman, W. H., Elmhurst, Ill. Automatically-closing valve for flushing water-closets, &c. No. 901,583; Oct. 20; Sp. p. 3181; Dr. p. 649; Gaz. vol. 136; p. 1631.
Bowman, W. H., Elmhurst, Ill. Flushing-valve. No. 901,584; Oct. 20; Sp. p. 3184; Dr. p. 649; Gaz. vol. 136; p. 1631.
Bowsher, S. (See Dieter, Bowsher, and Davis.)
Boyce, J. A., Springfield, Ill. Apparatus for printing and folding newspapers. No. 900,259; Oct. 6; Sp. p. 380; Dr. pp. 79–81; Gaz. vol. 136; p. 1134.
Boyce, J. A., Springfield, Ill. Apparatus for printing and folding papers. No. 900,654; Oct. 6; Sp. p. 1248; Dr. pp. 255–6; Gaz. vol. 136; p. 1265.
Boyd, A. H., Leadville, Colo. Automatic quick-closing valve. No. 900,260; Oct. 6; Sp. p. 403; Dr. pp. 81–2; Gaz. vol. 136; p. 1135.
Boyd, F. R. C. (See Rice and Boyd.)
Boyd, M., Irvine, Scotland. Marine signaling device. No. 901,677; Oct. 20; Sp. p. 3363; Dr. pp. 689–90; Gaz. vol. 136; p. 1661.
Boylan, S. H., Denver, Colo. Head-motion for concentrating-tables. No. 901,585; Oct. 20; Sp. p. 3186; Dr. pp. 649–50; Gaz. vol. 136; p. 1632.
Bradburn, F. C., assignor to Daylight Photo Specialty Company, Rochester, N. Y. Photographic apparatus. No. 901,308; Oct. 13; Sp. p. 2554; Dr. p. 526; Gaz. vol. 136; p. 1501.
Bradburn, F. C., J. H. Tyler, and J. B. Low, assignors to Daylight Photo Specialty Company, Rochester, N. Y. Photographic apparatus. No. 901,309; Oct. 13; Sp. p. 2556; Dr. p. 526; Gaz. vol. 136; p. 1502.
Bradley & Hubbard Mfg. Co. (See Crooke, R. F., assignor.)
Bradley, J. J., assignor, by mesne assignments, to L. von Gessner, Brooklyn, N. Y. Protected iron. No. 900,655; Oct. 6; Sp. p. 1254; Dr. p. 256; Gaz. vol. 136; p. 1265.
Bradley, J. J., assignor, by mesne assignments, to L. von Gessner, Brooklyn, N. Y. Protecting iron. No. 900,656; Oct. 6; Sp. p. 1256; Dr. pp. 256–7; Gaz. vol. 136; p. 1265.
Bradshaw, R. Y., Chicago, Ill. Machine for closing and sealing the ends of paper boxes. No. 902,273; Oct. 27; Sp. p. 4599; Dr. pp. 934–6; Gaz. vol. 136; p. 1883.
Bradstock, D. G., Frank, Pa. Adjustable bracket. No. 900,475; Oct. 6; Sp. p. 864; Dr. p. 176; Gaz. vol. 136; p. 1206.
Brady, J. H., Kansas City, Mo. Car-signal. No. 901,586; Oct. 20; Sp. p. 3188; Dr. p. 650; Gaz. vol. 136; p. 1633.
Brady, J. H., Kansas City, Mo. Automatic closet-cistern. No. 901,587; Oct. 20; Sp. p. 3190; Dr. p. 650; Gaz. vol. 136; p. 1633.
Bragg, G. J., Philadelphia, Pa. Centrifugal liquid-separator. No. 901,149; Oct. 13; Sp. p. 2246; Dr. p. 456; Gaz. vol. 136; p. 1452.
Brassington, J. L., Mount Carmel, Pa. Placket-closer. No. 900,662; Oct. 6; Sp. p. 1268; Dr. p. 259; Gaz. vol. 136; p. 1267.
Braun, F. C. (See Boettcher, H. P., assignor.)
Brayton, E. I. and J. T., assignors to Geneva Optical Company, Chicago, Ill. Measuring instrument. No. 901,678; Oct. 20; Sp. p. 3366; Dr. p. 690; Gaz. vol. 136; p. 1661.
Brayton, J. T. (See Brayton, E. I. and J. T.)
Breiding, A. W., Sterling, Ill. Water-motor. No. 902,202; Oct. 27; Sp. p. 4455; Dr. p. 901; Gaz. vol. 136; p. 1861.
Brewer, H. J., New York, N. Y. Cover for electric batteries. No. 900,476; Oct. 6; Sp. p. 865; Dr. pp. 176–7; Gaz. vol. 136; p. 1206.
Brewer, J., Hazleton, Pa. Machine for forming artificial-stone walls. No. 900,261; Oct. 6; Sp. p. 406; Dr. p. 82; Gaz. vol. 136; p. 1135.
Brewer, J. A., Jackson, Mich. Shoe-polishing machine. No. 900,825; Oct. 13; Sp. p. 1615; Dr. p. 328; Gaz. vol. 136; p. 1348.
Brewington, H. S., Baltimore, Md. Ash-sifter. No. 900,826; Oct. 13; Sp. p. 1617; Dr. p. 328; Gaz. vol. 136; p. 1348.
Bridgeport Chain Company. (See Sherwood, J. M., assignor.)
Briggs, G. E. (See Mayo and Houlehan, assignors.)
Briggs, G. R. (See Raymond, D. E., assignor.)
Briggs, O. R., Colby, Wis. Attachment for ice-cream freezers. No. 900,657; Oct. 6; Sp. p. 1258; Dr. p. 257; Gaz. vol. 136; p. 1266.
Bright, C. E., Columbus, Ohio. Food compound. No. 900,701; Oct. 13; Sp. p. 1354; Gaz. vol. 136; p. 1308.
Brinley-Hardy Company. (See Holsclaw, W. H., assignor.)
Brintnall, T. M., Oakland, and N. R. Doolittle, Berkeley, Cal. Fireproof attachment for vaults. No. 902,050; Oct. 27; Sp. p. 4153; Dr p. 841; Gaz. vol. 136; p. 1812.
Brintnall, T. M., Oakland, and N. R. Doolittle, Berkeley, Cal. Safe. No. 902,051; Oct. 27; Sp. p. 4154; Dr. p. 842; Gaz. vol. 136; p. 1812.
Briscoe Manufacturing Company. (See Groehn, W. C., assignor.)
Briscoe Manufacturing Company. (See Williams, C. A., assignor.)
Bristol, J. S., Gillespie, Ill. Remote-control electric switch. No. 900,658; Oct. 6; Sp. p. 1259; Dr. p. 257; Gaz. vol. 136; p. 1266.
Broad, H. L., and F. H. Orcutt, Alpena, Mich. Chair attachment. No. 901,065; Oct. 13; Sp. p. 2095; Dr. p. 426; Gaz. vol. 136; p. 1425.
Brockett, W. F., Anthony, and N. H. Beebe, Wichita, Kans. Book-mark. No. 901,225; Oct. 13; Sp. p. 2374; Dr. pp. 485–6; Gaz. vol. 136; p. 1474.
Broderick & Bascom Rope Company. (See Gemmer, W. S., assignor.)
Brookings, W. D. (See La Follette, C. F., assignor.)
Brooks, C. E., assignor to B. Roth Tool Company, St. Louis, Mo. Strip-feeding mechanism. No. 901,517; Oct. 20; Sp. p. 3053; Dr. pp. 623–4; Gaz. vol. 136; p. 1610.
Brooks, J. C., Paterson, N. J. Needle-loom. No. 902,203; Oct. 27; Sp. p. 4458; Dr. p. 901; Gaz. vol. 136; p. 1861.
Brooks, J. H., Pocahontas, Iowa. Vehicle-cover. No. 900,350; Oct. 6; Sp. p. 581; Dr. p. 121; Gaz. vol. 136; p. 1164.
Brooks, P. L., Washington county, Kans. Wire-stretcher. No. 901,946; Oct. 27; Sp. p. 3926; Dr. p. 801; Gaz. vol. 136; p. 1779.
Brooks, P. L., Washington county, Kans. Hog-gambrel. No. 901,947; Oct. 27; Sp. p. 3927; Dr. pp. 801–2; Gaz. vol. 136; p. 1779.
Brown, E. M., Ashtabula, Ohio. Trap-nest. No. 902,370; Oct. 27; Sp. p. 4819; Dr. p. 973; Gaz. vol. 136; p. 1917.
Brown, F. C., New Brighton, N. Y. Fountain-pen. No. 901,948; Oct. 27; Sp. p. 3928; Dr. p. 802; Gaz. vol. 136; p. 1780.
Brown, F. H. and F. H., Portland, Oreg. Unloading apparatus. No. 901,949; Oct. 27; Sp. p. 3931; Dr. p. 802; Gaz. vol. 136; p. 1780.
Brown, F. L., and I. W. Sprink, Scottdale, Pa. Grease-cup. No. 901,679; Oct. 20; Sp. p. 3372; Dr. p. 691; Gaz. vol. 136; p. 1662.
Brown, F. W. (See Brown, R. T., assignor.)
Brown, H. H., Stewart, Ohio. Measuring apparatus for indicating depths. No. 900,351; Oct. 6; Sp. p. 583; Dr. p. 121; Gaz. vol. 136; p. 1164.
Brown, H. W., Richardson, Miss. Mail-bag catching and delivering apparatus. No. 901,150; Oct. 13; Sp. p. 2247; Dr. pp. 456–7; Gaz. vol. 136; p. 1452.
Brown, L. K., Asotin, Wash. Steam-driven combined heading and threshing machine. No. 901,588; Oct 20; Sp. p. 3191; Dr. pp. 650–3; Gaz. vol. 136; p. 1633.
Brown, O. S., Milwaukee, Wis. Adjustable window-shade fixture. No. 900,477; Oct. 6; Sp. p. 867; Dr. p. 177; Gaz. vol. 136; p. 1207.
Brown, P., Troy, Idaho. Condenser. No. 900,827; Oct. 13; Sp. p. 1619; Dr. p. 328; Gaz. vol. 136; p. 1349.
Brown, R. T., assignor of one-half to F. W. Brown, Boston, Mass. Concrete construction. No. 902,204; Oct. 27; Sp. p. 4459; Dr. p. 902; Gaz. vol. 136; p. 1862.
Brown, W. F., Worcester, Mass. Drive-chain. No. 902,205; Oct. 27; Sp. p. 4461; Dr. p. 902; Gaz. vol. 136; p. 1862.
Brown, W. M., Crookston, Minn. Excavating-machine. No. 900,659; Oct. 6; Sp. p. 1261; Dr. pp. 257–8; Gaz. vol. 136; p. 1266.
Brown, W. M., Gibsonburg, Ohio. Hoisting-machine. No. 900,979; Oct. 13; Sp. p. 1937; Dr. p. 394; Gaz. vol. 136; p. 1397.

Brown, W. M., Johnstown, Pa., assignor to Lorain Steel Company. Universal switch-box. No. 901,776; Oct. 20; Sp. p. 3603; Dr. pp. 729–30; Gaz. vol. 136; p. 1695.
Brown, W. S., Knoxville, Tenn. Locomotive valve-gear. No. 901,066; Oct. 13; Sp. p. 2096; Dr. p. 426; Gaz. vol. 136; p. 1426.
Browne, M. C., Holyoke, Mass. Strip-moistening device. No. 900,352; Oct. 6; Sp. p. 585; Dr. p. 121; Gaz. vol. 136; p. 1164.
Brownell, F. A., assignor to Eastman Kodak Co., Rochester, N. Y. Mounting for photographic shutters. No. 900,081; Oct. 6; Sp. p. 15; Dr. p. 3; Gaz. vol. 136; p. 1077.
Brownell, G. L., Worcester, Mass. Flier for spinning and twisting machines. No. 901,226; Oct. 13; Sp. p. 2375; Dr. p. 486; Gaz. vol. 136; p. 1475.
Browning, L. C., Lawrence, Kans. Carrier. No. 901,318; Oct. 20; Sp. p. 2582; Dr. p. 531; Gaz. vol. 136; p. 1540.
Brubaker, H., York, assignor of two-thirds to H. D. Hershey, Columbia, Pa. Roller. No. 901,873; Oct. 20; Sp. p. 3771; Dr. p. 766; Gaz. vol. 136; p. 1725.
Bruce, S., Helvetia, Pa. Elevator. No. 902,371; Oct. 27; Sp. p. 4820; Dr. p. 973; Gaz. vol. 136; p. 1917.
Bruce, W. W., Baltimore, Md. Window-blind guide and stop. No. 900,660; Oct. 6; Sp. p. 1265; Dr. p. 258; Gaz. vol. 136; p. 1267.
Bruen, E. C., Brooklyn, N. Y. Device for producing the representation of a snow-storm. No. 901,319; Oct. 20; Sp. p. 2583; Dr. p. 532; Gaz. vol. 136; p. 1540.
Bruhn, A. and W., St. Bonifacius, Minn. Chicken-exercising feeder. No. 902,132; Oct. 27; Sp. p. 4313; Dr. p. 873; Gaz. vol. 136; p. 1838.
Bruhn, W. (See Bruhn, A. and W.)
Brunswick-Balke-Collender Company. (See Davenport, H. F., assignor.)
Brunswick-Balke-Collender Company. (See McIntire, J. N., assignor.)
Brush, A. P., Detroit, Mich. Planetary gearing. No. 901,518; Oct. 20; Sp. p. 3056; Dr. pp. 624–5; Gaz. vol. 136; p. 1610.
Bruzaud, C. N., Peekskill, N. Y. Head-covering for automobilists and chauffeurs. No. 901,320; Oct. 20; Sp. p. 2585; Dr. p. 532; Gaz. vol. 136; p. 1541.
Bruzaud, C. N., assignor of one-third to R. D. Kornhauser, Peekskill, N. Y. Brooch. No. 902,274; Oct. 27; Sp. p. 4608; Dr. p. 936; Gaz. vol. 136; p. 1884.
Bryan, S. R., Racine, Wis., assignor, by mesne assignments, to O. R. Barnett, Chicago, Ill. Railway-rail stay. (Reissue.) No. 12,862; Oct. 13; Sp. p. 2563; Dr. p. 527; Gaz. vol. 136; p. 1503.
Bryson, J. H., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo. Alternating-current motor. No. 900,478; Oct. 6; Sp. p. 868; Dr. p. 177; Gaz. vol. 136; p. 1207.
Bryson, W. S. (See Hobbs, C. L., assignor.)
Buchanan, T. E. H., Wheeling, W. Va. Alarm. No. 900,145; Oct. 6; Sp. p. 151; Dr. p. 32; Gaz. vol. 136; p. 1097.
Bucher & Gibbs Plow Company. (See Diesem, A. E., assignor.)
Buck, E. R. (See Louis, C. W., assignor.)
Buck, G. W., Omaha, Nebr. Cement-block machine. No. 900,910; Oct. 13; Sp. p. 1791; Dr. pp. 361–2; Gaz. vol. 136; p. 1375.
Buckhalter, F., Ashbourn, Pa. Milk-bottle closer. No. 901,777; Oct. 20; Sp. p. 3605; Dr. p. 730; Gaz. vol. 136; p. 1695.
Buckman, E. S., assignor to J. G. Brill Company, Philadelphia, Pa. Fare-box. No. 901,778; Oct. 20; Sp. p. 3606; Dr. pp. 730–1; Gaz. vol. 136; p. 1695.
Buda Foundry & Manufacturing Company. (See Place and Jenkins, assignors.)
Budd, E. G., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa. Arm-rest. No. 900,702; Oct. 13; Sp. p. 1355; Dr. p. 276; Gaz. vol. 136; p. 1308.
Budd, E. G., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa. Arm-rest. No. 900,703; Oct. 13; Sp. p. 1357; Dr. p. 277; Gaz. vol. 136; p. 1308.
Budd, E. G., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa. Arm-rest. No. 900,704; Oct. 13; Sp. p. 1358; Dr. p. 277; Gaz. vol. 136; p. 1309.
Buffalo Forge Company. (See Sulzer, G., assignor.)
Bullock Electric Manufacturing Company *et al.* (See Behrend, B. A., assignor.)
Bullock Electric Manufacturing Company *et al.* (See Elshoff, B., assignor.)
Bullock Electric Manufacturing Company *et al.* (See Elshoff, H. F., assignor.)
Bullock Electric Manufacturing Company *et al.* (See Field, A. B., assignor.)
Bullock Electric Manufacturing Company *et al.* (See McHugh, A. L., assignor.)
Bullock Electric Manufacturing Company *et al.* (See Pomeroy, W. D., assignor.)
Bullock, H. E., *et al.* (See Gray, T. J., assignor.)
Bullock, J. E., *et al.* (See Gray, T. J., assignor.)
Bullock, L. C., Jr., Milesburg, Pa. Chair or swing seat. No. 901,321; Oct. 20; Sp. p. 2586; Dr. p. 532; Gaz. vol. 136; p. 1541.
Bumm, W., Philadelphia, Pa. Salt-cellar. No. 900,911; Oct. 13; Sp. p. 1794; Dr. p. 363; Gaz. vol. 136; p. 1375.
Burch, F. W., Pueblo, Colo. Combination tent and sleeping-bag. No. 902,133; Oct. 27; Sp. p. 4315; Dr. p. 874; Gaz. vol. 136; p. 1839.
Burdett, P., Clifton, assignor to J. F. McAmmond and J. B. Gatenbee, Scottsville, N. Y. Pruning-saw. No. 900,661; Oct. 6; Sp. p. 1266; Dr. p. 259; Gaz. vol. 136; p. 1267.
Burger, J. A., Detroit, Mich. Friction-board for drop-forging hammers. No. 901,779; Oct. 20; Sp. p. 3609; Dr. p. 731; Gaz. vol. 136; p. 1695.
Burgess, C., assignor to G. Tibbils, Rochester, N. Y. Ironing-board attachment. No. 901,950; Oct. 27; Sp. p. 3935; Dr. p. 803; Gaz. vol. 136; p. 1780.
Burgess, J. C., assignor to L. M. Barrett, Indianapolis, Ind. Adjustable wrench. No. 900,828; Oct. 13; Sp. p. 1623; Dr. p. 328; Gaz. vol. 136; p. 1349.
Burgess, W. F., Atwood, W. Va. Plug for gas-wells. No. 901,874; Oct. 20; Sp. p. 3773; Dr. p. 767; Gaz. vol. 136; p. 1725.
Burhop, H. C. (See Neumeister and Burhop.)
Burhorn, E., Hoboken, N. J. By-pass. No. 900,479; Oct. 6; Sp. p. 869; Dr. pp. 177–8; Gaz. vol. 136; p. 1207.
Burke, G. P. and P. D., Roswell, S. D. Screening-machine. No. 901,519; Oct. 20; Sp. p. 3059; Dr. p. 625; Gaz. vol. 136; p. 1611.
Burke, P. D. (See Burke, G. P. and P. D.)
Burkholder, J. W., Moline, Ill. Egg-tester. No. 900,082; Oct. 6; Sp. p. 16; Dr. p. 3; Gaz. vol. 136; p. 1077.
Burris, G. P., Seattle, Wash. Roll-paper holder. No. 901,520; Oct. 20; Sp. p. 3061; Dr. p. 625; Gaz. vol. 136; p. 1611.
Burris, H., Hemer, Germany. Typographer's composing and founding machine. No. 902,134; Oct. 27; Sp. p. 4316; Dr. p. 874; Gaz. vol. 136; p. 1839.
Burton, C. S., Oak Park, Ill., assignor to E. Tyden, Hastings, Mich. Extension-table lock. No. 901,951; Oct. 27; Sp. p. 3937; Dr. p. 803; Gaz. vol. 136; p. 1780.
Burton, R. G., Bluefield, W. Va. Nut-lock. No. 901,875; Oct. 20; Sp. p. 3775; Dr. p. 767; Gaz. vol. 136; p. 1725.
Burton, W. K. (See Cameron, J. A., assignor.)
Burwell, E. L., Chelsea, Mass. Means for transporting vessels. No. 901,589; Oct. 20; Sp. p. 3196; Dr. pp. 653–4; Gaz. vol. 136; p. 1634.
Busch, A. A., assignor of two-thirds to O. S. Busch and M. Freund, St. Louis, Mo. Bottle-opener. No. 900,480; Oct. 6; Sp. p. 870; Dr. p. 178; Gaz. vol. 136; p. 1208.
Busch, C., New York, N. Y. Electrical accumulator. No. 901,322; Oct. 20; Sp. p. 2588; Dr. p. 532; Gaz. vol. 136; p. 1541.
Busch, O. S., *et al.* (See Busch, A. A., assignor.)
Bush, N. W., *et al.* (See Stapleford and Wagner, assignors.)
Bush, S. P., Columbus, Ohio. Brake-shoe. No. 902,206; Oct. 27; Sp. p. 4462; Dr. pp. 902–3; Gaz. vol. 136; p. 1862.
Butler, K. H. (See Jackson, J. H., assignor.)
Butlin, G. L., Kogarah, assignor to Butlin Gear Limited, Sydney, New South Wales, Australia. Power-transmission gearing. No. 901,590; Oct. 20; Sp. p. 3198; Dr. pp. 654–5; Gaz. vol. 136; p. 1634.
Butlin Gear Limited. (See Butlin, G. L., assignor.)
Button, T. E. (See Hewlett and Button.)
Byers, B. O., and C. F. Thiede, Columbus, Ohio. Automatic mine-door. No. 900,262; Oct. 6; Sp. p. 410; Dr. p. 83; Gaz. vol. 136; p. 1136.
Byron Jackson Iron Works. (See Jackson, F. H., assignor.)
C. A. Smith Lumber Co. (See Mereen and Gagnon, assignors.)
C. G. Sargent's Sons Corporation. (See Sargent, F. G., assignor.)
Cain, T. E., Lombard, Md. Combination burglar-alarm and window-sash. No. 900,146; Oct. 6; Sp. p. 153; Dr. p. 32; Gaz. vol. 136; p. 1098.
Callahan, E. J., and D. G. Fisher, Reading, Pa. Casket-protector. No. 900,980; Oct. 13; Sp. p. 1939; Dr. p. 395; Gaz. vol. 136; p. 1398.
Callane, W. E., Flora, Ind. Cross-arm support. No. 900,663; Oct. 6; Sp. p. 1269; Dr. p. 259; Gaz. vol. 136; p. 1268.
Caloris Manufacturing Company. (See Friedrich and Lyman, assignors.)
Cameron, J. A., assignor of one-half to W. K. Burton, Memphis, Tenn. Movable dike. No. 902,372; Oct. 27; Sp. p. 4821; Dr. p. 974; Gaz. vol. 136; p. 1917.
Cameron, J. F., Salt Lake City, Utah. Locomotive-mover. No. 900,912; Oct. 13; Sp. p. 1795; Dr. p. 363; Gaz. vol. 136; p. 1375.
Cameron, P., assignor to Valley Iron Works, Williamsport, Pa. Rocking grate. No. 901,876; Oct. 20; Sp. p. 3776; Dr. p. 767; Gaz. vol. 136; p. 1725.
Camet, B., Lyon, France. Case-shot for shotguns. No. 900,913; Oct. 13; Sp. p. 1796; Dr. p. 363; Gaz. vol. 136; p. 1376.
Campbell, C. C., Los Angeles, Cal. Pulley. No. 900,481; Oct. 6; Sp. p. 872; Dr. p. 178; Gaz. vol. 136; p. 1208.
Campbell, J., Pittsburg, Pa. Glass-making apparatus. No. 902,207; Oct. 27; Sp. p. 4464; Dr. p. 903; Gaz. vol. 136; p. 1862.

Campbell, J. A. (See Long and Campbell.)
Campbell, R., Liverpool, England. Furnace-grate and fire-bar. No. 902,135; Oct. 27; Sp. p. 4317; Dr. p. 874; Gaz. vol. 136; p. 1839.
Campbell, W. O., St. Louis, Mo. Smoking-pipe. No. 900,482; Oct. 6; Sp. p. 873; Dr. p. 178; Gaz. vol. 136; p. 1208.
Cantillo, R. M., Norristown, Pa. Mail-bag catcher and deliverer. No. 901,877; Oct. 20; Sp. p. 3777; Dr. p. 768; Gaz. vol. 136; p. 1726.
Carbonic Condensing Co. (See Reed, H. A., assignor.)
Cardell, C. O. L. (See Ostergren and Cardell.)
Carleton, F. B., Salem, Mass. Hydrocarbon-torch. No. 901,307; Oct. 13; Sp. p. 2552; Dr. p. 525; Gaz. vol. 136; p. 1501.
Carlson, C. A. (See Palmer and Carlson.)
Carlson, C. M. E. (See Carlson, E., assignor.)
Carlson, E., assignor of one-half to C. M. E. Carlson, Minneapolis, Minn. Sliding-door fastener. No. 901,419; Oct. 20; Sp. p. 2828; Dr. p. 577; Gaz. vol. 136; p. 1577.
Carney, E., High Falls, N. Y. Window-screen. No. 901,521; Oct. 20; Sp. p. 3062; Dr. p. 625; Gaz. vol. 136; p. 1611.
Carney, F. D., assignor to Pennsylvania Steel Company, Steelton, Pa. Manufacturing steel from chromiferous pig-iron. No. 902,052; Oct. 27; Sp. p. 4156; Gaz. vol. 136; p. 1813.
Carrera, J. M. R., *et al.* (See Jiminez, A. L., assignor.)
Carroll Barb-Wire Manufacturing and Fence Co. (See Kilmer, W. A., assignor.)
Carroll, J. B., Chicago, Ill. Scissors-sharpener. No. 901,522; Oct. 20; Sp. p. 3064; Dr. p. 626; Gaz. vol. 136; p. 1612.
Carroll, J. R. (See Foley, A. G., assignor.)
Carter, J. C., Pioneerville, Idaho. Dredge. No. 900,263; Oct. 6; Sp. p. 412; Dr. p. 834; Gaz. vol. 136; p. 1136.
Carter, T. E., Auckland, New Zealand. Window-sash lifting and locking appliance. No. 901,680; Oct. 20; Sp. p. 3374; Dr. p. 691; Gaz. vol. 136; p. 1662.
Casey, F. D., North Water Gap, Pa. Spark-plug attachment. No. 902,373; Oct. 27; Sp. p. 4822; Dr. p. 974; Gaz. vol. 136; p. 1917.
Casey, T. A., Pittsburg, Pa. Wrench. No. 901,151; Oct. 13; Sp. p. 2249; Dr. p. 457; Gaz. vol. 136; p. 1452.
Cass, T. M., Fort Worth, Tex. Mold for making burial-vaults. No. 901,523; Oct. 20; Sp. p. 3064; Dr. pp. 626–7; Gaz. vol. 136; p. 1612.
Cassman, J. F., Lake Cicott, Ind. Clevis for plows. No. 901,780; Oct. 20; Sp. p. 3610; Dr. p. 731; Gaz. vol. 136; p. 1696.
Casson, M., New York, N. Y. Window-screen. No. 901,067; Oct. 13; Sp. p. 2098; Dr. p. 427; Gaz. vol. 136; p. 1426.
Caswell, W. M., and J. A. Schofield, Warren, Pa. Trolley-wheel bearing. No. 901,878; Oct. 20; Sp. p. 3779; Dr. p. 768; Gaz. vol. 136; p. 1726.
Caulfield, J. P., Baltimore, Md. Pneumatic action for musical instruments. No. 901,068; Oct. 13; Sp. p. 2099; Dr. p. 427; Gaz. vol. 136; p. 1426.
Caverly, L. H., Somers, Mont. Feed-water heater. No. 902,208; Oct. 27; Sp. p. 4465; Dr. p. 903; Gaz. vol. 136; p. 1863.
Chadeloid Chemical Company. (See Ellis, C., assignor.)
Chamberlain, G. E., St. Louis, Mo. Can-filling machine. No. 901,420; Oct. 20; Sp. p. 2829; Dr. pp. 578–9; Gaz. vol. 136; p. 1577.
Chambers, J. P., Chattanooga, Tenn. Tie-fastener. No. 902,374; Oct. 27; Sp. p. 4823; Dr. p. 975; Gaz. vol. 136; p. 1917.
Chandler, H. H., New York, N. Y. Anti skidding and slipping attachment for automobile-wheels. No. 901,591; Oct. 20; Sp. p. 3200; Dr. p. 655; Gaz. vol. 136; p. 1634.
Chaplin-Fulton Manufacturing Company. (See Fulton, L. B., assignor.)
Chaplin, J. (See Blackledge and Chaplin.)
Chapman, L. (See Reed and Chapman.)
Chapman, L. J., Columbus, Ohio. Dust-pan. No. 900,705; Oct. 13; Sp. p. 1359; Dr. p. 277; Gaz. vol. 136; p. 1309.
Chapman, S. J., Marietta, Ohio. Road-leveler. No. 900,829; Oct. 13; Sp. p. 1625; Dr. p. 329; Gaz. vol. 136; p. 1350.
Chapman, W. A., Smithville, Ark. Talking-machine. No. 901,781; Oct. 20; Sp. p. 3611; Dr. p. 732; Gaz. vol. 136; p. 1696.
Chapman, W. A., Smithville, Ark. Sound-reproducer. No. 901,782; Oct. 20; Sp. p. 3615; Dr. p. 732; Gaz. vol. 136; p. 1697.
Chapman, W. H., Portland, Me. Apparatus for neutralizing static electricity. No. 900,830; Oct. 13; Sp. p. 1626; Dr. p. 329; Gaz. vol. 136; p. 1350.
Charlton, H. W., Ottawa, Ontario, Canada. Water-closet. No. 900,831; Oct. 13; Sp. p. 1627; Dr. p. 329; Gaz. vol. 136; p. 1350.
Chase, D., assignor to Strong Machinery & Supply Co., New York, N. Y. Belt-coupling. No. 901,952; Oct. 27; Sp. p. 3939; Dr. p. 804; Gaz. vol. 136; p. 1781.
Chateauneuf, F., Haverhill, Mass. Shoe-sewing machine. No. 900,353; Oct. 6; Sp. p. 586; Dr. p. 121; Gaz. vol. 136; p. 1165.
Cheape, J. A., Charlottesville, Va. Envelop. No. 902,375; Oct. 27; Sp. p. 4824; Dr. p. 975; Gaz. vol. 136; p. 1918.
Chelson, T. A., and H. J. Benedict, Los Angeles, Cal. Pigeon-hole spacer. No. 901,069; Oct. 13; Sp. p. 2102; Dr. p. 427; Gaz. vol. 136; p. 1427.
Chemical Works, formerly Sandoz. (See Böniger, M., assignor.)
Chemical Works, formerly Sandoz. (See Steiner, A., assignor.)
Chessher, G. W. (See Bentley and Chessher.)
Chicago Railroad Supply Company. (See Vogel, E. W., assignor.)
Chickering & Sons. (See Sager, E. C., assignor.)
Chiles, S. W. (See Taylor, H., assignor.)
Chilson, B. A., Ukiah, Cal. Plow. No. 900,981; Oct. 13; Sp. p. 1940; Dr. p. 395; Gaz. vol. 136; p. 1398.
Christensen, P. (See Smith and Christensen.)
Christopherson, M., Grafton, N. D. Game-board. No. 902,376; Oct. 27; Sp. p. 4825; Dr. p. 975; Gaz. vol. 136; p. 1918.
Chronik, A. and L., New York, N. Y. Thread-counting apparatus. No. 901,879; Oct. 20; Sp. p. 3780; Dr. p. 768; Gaz. vol. 136; p. 1726.
Chronik, L. (See Chronik, A. and L.)
Churchill, F. N., Spokane, Wash. Furniture. No. 901,152; Oct. 13; Sp. p. 2250; Dr. p. 457; Gaz. vol. 136; p. 1453.
Clark, B. F., assignor to Standard Optical Company, Geneva, N. Y. Lens-grinding machine. No. 900,664; Oct. 6; Sp. p. 1270; Dr. p. 260; Gaz. vol. 136; p. 1268.
Clark, C. A., Syracuse, N. Y. Gas-engine. No. 900,083; Oct. 6; Sp. p. 18; Dr. p. 4; Gaz. vol. 136; p. 1078.
Clark, M., Chicago, Ill. Automatic piano. No. 901,323; Oct. 20; Sp. p. 2590; Dr. p. 533; Gaz. vol. 136; p. 1542.
Clark, W. R., Jamestown, N. Y. Ball-bearing railway-track curve. No. 902,053; Oct. 27; Sp. p. 4159; Dr. p. 842; Gaz. vol. 136; p. 1813.
Clarke, C. M., Pittsburg, Pa. Valve mechanism for glass-blowing apparatus. No. 900,914; Oct. 13; Sp. p. 1798; Dr. p. 364; Gaz. vol. 136; p. 1376.
Clary, S., Carnegie, Pa. Wear-plate for railway-ties. No. 900,982; Oct. 13; Sp. p. 1941; Dr. p. 395; Gaz. vol. 136; p. 1398.
Clawson, F. O. (See Snyder and Clawson.)
Claxton, J. R., Doon, Iowa. Horse-detacher. No. 900,483; Oct. 6; Sp. p. 874; Dr. p. 179; Gaz. vol. 136; p. 1208.
Clay, F. W. H., Whitehall, Ky. Making sound-reproducing records. No. 900,706; Oct. 13; Sp. p. 1361; Dr. pp. 277–8; Gaz. vol. 136; p. 1309.
Clay, H. C., assignor to Reeves & Company, Columbus, Ind. Gearing. No. 901,070; Oct. 13; Sp. p. 2103; Dr. p. 428; Gaz. vol. 136; p. 1427.
Clay, J., Rock Ferry, assignor to Empire Oil Engine Syndicate Limited, London, England. Internal-combustion engine. No. 901,278; Oct. 13; Sp. p. 2490; Dr. pp. 509–10; Gaz. vol. 136; p. 1491.
Clegg, A., Christchurch, New Zealand. Means for preventing horses' front legs from knocking together. No. 901,592; Oct. 20; Sp. p. 3201; Dr. p. 655; Gaz. vol. 136; p. 1634.
Clement, G. L., Portland, Oreg. Safety-shoe for loggers. No. 901,880; Oct. 20; Sp. p. 3782; Dr. p. 769; Gaz. vol. 136; p. 1727.
Cleveland, A., Newark, N. J. Apparatus or machine for stretching leather, hides, or skins. No. 901,324; Oct. 20; Sp. p. 2594; Dr. pp. 533–4; Gaz. vol. 136; p. 1543.
Cleveland, G. E., Greenfield, Ind. Glass-feeding apparatus for tanks, pots, and similar receptacles. No. 901,881; Oct. 20; Sp. p. 3784; Dr. p. 769; Gaz. vol. 136; p. 1727.
Cleveland, W. B., assignor to Electric Railway Improvement Company, Cleveland, Ohio. Mold for casting rail-bond terminals. No. 901,227; Oct. 13; Sp. p. 2376; Dr. p. 486; Gaz. vol. 136; p. 1475.
Clinton Specialty Manufacturing Company. (See McCarty, E. J., assignor.)
Clipfel, J., Maubeuge, France. Multiplex press. No. 900,147; Oct. 6; Sp. p. 154; Dr. p. 32; Gaz. vol. 136; p. 1098.
Clites, W. H., Emerson, Iowa. Metal-shears. No. 900,983; Oct. 13; Sp. p. 1942; Dr. p. 395; Gaz. vol. 136; p. 1399.
Clodi, A. A., Union Hill, Ill. Incubator. No. 901,153; Oct. 13; Sp. p. 2252; Dr. p. 458; Gaz. vol. 136; p. 1453.
Clough, J. (See Willette, C. W., assignor.)
Cluff Brothers. (See Quinn, M. J., assignor.)
Clymans, E. G., and A. M. Hess, assignors to Geiser Manufacturing Company, Waynesboro, Pa. Straw-stacker. No. 901,884; Oct. 20; Sp. p. 3792; Dr. p. 772; Gaz. vol. 136; p. 1728.
Clymans, E. G., and M. A. Flautt, assignors to Geiser Manufacturing Company, Waynesboro, Pa. Straw-stacker. No. 901,882; Oct. 20; Sp. p. 3786; Dr. pp. 770–1; Gaz. vol. 136; p. 1727.
Clymans, E. G., and M. A. Flautt, assignors to Geiser Manufacturing Company, Waynesboro, Pa. Chaff-separator. No. 901,883; Oct. 20; Sp. p. 3791; Dr. p. 771; Gaz. vol. 136; p. 1728.
Coburn, H. L., Boston, Mass. Bridge-dam. No. 900,354; Oct. 6; Sp. p. 589; Dr. p. 122; Gaz. vol. 136; p. 1165.
Cochran, J. E. (See Ostendorf, L. C., assignor.)
Coderre, S., Holyoke, Mass. Cleaner for rolls. No. 901,783; Oct. 20; Sp. p. 3618; Dr. p. 732; Gaz. vol. 136; p. 1697.
Coe, C. E., New Haven, Conn. Faucet. No. 900,984; Oct. 13; Sp. p. 1943; Dr. p. 396; Gaz. vol. 136; p. 1399.
Coenen, J. L., Little Chute, Wis. Hydraulic pressing device for application to the press-rolls of pulp or paper making machines. No. 900,985; Oct. 13; Sp. p. 1944; Dr. p. 396; Gaz. vol. 136; p. 1399.

Coffield, P. T., Dayton, Ohio. Rotary pressure-motor. No. 902,054; Oct. 27; Sp. p. 4160; Dr. p. 842; Gaz. vol. 136; p. 1813.
Conn, H. A., Malden, Mass. Outlet-box. No. 901,593; Oct. 20; Sp. p. 3202; Dr. p. 656; Gaz. vol. 136; p. 1634.
Cole, A. L., Auburndale, assignor to United Copper Foundry Company, Boston, Mass. Electric contact-spring for trolley-harps. No. 901,885; Oct. 20; Sp. p. 3795; Dr. p. 772; Gaz. vol. 136; p. 1729.
Cole, H. W. N., Brooklyn, N. Y. Rotary engine. No. 902,472; Oct. 27; Sp. p. 5037; Dr. p. 1019; Gaz. vol. 136; p. 1950.
Cole, H. W. N., Brooklyn, N. Y. Rotary engine. No. 902,473; Oct. 27; Sp. p. 5039; Dr. pp. 1020–1; Gaz. vol. 136; p. 1950.
Coles, G. J., Gateshead, England. Automatic coupling for railway and other vehicles. No. 901,071; Oct. 13; Sp. p. 2104; Dr. p. 428; Gaz. vol. 136; p. 1427.
Collet, A., Paris, France. Tool for cutting seats in railway-sleepers. No. 901,681; Oct. 20; Sp. p. 3375; Dr. p. 691; Gaz. vol. 136; p. 1662.
Collier, G. B., Kinderhook, N. Y. Turbo-pump. No. 901,228; Oct. 13; Sp. p. 2379; Dr. pp. 486–7; Gaz. vol. 136; p. 1475.
Collier, J. H., Elsie, Mich. Music-turner. No. 901,421; Oct. 20; Sp. p. 2834; Dr. p. 579; Gaz. vol. 136; p. 1578.
Collier, W. H., Jackson, Tenn. Combined type-writing and printing machine. No. 901,682; Oct. 20; Sp. p. 3377; Dr. pp. 691–2; Gaz. vol. 136; p. 1663.
Colonial Company. (See Berry, W. G., assignor.)
Colter, J., Durhamville, N. Y. Remedy for coughs of horses. No. 900,484; Oct. 6; Sp. p. 875; Gaz. vol. 136; p. 1209.
Columbian Feed Governor Company. (See Dougan, K., assignor.)
Combs, E. E. and W. E., Evansville, Wis.; said W. E. Combs assignor to said E. E. Combs. Apparatus for sharpening disks and colters. No. 900,707; Oct. 13; Sp. p. 1366; Dr. p. 278; Gaz. vol. 136; p. 1309.
Combs, W. E. (See Combs, E. E. and W. E.)
Comins, F. B., Sharon, Mass. Humidifier. No. 900,355; Oct. 6; Sp. p. 590; Dr. p. 122; Gaz. vol. 136; p. 1165.
Comins, F. B., Sharon, Mass. Humidifier. No. 900,356; Oct. 6; Sp. p. 591; Dr. p. 122; Gaz. vol. 136; p. 1166.
Composite Fuel Syndicate. (See Vivian, A. W. H., assignor.)
Conklin, E. D., assignor to Whitehead & Hoag Company, Newark, N. J. Button pencil-holder. No. 901,886; Oct. 20; Sp. p. 3796; Dr. p. 772; Gaz. vol. 136; p. 1729.
Conlan, J., Newark, N. J. Well-drilling apparatus. No. 901,229; Oct. 13; Sp. p. 2384; Dr. p. 487; Gaz. vol. 136; p. 1476.
Conly, J. A. (See Allen and Conly.)
Conn, D. E., Hyde Park, assignor of one-half to W. G. Crawford, Boston, Mass. Car-fender. No. 902,210; Oct. 27; Sp. p. 4468; Dr. p. 904; Gaz. vol. 136; p. 1863.
Connaty, J. W., assignor to G. P. McDougall & Son, Indianapolis, Ind. Sliding top for cabinets. No. 901,887; Oct. 20; Sp. p. 3797; Dr. p. 773; Gaz. vol. 136; p. 1729.
Connecticut Auto Engineering Corporation. (See Cuno, C., assignor.)
Conner, A. B. (See Williams and Conner.)
Conner, F., Los Angeles, Cal. Mechanism for cleaning and finishing ground coffee after the same has been graded. No. 902,474; Oct. 27; Sp. p. 5045; Dr. p. 1021; Gaz. vol. 136; p. 1951.
Conner, M. S., Chicago, Ill., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Supervisory system. No. 901,683; Oct. 20; Sp. p. 3379; Dr. p. 692; Gaz. vol. 136; p. 1663.
Conner, M. S., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Telephone-exchange system. No. 901,684; Oct. 20; Sp. p. 3385; Dr. pp. 692–3; Gaz. vol. 136; p. 1664.
Conner, M. S., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N Y. Telephone-exchange system. No. 901,685; Oct. 20; Sp. p. 3396; Dr. p. 693; Gaz. vol. 136; p. 1665.
Conner, M. S., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Telephone-exchange system. No. 901,686; Oct. 20; Sp. p. 3405; Dr. p. 693; Gaz. vol. 136; p. 1665.
Conner, M. S., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Telephone-transmitter. No. 901,687; Oct. 20; Sp. p. 3411; Dr. p. 693; Gaz. vol. 136; p. 1666.
Conner, M. S., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Switchboard. No. 901,688; Oct. 20; Sp. p. 3414; Dr. p. 694; Gaz. vol. 136; p. 1667.
Conner, M. S., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Telephone-exchange system. No. 901,689; Oct. 20; Sp. p. 3416; Dr. p. 694; Gaz. vol. 136; p. 1667.
Consolidated Car Heating Company. (See McElroy, J. F., assignor.)
Continental Paper Bag Company. (See Smith, C. F., assignor.)
Continental Paper Bag Company. (See Strasburg, F. E., assignor.)
Continuous Rail & Safety Switch Co. (See Roach, H. F., assignor.)
Cook, E. F., Freeport, N. Y. Connection for water-receptacles. No. 900,485; Oct. 6; Sp. p. 876; Dr. p. 179; Gaz. vol. 136; p. 1209.
Cook, F. B., Chicago, Ill. Connector for electrical conductors. No. 901,422; Oct. 20; Sp. p. 2835; Dr. p. 580; Gaz. vol. 136; p. 1578.
Cookman, T. E., Everson, Wash. Saw-tool. No. 900,666; Oct. 6; Sp. p. 1275; Dr. p. 260; Gaz. vol. 136; p. 1269.
Coolidge, L. (See Foss and Coolidge.)
Cooper Hewitt Electric Company. (See Fichtner, S. E., assignor.)
Cooper Hewitt Electric Company. (See Hewitt, P. C., assignor.)
Cooper Hewitt Electric Company. (See Howard, H. H., assignor.)
Cooper Hewitt Electric Company. (See Thomas, P. H., assignor.)
Cordingley, W. A., Pudsey, England. Appliance for cleaning the delivery-rollers of mule spinning and twisting frames. No. 901,784; Oct. 20; Sp. p. 3620; Dr. p. 733; Gaz. vol. 136; p. 1697.
Corey, F. B., Schenectady, N. Y., assignor to General Electric Company. High-tension circuit-breaker. No. 900,708; Oct. 13; Sp. p. 1307; Dr. p. 278; Gaz. vol. 136; p. 1310.
Cork Asphalt Limited. (See Hughes, Quinlan, and Middleton, assignors.)
Cormick, J. H., Belleville, N. J., assignor to Union Switch and Signal Company, Swissvale, Pa. Switch for charging and discharging storage batteries. No. 901,423; Oct. 20; Sp. p. 2837; Dr. p. 580; Gaz. vol. 136; p. 1578.
Cornelius, E., Trollhättan, Sweden. Electric furnace. No. 900,486; Oct. 6; Sp. p. 877; Dr. p. 179; Gaz. vol. 136; p. 1209.
Corrigan, H., Bradford, N. H. Fruit-picker. No. 901,594; Oct. 20; Sp. p. 3203; Dr. p. 656; Gaz. vol. 136; p. 1635.
Corwin, E. R., assignor to Corwin Telephone Manufacturing Co., Chicago, Ill. Telephone system. No. 901,785; Oct. 20; Sp. p. 3620; Dr. p. 733; Gaz. vol. 136; p. 1697.
Corwin, E. R., and C. A. Bals, assignors to Corwin Telephone Manufacturing Company, Chicago, Ill. Bank of locking switch-keys. No. 902,275; Oct. 27; Sp. p. 4608; Dr. p. 937; Gaz. vol. 136; p. 1884.
Corwin Telephone Manufacturing Company. (See Corwin and Bals, assignors.)
Corwin Telephone Manufacturing Co. (See Corwin, E. R., assignor.)
Costello, T. H., Chicago, Ill. Globe-suspending device. No. 902,211; Oct. 27; Sp. p. 4470; Dr. p. 904; Gaz. vol. 136; p. 1864.
Côté, G. M., assignor to Standard Steel Tie Company, Pittsburg, Pa. Rail-support. No. 900,667; Oct. 6; Sp. p. 1276; Dr. p. 261; Gaz. vol. 136; p. 1269.
Cottrell, A. W., and M. A. Moore, Douglas, Ariz. Ter. Explosion-engine. No. 900,668; Oct. 6; Sp. p. 1279; Dr. p. 261; Gaz. vol. 136; p. 1269.
Coursen, G. M., Purdys, N. Y. Device for extracting bushings. No. 902,475; Oct. 27; Sp. p. 5047; Dr. p. 1021; Gaz. vol. 136; p. 1951.
Couture, W. L., San Francisco, Cal. Spirit-level. No. 901,953; Oct. 27; Sp. p. 3940; Dr. p. 804; Gaz. vol. 136; p. 1781.
Cox, J. H., Fairmount, Md. Oyster-snipping bucket. No. 900,986; Oct. 13; Sp. p. 1946; Dr. p. 396; Gaz. vol. 136; p. 1400.
Cox Multi-Mailer Company. (See Cox, S. C., assignor.)
Cox, S. C., Chicago, Ill., assignor, by mesne assignments, to Cox Multi-Mailer Company, Augusta, Me. Town-marker for addressing-machines. No. 901,954; Oct. 27; Sp. p. 3942; Dr. pp. 804–5; Gaz. vol. 136; p. 1782.
Coxe, E. J. D., Houtzdale, Pa. Pumping mechanism. No. 900,669; Oct. 6; Sp. p. 1281; Dr. p. 261; Gaz. vol. 136; p. 1270.
Craighead, G. W., Richmond, Ind. Adjustable light-fixture. No. 901,955; Oct. 27; Sp. p. 3944; Dr. p. 805; Gaz. vol. 136; p. 1782.
Cramer, H., Sonora, Cal. Vehicle-wheel. No. 900,264; Oct. 6; Sp. p. 414; Dr. p. 84; Gaz. vol. 136; p. 1136.
Crane Company. (See Hayden, J. T., assignor.)
Craven, H. O., Schenectady, N. Y. Sectional tire. No. 902,212; Oct. 27; Sp. p. 4472; Dr. p. 905; Gaz. vol. 136; p. 1864.
Crawford, A. H., Liverpool, N. Y. Basket. No. 900,487; Oct. 6; Sp. p. 878; Dr. p. 180; Gaz. vol. 136; p. 1209.
Crawford, J. W., Lagrange, Ga. Cotton-planter. No. 901,072; Oct. 13; Sp. p. 2105; Dr. p. 428; Gaz. vol. 136; p. 1427.
Crawford, W. G. (See Conn, D. E., assignor.)
Creighton, E. E. F., Schenectady, N. Y., assignor to Stanley G. I. Electric Manufacturing Company. Annealing-furnace. No. 901,956; Oct. 27; Sp. p. 3946; Dr. p. 806; Gaz. vol. 136; p. 1783.
Crell, A. P., Ionia, Mich. Reversing mechanism. No. 900,832; Oct. 13; Sp. p. 1629; Dr. p. 329; Gaz. vol. 136; p. 1351.
Crenshaw, J. T., Jetersville, Va., assignor of one-half to J. McCarthy, Appleton, Wis. Tobacco-planter. No. 901,279; Oct. 13; Sp. p. 2403; Dr. p. 511; Gaz. vol. 136; p. 1492.
Crevier, H. A. (See Trotter and Crevier.)
Crim, C. B., Seattle, Wash. Gradient instrument. No. 901,888; Oct. 20; Sp. p. 3798; Dr. p. 773; Gaz. vol. 136; p. 1730.
Crocker, F. W., North Baltimore, Ohio. Engraver's spoon-holder. No. 900,148; Oct. 6; Sp. p. 157; Dr. p. 33; Gaz. vol. 136; p. 1099.
Cromer, T. S., assignor of one-half to J. E. A. Banger, Linden, Tex. Compound rail. No. 902,136; Oct. 27; Sp. p. 4318; Dr. p. 875; Gaz. vol. 136; p. 1840.
Crompton & Knowles Loom Works. (See Wyman, H., assignor.)
Crone, F. G., Buffalo, N. Y. Tire-protector. No. 902,276; Oct. 27; Sp. p. 4611; Dr. p. 937; Gaz. vol. 136; p. 1885.

Crone, S. A., East Orange, N. J. Railway brake-beam. No. 902,055; Oct. 27; Sp. p. 4162; Dr. p. 842; Gaz. vol. 136; p. 1814.
Crone, S. A., East Orange, N. J. Railway-car brake. No. 902,137; Oct. 27; Sp. p. 4319; Dr. p. 875; Gaz. vol. 136; p. 1840.
Crone, S. A., East Orange, N. J. Railway brake-beam. No. 902,138; Oct. 27; Sp. p. 4322; Dr. p. 875; Gaz. vol. 136; p. 1918.
Crook, H. W., Chicago, Ill. Mail-bag-catching apparatus. No. 902,377; Oct. 27; Sp. p. 4826; Dr. pp. 975–6; Gaz. vol. 136; p. 1918.
Crooke, R. F., assignor to Bradley & Hubbard Mfg. Co., Meriden, Conn. Glass-mount for lamp-shades and kindred articles. No. 901,090; Oct. 20; Sp. p. 3426; Dr. p. 695; Gaz. vol. 136; p. 1668.
Crosley, A. D., Jewell, Iowa. Hen's nest. No. 902,056; Oct. 27; Sp. p. 4164; Dr. p. 843; Gaz. vol. 136; p. 1814.
Cross, A. T., Providence, R. I. Fountain-pen. No. 900,833; Oct. 13; Sp. p. 1631; Dr. p. 330; Gaz. vol. 136; p. 1351.
Crossan, E. W., Wilmington, Del. Stamping and numbering machine. No. 902,378; Oct. 27; Sp. p. 4828; Dr. p. 976; Gaz. vol. 136; p. 1918.
Crowell, C. M. (See Tickner, W. D. and L. C., assignors.)
Crowley, C. J., Burlington, Iowa. Flue-cutter. No. 902,379; Oct. 27; Sp. p. 4833; Dr. p. 976; Gaz. vol. 136; p. 1919.
Crozier, L. A., Lynn, Mass. Street-sweeper. No. 901,154; Oct. 13; Sp. p. 2252; Dr. p. 458; Gaz. vol. 136; p. 1453.
Cruse, C. B., Perkins, Okla. Animal-catcher. No. 902,057; Oct. 27; Sp. p. 4165; Dr. p. 843; Gaz. vol. 136; p. 1814.
Cubitt, A. S., Schenectady, N. Y., assignor to General Electric Company. Electrically-controlled switch. No. 901,424; Oct. 20; Sp. p. 2839; Dr. p. 580; Gaz. vol. 136; p. 1579.
Culp, C. M., South Bend, Ind. Rail-splice. No. 901,524; Oct. 20; Sp. p. 3066; Dr. p. 627; Gaz. vol. 136; p. 1612.
Cumber, R. G. (See Gschwend and Cumber.)
Cummings, E. W., Oakland, assignor to G. H. Young, San Francisco, Cal. Saw-table safety attachment. No. 901,889; Oct. 20; Sp. p. 3799; Dr. p. 773; Gaz. vol. 136; p. 1730.
Cumner, M. S., New York, N. Y. Clamp. No. 900,915; Oct. 13; Sp. p. 1801; Dr. p. 364; Gaz. vol. 136; p. 1376.
Cunningham, W. R., assignor to American Clay Machinery Co., Bucyrus, Ohio. Brick and tile cutting machine. No. 901,691; Oct. 20; Sp. p. 3427; Dr. pp. 695–6; Gaz. vol. 136; p. 1668.
Cunnius, C. T., Long Branch, N. J. Column. No. 902,209; Oct. 27; Sp. p. 4466; Dr. p. 903; Gaz. vol. 136; p. 1863.
Cuno, C., Oconomowoc, Wis., assignor to Connecticut Auto Engineering Corporation, Meriden, Conn. Electric-circuit controller for internal-combustion engines. No. 902,522; Oct. 27; Sp. p. 5160; Dr. p. 1045; Gaz. vol. 136; p. 1969.
Curl, W., and E. Wheelock, Hot Springs, Ark. Ice-tank. No. 901,692; Oct. 20; Sp. p. 3434; Dr. p. 696; Gaz. vol. 136; p. 1668.
Curtis, B. S., Dexter, Me. Plow-holder. No. 902,380; Oct. 27; Sp. p. 4835; Dr. p. 977; Gaz. vol. 136; p. 1919.
Curtis, L. E. (See Benson, A., assignor.)
Curwen, S. M. (See Smith and Curwen.)
Curwen, S. M., Haverford, assignor to J. G. Brill Company, Philadelphia, Pa. Passenger-car. No. 901,786; Oct. 20; Sp. p. 3623; Dr. p. 733; Gaz. vol. 136; p. 1698.
Curwen, S. M., Haverford, and W. M. Smith, Moores, assignors to J. G. Brill Company, Philadelphia, Pa. Passenger-car. No. 902,381; Oct. 27; Sp. p. 4836; Dr. p. 977; Gaz. vol. 136; p. 1920.
Custer, J. S. (See Turner and Custer.)
Cutter, G., South Bend, Ind. Hood and reflector. No. 900,266; Oct. 6; Sp. p. 420; Dr. p. 85; Gaz. vol. 136; p. 1137.
Cutter, G., Winnetka, assignor to George Cutter Company, Chicago, Ill. Supporting mechanism. No. 900,265; Oct. 6; Sp. p. 415; Dr. pp. 84–5; Gaz. vol. 136; p. 1137.
Cutting, E. M., *et al.* (See Marsellis, F., assignor.)
D'Olier, W. L. (See Ehret, C. D., assignor.)
Dahl, C., *et al.* (See Edman, J., assignor.)
Dahl, E. G., *et al.* (See Edman, J., assignor.)
Dahl, N., Trondhjem, Norway. Box-fastener. No. 900,084; Oct. 6; Sp. p. 24; Dr. p. 4; Gaz. vol. 136; p. 1078.
Dahma, H., Berlin, Germany. Stocking-suspender. No. 901,155; Oct. 13; Sp. p. 2254; Dr. p. 459; Gaz. vol. 136; p. 1454.
Dain, J., Ottumwa, Iowa. Hay-loader. No. 901,074; Oct. 13; Sp. p. 2111; Dr. p. 430; Gaz. vol. 136; p. 1428.
Dain, J., assignor to Dain Manufacturing Company of Iowa, Ottumwa, Iowa. Hay-stacker. No. 901,073; Oct. 13; Sp. p. 2106; Dr. pp. 429–30; Gaz. vol. 136; p. 1428.
Dain, J., assignor to Dain Manufacturing Company of Iowa, Ottumwa, Iowa. Hay-stacker. No. 901,156; Oct. 13; Sp. p. 2255; Dr. pp. 459–60; Gaz. vol. 136; p. 1454.
Dain Manufacturing Company of Iowa. (See Dain, J., assignor.)
Daley, D. W., Pittsburg, Pa. Combined hot-water heater and still. No. 902,277; Oct. 27; Sp. p. 4612; Dr. p. 937; Gaz. vol. 136; p. 1885.
Dalton, W., Schenectady, assignor to American Locomotive Company, New York, N. Y. Electric locomotive. No. 902,476; Oct. 27; Sp. p. 5050; Dr. p. 1022; Gaz. vol. 136; p. 1952.
Dalton, W., Schenectady, assignor to American Locomotive Company, New York, N. Y. Non-chattering brake-hanger. No. 902,477; Oct. 27; Sp. p. 5051; Dr. p. 1022; Gaz. vol. 136; p. 1952.
Dalton, W., Schenectady, assignor to American Locomotive Company, New York, N. Y. Flexible driving mechanism. No. 902,523; Oct. 27; Sp. p. 5162; Dr. p. 1045; Gaz. vol. 136; p. 1969.
Dalzell, J. A., and C. E. Harthan, Lynn, Mass., assignors to General Electric Company. Arc-lamp. No. 900,709; Oct. 13; Sp. p. 1308; Dr. p. 279; Gaz. vol. 136; p. 1310.
Damon, G. L. (See Holmes and Damon.)
Damon, G. L., Pittsburg, Pa. Mounting for heavy vault-doors. No. 901,425; Oct. 20; Sp. p. 2842; Dr. p. 581; Gaz. vol. 136; p. 1579.
Damon, W. H., New York, N. Y. Burner. No. 901,788; Oct. 20; Sp. p. 3626; Dr. p. 734; Gaz. vol. 136; p. 1668.
Danek, A., Chicago, Ill. Rug holder or stiffener. No. 901,693; Oct. 20; Sp. p. 3435; Dr. p. 697; Gaz. vol. 136; p. 1668.
Danglemeyer, C. W., Dubuque Iowa. Portable milling-machine. No. 900,149; Oct. 6; Sp. p. 158; Dr. pp. 33–4; Gaz. vol. 136; p. 1099.
Daniels, F. H., and C. R. Sturdevant, Worcester, Mass., assignors to American Steel & Wire Company, Chicago, Ill. Rail-bond. No. 900,488; Oct. 6; Sp. p. 879; Dr. p. 180; Gaz. vol. 136; p. 1209.
Daniels, J. T. (See Van Winkle and Daniels.)
Daniels, J. T., assignor of one-half to Hanson & Van Winkle Company, Newark, N. J. Electroplating apparatus. No. 901,280; Oct. 13; Sp. p. 2494; Dr. pp. 511–12; Gaz. vol. 136; p. 1492.
Daniels, T. M., Valdez, Alaska. Waterproof fuse-cap. No. 900,670; Oct. 6; Sp. p. 1283; Dr. p. 262; Gaz. vol. 136; p. 1270.
Danquard, T., assignor to Autopiano Company, New York, N. Y. Tracker-bar mechanism. No. 902,478; Oct. 27; Sp. p. 5052; Dr. p. 1022; Gaz. vol. 136; p. 1952.
Danquard, T., assignor to Autopiano Co., New York, N. Y. Tracker mechanism. No. 902,479; Oct. 27; Sp. p. 5055; Dr. p. 1023; Gaz. vol. 136; p. 1953.
Danquard, T., assignor to Autopiano Co., New York, N. Y. Tracker-bar-operating mechanism. No. 902,480; Oct. 27; Sp. p. 5057; Dr. p. 1023; Gaz. vol. 136; p. 1953.
Danquard, T., assignor to Autopiano Company, New York, N. Y. Double-scale pneumatic musical instrument. No. 902,481; Oct. 27; Sp. p. 5058; Dr. p. 1023; Gaz. vol. 136; p. 1953.
Danquard, T., assignor to Autopiano Co., New York, N. Y. Double tracker mechanism. No. 902,482; Oct. 27; Sp. p. 5060; Dr. p. 1023; Gaz. vol. 136; p. 1954.
Darley, J. W., Jr., assignor to E. J. Knabe, Jr., Baltimore, Md. Self-playing grand piano. No. 901,281; Oct. 13; Sp. p. 2498; Dr. pp. 512–14; Gaz. vol. 136; p. 1493.
Darley, J. W., Jr., assignor to E. J. Knabe, Jr., Baltimore, Md. Automatic grand piano. No. 901,890; Oct. 20; Sp. p. 3801; Dr. pp. 773–4; Gaz. vol. 136; p. 1730.
Darley, J. W., Jr., Baltimore, Md., assignor, by mesne assignments, to American Piano Company. Autopneumatic motor for self-playing musical instruments. No. 902,382; Oct. 27; Sp. p. 4837; Dr. p. 978; Gaz. vol. 136; p. 1920.
Darroch, A., New York, N. Y. Ventilator. No. 901,075; Oct. 13; Sp. p. 2113; Dr. pp. 430–1; Gaz. vol. 136; p. 1428.
Daudt, D. S., Plainfield, N. J. Catamenial appliance. No. 900,150; Oct. 6; Sp. p. 162; Dr. p. 34; Gaz. vol. 136; p. 1100.
Daugherty, A. A., New York, N. Y. Vehicle-wheel. No. 902,383; Oct. 27; Sp. p. 4839; Dr. p. 978; Gaz. vol. 136; p. 1920.
Davenport, H. F., Chicago, Ill., assignor to Brunswick-Balke-Collender Company, New York, N. Y. Convertible billiard-table. No 900,085; Oct. 6; Sp. p. 24; Dr. p. 4; Gaz. vol. 136; p. 1079.
Davidson, F. B., Marseilles, Ill., assignor to Howe and Davidson Company, East Orange, N. J. Container. No. 902,213; Oct. 27; Sp. p. 4475; Dr. pp. 905–6; Gaz. vol. 136; p. 1864.
Davidson, R. M., Elmira, N. Y. Paper perforating, cutting, and delivery apparatus. No. 901,892; Oct. 20; Sp. p. 3805; Dr. pp. 774–5; Gaz. vol. 136; p. 1731.
Davis, A., Scranton, Pa. Stair-rod. No. 900,358; Oct. 6; Sp. p. 594; Dr. p. 123; Gaz. vol. 136; p. 1166.
Davis, A., Chicago, Ill., assignor to Davis Acetylene Company, Elkhart, Ind. Governor. No. 902,278; Oct. 27; Sp. p. 4613; Dr. p. 937; Gaz. vol. 136; p. 1886.
Davis, A. E., Johannesburg, Transvaal. Pump and the like. No. 900,357; Oct. 6; Sp. p. 592; Dr. pp. 122–3; Gaz. vol. 136; p. 1166.
Davis Acetylene Company. (See Davis, A., assignor.)
Davis Bros. (See Davis, O. H., assignor.)
Davis, C., U. S. Navy, assignor, by mesne assignments, to National Torpedo Company, New York, N. Y. Shell or casing for standard torpedoes. No. 901,157; Oct. 13; Sp. p. 2261; Dr. p. 460; Gaz. vol. 136; p. 1454.
Davis, C. L. Doran, Va. Wire-fence stretcher. No. 901,891; Oct. 20; Sp. p. 3803; Dr. p. 774; Gaz. vol. 136; p. 1731.
Davis, D., Cleveland, Ohio, assignor to American Steel & Wire Company, Chicago, Ill. Continuous heating-furnace. No. 901,230; Oct. 13; Sp. p. 2386; Dr. p. 488; Gaz. vol. 136; p. 1476.
Davis, E. (See Dieter, Bowsher, and Davis.)

Davis, E. H. (See Lacroix, J. D., assignor.)
Davis, E. N., Lodi, Wis. Railway-tie. No. 900,086; Oct. 6; Sp. p. 27; Dr. p. 5; Gaz vol. 136; p. 1079.
Davis & Furber Machine Company. (See McGlincy, J. J., assignor.)
Davis, G. H., West Orange, N. J., and C. T. Bowman, Schenectady, N. Y., assignors to Standard Music Roll Company. Pattern-controlled punch-selecting perforating-machine. No. 900,151; Oct. 6; Sp. p. 164; Dr. pp. 34–5; Gaz. vol. 136; p. 1100.
Davis, G. M., Chicago, Ill. Valve. No. 900,987; Oct. 13; Sp. p. 1947; Dr. p. 396; Gaz. vol. 136; p. 1400.
Davis, L. B., Malden, Mass. Lacing-stud. No. 901,694; Oct. 20; Sp. p. 3436; Dr. p. 697; Gaz. vol. 136; p. 1668.
Davis, O. H., assignor to Davis Bros., Kansas City, Mo. Cardboard box. No. 901,695; Oct. 20; Sp. p. 3438; Dr. p. 697; Gaz. vol. 136; p. 1669.
Davis, O. W., Los Angeles, Cal. Straight-seaming apparatus No. 900,267; Oct. 6; Sp. p. 422; Dr. pp. 85–6; Gaz. vol. 136; p. 1137.
Davis, W. H., Federalsburg, Md. Tick-tack. No. 901,325; Oct. 20; Sp. p. 2600; Dr. p. 535; Gaz. vol. 136; p. 1543.
Davis, W. M., Chicago, Ill., assignor, by mesne assignments, to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Telephone-exchange system. No. 901,696; Oct. 20; Sp. p. 3439; Dr. p. 697; Gaz. vol. 136; p. 1669.
Dawson, J. C., St. Louis, Mo., assignor to Sieber & Trussell Mnfg. Co. Loose-leaf binder. No. 901,076; Oct. 13; Sp. p. 2118; Dr. p. 431; Gaz. vol. 136; p. 1429.
Dawson, W. F., Rugby, England, assignor to General Electric Company. Means for supporting collector-rings. No. 900,710; Oct. 13; Sp. p. 1371; Dr. p. 279; Gaz. vol. 136; p. 1310.
Daylight Photo Specialty Company. (See Bradburn, F. C., assignor.)
Daylight Photo Specialty Company. (See Bradburn, Tyler, and Low, assignors.)
De Forest, L. S., New Haven, Conn. Faucet. No. 900,152; Oct. 6; Sp. p. 170; Dr. p. 35; Gaz. vol. 136; p. 1100.
De Francisci, I., New York, N. Y. Machine for conveying and distributing button-blanks. No. 901,893; Oct. 20; Sp. p. 3806; Dr. pp. 775–6; Gaz. vol. 136; p. 1731.
Dean Electric Company. (See Dean, W. W., assignor.)
Dean Electric Company. (See Manson, R. H., assignor.)
Dean Electric Company. (See Slough, F. M., assignor.)
Dean, J. R., Girard, Pa. Stay for garments and the like. No. 901,426; Oct. 20; Sp. p. 2846; Dr. p. 581; Gaz. vol. 136; p. 1579.
Dean, W. W., assignor to Dean Electric Company, Elyria, Ohio. Telephone-exchange system. No. 900,499; Oct. 6; Sp. p. 880; Dr. pp. 180–1; Gaz. vol. 136; p. 1209.
Debauche, H. J., Gilly, Belgium. Brake-gear for winding machinery. No. 900,671; Oct. 6; Sp. p. 1284; Dr. p. 262; Gaz. vol. 136; p. 1270.
Dech, P., assignor of one-half to H. G. Rollpiller, West Orange, N. J. Horseshoe. No. 900,268; Oct. 6; Sp. p. 425; Dr. p. 87; Gaz. vol. 136; p. 1138.
Deems, C. M., Indianapolis, Ind., assignor to S. W. Putnam, 3d, Fitchburg, Mass. Work-holder. No. 901,595; Oct. 20; Sp. p. 3203; Dr. p. 656; Gaz. vol. 136; p. 1635.
Degagné, E., Limoilou, Quebec, Canada. Sounding device for vessels. No. 900,834; Oct. 13; Sp. p. 1632; Dr. p. 330; Gaz. vol. 136; p. 1351.
Deitsch Brothers. (See Slattery, W. H., assignor.)
Delphos Manufacturing Company. (See Leilich, H. L., assignor.)
Dempsey, J., Belfast, Ireland. Machine for filling breadstuffs into or on an oven. No. 901,077; Oct. 13; Sp. p. 2119; Dr. pp. 431–2; Gaz. vol. 136; p. 1429.
Dempsey, M. E. (See Rabbe, Harden, and Dempsey.)
Dempsey, W. S., New York, N. Y. Metallurgical furnace. No. 900,916; Oct. 13; Sp. p. 1803; Dr. pp. 364–5; Gaz. vol. 136; p. 1377.
Dempster, J. T. H., Schenectady, N. Y., assignor to General Electric Company. Electric-resistance conductor. No. 901,428; Oct. 20; Sp. p. 2848; Gaz. vol. 136; p. 1580.
Dempster, L. E., Schenectady, N. Y., assignor to General Electric Company. Vapor electric apparatus. No. 901,427; Oct. 20; Sp. p. 2847; Dr. p. 581; Gaz. vol. 136; p. 1580.
Denard, M. J. (See Thiellet and Denard.)
Denning, J. M. (See Lincoln, W. W., assignor.)
Denning, J. M., Cedar Rapids, Iowa. Wire-fence-making machine. No. 900,490; Oct. 6; Sp. p. 863; Dr. pp. 181–5; Gaz vol. 136; p. 1210.
Dennis, S. K., Chicago, Ill., assignor to International Harvester Company. Axle-skein. No. 902,214; Oct. 27; Sp. p. 4477; Dr. p. 906; Gaz. vol. 136; p. 1865.
Densmore Typewriter Company. (See Woodward, O., assignor.)
Denton, A. J., Nebraska City, Nebr. Grain-car door. No. 900,491; Oct. 6; Sp. p. 912; Dr p. 185; Gaz. vol. 136; p. 1210.
Depew, G. M., Canandaigua, N. Y. Water-closet. No. 901,525; Oct. 20; Sp. p. 3068; Dr. p. 627; Gaz. vol. 136; p. 1613.
Derby, E. E. (See Derby, J. H. and E. E.)
Derby, J. H. and E. E., Greensburg, Pa. Folding box or crate. No. 900,492; Oct 6; Sp. p. 913; Dr. p. 186; Gaz. vol. 136; p. 1211.
Detsinyi, G., Berlin, Germany. Gas-burner for lighting and heating purposes. No. 901,596; Oct. 20; Sp. p. 3205; Dr. p. 657; Gaz. vol. 136; p. 1635.
Dettmann, F. H., Kaukauna, Wis., assignor of one-half to G. Bear. Self-clamping scaffold-bracket. No. 901,158; Oct. 13; Sp. p. 2262; Dr. p. 461; Gaz. vol. 136; p. 1454.
Deutsche Gasglühlicht Aktiengesellschaft (Auergesellschaft). (See Blau and Remané, assignors.)
Devers, W. J., Scranton, Pa. Slate-picker. No. 900,087; Oct. 6; Sp. p. 28; Dr. p. 5; Gaz. vol. 136; p. 1079.
Dewey, D. R., Hamilton, Ontario, Canada. Appliance for the cure of rheumatism and other diseases. No. 900,493; Oct. 6; Sp. p. 915; Dr. p. 186; Gaz. vol. 136; p. 1211.
Dewey, F. P., Washington, D. C. Treating oxid of zinc. No. 900,088; Oct. 6; Sp. p. 31; Dr. p. 6; Gaz. vol. 136; p. 1079.
Di Gioia, F. (See Ferry and Di Gioia.)
Diamond Match Company. (See Palmer and Carlson, assignors.)
Diamond Match Company. (See Wright, J. P., assignor.)
Diaz, P., Hijo, Mexico, Mexico. Treating the soil. No. 901,078; Oct. 13; Sp. p. 2121; Dr. p. 432; Gaz. vol. 136; p. 1429.
Dickie, M. B., assignor to Nobel's Explosives Company, Limited, Glasgow, Scotland. Telegraphic-code condenser. No. 901,957; Oct. 27; Sp. p. 3947; Dr. p. 806; Gaz. vol. 136; p. 1783.
Dickinson, C., Maricopa, Cal. Pump for oil-wells. No. 901,282; Oct. 13; Sp. p. 2505; Dr. p. 514; Gaz. vol. 136; p. 1493.
Dickinson, R. B., Syracuse, N. Y. Utensil for cooking-ranges. No. 902,215; Oct. 27; Sp. p. 4478; Dr. p. 906; Gaz. vol. 136; p. 1865.
Dickinson, S. O., Manila, Philippine Islands. Fiber stripping and cleaning machine. No. 900,494; Oct. 6; Sp. p. 916; Dr. p. 186; Gaz. vol. 136; p. 1211.
Diehl, H., Berlin, Germany, assignor to General Electric Company. Railway-signal. No. 901,958; Oct. 27; Sp. p. 3949; Dr. p. 806; Gaz. vol. 136; p. 1783.
Diesem, A. E., Columbus, assignor to Bucher & Gibbs Plow Company, Canton, Ohio. Harrow. No. 902,279; Oct. 27; Sp. p. 4615; Dr. p. 938; Gaz. vol. 136; p. 1886.
Dieter, J. C., Anderson, S. Bowsher, Indianapolis, Ind., and E. Davis, Toledo, Ohio. Conduit-threader. No. 901,159; Oct. 13; Sp. p. 2264; Dr. p. 461; Gaz. vol. 136; p. 1455.
Digney, F. J. and N. L., Bridgeport, Conn. Corset. No. 900,711; Oct. 13; Sp. p. 1372; Dr. pp. 279–80; Gaz. vol. 136; p. 1311.
Digney, N. L. (See Digney, F. J. and N. L.)
Dilion, S., Edgewood Park, and J. Noey, Braddock, Pa. Man-head crane for steam-boilers. No. 900,689; Oct. 6; Sp. p. 1329; Dr. p. 271; Gaz. vol. 136; p. 1277.
Dioszeghy, A., Allegheny, Pa. Fur-nail-picking machine. No. 901,697; Oct. 20; Sp. p. 3441; Dr. p. 698; Gaz. vol. 136; p. 1670.
Disheroon, J. E., Mena, Ark. Buggy-top brace. No. 901,079; Oct. 13; Sp. p. 2122; Dr. p. 432; Gaz. vol. 136; p. 1429.
Dixon, H., Dayton, Ohio. Gutter-strainer. No. 901,526; Oct. 20; Sp. p. 3070; Dr. p. 627; Gaz. vol. 136; p. 1613.
Dixon, N. B., Dixie, Ala. Elevated railway. No. 901,209; Oct. 6; Sp. p. 426; Dr. p. 87; Gaz. vol. 136; p. 1138.
Dobson, G., assignor of one-half to R. A. Ohloff, Pittsburg, Pa. Insulator. No. 900,917; Oct. 13; Sp. p. 1804; Dr. p. 365; Gaz. vol. 136; p. 1377.
Dock Gas Engine Company. (See Dock, H., assignor.)
Dock, H., Wyncote, Pa., assignor to Dock Gas Engine Company, New York, N. Y. Universal coupling. No. 901,080; Oct. 13; Sp. p. 2123; Dr. pp. 432–3; Gaz. vol. 136; p. 1430.
Dock, H., Westerly, R. I., assignor to Dock Gas Engine Company, New York, N. Y. Clutch mechanism. No. 901,081; Oct. 13; Sp. p. 2125; Dr. p. 433; Gaz. vol. 136; p. 1430.
Dodge, J. M., Philadelphia, Pa. Chain. No. 901,789; Oct. 20; Sp. p. 3627; Dr. p. 734; Gaz. vol. 136; p. 1699.
Dodson, I. B., Milan, Mo. Folding camp-cupboard. No. 900,495; Oct. 6; Sp. p. 918; Dr. p. 187; Gaz. vol. 136; p. 1212.
Dodsworth, M., assignor to Nelson Baker & Co., Detroit, Mich. Antiseptic organic silver compound. No. 900,835; Oct. 13; Sp. p. 1633; Gaz. vol. 136; p. 1351.
Doherty, H. L., Madison, Wis. Apparatus for spraying liquids. No. 901,597; Oct. 20; Sp. p. 3206; Dr. p. 657; Gaz. vol. 136; p. 1635.
Doland, E. G., Starksboro, Vt. Bob-sled and brake therefor. No. 901,790; Oct. 20; Sp. p. 3628; Dr. p. 735; Gaz. vol. 136; p. 1699.
Dolese, N., Toronto, Ontario, Canada. Vacuum-valve for steam-heating. No. 900,153; Oct. 6; Sp. p. 171; Dr. p. 35; Gaz. vol. 136; p. 1101.
Doll, C. E., *et al.* (See Ramaley, W. H., assignor.)
Doman, L. B., assignor to Amphion Piano Player Company, Elbridge, N. Y. Motor-action for self-playing musical instruments. No. 900,496; Oct. 6; Sp. p. 920; Dr. p. 187; Gaz. vol. 136; p. 1212.
Domecq-Cazaux, H. M., Paris, France. Pumping and compressing apparatus for aeriform fluids. No. 900,988; Oct. 13; Sp. p. 1948; Dr. p. 397; Gaz. vol. 136; p. 1400.

Donahoe, W. Y., Cascade, Iowa. Breech-loading ordnance. No. 901,791; Oct. 20; Sp. p. 3631; Dr. p. 735; Gaz. vol. 136; p. 1700.
Donovan, T. J., East Pittsburg, Pa. Rail-retainer. No. 902,384; Oct. 27; Sp. p. 4840; Dr. p. 979; Gaz. vol. 136; p. 1921.
Donnelly, F. V., Greensburg, Pa. Curtain-pole. No. 900,497; Oct. 6; Sp. p. 924; Dr. p. 188; Gaz. vol. 136; p. 1213.
Doolittle, N. R. (See Brintnall and Doolittle.)
Doran, J., Empire, Mich. Door-hanger. No. 900,270; Oct. 6; Sp. p. 428; Dr. p. 87; Gaz. vol. 136; p. 1138.
Doran, J., *et al.*, administrators. (See Edlund, C. A.)
Doritty, C. M., Grimsby, Ontario, Canada. Axle-bearing. No. 902,058; Oct. 27; Sp. p. 4166; Dr. p. 843; Gaz. vol. 136; p. 1815.
Dörsing, F., Iserlohn, Germany, assignor to Firm of F. Soennecken. Device for grinding writing-pens. No. 900,271; Oct. 6; Sp. p. 430; Dr. pp. 87–8; Gaz. vol. 136; p. 1139.
Doty, A. J., Mount Vernon, N. Y., assignor of one-half to C. Berg, Philadelphia, Pa. Changing batteries in electrically-propelled vehicles. No. 900,359; Oct. 6; Sp. p. 595; Dr. p. 123; Gaz. vol. 136; p. 1166.
Dougan, K., Minneapolis, Minn. Apparatus for dampening wheat and other materials. No. 900,837; Oct. 13; Sp. p. 1636; Dr. p. 331; Gaz. vol. 136; p. 1352.
Dougan, K., Minneapolis, Minn., assignor to Columbian Feed Governor Company. Grain-steamer. No. 900,836; Oct. 13; Sp. p. 1633; Dr. p. 330; Gaz. vol. 136; p. 1352.
Douglass, L. F., Philadelphia, Pa., assignor to Victor Talking Machine Company. Sound-box for talking-machines. No. 902,280; Oct. 27; Sp. p. 4617; Dr. p. 938; Gaz. vol. 136; p. 1886.
Dover, H. W., Northampton, England. Pneumatic tire. No. 900,498; Oct. 6; Sp. p. 925; Dr. p. 188; Gaz. vol. 136; p. 1213.
Dowell, A. E., Washington, D. C., assignor to Duplex Printing Press Company, Battle Creek, Mich. Printing-press No. 901,312; Oct. 13; Sp. p. 2561; Dr. p. 527; Gaz. vol. 136; p. 1503.
Doyle, M. H., Belleplaine, and W. H. Schmitt, St. Paul, Minn. Box. No. 902,483; Oct. 27; Sp. p. 5063; Dr. p. 1024; Gaz. vol. 136; p. 1954.
Dr. Degen & Kuth. (See Jagelki, W., assignor.)
Dräger, J. H., Lübeck, Germany. Electric lamp for helmets and similar head-coverings. No. 902,216; Oct. 27; Sp. p. 4479; Dr. p. 906; Gaz. vol. 136; p. 1865.
Drake, L. W., *et al.* (See Babb, J. M., assignor.)
Draper Company. (See French, F. H., assignor.)
Draper Company. (See Rhoades, A. E., assignor.)
Drury, L. A. (See Pannebaker, G. F., assignor.)
Dubrulle, L., Paris, France. Lubricating-oil distributer. No. 900,154; Oct. 6; Sp. p. 172; Dr. p. 36; Gaz. vol. 136; p. 1101.
Ducharme, E. T., Boston, Mass. Indicator for telephone-calls. No. 901,894; Oct. 20; Sp. p. 3810; Dr. p. 776; Gaz. vol. 136; p. 1732.
Ducousso, T. (See Paul and Ducousso.)
Duerr, C. M., *et al.* (See Felmly, D. F., assignor.)
Duerr, W., deceased; D. F. Felmly, administrator, Akron, assignor to C. M. Duerr and T. Phillips, Cuyahoga Falls, Ohio. Clutch-pulley. No. 901,603; Oct. 20; Sp. p. 3214; Dr. p. 659; Gaz. vol. 136; p. 1637.
Duffy, J. L., *et al.* (See Hand, J. H., assignor.)
Duncan, J. S., assignor to Addressograph Company, Chicago, Ill. Printing-plate. No. 902,281; Oct. 27; Sp. p. 4620; Dr. p. 938; Gaz. vol. 136; p. 1886.
Dunham, B. G., Chicago, Ill., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Automatic telephone-exchange system. No. 901,698; Oct. 20; Sp. p. 3443; Dr. pp. 698–9; Gaz. vol. 136; p. 1670.
Dunkley, M. E., Kalamazoo, Mich., assignor to Hermetic Sealing Company, Wilmington, Del. Tin can. No. 901,429; Oct. 20; Sp. p. 2849; Dr. p. 582; Gaz. vol. 136; p. 1580.
Dunn, J. H., Timothey, La. Cotton chopper and cultivator. No. 902,385; Oct. 27; Sp. p. 4841; Dr. p. 979; Gaz. vol. 136; p. 1921.
Duntley, J. W., *et al.* (See Small, H., assignor.)
Duntley, W. O., *et al.* (See Small, H., assignor.)
Duplex Metals Company. (See Monnot, J. F., assignor.)
Duplex Printing Press Company. (See Dowell, A. E., assignor.)
Dupuis, I., Vancouver, British Columbia, Canada. Bottle-washer. No. 901,160; Oct. 13; Sp. p. 2265; Dr. p. 461; Gaz. vol. 136; p. 1455.
Durand, E. F., Paris, France, assignor to Union Special Sewing Machine Co., Chicago, Ill. Feeding mechanism for sewing-machines. No. 901,792; Oct. 20; Sp. p. 3632; Dr. pp. 735–6; Gaz. vol. 136; p. 1700.
Dure, F. S., Wilmington, Del. Overchecking-bit for bridles. No. 900,712; Oct. 13; Sp. p. 1374; Dr. p. 280; Gaz. vol. 136; p. 1311.
Dye, F. B., Fay, Ohio. Aerial cableway. No. 900,713; Oct. 13; Sp. p. 1375; Dr. p. 280; Gaz. vol. 136; p. 1311.
Dyer, J. W., Detroit, Mich. Shaving-mug. No. 901,082; Oct. 13; Sp. p. 2127; Dr. p. 433; Gaz. vol. 136; p. 1430.
E. Bement's Sons. (See Wells, R. S., assignor.)
E. Howard Watch Company. (See Mehl, W. B., assignor.)
E. Rutzler Co. (See McCrystal, J., assignor.)
E. A. Schwerdtfeger & Co. (See Vollmer, M., assignor.)
E. I. du Pont de Nemours Powder Company. (See Wheeler, P., assignor.)
E. W. Bliss Company. (See Leavitt, F. M., assignor.)
Eady, J. T., Carrollton, Ga. Attachment for road-machines. No. 902,139; Oct. 27; Sp. p. 4323; Dr. p. 876; Gaz. vol. 136; p. 1841.
Eagle Lock Co. (See Murphy, J. J., assignor.)
Eastman Kodak Co. (See Brownell, F. A., assignor.)
Eastwood, B., Jr., and B. Schibler, Jr., assignors to Benjamin Eastwood Company, Paterson, N. J. Quilling-machine. No. 900,155; Oct. 6; Sp. p. 173; Dr. p. 36; Gaz. vol. 136; p. 1101.
Eaton, G. O., *et al.* (See McCarty, W. F. M., assignor.)
Eaton, H. H., and G. Goddu, Winchester, Mass., assignors to United Shoe Machinery Company, Paterson, N. J. Machine for making lacing-hooks. No. 900,918; Oct. 13; Sp. p. 1805; Dr. pp. 365–7; Gaz. vol. 136; p. 1377.
Eberhart, F., New York, N. Y. Holder for disk graphophone or phonograph records. No. 900,714; Oct. 13; Sp. p. 1377; Dr. p. 281; Gaz. vol. 136; p. 1311.
Ebert, H. C., Los Angeles, Cal. Skillet-support. No. 901,326; Oct. 20; Sp. p. 2601; Dr. p. 535; Gaz. vol. 136; p. 1543.
Eby, J. M., Williston, N. D. Carpet-stretcher. No. 901,231; Oct. 13; Sp. p. 2387; Dr. p. 488; Gaz. vol. 136; p. 1476.
Eckhard, A., Jr., New York, N. Y. Shoe-protector. No. 900,499; Oct. 6; Sp. p. 928; Dr. p. 189; Gaz. vol. 136; p. 1213.
Economy Electric Company. (See Hertzberg and Wohl, assignors.)
Eddy, A. G., and G. J. Hobson, Mount Vernon, Wash. Farm-gate. No. 901,161; Oct. 13; Sp. p. 2266; Dr. pp. 461–2; Gaz. vol. 136; p. 1455.
Eddy, G. B., Chicago, Ill. Combined check and cut-off valve for locomotives. No. 900,989; Oct. 13; Sp. p. 1950; Dr. p. 397; Gaz. vol. 136; p. 1400.
Eddy, J. A. (See Stevens, F. P., assignor.)
Edewaard, C., Paterson, N. J. Optometer. No. 900,715; Oct. 13; Sp. p. 1379; Dr. p. 281; Gaz. vol. 136; p. 1312.
Edgar, E. F., Woodbridge, N. J. Rotary steam-engine. No. 902,059; Oct. 27; Sp. p. 4167; Dr. pp. 843–5; Gaz. vol. 136; p. 1815.
Edlund, C. A., deceased; H. Edlund and J. Doran, administrators; said Doran assignor of one-half to E. Bernstrom, Providence, R. I. Flexible neck-bearing for centrifugal separators. No. 902,282; Oct. 27; Sp. p. 4621; Dr. p. 939; Gaz. vol. 136; p. 1887.
Edlund, H., *et al.*, administrators. (See Edlund, C. A.)
Edman, J., assignor of one-half to C. Dahl, A. M. Hovland, and E. G. Dahl, Minneapolis, Minn. Grain-door for cars. No. 901,959; Oct. 27; Sp. p. 3950; Dr. pp. 806–7; Gaz. vol. 136; p. 1784.
Edmunds, F. W., West Nyack, N. Y. Switch-lamp holder. No. 901,283; Oct. 13; Sp. p. 2508; Dr. p. 514; Gaz. vol. 136; p. 1494.
Edmunds, F. W., West Nyack, N. Y. Signal-lamp bracket. No. 901,284; Oct. 13; Sp. p. 2510; Dr. p. 515; Gaz. vol. 136; p. 1494.
Edtbauer, P., Chicago, Ill. Automatic weighing apparatus. No. 900,990; Oct. 13; Sp. p. 1952; Dr. p. 398; Gaz. vol. 136; p. 1401.
Edwards, N. C., Buffalo, N. Y. Skirt-supporter. No. 901,327; Oct. 20; Sp. p. 2602; Dr. p. 535; Gaz. vol. 136; p. 1543.
Edwards, O. M., Syracuse, N. Y. Window. No. 902,060; Oct. 27; Sp. p. 4171; Dr. p. 845; Gaz. vol. 136; p. 1815.
Edwin B. Stimpson Company. (See Stimpson, E. B., assignor.)
Egan, J. W., Cleveland, Ohio. Hopper-bottom catch. No. 900,672; Oct. 6; Sp. p. 1289; Dr. p. 263; Gaz. vol. 136; p. 1271.
Egbert, F. L., Manistee, Mich. Curtain-fixture. No. 902,386; Oct. 27; Sp. p. 4843; Dr. p. 979; Gaz. vol. 136; p. 1921.
Egeness, A. A., Room, Minn. Loading and unloading device. No. 902,217; Oct. 27; Sp. p. 4480; Dr. p. 907; Gaz. vol. 136; p. 1865.
Eggl, G., Toledo, Ohio. Detachable auxiliary holder for shelves and tables. No. 901,598; Oct. 20; Sp. p. 3208; Dr. p. 657; Gaz. vol. 136; p. 1636.
Ehlers, G. C., Milwaukee, Wis. Smoke-pipe holder. No. 901,328; Oct. 20; Sp. p. 2604; Dr. p. 535; Gaz. vol. 136; p. 1544.
Ehret, C. D., Ardmore, assignor to W. L. D'Olier, Philadelphia, Pa. Centrifugal machine. No. 901,329; Oct. 20; Sp. p. 2605; Dr. p. 536; Gaz. vol. 136; p. 1544.
Eisenlohr, H., Karlsruhe, Germany. Producing a new ceramic mass and manufacturing pottery. No. 901,599; Oct. 20; Sp. p. 3210; Gaz. vol. 136; p. 1636.
Eklund, J., assignor to St. Joseph Iron Works, St. Joseph, Mo. Link-belt attachment. No. 902,524; Oct. 27; Sp. p. 5164; Dr. p. 1045; Gaz. vol. 136; p. 1960.
Eldred, B. E., Bronxville, N. Y. Producing gas. No. 901,232; Oct. 13; Sp. p. 2388; Dr. p. 489; Gaz. vol. 136; p. 1476.
Electric Controller and Supply Company. (See Hall, J. H., assignor.)
Electric Controller & Supply Company. (See Wright and Frost, assignors.)
Electric Manufacturing Co. (See Blanchard, G. N., assignor.)
Electric Railway Improvement Company. (See Cleveland, W. B., assignor.)

Ellenwood, S. N., Jones, Okla. Car-replacer. No. 900,838; Oct. 13; Sp. p. 1641; Dr. p. 332; Gaz. vol. 136; p. 1352.
Ellingson, M., Brooten, Minn. Lock-equipped whip-socket. No. 902,218; Oct. 27; Sp. p. 4481; Dr. p. 907; Gaz. vol. 136; p. 1865.
Ellis-Chalmers Company. (See Ellis, C., assignor.)
Ellis, C., White Plains, N. Y., assignor to Ellis-Chalmers Company. Varnish composition. No. 900,687; Oct. 6; Sp. p. 1326; Gaz. vol. 136; p. 1276.
Ellis, C., White Plains, N. Y., assignor to Fertilizer Products Company, Jersey City, N. J. Insecticide and preparation thereof. No. 901,793; Oct. 20; Sp. p. 3637; Gaz. vol. 136; p. 1700.
Ellis, C., White Plains, assignor to Chadeloid Chemical Company, New York, N. Y. Paint or varnish remover. No. 901,895; Oct. 20; Sp. p. 3812; Gaz. vol. 136; p. 1732.
Ellis, C., Larchmont, N. Y., assignor, by mesne assignment, to Fulton Chemical Company. Insectifuge. No. 901,083; Oct. 13; Sp. p. 2128; Gaz. vol. 136; p. 1430.
Ellis, F. I., assignor to United Engineering & Foundry Company, Pittsburg, Pa. Universal rolling-mill. No. 901,233; Oct. 13; Sp. p. 2391; Dr. pp. 489–90; Gaz. vol. 136; p. 1477.
Ellsworth, J. M. (See Fay and Ellsworth.)
Elshoff, B., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Rotor construction. No. 900,839; Oct. 13; Sp. p. 1642; Dr. pp. 332–3; Gaz. vol. 136; p. 1353.
Elshoff, H. F., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Motor-controller. No. 902,061; Oct. 27; Sp. p. 4175; Dr. p. 845; Gaz. vol. 136; p. 1816.
Elzy, J. C., and E. E. Anderson, St. Paul, Minn. Cable or rope guide. No. 901,794; Oct. 20; Sp. p. 3641; Dr. p. 736; Gaz. vol. 136; p. 1701
Emeis, H. T., Salt Lake City, Utah. Refunding attachment for cash-registers. No. 900,991; Oct. 13; Sp. p. 1956; Dr. pp. 398–9; Gaz. vol. 136; p. 1401.
Emery, E. A., Galva, Ill. Tripod for supporting lighting-fixtures. No. 901,795; Oct. 20; Sp. p. 3641; Dr. p. 736; Gaz. vol. 136; p. 1701.
Emery, W. S. (See Geary, G. A., assignor.)
Emmerson, M. E., *et al.* (See Norman, J. R., assignor.)
Emmet, W. L. R., Schenectady, N. Y., assignor to General Electric Company. Turbine bucket-wheel. No. 901,430; Oct. 20; Sp. p. 2850; Dr. p. 582; Gaz. vol. 136; p. 1580.
Emmet, W. L. R., and O. Junggren, Schenectady, N. Y., assignors to General Electric Company. Governor for turbines. No. 902,219; Oct. 27; Sp. p. 4483; Dr. pp. 908–9; Gaz. vol. 136; p. 1866.
Emmet, W. L. R., and O. Junggren, Schenectady, N. Y., assignors to General Electric Company. Governing mechanism. No. 902,220; Oct. 27; Sp. p. 4486; Dr. p. 910; Gaz. vol. 136; p. 1866.
Emory, S. W., Versailles, Mo. Blacking-brush kit. No. 901,600; Oct. 20; Sp. p. 3211; Dr. p. 658; Gaz. vol. 136; p. 1636.
Empire Oil Engine Syndicate Limited. (See Clay, J., assignor.)
Enell, O. E., Chicago, Ill., assignor to L. J. Lenox, Detroit, Mich. Bed. No. 900,156; Oct. 6; Sp. p. 175; Dr. pp. 36–7; Gaz. vol. 136; p. 1101.
Enell, O. E., assignor to L. J. Lenox, Detroit, Mich. Folding bed. No. 900,157; Oct. 6; Sp. p. 177; Dr. p. 37; Gaz. vol. 136; p. 1102.
English, N., Detroit, Mich. Boiler-feeder. No. 902,283; Oct. 27; Sp. p. 4623; Dr. p. 939; Gaz. vol. 136; p. 1887.
Enochs, C. I., New York, N. Y. Amusement device. No. 901,330; Oct. 20; Sp. p. 2607; Dr. p. 536; Gaz. vol. 136; p. 1544.
Erickson, M. A., Minneapolis, Minn. Double-acting spring-hinge. No. 901,796; Oct. 20; Sp. p. 3643; Dr. pp. 736–7; Gaz. vol. 136; p. 1701.
Ericson, G., Sacred Heart, Minn. Horse-releaser. No. 901,601; Oct. 20; Sp. p. 3211; Dr. p. 658; Gaz. vol. 136; p. 1636.
Ericsson, A. J., assignor to Aktiebolaget Separator, Stockholm, Sweden. Centrifugal machine. No. 900,089; Oct. 6; Sp. p. 35; Dr. p. 6; Gaz. vol. 136; p. 1080.
Erwood, J., Chicago, Ill. Relief-valve. No. 901,084; Oct. 13; Sp. p. 2128; Dr. p. 434; Gaz. vol. 136; p. 1431.
Eschellmann, G., St. Petersburg, Russia. Purifying gases containing sulfur dioxid. No. 900,500; Oct. 6; Sp. p. 930; Dr. p. 189; Gaz. vol. 136; p. 1213.
Escher, J., Indianapolis, Ind. Wind-actuated ventilator. No. 901,085; Oct. 13; Sp. p. 2131; Dr. p. 434; Gaz. vol. 136; p. 1431.
Estep, E., Sandwich, Ill. Molding apparatus. No. 902,062; Oct. 27; Sp. p. 4177; Dr. p. 846; Gaz. vol. 136; p. 1816.
Etling, D. H. (See Gardner, F. B., assignor.)
Eubanks, J. A., Greenfield, Ohio. Pencil-holder. No. 900,716; Oct. 13; Sp. p. 1382; Dr. p. 282; Gaz. vol. 136; p. 1312.
Euclectric Co. (See Warrell, F. G., assignor.)
Evans, F., Minneapolis, Minn. Attachment for plows. No. 900,992; Oct. 13; Sp. p. 1959; Dr. p. 399; Gaz. vol. 136; p. 1402.
Evans Stamping & Plating Company. (See Tuttle, H. A., assignor.)
Everett, E. A., Detroit, Mich. Electric railway-signal. No. 901,331; Oct. 20; Sp. p. 2610; Dr. pp. 536–7; Gaz. vol. 136; p. 1545.
Everette, W. E., Tacoma, Wash. Insulating material. No. 901,332; Oct. 20; Sp. p. 2613; Gaz. vol. 136; p. 1545.
Excelsior Garden Tool Company. (See Baumgartner, E., assignor.)
Excelsior Stove & Manufacturing Company. (See Ohnemus, A., assignor.)
Eyles, A. G., Cedar Rapids, Iowa. Chair. No. 901,285; Oct. 13; Sp. p. 2512; Dr. p. 515; Gaz. vol. 136; p. 1495.
Fairbanks, Morse & Company. (See Kennedy, T. C., assignor.)
Fairchild, W. H. (See Ferres and Fairchild.)
Fairhurst, I. J. D., Orfordville, Wis. Cover for pneumatic tires. No. 901,527; Oct. 20; Sp. p. 3071; Dr. p. 628; Gaz. vol. 136; p. 1613.
Fairhurst, I. J. D., Orfordville, Wis. Antislipping tire-cover. No. 901,528; Oct. 20; Sp. p. 3072; Dr. p. 628; Gaz. vol. 136; p. 1614.
Fairhurst, I. J. D., Orfordville, Wis. Tire-cover and fastening means therefor. No. 901,602; Oct. 20; Sp. p. 3213; Dr. p. 658; Gaz. vol. 136; p. 1637.
Falk, F. A., and H. C. Anderson, Stacyville, Iowa. Gang-plow. No. 900,919; Oct. 13; Sp. p. 1811; Dr. p. 367; Gaz. vol. 136; p. 1378.
Falkenrath, A., assignor to Racine Metal Stamping Company, Racine, Wis. Screen-door spring-hinge. No. 900,501; Oct. 6; Sp. p. 931; Dr. p. 189; Gaz. vol. 136; p. 1213.
Fallin, G. W., assignor to M. M. Freed, Montgomery, Ala. Sad-iron heater. No. 901,797; Oct. 20; Sp. p. 3645; Dr. p. 737; Gaz. vol. 136; p. 1702.
Fanton, H. B., Danbury, Conn. Riddle for fur-blowing machines. No. 900,993; Oct. 13; Sp. p. 1961; Dr. p. 399; Gaz. vol. 136; p. 1402.
Farbenfabriken vorm. Friedr. Bayer & Co. (See Heidenreich, C., assignor.)
Farbenfabriken vorm. Friedr. Bayer & Co. (See Lommel, W., assignor.)
Farbenfabriken vorm. Friedr. Bayer & Co. (See Toepfer, H., assignor.)
Farbenfabriken vorm. Friedr. Bayer & Co. (See Volkmann, P., assignor.)
Farbwerke vorm. Meister Lucius & Brüning. (See Schmidt and Schwab, assignors.)
Farnum, W. C., Arlington, Vt., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Type-writing machine. No. 902,525; Oct. 27; Sp. p. 5164; Dr. pp. 1046–7; Gaz. vol. 136; p. 1969.
Farquhar, E. H., Schenectady, N. Y., assignor to General Electric Company. Manufacturing turbine-buckets. No. 901,960; Oct. 27; Sp. p. 3952; Dr. p. 807; Gaz. vol. 136; p. 1784.
Farquhar, E. H., Schenectady, N. Y., assignor to General Electric Company. Bucket for turbines. No. 901,961; Oct. 27; Sp. p. 3955; Dr. p. 808; Gaz. vol. 136; p. 1785.
Farquhar, E. H., Schenectady, N. Y., assignor to General Electric Company. Apparatus for manufacturing turbine-buckets. No. 902,520; Oct. 27; Sp. p. 5179; Dr. p. 1047; Gaz. vol. 136; p. 1970.
Farr, J. D., Monroe, Ga. Destructible link or automatic fire-extinguisher. No. 900,673; Oct. 6; Sp. p. 1290; Dr. p. 263; Gaz. vol. 136; p. 1271.
Farr, J. D., Monroe, Ga. Automatic fire-extinguishing apparatus. No. 900,840; Oct. 13; Sp. p. 1646; Dr. p. 333; Gaz. vol. 136; p. 1353.
Farrell, B. J. (See Quackenboss and Farrell.)
Farrell, W. J., Johnstown, N. Y. Cigar-box and lid. No. 902,140; Oct. 27; Sp. p. 4325; Dr. p. 876; Gaz. vol. 136; p. 1841.
Farwell, G. D. (See Gravell and Farwell.)
Farwell, P. C. (See Gravell and Farwell, assignors.)
Fay, T. J., New York, N. Y., and J. M. Ellsworth, Bernardsville, N. J. Spring-support. No. 901,162; Oct. 13; Sp. p. 2267; Dr. p. 462; Gaz. vol. 136; p. 1455.
Feaster, E. B., Kansas City, Mo. Cable fastener or clamp. No. 900,717; Oct. 13; Sp. p. 1384; Dr. p. 282; Gaz. vol. 136; p. 1312.
Fechner, A. H. (See Fechner, W. and A. H.)
Fechner, W. and A. H., Goliad, Tex. Block-signaling device. No. 900,360; Oct. 6; Sp. p. 597; Dr. pp. 123–4; Gaz. vol. 136; p. 1167.
Federal Cigar Company. (See Lipscomb and Andrews, assignors.)
Fegley, T. J., assignor to North Bro's M'f'g Co., Philadelphia, Pa. Detachable-blade screw-driver. No. 902,387; Oct. 27; Sp. p. 4844; Dr. p. 980; Gaz. vol. 136; p. 1921.
Felmly, D. F., administrator. (See Duerr, W.)
Felix, A. A., New York, N. Y. Graphoscope. No. 902,063; Oct. 27; Sp. p. 4179; Dr. p. 846; Gaz. vol. 136; p. 1817.
Fenderson, J., Owego, N. Y. Metal and wood combined railway-tie. No. 900,841; Oct. 13; Sp. p. 1649; Dr. p. 334; Gaz. vol. 136; p. 1354.
Fenner, M. E., assignor of one-half to T. L. Hamilton, Durand, Ill. Concrete construction. No. 901,798; Oct. 20; Sp. p. 3646; Dr. p. 737; Gaz. vol. 136; p. 1702.
Fenwick, T., New York, N. Y. Excavator. No. 901,431; Oct. 20; Sp. p. 2853; Dr. pp. 582–3; Gaz. vol. 136; p. 1581.
Ferber, P., assignor to Keuffel & Esser Company, Hoboken, N. J. Tape-reel. No. 901,896; Oct. 20; Sp. p. 3813; Dr. p. 777; Gaz. vol. 136; p. 1732.

Ferber, P., assignor to Keuffel & Esser Company, Hoboken, N. J. Tape-reel. No. 901,897; Oct. 20; Sp. p. 3815; Dr. p. 777; Gaz. vol. 136; p. 1733.
Ferchland, P., Berlin, and J. Nussbaum, Charlottenburg, Germany. Electrode for electrolytic purposes. No. 900,502; Oct. 6; Sp. p. 933; Dr. p. 189; Gaz. vol. 136; p. 1214.
Ferguson, J. H., assignor to Lovejoy Company, New York, N. Y. Hydraulic press. No. 901,086; Oct. 13; Sp. p. 2132; Dr. p. 434; Gaz. vol. 136; p. 1431.
Ferranti, S. Z. de, Grindleford, near Sheffield, England. Turbine. No. 901,931; Oct. 20; Sp. p. 3883; Dr. pp. 792–3; Gaz. vol. 136; p. 1744.
Ferreres, J., Habana, Cuba. Calendar. No. 902,484; Oct. 27; Sp. p. 5065; Dr. p. 1024; Gaz. vol. 136; p. 1954.
Ferres, J. T., and W. H. Fairchild, assignors of one-half to J. W. Sefton Manufacturing Company, Anderson, Ind. Paper box. No. 901,286; Oct. 13; Sp. p. 2514; Dr. p. 516; Gaz. vol. 136; p. 1495.
Ferris, H. J. (See Ferris, H. L. and H. J.)
Ferris, H. L. and H. J., assignors to Hunt, Helm, Ferris & Company. Track for door-hangers. No. 902,221; Oct. 27; Sp. p. 4500; Dr. p. 910; Gaz. vol. 136; p. 1866.
Ferriss, E., Napoleon, N. D. Sleigh. No. 901,604; Oct. 20; Sp. p. 3215; Dr. p. 659; Gaz. vol. 136; p. 1637.
Ferriss, E., Napoleon, N. D. Machine for plowing or otherwise cultivating the soil. No. 901,605; Oct. 20; Sp. p. 3216; Dr. pp. 659–60; Gaz. vol. 136; p. 1637.
Ferry, L., and F. Di Gioia, Derby, Conn. Plow. No. 902,284; Oct. 27; Sp. p. 4624; Dr. p. 939; Gaz. vol. 136; p. 1887.
Fertilizer Products Company. (See Ellis, C., assignor.)
Fetherolf, C. W., Binghamton, N. Y. Dish-washer. No. 902,064; Oct. 27; Sp. p. 4180; Dr. p. 847; Gaz. vol. 136; p. 1817.
Fetzer, A. H., assignor of one-eighth to G. M. and one-third to M. E. Shumaker, Galion, Ohio. Driving mechanism for swinging axles. No. 900,503; Oct. 6; Sp. p. 936; Dr. p. 190; Gaz. vol. 136; p. 1214.
Fetzer, J. M., Madison, Wis. Mitering-machine. No. 901,699; Oct. 20; Sp. p. 3453; Dr. p. 700; Gaz. vol. 136; p. 1671.
Fichte, M. E. (See Alden, J. S., assignor.)
Fickert, G. R., Jersey City, N. J. Gas-lamp. No. 901,606; Oct. 20; Sp. p. 3219; Dr. p. 660; Gaz. vol. 136; p. 1638.
Field, A. B., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Dynamo-electric machine. No. 902,065; Oct. 27; Sp. p. 4182; Dr. p. 847; Gaz. vol. 136; p. 1817.
Fillet, J. E. W., Paris, France. Anchoring device for agricultural tractors or the like. No. 901,799; Oct. 20; Sp. p. 3646; Dr. p. 738; Gaz. vol. 136; p. 1702.
Filson, I., Springfield, Ohio. Adjustable bracket. No. 901,700; Oct. 20; Sp. p. 3455; Dr. p. 700; Gaz. vol. 136; p. 1671.
Finch, A. R. (See Finch, R. G., assignor.)
Finch, D. H., Manchester, Iowa. Lawn-trimming implement. No. 902,141; Oct. 27; Sp. p. 4327; Dr. p. 876; Gaz. vol. 136; p. 1841.
Finch, R. G., assignor of one-half to A. E. Finch, Plainville, Kans. Windmill. No. 900,504; Oct. 6; Sp. p. 937; Dr. p. 190; Gaz. vol. 136; p. 1215.
Finfrock, W. H., Chicago, Ill. Aluminium-solder. No. 901,607; Oct. 20; Sp. p. 3222; Gaz. vol. 136; p. 1638.
Fink, G., Northfield, Minn. Carrier. No. 901,234; Oct. 13; Sp. p. 2392; Dr. p. 490; Gaz. vol. 136; p. 1477.
Fish, J., assignor of three-fourths to D. D. and C. M. Frick, C. D. Lennox, and M. Strickler, South Bend, Ind. Machine for constructing hollow concrete building-blocks. No. 900,272; Oct. 6; Sp. p. 432; Dr. p. 88; Gaz. vol. 136; p. 1139.
Fish, M., Central Falls, R. I. Brushing-machine for loom-harness. No. 900,994; Oct. 13; Sp. p. 1962; Dr. pp. 399–400; Gaz. vol. 136; p. 1402.
Fisher, C. W. (See Fry and Fisher.)
Fisher, D. G. (See Callahan and Fisher.)
Fisher, W. C., assignor to Russell Manufacturing Company, Middletown, Conn. Suspenders. No. 900,090; Oct. 6; Sp. p. 37; Dr. pp. 6–7; Gaz. vol. 136; p. 1080.
Fisher, W. C., assignor to Russell Manufacturing Company, Middletown, Conn. Cartridge-belt. No. 900,091; Oct. 6; Sp. p. 38; Dr. p. 7; Gaz. vol. 136; p. 1080.
Fisher, W. C., assignor to Russell Manufacturing Company, Middletown, Conn. Cartridge-belt. No. 900,092; Oct. 6; Sp. p. 39; Dr. p. 7; Gaz. vol. 136; p. 1081.
Fisher, W. C., assignor to Russell Manufacturing Company, Middletown, Conn. Cartridge-pocket. No. 900,093; Oct. 6; Sp. p. 40; Dr. p. 7; Gaz. vol. 136; p. 1081.
Fisher, W. C., assignor to Russell Manufacturing Company, Middletown, Conn. Cartridge-belt. No. 900,094; Oct. 6; Sp. p. 41; Dr. p. 8; Gaz. vol. 136; p. 1081.
Fisher, W. C., assignor to Russell Manufacturing Company, Middletown, Conn. Cartridge-pocket. No. 900,095; Oct. 6; Sp. p. 42; Dr. p. 8; Gaz. vol. 136; p. 1082.
Fisher, W. C., assignor to Russell Manufacturing Company, Middletown, Conn. Cartridge-pocket. No. 900,096; Oct. 6; Sp. p. 43; Dr. p. 8; Gaz. vol. 136; p. 1082.
Fitzgerald, J. E., Providence, R. I. Finger-ring. No. 901,333; Oct. 20; Sp. p. 2614; Dr. p. 537; Gaz. vol. 136; p. 1545.
Fitzwater, J. E. (See Kemp, Loomis, and Fitzwater.)
Flagg, F. F., and G. W. Smith, assignors to J. A. Sherman, Worcester, Mass. Envelop-machine. No. 902,222; Oct. 27; Sp. p. 4501; Dr. pp. 910–11; Gaz. vol. 136; p. 1867.
Flandreau, E. L., Port Chester, N. Y. Griddle. No. 901,087; Oct. 13; Sp. p. 2134; Dr. p. 435; Gaz. vol. 136; p. 1431.
Flanegin, F. A., Chautauqua, N. Y. Device for cleaning oil-wells. No. 901,287; Oct. 13; Sp. p. 2517; Dr. pp. 516–17; Gaz. vol. 136; p. 1495.
Flautt, M. A. (See Clymans and Flautt.)
Flavell, D. A., Jersey City, N. J. Automatic weighing-machine. No. 902,485; Oct. 27; Sp. p. 5066; Dr. pp. 1025–6; Gaz. vol. 136; p. 1955.
Fleming, R., and C. A. B. Halvorson, Jr., Lynn, Mass., assignors to General Electric Company. Arc-lamp. No. 900,718; Oct. 13; Sp. p. 1386; Dr. p. 282; Gaz. vol. 136; p. 1313.
Fleming, R., Lynn, Mass., assignor to General Electric Company. Arc-lamp headlight. No. 901,432; Oct. 20; Sp. p. 2855; Dr. pp 583–4; Gaz. vol. 136; p. 1581.
Fleming, R., and C. A. B. Halvorson, Jr., Lynn, Mass., assignors to General Electric Company. Arc-lamp. No. 901,529; Oct. 20; Sp. p. 3073; Dr. p. 628; Gaz. vol. 136; p. 1614.
Flentje, W., Muskegon, Mich. Furrowing-machine. No. 902,388; Oct. 27; Sp. p. 4845; Dr. p. 980; Gaz. vol. 136; p. 1922.
Flichtner, S. E., Englewood, N. J., assignor to Cooper Hewitt Electric Company, New York, N. Y. Adjustable support for vapor-lamps. No. 900,719; Oct. 13; Sp. p. 1389; Dr. p. 283; Gaz. vol. 136; p. 1313.
Flichtner, S. E., Englewood, N. J., assignor to Cooper Hewitt Electric Company, New York, N. Y. Adjustable support for vapor-lamps. No. 901,288; Oct. 13; Sp. p. 2519; Dr. p. 517; Gaz. vol. 136; p. 1496.
Flipse, L. F., Sheboygan, Wis. Packing-pad. No. 901,334; Oct. 20; Sp. p. 2617; Dr. p. 537; Gaz. vol. 136; p. 1546.
Floor Scraping Machine Company. (See Murdock, E. F., assignor.)
Florence Manufacturing Company. (See Look, F. N., assignor.)
Flowers, J. C., St. Joseph, Mo. Washing-machine. No. 900,505; Oct. 6; Sp. p. 939; Dr. p. 191; Gaz. vol. 136; p. 1215.
Flynn, B. A., New York, and F. C. Rothenberger, Brooklyn, N. Y. Fishing-reel. No. 900,842; Oct. 13; Sp. p. 1650; Dr. p. 334; Gaz. vol. 136; p. 1354.
Flynn, M., Paterson, N. J. Safety-razor. No. 901,530; Oct. 20; Sp. p. 3077; Dr. p. 629; Gaz. vol. 136; p. 1614.
Focht, G., Hoboken, N. J. Hoisting-bucket. No. 902,223; Oct. 27; Sp. p. 4504; Dr. p. 911; Gaz. vol. 136; p. 1867.
Fodor, A., Budapest, Austria-Hungary. Apparatus for connecting conducting and other wires. No. 902,389; Oct. 27; Sp. p. 4846; Dr. p. 980; Gaz. vol. 136; p. 1922.
Folberth, F. G. (See Folberth, W. and F. G.)
Folberth, W. and F. G., Cleveland, Ohio. Quick-release nut. No. 900,843; Oct. 13; Sp. p. 1651; Dr. p. 334; Gaz. vol. 136; p. 1354.
Foley, A. G., assignor of one-half to J. R. Carroll, East Hartford, Conn. Detector-bar for railway-switches. No. 902,066; Oct. 27; Sp. p. 4184; Dr. p. 847; Gaz. vol. 136; p. 1817.
Foley, P. F., assignor of one-half to C. W. Hoffman, New York, N. Y. Safety mechanism for elevators. No. 900,158; Oct. 6; Sp. p. 180; Dr. p. 38; Gaz. vol. 136; p. 1102.
Follmer, J., and J. Wlacofsky, Denver, Colo. Swing. No. 902,486; Oct. 27; Sp. p. 5070; Dr. p. 1026; Gaz. vol. 136; p. 1955.
Fomm, G., Leipzig, Reudnitz, Germany. Paper-cutting machine. No. 901,088; Oct. 13; Sp. p. 2135; Dr. p. 435; Gaz. vol. 136; p. 1432.
Footitt, W. J., Carrington, N. D., assignor to Advance Thresher Co., Battle Creek, Mich. Band-cutter and feeder. No. 902,391; Oct. 27; Sp. p. 4849; Dr. p. 981; Gaz. vol. 136; p. 1923.
Forbes, J. S., Philadelphia, Pa. Blow-off valve. No. 900,506; Oct. 6; Sp. p. 940; Dr. pp. 191–2; Gaz. vol. 136; p. 1215.
Forcier, S. P., Detroit, Mich. Planter. No. 901,235; Oct. 13; Sp. p. 2395; Dr. p. 491; Gaz. vol. 136; p. 1478.
Ford, W. C., Lawrence, Mass. Shoe-blacking machine. No. 902,390; Oct. 27; Sp. p. 4848; Dr. p. 981; Gaz. vol. 136; p. 1922.
Foreman, D. H. (See Herr, Groves, and Foreman.)
Forsyth Brothers Company. (See Gallagher, F. S., assignor.)
Foss, A., and L. Coolidge, Montesano, Wash. Log-turner. No. 902,142; Oct. 27; Sp. p. 4328; Dr. pp. 876–7; Gaz. vol. 136; p. 1841.
Foster, J. A., Lowell, Mass. Heel for boots and shoes. No. 900,920; Oct. 13; Sp. p. 1815; Dr. p. 368; Gaz. vol. 136; p. 1378.
Foster, J. E., Portland, Me. Diagonal ruling attachment for paper-ruling machines. No. 900,674; Oct. 6; Sp. p. 1292; Dr. p. 264; Gaz. vol. 136; p. 1272.
Fouillaron, G., Paris, France. Belt. No. 902,224; Oct. 27; Sp. p. 4505; Dr. p. 112; Gaz. vol. 136; p. 1867.
Fourcault, E., Lodelinsart, Belgium. Apparatus for the manufacture of glass sheets or plates. No. 901,800; Oct. 20; Sp. p. 3646; Dr. pp. 738–9; Gaz. vol. 136; p. 1702.

Fowler, J. N., assignor of one-half to J. Waldo, Washington, D. C. Switch-throwing mechanism. No. 901,089; Oct. 13; Sp. p. 2136; Dr. p. 436; Gaz. vol. 136; p. 1432.
Fox, C. W., Boston, Mass. Liquid-receptacle. No. 901,433; Oct. 20; Sp. p. 2858; Dr. p. 584; Gaz. vol. 136; p. 1581.
Fox, P. C., McComb, Okla. Check-row corn-planter. No. 900,361; Oct. 6; Sp. p. 601; Dr. pp. 124–5; Gaz. vol. 136; p. 1167.
Francis, G. A., assignor of one-half to R. S. Green, Westfield, N. J. Pillow-sham holder. No. 900,507; Oct. 6; Sp. p. 945; Dr. p. 192; Gaz. vol. 136; p. 1216.
Francis, G. A., assignor of one-half to R. S. Green, Westfield, N. J. Pillow-sham holder. No. 900,508; Oct. 6; Sp. p. 947; Dr. p. 192; Gaz. vol. 136; p. 1216.
Frank, M., *et al.* (See Loomis, H. T., assignor.)
Frank W. Whitcher Company. (See Whitcher, F. W., assignor.)
Franks, O. G., assignor to Seng Company, Chicago, Ill. Extension-table slide. No. 900,509; Oct. 6; Sp. p. 948; Dr. pp. 192–3; Gaz. vol. 136; p. 1216.
Franks, O. G., assignor to Seng Company, Chicago, Ill. Extension-table slide. No. 902,392; Oct. 27; Sp. p. 4851; Dr. p. 981; Gaz. vol. 136; p. 1923.
Frantz, W. W., Waynesboro, Pa. Combined poultry-roost and vermin-trap. No. 902,393; Oct. 27; Sp. p. 4853; Dr. p. 982; Gaz. vol. 136; p. 1923.
Fraser Machine & Manufacturing Co. (See Fraser, W. F., assignor.)
Fraser, W. F., Dorchester, Mass., assignor to Fraser Machine & Manufacturing Co. Device for feeding lacing-hooks and the like. No. 901,434; Oct. 20; Sp. p. 2860; Dr. p. 584; Gaz. vol. 136; p. 1582.
Frear, J. B., Excelsior, Minn. Combined bag-holding rack and twine-holder. No. 900,362; Oct. 6; Sp. p. 603; Dr. p. 125; Gaz. vol. 136; p. 1168.
Fredericks, E. M., Chicago, Ill. Artificial tooth-crown and securing means therefor. No. 900,363; Oct. 6; Sp. p. 605; Dr. p. 125; Gaz. vol. 136; p. 1168.
Fredrickson, C., Cameron, Wis. Automatic trip for conveyers. No. 901,163; Oct. 13; Sp. p. 2269; Dr. p. 462; Gaz. vol. 136; p. 1456.
Freebey, M. P. (See Wettel and Freebey.)
Freeble, T. M., Latrobe, Pa. Electric railway signal system. No. 900,273; Oct. 6; Sp. p. 434; Dr. pp. 89–90; Gaz. vol. 136; p. 1139.
Freed, M. M. (See Fallin, G. W., assignor.)
Freeman, W., New York, N. Y. Suspenders. No. 900,921; Oct. 13; Sp. p. 1816; Dr. p. 368; Gaz. vol. 136; p. 1378.
Freeman, W., *et al.* (See Jiminez, A. L., assignor.)
French, F. H., assignor to Draper Company, Hopedale, Mass. Safety-coupling for driving and driven members. No. 902,527; Oct. 27; Sp. p. 5182; Dr. p. 1047; Gaz. vol. 136; p. 1970.
French, L. W., Holton, Kans. Rain-water filter. No. 900,510; Oct. 6; Sp. p. 951; Dr. p. 193; Gaz. vol. 136; p. 1217.
Freund, M., *et al.* (See Busch, A. A., assignor.)
Frey, G. G., Floyd, N. Y. Rotary rocking-chair. No. 901,090; Oct. 13; Sp. p. 2140; Dr. p. 436; Gaz. vol. 136; p. 1433.
Frey, H. J., Pittsburg, Pa. Window-chair. No. 901,801; Oct. 20; Sp. p. 3654; Dr. p. 740; Gaz. vol. 136; p. 1703.
Frick, C. M., *et al.* (See Fish, J., assignor.)
Frick, D. D., *et al.* (See Fish, J., assignor.)
Friedel, A. H., Cleveland, Ohio. Flying-machine. No. 900,844; Oct. 13; Sp. p. 1653; Dr. p. 334; Gaz. vol. 136; p. 1354.
Friedrich, P. O. E., New York, N. Y., and J. G. Lyman, Philadelphia, Pa., assignors to Caloris Manufacturing Company. Vacuum-bottle No. 902,528; Oct. 27; Sp. p. 5183; Dr. p. 1048; Gaz. vol. 136; p. 1970.
Friend, J. E., Annandale, Sydney, New South Wales, Australia. Rotary engine. No. 902,225; Oct. 27; Sp. p. 4506; Dr. pp. 912–13; Gaz. vol. 136; p. 1868.
Frigone, S., Chicago, Ill. Weather-strip. No. 902,143; Oct. 27; Sp. p. 4330; Dr. p. 877; Gaz. vol. 136; p. 1842.
Frisse, H. J., near Pierron, Ill. Potato-digger. No. 901,608; Oct. 20; Sp. p. 3222; Dr. p. 660; Gaz. vol. 136; p. 1638.
Fritsche, F., assignor to Stolle and Kopke, Rumburg, Austria-Hungary. Production of a soluble gum. No. 900,274; Oct. 6; Sp. p. 438; Gaz. vol. 136; p. 1140.
Fritsche, J., Philadelphia, Pa. Vending-machine for matches. No. 901,091; Oct. 13; Sp. p. 2142; Dr. p. 437; Gaz. vol. 136; p. 1433.
Fröberg, M. G., Stockholm, Sweden. Calculating-machine for money and similar objects. No. 902,067; Oct. 27; Sp. p. 4184; Dr. pp. 847–8; Gaz. vol. 136; p. 1818.
Fromont, L. G., Liege, Belgium. Gas-furnace. No. 900,845; Oct. 13; Sp. p. 1654; Dr. p. 335; Gaz. vol. 136; p. 1355.
Frost, H. E. (See Wright and Frost.)
Fry, J. W., and C. W. Fisher, Philadelphia, Pa. Try-square. No. 900,995; Oct. 13; Sp. p. 1965; Dr. p. 400; Gaz. vol. 136; p. 1403.
Frye, I. L., Vandergrift, Pa. Wrench. No. 902,144; Oct. 27; Sp. p. 4331; Dr. p. 877; Gaz. vol. 136; p. 1842.
Fuller, L. E., assignor of one-half to A. M. Heath, Chicago, Ill. Drain-valve for steam-heating radiators. No. 900,159; Oct. 6; Sp. p. 186; Dr. p. 38; Gaz. vol. 136; p. 1102.
Fuller, P. W., Boston, Mass. Amusement device. No. 901,435; Oct. 20; Sp. p. 2863; Dr. p. 585; Gaz. vol. 136; p. 1582.
Fuller, R., Detroit, Mich. Motor-vehicle truck. No. 900,160; Oct. 6; Sp. p. 190; Dr. p. 39; Gaz. vol. 136; p. 1103.
Fulton Chemical Company. (See Ellis, C., assignor.)
Fulton Company. (See Fulton, W. M., assignor.)
Fulton, L. B., assignor to Chaplin-Fulton Manufacturing Company, Pittsburg, Pa. Fluid-pressure regulator. No. 900,275; Oct. 6; Sp. p. 439; Dr. p. 90; Gaz. vol. 136; p. 1140.
Fulton, W. M., assignor to Fulton Company, Knoxville, Tenn. Damper-regulator. No. 900,511; Oct. 6; Sp. p. 952; Dr. p. 193; Gaz. vol. 136; p. 1217.
Funck, V., Luxemburg, Germany. Load lifting and lowering apparatus. No. 902,145; Oct. 27; Sp. p. 4332; Dr. p. 878; Gaz. vol. 136; p. 1842.
Furtner, P., Rosenheim, Germany. Coupling for fluid-pressure conduits. No. 901,289; Oct. 13; Sp. p. 2520; Dr. pp. 517–18; Gaz. vol. 136; p. 1496.
Fust, G. D., New Orleans, La. Roofing material. No. 900,512; Oct. 6; Sp. p. 954; Gaz. vol. 136; p. 1217.
G. P. McDougall & Son. (See Connaty, J. W., assignor.)
Gagnon, A. E. (See Mereen and Gagnon.)
Gallagher, F. S., assignor to Forsyth Brothers Company, Chicago, Ill. Draw-bar-centering device. No. 900,996; Oct. 13; Sp. p. 1967; Dr. p. 400; Gaz. vol. 136; p. 1404.
Gallup, J. A., Voluntown, Conn. Milking device. No. 901,335; Oct. 20; Sp. p. 2618; Dr. p. 538; Gaz. vol. 136; p. 1546.
Galway, G. W. (See Waldie and Galway.)
Gamage, H. C., New York, N. Y. Lubricating device for shafts, &c. No. 900,922; Oct. 13; Sp. p. 1817; Dr. pp. 368–9; Gaz. vol. 136; p. 1379.
Gardeen, C. J., Columbus township, Anoka county, Minn. Automatic electric-lighting system. No. 901,336; Oct. 20; Sp. p. 2619; Dr. p. 538; Gaz. vol. 136; p. 1546.
Gardiner, C. A., U. S. Navy. Dress-fastener. No. 901,164; Oct. 13; Sp. p. 2272; Dr. p. 463; Gaz. vol. 136; p. 1456.
Gardner, F. B., assignor of one-half to D. H. Etling, Lima, Ohio. Horse rasp or foot leveler. No. 901,290; Oct. 13; Sp. p. 2524; Dr. p. 518; Gaz. vol. 136; p. 1496.
Gardner, I. and I. N., Wapella, Ill. Feed-cutter. No. 902,068; Oct. 27; Sp. p. 4186; Dr. p. 848; Gaz. vol. 136; p. 1818.
Gardner, I. N. (See Gardner, I. and I. N.)
Gardner, J. W. (See Rogers and Gardner.)
Garey, J. A., Mound City, Mo. Conduit. No. 902,285; Oct. 27; Sp. p. 4626; Dr. p. 940; Gaz. vol. 136; p. 1888.
Garst, J., Worcester, Mass. Loom for weaving short-weft fabrics. No. 902,286; Oct. 27; Sp. p. 4627; Dr. p. 940; Gaz. vol. 136; p. 1888.
Garvens, W. A., assignor of one-fourth to J. P. McDonough, St. Louis, Mo. Furnace. No. 900,513; Oct. 6; Sp. p. 955; Dr. pp. 193–4; Gaz. vol. 136; p. 1217.
Gaskill, H. S., Lansing, Mich. Flushing-valve. No. 900,997; Oct. 13; Sp. p. 1969; Dr. p. 401; Gaz. vol. 136; p. 1404.
Gaskins, C. H., assignor of one-half to F. G. and D. G. Seller, Shamokin, Pa. Fishing-reel. No. 901,609; Oct. 20; Sp. p. 3223; Dr. p. 661; Gaz. vol. 136; p. 1638.
Gatenbee, J. B., *et al.* (See Burdett, P., assignor.)
Gauer, P., St. Petersburg, Russia. Rotary pump. No. 901,610; Oct. 20; Sp. p. 3225; Dr. p. 661; Gaz. vol. 136; p. 1639.
Geary, G. A., assignor to W. S. Emery, New York, N. Y. Post-hinge for water-closet seats, covers, and the like. No. 900,514; Oct. 6; Sp. p. 957; Dr. p. 194; Gaz. vol. 136; p. 1218.
Gearman, H., Marietta, Minn. Axle-lubricator. No. 901,165; Oct. 13; Sp. p. 2274; Dr. p. 463; Gaz. vol. 136; p. 1457.
Gebauer, E. G., Santa Fe, N. Mex. Ter. Universal elevating and lowering device. No. 900,515; Oct. 6; Sp. p. 958; Dr. pp. 194–5; Gaz. vol. 136; p. 1218.
Geffers, C., Erfurt, Germany. Means for pressing hollow bodies having depressions or cavities at their outer sides. No. 900,276; Oct. 6; Sp. p. 440; Dr. p. 90; Gaz. vol. 136; p. 1140.
Geilhuss, A. H. (See Porter, Laird, and Geilhuss.)
Geisenberger, E., Liege, Belgium. Apparatus for manufacturing hydrogen gas. No. 900,516; Oct. 6; Sp. p. 963; Dr. p. 195; Gaz. vol. 136; p. 1219.
Geisendorfer, G., Ukiah, Cal. Bottle. No. 900,364; Oct. 6; Sp. p. 607; Dr. p. 126; Gaz. vol. 136; p. 1168.
Geiser Manufacturing Company. (See Anderson, G. A., assignor.)
Geiser Manufacturing Company. (See Clymans and Flautt, assignors.)

Geiser Manufacturing Company. (See Clymans and Hess, assignors.)
Gemmer, W. S., assignor of one-half to Broderick & Bascom Rope Company, St. Louis, Mo. Tramway tower-saddle. No. 900,923 Oct. 13; Sp. p. 1820; Dr. pp. 369–71; Gaz. vol. 136; p. 1379.
General Electric Company. (See Alexander, H., assignor.)
General Electric Company. (See Alexanderson, E. F. W., assignor.)
General Electric Company. (See Badeau, C. C., assignor.)
General Electric Company. (See Ball, A. A., Jr., assignor.)
General Electric Company. (See Barnes, E. A., assignor.)
General Electric Company. (See Barringer, L. E., assignor.)
General Electric Company. (See Batchelder, A. F., assignor.)
General Electric Company. (See Corey, F. B., assignor.)
General Electric Company. (See Cubitt, A. S., assignor.)
General Electric Company. (See Dalzell and Harthan, assignors.)
General Electric Company. (See Dawson, W. F., assignor.)
General Electric Company. (See Dempster, J. T. H., assignor.)
General Electric Company. (See Dempster, L. E., assignor.)
General Electric Company. (See Diehl, H., assignor.)
General Electric Company. (See Emmet and Junggren, assignors.)
General Electric Company. (See Emmet, W. L. R., assignor.)
General Electric Company. (See Farquhar, E. H., assignor.)
General Electric Company. (See Fleming, R., assignor.)
General Electric Company. (See Fleming and Halvorson, assignors.)
General Electric Company. (See Hadley, A. L., assignor.)
General Electric Company. (See Hall, J. L., assignor.)
General Electric Company. (See Hewlett, E. M., assignor.)
General Electric Company. (See Hewlett and Button, assignors.)
General Electric Company. (See Heath, H. E., assignor.)
General Electric Company. (See Keller, H., assignor.)
General Electric Company. (See Kruh, O. O., assignor.)
General Electric Company. (See Kudlich, A. H., assignor.)
General Electric Company. (See Macdonald, A. F., assignor.)
General Electric Company. (See Macloskie, G., assignor.)
General Electric Company. (See Macmillan, C., assignor.)
General Electric Company. (See Noeggerath, J. E., assignor.)
General Electric Company. (See Parkshall, H. F., assignor.)
General Electric Company. (See Pratt, W. H., assignor.)
General Electric Company. (See Reist, H. G., assignor.)
General Electric Company. (See Rice and Boyd, assignors.)
General Electric Company. (See Riddell, J., assignor.)
General Electric Company. (See Sanford, F. W., assignor.)
General Electric Company. (See Stevens, G. E., assignor.)
General Electric Company. (See Sulzberger, K., assignor.)
General Electric Company. (See Thomson, E., assignor.)
General Electric Company. (See Vollmer, J., assignor.)
General Electric Company. (See Whitney, W. R., assignor.)
General Electric Company. (See Wiard, J. B., assignor.)
General Electric Company. (See Zimmer, P. H., assignor.)
General Railway Signal Company. (See Howe, W. K., assignor.)
General Storage Battery Company. (See Bijur, J., assignor.) (Reissue.)
Geneva Optical Company. (See Brayton, E. I. and J. T., assignors.)
Geneva Optical Company. (See Hardinge, F., assignor.)
George Cutter Company. (See Cutter, G., assignor.)
Geoghegan, A. F. S. (See McGee, J. J., assignor.)
Gerdes, T., and G. E. Wilken, Danforth, Ill. Grain-car door. No. 901,531; Oct. 20; Sp. p. 3079; Dr. p. 629; Gaz. vol. 136; p. 1614.
Gerling, F. A., Portland, Oreg. Draft appliance. No. 901,701; Oct. 20; Sp. p. 3458; Dr. p. 701; Gaz. vol. 136; p. 1671.
Gernsback, H., assignor, by mesne assignments, to Motor Car Equipment Company, New York, N. Y. Incandescent lamp. No. 902,069; Oct. 27; Sp. p. 4188; Dr. p. 849; Gaz. vol. 136; p. 1819.
Gerster, S. W., Gerster, Mo. Milking vessel. No. 900,161; Oct. 6; Sp. p. 192; Dr. p. 39; Gaz. vol. 136; p. 1103.
Gessner, L. von. (See Bradley, J. J., assignor.)
Gibbs, W. T., Buckingham, Quebec, Canada, assignor to National Electrolytic Company. Making chromates. No. 901,436; Oct. 20; Sp. p. 2865; Dr. p. 585; Gaz. vol. 136; p. 1583.
Gibney, J. W., assignor to W. P. Taylor Company, Buffalo, N. Y. Apparatus for making molds. No. 900,365; Oct. 6: Sp. p. 609; Dr. pp. 126–7; Gaz. vol. 136; p 1169.
Gibson, J. H., Liscard, assignor of one-half to R. R. Bevis, Hamptoune, England. Apparatus for indicating the magnitude of the torque in shafting. No. 902,394; Oct. 27; Sp. p. 4854; Dr. pp. 982–3; Gaz. vol. 136; p. 1923.
Gifford, H. W. (See Smith, W. H., assignor.)
Gilcrest, T. F., Des Moines, Iowa. Railway-tie. No. 902,287; Oct. 27; Sp. p. 4629; Dr. p. 941; Gaz. vol. 136; p. 1888.
Gill, W. F., and J. M. Barry, assignors to said J. M. Barry, Brooklyn, N. Y., and R. W. Bell, East Liverpool, Ohio. Advertising device. No. 901,166; Oct. 13; Sp. p. 2275; Dr. p. 463; Gaz. vol. 136; p. 1457.
Gillum, B. S., Stahl, Mo. Truck. No. 901,532; Oct. 20; Sp. p. 3081; Dr. pp. 629–30; Gaz. vol. 136; p. 1615.
Gilman, G. H., and H. M. Robertson, St. Paul, Minn. Lifting-jack. No. 900,720; Oct. 13; Sp. p. 1390; Dr. p. 283; Gaz. vol. 136; p. 1313.
Gilman, F. L., Eugene, Oreg. Hedge-trimmer. No. 902,529; Oct. 27; Sp. p. 5184; Dr. p. 1048; Gaz. vol. 136; p. 1971.
Gilman, G. H., assignor to Sullivan Machinery Company, Claremont, N. H. Fluid-pressure-engine-operated tool. No. 902,288; Oct. 27; Sp. p. 4631; Dr. p. 941; Gaz. vol. 136; p. 1889.
Gilroy, F. J., Buffalo, N. Y. Tie-tamper. No. 900,721; Oct. 13; Sp. p. 1392; Dr. p. 283; Gaz. vol. 136; p. 1314.
Gilson, D. E., Coalinga, Cal. Drill-sharpener. No. 902,146; Oct. 27; Sp. p. 4335; Dr. p. 878; Gaz. vol. 136; p. 1843.
Gimonet, A. (See Utard and Gimonet.)
Glasier, J. J. (See Glasner and Glasier.)
Glasner, F. P., and J. J. Glasier, Springfield, S. D. Computing-machine. No. 901,092; Oct. 13; Sp. p. 2146; Dr. pp. 438–9; Gaz. vol. 136; p. 1433.
Glaspoole, C. E., St. Paul, Minn. Culvert. No. 901,702; Oct. 20; Sp. p. 3461; Dr. p. 701; Gaz. vol. 136; p. 1672.
Glaspoole, C. E., St. Paul, Minn. Culvert. No. 901,703; Oct. 20; Sp. p. 3462; Dr. pp. 701–2; Gaz. vol. 136; p. 1672.
Gliding Boat Company of America. (See Motheral, W. B., assignor.)
Glover, J., Stubenville, Ohio. Column-step. No. 900,517; Oct. 6; Sp. p. 965; Dr. p. 195; Gaz. vol. 136; p. 1219.
Goddu, G. (See Eaton and Goddu.)
Godfrey, R. W., Oberlin, Ohio. Gas-engine starter. No. 900,518; Oct. 6; Sp. p. 966; Dr. p. 196; Gaz. vol. 136; p. 1219.
Goff, G. W. (See Hutton, C. F., assignor.)
Goldbach, J. C. (See Sedivi, L., assignor.)
Goldberg, J. S., Chicago, Ill., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Receiver. No. 901,704; Oct. 20; Sp. p. 3464; Dr. p. 702; Gaz. vol. 136; p. 1672.
Golding, W. H., Boston, Mass. Clamping and adjusting device for printing-presses. No. 900,519; Oct. 6; Sp. p. 967; Dr. p. 196; Gaz. vol. 136; p. 1220.
Goldschmidt, H., and F. Lange, Essen-on-the-Ruhr, Germany. Uniting metals. No. 900,366; Oct. 6; Sp. p. 611; Dr. p. 127; Gaz. vol. 136; p. 1169.
Gooch, T., Marysville, Idaho. Transplanter. No. 902,070; Oct. 27; Sp. p. 4189; Dr. p. 849; Gaz. vol. 136; p. 1819.
Goodall Matting Company. (See Arrouquier, F. E., assignor.)
Goodman Manufacturing Company. (See Pratt, C. A., assignor.)
Goodrich, Rommel Company. (See Goodrich, T. F., assignor.)
Goodrich, T. F., Albany, N. Y., assignor to Goodrich, Rommel Company. Guide-greaser for elevators. No. 902,226; Oct. 27; Sp. p. 4508; Dr. p. 913; Gaz. vol. 136; p. 1868.
Goodson, G. A., Minneapolis, Minn. Plated metallic body. No. 900,846; Oct. 13; Sp. p. 1656; Gaz. vol. 136; p. 1355.
Goodson, G. A., Minneapolis, Minn. Plating metallic bodies. No. 900,847; Oct. 13; Sp. p. 1657; Gaz. vol. 136; p. 1355.
Goodwin, T. J., Cleburne, Tex. Wire basket. No. 900,162; Oct. 6; Sp. p. 193; Dr. p. 39; Gaz. vol. 136; p. 1104.
Goosch, E., New York, N. Y. Fan. No. 900,520; Oct. 6; Sp. p. 968; Dr. p. 196; Gaz. vol. 136; p. 1220.
Gordon, N., Vernon, Tenn. Fan for cradles. No. 902,071; Oct. 27; Sp. p. 4190; Dr. p. 849; Gaz. vol. 136; p. 1819.

Gordon, W. L., Deal, assignor to Pneumatic Heel Cushion Company, Asbury Park, N. J. Pneumatic-cushion insole. No. 901,236; Oct. 13; Sp. p. 2397; Dr. p. 491; Gaz. vol. 136; p. 1478.
Goraline, H. A., and A. Klein, assignors of one-third to S. Klein, Cleveland, Ohio. Deodorizing attachment for gas-heaters. No. 900,722; Oct. 13; Sp. p. 1394; Dr. p. 283; Gaz. vol. 136; p. 1314.
Gosline, D. P., Boston, Mass. Disk ventilating-fan. No. 901,337; Oct. 20; Sp. p. 2621; Dr. pp. 538-9; Gaz. vol. 136; p. 1547.
Goss, C. O. (See Bluntach, A. J., assignor.)
Gotsche, F. H., San Francisco, Cal. Tent. No. 901,802; Oct. 20; Sp. p. 3655; Dr. p. 740; Gaz. vol. 136; p. 1703.
Goughnour H. S., Johnstown, Pa., assignor to Lorain Steel Company. Switch structure. No. 901,803; Oct. 20; Sp. p. 3656; Dr. p. 740; Gaz. vol. 136; p. 1703.
Goughnour, H. S., Johnstown, Pa., assignor to Lorain Steel Company. Switch-stand. No. 901,804; Oct. 20; Sp. p. 3657; Dr. p. 741; Gaz. vol. 136; p. 1704.
Grabau, H. E., Weehawken, N. J. Means for generating heat. No. 901,338; Oct. 20; Sp. p. 2623; Dr. p. 539; Gaz. vol. 136; p. 1547.
Grady, C. F. and F. L., Buffalo, N. Y. Gas-stove. No. 900,998; Oct. 13; Sp. p. 1971; Dr. p. 401; Gaz. vol. 136; p. 1404.
Grady, F. L. (See Grady, C. F. and F. L.)
Graffort, L. J., and P. L. Hoffman. New Carlisle, Ind. Ice-cream disher. No. 901,437; Oct. 20; Sp. p. 2867; Dr. p. 586; Gaz. vol. 136; p. 1583.
Granel, A. C., St. Cloud, France. Carbureting device. No. 900,999; Oct. 13; Sp. p. 1974; Dr. p. 401; Gaz. vol. 136; p. 1405.
Grant, A. H. (See Grant, M. N., C. J., and A. H.)
Grant, C. J. (See Grant, M. N., C. J., and A. H.)
Grant, J., Forestburg, Tex. Packing. No. 901,339; Oct. 20; Sp. p. 2627; Dr. p. 540; Gaz. vol. 136; p. 1548.
Grant, M. N., Columbus, C. J. and A. H. Grant, Groveport, Ohio. Attachment for brick-machines. No. 900,521; Oct. 6; Sp. p. 970; Dr. p. 196; Gaz. vol. 136; p. 1220.
Grant, W. M., Richmond, assignor of one-half to M. J. O'Neil, Manchester, Va. Smoke-consumer. No. 901,291; Oct. 13; Sp. p. 2525; Dr. p. 519; Gaz. vol. 136; p. 1497.
Graumüller, A., Dresden, Germany. Carbureter. No. 901,237; Oct. 13; Sp. p. 2398; Dr. p. 492; Gaz. vol. 136; p. 1478.
Gravell, J. H., Philadelphia, Pa., and G. D. Farwell, assignors of one-third to P. C. Farwell, Bridgeport, Conn. Picture-exhibition device. No. 900,522; Oct. 6; Sp. p. 971; Dr. p. 197; Gaz. vol. 136; p. 1220.
Gravelle, J., assignor of two-thirds to C. A. Blumhard and J. S. Koch, Philadelphia, Pa. Mechanical bell-operating device. No. 900,723; Oct. 13; Sp. p. 1395; Dr. p. 284; Gaz. vol. 136; p. 1314.
Gray, T. J., Indianapolis, Ind., assignor to H. E. and J. E. Bulloch, Chicago, Ill. Cotton-picking finger. No. 902,227; Oct. 27; Sp. p. 4508; Dr. p. 913; Gaz. vol. 136; p. 1868.
Green, R. S. (See Francis, G. A., assignor.)
Greenawalt, W. E., Denver, Colo. Apparatus for the extraction of metals from their ores. No. 901,611; Oct. 20; Sp. p. 3226; Dr. p. 661; Gaz. vol. 136; p. 1639.
Greene, E. E., assignor of one-half to C. Houston, Altoona, Pa. Stair-carpet fastener. No. 901,167; Oct. 13; Sp. p. 2277; Dr. p. 464; Gaz. vol. 136; p. 1457.
Greenfield, E. T., Kiamesha, N. Y. Tire. No. 902,147; Oct. 27; Sp. p. 4338; Dr. p. 878; Gaz. vol. 136; p. 1843.
Greenfield, E. T., Kiamesha, N. Y. Heating system. No. 902,148; Oct. 27; Sp. p. 4339; Dr. p. 879; Gaz. vol. 136; p. 1844.
Gregory, R. K., Greensboro, N. C. Wheel. No. 902,072; Oct. 27; Sp. p. 4192; Dr. p. 850; Gaz. vol. 136; p. 1819.
Gregory, T. M., Akron, Ohio. Means for molding hot-water bottles. No. 901,093; Oct. 13; Sp. p. 2153; Dr. pp. 439-40; Gaz. vol. 136; p. 1434.
Grey, H. E. (See Parker and Grey.)
Gribben, J. U., and M. Mohr, Columbus, Ohio. Ventilating-cover for cisterns. No. 902,289; Oct. 27; Sp. p. 4640; Dr. p. 941; Gaz. vol. 136; p. 1889.
Griffiths, S. M., Easton, assignor to himself, and M. May, Philadelphia, Pa. Wearing-apparel, such as collars and cuffs. No. 900,724; Oct. 13; Sp. p. 1396; Dr. p. 284; Gaz. vol. 136; p. 1315.
Griffiths, W. U., Philadelphia, Pa. Water-closet apparatus. No. 901,438; Oct. 20; Sp. p. 2869; Dr. p. 586; Gaz. vol. 136; p. 1583.
Grode, F. P., Wabash, Ind. Furniture-slat. No. 900,523; Oct. 6; Sp. p. 972; Dr. p. 197; Gaz. vol. 136; p. 1221.
Grode, F. P., Wabash, Ind. Routing-machine. No. 900,524; Oct. 6; Sp. p. 974; Dr. pp. 197-9; Gaz. vol. 136; p. 1221.
Grodsky, A., Cincinnati, Ohio. Tobacco-stemming machine. No. 901,000; Oct. 13; Sp. p. 1976; Dr. p. 402; Gaz. vol. 136; p. 1405
Groehn, W. C., assignor to Briscoe Manufacturing Company, Detroit, Mich. Fender-clip. No. 900,163; Oct. 6; Sp. p. 194; Dr. p. 40; Gaz. vol. 136; p. 1104.
Groenke, W. C., Milwaukee, Wis. Mail-box. No. 900,848; Oct. 13; Sp. p. 1659; Dr. p. 336; Gaz. vol. 136; p. 1355.
Groetsch, J. C., and C. L. Saal, Jr., Paterson, N. J. Apparatus for delivering mail-bags from railway-trains. No. 902,228; Oct. 27; Sp. p. 4510; Dr. p. 914; Gaz. vol. 136; p. 1869.
Grosser, M. W., Chicago, Ill. Fish-scaling device. No. 901,805; Oct. 20; Sp. p. 3659; Dr. p. 741; Gaz. vol. 136; p. 1704.
Grössler, H., Berlin, Germany. Type-writer. No. 900,525; Oct. 6; Sp. p. 979; Dr. p. 199; Gaz. vol. 136; p. 1315.
Grotta, D., Newark, N. J. Combined garment and hose-supporter. No. 900,725; Oct. 13; Sp. p. 1397; Dr. p. 284; Gaz. vol. 136; p. 1315.
Grover, A. D., Malden, Mass. Coin-controlled vending-machine, &c. No. 900,924; Oct. 13; Sp. p. 1824; Dr. p. 371; Gaz. vol. 136; p. 1380.
Groves, J. R. (See Herr, Groves, and Foreman.)
Grünbaum, M., Berne, assignor to Society of Chemical Industry in Basle, Basel, Switzerland. Printing sulfurized dyestuffs. No. 901,705; Oct. 20; Sp. p. 3465; Gaz. vol. 136; p. 1673.
Grunow, F. A., New Orleans, La. Water-elevator. No. 901,238; Oct. 13; Sp. p. 2400; Dr. p. 492; Gaz. vol. 136; p. 1479.
Gschwend, A., and R. G. Cumber; said Gschwend assignor to A. F. Hammer, Seattle, Wash. Skirt-marker. No. 900,849; Oct. 13; Sp. p. 1660; Dr. p. 336; Gaz. vol. 136; p. 1356.
Gueritey, C. H., Brooklyn, N. Y. Amusement apparatus. No. 902,073; Oct. 27; Sp. p. 4193; Dr. p. 850; Gaz. vol. 136; p. 1820.
Guffey, H. D., Unionville, Mo. Combined road-grader, drag, and harrow. No. 901,806; Oct. 20; Sp. p. 3659; Dr. p. 741; Gaz. vol. 136; p. 1704.
Gunther, J. D., *et al.* (See Richardson, R. K., assignor.)
Gury, J. B., St. Louis, Mo. Base for cloth-cutting machines. No. 901,439; Oct. 20; Sp. p. 2871; Dr. p. 586; Gaz. vol. 136; p. 1584.
Gustavsen, C. O., Columbus, Ohio, assignor, by mesne assignments, to Jeffrey Manufacturing Company. Conveyer. No. 902,530; Oct. 27; Sp. p. 5187; Dr. p. 1048; Gaz. vol. 136; p. 1971.
Guttman, A. J., *et al.* (See McCarty, W. F. M., assignor.)
Gwynne, J. H., Kansas City, Mo. Wire-fence stretcher. No. 900,726; Oct. 13; Sp. p. 1398; Dr. p. 284; Gaz. vol. 136; p. 1315.
H. Kleber & Brother Co. (See Osterberg, H. G. and A. F., assignors.)
H. Mueller Manufacturing Company. (See Schuermann, A., assignor.)
Haas, E., San Antonio, Tex. Switch mechanism and train-carried actuating means therefor. No. 900,367; Oct. 6; Sp. p. 615; Dr. pp. 127-8; Gaz. vol. 136; p. 1169.
Haas, F. G., Springfield, Mo. Necktie-case. No. 900,164; Oct. 6; Sp. p. 195; Dr. p. 40; Gaz. vol. 136; p. 1104.
Hackert, K. F. East Cleveland, Ohio. Ear-trumpet. No. 900,097; Oct. 6; Sp. p. 44; Dr. pp. 8-9; Gaz. vol. 136; p. 1062.
Hadley, A. L., Fort Wayne, Ind., assignor to General Electric Company. Dynamo-electric machine. No. 901,440; Oct. 20; Sp. p. 2873; Dr. p. 587; Gaz. vol. 136; p. 1584.
Hagan, J. H., Elizabeth, N. J. Penholder. No. 901,239; Oct. 13; Sp. p. 2402; Dr. p. 493; Gaz. vol. 136; p. 1479.
Hagan, J. H., Elizabeth, N. J. Device for securing fountain-pens, &c., to garments. No. 901,240; Oct. 13; Sp. p. 2403; Dr. p. 493; Gaz. vol. 136; p. 1479.
Hagerlund, J. W., *et al.* (See Robinson, F., assignor.)
Haines, R. T., London, England. Kinematograph mechanism. No. 901,962; Oct. 27; Sp. p. 3958; Dr. p. 808; Gaz. vol. 136; p. 1785.
Haldeman, C. B., Center township, Cloud county, Kans. Feed-trough. No. 900,277; Oct. 6; Sp. p. 442; Dr. p. 90; Gaz. vol. 136; p. 1141.
Hale-Kilburn Metal Company. (See Budd, E. G., assignor.)
Haley, A. L., Los Angeles, Cal. Combination rocker and standard chair. No. 902,395; Oct. 27; Sp. p. 4857; Dr. p. 983; Gaz. vol. 136; p. 1924.
Hall, A., Edmonton, Alberta, Canada. Spark-arrester. No. 901,807; Oct. 20; Sp. p. 3661; Dr. p. 742; Gaz. vol. 136; p. 1704.
Hall, E. L., New York, N. Y. Circular back for cameras. No. 900,526; Oct. 6; Sp. p. 980; Dr. p. 199; Gaz. vol. 136; p. 1222.
Hall, F. W., Merchantville, N. J., assignor to J. W. Paxson Company, Philadelphia, Pa. Molding-machine. No. 901,932; Oct. 20; Sp. p. 3887; Dr. pp. 793-4; Gaz. vol. 136; p. 1745.
Hall, J. H., New York, N. Y., assignor to Electric Controller and Supply Company, Cleveland, Ohio. Progressive cut-out mechanism. No. 900,165; Oct. 6; Sp. p. 196; Dr. pp. 40-1; Gaz. vol. 136; p. 1104.
Hall, J. H., assignor to Electric Controller and Supply Company, Cleveland, Ohio. Controlling system for electric motors. No. 902,396; Oct. 27; Sp. p. 4858; Dr. pp. 983-5; Gaz. vol. 136; p. 1924.
Hall, J. L., Schenectady, N. Y., assignor to General Electric Company. Speed-indicator. No. 902,074; Oct. 27; Sp. p. 4197; Dr. p. 851; Gaz. vol. 136; p. 1820.
Hall, S. A., Brooklyn, N. Y. Safety-stirrup. No. 902,397; Oct. 27; Sp. p. 4863; Dr. p. 985; Gaz. vol. 136; p. 1924.
Hall, S. N. (See Layne and Hall.)
Hall, W. A., New York, N. Y. Coloring wood. No. 901,098; Oct. 13; Sp. p. 2161; Gaz. vol. 136; p. 1435.
Hall, W. A., New York, N. Y. Coloring wood. No. 901,099; Oct. 13; Sp. p. 2162; Gaz. vol. 136; p. 1435.
Hall, W. A., New York, N. Y., assignor to American Mahogany Company. Coloring wood. No. 901,094; Oct. 13; Sp. p. 2155; Gaz. vol. 136; p. 1434.

Hall, W. A., New York, N. Y., assignor to American Mahogany Company. Coloring wood. No. 901,095; Oct. 13; Sp. p. 2157; Gaz. vol. 136; p. 1434.
Hall, W. A., New York, N. Y., assignor to American Mahogany Company. Treating wood for lumber. No. 901,096; Oct. 13; Sp. p. 2158; Gaz. vol. 136; p. 1434.
Hall, W. A., New York, N. Y., assignor to American Mahogany Company. Artificially grained or figured wood and producing the same. No. 901,097; Oct. 13; Sp. p. 2160; Gaz. vol. 136; p. 1435.
Halladay, L. P., assignor to Streator Motal Stamping Company, Streator, Ill. Carpet-sweeper. No. 900,527; Oct. 6; Sp. p. 981; Dr. p. 200; Gaz. vol. 136; p. 1222.
Haller, J. F., Sheridan borough, Pa. Bottle-washing machine. No. 900,528; Oct. 6; Sp. p. 983; Dr. p. 200; Gaz. vol. 136; p. 1223.
Halloway, J. A., New York, N. Y. Musical wind instrument. No. 902,290; Oct. 27; Sp. p. 4642; Dr. p. 941; Gaz. vol. 136; p. 1890.
Halvorson, C. A. B., Jr. (See Fleming and Halvorson.)
Halyburton, J. P. L., Cohoes, N. Y. Valve. No. 902,291; Oct. 27; Sp. p. 4642; Dr. p. 942; Gaz. vol. 136; p. 1890.
Ham, A. G., Rochester, Minn. Quack grass or weed exterminator. No. 901,533; Oct. 20; Sp. p. 3083; Dr. p. 630; Gaz. vol. 136; p. 1615.
Hamachek, F., Kewaunee, Wis. Side-delivery mechanism for harvesters. No. 900,727; Oct. 13; Sp. p. 1399; Dr. pp. 285-6; Gaz. vol. 136; p. 1315.
Haman, A. L. (See Hummel, E. A., assignor.)
Hamilton, D., Goshen, Ind. Churn. No. 901,808; Oct. 20; Sp. p. 3663; Dr. p. 742; Gaz. vol. 136; p. 1705.
Hamilton, F., assignor of one-half to F. A. Stevens, Providence, R. I. Lens-protractor. No. 901,612; Oct. 20; Sp. p. 3229; Dr. p. 661; Gaz. vol. 136; p. 1639.
Hamilton, J. T., Albertson, Miss. Cotton-chopper. No. 902,075; Oct. 27; Sp. p. 4200; Dr. p. 851; Gaz. vol. 136; p. 1820.
Hamilton, T. L. (See Fenner, M. E., assignor.)
Hamlin, C. S., assignor to E. W. Wilson, Los Angeles, Cal. Pipe. No. 901,534; Oct. 20; Sp. p. 3084; Dr. p. 636; Gaz. vol. 136; p. 1615.
Hammar, S. A. S., Bethlehem, Pa. Breech mechanism. No. 902,487; Oct. 27; Sp. p. 5072; Dr. pp. 1026-8; Gaz. vol. 136; p. 1956.
Hammer, A. F. (See Gschwend and Cumber, assignors.)
Hand, J. H., assignor of two-thirds to J. L. Duffy and A. J. Paul, Ann Arbor, Mich. Railway-crossing. No. 901,292; Oct. 13; Sp. p. 2527; Dr. p. 519; Gaz. vol. 136; p. 1497.
Hanna, F. W., Defiance, Iowa, assignor of one-half to J. H. Root, Port Byron, N. Y. Automatic constant-discharge water-gate. No. 902,531; Oct. 27; Sp. p. 5189; Dr. p. 1048; Gaz. vol. 136; p. 1972.
Hannaford, A. R., Traverse City, Mich. Concrete-mixer. No. 901,340; Oct. 20; Sp. p. 2628; Dr. p. 540; Gaz. vol. 136; p. 1548.
Hansen, H. T., Milwaukee, Wis., assignor, by mesne assignments, to T. D. Lovering, St. Paul, Minn. Driving mechanism for motor-driven vehicles. No. 902,149; Oct. 27; Sp. p. 4341; Dr. p. 879; Gaz. vol. 136; p. 1844.
Hansen, J. W., Princeton, Ind. Program attachment for clocks. No. 900,529; Oct. 6; Sp. p. 984; Dr. pp. 200-1; Gaz. vol. 136; p. 1223.
Hanson, M., Marinette, Wis. Pulp-machine. No. 901,168; Oct. 13; Sp. p. 2277; Dr. p. 464; Gaz. vol. 136; p. 1457.
Hanson & Van Winkle Company. (See Daniels, J. T., assignor.)
Hanson & Van Winkle Company. (See Van Winkle, A., assignor.)
Hanson & Van Winkle Company. (See Van Winkle and Daniels, assignors.)
Haradon, M. E., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Weft-channeling attachment for sole-sewing machines. No. 900,925; Oct. 13; Sp. p. 1826; Dr. p. 371; Gaz. vol. 136; p. 1380.
Harbour, R., Charlie, Tex. Warp-beam for looms. No. 900,530; Oct. 6; Sp. p. 988; Dr. p. 201; Gaz. vol. 136; p. 1224.
Harden, E. W. (See Rabbe, Harden, and Dempsey.)
Hardie, R. W., New York, N. Y. Shaping bilge bodies. No. 901,963; Oct. 27; Sp. p. 3960; Dr. p. 809; Gaz. vol. 136; p. 1785.
Hardinge, F., assignor to Geneva Optical Company, Chicago, Ill. Lens-measuring instrument. No. 900,531; Oct. 6; Sp. p. 988; Dr. p. 201; Gaz. vol. 136; p. 1224.
Hardman, Peck & Company. (See Hattemer, J., assignor.)
Hardy, E. A. (See Murphy, J. L., assignor.)
Harendt, F. (See Waugh and Harendt.)
Harlow, A. J., *et al.* (See Welsh, T. W., assignor.)
Harmeyer, C. L. (See Bowman and Harmeyer.)
Harmon, A. (See Hemphill, A. L., assignor.)
Harold, J. J., Jersey City, N. J., assignor, by mesne assignments, to E. A. Bern, Chicago, Ill. Metal piling. No. 901,241; Oct. 13; Sp. p. 2404; Dr. p. 493; Gaz. vol. 136; p. 1480.
Harper, J. M., Chicago, Ill., assignor to Harper Supply Company. Sad-iron. No. 900,850; Oct. 13; Sp. p. 1662; Dr. p. 336; Gaz. vol. 136; p. 1356.
Harper Supply Company. (See Harper, J. M., assignor.)
Harrington, J. (See Poppenhusen and Harrington.)
Harris, A., Greenock, Scotland, and F. A. Anderson, Westminster, England. Surface condenser. No. 901,809; Oct. 20; Sp. p. 3664; Dr. pp. 742-3; Gaz. vol. 136; p. 1705.
Harris Automatic Press Company. (See Harris, C. G., assignor.)
Harris, C. B., Minneapolis, Minn. Garment-supporter. No. 900,728; Oct. 13; Sp. p. 1407; Dr. p. 286; Gaz. vol. 136; p. 1316.
Harris, C. G., assignor to The Harris Automatic Press Company, Niles, Ohio. Printing-press. No. 901,964; Oct. 27; Sp. p. 3962; Dr. p. 809; Gaz. vol. 136; p. 1786.
Harris, J. R. (See Mortensen, W. C., assignor.)
Harris, J. T., New York, N. Y. Electrolytic apparatus for purifying liquids. No. 900,926; Oct. 13; Sp. p. 1828; Dr. pp. 371-2; Gaz. vol. 136; p. 1380.
Harrison, A. W., Baltimore, Md. Preparation of electrotype-molds. No. 901,965; Oct. 27; Sp. p. 3964; Gaz. vol. 136; p. 1786.
Harrison, A. W., Baltimore, Md. Solution for treating electrotype-molds. No. 901,966; Oct. 27; Sp. p. 3965; Gaz. vol. 136; p. 1786.
Harrison, O. L., Coleta, Ill. Automatic pencil. No. 902,292; Oct. 27; Sp. p. 4644; Dr. p. 942; Gaz. vol. 136; p. 1890.
Harry, O. K., St. Louis, Mo. Storage-receptacle. No. 900,166; Oct. 6; Sp. p. 200; Dr. p. 41; Gaz. vol. 136; p. 1105.
Harryman, C. R. (See Vose and Harryman.)
Hart, G. (See Osborne, J. W., assignor.)
Hart, O. W., Fall River, Mass. Selective signaling system. No. 901,441; Oct. 20; Sp. p. 2875; Dr. pp. 587-9; Gaz. vol. 136; p. 1585.
Hartford Rubber Works Company. (See Hopkinson and Midgley, assignors.)
Harthan, C. E. (See Dalzell and Harthan.)
Hartman Trunk Company. (See Hawley and Wheary, assignors.)
Harvey, W. H., Vancouver, British Columbia, Canada. Wood-block paving. No. 900,729; Oct. 13; Sp. p. 1408; Dr. p. 287; Gaz. vol. 136; p. 1316.
Hasey, S. P., North Belgrade, Me. Liquid-dispensing can. No. 901,442; Oct. 20; Sp. p. 2894; Dr. p. 589; Gaz. vol. 136; p. 1585.
Hasselstrom, I., Chicago, Ill. Numbering-machine. No. 901,443; Oct. 20; Sp. p. 2895; Dr. p. 590; Gaz. vol. 136; p. 1585.
Hatch, C. T., Waterville, N. Y. Feeding apparatus. No. 900,851; Oct. 13; Sp. p. 1663; Dr. p. 337; Gaz. vol. 136; p. 1356.
Hatfield, C. B., assignor to Hatfield Motor Vehicle Company, Cortland, N. Y. Steering mechanism for self-propelled vehicles. No. 901,898; Oct. 20; Sp. p. 3817; Dr. p. 777; Gaz. vol. 136; p. 1733.
Hatfield Motor Vehicle Company. (See Hatfield, C. B., assignor.)
Hattemer, J., West New York, N. J., assignor to Hardman, Peck & Company, New York, N. Y. Fall-board for pianos. No. 902,293; Oct. 27; Sp. p. 4646; Dr. p. 943; Gaz. vol. 136; p. 1890.
Hattersley and Sons, G. (See Monk, W. J., assignor.)
Haughawout, J. W., Fort Dodge, Iowa, assignor to W. P. Markle, St. Louis, Mo. Machine for repairing cartridge-shells. No. 900,532; Oct. 6; Sp. p. 991; Dr. p. 202; Gaz. vol. 136; p. 1224.
Hauxhurst, C. E., Jr., assignor to National Folding Box & Paper Co., New Haven, Conn. Confectioner's box. No. 902,540; Oct. 27; Sp. p. 5200; Dr. p. 1052; Gaz. vol. 136; p. 1974.
Havassy, J., Copperhill, Tenn. Filter and water-cooler. No. 902,076; Oct. 27; Sp. p. 4201; Dr. p. 851; Gaz. vol. 136; p. 1821.
Haven, W. S., Racine, Wis. Floor-dressing machine. No. 902,398; Oct. 27; Sp. p. 4865; Dr. p. 985; Gaz. vol. 136; p. 1925.
Havestadt, C., Wilmersdorf, near Berlin, Germany. Device for exhausting air from siphons of sluices and the like. No. 902,077; Oct. 27; Sp. p. 4202; Dr. p. 852; Gaz. vol. 136; p. 1821.
Hawkins, E. A., Baldwin, assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Cable-support. No. 901,706; Oct. 20; Sp. p. 3466; Dr. p. 702; Gaz. vol. 136; p. 1673.
Hawley, C. G., assignor to Barco Brass and Joint Company, Chicago, Ill. Flexible fluid-joint. No. 900,533; Oct. 6; Sp. p. 993; Dr. p. 202; Gaz. vol. 136; p. 1225.
Hawley, E. W., Milwaukee, and G. H. Wheary, assignors to Hartman Trunk Company, Racine Wis. Garment-hanger. No. 902,078; Oct. 27; Sp. p. 4205; Dr. p. 852; Gaz. vol. 136; p. 1821.
Hawthorne, E. A. (See Norcross, I. W., assignor.)
Hayden, J. T., assignor to Crane Company, Chicago, Ill. Valve-stem. No. 900,534; Oct. 6; Sp. p. 996; Dr. p. 203; Gaz. vol. 136; p. 1225.
Hayden, W. A., assignor of one-fourth to W. Skyles, Columbia Falls, Mont. Lacing-loop for shoes, &c. No. 902,399; Oct. 27; Sp. p. 4868; Dr. p. 986; Gaz. vol. 136; p. 1925.
Hayes, J., Jr., Amsterdam, and J. Berger, Jr., Utica, N. Y., assignors to Union Special Sewing Machine Company, Chicago, Ill. Sewing and trimming machine. No. 902,532; Oct. 27; Sp. p. 5190; Dr. p. 1049; Gaz. vol. 136; p. 1972.
Healy, A. (See Ray, F. O., assignor.)

Heath, A. M. (See Fuller, L. E., assignor.)
Heath, H. E., Lynn, Mass., assignor to General Electric Company. Brush-holder. No. 900,730; Oct. 13; Sp. p. 1409; Dr. p. 287; Gaz. vol. 136; p. 1316.
Hebestreit, O., Colorado Springs, Colo. Tray. No. 901,444; Oct. 20; Sp. p. 2899; Dr. p. 590; Gaz. vol. 136; p. 1586.
Hebting, M., Kaw, Okla. Potato digger and shaker. No. 902,400; Oct. 27; Sp. p. 4870; Dr. p. 986; Gaz. vol. 136; p. 1925.
Heckman, J. P. (See Pierce, A., assignor.)
Heffner, H. C., *et al.* (See Hutsler, C. W., assignor.)
Heidenreich, C., Vohwinkel, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Para-aminoacetyl meta-toluidin. No. 902,150; Oct. 27; Sp. p. 4343; Gaz. vol. 136; p. 1845.
Heiliger, W. H., Brazil, Ind. Safety-envelop. No. 901,001; Oct. 13; Sp. p. 1978; Dr. p. 402; Gaz. vol. 136; p. 1406.
Heintz, K., Munich, Germany. Primary battery. No. 901,445; Oct. 20; Sp. p. 2901; Dr. p. 591; Gaz. vol. 136; p. 1586.
Heitger Carburetter Company. (See Heitger, F. H., assignor.)
Heitger, F. H., Indianapolis, Ind. Carbureter. No. 900,098; Oct. 6; Sp. p. 46; Dr. p. 9; Gaz. vol. 136; p. 1082.
Heitger, F. H., Indianapolis, Ind., assignor to Heitger Carburetter Company. Carbureter. No. 900,731; Oct. 13; Sp. p. 1411; Dr. p. 287; Gaz. vol. 136; p. 1317.
Heitman, A. H. C., Detroit, Mich. Syringe. No. 901,100; Oct. 13; Sp. p. 2165; Dr. p. 440; Gaz. vol. 136; p. 1435.
Helbig, O. W., assignor to Otto W. Helbig Company, Chicago, Ill. Card-index file. No. 902,541; Oct. 27; Sp. p. 5210; Dr. pp. 1052–3; Gaz. vol. 136; p. 1975.
Held, H. H., Menasha, Wis. Water-motor. No. 900,535; Oct. 6; Sp. p. 997; Dr. p. 203; Gaz. vol. 136; p. 1225.
Heiwig, A. L., Paris, France. Water-purifying and like apparatus. No. 902,401; Oct. 27; Sp. p. 4872; Dr. pp. 986–7; Gaz. vol. 136; p. 1926.
Hemphill, A. L., Marion, assignor of one-half to A. Harmon, Indianapolis, Ind. Card-making machine. No. 902,488; Oct. 27; Sp. p. 5078; Dr. pp. 1028–9; Gaz. vol. 136; p. 1956.
Hemsteger, E. A., Chicago, Ill. Nut-lock. No. 901,810; Oct. 20; Sp. p. 3665; Dr. p. 743; Gaz. vol. 136; p. 1705.
Henderson, E. L., assignor to Kemper-Thomas Company, Norwood, Ohio. Suit-hanger. No. 901,002; Oct. 13; Sp. p. 1979; Dr. p. 402; Gaz. vol. 136; p. 1406.
Henky, J., New York, N. Y. Lock. No. 900,536; Oct. 6; Sp. p. 999; Dr. p. 203; Gaz. vol. 136; p. 1226.
Hennig, H., Paterson, N. J. Dyeing, washing, and stripping machine. No. 901,003; Oct. 13; Sp. p. 1980; Dr. pp. 402–3; Gaz. vol. 136; p. 1406.
Hennig, H., Paterson, N. J. Dyeing, washing, and stripping machine. No. 901,004; Oct. 13; Sp. p. 1984; Dr. pp. 403–4; Gaz. vol. 136; p. 1406.
Henze, P., Lehe, Germany. Bathometer. No. 900,537; Oct. 6; Sp. p. 1001; Dr. p. 204; Gaz. vol. 136; p. 1226.
Hepton, F., Woolwich, England. Billiard-table and the like. No. 902,151; Oct. 27; Sp. p. 4345; Dr. p. 880; Gaz. vol. 136; p. 1845.
Hepworth, O. (See Turpin, C., assignor.)
Herbein, G. W., Seattle, Wash. Artificial fuel. No. 901,707; Oct. 20; Sp. p. 3468; Gaz. vol. 136; p. 1673.
Hermanns, H., Galesburg, Ill. Post-hole auger. No. 902,294; Oct. 27; Sp. p. 4647; Dr. p. 943; Gaz. vol. 136; p. 1891.
Hermetic Sealing Company. (See Dunkley, M. E., assignor.)
Herr Dump Car Company. (See Herr, Groves, and Foreman, assignors.)
Herr, H. T., J. R. Groves, and D. H. Foreman, assignors to Herr Dump Car Company, Denver, Colo. Dumping-car. No. 900,368; Oct. 6; Sp. p. 617; Dr. pp. 128–9; Gaz. vol. 136; p. 1170.
Herrgott, J. M. C., Valdoie, France. Electromechanical regulator for electric tension. No. 901,613; Oct. 20; Sp. p. 3230; Dr. p. 662; Gaz. vol. 136; p. 1640.
Herrmann, L., Nuremberg, Germany. Ball-bearing. No. 901,169; Oct. 13; Sp. p. 2279; Dr. p. 465; Gaz. vol. 136; p. 1458.
Hershey, H. D. (See Brubaker, H., assignor.)
Hershey, H. D., Latrobe, Pa. Continuous-draw vacuum window-glass machine. No. 901,170; Oct. 13; Sp. p. 2280; Dr. pp. 465–6; Gaz. vol. 136; p. 1458.
Hertkorn, J., Berlin, Germany. Preparation of borneol esters from turpentine. No. 901,293; Oct. 13; Sp. p. 2528; Dr. p. 519; Gaz. vol. 136; p. 1497.
Hertkorn, J., Berlin, Germany. Making camphor. No. 901,708; Oct. 20; Sp. p. 3469; Gaz. vol. 136; p. 1673.
Hertkorn, J., Berlin, Germany. Making iodin products. No. 901,709; Oct. 20; Sp. p. 3470; Gaz. vol. 136; p. 1673.
Hertzberg, H., and M. J. Wohl, New York, assignors to Economy Electric Company, Brooklyn, N. Y. Electrically-heated curling-iron. No. 900,732; Oct. 13; Sp. p. 1415; Dr. p. 287; Gaz. vol. 136; p. 1317.
Hess, A. M. (See Clymans and Hess.)
Hess, S. B., New York, N. Y. Electric burglar-alarm. No. 901,171; Oct. 13; Sp. p. 2283; Dr. p. 466; Gaz. vol. 136; p. 1458.
Hettel, A., assignor to A. R. Beal, Rochester, N. Y. Gluing-frame. No. 900,167; Oct. 6; Sp. p. 201; Dr. p. 41; Gaz. vol. 136; p. 1105.
Heulings, W. H., Jr., assignor to J. G. Brill Company, Philadelphia, Pa. Gate for passenger-cars. No. 902,489; Oct. 27; Sp. p. 5081; Dr. p. 1029; Gaz. vol. 136; p. 1956.
Heulings, W. H., Jr., Philadelphia, and W. M. Smith, Moores, assignors to J. G. Brill Company, Philadelphia, Pa. Car-body. No. 902,402; Oct. 27; Sp. p. 4874; Dr. p. 987; Gaz. vol. 136; p. 1927.
Hewitt, P. C., New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company. Electric lighting. No. 900,733; Oct. 13; Sp. p. 1418; Dr. p. 288; Gaz. vol. 136; p. 1318.
Hewitt, P. C., New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company. Apparatus for electric lighting. No. 901,294; Oct. 13; Sp. p. 2532; Dr. p. 520; Gaz. vol. 136; p. 1497.
Hewlett, E. M., and T. E. Button, Schenectady, N. Y., assignors to General Electric Company. Circuit-breaker. No. 901,614; Oct. 20; Sp. p. 3233; Dr. pp. 662–3; Gaz. vol. 136; p. 1640.
Hewlett, E. M., Schenectady, N. Y., assignor to General Electric Company. Oil-switch. No. 901,967; Oct. 27; Sp. p. 3966; Dr. p. 809; Gaz. vol. 136; p. 1796.
Heyland, A., Brussels, Belgium. Alternating-electric-current machinery. No. 901,341; Oct. 20; Sp. p. 2629; Dr. pp. 540–1; Gaz. vol. 136; p. 1548.
Heyman, H., Gottenborg, Sweden. Threading-machine for carpet-looms. No. 902,229; Oct. 27; Sp. p. 4512; Dr. pp. 914–15; Gaz. vol. 136; p. 1869.
Heys, J. J., Lynn, Mass., assignor, by mesne assignments, to Manufacturers Machine Company, Montclair, N. J. Welt-beater. No. 901,446; Oct. 20; Sp. p. 2902; Dr. p. 591; Gaz. vol. 136; p. 1586.
Hickley, A. S., Manasquan, N. J. Electrolytic alternating-current rectifier. No. 900,278; Oct. 6; Sp. p. 444; Dr. p. 91; Gaz. vol. 136; p. 1141.
Hickley, A. S., Manasquan, N. J. Electrolytic alternating-current rectifier. No. 900,279; Oct. 6; Sp. p. 445; Dr. p. 91; Gaz. vol. 136; p. 1142.
Hicks, C. (See Hicks, E. and C.)
Hicks, E. and C., Montezuma, Iowa. Belt-holder for engines. No. 900,538; Oct. 6; Sp. p. 1002; Dr. p. 204; Gaz. vol. 136; p. 1226.
Hiegel, J. L., assignor of one-half to E. H. Wendtland, Dallas, Tex. Oil-press. No. 900,927; Oct. 13; Sp. p. 1832; Dr. pp. 372–3; Gaz. vol. 136; p. 1380.
Higgins, C. C., Woodmere, N. Y. Window-lock. No. 900,539; Oct. 6; Sp. p. 1004; Dr. p. 204; Gaz. vol. 136; p. 1227.
Higgins, C. H., Ottawa, Ontario, Canada. Aseptic package for vaccine or virus. No. 900,168; Oct. 6; Sp. p. 203; Dr. p. 41; Gaz. vol. 136; p. 1105.
Higgins, W. J., and C. J. Sheridan, Buffalo, N. Y. Electric signaling system for railways. No. 901,899; Oct. 20; Sp. p. 3819; Dr. p. 778; Gaz. vol. 136; p. 1733.
Hilfiker, F. O., Ilion, N. Y. Water-closet. No. 902,295; Oct. 27; Sp. p. 4649; Dr. p. 944; Gaz. vol. 136; p. 1891.
Hilger, G. M., Chicago, Ill. Steam-service controlling and recording apparatus. No. 900,540; Oct. 6; Sp. p. 1005; Dr. pp. 204–5; Gaz. vol. 136; p. 1227.
Hill, W. I., Clarksburg, W. Va. Tinning apparatus. No. 901,900; Oct. 20; Sp. p. 3824; Dr. p. 778; Gaz. vol. 136; p.1734.
Hill, W. R. T., assignor of one-third to J. M. Horner, Asheville, N. C. Pianoforte. No. 901,615; Oct. 20; Sp. p. 3238; Dr. pp. 663–4; Gaz. vol. 136; p. 1640.
Himmelreich, M. (See Kahle and Himmelreich.)
Hinkley, C. F., Seelyville, Ind. Steam-shovel. No. 901,101; Oct. 13; Sp. p. 2166; Dr. pp. 440–1; Gaz. vol. 136; p. 1436.
Hinton, G. W. (See Myers and Hinton.)
Hirschberg, S. C. (See Slevin, F. M., assignor.)
Hoag, E. W., and C. R. Kittle, Los Angeles, Cal. Spring bicycle-fork. No. 901,447; Oct. 20; Sp. p. 2904; Dr. pp. 591–2; Gaz. vol. 136; p. 1587.
Hobbs, C. L., assignor of one-half to W. S. Bryson, Wheeling, W. Va. Sash-lock. No. 901,102; Oct. 13; Sp. p. 2168; Dr. p. 441; Gaz. vol. 136; p. 1436.
Hobbs, C. L., Chicago, Ill. Supplemental hood for automobiles. No. 901,616; Oct. 20; Sp. p. 3239; Dr. p. 664; Gaz. vol. 136; p. 1641.
Hobbs, J. E., North Berwick, Me. Attachable sleigh-runner. No. 901,342; Oct. 20; Sp. p. 2633; Dr. p. 541; Gaz. vol. 136; p. 1549.
Hobson, G. J. (See Eddy and Hobson.)
Hochuli, E. J., and J. A. Bousquet, St. Paul, Minn Metal frame. No. 900,734; Oct. 13; Sp. p. 1420; Dr. p. 288; Gaz. vol. 136; p. 1318.
Hodges, C. B., Pittsburg, Pa. Apparatus for charging locomotives. No. 901,617; Oct. 20; Sp. p. 3242; Dr. pp. 664–5; Gaz. vol. 136; p. 1641.
Hodgins, F. J. (See Leitch, W. A., assignor.)

Hodgkinson, F., Edgewood Park, Pa., assignor to Westinghouse Machine Company. Governor. No. 900,852; Oct. 13; Sp. p. 1664; Dr. p. 337; Gaz. vol. 136; p. 1356.
Hodgman, W. K., assignor to Huber-Hodgman Printing Press Company, Taunton, Mass. Printing or plate cylinder for rotary printing-presses. No. 901,295; Oct. 13; Sp. p. 2533; Dr. p. 520; Gaz. vol. 136; p. 1498.
Hoffman, C. W. (See Anderson, J. N., assignor.)
Hoffman, C. W. (See Foley, P. F., assignor.)
Hoffman, G. D., Western Springs, assignor to Norwall Manufacturing Company, Chicago, Ill. Air-vent valve. No. 901,242; Oct. 13; Sp. p. 2405; Dr. p. 493; Gaz. vol. 136; p. 1480.
Hoffman, I. C., South Chicago, Ill. Apparatus for granulating slag. No. 902,490; Oct. 27; Sp. p. 5083; Dr. p. 1030; Gaz. vol. 136; p. 1957.
Hoffman, L. R., Oil City, Pa. Lubricator. No. 900,280; Oct. 6; Sp. p. 447; Dr. p. 91; Gaz. vol. 136; p. 1142.
Hoffman, P. L. (See Graffort and Hoffman.)
Holbrook, M. F., Longview, Tex. Window-sash. No. 901,343; Oct. 20; Sp. p. 2636; Dr. p. 541; Gaz. vol. 136; p. 1549.
Holgan, J. E. (See Holgan, T. H. and J. E.)
Holgan, T. H. and J. E., New York, N. Y. Reversing mechanism. No. 901,172; Oct. 13; Sp. p. 2287; Dr. p. 466; Gaz. vol. 136; p. 1459.
Holland, W. H., South Bend, Ind. Work-holder for box-making. No. 902,230; Oct. 27; Sp. p. 4516; Dr. p. 915; Gaz. vol. 136; p. 1869.
Hollander, J. (See Schwager, A. C., assignor.)
Hollenbeck, A. (See McDole and Hollenbeck.)
Hollenbeck, E. A., Funk, Nebr. Road-grader. No. 900,369; Oct. 6; Sp. p. 630; Dr. pp. 129–30; Gaz. vol. 136; p. 1170.
Holliday, J. S., Wilkinsburg, assignor to Union Switch & Signal Company, Swissvale, Pa. Block-signaling system. No. 900,370; Oct. 6; Sp. p. 632; Dr. p. 130; Gaz. vol. 136; p. 1171.
Hollis, H. L., Chicago, Ill. Apparatus for electroplating metal sheets. No. 900,169; Oct. 6; Sp. p. 204; Dr. p. 42; Gaz. vol. 136; p. 1106.
Holloway, G. T., London, England. Preparation of common salt for domestic and other uses. No. 902,403; Oct. 27; Sp. p. 4876; Gaz. vol. 136; p. 1927.
Holly, E. P., Roxbury, Mass., assignor to Holly Steam Engineering Company, Providence, R. I. Liquid-impelling device. No. 900,853; Oct. 13; Sp. p. 1666; Dr. p. 337; Gaz. vol. 136; p. 1357.
Holly Steam Engineering Company. (See Holly, E. P., assignor.)
Holm, J. N., Minneapolis, Minn. Sliding side panel for locomotive-cabs. No. 902,231; Oct. 27; Sp. p. 4521; Dr. pp. 915–16; Gaz. vol. 136; p. 1870.
Holmberg, P., Parkston, S. D. Grappling-tongs. No. 900,735; Oct. 13; Sp. p. 1421; Dr. p. 288; Gaz. vol. 136; p. 1318.
Holman, S. A., Guadaloupe, Cal. Wrench. No. 902,079; Oct. 27; Sp. p. 4206; Dr. p. 852; Gaz. vol. 136; p. 1822.
Holman, S. A., Guadaloupe, Cal. Wrench. No. 902,080; Oct. 27; Sp. p. 4208; Dr. p. 852; Gaz. vol. 136; p. 1822.
Holmes, E. E., Indianapolis, Ind. Dental appliance. No. 900,541; Oct. 6; Sp. p. 1009; Dr. p. 205; Gaz. vol. 136; p. 1227.
Holmes, F. S., New York, N. Y., and G. L. Damon, Pittsburg, Pa. Movable ventilator for vaults. No. 901,710; Oct. 20; Sp. p. 3473; Dr. p. 703; Gaz. vol. 136; p. 1673.
Holmes, W. E., Cicero, Ind. Method and apparatus for making glassware. No. 900,281; Oct. 6; Sp. p. 449; Dr. pp. 91–3; Gaz. vol. 136; p. 1142.
Holsclaw, W. H., assignor to Brinley-Hardy Company, Louisville, Ky. Corn-sheller. No. 901,968; Oct. 27; Sp. p. 3968; Dr. p. 810; Gaz. vol. 136; p. 1787.
Hoiste, A., Bielefeld, Germany. Garment. No. 902,081; Oct. 27; Sp. p. 4210; Dr. p. 853; Gaz. vol. 136; p. 1822.
Holtzman, C. E. (See Kessler, L., assignor.)
Home Security Vault and Pocket Bank Company. (See Woolums, W. H., assignor.)
Hone, C. R., Magnetic Springs, Ohio. Spindle. No. 900,928; Oct. 13; Sp. p. 1836; Dr. p. 374; Gaz. vol. 136; p. 1381.
Honold, G., Stuttgart, Germany. Electric generator. No. 900,542; Oct. 6; Sp. p. 1011; Dr. p. 205; Gaz. vol. 136; p. 1228.
Honstein, L., Portland, Oreg. Clamp for fruit-jars. No. 901,618; Oct. 20; Sp. p. 3244; Dr. p. 665; Gaz. vol. 136; p. 1641.
Hoover, A. J., Columbus, Ohio. Compound for removing paint. No. 902,404; Oct. 27; Sp. p. 4877; Gaz. vol. 136; p. 1927.
Hoover, H. M., Perrysburg, Ohio. Wood-fiber machine. No. 901,969; Oct. 27; Sp. p. 3969; Dr. pp. 810–11; Gaz. vol. 136; p. 1787.
Hopkins, F. H., Somerville, assignor to American Steam Gauge and Valve Manufacturing Company, Boston, Mass. Differential-pressure gage. No. 900,371; Oct. 6; Sp. p. 635; Dr. p. 130; Gaz. vol. 136; p. 1171.
Hopkins, R. R., Oskaloosa, Iowa. Drill. No. 901,005; Oct. 13; Sp. p. 1986; Dr. p. 404; Gaz. vol. 136; p. 1407.
Hopkinson, E., East Orange, N. J., and T. Midgley; said Hopkinson assignor to Hartford Rubber Works Company, Hartford, Conn. Apparatus for curing or vulcanizing rubber goods. No. 901,006; Oct. 13; Sp. p. 1988; Dr. p. 404; Gaz. vol. 136; p. 1407.
Hopkinson, E., East Orange, N. J., and T. Midgley; said Hopkinson assignor to Hartford Rubber Works Company, Hartford Conn. Curing or vulcanizing the outer shoes or castings of pneumatic tires. No. 901,007; Oct. 13; Sp. p. 1990; Dr. p. 404; Gaz. vol. 136; p. 1407.
Horner, J. M. (See Hill, W. R. T., assignor.)
Hornich W., Jr., assignor to Whitehead & Hoag Company, Newark, N. J. Advertising bill-hook. No. 901,901; Oct. 20; Sp. p. 3826; Dr. p. 778; Gaz. vol. 136; p. 1734.
Horstmann, H. J., Fort Wayne, Ind. Air-compressor. No. 901,344; Oct. 20; Sp. p. 2636; Dr. pp. 542–3; Gaz. vol. 136; p. 1549.
Horton, B. D., assignor to Horton-Massnick Co., Detroit, Mich. Fuse-holder. No. 901,448; Oct. 20; Sp. p. 2905; Dr. p. 592; Gaz. vol. 136; p. 1587.
Horton-Massnick Co. (See Horton, B. D., assignor.)
Houlehan, J. (See Mayo and Houlehan.)
Houser, H. B., Cincinnati, Ohio. Freight-car. No. 900,170; Oct. 6; Sp. p. 207; Dr. p. 42; Gaz. vol. 136; p. 1106.
Houston, C. (See Greene, E. E., assignor.)
Hoviand, A. M., *et al.* (See Edman, J., assignor.)
Howard, G. K., Richmond Hill, N. Y. Rod-packing. No. 902,296; Oct. 27; Sp. p. 4651; Dr. p. 944; Gaz. vol. 136; p. 1891.
Howard, H. H., Plainfield, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company. Quick-break electric switch. No. 900,736; Oct. 13; Sp. p. 1422; Dr. p. 289; Gaz. vol. 136; p. 1318.
Howe and Davidson Company. (See Davidson, F. B., assignor.)
Howe & Davidson Company. (See Kuhlmann, F. R., assignor.)
Howe, W., Seattle, Wash. Pile-protector. No. 900,929; Oct. 13; Sp. p. 1837; Dr. p. 374; Gaz. vol. 136; p. 1381.
Howe, W. K., assignor to General Railway Signal Company, Buffalo, N. Y. Railway signaling apparatus. No. 902,297; Oct. 27; Sp. p. 4652; Dr. p. 944; Gaz. vol. 136; p. 1892.
Howell, T., Newark, N. J. Carbureter. No. 901,345; Oct. 20; Sp. p. 2647; Dr. p. 543; Gaz. vol. 136; p. 1550.
Howson, H., assignor to J. G. Brill Company, Philadelphia, Pa. Passenger-car. No. 901,902; Oct. 20; Sp. p. 3827; Dr. p. 779; Gaz. vol. 136; p. 1734.
Howson, H., assignor to J. G. Brill Company, Philadelphia, Pa. Passenger-car. No. 901,903; Oct. 20; Sp. p. 3830; Dr. pp. 779–80; Gaz. vol. 136; p. 1735.
Howson, H., assignor to J. G. Brill Company, Philadelphia, Pa. Passenger-car. No. 902,405; Oct. 27; Sp. p. 4877; Dr. p. 987; Gaz. vol. 136; p. 1927.
Hubbard, M. G., Chatham, N. J., assignor to Mechanical Utilities Company, New York, N. Y. Centrifugal fan or pump. No. 902,533; Oct. 27; Sp. p. 5193; Dr. pp. 1049–50; Gaz. vol. 136; p. 1972.
Hubbell, H., Bridgeport, Conn. Means for locking electric sockets to fixtures. No. 900,854; Oct. 13; Sp. p. 1668; Dr. p. 337; Gaz. vol. 136; p. 1357.
Hubbell, H. S., Chicago, Ill. Cord-fastener for shades and the like. No. 902,082; Oct. 27; Sp. p. 4211; Dr. p. 853; Gaz. vol. 136; p. 1822.
Huber, W. E., Carlos, Ind. Wire-splicer. No. 902,406; Oct. 27; Sp. p. 4879; Dr. p. 987; Gaz. vol. 136; p. 1928.
Huber-Hodgman Printing Press Company. (See Hodgman, W. K., assignor.)
Hudson, A. H., Salt Lake City, Utah. Revolver-holster. No. 902,083; Oct. 27; Sp. p. 4212; Dr. p. 853; Gaz. vol. 136; p. 1823.
Huff, W. A., Newark, N. J. Journal-box. No. 900,543; Oct. 6; Sp. p. 1014; Dr. pp. 205–6; Gaz. vol. 136; p. 1228.
Huff, W. C. (See Thompson, A. O., assignor.)
Huffman, O. L., Erie, Kans. Windmill-gear. No. 900,544; Oct. 6; Sp. p. 1016; Dr. pp. 206–7; Gaz. vol. 136; p. 1228.
Hufschmidt, M. S., San Francisco, Cal. Antiseptic mouthpiece for telephones, speaking-tubes, &c. No. 900,372; Oct. 6; Sp. p. 636; Dr. p. 131; Gaz. vol. 136; p. 1172.
Hug, R. (See Bartels, A., assignor.)
Hughes, C. M. C., and T. H. Quinlan, London, and R. Middleton, Leeds, assignors to Cork Asphalt Limited, London, England. Machine for making blocks, plates, &c., from plastic materials. No. 901,296; Oct. 13; Sp. p. 2536; Dr. pp. 520–1; Gaz. vol. 136; p. 1498.
Hume, J. P. (See Seymour, W. M., assignor.)
Humiston, J. M., Berwyn, assignor to Steel Gain Manufacturing Company, Chicago, Ill. Support for cross-arms. No. 900,545; Oct. 6; Sp. p. 1019; Dr. p. 207; Gaz. vol. 136; p. 1229.
Hummel, E. A., assignor to A. L. Haman, St. Paul, Minn. Attachment for clocks. No. 900,855; Oct. 13; Sp. p. 1669; Dr. p. 338; Gaz. vol. 136; p. 1357.
Humphrey, A., *et al.* (See Humphrey, E. H., assignor.)
Humphrey, E. H., assignor to himself, A. Humphrey, and A. B. Kauffman, Lancaster, Pa. Drawers-supporter. No. 902,407; Oct. 27; Sp. p. 4880; Dr. p. 988; Gaz. vol. 136; p. 1928.
Hungerford, C., Philadelphia, Pa. Filter-valve. No. 902,232; Oct. 27; Sp. p. 4523; Dr. p. 916; Gaz. vol. 136; p. 1870.
Hunt, C. W. (See Barnes and Hunt.)
Hunt, Helm, Ferris & Company. (See Ferris, H. L. and H. J., assignors.)

Hunter, A., administratrix. (See Hunter, H. C.)
Hunter, H. C., deceased, Jersey City, N. J.; A. Hunter, administratrix. Collapsible crate. No. 902,408; Oct. 27; Sp. p. 4881; Dr. p. 988; Gaz. vol. 136; p. 1928.
Hunter, J. O. and W. L., Red Sulphur Springs, and W. A. Wykel, Hinton, W. Va. Physician's medicine-case. No. 900,373; Oct. 6; Sp. p. 637; Dr. pp. 131–2; Gaz. vol. 136; p. 1172.
Hunter, W. L. (See Hunter and Wykel.)
Hurd & Haggin. (See Le Pontois, L., assignor.)
Hurd, Z., Chicago, Ill. Wire-fence-stay-fastening machine. No. 900,099; Oct. 6; Sp. p. 48; Dr. pp. 9–10; Gaz. vol. 136; p. 1083.
Hurst, G. L., San Francisco, Cal. Endless-chain bucket excavator. No. 901,008; Oct. 13; Sp. p. 1992; Dr. p. 405; Gaz. vol. 136; p. 1408.
Hursthouse, F., Manchester, England. Extinguishing device. No. 900,282; Oct. 6; Sp. p. 454; Dr. p. 93; Gaz. vol. 136; p. 1143.
Huss, J. C., Philadelphia, Pa. Eraser for ink. No. 900,374; Oct. 6; Sp. p. 642; Dr. p. 132; Gaz. vol. 136; p. 1172.
Husted, L. J., assignor to National Rural Route Advertising Company, Denver, Colo. Metal-reinforced concrete post. No. 901,449; Oct. 20; Sp. p. 2908; Dr. p. 592; Gaz. vol. 136; p. 1587.
Huston, A. C. (See Ireland, J. B., assignor.)
Hutchins, F. (See Phillips and Hutchins.)
Hutchins, S. (See Kirkegaard, G., assignor.)
Hutchinson, G. S., North Bennington, Vt. Folding stool. No. 901,904; Oct. 20; Sp. p. 3832; Dr. pp. 780–1; Gaz. vol. 136; p. 1735.
Hutsler, C. W., Williamsport, Md., assignor of five-eighths to H. C. Heffner, G. A. Kerschner, and C. P. C. Rinker, Martinsburg, W. Va. Mail-bag-delivery apparatus. No. 902,409; Oct. 27; Sp. p. 4884; Dr. pp. 988–9; Gaz. vol. 136; p. 1928.
Hutton, C. P., assignor of one-half to G. W. Goff, East Hampton, Conn. Buckle. No. 901,103; Oct. 13; Sp. p. 2170; Dr. p. 441; Gaz. vol. 136; p. 1436.
Hyde, H., Rochester, N. Y. Apparatus for burning hydrocarbon. No. 902,298; Oct. 27; Sp. p. 4654; Dr. p. 945; Gaz. vol. 136; p. 1892.
Hyltén-Cavallius, C. F., Halmstad, Sweden. Garment-supporter. No. 902,084; Oct. 27; Sp. p. 4214; Dr. p. 853; Gaz. vol. 136; p. 1823.
I. E. Palmer Company. (See Palmer, I. E., assignor.)
Ide, H. L., assignor to A. L. Ide & Sons, Springfield, Ill. Engine. No. 900,100; Oct. 6; Sp. p. 51; Dr. p. 10; Gaz. vol. 136; p. 1083.
Ide & Sons, A. L. (See Ide, H. L., assignor.)
Illingworth, H. I., Swampscott, Mass. Machine for snipping and cementing shoe-uppers. No. 900,171; Oct. 6; Sp. p. 208; Dr. pp. 42–3; Gaz. vol. 136; p. 1106.
Imbert, G., Nuremberg, Germany. Making chloracetic ether. No. 901,009; Oct. 13; Sp. p. 1994; Gaz. vol. 136; p. 1408.
Imbert, G., Nuremberg, Germany. Producing hydroxy-fatty acids. No. 901,905; Oct. 20; Sp. p. 3834; Gaz. vol. 136; p. 1735.
Improved Paper Machinery Company. (See Parker, H., assignor.)
Incandescent Light & Stove Company. (See Stubbers, J., assignor.)
Ingoldsby, F. S., St. Louis, Mo., and J. F. Townsend, Pittsburg, Pa.; said Ingoldsby assignor to said Townsend. Car-stake. No. 900,930; Oct. 13; Sp. p. 1838; Dr. p. 374; Gaz. vol. 136; p. 1381.
Insull, S. (See Ball, H. P., assignor.)
International Generator Company. (See Moore, F. M., assignor.)
International Harvester Company. (See Dennis, S. K., assignor.)
International Nickel Company. (See Wadhams and Stanley, assignors.)
International Separator Company. (See Payne, C. Q., assignor.)
Irelan, A. E., assignor to Philadelphia Metallic Bed Company, Philadelphia, Pa. Corner-fastener for bedsteads. No. 902,085; Oct. 27; Sp. p. 4215; Dr. p. 854; Gaz. vol. 136; p. 1823.
Ireland, F. (See Pittman C. J., assignor.)
Ireland, G. F., Fort Totten, N. Y. Pencil-cushion. No. 902,233; Oct. 27; Sp. p. 4524; Dr. p. 916; Gaz. vol. 136; p. 1870.
Ireland, J. B., Broderick, assignor of one-half to A. C. Huston, Woodland, Cal. Box-clamping machine. No. 902,491; Oct. 27; Sp. p. 5084; Dr. p. 1030; Gaz. vol. 136; p. 1957.
Irwin, F. L., assignor to Ralston Steel Car Company, Columbus, Ohio. Car-underframe construction. No. 900,375; Oct. 6; Sp. p. 642; Dr. p. 132; Gaz. vol. 136; p. 1172.
Irwin, F. L., assignor to Ralston Steel Car Company, Columbus, Ohio. Car-bolster. No. 900,376; Oct. 6; Sp. p. 645; Dr. p. 133; Gaz. vol. 136; p. 1173.
Irwin, F. L., assignor to Ralston Steel Car Company, Columbus, Ohio. Car-underframe construction. No. 900,546; Oct. 6; Sp. p. 1022; Dr. pp. 207–8; Gaz. vol. 136; p. 1229.
Irwin, J. H., Highmore, S. D. Poultry-house. No. 901,535; Oct. 20; Sp. p. 3086; Dr. p. 630; Gaz. vol. 136; p. 1616.
Irwin, L. E., London, Ontario, Canada. Baby's diaper. No. 900,172; Oct 6; Sp. p. 213; Dr. pp. 43–4; Gaz. vol. 136; p. 1107.
Isaacs, H. S., Braddock, and L. Isaacs, Pittsburg, Pa., assignors to American Moving Picture Machine Company. Moving-picture apparatus. (Reissue.) No. 12,869; Oct. 27; Sp. p. 5213; Dr. p. 1053; Gaz. vol. 136; p. 1975.
Isaacs, L. (See Isaacs, H. S. and L.) (Reissue.)
Ives, F. E., Woodcliffe-on-Hudson, N. J. Self-playing piano. No. 901,906; Oct. 20; Sp. p. 3835; Dr. p. 781; Gaz. vol. 136; p. 1736.
J. G. Brill Company. (See Bole, S. T., assignor.)
J. G. Brill Company. (See Bucknam, E. S., assignor.)
J. G. Brill Company. (See Curwen, S. M., assignor.)
J. G. Brill Company. (See Curwen and Smith, assignors.)
J. G. Brill Company. (See Heulings, W. H., assignor.)
J. G. Brill Company. (See Heulings and Smith, assignors.)
J. G. Brill Company. (See Howson, H., assignor.)
J. G. Brill Company. (See Smith and Curwen, assignors.)
J. I. Case Threshing Machine Company. (See Power, J. J., assignor.)
J. W. Paxson Company. (See Hall, F. W., assignor.)
J. W. Sefton Manufacturing Company. (See Ferres and Fairchild, assignors.)
J. W. Sefton Manufacturing Company. (See Reber, J. G., assignor.)
Jackson, F. H., assignor to Byron Jackson Iron Works, West Berkeley, Cal. Apparatus for submarine operations. No. 901,104; Oct. 13; Sp. p. 2171; Dr. pp. 441–2; Gaz. vol. 136; p. 1437.
Jackson, G. W. and J. H., Cairo, Ill. Cotton-picker. No. 901,619; Oct. 20; Sp. p. 3245; Dr. pp. 665–6; Gaz. vol. 136; p. 1642.
Jackson, J. H., assignor of forty-nine one-hundredths to K. H. Butler, Pittsburg, Pa. Wall-tie. No. 900,377; Oct. 6; Sp. p. 646; Dr. p. 133; Gaz. vol. 136; p. 1173.
Jackson, J. H. (See Jackson, G. W. and J. H.)
Jackson, J. H., Hamilton, Ontario, Canada. Type-writing machine. No. 900,931; Oct. 13; Sp. p. 1839; Dr. pp. 374–5; Gaz. vol. 136; p. 1382.
Jackson, M. P., and A. D. Maxwell, Montezuma, Ga. Machine for loading cotton. No. 902,410; Oct. 27; Sp. p. 4888; Dr. pp. 989–90; Gaz. vol. 136; p. 1929.
Jackson, P. H., East Oakland, Cal. Building construction. No. 900,378; Oct. 6; Sp. p. 647; Dr. p. 133; Gaz. vol. 136; p. 1173.
Jackson, S. A., Kittery, Me. Sail-hank. No. 900,737; Oct. 13; Sp. p. 1425; Dr. p. 299; Gaz. vol. 136; p. 1319.
Jacob Haish Company. (See Westerberg, A., assignor.)
Jacobs, F. D., Paw Paw, Mich. Car-ventilating system. No. 901,010; Oct. 13; Sp. p. 1994; Dr. p. 405; Gaz. vol. 136; p. 1408.
Jaenichen, L., assignor to Standard Computing Scale Co., Detroit, Mich. Weighing-scale. No. 901,297; Oct. 13; Sp. p. 2538; Dr. p. 522; Gaz. vol. 136; p. 1498.
Jagelki, W., assignor to Dr. Degen & Kuth, Düren, Germany. Production of an organic soluble iron preparation. No. 902,234; Oct. 27; Sp. p. 4525; Gaz. vol. 136; p. 1870.
Jakobsson, H. G. (See Meigs and Jakobsson.)
James, J. S., Hiawatha, Kans. Agitator for washing-machines. No. 900,547; Oct. 6; Sp. p. 1024; Dr. p. 248; Gaz. vol. 136; p. 1230.
Janni, A. C. R., St. Louis, Mo. Reinforcing-bar. No. 900,379; Oct. 6; Sp. p. 649; Dr. p. 133; Gaz. vol. 136; p. 1174.
Jaques, F. O., Jr., assignor to Winsor & Jerauld Manufacturing Company, Providence, R. I. Micrometer-calipers. No. 902,492; Oct. 27; Sp. p. 5085; Dr. p 1030; Gaz. vol. 136; p. 1957.
Jaques, F. O., Jr., assignor to Winsor & Jerauld Manufacturing Company, Providence, R. I. Micrometer-calipers. No. 902,493; Oct. 27; Sp. p. 5087; D. p. 1031; Gaz. vol. 136; p. 1958.
Jecklin, J., and C. W. Schreiber, Dubuque, Iowa. Means for operating chucks. No. 900,856; Oct. 13; Sp. p. 1670; Dr. p. 338; Gaz. vol. 136; p. 1358.
Jeffery, T. B., Kenosha, Wis. Gearing. No. 900,857; Oct. 13; Sp. p. 1671; Dr. p. 338; Gaz. vol. 136; p. 1358.
Jeffrey Manufacturing Company. (See Gustavsen, C. O., assignor.)
Jeffrey Manufacturing Company. (See Liggett, W. K., assignor.)
Jeffrey Manufacturing Company. (See Lynch, G. E., assignor.)
Jeffrey Manufacturing Company. (See Willson, F. R., Jr., assignor.)
Jenkins, A., Carlisle, Iowa. Safety-catch for lifts. No. 900,866; Oct. 13; Sp. p. 1674; Dr. p. 339; Gaz. vol. 136; p. 1358.
Jenkins, H., Weir, Kans. Stock-feeding device. No. 901,620; Oct. 20; Sp. p. 3247; Dr. p. 666; Gaz. vol. 136; p. 1642.
Jenkins, M. L. (See Place and Jenkins.)
Jenson, H. A., Salt Lake City, Utah. Cradle or rocker attachment. No. 900,548; Oct. 6; Sp. p. 1025; Dr. pp. 208–9; Gaz. vol. 136; p. 1230.
Jiminez, A. L., assignor of forty-five one-hundredths to W. Freeman, five one-hundredths to J. L. Jiminez, and one-twentieth to J. M. R. Carrera, New York, N. Y. Wheel. No. 901,907; Oct. 20; Sp. p. 3837; Dr. p. 781; Gaz. vol. 136; p. 1736.

Jiminez, J. L., *et al.* (See Jiminez, A. L., assignor.)
Johannesmeyer, C. G., Cincinnati, Ohio. Device for stretching sheets uniformly. No. 902,494; Oct. 27; Sp. p. 5093; Dr. p. 1031; Gaz. vol. 136; p. 1959.
John Wyeth and Brother. (See Richards, E. L., assignor.)
Johns, L. G., assignor of one-half to M. E. Sloppy, Denver, Ind. Trace-eye guard. No. 900,283; Oct. 6; Sp. p. 455; Dr. p. 93; Gaz. vol. 136; p. 1143.
Johnson, A. B., Chicago, Ill. Device for use in studying pictorial composition. No. 902,299; Oct. 27; Sp. p. 4658; Dr. p. 945; Gaz. vol. 136; p. 1893.
Johnson, H., Edgerton, Mo. Clip-hook. No. 901,173; Oct. 13; Sp. p. 2288; Dr. p 467; Gaz. vol. 136; p. 1459.
Johnson, H. H., Forbes, and E. Moin, Sydney, New South Wales, Australia. Apparatus for lighting and extinguishing gas-lamps. No. 902,411; Oct. 27; Sp. p. 4891; Dr. p. 990; Gaz. vol. 136; p. 1929.
Johnson, J. C. (See Watt, J. R., assignor.)
Johnson, J. M., Edgerton, Wis. Folding box. No. 900,173; Oct. 6; Sp. p. 214; Dr. p. 44; Gaz. vol. 136; p. 1107.
Johnson, J. P., Kensal, N. D. Wrench. No. 901,174; Oct. 13; Sp. p. 2289; Dr. p. 467; Gaz. vol. 136; p. 1459.
Johnson, R. E., assignor to N. Y. Dash & Axle Mfg. Co., New York, N. Y. Carriage-axle. No. 900,859; Oct. 13; Sp. p. 1675; Dr. p. 339; Gaz. vol. 136; p. 1358.
Johnson, R. E. H., Jersey City, N. J. Stirrup. No. 901,908; Oct. 20; Sp. p. 3838; Dr. p. 782; Gaz. vol. 136; p. 1736.
Johnson, S. J., Montclair, N. J. Operating mechanism for dumping-cars. No. 900,549; Oct. 6; Sp. p. 1027; Dr. p. 209; Gaz. vol. 136; p. 1230.
Johnson, W. M., Hartford, Conn. Metallurgical condenser. No. 902,534; Oct. 27; Sp. p. 5196; Dr. p. 1050; Gaz. vol. 136; p. 1973.
Johnson, W. M., Hartford, Conn. Condensing volatile metals. No. 902,535; Oct. 27; Sp. p. 5199; Dr. p. 1050; Gaz. vol. 136; p. 1973.
Johnston, A., Ottumwa, Iowa. Grinding-machine. No. 901,909; Oct. 20; Sp. p. 3840; Dr. pp. 782–3; Gaz. vol. 136; p. 1737.
Johnston, C. H., Rogers Park, Ill. Non-detachable sliding and folding upper deck for brick-drier cars. No. 901,105; Oct. 13; Sp. p. 2173; Dr. p. 442; Gaz. vol. 136; p. 1437.
Johnston, J. E., *et al.* (See Babb, J. M., assignor.)
Johnston, J. F. (See Rowe and Johnston.)
Jones, A., Oolitic, Ind. Stone-sawing machine. No. 901,175; Oct. 13; Sp. p. 2290; Dr. p. 467; Gaz. vol. 136; p. 1459.
Jones, A., assignor to L. Kalling, Baltimore, Md. Machine for securing sealing-caps to bottles. No. 900,550; Oct. 6; Sp. p. 1029; Dr. pp. 209–12; Gaz. vol. 136; p. 1230.
Jones, A. A., *et al.* (See Robinson, F., assignor.)
Jones, J. D., Temple, Tex. Journal-box. No. 901,346; Oct. 20; Sp. p. 2652; Dr. p. 544; Gaz. vol. 136; p. 1551.
Jones, J. W., Baton Rouge, La. Graphophone-stop. No. 901,910; Oct. 20; Sp. p. 3841; Dr. p. 783; Gaz. vol. 136; p. 1737.
Jones, L., Broomfield, W. Va. Stop-cock. No. 901,621; Oct. 20; Sp. p. 3253; Dr. p. 666; Gaz. vol. 136; p. 1642.
Jones, L., Jefferson, Ohio. Door bolt and latch releasing device. No. 902,412; Oct. 27; Sp. p. 4893; Dr. pp. 990–1; Gaz. vol. 136; p. 1930.
Jones, L. W., and F. B. Leopold, Sewickley, assignors to Pittsburgh Filter Manufacturing Company, Pittsburg, Pa. Water-softener. No. 900,551; Oct. 6; Sp. p. 1030; Dr. pp. 212–13; Gaz. vol. 136; p. 1231.
Jones, O., Redfern, near Sydney, New South Wales, Australia. Beam-scale. No. 901,911; Oct. 20; Sp. p. 3843; Dr. pp. 783–4; Gaz. vol. 136; p. 1737.
Jones, S., East Liverpool, Ohio. Mechanical movement. No. 901,912; Oct. 20; Sp. p. 3845; Dr. p. 784; Gaz. vol. 136; p. 1738.
Jordan, C. D. (See Benton and Jordan.)
Jordan, F. B., Winchester, Mass. Loose-leaf binder. No. 901,347; Oct. 20; Sp. p. 2653; Dr. p. 544; Gaz. vol. 136; p. 1551.
Jorres, R. W., assignor to Paris Lamp Manufacturing Company, St. Louis, Mo. Vapor-burning lamp. No. 900,738; Oct. 13; Sp. p. 1426; Dr. p. 299; Gaz. vol. 136; p. 1319.
Jose, O. A., and S. Anderson, Indianapolis, Ind. Wooden column. No. 901,176; Oct. 13; Sp. p. 2291; Dr. p. 468; Gaz. vol. 136; p. 1460.
Jost, W. F., Pocatello, Idaho. Cannon-pinion. No. 900,380; Oct. 6; Sp. p. 651; Dr. p. 134; Gaz. vol. 136; p. 1174.
Jottrand, A., *et al.*, associate guardians. (See Jottrand, F.)
Jottrand, F., deceased, Uccle, near Brussels, Belgium; J. R. and A. Jottrand, associate guardians, assignors to Société Anonyme L' Oxhydrique Internationale. Machine for welding metal tubes, rings, and the like. No. 900,381; Oct. 6; Sp. p. 653; Dr. p. 134; Gaz. vol. 136; p. 1174.
Jottrand, J. R., *et al.*, guardians. (See Jottrand, F.)
Joynes, A. L., Paducah, Ky., assignor of one-third to C. L. Meyers, St. Louis, Mo. Moisture-proof case for insulated wires. No. 900,382; Oct. 6; Sp. p. 655; Dr. p. 135; Gaz. vol. 136; p. 1175.
Jude, A., and R. K. Morcom, assignors to Bellis & Morcom Limited, Birmingham, England. Turbine. No. 900,739; Oct. 13; Sp. p. 1427; Dr. p. 299; Gaz. vol. 136; p. 1319.
Judson L. Thomson M'f'g Company. (See Leach, J. N., assignor.)
Juillot, D., La Couture-Boussey, France, assignor to J. Mignolet, Denver, Colo. Flute. No. 901,913; Oct. 20; Sp. p. 3846; Dr. pp. 784–5; Gaz. vol. 136; p. 1738.
Junggren, O. (See Emmet and Junggren.)
Junius, G. E., Hagen, Germany, assignor to R. E. B. Sanderson, New York, N. Y. Black sulfur dye and making same. No. 901,970; Oct. 27; Sp. p. 3973; Gaz. vol. 136; p. 1787.
Kade, O. C., Chicago, Ill. Folding table. No. 900,552; Oct. 6; Sp. p. 1038; Dr. p. 213; Gaz. vol. 136; p. 1231.
Kahle, W. H., Pottsville, and M. Himmelreich, Philadelphia, Pa. Grinder for wood-planer knives. No. 900,284; Oct. 6; Sp. p. 456; Dr. pp. 93–4; Gaz. vol. 136; p. 1143.
Kaiser, F. A., Scranton, Pa. Mattress. No. 900,383; Oct. 6; Sp. p. 657; Dr. p. 135; Gaz. vol. 136; p. 1175.
Kaiser, G. G., Harrison township, Clay county, Ind. Wood-burning stove. No. 900,384; Oct. 6; Sp. p. 658; Dr. p. 135; Gaz. vol. 136; p. 1175.
Kalling, L. (See Jones, A., assignor.)
Kann, S., New York, N. Y. Crayon-sharpener. No. 901,622; Oct. 20; Sp. p. 3254; Dr. p. 667; Gaz. vol. 136; p. 1643.
Kapff, S. von, Boxgraben-Aachen, Germany, Producing diformin. No. 901,298; Oct. 13; Sp. p. 2539; Gaz. vol. 136; p. 1499.
Kappler, P. and C., Düren, Germany. Manufacturing wire pile fabrics from printed warps. No. 902,413; Oct. 27; Sp. p. 4894; Dr. p. 991; Gaz. vol. 136; p. 1930.
Kardos, H., Homestead, Pa. Table. No. 901,914; Oct. 20; Sp. p. 3848; Dr. p. 785; Gaz. vol. 136; p. 1738.
Kasjens, J. G., Peoria, Ill. Faucet. No. 900,385; Oct. 6; Sp. p. 660; Dr. p. 136; Gaz. vol. 136; p. 1176.
Kassler, F. W., assignor of one-half to I. Wagner, St. Louis, Mo. Coin-controlled lock. No. 902,086; Oct. 27; Sp. p. 4216; Dr. p. 854; Gaz. vol. 136; p. 1824.
Kauffman, A. B., *et al.* (See Humphrey, E. H., assignor.)
Kauffman, E. F., York, Pa. Insect-destroyer. No. 901,348; Oct. 20; Sp. p. 2655; Dr. p. 544; Gaz. vol. 136; p. 1551.
Kaufman, A. G., and L. J. Lippmann, assignors to American Callaphone Company, New York, N. Y. Telephone-transmitter. No. 900,386; Oct. 6; Sp. p. 662; Dr. p. 136; Gaz. vol. 136; p. 1176.
Kaufman, A. G., and L. J. Lippmann, assignors to American Callaphone Company, New York, N. Y. Telephone-receiver. No. 900,387; Oct. 6; Sp. p. 665; Dr. pp. 136–7; Gaz. vol. 136; p. 1176.
Kaufman, W. R., Sulphur, Okla. Smoking-pipe. No. 901,915; Oct. 20; Sp. p. 3849; Dr. p. 785; Gaz. vol. 136; p. 1738.
Keefe, P. T., New York, N. Y. Burglar-alarm. No. 901,349; Oct. 20; Sp. p. 2657; Dr. p. 544; Gaz. vol. 136; p. 1552.
Keegan, W. J., Winthrop, N. Y. Drilling-machine. No. 901,106; Oct. 13; Sp. p. 2175; Dr. p. 442; Gaz. vol. 136; p. 1437.
Keeley, N. K., assignor to J. E. Rice, Owensboro, Ky. Depressor for fruit-jars. No. 900,740; Oct. 13; Sp. p. 1430; Dr. p. 290; Gaz. vol. 136; p. 1319.
Keeley, W. J., assignor to Autopiano Co., New York, N. Y. Tracker-bar and music-sheet mechanism. No. 902,495; Oct. 27; Sp. p. 5095; Dr. p. 1031; Gaz. vol. 136; p. 1959.
Keeley, W. J., assignor to Autopiano Company, New York, N. Y. Sectional modulating attachment for musical instruments. No. 902,536; Oct. 27; Sp. p. 5201; Dr. p. 1050; Gaz. vol. 136; p. 1973.
Kehl, F. A., and A. F. Wright, Tacoma, Wash. Automatic fire-alarm trip. No. 901,243; Oct. 13; Sp. p. 2409; Dr. p. 494; Gaz. vol. 136; p. 1480.
Kell, R., Eisleben, Germany. Radio-active composition. No. 901,177; Oct. 13; Sp. p. 2293; Gaz. vol. 136; p. 1460.
Kelm, S. R., Johnstown, Pa. Metallic railway-tie. No. 902,414; Oct. 27; Sp. p. 4895; Dr. p. 991; Gaz. vol. 136; p. 1930.
Keltel, G., New York, N. Y. Collar-support. No. 901,178; Oct. 13; Sp. p. 2294; Dr. p. 468; Gaz. vol. 136; p. 1382.
Keller, G. O., Buena Vista, Va. Window-lock. No. 901,450; Oct. 20; Sp. p. 2909; Dr. p. 592; Gaz. vol. 136; p. 1460.
Keller, H., Berlin, Germany, assignor to General Electric Company. Multistage centrifugal pump. No. 901,450; Oct. 20; Sp. p. 2909; Dr. p. 592; Gaz. vol. 136; p. 1587.
Keller, M. E., assignor of one-half to C. F. Spotswood, New York, N. Y. Engine. No. 900,101; Oct. 6; Sp. p. 53; Dr. p. 10; Gaz. vol. 136; p. 1084.
Keltner, L., New York, N. Y., assignor to Metropolitan Switchboard Co. Cable-tip. No. 902,235; Oct. 27; Sp. p. 4526; Dr. p. 916; Gaz. vol. 136; p. 1871.
Kellogg Switchboard & Supply Company. (See Post, H. M., assignor.)
Kellogg Switchboard & Supply Company. (See Simpson C. A., assignor.)
Kellogg Switchboard & Supply Company. (See Winston, C. S., assignor.)
Kelly Axe Mfg. Co. (See Ball, C., assignor.)
Keltner, I. M., Carrollton, Mo. Railway-switch. No. 901,711; Oct. 20; Sp. p. 3475; Dr. pp. 703–4; Gaz. vol. 136; p. 1674.

Kemp, A. M., M. W. Loomis, and J. E. Fitzwater, Denver, Colo. Concentrating-table. No. 900,285; Oct. 6; Sp. p. 459; Dr. p. 94; Gaz. vol. 136; p. 1144.
Kemper-Thomas Company. (See Henderson, E. L., assignor.)
Kempshall, E., assignor to Kempshall Tyre Company, of Europe, Limited, London, England. Tire for vehicle-wheels. No. 901,244; Oct. 13; Sp. p. 2411; Dr. p. 494; Gaz. vol. 136; p. 1481.
Kempshall Tyre Company, of Europe. (See Kempshall, E., assignor.)
Kendrick, J. K., Germantown, Cal. Vehicle-brake. No. 901,451; Oct. 20; Sp. p. 2911; Dr. p. 593; Gaz. vol. 136; p. 1588.
Kenevel, J. W., Philadelphia, Pa. Valve-controlling means. No. 901,712; Oct. 20; Sp. p. 3478; Dr. p. 704; Gaz. vol. 136; p. 1674.
Kenne, T. (See Meyer and Kenne.)
Kennedy, T. C., assignor to Fairbanks, Morse & Company, Chicago, Ill. Storage apparatus. No. 902,300; Oct. 27; Sp. p. 4659; Dr. p. 945; Gaz. vol. 136; p. 1893.
Kennelly, E. F., Boston, Mass. Artificial-stone sewer-cap. No. 901,536; Oct. 20; Sp. p. 3087; Dr. p. 631; Gaz. vol. 136; p. 1616.
Kennicott, C. L., Chicago Heights, assignor to Kennicott Water Softener Co., Chicago, Ill. Water-purifying apparatus. No. 900,286; Oct. 6; Sp. p. 462; Dr. pp. 94–5; Gaz. vol. 136; p. 1144.
Kennicott Water Softener Co. (See Kennicott, C. L., assignor.)
Kerger, D. J., St. Anne, Ill. Corn-planter. No. 902,415; Oct. 27; Sp. p. 4898; Dr. pp. 991–2; Gaz. vol. 136; p. 1931.
Kerr, H. B., Baltimore, Md. Window-shade tool. No. 900,741; Oct. 13; Sp. p. 1431; Dr. p. 291; Gaz. vol. 136; p. 1320.
Kerr, J. S., Valparaiso, Chile. Sound-box. No. 901,713; Oct. 20; Sp. p. 3479; Dr. p. 704; Gaz. vol. 136; p. 1675.
Kerschner, G. A., *et al.* (See Hutsler, C. W., assignor.)
Kessler, L., Des Moines, Iowa, assignor of one-half to C. E. Holtzman, Chicago, Ill. Receptacle for combustible liquids. No. 900,102; Oct. 6; Sp. p. 56; Dr. p. 11; Gaz. vol. 136; p. 1084.
Kessler, L., Des Moines, Iowa, assignor of one-half to C. E. Holtzman, Chicago, Ill. Portable receptacle for liquids. No. 900,103; Oct. 6; Sp. p. 59; Dr. p. 11; Gaz. vol. 136; p. 1084.
Kessler, L., Des Moines, Iowa, assignor of one-half to C. E. Holtzman, Chicago, Ill. Portable receptacle for fluids. No. 900,104; Oct. 6; Sp. p. 62; Dr. p. 12; Gaz. vol. 136; p. 1085.
Keston Manufacturing Company of Baltimore City. (See Whitehurst, W. I., assignor.)
Ketchum, E. C., Boston, Mass. Antifriction-bearing. No. 900,860; Oct. 13; Sp. p. 1677; Dr. p. 339; Gaz. vol. 136; p. 1359.
Keuffel & Esser Company. (See Ferber, P., assignor.)
Keyes, E. L., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Locking device for lasts. No. 901,350; Oct. 20; Sp. p. 2660; Dr. p. 545; Gaz. vol. 136; p. 1552.
Kidder, W. P., Boston, Mass. Shock-absorbing mechanism for vehicle-springs. No. 900,388; Oct. 6; Sp. p. 667; Dr. p. 137; Gaz. vol. 136; p. 1177.
Kidwell, J. H., Staunton, Va. Feed-water heater. No. 901,245; Oct. 13; Sp. p. 2412; Dr. pp. 494–5; Gaz. vol. 136; p. 1481.
Kierstead, C. S., Cambridge, Mass. Apparatus for treating vegetables. No. 901,011; Oct. 13; Sp. p. 1996; Dr. pp. 405–6; Gaz. vol. 136; p. 1409.
Kilmer, W. A., Cleveland, Ohio, assignor to Carroll Barb-Wire Manufacturing and Fence Co., Peoria, Ill. Barb-wire machine. No. 902,152; Oct. 27; Sp. p. 4348; Dr. pp. 880–2; Gaz. vol. 136; p. 1845.
Kimball, C. G., West Derry, N. H. Ice-cutter. No. 900,933; Oct. 13; Sp. p. 1844; Dr. p. 375; Gaz. vol. 136; p. 1382.
Kimber, W. E., Johannesburg, Transvaal. Apparatus for sharpening drills or drill-bits. No. 902,416; Oct. 27; Sp. p. 4000; Dr. pp. 992–3; Gaz. vol. 136; p. 1931.
Kincaid, F. L., and H. T. Preble, Stockton, Cal. Self-propelling combined harvester, agricultural engine, and truck. No. 900,389; Oct. 6; Sp. p. 668; Dr. pp. 137–8; Gaz. vol. 136; p. 1177.
King, E. A., Philadelphia, Pa. Calorific kiln. No. 900,742; Oct. 13; Sp. p. 1432; Dr. p. 291; Gaz. vol. 136; p. 1320.
King, F. H., and D. F. Arburn, Evansville, Ind. Barrel-raiser. No. 900,391; Oct. 6; Sp. p. 676; Dr. p. 138; Gaz. vol. 136; p. 1178.
King, P., Springfield, Ohio. Hammock-stand and awning. No. 902,087; Oct. 27; Sp. p. 4219; Dr. pp. 854–5; Gaz. vol. 136; p. 1824.
King, T., *et al.* (See Schuman, J. B., assignor.)
Kingsley, F., New York, N. Y. Mechanism for feeding furnaces. No. 900,390; Oct. 6; Sp. p. 673; Dr. p. 138; Gaz. vol. 136; p. 1177.
Kingston, C. E., Columbus, Miss. Type-writer table. No. 901,916; Oct. 20; Sp. p. 3850; Dr. p. 786; Gaz. vol. 136; p. 1739.
Kinsel, J., Philadelphia, Pa. Antifraud-bottle. No. 901,107; Oct. 13; Sp. p. 2178; Dr. p. 442; Gaz. vol. 136; p. 1438.
Kintner, C. J., New York, N. Y. Dough-cutting machine. No. 902,088; Oct. 27; Sp. p. 4221; Dr. p. 855; Gaz. vol. 136; p. 1824.
Kintz, R. R., Meriden, Conn. Detachable handle for glasses. No. 902,236; Oct. 27; Sp. p. 4527; Dr. p. 917; Gaz. vol. 136; p. 1871.
Kirby, E. B., Flat River, Mo. Stopping or sealing off underground flows of water into mine-workings, &c. No. 900,683; Oct. 6; Sp. p. 1320; Dr. p. 270; Gaz. vol. 136; p. 1275.
Kirk, T. F., Jr., *et al.* (See Ruple, F., assignor.)
Kirkegaard, G., New York, N. Y., assignor to S. Hutchins, Washington, D. C. Sound recording and reproducing instrument. No. 900,392; Oct. 6; Sp. p. 677; Dr. p. 139; Gaz. vol. 136; p. 1178.
Kirkland, A. T. (See Reed, G. B., assignor.)
Kitsee, I. (See Nacke, A., assignor.)
Kitsee, I., Philadelphia, Pa. Telegraphic relay. No. 900,553; Oct. 6; Sp. p. 1039; Dr. p. 213; Gaz. vol. 136; p. 1232.
Kitsee, I., Philadelphia, Pa. Relay. No. 900,743; Oct. 13; Sp. p. 1435; Dr. p. 292; Gaz. vol. 136; p. 1320.
Kitsee, I., Philadelphia, Pa. Producing cellulose compounds. No. 900,744; Oct. 13; Sp. p. 1436; Gaz. vol. 136; p. 1320.
Kitsee, I., Philadelphia, Pa. Phonography. No. 900,934; Oct. 13; Sp. p. 1845; Dr. p. 375; Gaz. vol. 136; p. 1382.
Kitsee, I., Philadelphia, Pa. Electric battery. No. 901,012; Oct. 13; Sp. p. 1998; Dr. p. 406; Gaz. vol. 136; p. 1409.
Kitsee, I., Philadelphia, Pa. Producing electric coils and conductors therefor. No. 901,299; Oct. 13; Sp. p. 2539; Dr. p. 522; Gaz. vol. 136; p. 1499.
Kittle, C. R. (See Hoag and Kittle.)
Klein, A. (See Gorsline and Klein.)
Klein, I., New York, N. Y. Safety-envelop. No. 902,301; Oct. 27; Sp. p. 4661; Dr. p. 945; Gaz. vol. 136; p. 1893.
Klein, S. (See Gorsline and Klein, assignors.)
Kleineschay, W., Elmore, Wis. Neck-yoke. No. 901,971; Oct. 27; Sp. p. 3973; Dr. p. 811; Gaz. vol. 136; p. 1788.
Kline, J. W., Bedford, Ind. Collapsible stand. No. 902,089; Oct. 27; Sp. p. 4224; Dr. p. 856; Gaz. vol. 136; p. 1825.
Klingenberg, C., assignor to Libbey Glass Company, Toledo, Ohio. Cutting apparatus. No. 900,174; Oct. 6; Sp. p. 219; Dr. p. 45; Gaz. vol. 136; p. 1108.
Klotz & Co., H. and G. (See Utard and Gimonet, assignors.)
Knabe, E. J., Jr. (See Darley, J. W., Jr., assignor.)
Knapp, C. H., Chicago, Ill. Combined hay rake and elevator. No. 900,287; Oct. 6; Sp. p. 464; Dr. pp. 95–6; Gaz. vol. 136; p. 1145.
Knapp, C. H., Chicago, Ill. Conveyer. No. 900,554; Oct. 6; Sp. p. 1042; Dr. p. 213; Gaz. vol. 136; p. 1232.
Knapp, G. W., Baltimore, Md., assignor to National Enameling and Stamping Company. Drainer for kitchen-sinks;. No. 900,684; Oct. 6; Sp. p. 1323; Dr. p. 270; Gaz. vol. 136; p. 1276.
Knapp, W. L., *et al.* (See Putney, A. N., assignor.)
Knickerbocker, J. H., Logansport, Ind. Wire-fence fastener. No. 900,175; Oct. 6; Sp. p. 221; Dr. p. 45; Gaz. vol. 136; p. 1108.
Knight, J. L., assignor to A. U. Morse, Kansas City, Mo. Hand-operating eyeleting-machine. No. 900,935; Oct. 13; Sp. p. 1846; Dr. p. 376; Gaz. vol. 136; p. 1383.
Knott, L. E., assignor to L. E. Knott Apparatus Company, Boston, Mass. Galvanometer. No. 901,013; Oct. 13; Sp. p. 1999; Dr. p. 406; Gaz. vol. 136; p. 1409.
Knuppel, J., assignor of one-third to J. H. Reiter, New York, N. Y. Stevedore-rig. No. 900,685; Oct. 6; Sp. p. 1324; Dr. p. 270; Gaz. vol. 136; p. 1276.
Koch, J. S., *et al.* (See Gravelle, J., assignor.)
Koeneke, F. E., assignor to S. Koeneke, Milwaukee, Wis. Inking-machine for type-writer ribbons. No. 900,936; Oct. 13; Sp. p. 1848; Dr. p. 376; Gaz. vol. 136; p. 1383.
Koeneke, S. (See Koeneke, F. E., assignor.)
Kohke, J., Atlanta, Ga., assignor to American Can Company, New York, N. Y. Machine for manufacturing one-piece folded sheet-metal turpentine-cups. No. 900,393; Oct. 6; Sp. p. 680; Dr. p. 139; Gaz. vol. 136; p. 1178.
Kohke, J., Atlanta, Ga., assignor to American Can Company, New York, N. Y. Machine for manufacturing one-piece folded sheet-metal turpentine-cups. No. 900,394; Oct. 6; Sp. p. 682; Dr. p. 140; Gaz. vol. 136; p. 1179.
Kohler, E., Alameda, Cal. Envelop. No. 900,395; Oct. 6; Sp. p. 685; Dr. p. 140; Gaz. vol. 136; p. 1179.
Kolosick, E. F., Washington, and J. A. Kolosick, Ainsworth, Iowa. Animal-dipping device. No. 901,623; Oct. 20; Sp. p. 3255; Dr. p. 667; Gaz. vol. 136; p. 1643.
Kolosick, J. A. (See Kolosick, E. F. and J. A.)
Kolp, G., Richmond, Ind. Dancing-chart and method of self-instruction. No. 900,105; Oct. 6; Sp. p. 64; Dr. p. 12; Gaz. vol. 136; p. 1085.
Kone, G. W., Kansas City, Mo. Keyless padlock. No. 901,972; Oct. 27; Sp. p. 3974; Dr. p. 811; Gaz. vol. 136; p. 1788.
Koppers, H., Essen-on-the-Ruhr, Germany. Gas-furnace or coke-oven. No. 901,351; Oct. 20; Sp. p. 2662; Dr. p. 545; Gaz. vol. 136; p. 1552.
Korff, F., Lansing, Mich. Sleigh-runner attachment for vehicles. No. 900,937; Oct. 13; Sp. p. 1852; Dr. p. 377; Gaz. vol. 136; p. 1383.
Korinek, G., Detroit, Mich. Holder for emery, oilstone, and other abrading materials. No. 900,938; Oct. 13; Sp. p. 1853; Dr. p. 377; Gaz. vol. 136; p. 1384.

Kornhauser, R. D. (See Bruzaud, C. N., assignor.)
Korten, H., assignor to F. Y. Nichols, Chicago, Ill. Water-purifier. No. 901,352; Oct. 20; Sp. p. 2663; Dr. p. 546; Gaz. vol. 136; p. 1553.
Koscherak, A., New York, N. Y. Razor. No. 901,537; Oct. 20; Sp. p. 3089; Dr. p. 631; Gaz. vol. 136; p. 1616.
Krabill, C. A., Fostoria, Ohio. Fat-cutting machine. No. 901,624; Oct. 20; Sp. p. 3256; Dr. pp. 667–8; Gaz. vol. 136; p. 1643.
Kracker, G., Philadelphia, Pa. Muffler for telephone-transmitters. No. 901,108; Oct. 13; Sp. p. 2180; Dr. p. 443; Gaz. vol. 136; p. 1438.
Kruft, H. P. (See Schweinert and Kraft.)
Kramer, E. M., Cissna Park, Ill. Band-cutter and feeder. No. 902,237; Oct. 27; Sp. p. 4528; Dr. p. 917; Gaz. vol. 136; p. 1871.
Kreisel, F. W. T., Warrenton, Va. Crib. No. 901,917; Oct. 20; Sp. p. 3851; Dr. p. 786; Gaz. vol. 136; p. 1739.
Krentler-Arnold Hinge Last Company. (See Krentler, E. O., assignor.)
Krentler, E. O., assignor to Krentler-Arnold Hinge Last Company, Detroit, Mich. Divided last. No. 901,918; Oct. 20; Sp. p. 3852; Dr. p. 786; Gaz. vol. 136; p. 1739.
Krentler, E. O., assignor to Krentler-Arnold Hinge Last Company, Detroit, Mich. Link-last. No. 902,302; Oct. 27; Sp. p. 4663; Dr. p. 946; Gaz. vol. 136; p. 1894.
Krentler, E. O., assignor to Krentler-Arnold Hinge Last Company, Detroit, Mich. Hinged last. No. 902,303; Oct. 27; Sp. p. 4665; Dr. p. 946; Gaz. vol. 136; p. 1894.
Kruh, O. O., Schenectady, N. Y., assignor to General Electric Company. System of electrical distribution. No. 900,745; Oct. 13; Sp. p. 1439; Dr. p. 292; Gaz. vol. 136; p. 1321.
Kudlich, A. H., Lynn, Mass., assignor to General Electric Company. Core-box. No. 902,304; Oct. 27; Sp. p. 4667; Dr. p. 946; Gaz. vol. 136; p. 1895.
Kuehn, F. (See Paquette, F., assignor.)
Kügelgen, F. von. (See Seward and Kügelgen.)
Kühl, H., Blankenese, near Hamburg, Germany, assignor, by mesne assignments, to Atlas Portland Cement Company, New York, N. Y. Slag cement and making the same. No. 900,939; Oct. 13; Sp. p. 1854; Gaz. vol. 136; p. 1384.
Kuhlewind, C., assignor of five-eighths to P. Wuesthoff, Pittsburg, Pa. Apparatus for manufacturing glass articles. No. 900,940; Oct. 13; Sp. p. 1855; Dr. pp. 377–9; Gaz. vol. 136; p. 1384.
Kuhlmann, F. R., Marseilles, Ill., assignor to Howe & Davidson Company, East Orange, N. J. Embossing-die. No. 901,109; Oct. 13; Sp. p. 2181; Dr. p. 443; Gaz. vol. 136; p. 1438.
Kummer, J. L., Cold Spring, Minn. Rake. No. 902,238; Oct. 27; Sp. p. 4531; Dr. p. 918; Gaz. vol. 136; p. 1871.
Kunde, W., Dresden, Germany. Holder for writing and similar instruments or tools. No. 901,452; Oct. 20; Sp. p. 2912; Dr. p. 593; Gaz. vol. 136; p. 1588.
Kunkel, A., Johnstown, Pa. Broom-holder. No. 901,179; Oct. 13; Sp. p. 2295; Dr. p. 468; Gaz. vol. 136; p. 1460.
Kupferschmid, H., Burgdorf, Switzerland. Change-speed gearing. No. 902,090; Oct. 27; Sp. p. 4226; Dr. p. 856; Gaz. vol. 136; p. 1825.
Kyle, A., assignor to J. Kyle, Philadelphia, Pa. Register-hook. No. 901,110; Oct. 13; Sp. p. 2183; Dr. p. 443; Gaz. vol. 136; p. 1439.
Kyle, J. (See Kyle, A., assignor.)
L. E. Knott Apparatus Company. (See Knott, L. E., assignor.)
La Follette, C. F., assignor of one-half to W. D. Brookings, Highland, Cal. Rotating woodworking-cutter. No. 901,626; Oct. 20; Sp. p. 3262; Dr. p. 669; Gaz. vol. 136; p. 1644.
Labofish, C. S., Washington, D. C., assignor to Union Typewriter Company, Jersey City, N. J. Tabulating device for type-writers. No. 901,973; Oct. 27; Sp. p. 3978; Dr. pp. 811–12; Gaz. vol. 136; p. 1788.
Lacroix, J. D., New Orleans, La., assignor to E. H. Davis, New York, N. Y. Bunch shaping, compressing, and conveying mechanism for cigar-machines. No. 901,625; Oct. 20; Sp. p. 3258; Dr. pp. 668–9; Gaz. vol. 136; p. 1644.
Ladd, F. B. (See Bowman and Harmeyer, assignors.)
Ladd, S. W., assignor to S. W. Winslow, trustee, Beverly, Mass. Buffing-machine. No. 901,933; Oct. 20; Sp. p. 3889; Dr. p. 794; Gaz. vol. 136; p. 1745.
Lafond, E. J., Bristol, N. H. Shoe. No. 901,353; Oct. 20; Sp. p. 2666; Dr. p. 546; Gaz. vol. 136; p. 1553.
Lafond, H. S., New York, N. Y. Sign-displaying device. No. 902,496; Oct. 27; Sp. p. 5096; Dr. p. 1032; Gaz. vol. 136; p. 1959.
Lageson, A. H., Mabel, Minn. Package-tie. No. 900,746; Oct. 13; Sp. p. 1440; Dr. p. 292; Gaz. vol. 136; p. 1321.
Laird, J. F. (See Porter, Laird, and Geilfuss.)
Lally, J., Boston, Mass. Column. No. 901,453; Oct. 20; Sp. p. 2912; Dr. p. 593; Gaz. vol. 136; p. 1588.
Lambert, G. A., Anderson, Ind. Vehicle shaft or thill. No. 900,288; Oct. 6; Sp. p. 466; Dr. p. 96; Gaz. vol. 136; p. 1145.
Lambert, J. J., *et al.* (See Loomis, H. T., assignor.)
Lamme, B. G., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. System of control for electric motors. No. 900,289; Oct. 6; Sp. p. 468; Dr. pp. 96–7; Gaz. vol. 136; p. 1140.
Lamme, B. G., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Controlling system for electric motors. No. 900,555; Oct. 6; Sp. p. 1043; Dr. p. 214; Gaz. vol. 136; p. 1232.
Lancaster, C. M., Traverse City, Mich. Package-tie. No. 902,091; Oct. 27; Sp. p. 4227; Dr. p. 856; Gaz. vol. 136; p. 1825.
Landau Economic Syphon Company. (See Martin, J., assignor.)
Landgraf, F. K., Bridgeville, and W. L. Turner, Pittsburg, Pa. Testing-machine. No. 902,497; Oct. 27; Sp. p. 5099; Dr. pp. 1032–3; Gaz. vol. 136; p. 1960.
Lane, J. B., Glenwood Landing, N. Y. Automatic starting-valve. No. 902,417; Oct. 27; Sp. p. 4904; Dr. p. 993; Gaz. vol. 136; p. 1932.
Lange, F. (See Goldschmidt and Lange.)
Lange, G., Chicago, Ill. Ash-sifter. No. 900,396; Oct. 6; Sp. p. 384; Dr. p. 140; Gaz. vol. 136; p. 1179.
Lange, P. M. H., assignor to Toledo Machine and Tool Company, Toledo, Ohio. Friction-clutch. No. 900,397; Oct. 6; Sp. p. 686; Dr. p. 141; Gaz. vol. 136; p. 1180.
Langian, R. T., Boston, Mass. Insulator. No. 901,627; Oct. 20; Sp. p. 3263; Dr. p. 669; Gaz. vol. 136; p. 1644.
Langstaff, L. G., New York, N. Y. Vessel for dispensing liquids. No. 901,714; Oct. 20; Sp. p. 3482; Dr. p. 704; Gaz. vol. 136; p. 1675.
Langworthy, S. M., Cedar Rapids, Iowa. Surgical table. No. 901,628; Oct. 20; Sp. p. 3265; Dr. pp. 669–70; Gaz. vol. 136; p. 1644.
Lansing Wheelbarrow Company. (See Verplanck, H. M., assignor.)
Laprés, J. N., Montreal, Quebec, Canada. Awning reflector-screen. No. 901,715; Oct. 20; Sp. p. 3483; Dr. p. 705; Gaz. vol. 136; p. 1675.
Larava, H. F., Worcester, Mass. Wrench. No. 902,305; Oct. 27; Sp. p. 4670; Dr. p. 946; Gaz. vol. 136; p. 1895.
Larson, N. A. (See Malmrose, C. F., assignor.)
Lasance, A., Cincinnati, Ohio. Dovetailing-machine. No. 901,454; Oct. 20; Sp. p. 2914; Dr. p. 594; Gaz. vol. 136; p. 1589.
Lassiter, D. C., Shelmerdine, N. C. Combined vehicle jack and wrench. No. 900,556; Oct. 6; Sp. p. 1045; Dr. p. 214; Gaz. vol. 136; p. 1233.
Latham, A., Waltham, assignor of one-half to J. W. Nourbourn, Somerville, Mass. Variable-speed transmission mechanism. No. 900,675; Oct. 6; Sp. p. 1294; Dr. pp. 264–5; Gaz. vol. 136; p. 1272.
Lathrop, E. K., Springfield, Mass. Paper box. No. 900,557; Oct. 6; Sp. p. 1047; Dr. p. 214; Gaz. vol. 136; p. 1233.
Latimer, E. R. (See Latimer, W. E., assignor.)
Latimer, W. E., assignor to E. R. Latimer, Utica, N. Y. Extension foot-rest. No. 902,092; Oct. 27; Sp. p. 4228; Dr. p. 857; Gaz. vol. 136; p. 1825.
Lauhoff, F., Detroit, Mich. Coated flakes. No. 901,455; Oct. 20; Sp. p. 2917; Dr. pp. 594–5; Gaz. vol. 136; p. 1589.
Laux, J. A. (See Rowan and Laux.)
Lawlor, S. C., Duluth, Minn. Wringer. No. 901,919; Oct. 20; Sp. p. 3857; Dr. p. 787; Gaz. vol. 136; p. 1740.
Lawnin, L. D., Edwardsville, Ill., assignor of one-half to N. O. Nelson Manufacturing Company, St. Louis, Mo. Flushing device for water-closets. No. 900,176; Oct. 6; Sp. p. 223; Dr. p. 45; Gaz. vol. 136; p. 1108.
Layne, M. E., and S. N. Hall, Houston, Tex. Wrench. No. 900,861; Oct. 13; Sp. p. 1680; Dr. p. 340; Gaz. vol. 136; p. 1359.
Le Pontois, L., New Rochelle, N. Y., assignor to Hurd & Haggin. Inductor magneto alternator. No. 902,499; Oct. 27; Sp. p. 5108; Dr. p. 1034; Gaz. vol. 136; p. 1960.
Lea, H. I., Pittsburg, Pa., assignor to Westinghouse Machine Company. Gas-producer. No. 900,862; Oct. 13; Sp. p. 1681; Dr. p. 340; Gaz. vol. 136; p. 1360.
Leach, J. N., Melrose, Mass., assignor of one-half to Judson L. Thomson M'f'g Company. Steam-boiler. No. 901,301; Oct. 13; Sp. p. 2542; Dr. p. 523; Gaz. vol. 136; p. 1499.
Leahy, E. F., New York, N. Y. Measure. No. 902,306; Oct. 27; Sp. p. 4671; Dr. p. 947; Gaz. vol. 136; p. 1895.
Leas, D. H., Delaware, Ohio. Scenic effect. No. 901,354; Oct. 20; Sp. p. 2666; Dr. p. 547; Gaz. vol. 136; p. 1553.
Leavitt, F. M., New York, assignor to E. W. Bliss Company, Brooklyn, N. Y. Control mechanism for steering apparatus. No. 901,355; Oct. 20; Sp. p. 2668; Dr. p. 547; Gaz. vol. 136; p. 1554.
Lecroy, T. T., Lonsdale, Ark. Cotton chopper and cultivator. No. 900,106; Oct. 6; Sp. p. 69; Dr. pp. 12–13; Gaz. vol. 137; p. 1086.
Leddell, W. J., Summit, N. J. Alloy. No. 901,014; Oct. 13; Sp. p. 2004; Gaz. vol. 136; p. 1409.
Leder, E., Berlin, Germany. Calculating-machine. No. 902,498; Oct. 27; Sp. p. 5100; Dr. p. 1033; Gaz. vol. 136; p. 1960.
Lederer, L., Gulsbach, Germany. Separating cellulose esters from solutions. No. 902,093; Oct. 27; Sp. p. 4229; Gaz. vol. 136; p. 1826.
Lee, C. M., Gibbon, Nebr. Hay-loader. No. 900,747; Oct. 13; Sp. p. 1441; Dr. pp. 292–3; Gaz. vol. 136; p. 1321.
Lee, H., Kensington, New South Wales, Australia. Rotary engine. No. 902,239; Oct. 27; Sp. p. 4532; Dr. p. 918; Gaz. vol. 136; p. 1872.
Lee, J. L., Pasadena, Cal. Producing stereotype-bases. No. 901,111; Oct. 13; Sp. p. 2184; Dr. pp. 443–4; Gaz. vol. 136; p. 1439.
Lee, N. A. (See Nelson and Lee.)
Lee, W., Chicago, Ill. Match-box. No. 902,418; Oct. 27; Sp. p. 4906; Dr. pp. 993–4; Gaz. vol. 136; p. 1932.
Leech, C. M., Lima, Ohio. Transmission mechanism for motor-vehicles. No. 901,180; Oct. 13; Sp. p. 2296; Dr. p. 469; Gaz. vol. 136; p. 1460.

Leech, W., Marysville, Cal. Device for the prevention of onanism in animals. No. 900,863; Oct. 13; Sp. p. 1683; Dr. p. 340; Gaz. vol. 136; p. 1360.
Leeds and Northrup Company. (See Northrup, E. F., assignor.)
Leen, M., Tralee, Ireland. Machine for slicing butter. No. 900,107; Oct. 6; Sp. p. 70; Dr. p. 13; Gaz. vol. 136; p. 1086.
Leftwich, W. D., Pittsburg, Pa. Coupling mechanism. No. 900,558; Oct. 6; Sp. p. 1047; Dr. p. 215; Gaz. vol. 136; p. 1233.
Lellich, H. L., assignor to Delphos Manufacturing Company, Delphos, Ohio. Corn-popper. No. 901,302; Oct. 13; Sp. p. 2545; Dr. p. 523; Gaz. vol. 136; p. 1500.
Leitch, T. S., Seattle, Wash. Roller-skate. No. 900,177; Oct. 6; Sp. p. 225; Dr. p. 46; Gaz. vol. 136; p. 1109.
Leitch, W. A., assignor of one-half to F. J. Hodgins, Sarles, N. D. Grain-shocking machine. No. 900,559; Oct. 6; Sp. p. 1049; Dr. pp. 215–16; Gaz. vol. 136; p. 1233.
Leiser, B. F., South Bend, Ind. Moistening device. No. 900,748; Oct. 13; Sp. p. 1443; Dr. p. 293; Gaz. vol. 136; p. 1322.
Lemly, S., Texarkana, Tex. Collapsible barrel. No. 900,864; Oct. 13; Sp. p. 1684; Dr. p. 341; Gaz. vol. 136; p. 1360.
Lennox, C. D., *et al.* (See Fish, J., assignor.)
Lennox, D., Marshalltown, Iowa. Platform-scale. No. 901,356; Oct. 20; Sp. p. 2671; Dr. p. 548; Gaz. vol. 136; p. 1554.
Lenox, L. J. (See Enell, O. E., assignor.)
Leonard, H. W., Bronxville, N. Y. Electric controlling device. No. 902,307; Oct. 27; Sp. p. 4672; Dr. pp. 947–9; Gaz. vol. 136; p. 1896.
Leonard, T. H., Piqua, Ohio. Draft attachment for vehicle-thills. No. 900,178; Oct. 6; Sp. p. 227; Dr. p. 46; Gaz. vol. 136; p. 1109.
Leonard W. B., Chicago, Ill. Amusement device. No. 900,749; Oct. 13; Sp. p. 1445; Dr. p. 293; Gaz. vol. 136; p. 1322.
Leopold, F. B. (See Jones and Leopold.)
Lerille, N. L., Lockport, La. Attachment for seines. No. 902,419; Oct. 27; Sp. p. 4907; Dr. p. 994; Gaz. vol. 136; p. 1932.
Lester, J. S., Louisville, Ky. Hoe. No. 902,094; Oct. 27; Sp. p. 4230; Dr. p. 857; Gaz. vol. 136; p. 1826.
Lewis, T. E., Vicksburg, Miss. Package-tie. No. 901,112; Oct. 13; Sp. p. 2186; Dr. p. 444; Gaz. vol. 136; p. 1439.
Lewis, G., Uniontown, Pa. Portable track. No. 900,398; Oct. 6; Sp. p. 689; Dr. p. 141; Gaz. vol. 136; p. 1180.
Lewis, J. E., Steelton, Pa. Connecting-rod for switch-points. No. 900,750; Oct. 13; Sp. p. 1446; Dr. p. 294; Gaz. vol. 136; p. 1322.
Lewis, O. E., assignor to J. G. Manz Co., Milwaukee, Wis. Envelop. No. 901,357; Oct. 20; Sp. p. 2672; Dr. p. 548; Gaz. vol. 136; p. 1554.
Lewis, R. B., assignor to American Metal Edge Box Company, Philadelphia, Pa. Machine for punching and trimming metal stay-strips for boxes. No. 901,358; Oct. 20; Sp. p. 2673; Dr. pp. 548–9; Gaz. vol. 136; p. 1555.
Lewis, W. D., Plymouth, Pa. Trolley-guard. No. 902,420; Oct. 27; Sp. p. 4908; Dr. p. 994; Gaz. vol. 136; p. 1933.
Leyner, J. G., Denver, Colo. Striking-pin for piston-hammer rock-drilling engines. No. 901,538; Oct. 20; Sp. p. 3090; Dr. p. 631; Gaz. vol. 136; p. 1616.
Leyner, J. G., Denver, Colo. Multiple-stage air-compressor. No. 901,539; Oct. 20; Sp. p. 3094; Dr. pp. 632–3; Gaz. vol. 136; p. 1617.
Liais, L., Paris, France. Inverted incandescent gas or vapor lamp. No. 901,629; Oct. 20; Sp. p. 3267; Dr. p. 670; Gaz. vol. 136; p. 1645.
Libbey Glass Company. (See Klingenberg, C., assignor.)
Liggett, W. K., Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company. Conveyer. No. 902,421; Oct. 27; Sp. p. 4910; Dr. pp. 994–5; Gaz. vol. 136; p. 1933.
Lincoln, W. W., Rock Falls, Ill., assignor to J. M. Denning, Cedar Rapids, Iowa. Wire-fence machine. No. 902,422; Oct. 27; Sp. p. 4914; Dr. pp. 995–8; Gaz. vol. 136; p. 1934.
Lindley, Z. M., assignor to R. M. Sloan, Carthage, Mo. Foldable and adjustable harrow. No. 901,015; Oct. 13; Sp. p. 2006; Dr. p. 407; Gaz. vol. 136; p. 1409.
Lindquist, E. W. (See Baggaley, Allen, and Lindquist.)
Lindsey, L. A., Crystal Springs, Ga. Telephone-repeater. No. 901,974; Oct. 27; Sp. p. 3982; Dr. p. 812; Gaz. vol. 136; p. 1789.
Lindsey, W. A., Narberth, Pa. Combined electric alarm and light. No. 901,540; Oct. 20; Sp. p. 3099; Dr. p. 633; Gaz. vol. 136; p. 1617.
Lindsley, W. D., Waynoka, Okla. Cotton-chopper. No. 902,500; Oct. 27; Sp. p. 5111; Dr. pp. 1034–5; Gaz. vol. 136; p. 1961.
Lindström, C. A., assignor to Pressed Steel Car Company, Pittsburg, Pa. Car-door gear. No. 900,941; Oct. 13; Sp. p. 1860; Dr. p. 379; Gaz. vol. 136; p. 1384.
Lindström, J. P. L., Paris, France. Striking mechanism for clocks and the like. No. 900,399; Oct. 6; Sp. p. 689; Dr. p. 142; Gaz. vol. 136; p. 1181.
Link, F., Hoboken, N. J. Hand-operated key-seating machine. No. 901,716; Oct. 20; Sp. p. 3485; Dr. p. 705; Gaz. vol. 136; p. 1675.
Link, G. M., Dunkirk, N. Y. Box-lid holder. No. 901,920; Oct. 20; Sp. p. 3859; Dr. p. 787; Gaz. vol. 136; p. 1740.
Lipham, C. M., Fairburn, Ga. Iceless refrigerator. No. 900,400; Oct. 6; Sp. p. 691; Dr. p. 142; Gaz. vol. 136; p. 1181.
Lippmann, L. J. (See Kaufman and Lippmann.)
Lipscomb, H. E., and A. H. Andrews, Lancaster, Pa., assignors to Federal Cigar Company, New York, N. Y. Means for sealing cigars. No. 902,240; Oct. 27; Sp. p. 4534; Dr. pp. 918–19; Gaz. vol. 136; p. 1872.
Lister, A. T., Cedar Vale, Kans. Automatic gate. No. 902,095; Oct. 27; Sp. p. 4232; Dr. pp. 857–8; Gaz. vol. 136; p. 1826.
Liston, J. C., Chatsworth, Ill. Marker attachment for corn-planters. No. 901,541; Oct. 20; Sp. p. 3100; Dr. p. 633; Gaz. vol. 136; p. 1617.
Litle, T. J., Jr., Philadelphia, Pa., assignor to Welsbach Light Company, Gloucester City, N. J. Atmospheric gas-burner. No. 901,934; Oct. 20; Sp. p. 3892; Dr. p. 794; Gaz. vol. 136; p. 1746.
Little, A. W., Colesville, N. J. Skinning implement. No. 901,016; Oct. 13; Sp. p. 2010; Dr. p. 408; Gaz. vol. 136; p. 1410.
Lockwood, G. R., St. Louis, Mo. Envelop. No. 900,751; Oct. 13; Sp. p. 1447; Dr. p. 294; Gaz. vol. 136; p. 1323.
Lockwood, W. D., Schenectady, N. Y. Dumping-skip. No. 902,423; Oct. 27; Sp. p. 4944; Dr. p. 998; Gaz. vol. 136; p. 1934.
Logan, G., Albany, N. Y. Film-holder. No. 902,153; Oct. 27; Sp. p. 4356; Dr. p. 882; Gaz. vol. 136; p. 1845.
Logan, H. T., Erith, England. Mechanical piano-player. No. 900,179; Oct. 6; Sp. p. 228; Dr. p. 46; Gaz. vol. 136; p. 1109.
Loitron, A., Plaine St. Denis, France. Variable-speed gearing. No. 901,456; Oct. 20; Sp. p. 2919; Dr. p. 585; Gaz. vol. 136; p. 1589.
Lommel, W., assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Celestin-blue sulfonic acid. No. 902,154; Oct. 27; Sp. p. 4356; Gaz. vol. 136; p. 1846.
Look, F. N., assignor to Florence Manufacturing Company, Northampton, Mass. Display-holder. No. 900,942; Oct. 13; Sp. p. 1862; Dr. p. 379; Gaz. vol. 136; p. 1385.
Loomis, E. B. and G. O., Memphis, Tenn. Ventilator. No. 900,560; Oct. 6; Sp. p. 1056; Dr. p. 217; Gaz. vol. 136; p. 1234.
Loomis, F. J., Yonkers, N. Y. Apparatus for shaping heated metal. No. 900,401; Oct. 6; Sp. p. 693; Dr. p. 142; Gaz. vol. 136; p. 1181.
Loomis, G. O. (See Loomis, E. B. and G. O.)
Loomis, H. T., assignor to M. Frank and J. J. Lambert, New York, N. Y. Burial-robe. No. 901,457; Oct. 20; Sp. p. 2920; Dr. p. 595; Gaz. vol. 136; p.1590.
Loomis, M. W. (See Kemp, Loomis, and Fitzwater.)
Long, W. G., and J. A. Campbell, Wilmington, Del. Box-fastener. No. 902,241; Oct. 27; Sp. p. 4535; Dr. p. 919; Gaz. vol. 136; p. 1872.
Lorain Steel Company. (See Brown, W. M., assignor.)
Lorain Steel Company. (See Goughnour, H. S., assignor.)
Lorain Steel Company. (See Murray, A. R., assignor.)
Lorain Steel Company. (See Stiff, H. C., assignor.)
Loring, F. H., London, England. Commutator for dynamo-electric machines. No. 902,424; Oct. 27; Sp. p. 4945; Dr. p. 998; Gaz. vol. 136; p. 1934.
Losch, H. O., McKees Rocks, Pa. Protractor. No. 901,113; Oct. 13; Sp. p. 2187; Dr. p. 444; Gaz. vol. 136; p. 1439.
Louden Machinery Company. (See Neller and Louden, assignors.)
Louden, W., Fairfield, Iowa. Transfer for overhead tracks. No. 901,717; Oct. 20; Sp. p. 3486; Dr. pp. 705–6; Gaz. vol. 136; p. 1676.
Louden, W. (See Neller and Louden.)
Louis, C. W., Springfield, Mass., assignor to E. R. Buck, Windsor, Vt. Automatic magazine-firearm. No. 900,865; Oct. 13; Sp. p. 1685; Dr. pp. 341–2; Gaz. vol. 136; p. 1360.
Love, J. F., Zanesville, Ohio. Valve. No. 902,098; Oct. 27; Sp. p. 4234; Dr. p. 858; Gaz. vol. 136; p. 1827.
Lovejoy Company. (See Ferguson, J. H., assignor.)
Loveless, T., Upwey, and W. J. Samways, Weymouth, England. Obstacle-removing device for vehicles. No. 901,114; Oct. 13; Sp. p. 2188; Dr. p. 445; Gaz. vol. 136; p. 1440.
Loverud, E. K., *et al.* (See Mandt, M. G., assignor.)
Lovering, T. D. (See Hansen, H. T., assignor.)
Lovett, J. S. H., Trenton, assignor of two-thirds to T. P. Payne, Newark, N. J., and W. W. Near, Toronto, Canada. Hose-making machine. No. 902,308; Oct. 27; Sp. p. 4688; Dr. pp. 949–50; Gaz. vol. 136; p. 1896.
Low, J. B. (See Bradburn, Tyler, and Low.)
Lowry, A. H., Sheridanville, Pa. Ventilator for fire-doors, &c. No. 900,402; Oct. 6; Sp. p. 693; Dr. p. 143; Gaz. vol. 136; p. 1182.
Lowry, C. B., Lexington, Ky., and R. Bernhard, Chicago, Ill. Means for withdrawing and condensing vapors. No. 902,097; Oct. 27; Sp. p. 4236; Dr. p. 858; Gaz. vol. 136; p. 1827.
Lowry, W. D., St. Louis, Mo. Draft-rigging. No. 902,242; Oct. 27; Sp. p. 4536; Dr. p. 919; Gaz. vol. 136; p. 1873.
Luce, W. D., Haverhill, Mass. Damper. No. 902,099; Oct. 27; Sp. p. 4238; Dr. pp. 858–9; Gaz. vol. 136; p. 1827.
Lüdecke, K., assignor to "Vereinigte Chemische Werke Actiengesellschaft," Charlottenburg, Germany. Bleaching fats, oils, resins, waxes, and the like. No. 901,718; Oct. 20; Sp. p. 3489; Gaz. vol. 136; p. 1676.
Ludington, A. R., and H. K. Olmsted, Galesburg, Ill. Corn-sheller. No. 901,463; Oct. 20; Sp. p. 2929; Dr. p. 597; Gaz. vol. 136; p. 1591.
Ludington, I. M., *et al.* (See Putney, A. N., assignor.)

Lukacsevics, C. de, New York, N. Y. Blue-printing machine. No. 901,303; Oct. 13; Sp. p. 2546; Dr. p. 524; Gaz. vol. 136; p. 1500.
Lukasiewicz, C., Farwell, Nebr. Neck-yoke center. No. 901,542; Oct. 20; Sp. p. 3102; Dr. p. 633; Gaz. vol. 136; p. 1618.
Lundberg, P. G. C., Wärnamo, Sweden. Protecting arrangement for cutters and other rotary apparatus. No. 901,458; Oct. 20; Sp. p. 2921; Dr. p. 596; Gaz. vol. 136; p. 1590.
Lutton, W. H., Jersey City, N. J. Greenhouse construction. No. 902,155; Oct. 27; Sp. p. 4357; Dr. p. 882; Gaz. vol. 136; p. 1846.
Lutton, W. J., Paterson, N. J. Protector mechanism for looms. No. 900,403; Oct. 6; Sp. p. 696; Dr. pp. 143–4; Gaz. vol. 136; p. 1182.
Lux, J. K., Washington, D. C. Operating means for circuit-controlling devices. No. 901,630; Oct. 20; Sp. p. 3268; Dr. p. 670; Gaz. vol. 136; p. 1645.
Lyche, H. H. (See Odquist and Lyche.)
Lyche, H. H., and V. Odquist, assignors to Torris Wold & Company, Chicago, Ill. Can-end-seaming machine. No. 900,108; Oct. 6; Sp. p. 71; Dr. pp. 13–15; Gaz. vol. 136; p. 1086.
Lyman, J. G. (See Friedrich and Lyman.)
Lynch, G. E., Columbus, Ohio, assignor, by mesne assignments, to Jeffrey Manufacturing Company. Rack-rail locomotive. No. 901,975; Oct. 27; Sp. p. 3984; Dr. pp. 812–3; Gaz. vol. 136; p. 1789.
Lyon, G. B., Ithaca, N. Y. Embroidery-frame. No. 901,246; Oct. 13; Sp. p. 2413; Dr. p. 495; Gaz. vol. 136; p. 1481.
Lyons, I., *et al.* (See Welsh, T. W., assignor.)
Lyons, K., New Rumley, Ohio. Jar-wrench. No. 901,247; Oct. 13; Sp. p. 2414; Dr. p. 495; Gaz. vol. 136; p. 1481.
MacWilliam, J. F., Hubbardston, Mass. Nozzle. No. 902,309; Oct. 27; Sp. p. 4690; Dr. p. 950; Gaz. vol. 136; p. 1896.
Macdonald, A. F., Schenectady, N. Y., assignor to General Electric Company. Cover for turbine-buckets. No. 901,459; Oct. 20; Sp. p. 2923; Dr. p. 596; Gaz. vol. 136; p. 1590.
Macfarren, W. W. (See Martin and Macfarren.)
Machalske, F. J., Niagara Falls, N. Y., assignor to American Reduction Company, Pittsburg, Pa. Making soluble phosphates. No. 902,425; Oct. 27; Sp. p. 4926; Dr. p. 999; Gaz. vol. 136; p. 1935.
Machlet, F. W., Elizabeth, N. J. Pump, &c. No. 902,501; Oct. 27; Sp. p. 5116; Dr. pp. 1035–6; Gaz. vol. 136; p. 1961.
Maciosklie, G., Schenectady, N. Y., assignor to General Electric Company. Controlling means for air-brakes. No. 900,752; Oct. 13; Sp. p. 1448; Dr. p. 294; Gaz. vol. 136; p. 1323.
Macmillan, C., Schenectady, N. Y., assignor to General Electric Company. Current-collecting means. No. 901,976; Oct. 27; Sp. p. 3988; Dr. p. 813; Gaz. vol. 136; p. 1789.
Maggini, P. E., Los Angeles, Cal. Pressure-filter. No. 900,180; Oct. 6; Sp. p. 230; Dr. p. 47; Gaz. vol. 136; p. 1110.
Mahler, A. G., Medford, N. Y. Building-block. No. 900,753; Oct. 13; Sp. p. 1449; Dr. p. 295; Gaz. vol. 136; p. 1323.
Mahoney, D. H., *et al.* (See Welsh, T. W., assignor.)
Maier, J. F., Broughton, Kans. Riding attachment for corn-planters. No. 901,181; Oct. 13; Sp. p. 2297; Dr. pp. 469–70; Gaz. vol. 136; p. 1461.
Majorana, Q., Rome, Italy. Microphone apparatus for telephone and other circuits. No. 901,977; Oct. 27; Sp. p. 3990; Dr. p. 813; Gaz. vol. 136; p. 1790.
Majors, G., trustee. (See Whiteside, D. I., assignor.)
Mally, T. Z., and A. Pelz, Chicago, Ill. Floor scrubber and polisher. No. 901,978; Oct. 27; Sp. p. 3994; Dr. p. 814; Gaz. vol. 136; p. 1790.
Malmrose, C. F., assignor of one-half to N. A. Larson, Rock Island, Ill. Hitching-post. No. 901,311; Oct. 13; Sp. p. 2559; Dr. p. 527; Gaz. vol. 136; p. 1502.
Malmstrom, A. G., Chicago, Ill. Car-seal. No. 900,290; Oct. 6; Sp. p. 471; Dr. p. 97; Gaz. vol. 136; p. 1146.
Maloney, M. J. (See Woodard, J. H., assignor.)
Mandt, M. G., assignor of one-fifteenth to E. K. Loverud and one-half to C. Olson, Stoughton, Wis. Concrete-building wall. No. 901,017; Oct. 13; Sp. p. 2010; Dr. p. 408; Gaz. vol. 136; p. 1410.
Maness, W. C., Laredo, Tex. Lubricator. No. 900,181; Oct. 6; Sp. p. 233; Dr. p. 47; Gaz. vol. 136; p. 1110.
Mann, F. J., Scranton, Pa., assignor to Self-Heating Soldering Iron Company. Self-heating soldering-iron. No. 900,561; Oct. 6; Sp. p. 1057; Dr. p. 217; Gaz. vol. 136; p. 1234.
Manny, I. F., assignor to Manny Signal Company, Milwaukee, Wis. Selective signaling device. No. 902,099; Oct. 27; Sp. p. 4240; Dr. pp. 859–60; Gaz. vol. 136, p. 1828.
Manny Signal Company. (See Manny, I. F., assignor.)
Manson, R. H., assignor to Dean Electric Company, Elyria, Ohio. Telephone desk set. No. 900,404; Oct. 6; Sp. p. 698; Dr. pp. 144–5; Gaz. vol. 136; p. 1182.
Manson, R. H., assignor to Dean Electric Company, Elyria, Ohio. Telephone-exchange system. No. 900,676; Oct. 6; Sp. p. 1300; Dr. pp. 266–7; Gaz. vol. 136; p. 1273.
Manufacturers Machine Company. (See Heys, J. J., assignor.)
Manz Co., J. G. (See Lewis, O. E., assignor.)
Markham, D. C., Fort Leyden, N. Y. Hand-truck. No. 900,405; Oct. 6; Sp. p. 702; Dr. p. 145; Gaz. vol. 136; p. 1183.
Markle, W. P. (See Haughawout, J. W., assignor.)
Markman, J., Pittsburg, Pa. Automobile-lamp. No. 901,921; Oct. 20; Sp. p. 3859; Dr. p. 787; Gaz. vol. 136; p. 1740.
Marsellis, F., Berkeley, assignor of three-fourths to E. M. Cutting, Fruitvale, and W. W. Slater and H. C. Barnes, Oakland, Cal. Railway-track-rail-drilling machine. No. 900,109; Oct. 6; Sp. p. 76; Dr. pp. 15–16; Gaz. vol. 136; p. 1086.
Martin, J., Brooklyn, N. Y., assignor to Landau Economic Syphon Company, San Francisco, Cal. Siphon. No. 901,979; Oct. 27; Sp. p. 3997; Dr. p. 814; Gaz. vol. 136; p. 1791.
Martin, R. L., Jr., and W. W. Macfarren, Pittsburg, Pa., assignors to said Martin and Macfarren. Coke-drawer. No. 902,243; Oct. 27; Sp. p. 4537; Dr. pp. 920–1; Gaz. vol. 136; p. 1873.
Martin, T. L., Wrightsville, Ga. Axle-spindle. No. 900,562; Oct. 6; Sp. p. 1059; Dr. p. 217; Gaz. vol. 136; p. 1235.
Martin, W. J., Chicago, Ill. Traction-wheel. No. 902,426; Oct. 27; Sp. p. 4947; Dr. p. 999; Gaz. vol. 136; p. 1935.
Marvel, E. W., assignor to W. H. Hollar, Philadelphia, Pa. Electrically-controlled lock. No. 902,244; Oct. 27; Sp. p. 4542; Dr. p. 921; Gaz. vol. 136; p. 1873.
Marvin, A., assignor to Marvin Manfg. Company, El Paso, Ill. Loading apparatus. (Reissue.) No. 12,867; Oct. 20; Sp. p. 3904; Dr. p. 797; Gaz. vol. 136; p. 1747.
Marvin Manfg. Company. (See Marvin, A., assignor.) (Reissue.)
Mason, V. W., Providence, R. I. Winch. No. 901,719; Oct. 20; Sp. p. 3490; Dr. p. 706; Gaz. vol. 136; p. 1676.
Matheus, K., Chicago, Ill. Piston. No. 902,310; Oct. 27; Sp. p. 4691; Dr. p. 950; Gaz. vol. 136; p. 1897.
Matthias, E. A., Liverpool, England. Stoppering bottles or other vessels. No. 900,110; Oct. 6; Sp. p. 80; Dr. p. 16; Gaz. vol. 136; p. 1087.
Matts, G. E., Newark, N. J. Fishing-reel. No. 900,563; Oct. 6; Sp. p. 1059; Dr. pp. 217–18; Gaz. vol. 136; p. 1235.
Maxham, L. M., Boston, Mass. Safety appliance for street-cars. No. 902,156; Oct. 27; Sp. p. 4358; Dr. pp. 882–3; Gaz. vol. 136; p. 1846
Maxon, C. M., Walworth, Wis. Coupon-holder. No. 901,019; Oct. 13; Sp. p. 2013; Dr. p. 408; Gaz. vol. 136; p. 1411.
Maxwell, A. D. (See Jackson and Maxwell.)
Maxwell, J. W., Williamsport, Pa. Manufacturing steel. No. 900,564; Oct. 6; Sp. p. 1063; Gaz. vol. 136; p. 1235.
May, M. (See Griffiths, S. M., assignor.)
Mayer, A. T., New York, N. Y. Hanger. No. 901,720; Oct. 20; Sp. p. 3492; Dr. p. 706; Gaz. vol. 136; p. 1677.
Mayer, M., New York, N. Y. Display-rack. No. 900,406; Oct. 6; Sp. p. 704; Dr. p. 146; Gaz. vol. 136; p. 1183.
Mayer, M., New York, N. Y. Display-rack. No. 901,721; Oct. 20; Sp. p. 3493; Dr. p. 707; Gaz. vol. 136; p. 1677.
Mayers, K. L., St. Louis, Mo. Syringe. No. 900,182; Oct. 6; Sp. p. 234; Dr. p. 47; Gaz. vol. 136; p. 1110.
Mayers, K. L., and M. B. Benas, St. Louis, Mo. Vaginal syringe. No. 900,565; Oct. 6; Sp. p. 1064; Dr. p. 218; Gaz. vol. 136; p. 1235.
Mayes, H. C., Philadelphia, Pa. Straw holder and dispenser. No. 900,866; Oct. 13; Sp. p. 1696; Dr. pp. 342–3; Gaz. vol. 136; p. 1360.
Mayhew, T., assignor to American Promoting Company, Detroit, Mich. Toy savings-bank. No. 901,018; Oct. 13; Sp. p. 2012; Dr. p. 408; Gaz. vol. 136; p. 1410.
Mayo, W. C., and J. Houlehan, El Paso, assignors of one-third to G. E. Briggs, Barstow, Tex. Speed-changing gear. No. 901,980; Oct. 27; Sp. p. 3997; Dr. pp. 814–16; Gaz. vol. 136; p. 1791.
Maywald, F. J., Brooklyn, N. Y. Producing phosphoric acid. No. 902,157; Oct. 27; Sp. p. 4360; Dr. p. 883; Gaz. vol. 136; p. 1846.
McAdam, J. V., New York, N. Y. Railway-car truck. No. 900,759; Oct. 13; Sp. p. 1460; Dr. p. 297; Gaz. vol. 136; p. 1325.
McAdam, J. V., New York, N. Y. Railway-car truck. No. 900,760; Oct. 13; Sp. p. 1462; Dr. p. 298; Gaz. vol. 136; p. 1325.
McAdams, G. F., New York, N. Y. Cutting and perforating attachment for printing-machines. No. 902,314; Oct. 27; Sp. p. 4699; Dr. p. 952; Gaz. vol. 136; p. 1898.
McAmmond, J. F., *et al.* (See Burdett, P., assignor.)
McCabe, J. D., Kittrell, assignor of one-half to J. D. Youree, Readyville, Tenn. Hoe. No. 900,871; Oct. 13; Sp. p. 1707; Dr. p. 345; Gaz. vol. 136; p. 1362.
McCain, J. F., Chicago, Ill. Jar-opener. No. 900,297; Oct. 6; Sp. p. 481; Dr. p. 100; Gaz. vol. 136; p. 1148.
McCarren, C. E., Cincinnati, Ohio. Ice-cream spoon. No. 900,573; Oct. 6; Sp. p. 1076; Dr. p. 221; Gaz. vol. 136; p. 1238.
McCarthy, D. J., Wilkinsburg, assignor to Union Switch & Signal Company, Swissvale, Pa. Cab signal system. No. 901,250; Oct. 13; Sp. p. 2418; Dr. p. 496; Gaz. vol. 136; p. 1482.
McCarthy, J. (See Crenshaw, J. T., assignor.)
McCartney, G., Harrisville, R. I. Stop-motion mechanism for looms. No. 900,190; Oct. 6; Sp. p. 253; Dr. p. 51; Gaz. vol. 136; p. 1113.
McCarty, E. J., Clinton, Mass., assignor to Clinton Specialty Manufacturing Company. Boiler-tube cleaner. No. 902,315; Oct. 27; Sp. p. 4701; Dr. p. 952; Gaz. vol. 136; p. 1898.

McCarty, W. F. M., Pleasantville, assignor of one-fourth to G. O. Eaton, one-fourth to T. M. Acken, and one-thirtieth to A. J. Guttman, New York, N. Y. Molding process. No. 901,361; Oct. 20; Sp. p. 2682; Dr. p. 550; Gaz. vol. 136; p. 1556.
McCarty, W. F. M., Pleasantville, assignor of one-fourth to G. O. Eaton, one-fourth to T. M. Acken, and one-thirtieth to A. J. Guttman, New York, N. Y. Treating iron and steel. No. 901,362; Oct. 20; Sp. p. 2683; Dr. p. 550; Gaz. vol. 136; p. 1556.
McCarty, W. F. M., Pleasantville, assignor of one-fourth to G. O. Eaton, one-fourth to T. M. Acken, and one-thirtieth to A. J. Guttman, New York, N. Y. Metallurgical furnace. No. 901,363; Oct. 20; Sp. p. 2685; Dr. pp. 550–1; Gaz. vol. 136; p. 1557.
McCarty, W. F. M., Rocky Ridge, Md., assignor of one-fourth to G. O. Eaton, one-fourth to T. M. Acken, and one-thirtieth to A. J. Guttman, New York, N. Y. Treating iron and steel. No. 901,546; Oct. 20; Sp. p. 3109; Dr. p. 635; Gaz. vol. 136; p. 1619.
McCarty, W. F. M., Rocky Ridge, Md., assignor of one-fourth to G. O. Eaton, one-fourth to T. M. Acken, and one-thirtieth to A. J. Guttman, New York, N. Y. Treating iron and steel. No. 901,547; Oct. 20; Sp. p. 3111; Dr. p. 635; Gaz. vol. 136; p. 1620.
McClain, E. L., assignor to American Pad & Textile Company, Greenfield, Ohio. Clamp for horse-pads. No. 900,946; Oct. 13; Sp. p. 1869; Dr. p. 381; Gaz. vol. 136; p. 1386.
McConnell, A. W., Anderson, S. C. Rail-bond. No. 900,298; Oct. 6; Sp. p. 482; Dr. p. 100; Gaz. vol. 136; p. 1148.
McConnell, J. A., Dallas, Oreg. Check attachment for cars. No. 901,815; Oct. 20; Sp. p. 3674; Dr. p. 746; Gaz. vol. 136; p. 1707.
McConnell, J. M., Nickelsville, Va. Railway-rail joint. No. 902,434; Oct. 27; Sp. p. 4959; Dr. p. 1001; Gaz. vol. 136; p. 1938.
McCoy, J. R., Marshalltown, Iowa. Hatchet. No. 901,022; Oct. 13; Sp. p. 2019; Dr. p. 410; Gaz. vol. 136; p. 1412.
McCrystal, J., assignor to E. Rutzler Co., New York, N. Y. Coil-screen clamp. No. 900,412; Oct. 6; Sp. p. 717; Dr. p. 150; Gaz. vol. 136; p. 1186.
McCune, H. T., Braddock, Pa. Chalk-holder. No. 902,435; Oct. 27; Sp. p. 4960; Dr. p. 1002; Gaz. vol. 136; p. 1938.
McDermott, M. J. (See Slater and McDermott.)
McDole, V. R., Aurora, Ill., and A. Hollenbeck, Janesville, Wis. Corn-harvesting device. No. 901,989; Oct. 27; Sp. p. 4044; Dr. p. 820; Gaz. vol. 136; p. 1794.
McDonald, H. E., Petone, Wellington, New Zealand. Pipe-wrench. No. 900,191; Oct. 6; Sp. p. 255; Dr. p. 51; Gaz. vol. 136; p. 1113.
McDonough, J. P. (See Garvens, W. A., assignor.)
McElroy, J. F., Albany, N. Y., assignor to Consolidated Car Heating Company. Air-brake. No. 901,923; Oct. 20; Sp. p. 3862; Dr. p. 788; Gaz. vol. 136; p. 1741.
McFadden, B. B., Binghamton, N. Y. Paper bucket or box. No. 900,115; Oct. 6; Sp. p. 90; Dr. p. 18; Gaz. vol. 136; p. 1068.
McFarland, C. N., assignor to Adder Machine Company, Kingston, Pa. Power-transmitting mechanism for calculating-machines. No. 902,103; Oct. 27; Sp. p. 4252; Dr. pp. 861–3; Gaz. vol. 136; p. 1829.
McFarland, H. R., Newport News, Va. Hand canceling device. No. 902,436; Oct. 27; Sp. p. 4961; Dr. p. 1002; Gaz. vol. 136; p. 1938.
McFaul, W. J., Oakdale, Pa. Attachment for plows. No. 900,413; Oct. 6; Sp. p. 719; Dr. p. 150; Gaz. vol. 136; p. 1186.
McGaffey, J. W. (See Bergeron, J. P., assignor.)
McGee, J. J., New York, assignor of one-half to A. F. S. Geoghegan, Brooklyn, N. Y. Piston-packing for explosion-engines. No. 901,023; Oct. 13; Sp. p. 2020; Dr. p. 410; Gaz. vol. 136; p. 1412.
McGill, G. W., New York, N. Y. Metallic fastener. No. 900,299; Oct. 6; Sp. p. 483; Dr. p. 101; Gaz. vol. 136; p. 1149.
McGlincy, J. J., Worcester, assignor to Davis & Furber Machine Company, North Andover, Mass. Spinning-mule. No. 902,316; Oct. 27; Sp. p. 4703; Dr. p. 952; Gaz. vol. 136; p. 1899.
McGrath, M. K., Antwerp, Belgium, assignor to Western Electric Company, Chicago, Ill. Condenser and making same. (Reissue.) No. 12,860; Oct. 6; Sp. p. 1330; Dr. p. 271; Gaz. vol. 136; p. 1277.
McHugh, A. L., Cincinnati, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Motor-controller. No. 902,101; Oct. 27; Sp. p. 4249; Dr. p. 861; Gaz. vol. 136; p. 1829.
McIlvain, A. T., and G. F. Stover, Olathe, Kans. Compound for rendering photographs translucent. No. 902,102; Oct. 27; Sp. p. 4252; Gaz. vol. 136; p. 1829.
McIlvried, E. J., assignor to United Engineering & Foundry Company, Pittsburg, Pa. Screw-down mechanism for rolling-mills. No. 901,251; Oct. 13; Sp. p. 2421; Dr. pp. 496–7; Gaz. vol. 136; p. 1483.
McInnemy, M. Iowa City, Iowa. Toilet article. No. 900,872; Oct. 13; Sp. p. 1709; Dr. p. 346; Gaz. vol. 136; p. 1362.
McIntire, J. N., New York, N. Y., assignor to Brunswick-Balke-Collender Company. Combined device for supporting and leveling furniture. No. 901,636; Oct. 20; Sp. p. 3280; Dr. p. 673; Gaz. vol. 136; p. 1646.
McIsaac, A., Hartford, Conn. Trolley-wire anchor. No. 901,816; Oct. 20; Sp. p. 3676; Dr. p. 746; Gaz. vol. 136; p. 1707.
McKay, B. C., Atlanta, N. Y. Trace-holder. No. 902,159; Oct. 27; Sp. p. 4366; Dr. p. 884; Gaz. vol. 136; p. 1847.
McKay, C. W. (See Scranton, E. M., assignor.)
McKeen, W. H., Brawley, Cal. Plumb-level. No. 901,727; Oct. 20; Sp. p. 3505; Dr. p. 709; Gaz. vol. 136; p. 1679.
McKenzie, A., Canton, Ohio. Machine for forming eaves-troughs. No. 901,637; Oct. 20; Sp. p. 3283; Dr. pp. 673–4; Gaz. vol. 136; p. 1647.
McKeon, J. E., Wilkes-Barre, Pa. Concrete-mixer. No. 901,024; Oct. 13; Sp. p. 2023; Dr. p. 410; Gaz. vol. 136; p. 1412.
McKim, D. R., West Jordan, Utah. Lathe-dog. No. 900,761; Oct. 13; Sp. p. 1464; Dr. p. 298; Gaz. vol. 136; p. 1326.
McKnight, R., Pittsburg, Pa. Electric furnace. No. 900,192; Oct. 6; Sp. p. 256; Dr. p. 51; Gaz. vol. 136; p. 1114.
McLaughlin, J. C., Jersey City, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 900,574; Oct. 6; Sp. p. 1078; Dr. p. 221; Gaz. vol. 136; p. 1238.
McLeran, G. R., North Yakima, Wash. Dray-wagon. No. 901,252; Oct. 13; Sp. p. 2422; Dr. p. 497; Gaz. vol. 136; p. 1483.
McMahon, E., Springfield, Ill. Cornice-making machine. No. 901,364; Oct. 20; Sp. p. 2688; Dr. pp. 551–2; Gaz. vol. 136; p. 1557.
McMannama, D., Villisca, Iowa. Washing-machine. No. 901,817; Oct. 20; Sp. p. 3677; Dr. p. 747; Gaz. vol. 136; p. 1707.
McManns, J. A., Philadelphia, Pa. Wave-motor. No. 901,117; Oct. 13; Sp. p. 2193; Dr. p. 446; Gaz. vol. 136; p. 1441.
McMillan, C. E., Council Grove, Kans. Safety-shield for disk harrows. No. 902,437; Oct. 27; Sp. p. 4962; Dr. p. 1002; Gaz. vol. 136; p. 1938.
McMillan J. D., Alhambra, Cal. Harrow. No. 900,116; Oct. 6; Sp. p. 91; Dr. p. 19; Gaz. vol. 136; p. 1068.
McMyler, J., assignor to McMyler Manufacturing Company, Cleveland, Ohio. Derrick. No. 901,461; Oct. 20; Sp. p. 2926; Dr. pp. 596–7; Gaz. vol. 136; p. 1591.
McMyler Manufacturing Company. (See McMyler, J., assignor.)
McNally, J. T., Chicago, Ill. Grain-car. No. 901,183; Oct. 13; Sp. p. 2301; Dr. pp. 470–1; Gaz. vol. 136; p. 1462.
McNamar, G. A., Meriden, Conn. Storing and display case. No. 901,638; Oct. 20; Sp. p. 3286; Dr. p. 674; Gaz. vol. 136; p. 1648.
McNutt, W. H., assignor to W. E. Roche, New York, N. Y. Filling device for cans. No. 900,762; Oct. 13; Sp. p. 1467; Dr. p. 299; Gaz. vol. 136; p. 1326.
McNutt, W. H., assignor to W. E. Roche, New York, N. Y. Non-explosive closure for tanks. No. 900,763; Oct. 13; Sp. p. 1468; Dr. p. 299; Gaz. vol. 136; p. 1326.
McNutt, W. H., assignor to W. E. Roche, New York, N. Y. Safety filler-can. No. 900,764; Oct. 13; Sp. p. 1469; Dr. p. 299; Gaz. vol. 136; p. 1327.
McNutt, W. H., assignor to W. E. Roche, New York, N. Y. Cartridge system for explosive-engines. No. 900,765; Oct. 13; Sp. p. 1471; Dr. p. 299; Gaz. vol. 136; p. 1327.
McStay, L. A., Glen Elder, Kans. Garment clasp or holder. No. 901,818; Oct. 20; Sp. p. 3679; Dr. p. 747; Gaz. vol. 136; p. 1708.
McVay, P. M., *et al.* (See Ramaley, W. H., assignor.)
McVey, G. L., assignor to Press Button Knife Company, Walden, N. Y. Pocket-knife. No. 901,253; Oct. 13; Sp. p. 2425; Dr. p. 498; Gaz. vol. 136; p. 1483.
McVoy, M., Jr. (See Shattuck, W. P., assignor.)
Mead, E. J., Bournemouth, England. Gun-recoil brake. No. 900,943; Oct. 13; Sp. p. 1863; Dr. p. 379; Gaz. vol. 136; p. 1385.
Mead Fountain Pen Co. (See Mead, J. J., assignor.)
Mead, G. A., Mansfield, Ohio. Suspension device for trolley-wires or other conductors carrying currents of high voltage. No. 901,981; Oct. 27; Sp. p. 4019; Dr. p. 816; Gaz. vol. 136; p. 1791.
Mead, J. J., New York, N. Y., assignor to Mead Fountain Pen Co. Fountain-pen. No. 900,944; Oct. 13; Sp. p. 1864; Dr. p. 380; Gaz. vol. 136; p. 1385.
Means, J. H., Carnesville, Ga. Multiple hay-press. No. 900,566; Oct. 6; Sp. p. 1066; Dr. pp. 218–19; Gaz. vol. 136; p. 1236.
Mechanical Utilities Company. (See Hubbard, M. G., assignor.)
Mechin, G. V. R. (See Tabler, F. C., assignor.)
Mehl, H. (See Sohni and Mehl.)
Mehl, W. B., assignor to E. Howard Watch Company, Waltham, Mass. Watch-movement. No. 900,183; Oct. 6; Sp. p. 235; Dr. p. 47; Gaz. vol. 136; p. 1111.
Meier, F. W., Upper Sandusky, Ohio. Water-trap. No. 901,922; Oct. 20; Sp. p. 3861; Dr. pp. 787–8; Gaz. vol. 136; p. 1740.
Meigs, J. F., and H. G. Jakobsson, assignors to Bethlehem Steel Company, South Bethlehem, Pa. Breech appliance for guns. No. 900,754; Oct. 13; Sp. p. 1450; Dr. p. 295; Gaz. vol. 136; p. 1323.
Meigs, J. F., and R. P. Stout, assignors to Bethlehem Steel Company, South Bethlehem, Pa. Automatic means for controlling movements of gun-rammers. No. 900,755; Oct. 13; Sp. p. 1451; Dr. pp. 295–6; Gaz. vol. 136; p. 1324.
Meissner, J. H., Pittsburg, Pa. Blast-furnace. No. 900,291; Oct. 6; Sp. p. 473; Dr. pp. 97–8; Gaz. vol. 136; p. 1146.
Meiber, F., Ross township, Allegheny county, Pa. Concrete construction. No. 902,311; Oct. 27; Sp. p. 4694; Dr. p. 951; Gaz. vol. 136; p. 1897.
Melnick, J., Boston, Mass. Button-hook. No. 901,248; Oct. 13; Sp. p. 2415; Dr. p. 495; Gaz. vol. 136; p. 1482.
Mende, R., Munich, Germany. Sash-window for railway-cars. No. 900,407; Oct. 6; Sp. p. 705; Dr. p. 146; Gaz. vol. 136; p. 1184.
Mendenhall, C. E., Dayton, Ohio. Mail-box. No. 900,756; Oct. 13; Sp. p. 1454; Dr. p. 296; Gaz. vol. 136; p. 1324.

Meredith, W., San Francisco, assignor to Pacific Electric Heating Company, Ontario, Cal. Electric curling-iron heater. No. 900,292; Oct. 6; Sp. p. 475; Dr. p. 98; Gaz. vol. 136; p. 1147.
Mereen, A., and A. E. Gagnon, assignors of one-half to C. A. Smith Lumber Co., Minneapolis, Minn. Twin band-saw mill. No. 900,677; Oct. 6; Sp. p. 1305; Dr. pp. 267–8; Gaz. vol. 136; p. 1273.
Mereen, A., and A. E. Gagnon, Minneapolis, Minn. Cant-centering device for twin-saw mills. No. 902,502; Oct. 27; Sp. p. 5122; Dr. pp. 1036–7; Gaz. vol. 136; p. 1962.
Mergenthaler Linotype Company. (See Rogers, J. R., assignor.)
Merrill, C. W., Lead, S. D. Pressure-filter. No. 900,184; Oct. 6; Sp. p. 237; Dr. p. 48; Gaz. vol. 136; p. 1111.
Merrill, C. W., Lead, S. D. Filter-press. No. 900,185; Oct. 6; Sp. p. 239; Dr. pp. 48–9; Gaz. vol. 136; p. 1111.
Merrill, C. W., Lead, S. D. Precipitating and recovering materials from solutions. No. 900,186; Oct. 6; Sp. p. 240; Dr. p. 49; Gaz. vol. 136; p. 1112.
Merrill, J. J., Newburyport, assignor of one-half to B. Pearson, Byfield, and W. F. Runnells, Newburyport, Mass. Ice-cutting machine. No. 902,503; Oct. 27; Sp. p. 5124; Dr. p. 1037; Gaz. vol. 136; p. 1962.
Merritt, H. W., assignor to Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 901,982; Oct. 27; Sp. p. 4023; Dr. pp. 816–17; Gaz. vol. 136; p. 1791.
Metropolitan Switchboard Co. (See Kellner, L., assignor.)
Metten, J. F., Philadelphia, Pa. Securing blades of turbines, &c. No. 901,115; Oct. 13; Sp. p. 2189; Dr. p. 445; Gaz. vol. 136; p. 1440.
Metz, R., Oberursel in Taunus, Germany. Alarm-clock. No. 900,293; Oct. 6; Sp. p. 477; Dr. p. 98; Gaz. vol. 136; p. 1147.
Metzger, C. A., New York, N. Y. Burglar-alarm. No. 901,983; Oct. 27; Sp. p. 4032; Dr. p. 817; Gaz. vol. 136; p 1792.
Metzger, J. J., Cleveland, Ohio. Changeable-sign-exhibiting device. No. 901,631; Oct. 20; Sp. p. 3271; Dr. pp. 670–1; Gaz. vol. 136; p. 1645.
Metzger, W. C., assignor to American Sales Book Company, Elmira, N. Y. Manifold copy book or pad. No. 901,935; Oct. 20; Sp. p. 3893; Dr. p. 794; Gaz. vol. 136; p. 1746.
Metzler, J., Herkimer, N. Y. Type-writer cabinet. No. 901,543; Oct. 20; Sp. p. 3104; Dr. p. 634; Gaz vol. 136; p. 1618.
Meyer, H., New York, N. Y. Controlling mechanism. No. 900,408; Oct. 6; Sp. p. 707; Dr. p. 146; Gaz. vol. 136; p. 1184.
Meyer, J. J., assignor to Standard Carrier Co., Kenyon, Minn. Carrier system. No. 901,984; Oct. 27; Sp. p. 4033; Dr. pp. 817–18; Gaz. vol. 136; p. 1792.
Meyer, M., assignor to Meyer Safety Guard Company, Omaha, Nebr. Safety-guard for cars. No. 900,187; Oct. 6; Sp. p. 243; Dr. pp. 49–50; Gaz. vol. 136; p. 1112.
Meyer, M., and T. Kenne, Luverne, Iowa. Tongue supporting and locking means. No. 902,100; Oct. 27; Sp. p. 4247; Dr. p. 860; Gaz. vol. 136; p. 1828.
Meyer Safety Guard Company. (See Meyer, M., assignor.)
Meyers, C. L. (See Joynes, A. L., assignor.)
Michaelson, M., assignor of one-half to H. T. Alsop, Fargo, N. D. Billiard-chalk holder. No. 901,020; Oct. 13; Sp. p. 2014; Dr. p. 409; Gaz. vol. 136; p. 1411.
Middelthon, C., *et al.* (See Rasmussen and Olsen, assignors.)
Middleton, R. (See Hughes, Quinlan, and Middleton.)
Midgley, T. (See Hopkinson and Midgley.)
Mignolet, J. (See Julliot, D., assignor.)
Mildebrath, W. H. R., Jacksonville, Fla. Electric sparking device. No. 902,427; Oct. 27; Sp. p. 4949; Dr. p. 999; Gaz. vol. 136; p. 1935.
Miles, N. E., Indianapolis, Ind. Garment-hanger. No. 900,567; Oct. 6; Sp. p. 1068; Dr. p. 219; Gaz. vol. 136; p. 1236.
Miles, N. E., Indianapolis, Ind. Skirt-measuring device. No. 900,568; Oct. 6; Sp. p. 1069; Dr. p. 219; Gaz. vol. 136; p. 1236.
Milhado, E. W., Mineral, Va. Vegetable peeler or scraper. No. 902,428; Oct. 27; Sp. p. 4951; Dr. p. 999; Gaz. vol. 136; p. 1935.
Millea, F. J. (See Stannard, J. E., assignor.)
Miller, B. N. B., Hartford, Conn. Cushion for footwear. No. 900,867; Oct. 13; Sp. p. 1699; Dr. p. 343; Gaz. vol. 136; p. 1361.
Miller, E. B. (See Bentley and Chessher, assignors.)
Miller, F. J., Cleveland, Ohio. Engine. No. 900,757; Oct. 13; Sp. p. 1456; Dr. pp. 296–7; Gaz. vol. 136; p. 1325.
Miller, H., Mead, Colo. Folding car-step. No. 901,632; Oct. 20; Sp. p. 3274; Dr. p. 671; Gaz. vol. 136; p. 1646.
Miller Lock Company. (See Soley, F., assignor.)
Miller, T., New York, N. Y. Manicure implement. No. 900,758; Oct. 13; Sp. p. 1458; Dr. p. 297; Gaz. vol. 136; p. 1325.
Miller, T. S., South Orange, N. J. Conveying apparatus. No. 901,021; Oct. 13; Sp. p. 2016; Dr. p. 409; Gaz. vol. 136; p. 1411.
Million, R. J., Jefferson township, Carroll county, Ind. Transmission-gear. No. 900,111; Oct. 6; Sp. p. 81; Dr. p. 17; Gaz. vol. 136; p. 1067.
Mills, H. S., Chicago, Ill. Coin-operated weighing-scale. No. 900,409; Oct. 6; Sp. p. 708; Dr. pp. 147–8; Gaz. vol. 136; p. 1184.
Mills, J. H., Richmond, Ind. Casket-handle. No. 900,569; Oct. 6; Sp. p. 1070; Dr. pp. 219–20; Gaz. vol. 136; p. 1237.
Mills, J. H., St. Louis, Mo. Reclining-chair. No. 900,945; Oct. 13; Sp. p. 1866; Dr. p. 380; Gaz. vol. 136; p. 1386.
Mills, J. H., Richmond, Ind. Clamp. (Reissue.) No. 12,864; Oct. 13; Sp. p. 2568; Dr. p. 528; Gaz. vol. 136; p. 1504.
Mills, J. W. (See Pickop and Mills.)
Milne, R., Rockford, Ill., assignor to B. F. Barnes Company. Centering-chuck. No. 901,249; Oct. 13; Sp. p. 2416; Dr. p. 496; Gaz. vol. 136; p. 1482.
Milne, R., Rockford, Ill., assignor to B. F. Barnes Company. Routing-machine. No. 901,722; Oct. 20; Sp. p. 3494; Dr. p. 707; Gaz. vol. 136; p. 1677.
Minerals Separation. (See Sulman, H. L. and E. A., assignors.)
Miners, W. S., Fort William, Ontario, Canada. Toy. No. 902,429; Oct. 27; Sp. p. 4952; Dr. p. 1000; Gaz. vol. 136; p. 1936.
Minnick, C. F., North Powder, Oreg. Heating-stove. No. 901,985; Oct. 27; Sp. p. 4035; Dr. p. 818; Gaz. vol. 136; p. 1792.
Minor, W. S., Cunningham, Tenn. Rotary engine. No. 900,410; Oct. 6; Sp. p. 713; Dr. pp. 148–9; Gaz. vol. 136; p. 1185.
Mitchell, W. H., Yancy Mills, Mo. Brake. No. 901,633; Oct. 20; Sp. p. 3275; Dr. pp. 671–2; Gaz. vol. 136; p. 1646.
Modlin, T. B., assignor of two-thirds to H. Black and L. C. Schenimann, Hurdland, Mo. Rail-tie. No. 902,312; Oct. 27; Sp. p. 4697; Dr. p. 951; Gaz. vol. 136; p. 1897.
Mohr, E., Milwaukee, Wis., assignor to National Enameling and Stamping Company. Water-cooler. No. 900,678; Oct. 6; Sp. p. 1309; Dr. p. 268; Gaz. vol. 136; p. 1274.
Mohr, M. (See Gribben and Mohr.)
Moin, E. (See Johnson and Moin.)
Molloy, E., Philadelphia, Pa. Railway-track. No. 900,188; Oct. 6; Sp. p. 246; Dr. p. 50; Gaz. vol. 136; p. 1112.
Molloy, W. H., Hicksville, N. Y. Illuminating device. No. 902,313; Oct. 27; Sp. p. 4698; Dr. p. 951; Gaz. vol. 136; p. 1898.
Monarch Typewriter Company. (See Merritt, H. W., assignor.)
Monarch Typewriter Company. (See Pool, M. W., assignor.)
Monk, W. J., assignor to G. Hattersley and Sons Limited, Keighley, England. Flange for warp-beams. No. 900,294; Oct. 6; Sp. p. 478; Dr. pp. 98–9; Gaz. vol. 136; p. 1147.
Monmouth Acetylene-Electric Manufacturing Company. (See Nickel, F. C., assignor.)
Monnot, J. F., assignor to Duplex Metals Company, New York, N. Y. Furnace. No. 901,986; Oct. 27; Sp. p. 4036; Dr. pp. 818–19; Gaz. vol. 136; p. 1793.
Montambo, D. J., Pentoga, Mich. Brake-wheel. No. 901,634; Oct. 20; Sp. p. 3277; Dr. p. 672; Gaz. vol. 136; p. 1646.
Montgomery, W. R., Shreveport, La. Folding table. No. 902,245; Oct. 27; Sp. p. 4546; Dr. p. 922; Gaz. vol. 136; p. 1874.
Moon, F. D., Edgewater, N. J. Ventilator-sash mechanism. No. 901,544; Oct. 20; Sp. p. 3105; Dr. p. 634; Gaz. vol. 136; p. 1618.
Moon, R. D., San Angelo, Tex. Well-drilling apparatus. No. 901,182; Oct. 13; Sp. p. 2299; Dr. p. 470; Gaz. vol. 136; p. 1461.
Moon, W. T., Baltimore, Md., assignor to Allis-Chalmers Company. Signal apparatus. No. 900,679; Oct. 6; Sp. p. 1310; Dr. p. 269; Gaz. vol. 136; p. 1274.
Moore, A. D., Needles, Cal. Crude-oil burner. No. 900,112; Oct. 6; Sp. p. 86; Dr. p. 17; Gaz. vol. 136; p. 1087.
Moore, E. B., Los Angeles, Cal. Flash-light for photographic use. No. 902,430; Oct. 27; Sp. p. 4953; Dr. p. 1000; Gaz. vol. 136; p. 1937.
Moore, F. M., assignor to International Generator Company, Westfield, Mass. Lighting device or torch. No. 902,504; Oct. 27; Sp. p. 5127; Dr. p. 1038; Gaz. vol. 136; p. 1962.
Moore, M. A. (See Cottrell and Moore.)
Moore, M. E. (See Moore, R. H. and M. E.)
Moore, R. H. and M. E., New York, N. Y. Passenger-car. No. 902,431; Oct. 27; Sp. p. 4955; Dr. p. 1000; Gaz. vol. 136; p. 1937.
Moore, W. A., Dayton, Ohio. Oven-door. No. 900,113; Oct. 6; Sp. p. 87; Dr. p. 18; Gaz. vol. 136; p. 1088.
Morcom, R. K. (See Jude and Morcom.)
Morgan, C. H., Worcester, Mass. Gas-producer. No. 902,432; Oct. 27; Sp. p. 4955; Dr. p. 1001; Gaz. vol. 136; p. 1937.
Morgan R. L., Worcester, Mass. Gas-producer. No. 901,359; Oct. 20; Sp. p. 2677; Dr. p. 549; Gaz. vol. 136; p. 1555.
Morgan, S. J., Albany, Wis. Gearing for drill-presses. No. 901,635; Oct. 20; Sp. p. 3278; Dr. pp. 672–3; Gaz. vol. 136; p. 1646.
Morral, J. (See Morral, S. E., W. W., and J.)
Morral, S. E. and W. W., Morral, Ohio. Can-labeling machine. No. 900,114; Oct. 6; Sp. p. 89; Dr. p. 18; Gaz. vol. 136; p. 1088.
Morral, S. E. and W. W. Morral, and J. Morral, Larue, Ohio. Machine for removing silk from ears of corn. No. 100,189; Oct. 6; Sp. p. 250; Dr p. 50; Gaz. vol. 136; p 1113.
Morral, W. W. (See Morral, S. E. and W. W.)

Morral, W. W. (See Morral, S. E., W. W., and J.)
Morris, O. J., Laramie, Wyo. Means for securing railway-rails to ties of railway-beds. No. 900,570; Oct. 6; Sp. p 1072; Dr. p. 220; Gaz. vol 136; p. 1237
Morris, T. C., Little Rock, Ark. Drying-kiln. No. 901,811; Oct. 20; Sp. p. 3666; Dr. p. 743; Gaz. vol. 136; p. 1705.
Morrison, A. M., Dubuque, Iowa. Sanitary plumbing connection. No. 901,545; Oct. 20; Sp. p. 3106; Dr. pp. 634–5; Gaz. vol. 136; p. 1619.
Morrison, W., Chicago, Ill. Secondary battery. No. 900,571; Oct. 6; Sp. p. 1073; Dr. p. 220; Gaz. vol. 136; p. 1237.
Morrison, W. R., Derry, N. H. Mail-bag catcher and deliverer. No. 901,812; Oct. 20; Sp. p. 3668; Dr. p. 744; Gaz. vol. 136; p. 1705.
Morrison, W. S., San Francisco, Cal. Preparing concentrated hydrated magnesia. No. 900,868; Oct. 13; Sp. p. 1701; Gaz. vol. 136; p. 1361.
Morse, A. U. (See Knight, J. L., assignor.)
Morse, C. F., New York, N. Y. Invisible-picture card. No. 901,723; Oct. 20; Sp. p. 3499; Dr. p. 707; Gaz. vol. 136; p. 1678.
Morse, V. E., Shelton, Conn. Hook and eye. No. 901,987; Oct. 27; Sp. p. 4041; Dr. p. 819; Gaz. vol. 136; p. 1793.
Mortensen, W. C., Salt Lake City, Utah, assignor of one-half to J. R. Harris, Woodruff, Idaho. Electric heating device. No. 900,295; Oct. 6; Sp. p. 479; Dr. p. 99; Gaz. vol. 136; p. 1148.
Morterud, E., Torderód, near Moss, Norway. Apparatus for transmitting heat from one medium to another. No. 900,411; Oct. 6; Sp. p. 716; Dr. p. 149; Gaz. vol. 136; p. 1185.
Mortimer, J. D. D., Newport, England. Filing device. No. 901,988; Oct. 27; Sp. p. 4042; Dr. pp. 819–20; Gaz. vol. 136; p. 1793.
Morton, M., Muskegon Heights, Mich. Mechanism for planing shoes and wedges. No. 901,724; Oct. 20; Sp. p. 3499; Dr. p. 708; Gaz. vol. 136; p. 1678.
Morton, T., Ruthergien, Scotland. Chair-canopy. No. 900,572; Oct. 6; Sp. p. 1075; Dr. p. 220; Gaz. vol. 136; p. 1237.
Moses, W. S., Tracy, Minn. Rotary engine. No. 901,813; Oct. 20; Sp. p. 3670; Dr. pp. 744–5; Gaz. vol. 136; p. 1705.
Motheral, W. B., Washington, D. C. Boat. No. 900,296; Oct. 6; Sp. p. 479; Dr. pp. 99–100; Gaz. vol. 136; p. 1148.
Motheral, W. B., North McGregor, Iowa, assignor to Gliding Boat Company of America, New York, N. Y. Boat. No. 900,680; Oct. 6; Sp. p. 1313; Dr. p. 269; Gaz. vol. 136; p. 1274.
Motor Car Equipment Company. (See Gernsback, H., assignor.)
Mueller, F., assignor to Standard Stopper Company, New York, N. Y. Equalizing mechanism. No. 901,360; Oct. 20; Sp. p. 2678; Dr. pp. 549–50; Gaz. vol. 136; p. 1556.
Müller, H., and K. Specker, St. Gallen, Switzerland. Holder for sheets of all kinds. No. 902,433; Oct. 27; Sp. p. 4957; Dr. p. 1001; Gaz. vol. 136; p. 1937.
Mullins, W. H. (See Nelson and Mullens.)
Mundy, K. E., administratrix. (See Mundy, W. O.) (Reissue.)
Mundy, W. O., deceased; K. E. Mundy, administratrix, assignor to Westinghouse Air Brake Co., Pittsburg Pa. Air-brake. (Reissue.) No. 12,863; Oct. 13; Sp. p. 2566; Dr. p. 528; Gaz. vol. 136; p. 1503.
Murdock, E. F., East Orange, N. J., assignor to Floor Scraping Machine Company. Floor surfacing and polishing machine. No. 902,246; Oct. 27; Sp. p. 4548; Dr. pp. 922–3; Gaz. vol. 136; p. 1874.
Murnane, D. J., Kirkwood, Mo. Apparatus for forming sheets of glass. No. 901,725; Oct. 20; Sp. p. 3502; Dr. p. 708; Gaz. vol. 136; p. 1678.
Murphy, A., Sr. (See Wheildon, W. M., assignor.)
Murphy, D. W., assignor to Warren Axe and Tool Company, Warren, Pa. Log-grab. No. 901,304; Oct. 13; Sp. p. 2548; Dr. pp. 524–5; Gaz. vol. 136; p. 1500.
Murphy, J. A., assignor of one-half to G. Nightingale, Holyoke, Mass. Mailing-tube. No. 901,305; Oct. 13; Sp. p. 2550; Dr. p. 525; Gaz. vol. 136; p. 1501.
Murphy, J. J., assignor to Eagle Lock Co., Terryville, Conn. Permutation wheel-tumbler for locks. No. 901,116; Oct. 13; Sp. p. 2192; Dr. p. 446; Gaz. vol. 136; p. 1440.
Murphy, J. L., assignor of one-half to E. A. Hardy, Denver, Colo. Hot-air-distributing device for furnaces. No. 901,814; Oct. 20; Sp. p. 3673; Dr. p. 746; Gaz. vol. 136; p. 1706.
Murphy, T. M., assignor to Sanitary Street Cleaning & Sprinkling Machine Company, St. Louis, Mo. Flushing-head. No. 900,869; Oct. 13; Sp. p. 1703; Dr. pp. 343–4; Gaz. vol. 136; p. 1361.
Murphy, T. M., assignor to Sanitary Street Cleaning & Sprinkling Machine Company, St. Louis, Mo. Street-washing machine. No. 900,870; Oct. 13; Sp. p. 1704; Dr. pp. 344–5; Gaz. vol. 136; p. 1362.
Murray, A. R., Johnstown, Pa., assignor to Lorain Steel Company. Retaining device for switch-points. No. 901,726; Oct. 20; Sp. p. 3504; Dr. pp. 708–9; Gaz. vol. 136; p. 1679.
Musso, F. T., Bowman, Cal. Automatic oiler for vehicles. No. 901,460; Oct. 20; Sp. p. 2925; Dr. p. 596; Gaz. vol. 136; p. 1591.
Myers, W. M., and G. W. Hinton, St. Joseph, Mo.; said Hinton assignor to said Myers. Hoisting and conveying mechanism. No. 902,158; Oct. 27; Sp. p. 4362; Dr. p. 883; Gaz. vol. 136; p. 1847.
N. O. Nelson Manufacturing Company. (See Lawnin, L. D., assignor.)
N. Y. Dash & Axle Mfg. Co. (See Johnson, R. E., assignor.)
Nacke, A., assignor of one-half to I. Kitsee, Philadelphia, Pa. Platform for power-motors. No. 901,025; Oct. 13; Sp. p. 2025; Dr. p. 411; Gaz. vol. 136; p. 1413.
Nagel, E. C., Chicago, Ill. Adjustable socket-wrench. No. 900,766; Oct. 13; Sp. p. 1472; Dr. p. 300; Gaz. vol. 136; p. 1327.
Nashold, M., Davis Junction, Ill. Centrifugal block-machine. No. 900,414; Oct. 6; Sp. p. 720; Dr. p. 150; Gaz. vol. 136; p. 1186.
Nason, O. H., Martha Furnace, Pa. Neck-yoke. No. 902,160; Oct. 27; Sp. p. 4367; Dr. p. 884; Gaz. vol. 136; p. 1848.
National Brake and Electric Company. (See Aikman, B., assignor.)
National Electrolytic Company. (See Gibbs, W. T., assignor.)
National Enameling and Stamping Company. (See Knapp, George W., assignor.)
National Enameling and Stamping Company. (See Mohr, E., assignor.)
National Equipment Company. (See Schmidt, A. G. A., assignor.)
National Folding Box & Paper Co. (See Hauxhurst, C. E., assignor.)
National Rural Route Advertising Company. (See Husted, L. J., assignor.)
National Sewing Machine Company. (See Winkel, C., assignor.)
National Torpedo Company. (See Davis, C., assignor.)
Naylor, J. R., La Grange, Ill. Combined spring and spike tooth harrow. No. 901,118; Oct. 13; Sp. p. 2194; Dr. p. 446; Gaz. vol. 136; p. 1441.
Neal Naval Stores Company. (See Neal, S., assignor.)
Neal, S., assignor to Neal Naval Stores Company, Cordele, Ga. Thermometer. No. 900,575; Oct. 6; Sp. p. 1081; Dr. pp. 221–2; Gaz. vol. 136; p. 1239.
Near, W. W., *et al.* (See Lovett, J. S. H., assignor.)
Neef, A., Kattowitz, Germany. Centrifugal drying apparatus. No. 901,184; Oct. 13; Sp. p. 2304; Dr. p. 471; Gaz. vol. 136; p. 1462.
Neer, H. M., Columbus, Ohio. Valve-controlling mechanism for internal-combustion engines. No. 901,365; Oct. 20; Sp. p. 2690; Dr. p. 552; Gaz. vol. 136; p. 1557.
Neff, F. M., Milford, Ind. Gate. No. 902,438; Oct. 27; Sp. p. 4962; Dr. pp. 1002–3; Gaz. vol. 136; p. 1938.
Neilsen Mailing Machinery Company. (See Richards, G. L., assignor.)
Neireiter, H. N., Decatur, Ind. Tile-drain inlet. No. 902,104; Oct. 27; Sp. p. 4257; Dr. p. 863; Gaz. vol. 136; p. 1829.
Neitzel, H., Concordia, Kans. Expressing screw or auger for brick-machines. No. 901,819; Oct. 20; Sp. p. 3680; Dr. p. 747; Gaz. vol. 136; p. 1708.
Neller, A. H., and W. Louden, assignors to Louden Machinery Company, Fairfield, Iowa. Elevated carrier. No. 900,681; Oct. 6; Sp. p. 1314; Dr. p. 269; Gaz. vol. 136; p. 1274.
Neller, A. H., and W. Louden, assignors to Louden Machinery Company, Fairfield, Iowa. Elevated carrier. No. 900,682; Oct. 6; Sp. p. 1318; Dr. p. 270; Gaz. vol. 136; p. 1275.
Nelson Baker & Co. (See Dodsworth, M., assignor.)
Nelson, C., assignor to S. Sternau & Company, New York, N. Y. Towel-pin. No. 900,767; Oct. 13; Sp. p. 1473; Dr. p. 300; Gaz. vol. 136; p. 1328.
Nelson, C. J., Laurium, Mich. Pocket match-safe. No. 901,548; Oct. 20; Sp. p. 3113; Dr. pp. 635–6; Gaz. vol. 136; p. 1620.
Nelson, C. N., and N. A. Lee, Colfax, Wis. Water-heater. No. 900,873; Oct. 13; Sp. p. 1710; Dr. p. 346; Gaz. vol. 136; p. 1362.
Nelson, C. R., Chicago, Ill., assignor to Sieber & Trussell Mfg. Co. Loose-leaf binder. No. 901,549; Oct. 20; Sp. p. 3114; Dr. p. 636; Gaz. vol. 136; p. 1620.
Nelson, E. A., Salem township, Meigs county, Ohio. Harness attachment. No. 901,990; Oct. 27; Sp. p. 4046; Dr. p. 820; Gaz. vol. 136; p. 1794.
Nelson, G. N., Denver, Colo. Weed-puller. No. 901,820; Oct. 20; Sp. p. 3681; Dr. p. 748; Gaz. vol. 136; p. 1708.
Nelson, H. C., and W. H. Mullins, Salem, Ohio. Under-water exhaust for launches. No. 900,576; Oct. 6; Sp. p. 1082; Dr. p. 222; Gaz. vol. 136; p. 1239.
Nelson, J. H., Madison, Wis. Catch for swing-closures. No. 900,415; Oct. 6; Sp. p. 721; Dr. p. 150; Gaz. vol. 136; p. 1187.
Nelson, S. T., assignor to Sullivan Machinery Company, Chicago, Ill. Hoisting-engine. No. 900,768; Oct. 13; Sp. p. 1474; Dr. pp. 300–1; Gaz. vol. 136; p. 1328.
Nelson, S. T., assignor to Sullivan Machinery Company, Chicago, Ill. Hoisting-engine. No. 900,769; Oct. 13; Sp. p. 1481; Dr. pp. 301–3; Gaz. vol. 136; p. 1328.
Nelson, T. M., Marseilles, Ill. Whip-holder. No. 900,193; Oct. 6; Sp. p. 257; Dr. p. 52; Gaz. vol. 136; p. 1114.
Nerlich, F. W., Jr., Rochester N. Y. Egg-carrier. No. 901,639; Oct. 20; Sp. p. 3287; Dr. p. 674; Gaz. vol. 136; p. 1648.

Nernst Lamp Company. (See Nernst, W., assignor.)
Nernst, W., Göttingen, Germany, assignor, by mesne assignments, to Nernst Lamp Company, Pittsburg, Pa. Electric glow-lamp. No. 900,416; Oct. 6; Sp. p. 722; Dr. p. 151; Gaz. vol. 136; p. 1187.
Netzel, C., Chicago, Ill. Metallic bedstead. No. 901,992; Oct. 27; Sp. p. 4048; Dr. p. 821; Gaz. vol. 136; p. 1794.
Neuberth, G. E., Newark, N. J., assignor to Universal Caster & Foundry Company. Caster for furniture. No. 900,417; Oct. 6; Sp. p. 723; Dr. p. 151; Gaz. vol. 136; p. 1187.
Neuberth, G. E., Newark, N. J., assignor to Universal Caster & Foundry Company. Caster for furniture. No. 900,577; Oct. 6; Sp. p. 1084; Dr. p. 222; Gaz. vol. 136; p. 1239.
Neumeister, F. and H. C. Burhop, Howards Grove Wis. Cattle-stanchion. No. 901,366; Oct. 20; Sp. p. 2691; Dr. p. 552; Gaz. vol. 136; p. 1558.
New Haven Clock Co. (See Porter, W. E., assignor.)
Newberry, S. B., Sandusky, Ohio. White non-staining Portland cement and making same. No. 900,874; Oct. 13; Sp. p. 1712; Gaz. vol. 136; p. 1363.
Newman, A. A., Chicago, Ill. Watchman's time-register. No. 901,462; Oct. 20; Sp. p. 2927; Dr. p. 597; Gaz. vol. 136; p. 1591.
Newman, A. T., Greeley, Kans. Gas-regulator. No. 901,991; Oct. 27; Sp. p. 4046; Dr. p. 820; Gaz. vol. 136; p. 1794.
Newpher, A. H., Chicago, Ill. Combined rail-joint and anti-rail-spreader. No. 901,026; Oct. 13; Sp. p. 2026; Dr. p. 411; Gaz. vol. 136; p. 1413.
Newton, J. F., Jr., Boston, Mass. Hanger-strap or handhold for cars, &c. No. 901,119; Oct. 13; Sp. p. 2195; Dr. pp. 446–7; Gaz. vol. 136; p. 1441.
Newton, W. G., assignor to Peck Bros. & Co., New Haven, Conn. Combined descending shower and shampoo fixture for shower-baths. No. 901,728; Oct. 20; Sp. p. 3509; Dr. p. 709; Gaz. vol. 136; p. 1679.
Nichols, A. S., New York, N. Y. Factory spool-holder. No. 902,247; Oct. 27; Sp. p. 4550; Dr. p. 923; Gaz. vol. 136; p. 1875.
Nichols, F. M., Chillicothe, Ohio. Clutch. No. 900,578; Oct. 6; Sp. p. 1085; Dr. p. 222; Gaz. vol. 136; p. 1240.
Nichols, F. Y. (See Korten, H., assignor.)
Nichols, H. B., Philadelphia, Pa. Railway-switch. No. 901,254; Oct. 13; Sp. p. 2426; Dr. pp. 498–9; Gaz. vol. 136; p. 1484.
Nichols, J. W., Leominster, Mass. Barrette or hair-retainer. No. 902,317; Oct. 27; Sp. p. 4706; Dr. p. 953; Gaz. vol. 136; p. 1899.
Nicholson, E. P., New York, N. Y., assignor of one-half to J. A. Richardson, South Norwalk, Conn. Fluid-pressure motor. No. 901,550; Oct. 20; Sp. p. 3115; Dr. p. 636; Gaz. vol. 136; p. 1620.
Nicholson, J., Frackville, Pa. Carbon pencil of electric-arc lights. No. 901,993; Oct. 27; Sp. p. 4049; Dr. p. 821; Gaz. vol. 136; p. 1795.
Nickel, A., assignor to Wessell, Nickel & Gross, New York, N. Y. Repeating action for grand pianos. No. 902,439; Oct. 27; Sp. p. 4966; Dr. p. 1003; Gaz. vol. 136; p. 1939.
Nickel, F. C., Concord, assignor to Monmouth Acetylene-Electric Manufacturing Company, Monmouth, Ill. Acetylene-gas generator. No. 901,640; Oct. 20; Sp. p. 3288; Dr. p. 674; Gaz. vol. 136; p. 1648.
Nickol, F. C., Dayton, Ohio. Flushing apparatus for water-closets. No. 901,185; Oct. 13; Sp. p. 2304; Dr. p. 472; Gaz. vol. 136; p. 1462.
Nicolas, J. F., Chicago, Ill. Skinning device. No. 900,300; Oct. 6; Sp. p. 486; Dr. p. 101; Gaz. vol. 136; p. 1149.
Niell, M., New York, N. Y. Photographic-film package and holder therefor. No. 900,194; Oct. 6; Sp. p. 258; Dr. p. 52; Gaz. vol. 136; p. 1114.
Nies, F. J., East Orange, N. J. Shed-ventilator. No. 901,120; Oct. 13; Sp. p. 2199; Dr. p. 447; Gaz. vol. 136; p. 1441.
Niessner, F., Johnstown, Pa. Clutch-centering mechanism. No. 901,729; Oct. 20; Sp. p. 3510; Dr. p. 710; Gaz. vol. 136; p. 1680.
Nightingale, G. (See Murphy, J. A., assignor.)
Nilsson, E. (See Sandström, K. O., assignor.)
Nineteen Hundred Washer Company. (See Whitney, W. D., assignor.)
Nobel's Explosives Company. (See Dickie, M. B., assignor.)
Noe, R. D., Bozeman, Mont. Sash weight and pulley. No. 900,770; Oct. 13; Sp. p. 1494; Dr. p. 303; Gaz. vol. 136; p. 1329.
Noeggerath, J. E., Schenectady, N. Y., assignor to General Electric Company. Armature for unipolar machines. No. 900,771; Oct. 13; Sp. p. 1496; Dr. p. 303; Gaz. vol. 136; p. 1329.
Noey, J. (See Dillon and Noey.)
Nolan, F. J., assignor to Automatic Trolley Guard Company, Buffalo, N. Y. Safety-guard for trolley-wheels. No. 901,027; Oct. 13; Sp. p. 2027; Dr. p. 411; Gaz. vol. 136; p. 1414.
Nolan, J. F., Chicago, Ill. Molding-machine. No. 900,117; Oct. 6; Sp. p. 92; Dr. p. 19; Gaz. vol. 136; p. 1088.
Nolan, M. S., Waltham, Mass. Hinge. No. 900,579; Oct. 6; Sp. p. 1086; Dr. p. 225; Gaz. vol. 136; p. 1240.
Norcross, I. W., New York, N. Y., assignor of one-half to E. A. Hawthorne, Philadelphia, Pa. Combined phonograph and picture-exhibiting machine. No. 900,875; Oct. 13; Sp. p. 1713; Dr. pp. 346–7; Gaz. vol. 136; p. 1363.
Norcross, I. W., New York, N. Y., assignor of one-half to E. A. Hawthorne, Philadelphia, Pa. Automatic phonograph apparatus. No. 900,876; Oct. 13; Sp. p. 1716; Dr. p. 347; Gaz. vol. 136; p. 1363.
Norcross, I. W., New York, N. Y., assignor of one-half to E. A. Hawthorne, Philadelphia, Pa. Sound-tube. No. 900,877; Oct. 13; Sp. p. 1721; Dr. p. 348; Gaz. vol. 136; p. 1363.
Nordberg, B. V., Milwaukee, Wis. Variable-capacity compressor. No. 900,418; Oct. 6; Sp. p. 724; Dr. p. 151; Gaz. vol. 136; p. 1187.
Norman, J. R., assignor of one-half to M. E. Emmerson and J. F. Pogue, Byington, Tenn. Safety-elevator. No. 900,878; Oct. 13; Sp. p. 1724; Dr. p. 348; Gaz. vol. 136; p. 1364.
Normand, J. E., Hoboken, N. J., assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Quick-action automatic release mechanism for air-brakes. No. 902,161; Oct. 27; Sp. p. 4368; Dr. pp. 884–5; Gaz. vol. 136; p. 1848.
Normand, J. E., Hoboken, N. J., assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Quick-action automatic release mechanism for air-brakes. No. 902,162; Oct. 27; Sp. p. 4371; Dr. pp. 885–6; Gaz. vol. 136; p. 1848.
Normand, J. E., Hoboken, N. J., assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Valve mechanism for railway air-brake systems. No. 902,163; Oct. 27; Sp. p. 4377; Dr. pp. 886–7; Gaz. vol. 136; p. 1849.
Norquist, E. E., Kansas City, Mo. Stock-fountain. No. 901,730; Oct. 20; Sp. p. 3512; Dr. p. 710; Gaz. vol. 136; p. 1680.
Norris, J. C., Denver, Colo. Lamp shade or reflector. No. 901,641; Oct. 20; Sp. p. 3290; Dr. p. 675; Gaz. vol. 136; p. 1649.
North Bro's M'f'g Co. (See Fegley, T. J., assignor.)
North, C. H., assignor to North Electric Company, Cleveland, Ohio. Electric bell. No. 902,105; Oct. 27; Sp. p. 4258; Dr. p. 863; Gaz. vol. 136; p. 1830.
North, E. C., *et al.* (See Putney, A N., assignor.)
North Electric Company. (See North, C. H., assignor.)
Northrup, E. F., assignor to Leeds and Northrup Company, Philadelphia, Pa. Method of and means for utilizing the pressure in the interior of an electric conductor carrying current. No. 902,106; Oct. 27; Sp. p. 4261; Dr. p. 864; Gaz. vol. 136; p. 1830.
Norton, D. W., Vincennes, Ind. Reinforced structure. No. 901,551; Oct. 20; Sp. p. 3117; Dr. p. 636; Gaz. vol. 136; p. 1621.
Norwall Manufacturing Company. (See Hoffman, G. D., assignor.)
Nourbourn, J. W. (See Latham, A., assignor.)
Nurnberg, C., New York, N. Y. Clinical and other thermometer. No. 900,580; Oct. 6; Sp. p. 1087; Dr. p. 223; Gaz. vol. 136; p. 1240.
Nussbaum, J. (See Ferchland and Nussbaum.)
Nyborg, M. J. C., Minneapolis, Minn. Self-threading sewing-needle. No. 900,195; Oct. 6; Sp. p. 262; Dr. p. 52; Gaz. vol. 136; p. 1114.
O'Brien, J. B., Santa Anna, Tex. Planter attachment. No. 901,552; Oct. 20; Sp. p. 3118; Dr. p. 637; Gaz. vol. 136; p. 1621.
O'Connor, D. J., Parry Sound, Ontario, Canada. Wire-stretcher. No. 900,665; Oct. 6; Sp. p. 1274; Dr. p. 260; Gaz. vol. 136; p. 1268.
O'Kane, K., Philadelphia, Pa. Duplicating-machine. No. 901,121; Oct. 13; Sp. p. 2201; Dr. p. 447; Gaz. vol. 136; p. 1442.
O'Neal, W. F., Wenatchee, assignor of one-half to R. T. Warner, Everett, Wash. Nut-lock. No. 900,196; Oct. 6; Sp. p. 263; Dr. p. 53; Gaz. vol. 136; p. 1115.
O'Nell, M. J. (See Grant, W. M., assignor.)
O'Sullivan, E., San Francisco, Cal. Emergency-cistern for fire-engines. No. 901,733; Oct. 20; Sp. p. 3516; Dr. pp. 711–12; Gaz. vol. 136; p. 1681.
Oatley, H. B., Schenectady, assignor to American Locomotive Company, New York, N. Y. Superheater. No. 902,440; Oct. 27; Sp. p. 4968; Dr. pp. 1003–4; Gaz. vol. 136; p. 1939.
Oberlies, A. W., assignor to R. Raynor, Philadelphia, Pa. Antifreezing flush-tank. No. 901,731; Oct. 20; Sp. p. 3514; Dr. p. 710; Gaz. vol. 136; p. 1680.
Odquist, V., assignor, by mesne assignments, to Torris Wold & Company, Chicago, Ill. Can-making machine. No. 900,118; Oct. 6; Sp. p. 94; Dr. pp. 19–21; Gaz. vol. 136; p. 1089.
Odquist, V., and H. H. Lyche; said Odquist assignor to Torris Wold & Company, Chicago, Ill. Can-body-flanging machine. No. 900,119; Oct. 6; Sp. p. 102; Dr. pp. 21–2; Gaz. vol. 136; p. 1089.
Odquist, V. (See Lyche and Odquist.)
Ohloff, R. A. (See Dobson, G., assignor.)
Ohnemus, A., assignor to Excelsior Stove & Manufacturing Company, Quincy, Ill. Stovepipe-damper. No. 901,642; Oct. 20; Sp. p. 3291; Dr. p. 675; Gaz. vol. 136; p. 1649.
Olberg, C. R., Vienna, Va., assignor of one-half to F. R. Weller, Washington, D. C. Wrench. No. 901,821; Oct. 20; Sp. p. 3683; Dr. p. 748; Gaz. vol. 136; p. 1709.
Oldham, W. B., *et al.* (See Babb, J. M., assignor.)
Olmsted, H. K. (See Ludington and Olmsted.)
Olsen, M. (See Rasmussen and Olsen.)

Olson, A., Ashtabula, Ohio. Clothes-line fastener. No. 900,879; Oct. 13; Sp. p. 1725; Dr. p. 349; Gaz. vol. 136; p. 1364.
Olson, C., *et al.* (See Mandt, M. G., assignor.)
Olson, L., Airlie, Minn. Life buoy and raft. No. 901,732; Oct. 20; Sp. p. 3515; Dr. p. 711; Gaz. vol. 136; p. 1681.
Orchard, E. R., Fargo, N. D. Penholder. No. 902,164; Oct. 27; Sp. p. 4380; Dr. p. 887; Gaz. vol. 136; p. 1849.
Orcutt, F. H. (See Broad and Orcutt.)
Orenstein, M., Berlin, Germany. Dumping-car for sticky materials. No. 901,643; Oct. 20; Sp. p. 3293; Dr. pp. 675–6; Gaz. vol. 136; p. 1649.
Ormston, F. D., New York, N. Y. Postal mailing-card. No. 901,464; Oct. 20; Sp. p. 2931; Dr. p. 598; Gaz. vol. 136; p. 1592.
Orr, U. M., Hendersonville, N. C. Dolly or skid roller. No. 901,028; Oct. 13; Sp. p. 2029; Dr. pp. 411–12; Gaz. vol. 136; p. 1414.
Osborne, B. H. (See Adams, C. E., assignor.)
Osborne, J. W., assignor of one-half to G. Hart, Winchester, Ill. Cultivator. No. 902,107; Oct. 27; Sp. p. 4267; Dr. p. 865; Gaz. vol. 136; p. 1830.
Osman, G. H., Topeka, Kans. Blow-off cock. No. 900,197; Oct. 6; Sp. p. 264; Dr. p. 53; Gaz. vol. 136; p. 1115
Ostendorf, L. C., assignor to J. E. Cochran, Dundee, Ill. Weighing-scale. No. 901,994; Oct. 27; Sp. p. 4049; Dr. p. 821; Gaz. vol. 136; p. 1795.
Ostendorf, O. L., Milwaukee, Wis. Chair. No. 900,301; Oct. 6; Sp. p. 487; Dr. p. 102; Gaz. vol. 136; p. 1149
Osterberg, A. F. (See Osterberg, H. G. and A. F.)
Osterberg, H. G. and A. F., Greensburg, assignors to H. Kleber & Brother Co., Pittsburg, Pa. Mechanism for notching piano-sounding-board bridges. No. 901,644; Oct. 20; Sp. p. 3294; Dr. p. 676; Gaz. vol. 136; p. 1650.
Ostergren, O. P., New York, and C. O. L. Cardell, Pearl River, N. Y. Rotary blower or compressor. No. 902,441; Oct. 27; Sp. p. 4971; Dr. p. 1005; Gaz. vol. 136; p. 1940.
Ostlund, A., Exline, Iowa. Pick. No. 901,995; Oct. 27; Sp. p. 4051; Dr. p. 821; Gaz. vol. 136; p. 1795.
Ostrander, J., Indianapolis, Ind. Packing and producing same. No. 902,318; Oct. 27; Sp. p. 4706; Dr. p. 953; Gaz. vol. 136; p. 1899.
Ostrogovitch, A., Bucharest, Roumania, and T. Silbermann, Charlottenburg, Germany. Producing indulin colors No. 900,302; Oct. 6; Sp. p. 489; Gaz. vol. 136; p. 1150.
Otto W. Helbig Company. (See Helbig, O. W., assignor.)
Overkamp, C. H., assignor to Triumph Manufacturing Company, Cincinnati, Ohio. Loaf-forming machine. No. 901,029; Oct. 13; Sp. p. 2030; Dr. p. 412; Gaz. vol. 136; p. 1414.
Overkamp, C. H., assignor to Triumph Manufacturing Company, Cincinnati, Ohio. Loaf-forming machine. No. 901,030; Oct. 13; Sp. p. 2032; Dr. p. 412; Gaz. vol. 136; p. 1414.
Overkamp, C. H., and F. Streich, assignors to Triumph Manufacturing Company, Cincinnati, Ohio. Loaf-forming machine. No. 901,031; Oct. 13; Sp. p. 2034; Dr. p. 412; Gaz. vol. 136; p. 1415.
Pace, W. W. (See Sholar and Pace.)
Pacific Coast Soda Company. (See Stanley, J. C. W., assignor.)
Pacific Electric Heating Company. (See Meredith, W., assignor.)
Pacific Electric Heating Company. (See Richardson, E. H., assignor.)
Packer, E., Hydesville, Cal. Dry-goods marker. No. 900,880; Oct. 13; Sp. p. 1727; Dr. p. 349; Gaz. vol. 136; p. 1364.
Page, L. S., North Salem, Ind. Sliding jack. No. 900,419; Oct. 6; Sp. p. 728; Dr. p. 152; Gaz. vol. 136; p. 1188.
Pagett, J. F., Denver, Colo. Ore-separator. No. 900,581; Oct. 6; Sp. p. 1089; Dr. pp. 223–4; Gaz. vol. 136; p. 1240.
Painter, T. M., Cleveland, Ohio. Folding chair. No. 902,248; Oct. 27; Sp. p. 4552; Dr. p. 923; Gaz. vol. 136; p. 1875.
Palmer, I. E., assignor to I. E. Palmer Company, Middletown, Conn. Couch-hammock. No. 901,936; Oct. 20; Sp. p. 3895; Dr. p. 795; Gaz. vol. 136; p. 1746.
Palmer, T. A., Akron, and C. A. Carlson, Barberton, Ohio, assignors to Diamond Match Company, Chicago, Ill. Box-sanding machine. No. 901,367; Oct. 20; Sp. p. 2693; Dr. pp. 552–3; Gaz. vol. 136; p. 1558.
Palmer, W. H., Council Bluffs, Iowa. End-gate for wagons. No. 902,319; Oct. 27; Sp. p. 4709; Dr. p 953; Gaz. vol. 136; p. 1900.
Panasevitch, J. S., Bridgeport, Conn. Gas-heater. No. 900,303; Oct. 6; Sp. p. 491; Dr. p. 102; Gaz. vol. 136; p. 1150.
Pancoast, A. C., assignor of one-fourth to W. G. Pancoast, Cleveland, Ohio. Mashing, mixing, and churning machine. No. 901,465; Oct. 20; Sp. p. 2932; Dr. pp. 598–9; Gaz. vol. 136; p. 1592.
Pancoast, G. E., New York, N. Y., assignor to American Lithographic Company. Multicolor-printing press. No. 902,165; Oct. 27; Sp. p. 4380; Dr. p. 887; Gaz. vol. 136; p. 1849.
Pancoast, W. G. (See Pancoast, A. C., assignor.)
Pannebaker, G. F., assignor of one-half to L. A. Drury, St. Louis, Mich. Device for creating a central draft for fire-boxes. No. 900,772; Oct. 13; Sp. p. 1497; Dr. pp. 303–4; Gaz. vol. 136; p. 1329.
Papworth, T., Portland, Oreg. Stocking-supporter. No. 901,734; Oct. 20; Sp. p. 3518; Dr. p. 712; Gaz. vol. 136; p. 1681.
Paquette, F., assignor of one-half to F. Kuehn, Toledo, Ohio. Attachment for timepieces. No. 901,822; Oct. 20; Sp. p. 3686; Dr. p. 749; Gaz. vol. 136; p. 1709.
Paragon Mfg. Co. (See Blake, W. F., assignor.)
Paris Lamp Manufacturing Company. (See Jorres, R. W., assignor.)
Paris Lamp Manufacturing Company. (See Zierlein, R. W., assignor.)
Parker, A., Dannevirke, New Zealand. Machine for printing and issuing tickets. No. 901,996; Oct. 27; Sp. p. 4053; Dr. p. 822; Gaz. vol. 136; p. 1796.
Parker, E. O., and H. E. Grey, Independence, Iowa. Game-register. No. 902,320; Oct. 27; Sp. p. 4711; Dr. p. 953; Gaz. vol. 136; p. 1900.
Parker, E. R., Cincinnati, Ohio. Slipper for bathers. No. 900,881; Oct. 13; Sp. p. 1728; Dr. p. 349; Gaz. vol. 136; p. 1365.
Parker, H., Nashua, N. H., assignor to Improved Paper Machinery Company, Castine, Me. Cylinder-mold for paper-making machines and the like. No. 902,505; Oct. 27; Sp. p. 5130; Dr. p. 1038; Gaz. vol. 136; p. 1963.
Parker, H. R., Reading, Pa. Headlight-controller. No. 900,198; Oct. 6; Sp. p. 265; Dr. p. 53; Gaz. vol. 136; p. 1115.
Parker, J. C., Philadelphia, Pa. Wrench. No. 900,120; Oct. 6; Sp. p. 107; Dr. p. 22; Gaz. vol. 136; p. 1090.
Parker, L. C., Hamilton, Ohio. Gas-producer. No. 901,823; Oct. 20; Sp. p. 3687; Dr. p. 749; Gaz. vol. 136; p. 1709.
Parks, S. E., assignor of one-half to T. H. Arnold, Portland, N. D. Sash-balance. No. 901,553; Oct. 20; Sp. p. 3118; Dr. p. 637; Gaz. vol. 136; p. 1621.
Parshall, H. F., London Wall, London, England, assignor to General Electric Company. Electric-railway system. No. 901,997; Oct. 27; Sp. p. 4054; Dr. p. 822; Gaz. vol. 136; p. 1796.
Pasquale, R., Oil City, Pa. Switch-point thrower. No. 902,249; Oct. 27; Sp. p. 4553; Dr. p. 924; Gaz. vol. 136; p. 1875.
Patten, A. R., Fall River, Mass. Mechanical movement. No. 901,032; Oct. 13; Sp. p. 2036; Dr. p. 413; Gaz. vol. 136; p. 1415.
Patterson, A. C. (See Patterson, G. L., assignor.)
Patterson, F. M. (See Rizer, F. W., assignor.)
Patterson, G. L., assignor to A. C. Patterson, New York, N. Y. Electric plug-receptacle. No. 900,773; Oct. 13; Sp. p. 1498; Dr. p. 304; Gaz. vol. 136; p. 1329.
Patterson, G. L., assignor to A. C. Patterson, New York, N. Y. Electric bell. No. 901,033; Oct. 13; Sp. p. 2039; Dr. p. 413; Gaz. vol. 136; p. 1416.
Patterson, G. L., assignor to A. C. Patterson, New York, N. Y. Stage-pocket. No. 901,034; Oct. 13; Sp. p. 2039; Dr. p. 414; Gaz. vol. 136; p. 1416.
Pattison, C. A. (See Roby and Pattison.)
Patton, H. W., Indianapolis, Ind. Roller for maps, charts, &c. No. 901,035; Oct. 13; Sp. p. 2040; Dr. p. 414; Gaz. vol. 136; p. 1416.
Paul, A. J., *et al.* (See Hand, J. H., assignor.)
Paul, J., and T. Ducousso, Paris, France. System of electrically-controlled signals for railways. No. 901,122; Oct. 13; Sp. p. 2202; Dr. p. 447; Gaz. vol. 136; p. 1442.
Paul, J. W., Kittanning, Pa. Type-writer. No. 901,998; Oct. 27; Sp. p. 4057; Dr. pp. 822–3; Gaz. vol. 136; p. 1796.
Paul, J. W., Kittanning, Pa. Type-writing machine. No. 902,506; Oct. 27; Sp. p. 5130; Dr. p. 1039; Gaz. vol. 136; p. 1963.
Paul, J. W., Kittanning, Pa. Type-writing machine. No. 902,507; Oct. 27; Sp. p. 5133; Dr. pp. 1039–40; Gaz. vol. 136; p. 1963.
Paulson, H. H., Marshfield, Wis. Car-coupling. No. 902,442; Oct. 27; Sp. p. 4972; Dr. p. 1005; Gaz. vol. 136; p. 1940.
Pauly, J., Harlem, Mont. Neck-yoke holder. No. 902,443; Oct. 27; Sp. p. 4974; Dr. p. 1005; Gaz. vol. 136; p. 1941.
Paveietz, M., Canby, Oreg. Antifraud-box. No. 901,036; Oct. 13; Sp. p. 2041; Dr. p. 415; Gaz. vol. 136; p. 1416.
Pax, J. W. (See Raymond, C. T., assignor.)
Payne, C. Q., Stamford, Conn., assignor to International Separator Company. Apparatus for magnetic separation. No. 901,368; Oct. 20; Sp. p. 2695; Dr. p. 554; Gaz. vol. 136; p. 1558.
Payne, T. F., Pittsburg, Pa. Ball-valve for water-closets. No. 901,466; Oct. 20; Sp. p. 2937; Dr. p. 599; Gaz. vol. 136; p. 1593.
Payne, T. F., Pittsburg, Pa. Flushing-valve. No. 901,467; Oct. 20; Sp. p. 2938; Dr. pp. 599–600; Gaz. vol. 136; p. 1593.
Payne, T. P., *et al.* (See Lovett, J. S. H., assignor.)
Peabody, F. S., Utica, Minn. Swinging conveyer for band-cutters and feeders of threshers. No. 902,537; Oct. 27; Sp. p. 5203; Dr. p. 1051; Gaz. vol. 136; p. 1973.
Pearce, H. V., Detroit, Mich. Return steam-trap. No. 902,321; Oct. 27; Sp. p. 4713; Dr. p. 954; Gaz. vol. 136; p. 1900.
Pearl, E., Passaic, N. J. Buckle. No. 900,774; Oct. 13; Sp. p. 1500; Dr. p. 304; Gaz. vol. 136; p. 1330.
Pearson, B., *et al.* (See Merrill, J. J., assignor.)
Pearson, W. E., Swampscott, Mass. Reversible-explosive-rotary-engine unit. No. 901,554; Oct. 20; Sp. p. 3119; Dr. pp. 637–8; Gaz. vol. 136; p. 1621.

Peck Bros. & Co. (See Newton, W. G., assignor.)
Peck, Stow & Wilcox Company. (See Whitney, P. A., assignor.)
Pedersen, P. O., and V. Poulsen, Copenhagen, Denmark, assignors to American Telegraphone Company. Electromagnet for telegraphones. No. 900,304; Oct. 6; Sp. p. 492; Dr. p. 103; Gaz. vol. 136; p. 1150.
Pelz, A. (See Mally and Pelz.)
Pembroke, C. J., Rochester, N. Y. Vehicle-frame. No. 901,735; Oct. 20; Sp. p. 3520; Dr. p. 712; Gaz. vol. 136; p. 1682.
Pembroke, M., Montpelier, Vt. Stone-polishing wheel. No. 900,947; Oct. 13; Sp. p. 1870; Dr. p. 381; Gaz. vol. 136; p. 1386.
Pennsylvania Steel Company. (See Carney, F. D., assignor.)
Perkins, H., *et al.* (See Richardson, R. K., assignor.)
Perkins, J. A., Omaha, Nebr., assignor, by mesne assignments, to United States Roller Bearing Company, Jersey City, N. J. Roller-bearing. No. 900,199; Oct. 6; Sp. p. 266; Dr. pp. 53–4; Gaz. vol. 136; p. 1115.
Perlich, A., Laubergast, near Dresden, Germany. Jar, pot, or vessel for containing or keeping perishable products. No. 902,166; Oct. 27; Sp. p. 4387; Dr. p. 888; Gaz. vol. 136; p. 1850.
Perrin, M. A., Villeurbanne, France. Jacquard mechanism. No. 900,948; Oct. 13; Sp. p. 1871; Dr. p. 381; Gaz. vol. 136; p. 1387.
Perry, J. R., Wilkes-Barre, Pa. Device for distilling water. No. 901,645; Oct. 20; Sp. p. 3296; Dr. p. 676; Gaz. vol. 136; p. 1650.
Perry, S. R., Scranton, Pa. Piano-action. No. 900,305; Oct. 6; Sp. p. 494; Dr. p. 103; Gaz. vol. 136; p. 1150.
Perry, S. R., Scranton, Pa. Piano-action. No. 900,306; Oct. 6; Sp. p. 497; Dr. p. 104; Gaz. vol. 136; p. 1151.
Perry, S. R., Scranton, Pa. Piano-action. No. 900,307; Oct. 6; Sp. p. 501; Dr. p. 104; Gaz. vol. 136; p. 1151.
Perry, S. R., Scranton, Pa. Piano-action. No. 900,308; Oct. 6; Sp. p. 505; Dr. pp. 104–5; Gaz. vol. 136; p. 1152.
Perry, T. O., Chicago, Ill. Air-compressor. No. 901,555; Oct. 20; Sp. p. 3121; Dr. p. 639; Gaz. vol. 136; p. 1622.
Perry, W. H., New York, N. Y. Sanitary baking-pan. No. 901,999; Oct. 27; Sp. p. 4058; Dr. p. 823; Gaz. vol. 136; p. 1797.
Peterson, A. E., Moline, Ill. Corn-planter. No. 901,257; Oct. 13; Sp. p. 2433; Dr. pp. 499–500; Gaz. vol. 136; p. 1485.
Peterson, N., assignor of one-third to C. L. Thompson, Moscow, Idaho. Antifreezing closet. No. 901,255; Oct. 13; Sp. p. 2430; Dr. p. 499; Gaz. vol. 136; p. 1484.
Petrikin, J. G. (See Saunders and Petrikin.)
Petesche, G. B., assignor to Southwark Foundry and Machine Company, Philadelphia, Pa. Admission-valve for gas-engines. No. 901,256; Oct. 13; Sp. p. 2432; Dr. p. 499; Gaz. vol. 136; p. 1484.
Pettibone, H., New Rochelle, N. Y., assignor to Power and Mining Machinery Company. Apparatus for manufacturing gas. No. 900,582; Oct. 6; Sp. p. 1093; Dr. p. 224; Gaz. vol. 136; p. 1241.
Pettingell, E. E., Portland, Oreg. Drum-beating apparatus. No. 902,444; Oct. 27; Sp. p. 4974; Dr. p. 1005; Gaz. vol. 136; p. 1941.
Pfau, C., assignor to Pfau Manufacturing Company, Cincinnati, Ohio. Lining for water-closet tanks. No. 900,775; Oct. 13; Sp. p. 1500; Dr. p. 305; Gaz. vol. 136; p. 1330.
Pfau Manufacturing Company. (See Pfau, C., assignor.)
Phenice, W. H., assignor of one-half to A. B. Simpson, Vernon, Ind. Cover for receptacles. No. 900,583; Oct. 6; Sp. p. 1097; Dr. p. 225; Gaz. vol. 136; p. 1241.
Philadelphia Drying Machinery Company. (See Allsop and Sibson, assignors.)
Philadelphia Metallic Bed Company. (See Ireland, A. E., assignor.)
Philippart, G., Paris, France. Double top. No. 901,037; Oct. 13; Sp. p. 2042; Dr. p. 415; Gaz. vol. 136; p. 1416.
Phillips, A. P., Atlanta, Ga. Foot-measuring device. No. 902,167; Oct. 27; Sp. p. 4388; Dr. p. 888; Gaz. vol. 136; p. 1850.
Phillips, J. A., Bloomfield, Ind. Lifting-jack. No. 900,200; Oct. 6; Sp. p. 268; Dr. p. 54; Gaz. vol. 136; p. 1116.
Phillips, T., *et al.* (See Duerr, W., assignor.)
Phillips, W. A., and F. Hutchins, London, England. Treatment of wires, cords, threads, and the like. No. 902,445; Oct. 27; Sp. p. 4976; Dr. p. 1006; Gaz. vol. 136; p. 1941.
Pickop, G. B., and J. W. Mills, New Britain, Conn. Jacket for cylinders. No. 901,369; Oct. 20; Sp. p. 2698; Dr. p. 554; Gaz. vol. 136; p. 1559.
Pidelaserra y Brias, A. and M., Barcelona, Spain. Manufacture of copying-paper. No. 901,824; Oct. 20; Sp. p. 3689; Gaz. vol. 136; p. 1709.
Pidelaserra y Brias, M. (See Pidelaserra y Brias, A. and M.)
Pierce, A., Seville, assignor to J. P. Heckman, Creston, Ohio. Concrete-block machine. No. 901,825; Oct. 20; Sp. p. 3690; Dr. p. 749; Gaz. vol. 136; p. 1710.
Pifer, A. A., and C. E. F. Ahlm, assignors, by mesne assignments, to F. B. Wagner, Cleveland, Ohio. Variable-speed motor. No. 900,420; Oct. 6; Sp. p. 728; Dr. p. 152; Gaz. vol. 136; p. 1188.
Pike, R. D., Berkeley, Cal. Treating molasses. No. 900,584; Oct. 6; Sp. p. 1098; Dr. p. 225; Gaz. vol. 136; p. 1241.
Pines, P. A., Leyton, London, England. Brush-handle. No. 901,736; Oct. 20; Sp. p. 3521; Dr. p. 712; Gaz. vol. 136; p. 1682.
Pingret, V., Rio Grande do Sul, Brazil. Elastic-fluid motor. No. 901,258; Oct. 13; Sp. p. 2437; Dr. pp. 500–1; Gaz. vol. 136; p. 1485.
Pinkerton, H. J., assignor of one-half to W. H. Benteen, Watsonville, Cal. Apple quartering and trimming machine. No. 900,949; Oct. 13; Sp. p. 1872; Dr. pp. 381–2; Gaz. vol. 136; p. 1387.
Piper, F. A., assignor of one-half to J. M. Whittemore, Redlands, Cal. Tie-plate. No. 902,446; Oct. 27; Sp. p. 4978; Dr. p. 1006; Gaz. vol. 136; p. 1941.
Piper, P., Ladysmith, Wis. Fishing-pole. No. 902,447; Oct. 27; Sp. p. 4980; Dr. p. 1006; Gaz. vol. 136; p. 1942.
Pittman, C. J., Redfern, assignor of one-half to F. Ireland, Sydney, New South Wales, Australia. Differential gear for motor-vehicles. No. 901,826; Oct. 20; Sp. p. 3691; Dr. p. 749; Gaz. vol. 136; p. 1710.
Pittman, V. V., Santa Cruz, Cal. Lock-pin. No. 901,827; Oct. 20; Sp. p. 3692; Dr. p. 750; Gaz. vol. 136; p. 1710.
Pittsburgh Filter Manufacturing Company. (See Jones and Leopold, assignors.)
Place, F. E., Chicago, and M. L. Jenkins, Harvey, assignors to Buda Foundry & Manufacturing Company, Chicago, Ill. Jack. No. 900,585; Oct. 6; Sp. p. 1099; Dr. p. 225; Gaz. vol. 136; p. 1242.
Pleins, R. C., St. Paul, Minn. Seal-lock. No. 900,121; Oct. 6; Sp. p. 107; Dr. p. 22; Gaz. vol. 136; p. 1090.
Plume & Atwood Mfg. Co. (See Wirth, C. E., assignor.)
Pneumatic Heel Cushion Company. (See Gordon, W. L., assignor.)
Pogue, J. F., *et al.* (See Norman, J. R., assignor.)
Pomeroy, C. E., Salt Lake City, Utah. Device for assisting in teaching and writing music. No. 900,201; Oct. 6; Sp. p. 271; Dr. p. 54; Gaz. vol. 136; p. 1116.
Pomeroy, W. D., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Motor-controller. No. 902,108; Oct. 27; Sp. p. 4269; Dr. p. 865; Gaz. vol. 136; p. 1831.
Pool, M. W., New York, assignor to Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 901,259; Oct. 13; Sp. p. 2439; Dr. pp. 501–2; Gaz. vol. 136; p. 1485.
Poole, W. C., Marysville, Cal. Cutting-tool. No. 901,556; Oct. 20; Sp. p. 3127; Dr. p. 639; Gaz. vol. 136; p. 1622.
Pope, J. C. and W. J., Piano, Ill. Fertilizer-distributer. No. 901,123; Oct. 13; Sp. p. 2203; Dr. p. 448; Gaz. vol. 136; p. 1442.
Pope, W. J. (See Pope, J. C. and W. J.)
Poppenhusen, H. A., Evanston, and J. Harrington, Chicago, Ill. Furnace. No. 901,038; Oct. 13; Sp. p. 2043; Dr. pp. 415–16; Gaz. vol. 136; p. 1416.
Poppert, L., Milwaukee, Wis. Device for raising invalids. No. 901,370; Oct. 20; Sp. p. 2700; Dr. p. 554; Gaz. vol. 136; p. 1559.
Porter, B. J., and T. H. Binnington, Salt Lake City, Utah. Water cock or valve. No. 900,309; Oct. 6; Sp. p. 509; Dr. p. 105; Gaz. vol. 136; p. 1152.
Porter, J. M., J. F. Laird, and A. H. Gelifuss, Parkersburg, W. Va. Exhaust-muffler. No. 901,371; Oct. 20; Sp. p. 2701; Dr. pp. 554–5; Gaz. vol. 136; p. 1559.
Porter, W. E., assignor to New Haven Clock Co., New Haven, Conn. Alarm-clock. No. 901,737; Oct. 20; Sp. p. 3523; Dr. p. 713; Gaz. vol. 136; p. 1682.
Porter, W. E., assignor to New Haven Clock Co., New Haven, Conn. Producing movement-plates for watches, clocks, and the like. No. 902,322; Oct. 27; Sp. p. 4715; Dr. p. 954; Gaz. vol. 136; p. 1901.
Post, G. E., New York, N. Y. Hose-supporter for garments. No. 902,323; Oct. 27; Sp. p. 4716; Dr. p. 954; Gaz. vol. 136; p. 1901.
Post, H. M., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Subscriber's telephone-circuit. No. 901,738; Oct. 20; Sp. p. 3525; Dr. p. 713; Gaz. vol. 136; p. 1683.
Potts, J. E., Cleveland, Ohio. Hot-water heater. No. 901,828; Oct. 20; Sp. p. 3693; Dr. p. 750; Gaz. vol. 136; p. 1710.
Potts, L. M., assignor to Rowland Telegraphic Company, Baltimore, Md. Telegraphy. No. 901,372; Oct. 20; Sp. p. 2702; Dr. p. 555; Gaz. vol. 136; p. 1560.
Poulsen, V. (See Pedersen and Poulsen.)
Powell, J. G., Norris City, Ill. Dental finger-tray. No. 902,109; Oct. 27; Sp. p. 4271; Dr. p. 866; Gaz. vol. 136; p. 1831.
Power, D. P., Riverdale, N. J. Emergency repair device for vehicle-springs. No. 902,250; Oct. 27; Sp. p. 4554; Dr. p. 925; Gaz. vol. 136; p. 1875.
Power, J. J., Madison, assignor to J. I. Case Threshing Machine Company, Racine, Wis. Corn husker and shredder. No. 900,882; Oct. 13; Sp. p. 1732; Dr. pp. 349–50; Gaz. vol. 136; p. 1365.
Power and Mining Machinery Company. (See Pettibone, H., assignor.)
Prahar, L. B., New York, N. Y. Lock for bag-frames. No. 900,421; Oct. 6; Sp. p. 730; Dr. p. 152; Gaz. vol. 136; p. 1188.
Pratt, C. A., assignor to Goodman Manufacturing Company, Chicago, Ill. Composite locomotive. No. 900,776; Oct. 13; Sp. p. 1502; Dr. p. 305; Gaz. vol. 136; p. 1330.

Pratt, W. H., Lynn, Mass., assignor to General Electric Company. Prepayment-meter. No. 900,777; Oct. 13; Sp. p. 1504; Dr. p. 306; Gaz. vol. 136; p. 1331.
Preacher, G. L., Augusta, Ga. Column-base. No. 902,448; Oct. 27; Sp. p. 4981; Dr. pp. 1006–7; Gaz. vol. 136; p. 1942.
Preble, H. T. (See Kincaid and Preble.)
Press Button Knife Company. (See McVey, G. L., assignor.)
Pressed Steel Car Company. (See Lindström, C. A., assignor.)
Price, L. W., Whitten, Iowa. Commode. No. 902,449; Oct. 27; Sp. p. 4984; Dr. pp. 1007–8; Gaz. vol. 136; p. 1942.
Pringle, J. L., New Britain, Conn. Miter-box. No. 901,468; Oct. 20; Sp. p. 2940; Dr. p. 600; Gaz. vol. 136; p. 1593.
Proctor, A. W., New York, N. Y. Perpetual calendar. No. 900,310; Oct. 6; Sp. p. 509; Dr. p. 105; Gaz. vol. 136; p. 1152.
Proctor, O. S., Denver, Colo., assignor, by mesne assignments, to Terry, Tench & Proctor Tunneling Machine Company. Tunneling-machine. No. 900,950; Oct. 13; Sp. p. 1873; Dr. pp. 382–3; Gaz. vol. 136; p. 1387.
Proctor, O. S., Denver, Colo., assignor, by mesne assignments, to Terry, Tench & Proctor Tunneling Machine Company. Tunneling-machine. No. 900,951; Oct. 13; Sp. p. 1878; Dr. pp. 383–4; Gaz. vol. 136; p. 1388.
Procunier, W. L., Chicago, Ill. Yielding bit and tap chuck. No. 900,122; Oct. 6; Sp. p. 109; Dr. p. 23; Gaz. vol. 136; p. 1090.
Pugh, S. C., Nottingham township, Harrison county, Ohio. Nut-lock. No. 900,202; Oct. 6; Sp. p. 274; Dr. p. 55; Gaz. vol. 136; p. 1117.
Pugh, W., Streator, Ill. Shingle-molding machine. No. 900,778; Oct. 13; Sp. p. 1507; Dr. p. 306; Gaz. vol. 136; p. 1331.
Purdy, F., Chicago, Ill. Time-stamp. No. 901,409; Oct. 20; Sp. p. 2942; Dr. p. 601; Gaz. vol. 136; p. 1594.
Putnam, S. W., 3d. (See Deems, C. M., assignor.)
Putney, A. N., Palmyra, assignor of three-fourths to I. M. Ludington, Rochester, W. L. Knapp and E. C. North, Palmyra, N. Y. Dumping-wagon. No. 901,260; Oct. 13; Sp. p. 2447; Dr. p. 502; Gaz. vol. 136; p. 1486.
Quackenboss, L. G., and B. J. Farrell, Chicago, Ill. Culinary utensil. No. 901,952; Oct. 13; Sp. p. 1884; Dr. p. 384; Gaz. vol. 136; p. 1388.
Quentell, W. P., New York, N. Y. Printing-press. No. 901,186; Oct. 13; Sp. p. 2307; Dr. pp. 472–3; Gaz. vol. 136; p. 1463.
Quine, R. H., Manchester, England. Bath and stand for the same. No. 900,586; Oct. 6; Sp. p. 1100; Dr. pp. 225–6; Gaz. vol. 136; p. 1242.
Quinker, E. E., Valdosta, Ga. Turpentine-still. No. 900,203; Oct. 6; Sp. p. 276; Dr. p. 55; Gaz. vol. 136; p. 1117.
Quinlan, T. H. (See Hughes, Quinlan, and Middleton.)
Quinn, M. J., assignor to Cluff Brothers, Toronto, Ontario, Canada. Piston-packing. No. 902,168; Oct. 27; Sp. p. 4389; Dr. p. 888; Gaz. vol. 136; p. 1850.
Rabbe, W. H., E. W. Harden, and M. E. Dempsey, Hamilton, Ohio. Railway-frog. No. 900,422; Oct. 6; Sp. p. 732; Dr. p. 153; Gaz. vol. 136; p. 1189.
Racine Metal Stamping Company. (See Falkenrath, A., assignor.)
Ragaller, P. P., Avella, Pa. Rail-joint. No. 901,739; Oct. 20; Sp. p. 3528; Dr. p. 713; Gaz. vol. 136; p. 1683.
Ragsdale, C. E., Trafalgar, Ind. Quick-acting wrench. No. 902,000; Oct. 27; Sp. p. 4059; Dr. p. 823; Gaz. vol. 136; p. 1797.
Railroad Supply Company. (See Vogel, E. W., assignor.)
Raiter, C., Breckenridge, Minn. Foot-blocking for switch-frogs, guard-rails, &c. No. 900,883; Oct. 13; Sp. p. 1734; Dr. p. 350; Gaz. vol. 136; p. 1365.
Ralston Steel Car Company. (See Irwin, F. L., assignor.)
Ramaley, W. H., Ben Avon, assignor of one-half to C. E. Doell and P. M. McVay, Pittsburg, Pa. Heater. No. 901,829; Oct. 20; Sp. p. 3695; Dr. p. 750; Gaz. vol. 136; p. 1711.
Ramsey, J. A., Beatrice, Nebr. Husker. No. 901,830; Oct. 20; Sp. p. 3697; Dr. p. 750; Gaz. vol. 136; p. 1711.
Ramsey, S. W., and G. W. Smith, assignors to Ramsey-Smith Company, Youngstown, Ohio. Composition for solidifying flue-dust. No. 900,587; Oct. 6; Sp. p. 1102; Gaz. vol. 136; p. 1242.
Ramsey-Smith Company. (See Ramsey and Smith, assignors.)
Randall, F. (See Trivett and Randall.)
Rank, J., Minneapolis, Minn. Grease-cup. No. 901,039; Oct. 13; Sp. p. 2047; Dr. p. 416; Gaz. vol. 136; p. 1417.
Rankin, J. R., Washington, D. C. Type-case. No. 901,831; Oct. 20; Sp. p. 3698; Dr. p. 751; Gaz. vol. 136; p. 1711.
Rankins, W. D., Modesto, Cal. Sash-lock. No. 901,470; Oct. 20; Sp. p. 2947; Dr. p. 601; Gaz. vol. 136; p. 1594.
Rantz, W. R., Greenville, Ohio. Automobile-spring. No. 900,779; Oct. 13; Sp. p. 1508; Dr. pp. 306–7; Gaz. vol. 136; p. 1331.
Rapp, G. A., Fort Collins, Colo. Hay-press. No. 900,588; Oct. 6; Sp. p. 1103; Dr. p. 226–7; Gaz. vol. 136; p. 1243.
Raschig, F., Ludwigshafen-on-the-Rhine, Germany. Chemical product resembling celluloid and producing the same. No. 900,204; Oct. 6; Sp. p. 278; Gaz. vol. 136; p. 1117.
Rasmussen, A., and M. Olsen, assignors to C. Bjelland & Co. and C. Middelthon, Stavanger, Norway. Receptacle-closure. No. 901,646; Oct. 20; Sp. p. 3298; Dr. p. 677; Gaz. vol. 136; p. 1650.
Rasmussen, A. T., La Crosse, Wis. Molding appliance. No. 901,471; Oct. 20; Sp. p. 2949; Dr. p. 602; Gaz. vol. 136; p. 1594.
Ratcliffe, C. E., Paducah, Ky. Nut-lock. No. 900,589; Oct. 6; Sp. p. 1105; Dr. p. 227; Gaz. vol. 136; p. 1243.
Rateau, A. C. E., Paris, France, assignor to Rateau Turbine Company, Chicago, Ill. Automatic regulating device for fluid-pressure apparatus. No. 902,001; Oct. 27; Sp. p. 4060; Dr. p. 824; Gaz. vol. 136; p. 1797.
Rateau Turbine Company. (See Rateau, A. C. E., assignor.)
Rathbone, A. D., Grand Rapids, Mich. Combined grate and air-heater. No. 902,002; Oct. 27; Sp. p. 4062; Dr. p 824; Gaz. vol. 136; p. 1798.
Rathbone, A. D., Grand Rapids, Mich. Electric fireplace. No. 902,003; Oct. 27; Sp. p. 4064; Dr. p. 824; Gaz. vol. 136; p. 1798.
Rathborne, R. C., assignor to Spratt's Patent (America) Limited, Newark, N. J. Folding animal-bench. No. 902,508; Oct. 27; Sp. p. 5135; Dr. p. 1040; Gaz. vol. 136; p. 1964.
Ray, F. O., assignor of one-half to A. Healy, Detroit, Mich. Sea-wall. No. 901,040; Oct. 13; Sp. p. 2049; Dr. p. 416; Gaz. vol. 136; p. 1463.
Ray, R., Carrollton, Mo. Wind-actuated advertising device. No. 901,187; Oct. 13; Sp. p. 2209; Dr. p. 473; Gaz. vol. 136; p. 1463.
Raymond, C. T., assignor of one-half to J. W. Pax, Chicago, Ill. Portable sign. No. 900,590; Oct. 6; Sp. p. 1107; Dr. p. 227; Gaz. vol. 136; p. 1243.
Raymond, D. E., assignor of one-half to G. R. Briggs, Plymouth, Mass. Cranberry-picker. No. 901,373; Oct. 20; Sp. p. 2706; Dr. p. 555; Gaz. vol. 136; p. 1560.
Raynor, R. (See Oberlies, A. W., assignor.)
Reagan Bale Company. (See Reagan, E., assignor.)
Reagan, E., assignor, by mesne assignments, to Reagan Bale Company, San Antonio, Tex. Roller-press. No. 900,205; Oct. 6; Sp. p. 279; Dr. pp. 55–7; Gaz. vol. 136; p. 1118.
Reber, J. G., Chicago, Ill., assignor to J. W. Sefton Manufacturing Company, Anderson, Ind. Folding box. No. 900,953; Oct. 13; Sp. p. 1887; Dr. p. 384; Gaz. vol. 136; p. 1389.
Redington, F. B., Chicago, Ill. Counting-machine. No. 900,954; Oct. 13; Sp. p. 1889; Dr. p. 385; Gaz. vol. 136; p. 1389.
Redmond, R. P., Lewiston, N. Y. Fruit-sizer. No. 901,188; Oct. 13; Sp. p. 2311; Dr. pp. 473–4; Gaz. vol. 136; p. 1463.
Reed, G. B., assignor of one-half to A. T. Kirkland, Buffalo, N. Y. Box. No. 900,123; Oct. 6; Sp. p. 113; Dr. p. 23; Gaz. vol. 136; p. 1091.
Reed, G. L., assignor to Reed Manufacturing Company, Springfield, Ohio. Cement-block machine. No. 901,740; Oct. 20; Sp. p. 3528; Dr. p. 714; Gaz. vol. 136; p. 1683.
Reed, H. A., New York, N. Y., assignor to Carbonic Condensing Co., Hoboken, N. J. Pressure-reducer for gaseous liquids. No. 901,741; Oct. 20; Sp. p. 3530; Dr. p. 714; Gaz. vol. 136; p. 1684.
Reed, J., Pittsburg, Pa. Coke-drawing apparatus. No. 900,206; Oct. 6; Sp. p. 283; Dr. p. 57; Gaz. vol. 136; p. 1118.
Reed, J. W., and L. Chapman, Berwind, Colo. Door-check. No. 901,832; Oct. 20; Sp. p. 3700; Dr. p. 751; Gaz. vol. 136; p. 1712.
Reed Manufacturing Company. (See Reed, G. L., assignor.)
Rees, G. H. (See Bourne and Rees.)
Reeves & Company. (See Clay, H. C., assignor.)
Regan, M. C., U. S. Army. Motor-controlling apparatus. No. 901,189; Oct. 13; Sp. p. 2313; Dr. pp. 474–5; Gaz. vol. 136; p. 1464.
Regina Company. (See Sampere, J., assignor.)
Rehart, S. V., Lakeview, Oreg. Wrench. No. 902,251; Oct. 27; Sp. p. 4556; Dr. p. 925; Gaz. vol. 136; p. 1876.
Rehmann, H., Mulheim-on-the-Ruhr, Germany. Gas-generator. No. 900,955; Oct. 13; Sp. p. 1892; Dr. p. 385; Gaz. vol. 136; p. 1389.
Reid, A. H., Philadelphia, Pa. Bearing for shafts, spindles, &c. No. 901,374; Oct. 20; Sp. p. 2708; Dr. p. 556; Gaz. vol. 136; p. 1560.
Reid, C. H. (See Albertson, O. L., assignor.)
Reid, J. H., Cornwall, Ontario, assignor of one-half to S. L. Tingley, Ottawa, Canada. Electric furnace. No. 900,207; Oct. 6; Sp. p. 285; Dr. p. 58; Gaz. vol. 136; p. 1118.
Reilly, P. C., Indianapolis, Ind. Preserved wood and making same. No. 901,557; Oct. 20; Sp. p. 3128; Gaz. vol. 136; p. 1623.
Reist, H. G., Schenectady, N. Y., assignor to General Electric Company. Dynamo-electric machine. No. 900,780; Oct. 13; Sp. p. 1509; Dr. p. 307; Gaz. vol. 136; p. 1332.
Reist, H. G., Schenectady, N. Y., assignor to General Electric Company. Dynamo-electric machine. No. 900,781; Oct. 13; Sp. p. 1511; Dr. p. 307; Gaz. vol. 136; p. 1332.
Reiter, J. H. (See Knuppel, J., assignor.)
Reitz, E. A., Reynoldsville, Pa. Adjustable window-screen. No. 902,110; Oct. 27; Sp. p. 4272; Dr. p. 866; Gaz. vol. 136; p. 1831.
Remané, H. (See Blau and Remané.)
Remick, A. E., Providence, R. I. Explosive-gas engine. No. 902,450; Oct. 27; Sp. p. 4985; Dr. p. 1008; Gaz. vol. 136; p. 1943.
Remontet, S., Lagresle, France. Automatic door-closer. No. 900,956; Oct. 13; Sp. p. 1894; Dr. p. 385; Gaz. vol. 136; p. 1390.
Rettig, J. E., Reading, Pa. Hollow building-block. No. 901,833; Oct. 20; Sp. p. 3701; Dr. p. 751; Gaz. vol. 136; p. 1712.
Reynolds, F. D., and J. Sachs, assignors to Sachs Company, Hartford, Conn. Safety-fuse. No. 901,261; Oct. 13; Sp. p. 2449; Dr. p. 502; Gaz. vol. 136; p. 1486.

Reynolds, W. E. (See Tomkies, A. G., assignor.)
Rheinische Metallwaren-und Maschinenfabrik. (See Völler, K., assignor.)
Rhoades, A. E., assignor to Draper Company, Hopedale, Mass. Fork-grid for looms. No. 900,591; Oct. 6; Sp. p. 1108; Dr. p. 227; Gaz. vol. 136; p. 1243.
Rhoades, A. E., assignor to Draper Company, Hopedale, Mass. Spinning or twisting apparatus. No. 900,592; Oct. 6; Sp. p. 1109; Dr. p. 228; Gaz. vol. 136; p. 1244.
Rhoades, A. E., assignor to Draper Company, Hopedale, Mass. Filling-detecting mechanism for looms. No. 902,324; Oct. 27; Sp. p. 4718; Dr. p. 954; Gaz. vol. 136; p. 1901.
Rhoades, A. E., assignor to Draper Company, Hopedale, Mass. Automatic filling-replenishing loom. No. 902,325; Oct. 27; Sp. p. 4720; Dr. p. 955; Gaz. vol. 136; p. 1902.
Rhodes, C. H., Cold Brook, N. Y. Adjustable chair. No. 900,593; Oct. 6; Sp. p. 1113; Dr. p. 228; Gaz. vol. 136; p. 1244.
Riblet, G. E., Erie, Pa. Steam-engine. No. 901,472; Oct. 20; Sp. p. 2950; Dr. pp. 602–3; Gaz. vol. 136; p. 1594.
Rice, E. J., Rochester, N. Y. Water-closet connection. No. 900,594; Oct. 6; Sp. p. 1114; Dr. p. 228; Gaz. vol. 136; p. 1244.
Rice, J. E. (See Keeley, N. K., assignor.)
Rice, R. H., Swampscott, and F. R. C. Boyd, Lynn, Mass., assignors to General Electric Company. Power-transmitting mechanism. No. 901,473; Oct. 20; Sp. p. 2953; Dr. pp. 603–4; Gaz. vol. 136; p. 1595.
Richards, C. H., assignor of three-fourths to L. Armstrong, Chicago, Ill. Making cereal food products No. 901,647; Oct. 20; Sp. p. 3299; Dr. p. 677; Gaz. vol. 136; p. 1651.
Richards, E. L., assignor to John Wyeth and Brother, Incorporated, Philadelphia, Pa. Tablet-machine. No. 900,957; Oct. 13; Sp. p. 1895; Dr. pp. 385–6; Gaz. vol. 136; p. 1390.
Richards, F. H., Hartford, Conn. Adjustable tool-support. No. 902,169; Oct. 27; Sp. p. 4390; Dr. p. 889; Gaz. vol. 136; p. 1850.
Richards, F. H., Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation. Mechanism for operating adjustable work-performing members. No. 902,326; Oct. 27; Sp. p. 4721; Dr. pp. 955–6; Gaz. vol. 136; p. 1902.
Richards, F. H., Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation. Mechanism for operating adjustable work-performing members. No. 902,327; Oct. 27; Sp. p. 4729; Dr. pp. 956–7; Gaz. vol. 136; p. 1902.
Richards, F. H., Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation. Mounting for adjustable working members. No. 902,328; Oct. 27; Sp. p. 4736; Dr. p. 957; Gaz. vol. 136; p. 1903.
Richards, F. H., Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation. Mechanical movement. No. 902,329; Oct. 27; Sp. p. 4741; Dr. pp. 957–8; Gaz. vol. 136; p. 1903.
Richards, G. L., Brookline, Mass., assignor, by mesne assignments, to Neilsen Mailing Machinery Company, Erie, Pa. Machine for feeding off newspapers. No. 900,782; Oct. 13; Sp. p. 1516; Dr. pp. 308–9; Gaz. vol. 136; p. 1332.
Richards, H. M., assignor to Womans Mutual Benefit Company, Joliet, Ill. Catamenial-sack support. No. 901,742; Oct. 20; Sp. p. 3532; Dr. p. 714; Gaz. vol. 136; p. 1684.
Richards, R. H., Boston, Mass. Apparatus for separating and classifying minerals. No. 901,474; Oct. 20; Sp. p. 2957; Dr. pp 604–5; Gaz. vol. 136; p. 1595.
Richards, R. H., Boston, Mass. Jig. No. 901,475; Oct. 20; Sp. p. 2963; Dr. p. 605; Gaz. vol. 136; p. 1596.
Richards, W. J., Milwaukee, Wis., assignor to Allis-Chalmers Company. Automatically-adjustable brush-holder. No. 900,884; Oct. 13; Sp. p. 1735; Dr. pp. 350–1; Gaz. vol. 136; p. 1366.
Richardson, E. H., assignor to Pacific Electric Heating Company, Ontario, Cal. Electric laundry-iron. No. 900,208; Oct. 6; Sp. p. 287; Dr. p. 58; Gaz. vol. 136; p. 1119.
Richardson, J. A. (See Nicholson, E. P., assignor.)
Richardson, N. H., administrator. (See Wyckoff, H. W.)
Richardson, R. K., assignor of one-half to J. D. Gunther and H. Perkins, Brooklyn, N. Y. Safety appliance for electric railways. No. 900,958; Oct. 13; Sp. p. 1899; Dr. p. 387; Gaz. vol. 136; p. 1391.
Richert, P., Berlin, Germany. Fare-indicator. No. 901,558; Oct. 20; Sp. p. 3130; Dr. p. 640; Gaz. vol. 136; p. 1623.
Richter, H., Omaha, Nebr. Combination confectionery and valentine box. No. 901,476; Oct. 20; Sp. p. 2968; Dr. p. 606; Gaz. vol. 136; p. 1597.
Riddell, J., Schenectady, N. Y., assignor to General Electric Company. Speed-changing device. No. 902,538; Oct. 27; Sp. p. 5206; Dr. p. 1051; Gaz. vol. 136; p. 1974.
Rider, E., St. Louis, Mo Apparatus for manufacturing gas. No. 900,423; Oct. 6; Sp. p. 734; Dr. p. 153; Gaz. vol. 136; p. 1189.
Riehl, H., Philadelphia, Pa. Mechanism for operating shuttles of narrow-ware looms. No. 901,834; Oct. 20; Sp. p. 3702; Dr. pp. 751–2; Gaz. vol. 136; p. 1712.
Rigby, J. J., New York, N. Y. Solder-carrying can-cap. No. 901,375; Oct. 20; Sp. p. 2711; Dr. p. 556; Gaz. vol. 136; p. 1561.
Riggan, D. H., Warrenton, N. C. Safe-door. No. 900,311; Oct. 6; Sp. p. 510; Dr. p. 106; Gaz. vol. 136; p. 1153.
Riggs, A. L., Ebensburg, Pa. Steam-trap. No. 901,190; Oct. 13; Sp. p. 2316; Dr. p. 475; Gaz. vol. 136; p. 1464.
Ring, L., Leesburg, Va. Overlapping the edges of garments. No. 901,041; Oct. 13; Sp. p. 2050; Dr. p. 417; Gaz. vol. 136; p. 1418.
Ringer, R. R., Pittsburg, Pa. Tooth-brush. No. 901,835; Oct. 20; Sp. p. 3706; Dr. p. 752; Gaz. vol. 136; p. 1712.
Rinker, C. P. C., *et al.* (See Hutsler, C. W., assignor.)
Ripson, J. D., Rochester, N. Y. Ventilator. No. 900,595; Oct. 6; Sp. p. 1116; Dr. p. 229; Gaz. vol. 136; p. 1245.
Rizer, F. W., assignor of one-half to F. M. Patterson, Chicago, Ill. Guard-rail-spacing block. No. 900,209; Oct. 6; Sp. p. 289; Dr. p. 58; Gaz. vol. 136; p. 1119.
Roach, H. F., assignor to Continuous Rail & Safety Switch Co., St. Louis, Mo. Switch-frog. No. 902,451; Oct. 27; Sp. p. 4987; Dr. p. 1009; Gaz. vol. 136; p. 1943.
Robbins, I. (See Smith and Robbins.)
Robbins, J. E., Cambridge, Md. Davit-supporting means for sharp-stern boats. No. 902,452; Oct. 27; Sp. p. 4997; Dr. p. 1010; Gaz. vol. 136; p. 1943.
Roberts, H. H., Lexington, Ky. Massage and vibratory dilator. No. 901,376; Oct. 20; Sp. p. 2712; Dr. p. 556; Gaz. vol 136; p. 1561.
Roberts, W. A., Kansas City, Mo. Manure-pouch. No. 900,783; Oct. 13; Sp. p. 1522; Dr. p. 310; Gaz. vol. 136; p. 1333.
Robertson, H. M. (See Gilman and Robertson.)
Robinson, B. F., Camp Hill, Ala. Seed-planter. No. 900,784; Oct. 13; Sp. p. 1523; Dr. p. 310; Gaz. vol. 136; p. 1333.
Robinson, F., assignor of one-half to A. A. Jones and J. W. Hagerlund, Mesa, Ariz. Ter. Cooking utensil. No. 902,111; Oct. 27; Sp. p. 4273; Dr. p. 666; Gaz. vol. 136; p. 1832.
Robinson, H. G. (See Robinson, J. G. and H. G.)
Robinson, J. E., Chicago, Ill. Vehicle-tire protector. No. 900,785; Oct. 13; Sp. p. 1525; Dr. p. 310; Gaz. vol. 136; p. 1333.
Robinson, J. G. and H. G., Holyoke, Mass. Fire-extinguishing apparatus. No. 900,596; Oct. 6; Sp. p. 1117; Dr. p. 229; Gaz. vol. 136; p. 1245
Robinson, R. H., *et al.* (See Stapleford and Wagner, assignors.)
Robinson, T. F., Harrogate, England. Folding and adjustable chair. No. 900,885; Oct. 13; Sp. p. 1738; Dr. p. 351; Gaz. vol. 136; p. 1366.
Robinson, W., Brooklyn, N. Y. Electric-railway system. No. 901,377; Oct. 20; Sp p. 2713; Dr. pp. 556–7; Gaz. vol. 136; p. 1561.
Robinson, W., Brooklyn, N. Y. Electric-railway system. No. 901,378; Oct. 20; Sp. p. 2717; Dr. p. 557; Gaz. vol. 136; p. 1562.
Robinson, W., Brooklyn, N. Y. Electric-railway system. No. 901,379; Oct. 20; Sp. p. 2725; Dr. p. 558; Gaz. vol. 136; p. 1562.
Robinson, W., Brooklyn, N. Y. Electric-railway system. No. 901,380; Oct. 20; Sp. p. 2731; Dr. p. 558; Gaz. vol. 136; p. 1563.
Robinson, W., Brooklyn, N. Y. Electric-railway system. No. 901,381; Oct. 20; Sp. p. 2736; Dr. p. 559; Gaz. vol. 136; p. 1564.
Robinson, W., Brooklyn, N. Y. Electric-railway system. No. 901,382; Oct. 20; Sp. p. 2739; Dr. p. 559; Gaz. vol. 136; p. 1565.
Robinson, W., Brooklyn, N. Y. Electric-railway system. No. 901,383; Oct. 20; Sp. p. 2746; Dr. p. 560; Gaz. vol. 136; p. 1565.
Robinson, W., Brooklyn, N. Y. Electric-railway system. No. 901,477; Oct. 20; Sp. p. 2969; Dr. p. 606; Gaz. vol. 136; p. 1597
Roby, L. E., and C. A. Pattison, Peoria, Ill. Fertilizer-distributer. No. 900,124; Oct. 6; Sp. p. 115; Dr. pp. 23–4; Gaz. vol. 136; p. 1091.
Roche, W. E. (See McNutt, W. H., assignor.)
Rockwood, G. I., Worcester, Mass. Automatic sprinkler. No. 900,886; Oct. 13; Sp. p. 1739; Dr. p. 351; Gaz. vol. 136; p. 1366.
Rodgers, J. D., Georgetown, Ky. Farm-gate. No. 901,648; Oct. 20; Sp. p. 3303; Dr. p. 677; Gaz. vol. 136; p. 1651.
Roebling Construction Company. (See Wendell, F. J., assignor.)
Roess, L. J. (See Steirly, J. C. R., assignor.)
Rogers, C. B., and J. W. Gardner, St. Peter, Minn. Laundry appliance. No. 901,836; Oct. 20; Sp. p. 3706; Dr. pp. 752–3; Gaz. vol. 136; p. 1713.
Rogers, J. R., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Linotype-machine. No. 901,478; Oct. 20; Sp. p. 2976; Dr. pp. 606–7; Gaz. vol. 136; p. 1597.
Rolfe, C. A., Adrian, Mich., assignor, by mesne assignments, to Rolfe Electric Co., Rochester, N. Y. Electric protective apparatus. No. 901,479; Oct. 20; Sp. p. 2978; Dr. p. 607; Gaz. vol. 136; p. 1598.
Rolfe Electric Co. (See Rolfe, C. A., assignor.)
Rollpiller, H. G. (See Dech, P., assignor.)
Roos, O. C., Newton, assignor to Stone Telegraph and Telephone Company, Boston, Mass. Space telegraphy. No. 901,649; Oct. 20; Sp. p. 3304; Dr. pp. 678–9; Gaz. vol. 136; p. 1651.
Root, J. H. (See Hanna, F. W., assignor.)

Roper, J. W., East Orange, N. J. Horseshoe. No. 900,959; Oct. 13; Sp. p. 1900; Dr. p. 387; Gaz. vol. 136; p. 1391.
Rosborough, W. J., New York, N. Y. Tie-holder. No. 900,960; Oct. 13; Sp. p. 1901; Dr. p. 387; Gaz. vol. 136; p. 1391.
Rose, H. F., Binghamton, N. Y. Mail-collecting announcer. No. 901,480; Oct. 20; Sp. p. 2980; Dr. p. 607; Gaz. vol. 136; p. 1598.
Rosenhaft, M., Hamburg, Germany. Dust-proof watchcase-pendant. No. 902,112; Oct. 27; Sp. p. 4274; Dr. p. 866; Gaz. vol. 136; p. 1832.
Ross, T. A., Selby, Cal. Recovering silver from solutions. No. 901,124; Oct. 13; Sp. p. 2206; Dr. p. 448; Gaz. vol. 136; p. 1443.
Roteng Manufacturing Company. (See Tolman, C. P., assignor.)
Roth, C., Zehlendorf, near Berlin, Germany. Turbine. No. 902,252; Oct. 27; Sp. p. 4558; Dr. p. 925; Gaz. vol. 136; p. 1876.
Roth, R. R., Easton, Md. Mail-catcher. No. 901,042; Oct. 13; Sp. p. 2051; Dr. p. 417; Gaz. vol. 136; p. 1418.
Rothenberger, F. C. (See Flynn and Rothenberger.)
Rother, E. P., Chicago, Ill. Furniture-caster. No. 900,424; Oct. 6; Sp. p. 736; Dr. pp. 153–4; Gaz. vol. 136; p. 1189.
Rotz, J. B., Fort Loudon, Pa. Checkrein-hook. No. 900,425; Oct. 6; Sp. p. 737; Dr. p. 154; Gaz. vol. 136; p. 1190.
Rouland, L. W., Olivet, Kans. Wedge-cutter. No. 901,384; Oct. 20; Sp. p. 2752; Dr. p. 560; Gaz. vol. 136; p. 1566.
Rovere, P. L. D., Bagnaia, near Viterbo, Italy. Armored cover for the protection of rubber tires. No. 901,300; Oct. 13; Sp. p. 2541; Dr. p. 523; Gaz. vol. 136; p. 1499.
Rowan, A. J., and J. A. Laux, Tremont, Pa. Turbine. No. 901,385; Oct. 20; Sp. p. 2754; Dr. p. 561; Gaz. vol. 136; p. 1566.
Rowe, G. F., Bangor, Me., and J. F. Johnston, Mispec, New Brunswick, Canada. Floating crib for transportation of pulp-wood. No. 902,253; Oct. 27; Sp. p. 4559; Dr. p. 925; Gaz. vol. 136; p. 1876.
Rowell, W. G., Bridgeport, Conn. Reversible compression stop and waste. No. 901,481; Oct. 20; Sp. p. 2981; Dr. p. 607; Gaz. vol. 136; p. 1598.
Rowland Telegraphic Company. (See Potts, L. M., assignor.)
Rowley, F., Whaley Bridge, England. Manufacture of tennis and similar playing balls. No. 902,330; Oct. 27; Sp. p. 4740; Dr. p. 958; Gaz. vol. 136; p. 1904.
Royal, C. B., Oak Park, Ill. Lubricating apparatus. No. 900,887; Oct. 13; Sp. p. 1740; Dr. pp. 351–2; Gaz. vol. 136; p. 1367.
Rucker, B. P., Wilkinsburg, Pa. Shade and socket for incandescent lamps. No. 900,426; Oct. 6; Sp. p 738; Dr. p. 154; Gaz. vol. 136; p. 1190.
Rudd, O., assignor to Simmons Manufacturing Company, Kenosha, Wis. Metal bed. No. 901,482; Oct. 20; Sp. p. 2983; Dr. p. 608; Gaz. vol. 136; p. 1598.
Rudland, A. C., Vancouver, British Columbia, Canada. Pneumatic tire. No. 900,888; Oct. 13; Sp. p. 1742; Dr. p. 352; Gaz. vol. 136; p. 1367.
Ruettgers, E., Brooklyn, N. Y. Nail-file or similar instrument. No. 901,743; Oct. 20; Sp. p. 3533; Dr. p. 714; Gaz. vol. 136; p. 1684.
Rumely, W. N. (See Young, A., assignor.)
Runnells, W. F., *et al.* (See Merrill, J. J., assignor.)
Ruple, F., assignor of three-fourths to T. F. Kirk, Jr., E. J. Small, and A. A. Shepard, Pittsburg, Pa. Device for making facial expressions. No. 902,113; Oct. 27; Sp. p. 4275; Dr. p. 867; Gaz. vol. 136; p. 1832.
Rusbatch, A., Cleveland, Ohio. Wire-drawing machine. No. 900,312; Oct. 6; Sp. p. 513; Dr. pp. 106–7; Gaz. vol. 136; p. 1153.
Rush, W. S., San Francisco, Cal. Motion-indicator. No. 900,427; Oct. 6; Sp. p. 739; Dr. p. 155; Gaz. vol. 136; p. 1190.
Rush, W. S., Stillwater, Okla. Alarm or signal system for engines and motors. No. 900,428; Oct. 6; Sp. p. 746; Dr. pp. 155–6; Gaz. vol. 136; p. 1191.
Russell, A., St. Marys, W. Va. Intermediate head for engine-frames and pump-cylinders. No. 901,837; Oct. 20; Sp. p. 3708; Dr. p. 753; Gaz. vol. 136; p. 1713.
Russell & Erwin Manufacturing Company. (See Voight, H. G., assignor.)
Russell, F. J., New York, N. Y. Plural-lamp fixture. No. 902,004; Oct. 27; Sp. p. 4065; Dr. p. 825; Gaz. vol. 136; p. 1799.
Russell, H. W., assignor to Tubeless Iron Company, Manchester, N. H. Sad-iron heater. No. 901,744; Oct. 20; Sp. p. 3534; Dr. p. 715; Gaz. vol. 136; p. 1685.
Russell Manufscturing Company. (See Fisher, W. C., assignor.)
Rutherford, J. H., and W. J. Alford, Knoxville, Tenn. Car-wheel. No. 901,650; Oct. 20; Sp. p. 3308; Dr. p. 680; Gaz. vol. 136; p. 1651.
Ryan, J. A., Washington, D. C. Ladder for freight-cars. No. 902,331; Oct. 27; Sp. p. 4750; Dr. p. 958; Gaz. vol. 136; p. 1904.
Saal, C. L., Jr. (See Groetsch and Saal.)
Sachs Company. (See Reynolds and Sachs, assignors.)
Sachs, J. (See Reynolds and Sachs.)
Sager, E. C., Boston, Mass., assignor to Chickering & Sons, New York, N. Y. Device for use in obtaining bridge-bearings in constructing pianos. No. 901,262; Oct. 13; Sp. p. 2450; Dr. p. 503; Gaz. vol. 136; p. 1486.
Sakamoto, R., Tokyo, Japan. Electrosonator. No. 900,429; Oct. 6; Sp. p. 756; Dr. p. 156; Gaz. vol. 136; p. 1191.
Salomon, J., Chicago, Ill. Chair-back adjustment. No. 901,559; Oct. 20; Sp. p. 3134; Dr. p. 640; Gaz. vol. 136; p. 1623.
Saltsman, A. J., assignor to R. B. Saltsman, Chicago, Ill. Cake-mixer and egg-beater. No. 900,210; Oct. 6; Sp. p. 291; Dr. p. 59; Gaz. vol. 136; p. 1119.
Saltsman, R. B. (See Saltsman, A. J., assignor.)
Salviati, B. von, Dusseldorf, Germany. Shoe-cleaning apparatus. No. 902,254; Oct. 27; Sp. p. 4560; Dr. p. 926; Gaz. vol. 136; p. 1877.
Salzer, E., Laporte, Ind. Cigar-cutter and match-deliverer. No. 902,170; Oct. 27; Sp. p. 4391; Dr. p. 889; Gaz. vol. 136; p. 1851.
Salzer, E., Laporte, Ind. Cigar-cutter. No. 902,171; Oct. 27; Sp. p. 4393; Dr. p. 889; Gaz. vol. 136; p. 1851.
Salzer, F., Dresden, Germany. Producing an electrolytic deposit of metallic chromium. No. 900,597; Oct. 6; Sp. p. 1119; Gaz. vol. 136; p. 1245.
Sampere, J., New York, N. Y., assignor to Regina Company, Rahway, N. J. Pedal for automatically-operated pianos. No. 901,125; Oct. 13; Sp. p. 2207; Dr. p. 449; Gaz. vol. 136; p. 1443.
Sampson, F. E., London Mills, Ill. Railway-gate. No. 900,125; Oct. 6; Sp. p. 116; Dr. pp. 24–5; Gaz. vol. 136; p. 1091.
Samways, W. J. (See Loveless and Samways.)
Sanderson, R. E. B. (See Junius, G. E., assignor.)
Sandström, K. O., Karlskrona, assignor to E. Nilsson, Husqvarna, Sweden. Tube-cleaner. No. 901,483; Oct. 20; Sp. p. 2986; Dr. p. 608; Gaz. vol. 136; p. 1599.
Sandström, K. O., Karlskrona, assignor to E. Nilsson, Husqvarna, Sweden. Tube-scraper. No. 901,484; Oct. 20; Sp. p. 2987; Dr. p. 608; Gaz. vol. 136; p. 1590.
Sanford, F. W., Schenectady, N. Y., assignor to General Electric Company. Two-button switch. No. 900,786; Oct. 13; Sp. p. 1527; Dr. p. 310; Gaz. vol. 136; p. 1334.
Sanitary Street Cleansing & Sprinkling Machine Company. (See Murphy, T. M., assignor.)
Santoski, F., Stevens Point, Wis. Illuminated oven for stoves. No. 900,211; Oct. 6; Sp. p. 292; Dr. p. 59; Gaz. vol. 136; p. 1120.
Sargent, F. G., Westford, assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass. Drier. No. 901,191; Oct. 13; Sp. p. 2319; Dr. p. 475; Gaz. vol. 136; p. 1465.
Sarvent, J. G., Chicago, Ill. Car-truck. No. 902,172; Oct. 27; Sp. p. 4395; Dr. pp. 890–1; Gaz. vol. 136; p. 1851.
Sattler, C., Steglitz, near Berlin, Germany. Automatic nailing device for nailing-machines. No. 901,192; Oct. 13; Sp. p. 2321; Dr. p. 476; Gaz. vol. 136; p. 1465.
Saunders, L. E., Niagara Falls, N. Y., and J. G. Petrikin, Lock Haven, Pa. Treating aluminous materials. No. 902,255; Oct. 27; Sp. p. 4561; Dr. p. 926; Gaz. vol. 136; p. 1877.
Sauvage, W. H., New York, N. Y. Fluid-pressure brake system. No. 902,114; Oct. 27; Sp. p. 4278; Dr. p. 867; Gaz. vol. 136; p. 1832.
Savage, A. C., Finsbury, assignor to Sweetmeat Automatic Delivery Company, Limited, London, England. Coin-freed punch-ball machine. No. 900,126; Oct. 6; Sp. p. 123; Dr. p. 25; Gaz. vol. 136; p. 1091.
Sawatzky, T., Herbert, Saskatchewan, Canada. Plow. No. 901,193; Oct. 13; Sp. p. 2323; Dr. p. 476; Gaz. vol. 136; p. 1465.
Say, J. J., Unionville, Mo. Hoisting-machine. No. 900,212; Oct. 6; Sp. p. 294; Dr. pp. 59–60; Gaz. vol. 136, p. 1120.
Sayer, R. C., Redland, Bristol, England. Vehicle for railways and roads. No. 901,194; Oct. 13; Sp. p. 2324; Dr. p. 476; Gaz. vol. 136; p. 1466.
Schacht, W. F., Goshen, Ind. Sink-stopple. No. 901,195; Oct. 13; Sp. p. 2325; Dr. p. 477; Gaz. vol. 136; p. 1466.
Schaefer, A. W., New York, N. Y. Machine for cutting leather. No. 901,126; Oct. 13; Sp. p. 2208; Dr. p. 449; Gaz. vol. 136; p. 1443.
Schaefe, S. M., Naperville, Ill. Mop-wringer. No. 900,430; Oct. 6; Sp. p. 757; Dr. p. 156; Gaz. vol. 136; p. 1192.
Schafer, J. C. F., Mount Pulaski, Ill. Damper. No. 901,485; Oct. 20; Sp. p. 2988; Dr. p. 609; Gaz. vol. 136; p. 1599.
Schaller, G. J. (See Adams and Schaller.)
Schanick, H. J., Kenney, Tex. Lamp attachment. No. 900,127; Oct. 6; Sp. p. 124; Dr. p. 26; Gaz. vol. 136; p. 1092.
Schaull, G., London, England. Electric cell. No. 902,173; Oct. 27; Sp. p. 4399; Dr. p. 891; Gaz. vol. 136; p. 1851.
Scheer, G. H., Sheboygan, Wis. Fixing and washing tank. No. 900,431; Oct. 6; Sp. p. 759; Dr. p. 156; Gaz. vol. 136; p. 1192.
Scheib, L., Sr., and L., Jr., Kaiserslautern, Germany. Uncoupling mechanism for central-buffer claw-couplings. No. 901,560; Oct. 20; Sp. p. 3135; Dr. p. 640; Gaz. vol. 136; p. 1623.
Scheideman, J., Washington, D. C. Refrigerating apparatus. No. 902,256; Oct. 27; Sp. p. 4563; Dr. p. 926; Gaz. vol. 136; p. 1877.
Scheinimann, L. C., *et al.* (See Modlin, T. B., assignor.)
Schibler, B., Jr. (See Eastwood and Schibler.)
Schieferstein, A., Bayonne, N. J. Gas-engine. No. 901,745; Oct. 20; Sp. p. 3536; Dr. p. 715; Gaz. vol. 136; p. 1685.
Schiller, H. B., Reading, Pa. Flying-machine. No. 901,486; Oct. 20; Sp. p. 2989; Dr. p. 609; Gaz. vol. 136; p. 1600.
Schmidt, A., and O. Schwab, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Making concentrated liquid dyestuffs. No. 901,746; Oct. 20; Sp. p. 3537; Gaz. vol. 136; p. 1686.

Schmidt, A. G. A., assignor to National Equipment Company, Chicago, Ill. Derrick. No. 901,386; Oct. 20; Sp. p. 2755; Dr. pp. 561–2; Gaz. vol. 136; p. 1566.
Schmidt, B. L., assignor to White Lily Manufacturing Company, Davenport, Iowa. Gearing for washing-machines. No. 902,174; Oct. 27; Sp. p. 4400; Dr. p. 892; Gaz. vol. 136; p. 1852.
Schmidt, C. R., Baltimore, Md. Effecting the closure of bottles. No. 901,651; Oct. 20; Sp. p. 3309; Dr. p. 680; Gaz. vol. 136; p. 1652.
Schmitt, W. H. (See Doyle and Schmitt.)
Schneider, B., Berlin, Germany. Fare-indicator. No. 901,263; Oct. 13; Sp. p. 2454; Dr. pp. 503–4; Gaz. vol. 136; p. 1487.
Schneider, B., Berlin, Germany. Fare indicator and register for vehicles. No. 902,332; Oct. 27; Sp. p. 4751; Dr. pp. 958–9; Gaz. vol. 136; p. 1904.
Schneider, F. G., and W. C. L. Ziehn, Chicago, Ill. Beverage cooling and dispensing apparatus. No. 902,333; Oct. 27; Sp. p. 4753; Dr. p. 959; Gaz. vol. 136; p. 1905.
Schneider, R., Sharon, Pa. Steam-condensing and feed-water-heating plant. (Relssue.) No. 12,868; Oct. 20; Sp. p. 3906; Dr. p. 797; Gaz. vol. 136; p. 1748.
Schnell, F., Gutenstein, Austria-Hungary. Wood substitute. No. 900,686; Oct. 6; Sp. p. 1325; Gaz. vol. 136; p. 1276.
Schnorbach, P. P. (See Weir, R., assignor.)
Schoenner, G., Nuremberg, Germany. Drawing-compasses. No. 902,257; Oct. 27; Sp. p. 4566; Dr. p. 927; Gaz. vol. 136; p. 1878.
Schofield, J. A. (See Caswell and Schofield.)
Schomber, L. M., Shirley, Ind. Dish-drying rack. No. 901,747; Oct. 20; Sp. p. 3540; Dr. p. 716; Gaz. vol. 136; p. 1686.
Schoop, J., Springfield, Wis. Roller for watches. No. 901,487; Oct. 20; Sp. p. 2993; Dr. p. 610; Gaz. vol. 136; p. 1600.
Schreck, M., Sr., Cincinnati, Ohio. Drier-conveyer for white lead. No. 900,787; Oct. 13; Sp. p. 1528; Dr. p. 311; Gaz. vol. 136; p. 1334.
Schreiber, C. W. (See Jecklin and Schreiber.)
Schubert, H., New York, N. Y. Oven. No. 902,175; Oct. 27; Sp. p. 4402; Dr. pp. 892–3; Gaz. vol. 136; p. 1852.
Schuckman, L., Garden City, Kans. Beet-cultivator. No. 901,387; Oct. 20; Sp. p. 2759; Dr. p. 562; Gaz. vol. 136; p. 1567.
Schuermann, A., assignor to H. Mueller Manufacturing Company, Decatur, Ill. Roller bearing for self-closing liquid shut-offs. No. 900,598; Oct. 6; Sp. p. 1120; Dr. p. 229; Gaz. vol. 136; p. 1246.
Schultz, A. E., Chicago, Ill. Bumping-post. No. 901,196; Oct. 13; Sp. p. 2326; Dr. p. 477; Gaz. vol. 136; p. 1466.
Schultz, J. A., Jr., Newark, N. J., assignor to Schultz Syphon Company. Dispensing-siphon. No. 902,258; Oct. 27; Sp. p. 4567; Dr. pp. 927–8; Gaz. vol. 136; p. 1878.
Schultz Syphon Company. (See Schultz, J. A., Jr., assignor.)
Schulze, W. C., Flushing, N. Y. Glass receptacle. No. 901,388; Oct. 20; Sp. p. 2761; Dr. p. 563; Gaz. vol. 136; p. 1567.
Schuman, J. B., *et al.* (See Schuman, J. B., assignor.)
Schuman, J. B., assignor to said J. B. Schuman, J. K. Sharpe, Jr., and T. King, Indianapolis, Ind: Shredder-feeder. No. 902,334; Oct. 27; Sp. p. 4756; Dr. p. 960; Gaz. vol. 136; p. 1905.
Schuster, E., Berlin, Germany. Calculating-machine. No. 901,748; Oct. 20; Sp. p. 3541; Dr. p. 716; Gaz. vol. 136; p. 1686.
Schuster, J., Clay Banks, Wis. Hog-catcher. No. 900,889; Oct. 13; Sp. p. 1743; Dr. p. 352; Gaz. vol. 136; p. 1367.
Schutz, J. M., assignor to Schutz-O'Neill Co., Minneapolis, Minn. Gyrator. No. 900,313; Oct. 6; Sp. p. 515; Dr. pp. 107–8; Gaz. vol. 136; p. 1153.
Schutz-O'Neill Co. (See Schutz, J. M., assignor.)
Schwab, O. (See Schmidt and Schwab.)
Schwager, A. C., New York, N. Y., assignor of one-half to J. Hollander, Boston, Mass. Thermal gas-cut-off device. No. 901,197; Oct. 13; Sp. p. 2329; Dr. p. 477; Gaz. vol. 136; p. 1467.
Schwarze, C. J., Adrian, Mich. Railway signaling system. No. 902,176; Oct. 27; Sp. p. 4405; Dr. p. 893; Gaz. vol. 136; p. 1853.
Schweinert, M. C., West Hoboken, N. J., and H. P. Kraft, New York, N. Y. Closure for jars or the like. No. 902,259; Oct. 27; Sp. p. 4570; Dr. p. 928; Gaz. vol. 136; p. 1879.
Schweizer, W. H., Baltimore, Md. Writing-pen. No. 901,389; Oct. 20; Sp. p. 2762; Dr. p. 563; Gaz. vol. 136; p. 1567.
Schwing, G., Newark, N. J. Automatic closing attachment for window-sashes. No. 901,390; Oct. 20; Sp. p. 2763; Dr. p. 563; Gaz. vol. 136; p. 1567.
Schwoerer, P., Strassburg, Germany. Apparatus for treating oleic acid. No. 902,177; Oct. 27; Sp. p. 4406; Dr. p. 893; Gaz. vol. 136; p. 1853.
Scotford, R. M., Kansas City, Mo. Check. No. 901,838; Oct. 20; Sp. p. 3710; Dr. p. 753; Gaz. vol. 136; p. 1713.
Scott, B. W., assignor to Arthur Colton Company, Detroit, Mich. Tablet-forming machine. No. 901,937; Oct. 20; Sp. p. 3900; Dr. pp. 795–6; Gaz. vol. 136; p. 1746.
Scott, G., Amsterdam, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Sewing and trimming machine. No. 902,453; Oct. 27; Sp. p. 4998; Dr. pp. 1010–11; Gaz. vol. 136; p. 1944.
Scott, E., Westmoreland, Kans. Umbrella-cover. No. 901,198; Oct. 13; Sp. p. 2331; Dr. p. 477; Gaz. vol. 136; p. 1467.
Scott, O. E., Hamilton, Ontario, Canada. Safety-gun. No. 901,043; Oct. 13; Sp. p. 2053; Dr. p. 417; Gaz. vol. 136; p. 1418.
Scott, R. W., Leeds Point, N. J., assignor of one-half to L. N. D. Williams, Ogontz, Pa. Knitted fabric and making same. No. 901,264; Oct. 13; Sp. p. 2456; Dr. pp. 504–5; Gaz. vol. 136; p. 1487.
Scott, R. W., Leeds Point, N. J., assignor of one-half to L. N. D. Williams, Ogontz, Pa. Web-holder for rib-knitting machines. No. 901,839; Oct. 20; Sp. p. 3711; Dr. p. 753; Gaz. vol. 136; p. 1714.
Scott, R. W., Leeds Point, N. J., assignor of one-half to L. N. D. Williams, Ogontz, Pa. Rib-knitting machine. No. 901,840; Oct. 20; Sp. p. 3712; Dr. pp. 754–5; Gaz. vol. 136; p. 1714.
Scovill Manufacturing Company. (See Simons, E. D., assignor.)
Scoville, E. M., assignor of one-half to C. Bosse, Waipahu, Hawaii. Automatic car-transfer. No. 901,488; Oct. 20; Sp. p. 2994; Dr. pp. 610–11; Gaz. vol. 136; p. 1600.
Scranton, E. M., assignor of one-half to C. W. McKay, Rochester, N. Y. Shoe-polishing apparatus. No. 901,265; Oct. 13; Sp. p. 2459; Dr. p. 505; Gaz. vol. 136; p. 1488.
Searing, G. E., Towanda, Pa. Chair-lock. No. 901,561; Oct. 20; Sp. p. 3136; Dr. p. 641; Gaz. vol. 136; p. 1624.
Sears, W. T., Onslow, Iowa. Cutting, punching, and tire-shrinking machine. No. 900,213; Oct. 6; Sp. p. 295; Dr. p. 60; Gaz. vol. 136; p. 1120.
Sedgwick, H. G., Mill Valley, Cal. Vent-valve for automatic train-stops. No. 900,214; Oct. 6; Sp. p. 298; Dr. p. 61; Gaz. vol. 136; p. 1120.
Sedgwick, H. G., Mill Valley, Cal. Automatic train-stop. No. 900,215; Oct. 6; Sp. p. 300; Dr. p. 61; Gaz. vol. 136; p. 1121.
Sedgwick, H. G., Mill Valley, Cal. Automatic train-stop. No. 900,216; Oct. 6; Sp. p. 301; Dr. p. 61; Gaz. vol. 136; p. 1121.
Sedgwick, H. G., Mill Valley, Cal. Automatic train-stop. No. 900,217; Oct. 6; Sp. p. 302; Dr. p. 61; Gaz. vol. 136; p. 1121.
Sedivi, L., Nashville, Tenn., assignor to J. C. Goldbach, Louisville, Ky. Last-support. No. 900,314; Oct. 6; Sp. p. 518; Dr. p. 108; Gaz. vol. 136; p. 1153.
Seifert, T. H., Springtown, Pa. Vault. No. 900,218; Oct. 6; Sp. p. 303; Dr. p. 62; Gaz. vol. 136; p. 1121.
Seiffert, R., Bobrek, Germany. Obtaining metallic oxids. No. 902,260; Oct. 27; Sp. p. 4572; Dr. p. 928; Gaz. vol. 136; p. 1879.
Seiler, D. G., *et al.* (See Gaskins, C. H., assignor.)
Seiler, F. G., *et al.* (See Gaskins, C. H., assignor.)
Self-Heating Soldering Iron Company. (See Mann, F. J., assignor.)
Seliers, C. W., Beloit, Kans. Pneumatic feeder for threshing-machines. No. 901,490; Oct. 20; Sp. p. 2998; Dr. pp. 611–12; Gaz. vol, 136; p. 1601.
Semenoff, I., St. Petersburg, Russia. Production of shells employed in the manufacture of cigarettes. No. 900,432; Oct. 6; Sp. p. 760; Dr. p. 157; Gaz. vol. 136; p. 1192.
Seng Company. (See Franks, O. G., assignor.)
Senn, W. (See Winfield and Senn.)
Settle, T. H., Los Angeles, Cal. Wave-motor. No. 901,489; Oct. 20; Sp. p. 2997; Dr. p. 611; Gaz. vol. 136; p. 1601.
Setzer, G. A., New York, assignor to C. S. Averill, Syracuse, N. Y. Automatic pipe-cleaning apparatus. No. 900,599; Oct. 6; Sp. p. 1123; Dr. p. 230; Gaz. vol. 136; p. 1246.
Severin, H., Achern, Germany. Apparatus for manufacturing hollow glass articles, such as bottles. No. 901,199; Oct. 13; Sp. p. 2332; Dr. p. 478; Gaz. vol. 136; p. 1467.
Seward, G. O., and F. von Kügelgen, Holcombs Rock, Va., assignors to Virginia Laboratory Company, New York, N. Y. Production of magnesium by electrolysis. No. 900,961; Oct. 13; Sp. p. 1903; Gaz. vol. 136; p. 1392.
Seward, G. O., and F. von Kügelgen, Holcombs Rock, Va., assignors to Virginia Laboratory Company, New York, N. Y. Production of barium and barium alloys. No. 900,962; Oct. 13; Sp. p. 1904; Gaz. vol. 136; p. 1392.
Sewell, R., Cedartown, Ga. Case for tooth-brushes. No. 901,841; Oct. 20; Sp. p. 3716; Dr. p. 755; Gaz. vol. 136; p. 1714.
Seydel, W., Ratibor, Germany. Support for clothing. No. 901,652; Oct. 20; Sp. p. 3310; Dr. p. 680; Gaz. vol. 136; p. 1652.
Seymour, W. M., assignor of one-half to J. P. Hume, Marshfield, Wis. Land-clearing machine. No. 900,433; Oct. 6; Sp. p. 762; Dr. p. 157; Gaz. vol. 136; p. 1192.
Shallenberger, C. S., St. Louis, Mo. Brake-shoe. No. 900,600; Oct. 6; Sp. p. 1126; Dr. pp. 230–1; Gaz. vol. 136; p. 1247.
Shallenberger, C. S., St. Louis, Mo. Brake-shoe. No. 900,601; Oct. 6; Sp. p. 1128; Dr. p. 231; Gaz. vol. 136; p. 1247.
Shannon, J., and J. E. Wood, Portland, Oreg. Railway block-signal. No. 900,315; Oct. 6; Sp. p. 519; Dr. pp. 108–9; Gaz. vol. 136; p. 1154.
Shapleigh, M. S., Plainfield, N. J. Self-registering gage. No. 901,653; Oct. 20; Sp. p. 3311; Dr. p. 680; Gaz. vol. 136; p. 1652.
Sharp, A. G., Bethesda, Md. Garbage-collecting vehicle. No. 902,115; Oct. 27; Sp. p. 4281; Dr. p. 867; Gaz. vol. 136; p. 1833.

Sharpe, J. K., Jr., Indianapolis, Ind. Bottom for clover-bunchers. No. 901,491; Oct. 20; Sp. p. 3004; Dr. p. 613; Gaz. vol. 136; p. 1601.
Sharpe, J. K., *et al.* (See Schuman, J. B., assignor.)
Shattuck, W. P., Minneapolis, Minn., assignor of one-half to M. McVoy, Jr., New York, N. Y. Detachable shoe for self-propelled-vehicle wheels. No. 901,842; Oct. 20; Sp. p. 3717; Dr. p. 755; Gaz. vol. 136; p. 1714.
Shaw, D. P., Rhome, assignor of one-half to W. J. Tackaberry, Fort Worth, Tex. Stalk-breaker. No. 902,116; Oct. 27; Sp. p. 4282; Dr. p. 868; Gaz. vol. 136; p. 1833.
Shaw, L., Chicago, Ill. Automatic device for operating water seals for gas-mains. No. 902,454; Oct. 27; Sp. p. 5003; Dr. p. 1011; Gaz. vol. 136; p. 1944.
Shedd, H. E., Austin, Minn. Calendar. (Reissue.) No. 12,861; Oct. 6; Sp. p. 1332; Dr. p. 271; Gaz. vol. 136; p. 1277.
Sheehan, W. E., Albany, N. Y. Means for manufacturing paper, board, and pulp. No. 902,178; Oct. 27; Sp. p. 4407; Dr. pp. 893–4; Gaz. vol. 136; p. 1854.
Sheffield Car Company. (See Whitesell, F. N., assignor.)
Shelly, F. J., Philadelphia, Pa. Rail-joint. No. 901,391; Oct. 20; Sp. p. 2764; Dr. p. 563; Gaz. vol. 136; p. 1568.
Shelton, W. G., Chicago, Ill. Massage-vibrator. No. 900,602; Oct. 6; Sp. p. 1129; Dr. p. 231; Gaz. vol. 136; p. 1247.
Shepard, A. A., *et al.* (See Ruple, F., assignor.)
Shepherd, J., assignor to F. B. Ullery, Chicago, Ill. Animal-trap. No. 902,005; Oct. 27; Sp. p. 4068; Dr p. 825; Gaz. vol. 136; p. 1799.
Sheppard, A. B., Pittsburg, Pa. Packing-box for photographic plates. No. 901,200; Oct. 13; Sp. p. 2334; Dr. p. 478; Gaz. vol. 136; p. 1468.
Sheppard, A. B., Pittsburg, Pa. Device for transferring photographic plates. No. 901,201; Oct. 13; Sp. p. 2336; Dr. p. 479; Gaz. vol. 136; p. 1468.
Sheppard, A. B., Pittsburg, Pa. Developing-plate holder. No. 901,202; Oct. 13; Sp. p. 2338; Dr. p. 479; Gaz. vol. 136; p. 1468.
Sheppard, A. B., Pittsburg, Pa. Developing-package for photographic plates. No. 901,203; Oct. 13; Sp. p. 2342; Dr. pp. 479–80; Gaz. vol. 136; p. 1469.
Sheridan, C. J. (See Higgins and Sheridan.)
Sherman, J. A. (See Flagg and Smith, assignors.)
Sherwood, J. M., assignor to Bridgeport Chain Company, Bridgeport, Conn. Reinforce for concrete structures. No. 902,335; Oct. 27; Sp. p. 4757; Dr. p. 960; Gaz. vol. 136; p. 1905.
Shipley, J. J., Washington, D. C. Automatic headlight-deflecting mechanism. No. 902,117; Oct. 27; Sp. p. 4283; Dr. p. 868; Gaz. vol. 136; p. 1833.
Shoemaker, J. E., Washington, D. C. Piano-playing attachment. No. 901,562; Oct. 20; Sp. p. 3138; Dr. p. 641; Gaz. vol. 136; p. 1624.
Sholar, E. H., and W. W. Pace, East Chattanooga, Tenn., assignors to Volunteer Disc Plow Co. Disk plow. No. 900,219; Oct. 6; Sp. p. 305; Dr. p. 62; Gaz. vol. 136; p. 1122.
Shotwell, C. H., Akron, Ohio. Car-mover. No. 902,336; Oct. 27; Sp. p. 4758; Dr. p. 960; Gaz. vol. 136; p. 1906.
Shukoff, A. A., St. Petersburg, Russia. Making terpene esters. No. 900,316; Oct. 6; Sp. p. 524; Gaz. vol. 136; p. 1154.
Shumaker, G. M., *et al.* (See Fetzer, A. H., assignor.)
Shumaker, M. E., *et al.* (See Fetzer, A. H., assignor.)
Sibson, W. W. (See Allsop and Sibson.)
Sieber & Trussell Mfg. Co. (See Nelson, C. R., assignor.)
Sieber & Trussell Mnfg. Co. (See Dawson, J. C., assignor.)
Siegfried, G., Chicago, Ill. Hair-drying device. No. 900,434; Oct. 6; Sp. p. 765; Dr. p. 158; Gaz. vol. 136; p. 1193.
Sierra, V. J., San Francisco, Cal. Soap composition. No. 901,204; Oct. 13; Sp. p. 2345; Gaz. vol. 136; p. 1469.
Sigafoos, R. B., Denver, Colo. Rotary tunneling-machine. No. 901,302; Oct. 20; Sp. p. 2766; Dr. p. 564; Gaz. vol. 136; p. 1568.
Sigler, E. A., Coleman, Mich. Folding poultry-roost. No. 901,843; Oct. 20; Sp. p. 3719; Dr. p. 756; Gaz. vol. 136; p. 1715.
Silbermann, T. (See Ostrogovich and Silbermann.)
Silk, E. E., assignor to Barco Brass and Joint Company, Chicago, Ill. Flexible fluid-joint. No. 900,603; Oct. 6; Sp. p. 1131; Dr. p. 232; Gaz. vol. 136; p. 1248.
Sills, B. H., Ottawa, Ontario, Canada. Grip-tread for pneumatic tires. No. 901,654; Oct. 20; Sp. p. 3312; Dr. p. 681; Gaz. vol. 136; p. 1652.
Simmonds, A. D., Kansas City, Mo. Nursery rocking-chair. No. 900,788; Oct. 13; Sp. p. 1530; Dr. p. 311; Gaz. vol. 136; p. 1335.
Simmons Manufacturing Company. (See Rudd, O., assignor.)
Simons, E. D., assignor to Scovill Manufacturing Company, Waterbury, Conn. Snap-fastener socket. No. 900,789; Oct. 13; Sp. p. 1531; Dr. p. 311; Gaz. vol. 136; p. 1335.
Simpkin, R. A., Chicago, Ill. Device for obtaining color combinations. No. 901,655; Oct. 20; Sp. p. 3313; Dr. p. 681; Gaz. vol. 136; p. 1653.
Simpson, A. B. (See Phenice, W. H., assignor.)
Simpson, B. J., Chicago, Ill. Clothes-guard. No. 900,220; Oct. 6; Sp. p. 307; Dr. p. 62; Gaz. vol. 136; p. 1122.
Simpson, C. A., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Apparatus for telephone installations. No. 901,127; Oct. 13; Sp. p. 2210; Dr. p. 449; Gaz. vol. 136; p. 1444.
Sipp, G., Paterson, N. J. Measuring apparatus for winding-machines. No. 902,337; Oct. 27; Sp. p. 4760; Dr. pp. 960–1; Gaz. vol. 136; p. 1906.
Skinner, J. E., Kingman, Kans. Transposition-bracket for insulators. No. 902,455; Oct. 27; Sp. p. 5007; Dr. p. 1012; Gaz. vol. 136; p. 1944.
Skyles, W. (See Hayden, W. A., assignor.)
Slater, B. A., and M. J. McDermott, Boise, Idaho. Signal system. No. 902,118; Oct. 27; Sp. p. 4285; Dr. pp. 868–9; Gaz. vol. 136; p. 1834.
Slater, W. W., *et al.* (See Marseille, F., assignor.)
Slattery, W. H., assignor to Deitsch Brothers, New York, N. Y. Portable case for clocks and the like. No. 900,317; Oct. 6; Sp. p. 526; Dr. p. 109; Gaz. vol. 136; p. 1154.
Sleeper, C. W., Lancaster, N. H. Device for testing cans. No. 901,393; Oct. 20; Sp. p. 2776; Dr. p. 565; Gaz. vol. 136; p. 1569.
Slevin, F. M., Jersey City, N. J., assignor to S. C. Hirschberg, New York, N. Y. Goggles. No. 901,394; Oct. 20; Sp. p. 2778; Dr. p. 565; Gaz. vol. 136; p. 1569.
Sloan, R. M. (See Lindley, Z. M., assignor.)
Sloper, H. T., New Britain, Conn. Coin-controlled gas-meter. No. 901,044; Oct. 13; Sp. p. 2056; Dr. p. 418; Gaz. vol. 136; p. 1418.
Sloppy, M. E. (See Johns, L. G., assignor.)
Slough, F. M., assignor to Dean Electric Company, Elyria, Ohio. Self-restoring drop-relay. No. 900,435; Oct. 6; Sp. p. 766; Dr. p. 158; Gaz. vol. 136; p. 1193.
Small, E. J., *et al.* (See Ruple, F., assignor.)
Small, H., assignor to J. W. and W. O. Duntley, Chicago, Ill. Carburster. No. 900,604; Oct. 6; Sp. p. 1132; Dr. pp. 232–3; Gaz. vol. 136; p. 1248.
Smead, N. W., Sheldon, Iowa. Game apparatus. No. 902,006; Oct. 27; Sp. p. 4069; Dr. p. 825; Gaz. vol. 136; p. 1799.
Smiley, E. G. (See Tambling, F. C., assignor.)
Smith, A., U. S. Army. Spike-lock. No. 900,318; Oct. 6; Sp. p. 527; Dr. p. 109; Gaz. vol. 136; p. 1155.
Smith, A., Newport, R. I. Stove-lid lifter. No. 901,844; Oct. 20; Sp. p. 3720; Dr. p. 756; Gaz. vol. 136; p. 1715.
Smith, A. A., Chicago, Ill. Bag-holder. No. 900,221; Oct. 6; Sp. p. 308; Dr. p. 62; Gaz. vol. 136; p. 1122.
Smith, A. B., Binghamton, N. Y. Cigar-box. No. 900,222; Oct. 6; Sp. p. 309; Dr. p 63; Gaz. vol. 136; p. 1123.
Smith, A. E., Kelso, Wash. Brace. No. 901,395; Oct. 20; Sp. p. 2779; Dr. p. 565; Gaz. vol. 136; p. 1569.
Smith, C. F., Bridgeport, Conn., assignor to Continental Paper Bag Company. Paper-bag machine. No. 900,605; Oct. 6; Sp. p. 1143; Dr. pp. 233–4; Gaz. vol. 136; p. 1248.
Smith, E. P., Galesburg, Ill. Combined table and bed. No. 902,007; Oct. 27; Sp. p. 4070; Dr. p. 826; Gaz. vol. 136; p. 1799.
Smith, G. B., and I. Robbins, Philadelphia, Pa. Stamp-affixer. No. 902,179; Oct. 27; Sp. p. 4410; Dr. p. 894; Gaz. vol. 136; p. 1854.
Smith, G. W. (See Flagg and Smith.)
Smith, G. W. (See Ramsey and Smith.)
Smith, J. H., Portland, Me. Bottle-stopper. No. 900,223; Oct. 6; Sp. p. 310; Dr. p. 63; Gaz. vol. 136; p. 1123.
Smith, M. A., New York, N. Y. Coating-machine. No. 901,749; Oct. 20; Sp. p. 3543; Dr. pp. 716–18; Gaz. vol. 136; p. 1686.
Smith, M. F., assignor to E. V. Bates, Lowell, Mass. Steam-heating apparatus. No. 902,539; Oct. 27; Sp. p. 5207; Dr. pp. 1051–2; Gaz. vol. 136; p. 1974.
Smith, O., Remer, Minn. Sled-knuckle. No. 900,319; Oct. 6; Sp. p. 528; Dr. p. 110; Gaz. vol. 136; p. 1155.
Smith Premier Typewriter Company. (See Barrett, G. J., assignor.)
Smith, P. V., Lyons, Kans. Telephone system. No. 902,338; Oct. 27; Sp. p. 4763; Dr. p. 961; Gaz. vol. 136; p. 1906.
Smith, R., Denver, and P. Christensen, Fort Logan, Colo. Car-truck. No. 901,396; Oct. 20; Sp. p. 2781; Dr. pp. 565–6; Gaz. vol. 136; p. 1569.
Smith, S. J., Hot Springs, Ark. Rotary churn. No. 901,492; Oct. 20; Sp. p. 3005; Dr. p. 613; Gaz. vol. 136; p. 1601.
Smith, W. E., Cleveland, Ohio. Fastener. No. 900,963; Oct. 13; Sp. p. 1905; Dr. p. 387; Gaz. vol. 136; p. 1392.
Smith, W. H., assignor of one-half to H. W. Gifford, Aberdeen, S. D. Feed mechanism of roller-mills. No. 900,790; Oct. 13; Sp. p. 1532; Dr. p. 312; Gaz. vol. 136; p. 1335.
Smith, W. M. (See Curwen and Smith.)
Smith, W. M. (See Heulings and Smith.)
Smith, W. M., Moore, and S. M. Curwen, Haverford, assignors to J. G. Brill Company, Philadelphia, Pa. Passenger-car. No. 901,787; Oct. 20; Sp. p. 3625; Dr. p. 734; Gaz. vol. 136; p. 1668.

Smith, W. S., Paducah, Ky. Machine for bending basket-handles. No. 900,890; Oct. 13; Sp. p. 1745; Dr. pp. 352–3; Gaz. vol. 136; p. 1368.
Snell, C. B., Bradford, Mass. Circuit-interrupter. No. 900,320; Oct. 6; Sp. p. 530; Dr. p. 110; Gaz. vol. 136; p. 1155.
Snyder, F. E., Massillon, Ohio. Drill. No. 902,008; Oct. 27; Sp. p. 4072; Dr. pp. 826–7; Gaz. vol. 136; p. 1800.
Snyder, J. O., and F. O. Clawson, South San Francisco, Cal. Rotary vacuum-drier. No. 900,436; Oct. 6; Sp. p. 770; Dr. p. 159; Gaz. vol. 136; p. 1193.
Société Anonyme de la Thyoleine. (See Terrisse, H., assignor.)
Societe Anonyme "Itala" Fabrica di Automobili. (See Balloco, A., assignor.)
Société Anonyme L'Oxhydrique Internationale. (See Jottrand, F., assignor.)
Society of Chemical Industry in Basle. (See Grünbaum, M., assignor.)
Soennecken, Firm of F. (See Dörsing, F., assignor.)
Sohni, O., and H. Mehl, Buffalo, N. Y. Seal-padlock. No. 902,456; Oct. 27; Sp. p. 5008; Dr. p. 1012; Gaz. vol. 136; p. 1945.
Soley, F., assignor to Miller Lock Company, Philadelphia, Pa. Combination latch-lock. No. 900,437; Oct. 6; Sp. p. 771; Dr. p. 159; Gaz. vol. 136; p. 1194.
Soley, F., assignor to Miller Lock Company, Philadelphia, Pa. Combination-lock. No. 900,438; Oct. 6; Sp. p. 773; Dr. pp. 159–60; Gaz. vol. 136; p. 1194.
Somers, E. K., St. Johnsbury, Vt. Coin-controlled operating mechanism for vending apparatus. No. 900,224; Oct. 6; Sp. p. 311; Dr. pp. 63–4; Gaz. vol. 136; p. 1123.
Sommers, G., Minneapolis, Minn. Vehicle-wheel. No. 900,891; Oct. 13; Sp. p. 1748; Dr. pp. 353–4; Gaz. vol. 136; p. 1368.
Sone, L. K., New York, N. Y. Traveling cooking utensil. No. 900,321; Oct. 6; Sp. p. 532; Dr. pp. 110–11; Gaz. vol. 136; p. 1155.
Sone, L. K., New York, N. Y. Collapsible frame or support. No. 900,322; Oct 6; Sp. p. 535; Dr. p. 111; Gaz. vol. 136; p. 1156.
Sorensen, P., Brooklyn, N. Y. Lamp-guard. No. 900,439; Oct. 6; Sp. p. 776; Dr. p. 160; Gaz. vol. 136; p. 1195.
Southwark Foundry and Machine Company. (See Petsche, G. B., assignor.)
Southwell, J. A., Wyoming, Pa. Shovel. No. 902,261; Oct. 27; Sp. p. 4574; Dr. p. 928; Gaz. vol. 136; p. 1879.
Spalding, G. M., St. Louis, Mo. Railway-switch-operating device. No. 901,750; Oct. 20; Sp. p. 3548; Dr. p. 718; Gaz. vol. 136; p. 1686.
Spang & Company. (See Spang, G. A., assignor.)
Spang, G. A., assignor to Spang & Company, Butler, Pa. Anchor mechanism for well-packers. No. 900,440; Oct. 6; Sp. p. 778; Dr. p. 160; Gaz. vol. 136; p. 1195.
Sparks, H. O., Shelbina, Mo. Loading or unloading means. No. 900,225; Oct. 6; Sp. p. 314; Dr. p. 64; Gaz. vol. 136; p. 1124.
Sparks, H. O., Shelbina, Mo. Vehicle-unloading mechanism. No. 900,606; Oct. 6; Sp. p. 1146; Dr. p. 234; Gaz. vol. 136; p. 1249.
Sparks, R. R., Greenfield, Mass. Insulator-protector. No. 902,262; Oct. 27; Sp. p. 4575; Dr. p. 929; Gaz. vol. 136; p. 1880.
Spaulding, J. T., Port Byron, N. Y. Railway-tie. No. 901,845; Oct. 20; Sp. p. 3721; Dr. p. 756; Gaz. vol. 136; p. 1715.
Specker, K. (See Müller and Specker.)
Speer, D. F., Denver, Colo. Automatic means for ventilating buildings. No. 902,509; Oct. 27; Sp. p. 5137; Dr. p. 1040; Gaz. vol. 136; p. 1964.
Speller, F. N., Pittsburg, Pa. Reducing the corrosive action of water. No. 900,323; Oct. 6; Sp. p. 538; Dr. p. 111; Gaz. vol. 136; p. 1156.
Spencer, B. M., *et al.* (See Weber, A. W. H., assignor.)
Spencer, J. M., *et al.* (See Weber, A. W. H., assignor.)
Sperry, E. A., Brooklyn, N. Y. Preparing merchantable iron from tin-plate scrap. No. 901,266; Oct. 13; Sp. p. 2460; Dr. p. 505; Gaz. vol. 136; p. 1488.
Spielmann, C., and F. W. Wicht, New York, N. Y. Consecutive-numbering apparatus. No. 902,339; Oct. 27; Sp. p. 4766; Dr. p. 961; Gaz. vol. 136; p. 1907.
Spink, A. (See Walker and Spink.)
Spiro, C., New York, N. Y. Margin-stop. No. 902,263; Oct. 27; Sp. p. 4576; Dr. p. 929; Gaz. vol. 136; p. 1880.
Spotswood, C. F. (See Keller, M. E., assignor.)
Sprague, H. S., Dana, Ind. Piston-valve. No. 901,846; Oct. 20; Sp. p. 3722; Dr. pp. 756–7; Gaz. vol. 136; p. 1716.
Spratt's Patent (America) Limited. (See Rathborne, R. C., assignor.)
Sprink, I. W. (See Brown and Sprink.)
Sprout, L. A., Waukomis, Okla. Churn-dasher. No. 900,441; Oct. 6; Sp. p. 780; Dr. p. 161; Gaz. vol. 136; p. 1195.
St. Joseph Iron Works. (See Eklund, J., assignor.)
Staines, F., assignor to J. C. Bowden, Melbourne, Victoria, Australia. Plate and dish cover. No. 902,340; Oct. 27; Sp. p. 4768; Dr. pp. 961–2; Gaz. vol. 136; p. 1907.
Staley, H. L., Charleroi, Pa. Envelop. No. 902,341; Oct. 27; Sp. p. 4769; Dr. p. 962; Gaz. vol. 136; p. 1908.
Stall, F. A., Jr., Darlington, S. C. Vehicle-tire. No. 902,009; Oct. 27; Sp. p. 4075; Dr. p. 827; Gaz. vol. 136; p. 1800.
Standard Carrier Co. (See Meyer, J. J., assignor.)
Standard Computing Scale Co. (See Jaenichen, L., assignor.)
Standard Music Roll Company. (See Davis and Bowman, assignors.)
Standard Optical Company. (See Clark, B. F., assignor.)
Standard Rivet Company. (See Barber, E. A., assignor.)
Standard Silk Company. (See Anner, H., assignor.)
Standard Steel Tie Company. (See Côté, G. M., assignor.)
Standard Stopper Company. (See Mueller, F., assignor.)
Standard Sugar Process Company. (See Bertels, C. H., assignor.)
Standing, W. G., Sharpsburg, Pa. Chill for sash-weights. No. 901,656; Oct. 20; Sp. p. 3317; Dr. p. 681; Gaz. vol. 136; p. 1653.
Standish, Z. J., Fort Scott, Kans. Combined shade and curtain bracket. No. 902,342; Oct. 27; Sp. p. 4770; Dr. p. 962; Gaz. vol. 136; p. 1908.
Stanley G. I. Electric Manufacturing Company. (See Creighton, E. E. F., assignor.)
Stanley, H. C., New York, N. Y. Envelop-sealing machine. No. 900,791; Oct. 13; Sp. p. 1534; Dr. p. 312; Gaz. vol. 136; p. 1335.
Stanley, J. C. W., assignor to Pacific Coast Soda Company, Los Angeles, Cal. Treating alkaline deposits for recovering soda, &c. No. 900,892; Oct. 13; Sp. p. 1750; Dr. p. 354; Gaz. vol. 136; p. 1368.
Stanley, R. C. (See Wadhams and Stanley.)
Stannard, J. E., assignor of one-half to F. J. Millea, Springfield, Mass. Spring-wheel. No. 901,751; Oct. 20; Sp. p. 3549; Dr. pp. 718–19; Gaz. vol. 136; p. 1687.
Stapleford, S., and J. F. Wagner, Aberdeen, Wash., assignors of one-third to R. H. Robinson and N. W. Bush. Manufacture of steel. No. 902,010; Oct. 27; Sp. p. 4076; Gaz. vol. 136; p. 1800.
Staples, J. A., Newburgh, N. Y. Springwork. No. 902,011; Oct. 27; Sp. p. 4076; Dr. p. 827; Gaz. vol. 136; p. 1800.
Ste. Ame. de Blanchiment, Teintures, Impressions et Apprêts de St. Julien. (See Berthet and Berthonnet, assignors.)
Stebbins, A. H., Los Angeles, Cal. Ore-concentrator. No. 900,442; Oct. 6; Sp. p. 780; Dr. pp. 161–2; Gaz. vol. 136; p. 1195.
Stebbins, H. A., Malden, Mass., assignor to Sub-Target Gun Company, Saco, Me. Target-practice apparatus. No. 900,607; Oct. 6; Sp. p. 1150; Dr. pp. 235–6; Gaz. vol. 136; p. 1249.
Steel Gain Manufacturing Company. (See Humiston, J. M., assignor.)
Steele, H. H., Watertown, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 902,012; Oct. 27; Sp. p. 4078; Dr. p. 828; Gaz. vol. 136; p. 1801.
Steinberg, J., Pittsburg, Pa. Coffee-steeper. No. 900,128; Oct. 6; Sp. p. 126; Dr. p. 26; Gaz. vol. 136; p. 1092.
Steiner, A., assignor to Chemical Works, formerly Sandoz, Basel, Switzerland. Gallocyanin dye and making same. No. 901,667; Oct. 20; Sp. p. 3318; Gaz. vol. 136; p. 1653.
Steiriy, J. C. H., assignor to L. J. Roess, Oil City, Pa. Clothes-line holder. No. 900,608; Oct. 6; Sp. p. 1158; Dr. p. 236; Gaz. vol. 136; p. 1250.
Stem, E., Spokane, Wash. Rail-fastener. No. 901,658; Oct. 20; Sp. p. 3320; Dr. p. 682; Gaz. vol. 136; p. 1654.
Stephens, F. A., Dunkirk, N. Y. Automobile. No. 901,493; Oct. 20; Sp. p. 3007; Dr. pp. 613–14; Gaz. vol. 136; p. 1602.
Stephenson, B. S., Brooklyn, N. Y. Ear-trumpet. No. 900,226; Oct. 6; Sp. p. 316; Dr. pp. 64–5; Gaz. vol. 136; p. 1124.
Sternau & Company, S. (See Nelson, C., assignor.)
Sternau & Company, S. (See Voska and Nelson, assignors.)
Sternberg, E. M., Milwaukee, Wis. Transmission-gear. No. 900,792; Oct. 13; Sp. p. 1534; Dr. p. 312; Gaz. vol. 136; p. 1335.
Steuben, W. E., Visalia, Cal. Lawn-mower. No. 900,443; Oct. 6; Sp. p. 783; Dr. p. 162; Gaz. vol. 136; p. 1196.
Stevens, C. W., New York, N. Y. Wire hat-frame. No. 900,129; Oct. 6; Sp. p. 127; Dr. p. 26; Gaz. vol. 136; p. 1093.
Stevens, F. A., Providence, R. I. Making bifocal lenses. No. 901,659; Oct. 20; Sp. p. 3321; Dr. p. 682; Gaz. vol. 136; p. 1654.
Stevens, F. A. (See Hamilton, F., assignor.)
Stevens, F. A. (See Wilhelm, L., assignor.)
Stevens, F. P., assignor of one-half to J. A. Eddy, Denver, Colo. Fluid-controlling means. No. 902,264; Oct. 27; Sp. p. 4582; Dr. p. 930; Gaz. vol. 136; p. 1880.
Stevens, G. E., Lynn, Mass., assignor to General Electric Company. Arc-lamp. No. 900,793; Oct. 13; Sp. p. 1536; Dr. p. 312; Gaz. vol. 136; p. 1336.
Stevens, G. J., London, England, assignor, by mesne assignments, to American Attachment Company, Portland, Me. Combined presser-foot and guide for sewing-machines. No. 902,180; Oct. 27; Sp. p. 4414; Dr. p. 895; Gaz. vol. 136; p. 1854.
Stewart, J., Grand Rapids, Mich. Carding-machine. No. 901,045; Oct. 13; Sp. p. 2057; Dr. p. 418; Gaz. vol. 136; p. 1419.
Stewart, J. E. (See Stewart, T. S. and J. E.)
Stewart, S. T., Newark, N. J. Signaling system for railway-trains. No. 902,014; Oct. 27; Sp. p. 4084; Dr. p. 828; Gaz. vol. 136; p. 1801.
Stewart, T. S. and J. E., Saltsburg, Pa. Rotary sprinkler. No. 900,609; Oct. 6; Sp. p. 1160; Dr. p. 236; Gaz. vol. 136; p. 1250.

Stickle, F. K., New York, N. Y. Converting device for eyeglasses and spectacles. No. 900,444; Oct. 6; Sp. p. 785; Dr. p. 163; Gaz. vol. 136; p. 1196.
Stiff, H. C., Johnstown, Pa., assignor to Lorain Steel Company. Switch structure. No. 901,752; Oct. 20; Sp. p. 3551; Dr. p. 719; Gaz. vol. 136; p. 1687.
Stiles, E. W., Grand Rapids, Mich. Underwaist. No. 901,046; Oct. 13; Sp. p. 2059; Dr. p. 418; Gaz. vol. 136; p. 1419.
Stimpson, E. B., New York, N. Y., assignor to Edwin B. Stimpson Company. Garment-fastener. No. 900,445; Oct. 6; Sp. p. 793; Dr. p. 163; Gaz. vol. 136; p. 1196.
Stimpson, E. B., Brooklyn, N. Y., assignor to Edwin B. Stimpson Company. Tire-protective rivet. No. 902,015; Oct. 27; Sp. p. 4086; Dr. p. 829; Gaz. vol. 136; p. 1801.
Stocker, N. C., Cedar Rapids, Iowa. Horse-hitching device. No. 900,964; Oct. 13; Sp. p. 1906; Dr. p. 387; Gaz. vol. 136; p. 1392.
Stoffels, H. J., Norwood, Ohio. Guide-frame for gas-holders. No. 901,205; Oct. 13; Sp. p. 2346; Dr. p. 480; Gaz. vol. 136; p. 1469.
Stoffels, M. N., Medaryville, Ind. Door-fastener. No. 900,794; Oct. 13; Sp. p. 1537; Dr. p. 313; Gaz. vol. 136; p. 1336.
Stoffer, J. L., Homeworth, Ohio. Bolt-locking device. No. 901,563; Oct. 20; Sp. p. 3139; Dr. p. 641; Gaz. vol. 136; p. 1624.
Stolle and Kopke. (See Fritsche, F., assignor.)
Stone Telegraph and Telephone Company. (See Roos, O. C., assignor.)
Storck, L. (See Vogt and Storck.)
Storck, L., and J. H. Vogt, Stamford, Conn. Machine for finishing the packing of barrels. No. 901,753; Oct. 20; Sp. p. 3553; Dr. p. 719; Gaz. vol. 136; p. 1687.
Storey, A. A., Leicester, England. Game apparatus. No. 901,206; Oct. 13; Sp. p. 2347; Dr. p. 480; Gaz. vol. 136; p. 1469.
Stott, D. M., assignor of one-half to H. E. Argo, Chicago, Ill. Equalizer and separator for steam. No. 902,016; Oct. 27; Sp. p. 4087; Dr. p. 829; Gaz. vol. 136; p. 1802.
Stout, O. E., Ozark, Ill. Electric mail delivering and collecting machine. No. 901,847; Oct. 20; Sp. p. 3724; Dr. p. 757; Gaz. vol. 136; p. 1716.
Stout, R. P. (See Meigs and Stout.)
Stoutenburg, R. V. D., Hollis, N. Y. Hinge-clamp. No. 902,343; Oct. 27; Sp. p. 4772; Dr. p. 962; Gaz. vol. 136; p. 1908.
Stover, G. F. (See McIlvain and Stover.)
Stow, H. E., Windsor, N. Y. Pneumatic pad. No. 900,610; Oct. 6; Sp. p. 1161; Dr. p. 236; Gaz. vol. 136; p. 1251.
Stowe, F. F., Worcester, Mass. Electric-car truck. No. 902,017; Oct. 27; Sp. p. 4088; Dr. pp. 829–30; Gaz. vol. 136; p. 1802.
Strain, J. J., Christchurch, New Zealand. Hot-water-service attachment to the burners of gas heater stoves or to the gas-rings used for heating pots, irons, &c. No. 902,119; Oct. 27; Sp. p. 4288; Dr. p. 869; Gaz. vol. 136; p. 1834.
Strasburg, F. E., Rumford Falls, Me., assignor to Continental Paper Bag Company. Bunching and counting machine. No. 900,611; Oct. 6; Sp. p. 1162; Dr. p. 237; Gaz. vol. 136; p. 1251.
Strauss, E. A., Chicago, Ill. Safe or vault door. No. 901,047; Oct. 13; Sp. p. 2060; Dr. p. 419; Gaz. vol. 136; p. 1419.
Streator Metal Stamping Company. (See Halladay, L. P., assignor.)
Streich, F. (See Overkamp and Streich.)
Strickler, M., *et al.* (See Fish, J., assignor.)
Stringham, F., Manitou, Colo. Amalgamator. No. 900,965; Oct. 13; Sp. p. 1908; Dr. p. 388; Gaz. vol. 136; p. 1392.
Stromberg-Carlson Telephone Manufacturing Company. (See Babcock, G., assignor.)
Stromberg-Carlson Telephone Manufacturing Company. (See Birsfield, J. A., assignor.)
Stromberg-Carlson Telephone Manufacturing Company. (See Conner, M. S., assignor.)
Stromberg-Carlson Telephone Manufacturing Company. (See Davis, W. M., assignor.)
Stromberg-Carlson Telephone Manufacturing Company. (See Dunham, B. G., assignor.)
Stromberg-Carlson Telephone Manufacturing Company. (See Goldberg, J. S., assignor.)
Stromberg-Carlson Telephone Manufacturing Company. (See Hawkins, E. A., assignor.)
Strong, H. B., Cleveland, Ohio. Pile-driver. No. 902,120; Oct. 27; Sp. p. 4289; Dr. p. 869; Gaz. vol. 136; p. 1834.
Strong Machinery & Supply Co. (See Chase, D., assignor.)
Struble, J. B., Wilkinsburg, Pa. Lightning-arrester. No. 901,207; Oct. 13; Sp. p. 2348; Dr. p. 480; Gaz. vol. 136; p. 1469.
Stuart, H. R., Wheeling, W. Va. Apparatus for recording and reproducing by the telegraphone principle. No. 901,397; Oct. 20; Sp. p. 2783; Dr. p. 566; Gaz. vol. 136; p. 1570.
Stubbers, J., Covington, Ky., assignor to Incandescent Light & Stove Company, Cincinnati, Ohio. Incandescent-lamp fixture. No. 901,494; Oct. 20; Sp. p. 3010; Dr. p. 614; Gaz. vol. 136; p. 1602.
Stull, E. W., Norwood, Ohio, assignor to Allis-Chalmers Company. Controller. No. 900,612; Oct. 6; Sp. p. 1165; Dr. p. 237; Gaz. vol. 136; p. 1251.
Stumpf, J., Balz, near Vietz, Germany. Sliding window. No. 901,208; Oct. 13; Sp. p. 2350; Dr. p. 481; Gaz. vol. 136; p. 1470.
Sturdevant, C. R. (See Daniels and Sturdevant.)
Sturtevant, O. S., assignor to Adrian Wire Fence Co., Adrian, Mich. Register. No. 902,022; Oct. 27; Sp. p. 4102; Dr. p. 831; Gaz. vol. 136; p. 1804.
Stussy, H. H., Sioux City, Iowa. Milk purifying and homogenizing machine. No. 900,446; Oct. 6; Sp. p. 795; Dr. pp. 163–4; Gaz. vol. 136; p. 1197.
Stutsman, A. A., Jacksonville, Ill. Umbrella-holder. No. 901,495; Oct. 20; Sp. p. 3011; Dr. p. 615; Gaz. vol. 136; p. 1603.
Sub-Target Gun Company. (See Stebbins, H. A., assignor.)
Suiter, E. C., Olympia, Wash. Electric fixture. No. 902,121; Oct. 27; Sp. p. 4290; Dr. p. 869; Gaz. vol. 136; p. 1835.
Sullivan, J. H., Grand Rapids, Mich. Fastening device for molds. No. 901,209; Oct. 13; Sp. p. 2352; Dr. p. 481; Gaz. vol. 136; p. 1470.
Sullivan Machinery Company. (See Gilman, G. H., assignor.)
Sullivan Machinery Company. (See Nelson, S. T., assignor.)
Sulman, E. A. (See Sulman, H. L. and E. A.)
Sulman, H. L. and E. A., assignors to Minerals Separation, Limited, London, England. Ore-concentrator. No. 902,018; Oct. 27; Sp. p. 4092; Dr. p. 830; Gaz. vol. 136; p. 1802.
Sulzberger, K., Charlottenburg, Germany, assignor to General Electric Company. Dynamo-electric machine. No. 902,019; Oct. 27; Sp. p. 4095; Dr. p. 830; Gaz. vol. 136; p. 1803.
Sulzberger, K., Charlottenburg, Germany, assignor to General Electric Company. Dynamo-electric machine. No. 902,020; Oct. 27; Sp. p. 4097; Dr. p. 831; Gaz. vol. 136; p. 1803.
Sulzberger, N., New York, N. Y. Making azo dyes containing fatty acid radicals. No. 902,021; Oct. 27; Sp. p. 4100; Gaz. vol. 136; p. 1804.
Sulzer, E. E., Philadelphia, Pa. Tooth-cleaner. No. 902,122; Oct. 27; Sp. p. 4292; Dr. p. 870; Gaz. vol. 136; p. 1835.
Sulzer, G., assignor to Buffalo Forge Company, Buffalo, N. Y. Centrifugal pump. No. 900,966; Oct. 13; Sp. p. 1910; Dr. pp. 388–9; Gaz. vol. 136; p. 1393.
Summerbell, W. J., Chicago, Ill. Window. No. 900,893; Oct. 13; Sp. p. 1752; Dr. pp. 354–5; Gaz. vol. 136; p. 1369.
Supplementary Spiral Spring Company. (See Young, W., assignor.)
Surrell, J. R., New York, N. Y. Boiler-furnace. No. 902,265; Oct. 27; Sp. p. 4586; Dr. pp. 930–1; Gaz. vol. 136; p. 1881.
Sutton, A. M., Allegheny, Pa. Skirt-marker. No. 901,496; Oct. 20; Sp. p. 3012; Dr. p. 615; Gaz. vol. 136; p. 1603.
Suva, J., Bryant, S. D. Rocking-chair. No. 901,848; Oct. 20; Sp. p. 3725; Dr. p. 758; Gaz. vol. 136; p. 1716.
Svenson, J. A., Pittsburg, Pa. Mixing apparatus. No. 900,227; Oct. 6; Sp. p. 317; Dr. p. 65; Gaz. vol. 136; p. 1124.
Swangren, E. V., Maywood, Ill., assignor to American Can Company, New York, N. Y. Can-tester. No. 900,324; Oct. 6; Sp. p. 539; Dr. p. 112; Gaz. vol. 136; p. 1156.
Sweeney, B. F., Neosho, Mo. Air self-coupling. No. 901,660; Oct. 20; Sp. p. 3323; Dr. p. 682; Gaz. vol. 136; p. 1654.
Sweetman, G. A., Bickford, Okla. Tanning-ooze. No. 901,564; Oct. 20; Sp. p. 3140; Gaz. vol. 136; p. 1625.
Sweetmeat Automatic Delivery Company. (See Savage, A. C., assignor.)
Sweigart, A. F., South Hampton, Pa. Rail-joint fastening. No. 900,325; Oct. 6; Sp. p. 541; Dr. p. 112; Gaz. vol. 136; p. 1157.
Szek, J. T., London, England. Carbon electrode. No. 901,497; Oct. 20; Sp. p. 3013; Dr. p. 615; Gaz. vol. 136; p. 1603.
Tabler, F. C., assignor of fifty-one one-hundredths to G. V. R. Mechin, St. Louis, Mo. Antiseptic attachment for telephones. No. 900,447; Oct. 6; Sp. p. 799; Dr. p. 164; Gaz. vol. 136; p. 1197.
Tackaberry, W. J. (See Shaw, D. P., assignor.)
Taft, S. E., South Framingham, Mass., assignor to American Lacing Hook Co. Lacing-hook-setting machine. No. 900,795; Oct. 13; Sp. p. 1539; Dr. p. 313; Gaz. vol. 136; p. 1337.
Taggart, E. E., New York, N. Y. Acetylene-generator. No. 902,023; Oct. 27; Sp. p. 4103; Dr. p. 831; Gaz. vol. 136; p. 1804.
Talas, L., New York, N. Y. Lock-alarm. No. 900,326; Oct. 6; Sp. p. 542; Dr. p. 112; Gaz. vol. 136; p. 1157.
Taliaferro, E. E., Colorado Springs, Colo. Blacking-machine. No. 900,448; Oct. 6; Sp. p. 803; Dr. pp. 164–7; Gaz. vol. 136; p. 1198.
Talley, H. B., Farmland, Ind. Drinking-fount for live stock. No. 901,048; Oct. 13; Sp. p. 2064; Dr. p. 419; Gaz. vol. 136; p. 1420.
Talmadge, C. M., and P. M. Veibell, Hillman, Wash. Snatch-block. No. 900,894; Oct. 13; Sp. p. 1754; Dr. p. 355; Gaz. vol. 136; p. 1369.
Tallman, H. M., Shelbyville, Ill., assignor to Admiral Hay Press Co., Kansas City, Mo. Hay-baling press. No. 901,849; Oct. 20; Sp. p. 3726; Dr. p. 758; Gaz. vol. 136; p. 1716.
Talton, O., Krebs, Okla. Meat chopping and pounding machine. No. 901,267; Oct. 13; Sp. p. 2464; Dr. pp. 505–6; Gaz. vol. 136; p. 1489.
Tambling, F. C., Seattle, Wash., assignor of one-third to E. G. Smiley, Stevens Point, Wis. Nut-lock. No. 900,796; Oct. 13; Sp. p. 1543; Dr. p. 313; Gaz. vol. 136; p. 1337.
Tarrant, W. G., Versailles, Ill. Animal and fowl catcher. No. 901,210; Oct. 13; Sp. p. 2354; Dr. p. 481; Gaz. vol. 136; p. 1471.
Tatlow, R. H. (See Birdsall, C. A., assignor.)

Tatum, J. W., Philadelphia, Pa. Stand for calendars. No. 901,754; Oct. 20; Sp. p. 3554; Dr. p. 719; Gaz. vol. 136; p. 1688.
Taylor, D. W., Washington, D. C. Screw-propeller. No. 900,797; Oct. 13; Sp. p. 1543; Dr. p. 314; Gaz. vol. 136; p. 1338.
Taylor, F. W., Ashland, Va. Pneumatic tire. No. 901,211; Oct. 13; Sp. p. 2354; Dr. p. 482; Gaz. vol. 136; p. 1471.
Taylor, H., Philadelphia, assignor of one-half to S. W. Chiles, South Bethlehem, Pa. Calendar. No. 900,228; Oct. 6; Sp. p. 319; Dr. p. 66; Gaz. vol. 136; p. 1125.
Taylor, H. B., assignor of one-half to J. Taylor, Philadelphia, Pa. Circular-knitting machine. No. 901,924; Oct. 20; Sp. p. 3866; Dr. p. 788; Gaz. vol. 136; p. 1741.
Taylor, J. (See Taylor, H. B., assignor.)
Teare, J. T., Stillwater, Minn. Log-fishing grapple. No. 902,344; Oct. 27; Sp. p. 4774; Dr. p. 963; Gaz. vol. 136; p. 1908.
Telke, G., Tangerhütte, Germany. Toothed-wheel-molding machine. No. 900,327; Oct. 6; Sp. p. 544; Dr. p. 113; Gaz. vol. 136; p. 1157.
Templeton, A. W., Tornado, W. Va. Wire-stretcher. No. 900,229; Oct. 6; Sp. p. 321; Dr. p. 66; Gaz. vol. 136; p. 1125.
Templeton, W. G., Colorado Springs, Colo. Scale. No. 900,895; Oct. 13; Sp. p. 1756; Dr. pp. 355–6; Gaz. vol. 136; p. 1370.
Templeton, W. G., Colorado Springs, Colo. Scale. No. 900,896; Oct. 13; Sp. p. 1757; Dr. p. 357; Gaz. vol. 136; p. 1370.
Templeton, W. G., Colorado Springs, Colo. Scale. No. 902,266; Oct. 27; Sp. p. 4588; Dr. p. 932; Gaz. vol. 136; p. 1881.
Tenney, C. I., Mason City, Iowa. Boiler for gas-making systems. No. 900,230; Oct. 6; Sp. p. 322; Dr. p. 66; Gaz. vol. 136; p. 1125.
Tenney, C. I., Mason City, Iowa. Gas-generator. No. 900,231; Oct. 6; Sp. p. 323; Dr. p. 67; Gaz. vol. 136; p. 1125.
Terrisse, H., assignor to Société Anonyme de la Thyoleine, Vernier, near Geneva, Switzerland. Insecticide. No. 901,268; Oct. 13; Sp. p. 2466; Gaz. vol. 136; p. 1489.
Terry, Tench & Proctor Tunneling Machine Company. (See Proctor, O. S., assignor).
Tetreault, C. E., Newport, Vt. Self-propelled sleigh. No. 902,345; Oct. 27; Sp. p. 4775; Dr. pp. 963–4; Gaz. vol. 136; p. 1909.
Thiede, C. F. (See Byers and Thiede.)
Thiedemann, H. and J. H., Hickman, Nebr. Draft-evener. No. 900,897; Oct. 13; Sp. p. 1759; Dr. p. 357; Gaz. vol. 136; p. 1370.
Thiedemann, J. H. (See Thiedemann, H. and J. H.)
Thiellet, M. C., and M. J. Denard, Lyon, France. Electric accumulator. No. 900,898; Oct. 13; Sp. p. 1760; Dr. p. 357; Gaz. vol. 136; p. 1371.
Thomas Andrews Manufacturing Company. (See Andrews, T., assignor.)
Thomas, G. J., New York, N. Y. Telephone-receiver holder. No. 901,850; Oct. 20; Sp. p. 3728; Dr. p. 758; Gaz. vol. 136; p. 1716.
Thomas, P. H., Pittsburg, Pa., assignor to Cooper Hewitt Electric Company. System of electric distribution. No. 901,306; Oct. 13; Sp. p. 2551; Dr. p. 525; Gaz. vol. 136; p. 1501.
Thomas, R. C., New York, N. Y. Garment-hanger. No. 902,346; Oct. 27; Sp. p. 4778; Dr. p. 964; Gaz. vol. 136; p. 1909.
Thompson, A. O., assignor of one-half to W. C. Huff, Wolverton, Minn. Trap. No. 901,851; Oct. 20; Sp. p. 3730; Dr. p. 759; Gaz. vol. 136; p. 1717.
Thompson, C. L. (See Peterson, N., assignor.)
Thompson, G., New York, N. Y. Moth-ball holder. No. 900,449; Oct. 6; Sp. p. 812; Dr. p. 167; Gaz. vol. 136; p. 1198.
Thompson, H. A., Cambridge, Mass. Clamp. No. 901,925; Oct. 20; Sp. p. 3868; Dr. pp. 788–9; Gaz. vol. 136; p. 1742.
Thompson, L. W., Waynesburg, Pa. Ladder. No. 900,232; Oct. 6; Sp. p. 325; Dr. pp. 67–8; Gaz. vol. 136; p. 1126.
Thomson, E., Swampscott, Mass., assignor to General Electric Company. Condenser. No. 901,498; Oct. 20; Sp. p. 3013; Dr. p. 615; Gaz. vol. 136; p. 1603.
Thomson, E., Swampscott, Mass., assignor to General Electric Company. Electric heater. No. 902,024; Oct. 27; Sp. p. 4106; Dr. p. 832; Gaz. vol. 136; p. 1805.
Thomson, H. H., Lawrence, Kans. Combined ladder, step-ladder, and scaffolding. No. 901,565; Oct. 20; Sp. p. 3141; Dr. pp. 641–2; Gaz. vol. 136; p. 1625.
Thornton, S. M., Billings, Mont. Beet-unloader. No. 901,852; Oct. 20; Sp. p. 3731; Dr. p. 759; Gaz. vol. 136; p. 1717.
Thurston, F. A., Chicago, Ill. Sparking device for gas-engines and the like. No. 900,798; Oct. 13; Sp. p. 1546; Dr. p. 315; Gaz. vol. 136; p. 1338.
Tibbils, G. (See Burgess, C., assignor.)
Tickner, L. C. (See Tickner, W. D. and L. C.)
Tickner, W. D. and L. C., assignors to C. M. Crowell, Blanchardville, Wis. Automatic circuit-closer for electric-lamp holders. No. 900,613; Oct. 6; Sp. p. 1167; Dr. p. 238; Gaz. vol. 136; p. 1251.
Tideman, H., Menominee, Mich. Telephone hook-switch. No. 901,212; Oct. 13; Sp. p. 2355; Dr. p. 482; Gaz. vol. 136; p. 1471.
Tideman, H., Menominee, Mich. Telephone hook-switch. No. 901,213; Oct. 13; Sp. p. 2356; Dr. p. 482; Gaz. vol. 136; p. 1471.
Tideman, H., Menominee, Mich. Telephone hook-switch. No. 901,214; Oct. 13; Sp. p. 2357; Dr. p. 482; Gaz. vol. 136; p. 1471.
Tideman, H., Menominee, Mich. Telephone-ringer. No. 901,215; Oct. 13; Sp. p. 2358; Dr. p. 483; Gaz. vol. 136; p. 1471.
Tideman, H., Menominee, Mich. Telephone-ringer. No. 901,216; Oct. 13; Sp. p. 2359; Dr. p. 483; Gaz. vol. 136; p. 1472.
Tideman, H., Menominee, Mich. Telephone-ringer. No. 901,269; Oct. 13; Sp. p. 2467; Dr. p. 506; Gaz. vol. 136; p. 1489.
Tidow, H., New York, N. Y. Cooking utensil. No. 902,181; Oct. 27; Sp. p. 4416; Dr. p. 895; Gaz. vol. 136; p. 1854.
Tiepolt, P., Cologne-Lindenthal, Germany. Ladder and step. No. 901,755; Oct. 20; Sp. p. 3555; Dr. p. 720; Gaz. vol. 136; p. 1688.
Tillinghast, B. C., Philadelphia, Pa. Vending carton or package. No. 902,347; Oct. 27; Sp. p. 4779; Dr. p. 964; Gaz. vol. 136; p. 1909.
Tillinghast, W. E., Worcester, Mass. Vacuum-generating apparatus for steam-heating systems. No. 900,233; Oct. 6; Sp. p. 326; Dr. p. 68; Gaz. vol. 136; p. 1126.
Tillotson, H. T., Chicago, Ill. Vehicle spring structure and frame. No. 900,234; Oct. 6; Sp. p. 329; Dr. pp. 68–9; Gaz. vol. 136; p. 1127.
Tillson, W., Quincy, Ill., assignor, by mesne assignments, to West Disinfecting Company. Soap-powdering machine. No. 900,967; Oct. 13; Sp. p. 1915; Dr. p. 389; Gaz. vol. 136; p. 1393.
Tilton, A. M., Brookiyn, N. Y. Chain wrench. No. 902,025; Oct. 27; Sp. p. 4108; Dr. p. 832; Gaz. vol. 136; p. 1805.
Timochowitsch, S., Moscow, Russia. Ventilating system for railway-carriages and the like. No. 900,614; Oct. 6; Sp. p. 1168; Dr. p. 238; Gaz. vol. 136; p. 1252.
Tingley, S. L. (See Reid, J. H., assignor.)
Todd, H., Toronto, Ontario, Canada. Door and gate hanger. No. 902,348; Oct. 27; Sp. p. 4781; Dr. p. 965; Gaz. vol. 136; p. 1910.
Toepfer, H., assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany Fixing colors. No. 900,130; Oct. 6; Sp. p. 128; Gaz. vol. 136; p. 1093.
Toledo Machine and Tool Company. (See Lange, P. M. H., assignor.)
Tolman, C. P., New York, N. Y., assignor, by mesne assignments, to Roteng Manufacturing Company. Combined motor and compressor. No. 901,499; Oct. 20; Sp. p. 3015; Dr. p. 616; Gaz. vol. 136; p. 1604.
Tomkies, A. G., Westport, assignor of one-half to W. E. Reynolds, Greymouth, New Zealand. Belt-fastener. No. 900,615; Oct. 6; Sp. p. 1170; Dr. pp. 238–9; Gaz. vol. 136; p. 1252.
Tomlinson, W. H., Chicago, Ill. Apparatus for turning doughnuts and the like. No. 900,235; Oct. 6; Sp. p. 331; Dr. p. 69; Gaz. vol. 136; p. 1127.
Tommins, V. P., Hoboken, N. J. Fern-dish or display-receptacle. No. 901,661; Oct. 20; Sp. p. 3323; Dr. p. 682; Gaz. vol. 136; p. 1654.
Tonlnetti, V., Milan, Italy. Filter. No. 902,349; Oct. 27; Sp. p. 4784; Dr. p. 965; Gaz. vol. 136; p. 1910.
Tornkvist, G. A., Minneapolis, Minn. Bed-spring frame. No. 900,799; Oct. 13; Sp. p. 1548; Dr. p. 315; Gaz. vol. 136; p. 1338.
Torpey, J. W., Louisville, Ky. Switch stand and lock. No. 900,131; Oct. 6; Sp. p. 128; Dr. p. 27; Gaz. vol. 136; p. 1093.
Torris Wold & Company. (See Lyche and Odquist, assignors.)
Torris Wold & Company. (See Odquist, V., assignor.)
Torris Wold & Company. (See Odquist and Lyche, assignors.)
Tothill, H. H., Lockport, N. Y. Hitching-weight holder. No. 902,267; Oct. 27; Sp. p. 4590; Dr. p. 933; Gaz. vol. 136; p. 1882.
Touya, J. B., Jr., Tarbes, France. Centrifugal disintegrator. No. 901,217; Oct. 13; Sp. p. 2360; Dr. p. 483; Gaz. vol. 136; p. 1472.
Tovey, M. K., Anacostia, D. C. Device for making Marcel waves. No. 901,662; Oct. 20; Sp. p. 3325; Dr. p. 683; Gaz. vol. 136; p. 1655.
Tower, C. B., New Rochelle, N. Y. Needle and thread case. No. 900,236; Oct. 6; Sp. p. 333; Dr. p. 69; Gaz. vol. 136; p. 1128.
Tower, D. W., Grand Rapids, Mich. Latch. No. 900,800; Oct. 13; Sp. p. 1549; Dr. p. 315; Gaz. vol. 136; p. 1338.
Townsend, J. F. (See Ingoldsby and Townsend.)
Townsend, J. F., Pittsburg, Pa. Car-stake. No. 900,899; Oct. 13; Sp. p. 1762; Dr. p. 358; Gaz. vol. 136; p. 1371.
Toy, N., Weir, Kans. Automatic air-hose coupling. No. 900,132; Oct. 6; Sp. p. 129; Dr. p. 27; Gaz. vol. 136; p. 1093.
Trease, C. E., Valley Springs, Ark. Harrow. No. 900,133; Oct. 6; Sp. p. 131; Dr. p. 27; Gaz. vol. 136; p. 1093.
Trent, S. V., Salt Lake City, Utah. Elevator. No. 900,237; Oct. 6; Sp. p. 335; Dr. pp. 69–70; Gaz. vol. 136; p. 1128.
Triepel, W., Berlin, Germany. Producing pictures and photographic-printing plates. No. 901,218; Oct. 13; Sp. p. 2362; Gaz. vol. 136; p. 1472.
Triumph Manufacturing Company. (See Overkamp, C. H., assignor.)
Triumph Manufacturing Company. (See Overkamp and Streich, assignors.)
Triumph Voting Machine Company. (See Abbott, C. C., assignor.)
Trivett and Company, L. O. (See Trivett and Randall, assignors.)
Trivett, L. O., Nottingham, and F. Randall, Beeston, assignors to L. O. Trivett and Company, Limited, Nottingham, England. Chenille-spotting machine. No. 900,616; Oct. 6; Sp. p. 1171; Dr. p. 239; Gaz. vol. 136; p. 1252.
Trompeter, G., near Horton, Kans. Harrow attachment for cultivators. No. 902,123; Oct. 27; Sp. p. 4292; Dr. p. 870; Gaz. vol. 136; p. 1835.

Trotter, J. E., and H. A. Crevier, Ste. Anne de Bellevue, Quebec, Canada. Stock and die. No. 900,617; Oct. 6; Sp. p. 1174; Dr. p. 240; Gaz. vol. 136; p. 1253.
Tubeless Iron Company. (See Russell, H. W., assignor.)
Tucker, B. W., Newark, N. J., assignor to American Tobacco Company, New York, N. Y. Mechanism for feeding conical tubes. No. 900,900; Oct. 13; Sp. p. 1763; Dr. p. 358; Gaz. vol. 136; p. 1371.
Tucker, J. Z. and L. V., St. Louis, Mo. Telegraph-key. No. 900,238; Oct. 6; Sp. p. 336; Dr. p. 70; Gaz. vol. 136; p. 1128.
Tucker, L. V. (See Tucker, J. Z. and L. V.)
Tuggle, G. S., Braymer, Mo. Replanting attachment for cultivators. No. 901,566; Oct. 20; Sp. p. 3144; Dr. p. 642; Gaz. vol. 136; p. 1625.
Tully, J., Chicago, Ill. Making artificial variegated stone veneer. No. 900,801; Oct. 13; Sp. p. 1550; Gaz. vol. 136; p. 1339.
Tuor, J. B., St. Paul, Minn. Fluid-pressure distributer. No. 901,049; Oct. 13; Sp. p. 2065; Dr. p. 419; Gaz. vol. 136; p. 1420.
Turnbaugh, D. H., Altoona, Pa. Rail-fastener. No. 901,128; Oct. 13; Sp. p. 2213; Dr. pp. 449–50; Gaz. vol. 136; p. 1444.
Turner, G. A., New Orleans, La. Water-cooler. No. 901,663; Oct. 20; Sp. p. 3326; Dr. p. 683; Gaz. vol. 136; p. 1655.
Turner, L. R., Long Pine, Nebr. Marker attachment. No. 901,853; Oct. 20; Sp. p. 3734; Dr. pp. 759–60; Gaz. vol. 136; p. 1717.
Turner, W. L. (See Landgraf and Turner.)
Turner, W. V., Wilkinsburg, assignor to Westinghouse Air Brake Company, Pittsburg, Pa. High-speed-reducing valve for air-brakes. No. 902,182; Oct. 27; Sp. p. 4417; Dr. p. 895; Gaz. vol. 136; p. 1855.
Turner, W. V., Wilkinsburg, assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Electropneumatic brake. No. 902,184; Oct. 27; Sp. p. 4424; Dr. p. 896; Gaz. vol. 136; p. 1855.
Turner, W. V., Edgewood, assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Duplex brake-cylinder. No. 902,185; Oct. 27; Sp. p. 4426; Dr. p. 896; Gaz. vol. 136; p. 1856.
Turner, W. V., Wilkinsburg, and J. S. Custer, assignors to Westinghouse Air Brake Company, Pittsburg, Pa. High-speed-reducing valve for air-brakes. No. 902,183; Oct. 27; Sp. p. 4420; Dr. p. 896; Gaz. vol. 136; p. 1855.
Turpin, C., assignor of one-fourth to O. Hepworth, Scappoose, Oreg. Logging-tackle. No. 902,510; Oct. 27; Sp. p. 5138; Dr. p. 1041; Gaz. vol. 136; p. 1964.
Tuttle, H. A., assignor to Evans Stamping and Plating Co., Taunton, Mass. Reverse-gearing. No. 901,664; Oct. 20; Sp. p. 3328; Dr. pp. 683–4; Gaz. vol. 136; p. 1655.
Tuttle, H. A., assignor to Evans Stamping & Plating Company, Taunton, Mass. Clutch mechanism for reverse-gearing. No. 901,854; Oct. 20; Sp. p. 3737; Dr. p. 760; Gaz. vol. 136; p. 1718.
Tuttle, L. S., Eastport, N. Y. Engine-starter. No. 902,350; Oct. 27; Sp. p 4785; Dr. pp. 965–6; Gaz. vol. 136; p. 1911.
Tuttle, W. S., Brooklyn, N. Y. Hot-air register. No. 901,756; Oct. 20; Sp. p. 3557; Dr. pp. 720–1; Gaz. vol. 136; p. 1688.
Tyden, E., Hastings, Mich. Extension-table-locking device. No. 900,239; Oct. 6; Sp. p. 337; Dr. pp. 70–1; Gaz. vol. 136; p. 1128.
Tyler, J. H (See Bradburn, Tyler, and Low.)
Tyden, E. (See Burton, C. S., assignor.)
Uhle, E. J. (See Bell and Uhle.)
Uhlenhaut, F. (See Walsh, M. J., assignor.)
Ullery, F. B. (See Shepherd, J., assignor.)
Underwood Typewriter Company. (See McLaughlin, J. C., assignor.)
Union Special Machine Company. (See Scott, G., assignor.)
Union Special Sewing Machine Co. (See Durand, E. F., assignor.)
Union Special Sewing Machine Company. (See Hayes and Berger, assignors.)
Union Switch and Signal Company. (See Cormick, J. H., assignor.)
Union Switch & Signal Company. (See Holliday, J. S., assignor.)
Union Switch & Signal Company. (See McCarthy, D. J., assignor.)
Union Switch and Signal Company. (See Wilson, A. G., assignor.)
Union Typewriter Company (See Barney, E. E., assignor.)
Union Typewriter Company. (See Labofish, C. S., assignor.)
Union Typewriter Company. (See Steele, H. H., assignor.)
Unit Steel Cabinet Company. (See Walton, S. T., assignor.)
United Copper Foundry Company. (See Cole, A. L., assignor.)
United Engineering & Foundry Company. (See Ellis, F. I., assignor.)
United Engineering & Foundry Company. (See McIlvried, E. J., assignor.)
United Shoe Machinery Company. (See Eaton and Goddu, assignors.)
United Shoe Machinery Company. (See Haradon, M. E., assignor.)
United Shoe Machinery Company. (See Keyes, E. L., assignor.)
United Shoe Machinery Company. (See Webster, E. A., assignor.)
United Shoe Machinery Company. (See Winkley, E. E., assignor.)
United States Roller Bearing Company. (See Perkins, J. A., assignor.)
United Wireless Telegraph Company. (See Babcock, C. D., assignor.)
Universal Caster & Foundry Company. (See Neuberth, G. E., assignor.)
Utard, E., and A. Gimonet, assignors to H. & G. Klotz & Co., New York, N. Y. Machine for drying bottles. No. 901,757; Oct. 20; Sp. p. 3561; Dr. pp. 721–2; Gaz. vol. 136; p. 1689.
Utschig, W. G., San Jose, Cal. Device for extracting matter from inflamed tissues. No. 901,567; Oct. 20; Sp. p. 3145; Dr. p. 642; Gaz. vol. 136; p. 1626.
Vail, J. M., Bryan, Ohio. Rail-clamp. No. 900,228; Oct. 6; Sp. p. 546; Dr. p. 113; Gaz. vol. 136; p. 1157.
Valentine, G., Chicago, Ill. Closure for jars and other receptacles. No. 900,240; Oct. 6; Sp. p. 343; Dr. p. 72; Gaz. vol. 136; p. 1129.
Valentine, G., Chicago, Ill. Spring-catch box-fastener. No. 900,241; Oct. 6; Sp. p. 344; Dr. p. 72; Gaz. vol. 136; p. 1129.
Valentine, N. F. Kansas City, Mo. Apparatus for transferring mail-bags from a moving train to a station. No. 901,219; Oct. 13; Sp. p. 2364; Dr. p. 484; Gaz. vol. 136; p. 1472.
Valley Iron Works. (See Cameron, P., assignor.)
Van Berkel, W. A., Rotterdam, Netherlands. Meat-slicing machine. No. 901,855; Oct. 20; Sp. p. 3741; Dr. pp. 760–1; Gaz. vol. 136; p. 1719.
Van Erka, A. C., Chicago, Ill. Window-shade carrier. No. 901,398; Oct. 20; Sp. p. 2785; Dr. p. 566; Gaz. vol. 136; p. 1570.
Van Horn, J. F., Philadelphia, Pa. Folding stand. No. 901,129; Oct. 13; Sp. p. 2214; Dr. p. 450; Gaz. vol. 136; p. 1444.
Van Valkenburg, L. D., Holyoke, Mass. Garment-button. No. 900,134; Oct. 6; Sp. p. 132; Dr. p. 28; Gaz. vol. 136; p. 1094.
Van Vliet, H. B., Blackduck, Minn. Runner for children's carriages. No. 901,500; Oct. 20; Sp. p. 3019; Dr. p. 617; Gaz. vol. 136; p. 1604.
Van Wagner, E. B., Syracuse, N. Y. Casting apparatus. No. 900,802; Oct. 13; Sp. p. 1551; Dr. pp. 315–16; Gaz. vol. 136; p. 1339.
Van Wagner, E. B., Syracuse, N. Y. Casting apparatus. No. 900 803; Oct. 13; Sp. p. 1556; Dr. p. 316; Gaz. vol. 136; p. 1340.
Van Winkle, A., assignor to Hanson & Van Winkle Company, Newark, N. J. Electrolvte. No. 901,758; Oct. 20; Sp. p. 3564; Gaz. vol. 136; p. 1689.
Van Winkle, A., and J. T. Daniels, Newark, N. J., assignors to Hanson & Van Winkle Company. Electroplating apparatus. No. 901,399; Oct. 20; Sp. p. 2786; Dr. pp. 567–8; Gaz. vol. 136; p. 1570.
Van Wyhe, J. W., Hawarden, Iowa. Corn-crib. No. 900,618; Oct. 6; Sp. p. 1175; Dr. p. 240; Gaz. vol. 136; p. 1253.
Vance, C. E., Pittsburg, Pa. Steam-trap. No. 900,329; Oct. 6; Sp. p. 547; Dr. p. 113; Gaz. vol. 136; p. 1158.
Vaughn, M. E., Plainfield, Ind. Variable-speed driving mechanism. No. 900,450; Oct. 6; Sp. p. 813; Dr. p. 167; Gaz. vol. 136; p. 1198.
Veibell, P. M. (See Talmadge and Veibell.)
Venner, W. N., Brockley, England. Apparatus for machining helical surfaces, such as those of propellers and propeller-blades. No. 900,804; Oct. 13; Sp. p. 1563; Dr. pp. 316–17; Gaz. vol. 136; p. 1341.
"Vereinigte Chemische Werke Actiengesellschaft." (See Lüdecke, K., assignor.)
Verplanck, H. M., assignor to Lansing Wheelbarrow Company, Lansing, Mich. Wheel. No. 901,568; Oct. 20; Sp. p. 3146; Dr. p. 643; Gaz. vol. 136; p. 1626.
Vest, E. W., Mulberry Grove, Ill. Latch. No. 901,501; Oct. 20; Sp. p. 3021; Dr. p. 617; Gaz. vol. 136; p. 1604.
Victor Talking Machine Company. (See Douglass, L. F., assignor.)
Vincent, A., Brooklyn, N. Y.. Pan-handle. No. 901,400; Oct. 20; Sp. p. 2791; Dr. p. 568; Gaz. vol. 136; p. 1571.
Virginia Laboratory Company. (See Seward and Kilgelgen, assignors.)
Vivian, A. W. H., assignor to Composite Fuel Syndicate Limited, London, England. Manufacture of artificial fuel. No. 900,619; Oct. 6; Sp. p. 1177; Gaz. vol. 136; p. 1253.
Vogel, E. W., assignor to Railroad Supply Company, Chicago, Ill. Rail-bond. No. 902,026; Oct. 27; Sp. p. 4111; Dr. p. 832; Gaz. vol. 136; p. 1805.
Vogel, F. F., Clinton, Tenn. Machine for unraveling textile fabrics. No. 900,451; Oct. 6; Sp. p. 817; Dr. p. 168; Gaz. vol. 136; p. 1198.
Voight, H. G., New Britain, Conn. Door-holder. No. 900,621; Oct. 6; Sp. p. 1181; Dr. p. 241; Gaz. vol. 136; p. 1254.
Voight, H. G., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn. Lock attachment. No. 900,620; Oct. 6; Sp. p. 1179; Dr. p. 241; Gaz. vol. 136; p. 1253.
Volkmann, P., assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Azo dye. No. 902,186; Oct. 27; Sp. p. 4428; Gaz. vol. 136; p. 1856.
Völler, K., assignor to Rheinische Metallwaren-und Maschinenfabrik, Dusseldorf-Derendorf Germany. Foundation for guns with recoiling barrels. No. 901,401; Oct. 20; Sp. p. 2792; Dr. pp. 568–9; Gaz. vol. 136; p. 1571.

Vollmer, J., Berlin, Germany, assignor to General Electric Company. Lubricator. No. 901,502; Oct. 20; Sp. p. 3022; Dr. p. 617; Gaz. vol. 136; p. 1605.
Vollmer, M., assignor to E. A. Schwerdtfeger & Co., Berlin, Germany. Illustrated post-card. No. 900,135; Oct. 6; Sp. p. 133; Dr. p. 28; Gaz. vol. 136; p. 1094.
Volunteer Disc Plow Co. (See Sholar and Pace, assignors.)
Voris, C. D., Crawfordsville, Ind. Corrugated-metal culvert. No. 901,569; Oct. 20; Sp. p. 3147; Dr. p. 643; Gaz. vol. 136; p. 1626.
Voris, C. D., Crawfordsville, Ind. Reinforced cement culvert. No. 902,027; Oct. 27; Sp. p. 4113; Dr. p. 832; Gaz. vol. 136; p. 1806.
Vose, S. F., and C. R. Harryman, Shawnee, Okla. Plow. No. 901,220; Oct. 13; Sp. p. 2368; Dr. p. 484; Gaz. vol. 136; p. 1473.
Voshell, D., Wilmington, Del. Multibladed garden implement. No. 902,124; Oct. 27; Sp. p. 4294; Dr. p. 870; Gaz. vol. 136; p. 1835.
Voska, J., and G. Nelson, Brooklyn, assignors to S. Sternau & Company, New York, N. Y. Ash-receiver. No. 902,511; Oct. 27; Sp. p. 5139; Dr. p. 1041; Gaz. vol. 136; p. 1965.
W. P. Taylor Company. (See Gibney, J. W., assignor.)
Wachter, H. H., Melrose, Wis. Plow-colter. No. 901,759; Oct. 20; Sp. p. 3565; Dr. p. 722; Gaz. vol. 136; p. 1689.
Wadhams, A. J., Riverton, N. J., and R. C. Stanley, New Brighton, N. Y., assignors to International Nickel Company, Bayonne, N. J. Separating metals from matte. No. 900,452; Oct. 6; Sp. p. 818; Gaz. vol. 136; p. 1199.
Wadhams, A. J., Riverton, N. J., and R. C. Stanley, New Brighton, N. Y., assignors to International Nickel Company, Bayonne, N. J. Separating metals from matte. No. 900,453; Oct. 6; Sp. p. 820; Gaz. vol. 136; p. 1199.
Wadhams, A. J., Riverton, N. J., and R. C. Stanley, New Brighton, N. Y., assignors to International Nickel Company, Bayonne, N. J. Separating metals from speiss. No. 900,454; Oct. 6; Sp. p. 821; Gaz. vol. 136; p. 1199.
Wagenet, H. W., Oakland, Cal. Sweat-shield for hats. No. 900,330; Oct. 6; Sp. p. 549; Dr. p. 114; Gaz. vol. 136; p. 1158.
Wagner Electric Manufacturing Company. (See Bryson, J. H., assignor.)
Wagner, F. B. (See Pifer and Ahlm, assignors.)
Wagner, J. (See Kassler, F. W., assignor.)
Wagner, J. F. (See Stapleford and Wagner.)
Wagner, N., Scranton, Pa. Ink-fountain. No. 901,760; Oct. 20; Sp. p. 3566; Dr. p. 722; Gaz. vol. 136; p. 1690.
Walt, W. B., New York, N. Y. Press for embossed printing of literature, music, and the like, for reading by the blind. No. 900,622; Oct. 6; Sp. p. 1183; Dr. pp. 241–2; Gaz. vol. 136; p. 1254.
Walte, F., Otley, England. Platen printing-press. No. 900,805; Oct. 13; Sp. p. 1567; Dr. p. 317; Gaz. vol. 136; p. 1341.
Walchner, B., New York, N. Y. Machine for splitting mica. No. 901,130; Oct. 13; Sp. p. 2215; Dr. pp. 450–1; Gaz. vol. 136; p. 1445.
Waldie, D., and G. W. Galway, Watertown, N. Y. Burial-case. No. 900,908; Oct. 13; Sp. p. 1915; Dr. p. 390; Gaz. vol. 136; p. 1394.
Waldo, J. (See Fowler, J. N., assignor.)
Wales, C., Cleveland, Ohio, assignor to Adder Machine Company, Kingston, Pa. Printing-eliminating device for adding-machines. No. 902,125; Oct. 27; Sp. p. 4295; Dr. p. 871; Gaz. vol. 136; p. 1836.
Walker, B., Shelley, near Huddersfield, and A. Spink, Leeds, England. Loom for weaving pile fabrics. No. 900,136; Oct. 6; Sp. p. 134; Dr. p. 28; Gaz. vol. 136; p. 1094.
Walker, J. M., Augusta, Ga. Store-fixture. No. 901,665; Oct. 20; Sp. p. 3332; Dr. pp. 684–5; Gaz. vol. 136; p. 1656.
Walker, M. J., Salt Lake City, Utah. Ironing-table. No. 900,623; Oct. 6; Sp. p. 1184; Dr. p. 242; Gaz. vol. 136; p. 1254.
Wallace, J. T., New York, N. Y. Letter and other character. No. 900,969; Oct. 13; Sp. p. 1917; Dr. p. 390; Gaz. vol. 136; p. 1394.
Wallenthin, W., assignor to S. O. Bigney and Company, Attleboro, Mass. Joint for bracelets. No. 900,624; Oct. 6; Sp. p. 1185; Dr. p. 243; Gaz. vol. 136; p. 1255.
Wallis, C. W., Los Angeles, Cal. Garment-supporter. No. 900,625; Oct. 6; Sp. p. 1187; Dr. p. 243; Gaz. vol. 136; p. 1255.
Wallstein, F., New York, N. Y. Game-piece. No. 902,512; Oct. 27; Sp. p. 5141; Dr. p. 1041; Gaz. vol. 136; p. 1965.
Walser, H. J., Cleveland, Ohio. Electric sign. No. 902,028; Oct. 27; Sp. p. 4114; Dr. p. 833; Gaz. vol. 136; p. 1806.
Walsh, M. J., assignor of one-half to F. Uhlenhaut, Pittsburg, Pa. Railway-crossing frog. No. 902,268; Oct. 27; Sp. p. 4591; Dr. p. 933; Gaz. vol. 136; p. 1882.
Walter, J. J., New Albany, Ind. Metal-crimping machine. No. 901,131; Oct. 13; Sp. p. 2217; Dr. p. 451; Gaz. vol. 136; p. 1445.
Walton, S. T., assignor to Unit Steel Cabinet Company, Brooklyn, N. Y. Card-file. No. 901,856; Oct. 20; Sp. p. 3743; Dr. p. 761; Gaz. vol. 136; p. 1719.
Waltz, E. W., Newberry, Pa. Overshoe-clamp. No. 901,132; Oct. 13; Sp. p. 2219; Dr. p. 452; Gaz. vol. 136; p. 1445.
Wappler Electric Controller Company. (See Wappler, R. H., assignor.)
Wappler, R. H., assignor to Wappler Electric Controller Company, New York, N. Y. Endoscope. No. 902,513; Oct. 27; Sp. p. 5142; Dr. p. 1041; Gaz. vol. 136; p. 1965.
Ward, C. G., Jeffersonville, Ind. File-cabinet. No. 900,242; Oct. 6; Sp. p. 346; Dr. pp. 72–3; Gaz. vol. 136; p. 1129.
Warfield, W. C., Eminence, Kans. Weeder and cultivator. No. 900,137; Oct. 6; Sp. p. 136; Dr. p. 29; Gaz. vol. 136; p. 1094.
Warner, R. T. (See O'Neal, W. F., assignor.)
Warrell, F. G., Lansdowne, Pa., assignor to Euelectric Co. Telephonic transmitter. No. 901,570; Oct. 20; Sp. p. 3149; Dr. p. 643; Gaz. vol. 136; p. 1626.
Warren Axe and Tool Company. (See Murphy, D. W., assignor.)
Warren Featherbone Company of Michigan. (See Ackerman, A. A., assignor.)
Warren, W. P., Sheridan, Ill. Scraper. No. 900,626; Oct. 6; Sp. p. 1188; Dr. pp. 243–4; Gaz. vol. 136; p. 1255.
Warrenfeltz, E. M., Funkstown, Md. Rotary rake. No. 902,187; Oct. 27; Sp. p. 4429; Dr. p. 896; Gaz. vol. 136; p. 1856.
Washburn, E. C., Minneapolis, Minn. Riser-lining for molding devices. No. 900,970; Oct. 13; Sp. p. 1919; Dr. p. 390; Gaz. vol. 136; p. 1394.
Washburn, E. C., Minneapolis, Minn. Dumping-car. No. 901,270; Oct. 13; Sp. p. 2468; Dr. pp. 506–7; Gaz. vol. 136; p. 1489.
Waterman, A., New York, N. Y. Skirt-marker. No. 902,029; Oct. 27; Sp. p. 4115; Dr. p. 833; Gaz. vol. 136; p. 1806.
Waterman, B. B., East Bridgewater, Mass., assignor to American Shoe Finding Company. Machine for tacking shoe-shanks. (Reissue.) No. 12,870; Oct. 27; Sp. p. 5215; Dr. pp. 1053–4; Gaz. vol. 136; p. 1975.
Watkins, J. W., Syracuse, N. Y. Engine. No. 900,806; Oct. 13; Sp. p. 1569; Dr. pp. 317–18; Gaz. vol. 136; p. 1342.
Watrous, E. G., Chicago, Ill. Ball cock-valve. No. 901,571; Oct. 20; Sp. p. 3150; Dr. pp. 643–4; Gaz. vol. 136; p. 1627.
Watrous, E. G., Chicago, Ill. Water-closet. No. 901,572; Oct. 20; Sp. p. 3154; Dr. p. 644; Gaz. vol. 136; p. 1627.
Watson, D. S., Canastota, N. Y. Fire-protective shield. No. 900,243; Oct. 6; Sp. p. 347; Dr. p. 73; Gaz. vol. 136; p. 1129.
Watson, F. L., Lynchburg, Va. Steam-trap for radiators. No. 902,126; Oct. 27; Sp. p. 4298; Dr. p. 871; Gaz. vol. 136; p. 1836.
Watson, J., Obion, Tenn. Lawn-mower. No. 901,402; Oct. 20; Sp. p. 2793; Dr. p. 569; Gaz. vol. 136; p. 1571.
Watson, J. W., Newton, Iowa. Adjustable hand disk cultivator. No. 901,221; Oct. 13; Sp. p. 2369; Dr. p. 484; Gaz. vol. 136; p. 1473.
Watt, J. R., assignor of one-half to J. C. Johnson, Detroit, Mich. Safety scaffold-bracket. No. 901 926; Oct. 20; Sp. p. 3869; Dr. p. 789; Gaz. vol. 136; p. 1742.
Waugh, C. J., and F. Harendt, Camden, N. J. Cylinder-lock. No. 900,627; Oct. 6; Sp. p. 1190; Dr. p. 244; Gaz. vol. 136; p. 1255.
Wayman, W. N., Staunton, Va. Mold. No. 901,133; Oct. 13; Sp. p. 2220; Dr. p. 452; Gaz. vol. 136; p. 1446.
Waymoth, C. H., Fitchburg, Mass. Wood-turning lathe. No. 901,503; Oct. 20; Sp. p. 3024; Dr. p. 618; Gaz. vol. 136; p. 1605.
Weatherly, A. M., Sr., Rome, Ga. Fence-post. No. 902,437; Oct. 27; Sp. p. 5010; Dr. p. 1012; Gaz. vol. 136; p. 1945.
Weaver, J. D., Naples, Ill. Spirit-level. No. 902,269; Oct. 27; Sp. p. 4593; Dr. p. 932; Gaz. vol. 136; p. 1882.
Weber A. W. H., assignor of one-half to J. M. and B. M. Spencer, Indianapolis, Ind. Anchor and base-plate for lawn swings, benches, &c. No. 901,761; Oct. 20; Sp. p. 3568; Dr. p. 722; Gaz. vol. 136; p. 1690.
Weber-Illig, C., Delawanna, N. J. Combined cover and hood for caskets and graves. No. 900,971; Oct. 13; Sp. p. 1920; Dr. p. 391; Gaz. vol. 136; p. 1394.
Webster, E. A., Haverhill, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Heel-nailing machine. No. 900,244; Oct. 6; Sp. p. 349; Dr. p. 73; Gaz. vol. 136; p. 1130.
Wedge, U., Ardmore, Pa. Manufacture of arsenious oxid. No. 900,138; Oct. 6; Sp. p. 137; Dr. p. 29; Gaz. vol. 136; p. 1095.
Wehrenberg, C. E., Mound City, assignor to Belleville Baler Company, Belleville, Ill. Baling-press. (Reissue.) No. 12,865; Oct. 13; Sp. p. 2571; Dr. pp. 528–9; Gaz. vol. 136; p. 1504.
Wehrsen, A., Berlin, Germany. Disk for influence or static induction and condenser machines. No. 901,666; Oct. 20; Sp. p. 3336; Dr. p. 685; Gaz. vol. 136; p. 1656.
Weidl, F., Dresden, Germany. Hand-bidet. No. 901,134; Oct. 13; Sp. p. 2221; Dr. p. 452; Gaz. vol. 136; p. 1446.
Weiler, W., Dayton, Ohio. Floor-drain and backwater trap. No. 902,030; Oct. 27; Sp. p. 4117; Dr. p. 833; Gaz. vol. 136; p. 1806.
Weingartner, A. E., Bethlehem, Pa. Hydraulic motor. No. 902,351; Oct. 27; Sp. p. 4787; Dr. p. 966; Gaz. vol. 136; p. 1911.
Weinman, W. J., Nicholasville, Ky. Stuffing-box. No. 902,352; Oct. 27; Sp. p. 4790; Dr. p. 967; Gaz. vol. 136; p. 1912.
Weir, R., assignor of one-half to P. P. Schnorbach, Muskegon, Mich. Cart. No. 900,455; Oct. 6; Sp. p. 822; Dr. p. 168; Gaz. vol. 136; p. 1199.
Weisenberg, F., New York, N. Y. Receptacle. No. 900,901; Oct. 13; Sp. p. 1767; Dr. p. 359; Gaz. vol. 136; p. 1371.
Weitzel, J. A., Rochester, N. Y. Hub-securing device. No. 902,127; Oct. 27; Sp. p. 4299; Dr. p. 871; Gaz. vol. 136; p. 1836.
Welch, J. B., and C. W. Wheatley, Stockport, Iowa. Fishing device. No. 900,139; Oct. 6; Sp. p. 140; Dr. p. 29; Gaz. vol. 136; p. 1095.
Weller, F. R. (See Olberg, C. R., assignor.)
Wells, G. W., Southbridge, Mass. Eyeglass-hook. No. 901,573; Oct. 20; Sp. p. 3161; Dr. p. 644; Gaz. vol. 136; p. 1628.
Wells, L. A., Akron, Ohio. Attachment for rubber-stock machines. No. 900,628; Oct. 6; Sp. p. 1191; Dr. p. 244; Gaz. vol. 136; p. 1256.
Wells, R. S., assignor to E. Bement's Sons, Lansing, Mich. Sled-knee. No. 901,135; Oct. 13; Sp. p. 2223; Dr. p. 452; Gaz. vol. 136; p. 1446.

Welsbach Light Company. (See Litle, T. J., Jr., assignor.)
Welsh, T. W., assignor of three-fourths to A. J. Harlow, Mitchell, D. H. Mahoney and I. Lyons, Vincennes, Ind. Railway-tie. No. 901,574; Oct. 20; Sp. p. 3162; Dr. p. 644; Gaz. vol. 136; p. 1628.
Wendell, F. J., assignor to Roebling Construction Company, New York, N. Y. Method and machine for stretching slitted sheet metal. No. 900,902; Oct. 13; Sp. p. 1769; Dr. p. 359; Gaz. vol. 136; p. 1372.
Wendtland, E. H. (See Hiegel, J. L., assignor.)
Wessell, Nickel & Gross. (See Nickel, A., assignor.)
West Disinfecting Company. (See Tillson, W., assignor.)
West, J. T., Rockingham, N. C. Block-signal system for railways. No. 900,456; Oct. 6; Sp. p. 823; Dr. pp. 168–9; Gaz. vol. 136; p. 1200.
Westbrook, W. B., Cliff, Ky. Concrete railway-tie. No. 901,403; Oct. 20; Sp. p. 2794; Dr. p. 569; Gaz. vol. 136; p. 1571.
Westerberg, A., assignor to Jacob Haish Company, De Kalb, Ill. Wire fence. No. 902,188; Oct. 27; Sp. p. 4431; Dr. p. 897; Gaz. vol. 136; p. 1856.
Western Electric Company. (See Atwood, G. F., assignor.)
Western Electric Company. (See McGrath, M. K., assignor.) (Reissue.)
Westinghouse Air Brake Co. (See Mundy, W. O., assignor.) (Reissue.)
Westinghouse Air Brake Company. (See Normand, J. E., assignor.)
Westinghouse Air Brake Company. (See Turner and Custer, assignors.)
Westinghouse Air Brake Company. (See Turner, W. V., assignor.)
Westinghouse Electric & Manufacturing Company. (See Lamme, B. G., assignor.)
Westinghouse Machine Company. (See Boie, W. A., assignor.)
Westinghouse Machine Company. (See Hodgkinson, F., assignor.)
Westinghouse Machine Company. (See Lea, H. I., assignor.)
Weston, E. B., Dayton, Ohio. Display-rack. No. 900,331; Oct. 6; Sp. p. 550; Dr. p. 114; Gaz. vol. 136; p. 1158.
Weston, E. B., Dayton, Ohio. Display-rack attachment. No. 900,332; Oct. 6; Sp. p. 550; Dr. p. 114; Gaz. vol. 136; p. 1158.
Weston, W. S., Chicago, Ill. Casting apparatus. No. 900,807; Oct. 13; Sp. p. 1572; Dr. pp. 318–19; Gaz. vol. 136; p. 1342.
Wetmore, C. A., Watson, N. Y. Sleigh. No. 902,458; Oct. 27; Sp. p. 5011; Dr. p. 1013; Gaz. vol. 136; p. 1945.
Wettel, R., and M. P. Freebey, Los Angeles, Cal. Combination latch and key lock. No. 900,629; Oct. 6; Sp. p. 1192; Dr. pp. 244–5; Gaz. vol. 136; p. 1256.
Wettengel, G. A., St. Louis, Mo. Pipe-machine. No. 901,404; Oct. 20; Sp. p. 2794; Dr. pp. 569–70; Gaz. vol. 136; p. 1572.
Wettengel, G. A., St. Louis, Mo. Smelting-furnace. No. 901,405; Oct. 20; Sp. p. 2797; Dr. p. 570; Gaz. vol. 136; p. 1572.
Wetzel, E. V., New York, N. Y. Toy. No. 901,762; Oct. 20; Sp. p. 3569; Dr. p. 723; Gaz. vol. 136; p. 1690.
Wever, F., Stuttgart, Germany. Sewing-machine. No. 902,353; Oct. 27; Sp. p. 4791; Dr. p. 967; Gaz. vol. 136; p. 1912.
Wheary, G. H. (See Hawley and Wheary.)
Wheatley, C. W. (See Welch and Wheatley.)
Wheeler, P., Chester, Pa., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Producing high-explosive compounds. No. 901,504; Oct. 20; Sp. p. 3027; Gaz. vol. 136; p. 1606.
Wheelock, E. (See Curl and Wheelock.)
Wheildon, W. M., Boston, assignor to A. Murphy, Sr., Quincy, Mass. Loose-leaf binder. No. 902,189; Oct. 27; Sp. p. 4432; Dr. p. 897; Gaz. vol. 136; p. 1857.
Whelan, H. W., Detroit, Mich. Friction-match. No. 900,245; Oct. 6; Sp. p. 354; Dr. p. 73; Gaz. vol. 136; p. 1130.
Whitcher, F. W., assignor to Frank W. Whitcher Company, Boston, Mass. Lacing. No. 902,190; Oct. 27; Sp. p. 4433; Dr. p. 897; Gaz. vol. 136; p. 1857.
White, C. H., Sparrows Point, Md. Electric clock. No. 901,050; Oct. 13; Sp. p. 2066; Dr. p. 420; Gaz. vol. 136; p. 1420.
White, E. W., Chicago, Ill. Roller-skate. No. 901,136; Oct. 13; Sp. p. 2224; Dr. p. 453; Gaz. vol. 136; p. 1447.
White, H. E. and H. K., Chicago, Ill. Making gutters. No. 902,031; Oct. 27; Sp. p. 4118; Dr. p. 834; Gaz. vol. 136; p. 1806.
White, H. K. (See White, H. E. and H. K.)
White, J. M., Selma, Oreg. Saw for removing stumps. No. 901,505; Oct. 20; Sp. p. 3028; Dr. pp. 618–19; Gaz. vol. 136; p. 1606.
White, L. Pollocksville, N. C. Rail-joint. No. 901,557; Oct. 20; Sp. p. 3744; Dr. p. 761; Gaz. vol. 136; p. 1719.
White Lily Manufacturing company. (See Schmidt, B. L., assignor.)
White, R. (See Withee and White.)
Whitehead & Hoag Company. (See Conklin, E. D., assignor.)
Whitehead & Hoag Company. (See Hornich, W., Jr., assignor.)
Whitehill, D. B., North Clarendon, Pa. Drive head or cap for well pipes or casings. No. 900,140; Oct. 6; Sp. p. 142; Dr. p. 29; Gaz. vol. 136; p. 1092.
Whitehurst, W. I., assignor to Keston Manufacturing Company of Baltimore City, Baltimore, Md. Noodle-cutter. No. 900,808; Oct. 13; Sp. p. 1582; Dr. p. 319; Gaz. vol. 136; p. 1343.
Whitesell, F. N., assignor to Sheffield Car Company, Three Rivers, Mich. Stand-pipe. No. 900,141; Oct. 6; Sp. p. 144; Dr. p. 30; Gaz. vol. 136; p. 1096.
Whiteside, D. I., San Francisco, assignor to G. Majors, trustee, Alameda, Cal. Interlocking mechanism for voting-machines. No. 900,630; Oct. 6; Sp. p. 1194; Dr. pp. 245–6; Gaz. vol. 136; p. 1256.
Whiting, A. E., Weston, W. Va. Lathe attachment. No. 900,457; Oct. 6; Sp. p. 830; Dr. p. 169; Gaz. vol. 136; p. 1200.
Whitney, A. E. (See Whitney, R. F., assignor.)
Whitney, P. A., assignor to Peck, Stow & Wilcox Company, Southington, Conn. Chuck. No. 902,191; Oct. 27; Sp. p. 4434; Dr. p. 897; Gaz. vol. 136; p. 1857.
Whitney, R. F., assignor of one-half to A. E. Whitney, Winchester, Mass. Hide-working machine. No. 900,334; Oct. 6; Sp. p. 553; Dr. pp. 115–16; Gaz. vol. 136; p. 1159.
Whitney, W. D., Holley, N. Y. Washing-machine. No. 900,333; Oct. 6; Sp. p. 552; Dr. pp. 114–15; Gaz. vol. 136; p. 1159.
Whitney, W. D., Holley, N. Y. Washing-machine. No. 900,809; Oct. 13; Sp. p. 1583; Dr. p. 320; Gaz. vol. 136; p. 1343.
Whitney, W. D., assignor to Nineteen Hundred Washer Company, Binghamton, N. Y. Washing-machine. No. 901,051; Oct. 13; Sp. p. 2067; Dr. pp. 420–1; Gaz. vol. 136; p. 1420.
Whitney, W. R., Schenectady, N. Y., assignor to General Electric Company. Vapor electric apparatus. No. 901,506; Oct. 20; Sp. p. 3030; Dr. p. 619; Gaz. vol. 136; p. 1606.
Whitney, W. R., Schenectady, N. Y., assignor to General Electric Company. Incandescent electric lamp. No. 902,032; Oct. 27; Sp. p. 4119; Dr. p. 834; Gaz. vol. 136; p. 1807.
Whitney, W. R., Boston, Mass., assignor to General Electric Company. Electrode for arc-lamps. No. 902,354; Oct. 27; Sp. p. 4793; Gaz. vol. 136; p. 1912.
Whittaker, T. R., Lawrence, Mass. Steam-trap. No. 902,355; Oct. 27; Sp. p. 4794; Dr. p. 967; Gaz. vol. 136; p. 1912.
Whittemore, J. M. (See Piper, F. A., assignor.)
Whyte, J. F. (See Williams, H. M., assignor.)
Wiard, J. B., Lynn, Mass., assignor to General Electric Company. Switch mechanism. No. 902,033; Oct. 27; Sp. p. 4120; Dr. p. 834; Gaz. vol. 136; p. 1807.
Wibrin, R. (See Wibrin, T. J. and R.)
Wibrin, T. J. and R., Chaudefontaine, Belgium. Aluminum-solder. No. 900,810; Oct. 13; Sp. p. 1585; Gaz. vol. 136; p. 1343.
Wicht, F. V. (See Spielmann and Wicht.)
Widney, R. L., La Harpe, Ill. Poultry-coop. No. 901,406; Oct. 20; Sp. p. 2799; Dr. p. 571; Gaz. vol. 136; p. 1572.
Wiedeke, G., Jr., *et al.* (See Wiedeke, G., Sr., assignor.)
Wiedeke, G., Sr., assignor to O. Wiedeke, G. Wiedeke, Jr., and himself, Dayton, Ohio. Tube-expander. No. 901,271; Oct. 13; Sp. p. 2470; Dr. p. 507; Gaz. vol. 136; p. 1490.
Wiedeke, O., *et al.* (See Wiedeke, G., Sr., assignor.)
Wiens, D. J., *et al.* (See Wiens, J. J., assignor.)
Wiens, J. J., assignor of three-fourths to F. H. Boldt, D. J. Wiens, and P. F. Billingsley, Quincy, Wash. Watch-regulator. No. 902,034; Oct. 27; Sp. p. 4122; Dr. p. 835; Gaz. vol. 136; p. 1807.
Wightman, M. J., New York, N. Y. Electric railway-switch. No. 902,035; Oct. 27; Sp. p. 4123; Dr. p. 835; Gaz. vol. 136; p. 1808.
Wilcox, J., Athol, Mass. Hair-roll. No. 901,763; Oct. 20; Sp. p. 3570; Dr. p. 723; Gaz. vol. 136; p. 1690.
Wilcox, M. S., Middleport, Ohio. Valve. No. 900,811; Oct. 13; Sp. p. 1585; Dr. pp. 320–1; Gaz. vol. 136; p. 1343.
Wilde, W. J., American Fork, Utah. Gearing. No. 900,631; Oct. 6; Sp. p. 1202; Dr. p. 246; Gaz. vol. 136; p. 1257.
Wilhelm, L., Worcester, Mass., assignor of one-half to F. A. Stevens, Providence, R. I. Lens-blank. No. 901,575; Oct. 20; Sp. p. 3164; Dr. p. 645; Gaz. vol. 136; p. 1628.
Wilhelm, L., Worcester, Mass., assignor of one-half to F. A. Stevens, Providence, R. I. Making bifocal lenses. No. 901,576; Oct. 20; Sp. p. 3165; Dr. p. 645; Gaz. vol. 136; p. 1628.
Wilke, H., Seattle, Wash. Account system. No. 901,507; Oct. 20; Sp. p. 3031; Dr. p. 619; Gaz. vol. 136; p. 1606.
Wilken, G. E. (See Gerdes and Wilken.)
Will, W. B., Grand Junction, Colo. Brush and duck scraper bracket. No. 902,270; Oct. 27; Sp. p. 4593; Dr. p. 933; Gaz. vol. 136; p. 1882.
Willems, G. H., Roanoke, Ill. Grave attachment. No. 901,407; Oct. 20; Sp. p. 2800; Dr. p. 571; Gaz. vol. 136; p. 1573.

Willette, C. W., assignor of one-half to J. Clough, Tacoma, Wash. Controlling mechanism for power-driven vehicles. No. 901,508; Oct. 20; Sp. p. 3032; Dr. pp. 619–20; Gaz. vol. 136; p. 1607.
Williams, C. A., assignor to Briscoe Manufacturing Company, Detroit, Mich. Self-feeding mechanism for punch and die presses. No. 900,335; Oct. 6; Sp. p. 556; Dr. p. 116; Gaz. vol. 136; p. 1159.
Williams, C. F., New York, N. Y. Folding carrier. No. 901,858; Oct. 20; Sp. p. 3745; Dr. pp. 761–2; Gaz. vol. 136; p. 1720.
Williams, F., Bilston, England. Floor-cramp. No. 900,246; Oct. 6; Sp. p. 356; Dr. p. 74; Gaz. vol. 136; p. 1131.
Williams, H. M., Vincennes, assignor of one-half to J. F. Whyte, Coatesville, Ind. Pump for pneumatic tires. No. 900,632; Oct. 6; Sp. p. 1203; Dr. pp. 246–7; Gaz. vol. 136; p. 1257.
Williams, H. N., Providence, R. I. Gas-producing apparatus for extinguishing fires and other purposes. No. 902,514; Oct. 27; Sp. p. 5143; Dr. p. 1042; Gaz. vol. 136; p. 1966.
Williams, J. A., Ironton, Ohio. Molding-machine. No. 900,633; Oct. 6; Sp. p. 1207; Dr. p. 247; Gaz. vol. 136; p. 1258.
Williams, J. B., Houston, Tex. Shutter-hinge. No. 900,336; Oct. 6; Sp. p. 559; Dr. p. 116; Gaz. vol. 136; p. 1160.
Williams, J. C., and A. B. Conner, Soperton, Ga. Umbrella-support for carriages. No. 902,459; Oct. 27; Sp. p. 5012; Dr. p. 1013; Gaz. vol. 136; p. 1945.
Williams, J. P., Boston, Mass. Chair-bottom clip. No. 900,247; Oct. 6; Sp. p. 357; Dr. p. 74; Gaz. vol. 136; p. 1131.
Williams, J. R., Milwaukee, Wis. Catch-basin and trap. No. 901,859; Oct. 20; Sp. p. 3747; Dr. p. 762; Gaz. vol. 136; p. 1720.
Williams, L. N. D. (See Scott, R. W., assignor.)
Williams, M. L., Tacoma, Wash. Folding lantern. No. 902,036; Oct. 27; Sp. p. 4126; Dr. p. 835; Gaz. vol. 136; p. 1808.
Williams, M. L., South Bend, Ind. Friction-clutch. No. 902,515; Oct. 27; Sp. p. 5145; Dr. p. 1042; Gaz. vol. 136; p. 1966.
Williams, P. E., Savannah, Ga. Dental blower. No. 900,812; Oct. 13; Sp. p. 1587; Dr. p. 321; Gaz. vol. 136; p. 1344.
Williams, T. H., Hood River, Oreg. Loaf-maker for bread. No. 901,577; Oct. 20; Sp. p. 3166; Dr. p. 645; Gaz. vol. 136; p. 1629.
Williamson, F. E., Glasco, Kans. Stock-watering device. No. 901,860; Oct. 20; Sp. p. 3748; Dr. p. 762; Gaz. vol. 136; p. 1720.
Willis, J. C., Herkimer, N. Y. Cleaning device. No. 901,272; Oct. 13; Sp. p. 2472; Dr. p. 507; Gaz. vol. 136; p. 1490.
Willis, L., assignor to Bateman Manufacturing Company, Grenloch, N. J. Plant-marker. No. 901,127; Oct. 13; Sp. p. 2225; Dr. p. 453; Gaz. vol. 136; p. 1447.
Willis, L., assignor to Bateman Manufacturing Company, Grenloch, N. J. Duplex pump. No. 901,138; Oct. 13; Sp. p. 2227; Dr. p. 453; Gaz. vol. 136; p. 1447.
Willson, F. R., Jr., Worthington, Ohio, assignor to Jeffrey Manufacturing Company. System of mine-trackage. No. 900,903; Oct. 13; Sp. p. 1773; Dr. p. 359; Gaz. vol. 136; p. 1372.
Wilson, A. G., Wilkinsburg, assignor to Union Switch and Signal Company, Swissvale, Pa. Switch for charging and discharging storage batteries. No. 901,509; Oct. 20; Sp. p. 3035; Dr. p. 620; Gaz. vol. 136; p. 1607.
Wilson, E. W. (See Hamlin, C. S., assignor.)
Wilson, R. G., Madison, N. C. Lister and fertilizer-distributer. No. 902,516; Oct. 27; Sp. p. 5147; Dr. pp. 1042–3; Gaz. vol. 136; p. 1967.
Wilson, S. G., Philadelphia, Pa. Mechanical chair. No. 900,813; Oct. 13; Sp. p. 1592; Dr. pp. 321–2; Gaz. vol. 136; p. 1344.
Wilson, W. G., Denver, Colo. Air-compressor. No. 900,814; Oct. 13; Sp. p. 1594; Dr. p. 322; Gaz. vol. 136; p. 1345.
Windsor, E., London, Ontario, Canada. Machine for cutting barrel-headings. No. 900,972; Oct. 13; Sp. p. 1923; Dr. pp. 391–2; Gaz. vol. 136; p. 1395.
Winfield, W. H., Richmond Hill, and W. Senn, New York, N. Y. Can-opener. No. 901,510; Oct. 20; Sp. p. 3037; Dr. p. 620; Gaz. vol. 136; p. 1608.
Wingate, W. B., Callahan, Fla. Flue-plugger. No. 900,337; Oct. 6; Sp. p. 559; Dr. p. 117; Gaz. vol. 136; p. 1160.
Winkel, C., assignor to National Sewing Machine Company, Belvidere, Ill. Bed-plate for sewing-machines. No. 901,052; Oct. 13; Sp. p. 2070; Dr. p. 421; Gaz. vol. 136; p. 1421.
Winkley, E. E., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-leveling machine. No. 900,248; Oct. 6; Sp. p. 357; Dr. pp. 74–5; Gaz. vol. 136; p. 1131.
Winn, J. C., Brooklyn, assignor to Winn Manufacturing Company, New York, N. Y. Door-holder. No. 901,511; Oct. 20; Sp. p. 3039; Dr. p. 621; Gaz. vol. 136; p. 1608.
Winn Manufacturing Company. (See Winn, J. C., assignor.)
Winslow, S. W., trustee. (See Ladd, S. W., assignor.)
Winsor & Jerauld Manufacturing Company. (See Jaques, F. O., assignor.)
Winston, C. S., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Telephone testing system for party-lines. No. 900,458; Oct. 6; Sp. p. 831; Dr. p. 169; Gaz. vol. 136; p. 1200
Winston, C. S., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Four-party-line indicating ringing key. No. 902,356; Oct. 27; Sp. p. 4795; Dr. p. 968; Gaz. vol. 136; p. 1913.
Winter, O., Philadelphia, Pa. Sectional table-pad. No. 902,037; Oct. 27; Sp. p. 4128; Dr. p. 836; Gaz. vol. 136; p. 1809.
Wirth, C. E., assignor to Plume & Atwood Mfg. Co., Waterbury, Conn. Lamp-burner. No. 901,139; Oct. 13; Sp. p. 2228; Dr. p. 453; Gaz. vol. 136; p. 1448.
Withers, W. G., Atlanta, Ga. Sash-weight. No. 901,053; Oct. 13; Sp. p. 2072; Dr. p. 421; Gaz. vol. 136; p 1421.
Wirtz, L., Bilston, England. Clutch. No. 901,408; Oct. 20; Sp. p. 2801; Dr. p. 571; Gaz. vol. 136; p. 1573.
Wise, A. E., New York, N. Y. Ironing-table. No. 900,459; Oct. 6; Sp. p. 836; Dr. p. 170; Gaz. vol. 136; p. 1201.
Withee, F. T., and R. White, Springfield, Mass. Loom. No. 901,764; Oct. 20; Sp. p. 3572; Dr. p. 723; Gaz. vol. 136; p. 1691.
Withee, F. T., Springfield, Mass., and R. White, Cleveland, Ohio. Heddle adjustment for looms. No. 901,927; Oct. 20; Sp. p 3872; Dr. p. 789; Gaz. vol. 136; p. 1743.
Withee, F. T., Springfield, Mass., and R. White, Cleveland, Ohio. Loom-shuttle. No. 901,928; Oct. 20; Sp. p. 3873; Dr. p. 790; Gaz. vol. 136; p. 1743.
Witte, F. W., Chelmsford, England. Ball-bearing. No. 900,634; Oct. 6; Sp. p. 1208; Dr. p. 248; Gaz. vol. 136; p. 1258.
Witte, F. W., Leipzig-Plagwitz, Germany. Ball-bearing. No. 900,635; Oct. 6; Sp. p. 1209; Dr. p. 248; Gaz. vol. 136; p. 1258.
Wittich Success Shaft Sinking and Tunnelling Machine Company. (See Wittich, W. F., assignor.)
Wittich, W. F., assignor to Wittich Success Shaft Sinking and Tunnelling Machine Company, Erie, Pa. Shaft or tunnel boring mechanism. No. 902,517; Oct. 27; Sp. p. 5150; Dr. p. 1043; Gaz. vol. 136; p. 1967.
Witzenmann, E., Pforzheim, Germany. Cock-coupling. No. 902,192; Oct. 27; Sp. p. 4435; Dr. p. 898; Gaz. vol. 136; p. 1857.
Wlacofsky, J. (See Foltmer and Wlacofsky.)
Wobbrock, L. A., Merton, Minn. Apparatus for coating receptacles with paraffin. No. 900,815; Oct. 13; Sp. p 1595; Dr. p. 323; Gaz. vol. 136; p. 1345.
Wohl, M. J. (See Hertzberg and Wohl.)
Wohlpart, A. P. S. and P., New York, N. Y. Fireproof construction. No. 902,357; Oct. 27; Sp. p. 4797; Dr. p. 968; Gaz. vol. 136; p. 1913.
Wohlpart, P. (See Wohlpart, A. P. S. and P.)
Wolfe, W., Patton, Pa. Spike-extractor. No. 900,338; Oct. 6; Sp. p. 561; Dr. p. 117; Gaz. vol. 136; p. 1160.
Womans Mutual Benefit Company. (See Richards, H. M., assignor.)
Wood, E. H., Roswell, Ga. Drawers adjuster and supporter. No. 902,460; Oct. 27; Sp. p. 5013; Dr. p. 1013; Gaz. vol. 136; p. 1946.
Wood, F. J., Niles, Mich. Filter-basket. No. 902,035; Oct. 27; Sp. p. 1429; Dr. p. 836; Gaz. vol. 136; p. 1809.
Wood, F. W., assignor to Berry-Wood Piano Player Co., Kansas City, Mo. Automatic piano. No. 901,929; Oct. 20; Sp. p. 3875; Dr. pp. 790–1; Gaz. vol. 136; p. 1743.
Wood, F. W., assignor to Berry-Wood Piano Player Co., Kansas City, Mo. Note-sheet-guide mechanism. No. 901,930; Oct. 20; Sp. p. 3880; Dr. p. 791; Gaz. vol. 136; p. 1744.
Wood, J. E. (See Shannon and Wood.)
Woodard, J. H., assignor to M. J. Maloney, Dayton, Ky. Wrench. No. 900,460; Oct. 6; Sp. p. 837; Dr. p. 170; Gaz. vol. 136; p. 1201.
Woodard, R. L., Richburg, N. Y. Well-drilling machine. No. 900,636; Oct. 6; Sp. p. 1210; Dr. pp. 248–9; Gaz. vol. 136; p. 1258.
Woodbury, M., Brookline, and N. W. Aldrich, Boston, Mass. Coin-controlled food-dispensing apparatus. No. 902,358; Oct. 27; Sp. p. 4798; Dr. p. 909; Gaz. vol. 136; p. 1913.
Woodland, F. O., Worcester, Mass. Labeling-machine. No. 900,816; Oct. 13; Sp. p. 1596; Dr. p. 323; Gaz. vol. 136; p. 1345.
Woodruff, W. B., Cadiz, Ky. Tool-handle. No. 900,339; Oct. 6; Sp. p. 562; Dr. p. 117; Gaz. vol. 136; p. 1161.
Woodward, O., New York, assignor to Densmore Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 900,461; Oct. 6; Sp. p. 839; Dr. pp. 170–1; Gaz. vol. 136; p. 1202.
Woodward, O., New York, assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Type-writing machine. No. 902,039; Oct. 27; Sp. p. 4131; Dr. pp. 836–8; Gaz. vol. 136; p. 1809.
Woolums, W. H., assignor to Home Security Vault and Pocket Bank Company, Chicago, Ill. Locking mechanism for coin-receptacles. No. 901,409; Oct. 20; Sp. p. 2804; Dr. p. 572; Gaz. vol. 136; p. 1573.
Worcester Pressed Steel Company. (See Anderson, A. G., assignor.)
Wright, A. F. (See Kehl and Wright.)
Wright, C. D., Palestine, Ill. Vehicle-tongue. No. 901,054; Oct. 13; Sp. p. 2073; Dr. p. 422; Gaz. vol. 136; p. 1421.
Wright, F. C., Tucson, Ariz. Cactus-leather. No. 902,359; Oct. 27; Sp. p. 4801; Dr. p. 969; Gaz. vol. 136; p. 1914.
Wright, J. P., Barberton, Ohio, assignor to Diamond Match Company, New York, N. Y. Match-machine. No. 901,410; Oct. 20; Sp. p. 2805; Dr. pp. 572–3; Gaz. vol. 136; p. 1574.
Wright, M. S., Worcester, Mass. Pneumatic action for musical instruments. No. 901,273; Oct. 13; Sp. p. 2473; Dr. p. 508; Gaz. vol. 136; p. 1490.

Wright, R. I., and H. E. Frost, assignors to Electric Controller & Supply Company, Cleveland, Ohio. Magnetic separator. No. 901,765; Oct. 20; Sp. p. 3574; Dr. p. 724; Gaz. vol. 136; p. 1691.
Wright Wire Company. (See Barlow, A. E., assignor.)
Wrigley, E., Auckland, New Zealand. Machine for splitting and splaying the ends of metal bars. No. 901,667; Oct. 20; Sp. p. 3337; Dr. p. 685; Gaz. vol. 136; p. 1656.
Wuesthoff, P. (See Kuhlewind, C., assignor.)
Wulf, J., Omaha, Nebr. Wagon-brake. No. 902,340; Oct. 27; Sp. p. 4802; Dr. pp. 909–70; Gaz. vol. 136; p. 1914.
Wyckoff, H. W., deceased, Indianapolis, Ind.; N. H. Richardson, administrator. Wire-connector. No. 902,040; Oct. 27; Sp. p. 4137; Dr. p. 838; Gaz. vol. 136; p. 1809.
Wyckoff, Seamans & Benedict. (See Farnum, W. C., assignor.)
Wyckoff, Seamans & Benedict. (See Woodward, O., assignor.)
Wykel, W. A. (See Hunter and Wykel.)
Wyman, G. R., assignor to F. W. Bird & Son, East Walpole, Mass. Paper box. No. 900,904; Oct. 13; Sp. p. 1774; Dr. p. 359; Gaz. vol. 136; p. 1372.
Wyman, H., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Loom-filling-carrier magazine. No. 902,193; Oct. 27; Sp. p. 4436; Dr. p. 898; Gaz. vol. 136; p. 1857.
Wynne, E. W., Liverpool, England. Purifying petroleum oils. No. 901,411; Oct. 20; Sp. p. 2810; Gaz. vol. 136; p. 1574.
Wysong, O. C., Greensboro, N. C. Abrasive apparatus. No. 900,249; Oct. 6; Sp. p. 361; Dr. p. 75; Gaz. vol. 136; p. 1131.
Wyssling, W., Paris, France. Pressing or molding machine. No. 900,142; Oct. 6; Sp. p. 147; Dr. pp. 30–1; Gaz. vol. 136; p. 1096.
Yale & Towne Manufacturing Company. (See Augenbraum, P. F., assignor.)
Ybarrondo, V. C., de, Los Angeles, Cal. Telegraphic sounder. No. 901,861; Oct. 20; Sp. p. 3750; Dr. p. 762; Gaz. vol. 136; p. 1721.
Yell, W. S., Wartrace, Tenn. Phonograph-record case. No. 902,361; Oct. 27; Sp. p. 4804; Dr. p. 970; Gaz. vol. 136; p. 1914.
Yetter, A. B., New York, N. Y. Moving-van. No. 901,766; Oct. 20; Sp. p. 3576; Dr. p. 724; Gaz. vol. 136; p. 1691.
Young, A., assignor of one-half to W. N. Rumely, Laporte, Ind. Rupture-truss. No. 900,250; Oct. 6; Sp. p. 364; Dr. p 75; Gaz. vol. 136; p. 1132.
Young, C. S., Pittsburg, Pa. Crate. No. 900,637; Oct. 6; Sp. p. 1212; Dr. p. 249; Gaz. vol. 136; p. 1259.
Young, E. T., Boston, Mass. Supplying energy to engines. No. 901,310; Oct. 13; Sp. p. 2558; Dr. p. 526; Gaz. vol. 136; p. 1502.
Young, G. H. (See Cummings, E. W., assignor.)
Young, W., assignor to Supplementary Spiral Spring Company, St. Louis, Mo. Steadying device for supplementary vehicle-springs. No. 901,578; Oct. 20; Sp. p. 3167; Dr. pp. 645–6; Gaz. vol. 136; p. 1629.
Young, W., assignor to Supplementary Spiral Spring Company, St. Louis, Mo. Brace for supplementary vehicle-springs. No. 901,767; Oct. 20; Sp. p. 3578; Dr. p. 724; Gaz. vol. 136; p. 1692.
Youree, J. D. (See McCabe, J. D., assignor.)
Youtz, E. E., Casner, Ill. Land-marker. No. 902,128; Oct. 27; Sp. p. 4301; Dr. pp. 871–2; Gaz. vol. 136; p. 1837.
Yunck, J. A., South Orange, N. J. Apparatus for electroplating. No. 900,340; Oct. 6; Sp. p. 563; Dr. p. 117; Gaz. vol. 136; p. 1161.
Zabriskie, A., Paterson, N. J. Fiber-preparing machine. No. 900,251; Oct. 6; Sp. p. 365; Dr. p. 76; Gaz. vol. 136; p. 1132.
Zetterberg, C. A., Duluth, Minn. Life-preserving apparatus. No. 901,862; Oct. 20; Sp. p. 3751; Dr. p. 763; Gaz. vol. 136; p. 1721.
Ziehn, W. C. L. (See Schneider and Ziehn.)
Zierlein, R. W., assignor to Paris Lamp Manufacturing Company, St. Louis, Mo. Gas-lamp. No. 900,817; Oct. 13; Sp. p. 1599; Dr. p. 324; Gaz. vol. 136; p. 1346.
Zimmer, P. H., Schenectady, N. Y., assignor to General Electric Company. Rheostat. No. 901,512; Oct. 20; Sp. p. 3040; Dr. p. 621; Gaz. vol. 136; p. 1608.
Zschoge, O., Brooklyn, N. Y. Gasolene-strainer. No. 900,638; Oct. 6; Sp. p. 1213; Dr. p. 249; Gaz. vol. 136; p. 1259.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF OCTOBER, 1908.

{Abbreviations: "Sp."=Monthly Volume of Specifications; "Dr."=Monthly Volume of Drawings; "Gaz."=Official Gazette.}

Abrasive apparatus. O. C. Wysong. No. 900,249; Oct. 6; Sp. p. 361; Dr. p. 75; Gaz. vol. 136; p. 1131.
Account system. H. Wilke. No. 901,507; Oct. 20; Sp. p. 3031; Dr. p. 619; Gaz. vol. 136; p. 1606.
Accounting system. E. C. Albree. No. 901,579; Oct. 20; Sp. p. 3171; Dr. p. 647; Gaz. vol. 136; p. 1629.
Acetylene-generator. E. E. Taggart. No. 902,023; Oct. 27; Sp. p. 4103; Dr. p. 831; Gaz. vol. 136; p. 1804.
Acid, Apparatus for treating oleic. P. Schwoerer. No. 902,177; Oct. 27; Sp. p. 4406; Dr. p. 893; Gaz. vol. 136; p. 1853.
Acid, Celestin-blue sulfonic. W. Lommel. No. 902,154; Oct. 27; Sp. p. 4356; Gaz. vol. 136; p. 1846.
Acid, Making nitric. O. Bender. No. 900,471; Oct. 6; Sp. p. 856; Dr. p. 174; Gaz. vol. 136; p. 1205.
Acid, Making sulfuric. O. Bender. No. 900,688; Oct. 6; Sp. p. 1327; Dr. p. 271; Gaz. vol. 136; p. 1276.
Acid, Producing phosphoric. F. J. Maywald. No. 902,157; Oct. 27; Sp. p. 4360; Dr. p. 883; Gaz. vol. 136; p. 1846.
Acids, Producing hydroxy-fatty. G. Imbert. No. 901,905; Oct. 20; Sp. p. 3834; Gaz. vol. 136; p. 1735.
Adding-machines, Printing-eliminating device for. C. Wales. No. 902,125; Oct. 27; Sp. p. 4295; Dr. p. 871; Gaz. vol. 136; p. 1836.
Addressing-machines, Town-marker for. S. C. Cox. No. 901,954; Oct. 27; Sp. p. 3942; Dr. pp. 804–5; Gaz. vol. 136; p. 1782.
Adjustable bracket. D. C. Bradstock. No. 900,475; Oct. 6; Sp. p. 864; Dr. p. 176; Gaz. vol. 136; p. 1206.
Adjustable bracket. I. Filson. No. 901,700; Oct. 20; Sp. p. 3455; Dr. p. 700; Gaz. vol. 136; p. 1671.
Adjustable chair. C. H. Rhodes. No. 900,593; Oct. 6; Sp. p. 1113; Dr. p. 228; Gaz. vol. 136; p. 1244.
Adjustable wrench. J. C. Burgess. No. 900,828; Oct. 13; Sp. p. 1623; Dr. p. 328; Gaz. vol. 136; p. 1349.
Advertising bill-hook. W. Hornich, Jr. No. 901,901; Oct. 20; Sp. 3826; Dr. p. 778; Gaz. vol. 136; p. 1734.
Advertising device. W. F. Gill and J. M. Barry. No. 901,166; Oct. 13; Sp. p. 2275; Dr. p. 463; Gaz. vol. 136; p. 1457.
Advertising device, Wind-actuated. R. Ray. No. 901,187; Oct. 13; Sp. p. 2309; Dr. p. 473; Gaz. vol. 136; p. 1463.
Agricultural tractors or the like, Anchoring device for. J. E. W. Fillet. No. 901,799; Oct. 20; Sp. p. 3646; Dr. p. 738; Gaz. vol. 136; p. 1702.
Air-brake. W. O. Mundy. (Reissue.) No. 12,863; Oct. 13; Sp. p. 2566; Dr. p. 528; Gaz. vol. 136; p. 1503.
Air-brake. J. F. McElroy. No. 901,923; Oct. 20; Sp. p. 3862; Dr. p. 788; Gaz. vol. 136; p. 1741.
Air-brake controlling means. G. Macloskie. No. 900,752; Oct. 13; Sp. p. 1448; Dr. p. 294; Gaz. vol. 136; p. 1323.
Air-brake quick-action automatic release mechanism. J. E. Normand. No. 902,161; Oct. 27; Sp. p. 4368; Dr. pp. 884–5; Gaz. vol. 136; p. 1848.
Air-brake quick-action automatic release mechanism. J. E. Normand. No. 902,162; Oct. 27; Sp. p. 4371; Dr. pp. 885–6; Gaz. vol. 136; p. 1848.
Air-brake system. B. Aikman. No. 900,639; Oct. 6; Sp. p. 1214; Dr. pp. 249–50; Gaz. vol. 136; p. 1259.
Air-brake systems, Valve mechanism for railway. J. E. Normand. No. 902,163; Oct. 27; Sp. p. 4377; Dr. pp. 886–7; Gaz. vol. 136; p. 1848.
Air-brakes, High-speed-reducing valve for. W. V. Turner. No. 902,182; Oct 27; Sp. p. 4417; Dr. p. 895; Gaz. vol. 136; p. 1855.
Air-brakes, High-speed-reducing valve for. W. V. Turner and J. S. Custer. No. 902,183; Oct. 27; Sp. p. 4420; Dr. p. 896; Gaz. vol. 136; p. 1855.
Air-compressor. W. G. Wilson. No. 900,814; Oct. 13; Sp. p. 1594; Dr. p. 322; Gaz. vol. 136; p. 1345.
Air-compressor. H. J. Horstmann. No. 901,344; Oct. 20; Sp. p. 2636; Dr. pp. 542–3; Gaz. vol. 136; p. 1549.
Air-compressor. T. O. Perry. No. 901,555; Oct. 20; Sp. p. 3121; Dr. p. 639; Gaz. vol. 136; p. 1622.
Air-compressor, Multiple-stage. J. G. Leyner. No. 901,539; Oct. 20; Sp. p. 3094; Dr. pp. 632–3; Gaz. vol. 136; p. 1617.
Air from siphons of sluices and the like, Device for exhausting. C. Havestadt. No. 902,077; Oct. 27; Sp. p. 4202; Dr. p. 852; Gaz. vol. 136; p. 1821.
Air self-coupling. B. F. Sweeney. No. 901,660; Oct. 20; Sp. p. 3323; Dr. p. 682; Gaz. vol. 136; p. 1654.
Alarm: *See* Burglar-alarm; Electric alarm; Fire-alarm; Lock-alarm.
Alarm. T. E. H. Buchanan. No. 900,145; Oct. 6; Sp. p. 151; Dr. p. 32; Gaz. vol. 136; p. 1097.
Alkaline deposits for recovering soda, &c., Treating. J. C. W. Stanley. No. 900,892; Oct. 13; Sp. p. 1750; Dr. p. 354; Gaz. vol. 136; p. 1368.
Alloy. W. J. Leddell. No. 901,014; Oct. 13; Sp. p. 2004; Gaz. vol. 136; p. 1409.
Alternator, Inductor magneto. L. Le Pontois. No. 902,499; Oct. 27; Sp. p. 5108; Dr. p. 1034; Gaz. vol. 136; p. 1960.
Aluminium-solder. W. H. Finfrock. No. 901,607; Oct. 20; Sp. p. 3222; Gaz. vol. 136; p. 1638.
Aluminous materials, Treating. L. E. Saunders and J. G. Petrikin. No. 902,255; Oct. 27; Sp. p. 4561; Dr. p. 926; Gaz. vol. 136; p. 1877.
Aluminum-solder. T. J. and R. Wibrin. No. 900,810; Oct. 13; Sp. p. 1585; Gaz. vol. 136; p. 1343.
Amalgamator. F. Stringham. No. 900,965; Oct. 13; Sp. p. 1908; Dr. p. 388; Gaz. vol. 136; p. 1392.
Amusement apparatus. C. H. Gueritey. No. 902,073; Oct. 27; Sp. p. 4193; Dr. p. 850; Gaz. vol. 136; p. 1820.
Amusement device. W. B. Leonard. No. 900,749; Oct. 13; Sp. p. 1445; Dr. p. 293; Gaz. vol. 136; p. 1322.
Amusement device. C. I. Enochs. No. 901,330; Oct. 20; Sp. p. 2607; Dr. p. 536; Gaz. vol. 136; p. 1544.
Amusement device. P. W. Fuller. No. 901,435; Oct. 20; Sp. p. 2863; Dr. p. 585; Gaz. vol. 136; p. 1582.
Amusement riding device. M. B. Becker. No. 900,820; Oct. 13; Sp. p. 1604; Dr. p. 325; Gaz. vol. 136; p. 1347.
Anchor, Vessel-. W. I. Babcock. No. 902,046; Oct. 27; Sp. p. 4145; Dr. p. 840; Gaz. vol. 136; p. 1811.
Animal and fowl catcher. W. G. Tarrant. No. 901,210; Oct. 13; Sp. p. 2354; Dr. p. 481; Gaz. vol. 136; p. 1471.
Animal-bench, Folding. R. C. Rathborne. No. 902,508; Oct. 27; Sp. p. 5135; Dr. p. 1040; Gaz. vol. 136; p. 1964.
Animal-catcher. C. B. Cruse. No. 902,057; Oct. 27; Sp. p. 4165; Dr. p. 843; Gaz. vol. 136; p. 1814.
Animal-dipping device. E. F. and J. A. Kolosick. No. 901,623; Oct. 20; Sp. p. 3255; Dr. p. 667; Gaz. vol. 136; p. 1643.
Animal-trap. J. Shepherd. No. 902,005; Oct. 27; Sp. p. 4068; Dr. p. 825; Gaz. vol. 136; p. 1799.
Animals, Device for the prevention of onanism in. W. Leech. No. 900,863; Oct. 13; Sp. p. 1683; Dr. p. 340; Gaz. vol. 136; p. 1360.
Annealing-furnace. E. E. F. Creighton. No. 901,956; Oct. 27; Sp. p. 3946; Dr. p. 805; Gaz. vol. 136; p. 1783.
Antifraud-box. M. Paveletz. No. 901,036; Oct. 13; Sp. p. 2041; Dr. p. 415; Gaz. vol. 136; p. 1416.
Antifreezing closet. N. Peterson. No. 901,255; Oct. 13; Sp. p. 2430; Dr. p. 499; Gaz. vol. 136; p. 1484.
Antiseptic attachment for telephones. F. C. Tabler. No. 900,447; Oct. 6; Sp. p. 799; Dr. p. 164; Gaz. vol. 136; p. 1197.
Antiseptic mouthpiece for telephones, speaking-tubes, &c. M. S. Hufschmidt. No. 900,372; Oct. 6; Sp. p. 636; Dr. p. 131; Gaz. vol. 136; p. 1172.
Antiseptic organic-silver compound. M. Dodsworth. No. 900,835; Oct. 13; Sp. p. 1633; Gaz. vol. 136; p. 1351.
Apparel, such as collars and cuffs, Wearing-. S. M. Griffiths. No. 900,724; Oct. 13; Sp. p. 1396; Dr. p. 284; Gaz. vol. 136; p. 1315.
Apple quartering and trimming machine. H. J. Pinkerton. No. 900,949; Oct. 13; Sp. p. 1872; Dr. pp. 381–2; Gaz. vol. 136; p. 1387.
Arc lights, Carbon pencil of electric-. J. Nicholson. No. 901,993; Oct. 27; Sp. p. 4049; Dr. p. 821; Gaz. vol. 136; p. 1795.
Arm-rest. E. G. Budd. No. 900,702; Oct. 13; Sp. p. 1355; Dr. p. 276; Gaz. vol. 136; p. 1308.
Arm-rest. E. G. Budd. No. 900,703; Oct. 13; Sp. p. 1357; Dr. p. 276; Gaz. vol. 136; p. 1308.
Arm-rest. E. G. Budd. No. 900,704; Oct. 13; Sp. p. 1358; Dr. p. 277; Gaz. vol. 136; p. 1309.
Armature for unipolar machines. J. E. Noeggerath. No. 900,771; Oct. 13; Sp. p. 1496; Dr. p. 303; Gaz. vol. 136; p. 1329.
Arsenious oxid, Manufacture of. U. Wedge. No. 900,138; Oct. 6; Sp. p. 137; Dr. p. 29; Gaz. vol. 136; p. 1095.
Ash-receiver. J. Voska and C. Nelson. No. 902,511; Oct. 27; Sp. p. 5139; Dr. p. 1041; Gaz. vol. 136; p. 1965.
Auger, Post-hole. H. Herrmanns. No. 902,294; Oct. 27; Sp. p. 4647; Dr. p. 943; Gaz. vol. 136; p. 1892.
Automatic gate. A. T. Lister. No. 902,095; Oct. 27; Sp. p. 4232; Dr. pp. 857–8; Gaz. vol. 136; p. 1826.
Automatic sprinkler. G. I. Rockwood. No. 900,886; Oct. 13; Sp. p. 1739; Dr. p. 351; Gaz. vol. 136; p. 1366.
Automobile. F. A. Stephens. No. 901,493; Oct. 20; Sp. 3007; Dr. pp. 613–14; Gaz. vol. 136; p. 1602.

Automobile-spring. W. R. Rantz. No. 900,779; Oct. 13; Sp. p. 1508; Dr. pp. 306–7; Gaz. vol. 136; p. 1331.
Automobile steering means. A. Balloco. No. 900,975; Oct. 13; Sp. p. 1927; Dr. p. 392; Gaz. vol. 136; p. 1396.
Automobile-wheels, Anti skidding and slipping attachment for. H. H. Chandler. No. 901,591; Oct. 20; Sp. p. 3200; Dr. p. 655; Gaz. vol. 136; p. 1634.
Automobiles, Supplemental hood for. C. L. Hobbs. No. 901,616; Oct. 20; Sp. p. 3239; Dr. p. 664; Gaz. vol. 136; p. 1641.
Automobiles, Supplemental hood for. C. L. Hobbs. No. 901,616; Oct. 20; Sp. p. 3239; Dr. p. 664; Gaz. vol. 136; p. 1641.
Automobilists and chauffeurs, Head-covering for. C. N. Bruzaud. No. 901,320; Oct. 20; Sp. p. 2585; Dr. p. 530; Gaz. vol. 136; p. 1541.
Awning reflector-screen. J. N. Laprés. No. 901,715; Oct. 20; Sp. p. 3483; Dr. p. 705; Gaz. vol. 136; p. 1675.
Axle-bearing. C. M. Doritty. No. 902,058; Oct. 27; Sp. p. 4166; Dr. p. 843; Gaz. vol. 136; p. 1815.
Axle, Carriage-. R. E. Johnson. No. 900,859; Oct. 13; Sp. p. 1675; Dr. p. 339; Gaz. vol. 136; p. 1358.
Axle-lubricator. J. Aden. No. 900,252; Oct. 6; Sp. p. 368; Dr. p. 76; Gaz. vol. 136; p. 1132.
Axle-lubricator. H. Gearman. No. 901,165; Oct. 13; Sp. p. 2274; Dr. p. 463; Gaz. vol. 136; p. 1457.
Axle-lubricator. H. Gearman. No. 901,165; Oct. 13; Sp. p. 2274; Dr. p. 463; Gaz. vol. 136; p. 1457.
Axle-skein. S. K. Dennis. No. 902,214; Oct. 27; Sp. p. 4477; Dr. p. 906; Gaz. vol. 136; p. 1865.
Axle-spindle. T. L. Martin. No. 900,562; Oct. 6; Sp. p. 1059; Dr. p. 217; Gaz. vol. 136; p. 1235.
Axles, Driving mechanism for swinging. A. H. Fetzer. No. 900,503; Oct. 6; Sp. p. 936; Dr. p. 190; Gaz. vol. 136; p. 1214.
Back-band and hook attachment therefor. W. O. Barnett. No. 901,060; Oct. 13; Sp. p. 2089; Dr. p. 425; Gaz. vol. 136; p. 1424.
Bag-frame lock. L. B. Prahar. No. 900,421; Oct. 6; Sp. p. 730; Dr. p. 152; Gaz. vol. 136; p. 1188.
Bag-holder. A. A. Smith. No. 900,221; Oct. 6; Sp. p. 306; Dr. p. 62; Gaz. vol. 136; p. 1122.
Bag-holding rack and twine-holder, Combined. J. B. Frear. No. 900,362; Oct. 6; Sp. p. 603; Dr. p. 125; Gaz. vol. 136; p. 1168.
Baking-pan, Sanitary. W. H. Perry. No. 901,999; Oct. 27; Sp. p. 4058; Dr. p. 823; Gaz. vol. 136; p. 1797.
Baling-press. C. E. Wehrenberg. (Reissue.) No. 12,865; Oct. 13; Sp. p. 2571; Dr. pp. 528–9; Gaz. vol. 136; p. 1504.
Baling press, Hay-. H. M. Tallman. No. 901,849; Oct. 20; Sp. p. 3726; Dr. p. 758; Gaz. vol. 136; p. 1716.
Ballot-box, Computing. C. A. Ball. No. 902,365; Oct. 27; Sp. p. 4809; Dr. pp. 971–2; Gaz. vol. 136; p. 1915.
Balls, Manufacture of tennis and similar playing. F. Rowley. No. 902,330; Oct. 27; Sp. p. 4749; Dr. p. 958; Gaz. vol. 136; p. 1904.
Band-cutter and feeder. H. H. Bockelman. No. 901,674; Oct. 20; Sp. p. 3356; Dr. p. 688; Gaz. vol. 136; p. 1659.
Band-cutter and feeder. E. M. Kramer. No. 902,237; Oct. 27; Sp. p. 4528; Dr. p. 917; Gaz. vol. 136; p. 1871.
Band-cutter and feeder. W. J. Footitt. No. 902,391; Oct. 27; Sp. p. 4849; Dr. p. 981; Gaz. vol. 136; p. 1923.
Bar: *See* Reinforcing-bar; Tracker-bar.
Barium and barium alloys, Production of. G. O. Seward and F. von Kügelgen. No. 900,962; Oct. 13; Sp. p. 1904; Gaz. vol. 136; p. 1392.
Barrel, Collapsible. S. Lemly. No. 900,864; Oct. 13; Sp. p. 1684; Dr. p. 341; Gaz. vol. 136; p. 1360.
Barrel-headings, Machine for cutting. E. Windsor. No. 900,972; Oct. 13; Sp. p. 1923; Dr. pp. 391–2; Gaz. vol. 136; p. 1395.
Barrel-raiser. F. H. King and D. F. Arburn. No. 900,391; Oct. 6; Sp. p. 676; Dr. p. 138; Gaz. vol. 136; p. 1178.
Barrels, Machine for finishing the packing of. J. H. Vogt and L. Storck. No. 901,753; Oct. 20; Sp. p. 3553; Dr. p. 719; Gaz. vol. 136; p. 1687.
Barrels, Machine for use in chiming, crozing, and howelling. C. J. Alley. No. 900,253; Oct. 6; Sp. p. 369; Dr. p. 77; Gaz. vol. 136; p. 1133.
Barrette or hair-retainer. J. W. Nichols. No. 902,317; Oct. 27; Sp. p. 4706; Dr. p. 953; Gaz. vol. 136; p. 1899.
Basin and trap, Catch-. J. R. Williams. No. 901,859; Oct. 20; Sp. p. 3747; Dr. p. 762; Gaz. vol. 136; p. 1720.
Basket. A. H. Crawford. No. 900,487; Oct. 6; Sp. p. 878; Dr. p. 180; Gaz. vol. 136; p. 1209.
Basket-handle-bending machine. W. S. Smith. No. 900,890; Oct. 13; Sp. p. 1745; Dr. pp. 352–3; Gaz. vol. 136; p. 1368.
Bath and stand for the same. R. H. Quine. No. 900,586; Oct. 6; Sp. p. 1100; Dr. pp. 225–6; Gaz. vol. 136; p. 1242.
Baths, Combined descending-shower and shampoo fixture for shower-. W. G. Newton. No. 901,728; Oct. 20; Sp. p. 3509; Dr. p. 709; Gaz. vol. 136; p. 1679.
Bather's slipper. E. R. Parker. No. 900,881; Oct. 13; Sp. p. 1728; Dr. p. 349; Gaz. vol. 136; p. 1365.
Bathometer. P. Henze. No. 900,537; Oct. 6; Sp. p. 1001; Dr. p. 204; Gaz. vol. 136; p. 1226.
Batteries, Switch for charging and discharging storage. J. H. Cormick. No. 901,423; Oct. 20; Sp. p. 2837; Dr. p. 580; Gaz. vol. 136; p. 1578.
Batteries, Switch for charging and discharging storage. A. G. Wilson. No. 901,509; Oct. 20; Sp. p. 3035; Dr. p. 620; Gaz. vol. 136; p. 1607.
Battery: *See* Electric battery; Primary battery; Secondary battery.
Battery cover, Electric-. H. J. Brewer. No. 900,476; Oct. 6; Sp. p. 865; Dr. pp. 176–7; Gaz. vol. 136; p. 1206.
Bearing, Antifriction-. E. C. Ketchum. No. 900,860; Oct. 13; Sp. p. 1677; Dr. p. 339; Gaz. vol. 136; p. 1359.
Bearing, Ball-. F. W. Witte. No. 900,634; Oct. 6; Sp. p. 1206; Dr. p. 248; Gaz. vol. 136; p. 1258.
Bearing, Ball-. F. W. Witte. No. 900,635; Oct. 6; Sp. p. 1209; Dr. p. 248; Gaz. vol. 136; p. 1258.
Bearing, Ball-. L. Herrmann. No. 901,169; Oct. 13; Sp. p. 2279; Dr. p. 465; Gaz. vol. 136; p. 1458.
Bearing for cars, Antifriction center. J. C. Barber. No. 901,223; Oct. 13; Sp. p. 2372; Dr. p. 485; Gaz. vol. 136; p. 1474.
Bearing for self-closing liquid shut-offs, Roller-. A. Schuermann. No. 900,598; Oct. 6; Sp. p. 1120; Dr. p. 229; Gaz. vol. 136; p. 1246.
Bearing for shafts, spindles, &c. A. H. Reid. No. 901,374; Oct. 20; Sp. p. 2708; Dr. p. 556; Gaz. vol. 136; p. 1560.
Bearing, Roller-. J. A. Perkins. No. 900,199; Oct. 6; Sp. p. 266; Dr. pp. 53–4; Gaz. vol. 136; p. 1115.
Bed. O. E. Enell. No. 900,156; Oct. 6; Sp. p. 175; Dr. pp. 36–7; Gaz. vol. 136; p. 1101.
Bed. Folding. O. E. Enell. No. 900,157; Oct. 6; Sp. p. 177; Dr. p. 37; Gaz. vol. 136; p. 1102.
Bed, Metal-. O. Rudd. No. 901,482; Oct. 20; Sp. p. 2983; Dr. p. 608; Gaz. vol. 136; p. 1508.
Bed-spring. N. K. Billow. No. 901,516; Oct. 20; Sp. p. 3052; Dr. p. 623; Gaz. vol. 136; p. 1610.
Bed-spring frame. G. A. Tornkvist. No. 900,799; Oct. 13; Sp. p. 1548; Dr. p. 315; Gaz. vol. 136; p. 1338.
Bedstead corner-fastener. A. E. Irelan. No. 902,085; Oct. 27; Sp. p. 4215; Dr. p. 854; Gaz. vol. 136; p. 1823.
Bedstead, Metallic. C. Netzel. No. 901,992; Oct. 27; Sp. p. 4048; Dr. p. 821; Gaz. vol. 136; p. 1794.
Beehives, Super for. C. H. Bachmann. No. 901,058; Oct. 13; Sp. p. 2085; Dr. p. 424; Gaz. vol. 136; p. 1423.
Beer-dispensing apparatus. S. J. Asbell. No. 900,076; Oct. 6; Sp. p. 5; Dr. pp. 1–2; Gaz. vol. 136; p. 1075.
Beet-unloader. S. M. Thornton. No. 901,852; Oct. 20; Sp. p. 3731; Dr. p. 759; Gaz. vol. 136; p. 1717.
Bell, Electric. G. L. Patterson. No. 901,033; Oct. 13; Sp. p. 2039; Dr. p. 413; Gaz. vol. 136; p. 1416.
Bell, Electric. C. H. North. No. 902,105; Oct. 27; Sp. p. 4258; Dr. p. 863; Gaz. vol. 136; p. 1830.
Bell-operating device, Mechanical. J. Gravelle. No. 900,723; Oct. 13; Sp. p. 1395; Dr. p. 284; Gaz. vol. 136; p. 1314.
Belt. G. Fouillaron. No. 902,224; Oct. 27; Sp. p. 4505; Dr. p. 912; Gaz. vol. 136; p. 1867.
Belt attachment, Link-. J. Eklund. No. 902,524; Oct. 27; Sp. p. 5164; Dr. p. 1046; Gaz. vol. 136; p. 1969.
Belt-coupling. D. Chase. No. 901,952; Oct. 27; Sp. p. 3939; Dr. p. 804; Gaz. vol. 136; p. 1781.
Belt-fastener. A. G. Tomkies. No. 900,615; Oct. 6; Sp. p. 1170; Dr. pp. 238–9; Gaz. vol. 136; p. 1252.
Bench: *See* Animal-bench.
Beverage cooling and dispensing apparatus. F. G. Schneider and W. C. L. Ziehn. No. 902,333; Oct. 27; Sp. p. 4753; Dr. p. 959; Gaz. vol. 136; p. 1905.
Bicycle-fork, Spring. E. W. Hoag and C. R. Kittle. No. 901,447; Oct. 20; Sp. p. 2904; Dr. pp. 591–2; Gaz. vol. 136; p. 1587.
Bicycle package-carrier. G. W. Blake. No. 900,080; Oct. 6; Sp. p. 13; Dr. p. 3; Gaz. vol. 136; p. 1077.
Bidet, Hand-. F. Weidl. No. 901,134; Oct. 13; Sp. p. 2221; Dr. p. 452; Gaz. vol. 136; p. 1446.
Bilge bodies, Shaping. R. W. Hardie. No. 901,963; Oct. 27; Sp. p. 3960; Dr. p. 809; Gaz. vol. 136; p. 1785.
Billiard-chalk holder. M. Michaelson. No. 901,020; Oct. 13; Sp. p. 2014; Dr. p. 409; Gaz. vol. 136; p. 1411.
Billiard-table and the like. F. Hepton. No. 902,151; Oct. 27; Sp. p. 4345; Dr. p. 880; Gaz. vol. 136; p. 1845.
Billiard-table, Convertible. H. F. Davenport. No. 900,085; Oct. 6; Sp. p. 24; Dr. p. 4; Gaz. vol. 136; p. 1079.
Binder, Loose-leaf. J. C. Dawson. No. 901,076; Oct. 13; Sp. p. 2118; Dr. p. 431; Gaz. vol. 136; p. 1429.
Binder, Loose-leaf. F. B. Jordan. No. 901,347; Oct. 20; Sp. p. 2653; Dr. p. 544; Gaz. vol. 136; p. 1551.
Binder, Loose-leaf. C. R. Nelson. No. 901,549; Oct. 20; Sp. p. 3114; Dr. p. 636; Gaz. vol. 136; p. 1620.
Binder, Loose-leaf. W. M. Wheildon. No. 902,189; Oct. 27; Sp. p. 4432; Dr. p. 897; Gaz. vol. 136; p. 1857.
Bit: *See* Bridle-bit; Yielding bit.
Blacking-machine. E. E. Taliaferro. No. 900,448; Oct. 6; Sp. p. 803; Dr. pp. 164–7; Gaz. vol. 136; p. 1198.
Blacking machine, Shoe-. W. C. Ford. No. 902,390; Oct. 27; Sp. p. 4848; Dr. p. 981; Gaz. vol. 136; p. 1922.
Blast-furnace. J. H. Meissner. No. 900,291; Oct. 6; Sp. p. 473; Dr. pp. 97–8; Gaz. vol. 136; p. 1146.
Bleaching fats, oils, resins, waxes, and the like. K. Lidecke. No. 901,718; Oct. 20; Sp. p. 3489; Gaz. vol. 136; p. 1676.
Blind guide and stop, Window-. W. W. Bruce. No. 900,660; Oct. 6; Sp. p. 1265; Dr. p. 258; Gaz. vol. 136; p. 1267.
Block: *See* Building-block; Concrete building-block; Rail-splicing block; Sheave-block; Snatch-block.
Block-signaling device. W. and A. H. Fechner. No. 900,360; Oct. 6; Sp. p. 597; Dr. pp. 123–4; Gaz. vol. 136; p. 1167.
Block-signaling system. J. S. Holliday. No. 900,370; Oct. 6; Sp. p. 632; Dr. p. 130; Gaz. vol. 136; p. 1171.
Blower or compressor, Rotary. O. P. Ostergren and C. O. L. Cardell. No. 902,441; Oct. 27; Sp. p. 4971; Dr. p. 1005; Gaz. vol. 136; p. 1940.
Board: *See* Game-board; Piano fall-board.
Boat. W. B. Motheral. No. 900,296; Oct. 6; Sp. p. 479; Dr. pp. 99–100; Gaz. vol. 136; p. 1148.
Boat. W. B. Motheral. No. 900,680; Oct. 6; Sp. p. 1313; Dr. p. 269; Gaz. vol. 136; p. 1274.
Boats, Davit-supporting means for sharp-stern. J. E. Robbins. No. 902,452; Oct. 27; Sp. p. 4997; Dr. p. 1010; Gaz. vol. 136; p. 1943.
Boiler: *See* Steam-boiler.
Boiler-cleaner. F. X. Bayer. No. 900,078; Oct. 6; Sp. p. 10; Dr. p. 2; Gaz. vol. 136; p. 1076.
Boiler-furnace. J. R. Surrell. No. 902,265; Oct. 27; Sp. p. 4586; Dr. pp. 930–1; Gaz. vol. 136; p. 1881.

Boiler-hanger. T. C. Best. No. 901,416; Oct. 20; Sp. p. 2823; Dr. p. 576; Gaz. vol. 136; p. 1576.
Boiler-tube cleaner. E. J. McCarty. No. 902,315; Oct. 27; Sp. p. 4701; Dr. p. 952; Gaz. vol. 136; p. 1898.
Boilers, Man-head crane for steam-. S. Dillon and J. Noey. No. 900,689; Oct. 6; Sp. p. 1329; Dr. p. 271; Gaz. vol. 136; p. 1277.
Bolt and latch releasing device, Door. L. Jones. No. 902,412; Oct. 27; Sp. p. 4893; Dr. pp. 990–1; Gaz. vol. 136; p. 1930.
Bolt-locking device. J. L. Stoffer, No. 901,563; Oct. 20; Sp. p. 3130; Dr. p. 641; Gaz. vol. 136; p. 1624.
Book-mark. W. F. Brockett and N. H. Beebe. No. 901,225; Oct. 13; Sp. p. 2374; Dr. pp. 485–6; Gaz. vol. 136; p. 1474.
Book or pad, Manifold copy. W. C. Metzger. No. 901,935; Oct. 20; Sp. p. 3893; Dr. p. 794; Gaz. vol. 136; p. 1746
Bottle. G. Geisendorfer. No. 900,364; Oct. 6; Sp. p. 607; Dr. p. 126; Gaz. vol. 136; p. 1168.
Bottle, Antifraud-. J. Kinsel. No. 901,107; Oct. 13; Sp. p. 2178; Dr. p. 442; Gaz. vol. 136; p. 1438.
Bottle closer, Milk-. F. Buckhalter. No. 901,777; Oct. 20; Sp. p. 3605; Dr. p. 730; Gaz. vol. 136; p. 1695.
Bottle-drying machine. E. Utard and A. Gimonet. No. 901,757; Oct. 20; Sp. p. 3561; Dr. pp. 721–2; Gaz. vol. 136; p. 1689.
Bottle-molding means, Hot-water-. T. M. Gregory. No. 901,093; Oct. 13; Sp. p. 2153; Dr. pp. 439–40; Gaz. vol. 136; p. 1434.
Bottle-opener. A. A. Busch. No. 900,480; Oct. 6; Sp. p. 870; Dr. p. 178; Gaz. vol. 136; p. 1208.
Bottle or other vessel, Stoppering. E. A. Matthias. No. 900,110; Oct. 6; Sp. p. 80; Dr. p. 16; Gaz. vol. 136; p. 1087.
Bottle-stopper. J. H. Smith. No. 900,223; Oct. 6; Sp. p. 310; Dr. p. 63; Gaz. vol. 136; p. 1123.
Bottle-washer. I. Dupuis. No. 901,160; Oct. 13; Sp. p. 2265; Dr. p. 461; Gaz. vol. 136; p. 1455.
Bottle-washing machine. J. F. Haller. No. 900,528; Oct. 6; Sp. p. 983; Dr. p. 200; Gaz. vol. 136; p. 1223.
Bottle, Vacuum-. P. O. E. Friedrich and J. G. Lyman. No. 902,528; Oct. 27; Sp. p. 5183; Dr. p. 1048; Gaz. vol. 136; p. 1970.
Bottles, Effecting the closure of. C. R. Schmidt. No. 901,651; Oct. 20; Sp. p. 3309; Dr. p. 680; Gaz. vol. 136; p. 1652.
Box: *See* Antifraud-box; Ballot-box; Cardboard box; Cigar-box; Confectioner's box; Core-box; Cut-out box; Fare-box; Folding box; Mail-box; Match-box; Miter-box; Outlet-box; Paper box; Sound-box; Stuffing-box; Switch-box; Talking-machine box.
Box. G. B. Reed. No. 900,123; Oct. 6; Sp. p. 113; Dr. p. 23; Gaz. vol. 136; p. 1091.
Box. M. H. Doyle and W. H. Schmitt. No. 902,483; Oct. 27; Sp. p. 5063; Dr. p. 1024; Gaz. vol. 136; p. 1954.
Box-clamping machine. J. B. Ireland. No. 902,491; Oct. 27; Sp. p. 5084; Dr. p. 1030; Gaz. vol. 136; p. 1957.
Box-fastener. N. Dahl. No. 900,084; Oct. 6; Sp. p. 24; Dr. p. 4; Gaz. vol. 136; p. 1078.
Box-fastener. W. G. Long and J. A. Campbell. No. 902,241; Oct. 27; Sp. p. 4535; Dr. p. 919; Gaz. vol. 136; p. 1872.
Box-fastener, Spring-catch. G. Valentine. No. 900,241; Oct. 6; Sp. p. 344; Dr. p. 72; Gaz. vol. 136; p. 1129.
Box-lid holder. G. M. Link. No. 901,920; Oct. 20; Sp. p. 3859; Dr. p. 787; Gaz. vol. 136; p. 1740.
Box-making, Work-holder for. W. H. Holland. No. 902,230; Oct. 27; Sp. p. 4516; Dr. p. 915; Gaz. vol. 136; p. 1869.
Box-press and box-making apparatus, Combined. R. H. Bowman. No. 901,676; Oct. 20; Sp. p. 3360; Dr. pp. 688–9; Gaz. vol. 136; p. 1660.
Box-sanding machine. T. A. Palmer and C. A. Carlson. No. 901,367; Oct. 20; Sp. p. 2693; Dr. pp. 552–3; Gaz. vol. 136; p. 1558.
Boxes, Machine for punching and trimming metal stay-strips for. R. B. Lewis. No. 901,358; Oct. 20; Sp. p. 2673; Dr. pp. 548–9; Gaz. vol. 136; p. 1555.
Brace: *See* Buggy-top brace.
Brace. A. E. Smith. No. 901,395; Oct. 20; Sp. p. 2779; Dr. p. 565; Gaz. vol. 136; p. 1569.
Bracelet-joint. W. Wallenthin. No. 900,624; Oct. 6; Sp. p. 1185; Dr. p. 243; Gaz. vol. 136; p. 1255.
Bracket: *See* Adjustable bracket; Lamp-bracket; Scaffold-bracket; Scraper-bracket; Shade and curtain bracket.
Brake: *See* Air-brake; Car-brake; Electropneumatic brake; Gun-recoil brake; Vehicle-brake; Wagon-brake.
Brake. W. H. Mitchell. No. 901,633; Oct. 20; Sp. p. 3275; Dr. pp. 671–2; Gaz. vol. 136; p. 1646.
Brake-cylinder, Duplex. W. V. Turner. No. 902,185; Oct. 27; Sp. p. 4426; Dr. p. 896; Gaz. vol. 136; p. 1856.
Brake-hanger, Non-chattering. W. Dalton. No. 902,477; Oct. 27; Sp. p. 5051; Dr. p. 1022; Gaz. vol. 136; p. 1952.
Brake-head. G. A. Bowman and C. L. Harmeyer. No. 901,872; Oct. 20; Sp. p. 3769; Dr. p. 766; Gaz. vol. 136; p. 1724.
Brake mechanism. A. Balloco. No. 901,670; Oct. 20; Sp. p. 3349; Dr. p. 686; Gaz. vol. 136; p. 1658.
Brake-shoe. C. S. Shallenberger. No. 900,600; Oct. 6; Sp. p. 1126; Dr. pp. 230–1; Gaz. vol. 136; p. 1247.
Brake-shoe. C. S. Shallenberger. No. 900,601; Oct. 6; Sp. p. 1128; Dr. p. 231; Gaz. vol. 136; p. 1247.
Brake-shoe. S. P. Bush. No. 902,206; Oct. 27; Sp. p. 4462; Dr. pp. 902–3; Gaz. vol. 136; p. 1862.
Brake system, Fluid-pressure. W. H. Sauvage. No. 902,114; Oct. 27; Sp. p. 4278; Dr. p. 867; Gaz. vol. 136; p. 1832.
Brake-wheel. D. J. Montambo. No. 901,634; Oct. 20; Sp. p. 3277; Dr. p. 672; Gaz. vol. 136; p. 1646.
Bread, cake, and pie lifter. F. A. and S. L. Bennett. No. 901,671; Oct. 20; Sp. p. 3350; Dr. p. 687; Gaz. vol. 136; p. 1658.
Breech mechanism. S. A. S. Hammar. No. 902,487; Oct. 27; Sp. p. 5072; Dr. pp. 1026–8; Gaz. vol. 136; p. 1956.
Brick and tile cutting machine. W. R. Cunningham. No. 901,691; Oct. 20; Sp. p. 3427; Dr. pp. 695–6; Gaz. vol. 136; p. 1668.
Brick-drier cars, Non-detachable sliding and folding upper deck for. C. H. Johnston. No. 901,105; Oct. 13; Sp. p. 2173; Dr. p. 442; Gaz. vol. 136; p. 1437.
Brick-machine attachment. M. N., C. J., and A. H. Grant. No. 900,521; Oct. 6; Sp. p. 970; Dr. p. 196; Gaz vol. 136; p. 1220
Brick-machines, Expressing screw or auger for. H. Neitzel. No. 901,819; Oct. 20; Sp. p. 3680; Dr. p. 747; Gaz. vol. 136; p. 1709.
Bridge-dam. H. L. Coburn. No. 900,354; Oct. 6; Sp. p. 589; Dr. p. 122; Gaz. vol. 136; p. 1165.
Bridle-bit, Overchecking. F. S. Dure. No. 900,712; Oct. 13; Sp. p. 1374; Dr. p. 280; Gaz. vol. 136; p. 1311.
Brooch. C. N. Bruzaud. No. 902,274; Oct. 27; Sp. p. 4608; Dr. p. 936; Gaz. vol. 136; p. 1884.
Broom-holder. A. Kunkel. No. 901,179; Oct. 13; Sp. p. 2295; Dr. p. 468; Gaz. vol. 136; p. 1460.
Brush case, Tooth-. R. Sewell. No. 901,841; Oct. 20; Sp. p. 3716; Dr. p. 755; Gaz. vol. 136; p. 1714.
Brush-handle. P. A. Pines. No. 901,736; Oct. 20; Sp. p. 3521; Dr. p. 712; Gaz. vol. 136; p. 1682.
Brush-holder. H. E. Heath. No. 900,730; Oct. 13; Sp. p. 1409; Dr. p. 287; Gaz. vol. 136; p. 1316.
Brush-holder, Automatically-adjustable. W. J. Richards. No. 900,884; Oct. 13; Sp. p. 1735; Dr. pp. 350–1; Gaz. vol. 136; p. 1366.
Brush kit, Blacking-. S. W. Emory. No. 901,600; Oct. 20; Sp. p. 3211; Dr. p. 658; Gaz. vol. 136; p. 1636.
Brush, Tooth-. R. R. Ringer. No. 901,835; Oct. 20; Sp. p. 3706; Dr. p. 752; Gaz. vol. 136; p. 1712.
Bucket, Oyster-shipping. J. H. Cox. No. 900,986; Oct. 13; Sp. p. 1946; Dr. p. 396; Gaz. vol. 136; p. 1400.
Buckle. E. Pearl. No. 900,774; Oct. 13; Sp. p. 1500; Dr. p. 304; Gaz. vol. 136; p. 1330.
Buckle. C. P. Hutton. No. 901,103; Oct. 13; Sp. p. 2170; Dr. p. 441; Gaz. vol. 136; p. 1436.
Buffing-machine. S. W. Ladd. No. 901,933; Oct. 20; Sp. p. 3889; Dr. p. 794; Gaz. vol. 136; p. 1745.
Buggy-top brace. J. E. Disheroon. No. 901,079; Oct. 13; Sp. p. 2122; Dr. p. 432; Gaz. vol. 136; p. 1429.
Building-block. A. G. Mahler. No. 900,753; Oct. 13; Sp. p. 1449; Dr. p. 295; Gaz. vol. 136; p. 1323.
Building-block, Hollow. J. F. Rettig. No. 901,833; Oct. 20; Sp. p. 3701; Dr. p. 751; Gaz. vol. 136; p. 1712.
Building construction. P. H. Jackson. No. 900,378; Oct. 6; Sp. p. 647; Dr. p. 133; Gaz. vol. 136; p. 1173.
Bumping-post. A. E. Schultz. No. 901,196; Oct. 13; Sp. p. 2326; Dr. p. 477; Gaz. vol. 136; p. 1466.
Bunching and counting machine. F. E. Strasburg. No. 900,611; Oct. 6; Sp. p. 1162; Dr. p. 237; Gaz. vol. 136; p. 1251.
Bundle-tie. A. W. Baird. No. 900,645; Oct. 6; Sp. p. 1234; Dr. p. 252; Gaz. vol. 136; p. 1262.
Burglar-alarm. P. T. Keefe. No. 901,349; Oct. 20; Sp. p. 2657; Dr. p. 544; Gaz. vol. 136; p. 1552.
Burglar-alarm. C. A. Metzger. No. 901,983; Oct. 27; Sp. p. 4032; Dr. p. 817; Gaz. vol. 136; p. 1792.
Burglar-alarm and window-sash, Combination. T. E. Cain. No. 900,146; Oct. 6; Sp. p. 153; Dr. p. 32; Gaz. vol. 136; p. 1098.
Burglar-alarm, Electric. S. B. Hess. No. 901,171; Oct. 13; Sp. p. 2283; Dr. p. 466; Gaz. vol. 136; p. 1458.
Burial-case. D. Waldie and G. W. Galway. No. 900,968; Oct. 13; Sp. p. 1915; Dr. p. 390; Gaz. vol. 136; p. 1394.
Burial-robe. H. T. Loomis. No. 901,457; Oct. 20; Sp. p. 2920; Dr. p. 595; Gaz. vol. 136; p. 1590.
Burner: *See* Gas-burner; Hydrocarbon-burner; Lamp-burner; Oil-burner.
Burner. W. H. Damon. No. 901,788; Oct. 20; Sp. p. 3626; Dr. p. 734; Gaz. vol. 136; p. 1699.
Bushings, Device for extracting. G. M. Coursen. No. 902,475; Oct. 27; Sp. p. 5047; Dr. p. 1021; Gaz. vol. 136; p. 1951.
Button-blank conveying and distributing machine. I. De Francisci. No. 901,893; Oct. 20; Sp. p. 3808; Dr. pp. 776–7; Gaz. vol. 136; p. 1731.
Button, Garment-. L. D. Van Valkenburg. No. 900,134; Oct. 6; Sp. p. 132; Dr. p. 28; Gaz. vol. 136; p. 1094.
Button-hook. J. Melnick. No. 901,248; Oct. 13; Sp. p. 2415; Dr. p. 495; Gaz. vol. 136; p. 1482.
Button pencil-holder. E. D. Conklin. No. 901,886; Oct. 20; Sp. p. 3796; Dr. p. 772; Gaz. vol. 136; p. 1729.
By-pass. E. Burhorn. No. 900,479; Oct. 6; Sp. p. 869; Dr. pp. 177–8; Gaz. vol. 136; p. 1207.
Cab signal system. D. J. McCarthy. No. 901,250; Oct. 13; Sp. p. 2418; Dr. p. 496; Gaz. vol. 136; p. 1489.
Cabinet, Account-. J. S. Bash. No. 900,646; Oct. 6; Sp. p. 1235; Dr. p. 253; Gaz. vol. 136; p. 1262.
Cabinet, Laundry-. W. P. Berry. No. 900,347; Oct. 6; Sp. p. 577; Dr. pp. 119–20; Gaz. vol. 136; p. 1163.
Cabinet, Seed-. T. A. Bateman. No. 901,868; Oct. 20; Sp. p. 3764; Dr. p. 765; Gaz. vol. 136; p. 1723.
Cabinet top, Sliding. J. W. Connaty No. 901,887; Oct. 20; Sp. p. 3797; Dr. p. 773; Gaz. vol. 136; p. 1729.
Cable fastener or clamp. E. B. Feaster. No. 900,717; Oct. 13; Sp. p. 1384; Dr. p. 282; Gaz. vol. 136; p. 1312.
Cable or rope guide. J. C. Elzy and E. E. Anderson. No. 901,794; Oct. 20; Sp. p. 3641; Dr. p. 736; Gaz. vol. 136; p. 1701.
Cable-support. E. A. Hawkins. No. 901,706; Oct. 20; Sp. p. 3466; Dr. p. 702; Gaz. vol. 136; p. 1673.
Cable-tip. L. Kellner. No. 902,235; Oct. 27; Sp. p. 4526; Dr. p. 916; Gaz. vol. 136; p. 1871.
Cableway, Aerial. F. B. Dye. No. 900,713; Oct. 13; Sp. p. 1375; Dr. p. 280; Gaz. vol. 136; p. 1311.
Cake-mixer and egg-beater. A. J. Saltsman. No. 900,210; Oct. 6; Sp. p. 291; Dr. p. 59; Gaz. vol. 136; p. 1119.
Calculating-machine. E. Schuster. No. 901,748; Oct. 20; Sp. p. 3541; Dr. p. 716; Gaz. vol. 136; p. 1686.
Calculating-machine. E. Leder. No. 902,498; Oct. 27; Sp. p. 5100; Dr. p. 1033; Gaz. vol. 136; p. 1960.
Calculating-machine for money and similar objects. M. G. Fröberg. No. 902,067; Oct. 27; Sp. p. 4184; Dr. pp. 847–8; Gaz. vol. 136; p. 1818.

Calculating-machines, Power-transmitting mechanism for. C. N. McFarland. No. 902,103; Oct. 27; Sp. p. 4252; Dr. pp. 861-3; Gaz. vol. 136; p. 1829.
Calendar. H Taylor. No. 900,228; Oct. 6; Sp. p. 319; Dr. p. 66; Gaz. vol. 136; p. 1125.
Calendar. H. E. Shedd. (Reissue.) No. 12,861; Oct. 6; Sp. p. 1332; Dr. p. 271; Gaz. vol. 136; p. 1277.
Calendar. J. Ferreres. No. 902,484; Oct. 27; Sp. p. 5065; Dr. p. 1024; Gaz. vol. 136; p. 1954.
Calendar, Perpetual. A. W. Proctor. No. 900,310; Oct. 6; Sp. p. 509; Dr. p. 105; Gaz. vol. 136; p. 1152.
Calendar-stand. J. W. Tatum. No. 901,754; Oct. 20; Sp. p. 3554; Dr. p. 719; Gaz. vol. 136; p. 1688.
Calipers, Micrometer-. F. O. Jaques, Jr. No. 902,492; Oct. 27; Sp. p. 5085; Dr. p. 1030; Gaz. vol. 136; p. 1957.
Calipers, Micrometer. F. O. Jaques, Jr. No. 902,493; Oct. 27; Sp. p. 5087; Dr. p. 1031; Gaz. vol. 136; p. 1958.
Calorific kiln. E. A. King. No. 900,742; Oct. 13; Sp. p. 1432; Dr. p. 291; Gaz. vol. 136; p. 1320.
Camera-back, Circular. E. L. Hall. No. 900,526; Oct. 6; Sp. p. 980; Dr. p. 199; Gaz. vol. 136; p. 1222.
Camera-shutters, Magnetic operating means for. A. Bartels. No. 900,344; Oct. 6; Sp. p. 572; Dr. p. 118; Gaz. vol. 136; p. 1162.
Camphor, Making. J. Hertkorn. No. 901,708; Oct. 20; Sp. p. 3469; Gaz. vol. 136; p. 1673.
Can: *See* Filler-can; Liquid-dispensing can; Tin can.
Can-body-flanging machine. V. Odquist and H. H. Lyche. No. 900,119; Oct. 6; Sp. p. 102; Dr. pp. 21-2; Gaz. vol. 136; p. 1089.
Can-cap, Solder-carrying. J. J. Rigby. No. 901,375; Oct. 20; Sp. p. 2711; Dr. p. 556; Gaz. vol. 136; p. 1561.
Can-filling device. W. H. McNutt. No. 900,762; Oct. 13; Sp. p. 1467; Dr. p. 299; Gaz. vol. 136; p. 1326.
Can-filling machine. G. E. Chamberlain. No. 901,420; Oct. 20; Sp. p. 2829; Dr. pp. 578-9; Gaz. vol. 136; p. 1577.
Can-fluxing machine. C. H. Ayars. No. 901,867; Oct. 20; Sp. p. 3761; Dr. p. 765; Gaz. vol. 136; p. 1723.
Can-making machine. V. Odquist. No. 900,118; Oct. 6; Sp. p. 94; Dr. pp. 19-21; Gaz. vol. 136; p. 1089.
Can-opener. S. T. Allen. No. 901,412; Oct. 20; Sp. p. 2811; Dr. p. 574; Gaz. vol. 136; p. 1574.
Can-opener. W. H. Winfield and W. Senn. No. 901,510; Oct. 20; Sp. p. 3037; Dr. p. 620; Gaz. vol. 136; p. 1608.
Can-tester. E. V. Swangren. No. 900,324; Oct. 6; Sp. p. 539; Dr. p. 112; Gaz. vol. 136; p. 1156.
Can-testing device. C. W. Sleeper. No. 901,393; Oct. 20; Sp. p. 2776; Dr. p. 565; Gaz. vol. 136; p. 1569.
Canceling device, Hand. H. R. McFarland. No. 902,436; Oct. 27; Sp. p. 4961; Dr. p. 1002; Gaz. vol. 136; p. 1938.
Cannon-pinion. W. F. Jost. No. 900,380; Oct. 6; Sp. p. 651; Dr. p. 134; Gaz. vol. 136; p. 1174.
Car-body. W. H. Heulings, Jr., and W. M. Smith. No. 902,402; Oct. 27; Sp. p. 4874; Dr. p. 987; Gaz. vol. 136; p. 1927.
Car-bolster. F. L. Irwin. No. 900,376; Oct. 6; Sp. p. 645; Dr. p. 133; Gaz. vol. 136; p. 1173.
Car brake, Railway-. S. A. Crone. No. 902,137; Oct. 27; Sp. p. 4319; Dr. p. 875; Gaz. vol. 136; p. 1840.
Car-coupling. O. L. Albertson. No. 901,863; Oct. 20; Sp. p. 3752; Dr. p. 763; Gaz. vol. 136; p. 1721.
Car-coupling. H. H. Paulson. No. 902,442; Oct. 27; Sp. p. 4972; Dr p. 1005; Gaz. vol. 136; p. 1940.
Car-door gear. C. A. Lindström. No. 900,941; Oct. 13; Sp. p. 1860; Dr. p. 379; Gaz. vol. 136; p. 1384.
Car door, Grain-. A. J. Denton. No. 900,491; Oct. 6; Sp. p. 912; Dr. p. 185; Gaz. vol. 136; p. 1210.
Car door, Grain-. T. Gerdes and G. E. Wilken. No. 901,531; Oct. 20; Sp. p. 3079; Dr. p. 629; Gaz. vol. 136; p. 1614.
Car, Dumping-. H. T. Herr, J. R. Groves, and D. H. Foreman. No. 900,368; Oct. 6; Sp. p. 615; Dr. pp. 128-9; Gaz. vol. 136; p. 1170.
Car, Dumping-. E. C. Washburn. No. 901,270; Oct. 13; Sp. p. 2468; Dr. pp. 506-7; Gaz. vol. 136; p. 1489.
Car-fender. D. E. Conn. No. 902,210; Oct. 27; Sp. p. 4468; Dr. p. 904; Gaz. vol. 136; p. 1903.
Car for sticky materials, Dumping-. M. Orenstein. No. 901,643; Oct. 20; Sp. p. 3263; Dr. pp. 675-6; Gaz. vol. 136; p. 1640.
Car, Freight-. H. B. Houser. No. 900,170; Oct. 6; Sp. p. 207; Dr. p. 42; Gaz. vol. 136; p. 1106.
Car, Freight-. J. S. Andrews. No. 901,413; Oct. 20; Sp. p. 2812; Dr. p. 574; Gaz. vol. 136; p. 1574.
Car gate, Passenger-. W. H. Heulings, Jr. No. 902,489; Oct. 27; Sp. p. 5081; Dr. p. 1029; Gaz. vol. 136; p. 1956.
Car, Grain-. J. T. McNally. No. 901,183; Oct. 13; Sp. p. 2301; Dr. pp. 470-1; Gaz. vol. 136; p. 1462.
Car grain-door. J. Edman. No. 901,959; Oct. 27; Sp. p. 3950; Dr. pp. 806-7; Gaz. vol. 136; p. 1784.
Car guard-rail, Passenger-. S. T. Bole. No. 902,368; Oct. 27; Sp. p. 4816; Dr. p. 973; Gaz. vol. 136; p. 1916.
Car-mover. C. H Shotwell. No. 902,336; Oct. 27; Sp. p. 4758; Dr. p. 960; Gaz. vol. 136; p. 1906.
Car operating mechanism, Dumping-. S. J. Johnson. No. 900,549; Oct. 6; Sp. p. 1027; Dr. p. 209; Gaz. vol. 136; p. 1230.
Car, Passenger-. S. M. Curwen. No. 901,786; Oct. 20; Sp. p. 3623; Dr. p. 733; Gaz. vol. 136; p. 1698.
Car, Passenger-. W. M. Smith and S. M. Curwen. No. 901,787; Oct. 20; Sp. p. 3625; Dr. p. 734; Gaz. vol. 136; p. 1698.
Car, Passenger-. H. Howson. No. 901,902; Oct. 20; Sp. p. 3827; Dr. p. 779; Gaz. vol. 136; p. 1734.
Car, Passenger-. H. Howson. No. 901,903; Oct. 20; Sp. p. 3830; Dr. pp. 779-80; Gaz. vol. 136; p. 1735.
Car, Passenger-. S. M. Curwen and W. M. Smith. No. 902,381; Oct. 27; Sp. p. 4836; Dr. p. 977; Gaz. vol. 136; p. 1920.
Car, Passenger-. H. Howson. No. 902,405; Oct. 27; Sp. p. 4877; Dr. p. 987; Gaz. vol. 136; p. 1927.
Car, Passenger-. R. H. and M. E. Moore. No. 902,431; Oct. 27; Sp. p. 4955; Dr. p. 1000; Gaz. vol. 136; p. 1937.
Car-replacer. S. N. Ellenwood. No. 900,838; Oct. 13; Sp. p. 1641; Dr. p. 332; Gaz. vol. 136; p. 1352.
Car safety appliance, Street-. L. M. Maxham. No. 902,156; Oct. 27; Sp. p. 4358; Dr. pp. 882-3; Gaz. vol. 136; p. 1846.
Car safety-guard. M. Meyer. No. 900,187; Oct. 6; Sp. p. 243; Dr. pp. 49-50; Gaz. vol. 136; p. 1112.
Car-signal. J. H. Brady. No. 901,586; Oct. 20; Sp. p. 3188; Dr. p. 650; Gaz. vol. 136; p. 1633.
Car-stake. J. F. Townsend. No. 900,899; Oct. 13; Sp. p. 1762; Dr. 358; Gaz. vol. 136; p. 1371.
Car-stake. F. S. Ingoldsby and J. F. Townsend. No. 900,930; Oct. 13; Sp. p. 1838; Dr. p. 374; Gaz. vol. 136; p. 1381.
Car-step, Folding. H. Miller. No. 901,632; Oct. 20; Sp. p. 3274; Dr. p. 671; Gaz. vol. 136; p. 1646.
Car-transfer, Automatic. E. M. Scoville. No. 901,488; Oct. 20; Sp. p. 2994; Dr. pp. 610-11; Gaz. vol. 136; p. 1600.
Car-underframe construction. F. L. Irwin. No. 900,375; Oct. 6; Sp. p. 642; Dr. p. 132; Gaz. vol. 136; p. 1172.
Car-underframe construction. F. L. Irwin. No. 900,546; Oct. 6; Sp. p. 1022; Dr. pp. 207-8; Gaz. vol. 136; p. 1229.
Car-ventilating system. F. D. Jacobs. No. 901,010; Oct. 13; Sp. p. 1994; Dr. p. 405; Gaz. vol. 136; p. 1408.
Car-wheel. J. H. Rutherford and W. J. Alford. No. 901,650; Oct. 20; Sp. p. 3306; Dr. p. 680; Gaz. vol. 136; p. 1651.
Cars, Check attachment for. J. A. McConnell. No. 901,815; Oct. 20; Sp. p. 3674; Dr. p. 746; Gaz. vol. 136; p. 1707.
Cars, &c., Hanger-strap or handhold for. J. F. Newton, Jr. No. 901,119; Oct. 13; Sp. p. 2195; Dr. pp. 446-7; Gaz. vol. 136; p. 1441.
Cars, Sash-window for railway-. R. Mende. No. 900,407; Oct. 6; Sp. p. 705; Dr. p. 146; Gaz. vol. 136; p. 1184.
Carbureter. F. H. Heitger. No. 900,098; Oct. 6; Sp. p. 46; Dr. p. 9; Gaz. vol. 136; p. 1082.
Carbureter. H. Small. No. 900,604; Oct. 6; Sp. p. 1132; Dr. pp. 232-3; Gaz. vol. 136; p. 1248.
Carbureter. F. H. Heitger. No. 900,731; Oct. 13; Sp. p. 1411; Dr. p. 287; Gaz. vol. 136; p. 1317.
Carbureter. A. Graumüller. No. 901,237; Oct. 13; Sp. p. 2398; Dr. p. 492; Gaz vol. 136; p. 1478.
Carbureter. T. Howell. No. 901,345; Oct. 20; Sp. p. 2647; Dr. p. 543; Gaz. vol. 136; p. 1550.
Carbureting device. A. C. Granel. No. 900,999; Oct. 13; Sp. p. 1974; Dr. p. 401; Gaz. vol. 136; p. 1405.
Card-making machine. A. L. Hemphill. No. 902,488; Oct. 27; Sp. p. 5078; Dr. pp. 1028-9; Gaz. vol. 136; p. 1956.
Carding-machine. J. Stewart. No. 901,045; Oct. 13; Sp. p. 2057; Dr. p. 418; Gaz. vol. 136; p. 1419.
Cardboard box. O. H. Davis. No. 901,695; Oct. 20; Sp. p. 3438; Dr. p. 697; Gaz. vol. 136; p. 1669.
Carpet fastener, Stair-. E. E. Greene. No. 901,167; Oct. 13; Sp. p. 2277; Dr. p. 464; Gaz. vol. 136; p. 1457.
Carpet-stretcher. J. M. Eby. No. 901,231; Oct. 13; Sp. p. 2387; Dr. p. 488; Gaz. vol. 136; p. 1476.
Carpet-sweeper. L. P. Halladay. No. 900,527; Oct. 6; Sp. p. 981; Dr. p. 200; Gaz. vol. 136; p. 1222.
Carriage runner, Child's-. H. B. Van Vliet. No. 901,500; Oct. 20; Sp. p. 3019; Dr. p. 617; Gaz. vol. 136; p. 1604.
Carriages, Umbrella-support for. J. C. Williams and A. B. Conner. No. 902,459; Oct. 27; Sp. p. 5012; Dr. p. 1013; Gaz. vol. 136; p. 1945.
Carrier: *See* Bicycle package-carrier; Egg-carrier; Elevated carrier; Folding carrier; Shade-carrier.
Carrier. G. Fink. No. 901,234; Oct. 13; Sp. p. 2392; Dr. p. 490; Gaz. vol. 136; p. 1477.
Carrier. L. C. Browning. No. 901,318; Oct. 20; Sp. p. 2582; Dr. p. 531; Gaz. vol. 136; p. 1540.
Carrier system. J. J. Meyer. No. 901,964; Oct. 27; Sp. p. 4033; Dr. pp. 817-18; Gaz. vol. 136; p. 1792.
Cart. R. Weir. No. 900,455; Oct. 6; Sp. p. 822; Dr. p. 168; Gaz. vol. 136; p. 1199.
Cartridge-belt. W. C. Fisher. No. 900,091; Oct. 6; Sp. p. 38; Dr. p. 7; Gaz. vol. 136; p. 1080.
Cartridge-belt. W. C. Fisher. No. 900,092; Oct. 6; Sp. p. 39; Dr. p. 7; Gaz. vol. 136; p. 1081.
Cartridge-belt. W. C. Fisher. No. 900,094; Oct. 6; Sp. p. 41; Dr. p. 8; Gaz. vol. 136; p. 1081.
Cartridge-pocket. W. C. Fisher. No. 900,093; Oct. 6; Sp. p. 40; Dr. p. 7; Gaz. vol. 136; p. 1081.
Cartridge-pocket. W. C. Fisher. No. 900,095; Oct. 6; Sp. p. 42; Dr. p. 8; Gaz. vol. 136; p. 1082.
Cartridge-pocket. W. C. Fisher. No. 900,096; Oct. 6; Sp. p. 43; Dr. p. 8; Gaz. vol. 136; p. 1082.
Cartridge-shell-repairing machine. J. W. Hanghawout. No. 900,532; Oct. 6; Sp. p. 991; Dr. p. 202; Gaz. vol. 136; p. 1224.
Case: *See* Brush-case; Burial-case; Medicine-case; Necktie-case; Needle and thread case; Phonograph-record case; Spool-case; Storing and display case; Type-case.
Cash-registers, Refunding attachment for. H. T. Emeis. No. 900,991; Oct. 13; Sp. p. 1956; Dr. pp. 398-9; Gaz. vol. 136; p. 1401.
Cask, Cylindrical. W. G. Avery. No. 900,692; Oct. 13; Sp. p. 1337; Dr. p. 272; Gaz. vol. 136; p. 1305.
Casket-handle. J. H. Mills. No. 900,509; Oct. 6; Sp. p. 1070; Dr. pp. 219-20; Gaz. vol. 136; p. 1237.
Casket-protector. E. J. Callahan and D. G. Fisher. No. 900,980; Oct. 13; Sp. p. 1939; Dr. p. 395; Gaz. vol. 136; p. 1398.
Caskets and graves, Combined cover and hood for. C. Weber-Illig. No. 900,971; Oct. 13; Sp. p. 1920; Dr. p. 391; Gaz. vol. 136; p. 1394.
Caster, Furniture-. G. E. Neuberth. No. 900,417; Oct. 6; Sp. p. 723; Dr. p. 151; Gaz. vol. 136; p. 1187.
Caster, Furniture-. E. P. Rother. No. 900,424; Oct. 6; Sp. p. 736; Dr. pp. 153-4; Gaz. vol. 136; p. 1189.
Caster, Furniture-. G. E. Neuberth. No. 900,877; Oct. 6; Sp. p. 1084; Dr. p. 222; Gaz. vol. 136; p. 1239.
Casting apparatus. E. B. Van Wagner. No. 900,802; Oct. 13; Sp. p. 1551; Dr. pp. 315-16; Gaz. vol. 136; p. 1339.
Casting apparatus. E. B. Van Wagner. No. 900,803; Oct. 13; Sp. p. 1556; Dr. p. 316; Gaz. vol. 136; p. 1340.

Casting apparatus. W. S. Weston. No. 900,807; Oct. 13; Sp. p. 1572; Dr. pp. 318-19; Gaz. vol. 136; p. 1342.
Catamenial appliance. D. S. Daudt. No. 900,150; Oct. 6; Sp. p. 162; Dr. p. 34; Gaz. vol. 136; p. 1100.
Catamenial-sack support. H. M. Richards. No. 901,742; Oct. 20; Sp. p. 3532; Dr. p. 714; Gaz. vol. 136; p. 1684.
Catch for swing-closures. J. H. Nelson. No. 900,415; Oct. 6; Sp. p. 721; Dr. p. 150; Gaz. vol. 136; p. 1187.
Cattle-guard gate. J. Adams. No. 902,518; Oct. 27; Sp. p. 5152; Dr. p. 1043; Gaz. vol. 136; p. 1967.
Cellulose compounds, Producing. I. Kitsee. No. 900,744; Oct. 13; Sp. p. 1437; Gaz. vol. 136; p. 1320.
Cement and making same, White non-staining Portland. S. B. Newberry. No. 900,874; Oct. 13; Sp. p. 1712; Gaz. vol. 136; p. 1363.
Cement and making the same, Slag. H. Kühl. No. 900,939; Oct. 13; Sp. p. 1854; Gaz. vol. 136; p. 1384.
Cement-block machine. G. W. Buck. No. 900,910; Oct. 13; Sp. p. 1791; Dr. pp. 361-2; Gaz. vol. 136; p. 1375.
Cement-block machine. G. L. Reed. No. 901,740; Oct. 20; Sp. p. 3528; Dr. p. 714; Gaz. vol. 136; p. 1683.
Cement-block machine. M. Nashold. No. 900,414; Oct. 6; Sp. p. 720; Dr. p. 150; Gaz. vol. 136; p. 1186.
Centrifugal block-machine. M. Nashold. No. 900,414; Oct. 6; Sp. p. 35; Dr. p. 6; Gaz. vol. 136; p. 1080.
Centrifugal machine. A. J. Ericsson. No. 900,089; Oct. 6; Sp. p. 35; Dr. p. 6; Gaz. vol. 136; p. 1544.
Centrifugal machine. C. D. Ehret. No. 901,329; Oct. 20; Sp. p. 2606; Dr. p. 536; Gaz. vol. 136; p. 1887.
Centrifugal separators, Flexible neck-bearing for. C. A. Edlund. No. 902,282; Oct. 27; Sp. p. 4621; Dr. p. 939; Gaz. vol. 136; p. 1636.
Ceramic mass and manufacturing pottery, Producing a new. H. Eisenlohr. No. 901,599; Oct. 20; Sp. p. 3210; Gaz. vol. 136; p. 1728.
Chaff-separator. E. G. Clymans and M. A. Flautt. No. 901,883; Oct. 20; Sp. p. 3791; Dr. p. 771; Gaz. vol. 136; p. 1699.
Chain. J. M. Dodge. No. 901,789; Oct. 20; Sp. p. 3627; Dr. p. 734; Gaz. vol. 136; p. 1862.
Chain, Drive-. W. F. Brown. No. 902,205; Oct. 27; Sp. p. 4461; Dr. p. 902; Gaz. vol. 136; p. 1805.
Chain wrench. A. M. Tilton. No. 902,025; Oct. 27; Sp. p. 4108; Dr. p. 832; Gaz. vol. 136; p. 1886.
Chair: *See* Adjustable chair; Folding chair; Folding and adjustable chair; Mechanical chair; Reclining-chair; Rocking-chair; Swing-seat chair; Window-chair.
Chair. O. L. Ostendorf. No. 900,301; Oct. 6; Sp. p. 487; Dr. p. 102; Gaz. vol. 136; p. 1149.
Chair. A. G. Eyles. No. 901,285; Oct. 13; Sp. p. 2512; Dr. p. 515; Gaz. vol. 136; p. 1495.
Chair attachment. H. L. Broad and F. H. Orcutt. No. 901,065; Oct. 13; Sp. p. 2095; Dr. p. 426; Gaz. vol. 136; p. 1425.
Chair-back adjustment. J. Salomon. No. 901,559; Oct. 20; Sp. p. 3134; Dr. p. 640; Gaz. vol. 136; p. 1623.
Chair-bottom clip. J. P. Williams. No. 900,247; Oct. 6; Sp. p. 457; Dr. p. 74; Gaz. vol. 136; p. 1131.
Chair-canopy. T. Morton. No. 900,572; Oct. 6; Sp. p. 1075; Dr. p. 220; Gaz. vol. 136; p. 1237.
Chair-lock. G. E. Searing. No. 901,561; Oct. 20; Sp. p. 3136; Dr. p. 641; Gaz. vol. 136; p. 1624.
Chair or swing seat. L. C. Bullock, Jr. No. 901,321; Oct. 20; Sp. p. 2586; Dr. p. 532; Gaz. vol. 136; p. 1541.
Chairs, Reclining attachment for. F. E. Barnickle. No. 900,077; Oct. 6; Sp. p. 9; Dr. p. 2; Gaz. vol. 136; p. 1076.
Chalk-holder. H. T. McCune. No. 902,435; Oct. 27; Sp. p. 4960; Dr. p. 1002; Gaz. vol. 136; p. 1938.
Check. R. M. Scotford. No. 901,838; Oct. 20; Sp. p. 3710; Dr. p. 753; Gaz. vol. 136; p. 1713.
Checkrein-hook. J. B. Rotz. No. 900,425; Oct. 6; Sp. p. 737; Dr. p. 154; Gaz. vol. 136; p. 1190.
Chemical product resembling celluloid and producing the same. F. Raschig. No. 900,204; Oct. 6; Sp. p. 278; Gaz. vol. 136; p. 1117.
Chenille-spotting machine. L. O. Trivett and F. Randall. No. 900,616; Oct. 6; Sp. p. 1171; Dr. p. 239; Gaz. vol. 136; p. 1252.
Chopper: *See* Cotton-chopper.
Chromates, Making. W. T. Glibbs. No. 901,436; Oct. 20; Sp. p. 2865; Dr. p. 585; Gaz. vol. 136; p. 1583.
Chromium, Producing an electrolytic deposit of metallic. F. Salzer. No. 900,597; Oct. 6; Sp. p. 1119; Gaz. vol. 136; p. 1245.
Chuck. P. A. Whitney. No. 902,191; Oct. 27; Sp. p. 4434; Dr. p. 897; Gaz. vol. 136; p. 1857.
Chuck, Centering-. R. Milne. No. 902,459; Oct. 27; Sp. p. 2416; Dr. p. 496; Gaz. vol. 136; p. 1482.
Chuck-operating means. J. Jecklin and C. W. Schreiber. No. 900,856; Oct. 13; Sp. p. 1670; Dr. p. 338; Gaz. vol. 136; p. 1358.
Churn. D. Hamilton. No. 901,808; Oct. 20; Sp. p. 3663; Dr. p. 742; Gaz. vol. 136; p. 1705.
Churn-dasher. L. A. Sprout. No. 900,441; Oct. 6; Sp. p. 780; Dr. p. 161; Gaz. vol. 136; p. 1195.
Churn, Rotary. S. J. Smith. No. 901,492; Oct. 20; Sp. p. 3005; Dr. p. 613; Gaz. vol. 136; p. 1601.
Cigar-box. A. B. Smith. No. 900,222; Oct. 6; Sp. p. 309; Dr. p. 63; Gaz. vol. 136; p. 1123.
Cigar-box and lid. W. J. Farrell. No. 902,140; Oct. 27; Sp. p. 4325; Dr. p. 876; Gaz. vol. 136; p. 1841.
Cigar-cutter. E. Salzer. No. 902,171; Oct. 27; Sp. p. 4393; Dr. p. 889; Gaz. vol. 136; p. 1851.
Cigar-cutter and match-deliverer. E. Salzer. No. 902,170; Oct. 27; Sp. p. 4391; Dr. p. 889; Gaz. vol. 136; p. 1851.
Cigar-holding receptacle. J. P. Bergeron. No. 902,521; Oct. 27; Sp. p. 5159; Dr. p. 1045; Gaz. vol. 136; p. 1968.
Cigar-machines, Bunch shaping, compressing, and conveying mechanism for. J. D. Lacroix. No. 901,625; Oct. 20; Sp. p. 3258; Dr. pp. 668-9; Gaz. vol. 136; p. 1644.
Cigarettes, Production of shells employed in the manufacture of. I. Semenoff. No. 900,432; Oct. 6; Sp. p. 760; Dr. p. 157; Gaz. vol. 136; p. 1192.
Circuit-breaker. C. C. Badeau. No. 900,693; Oct. 13; Sp. p. 1338; Dr. p. 273; Gaz. vol. 136; p. 1305
Circuit-breaker. E. M. Hewlett and T. E. Button. No. 901,614; Oct. 20; Sp. p. 3233; Dr. pp. 662-3; Gaz. vol. 136; p. 1640.
Circuit-breaker, High-tension. F. B. Corey. No. 900,708; Oct. 13; Sp. p. 1367; Dr. p. 278; Gaz. vol. 136; p. 1310.
Circuit-controller. A. Bevan. No. 900,699; Oct. 13; Sp. p. 1349; Dr. p. 276; Gaz. vol. 136; p. 1307.
Circuit-controlling devices, Operating means for. J. K. Lux. No. 901,630; Oct. 20; Sp. p. 3268; Dr. p. 670; Gaz. vol. 136; p. 1645.
Circuit-interrupter. C. B. Snell. No. 900,320; Oct. 6; Sp. p. 530; Dr. p. 110; Gaz. vol. 136; p. 1155.
Cisterns, Ventilating-cover for. J. U. Gribben and M. Mohr. No. 902,289; Oct. 27; Sp. p. 4640; Dr. p. 941; Gaz. vol. 136; p. 1889.
Clamp: *See* Hinge-clamp; Horse-pad clamp; Jar-clamp; Overshoe-clamp; Rail-clamp; Screen-clamp.
Clamp. M. S. Cumner. No. 900,915; Oct. 13; Sp. p. 1801; Dr. p. 364; Gaz. vol. 136; p. 1376.
Clamp. J. H. Mills. (Reissue.) No. 12,864; Oct. 13; Sp. p. 2508; Dr. p. 528; Gaz. vol. 136; p. 1504.
Clamp. H. A. Thompson. No. 901,925; Oct. 20; Sp. p. 3868; Dr. p. 788-9; Gaz. vol. 136; p. 1742.
Clasp: *See* Garment-clasp.
Cleaner: *See* Boiler-cleaner; Boiler-tube cleaner; Roll-cleaner; Tooth-cleaner; Tube-cleaner.
Cleaning device. J. C. Willis. No. 901,272; Oct. 13; Sp. p. 2472; Dr. p. 507; Gaz. vol. 136; p. 1490.
Clevis, Plow-. J. F. Cassman. No. 901,780; Oct. 20; Sp. p. 3610; Dr. p. 731; Gaz. vol. 136; p. 1696.
Clip: *See* Chair-bottom clip; Fender-clip.
Clip-hook. H. Johnson. No. 901,173; Oct. 13; Sp. p. 2288; Dr. p. 467; Gaz. vol. 136; p. 1459.
Clock, Alarm-. R. Metz. No. 900,293; Oct. 6; Sp. p. 477; Dr. p. 98; Gaz. vol. 136; p. 1147.
Clock, Alarm-. W. E. Porter. No. 901,737; Oct. 20; Sp. p. 3523; Dr. p. 713; Gaz. vol. 136; p. 1682.
Clock attachment. E. A. Hummel. No. 900,855; Oct. 13; Sp. p. 1669; Dr. p. 338; Gaz. vol. 136; p. 1357.
Clock, Electric. C. H. White. No. 900,050; Oct. 13; Sp. p. 2066; Dr. p. 420; Gaz. vol. 136; p. 1420.
Clocks and the like, Portable case for. W. H. Slattery. No. 900,317; Oct. 6; Sp. p. 526; Dr. p. 109; Gaz. vol. 136; p. 1154.
Clocks and the like, Striking mechanism for. J. P. L. Lindström. No. 900,399; Oct. 6; Sp. p. 689; Dr. p. 142; Gaz. vol. 136; p. 1181.
Clocks, Program attachment for. J. W. Hansen. No. 900,529; Oct. 6; Sp. p. 984; Dr. pp. 200-1; Gaz. vol. 136; p. 1223
Closet: *See* Antifreezing closet; Water-closet.
Closet-cistern, Automatic. J. H. Brady. No. 901,587; Oct. 20; Sp. p. 3190; Dr. p. 650; Gaz. vol. 136; p. 1633.
Cloth-cutting-machine base. J. B. Gury. No. 901,439; Oct. 20; Sp. p. 2871; Dr. p. 586; Gaz. vol. 136; p. 1584.
Clothes-guard. B. J. Simpson. No. 900,220; Oct. 6; Sp. p. 307; Dr. p. 62; Gaz. vol. 136; p. 1122.
Clothes-line fastener. A. Olson. No. 900,879; Oct. 13; Sp. p. 1725; Dr. p. 349; Gaz. vol. 136; p. 1364.
Clothes-line holder. J. C. R. Steirly. No. 900,608; Oct. 6; Sp. p. 1158; Dr. p. 236; Gaz. vol. 136; p. 1250.
Clothes-line reel. E. E. Blackledge and J. Chaplin. No. 900,823; Oct. 13; Sp. p. 1608; Dr. p. 326; Gaz. vol. 136; p. 1347.
Clothing-support. W. Seydel. No. 901,652; Oct. 20; Sp. p. 3310; Dr. p. 680; Gaz. vol. 136; p. 1652.
Clover-buncher bottom. J. K. Sharpe, Jr. No. 901,491; Oct. 20; Sp. p. 3004; Dr. p. 613; Gaz. vol. 136; p. 1601.
Clutch. F. M. Nichols. No. 900,578; Oct. 6; Sp. p. 1085; Dr. p. 222; Gaz. vol. 136; p. 1240.
Clutch. L. Wirtz. No. 901,408; Oct. 20; Sp. p. 2801; Dr. p. 571; Gaz. vol. 136; p. 1573.
Clutch-centering mechanism. F. Niessner. No. 901,729; Oct. 20; Sp. p. 3510; Dr. p. 710; Gaz. vol. 136; p. 1680.
Clutch, Friction-. P. M. H. Lange. No. 900,397; Oct. 6; Sp. p. 686; Dr. p. 141; Gaz. vol. 136; p. 1180.
Clutch, Friction-. M. L. Williams. No. 902,515; Oct. 27; Sp. p. 5145; Dr. p. 1042; Gaz. vol. 136; p. 1966.
Clutch mechanism. H. Dock. No. 901,061; Oct. 13; Sp. p. 2125; Dr. p. 433; Gaz. vol. 136; p. 1430.
Clutch mechanism for reverse-gearing. H. A. Tuttle. No. 901,854; Oct. 20; Sp. p. 3737; Dr. p. 760; Gaz. vol. 136; p. 1718.
Coating-machine. M. A. Smith. No. 901,749; Oct. 20; Sp. p. 3543; Dr. pp. 716-18; Gaz. vol. 136; p. 1686.
Cock, Blow-off. G. H. Osman. No. 900,197; Oct. 6; Sp. p. 264; Dr. p. 53; Gaz. vol. 136; p. 1115.
Cock-coupling. E. Witzenmann. No. 902,192; Oct. 27; Sp. p. 4435; Dr. p. 898; Gaz. vol. 136; p. 1857.
Cock or valve, Water. B. J. Porter and T. H. Binnington. No. 900,309; Oct. 6; Sp. p. 509; Dr. p. 105; Gaz. vol. 136; p. 1152.
Cock, Stop-. L. Jones. No. 901,621; Oct. 20; Sp. p. 3253; Dr. p. 666; Gaz. vol. 136; p. 1642.
Coffee after the same has been graded, Mechanism for cleaning and finishing ground. F. Conner. No. 902,474; Oct. 27; Sp. p. 5045; Dr. p. 1021; Gaz. vol. 136; p. 1951.
Coffee-steeper. J. Steinberg. No. 900,128; Oct. 6; Sp. p. 126; Dr. p. 26; Gaz. vol. 136; p. 1092.
Coin-controlled lock. F. W. Kassler. No. 902,086; Oct. 27; Sp. p. 4216; Dr. p. 854; Gaz. vol. 136; p. 1824.
Coin-receptacles, Locking mechanism for. W. H. Woolums. No. 901,409; Oct. 20; Sp. p. 2804; Dr. p. 572; Gaz. vol. 136; p. 1573.
Coke-drawer. R. L. Martin, Jr., and W. W. Macfarren. No. 902,242; Oct. 27; Sp. p. 4537; Dr. pp. 920-1; Gaz. vol. 136; p. 1873.
Coke-drawing apparatus. J. Reed. No. 900,206; Oct. 6; Sp. p. 283; Dr. p. 57; Gaz. vol. 136; p. 1118.
Collapsible frame or support. L. K. Sone. No. 900,322; Oct. 6; Sp. p. 535; Dr. p. 111; Gaz. vol. 136; p. 1156.

Collapsible stand. J. W. Kline. No. 902,089; Oct. 27; Sp. p. 4224; Dr. p. 856; Gaz. vol. 136; p. 1825.
Collar-support. G. Keitel. No. 900,932; Oct. 13; Sp. p. 1843; Dr. p. 375; Gaz. vol. 136; p. 1382.
Collector-rings, Means for supporting. W. F. Dawson. No. 900,710; Oct. 13; Sp. p. 1371; Dr. p. 279; Gaz. vol. 136; p. 1310.
Color combinations, Device for obtaining. R. A. Simpkin. No. 901,655; Oct. 20; Sp. p. 3313; Dr. p. 681; Gaz. vol. 136; p. 1653.
Colors, Process of fixing. H. Toepfer. No. 900,130; Oct. 6; Sp. p. 128; Gaz. vol. 136; p. 1093.
Colors, Producing indulin. A. Ostrogovich and T. Silbermann. No. 900,302; Oct. 6; Sp. p. 489; Gaz. vol. 136; p. 1150.
Colter, Plow-. H. H. Wachter. No. 901,759; Oct. 20; Sp. p. 3565; Dr. p. 722; Gaz. vol. 136; p. 1689.
Column. J. Lally. No. 901,453; Oct. 20; Sp. p. 2912; Dr. p. 593; Gaz. vol. 136; p. 1588.
Column. C. T. Cunnius. No. 902,209; Oct. 27; Sp. p. 4466; Dr. p. 903; Gaz. vol. 136; p. 1863.
Column-base. G. L. Preacher. No. 902,448; Oct. 27; Sp. p. 4981; Dr. pp. 1006–7; Gaz. vol. 136; p. 1942.
Column-step. J. Glover. No. 900,517; Oct. 6; Sp. p. 965; Dr. p. 195; Gaz. vol. 136; p. 1219.
Column, Wooden. O. A. Jose and S. Anderson. No. 901,176; Oct. 13; Sp. p. 2291; Dr. p. 468; Gaz. vol. 136; p. 1460.
Combination-lock. F. Soley. No. 900,438; Oct. 6; Sp. p. 773; Dr. pp. 159–60; Gaz. vol. 136; p. 1194.
Commode. L. W. Price. No. 902,449; Oct. 27; Sp. p. 4984; Dr. pp. 1007–8; Gaz. vol. 136; p. 1942.
Commutator for dynamo-electric machines. F. H. Loring. No. 902,424; Oct. 27; Sp. p. 4945; Dr. p. 998; Gaz. vol. 136; p. 1934.
Compasses, Drawing-. G. Schoenner. No. 902,267; Oct. 27; Sp. p. 4566; Dr. p. 927; Gaz. vol. 136; p. 1878.
Composition. J. H. Batchelder. No. 900,256; Oct. 6; Sp. p. 374; Gaz. vol. 136; p. 1133.
Compressor, Variable-capacity. B. V. Nordberg. No. 900,418; Oct. 6; Sp. p. 724; Dr. p. 151; Gaz. vol. 136; p. 1187.
Computing-machine. F. P. Glasner and J. J. Glasier. No. 901,092; Oct. 13; Sp. p. 2146; Dr. pp. 438–9; Gaz. vol. 136; p. 1433.
Concentrating-table. A. M. Kemp, M. W. Loomis, and J. E. Fitzwater. No. 900,285; Oct. 6; Sp. p. 459; Dr. p. 94; Gaz. vol. 136; p. 1144.
Concentrating-tables, Head-motion for. S. H. Boylan. No. 901,585; Oct. 20; Sp. p. 3186; Dr. pp. 649–50; Gaz. vol. 136; p. 1632.
Concrete-block machine. A. Pierce. No. 901,825; Oct. 20; Sp. p. 3690; Dr. p. 749; Gaz. vol. 136; p. 1710.
Concrete building-blocks, Machine for constructing hollow. J. Fish. No. 900,272; Oct. 6; Sp. p. 432; Dr. p. 88; Gaz. vol. 136; p. 1139.
Concrete building-wall. M. G. Mandt. No. 901,017; Oct. 13; Sp. p. 2010; Dr. p. 408; Gaz. vol. 136; p. 1410.
Concrete construction. M. E. Fenner. No. 901,798; Oct. 20; Sp. p. 3646; Dr. p. 737; Gaz. vol. 136; p. 1702.
Concrete construction. R. T. Brown. No. 902,204; Oct. 27; Sp. p. 4459; Dr. p. 902; Gaz. vol. 136; p. 1862.
Concrete construction. F. Melber. No. 902,311; Oct. 27; Sp. p. 4694; Dr. p. 951; Gaz. vol. 136; p. 1897.
Concrete-mixer. J. E. McKeon. No. 901,024; Oct. 13; Sp. p. 2023; Dr. p. 410; Gaz. vol. 136; p. 1412.
Concrete-mixer. A. R. Hannaford. No. 901,340; Oct. 20; Sp. p. 2628; Dr. p. 540; Gaz. vol. 136; p. 1548.
Concrete-mixer. J. Husted. No. 901,449; Oct. 20; Sp. p. 2908; Dr. p. 592; Gaz. vol. 136; p. 1587.
Concrete post, Metal-reinforced. L. J. Husted. No. 901,449; Oct. 20; Sp. p. 2908; Dr. p. 592; Gaz. vol. 136; p. 1587.
Concrete railway-tie. W. B. Westbrook. No. 901,403; Oct. 20; Sp. p. 2794; Dr. p. 509; Gaz. vol. 136; p. 1571.
Concrete structures, Reinforce for. J. M. Sherwood. No. 902,335; Oct. 27; Sp. p. 4757; Dr. p. 960; Gaz. vol. 136; p. 1906.
Condenser. P. Brown. No. 900,827; Oct. 13; Sp. p. 1619; Dr. p. 328; Gaz. vol. 136; p. 1349.
Condenser. E. Thomson. No. 901,498; Oct. 20; Sp. p. 3013; Dr. p. 615; Gaz. vol. 136; p. 1603.
Condenser and making same. M. K. McGrath. (Reissue.) No. 12,860; Oct. 6; Sp. p. 1330; Dr. p. 271; Gaz. vol. 136; p. 1277.
Condenser, Surface. A. Harris and F. A. Anderson. No. 901,809; Oct. 20; Sp. p. 3664; Dr. pp. 742–3; Gaz. vol. 136; p. 1705.
Condensing and feed-water-heating plant, Steam-. R. Schneider. (Reissue.) No. 12,868; Oct. 20; Sp. p. 3906; Dr. p. 797; Gaz. vol. 136; p. 1748.
Conduit. J. A. Garey. No. 902,285; Oct. 27; Sp. p. 4626; Dr. p. 940; Gaz. vol. 136; p. 1888.
Conduit-threader. J. C. Dieter, S. Bowsher, and E. Davis. No. 901,159; Oct. 13; Sp. p. 2264; Dr. p. 461; Gaz. vol. 136; p. 1455.
Confectioner's box. C. E. Hawxhurst, Jr. No. 902,540; Oct. 27; Sp. p. 5209; Dr. p. 1052; Gaz. vol. 136; p. 1974.
Confectionery and valentine box, Combination. H. Richter. No. 901,476; Oct. 20; Sp. p. 2968; Dr. p. 606; Gaz. vol. 136; p. 1597.
Container. F. B. Davidson. No. 902,213; Oct. 27; Sp. p. 4475; Dr. pp. 905–6; Gaz. vol. 136; p. 1864.
Controller. E. W. Stull. No. 900,612; Oct. 6; Sp. p. 1165; Dr. p. 237; Gaz. vol. 136; p. 1251.
Controlling mechanism. H. Meyer. No. 900,408; Oct. 6; Sp. p. 707; Dr. p. 146; Gaz. vol. 136; p. 1184.
Conveyer. C. H. Knapp. No. 900,554; Oct. 6; Sp. p. 1042; Dr. p. 213; Gaz. vol. 136; p. 1232.
Conveyer. W. K. Liggett. No. 902,421; Oct. 27; Sp. p. 4910; Dr. pp. 994–5; Gaz. vol. 136; p. 1933.
Conveyer. C. O. Gustavsen. No. 902,530; Oct. 27; Sp. p. 5187; Dr. p. 1048; Gaz. vol. 136; p. 1971.
Conveyers, Automatic trip for. C. Fredrickson. No. 901,163; Oct. 13; Sp. p. 2269; Dr. p. 462; Gaz. vol. 136; p. 1456.
Conveying apparatus. T. S. Miller. No. 901,021; Oct. 13; Sp. p. 2016; Dr. p. 409; Gaz. vol. 136; p. 1411.
Cooking utensil. F. Robinson. No. 902,111; Oct. 27; Sp. p. 4273; Dr. p. 866; Gaz. vol. 136; p. 1832.
Cooking utensil. H. Tidow. No. 902,181; Oct. 27; Sp. p. 4416; Dr. p. 895; Gaz. vol. 136; p. 1854.
Cooking utensil, Traveling. L. K. Sone. No. 900,321; Oct. 6; Sp. p. 532; Dr. pp. 110–11; Gaz. vol. 136; p. 1155.
Cooler: *See* Water-cooler.
Coop, Poultry-. R. L. Widney. No. 901,406; Oct. 20; Sp. p. 2799; Dr. p. 571; Gaz. vol. 136; p. 1572.
Copper matte, Bessemerizing. G. H. Benjamin. No. 900,345; Oct. 6; Sp. p. 573; Dr. p. 119; Gaz. vol. 136; p. 1162.
Core-box. A. H. Kudlich. No. 902,304; Oct. 27; Sp. p. 4667; Dr. p. 946; Gaz. vol. 136; p. 1895.
Corn-crib. J. W. Van Wyhe. No. 900,618; Oct. 6; Sp. p. 1175; Dr. p. 240; Gaz. vol. 136; p. 1253.
Corn husker and shredder. J. J. Power. No. 900,882; Oct. 13; Sp. p. 1732; Dr. pp. 349–50; Gaz. vol. 136; p. 1365.
Corn, Machine for removing silk from ears of. S. E., W. W., and J. Morral. No. 900,189; Oct. 6; Sp. p. 250; Dr. p. 50; Gaz. vol. 136; p. 1113.
Corn-popper. H. L. Leilich. No. 901,302; Oct. 13; Sp. p. 2545; Dr. p. 523; Gaz. vol. 136; p. 1500.
Corn-sheller. A. R. Ludington and H. K. Olmsted. No. 901,463; Oct. 20; Sp. p. 2929; Dr. p. 597; Gaz. vol. 136; p. 1591.
Corn-sheller. W. H. Holsclaw. No. 901,968; Oct. 27; Sp. p. 3968; Dr. p. 810; Gaz. vol. 136; p. 1787.
Cornice-making machine. E. McMahon. No. 901,364; Oct. 20; Sp. p. 2688; Dr. pp. 551–2; Gaz. vol. 136; p. 1557.
Corset. F. J. and N. L. Digney. No. 900,711; Oct. 13; Sp. p. 1372; Dr. pp. 279–80; Gaz. vol. 136; p. 1311.
Cotton-chopper. J. T. Hamilton. No. 902,075; Oct. 27; Sp. p. 4200; Dr. p. 851; Gaz. vol. 136; p. 1820.
Cotton-chopper. W. D. Lindsley. No. 902,500; Oct. 27; Sp. p. 5111; Dr. pp. 1034–5; Gaz. vol. 136; p. 1961.
Cotton chopper and cultivator. T. T. Lecroy. No. 900,106; Oct. 6; Sp. p. 69; Dr. pp. 12–13; Gaz. vol. 136; p. 1086.
Cotton chopper and cultivator. J. H. Dunn. No. 902,385; Oct. 27; Sp. p. 4841; Dr. p. 979; Gaz. vol. 136; p. 1921.
Cotton-picker. G. W. and J. H. Jackson. No. 901,619; Oct. 20; Sp. p. 3245; Dr. pp. 665–6; Gaz. vol. 136; p. 1642.
Cotton-picking finger. T. J. Gray. No. 902,227; Oct. 27; Sp. p. 4508; Dr. p. 913; Gaz. vol. 136; p. 1868.
Counting-machine. F. B. Redington. No. 900,954; Oct. 13; Sp. p. 1889; Dr. p. 385; Gaz. vol. 136; p. 1389.
Coupling: *See* Air self-coupling; Belt-coupling; Car-coupling; Cock-coupling; Hose-coupling; Thill-coupling; Universal coupling.
Coupling. T. Andrews. No. 900,974; Oct. 13; Sp. p. 1926; Dr. p. 392; Gaz. vol. 136; p. 1396.
Coupling mechanism. W. D. Leftwich. No. 900,558; Oct. 6; Sp. p. 1047; Dr. p. 215; Gaz. vol. 136; p. 1233.
Couplings, Uncoupling mechanism for central-buffer claw-. L. Sr., and L. Scheib, Jr. No. 901,560; Oct. 20; Sp. p. 3135; Dr. p. 640; Gaz. vol. 136; p. 1623.
Coupon-holder. C. M. Maxon. No. 901,019; Oct. 13; Sp. p. 2013; Dr. p. 408; Gaz. vol. 136; p. 1411.
Cradle or rocker attachment. H. A. Jenson. No. 900,548; Oct. 6; Sp. p. 1025; Dr. pp. 208–9; Gaz. vol. 136; p. 1230.
Cranberry-picker. D. E. Raymond. No. 901,373; Oct. 20; Sp. p. 2706; Dr. p. 555; Gaz. vol. 136; p. 1560.
Crate. C. S. Young. No. 900,637; Oct. 6; Sp. p. 1212; Dr. p. 249; Gaz. vol. 136; p. 1259.
Crate, Collapsible. H. C. Hunter. No. 902,406; Oct. 27; Sp. p. 4881; Dr. p. 988; Gaz. vol. 136; p. 1928.
Crayon-holder. H. T. Bailey. No. 900,143; Oct. 6; Sp. p. 149; Dr. p. 31; Gaz. vol. 136; p. 1097.
Crayon-sharpener. S. Kann. No. 901,622; Oct. 20; Sp. p. 3254; Dr. p. 667; Gaz. vol. 136; p. 1643.
Crib. F. W. T. Kreisel. No. 901,917; Oct. 20; Sp. p. 3851; Dr. p. 786; Gaz. vol. 136; p. 1739.
Cross-arm support. J. M. Humiston. No. 900,545; Oct. 6; Sp. p. 1019; Dr. p. 207; Gaz. vol. 136; p. 1229.
Cross-arm support. W. E. Callane. No. 900,663; Oct. 6; Sp. p. 1269; Dr. p. 259; Gaz. vol. 136; p. 1268.
Culinary utensil. L. G. Quackenboss and B. J. Farrell. No. 900,952; Oct. 13; Sp. p. 1884; Dr. p. 384; Gaz. vol. 136; p. 1388.
Cultivator. E. Baumgartner. No. 901,938; Oct. 20; Sp. p. 3903; Dr. p. 796; Gaz. vol. 136; p. 1747.
Cultivator. J. W. Osborne. No. 902,107; Oct. 27; Sp. p. 4267; Dr. p. 865; Gaz. vol. 136; p. 1830.
Cultivator, Adjustable hand disk-. J. W. Watson. No. 901,221; Oct. 13; Sp. p. 2369; Dr. p. 484; Gaz. vol. 136; p. 1473.
Cultivator, Beet-. I. Schuckman. No. 901,387; Oct. 20; Sp. p. 2759; Dr. p. 562; Gaz. vol. 136; p. 1567.
Cultivator guiding attachment. R. E. Berry. No. 900,698; Oct. 13; Sp. p. 1347; Dr. p. 275; Gaz. vol. 136; p. 1307.
Cultivator, harrow, and rake, Combined. A. Benton and C. D. Jordan. No. 902,367; Oct. 27; Sp. p. 4814; Dr. p. 972; Gaz. vol. 136; p. 1916.
Cultivator harrow attachment. G. Trompeter. No. 902,123; Oct. 27; Sp. p. 4292; Dr. p. 870; Gaz. vol. 136; p. 1835.
Cultivator replanting attachment. G. S. Tuggle. No. 901,566; Oct. 20; Sp. p. 3144; Dr. p. 642; Gaz. vol. 136; p. 1625.
Culvert. C. E. Glaspoole. No. 901,702; Oct. 20; Sp. p. 3461; Dr. p. 701; Gaz. vol. 136; p. 1672.
Culvert. C. E. Glaspoole. No. 901,703; Oct. 20; Sp. p. 3462; Dr. pp. 701–2; Gaz. vol. 136; p. 1672.
Culvert, Corrugated-metal. C. D. Voris. No. 901,569; Oct. 20; Sp. p. 3147; Dr. p. 643; Gaz. vol. 136; p. 1626.
Culvert, Reinforced cement. C. D. Voris. No. 902,027; Oct. 27; Sp. p. 4113; Dr. p. 832; Gaz. vol. 136; p. 1806.
Cup: *See* Grease-cup.
Cupboard, Folding camp-. I. B. Dodson. No. 900,495; Oct. 6; Sp. p. 918; Dr. p. 187; Gaz. vol. 136; p. 1212.
Cure of rheumatism and other diseases, Appliance for the. D. R. Dewey. No. 900,493; Oct. 6; Sp. p. 915; Dr. p. 186; Gaz. vol. 136; p. 1211.
Curling-iron, Electrically-heated. H. Hertzberg and M. J. Wohl. No. 900,732; Oct. 13; Sp. p. 1415; Dr. p. 287; Gaz. vol. 136; p. 1317.

Curling-iron heater, Electric. W. Meredith. No. 900,292; Oct. 6; Sp. p. 475; Dr. p. 98; Gaz. vol. 136; p. 1147.
Current-collecting means. C. Macmillan. No. 901,976; Oct. 27; Sp. p. 3988; Dr. p. 813; Gaz. vol. 136; p. 1790.
Current motor, Alternating-. J. H. Bryson. No. 900,478; Oct. 6; Sp. p. 868; Dr. p. 177; Gaz. vol. 136; p. 1207.
Current rectifier, Electrolytic alternating-. A. S. Hickley. No. 900,278; Oct. 6; Sp. p. 444; Dr. p. 91; Gaz. vol. 136; p. 1141.
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Current rectifier, Electrolytic alternating-. E. L. Egbert. No. 902,386; Oct. 27; Sp. p. 4843; Dr. p. 979; Gaz. vol. 136; p. 1921.
Curtain-fixture. F. L. Egbert. No. 902,386; Oct. 27; Sp. p. 4843; Dr. p. 979; Gaz. vol. 136; p. 1921.
Curtain-pole. F. V. Donnelly. No. 900,497; Oct. 6; Sp. p. 924; Dr. p. 188; Gaz. vol. 136; p. 1213.
Cushion: *See* Footwear-cushion; Pencil-cushion.
Cut-out box. T. Q. Andrazyk. No. 901,939; Oct. 27; Sp. p. 3911; Dr. p. 798; Gaz. vol. 136; p. 1777.
Cut-out mechanism, Progressive. J. H. Hall. No. 900,165; Oct. 6; Sp. p. 196; Dr. pp. 40–1; Gaz. vol. 136; p. 1104.
Cutter: *See* Band-cutter; Cigar-cutter; Feed-cutter; Flue-cutter; Ice-cutter; Noodle-cutter; Rotary cutter; Wedge-cutter; Wood-working-cutter.
Cutters and other rotary apparatus, Protecting arrangement for. P. G. C. Lundberg. No. 901,458; Oct. 20; Sp. p. 2921; Dr. p. 596; Gaz. vol. 136; p. 1590.
Cutting apparatus. C. Klingenberg. No. 900,174; Oct. 6; Sp. p. 219; Dr. p. 45; Gaz. vol. 136; p. 1108.
Cutting, punching, and tire-shrinking machine. W. T. Sears. No. 900,213; Oct. 6; Sp. p. 295; Dr. p. 260; Gaz. vol. 136; p. 1120.
Cutting-tool. W. C. Poole. No. 901,556; Oct. 20; Sp. p. 3127; Dr. p. 639; Gaz. vol. 136; p. 1622.
Cylinder-jacket. G. B. Pickop and J. W. Mills. No. 901,369; Oct. 20; Sp. p. 2698; Dr. p. 554; Gaz. vol. 136; p. 1559.
Cylinder-lock. C. J. Waugh and F. Harendt. No. 900,627; Oct. 6; Sp. p. 1190; Dr. p. 244; Gaz. vol. 136; p. 1255.
Dampening wheat and other materials, Apparatus for. K. Dougan. No. 900,837; Oct. 13; Sp. p. 1636; Dr. p. 331; Gaz. vol. 136; p. 1352.
Damper. J. C. F. Schafer. No. 901,485; Oct. 20; Sp. p. 2988; Dr. p. 609; Gaz. vol. 136; p. 1599.
Damper. W. D. Luce. No. 902,098; Oct. 27; Sp. p. 4238; Dr. pp. 858–9; Gaz. vol. 136; p. 1827.
Damper-regulator. W. M. Fulton. No. 900,511; Oct. 6; Sp. p. 952; Dr. p. 193; Gaz. vol. 136; p. 1217.
Damper, Stovepipe-. A. Ohnemus. No. 901,642; Oct. 20; Sp. p. 3291; Dr. p. 675; Gaz. vol. 136; p. 1649.
Dancing-chart and method of self-instruction. G. Kolp. No. 900,105; Oct. 6; Sp. p. 64; Dr. p. 12; Gaz. vol. 136; p. 1085.
Dental apparatus. F. Armstrong. No. 902,463; Oct. 27; Sp. p. 5018; Dr. p. 1015; Gaz. vol. 136; p. 1947.
Dental appliance. E. E. Holmes. No. 900,541; Oct. 6; Sp. p. 1009; Dr. p. 205; Gaz. vol. 136; p. 1227.
Dental blower. P. E. Williams. No. 900,812; Oct. 13; Sp. p. 1587; Dr. p. 321; Gaz. vol. 136; p. 1344.
Dental finger-tray. J. G. Powell. No. 902,109; Oct. 27; Sp. p. 4271; Dr. p. 866; Gaz. vol. 136; p. 1831.
Dental plugger. J. C. Betts. No. 901,276; Oct. 13; Sp. p. 2489; Dr. p. 509; Gaz. vol. 136; p. 1491.
Derrick. A. G. A. Schmidt. No. 901,386; Oct. 20; Sp. p. 2755; Dr. pp. 561–2; Gaz. vol. 136; p. 1566.
Derrick. J. McMyler. No. 901,461; Oct. 20; Sp. p. 2926, Dr. pp. 596–7; Gaz. vol. 136; p. 1591.
Developing-plate holder. A. B. Sheppard. No. 901,202; Oct. 13; Sp. p. 2338; Dr. p. 479; Gaz. vol. 136; p. 1468.
Diaper, Baby's. L. E. Irwin. No. 900,172; Oct. 6; Sp. p. 213; Dr. pp. 43–4; Gaz. vol. 136; p. 1107.
Differential mechanism. E. Aze. No. 902,045; Oct. 27; Sp. p. 4144; Dr. p. 839; Gaz. vol. 136; p. 1811.
Diformin, Producing. S. von Kapff. No. 901,298; Oct. 13; Sp. p. 2539; Gaz. vol. 136; p. 1499.
Digger: *See* Potato-digger.
Dike, Movable. J. A. Cameron. No. 902,372; Oct. 27; Sp. p. 4821; Dr. p. 974; Gaz. vol. 136; p. 1917.
Dish-drying rack. L. M. Schomber. No. 901,747; Oct. 20; Sp. p. 3540; Dr. p. 716; Gaz. vol. 136; p. 1686.
Dish-washer. C. W. Fetherolf. No. 902,064; Oct. 27; Sp. p. 4180; Dr. p. 847; Gaz. vol. 136; p. 1817.
Disintegrator, Centrifugal. J. B. Tonya, Jr. No. 901,217; Oct. 13; Sp. p. 2360; Dr. p. 483; Gaz. vol. 136; p. 1472.
Dispensing vessel. H. von Baeyer. No. 900,644; Oct. 6; Sp. p. 1233; Dr. p. 252; Gaz. vol. 136; p. 1262.
Display-holder. F. N. Look. No. 900,942; Oct. 13; Sp. p. 1862; Dr. p. 379; Gaz. vol. 136; p. 1385.
Display-rack. E. B. Weston. No. 900,331; Oct. 6; Sp. p. 550; Dr. p. 114; Gaz. vol. 136; p. 1158.
Display-rack. M. Mayer. No. 900,406; Oct. 6; Sp. p. 704; Dr. p. 146; Gaz. vol. 136; p. 1183.
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Display-rack attachment. E. B. Weston. No. 900,332; Oct. 6; Sp. p. 550; Dr. p. 114; Gaz. vol. 136; p. 1158.
Distilling device, Water-. J. R. Perry. No. 901,645; Oct. 20; Sp. p. 3296; Dr. p. 676; Gaz. vol. 136; p. 1650.
Dolly or skid roller. U. M. Orr. No. 901,028; Oct. 13; Sp. p. 2029; Dr. pp. 411–12; Gaz. vol. 136; p. 1414.
Door and gate hanger. H. Todd. No. 902,348; Oct. 27; Sp. p. 4781; Dr. p. 965; Gaz. vol. 136; p. 1910.
Door-check. J. W. Reed and L. Chapman. No. 901,832; Oct. 20; Sp. p. 3700; Dr. p. 751; Gaz. vol. 136; p. 1712.
Door closer and check. S. Alsop. No. 900,973; Oct. 13; Sp. p. 1925; Dr. p. 392; Gaz. vol. 136; p. 1395.
Door-closer, Automatic. S. Remontet. No. 900,956; Oct. 13; Sp. p. 1894; Dr. p. 385; Gaz. vol. 136; p. 1390.
Door-fastener. M. N. Stoffels. No. 900,794; Oct. 13; Sp. p. 1537; Dr. p. 313; Gaz. vol. 136; p. 1336.
Door fastener, Sliding-. E. Carlson. No. 901,419; Oct. 20; Sp. p. 2828; Dr. p. 577; Gaz. vol. 136; p. 1577.
Door-hanger. J. Doran. No. 900,270; Oct. 6; Sp. p. 428; Dr. p. 87; Gaz. vol. 136; p. 1138.
Door-hanger track. H. L. and H. J. Ferris. No. 902,221; Oct. 27; Sp. p. 4500; Dr. p. 910; Gaz. vol. 136; p. 1866.
Door-holder. H. G. Voight. No. 900,621; Oct. 6; Sp. p. 1181; Dr. p. 241; Gaz. vol. 136; p. 1254.
Door-holder. J. C. Winn. No. 901,511; Oct. 20; Sp. p. 3039; Dr. p. 621; Gaz. vol. 136; p. 1608.
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Dough-cutting machine. C. J. Kintner. No. 902,088; Oct. 27; Sp. p. 4221; Dr. p. 855; Gaz. vol. 136; p. 1824.
Doughnuts and the like, Apparatus for turning. W. H. Tomlinson. No. 900,235; Oct. 6; Sp. p. 331; Dr. p. 69; Gaz. vol. 136; p. 1127.
Dovetailing-machine. A. Lasance. No. 901,454; Oct. 20; Sp. p. 2914; Dr. p. 594; Gaz. vol. 136; p. 1589.
Draft appliance. F. A. Gerling. No. 901,701; Oct. 20; Sp. p. 3458; Dr. p. 701; Gaz. vol. 136; p. 1671.
Draft attachment for vehicle-thills. T. H. Leonard. No. 900,178; Oct. 6; Sp. p. 227; Dr. p. 46; Gaz. vol. 136; p. 1109.
Draft-evener. H. and J. H. Thiedemann. No. 900,897; Oct. 13; Sp. p. 1759; Dr. p. 357; Gaz. vol. 136; p. 1370.
Draft-rigging. W. D. Lowry. No. 902,242; Oct. 27; Sp. p. 4536; Dr. p. 919; Gaz. vol. 136; p. 1873.
Drain and backwater trap, Floor-. W. Weller. No. 902,030; Oct. 27; Sp. p. 4117; Dr. p. 833; Gaz. vol. 136; p. 1806.
Drain inlet, Tile-. H. N. Neireiter. No. 902,104; Oct. 27; Sp. p. 4257; Dr. p. 863; Gaz. vol. 136; p. 1829.
Draw-bar-centering device. F. S. Gallagher. No. 900,996; Oct. 13; Sp. p. 1967; Dr. p. 400; Gaz. vol. 136; p. 1404.
Drawers adjuster and supporter. E. H. Wood. No. 902,460; Oct. 27; Sp. p. 5013; Dr. p. 1013; Gaz. vol. 136; p. 1946.
Drawers-supporter. E. H. Humphrey. No. 902,407; Oct. 27; Sp. p. 4880; Dr. p. 988; Gaz. vol. 136; p. 1928.
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Dress-fastener. C. A. Gardiner. No. 901,164; Oct. 13; Sp. p. 2272; Dr. p. 463; Gaz. vol. 136; p. 1456.
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Drier. F. G. Sargent. No. 901,191; Oct. 13; Sp. p. 2319; Dr. p. 475; Gaz. vol. 136; p. 1465.
Drill. R. R. Hopkins. No. 901,005; Oct. 13; Sp. p. 1986; Dr. p. 404; Gaz. vol. 136; p. 1407.
Drill. F. E. Snyder. No. 902,008; Oct. 27; Sp. p. 4072; Dr. pp. 826–7; Gaz. vol. 136; p. 1800.
Drill-press gearing. S. J. Morgan. No. 901,635; Oct. 20; Sp. p. 3278; Dr. pp. 672–3; Gaz. vol. 136; p. 1647.
Drilling-machine. W. J. Keegan. No. 901,106; Oct. 13; Sp. p. 2175; Dr. p. 442; Gaz. vol. 136; p. 1437.
Drinking-fount for live stock. H. B. Talley. No. 901,048; Oct. 13; Sp. p. 2064; Dr. p. 419; Gaz. vol. 136; p. 1420.
Driving and driven members, Safety-coupling for. F. H. French. No. 902,527; Oct. 27; Sp. p. 5182; Dr. p. 1047; Gaz. vol. 136; p. 1970.
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Drum-beating apparatus. E. E. Pettingell. No. 902,444; Oct. 27; Sp. p. 4974; Dr. p. 1005; Gaz. vol. 136; p. 1941.
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Drying-kiln. T. C. Morris. No. 901,811; Oct. 20; Sp. p. 3666; Dr. p. 743; Gaz. vol. 136; p. 1705.
Drying-machine. T. Allsop and W. W. Sibson. No. 901,769; Oct. 20; Sp. p. 3584; Dr. p. 725; Gaz. vol. 136; p. 1692.
Duplicating-machine. K. O'Kane. No. 901,121; Oct. 13; Sp. p. 2201; Dr. p. 447; Gaz. vol. 136; p. 1442.
Dust-pan. L. J. Chapman. No. 900,705; Oct. 13; Sp. p. 1359; Dr. p. 277; Gaz. vol. 136; p. 1309.
Dye and making same, Black sulfur. G. E. Junius. No. 901,970; Oct. 27; Sp. p. 3973; Gaz. vol. 136; p. 1787.
Dye and making same, Gallocyanin. A. Steiner. No. 901,657; Oct. 20; Sp. p. 3318; Gaz. vol. 136; p. 1653.
Dye and making same, Yellow azo. M. Böniger. No. 901,675; Oct. 20; Sp. p. 3359; Gaz. vol. 136; p. 1660.
Dye, Azo. P. Volkmann. No. 902,186; Oct. 27; Sp. p. 4428; Gaz. vol. 136; p. 1856.
Dyes containing fatty acid radicals, Making azo. N. Sulzberger. No. 902,021; Oct. 27; Sp. p. 4100; Gaz. vol. 136; p. 1804.
Dyeing apparatus. H. Anner. No. 902,271; Oct. 27; Sp. p. 4595; Dr. p. 933; Gaz. vol. 136; p. 1883.
Dyeing, washing, and stripping machine. H. Hennig. No. 901,003; Oct. 13; Sp. p. 1980; Dr. pp. 402–3; Gaz. vol. 136; p. 1406.
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Dyestuffs, Making concentrated liquid. A. Schmidt and O. Schwab. No. 901,746; Oct. 20; Sp. p. 3537; Gaz. vol. 136; p. 1686.
Dyestuffs, Printing sulfurized. M. Grünbaum. No. 901,705; Oct. 20; Sp. p. 3465; Gaz. vol. 136; p. 1673.
Ear-trumpet. K. F. Hackert. No. 900,097; Oct. 6; Sp. p. 44; Dr. pp. 8–9; Gaz. vol. 136; p. 1082.
Ear-trumpet. B. S. Stephenson. No. 900,226; Oct. 6; Sp. p. 316; Dr. pp. 64–5; Gaz. vol. 136; p. 1124.
Eaves-troughs, Machine for forming. A. McKenzie. No. 901,637; Oct. 20; Sp. p. 3283; Dr. pp. 673–4; Gaz. vol. 136; p. 1647.
Egg-carrier. F. W. Nerlich, Jr. No. 901,639; Oct. 20; Sp. p. 3287; Dr. p. 674; Gaz. vol. 136; p. 1648.
Egg opener and holder, Hot-. J. H. Bancroft. No. 900,908; Oct. 13; Sp. p. 1788; Dr. p. 361; Gaz. vol. 136; p. 1374.
Egg-scouring machine. E. M. and W. W. Boies. No. 901,774; Oct. 20; Sp. p. 3597; Dr. p. 728; Gaz. vol. 136; p. 1694.

Egg-tester. J. W. Burkholder. No. 900,082; Oct. 6; Sp. p. 16; Dr. p. 3; Gaz. vol. 136; p. 1077.
Electric accumulator. M. C. Thiellet and M. J. Denard. No. 900,808; Oct. 13; Sp. p. 1760; Dr. p. 357; Gaz. vol. 136; p. 137
Electric alarm and light, Combined. W. A. Lindsey. No. 901,540; Oct. 20; Sp. p. 3099; Dr. p. 633; Gaz. vol. 136; p. 1617.
Electric apparatus, Vapor. L. E. Dempster. No. 901,427; Oct. 20; Sp. p. 2847; Dr. p. 581; Gaz. vol. 136; p. 1580.
Electric apparatus, Vapor. W. R. Whitney. No. 901,506; Oct. 20; Sp. p. 3030; Dr. p. 619; Gaz. vol. 136; p. 1606.
Electric battery. I. Kitsee. No. 901,012; Oct. 13; Sp. p. 1998; Dr. p. 406; Gaz. vol. 136; p. 1409.
Electric cell. G. Schauli. No. 902,173; Oct. 27; Sp. p. 4399; Dr. p. 891; Gaz. vol. 136; p. 1851.
Electric coils and conductors therefor, Producing. I. Kitsee. No. 901,299; Oct. 13; Sp. p. 2539; Dr. p. 522; Gaz. vol. 136; p. 1499.
Electric conductor carrying current, Method of and means for utilizing the pressure in the interior of an. E. F. Northrup. No. 902,106; Oct. 27; Sp. p. 4261; Dr. p. 864; Gaz. vol. 136; p. 1830.
Electric controlling device. H. W. Leonard. No. 902,307; Oct. 27; Sp. p. 4672; Dr. pp. 947–9; Gaz. vol. 136; p. 1896.
Electric-current machinery, Alternating-. A. Heyland. No. 901,341; Oct. 20; Sp. p. 2629; Dr. pp. 540–1; Gaz. vol. 136; p. 1548.
Electric-distribution system. P. H. Thomas. No. 901,306; Oct. 13; Sp. p. 2551; Dr. p. 525; Gaz. vol. 136; p. 1501.
Electric fixture. E. C. Suiter. No. 902,121; Oct. 27; Sp. p. 4290; Dr. p. 869; Gaz. vol. 136; p. 1835.
Electric furnace. R. McKnight. No. 900,192; Oct. 6; Sp. p. 256; Dr. p. 51; Gaz. vol. 136; p. 1114.
Electric furnace. J. H. Reid. No. 900,207; Oct. 6; Sp. p. 285; Dr. p. 58; Gaz. vol. 136; p. 1118.
Electric furnace. E. Cornelius. No. 900,466; Oct. 6; Sp. p. 877; Dr. p. 179; Gaz. vol. 136; p. 1209.
Electric generator. G. Honold. No. 900,542; Oct. 6; Sp. p. 1011; Dr. p. 205; Gaz. vol. 136; p. 1228.
Electric heater. E. Thomson. No. 902,024; Oct. 27; Sp. p. 4106; Dr. p. 822; Gaz. vol. 136; p. 1805.
Electric heater and drier. G. N. Blanchard. No. 901,871; Oct. 20; Sp. p. 3768; Dr. p. 766; Gaz. vol. 136; p. 1724.
Electric lighting. P. C. Hewitt. No. 900,733; Oct. 13; Sp. p. 1418; Dr. p. 288; Gaz. vol. 136; p. 1318.
Electric lighting apparatus. P. C. Hewitt. No. 901,294; Oct. 13; Sp. p. 2532; Dr. p. 520; Gaz. vol. 136; p. 1497.
Electric lighting system, Automatic. C. J. Gardeen. No. 901,336; Oct. 20; Sp. p. 2619; Dr. p. 538; Gaz. vol. 136; p. 1546.
Electric machine, Dynamo-. H. G. Reist. No. 900,780; Oct. 13; Sp. p. 1509; Dr. p. 307; Gaz. vol. 136; p. 1332.
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Electric machine, Dynamo-. A. B. Field. No. 902,065; Oct. 27; Sp. p. 4182; Dr. p. 847; Gaz. vol. 136; p. 1329.
Electric plug-receptacle. G. L. Patterson. No. 900,773; Oct. 13; Sp. p. 1498; Dr. p. 304; Gaz. vol. 136; p. 1598.
Electric protective apparatus. C. A. Rolfe. No. 901,479; Oct. 20; Sp. p. 2978; Dr. p. 607; Gaz. vol. 136; p. 1580.
Electric-resistance conductor. J. T. H. Dempster. No. 901,428; Oct. 20; Sp. p. 2848; Gaz. vol. 136; p. 1357.
Electric sockets to fixtures, Means for locking. H. Hubbell. No. 900,854; Oct. 13; Sp. p. 1668; Dr. p. 337; Gaz. vol. 136; p. 1935.
Electric sparking device. W. H. R. Mildebrath. No. 902,427; Oct. 27; Sp. p. 4949; Dr. p. 999; Gaz. vol. 136; p. 1318.
Electric switch, Quick-break. H. H. Howard. No. 900,736; Oct. 13; Sp. p. 1422; Dr. p. 289; Gaz. vol. 136; p. 1266.
Electric switch, Remote-control. J. S. Bristol. No. 900,658; Oct. 6; Sp. p. 1259; Dr. p. 257; Gaz. vol. 136; p. 1640.
Electric-tension regulator, Electromechanical. J. M. C. Herrgott. No. 903,613; Oct. 20; Sp. p. 3230; Dr. p. 662; Gaz. vol. 136; p. 1541.
Electrical accumulator. C. Busch. No. 901,322; Oct. 20; Sp. p. 2588; Dr. p. 532; Gaz. vol. 136; p. 1578.
Electrical conductors, Connector for. F. B. Cook. No. 901,422; Oct. 20; Sp. p. 2835; Dr. p. 580; Gaz. vol. 136; p. 1321.
Electrical-distribution system. O. O. Kruh. No. 900,745; Oct. 13; Sp. p. 1439; Dr. p. 292; Gaz. vol. 136; p. 1873.
Electrically-controlled lock. F. W. Marvel. No. 902,244; Oct. 27; Sp. p. 4542; Dr. p. 921; Gaz. vol. 136; p. 1579.
Electrically-controlled switch. A. S. Cubitt. No. 901,424; Oct. 20; Sp. p. 2839; Dr. p. 580; Gaz. vol. 136; p. 1350.
Electricity, Apparatus for neutralizing static. W. H. Chapman. No. 900,830; Oct. 13; Sp. p. 1626; Dr. p. 329; Gaz. vol. 136; p. 1603.
Electrode, Carbon. J. T. Szek. No. 901,497; Oct. 20; Sp. p. 3013; Dr. p. 615; Gaz. vol. 136; p. 1855.
Electrode for arc-lamps. W. R. Whitney. No. 902,354; Oct. 27; Sp. p. 4793; Gaz. vol. 136; p. 1912.
Electrode for electrolytic purposes. P. Ferchland and J. Nussbaum. No. 900,502; Oct. 6; Sp. p. 933; Dr. p. 189; Gaz. vol. 136; p. 1214.
Electrolyte. A. Van Winkle. No. 901,758; Oct. 20; Sp. p. 3564; Gaz. vol. 136; p. 1689.
Electromagnet for telegraphones. P. O. Pedersen and V. Poulsen. No. 900,304; Oct. 6; Sp. p. 492; Dr. p. 103; Gaz. vol. 136; p. 1150.
Electroplating apparatus. J. A. Yunck. No. 900,340; Oct. 6; Sp. p. 563; Dr. p. 117; Gaz. vol. 136; p. 1161.
Electroplating apparatus. J. T. Daniels. No. 901,280; Oct. 13; Sp. p. 2494; Dr. pp. 511–12; Gaz. vol. 136; p. 1492.
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Electroplating metal sheets, Apparatus for. H. L. Hollis. No. 900,169; Oct. 6; Sp. p. 204; Dr. p. 42; Gaz. vol. 136; p. 1106.
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Electrosonator. R. Sakamoto. No. 900,429; Oct. 6; Sp. p. 756; Dr. p. 156; Gaz. vol. 136; p. 1191.
Electrotype-molds, Preparation of. A. W. Harrison. No. 901,965; Oct. 27; Sp. p. 3964; Gaz. vol. 136; p. 1786.
Electrotype-molds, Solution for treating. A. W. Harrison. No. 901,966; Oct. 27; Sp. p. 3965; Gaz. vol. 136; p. 1786.
Elevated carrier. A. H. Neller and W. Louden. No. 900,681; Oct. 6; Sp. p. 1314; Dr. p. 269; Gaz. vol. 136; p. 1274.
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Elevating and lowering device, Universal. E. G. Gebauer. No. 900,515; Oct. 6; Sp. p. 958; Dr. pp. 194–5; Gaz. vol. 136; p. 1218.
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Elevator. S. V. Trent. No. 900,237; Oct. 6; Sp. p. 335; Dr. pp. 69–70; Gaz. vol. 136; p. 1128.
Elevator. S. Bruce. No. 902,371; Oct. 27; Sp. p. 4820; Dr. p. 973; Gaz. vol. 136; p. 1917.
Elevator and mine-cage safety-brake. A. Barbieux. No. 901,314; Oct. 20; Sp. p. 2576; Dr. p. 530; Gaz. vol. 136; p. 1539.
Elevator safety device. R. Bohlen. No. 900,473; Oct. 6; Sp. p. 859; Dr. p. 175; Gaz. vol. 136; p. 1205.
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Elevator safety mechanism. P. F. Foley. No. 900,158; Oct. 6; Sp. p. 180; Dr. p. 38; Gaz. vol. 136; p. 1102.
Elevators, Guide-greaser for. T. F. Goodrich. No. 902,226; Oct. 27; Sp. p. 4508; Dr. p. 913; Gaz. vol. 136; p. 1868.
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Emery, oilstone, and other abrading materials, Holder for. G. Korinek. No. 900,938; Oct. 13; Sp. p. 1853; Dr. p. 377; Gaz. vol. 136; p. 1384.
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Endoscope. R. H. Wappler. No. 902,513; Oct. 27; Sp. p. 5142; Dr. p. 1041; Gaz. vol. 136; p. 1965.
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Engine. H. L. Ide. No. 900,100; Oct. 6; Sp. p. 51; Dr. p. 10; Gaz. vol. 136; p. 1083.
Engine. M. E. Keller. No. 900,101; Oct. 6; Sp. p. 53; Dr. p. 10; Gaz. vol. 136; p. 1084.
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Engine. J. W. Watkins. No. 900,806; Oct. 13; Sp. p. 1569; Dr. pp. 317–18; Gaz. vol. 136; p. 1342.
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Engine-starter. L. S. Tuttle. No. 902,350; Oct. 27; Sp. p. 4785; Dr. pp. 965–6; Gaz. vol. 136; p. 1911.
Engine starter, Gas-. R. W. Godfrey. No. 900,518; Oct. 6; Sp. p. 966; Dr. p. 196; Gaz. vol. 136; p. 1219.
Engine unit, Reversible-explosive-rotary-. W. E. Pearson. No. 901,554; Oct. 20; Sp. p. 3119; Dr. pp. 637–8; Gaz. vol. 136; p. 1621.
Engines and motors, Alarm or signal system for. W. S. Rush. No. 900,428; Oct. 6; Sp. p. 746; Dr. pp. 155–6; Gaz. vol. 136; p. 1191.
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Engines, Supplying energy to. E. T. Young. No. 901,310; Oct. 13; Sp. p. 2558; Dr. p. 526; Gaz. vol. 136; p. 1502.
Engraver's spoon-holder. F. W. Crocker. No. 900,148; Oct. 6; Sp. p. 157; Dr. p. 33; Gaz. vol. 136; p. 1099.
Envelop. E. Kohler. No. 900,395; Oct. 6; Sp. p. 683; Dr. p. 140; Gaz. vol. 136; p. 1179.
Envelop. G. R. Lockwood. No. 900,751; Oct. 13; Sp. p. 1447; Dr. p. 294; Gaz. vol. 136; p. 1323.
Envelop. O. E. Lewis. No. 901,357; Oct. 20; Sp. p. 2672; Dr. p. 548; Gaz. vol. 136; p. 1554.
Envelop. H. L. Staley. No. 902,341; Oct. 27; Sp. p. 4760; Dr. p. 962; Gaz. vol. 136; p. 1908.
Envelop. J. A. Cheape. No. 902,375; Oct. 27; Sp. p. 4824; Dr. p. 975; Gaz. vol. 136; p. 1918.
Envelop-machine. F. F. Flagg and G. W. Smith. No. 902,222; Oct. 27; Sp. p. 4501; Dr. pp. 910–11; Gaz. vol. 136; p. 1867.
Envelop, Safety-. W. H. Helliger. No. 901,401; Oct. 13; Sp. p. 1978; Dr. p. 402; Gaz. vol. 136; p. 1406.
Envelop, Safety-. I. Klein. No. 902,301; Oct. 27; Sp. p. 4661; Dr. p. 945; Gaz. vol. 136; p. 1893.
Equalizing mechanism. F. Mueller. No. 901,360; Oct. 20; Sp. p. 2678; Dr. pp. 549–50; Gaz. vol. 136; p. 1556.
Eraser, Ink-. J. C. Huss. No. 900,374; Oct. 6; Sp. p. 642; Dr. p. 132; Gaz. vol. 136; p. 1172.
Esters from solutions, Separating cellulose. L. Lederer. No. 902,093; Oct. 27; Sp. p. 4229; Gaz. vol. 136; p. 1826.
Ether, Making chloracetic. G. Imbert. No. 901,009; Oct. 13; Sp. p. 1994; Gaz. vol. 136; p. 1408.
Excavating-machine. W. M. Brown. No. 900,659; Oct. 6; Sp. p. 1261; Dr. pp. 257–8; Gaz. vol. 136; p. 1266.

Excavator. T. Fenwick. No. 901,431; Oct. 20; Sp. p. 2853; Dr. pp. 582–3; Gaz. vol. 136; p. 1581.
Excavator, Endless-chain bucket. G. L. Hurst. No. 901,008; Oct. 13; Sp. p. 1992; Dr. p. 405; Gaz. vol. 136; p. 1408.
Explosion-engine. A. W. Cottrell and M. A. Moore. No. 900,668; Oct. 6; Sp. p. 1279; Dr. p. 261; Gaz. vol. 136; p. 1269.
Explosive compounds, Producing high-. P. Wheeler. No. 901,504; Oct. 20; Sp. p. 3027; Gaz. vol. 136; p. 1606.
Explosives, Machine for mixing. H. Auchu. No. 902,464; Oct. 27; Sp. p. 5020; Dr. pp. 1015–16; Gaz. vol. 136; p. 1947.
Explosives, Machine for mixing. H. Auchu. No. 902,465; Oct. 27; Sp. p. 5022; Dr. pp. 1016–17; Gaz. vol. 136; p. 1947.
Extinguishing device. F. Hurstthouse. No. 900,282; Oct. 6; Sp. p. 454; Dr. p. 93; Gaz. vol. 136; p. 1143.
Extractor: *See* Spike-extractor.
Eyeglass-hook. G. W. Wells. No. 901,573; Oct. 20; Sp. p. 3161; Dr. p. 644; Gaz. vol. 136; p. 1628.
Eyeglasses and spectacles, Converting device for. F. K. Stickle. No. 900,444; Oct. 6; Sp. p. 785; Dr. p. 163; Gaz. vol. 136; p. 1196.
Eyeleting-machine, Hand-operating. J. L. Knight. No. 900,935; Oct. 13; Sp. p. 1846; Dr. p. 376; Gaz. vol. 136; p. 1383.
Fabric: *See* Knitted fabric; Metallic fabric.
Fabrics, Machine for unraveling textile. P. F. Vogel. No. 900,451; Oct. 6; Sp. p. 817; Dr. p. 168; Gaz. vol. 136; p. 1198.
Facial expressions, Device for making. F. Ruple. No. 902,113; Oct. 27; Sp. p. 4275; Dr. p. 867; Gaz. vol. 136; p. 1852.
Fan. E. Goosch. No. 900,520; Oct. 6; Sp. p. 968; Dr. p. 196; Gaz. vol. 136; p. 1220.
Fan, Disk ventilating-. D. P. Gosline. No. 901,337; Oct. 20; Sp. p. 2621; Dr. pp. 538–9; Gaz. vol. 136; p. 1547.
Fan for cradles. N. Gordon. No. 902,071; Oct. 27; Sp. p. 4190; Dr. p. 849; Gaz. vol. 136; p. 1819.
Fan or pump, Centrifugal. M. G. Hubbard. No. 902,533; Oct. 27; Sp. p. 5193; Dr. pp. 1049–50; Gaz. vol. 136; p. 1972.
Fare-box. E. S. Bucknam. No. 901,778; Oct. 20; Sp. p. 3606; Dr. pp. 730–1; Gaz. vol. 136; p. 1695.
Fare-indicator. B. Schneider. No. 901,263; Oct. 13; Sp. p. 2454; Dr. pp. 503–4; Gaz. vol. 136; p. 1487.
Fare-indicator. P. Richert. No. 901,558; Oct. 20; Sp. p. 3130; Dr. p. 640; Gaz. vol. 136; p. 1623.
Fare indicator and register for vehicles. B. Schneider. No. 902,232; Oct. 27; Sp. p. 4751; Dr. pp. 958–9; Gaz. vol. 136; p. 1904.
Farm-gate. A. G. Eddy and G. J. Hobson. No. 901,161; Oct. 13; Sp. p. 2266; Dr. pp. 461–2; Gaz. vol. 136; p. 1455.
Farm-gate. J. D. Rodgers. No. 901,648; Oct. 20; Sp. p. 3303; Dr. p. 677; Gaz. vol. 136; p. 1651.
Fastener. W. E. Smith. No. 900,963; Oct. 13; Sp. p. 1905; Dr. p. 387; Gaz. vol. 136; p. 1392.
Fastener, Metallic. G. W. McGill. No. 900,299; Oct. 6; Sp. p. 483; Dr. p. 101; Gaz. vol. 136; p. 1149.
Fat-cutting machine. C. A. Krabill. No. 901,624; Oct. 20; Sp. p. 3256; Dr. pp. 667–8; Gaz. vol. 136; p. 1643.
Faucet. L. S. De Forest. No. 900,152; Oct. 6; Sp. p. 170; Dr. p. 35; Gaz. vol. 136; p. 1100.
Faucet. J. G. Kasjens. No. 900,385; Oct. 6; Sp. p. 660; Dr. p. 136; Gaz. vol. 136; p. 1176.
Faucet. C. E. Coe. No. 900,984; Oct. 13; Sp. p. 1943; Dr. p. 396; Gaz. vol. 136; p. 1399.
Feed-cutter. I. and I. N. Gardner. No. 902,068; Oct. 27; Sp. p. 4186; Dr. p. 848; Gaz. vol. 136; p. 1818.
Feed-trough. C. B. Halderman. No. 900,277; Oct. 6; Sp. p. 442; Dr. p. 90; Gaz. vol. 136; p. 1141.
Feed-water heater. J. H. Kidwell. No. 901,245; Oct. 13; Sp. p. 2412; Dr. pp. 494–5; Gaz. vol. 136; p. 1481.
Feed-water heater. L. H. Caverly. No. 902,208; Oct. 27; Sp. p. 4465; Dr. p. 903; Gaz. vol. 136; p. 1863.
Feeder, Boiler-. N. English. No. 902,283; Oct. 27; Sp. p. 4623; Dr. p. 939; Gaz. vol. 136; p. 1887.
Feeder, Chicken-exercising. A. and W. Bruhn. No. 902,132; Oct. 27; Sp. p. 4313; Dr. p. 873; Gaz. vol. 136; p. 1838
Feeding apparatus. C. T. Hatch. No. 900,851; Oct. 13; Sp. p. 1663; Dr. p. 337; Gaz. vol. 136; p. 1356.
Feeding device, Stock-. H. Jenkins. No. 901,620; Oct. 20; Sp. p. 3247; Dr. p. 666; Gaz. vol. 136; p. 1642.
Fence fastener, Wire-. J. H. Knickerbocker. No. 900,175; Oct. 6; Sp. p. 221; Dr. p. 45; Gaz. vol. 136; p. 1108.
Fence machine, Wire-. W. W. Lincoln. No. 902,422; Oct. 27; Sp. p. 4914; Dr. pp. 995–8; Gaz. vol. 136; p. 1934.
Fence-making machine, Wire-. J. M. Denning. No. 900,490; Oct. 6; Sp. p. 883; Dr. pp. 181–5; Gaz. vol. 136; p. 1210.
Fence-post. A. M. Weatherly, Sr. No. 902,457; Oct. 27; Sp. p. 5010; Dr. p. 1012; Gaz. vol. 136; p. 1945.
Fence-post. A. M. Weatherly, Sr. No. 902,458; Oct. 27; Sp. p. 5011; Dr. p. 1012; Gaz. vol. 136; p. 1945.
Fence-stay-fastening machine, Wire-. Z. Hurd. No. 900,099; Oct. 6; Sp. p. 48; Dr. pp. 9–10; Gaz. vol. 136; p. 1083.
Fence stretcher, Wire-. J. H. Gwynne. No. 900,726; Oct. 13; Sp. p. 1398; Dr. p. 284; Gaz. vol. 136; p. 1315.
Fence stretcher, Wire-. C. L. Davis. No. 901,891; Oct. 20; Sp. p. 3803; Dr. p. 774; Gaz. vol. 136; p. 1731.
Fence, Wire. A. Westerberg. No. 902,188; Oct. 27; Sp. p. 4431; Dr. p. 897; Gaz. vol. 136; p. 1856.
Fender: *See* Car-fender.
Fender-clip. W. C. Groehn. No. 900,163; Oct. 6; Sp. p. 194; Dr. p. 40; Gaz. vol. 136; p. 1104.
Fern-dish or display-receptacle. V. P. Tommins. No. 901,661; Oct. 20; Sp. p. 3323; Dr. p. 682; Gaz. vol. 136; p. 1654.
Ferrule, Handle-. J. H. Bennett. No. 901,063; Oct. 13; Sp. p. 2093; Dr. p. 425; Gaz. vol. 136; p. 1425.
Fertilizer-distributer. L. E. Roby and C. A. Pattison. No. 900,124; Oct. 6; Sp. p. 115; Dr. pp. 23–4; Gaz. vol. 136; p. 1091.
Fertilizer-distributer. J. C. and W. J. Pope. No. 901,123; Oct. 13; Sp. p. 2203; Dr. p. 448; Gaz. vol. 136; p. 1442.
Fiber-preparing machine. A. Zabriskie. No. 900,251; Oct. 6; Sp. p. 365; Dr. p. 76; Gaz. vol. 136; p. 1132.
Fiber stripping and cleaning machine. S. O. Dickinson. No. 900,494; Oct. 6; Sp. p. 916; Dr. p. 186; Gaz. vol. 136; p. 1211.
File-cabinet. C. G. Ward. No. 900,242; Oct. 6; Sp. p. 346; Dr. pp. 72–3; Gaz. vol. 136; p. 1129.
File, Card-. S. T. Walton. No. 901,856; Oct. 20; Sp. p. 3743; Dr. p. 761; Gaz. vol. 136; p. 1719.
File, Card-index. O. W. Helbig. No. 902,541; Oct. 27; Sp. p. 5210; Dr. pp. 1052–3; Gaz. vol. 136; p. 1975.
File or similar instrument, Nail-. E. Ruettgers. No. 901,743; Oct. 20; Sp. p. 3533; Dr. p. 714; Gaz. vol. 136; p. 1684.
Filing device. J. D. D. Mortimer. No. 901,988; Oct. 27; Sp. p. 4042; Dr. pp. 819–20; Gaz. vol. 136; p. 1793.
Filler-can, Safety. W. H. McNutt. No. 900,764; Oct. 13; Sp. p. 1469; Dr. p. 299; Gaz. vol. 136; p. 1327.
Film-holder. G. Logan. No. 902,153; Oct. 27; Sp. p. 4356; Dr. p. 882; Gaz. vol. 136; p. 1845.
Filter. V. Toninetti. No. 902,349; Oct. 27; Sp. p. 4784; Dr. p. 965; Gaz. vol. 136; p. 1910.
Filter and water-cooler. J. Havassy. No. 902,076; Oct. 27; Sp. p. 4201; Dr. p. 851; Gaz. vol. 136; p. 1821.
Filter-basket. F. J. Wood. No. 902,038; Oct. 27; Sp. p. 4129; Dr. p. 836; Gaz. vol. 136; p. 1809.
Filter, Oil-. W. F. Bousman. No. 901,418; Oct. 20; Sp. p. 2825; Dr. p. 577; Gaz. vol. 136; p. 1576.
Filter-press. C. W. Merrill. No. 900,185; Oct. 6; Sp. p. 239; Dr. pp. 48–9; Gaz. vol. 136; p. 1111.
Filter, Pressure-. P. E. Maggini. No. 900,180; Oct. 6; Sp. p. 230; Dr. p. 47; Gaz. vol. 136; p. 1110.
Filter, Pressure-. C. W. Merrill. No. 900,184; Oct. 6; Sp. p. 237; Dr. p. 48; Gaz. vol. 136; p. 1111.
Filter, Rain-water. L. W. French. No. 900,510; Oct. 6; Sp. p. 951; Dr. p. 193; Gaz. vol. 136; p. 1217.
Finger-ring. J. E. Fitzgerald. No. 901,333; Oct. 20; Sp. p. 2614; Dr. p. 537; Gaz. vol. 136; p. 1545.
Fire-alarm, Electric. H. Anderson. No. 900,641; Oct. 6; Sp. p. 1223; Dr. p. 250; Gaz. vol. 136; p. 1261.
Fire-alarm trip, Automatic. F. A. Kehl and A. F. Wright. No. 901,243; Oct. 13; Sp. p. 2409; Dr. p. 494; Gaz. vol. 136; p. 1480.
Fire-boxes, Device for creating a central draft for. G. F. Pannebaker. No. 900,772; Oct. 13; Sp. p. 1497; Dr. pp. 303–4; Gaz. vol. 136; p. 1329.
Fire-cracker. I. M. Bond. No. 901,317; Oct. 20; Sp. p. 2581; Dr. p. 531; Gaz. vol. 136; p. 1540.
Fire-doors, &c., Ventilator for. A. H. Lowry. No. 900,402; Oct. 6; Sp. p. 693; Dr. p. 143; Gaz. vol. 136; p. 1182.
Fire-engines, Emergency-cistern for. E. O'Sullivan. No. 901,733; Oct. 20; Sp. p. 3516; Dr. pp. 711–12; Gaz. vol. 136; p. 1681.
Fire-extinguisher, Destructible link or automatic. J. D. Farr. No. 900,673; Oct. 6; Sp. p. 1290; Dr. p. 263; Gaz. vol. 136; p. 1271.
Fire-extinguishing apparatus. J. G. and H. G. Robinson. No. 900,596; Oct. 6; Sp. p. 1117; Dr. p. 229; Gaz. vol. 136; p. 1245.
Fire-extinguishing apparatus, Automatic. J. D. Farr. No. 900,840; Oct. 13; Sp. p. 1646; Dr. p. 333; Gaz. vol. 136; p. 1353.
Fire-protective shield. D. S. Watson. No. 900,243; Oct. 6; Sp. p. 347; Dr. p. 73; Gaz. vol. 136; p. 1129.
Firearm, Automatic magazine-. C. W. Louis. No. 900,865; Oct. 13; Sp. p. 1685; Dr. pp. 341–2; Gaz. vol. 136; p. 1360.
Fireplace, Electric. A. D. Rathbone. No. 902,003; Oct. 27; Sp. p. 4064; Dr. p. 824; Gaz. vol. 136; p. 1798.
Fireproof attachment for vaults. T. M. Brintnall and N. R. Doolittle. No. 902,050; Oct. 27; Sp. p. 4153; Dr. p. 841; Gaz. vol. 136; p. 1812.
Fireproof construction. A. P. S. and P. Wohlpart. No. 902,357; Oct. 27; Sp. p. 4797; Dr. p. 969; Gaz. vol. 136; p. 1913.
Firing of self-loading arms, Device for automatic. S. H. Bang. No. 901,143; Oct. 13; Sp. p. 2236; Dr. pp. 454–5; Gaz. vol. 136; p. 1449.
Fish-scaling device. M. W. Grosser. No. 901,805; Oct. 20; Sp. p. 3659; Dr. p. 741; Gaz. vol. 136; p. 1704.
Fishing device. J. B. Welch and C. W. Wheatley. No. 900,139; Oct. 6; Sp. p. 140; Dr. p. 29; Gaz. vol. 136; p. 1095.
Fishing-pole. P. Piper. No. 902,447; Oct. 27; Sp. p. 4980; Dr. p. 1006; Gaz. vol. 136; p. 1942.
Fishing-reel. G. E. Matts. No. 900,563; Oct. 6; Sp. p. 1059; Dr. pp. 217–18; Gaz. vol. 136; p. 1235.
Fishing-reel. B. A. Flynn and F. C. Rothenberger. No. 900,842; Oct. 13; Sp. p. 1650; Dr. p. 334; Gaz. vol. 136; p. 1354.
Fishing-reel. C. H. Gaskins. No. 901,609; Oct. 20; Sp. p. 3223; Dr. p. 661; Gaz. vol. 136; p. 1638.
Fixing and washing tank. G. H. Scheer. No. 900,431; Oct. 6; Sp. p. 750; Dr. p. 156; Gaz. vol. 136; p. 1192.
Flakes, Coated. F. Lauhoff. No. 901,455; Oct. 20; Sp. p. 2917; Dr. pp. 594–5; Gaz. vol. 136; p. 1589.
Floor-cramp. F. Williams. No. 900,246; Oct. 6; Sp. p. 356; Dr. p. 74; Gaz. vol. 136; p. 1131.
Floor-dressing machine. W. S. Haven. No. 902,398; Oct. 27; Sp. p. 4865; Dr. p. 985; Gaz. vol. 136; p. 1925.
Floor surfacing and polishing machine. E. F. Murdock. No. 902,246; Oct. 27; Sp. p. 4548; Dr. pp. 922–3; Gaz. vol. 136; p. 1874.
Flue-cutter. C. J. Crowley. No. 902,379; Oct. 27; Sp. p. 4833; Dr. p. 976; Gaz. vol. 136; p. 1919.
Flue-dust and fines, Recovering values from. R. Baggaley. No. 900,467; Oct. 6; Sp. p. 851; Dr. p. 173; Gaz. vol. 136; p. 1204.
Flue-dust, Composition for solidifying. S. W. Ramsey and G. W. Smith. No. 900,587; Oct. 6; Sp. p. 1102; Gaz. vol. 136; p. 1242.
Flue-plugger. W. B. Wingate. No. 900,337; Oct. 6; Sp. p. 559; Dr. p. 117; Gaz. vol. 136; p. 1160.
Fluid-controlling means. F. P. Stevens. No. 902,264; Oct. 27; Sp. p. 4582; Dr. p. 930; Gaz. vol. 136; p. 1890.
Fluid-joint, Flexible. C. G. Hawley. No. 900,533; Oct. 6; Sp. p. 993; Dr. p. 202; Gaz. vol. 136; p. 1225.
Fluid-joint, Flexible. E. E. Silk. No. 900,603; Oct. 6; Sp. p. 1131; Dr. p. 232; Gaz. vol. 136; p. 1248.
Fluid motor, Elastic-. V. Pingret. No. 901,258; Oct. 13; Sp. p. 2437; Dr. pp. 500–1; Gaz. vol. 136; p. 1485.

Fluid-pressure apparatus, Automatic regulating device for. A. C. E. Rateau. No. 902,001; Oct. 27; Sp. p. 4060; Dr. p. 824; Gaz. vol. 136; p. 1797.
Fluid-pressure conduits, Coupling for. P. Furtner. No. 901,289; Oct. 13; Sp. p. 2520; Dr. pp. 517–18; Gaz. vol. 136; p. 1496.
Fluid-pressure distributer. J. B. Tuor. No. 901,049; Oct. 13; Sp. p. 2065; Dr. p. 419; Gaz. vol. 136; p. 1420.
Fluid-pressure motor. E. P. Nicholson. No. 901,550; Oct 20; Sp. p. 3115; Dr. p. 636; Gaz. vol. 136; p. 1620.
Fluid-pressure regulator. L. B. Fulton. No. 900,275; Oct. 6; Sp. p. 439; Dr. p. 90; Gaz. vol. 136; p. 1140.
Fluid-receptacle, Portable. L. Kessler. No. 900,104; Oct. 6; Sp. p. 62; Dr. p. 12; Gaz. vol. 136; p. 1085.
Flush-tank, Antifreezing. A. W. Oberlies. No. 901,731; Oct. 20; Sp. p. 3514; Dr. p. 710; Gaz. vol. 136; p. 1680.
Flushing-head. T. M. Murphy. No. 900,869; Oct. 13; Sp. p. 1703; Dr. pp. 343–4; Gaz. vol. 136; p. 1361.
Flute. D. Julliot. No. 901,913; Oct. 20; Sp. p. 3846; Dr. pp. 784–5; Gaz. vol. 136; p. 1738.
Flying-machine. A. H. Friedel. No. 900,844; Oct. 13; Sp. p. 1653; Dr. p. 334; Gaz. vol. 136; p. 1354.
Flying-machine. H. B. Schiller. No. 901,486; Oct. 20; Sp. p. 2989; Dr. p. 609; Gaz. vol. 136; p. 1600.
Folding and adjustable chair. T. F. Robinson. No. 900,885; Oct. 13; Sp. p. 1738; Dr. p. 351; Gaz. vol. 136; p. 1366.
Folding box. J. M. Johnson. No. 900,173; Oct. 6; Sp. p. 214; Dr. p. 44; Gaz. vol. 136; p. 1107.
Folding box. J. G. Reber. No. 900,953; Oct. 13; Sp. p. 1887; Dr. p. 384; Gaz. vol. 136; p. 1389.
Folding box or crate. J. H. and E. E. Derby. No. 900,492; Oct. 6; Sp. p. 913; Dr. p. 186; Gaz. vol. 136; p. 1211.
Folding carrier. C. F. Williams. No. 901,858; Oct. 20; Sp. p. 3745; Dr. pp. 761–2; Gaz. vol. 136; p. 1720.
Folding chair. T. M. Painter. No. 902,248; Oct. 27; Sp. p. 4552; Dr. p. 923; Gaz. vol. 136; p. 1875.
Folding chair. J. C. Bennett. No. 902,471; Oct. 27; Sp. p. 5035; Dr. p. 1019; Gaz. vol. 136; p. 1950.
Folding chair, Automatic. C. O. Austin. No. 901,581; Oct. 20; Sp. p. 3178; Dr. p. 648; Gaz. vol. 136; p. 1630.
Folding stand. J. F. Van Horn. No. 901,129; Oct. 13; Sp. p. 2214; Dr. p. 450; Gaz. vol. 136; p. 1444.
Folding table. O. C. Kade. No. 900,552; Oct. 6; Sp. p. 1038; Dr. p. 213; Gaz. vol. 136; p. 1231.
Folding table. W. R. Montgomery. No. 902,245; Oct. 27; Sp. p. 4546; Dr. p. 922; Gaz. vol. 136; p. 1874.
Food compound. C. E. Bright. No. 900,701; Oct. 13; Sp. p. 1354; Gaz. vol. 136; p. 1308.
Food-dispensing apparatus, Coin-controlled. M. Woodbury and N. W. Aldrich. No. 902,358; Oct. 27; Sp. p. 4798; Dr. p. 969; Gaz. vol. 136; p. 1913.
Food products, Making cereal. C. H. Richards. No. 901,647; Oct. 20; Sp. p. 3299; Dr. p. 677; Gaz. vol. 136; p. 1651.
Foot-rest, Extension. W. E. Latimer. No. 902,092; Oct. 27; Sp. p. 4228; Dr. p. 857; Gaz. vol. 136; p. 1825.
Footwear-cushion. B. N. B. Miller. No. 900,867; Oct. 13; Sp. p. 1699; Dr. p. 343; Gaz. vol. 136; p. 1361.
Fork: *See* Bicycle-fork.
Fountain: *See* Ink-fountain; Stock-fountain.
Frame: *See* Bed-spring frame; Collapsible frame; Embroidery-frame; Gluing-frame; Hat-frame; Metal frame; Truck side frame; Vehicle-frame.
Fruit-picker. H. Corrigan. No. 901,594; Oct. 20; Sp. p. 3203; Dr. p. 656; Gaz. vol. 136; p. 1635.
Fruit-sizer. R. P. Redmond. No. 901,188; Oct. 13; Sp. p. 2311; Dr. pp. 473–4; Gaz. vol. 136; p. 1463.
Fuel, Artificial. G. W. Herbein. No. 901,707; Oct. 20; Sp. p. 3468; Gaz. vol. 136; p. 1673.
Fuel, Manufacture of artificial. A. W. H. Vivian. No. 900,619; Oct. 6; Sp. p. 1177; Gaz. vol. 136; p. 1253.
Fur-blowing machines, Riddle for. H. B. Fanton. No. 900,903; Oct. 13; Sp. p. 1961; Dr. p. 399; Gaz. vol. 136; p. 1402.
Fur-nail-picking machine. A. Dioszeghy. No. 901,697; Oct. 20; Sp. p. 3441; Dr. p. 698; Gaz. vol. 136; p. 1670.
Furnace: *See* Annealing-furnace; Blast-furnace; Boiler-furnace; Electric furnace; Gas-furnace; Heating-furnace; Liquation-furnace; Metallurgical furnace; Oil-furnace; Smelting-furnace.
Furnace. W. A. Garvens. No. 900,513; Oct. 6; Sp. p. 955; Dr. pp. 193–4; Gaz. vol. 136; p. 1217.
Furnace. H. A. Poppenhusen and J. Harrington. No. 901,038; Oct. 13; Sp. p. 2043; Dr. pp. 415–16; Gaz. vol. 136; p. 1416.
Furnace. J. F. Monnot. No. 901,986; Oct. 27; Sp. p. 4036; Dr. pp. 818–19; Gaz. vol. 136; p. 1793.
Furnace-feeding mechanism. F. Kingsley. No. 900,390; Oct. 6; Sp. p. 673; Dr. p. 138; Gaz. vol. 136; p. 1177.
Furnace-grate and fire-bar. R. Campbell. No. 902,135; Oct. 27; Sp. p. 4317; Dr. p. 874; Gaz. vol. 136; p. 1839.
Furnaces, Hot-air-distributing device for. J. L. Murphy. No. 901,814; Oct. 20; Sp. p. 3673; Dr. p. 746; Gaz. vol. 136; p. 1706.
Furniture. F. N. Churchill. No. 901,152; Oct. 13; Sp. p. 2250; Dr. p. 457; Gaz. vol. 136; p. 1453.
Furniture, Combined device for supporting and leveling. J. N. McIntire. No. 901,636; Oct. 20; Sp. p. 3280; Dr. p. 673; Gaz. vol. 136; p. 1647.
Furniture-slat. F. P. Grode. No. 900,523; Oct. 6; Sp. p. 972; Dr. p. 197; Gaz. vol. 136; p. 1221.
Furrowing-machine. W. Flentje. No. 902,388; Oct. 27; Sp. p. 4845; Dr. p. 980; Gaz. vol. 136; p. 1922.
Fuse-cap, Waterproof. T. M. Daniels. No. 900,570; Oct. 6; Sp. p. 1283; Dr. p. 262; Gaz. vol. 136; p. 1270.
Fuse-holder. B. D. Horton. No. 901,448; Oct. 20; Sp. p. 2905; Dr. p. 592; Gaz. vol. 136; p. 1587.
Fuse, Safety-. F. D. Reynolds and J. Sachs. No. 901,261; Oct. 13; Sp. p. 2449; Dr. p. 502; Gaz. vol. 136; p. 1486.
Gage: *See* Pressure-gage; Self-registering gage.
Galvanometer. L. E. Knott. No. 901,013; Oct. 13; Sp. p. 1999; Dr. p. 406; Gaz. vol. 136; p. 1409.
Gambrel, Hog-. P. L. Brooks. No. 901,947; Oct. 27; Sp. p. 3927; Dr. pp. 801–2; Gaz. vol. 136; p. 1779.
Game apparatus. A. A. Storey. No. 901,206; Oct. 13; Sp. p. 2347; Dr. p. 480; Gaz. vol. 136; p. 1469.
Game apparatus. N. W. Smead. No. 902,006; Oct. 27; Sp. p. 4069; Dr. p. 825; Gaz. vol. 136; p. 1799.
Game-board. M. Christopherson. No. 902,376; Oct. 27; Sp. p. 4825; Dr. p. 975; Gaz. vol. 136; p. 1918.
Game-piece. F. Wallstein. No. 902,512; Oct. 27; Sp. p. 5141; Dr. p. 1041; Gaz. vol. 136; p. 1965.
Game-register. E. O. Parker and H. E. Grey. No. 902,320; Oct. 27; Sp. p. 4711; Dr. p. 953; Gaz. vol. 136; p. 1900.
Garbage-collecting vehicle. A. G. Sharp. No. 902,115; Oct. 27; Sp. p. 4281; Dr. p. 867; Gaz. vol. 136; p. 1833.
Garden implement, Multibladed. D. Voshell. No. 902,124; Oct. 27; Sp. p. 4294; Dr. p. 870; Gaz. vol. 136; p. 1835.
Garment. A. Holste. No. 902,081; Oct. 27; Sp. p. 4210; Dr. p. 853; Gaz. vol. 136; p. 1822.
Garment and hose-supporter, Combined. D. Grotta. No. 900,725; Oct. 13; Sp. p. 1397; Dr. p. 284; Gaz. vol. 136; p. 1315.
Garment clasp or holder. L. A. McStay. No. 901,818; Oct. 20; Sp. p. 3679; Dr. p. 747; Gaz. vol. 136; p. 1708.
Garment-fastener. E. B. Stimpson. No. 900,445; Oct. 6; Sp. p. 793; Dr. p. 163; Gaz. vol. 136; p. 1196.
Garment-hanger. N. E. Miles. No. 900,567; Oct. 6; Sp. p. 1068; Dr. p. 219; Gaz. vol. 136; p. 1236.
Garment-hanger. E. W. Hawley and G. H. Wheary. No. 902,078; Oct. 27; Sp. p. 4205; Dr. p. 852; Gaz. vol. 136; p. 1821.
Garment-hanger. R. C. Thomas. No. 902,346; Oct. 27; Sp. p. 4778; Dr. p. 964; Gaz. vol. 136; p. 1909.
Garment-supporter. C. W. Wallis. No. 900,623; Oct. 6; Sp. p. 1187; Dr. p. 243; Gaz. vol. 136; p. 1255.
Garment-supporter. C. B. Harris. No. 900,728; Oct. 13; Sp. p. 1407; Dr. p. 286; Gaz. vol. 136; p. 1316.
Garment-supporter. C. F. Hyltén-Cavallius. No. 902,084; Oct. 27; Sp. p. 4214; Dr. p. 853; Gaz. vol. 136; p. 1823.
Garments, Overlapping the edges of. L. Ring. No. 901,041; Oct. 13; Sp. p. 2050; Dr. p. 417; Gaz. vol. 136; p. 1418.
Gas-burner, Atmospheric. T. J. Litle, Jr. No. 901,934; Oct. 20; Sp. p. 3892; Dr. p. 794; Gaz. vol. 136; p. 1746.
Gas-burner for lighting and heating purposes. G. Detsinyi. No. 901,596; Oct. 20; Sp. p. 3205; Dr. p. 657; Gaz. vol. 136; p. 1635.
Gas-cut-off device, Thermal. A. C. Schwager. No. 901,197; Oct. 13; Sp. p. 2329; Dr. p. 477; Gaz. vol. 136; p. 1467.
Gas-engine. C. A. Clark. No. 900,083; Oct. 6; Sp. p. 18; Dr. p. 4; Gaz. vol. 136; p. 1078.
Gas-engine. A. Schieferstein. No. 901,745; Oct. 20; Sp. p. 3536; Dr. p. 715; Gaz. vol. 136; p. 1683.
Gas engine, Explosive-. A. E. Remick. No. 902,450; Oct. 27; Sp. p. 4985; Dr. p. 1008; Gaz. vol. 136; p. 1943.
Gas-furnace. L. G. Fromont. No. 900,845; Oct. 13; Sp. p. 1654; Dr. p. 335; Gaz. vol. 136; p. 1355.
Gas-furnace or coke-oven. H. Koppers. No. 901,351; Oct. 20; Sp. p. 2662; Dr. p. 545; Gaz. vol. 136; p. 1552.
Gas-generator. C. I. Tenney. No. 900,231; Oct. 6; Sp. p. 323; Dr. p. 67; Gaz. vol. 136; p. 1125.
Gas-generator. H. Rehmann. No. 900,955; Oct. 13; Sp. p. 1892; Dr. p. 385; Gaz. vol. 136; p. 1389.
Gas generator, Acetylene-. F. C. Nickel. No. 901,640; Oct. 20; Sp. p. 3288; Dr. p. 674; Gaz. vol. 136; p. 1648.
Gas-heater. J. S. Panasevitch. No. 900,303; Oct. 6; Sp. p. 491; Dr. p. 102; Gaz. vol. 136; p. 1150.
Gas-heaters, Deodorizing attachment for. H. A. Gorsline and A. Klein. No. 900,722; Oct. 13; Sp. p. 1394; Dr. p. 283; Gaz. vol. 136; p. 1314.
Gas-holders, Guide-frame for. H. J. Stoffels. No. 901,205; Oct. 13; Sp. p. 2346; Dr. p. 480; Gaz. vol. 136; p. 1469.
Gas-mains, Automatic device for operating water seals for. L. Shaw. No. 902,454; Oct. 27; Sp. p. 5003; Dr. p. 1011; Gaz. vol. 136; p. 1944.
Gas-making systems, Boiler for. C. I. Tenney. No. 900,230; Oct. 6; Sp. p. 322; Dr. p. 66; Gaz. vol. 136; p. 1189.
Gas-manufacturing apparatus. E. Rider. No. 900,423; Oct. 6; Sp. p. 734; Dr. p. 153; Gaz. vol. 136; p. 1241.
Gas-manufacturing apparatus. H. Pettibone. No. 900,582; Oct. 6; Sp. p. 1093; Dr. p. 224; Gaz. vol. 136; p. 1219.
Gas-manufacturing apparatus, Hydrogen-. E. Geisenberger. No. 900,516; Oct. 6; Sp. p. 963; Dr. p. 195; Gaz. vol. 136; p. 1418.
Gas-meter, Coin-controlled. H. T. Sloper. No. 901,044; Oct. 13; Sp. p. 2056; Dr. p. 418; Gaz. vol. 136; p. 1360.
Gas-producer. H. I. Lea. No. 900,862; Oct. 13; Sp. p. 1681; Dr. p. 340; Gaz. vol. 136; p. 1555.
Gas-producer. R. L. Morgan. No. 901,359; Oct. 20; Sp. p. 2677; Dr. p. 549; Gaz. vol. 136; p. 1709.
Gas-producer. L. C. Parker. No. 901,823; Oct. 20; Sp. p. 3687; Dr. p. 749; Gaz. vol. 136; p. 1937.
Gas-producer. C. H. Morgan. No. 902,432; Oct. 27; Sp. p. 4955; Dr. p. 1001; Gaz. vol. 136; p. 1476.
Gas, Producing. B. E. Eldred. No. 901,232; Oct. 13; Sp. p. 2388; Dr. p. 489; Gaz. vol. 136; p. 1966.
Gas-producing apparatus for extinguishing fires and other purposes. H. N. Williams. No. 902,514; Oct. 27; Sp. p. 5143; Dr. p. 1042; Gaz. vol. 136; p. 1966.
Gas-regulator. A. T. Newman. No. 901,991; Oct. 27; Sp. p. 4046; Dr. p. 820; Gaz. vol. 136; p. 1794.
Gases containing sulfur dioxid, Purifying. G. Eschellmann. No. 900,500; Oct. 6; Sp. p. 930; Dr. p. 189; Gaz. vol. 136; p. 1213.

Gaseous liquids, Pressure-reducer for. H. A. Reed. No. 901,741; Oct. 20; Sp. p. 3530; Dr. p. 714; Gaz. vol. 136; p. 1684.
Gate: *See* Automatic gate; Car-gate; Cattle-guard gate; End-gate; Farm-gate; Railway-gate; Water-gate.
Gate. F. M. Neff. No. 902,438; Oct. 27; Sp. p. 4962; Dr. pp. 1002–3; Gaz. vol. 136; p. 1939.
Gate construction. W. H. Ansted. No. 901,865; Oct. 20; Sp. p. 3755; Dr. p. 764; Gaz. vol. 136; p. 1722.
Gear, Speed-changing. W. C. Mayo and J. Houlehan. No. 901,980; Oct. 27; Sp. p. 3997; Dr. pp. 814–16; Gaz. vol. 136; p. 1791.
Gear, Transmission-. R. J. Million. No. 900,111; Oct. 6; Sp. p. 81; Dr. p. 17; Gaz. vol. 136; p. 1087.
Gear, Transmission-. E. M. Sternberg. No. 900,792; Oct. 13; Sp. p. 1534; Dr. p. 312; Gaz. vol. 136; p. 1335.
Gearing. W. J. Wilde. No. 900,631; Oct. 6; Sp. p. 1202; Dr. p. 246; Gaz. vol. 136; p. 1257.
Gearing. T. B. Jeffery. No. 900,857; Oct. 13; Sp. p. 1671; Dr. p. 338; Gaz. vol. 136; p. 1358.
Gearing. H. C. Clay. No. 901,070; Oct. 13; Sp. p. 2103; Dr. p. 428; Gaz. vol. 136; p. 1427.
Gearing, Change-speed. H. Kupferschmid. No. 902,090; Oct. 27; Sp. p. 4226; Dr. p. 856; Gaz. vol. 136; p. 1825.
Gearing, Planetary. A. P. Brush. No. 901,518; Oct. 20; Sp. p. 3056; Dr. pp. 624–5; Gaz. vol. 136; p. 1610.
Gearing, Power-transmission. G. L. Butlin. No. 901,590; Oct. 20; Sp. p. 3198; Dr. pp. 654–5; Gaz. vol. 136; p. 1634.
Gearing, Reverse-. H. A. Tuttle. No. 901,664; Oct. 20; Sp. p. 3328; Dr. pp. 683–4; Gaz. vol. 136; p. 1655.
Gearing, Variable-speed. A. Loitron. No. 901,456; Oct. 20; Sp. p. 2919; Dr. p. 595; Gaz. vol. 136; p. 1589.
Generator: *See* Acetylene-generator; Electric generator; Gas-generator.
Glass articles, Apparatus for manufacturing. C. Kuhlewind. No. 900,940; Oct. 13; Sp. p. 1855; Dr. pp. 377–9; Gaz. vol. 136; p. 1384.
Glass articles, such as bottles, Apparatus for manufacturing hollow. H. Severin. No. 901,199; Oct. 13; Sp. p. 2332; Dr. p. 478; Gaz. vol. 136; p. 1467.
Glass-blowing apparatus, Valve mechanism for. C. M. Clarke. No. 900,914; Oct. 13; Sp. p. 1798; Dr. p. 364; Gaz. vol. 136; p. 1376.
Glass-feeding apparatus for tanks, pots, and similar receptacles. G. E. Cleveland. No. 901,881; Oct. 20; Sp. p. 3784; Dr. p. 769; Gaz. vol. 136; p. 1727.
Glass machine, Continuous-draw vacuum window-. H. D. Hershey. No. 901,170; Oct. 13; Sp. p. 2280; Dr. pp. 465–6; Gaz. vol. 136; p. 1458.
Glass-making apparatus. J. Campbell. No. 902,207; Oct. 27; Sp. p. 4464; Dr. p. 903; Gaz. vol. 136; p. 1862.
Glass receptacle. W. C. Schulze. No. 901,388; Oct. 20; Sp. p. 2761; Dr. p. 562; Gaz. vol. 136; p. 1567.
Glass sheets, Apparatus for forming. D. J. Murnane. No. 901,725; Oct. 20; Sp. p. 3502; Dr. p. 708; Gaz. vol. 136; p. 1678.
Glass sheets or plates, Apparatus for the manufacture of. E. Fourcault. No. 901,800; Oct. 20; Sp. p. 3647; Dr. pp. 738–9; Gaz. vol. 136; p. 1702.
Glasses, Detachable handle for. R. R. Kintz. No. 902,236; Oct. 27; Sp. p. 4527; Dr. p. 917; Gaz. vol. 136; p. 1871.
Glassware, Method and apparatus for making. W. E. Holmes. No. 900,281; Oct. 6; Sp. p. 449; Dr. pp. 91–3; Gaz. vol. 136; p. 1142.
Globe-suspending device. T. H. Costello. No. 902,211; Oct. 27; Sp. p. 4470; Dr. p. 904; Gaz. vol. 136; p. 1864.
Gluing-frame. A. Hettel. No. 900,167; Oct. 6; Sp. p. 201; Dr. p. 41; Gaz. vol. 136; p. 1105.
Goggles. F. M. Slevin. No. 901,394; Oct. 20; Sp. p. 2778; Dr. p. 565; Gaz. vol. 136; p. 1569.
Governing mechanism. W. L. R. Emmet and O. Junggren. No. 902,220; Oct. 27; Sp. p. 4496; Dr. p. 910; Gaz. vol. 136; p. 1866.
Governor. F. Hodgkinson. No. 900,852; Oct. 13; Sp. p. 1664; Dr. p. 337; Gaz. vol. 136; p. 1356.
Governor. A. Davis. No. 902,278; Oct. 27; Sp. p. 4613; Dr. p. 937; Gaz. vol. 136; p. 1886.
Grader, drag, and harrow, Combined road-. H. D. Guffey. No. 901,806; Oct. 20; Sp. p. 3659; Dr. p. 741; Gaz. vol. 136; p. 1704.
Grader, Road-. E. A. Hollenbeck. No. 900,369; Oct. 6; Sp. p. 630; Dr. pp. 129–30; Gaz. vol. 136; p. 1170.
Gradient instrument. C. B. Crim. No. 901,888; Oct. 20; Sp. p. 3798; Dr. p. 773; Gaz. vol. 136; p. 1730.
Grain-shocking machine. W. A. Leitch. No. 900,559; Oct. 6; Sp. p. 1049; Dr. pp. 215–16; Gaz. vol. 136; p. 1233.
Granular material, Sampler for. H. D. Bonnell. No. 902,049; Oct. 27; Sp. p. 4152; Dr. p. 841; Gaz. vol. 136; p. 1812.
Graphophone or phonograph record holder, Disk. F. Eberhart. No. 900,714; Oct. 13; Sp. p. 1377; Dr. p. 281; Gaz. vol. 136; p. 1311.
Graphophone-stop. J. W. Jones. No. 901,910; Oct. 20; Sp. p. 3841; Dr. p. 783; Gaz. vol. 136; p. 1737.
Graphoscope. A. A. Fellx. No. 902,063; Oct. 27; Sp. p. 4179; Dr. p. 846; Gaz. vol. 136; p. 1817.
Grapple. W. Autenrieth. No. 901,057; Oct. 13; Sp. p. 2084; Dr. p. 424; Gaz. vol. 136; p. 1423.
Grass or weed exterminator, Quack-. A. G. Ham. No. 901,533; Oct. 20; Sp. p. 3083; Dr. p. 630; Gaz. vol. 136; p. 1615.
Grate and air-heater, Combined. A. D. Rathbone. No. 902,002; Oct. 27; Sp. p. 4062; Dr. p. 824; Gaz. vol. 136; p. 1798.
Grate, Rocking. P. Cameron. No. 901,876; Oct. 20; Sp. p. 3776; Dr. p. 767; Gaz. vol. 136; p. 1725.
Grave attachment. G. H. Willems. No. 901,407; Oct. 20; Sp. p. 2800; Dr. p. 571; Gaz. vol. 136; p. 1573.
Grease-cup. J. Rank. No. 901,039; Oct. 13; Sp. p. 2047; Dr. p. 416; Gaz. vol. 136; p. 1417.
Grease-cup. F. L. Brown and I. W. Sprink. No. 901,679; Oct. 20; Sp. p. 3372; Dr. p. 691; Gaz. vol. 136; p. 1662.
Greenhouse construction. W. H. Lutton. No. 902,155; Oct. 27; Sp. p. 4357; Dr. p. 882; Gaz. vol. 136; p. 1846.
Griddle. E. L. Flandreau. No. 901,087; Oct. 13; Sp. p. 2134; Dr. p. 435; Gaz. vol. 136; p. 1431.
Grinder for wood-planer knives. W. H. Kahle and M. Himmelreich. No. 900,284; Oct. 6; Sp. p. 456; Dr. pp. 93–4; Gaz. vol. 136; p. 1143.
Grinder, Scythe-. C. Ball. No. 901,059; Oct. 13; Sp. p. 2087; Dr. p. 424; Gaz. vol. 136; p. 1424.
Grinding-machine. A. Johnston. No. 901,909; Oct. 20; Sp. p. 3840; Dr. pp. 782–3; Gaz. vol. 136; p. 1737.
Grinding-mill. D. S. Anthony. No. 901,770; Oct. 20; Sp. p. 3590; Dr. p. 726; Gaz. vol. 136; p. 1693.
Gum, Production of a soluble. F. Fritsche. No. 900,274; Oct. 6; Sp. p. 438; Gaz. vol. 136; p. 1140.
Gun-rammers, Automatic means for controlling movements of. J. F. Meigs and R. P. Stout. No. 900,755; Oct. 13; Sp. p. 1451; Dr. pp. 295–6; Gaz. vol. 136; p. 1324.
Gun-recoil brake. E. J. Mead. No. 900,943; Oct. 13; Sp. p. 1863; Dr. p. 379; Gaz. vol. 136; p. 1385.
Gun, Safety-. O. E. Scott. No. 901,043; Oct. 13; Sp. p. 2053; Dr. p. 417; Gaz. vol. 136; p. 1418.
Guns, Breech appliance for. J. F. Meigs and H. G. Jakobsson. No. 900,754; Oct. 13; Sp. p. 1450; Dr. p. 295; Gaz. vol. 136; p. 1323.
Guns with recoiling barrels, Foundation for. K. Völler. No. 901,401; Oct. 20; Sp. p. 2792; Dr. pp. 568–9; Gaz. vol. 136; p. 1571.
Gutters, Making. H. E. and H. K. White. No. 902,031; Oct. 27; Sp. p. 4118; Dr. p. 834; Gaz. vol. 136; p. 1806.
Gyrator. J. M. Schutz. No. 900,313; Oct. 6; Sp. p. 515; Dr. pp. 107–8; Gaz. vol. 136; p. 1153.
Hair-drying device. G. Siegfried. No. 900,434; Oct. 6; Sp. p. 765; Dr. p. 158; Gaz. vol. 136; p. 1193.
Hair-roll. J. Wilcox. No. 901,763; Oct. 20; Sp. p. 3570; Dr. p. 723; Gaz. vol. 136; p. 1690.
Hammers, Friction-board for drop-forging. J. A. Burger. No. 901,779; Oct. 20; Sp. p. 3609; Dr. p. 731; Gaz. vol. 136; p. 1696.
Hammock, Couch-. I. E. Palmer. No. 901,936; Oct. 20; Sp. p. 3895; Dr. p. 795; Gaz. vol. 136; p. 1746.
Hammock-stand and awning. P. King. No. 902,087; Oct. 27; Sp. p. 4219; Dr. pp. 854–5; Gaz. vol. 136; p. 1824.
Handle: *See* Brush-handle; Casket-handle; Pan-handle; Tool-handle.
Hanger: *See* Boiler-hanger; Brake-hanger; Door-hanger; Door and gate hanger; Garment-hanger; Suit-hanger.
Hanger. J. T. Mayer. No. 901,720; Oct. 20; Sp. p. 3492; Dr. p. 706; Gaz. vol. 136; p. 1677.
Harness attachment. E. A. Nelson. No. 901,990; Oct. 27; Sp. p. 4046; Dr. p. 820; Gaz. vol. 136; p. 1794.
Harrow. J. D. McMillan. No. 900,116; Oct. 6; Sp. p. 91; Dr. p. 19; Gaz. vol. 136; p. 1088.
Harrow. C. E. Trease. No. 900,133; Oct. 6; Sp. p. 131; Dr. p. 27; Gaz. vol. 136; p. 1093.
Harrow. A. E. Diesem. No. 902,279; Oct. 27; Sp. p. 4615; Dr. p. 938; Gaz. vol. 136; p. 1886.
Harrow, Combined spring and spike tooth. J. R. Naylor. No. 901,118; Oct. 13; Sp. p. 2194; Dr. p. 446; Gaz. vol. 136; p. 1441.
Harrow, Foldable and adjustable. Z. M. Lindley. No. 901,015; Oct. 13; Sp. p. 2006; Dr. p. 407; Gaz. vol. 136; p. 1409.
Harrows, Safety-shield for disk. C. E. McMillan. No. 902,437; Oct. 27; Sp. p. 4962; Dr. p. 1002; Gaz. vol. 136; p. 1938.
Harvester, agricultural engine, and truck, Self-propelling combined. F. L. Kincaid and H. T. Preble. No. 900,389; Oct. 6; Sp. p. 668; Dr. pp. 137–8; Gaz. vol. 136; p. 1177.
Harvesters, Side-delivery mechanism for. F. Hamachek. No. 900,727; Oct. 13; Sp. p. 1399; Dr. pp. 285–6; Gaz. vol. 136; p. 1315.
Harvesting device, Corn-. V. R. McDole and A. Hollenbeck. No. 901,989; Oct. 27; Sp. p. 4044; Dr. p. 820; Gaz. vol. 136; p. 1794.
Hat-frame, Wire. C. W. Stevens. No. 900,129; Oct. 6; Sp. p. 127; Dr. p. 26; Gaz. vol. 136; p. 1093.
Hat-rack and kneeling-stool for pews, Folding. F. X. Aumann, Jr. No. 902,130; Oct. 27; Sp. p. 4305; Dr. p. 872; Gaz. vol. 136; p. 1838.
Hat sweat-shield. H. W. Wagenet. No. 900,330; Oct. 6; Sp. p. 549; Dr. p. 114; Gaz. vol. 136; p. 1158.
Hatchet. J. R. McCoy. No. 901,022; Oct. 13; Sp. p. 2019; Dr. p. 410; Gaz. vol. 136; p. 1412.
Hay-loader. C. M. Lee. No. 900,747; Oct. 13; Sp. p. 1441; Dr. pp. 292–3; Gaz. vol. 136; p. 1321.
Hay-loader. J. Dain. No. 901,074; Oct. 13; Sp. p. 2111; Dr. p. 430; Gaz. vol. 136; p. 1428.
Hay-press. G. A. Rapp. No. 900,588; Oct. 6; Sp. p. 1103; Dr. pp. 226–7; Gaz. vol. 136; p. 1242.
Hay-press, Multiple. J. H. Means. No. 900,566; Oct. 6; Sp. p. 1066; Dr. pp. 218–19; Gaz. vol. 136; p. 1236.
Hay rake and elevator, Combined. C. H. Knapp. No. 900,287; Oct. 6; Sp. p. 464; Dr. pp. 95–6; Gaz. vol. 136; p. 1145.
Heading and threshing machine, Steam-driven combined. L. K. Brown. No. 901,588; Oct. 20; Sp. p. 3191; Dr. pp. 650–3; Gaz. vol. 136; p. 1633.
Headlight, Arc-lamp. R. Fleming. No. 901,432; Oct. 20; Sp. p. 2855; Dr. pp. 583–4; Gaz. vol. 136; p. 1581.
Headlight-controller. H. R. Parker. No. 900,198; Oct. 6; Sp. p. 265; Dr. p. 53; Gaz. vol. 136; p. 1115.
Headlight-deflecting mechanism, Automatic. J. J. Shipley. No. 902,117; Oct. 27; Sp. p. 4283; Dr. p. 868; Gaz. vol. 136; p. 1833.
Heat from one medium to another, Apparatus for transmitting. E. Morterud. No. 900,411; Oct. 6; Sp. p. 716; Dr. p. 149; Gaz. vol. 136; p. 1185.
Heat-generating means. H. E. Grabau. No. 901,338; Oct. 20; Sp. p. 2623; Dr. p. 539; Gaz. vol. 136; p. 1547.
Heater: *See* Curling-iron heater; Electric heater; Feed-water heater; Gas-heater; Hot-water heater; Sad-iron heater; Water-heater.
Heater. W. H. Ramaley. No. 901,829; Oct. 20; Sp. p. 3695; Dr. p. 750; Gaz. vol. 136; p. 1711.

Heating apparatus, Steam-. M. F. Smith. No. 902,539; Oct. 27; Sp. p. 5207; Dr. pp. 1051-2; Gaz. vol. 136; p. 1974.
Heating device, Electric. W. C. Mortensen. No. 900,205; Oct. 6; Sp. p. 479; Dr. p. 99; Gaz. vol. 136; p. 1148.
Heating-furnace, Continuous. D. Davis. No. 901,230; Oct. 13; Sp. p. 2386; Dr. p. 488; Gaz. vol. 136; p. 1476.
Heating system. E. T. Greenfield. No. 902,148; Oct. 27; Sp. p. 4339; Dr. p. 879; Gaz. vol. 136; p. 1844.
Heating systems, Vacuum-generating apparatus for steam-. W. E. Tillinghast. No. 900,233; Oct. 6; Sp. p. 327; Dr. p. 68; Gaz. vol. 136; p. 1126.
Hedge-trimmer. F. L. Gilman. No. 902,529; Oct. 27; Sp. p. 5184; Dr. p 1048; Gaz. vol. 136; p. 1971.
Heel, Boot and shoe. J. A. Foster. No. 900,920; Oct. 13; Sp. p. 1815; Dr. p. 368; Gaz. vol. 136; p. 1378.
Heel-nailing machine. E. A. Webster. No. 900,244; Oct. 6; Sp. p. 349; Dr. p. 73; Gaz. vol. 136; p. 1130.
Hide-working machine. R. F. Whitney. No. 900,334; Oct. 6; Sp. p. 553; Dr. pp. 115-16; Gaz. vol. 136; p. 1159.
Hinge. M. S. Nelan. No. 900,579; Oct. 6; Sp. p. 1086; Dr. p. 223; Gaz. vol. 136; p. 1240.
Hinge-clamp. R. V. D. Stoutenburgh. No. 902,343; Oct. 27; Sp. p. 4772; Dr. p. 962; Gaz. vol. 136; p. 1908.
Hinge, Double-acting spring-. M. A. Erickson. No. 901,796; Oct. 20; Sp. p. 3643; Dr. pp. 736-7; Gaz. vol. 136; p. 1701.
Hinge for water-closet seats, covers, and the like, Post-. G. A. Geary. No. 900,514; Oct. 6; Sp. p. 957; Dr. p. 194; Gaz. vol. 136; p. 1218.
Hinge, Screen-door spring-. A. Falkenrath. No. 900,501; Oct. 6; Sp. p. 931; Dr. p. 189; Gaz. vol. 136; p. 1213.
Hinge, Shutter-. J. B. Williams. No. 900,336; Oct. 6; Sp. p. 559; Dr. p. 116; Gaz. vol. 136; p. 1160.
Hitching device, Horse-. N. C. Stocker. No. 900,964; Oct. 13; Sp. p. 1906; Dr. p. 388; Gaz. vol. 136; p. 1392.
Hitching-post. C. F. Malmrose. No. 901,311; Oct. 13; Sp. p. 2559; Dr. p. 527; Gaz. vol. 136; p. 1502.
Hitching-weight holder. H. H. Tothill. No. 902,267; Oct. 27; Sp. p. 4590; Dr. p. 932; Gaz. vol. 136; p. 1882.
Hoe. J. D. McCabe. No. 900,871; Oct. 13; Sp. p. 1707; Dr. p. 345; Gaz. vol. 136; p. 1362.
Hoe. J. S. Lester. No. 902,094; Oct. 27; Sp. p. 4230; Dr. p. 857; Gaz. vol. 136; p. 1826.
Hoeing-machine. C. Bongartz. No. 902,201; Oct. 27; Sp. p. 4454; Dr. p. 901; Gaz. vol. 136; p. 1861.
Hog-catcher. J. Schuster. No. 900,889; Oct. 13; Sp. p. 1743; Dr. p. 352; Gaz. vol. 136; p. 1367.
Hoisting and conveying mechanism. W. M. Myers and G. W. Hinton. No. 902,158; Oct. 27; Sp. p 4362; Dr. p. 883; Gaz. vol. 136; p. 1847.
Holsting-bucket. G. Focht. No. 902,223; Oct. 27; Sp. p. 4504; Dr. p. 911; Gaz. vol. 136; p. 1867.
Hoisting device, Automatic. E. E. Barrett. No. 901,943; Oct. 27; Sp. p. 3022; Dr. pp. 799-800; Gaz. vol. 136; p. 1778.
Hoisting-engine. S. T. Nelson. No. 900,768; Oct. 13; Sp. p. 1474; Dr. pp. 300-1; Gaz. vol. 136; p. 1328.
Hoisting-engine. S. T. Nelson. No. 900,769; Oct. 13; Sp. p. 1481; Dr. pp. 301-3; Gaz. vol. 136; p. 1328.
Hoisting-machine. J. J. Say. No. 900,212; Oct. 6; Sp. p. 294; Dr. pp. 59-60; Gaz. vol. 136; p. 1120.
Hoisting-machine. W. M. Brown. No. 900,979; Oct. 13; Sp. p. 1937; Dr. p. 394; Gaz. vol. 136; p. 1397.
Honey, Extracting. L. W. Avant. No. 900,643; Oct. 6; Sp. p. 1230; Dr. pp. 251-2; Gaz. vol. 136; p. 1262.
Hood and reflector. G. Cutter. No. 900,266; Oct. 6; Sp. p. 420; Dr. p. 85; Gaz. vol. 136; p. 1137.
Hook: *See* Advertising bill-hook; Button-hook; Checkrein-hook; Clip-hook; Eyeglass-hook; Register-hook.
Hook and eye. J. P. Baumgartner. No. 900,460; Oct. 6; Sp. p. 853; Dr. p. 174; Gaz. vol. 136; p. 1204.
Hook and eye. V E. Morse. No. 901,987; Oct. 27; Sp. p. 4041; Dr. p. 819; Gaz. vol. 136; p. 1793.
Hopper-bottom catch. J. W. Egan. No. 900,672; Oct. 6; Sp. p. 1289; Dr. p. 263; Gaz. vol. 136; p. 1271.
Horse-detacher. J. R. Claxton. No. 900,483; Oct. 6; Sp. p. 874; Dr. p. 179; Gaz. vol. 136; p. 1208.
Horse-pad clamp. E. L. McClain. No. 900,946; Oct. 13; Sp. p. 1869; Dr. p. 381; Gaz. vol. 136; p. 1386.
Horse-releaser. G. Ericson. No. 901,601; Oct. 20; Sp. p. 3211; Dr. p. 658; Gaz. vol. 136; p. 1636.
Horses' front legs from knocking together, Means for preventing. A. Clegg. No. 901,592; Oct. 20; Sp. p. 3201; Dr. p. 655; Gaz. vol. 136; p. 1634.
Horseshoe. P. Dech. No. 900,268; Oct. 6; Sp. p. 425; Dr. p. 87; Gaz. vol. 136; p. 1138.
Horseshoe. J. W. Roper. No. 900,959; Oct. 13; Sp. p. 1900; Dr. p. 387; Gaz. vol. 136; p. 1391.
Hose-bridge. M. T. Andrick. No. 900,690; Oct. 13; Sp. p. 1335; Dr. p. 272; Gaz. vol. 136; p. 1305.
Hose coupling, Automatic air-. N. Troy. No. 900,132; Oct. 6; Sp. p. 129; Dr. p. 27; Gaz. vol. 136; p. 1093.
Hose-making machine. J. S. H. Lovett. No. 902,308; Oct. 27; Sp. p. 4688; Dr. pp. 949-50; Gaz. vol. 136; p. 1896.
Hose-supporter for garments. G. E. Post. No. 902,323; Oct. 27; Sp. p. 4716; Dr. p. 954; Gaz. vol. 136; p. 1901.
Hot-air register. W. S. Tuttle. No. 901,756; Oct. 20; Sp. p. 3557; Dr. pp. 720-1; Gaz. vol. 136; p. 1688.
Hot-water heater. J. E. Potts. No. 901,828; Oct. 20; Sp. p. 3693; Dr. p. 750; Gaz. vol. 136; p. 1710.
Hot-water heater and still, Combined. D. W. Daley. No. 902,277; Oct. 27; Sp. p. 4612; Dr. p. 937; Gaz. vol. 136; p. 1885.
House: *See* Poultry-house.
Hub-securing device. J. A. Weltzel. No. 902,127; Oct. 27; Sp. p. 4299; Dr. p. 871; Gaz. vol. 136; p. 1836.
Humidifier. F. B. Comins. No. 900,355; Oct. 6; Sp. p. 590; Dr. p. 122; Gaz. vol. 136; p. 1165.
Humidifier. F. B. Comins. No. 900,356; Oct. 6; Sp. p. 591; Dr. p. 122; Gaz. vol. 136; p. 1166.
Husker. J. A. Ramsey. No. 901,830; Oct. 20; Sp. p. 3697; Dr. p. 750; Gaz. vol. 136; p. 1711.
Hydraulic motor. A. E. Weingartner. No. 902,351; Oct. 27; Sp. p. 4787; Dr. p. 966; Gaz. vol. 136; p. 1911.
Hydraulic press. J. H. Ferguson. No. 901,086; Oct. 13; Sp. p. 2132; Dr. p. 434; Gaz. vol. 136; p. 1431.
Hydrocarbon-burner. V. W. and L. S. Blanchard. No. 900,652; Oct. 6; Sp. p. 1244; Dr. p. 255; Gaz. vol. 136; p. 1264.
Hydrocarbon-burner. A. A. Ball, Jr. No. 901,415; Oct. 20; Sp. p. 2818; Dr. pp. 575-6; Gaz. vol. 136; p. 1575.
Hydrocarbon-burner. A. A. Ball, Jr. No. 901,415; Oct. 20; Sp. p. 2818; Dr. pp. 575-6; Gaz. vol. 136; p. 1575.
Hydrocarbon-burning apparatus. H. Hyde. No. 902,298; Oct. 27; Sp. p. 4654; Dr. p. 945; Gaz. vol. 136; p. 1892.
Hydrocarbon-torch. F. B. Carleton. No. 901,307; Oct. 13; Sp. p. 2552; Dr. p. 525; Gaz. vol. 136; p. 1501.
Ice-cream-can attachment. E. G. Appleton. No. 902,363; Oct. 27; Sp. p. 4807; Dr. p. 970; Gaz. vol. 136; p. 1915.
Ice-cream cornets, Device for filling. M. Bohlig. No. 900,348; Oct. 6; Sp. p. 579; Dr. p. 120; Gaz. vol. 136; p. 1163.
Ice-cream disher. L. J. Graffort and P. L. Hoffman. No. 901,437; Oct. 20; Sp. p. 2867; Dr. p. 586; Gaz. vol. 136; p. 1583.
Ice-cream-freezer attachment. O. R. Briggs. No. 900,657; Oct. 6; Sp. p. 1258; Dr. p. 257; Gaz. vol. 136; p. 1266.
Ice-cream spoon. C. E. McCarren. No. 900,573; Oct. 6; Sp. p. 1076; Dr. p. 221; Gaz. vol. 136; p. 1238.
Ice-cutter. C. G. Kimball. No. 900,933; Oct. 13; Sp. p. 1844; Dr. p. 375; Gaz. vol. 136; p. 1382.
Ice-cutting machine. G. S. Blakeslee. No. 902,200; Oct. 27; Sp. p. 4451; Dr. p. 900; Gaz. vol. 136; p. 1860.
Ice-cutting machine. J. J. Merrill. No. 902,503; Oct. 27; Sp. p. 5124; Dr. p. 1037; Gaz. vol. 136; p. 1962.
Ice-tank. W. Curl and E. Wheelock. No. 901,602; Oct. 20; Sp. p. 3434; Dr. p. 696; Gaz. vol. 136; p. 1668.
Illuminating device. W. H. Molloy. No. 902,313; Oct. 27; Sp. p. 4698; Dr. p. 951; Gaz. vol. 136; p. 1898.
Incubator. A. A. Clodi. No. 901,153; Oct. 13; Sp. p. 2252; Dr. p. 468; Gaz. vol. 136; p. 1453.
Indicator: *See* Fare-indicator; Motion-indicator; Speed-indicator; Telephone-call indicator; Universal indicator.
Influence or static induction and condenser machines, Disk for. A. Wehrsen. No. 901,666; Oct. 20; Sp. p. 3336; Dr. p. 685; Gaz. vol. 136; p. 1656.
Ink-fountain. N Wagner. No. 901,760; Oct. 20; Sp. p. 3568; Dr. p. 722; Gaz. vol. 136; p. 1690.
Insect-destroyer. E. F. Kauffman. No. 901,548; Oct. 20; Sp. p. 2655; Dr. p. 544; Gaz. vol. 136; p. 1551.
Insecticide. H. Terrisse. No. 901,268; Oct. 13; Sp. p. 2466; Gaz. vol. 136; p. 1489.
Insecticide and preparation thereof. C. Ellis. No. 901,793; Oct. 20; Sp. p. 3637; Gaz. vol. 136; p. 1700.
Insectifuge. C. Ellis. No. 901,083; Oct. 13; Sp. p. 2128; Gaz. vol. 136; p. 1430.
Insole, Pneumatic-cushion. W. L. Gordon. No. 901,236; Oct. 13; Sp. p. 2397; Dr. p. 491; Gaz. vol. 136; p. 1478.
Insulated wires, Moisture-proof case for. A. L. Joynes. No. 900,382; Oct. 6; Sp. p. 655; Dr. p. 135; Gaz. vol. 136; p. 1175.
Insulating material. W. E. Everette. No. 901,332; Oct. 20; Sp. p. 2613; Gaz. vol. 136; p. 1545.
Insulator. G. Dobson. No. 900,917; Oct. 13; Sp. p. 1804; Dr. p. 365; Gaz. vol. 136; p. 1377.
Insulator. R. T. Langlan. No. 901,627; Oct. 20; Sp. p. 3263; Dr. p. 669; Gaz. vol. 136; p. 1644.
Insulator-protector. R. R. Sparks. No. 902,262; Oct. 27; Sp. p. 4575; Dr. p. 929; Gaz. vol. 136; p. 1880.
Insulators, Transposition-bracket for. J. E. Skinner. No. 902,455; Oct. 27; Sp. p. 5007; Dr. p. 1012; Gaz. vol. 136; p. 1944.
Internal-combustion engine. J. Clay. No. 901,278; Oct. 13; Sp. p. 2490; Dr. pp. 509-10; Gaz. vol. 136; p. 1491.
Invalids, Device for raising. L. Poppert. No. 901,370; Oct. 20; Sp. p. 2700; Dr. p. 554; Gaz. vol. 136; p. 1559.
Iodin products, Making. J. Hertkorn. No. 901,709; Oct. 20; Sp. p. 3470; Gaz. vol. 136; p. 1673.
Iron: *See* Curling-iron; Laundry-iron; Protected iron; Sad-iron; Soldering-iron.
Iron and steel, Treating. W. F. M. McCarty. No. 901,362; Oct. 20; Sp. p. 2683; Dr. p. 550; Gaz. vol. 136; p. 1556.
Iron and steel, Treating. W. F. M. McCarty. No. 901,546; Oct. 20; Sp. p. 3109; Dr. p. 635; Gaz. vol. 136; p. 1619.
Iron and steel, Treating. W. F. M. McCarty. No. 901,546; Oct. 20; Sp. p. 3109; Dr. p. 635; Gaz. vol. 136; p. 1620.
Iron and steel, Treating. W. F. M. McCarty. No. 901,547; Oct. 20; Sp. p. 3111; Dr. p. 635; Gaz. vol. 136; p. 1488.
Iron from tin-plate scrap, Preparing merchantable. E. A. Sperry. No. 901,266; Oct. 13; Sp. p. 2460; Dr. p. 505; Gaz. vol. 136; p. 1870.
Iron preparation, Production of an organic soluble. W. Jagelki. No. 902,234; Oct. 27; Sp. p. 4525; Gaz. vol. 136; p. 1870.
Iron, Protecting. J. J. Bradley. No. 900,656; Oct. 6; Sp. p. 1256; Dr. pp. 256-7; Gaz. vol. 136; p. 1265.
Ironing-board attachment. C. Burgess. No. 901,960; Oct. 27; Sp. p. 3935; Dr. p. 803; Gaz. vol. 136; p. 1780.
Ironing-table. A. E. Wise. No. 900,459; Oct. 6; Sp. p. 836; Dr. p. 170; Gaz. vol. 136; p. 1201.
Ironing-table. M. J. Walker. No. 900,623; Oct. 6; Sp. p. 1184; Dr. p. 242; Gaz. vol. 136; p. 1254.
Jack: *See* Lifting-jack; Sliding jack; Switchboard-jack; Vehicle-jack.
Jack. F. E. Place and M. L. Jenkins. No. 900,585; Oct. 6; Sp. p. 1099; Dr. p. 225; Gaz. vol. 136; p. 1242.
Jacquard mechanism. M. A. Perrin. No. 900,948; Oct. 13; Sp. p. 1871; Dr. p. 381; Gaz. vol. 136; p. 1387.
Jar clamp, Fruit-. L. Honstein. No. 901,614; Oct. 20; Sp. p. 3244; Dr. p. 665; Gaz. vol. 136; p. 1641.
Jar-opener. J. F. McCain. No. 900,297; Oct. 6; Sp. p. 481; Dr. p. 100; Gaz. vol. 136; p. 1148.

Jar, pot, or vessel for containing or keeping perishable products. A. Perlich. No. 902,166; Oct. 27; Sp. p. 4387; Dr. p. 888; Gaz. vol. 136; p. 1850.
Jar-wrench. K. Lyons. No. 901,247; Oct. 13; Sp. p. 2414; Dr. p. 495; Gaz. vol. 136; p. 1481.
Jars and other receptacles, Closure for. G. Valentine. No. 900,240; Oct. 6; Sp. p. 343; Dr. p. 72; Gaz. vol. 136; p. 1129.
Jars, Depressor for fruit-. N. K. Keeley. No. 900,740; Oct. 13; Sp. p. 1430; Dr. p. 290; Gaz. vol. 136; p. 1319.
Jars or the like, Closure for. M. C. Schweinert and H. P. Kraft. No. 902,259; Oct. 27; Sp. p. 4570; Dr. p. 928; Gaz. vol. 136; p. 1879.
Jig. R. H. Richards. No. 901,475; Oct. 20; Sp. p. 2963; Dr. p. 605; Gaz. vol. 136; p. 1596.
Joint: *See* Bracelet-joint; Fluid-joint; Rail-joint; Railway-rail joint.
Journal-bearing. E. K. Bailey. No. 901,140; Oct. 13; Sp. p. 2231; Dr. p. 454; Gaz. vol. 136; p. 1448.
Journal-box. W. A. Huff. No. 900,543; Oct. 6; Sp. p. 1014; Dr. pp. 205-6; Gaz. vol. 136; p. 1228.
Journal-box. J. D. Jones. No. 901,346; Oct. 20; Sp. p. 2652; Dr. p. 544; Gaz. vol. 136; p. 1551.
Key: *See* Telegraph-key.
Key-seating machine, Hand-operated. F. Link. No. 901,716; Oct. 20; Sp. p. 3485; Dr. p. 705; Gaz. vol. 136; p. 1675.
Kiln: *See* Calorific kiln; Drying-kiln.
Kinematograph mechanism. R. T. Haines. No. 901,962; Oct. 27; Sp. p. 3958; Dr. p. 808; Gaz. vol. 136; p. 1785.
Knife: *See* Pocket-knife.
Knitted fabric and making same. R. W. Scott. No. 901,264; Oct. 13; Sp. p. 2456; Dr. pp. 504-5; Gaz. vol. 136; p. 1487.
Knitting machine, Circular-. H. B. Taylor. No. 901,924; Oct. 20; Sp. p. 3866; Dr. p. 788; Gaz. vol. 136; p. 1741.
Knitting machine, Rib-. R. W. Scott. No. 901,840; Oct. 20; Sp. p. 3712; Dr. pp. 754-5; Gaz. vol. 136; p. 1714.
Knitting-machine web-holder, Rib-. R. W. Scott. No. 901,839; Oct. 20; Sp. p. 3711; Dr. p. 753; Gaz. vol. 136; p. 1714.
Labeling-machine. F. O. Woodland. No. 900,816; Oct. 13; Sp. p. 1590; Dr. p. 323; Gaz. vol. 136; p. 1345.
Labeling-machine. S. E. and W. W. Morral. No. 900,114; Oct. 6; Sp. p. 89; Dr. p. 18; Gaz. vol. 136; p. 1088.
Labeling machine, Can-. S. E. and W. W. Morral. No. 900,114; Oct. 6; Sp. p. 89; Dr. p. 18; Gaz. vol. 136; p. 1088.
Lacing. F. W. Whitcher. No. 902,190; Oct. 27; Sp. p. 4433; Dr. p. 897; Gaz. vol. 136; p. 1857.
Lacing-hook-making machine. H. H. Eaton and G. Goddu. No. 900,918; Oct. 13; Sp. p. 1805; Dr. pp. 365-7; Gaz. vol. 136; p. 1377.
Lacing-hook-setting machine. S. E. Taft. No. 900,795; Oct. 13; Sp. p. 1539; Dr. p. 313; Gaz. vol. 136; p. 1337.
Lacing-hooks and the like, Device for feeding. W. F. Fraser. No. 901,434; Oct. 20; Sp. p. 2860; Dr. p. 584; Gaz. vol. 136; p. 1582.
Lacing-loop for shoes, &c. W. A. Hayden. No. 902,399; Oct. 27; Sp. p. 4868; Dr. p. 986; Gaz. vol. 136; p. 1925.
Ladder. L. W. Thompson. No. 900,232; Oct. 6; Sp. p. 325; Dr. pp. 67-8; Gaz. vol. 136; p. 1126.
Ladder and step. P. Tiepolt. No. 901,755; Oct. 20; Sp. p. 3555; Dr. p. 720; Gaz. vol. 136; p. 1688.
Ladder for freight-cars. J. A. Ryan. No. 902,331; Oct. 27; Sp. p. 4750; Dr. p. 958; Gaz. vol. 136; p. 1904.
Ladder, step-ladder, and scaffolding, Combined. H. H. Thomson. No. 901,565; Oct. 20; Sp. p. 3141; Dr. pp. 641-2; Gaz. vol. 136; p. 1625.
Lamp adjustable support, Vapor-. S. E. Flichtner. No. 900,719; Oct. 13; Sp. p. 1389; Dr. p. 283; Gaz. vol. 136; p. 1313.
Lamp adjustable support, Vapor-. S. E. Flichtner. No. 901,288; Oct. 13; Sp. p. 2519; Dr. p. 517; Gaz. vol. 136; p. 1496.
Lamp, Arc-. J. A. Daizell and C. E. Harthan. No. 900,709; Oct. 13; Sp. p. 1368; Dr. p. 279; Gaz. vol. 136; p. 1310.
Lamp, Arc-. R. Fleming and C. A. B. Halvorson, Jr. No. 900,718; Oct. 13; Sp. p. 1386; Dr. p. 282; Gaz. vol. 136; p. 1313.
Lamp, Arc-. G. E. Stevens. No. 900,793; Oct. 13; Sp. p. 1536; Dr. p. 312; Gaz. vol. 136; p. 1336.
Lamp, Arc-. R. Fleming and C. A. B. Halvorson, Jr. No. 901,528; Oct. 20; Sp. p. 3073; Dr. p. 628; Gaz. vol. 136; p. 1614.
Lamp attachment. H. J. Schanick. No. 900,127; Oct. 6; Sp. p. 124; Dr. p. 26; Gaz. vol. 136; p. 1092.
Lamp, Automobile-. J. Markman. No. 901,921; Oct. 20; Sp. p. 3859; Dr. p. 787; Gaz. vol. 136; p. 1740.
Lamp bracket, Signal-. F. W. Edmunds. No. 901,284; Oct. 13; Sp. p. 2510; Dr. p. 515; Gaz. vol. 136; p. 1494.
Lamp-burner. C. E. Wirth. No. 901,139; Oct. 13; Sp. p. 2228; Dr. p. 453; Gaz. vol. 136; p. 1448.
Lamp, Electric glow-. W. Nernst. No. 900,416; Oct. 6; Sp. p. 722; Dr. p. 151; Gaz. vol. 136; p. 1187.
Lamp, Electric glow-. F. Blau and H. Remané. No. 900,909; Oct. 13; Sp. p. 1790; Dr. p. 361; Gaz. vol. 136; p. 1374.
Lamp, &c., Electric glow-. J. Stubbers. No. 901,494; Oct. 20; Sp. p. 3010; Dr. p. 614; Gaz. vol. 136; p. 1602.
Lamp fixture, Incandescent-. F. J. Russell. No. 902,004; Oct. 27; Sp. p. 4005; Dr. p. 825; Gaz. vol. 136; p. 1799.
Lamp fixture, Plural-. F. J. Russell. No. 902,004; Oct. 27; Sp. p. 4005; Dr. p. 825; Gaz. vol. 136; p. 1799.
Lamp for helmets and similar head-coverings, Electric. J. H. Dräger. No. 902,216; Oct. 27; Sp. p. 4479; Dr. p. 906; Gaz. vol. 136; p. 1865.
Lamp, Gas-. R. W. Zierlein. No. 900,817; Oct. 13; Sp. p. 1509; Dr. p. 324; Gaz. vol. 136; p. 1346.
Lamp, Gas-. G. R. Fickert. No. 901,606; Oct. 20; Sp. p. 3219; Dr. p. 660; Gaz. vol. 136; p. 1638.
Lamp, Gas-. P. Sorensen. No. 900,439; Oct. 6; Sp. p. 776; Dr. p. 160; Gaz. vol. 136; p. 1194.
Lamp-guard. P. Sorensen. No. 900,439; Oct. 6; Sp. p. 776; Dr. p. 160; Gaz. vol. 136; p. 1194.
Lamp holder, Switch-. F. W. Edmunds. No. 901,283; Oct. 13; Sp. p. 2508; Dr. p. 514; Gaz. vol. 136; p. 1494.
Lamp holders, Automatic circuit-closer for electric-. W. D. and L. C. Tickner. No. 900,613; Oct. 6; Sp. p. 1167; Dr. p. 238; Gaz. vol. 136; p. 1251.
Lamp, Incandescent. H. Gernsback. No. 902,009; Oct. 27; Sp. p. 4188; Dr. p. 848; Gaz. vol. 136; p. 1819.
Lamp, Incandescent. W. R. Whitney. No. 902,032; Oct. 27; Sp. p. 4119; Dr. p. 834; Gaz. vol. 136; p. 1807.
Lamp, Incandescent electric. W. R. Whitney. No. 902,032; Oct. 27; Sp. p. 4119; Dr. p. 834; Gaz. vol. 136; p. 1807.
Lamp, Inverted incandescent gas or vapor. L. Lials. No. 901,629; Oct. 20; Sp. p. 3267; Dr. p. 670; Gaz. vol. 136; p. 1645.
Lamp lighting and extinguishing apparatus, Gas-. H. H. Johnson and E. Moin. No. 902,411; Oct. 27; Sp. p. 4891; Dr. p. 990; Gaz. vol. 136; p. 1929.
Lamp shade and socket, Incandescent-. B. P. Rucker. No. 900,426; Oct. 6; Sp. p. 738; Dr. p. 154; Gaz. vol. 136; p. 1190.
Lamp shade or reflector. J. C. Norris. No. 901,641; Oct. 20; Sp. p. 3290; Dr. p. 675; Gaz. vol. 136; p. 1649.
Lamp shades and kindred articles, Glass-mount for. R. F. Crooke. No. 901,690; Oct. 20; Sp. p. 3426; Dr. p. 695; Gaz. vol. 136; p. 1668.
Lamp, Vapor-burning. R. W. Jorres. No. 900,738; Oct. 13; Sp. p. 1426; Dr. p. 289; Gaz. vol. 136; p. 1319.
Land-clearing machine. W. M. Seymour. No. 900,433; Oct. 6; Sp. p. 762; Dr. p. 157; Gaz. vol. 136; p. 1192.
Lantern, Folding. M. L. Williams. No. 902,036; Oct. 27; Sp. p. 4126; Dr. p. 835; Gaz. vol. 136; p. 1808.
Last, Divided. E. O. Krentler. No. 901,918; Oct. 20; Sp. p. 3852; Dr. p. 786; Gaz. vol. 136; p. 1739.
Last, Hinged. E. O. Krentler. No. 902,303; Oct. 27; Sp. p. 4665; Dr. p. 946; Gaz. vol. 136; p. 1894.
Last, Link-. E. O. Krentler. No. 902,302; Oct. 27; Sp. p. 4663; Dr. p. 946; Gaz. vol. 136; p. 1894.
Last-locking device. E. L. Keyes. No. 901,350; Oct. 20; Sp. p. 2660; Dr. p. 545; Gaz. vol. 136; p. 1552.
Last-support. L. Sedivi. No. 900,314; Oct. 6; Sp. p. 518; Dr. p. 108; Gaz. vol. 136; p. 1153.
Latch. D. W. Tower. No. 900,800; Oct. 13; Sp. p. 1549; Dr. p. 315; Gaz. vol. 136; p. 1338.
Latch. E. W. Vest. No. 901,501; Oct. 20; Sp. p. 3021; Dr. p. 617; Gaz. vol. 136; p. 1604.
Latch and key lock, Combination. R. Wettel and M. P. Freebey. No. 900,629; Oct. 6; Sp. p. 1192; Dr. pp. 244-5; Gaz. vol. 136; p. 1256.
Latch-lock, Combination. F. Soley. No. 900,437; Oct. 6; Sp. p. 771; Dr. p. 159; Gaz. vol. 136; p. 1194.
Lathe attachment. A. E. Whiting. No. 900,457; Oct. 6; Sp. p. 830; Dr. p. 169; Gaz. vol. 136; p. 1200.
Lathe-dog. D. R. McKim. No. 900,761; Oct. 13; Sp. p. 1464; Dr. p. 298; Gaz. vol. 136; p. 1326.
Lathe, Wood-turning. C. H. Waymoth. No. 901,503; Oct. 20; Sp. p. 3024; Dr. p. 618; Gaz. vol. 136; p. 1605.
Launches, Under-water exhaust for. H. C. Nelson and W. H. Mullins. No. 900,576; Oct. 6; Sp. p. 1082; Dr. p. 222; Gaz. vol. 136; p. 1239.
Laundry appliance. C. B. Rogers and J. W. Gardner. No. 901,836; Oct. 20; Sp. p. 3706; Dr. pp. 752-3; Gaz. vol. 136; p. 1713.
Laundry-iron, Electric. E. H. Richardson. No. 900,208; Oct. 6; Sp. p. 287; Dr. p. 58; Gaz. vol. 136; p. 1119.
Lawn-trimming implement. D. H. Finch. No. 902,141; Oct. 27; Sp. p. 4327; Dr. p. 876; Gaz. vol. 136; p. 1841.
Lead, Drier-conveyer for white. M. Schreck, Sr. No. 900,787; Oct. 13; Sp. p. 1528; Dr. p. 311; Gaz. vol. 136; p. 1334.
Leather, Cactus. F. C. Wright. No. 902,359; Oct. 27; Sp. p. 4801; Dr. p. 969; Gaz. vol. 136; p. 1914.
Leather-cutting machine. A. W. Schaefer. No. 901,126; Oct. 13; Sp. p. 2208; Dr. p. 449; Gaz. vol. 136; p. 1443.
Leather, hides, or skins, Apparatus or machine for stretching. A. Cleveland. No. 901,324; Oct. 20; Sp. p. 2594; Dr. pp. 533-4; Gaz. vol. 136; p. 1543.
Lens-blank. L. Wilhelm. No. 901,575; Oct. 20; Sp. p. 3164; Dr. p. 645; Gaz. vol. 136; p. 1628.
Lens-grinding machine. B. F. Clark. No. 900,664; Oct. 6; Sp. p. 1270; Dr. p. 260; Gaz. vol. 136; p. 1268.
Lens-protractor. F. Hamilton. No. 901,612; Oct. 20; Sp. p. 3229; Dr. p. 661; Gaz. vol. 136; p. 1639.
Lenses, Making bifocal. L. Wilhelm. No. 901,576; Oct. 20; Sp. p. 3165; Dr. p. 645; Gaz. vol. 136; p. 1628.
Lenses, Making bifocal. F. A. Stevens. No. 901,659; Oct. 20; Sp. p. 3321; Dr. p. 682; Gaz. vol. 136; p. 1654.
Letter and other character. J. T. Wallace. No. 900,969; Oct. 13; Sp. p. 1917; Dr. p. 390; Gaz. vol. 136; p. 1394.
Level, Plumb-. W. H. McKeen. No. 901,727; Oct. 20; Sp. p. 3505; Dr. p. 709; Gaz. vol. 136; p. 1679.
Level, Spirit-. W. L. Couture. No. 901,953; Oct. 27; Sp. p. 3940; Dr. p. 804; Gaz. vol. 136; p. 1781.
Level, Spirit-. J. D. Weaver. No. 902,269; Oct. 27; Sp. p. 4592; Dr. p. 932; Gaz. vol. 136; p. 1882.
Leveler, Road-. S. J. Chapman. No. 900,829; Oct. 13; Sp. p. 1625; Dr. p. 329; Gaz. vol. 136; p. 1350.
Life buoy and raft. L. Olson. No. 901,732; Oct. 20; Sp. p. 3515; Dr. p. 711; Gaz. vol. 136; p. 1681.
Life-preserving apparatus. C. A. Zetterberg. No. 901,862; Oct. 20; Sp. p. 3751; Dr. p. 763; Gaz. vol. 136; p. 1721.
Lifter: *See* Bread, cake, and pie lifter; Stove-lid lifter.
Lifting-jack. J. A. Phillips. No. 900,200; Oct. 6; Sp. p. 268; Dr. p. 54; Gaz. vol. 136; p. 1116.
Lifting-jack. G. H. Gilman and H. M. Robertson. No. 900,720; Oct. 13; Sp. p. 1390; Dr. p. 283; Gaz. vol. 136; p. 1313.
Lifts, Safety-catch for. A. Jenkins. No. 900,858; Oct. 13; Sp. p. 1674; Dr. p. 339; Gaz. vol. 136; p. 1358.
Light-fixture, Adjustable. G. W. Craighead. No. 901,955; Oct. 27; Sp. p. 3944; Dr. p. 805; Gaz. vol. 136; p. 1782.
Lightning-arrester. J. B. Struble. No. 901,207; Oct. 13; Sp. p. 2348; Dr. p. 480; Gaz. vol. 136; p. 1469.
Lighting device or torch. F. M. Moore. No. 902,504; Oct. 27; Sp. p. 5127; Dr. p. 1038; Gaz. vol. 136; p. 1962.
Lighting-fixtures, Tripod for supporting. E. A. Emery. No. 901,795; Oct. 20; Sp. p. 3641; Dr. p. 736; Gaz. vol. 136; p. 1701.
Linotype-machine. J. R. Rogers. No. 901,478; Oct. 20; Sp. p. 2976; Dr. pp. 606-7; Gaz. vol. 136; p. 1597.

Liquation-furnace. R. Baggaley, C. M. Allen, and E. W. Lindquist. No. 902,047; Oct. 27; Sp. p. 4146; Dr. pp. 840–1; Gaz. vol. 136; p. 1312.
Liquid-dispensing can. S. P. Hasey. No. 901,442; Oct. 20; Sp. p. 2894; Dr. p. 589; Gaz. vol. 136; p. 1585.
Liquid-dispensing vessel. L. G. Langstaff. No. 901,714; Oct. 20; Sp. p 3483; Dr. p. 704; Gaz. vol. 136; p. 1675.
Liquid-impelling device. E. P. Holly. No. 900,853; Oct. 13; Sp. p. 1666; Dr. p. 337; Gaz. vol. 136; p. 1357.
Liquid-purifying apparatus, Electrolytic. J. T. Harris. No. 900,926; Oct. 13; Sp. p. 1826; Dr. pp. 371–2; Gaz. vol. 136; p. 1380.
Liquid-raising apparatus. J. M. Babb. No. 901,414; Oct. 20; Sp p. 2814; Dr. p. 575; Gaz. vol. 136; p. 1575.
Liquid-receptacle. C. W. Fox. No. 901,433; Oct 20; Sp. p. 2858; Dr. p. 584; Gaz. vol. 136; p. 1581.
Liquid receptacle, Combustible-. L. Kessler. No. 900,102; Oct. 6; Sp. p. 56; Dr. p 11; Gaz. vol. 136; p. 1084.
Liquid-receptacle, Portable. L. Kessler. No. 900,103; Oct. 6; Sp. p. 59; Dr. p. 11; Gaz. vol. 136; p. 1084.
Liquid-separator, Centrifugal. G. J. Bragg. No. 901,149; Oct. 13; Sp. p. 2246; Dr. p. 456; Gaz. vol. 136; p. 1452.
Liquids, Machine for separating solids from. F. K. and E. F. Atkins. No. 901,056; Oct. 13; Sp. p. 2077; Dr. pp. 423–4; Gaz. vol. 136; p. 1422.
Lister and fertilizer-distributer. R. G. Wilson. No. 902,516; Oct. 27; Sp. p. 5147; Dr. pp. 1042–3; Gaz. vol. 136; p. 1967.
Load lifting and lowering apparatus. V. Funck. No. 902,145; Oct. 27; Sp. p. 4332; Dr. p. 878; Gaz. vol. 136; p. 1842.
Loading and unloading device. A. A. Egeness. No. 902,217; Oct. 27; Sp. p. 4480; Dr. p. 907; Gaz. vol. 136; p. 1865.
Loading apparatus. A. Marvin. (Reissue.) No. 12,867; Oct. 20; Sp. p. 3004; Dr. p. 797; Gaz. vol. 136; p. 1747.
Loading cotton, Machine for. M. P. Jackson and A. D. Maxwell. No. 902,410; Oct. 27; Sp. p. 4888; Dr. pp. 989–90; Gaz. vol. 136; p. 1929.
Loading or unloading means. H. O. Sparks. No. 900,225; Oct. 6; Sp. p. 314; Dr. p. 64; Gaz. vol. 136; p. 1124.
Loaf-forming machine. C. H. Overkamp. No. 901,029; Oct. 13; Sp. p. 2030; Dr. p. 412; Gaz. vol. 136; p. 1414.
Loaf-forming machine. C. H. Overkamp. No. 901,030; Oct. 13; Sp. p. 2032; Dr. p. 412; Gaz. vol. 136; p. 1414.
Loaf-forming machine. C. H. Overkamp and F. Streich. No. 901,031; Oct. 13; Sp. p. 2034; Dr. p. 412; Gaz. vol. 136; p. 1415.
Loaf-maker for bread. T. H. Williams. No. 901,577; Oct. 20; Sp. p. 3166; Dr. p. 645; Gaz. vol. 136; p. 1629.
Lock: *See* Bag-frame lock; Chair-lock; Coin-controlled lock; Combination-lock; Cylinder-lock; Door-lock; Electrically-controlled lock; Latch and key lock; Nut-lock; Sash-lock; Seal-lock; Spike-lock; Table-lock; Whip-lock; Window-lock.
Lock. J. Henky. No. 900,536; Oct. 6; Sp. p. 999; Dr. p. 203; Gaz. vol. 136; p. 1226.
Lock. P. F. Augenbraun. No. 902,044; Oct. 27; Sp. p. 4143; Dr. p. 839; Gaz. vol. 136; p. 1811.
Lock-alarm. L. Tálas. No. 900,326; Oct. 6; Sp. p. 542; Dr. p. 112; Gaz. vol. 136; p. 1157.
Lock attachment. H. G. Voight. No. 900,620; Oct. 6; Sp. p. 1179; Dr. p. 241; Gaz. vol. 136; p. 1253.
Lock-pin. V. V. Pittman. No. 901,827; Oct. 20; Sp. p. 3692; Dr. p. 750; Gaz. vol. 136; p. 1710.
Locks, Permutation wheel-tumbler for. J. J. Murphy. No. 901,116; Oct. 13; Sp. p. 2192; Dr. p. 446; Gaz. vol. 136; p. 1440.
Locomotive-cabs, Sliding side panel for. J. N. Holm. No. 902,231; Oct. 27; Sp. p. 4521; Dr. p. 915–16; Gaz. vol. 136; p. 1870.
Locomotive-charging apparatus. C. B. Hodges. No. 901,617; Oct. 20; Sp. p. 3242; Dr. pp. 664–5; Gaz. vol. 136; p. 1641.
Locomotive, Compoelte. C. A. Pratt. No. 900,776; Oct. 13; Sp. p. 1502; Dr. p. 305; Gaz. vol. 136; p. 1330.
Locomotive, Electric. W. Dalton. No. 902,476; Oct. 27; Sp. p. 5050; Dr. p. 1022; Gaz. vol. 136; p. 1952.
Locomotive-mover. J. F. Cameron. No. 900,912; Oct. 13; Sp. p. 1795; Dr. p. 363; Gaz. vol. 136; p. 1376.
Locomotive, Rack-rail. G. E. Lynch. No. 901,975; Oct. 27; Sp. p. 3984; Dr. pp. 812–13; Gaz. vol. 136; p. 1789.
Locomotive-tenders, Water-scoop for. A. Bennett. No. 901,315; Oct. 20; Sp. p. 2577; Dr. pp. 530–1; Gaz. vol. 136; p. 1539.
Log-fishing grapple. J. T. Teare. No. 902,344; Oct. 27; Sp. p. 4774; Dr. p. 963; Gaz. vol. 136; p. 1908.
Log-grab. D. W. Murphy. No. 901,304; Oct. 13; Sp. p. 2548; Dr. pp. 524–5; Gaz. vol. 136; p. 1500.
Log-turner. A. Foss and L. Coolidge. No. 902,142; Oct. 27; Sp. p. 4328; Dr. pp. 876–7; Gaz. vol. 136; p. 1841.
Logging-tackle. C. Turpin. No. 902,510; Oct. 27; Sp. p. 5138; Dr. p. 1041; Gaz. vol. 136; p. 1964.
Loom. F. T. Withee and R. White. No. 901,764; Oct. 20; Sp. p. 3572; Dr. p. 723; Gaz. vol. 136; p. 1691.
Loom, Automatic filling-replenishing. A. E. Rhoades. No. 902,325; Oct. 27; Sp. p. 4720; Dr. p. 955; Gaz. vol. 136; p. 1902.
Loom-filling-carrier magazine. H. Wyman. No. 902,193; Oct. 27; Sp. p. 4436; Dr. p. 896; Gaz. vol. 136; p. 1857.
Loom-filling-detecting mechanism. A. E. Rhoades. No. 902,324; Oct. 27; Sp. p. 4718; Dr. p. 954; Gaz. vol. 136; p. 1901.
Loom for weaving pile fabrics. B. Walker and A. Spink. No. 900,136; Oct. 6; Sp. p. 134; Dr. p. 28; Gaz. vol. 136; p. 1094.
Loom for weaving short-weft fabrics. J. Garst. No. 902,286; Oct. 27; Sp. p. 4627; Dr. p. 940; Gaz. vol. 136; p. 1888.
Loom fork-grid. A. E. Rhoades. No. 900,591; Oct. 6; Sp. p. 1108; Dr. p. 227; Gaz. vol. 136; p. 1243.
Loom-harness, Brushing-machine for. M. Fish. No. 900,994; Oct. 13; Sp. p. 1962; Dr. pp. 399–400; Gaz. vol. 136; p. 1402.
Loom heddle adjustment. F. T. Withee and R. White. No. 901,927; Oct. 20; Sp. p. 3872; Dr. p. 789; Gaz. vol. 136; p. 1743.
Loom, Needle-. J. C. Brooks. No. 902,203; Oct. 27; Sp. p. 4458; Dr. p. 901; Gaz. vol. 136; p. 1861.
Loom protector mechanism. W. J. Lutton. No. 900,403; Oct. 6; Sp. p. 696; Dr. pp. 143–4; Gaz. vol. 136; p. 1182.
Loom-shuttle. F. T. Withee and R. White. No. 901,928; Oct. 20; Sp. p. 3873; Dr. p. 790; Gaz. vol 136; p. 1743.
Loom stop-motion mechanism. G. McCartney. No. 900,190; Oct. 6; Sp. p. 253; Dr. p. 51; Gaz. vol. 136; p. 1113.
Loom threading-machine, Carpet-. H. Heyman. No. 902,229; Oct. 27; Sp. p. 4512; Dr. pp. 914–15; Gaz. vol. 136; p. 1869.
Loom warp-beam. R. Harbour. No. 900,530; Oct. 6; Sp. p. 988; Dr. p. 201; Gaz. vol. 136; p. 1224.
Looms, Mechanism for operating shuttles of narrow-ware. H. Riehl. No. 901,834; Oct. 20; Sp. p. 3702; Dr. pp. 751–2; Gaz. vol. 136; p. 1712.
Looms, Selvage-forming mechanism for short-weft. F. E. Arrouquier. No. 901,941; Oct. 27; Sp. p. 3914; Dr. pp. 798–9; Gaz. vol. 136; p. 1777.
Lubricating apparatus. C. B. Royal. No. 900,887; Oct. 13; Sp. p. 1740; Dr. pp. 351–2; Gaz. vol. 136; p. 1367.
Lubricating device for shafts, &c. H. C. Gamage. No. 900,922; Oct. 13; Sp. p. 1817; Dr. pp. 368–9; Gaz. vol. 136; p. 1379.
Lubricator: *See* Axle-lubricator.
Lubricator. W. C. Maness. No. 900,181; Oct. 6; Sp. p. 233; Dr. p. 47; Gaz. vol. 136; p. 1110.
Lubricator. L. R. Hoffman. No. 900,280; Oct. 6; Sp. p. 447; Dr. p. 91; Gaz. vol. 136; p. 1142.
Lubricator. J. Vollmer. No. 901,502; Oct. 20; Sp. p. 3022; Dr. p. 617; Gaz. vol. 136; p. 1605.
Magnesia, Preparing concentrated hydrated. W. S. Morrison. No. 900,868; Oct. 13; Sp. p. 1701; Gaz. vol. 136; p. 1361.
Magnesium by electrolysis, Production of. G. O. Seward and F. von Kügelgen. No. 900,961; Oct. 13; Sp. p. 1903; Gaz. vol. 136; p. 1392.
Magnetic separation, Apparatus for. C. Q. Payne. No. 901,368; Oct. 20; Sp. p. 2695; Dr. p. 554; Gaz. vol. 136; p. 1558.
Magnetic separator. R. I. Wright and H. E. Frost. No. 901,765; Oct. 20; Sp. p. 3574; Dr. p. 724; Gaz. vol. 136; p. 1691.
Mail-bag catcher and deliverer. W. R. Morrison. No. 901,812; Oct. 20; Sp. p. 3668; Dr. p. 744; Gaz. vol. 136; p. 1705.
Mail-bag catcher and deliverer. R. M. Cantillo. No. 901,877; Oct. 20; Sp. p. 3777; Dr. p. 768; Gaz. vol. 136; p. 1726.
Mail-bag catching and delivering apparatus. H. W. Brown. No. 901,156; Oct. 13; Sp. p. 2247; Dr. pp. 456–7; Gaz. vol. 136; p. 1452.
Mail-bag-catching apparatus. H. W. Crook. No. 902,377; Oct. 27; Sp. p. 4826; Dr. pp. 975–6; Gaz. vol. 136; p. 1918.
Mail-bag-delivery apparatus. C. W. Hutsler. No. 902,409; Oct. 27; Sp. p. 4884; Dr. pp. 988–9; Gaz. vol. 136; p. 1928.
Mail-bags from a moving train to a station, Apparatus for transferring. N. F. Valentine. No. 901,219; Oct. 13; Sp. p. 2364; Dr. p. 484; Gaz. vol. 136; p. 1472.
Mail-bags from railway-trains, Apparatus for delivering. J. C. Groetsch and C. L. Saal, Jr. No. 902,228; Oct. 27; Sp. p. 4510; Dr. p. 914; Gaz. vol. 136; p. 1869.
Mail-box. C. E. Mendenhall. No. 900,756; Oct. 13; Sp. p. 1454; Dr. p. 296; Gaz. vol. 136; p. 1324.
Mail-box. W. C. Groenke. No. 900,848; Oct. 13; Sp. p. 1659; Dr. p. 336; Gaz. vol. 136; p. 1355.
Mail-catcher. R. R. Roth. No. 901,042; Oct. 13; Sp. p. 2051; Dr. p. 417; Gaz. vol. 136; p. 1418.
Mail-collecting announcer. H. F. Rose. No. 901,680; Oct. 20; Sp. p. 2980; Dr. p. 607; Gaz. vol. 136; p. 1598.
Mail delivering and collecting machine, Electric. O. E. Stout. No. 901,847; Oct. 20; Sp. p. 3724; Dr. p. 757; Gaz. vol. 136; p. 1716.
Mail-delivering device. G. M. Beard. No. 900,647; Oct. 6; Sp. p. 1236; Dr. p. 253; Gaz. vol. 136; p. 1263.
Mailing-tube. J. A. Murphy. No. 901,305; Oct. 13; Sp. p. 2550; Dr. p. 525; Gaz. vol. 136; p. 1501.
Manicure implement. T. Miller. No. 900,758; Oct. 13; Sp. p. 1458; Dr. p. 297; Gaz. vol. 136; p. 1325.
Manure-pouch. W. A. Roberts. No. 900,783; Oct. 13; Sp. p. 1522; Dr. p. 310; Gaz. vol. 136; p. 1333.
Maps, charts, &c., Roller for. H. W. Patton. No. 901,035; Oct. 13; Sp. p. 2040; Dr. p. 414; Gaz. vol. 136; p. 1416.
Marcel waves, Device for making. M. K. Tovey. No. 901,662; Oct. 20; Sp. p. 3225; Dr. p. 683; Gaz. vol. 136; p. 1655.
Margin-stop. C. Spiro. No. 902,263; Oct. 27; Sp. p. 4576; Dr. p. 929; Gaz. vol. 136; p. 1880.
Marker attachment. L. R. Turner. No. 901,853; Oct. 20; Sp. p. 3734; Dr. pp. 759–60; Gaz. vol. 136; p. 1717.
Marker, Dry-goods. E. Packer. No. 900,880; Oct. 13; Sp. p. 1727; Dr. p. 346; Gaz. vol. 136; p. 1364.
Marker, Land-. E. E. Youtz. No. 902,128; Oct 27; Sp. p. 4301; Dr. pp. 871–2; Gaz. vol. 136; p. 1837.
Mashing, mixing, and churning machine. A. C. Pancoast. No. 901,465; Oct. 20; Sp. p. 2932; Dr. pp. 598–9; Gaz. vol. 136; p. 1592.
Massage and vibratory dilator. H. H. Roberts. No. 901,376; Oct. 20; Sp. p. 2712; Dr. p. 556; Gaz. vol. 136; p. 1561.
Massage-vibrator. W. G. Shelton. No. 900,602; Oct. 6; Sp. p. 1129; Dr. p. 231; Gaz. vol. 136; p. 1247.
Match-box. A. W. Aylsworth. No. 900,819; Oct. 13; Sp. p. 1602; Dr. p. 324; Gaz. vol. 136; p. 1346.
Match-box. W. Lee. No. 902,418; Oct. 27; Sp. p. 4906; Dr. pp. 993–4; Gaz. vol. 136; p. 1932.
Match, Friction-. H. W. Whelan. No. 900,245; Oct. 6; Sp. p. 354; Dr. p. 73; Gaz. vol. 136; p. 1130.
Match-machine. J. P. Wright. No. 901,410; Oct. 20; Sp. p. 2805; Dr. pp. 572–3; Gaz. vol. 136; p. 1574.
Match-safe, Pocket. C. J. Nelson. No. 901,548; Oct. 20; Sp. p. 3113; Dr. pp. 635–6; Gaz. vol. 136; p. 1620.
Matter from inflamed tissues, Device for extracting. W. G. Utschig. No. 901,567; Oct. 20; Sp. p. 3145; Dr. p. 642; Gaz. vol. 136; p. 1626.
Mattress. F. A. Kaiser. No. 900,383; Oct. 6; Sp. p. 657; Dr. p. 135; Gaz. vol. 136; p. 1175.
Measure. E. F. Leahy. No. 902,306; Oct. 27; Sp. p. 4671; Dr. p. 947; Gaz. vol. 136; p. 1895.

Measuring apparatus for indicating depths. H. H. Brown. No. 900,351; Oct. 6; Sp. p. 583; Dr. p. 121; Gaz. vol. 136; p. 1164.
Measuring apparatus for winding-machines. G. Sipp. No. 902,337; Oct. 27; Sp. p. 4760; Dr. pp. 960–1; Gaz. vol. 136; p. 1906.
Measuring device, Foot-. A. P. Phillips. No. 902,167; Oct. 27; Sp. p. 4388; Dr. p. 888; Gaz. vol. 136; p. 1859.
Measuring device, Skirt-. N. E. Miles. No. 900,568; Oct. 6; Sp. p. 1069; Dr. p. 219; Gaz. vol. 136; p. 1236.
Measuring instrument. E. I. and J. T. Brayton. No. 901,678; Oct. 20; Sp. p. 3366; Dr. p. 690; Gaz. vol. 136; p. 1661.
Measuring instrument, Lens-. F. Hardinge. No. 900,531; Oct. 6; Sp. p. 988; Dr. p. 201; Gaz. vol. 136; p. 1224.
Meat chopping and pounding machine. O. Talton. No. 901,267; Oct. 13; Sp. p. 2464; Dr. pp. 505–6; Gaz. vol. 136; p. 1489.
Mechanical chair. S. G. Wilson. No. 900,813; Oct. 13; Sp. p. 1592; Dr. pp. 321–2; Gaz. vol. 136; p. 1344.
Mechanical movement. A. R. Patten. No. 901,032; Oct. 13; Sp. p. 2036; Dr. p. 413; Gaz. vol. 136; p. 1415.
Mechanical movement. S. Jones. No. 901,912; Oct. 20; Sp. p. 3845; Dr. p. 784; Gaz. vol. 136; p. 1738.
Mechanical movement. F. H. Richards. No. 902,329; Oct. 27; Sp. p. 4741; Dr. pp. 957–8; Gaz. vol. 136; p. 1903.
Medicine-case, Physician's. J. O. and W. L. Hunter and W. A. Wykel. No. 900,373; Oct. 6; Sp. p. 637; Dr. pp. 131–2; Gaz. vol. 136; p. 1172.
Metal bars, Machine for splitting and splaying the ends of. E. Wrigley. No. 901,667; Oct. 20; Sp. p. 3337; Dr. p. 685; Gaz. vol. 136; p. 1656.
Metal-crimping machine. J. J. Walter. No. 901,131; Oct. 13; Sp. p. 2217; Dr. p. 451; Gaz. vol. 136; p. 1445.
Metal frame. E. J. Hochule and J. A. Bousquet. No. 900,734; Oct. 13; Sp. p. 1420; Dr. p. 288; Gaz. vol. 136; p. 1318.
Metal-shaping apparatus, Heated-. F. J. Loomis. No. 900,401; Oct. 6; Sp. p. 693; Dr. p. 142; Gaz. vol. 136; p. 1181.
Metal-shears. W. H. Clites. No. 900,983; Oct. 13; Sp. p. 1942; Dr. p. 395; Gaz. vol. 136; p. 1399.
Metals, Condensing volatile. W. M. Johnson. No. 902,535; Oct. 27; Sp. p. 5199; Dr. p. 1050; Gaz. vol. 136; p. 1973.
Metals from matte, Separating. A. J. Wadhams and R. C. Stanley. No. 900,452; Oct. 6; Sp. p. 818; Gaz. vol. 136; p. 1199.
Metals from matte, Separating. A. J. Wadhams and R. C. Stanley. No. 900,453; Oct. 6; Sp. p. 820; Gaz. vol. 136; p. 1199.
Metals from speiss, Separating. A. J. Wadhams and R. C. Stanley. No. 900,454; Oct. 6; Sp. p. 821; Gaz. vol. 136; p. 1199.
Metals from their ores, Apparatus for the extraction of. W. E. Greenawalt. No. 901,611; Oct. 20; Sp. p. 3226; Dr. p. 661; Gaz. vol. 136; p. 1639.
Metals, Uniting. H. Goldschmidt and F. Lange. No. 900,366; Oct. 6; Sp. p. 611; Dr. p. 127; Gaz. vol. 136; p. 1169.
Metallic bodies, Plating. G. A. Goodson. No. 900,847; Oct. 13; Sp. p. 1657; Gaz. vol. 136; p. 1355.
Metallic body, Plated. G. A. Goodson. No. 900,846; Oct. 13; Sp. p. 1656; Dr. p. 136; p. 1355.
Metallic fabric. C. E. Bedient. No. 900,697; Oct. 13; Sp. p. 1346; Dr. p. 275; Gaz. vol. 136; p. 1307.
Metallic oxids, Obtaining. R. Seiffert. No. 902,260; Oct. 27; Sp. p. 4572; Dr. p. 928; Gaz. vol. 136; p. 1879.
Metallurgical condenser. W. M. Johnson. No. 902,534; Oct. 27; Sp. p. 5196; Dr. p. 1050; Gaz. vol. 136; p. 1973.
Metallurgical furnace. W. S. Dempsey. No. 900,916; Oct. 13; Sp. p. 1803; Dr. pp. 364–5; Gaz. vol. 136; p. 1377.
Metallurgical furnace. W. F. M. McCarty. No. 901,363; Oct. 20; Sp. p. 2685; Dr. pp. 550–1; Gaz. vol. 136; p. 1557.
Meter: *See* Gas-meter.
Mica-splitting machine. B. Walchner. No. 901,130; Oct. 13; Sp. p. 2215; Dr. pp. 450–1; Gaz. vol. 136; p. 1445.
Milk purifying and homogenizing machine. H. H. Stüssy. No. 900,446; Oct. 6; Sp. p. 795; Dr. pp. 163–4; Gaz. vol. 136; p. 1197
Milking device. J. A. Gallup. No. 901,335; Oct. 20; Sp. p. 2618; Dr. p. 538; Gaz. vol. 136; p. 1546.
Milking vessel. S. W. Gerster. No. 900,161; Oct. 6; Sp. p. 192; Dr. p. 39; Gaz. vol. 136; p. 1103.
Mill: *See* Grinding-mill; Rolling-mill; Windmill.
Milling-machine, Portable. C. W. Danglemeyer. No. 900,149; Oct. 6; Sp. p. 158; Dr. pp. 33–4; Gaz. vol. 136; p. 1099.
Mine-door, Automatic. B. O. Byers and C. F. Thiede. No. 900,262; Oct. 6; Sp. p. 410; Dr. p. 83; Gaz. vol. 136; p. 1136.
Mine-trackage system. F. R. Willson, Jr. No. 900,903; Oct. 13; Sp. p. 1773; Dr. p. 359; Gaz. vol. 136; p. 1372.
Mine-transit. W. A. Berger. No. 902,272; Oct. 27; Sp. p. 4598; Dr. p. 934; Gaz. vol. 136; p. 1883.
Mineral separating and classifying apparatus. R. H. Richards. No. 901,474; Oct. 20; Sp. p. 2957; Dr. pp. 604–5; Gaz. vol. 136; p. 1595.
Mining-pipe, Telescope. W. Beeson. No. 900,470; Oct. 6; Sp. p. 854; Dr. p. 174; Gaz. vol. 136; p. 1204.
Miter-box. J. L. Pringle. No. 901,468; Oct. 20; Sp. p. 2940; Dr. p. 600; Gaz. vol. 136; p. 1593.
Mitering-machine. J. M. Fetzer. No. 901,699; Oct. 20; Sp. p. 3453; Dr. p. 700; Gaz. vol. 136; p. 1671.
Mixer: *See* Cake-mixer; Concrete-mixer.
Mixing apparatus. J. A. Svenson. No. 900,227; Oct. 6; Sp. p. 317; Dr. p. 65; Gaz. vol. 136; p. 1124.
Molding device. B. F. Leiser. No. 900,748; Oct. 13; Sp. p. 1443; Dr. p. 293; Gaz. vol. 136; p. 1322.
Moistening device, Riser-lining for. E. C. Washburn. No. 900,970; Oct. 13; Sp. p. 988; Dr. p. 201; Gaz. vol. 136; p. 1164.
Moistening device, Strip-. M. C. Browne. No. 900,430; Oct. 6; Sp. p. 585; Dr. p. 121; Gaz. vol. 136; p. 1088.
Molasses, Treating. R. D. Pike. No. 900,584; Oct. 6; Sp. p. 1098; Dr. p. 225; Gaz. vol. 136; p. 1241.
Mold: *See* Type-mold: Type-casting mold.
Mold. W. N. Wayman. No. 901,133; Oct. 13; Sp. p. 2220; Dr. p. 452; Gaz. vol. 136; p. 1446.
Mold-fastening device. J. H. Sullivan. No. 901,209; Oct. 13; Sp. p. 2352; Dr. p. 481; Gaz. vol. 136; p. 1470.
Mold-making apparatus. J. W. Gibney. No. 900,365; Oct. 6; Sp. p. 609; Dr. pp. 126–7; Gaz. vol. 136; p. 1169.
Molding apparatus. E. Estep. No. 902,062; Oct. 27; Sp. p. 4177; Dr. p. 846; Gaz. vol. 136; p. 1816.
Molding appliance. A. T. Rasmussen. No. 901,471; Oct. 20; Sp. p. 2949; Dr. p. 602; Gaz. vol. 136; p. 1594.
Molding devices, Riser-lining for. E. C. Washburn. No. 900,970; Oct. 13; Sp. p. 1919; Dr. p. 390; Gaz. vol. 136; p. 1394.
Molding-machine. J. F. Nolan. No. 900,117; Oct. 6; Sp. p. 92; Dr. p. 19; Gaz. vol. 136; p. 1088.
Molding-machine. J. A. Williams. No. 900,633; Oct. 6; Sp. p. 1207; Dr. p. 247; Gaz. vol. 136; p. 1258.
Molding-machine. F. W. Hall. No. 901,932; Oct. 20; Sp. p. 3887; Dr. pp. 793–4; Gaz. vol. 136; p. 1745.
Molding machine, Toothed-wheel-. G. Telke. No. 900,327; Oct. 6; Sp. p. 544; Dr. p. 113; Gaz. vol. 136; p. 1157.
Molding process. W. F. M. McCarty. No. 901,361; Oct. 20; Sp. p. 2682; Dr. p. 550; Gaz. vol. 136; p. 1556.
Mop-wringer. S. M. Schaefle. No. 900,430; Oct. 6; Sp. p. 757; Dr. p. 156; Gaz. vol. 136; p. 1192.
Moth-ball holder. G. Thompson. No. 900,449; Oct. 6; Sp. p. 812; Dr. p. 167; Gaz. vol. 136; p. 1198.
Motion-indicator. W. S. Rush. No. 900,427; Oct. 6; Sp. p. 739; Dr. p. 155; Gaz. vol. 136; p. 1190.
Motor: *See* Current-motor; Fluid-motor; Fluid-pressure motor; Hydraulic motor; Rotary pressure-motor; Turbine-motor; Variable-speed motor; Water-motor; Wave-motor.
Motor and compressor, Combined. C. P. Tolman. No. 901,499; Oct. 20; Sp. p. 3015; Dr. p. 616; Gaz. vol. 136; p. 1604.
Motor control, Induction-. E. F. W. Alexanderson. No. 901,513; Oct. 20; Sp. p. 3043; Dr. pp. 621–2; Gaz. vol. 136; p. 1608.
Motor-control system. H. Alexander. No. 901,514; Oct. 20; Sp. p. 3048; Dr. p. 622; Gaz. vol. 136; p. 1609.
Motor control system, Electric-. B. G. Lamme. No. 900,289; Oct. 6; Sp. p. 468; Dr. pp. 96–7; Gaz. vol. 136; p. 1146.
Motor-controller. H. F. Elshoff. No. 902,061; Oct. 27; Sp. p. 4175; Dr. p. 845; Gaz. vol. 136; p. 1816.
Motor-controller. A. L. McHugh. No. 902,101; Oct. 27; Sp. p. 4249; Dr. p. 861; Gaz. vol. 136; p. 1829.
Motor-controller. W. D. Pomeroy. No. 902,108; Oct. 27; Sp. p. 4269; Dr. p. 865; Gaz. vol. 136; p. 1831.
Motor-controlling apparatus. M. C. Regan. No. 901,189; Oct. 13; Sp. p. 2313; Dr. pp. 474–5; Gaz. vol. 136; p. 1464.
Motor controlling system, Electric-. B. G. Lamme. No. 900,555; Oct. 6; Sp. p. 1043; Dr. p. 214; Gaz. vol. 136; p. 1232.
Motor controlling system, Electric-. J. H. Hall. No. 902,396; Oct. 27; Sp. p. 4855; Dr. pp. 983–5; Gaz. vol. 136; p. 1924.
Motors, Platform for power-. A. Nacke. No. 901,025; Oct. 13; Sp. p. 2025; Dr. p. 411; Gaz. vol. 136; p. 1413.
Mower, Lawn-. W. E. Steuben. No. 900,443; Oct. 6; Sp. p. 783; Dr. p. 162; Gaz. vol. 136; p. 1196.
Mower, Lawn-. J. Watson. No. 901,402; Oct. 20; Sp. p. 2793; Dr. p. 569; Gaz. vol. 136; p. 1571.
Muffler, Exhaust-. J. M. Porter, J. F. Laird, and A. H. Geilfuss. No. 901,371; Oct. 20; Sp. p. 2701; Dr. pp. 554–5; Gaz. vol. 136; p. 1559.
Multiplex press. J. Clipfel. No. 900,147; Oct. 6; Sp. p. 154; Dr. p. 32; Gaz. vol. 136; p. 1098.
Music, Device for assisting in teaching and writing. C. E. Pomeroy. No. 900,201; Oct. 6; Sp. p. 271; Dr. p. 54; Gaz. vol. 136; p. 1116.
Music-roll and apparatus to be used in connection therewith. H. P. Ball. No. 901,275; Oct. 13; Sp. p. 2486; Dr. p. 509; Gaz. vol. 136; p. 1491.
Music-turner. J. H. Collier. No. 901,421; Oct. 20; Sp. p. 2834; Dr. p. 579; Gaz. vol. 136; p. 1578.
Musical instrument, Double-scale pneumatic. T. Danguard. No. 902,481; Oct. 27; Sp. p. 5058; Dr. p. 1023; Gaz. vol. 136; p. 1953.
Musical instruments, Autopneumatic motor for self-playing. J. W. Darley, Jr. No. 902,382; Oct. 27; Sp. p. 4837; Dr. p. 978; Gaz. vol. 136; p. 1920.
Musical instruments, Motor-action for self-playing. L. B. Doman. No. 900,496; Oct. 6; Sp. p. 920; Dr. p. 187; Gaz. vol. 136; p. 1212.
Musical instruments, Pneumatic action for. J. P. Caulfield. No. 901,068; Oct. 13; Sp. p. 2099; Dr. p. 427; Gaz. vol. 136; p. 1426.
Musical instruments, Pneumatic action for. M. S. Wright. No. 901,273; Oct. 13; Sp. p. 2473; Dr. p. 508; Gaz. vol. 136; p. 1490.
Musical instruments, Sectional modulating attachment for. W. J. Keeley. No. 902,536; Oct. 27; Sp. p. 5201; Dr. p. 1050; Gaz. vol. 136; p. 1973.
Musical wind instrument. J. A. Halloway. No. 902,290; Oct. 27; Sp. p. 4642; Dr. p. 941; Gaz. vol. 136; p. 1890.
Nailing-machines, Automatic nailing device for. C. Sattler. No. 901,192; Oct. 13; Sp. p. 2321; Dr. p. 476; Gaz. vol. 136; p. 1465.
Necktie-case. F. G. Haas. No. 900,164; Oct. 6; Sp. p. 195; Dr. p. 40; Gaz. vol. 136; p. 1104.
Needle and thread case. C. B. Tower. No. 900,236; Oct. 6; Sp. p. 333; Dr. p. 69; Gaz. vol. 136; p. 1127.
Needle, Self-threading sewing-. M. J. C. Nyborg. No. 900,195; Oct. 6; Sp. p. 262; Dr. p. 52; Gaz. vol. 136; p. 1114.
Negative-pole plate. J. Bijur. (Reissue.) No. 12,872; Oct. 27; Sp. p. 5227; Dr. p. 1055; Gaz. vol. 136; p. 1976.
Negative-pole plate, Treating. J. Bijur. (Reissue.) No. 12,871; Oct. 27; Sp. p. 5224; Dr. p. 1055; Gaz. vol. 136; p. 1976.
Nest, Hen's. A. D. Crosley. No. 902,056; Oct. 27; Sp. p. 4164; Dr. p. 843; Gaz. vol. 136; p. 1814.
Nest, Trap-. E. M. Brown. No. 902,370; Oct. 27; Sp. p. 4819; Dr. p. 973; Gaz. vol. 136; p. 1917.
Newspapers, Machine for feeding off. G. L. Richards. No. 900,782; Oct. 13; Sp. p. 1516; Dr. pp. 308–9; Gaz. vol. 136; p. 1332.

Noodle-cutter. W. L. Whitehurst. No. 900,808; Oct. 13; Sp. p. 1582; Dr. p. 319; Gaz. vol. 136; p. 1243.
Note-sheet-guide mechanism. F. W. Wood. No. 901,930; Oct. 20; Sp. p. 3880; Dr. p. 791; Gaz. vol. 136; p. 1744.
Nozzle. J. F. MacWilliam. No. 902,309; Oct. 27; Sp. p. 4690; Dr. p. 950; Gaz. vol. 136; p. 1896.
Numbering apparatus, Consecutive-. C. Spielmann and F. W. Wicht. No. 902,339; Oct. 27; Sp. p. 4766; Dr. p. 961; Gaz. vol. 136; p. 1907.
Numbering-machine. I. Hasselstrom. No. 901,443; Oct. 20; Sp. p. 2896; Dr. p. 590; Gaz. vol. 136; p. 1585.
Nut-lock. W. F. O'Neal. No. 900,196; Oct. 6; Sp. p. 263; Dr. p. 53; Gaz. vol. 136; p. 1115.
Nut-lock. S. C. Pugh. No. 900,202; Oct. 6; Sp. p. 274; Dr. p. 55; Gaz. vol. 136; p. 1117.
Nut-lock. J. Aderer. No. 900,462; Oct. 6; Sp. p. 344; Dr. p. 171; Gaz. vol. 136; p. 1202.
Nut-lock. C. E. Ratcliffe. No. 900,599; Oct. 6; Sp. p. 1105; Dr. p. 227; Gaz. vol. 136; p. 1243.
Nut-lock. F. C. Tambling. No. 900,796; Oct. 13; Sp. p. 1543; Dr. p. 313; Gaz. vol. 136; p. 1337.
Nut-lock. E. A. Hemsteger. No. 901,810; Oct. 20; Sp. p. 3665; Dr. p. 743; Gaz. vol. 136; p. 1705.
Nut-lock. R. G. Burton. No. 901,875; Oct. 20; Sp. p. 3775; Dr. p. 767; Gaz. vol. 136; p. 1725.
Nut, Quick-release. W. and F. G. Folberth. No. 900,843; Oct. 13; Sp. p. 1661; Dr. p. 334; Gaz. vol. 136; p. 1354.
Nuts, Making screw-. A. G. Anderson. No. 900,341; Oct. 6; Sp. p. 565; Dr. p. 118; Gaz. vol. 136; p. 1161.
Oil burner, Crude-. A. D. Moore. No. 900,112; Oct. 6; Sp. p. 86; Dr. p. 17; Gaz. vol. 136; p. 1087.
Oil distributer, Lubricating-. L. Dubrulle. No. 900,154; Oct. 6; Sp. p. 172; Dr. p. 36; Gaz. vol. 136; p. 1101.
Oil-furnace. E. A. Barnes. No. 900,695; Oct. 13; Sp. p. 1343; Dr. p. 274; Gaz. vol. 136; p. 1306.
Oil-press. J. L. Hiegel. No. 900,927; Oct. 13; Sp. p. 1832; Dr. pp. 372–3; Gaz. vol. 136; p. 1380.
Oil-switch. E. M. Hewlett. No. 901,967; Oct. 27; Sp. p. 3966; Dr. p. 809; Gaz. vol. 136; p. 1786.
Oils, Purifying petroleum-. E. W. Wynne. No. 901,411; Oct. 20; Sp. p. 2810; Gaz. vol. 136; p. 1574.
Oiler for vehicles, Automatic. F. T. Musso. No. 901,460; Oct. 20; Sp. p. 2925; Dr. p. 596; Gaz. vol. 136; p. 1591.
Optometer. C. Edewaard. No. 900,715; Oct. 13; Sp. p. 1379; Dr. p. 281; Gaz. vol. 136; p. 1312.
Ordnance, Breech-loading. W. Y. Donahoe. No. 901,791; Oct. 20; Sp. p. 3631; Dr. p. 735; Gaz. vol. 136; p. 1700.
Ore-concentrator. A. H. Stebbins. No. 900,442; Oct. 6; Sp. p. 780; Dr. pp. 161–2; Gaz. vol. 136; p. 1195.
Ore-concentrator. H. L. and E. A. Sulman. No. 902,018; Oct. 27; Sp. p. 4692; Dr. p. 830; Gaz. vol. 136; p. 1802.
Ore-separator. J. F. Pagett. No. 900,581; Oct. 6; Sp. p. 1059; Dr. pp. 223–4; Gaz. vol. 136; p. 1240.
Outlet-box. H. A. Coffin. No. 901,593; Oct. 20; Sp. p. 3202; Dr. p. 656; Gaz. vol. 136; p. 1634.
Oven. H. Schubert. No. 902,175; Oct. 27; Sp. p. 4402; Dr. pp. 892–3; Gaz. vol. 136; p. 1852.
Oven-door. W. A. Moore. No. 900,113; Oct. 6; Sp. p. 87; Dr. p. 18; Gaz. vol. 136; p. 1088.
Oven, Machine for filling breadstuffs into or on an. J. Dempsey. No. 901,077; Oct. 13; Sp. p. 2119; Dr. pp. 431–2; Gaz. vol. 136; p. 1429.
Overshoe-clamp. E. W. Waltz. No. 901,132; Oct. 13; Sp. p. 2219; Dr. p. 452; Gaz. vol. 136; p. 1445.
Overshoe-fastener. J. H. Auld. No. 900,465; Oct. 6; Sp. p. 348; Dr. p. 172; Gaz. vol. 136; p. 1203.
Package for vaccine or virus, Aseptic. C. H. Higgins. No. 900,168; Oct. 6; Sp. p. 203; Dr. p. 41; Gaz. vol. 136; p. 1105.
Package-tie. A. H. Lageson. No. 900,746; Oct. 13; Sp. p. 1440; Dr. p. 292; Gaz. vol. 136; p. 1321.
Package-tie. T. E. Lewis. No. 901,112; Oct. 13; Sp. p. 2186; Dr. p. 444; Gaz. vol. 136; p. 1439.
Package-tie. C. M. Lancaster. No. 902,091; Oct. 27; Sp. p. 4227; Dr. p. 856; Gaz. vol. 136; p. 1825.
Packing. A. F. Book. No. 900,653; Oct. 6; Sp. p. 1246; Dr. p. 255; Gaz. vol. 136; p. 1264.
Packing. J. Grant. No. 901,339; Oct. 20; Sp. p. 2627; Dr. p. 540; Gaz. vol. 136; p. 1548.
Packing and producing same. J. Ostrander. No. 902,318; Oct. 27; Sp. p. 4708; Dr. p. 953; Gaz. vol. 136; p. 1899.
Packing for explosion-engines, Piston-. J. J. McGee. No. 901,023; Oct. 13; Sp. p. 2020; Dr. p. 410; Gaz. vol. 136; p. 1412.
Packing-pad. L. F. Flipse. No. 901,334; Oct. 20; Sp. p. 2617; Dr. p. 537; Gaz. vol. 136; p. 1546.
Packing, Piston-. M. J. Quinn. No. 902,168; Oct. 27; Sp. p. 4399; Dr. p. 888; Gaz. vol. 136; p. 1850.
Packing, Rod-. G. K. Howard. No. 902,296; Oct. 27; Sp. p. 4651; Dr. p. 944; Gaz. vol. 136; p. 1894.
Pad: *See* Packing-pad; Pneumatic pad; Table-pad.
Padlock, Keyless. G. W. Kone. No. 901,972; Oct. 27; Sp. p. 3974; Dr. p. 811; Gaz. vol. 136; p. 1788.
Padlock, Seal-. O. Sohni and H. Mehl. No. 902,456; Oct. 27; Sp. p. 5008; Dr. p. 1012; Gaz. vol. 136; p. 1945.
Paint or varnish remover. C. Ellis. No. 901,896; Oct. 20; Sp. p. 3812; Gaz. vol. 136; p. 1732.
Paint-removing compound. A. J. Hoover. No. 902,404; Oct. 27; Sp. p. 4877; Gaz. vol. 136; p. 1927.
Pan: *See* Baking-pan; Dust-pan.
Pan-handle. A. Vincent. No. 901,400; Oct. 20; Sp. p. 2791; Dr. p. 568; Gaz. vol. 136; p. 1571.
Paper-bag machine. C. F. Smith. No. 900,605; Oct. 6; Sp. p. 1143; Dr. p. 233–4; Gaz. vol. 136; p. 1248.
Paper, board, and pulp, Means for manufacturing. W. E. Sheehan. No. 902,178; Oct. 27; Sp. p. 4407; Dr. pp. 893–4; Gaz. vol. 136; p. 1854.
Paper box. E. K. Lathrop. No. 900,557; Oct. 6; Sp. p. 1047; Dr. p. 214; Gaz. vol. 136; p. 1233.
Paper box. G. R. Wyman. No. 900,904; Oct. 13; Sp. p. 1774; Dr. p. 359; Gaz. vol. 136; p. 1372.
Paper box. J. T. Ferree and W. H. Fairchild. No. 901,286; Oct. 13; Sp. p. 2514; Dr. p. 516; Gaz. vol. 136; p. 1495.
Paper-box ends, Machine for closing and sealing. R. Y. Bradshaw. No. 902,273; Oct. 27; Sp. p. 4599; Dr. pp. 934–6; Gaz. vol. 136; p. 1883.
Paper bucket or box. B. B. McFadden. No. 900,115; Oct. 6; Sp. p. 90; Dr. p. 18; Gaz. vol. 136; p. 1088.
Paper-cutting machine. G. Fomm. No. 901,088; Oct. 13; Sp. p. 2135; Dr. p. 435; Gaz. vol. 136; p. 1432.
Paper holder, Roll-. G. P. Burris. No. 901,520; Oct. 20; Sp. p. 3061; Dr. p. 625; Gaz. vol. 136; p. 1611.
Paper-making machines and the like, Cylinder-mold for. H. Parker. No. 902,505; Oct. 27; Sp. p. 5130; Dr. p. 1038; Gaz. vol. 136; p. 1963.
Paper, Manufacture of copying-. A. and M. Pidelaserra y Brias. No. 901,824; Oct. 20; Sp. p. 3689; Gaz. vol. 136; p. 1709.
Paper perforating, cutting, and delivery apparatus. R. M. Davidson. No. 901,892; Oct. 20; Sp. p. 3805; Dr. pp. 774–5; Gaz. vol. 136; p. 1731.
Para-aminoacetyl meta-toluidin. C. Heidenreich. No. 902,150; Oct. 27; Sp. p. 4343; Gaz. vol. 136; p. 1845.
Paraffin, Apparatus for coating receptacles with. L. A. Wobbrock. No. 900,815; Oct. 13; Sp. p. 1595; Dr. p. 323; Gaz. vol. 136; p. 1345.
Party-line indicating ringing key, Four-. C. S. Winston. No. 902,356; Oct. 27; Sp. p. 4795; Dr. p. 968; Gaz. vol. 136; p. 1913.
Paste-receptacle. G. L. Belcher. No. 901,061; Oct. 13; Sp. p. 2060; Dr. p. 425; Gaz. vol. 136; p. 1424.
Paving, Wood-block. W. H. Harvey. No. 900,729; Oct. 13; Sp. p. 1408; Dr. p. 287; Gaz. vol. 136; p. 1316.
Peeling and cleaning machine, Potato. S. E. Bailey. No. 902,466; Oct. 27; Sp. p. 5025; Dr. p. 1018; Gaz. vol. 136; p. 1948.
Pen, Fountain-. A. T. Cross. No. 900,833; Oct. 13; Sp. p. 1631; Dr. p. 330; Gaz. vol. 136; p. 1351.
Pen, Fountain-. J. J. Mead. No. 900,944; Oct. 13; Sp. p. 1864; Dr. p. 380; Gaz. vol. 136; p. 1385.
Pen, Fountain-. F. C. Brown. No. 901,945; Oct. 27; Sp. p. 3928; Dr. p. 802; Gaz. vol. 136; p. 1780.
Pen, Writing-. W. H. Schweizer. No. 901,389; Oct. 20; Sp. p. 2762; Dr. p. 563; Gaz. vol. 136; p. 1567.
Pens, Device for grinding writing-. F. Dörsing. No. 900,271; Oct. 6; Sp. p. 430; Dr. pp. 87–8; Gaz. vol. 136; p. 1139.
Pens, &c., to garments, Device for securing fountain-. J. H. Hagan. No. 901,240; Oct. 13; Sp. p. 2403; Dr. p. 493; Gaz. vol. 136; p. 1479.
Penholder. J. H. Hagan. No. 901,239; Oct. 13; Sp. p. 2402; Dr. p. 493; Gaz. vol. 136; p. 1479.
Penholder. E. R. Orchard. No. 902,164; Oct. 27; Sp. p. 4380; Dr. p. 887; Gaz. vol. 136; p. 1849.
Pencil, Automatic. O. L. Harrison. No. 902,292; Oct. 27; Sp. p. 4644; Dr. p. 942; Gaz. vol. 136; p. 1890.
Pencil-cushion. G. F. Ireland. No. 902,233; Oct. 27; Sp. p. 4524; Dr. p. 916; Gaz. vol. 136; p. 1870.
Pencil-holder. J. A. Eubanks. No. 900,716; Oct. 13; Sp. p. 1382; Dr. p. 282; Gaz. vol. 136; p. 1312.
Perforating-machine. W. G. Berry. No. 900,257; Oct. 6; Sp. p. 375; Dr. p. 78; Gaz. vol. 136; p. 1134.
Perforating-machine, Pattern-controlled punch-selecting. G. H. Davis and C. T. Bowman. No. 900,151; Oct. 6; Sp. p. 164; Dr. pp. 34–5; Gaz. vol. 136; p. 1100.
Phonograph and picture-exhibiting machine, Combined. I. W. Norcross. No. 900,875; Oct. 13; Sp. p. 1713; Dr. pp. 346–7; Gaz. vol. 136; p. 1363.
Phonograph apparatus, Automatic. I. W. Norcross. No. 900,876; Oct. 13; Sp. p. 1718; Dr. p. 347; Gaz. vol. 136; p. 1363.
Phonograph-record case. W. S. Yell. No. 902,361; Oct. 27; Sp. p. 4804; Dr. p. 970; Gaz. vol. 136; p. 1914.
Phonography. I. Kitsee. No. 900,934; Oct. 13; Sp. p. 1845; Dr. p. 375; Gaz. vol. 136; p. 1382.
Phosphates, Making soluble. F. J. Machalske. No. 902,425; Oct. 27; Sp. p. 4946; Dr. p. 999; Gaz. vol. 136; p. 1935.
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Photographic-film package and holder therefor. M. Niell. No. 900,194; Oct. 6; Sp. p. 258; Dr. p. 52; Gaz. vol. 136; p. 1114.
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Photographic plates, Device for transferring. A. B. Sheppard. No. 901,201; Oct. 13; Sp. p. 2336; Dr. p. 479; Gaz. vol. 136; p. 1468.
Photographic plates, Packing-box for. A. B. Sheppard. No. 901,200; Oct. 13; Sp. p. 2334; Dr. p. 478; Gaz. vol. 136; p. 1468.
Photographic-shutter mounting. F. A. Brownell. No. 900,081; Oct. 6; Sp. p. 15; Dr. p. 3; Gaz. vol. 136; p. 1077.
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Photographs translucent, Compound for rendering. A. T. McIlvain and G. F. Stover. No. 902,102; Oct. 27; Sp. p. 4252; Gaz. vol. 136; p. 1829.
Piano-action. S. R. Perry. No. 900,305; Oct. 6; Sp. p. 494; Dr. p. 103; Gaz. vol. 136; p. 1150.
Piano-action. S. R. Perry. No. 900,306; Oct. 6; Sp. p. 497; Dr. p. 104; Gaz. vol. 136; p. 1151.
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Piano-action. S. R. Perry. No. 900,308; Oct. 6; Sp. p. 505; Dr. pp. 104–5; Gaz. vol. 136; p. 1152.
Piano, Automatic. M. Clark. No. 901,323; Oct. 20; Sp. p. 2590; Dr. p. 533; Gaz. vol. 136; p. 1542.
Piano, Automatic. F. W. Wood. No. 901,929; Oct. 20; Sp. p. 3875; Dr. pp. 790–1; Gaz. vol. 136; p. 1743.

Piano, Automatic grand. J. W. Darley, Jr. No. 901,890; Oct. 20; Sp. p. 3801; Dr. pp. 773–4; Gaz. vol. 136; p. 1730.
Piano fall-board. J. Hattemer. No. 902,293; Oct. 27; Sp. p. 4646; Dr. p. 943; Gaz. vol. 136; p. 1890.
Piano-player, Mechanical. H. T. Logan. No. 900,179; Oct. 6; Sp. p. 228; Dr. p. 46; Gaz. vol. 136; p. 1109.
Piano-playing attachment. J. E. Shoemaker. No. 901,562; Oct. 20; Sp. p. 3138; Dr. p. 641; Gaz. vol. 136; p. 1624.
Piano, Self-playing. F. E. Ives. No. 901,906; Oct. 20; Sp. p. 3835; Dr. p. 781; Gaz. vol. 136; p. 1736.
Piano, Self-playing grand. J. W. Darley, Jr. No. 901,281; Oct. 13; Sp. p. 2498; Dr. pp. 512–14; Gaz. vol. 136; p. 1493.
Piano-sounding-board bridges, Mechanism for notching. H. G. and A. F. Osterberg. No. 901,644; Oct. 20; Sp. p. 3294; Dr. p. 676; Gaz. vol. 136; p. 1650.
Pianos, Device for use in obtaining bridge-bearings in constructing. E. C. Sager. No. 901,262; Oct. 13; Sp. p. 2450; Dr. p. 503; Gaz. vol. 136; p. 1486.
Pianos, Pedal for automatically-operated. J. Sampere. No. 901,125; Oct. 13; Sp. p. 2207; Dr. p. 449; Gaz. vol. 136; p. 1443.
Pianos, Repeating action for grand. A. Nickel. No. 902,439; Oct. 27; Sp. p. 4966; Dr. p. 1003; Gaz. vol. 136; p. 1939.
Pianoforte. W. R. T. Hill. No. 901,615; Oct. 20; Sp. p. 3238; Dr. pp. 663–4; Gaz. vol. 136; p. 1640.
Pick. A. Ostlund. No. 901,995; Oct. 27; Sp. p. 4051; Dr. p. 821; Gaz. vol. 136; p. 1795.
Picker: *See* Cotton-picker; Cranberry-picker; Fruit-picker; Slate-picker.
Pictorial composition, Device for use in studying. A. B. Johnson. No. 902,299; Oct. 27; Sp. p. 4658; Dr. p. 945; Gaz. vol. 136; p. 1893.
Picture apparatus, Moving-. H. S. and L. Isaacs. (Reissue.) No. 12,969; Oct. 27; Sp. p. 5213; Dr. p. 1053; Gaz. vol. 136; p. 1975.
Picture card, Invisible-. C. F. Morse. No. 901,723; Oct. 20; Sp. p. 3499; Dr. p. 707; Gaz. vol. 136; p. 1678.
Picture-exhibition device. J. H. Gravell and G. D. Farwell. No. 900,522; Oct. 6; Sp. p. 971; Dr. p. 197; Gaz. vol. 136; p. 1220.
Pictures and photographic-printing plates, Producing. W. Triepel. No. 901,218; Oct. 13; Sp. p. 2362; Gaz. vol. 136; p. 1472
Pigeon-hole spacer. T. A. Chelson and H. J. Benedict. No. 901,069; Oct. 13; Sp. p. 2102; Dr. p. 427; Gaz. vol. 136; p. 1427.
Pile-driver. H. B. Strong. No. 902,120; Oct. 27; Sp. p. 4289; Dr. p. 869; Gaz. vol. 136; p. 1834.
Pile-protector. W. Howe. No. 900,929; Oct. 13; Sp. p. 1837; Dr. p. 374; Gaz. vol. 136; p. 1381.
Piling, Metal. J. J. Harold. No. 901,241; Oct. 13; Sp. p. 2404; Dr. p. 493; Gaz. vol. 136; p. 1480.
Pillow-sham holder. G. A. Francis. No. 900,507; Oct. 6; Sp. p. 945; Dr. p. 192; Gaz. vol. 136; p. 1216.
Pillow-sham holder. G. A. Francis. No. 900,508; Oct. 6; Sp. p. 947; Dr. p. 192; Gaz. vol. 136; p. 1216.
Pin: *See* Lock-pin; Towel-pin.
Pipe: *See* Mining-pipe; Smoking-pipe; Stand-pipe.
Pipe. C. S. Hamlin. No. 901,534; Oct. 20; Sp. p. 3084; Dr. p. 630; Gaz. vol. 136; p. 1615.
Pipe-cleaning apparatus, Automatic. G. A. Setzer. No. 900,599; Oct. 6; Sp. p. 1123; Dr. p. 230; Gaz. vol. 136; p. 1246.
Pipe holder, Smoke-. G. C. Ehlers. No. 901,328; Oct. 20; Sp. p. 2604; Dr. p. 535; Gaz. vol. 136; p. 1544.
Pipe-machine. G. A. Wettengel. No. 901,404; Oct. 20; Sp. p. 2794; Dr. pp. 569–70; Gaz. vol. 136; p. 1572.
Pipe-wrench. H. E. McDonald. No. 900,191; Oct. 6; Sp. p. 255; Dr. p. 51; Gaz. vol. 136; p. 1113.
Pipe-wrench. C. E. Adams. No. 902,041; Oct. 27; Sp. p. 4139; Dr. p. 838; Gaz. vol. 136; p. 1810.
Piston. K. Matheus. No. 902,310; Oct. 27; Sp. p. 4691; Dr. p. 950; Gaz. vol. 136; p. 1897.
Placket-closer. J. L. Brassington. No. 900,662; Oct. 6; Sp. p. 1268; Dr. p. 259; Gaz. vol. 136; p. 1267.
Planing-machine tables, Shield for the post-holes in. W. N. Bauer. No. 900,976; Oct. 13; Sp. p. 1929; Dr. p. 393; Gaz. vol. 136; p. 1396.
Planing shoes and wedges, Mechanism for. M. Morton. No. 901,724; Oct. 20; Sp. p. 3499; Dr. p. 708; Gaz. vol. 136; p. 1678.
Plant-marker. L. Willis. No. 901,137; Oct. 13; Sp. p. 2225; Dr. p. 453; Gaz. vol. 136; p. 1447.
Planter. S. P. Forcier. No. 901,235; Oct. 13; Sp. p. 2395; Dr. p. 491; Gaz. vol. 136; p. 1478.
Planter attachment. J. B. O'Brien. No. 901,552; Oct. 20; Sp. p. 3118; Dr. p. 637; Gaz. vol. 136; p. 1621.
Planter, Check-row corn-. P. C. Fox. No. 900,361; Oct. 6; Sp. p. 601; Dr. pp. 124–5; Gaz. vol. 136; p. 1167.
Planter, Corn-. A. E. Peterson. No. 901,257; Oct. 13; Sp. p. 2433; Dr. pp. 499–500; Gaz. vol. 136; p. 1485.
Planter, Corn-. D. J. Kerger. No. 902,415; Oct. 27; Sp. p. 4896; Dr. pp. 991–2; Gaz. vol. 136; p. 1931.
Planter, Cotton-. J. W. Crawford. No. 901,072; Oct. 13; Sp. p. 2105; Dr. p. 428; Gaz. vol. 136; p. 1428.
Planter marker attachment, Corn-. J. C. Liston. No. 901,541; Oct. 20; Sp. p. 3100; Dr. p. 633; Gaz. vol. 136; p. 1617.
Planter, Seed-. B. F. Robinson. No. 900,784; Oct. 13; Sp. p. 1523; Dr. p. 310; Gaz. vol. 136; p. 1333.
Planter, Tobacco-. J. T. Crenshaw. No. 901,279; Oct. 13; Sp. p. 2493; Dr. p. 511; Gaz. vol. 136; p. 1492.
Planters, Riding attachment for corn-. J. F. Maier. No. 901,181; Oct. 13; Sp. p. 2297; Dr. pp. 469–70; Gaz. vol. 136; p. 1461.
Plastic materials, Machine for making blocks, plates, &c., from. C. M. C. Hughes and T. H. Quinlan. No. 901,296; Oct. 13; Sp. p. 2536; Dr. pp. 520–1; Gaz. vol. 136; p. 1498.
Plate and dish cover. F. Staines. No. 902,340; Oct. 27; Sp. p. 4768; Dr. pp. 961–2; Gaz. vol. 136; p. 1907.
Plow. B. A. Chilson. No. 900,981; Oct. 13; Sp. p. 1940; Dr. p. 395; Gaz. vol. 136; p. 1398.
Plow. T. Sawatzky. No. 901,193; Oct. 13; Sp. p. 2323; Dr. p. 476; Gaz. vol. 136; p. 1465.
Plow. S. F. Vose and C. R. Harryman. No. 901,220; Oct. 13; Sp. p. 2368; Dr. p. 484; Gaz. vol. 136; p. 1473.
Plow. L. Ferry and F. Di Gioia. No. 902,284; Oct. 27; Sp. p. 4624; Dr. p. 939; Gaz. vol. 136; p. 1887.
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Plow attachment. F. Evans. No. 900,992; Oct. 13; Sp. p. 1959; Dr. p. 399; Gaz. vol. 136; p. 1402.
Plow, Disk. E. H. Sholar and W. W. Pace. No. 900,219; Oct. 6; Sp. p. 305; Dr. p. 62; Gaz. vol. 136; p. 1122.
Plow, Gang-. F. A. Falk and H. C. Anderson. No. 900,919; Oct. 13; Sp. p. 1811; Dr. p. 367; Gaz. vol. 136; p. 1378.
Plow-holder. B. S. Curtis. No. 902,380; Oct. 27; Sp. p. 4835; Dr. p. 977; Gaz. vol. 136; p. 1919.
Plowing or otherwise cultivating the soil, Machine for. E. Ferriss. No. 901,605; Oct. 20; Sp. p. 3216; Dr. pp. 659–60; Gaz. vol. 136; p. 1637.
Plumbing connection, Sanitary. A. M. Morrison. No. 901,545; Oct. 20; Sp. p. 3106; Dr. pp. 634–5; Gaz. vol. 136; p. 1619.
Pneumatic pad. H. E. Stow. No. 900,610; Oct. 6; Sp. p. 1161; Dr. p. 236; Gaz. vol. 136; p. 1251.
Pocket-knife. G. L. McVey. No. 901,253; Oct. 13; Sp. p. 2425; Dr. p. 498; Gaz. vol. 136; p. 1483.
Post: *See* Bumping-post; Concrete post; Fence-post; Hitching-post.
Post-card, Illustrated. M. Vollmer. No. 900,135; Oct. 6; Sp. p. 133; Dr. p. 28; Gaz. vol. 136; p. 1094.
Postal mailing-card. F. D. Ormston. No. 901,464; Oct. 20; Sp. p. 2931; Dr. p. 598; Gaz. vol. 136; p. 1592.
Potato-digger. H. J. Frisse. No. 901,608; Oct. 20; Sp. p. 3222; Dr. p. 660; Gaz. vol. 136; p. 1638.
Potato digger and shaker. M. Hebting. No. 902,400; Oct. 27; Sp. p. 4870; Dr. p. 986; Gaz. vol. 136; p. 1925.
Potato-digging machine. F. Bateman. No. 901,145; Oct. 13; Sp. p. 2240; Dr. p. 455; Gaz. vol. 136; p. 1450.
Poultry-house. J. H. Irwin. No. 901,535; Oct. 20; Sp. p. 3086; Dr. p. 630; Gaz. vol. 136; p. 1616.
Power, Transmission of. F. M. Ashley. No. 900,342; Oct. 6; Sp. p. 566; Dr. p. 118; Gaz. vol. 136; p. 1161.
Power-transmitting mechanism. R. H. Rice and F. R. C. Boyd. No. 901,473; Oct. 20; Sp. p. 2953; Dr. pp. 603–4; Gaz. vol. 136; p. 1595.
Prepayment-meter. W. H. Pratt. No. 900,777; Oct. 13; Sp. p. 1504; Dr. p. 306; Gaz. vol. 136; p. 1331.
Press: *See* Baling-press; Box-press; Filter-press; Hay-press; Hydraulic press; Multiplex press; Oil-press; Printing-press; Roller-press.
Presses, Self-feeding mechanism for punch and die. C. A. Williams. No. 900,335; Oct. 6; Sp. p. 556; Dr. p. 116; Gaz. vol. 136; p. 1159.
Pressing hollow bodies having depressions or cavities at their outer sides, Means for. C. Geiers. No. 900,276; Oct. 6; Sp. p. 440; Dr. p. 90; Gaz. vol. 136; p. 1140.
Pressing or molding machine. W. Wyssling. No. 900,142; Oct. 6; Sp. p. 147; Dr. pp. 30–1; Gaz. vol. 136; p. 1096.
Pressure gage, Differential-. F. H. Hopkins. No. 900,371; Oct. 6; Sp. p. 635; Dr. p. 130; Gaz. vol. 136; p. 1171.
Primary battery. K. Heintz. No. 901,445; Oct. 20; Sp. p. 2901; Dr. p. 591; Gaz. vol. 136; p. 1586.
Printing and folding apparatus, Newspaper. J. A. Boyce. No. 900,259; Oct. 6; Sp. p. 380; Dr. pp. 79–81; Gaz. vol. 136; p. 1134.
Printing and folding apparatus, Paper. J. A. Boyce. No. 900,654; Oct. 6; Sp. p. 1248; Dr. pp. 255–6; Gaz. vol. 136; p. 1265.
Printing and issuing tickets, Machine for. A. Parker. No. 901,996; Oct. 27; Sp. p. 4053; Dr. p. 822; Gaz. vol. 136; p. 1796.
Printing machine, Blue-. C. de Lukacsevics. No. 901,303; Oct. 13; Sp. p. 2546; Dr. p. 524; Gaz. vol. 136; p. 1500.
Printing machine, Fabric-. G. Berthet and V. Berthonnet. No. 900,978; Oct. 13; Sp. p. 1932; Dr. pp. 393–4; Gaz. vol. 136; p. 1397.
Printing-machines, Cutting and perforating attachment for. G. F. McAdams. No. 902,314; Oct. 27; Sp. p. 4699; Dr. p. 952; Gaz. vol. 136; p. 1898.
Printing of literature, music, and the like for reading by the blind, Press for embossed. W. B. Walt. No. 900,622; Oct. 6; Sp. p. 1183; Dr. pp. 241–2; Gaz. vol. 136; p. 1254.
Printing-plate. J. S. Duncan. No. 902,281; Oct. 27; Sp. p. 4620; Dr. p. 938; Gaz. vol. 136; p. 1886.
Printing-press. W. P. Quentell. No. 901,186; Oct. 13; Sp. p. 2307; Dr. pp. 472–3; Gaz. vol. 136; p. 1463.
Printing-press. A. E. Dowell. No. 901,312; Oct. 13; Sp. p. 2561; Dr. p. 527; Gaz. vol. 136; p. 1503.
Printing-press. C. G. Harris. No. 901,964; Oct. 27; Sp. p. 3962; Dr. p. 809; Gaz. vol. 136; p. 1786.
Printing-press clamping and adjusting device. W. H. Golding. No. 900,519; Oct. 6; Sp. p. 967; Dr. p. 196; Gaz. vol. 136; p. 1220.
Printing press, Multicolor-. G. E. Pancoast. No. 902,165; Oct. 27; Sp. p. 4380; Dr. p. 887; Gaz. vol. 136; p. 1849.
Printing-press, Platen. F. Waite. No. 900,805; Oct. 13; Sp. p. 1567; Dr. p. 317; Gaz. vol. 136; p. 1341.
Printing-presses, Printing or plate cylinder for rotary. W. K. Hodgman. No. 901,295; Oct. 13; Sp. p. 2533; Dr. p. 520; Gaz. vol. 136; p. 1498.
Propeller, Boat-. R. Adnson. No. 902,362; Oct. 27; Sp. p. 4805; Dr. p. 970; Gaz. vol. 136; p. 1915.
Propeller, Screw-. D. W. Taylor. No. 900,797; Oct. 13; Sp. p. 1543; Dr. p. 314; Gaz. vol. 136; p. 1338.
Propellers and propeller-blades, Apparatus for machining helical surfaces, such as those of. W. N. Venner. No. 900,804; Oct. 13; Sp. p. 1563; Dr. pp. 316–17; Gaz. vol. 136; p. 1341.

Protected iron. J. J. Bradley. No. 900,655; Oct. 6; Sp. p. 1254; Dr. p. 256; Gaz. vol. 136; p. 1265.
Protractor. H. O. Losch. No. 901,113; Oct. 13; Sp. p. 2187; Dr. p. 444; Gaz. vol. 136; p. 1439.
Puller: *See* Weed-puller.
Pulley. C. C. Campbell. No. 900,481; Oct. 6; Sp. p. 872; Dr. p. 178; Gaz. vol. 136; p. 1208.
Pulley, Clutch-. W. Duerr. No. 901,603; Oct. 20; Sp. p. 3214; Dr. p. 659; Gaz. vol. 136; p. 1637.
Pulp-machine. M. Hanson. No. 901,168; Oct. 13; Sp. p. 2277; Dr. p. 464; Gaz. vol. 136; p. 1457.
Pulp or paper making machines, Hydraulic pressing device for application to the press-rolls of. J. L. Coenen. No. 900,985; Oct. 13; Sp. p. 1944; Dr. p. 396; Gaz. vol. 136; p. 1399.
Pulp-wood, Floating crib for transportation of. G. F. Rowe and J. F. Johnston. No. 902,253; Oct. 27; Sp. p. 4559; Dr. p. 925; Gaz. vol. 136; p. 1876.
Pulverizer, Soil-. S. D. Beum. No. 900,822; Oct. 13; Sp. p. 1607; Dr. p. 326; Gaz. vol. 136; p. 1347.
Pump, &c. F. W. Machlet. No. 902,501; Oct. 27; Sp. p. 5116; Dr. pp. 1035–6; Gaz. vol. 136; p. 1961.
Pump, Air-. P. P. Bourne. No. 901,945; Oct. 27; Sp. p. 3926; Dr. p. 801; Gaz. vol. 136; p. 1779.
Pump and the like. A. E. Davis. No. 900,357; Oct. 6; Sp. p. 592; Dr. pp. 122–3; Gaz. vol. 136; p. 1166.
Pump, Centrifugal. G. Sulzer. No. 900,966; Oct. 13; Sp. p. 1910; Dr. pp. 388–9; Gaz. vol. 136; p. 1393.
Pump, Condensing-apparatus. J. Astrom. No. 901,580; Oct. 20; Sp. p. 3176; Dr. p. 648; Gaz. vol. 136; p. 1630.
Pump, Duplex. L. Willis. No. 901,138; Oct. 13; Sp. p. 2227; Dr. p. 453; Gaz. vol. 136; p. 1447.
Pump for pneumatic tires. H. M. Williams. No. 900,632; Oct. 6; Sp. p. 1203; Dr. pp. 246–7; Gaz. vol. 136; p. 1257.
Pump, Multistage centrifugal. H. Keller. No. 901,450; Oct. 20; Sp. p. 2909; Dr. p. 592; Gaz. vol. 136; p. 1587.
Pump, Oil-well. C. Dickinson. No. 901,282; Oct. 13; Sp. p. 2505; Dr. p. 514; Gaz. vol. 136; p. 1493.
Pump-primer. J. J. Bataille. No. 900,468; Oct. 6; Sp. p. 852; Dr. p. 173; Gaz. vol. 136; p. 1204.
Pump, Rotary. P. Gauer. No. 901,610; Oct. 20; Sp. p. 3225; Dr. p. 661; Gaz. vol. 136; p. 1639.
Pump, Turbo-. G. B. Collier. No. 901,228; Oct. 13; Sp. p. 2379; Dr. pp. 486–7; Gaz. vol. 136; p. 1475.
Pumping and compressing apparatus for aeriform fluids. H. M. Doinecq-Cazaux. No. 900,988; Oct. 13; Sp. p. 1948; Dr. p. 397; Gaz. vol. 136; p. 1400.
Pumping apparatus, Oil-well. W. C. Beckwith. No. 902,469; Oct. 27; Sp. p. 5032; Dr. p. 1018; Gaz. vol. 136; p. 1949.
Pumping mechanism. E. J. D. Coxe. No. 900,669; Oct. 6; Sp. p. 1281; Dr. p. 261; Gaz. vol. 136; p. 1270.
Punch-ball machine, Coin-freed. A. C. Savage. No. 900,126; Oct. 6; Sp. p. 123; Dr. p. 25; Gaz. vol. 136; p. 1091.
Quick-acting wrench. C. E. Ragsdale. No. 902,000; Oct. 27; Sp. p. 4059; Dr. p. 823; Gaz. vol. 136; p. 1797.
Quilling-machine. B. Eastwood, Jr., and B. Schibler, Jr. No. 900,155; Oct. 6; Sp. p. 173; Dr. p. 36; Gaz. vol. 136; p. 1101.
Rack: *See* Bag-holding rack; Dish-drying rack; Display-rack; Hat-rack.
Radio-active composition. R. Kell. No. 901,177; Oct. 13; Sp. p. 2293; Gaz. vol. 136; p. 1460.
Rail-bender. D. Belloni. No. 902,470; Oct. 27; Sp. p. 5034; Dr. p. 1019; Gaz. vol. 136; p. 1949.
Rail-bond. A. W. McConnell. No. 900,298; Oct. 6; Sp. p. 482; Dr. p. 100; Gaz. vol. 136; p. 1148.
Rail-bond. F. H. Daniels and C. R. Sturdevant. No. 900,488; Oct. 6; Sp. p. 879; Dr. p. 180; Gaz. vol. 136; p. 1209.
Rail-bond. E. W. Vogel. No. 902,026; Oct. 27; Sp. p. 4111; Dr. p. 832; Gaz. vol. 136; p. 1805.
Rail-bond terminals, Mold for casting. W. B. Cleveland. No. 901,227; Oct. 13; Sp. p. 2376; Dr. p. 486; Gaz. vol. 136; p. 1475.
Rail-clamp. J. M. Vail. No. 900,328; Oct. 6; Sp. p. 546; Dr. p. 113; Gaz. vol. 136; p. 1157.
Rail, Compound. T. S. Cromer. No. 902,136; Oct. 27; Sp. p. 4318; Dr. p. 875; Gaz. vol. 136; p. 1840.
Rail-fastener. D. H. Turnbaugh. No. 901,128; Oct. 13; Sp. p. 2213; Dr. pp. 449–50; Gaz. vol. 136; p. 1444.
Rail-fastener. E. Stem. No. 901,658; Oct. 20; Sp. p. 3320; Dr. p. 682; Gaz. vol. 136; p. 1654.
Rail-fastener. F. J. Shelly. No. 901,391; Oct. 20; Sp. p. 2764; Dr. p. 563; Gaz. vol. 136; p. 1568.
Rail-joint. P. P. Ragaller. No. 901,739; Oct. 20; Sp. p. 3328; Dr. p. 713; Gaz. vol. 136; p. 1683.
Rail-joint. L. White. No. 901,857; Oct. 20; Sp. p. 3744; Dr. p. 761; Gaz. vol. 136; p. 1719.
Rail-joint and anti-rail-spreader, Combined. A. H. Newpher. No. 901,026; Oct. 13; Sp. p. 2026; Dr. p. 411; Gaz. vol. 136; p. 1413.
Rail-joint fastening. A. F. Sweigart. No. 900,325; Oct. 6; Sp. p. 541; Dr. p. 112; Gaz. vol. 136; p. 1157.
Rail-retainer. T. J. Donovan. No. 902,384; Oct. 27; Sp. p. 4840; Dr. p. 979; Gaz. vol. 136; p. 1921.
Rail-spacing block, Guard-. F. W. Rizer. No. 900,209; Oct 6; Sp. p. 289; Dr. p. 58; Gaz. vol. 136; p. 1119.
Rail-splice. C. M. Culp. No. 901,524; Oct. 20; Sp. p. 3066; Dr. p. 627; Gaz. vol. 136; p. 1612.
Rail-support. G. M. Côté. No. 900,667; Oct. 6; Sp. p. 1276; Dr. p. 261; Gaz. vol. 136; p. 1269.
Rail-tie. T. B. Modlin. No. 902,312; Oct. 27; Sp. p. 4697; Dr. p. 951; Gaz. vol. 136; p. 1897.
Railway and other vehicles, Automatic coupling for. G. J. Coles. No. 901,071; Oct. 13; Sp. p. 2104; Dr. p. 428; Gaz. vol. 136; p. 1427.
Railway and road vehicle. R. C. Sayer. No. 901,194; Oct. 13; Sp. p. 2324; Dr. p. 476; Gaz. vol. 136; p. 1466.
Railway block-signal. J. Shannon and J. E. Wood. No. 900,315; Oct. 6; Sp. p. 519; Dr. pp. 108–9; Gaz. vol. 136; p. 1154.
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Railway-crossing. J. H. Hand. No. 901,292; Oct. 13; Sp. p. 2527; Dr. p. 519; Gaz. vol. 136; p. 1497.
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Railway-frog. W. H. Rabbe, E. W. Harden, and M. E. Dempsey. No. 900,422; Oct. 6; Sp. p. 732; Dr. p. 153; Gaz. vol. 136; p. 1189.
Railway-gate. E. E Sampson. No. 900,125; Oct. 6; Sp. p. 116; Dr. pp. 24–5; Gaz. vol. 136; p. 1091.
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Railway-rail stay. S. R. Bryan. (Reissue.) No. 12,862; Oct. 13; Sp. p. 2563; Dr. p. 527; Gaz. vol. 136; p. 1503.
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Railway safety apparatus. A. Bonom. No. 900,474; Oct. 6; Sp. p. 860; Dr. p. 176; Gaz. vol. 136; p. 1206.
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Railway-signal. H. Diehl. No. 901,956; Oct. 27; Sp. p. 3949; Dr. p. 806; Gaz. vol. 136; p. 1783.
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Railway-sleepers, Tool for cutting seats in. A. Collet. No. 901,681; Oct. 20; Sp. p. 3375; Dr. p. 691; Gaz. vol. 136; p. 1662.
Railway-switch. H. B. Nichols. No. 901,254; Oct. 13; Sp. p. 2426; Dr. pp. 498–9; Gaz. vol. 136; p. 1484.
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Railway-switch, Electric. M. J. Wightman. No. 902,035; Oct. 27; Sp. p. 4123; Dr. p. 835; Gaz. vol. 136; p. 1808.
Railway-switch-operating device. G. M. Spalding. No. 901,750; Oct. 20; Sp. p. 3548; Dr. p. 718; Gaz. vol. 136; p. 1686.
Railway-switches, Detector-bar for. A. G. Foley. No. 902,066; Oct. 27; Sp. p. 4184; Dr. p. 847; Gaz. vol. 136; p. 1817.
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Railway-tie. E. N. Davis. No. 900,086; Oct. 6; Sp. p. 27; Dr. p. 5; Gaz. vol. 136; p. 1079.
Railway-tie. H. C. Bennetch. No. 900,648; Oct. 6; Sp. p. 1239; Dr. p. 254; Gaz. vol. 136; p. 1263.
Railway-tie. J. A. Bergquist. No. 901,316; Oct. 20; Sp. p. 2579; Dr. p. 531; Gaz. vol. 136; p. 1540.
Railway-tie. T. W. Welsh. No. 901,574; Oct. 20; Sp. p. 3162; Dr. p. 644; Gaz. vol. 136; p. 1628.
Railway-tie. J. T. Spaulding. No. 901,845; Oct. 20; Sp. p. 3721; Dr. p. 756; Gaz. vol. 136; p. 1715.
Railway-tie. J. W. Biller. No. 901,870; Oct. 20; Sp. p. 3766; Dr. p. 766; Gaz. vol. 136; p. 1724.
Railway-tie. T. F. Gilcrest. No. 902,287; Oct. 27; Sp. p. 4629; Dr. p. 941; Gaz. vol. 136; p. 1885.
Railway-tie, Metal and wood combined. J. Fenderson. No. 900,841; Oct. 13; Sp. p. 1649; Dr. p. 334; Gaz. vol. 136; p. 1354.
Railway-tie, Metallic. A. M. Baird. No. 902,364; Oct. 27; Sp. p. 4806; Dr. p. 971; Gaz. vol. 136; p. 1915.
Railway-tie, Metallic. S. R. Kelm. No. 902,414; Oct. 27; Sp. p. 4895; Dr. p. 991; Gaz. vol. 136; p. 1930.
Railway-ties, Wear-plate for. S. Clary. No. 900,982; Oct. 13; Sp. p. 1941; Dr. p. 395; Gaz. vol. 136; p. 1398.
Railway-track. E. Molloy. No. 900,188; Oct. 6; Sp. p. 246; Dr. p. 50; Gaz. vol. 136; p. 1112.
Railway-track curve, Ball-bearing. W. R. Clark. No. 902,053; Oct. 27; Sp. p. 4159; Dr. p. 842; Gaz. vol. 136; p. 1813.
Railway-track-rail-drilling machine. F. Marsellis. No. 900,109; Oct. 6; Sp. p. 76; Dr. pp. 15–16; Gaz. vol. 136; p. 1086.
Railway-trains, Signaling system for. S. T. Stewart. No. 902,014; Oct. 27; Sp. p. 4084; Dr. p. 828; Gaz. vol. 136; p. 1801.

Railways, System of electrically-controlled signals for. J. Paul and T. Ducousso. No. 901,122; Oct. 13; Sp. p. 2202; Dr. p. 447; Gaz. vol. 136; p. 1442.
Rake: *See* Hay-rake; Rotary rake.
Rake. J. L. Kummer. No. 902,238; Oct. 27; Sp. p. 4531; Dr. p. 918; Gaz. vol. 136; p. 1871.
Range utensil, Cooking-. R. B. Dickinson. No. 902,215; Oct. 27; Sp. p. 4478; Dr. p. 906; Gaz. vol. 136; p. 1865.
Rasp or foot leveler, Horse. F. B. Gardner. No. 901,290; Oct. 13; Sp. p. 2524; Dr. p. 518; Gaz. vol. 136; p. 1496.
Razor. A. Koscherak. No. 901,537; Oct. 20; Sp. p. 3089; Dr. p. 631; Gaz. vol. 136; p. 1616.
Razor, Safety-. T. A. Bell and E. J. Uhle. No. 901,062; Oct. 13; Sp. p. 2091; Dr. p. 425; Gaz. vol. 136; p. 1424.
Razor, Safety-. M. Flynn. No. 901,530; Oct. 20; Sp. p. 3077; Dr. p. 629; Gaz. vol. 136; p. 1614.
Receiver. J. S. Goldberg. No. 901,704; Oct. 20; Sp. p. 3464; Dr. p. 702; Gaz. vol. 136; p. 1672.
Receptacle. F. Weisenberg. No. 900,901; Oct. 13; Sp. p. 1767; Dr. p. 359; Gaz. vol. 136; p. 1371.
Receptacle-closure. A. Rasmussen and M. Olsen. No. 901,646; Oct. 20; Sp. p. 3298; Dr. p. 677; Gaz. vol. 136; p. 1650.
Receptacle-cover. W. H. Phenice. No. 900,583; Oct. 6; Sp. p. 1097; Dr. p. 225; Gaz. vol. 136; p. 1241.
Reclining-chair. J. H. Mills. No. 900,945; Oct. 13; Sp. p. 1866; Dr. p. 380; Gaz. vol. 136; p. 1386.
Reel: *See* Clothes-line reel; Fishing-reel; Tape-reel.
Refrigerating apparatus. J. Scheideman. No. 902,256; Oct. 27; Sp. p. 4563; Dr. p. 926; Gaz. vol. 136; p. 1877.
Refrigerator, Iceless. C. M. Lipham. No. 900,400; Oct. 6; Sp. p. 691; Dr. p. 142; Gaz. vol. 136; p. 1181.
Register: *See* Game-register; Hot-air register; Time-register.
Register. O. S. Sturtevant. No. 902,022; Oct. 27; Sp. p. 4102; Dr. p. 831; Gaz. vol. 136; p. 1804.
Register-hook. A. Kyle. No. 901,110; Oct. 13; Sp. p. 2183; Dr. p. 443; Gaz. vol. 136; p. 1439.
Regulator: *See* Damper-regulator; Electric-tension regulator; Fluid-pressure regulator; Gas-regulator; Watch-regulator.
Reinforcing-bar. A. C. R. Janni. No. 900,379; Oct. 6; Sp. p. 640; Dr. p. 133; Gaz. vol. 136; p. 1174.
Relay. I. K. Kitsee. No. 900,743; Oct. 13; Sp. p. 1435; Dr. p. 292; Gaz. vol. 136; p. 1320.
Relay, Self-restoring drop-. F. M. Slough. No. 900,435; Oct. 6; Sp. p. 766; Dr. p. 158; Gaz. vol. 136; p. 1193.
Remedy for coughs of horses. J. Colter. No. 900,484; Oct. 6; Sp. p. 875; Gaz. vol. 136; p. 1209.
Resistance, Molded. L. E. Barringer. No. 902,048; Oct. 27; Sp. p. 4151; Gaz. vol. 136; p. 1812.
Reversing mechanism. A. P. Crell. No. 900,832; Oct. 13; Sp. p. 1629; Dr. p. 329; Gaz. vol. 136; p. 1351.
Reversing mechanism. T. H. and J. E. Holgan. No. 901,172; Oct. 13; Sp. p. 2287; Dr. p. 466; Gaz. vol. 136; p. 1459.
Revolver-holster. A. H. Hudson. No. 902,083; Oct. 27; Sp. p. 4212; Dr. p. 853; Gaz. vol. 136; p. 1823.
Rheostat. P. H. Zimmer. No. 901,512; Oct. 20; Sp. p. 3040; Dr. p. 621; Gaz. vol. 136; p. 1608.
Ring: *See* Finger-ring.
Road-machine attachment. J. T. Eady. No. 902,139; Oct. 27; Sp. p. 4323; Dr. p. 876; Gaz. vol. 136; p. 1841.
Rocker and standard chair, Combination. A. L. Haley. No. 902,395; Oct. 27; Sp. p. 4857; Dr. p. 983; Gaz. vol. 136; p. 1924.
Rocking-chair. J. Suva. No. 901,848; Oct. 20; Sp. p. 3725; Dr. p. 758; Gaz. vol. 136; p. 1716.
Rocking-chair, Nursery. A. D. Simmonds. No. 900,788; Oct. 13; Sp. p. 1530; Dr. p. 311; Gaz. vol. 136; p. 1335.
Rocking-chair, Rotary. G. G. Frey. No. 901,090; Oct. 13; Sp. p. 2140; Dr. p. 436; Gaz. vol. 136; p. 1433.
Rod: *See* Stair-rod.
Roll-cleaner. S. Coderre. No. 901,783; Oct. 20; Sp. p. 3618; Dr. p. 732; Gaz. vol. 136; p. 1697.
Roller. H. Brubaker. No. 901,873; Oct. 20; Sp. p. 3771; Dr. p. 766; Gaz. vol. 136; p. 1725.
Roller-mill feed mechanism. W. H. Smith. No. 900,790; Oct. 13; Sp. p. 1532; Dr. p. 312; Gaz. vol. 136; p. 1335.
Roller-press. E. Reagan. No. 900,205; Oct. 6; Sp. p. 279; Dr. pp. 55–7; Gaz. vol. 136; p. 1118.
Rolling-mill, Universal. F. I. Ellis. No. 901,233; Oct. 13; Sp. p. 2391; Dr. pp. 489–90; Gaz. vol. 136; p. 1477.
Rolling-mills, Screw-down mechanism for. E. J. McIlvried. No. 901,251; Oct. 13; Sp. p. 2421; Dr. pp. 496–7; Gaz. vol. 136; p. 1483.
Roofing material. G. D. Fust. No. 900,512; Oct. 6; Sp. p. 954; Gaz. vol. 136; p. 1217.
Roost and vermin-trap, Combined poultry-. W. W. Frantz. No. 902,393; Oct. 27; Sp. p. 4853; Dr. p. 982; Gaz. vol. 136; p. 1923.
Roost, Folding poultry-. E. A. Sigler. No. 901,843; Oct. 20; Sp. p. 3719; Dr. p. 756; Gaz. vol. 136; p. 1715.
Rotary cutter. C. F. Ball. No. 900,254; Oct. 6; Sp. p. 372; Dr. p. 77; Gaz. vol. 136; p. 1133.
Rotary cutter. C. F. Ball. No. 900,255; Oct. 6; Sp. p. 373; Dr. p. 77; Gaz. vol. 136; p. 1133.
Rotary engine. W. S. Minor. No. 900,410; Oct. 6; Sp. p. 713; Dr. pp. 148–9; Gaz. vol. 136; p. 1185.
Rotary engine. W. S. Moses. No. 901,813; Oct. 20; Sp. p. 3670; Dr. pp. 744–5; Gaz. vol. 136; p. 1706.
Rotary engine. J. E. Friend. No. 902,225; Oct. 27; Sp. p. 4506; Dr. pp. 912–13; Gaz. vol. 136; p. 1868.
Rotary engine. H. Lee. No. 902,239; Oct. 27; Sp. p. 4532; Dr. p. 918; Gaz. vol. 136; p. 1872.
Rotary engine. H. W. N. Cole. No. 902,472; Oct. 27; Sp. p. 5037; Dr. p. 1019; Gaz. vol. 136; p. 1950.
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Rotary pressure-motor. P. T. Cornell. No. 902,054; Oct. 27; Sp. p. 4160; Dr. p. 842; Gaz. vol. 136; p. 1813.
Rotary rake. E. M. Warrenfeltz. No. 902,187; Oct. 27; Sp. p. 4429; Dr. p. 896; Gaz. vol. 136; p. 1856.
Rotary sprinkler. T. S. and J. E. Stewart. No. 900,609; Oct. 6; Sp. p. 1160; Dr. p. 236; Gaz. vol. 136; p. 1250.
Rotary steam-engine. E. F. Edgar. No. 902,059; Oct. 27; Sp. p. 4167; Dr. pp. 843–5; Gaz. vol. 136; p. 1815.
Rotary vacuum-drier. J. O. Snyder and F. O. Clawson. No. 900,436; Oct. 6; Sp. p. 770; Dr. p. 159; Gaz. vol. 136; p. 1193.
Rotor construction. B. Elshoff. No. 900,839; Oct. 13; Sp. p. 1642; Dr. pp. 332–3; Gaz. vol. 136; p. 1353.
Routing-machine. F. P. Grode. No. 900,524; Oct. 6; Sp. p. 974; Dr. pp. 197–9; Gaz. vol. 136; p. 1221.
Routing-machine. R. Milne. No. 901,722; Oct. 20; Sp. p. 3494; Dr. p. 707; Gaz. vol. 136; p. 1677.
Rubber goods, Apparatus for curing or vulcanizing. E. Hopkinson and T. Midgley. No. 901,006; Oct. 13; Sp. p. 1988; Dr. p. 404; Gaz. vol. 136; p. 1407.
Rubber sandal. A. O. Bourn. No. 901,064; Oct. 13; Sp. p. 2094; Dr. p. 426; Gaz. vol. 136; p. 1425.
Rubber-stock machines, Attachment for. L. A. Wells. No. 900,628; Oct. 6; Sp. p. 1191; Dr. p. 244; Gaz. vol. 136; p. 1256.
Rug holder or stiffener. A. Danek. No. 901,693; Oct. 20; Sp. p. 3435; Dr. p. 667; Gaz. vol. 136; p. 1668.
Ruling machines, Diagonal-ruling attachment for paper-. J. E. Foster. No. 900,674; Oct. 6; Sp. p. 1292; Dr. p. 264; Gaz. vol. 136; p. 1272.
Sad-iron. J. M. Harper. No. 900,850; Oct. 13; Sp. p. 1662; Dr. p. 336; Gaz. vol. 136; p. 1356.
Sad-iron heater. H. W. Russell. No. 901,744; Oct. 20; Sp. p. 3534; Dr. p. 715; Gaz. vol. 136; p. 1685.
Sad-iron heater. G. W. Fallin. No. 901,797; Oct. 20; Sp. p. 3645; Dr. p. 737; Gaz. vol. 136; p. 1702.
Safe. J. Baum. No. 900,696; Oct. 13; Sp. p. 1344; Dr. p. 275; Gaz. vol. 136; p. 1306.
Safe. T. M. Brintnall and N. R. Doolittle. No. 902,051; Oct. 27; Sp. p. 4154; Dr. p. 842; Gaz. vol. 136; p. 1812.
Safe-door. D. H. Riggan. No. 900,311; Oct. 6; Sp. p. 510; Dr. p. 106; Gaz. vol. 136; p. 1153.
Safe or vault door. E. A. Strauss. No. 901,047; Oct. 13; Sp. p. 2060; Dr. p. 419; Gaz. vol. 136; p. 1419.
Safety-elevator. J. R. Norman. No. 900,878; Oct. 13; Sp. p. 1724; Dr. p. 348; Gaz. vol. 136; p. 1364.
Sail-hank. S. A. Jackson. No. 900,737; Oct. 13; Sp. p. 1425; Dr. p. 289; Gaz. vol. 136; p. 1319.
Salt-cellar. W. Bumm. No. 900,911; Oct. 13; Sp. p. 1794; Dr. p. 363; Gaz. vol. 136; p. 1375.
Salt for domestic and other uses, Preparation of common. G. T. Holloway. No. 902,403; Oct. 27; Sp. p. 4876; Gaz. vol. 136; p. 1927.
Sash automatic closing attachment, Window-. G. Schwing. No. 901,390; Oct. 20; Sp. p. 2763; Dr. p. 563; Gaz. vol. 136; p. 1567.
Sash-balance. S. E. Parks. No. 901,553; Oct. 20; Sp. p. 3118; Dr. p. 637; Gaz. vol. 136; p. 1621.
Sash-fastener. L. A. Bittorf. No. 900,079; Oct. 6; Sp. p. 11; Dr. p. 2; Gaz. vol. 136; p. 1076.
Sash-fastener. H. Atwater. No. 901,771; Oct. 20; Sp. p. 3591; Dr. p. 726; Gaz. vol. 136; p. 1693.
Sash lifting and locking appliance, Window-. T. E. Carter. No. 901,680; Oct. 20; Sp. p. 3374; Dr. p. 691; Gaz. vol. 136; p. 1662.
Sash-lock. C. L. Hobbs. No. 901,102; Oct. 13; Sp. p. 2168; Dr. p. 441; Gaz. vol. 136; p. 1436.
Sash-lock. W. D. Rankins. No. 901,470; Oct. 20; Sp. p. 2947; Dr. p. 601; Gaz. vol. 136; p. 1594.
Sash mechanism, Ventilator-. F. D. Moon. No. 901,544; Oct. 20; Sp. p. 3105; Dr. p. 634; Gaz. vol. 136; p. 1618.
Sash-weight. W. G. Withers. No. 901,053; Oct. 13; Sp. p. 2072; Dr. p. 421; Gaz. vol. 136; p. 1421.
Sash weight and pulley. R. D. Noe. No. 900,770; Oct. 13; Sp. p. 1494; Dr. p. 303; Gaz. vol. 136; p. 1329.
Sash-weights, Chill for. W. G. Standing. No. 901,656; Oct. 20; Sp. p. 3317; Dr. p. 681; Gaz. vol. 136; p. 1653.
Sash, Window-. M. F. Holbrook. No. 901,343; Oct. 20; Sp. p. 2636; Dr. p. 541; Gaz. vol. 136; p. 1549.
Saw for removing stumps. J. M. White. No. 901,505; Oct. 20; Sp. p. 3028; Dr. pp. 618–19; Gaz. vol. 136; p. 1606.
Saw mill, Twin band-. A. Mereen and A. E. Gagnon. No. 900,677; Oct. 6; Sp. p. 1305; Dr. pp. 267–8; Gaz. vol. 136; p. 1273.
Saw mills, Cant-centering device for twin-. A. Mereen and A. E. Gagnon. No. 902,502; Oct. 27; Sp. p. 5122; Dr. pp. 1036–7; Gaz. vol. 136; p. 1962.
Saw, Pruning-. P. Burdett. No. 900,661; Oct. 6; Sp. p. 1266; Dr. p. 259; Gaz. vol. 136; p. 1267.
Saw-table safety attachment. E. W. Cummings. No. 901,889; Oct. 20; Sp. p. 3799; Dr. p. 773; Gaz. vol. 136; p. 1730.
Saw-tool. T. E. Cookman. No. 900,666; Oct. 6; Sp. p. 1275; Dr. p. 260; Gaz. vol. 136; p. 1269.
Scaffold-bracket, Safety. J. R. Watt. No. 901,926; Oct. 20; Sp. p. 3869; Dr. p. 789; Gaz. vol. 136; p. 1742.
Scaffold-bracket, Self-clamping. F. H. Dettmann. No. 901,158; Oct. 13; Sp. p. 2262; Dr. p. 461; Gaz. vol. 136; p. 1454.
Scale. W. G. Templeton. No. 900,895; Oct. 13; Sp. p. 1756; Dr. pp. 355–6; Gaz. vol. 136; p. 1370.
Scale. W. G. Templeton. No. 900,896; Oct. 13; Sp. p. 1757; Dr. p. 357; Gaz. vol. 136; p. 1370.
Scale. W. G. Templeton. No. 902,266; Oct. 27; Sp. p. 4588; Dr. p. 932; Gaz. vol. 136; p. 1881.
Scale, Beam-. O. Jones. No. 901,911; Oct. 20; Sp. p. 3843; Dr. pp. 783–4; Gaz. vol. 136; p. 1737.
Scale, Coin-operated weighing-. H. S. Mills. No. 900,409; Oct. 6; Sp. p. 708; Dr. pp. 147–8; Gaz. vol 136; p. 1184.
Scale, Platform-. D. Lennox. No. 901,356; Oct. 20; Sp. p. 2671; Dr. p. 548; Gaz. vol. 136; p. 1554.

Scale, Weighing-. L. Jaenichen. No. 901,297; Oct. 13; Sp. p. 2538; Dr. p. 522; Gaz. vol. 136; p. 1498.
Scale, Weighing-. L. C. Ostendorf. No. 901,994; Oct. 27; Sp. p. 4049; Dr. p. 821; Gaz. vol. 136; p. 1795.
Scenic effect. D. H. Leas. No. 901,354; Oct. 20; Sp. p. 2666; Dr. p. 547; Gaz. vol. 136; p. 1553.
Scraper. W. P. Warren. No. 900,626; Oct. 6; Sp. p. 1188; Dr. pp. 243–4; Gaz vol. 136; p. 1255.
Scraper bracket, Brush and duck. W. B. Will. No. 902,270; Oct. 27; Sp. p. 4593; Dr. p. 933; Gaz. vol. 136; p. 1882.
Screen: *See* Awning reflector-screen; Window-screen.
Screen clamp, Coil-. J. McCrystal. No. 900,412; Oct. 6; Sp. p. 717; Dr. p. 150; Gaz. vol. 136; p. 1186.
Screening-machine. G. P. and P. D. Burke. No. 901,519; Oct. 20; Sp. p. 3059; Dr. p. 625; Gaz. vol. 136; p. 1611.
Screw-driver, Detachable-blade. T. J. Fegley. No. 902,387; Oct. 27; Sp. p. 4844; Dr. p. 980; Gaz. vol. 136; p. 1921.
Scrubber and polisher, Floor. T. Z. Maily and A. Peiz. No. 901,978; Oct. 27; Sp. p. 3994; Dr. p. 814; Gaz. vol. 136; p. 1790.
Sea-wall. F. O. Ray. No. 901,040; Oct. 13; Sp. p. 2049; Dr. p. 416; Gaz. vol. 136; p. 1417.
Seal, Car-. A. G. Malmstrom. No. 900,290; Oct. 6; Sp. p. 471; Dr. p. 97; Gaz. vol. 136; p. 1146.
Seal-lock. R. C. Pleins. No. 900,121; Oct. 6; Sp. p. 107; Dr. p. 22; Gaz. vol. 136; p. 1090.
Sealing-caps to bottles, Machine for securing. A. Jones. No. 900,550; Oct. 6; Sp. p. 1029; Dr. pp. 209–12; Gaz. vol. 136; p. 1230.
Sealing cigars, Means for. H. E. Lipscomb and A. H. Andrews. No. 902,240; Oct. 27; Sp. p. 4534; Dr. pp. 918–19; Gaz. vol. 136; p. 1872.
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Seaming apparatus, Straight-. O. W. Davis. No. 900,267; Oct. 6; Sp. p. 422; Dr. pp. 85–6; Gaz. vol. 136; p. 1137.
Seaming machine, Can-end-. H. H. Lyche and V. Odquist. No. 900,105; Oct. 6; Sp. p. 71; Dr. pp. 13–15; Gaz. vol. 136; p. 1086.
Secondary battery. W. Morrison. No. 900,571; Oct. 6; Sp. p. 1073; Dr. p. 220; Gaz. vol. 136; p. 1237.
Seines, Attachment for. N. L. Lerille. No. 902,419; Oct. 27; Sp. p. 4907; Dr. p. 994; Gaz. vol. 136; p. 1932.
Self-lubricating wheel. H. Atkinson. No. 901,846; Oct. 20; Sp. p. 3758; Dr. p. 764; Gaz. vol. 136; p. 1722.
Self-playing instrument. A. J. Bluntach. No. 900,824; Oct. 13; Sp. p. 1609; Dr. pp. 326–7; Gaz. vol. 136; p. 1348.
Self-registering gage. M. S. Shapleigh. No. 901,653; Oct. 20; Sp. p. 3311; Dr. p. 680; Gaz. vol. 136; p. 1652.
Separator: *See* Chaff-separator; Liquid-separator; Magnetic separator; Ore-separator.
Sewer-cap, Artificial-stone. E. F. Kennelly. No. 901,536; Oct. 20; Sp. p. 3087; Dr. p. 631; Gaz. vol. 136; p. 1616.
Sewing and trimming machine. G. Scott. No. 902,453; Oct. 27; Sp. p. 4998; Dr. pp. 1010–11; Gaz. vol. 136; p. 1944.
Sewing and trimming machine. J. Hayes, Jr., and J. Berger, Jr. No. 902,532; Oct. 27; Sp. p. 5190; Dr. p. 1049; Gaz. vol. 136; p. 1972.
Sewing-machine. F. Wever. No. 902,353; Oct. 27; Sp. p. 4791; Dr. p. 967; Gaz. vol. 136; p. 1912.
Sewing-machine bed-plate. C. Winkel. No. 901,052; Oct. 13; Sp. p. 2070; Dr. p. 421; Gaz. vol. 136; p. 1421.
Sewing-machine feeding mechanism. E. F. Durand. No. 901,792; Oct. 20; Sp. p. 3632; Dr. pp. 735–6; Gaz. vol. 136; p. 1700.
Sewing machine, Shoe-. F. Chateauneuf. No. 900,353; Oct. 6; Sp. p. 586; Dr. p. 121; Gaz. vol. 136; p. 1165.
Sewing-machines, Combined presser-foot and guide for. G. J. Stevens. No. 902,180; Oct. 27; Sp. p. 4414; Dr. p. 895; Gaz. vol. 136; p. 1854.
Sewing machines, Weft-channeling attachment for sole-. M. E. Haradon. No. 900,925; Oct. 13; Sp. p. 1826; Dr. p. 371; Gaz. vol. 136; p. 1380.
Shade and curtain bracket, Combined. Z. J. Standish. No. 902,342; Oct. 27; Sp. p. 4770; Dr. p. 962; Gaz. vol. 136; p. 1908.
Shade carrier, Window-. A. C. Van Erka. No. 901,398; Oct. 20; Sp. p. 2785; Dr. p. 566; Gaz. vol. 136; p. 1570.
Shade fixture, Adjustable window-. O. S. Brown. No. 900,477; Oct. 6; Sp. p. 867; Dr. p. 177; Gaz. vol. 136; p. 1207.
Shade tool, Window-. H. B. Kerr. No. 900,741; Oct. 13; Sp. p. 1431; Dr. p. 291; Gaz. vol. 136; p. 1320.
Shades and the like, Cord-fastener for. H. S. Hubbell. No. 902,082; Oct. 27; Sp. p. 4211; Dr. p. 853; Gaz. vol. 136; p. 1822.
Shaft or thill, Vehicle. G. A. Lambert. No. 900,288; Oct. 6; Sp. p. 466; Dr. p. 96; Gaz. vol. 136; p. 1145.
Shaft or tunnel boring mechanism. W. F. Wittich. No. 902,517; Oct. 27; Sp. p. 5150; Dr. p. 1043; Gaz. vol. 136; p. 1967.
Shafting, Apparatus for indicating the magnitude of the torque in. J. H. Gibson. No. 902,394; Oct. 27; Sp. p. 4854; Dr. pp. 982–3; Gaz. vol. 136; p. 1923.
Sharpener, Drill-. D. E. Gilson. No. 902,146; Oct. 27; Sp. p. 4335; Dr. p. 873; Gaz. vol. 136; p. 1843.
Sharpener, Scissors-. J. B. Carroll. No. 901,522; Oct. 20; Sp. p. 3064; Dr. p. 626; Gaz. vol. 136; p. 1612.
Sharpening disks and colters, Apparatus for. E. E. and W. E. Combs. No. 900,707; Oct. 13; Sp. p. 1366; Dr. p. 278; Gaz. vol. 136; p. 1309.
Sharpening drills or drill-bits, Apparatus for. W. E. Kimber. No. 902,416; Oct. 27; Sp. p. 4900; Dr. pp. 992–3; Gaz. vol. 136; p. 1931.
Shaving-mug. J. W. Dyer. No. 901,082; Oct. 13; Sp. p. 2127; Dr. p. 433; Gaz. vol. 136; p. 1430.
Shears: *See* Metal-shears.
Sheave-block. J. Bass. No. 901,144; Oct. 13; Sp. p. 2238; Dr. p. 455; Gaz. vol. 136; p. 1450.
Shed-ventilator. F. J. Nies. No. 901,120; Oct. 13; Sp. p. 2199; Dr. p. 447; Gaz. vol. 136; p. 1441.
Sheet metal, Cutting. A. Benson. No. 901,772; Oct. 20; Sp. p. 3593; Dr. p. 727; Gaz. vol. 136; p. 1693.
Sheet-metal-cutting machine. A. Benson. No. 901,773; Oct. 20; Sp. p. 3595; Dr. p. 727; Gaz. vol. 136; p. 1694.
Sheet metal, Method and machine for stretching slitted. F. J. Wendell. No. 900,902; Oct. 13; Sp. p. 1769; Dr. p. 359; Gaz. vol. 136; p. 1372.
Sheets of all kinds, Holder for. H. Müller and K. Specker. No. 902,433; Oct. 27; Sp. p. 4957; Dr. p. 1001; Gaz. vol. 136; p. 1937.
Sheets uniformly, Device for stretching. C. G. Johannesmeyer. No. 902,494; Oct. 27; Sp. p. 5093; Dr. p. 1031; Gaz. vol. 136; p. 1959.
Sheller: *See* Corn-sheller.
Shelves and tables, Detachable auxiliary holder for. G. Eggl. No. 901,598; Oct. 20; Sp. p. 3208; Dr. p. 657; Gaz. vol. 136, p. 1636.
Shingle-molding machine. W. Pugh. No. 900,778; Oct. 13; Sp. p. 1507; Dr. p. 306; Gaz. vol. 136; p. 1331.
Shoe. E. J. Lafond. No. 901,353; Oct. 20; Sp. p. 2666; Dr. p. 546; Gaz. vol. 136; p. 1553.
Shoe-cleaning apparatus. B. von Salviati. No. 902,254; Oct. 27; Sp. p. 4590; Dr. p. 926; Gaz. vol. 136; p. 1877.
Shoe for loggers, Safety-. G. L. Clement. No. 901,880; Oct. 20; Sp. p. 3782; Dr. p. 769; Gaz. vol. 136; p. 1727.
Shoe-polishing apparatus. E. M. Scranton. No. 901,265; Oct. 13; Sp. p. 2459; Dr. p. 505; Gaz. vol. 136; p. 1488.
Shoe-polishing machine. J. A. Brewer. No. 900,825; Oct. 13; Sp. p. 1615; Dr. p. 328; Gaz. vol. 136; p. 1348.
Shoe-protector. A. Eckhard, Jr. No. 900,499; Oct. 6; Sp. p. 928; Dr. p. 189; Gaz. vol. 136; p. 1213.
Shoe-shank-tacking machine. B. B. Waterman. (Reissue.) No. 12,870; Oct. 27; Sp. p. 5215; Dr. pp. 1053–4; Gaz vol. 136; p. 1975.
Shoe-uppers, Machine for snipping and cementing. H. I. Illingworth. No. 900,171; Oct. 6; Sp. p. 208; Dr. pp. 42–3; Gaz. vol. 136; p. 1106.
Shot for shotguns, Case-. B. Camet. No. 900,913; Oct. 13; Sp. p. 1796; Dr. p. 363; Gaz. vol. 136; p. 1376.
Shovel: *See* Steam-shovel.
Shovel. J. A. Southwell. No. 902,261; Oct. 27; Sp. p. 4574; Dr. p. 928; Gaz. vol. 136; p. 1879.
Shredder-feeder. J. B. Schuman. No. 902,334; Oct. 27; Sp. p. 4756; Dr. p. 960; Gaz. vol. 136; p. 1905.
Sifter, Ash-. G. Lange. No. 900,396; Oct. 6; Sp. p. 684; Dr. p. 140; Gaz. vol. 136; p. 1179.
Sifter, Ash-. H. S. Brewington. No. 900,826; Oct. 13; Sp. p. 1617; Dr. p. 328; Gaz. vol. 136; p. 1348.
Sign-displaying device. H. S. Lafond. No. 902,496; Oct. 27; Sp. p. 5096; Dr. p. 1032; Gaz. vol. 136; p. 1959.
Sign, Electric. H. J. Waiser. No. 902,028; Oct. 27; Sp. p. 4114; Dr. p. 833; Gaz. vol. 136; p. 1806.
Sign-exhibiting device, Changeable-. J. J. Metzger. No. 901,631; Oct. 20; Sp. p. 3271; Dr. pp. 670–1; Gaz. vol. 136; p. 1645.
Sign, Portable. C. T. Raymond. No. 900,580; Oct. 6; Sp. p. 1107; Dr. p. 227; Gaz. vol. 136; p. 1243.
Signal: *See* Car-signal; Railway-signal; Railway block-signal.
Signal apparatus. W. T. Moon. No. 900,679; Oct. 6; Sp. p. 1310; Dr. p. 269; Gaz. vol. 136; p. 1274.
Signal system. B. A. Slater and M. J. McDermott. No. 902,118; Oct. 27; Sp. p. 4285; Dr. pp. 908–9; Gaz. vol. 136; p. 1834.
Signalling device, Marine. M. Boyd. No. 901,677; Oct. 20; Sp. p. 3363; Dr. pp. 689–90; Gaz. vol. 136; p. 1661.
Signalling device, Selective. I. F. Manny. No. 902,099; Oct. 27; Sp. p. 4240; Dr. pp. 859–60; Gaz. vol. 136; p. 1828.
Signaling system, Selective. O. W. Hart. No. 901,441; Oct. 20; Sp. p. 2875; Dr. pp. 587–9; Gaz. vol. 136; p. 1585.
Silver from solution, Recovering. T. A. Rossi. No. 901,124; Oct. 13; Sp. p. 2206; Dr. p. 448; Gaz. vol. 136; p. 1443.
Sink drainer, Kitchen-. G. W. Knapp. No. 900,684; Oct. 6; Sp. p. 1323; Dr. p. 270; Gaz. vol. 136; p. 1274.
Sink-stopple. W. F. Schacht. No. 901,195; Oct. 13; Sp. p. 2325; Dr. p. 477; Gaz. vol. 136; p. 1466.
Siphon. J. Martin. No. 901,979; Oct. 27; Sp. p. 3997; Dr. p. 814; Gaz. vol. 136; p. 1791.
Siphon, Dispensing-. J. A. Schultz, Jr. No. 902,258; Oct. 27; Sp. p. 4567; Dr. pp. 927–8; Gaz. vol. 136; p. 1878.
Skate, Roller-. T. S. Leitch. No. 900,177; Oct. 6; Sp. p. 225; Dr. p. 46; Gaz. vol. 136; p. 1109.
Skate, Roller-. E. W. White. No. 901,136; Oct. 13; Sp. p. 2224; Dr. p. 453; Gaz. vol. 136; p. 1447.
Skillet-support. H. C. Ebert. No. 901,326; Oct. 20; Sp. p. 2601; Dr. p. 535; Gaz. vol. 136; p. 1543.
Skinning device. J. F. Nicolas. No. 900,300; Oct. 6; Sp. p. 486; Dr. p. 101; Gaz. vol. 136; p. 1149.
Skinning implement. A. W. Little. No. 901,016; Oct. 13; Sp. p. 2010; Dr. p. 408; Gaz. vol. 136; p. 1410.
Skip, Dumping-. W. D. Lockwood. No. 902,423; Oct. 27; Sp. p. 4944; Dr. p. 998; Gaz. vol. 136; p. 1934.
Skirt-marker. A. Geschwend and R. G. Cumber. No. 900,849; Oct. 13; Sp. p. 1660; Dr. p. 336; Gaz. vol. 136; p. 1356.
Skirt-marker. A. M. Sutton. No. 901,496; Oct. 20; Sp. p. 3012; Dr. p. 615; Gaz. vol. 136; p. 1603.
Skirt-marker. A. Waterman. No. 902,029; Oct. 27; Sp. p. 4115; Dr. p. 833; Gaz. vol. 136; p. 1806.
Skirt-supporter. N. C. Edwards. No. 901,327; Oct. 20; Sp. p. 2602; Dr. p. 535; Gaz. vol. 136; p. 1543.
Slag-granulating apparatus. I. C. Hoffman. No. 902,490; Oct. 27; Sp. p. 5083; Dr. p. 1030; Gaz. vol. 136; p. 1957.
Slate-picker. W. J. Devers. No. 900,087; Oct. 6; Sp. p. 28; Dr. p. 5; Gaz. vol. 136; p. 1079.
Sled and brake therefor, Bob-. E. G. Doland. No. 901,790; Oct. 20; Sp. p. 3628; Dr. p. 735; Gaz. vol. 136; p. 1699.
Sled-knee. R. S. Wells. No. 901,135; Oct. 13; Sp. p. 2223; Dr. p. 452; Gaz. vol. 136; p. 1446.
Sled-knuckle. O. Smith. No. 900,319; Oct. 6; Sp. p. 528; Dr. p. 110; Gaz. vol. 136; p. 1155.

Sleigh. E. Ferriss. No. 901,604; Oct. 20; Sp. p. 3215; Dr. p. 659; Gaz. vol. 136; p. 1637.
Sleigh. C. A. Wetmore. No. 902,488; Oct. 27; Sp. p. 5011; Dr. p. 1014; Gaz. vol. 136; p. 1945.
Sleigh-runner, Attachable. J. E. Hobbs. No. 901,342; Oct. 20; Sp. p. 2633; Dr. p. 541; Gaz. vol. 136; p. 1549.
Sleigh-runner attachment for vehicles. F. Korff. No. 901,937; Oct. 13; Sp. p. 1852; Dr. p. 377; Gaz. vol. 136; p. 1383.
Sleigh, Self-propelled. C. E. Tetreault. No. 902,345; Oct. 27; Sp. p. 4775; Dr. pp. 963–4; Gaz. vol. 136; p. 1909.
Slicing machine, Butter-. M. Leen. No. 900,107; Oct. 6; Sp. p. 70; Dr. p. 13; Gaz. vol. 136; p. 1086.
Slicing machine, Meat-. W. A. Van Berkel. No. 901,855; Oct. 20; Sp. p. 3741; Dr. pp. 760–1; Gaz. vol. 136; p. 1719.
Sliding jack. L. S. Page. No. 900,419; Oct. 6; Sp. p. 728; Dr. p. 152; Gaz. vol. 136; p. 1188.
Smelting copper ores. G. H. Benjamin. No. 900,346; Oct. 6; Sp. p. 575; Dr. p. 119; Gaz. vol. 136; p. 1163.
Smelting-furnace. G. A. Wettengel. No. 901,405; Oct. 20; Sp. p. 2797; Dr. p. 570; Gaz. vol. 136; p. 1572.
Smelting ores. R. Baggaley. No. 900,466; Oct. 6; Sp. p. 849; Dr. pp. 172–3; Gaz. vol. 136; p. 1203.
Smoke-consumer. W. M. Grant. No. 901,291; Oct. 13; Sp. p. 2525; Dr. p. 519; Gaz. vol. 136; p. 1497.
Smoking-pipe. W. O. Campbell. No. 900,482; Oct. 6; Sp. p. 873; Dr. p. 178; Gaz. vol. 136; p. 1208.
Smoking-pipe. W. R. Kaufman. No. 901,915; Oct. 20; Sp. p. 3849; Dr. p. 785; Gaz. vol. 136; p. 1738.
Snap-fastener socket. E. D. Simons. No. 900,789; Oct. 13; Sp. p. 1531; Dr. p. 311; Gaz. vol. 136; p. 1335.
Snatch-block. C. M. Talmadge and P. M. Veibell. No. 900,894; Oct. 13; Sp. p. 1754; Dr. p. 355; Gaz. vol. 136; p. 1369.
Snow-storm, Device for producing the representation of a. E. C. Bruen. No. 901,319; Oct. 20; Sp. p. 2583; Dr. p. 532; Gaz. vol. 136; p. 1540.
Soap composition. J. Sierra V. No. 901,204; Oct. 13; Sp. p. 2345; Gaz. vol. 136; p. 1469.
Soap-powdering machine. W. Tillson. No. 900,067; Oct. 13; Sp. p. 1915; Dr. p. 389; Gaz. vol. 136; p. 1393.
Socket-wrench, Adjustable. E. C. Nagel. No. 900,766; Oct. 13; Sp. p. 1472; Dr. p. 300; Gaz. vol. 136; p. 1327.
Soil, Treating the. P. Diaz, Hijo. No. 901,078; Oct. 13; Sp. p. 2121; Dr. p. 432; Gaz. vol. 136; p. 1429.
Soldering-iron, Self-heating. F. J. Mann. No. 900,561; Oct. 6; Sp. p. 1057; Dr. p. 217; Gaz. vol. 136; p. 1234.
Sole-leveling machine. E. E. Winkler. No. 900,248; Oct. 6; Sp. p. 357; Dr. pp. 74–5; Gaz. vol. 136; p. 1131.
Solutions, Precipitating and recovering materials from. C. W. Merrill. No. 900,186; Oct. 6; Sp. p. 240; Dr. p. 49; Gaz. vol. 135; p. 1112.
Sound-box. J. S. Kerr. No. 901,713; Oct. 20; Sp. p. 3479; Dr. p. 704; Gaz. vol. 136; p. 1675.
Sound recording and reproducing instrument. G. Kirkegaard. No. 900,392; Oct. 6; Sp. p. 677; Dr. p. 139; Gaz. vol. 136; p. 1178.
Sound-reproducer. W. A. Chapman. No. 901,782; Oct. 20; Sp. p. 3615; Dr. p. 732; Gaz. vol. 136; p. 1697.
Sound-reproducing records, Making. F. W. H. Clay. No. 900,706; Oct. 13; Sp. p. 1361; Dr. pp. 277–8; Gaz. vol. 136; p. 1309.
Sound-tube. I. W. Norcross. No. 900,877; Oct. 13; Sp. p. 1721; Dr. p. 348; Gaz. vol. 136; p. 1363.
Spark-arrester. A. Hall. No. 901,807; Oct. 20; Sp. p. 3661; Dr. p. 742; Gaz. vol. 136; p. 1704.
Spark-plug attachment. F. D. Casey. No. 902,373; Oct. 27; Sp. p. 4822; Dr. p. 974; Gaz vol. 136; p. 1917.
Speed-changing device. J. Riddell. No. 902,538; Oct. 27; Sp. p. 5206; Dr. p. 1051; Gaz. vol. 136; p. 1974.
Speed-indicator. J. L. Hall. No. 902,074; Oct. 27; Sp. p. 4197; Dr. p. 851; Gaz. vol. 136; p. 1820.
Speed transmission mechanism, Variable-. A. Latham. No. 900,675; Oct. 6; Sp. p. 1294; Dr. pp. 264–5; Gaz. vol. 136; p. 1272.
Spike-extractor. W. Wolfe. No. 900,338; Oct. 6; Sp. p. 561; Dr. p. 117; Gaz. vol. 136; p. 1160.
Spike-lock. A Smith. No. 900,318; Oct. 6; Sp. p. 527; Dr. p. 109; Gaz. vol. 136; p. 1155.
Spindle: *See* Axle-spindle.
Spindle. C. R. Hone. No. 900,928; Oct. 13; Sp. p. 1836; Dr. p. 374; Gaz. vol. 136; p. 1381.
Spindle-driving mechanism. H. Allen. No. 901,515; Oct. 20; Sp. p. 3051; Dr. p. 623; Gaz. vol. 136; p. 1609.
Spinning and twisting frames, Appliance for cleaning the delivery-rollers of mule. W. A. Cordingley. No. 901,784; Oct. 20; Sp. p. 3620; Dr. p. 733; Gaz. vol. 136; p. 1697.
Spinning and twisting machines, Flier for. G. L. Brownell. No. 901,226; Oct. 13; Sp. p. 2375; Dr. p. 486; Gaz. vol. 136; p. 1475.
Spinning-mule. J. J. McGilncy. No. 902,316; Oct. 27; Sp. p. 4703; Dr. p. 952; Gaz. vol. 136; p. 1897.
Spinning or twisting apparatus. A. E. Rhoades. No. 900,592; Oct. 6; Sp. p. 1109; Dr. p. 228; Gaz. vol. 136; p. 1244.
Spool-case. C. J. Alfred. No. 900,464; Oct. 6; Sp. p. 847; Dr. p. 172; Gaz. vol. 136; p. 1202.
Spool-holder, Factory. A. S. Nichols. No. 902,247; Oct. 27; Sp. p. 4550; Dr. p. 923; Gaz. vol. 136; p. 1875.
Spot-setting machine. E. A. Barber. No. 900,694; Oct. 13; Sp. p. 1339; Dr. pp. 273–4; Gaz. vol. 136; p. 1306.
Spraying apparatus, Liquid-. H. L. Doherty. No. 901,597; Oct. 20; Sp. p. 3206; Dr. p. 657; Gaz. vol. 136; p. 1635.
Spreading device. J. A. Birsfield. No. 901,673; Oct. 20; Sp. p. 3354; Dr. p. 687; Gaz. vol. 136; p. 1659.
Spring: *See* Automobile-spring; Bed-spring.
Spring-support. T. J. Fay and J. M. Ellsworth. No. 901,162; Oct. 13; Sp. p. 2267; Dr. p. 462; Gaz. vol. 136; p. 1455.
Spring-wheel. J. E. Stannard. No. 901,751; Oct. 20; Sp. p. 3549; Dr. pp. 718–19; Gaz. vol. 136; p. 1687.
Springwork. J. A. Staples. No. 902,011; Oct. 27; Sp. p. 4076; Dr. p. 827; Gaz. vol. 136; p. 1800.
Sprinkler: *See* Automatic sprinkler; Rotary sprinkler.
Square, Try-. J. W. Fry and C. W. Fisher. No. 900,995; Oct. 13; Sp. p. 1965; Dr. p. 400; Gaz. vol. 136; p. 1403.
Stacker, Hay-. J. Dain. No. 901,073; Oct. 13; Sp. p. 2106; Dr. pp. 429–30; Gaz. vol. 136; p. 1428.
Stacker, Hay-. J. Dain. No. 901,156; Oct. 13; Sp. p. 2255; Dr. pp. 459–60; Gaz. vol. 136; p. 1454.
Stacker, Straw-. E. G. Clymans and M. A. Flautt. No. 901,882; Oct. 20; Sp. p. 3786; Dr. pp. 770–1; Gaz. vol. 136; p. 1727.
Stacker, Straw-. E. G. Clymans and A. M. Hess. No. 901,884; Oct. 20; Sp. p. 3792; Dr. p. 772; Gaz. vol. 136; p. 1728.
Stacker, Straw-. E. G. Clymans and A. M. Hess. No. 901,885; Oct. 20; Sp. p. 3796; Dr. p. 773; Gaz. vol. 136; p. 1729.
Stage-pocket. G. L. Patterson. No. 901,034; Oct. 13; Sp. p. 2039; Dr. p. 414; Gaz. vol. 136; p. 1416.
Stair-rod. A. Davis. No. 900,358; Oct. 6; Sp. p. 594; Dr. p. 123; Gaz. vol. 136; p. 1166.
Stair-rod. W. G. Altland. No. 902,461; Oct. 27; Sp. p. 5015; Dr. pp. 1013–14; Gaz. vol. 136; p. 1946.
Stalk-breaker. D. P. Shaw. No. 902,116; Oct. 27; Sp. p. 4282; Dr. p. 868; Gaz. vol. 136; p. 1833.
Stamp-affixer. G. B. Smith and I. Robbins. No. 902,179; Oct. 27; Sp. p. 4410; Dr. p. 894; Gaz. vol. 136; p. 1854.
Stamp-mill tappet. M. P. Boss. No. 901,417; Oct. 20; Sp. p. 2825; Dr. p. 577; Gaz. vol. 136; p. 1576.
Stamp, Time-. F. Purdy. No. 901,409; Oct. 20; Sp. p. 2942; Dr. p. 601; Gaz. vol. 136; p. 1594.
Stamping and numbering machine. E. W. Crossan. No. 902,378; Oct. 27; Sp. p. 4828; Dr. p. 976; Gaz. vol. 136; p. 1918.
Stanchion, Cattle-. F. Neumeister and H. C. Burhop. No. 901,366; Oct. 20; Sp. p. 2691; Dr. p. 552; Gaz. vol. 136; p. 1558.
Stand: *See* Calendar-stand; Collapsible stand; Folding stand; Hammock-stand; Switch-stand.
Stand-pipe. F. N. Whitesell. No. 900,141; Oct. 6; Sp. p. 144; Dr. p. 30; Gaz. vol. 136; p. 1096.
Stay for garments and the like. J. R. Dean. No. 901,426; Oct. 20; Sp. p. 2846; Dr. p. 581; Gaz. vol. 136; p. 1579.
Steam-boiler. J. N. Leach. No. 901,301; Oct. 13; Sp. p. 2542; Dr. p. 523; Gaz. vol. 136; p. 1499.
Steam-engine. G. E. Riblet. No. 901,472; Oct. 20; Sp. p. 2950; Dr. pp. 602–3; Gaz. vol. 136; p. 1594.
Steam equalizer and separator. D. M. Stott. No. 902,016; Oct. 27; Sp. p. 4087; Dr. p. 829; Gaz. vol. 136; p. 1802.
Steam-service controlling and recording apparatus. G. M. Hilger. No. 900,540; Oct. 6; Sp. p. 1005; Dr. pp. 204–5; Gaz. vol. 136; p. 1227.
Steam-shovel. C. F. Hinkley. No. 901,101; Oct. 13; Sp. p. 2166; Dr. pp. 440–1; Gaz. vol. 136; p. 1436.
Steam-trap. C. E. Vance. No. 900,329; Oct. 6; Sp. p. 547; Dr. p. 113; Gaz. vol. 136; p. 1158.
Steam-trap. A. L. Riggs. No. 901,190; Oct. 13; Sp. p. 2316; Dr. p. 475; Gaz. vol. 136; p. 1464.
Steam-trap. T. R. Whittaker. No. 902,355; Oct. 27; Sp. p. 4794; Dr. p. 967; Gaz. vol. 136; p. 1912.
Steam-trap for radiators. F. L. Watson. No. 902,126; Oct. 27; Sp. p. 4298; Dr. p. 871; Gaz. vol. 136; p. 1836.
Steam-trap, Return. H. V. Pearce. No. 902,321; Oct. 27; Sp. p. 4713; Dr. p. 954; Gaz. vol. 136; p. 1900.
Steamer, Grain-. K. Dougan. No. 900,836; Oct. 13; Sp. p. 1633; Dr. p. 330; Gaz. vol. 136; p. 1352.
Steaming apparatus. H. F. Belz. No. 902,366; Oct. 27; Sp. p. 4813; Dr. p. 972; Gaz. vol. 136; p. 1916.
Steel from chromiferous pig-iron, Manufacturing. F. D. Carney. No. 902,052; Oct. 27; Sp. p. 4156; Gaz. vol. 136; p. 1813.
Steel, Manufacture of. S. Stapleford and J. F. Wagner. No. 902,010; Oct. 27; Sp. p. 4076; Gaz. vol. 136; p. 1800.
Steel, Manufacturing. J. W. Maxwell. No. 900,564; Oct. 6; Sp. p. 1063; Gaz. vol. 136; p. 1235.
Steering apparatus control mechanism. F. M. Leavitt. No. 901,355; Oct. 20; Sp. p. 2668; Dr. p. 547; Gaz. vol. 136; p. 1554.
Stereotype-bases, Producing. J. L. Lee. No. 901,111; Oct. 13; Sp. p. 2184; Dr. pp. 443–4; Gaz. vol. 136; p. 1439.
Stevedore-rig. J. Knuppel. No. 900,655; Oct. 6; Sp. p. 1324; Dr. p. 270; Gaz. vol. 136; p. 1276.
Stiffening-strip. A. A. Ackerman. No. 902,194; Oct. 27; Sp. p. 4438; Dr. p. 898; Gaz. vol. 136; p. 1858.
Still, Turpentine-. F. F. Quinker. No. 900,203; Oct. 6; Sp. p. 276; Dr. p. 55; Gaz. vol. 136; p. 1117.
Stirrup. R. E. H. Johnson. No. 901,909; Oct. 20; Sp. p. 3838; Dr. p. 782; Gaz. vol. 136; p. 1736.
Stirrup, Safety-. S. A. Hall. No. 902,397; Oct. 27; Sp. p. 4863; Dr. p. 985; Gaz. vol. 136; p. 1924.
Stock and die. J. F. Trotter and H. A. Crevier. No. 900,617; Oct. 6; Sp. p. 1174; Dr. p. 240; Gaz. vol. 136; p. 1253.
Stock-fountain. E. E. Norquist. No. 901,730; Oct. 20; Sp. p. 3512; Dr. p. 710; Gaz. vol. 136; p. 1680.
Stocking-supporter. T. Papworth. No. 901,734; Oct. 20; Sp. p. 3518; Dr. p. 712; Gaz. vol. 136; p. 1681.
Stocking-suspender. H. Dahms. No. 901,155; Oct. 13; Sp. p. 2254; Dr. p. 459; Gaz. vol. 136; p. 1454.
Stone-polishing wheel. M. Pembroke. No. 900,947; Oct. 13; Sp. p. 1870; Dr. p. 381; Gaz. vol. 136; p. 1386.
Stone-sawing machine. A. Jones. No. 901,175; Oct. 13; Sp. p. 2290; Dr. p. 467; Gaz. vol. 136; p. 1459.
Stone veneer, Making artificial variegated. J. Tully. No. 900,801; Oct. 13; Sp. p. 1550; Gaz. vol. 136; p. 1339.
Stone walls, Machine for forming artificial-. J. Brewer. No. 900,261; Oct. 6; Sp. p. 406; Dr. p. 82; Gaz. vol. 136; p. 1135.
Stool, Folding. G. S. Hutchinson. No. 901,904; Oct. 20; Sp. p. 3832; Dr. pp. 780–1; Gaz. vol. 136; p. 1735.
Stop and waste, Reversible compression. W. G. Rowell. No. 901,481; Oct. 20; Sp. p. 2981; Dr. p. 607; Gaz. vol. 136; p. 1598.

Stopper: *See* Bottle-stopper.
Storage apparatus. T. C. Kennedy. No. 902,302; Oct. 27; Sp. p. 4659; Dr. p. 945; Gaz. vol. 136; p. 1868.
Storage-receptacle. O. K. Harry. No. 900,166; Oct. 6; Sp. p. 300; Dr. p. 41; Gaz. vol. 136; p. 1105.
Store-fixture. J. M. Walker. No 901,665; Oct. 20; Sp. p. 3332; Dr. pp. 684–5; Gaz. vol. 136; p. 1656.
Storing and display case. G. A. McNamar. No. 901,638; Oct. 20; Sp. p. 3286; Dr. p. 674; Gaz. vol. 136; p. 1648.
Stove, Gas-. C. F. and F. L. Grady. No. 900,998; Oct. 13; Sp. p. 1971; Dr. p. 401; Gaz. vol. 136; p. 1404.
Stove, Heating-. C. F. Minnick. No. 901,985; Oct. 27; Sp. p. 4035; Dr. p. 818; Gaz. vol. 136; p. 1792.
Stove-lid lifter. A. Smith. No. 901,844; Oct. 20; Sp. p. 3720; Dr. p. 756; Gaz. vol. 136; p. 1715.
Stove or range. D. D. Berry. No. 900,821; Oct. 13; Sp. p. 1606; Dr. p. 325; Gaz. vol. 136; p. 1347.
Stove-oven, Illuminated. F. Santoski. No. 900,211; Oct. 6; Sp. p. 202; Dr. p. 59; Gaz. vol. 136; p. 1119.
Stove, Wood-burning. G. G. Kalser. No. 900,584; Oct. 6; Sp. p. 658; Dr. p. 135; Gaz. vol. 136; p. 1175.
Stoves or to the gas-rings used for heating pots, irons, &c., Hot-water-service attachment to the burners of gas heater. J. J. Strain. No. 902,119; Oct. 27; Sp. p. 4288; Dr. p. 869; Gaz. vol. 136; p. 1834.
Strainer, Gasolene-. O. Zschoge. No. 900,638; Oct. 6; Sp. p. 1213; Dr. p. 246; Gaz. vol. 136; p. 1259.
Strainer, Gutter-. H. Dixon. No. 901,526; Oct. 20; Sp. p. 3070; Dr. p. 627; Gaz. vol. 136; p. 1613.
Straw holder and dispenser. H. C. Mayes. No. 900,866; Oct. 13; Sp. p. 1696; Dr. pp. 342–3; Gaz. vol. 136; p. 1360.
Street-sweeper. L. A. Crozier. No. 901,154; Oct. 13; Sp. p. 2252; Dr. p. 458; Gaz. vol. 136; p. 1453.
Street-washing machine. T. M. Murphy. No. 900,870; Oct. 13; Sp. p. 1704; Dr. pp. 344–5; Gaz. vol. 136; p. 1362.
Strip-feeding mechanism. C. E. Brooks. No. 901,517; Oct. 20; Sp. p. 3053; Dr. pp. 623–4; Gaz. vol. 136; p. 1610.
Structure, Reinforced. D. W. Norton. No. 901,551; Oct. 20; Sp. p. 3117; Dr. p. 636; Gaz. vol. 136; p. 1621.
Stud, Lacing-. L. B. Davis. No. 901,094; Oct. 20; Sp. p. 3436; Dr. p. 697; Gaz. vol. 136; p. 1668.
Stuffing-box. W. J. Weinman. No. 902,352; Oct. 27; Sp. p. 4790; Dr. p. 967; Gaz. vol. 136; p. 1912.
Submarine operations, Apparatus for. F. H. Jackson. No. 901,104; Oct. 13; Sp. p. 2171; Dr. pp. 441–2; Gaz. vol. 136; p. 1437.
Sugar-juices, Purification of. C. H. Bertels. No. 901,147; Oct. 13; Sp. p. 2243; Gaz. vol. 136; p. 1451.
Suit-hanger. E. L. Henderson. No. 901,002; Oct. 13; Sp. p. 1979; Dr. p. 402; Gaz. vol. 136; p. 1406.
Superheater. H. B. Oatley. No. 902,440; Oct. 27; Sp. p. 4968; Dr. pp. 1003–4; Gaz. vol. 136; p. 1939.
Supervisory system. M. S. Conner. No. 901,683; Oct. 20; Sp. p. 3379; Dr. p. 602; Gaz. vol. 136; p. 1663.
Supporting mechanism. G. Cutter. No. 900,265; Oct. 6; Sp. p. 415; Dr. pp. 84–5; Gaz. vol. 136; p. 1137.
Surgical instrument. W. H. Barnes. No. 900,243; Oct. 6; Sp. p. 571; Dr. p. 118; Gaz. vol. 136; p. 1162.
Surgical table. S. M. Langworthy. No. 901,628; Oct. 20; Sp. p. 3265; Dr. pp. 669–70; Gaz. vol. 136; p. 1644.
Suspenders. W. C. Fisher. No. 900,990; Oct. 6; Sp. p. 37; Dr. pp. 6–7; Gaz. vol. 136; p. 1080.
Suspenders. W. Freeman. No. 900,921; Oct. 13; Sp. p. 1816; Dr. p. 368; Gaz. vol. 136; p. 1378.
Swing. M. E. Best. No. 900,649; Oct. 6; Sp. p. 1240; Dr. p. 254; Gaz. vol. 136; p. 1263.
Swing. J. Follmer and J. Wlacofsky. No. 902,496; Oct. 27; Sp. p. 5070; Dr. p. 1026; Gaz. vol. 136; p. 1955.
Swings, benches, &c., Anchor and base-plate for lawn. A. W. H. Weber. No. 901,761; Oct. 20; Sp. p. 3568; Dr. p. 722; Gaz. vol. 136; p. 1690.
Switch: *See* Electric switch; Electrically-controlled switch; Oil-switch; Railway-switch; Telephone hook-switch; Two-button switch.
Switch-box, Universal. W. M. Brown. No. 901,776; Oct. 20; Sp. p. 3603; Dr. pp. 729–30; Gaz. vol. 136; p. 1695.
Switch-frog. H. F. Roach. No. 902,451; Oct. 27; Sp. p. 4987; Dr. pp. 1009–10; Gaz. vol. 136; p. 1943.
Switch-frogs, guard-rails, &c., Foot-blocking for. C. Raiter. No. 900,883; Oct. 13; Sp. p. 1734; Dr. p. 350; Gaz. vol. 136; p. 1365.
Switch-keys, Bank of locking. E. R. Corwin and C. A. Bals. No. 902,275; Oct. 27; Sp. p. 4808; Dr. p. 937; Gaz. vol. 136; p. 1854.
Switch mechanism. J. B. Wiard. No. 902,033; Oct. 27; Sp p. 4120; Dr. p. 834; Gaz. vol. 136; p. 1807.
Switch mechanism and train-carried actuating means therefor. E. Haas. No. 900,367; Oct. 6; Sp. p. 615; Dr. pp. 127–8; Gaz. vol. 136; p. 1169.
Switch-point retaining device. A. R. Murray. No. 901,726; Oct. 20; Sp. p. 3504; Dr. pp. 706–9; Gaz. vol. 136; p. 1679.
Switch-point thrower. R. Pasquale. No. 902,249; Oct. 27; Sp. p. 4553; Dr. p. 924; Gaz. vol. 136; p. 1875.
Switch-points, Connecting-rod for. J. E. Lewis. No. 900,750; Oct. 13; Sp. p. 1446; Dr. p. 294; Gaz. vol. 136; p. 1322.
Switch-stand. H. S. Goughnour. No. 901,804; Oct. 20; Sp. p. 3657; Dr. p. 741; Gaz. vol. 136; p. 1704.
Switch stand and lock. J. W. Torpey. No. 900,131; Oct. 6; Sp. p. 128; Dr. p. 27; Gaz. vol. 136; p. 1093.
Switch structure. H. C. Stiff. No. 901,752; Oct. 20; Sp. p. 3551; Dr. p. 719; Gaz. vol. 136; p. 1687.
Switch structure. H. S. Goughnour. No. 901,803; Oct. 20; Sp. p. 3656; Dr. p. 740; Gaz. vol. 136; p. 1703.
Switch-throwing mechanism. J. N. Fowler. No. 901,089; Oct. 13; Sp. p. 2136; Dr. p. 436; Gaz. vol. 136; p. 1432.
Switchboard. M. S. Conner. No. 901,688; Oct. 20; Sp. p. 3414; Dr. p. 604; Gaz. vol. 136; p. 1667.
Switchboard jack, Multiple-. J. A. Birsfield. No. 901,672; Oct. 20; Sp. p. 3352; Dr. p. 667; Gaz. vol. 136; p. 1659.
Syringe. K. L. Mayers. No. 900,182; Oct. 6; Sp. p. 234; Dr. p. 47; Gaz. vol. 136; p. 1110.
Syringe. A. H. C. Heitman. No. 900,100; Oct. 13; Sp. p. 2165; Dr. p. 440; Gaz. vol. 136; p. 1435.
Syringe, Vaginal. K. L. Mayers and M. B. Bemas. No. 900,565; Oct. 6; Sp. p. 1064; Dr. p. 218; Gaz. vol. 136; p. 1235.
Table: *See* Billiard-table; Concentrating-table; Foldable table; Folding table; Ironing-table; Surgical table; Type-writer table.
Table. H. Kardos. No. 901,914; Oct. 20; Sp. p. 3845; Dr. p. 785; Gaz. vol. 136; p. 1738.
Table and bed, Combined. E. P. Smith. No. 902,007; Oct. 27; Sp. p. 4070; Dr. p. 826; Gaz. vol. 136; p. 1799.
Table lock, Extension-. C. S. Burton. No. 901,951; Oct. 27; Sp. p. 3937; Dr. p. 803; Gaz. vol. 136; p. 1781.
Table locking device, Extension-. F. Tyden. No. 900,230; Oct. 6; Sp. p. 337; Dr. pp. 70–1; Gaz. vol. 136; p. 1128.
Table-pad, Sectional. O. Winter. No. 902,037; Oct. 27; Sp. p. 4128; Dr. p. 836; Gaz. vol. 136; p. 1808.
Table slide, Extension-. O. G. Franks. No. 900,509; Oct. 6; Sp. p. 948; Dr. pp. 192–3; Gaz. vol. 136; p. 1216.
Table slide, Extension-. O. G. Franks. No. 902,362; Oct. 27; Sp. p. 4851; Dr. p. 981; Gaz. vol. 136; p. 1928.
Tablet-forming machine. B. W. Scott. No. 901,937; Oct. 20; Sp. p. 3900; Dr. pp. 795–6; Gaz. vol. 136; p. 1746.
Tablet-machine. E. L. Richards. No. 900,957; Oct. 13; Sp. p. 1895; Dr. pp. 385–6; Gaz. vol. 136; p. 1390.
Talking-machine. W. A. Chapman. No. 901,781; Oct. 20; Sp. p. 3611; Dr. p. 732; Gaz. vol. 136; p. 1696.
Talking-machine sound-box. L. F Douglass. No. 902,280; Oct. 27; Sp p. 4617; Dr. p. 938; Gaz. vol. 136; p. 1886.
Tank: *See* Fixing and washing tank; Flush-tank; Ice-tank.
Tank-closure, Non-explosive. W. H. McNutt. No. 900,763; Oct. 13; Sp. p. 1468; Dr. p. 299; Gaz. vol. 136; p. 1326.
Tanning-ooze. G. A. Sweetman. No. 901,564; Oct. 20; Sp. p. 3140; Gaz. vol. 136; p. 1625.
Tape-reel. P. Ferber. No. 901,896; Oct. 20; Sp. p. 3813; Dr. p. 777; Gaz. vol. 136; p. 1732.
Tape-reel. P. Ferber. No. 901,897; Oct. 20; Sp. p. 3815; Dr. p. 777; Gaz. vol. 136; p. 1733.
Target-practice apparatus. H. A. Stebbins. No. 900,607; Oct. 6; Sp. p. 1150; Dr. pp. 235–6; Gaz. vol. 136; p. 1249.
Teeth for filling, Treating. F. Armstrong. No. 902,462; Oct. 27; Sp. p. 5016; Dr. p. 1014; Gaz. vol. 136; p. 1946.
Telegraph-key. J. Z. and L. V. Tucker. No. 900,238; Oct. 6; Sp. p. 336; Dr. p. 70; Gaz. vol. 136; p. 1128.
Telegraphic-code condenser. M. B. Dickie. No. 901,957; Oct. 27; Sp. p. 3947; Dr. p. 805; Gaz. vol. 136; p. 1783.
Telegraphic relay. I. Kitsee. No. 900,553; Oct. 6; Sp. p. 1039; Dr. p. 213; Gaz. vol. 136; p. 1232.
Telegraphic sounder. V. C. de Ybarrondo. No. 901,861; Oct. 20; Sp. p. 3750; Dr. p. 762; Gaz. vol. 136; p. 1721.
Telegraphone principle, Apparatus for recording and reproducing by the. H. R. Stuart. No. 901,307; Oct. 20; Sp. p. 2783; Dr. p. 565; Gaz. vol. 136; p. 1570.
Telegraphy. L. M. Potts. No. 901,372; Oct. 20; Sp. p. 2702; Dr. p. 555; Gaz. vol. 136; p. 1560.
Telegraphy, Space. O. C. Roos. No. 901,649; Oct. 20; Sp. p. 3304; Dr. pp. 678–9; Gaz. vol. 136; p. 1651.
Telephone and other circuits, Microphone apparatus for. Q. Majorana. No. 901,977; Oct. 27; Sp. p. 3986; Dr. p. 813; Gaz. vol. 136; p. 1769.
Telephone-call indicator. E. T. Ducharme. No. 901,904; Oct. 20; Sp. p. 3810; Dr. p. 776; Gaz. vol. 136; p. 1732.
Telephone-circuit, Subscriber's. H. M. Post. No. 901,736; Oct. 20; Sp. p. 3525; Dr. p. 713; Gaz. vol. 136; p. 1683.
Telephone desk set. R. H. Manson. No. 900,404; Oct. 6; Sp. p. 698; Dr. pp. 144–5; Gaz. vol. 136; p. 1182.
Telephone-exchange system. W. W. Dean. No. 900,489; Oct. 6; Sp. p. 860; Dr. pp. 180–1; Gaz vol. 136; p. 1209.
Telephone-exchange system. R. H. Manson. No. 900,676; Oct. 6; Sp. p. 1300; Dr. pp. 266–7; Gaz. vol. 136; p. 1273.
Telephone-exchange system. M. S. Conner. No. 901,684; Oct. 20; Sp. p. 3385; Dr. pp. 602–3; Gaz. vol. 136; p. 1664.
Telephone-exchange system. M. S. Conner. No. 901,685; Oct. 20; Sp. p. 3396; Dr. p. 603; Gaz. vol. 136; p. 1665.
Telephone-exchange system. M. S. Conner. No. 901,686; Oct. 20; Sp. p. 3405; Dr. p. 603; Gaz. vol. 136; p. 1665.
Telephone-exchange system. M. S. Conner. No. 901,689; Oct. 20; Sp. p. 3416; Dr. p. 604; Gaz. vol. 136; p. 1667.
Telephone-exchange system. W. M. Davis. No. 901,696; Oct. 20; Sp. p. 3439; Dr. p. 607; Gaz. vol. 136; p. 1669.
Telephone-exchange system, Automatic. B. G. Dunham. No. 901,606; Oct. 20; Sp. p. 3443; Dr. pp. 608–9; Gaz. vol. 136; p. 1670.
Telephone-exchange system, Multiparty-line. G. Babcock. No. 901,689; Oct. 20; Sp. p. 3541; Dr. p. 686; Gaz. vol. 136; p. 1687.
Telephone hook-switch. H. Tideman. No. 901,212; Oct. 13; Sp. p. 2355; Dr. p. 462; Gaz. vol. 136; p. 1471.
Telephone hook-switch. H. Tideman. No. 901,213; Oct. 13; Sp. p. 2356; Dr. p. 462; Gaz. vol. 136; p. 1471.
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Telephone installations, Apparatus for. C. A. Simpson. No. 901,127; Oct. 13; Sp. p. 2210; Dr. p. 449; Gaz. vol. 136; p. 1444.
Telephone-receiver. A. G. Kaufman and L. J. Lippmann. No. 900,567; Oct. 6; Sp. p. 665; Dr. pp. 136–7; Gaz. vol. 136; p. 1176.
Telephone-receiver holder. G. J. Thomas. No. 901,850; Oct. 20; Sp. p. 3728; Dr. p. 758; Gaz. vol. 136; p. 1714.
Telephone-relay. E. F. W. Alexanderson. No. 902,104; Oct. 27; Sp. p. 4440; Dr. p. 898; Gaz. vol. 136; p. 1858.
Telephone-repeater. L. A. Lindsey. No. 901,874; Oct. 27; Sp. p. 3862; Dr. p. 812; Gaz. vol. 136; p. 1789.
Telephone-ringer. H. Tideman. No. 901,215; Oct. 13; Sp. p. 2358; Dr. p. 463; Gaz. vol. 136; p. 1471.

Telephone-ringer. H. Tideman. No. 901,216; Oct. 13; Sp. p. 2359; Dr. p. 463; Gaz. vol. 136; p. 1472.
Telephone-ringer. H. Tideman. No. 901,209; Oct. 13; Sp. p. 2467; Dr. p. 500; Gaz. vol. 136; p. 1489.
Telephone support, Desk-. F. P. Anderson. No. 900,640; Oct. 6; Sp. p. 1221; Dr. p. 250; Gaz. vol. 136; p. 1260.
Telephone system. E. R. Corwin. No. 901,785; Oct. 20; Sp. p. 3620; Dr. p. 733; Gaz. vol. 136; p. 1697.
Telephone system. P. V. Smith. No. 902,338; Oct. 27; Sp. p. 4763; Dr. p. 961; Gaz. vol. 136; p. 1906.
Telephone testing system for party-lines. C. S. Winston. No. 900,458; Oct. 6; Sp. p. 831; Dr. p. 169; Gaz. vol. 136; p. 1200.
Telephone-transmitter. A. G. Kaufman and L. J. Lippmann. No. 900,380; Oct. 6; Sp. p. 602; Dr. p. 136; Gaz. vol. 136; p. 1176.
Telephone-transmitter. M. S. Conner. No. 901,687; Oct. 20; Sp. p. 3411; Dr. p. 603; Gaz. vol. 136; p. 1666.
Telephone-transmitter. G. F. Atwood. No. 902,043; Oct. 27; Sp. p. 4141; Dr. p. 839; Gaz. vol. 136; p. 1810.
Telephone-transmitter muffler. G. Kracker. No. 901,108; Oct. 13; Sp. p. 2180; Dr. p. 443; Gaz. vol. 136; p. 1438.
Telephone-transmitter protector. J. Baumgarten. No. 901,809; Oct. 20; Sp. p. 3765; Dr. p. 765; Gaz. vol. 136; p. 1723.
Telephonic transmitter. F. G. Warrell. No. 901,570; Oct. 20; Sp. p. 3149; Dr. p. 643; Gaz. vol. 136; p. 1626.
Tent. F. H. Gotsche. No. 901,802; Oct. 20; Sp. p. 3655; Dr. p. 740; Gaz. vol. 136; p. 1763.
Tent and sleeping-bag, Combination. F. W. Buren. No. 902,133; Oct. 27; Sp. p. 4315; Dr. p. 874; Gaz. vol. 136; p. 1839.
Terpene esters, Making. A. A. Shukoff. No. 900,316; Oct. 6; Sp. p. 524; Gaz. vol. 136; p. 1154.
Testing-machine. F. K. Landgraf and W. L. Turner. No. 902,497; Oct. 27; Sp. p. 5099; Dr. pp. 1032–3; Gaz. vol. 136; p. 1960.
Thermometer. S. Neal. No. 900,575; Oct. 6; Sp. p. 1061; Dr. pp. 221–2; Gaz. vol. 136; p. 1239.
Thermometer, Clinical and other. C. Nurnberg. No. 900,580; Oct. 6; Sp. p. 1087; Dr. p. 223; Gaz. vol. 136; p. 1240.
Thill-coupling. J. S. Alden. No. 901,274; Oct. 13; Sp. p. 2485; Dr. p. 508; Gaz. vol. 136; p. 1491.
Thread-counting apparatus. A. and L. Chronik. No. 901,579; Oct. 20; Sp. p. 3780; Dr. p. 768; Gaz. vol. 136; p. 1726.
Threshers, Swinging conveyer for band-cutters and feeders of. F. S. Peabody. No. 902,537; Oct. 27; Sp. p. 5203; Dr. p. 1051; Gaz. vol. 136; p. 1973.
Threshing-machine feeder, Pneumatic. C. W. Sellers. No. 901,490; Oct. 20; Sp. p. 2998; Dr. pp. 611–12; Gaz. vol. 136; p. 1601.
Tick-tack. W. H. Davis. No. 901,325; Oct. 20; Sp. p. 2600; Dr. p. 535; Gaz. vol. 136; p. 1543.
Tie: *See* Bundle-tie; Concrete railway-tie; Package-tie; Rail-tie; Railway-tie; Wall-tie.
Tie-fastener. J. P. Chambers. No. 902,374; Oct. 27; Sp. p. 4823; Dr. p. 975; Gaz. vol. 136; p. 1917.
Tie-holder. W. J. Rosborough. No. 900,980; Oct. 13; Sp. p. 1901; Dr. p. 387; Gaz. vol. 136; p. 1391.
Tie-plate. F. A. Piper. No. 902,446; Oct. 27; Sp. p. 4978; Dr. p. 1006; Gaz. vol. 136; p. 1941.
Tie-tamper. P. J. Gilroy. No. 900,721; Oct. 13; Sp. p. 1392; Dr. p. 283; Gaz. vol. 136; p. 1314.
Tile, Drainage and irrigation. N. E. Austin. No. 901,582; Oct. 20; Sp. p. 3189; Dr. p. 648; Gaz. vol. 136; p. 1631.
Time-register, Watchman's. A. A. Newman. No. 901,462; Oct. 20; Sp. p. 2627; Dr. p. 597; Gaz. vol. 136; p. 1591.
Timepieces, Attachment for. F. Paquette. No. 901,822; Oct. 20; Sp. p. 3684; Dr. p. 749; Gaz. vol. 136; p. 1709.
Tin can. M. E. Dunkley. No. 901,429; Oct. 20; Sp. p. 2849; Dr. p. 582; Gaz. vol. 136; p. 1520.
Tinning apparatus. W. I. Hill. No. 901,900; Oct. 20; Sp. p. 3824; Dr. p. 778; Gaz. vol. 136; p. 1734.
Tire. E. T. Greenfield. No. 902,147; Oct. 27; Sp. p. 4338; Dr. p. 878; Gaz. vol. 136; p. 1843.
Tire-cover and fastening means therefor. I. J. D. Fairhurst. No. 901,602; Oct. 20; Sp. p. 3213; Dr. p. 655; Gaz. vol. 136; p. 1637.
Tire-cover, Antislipping. I. J. D. Fairhurst. No. 901,528; Oct. 20; Sp. p. 3072; Dr. p. 628; Gaz. vol. 136; p. 1614.
Tire cover, Pneumatic-. I. J. D. Fairhurst. No. 901,527; Oct. 20; Sp. p. 3071; Dr. p. 628; Gaz. vol. 136; p. 1613.
Tire, Pneumatic. H. W. Dover. No. 900,498; Oct. 6; Sp. p. 925; Dr. p. 188; Gaz. vol. 136; p. 1213.
Tire, Pneumatic. A. C. Rudland. No. 900,898; Oct. 13; Sp. p. 1742; Dr. p. 352; Gaz. vol. 136; p. 1367.
Tire, Pneumatic. F. W. Taylor. No. 901,211; Oct. 13; Sp. p. 2354; Dr. p. 462; Gaz. vol. 136; p. 1471.
Tire-protective rivet. E. B. Stimpson. No. 902,015; Oct. 27; Sp. p. 4086; Dr. p. 829; Gaz. vol. 136; p. 1801.
Tire-protector. F. G. Crone. No. 902,276; Oct. 27; Sp. p. 4611; Dr. p. 937; Gaz. vol. 136; p. 1885.
Tire protector, Vehicle-. J. E. Robinson. No. 900,785; Oct. 13; Sp. p. 1525; Dr. p. 310; Gaz. vol. 136; p. 1333.
Tire, Sectional. H. O. Craven. No. 902,212; Oct. 27; Sp. p. 4472; Dr. p. 905; Gaz. vol. 136; p. 1864.
Tire, Vehicle-. F. A. Stall, Jr. No. 902,009; Oct. 27; Sp. p. 4075; Dr. p. 827; Gaz. vol. 136; p. 1800.
Tire, Vehicle-wheel. E. Kempshall. No. 901,244; Oct. 13; Sp. p. 2411; Dr. p. 494; Gaz. vol. 136; p. 1481.
Tires, Armored cover for the protection of rubber. P. L. D. Rovere. No. 901,300; Oct. 13; Sp. p. 2541; Dr. p. 523; Gaz. vol. 136; p. 1499.
Tires, Curing or vulcanizing the outer shoes or casings of pneumatic. E. Hopkinson and T. Midgley. No. 901,007; Oct. 13; Sp. p. 1990; Dr. p. 404; Gaz. vol. 136; p. 1407.
Tires, Grip-tread for pneumatic. B. H. Sills. No. 901,654; Oct. 20; Sp. p. 3312; Dr. p. 681; Gaz. vol. 136; p. 1652.
Tobacco-steaming device. J. A. Bell. No. 901,224; Oct. 13; Sp. p. 2373; Dr. p. 485; Gaz. vol. 136; p. 1474.
Tobacco-stemming machine. A. Grodsky. No. 901,000; Oct. 13; Sp. p. 1976; Dr. p. 402; Gaz. vol. 136; p. 1405.
Toilet article. M. McInnemy. No. 900,872; Oct. 13; Sp. p. 1709; Dr. p. 346; Gaz. vol. 136; p. 1362.
Tongs, Grappling-. P. Holmberg. No. 900,735; Oct. 13; Sp. p. 1421; Dr. p. 288; Gaz. vol. 136; p. 1318.
Tongue supporting and locking means. M. Meyer and T. Kenne. No. 902,100; Oct. 27; Sp. p. 4247; Dr. p. 860; Gaz. vol. 136; p. 1828.
Tongue, Vehicle-. C. D. Wright. No. 901,054; Oct. 13; Sp. p. 2073; Dr. p. 422; Gaz. vol. 136; p. 1421.
Tool, Combination-. D. Barnes and C. W. Hunt. No. 900,144; Oct. 6; Sp. p. 150; Dr. p. 31; Gaz. vol. 136; p. 1097.
Tool, Fluid-pressure-engine-operated. G. H. Gilman. No. 902,288; Oct. 27; Sp. p. 4631; Dr. p. 941; Gaz. vol. 136; p. 1889.
Tool-handle. W. B. Woodruff. No. 900,339; Oct. 6; Sp. p. 562; Dr. p. 117; Gaz. vol. 136; p. 1161.
Toot-support, Adjustable. F. H. Richards. No. 902,169; Oct. 27; Sp. p. 4390; Dr. p. 889; Gaz. vol. 136; p. 1850.
Tooth-cleaner. E. E. Sulzer. No. 902,122; Oct. 27; Sp. p. 4292; Dr. p. 870; Gaz. vol. 136; p. 1835.
Tooth-crown and securing means therefor, Artificial. E. M. Fredericks. No. 900,363; Oct. 6; Sp. p. 605; Dr. p. 125; Gaz. vol. 136; p. 1165.
Top, Double. G. Philippart. No. 901,037; Oct. 13; Sp. p. 2042; Dr. p. 415; Gaz. vol. 136; p. 1416.
Torpedo shell or casing, Standard-. C. Davis. No. 901,157; Oct. 13; Sp. p. 2263; Dr. p. 460; Gaz. vol. 136; p. 1454.
Towel-pin. C. Nelson. No. 900,767; Oct. 13; Sp. p. 1473; Dr. p. 300; Gaz. vol. 136; p. 1328.
Toy. E. V. Wetzel. No. 901,702; Oct. 20; Sp. p. 3569; Dr. p. 723; Gaz. vol. 136; p. 1690.
Toy. W. S. Miners. No. 902,429; Oct. 27; Sp. p. 4952; Dr. p. 1000; Gaz. vol. 136; p. 1936.
Toy savings-bank. T. Mayhew. No. 901,018; Oct. 13; Sp. p. 2012; Dr. p. 408; Gaz. vol. 136; p. 1410.
Trace-eye guard. L. G. Johns. No. 900,283; Oct. 6; Sp. p. 455; Dr. p. 93; Gaz. vol. 136; p. 1143.
Trace-holder. B. C. McKay. No. 902,159; Oct. 27; Sp. p. 4366; Dr. p. 884; Gaz. vol. 136; p. 1847.
Track, Portable. G. Lewis. No. 900,398; Oct. 6; Sp. p. 689; Dr. p. 141; Gaz. vol. 136; p. 1180.
Tracks, Transfer for overhead. W. Louden. No. 901,717; Oct. 20; Sp. p. 3486; Dr. pp. 705–6; Gaz. vol. 136; p. 1676.
Tracker-bar and music-sheet mechanism. W. J. Keeley. No. 902,495; Oct. 27; Sp. p. 5095; Dr. p. 1031; Gaz. vol. 136; p. 1959.
Tracker-bar mechanism. T. Danquard. No. 902,478; Oct. 27; Sp. p. 5052; Dr. p. 1022; Gaz. vol. 136; p. 1952.
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Traction-wheel. F. Bottrill. No. 902,369; Oct. 27; Sp. p. 4817; Dr. p. 973; Gaz. vol. 136; p. 1916.
Traction-wheel. W. L. Martin. No. 902,426; Oct. 27; Sp. p. 4947; Dr. p. 999; Gaz. vol. 136; p. 1935.
Train-stop, Automatic. H. G. Sedgwick. No. 900,215; Oct. 6; Sp. p. 300; Dr. p. 61; Gaz. vol. 136; p. 1121.
Train-stop, Automatic. H. G. Sedgwick. No. 900,216; Oct. 6; Sp. p. 301; Dr. p. 61; Gaz. vol. 136; p. 1121.
Train-stop, Automatic. H. G. Sedgwick. No. 900,217; Oct. 6; Sp. p. 302; Dr. p. 61; Gaz. vol. 136; p. 1121.
Train-stop, Automatic. H. G. Sedgwick. No. 900,923; Oct. 13; Sp. p. 1820; Dr. pp. 369–71; Gaz. vol. 136; p. 1379.
Tramway tower-saddle. W. S. Gemmer. No. 900,923; Oct. 13; Sp. p. 1820; Dr. pp. 369–71; Gaz. vol. 136; p. 1379.
Transplanter. T. Gooch. No. 902,070; Oct. 27; Sp. p. 4189; Dr. p. 849; Gaz. vol. 136; p. 1819.
Trap: *See* Animal-trap; Steam-trap; Water-trap.
Trap. A. O. Thompson. No. 901,851; Oct. 20; Sp. p. 3730; Dr. p. 759; Gaz. vol. 136; p. 1717.
Tray. O. Hebestreit. No. 901,444; Oct. 20; Sp. p. 2899; Dr. p. 590; Gaz. vol. 136; p. 1586.
Trimmer: *See* Hedge-trimmer.
Trolley-guard. W. D. Lewis. No. 902,420; Oct. 27; Sp. p. 4908; Dr. p. 994; Gaz. vol. 136; p. 1933.
Trolley-harps, Electric contact-spring for. A. L. Cole. No. 901,885; Oct. 20; Sp. p. 3795; Dr. p. 772; Gaz. vol. 136; p. 1729.
Trolley-wheel bearing. W. M. Caswell and J. A. Schofield. No. 901,878; Oct. 20; Sp. p. 3779; Dr. p. 768; Gaz. vol. 136; p. 1726.
Trolley-wheel safety-guard. F. J. Nolan. No. 901,027; Oct. 13; Sp. p. 2027; Dr. p. 411; Gaz. vol. 136; p. 1414.
Trolley-wire anchor. A. Mclsaac. No. 901,816; Oct. 20; Sp. p. 3676; Dr. p. 746; Gaz. vol. 136; p. 1707.
Trolley-wires or other conductors carrying currents of high voltage, Suspension device for. G. A. Mead. No. 901,981; Oct. 27; Sp. p. 4019; Dr. p. 816; Gaz. vol. 136; p. 1791.
Trough: *See* Feed-trough.
Truck. B. S. Gillum. No. 901,532; Oct. 20; Sp. p. 3081; Dr. pp. 629–30; Gaz. vol. 136; p. 1615.
Truck, Car-. R. Smith and P. Christensen. No. 901,390; Oct. 20; Sp. p. 2781; Dr. pp. 565–6; Gaz. vol. 136; p. 1569.
Truck, Car-. A. F. Batchelder. No. 901,944; Oct. 27; Sp. p. 3924; Dr. p. 800; Gaz. vol. 136; p. 1779.
Truck, Car-. J. G. Sarvent. No. 902,172; Oct. 27; Sp. p. 4395; Dr. pp. 890–1; Gaz. vol. 136; p. 1851.
Truck, Electric-car. F. F. Stowe. No. 902,017; Oct. 27; Sp. p. 4083; Dr. pp. 829–30; Gaz. vol. 136; p. 1802.
Truck, Hand-. D. C. Markham. No. 900,405; Oct. 6; Sp. p. 702; Dr. p. 145; Gaz. vol. 136; p. 1183.
Truck, Motor-vehicle. R. Fuller. No. 900,160; Oct. 6; Sp. p. 190; Dr. p. 39; Gaz. vol. 136; p. 1103.
Truck, Railway-car J. V. McAdam. No. 900,759; Oct. 13; Sp. p. 1460; Dr. p. 297; Gaz. vol. 136; p. 1325.

Truck, Railway-car. J. V. McAdam. No. 900,790; Oct. 13; Sp. p. 1462; Dr. p. 298; Gaz. vol. 136; p. 1325.
Truck side frame. H. Aiken. No. 900,463; Oct. 6; Sp. p. 845; Dr. p. 171; Gaz. vol. 136; p. 1203.
Truss, Rupture-. A. Young. No. 900,250; Oct. 6; Sp. p. 364; Dr. p. 75; Gaz. vol. 136; p. 1132.
Tube: *See* Mailing-tube; Sound-tube.
Tube-cleaner. K. O. Sandström. No. 901,483; Oct. 20; Sp. p. 2986; Dr. p. 608; Gaz. vol. 136; p. 1599.
Tube-cleaner. T. Andrews. No. 901,940; Oct. 27; Sp. p. 3912; Dr. p. 798; Gaz. vol. 136; p. 1777.
Tube-expander. G. Wiedeke, Sr. No. 901,271; Oct. 13; Sp. p. 2470; Dr. p. 507; Gaz. vol. 136; p. 1490.
Tube-scraper. K. O. Sandström. No. 901,484; Oct. 20; Sp. p. 2987; Dr. p. 608; Gaz. vol. 136; p. 1599.
Tubes, Mechanism for feeding conical. B. W. Tucker. No. 900,900; Oct. 13; Sp. p. 1763; Dr. p. 358; Gaz. vol. 136; p. 1371.
Tunneling-machine. O. S. Proctor. No. 900,950; Oct. 13; Sp. p. 1873; Dr. pp. 382–3; Gaz. vol. 136; p. 1387.
Tunneling-machine. O. S. Proctor. No. 900,951; Oct. 13; Sp. p. 1878; Dr. pp. 383–4; Gaz. vol. 136; p. 1388.
Tunneling-machine. Rotary. R. B. Sigafoos. No. 901,392; Oct. 20; Sp. p. 2766; Dr. p. 564; Gaz. vol. 136; p. 1568.
Turbine. A. Jude and R. K. Morcom. No. 900,739; Oct. 13; Sp. p. 1427; Dr. p. 290; Gaz. vol. 136; p. 1319.
Turbine. A. J. Rowan and J. A. Laux. No. 901,385; Oct. 20; Sp. p. 2754; Dr. p. 561; Gaz. vol. 136; p. 1566.
Turbine. S. Z. de Ferranti. No. 901,931; Oct. 20; Sp. p. 3883; Dr. pp. 792–3; Gaz. vol. 136; p. 1744.
Turbine. C. Roth. No. 902,252; Oct. 27; Sp. p. 4558; Dr. p. 925; Gaz. vol. 136; p. 1876.
Turbine-bucket. E. H. Farquhar. No. 901,961; Oct. 27; Sp. p. 3955; Dr. p. 806; Gaz. vol. 136; p. 1785.
Turbine-bucket cover. A. F. Macdonald. No. 901,459; Oct. 20; Sp. p. 2923; Dr. p. 596; Gaz. vol. 136; p. 1590.
Turbine bucket-wheel. W. L. R. Emmet. No. 901,430; Oct. 20; Sp. p. 2850; Dr. p. 582; Gaz. vol. 136; p. 1580.
Turbine-buckets, Apparatus for manufacturing. E. H. Farquhar. No. 902,526; Oct. 27; Sp. p. 5179; Dr. p. 1047; Gaz. vol. 136; p. 1970.
Turbine-buckets, Manufacturing. E. H. Farquhar. No. 901,960; Oct. 27; Sp. p. 3952; Dr. p. 807; Gaz. vol. 136; p. 1784.
Turbine-governor. W. L. R. Emmet and O. Junggren. No. 902,219; Oct. 27; Sp. p. 4483; Dr. pp. 908–9; Gaz. vol. 136; p. 1866.
Turbine-rotor. W. A. Bole. No. 900,700; Oct. 13; Sp. p. 1352; Dr. p. 276; Gaz. vol. 136; p. 1307.
Turbines, &c., Securing blades of. J. F. Metten. No. 901,115; Oct. 13; Sp. p. 2189; Dr. p. 445; Gaz. vol. 136; p. 1440.
Turpentine-cups, Machine for manufacturing one-piece folded sheet-metal. J. Kohke. No. 900,393; Oct. 6; Sp. p. 680; Dr. p. 139; Gaz. vol. 136; p. 1178.
Turpentine-cups, Machine for manufacturing one-piece folded sheet-metal. J. Kohke. No. 900,394; Oct. 6; Sp. p. 682; Dr. p. 140; Gaz. vol. 136; p. 1179.
Turpentine, Preparation of borneol esters from. J. Hertkorn. No. 901,293; Oct. 13; Sp. p. 2528; Dr. p. 519; Gaz. vol. 136; p 1497.
Two-button switch. F. W. Sanford. No. 900,786; Oct. 13; Sp. p. 1527; Dr. p. 310; Gaz. vol. 136; p. 1334.
Type-case. J. R. Rankin. No. 901,831; Oct. 20; Sp. p. 3698; Dr. p. 751; Gaz. vol. 136; p. 1711.
Type-casting mold. I. Baas. No. 902,196; Oct. 27; Sp. p. 4442; Dr. p. 899; Gaz. vol. 136; p. 1859.
Type-mold. I. Baas. No. 902,197; Oct. 27; Sp. p. 4443; Dr. p. 899; Gaz. vol. 136; p. 1859.
Type-writer. H. Grössler. No. 900,525; Oct. 6; Sp. p. 979; Dr. p. 199; Gaz. vol. 136; p. 1222.
Type-writer. J. W. Paul. No. 901,998; Oct. 27; Sp. p. 4057; Dr. pp. 822–3; Gaz. vol. 136; p. 1796.
Type-writer cabinet. J. Metzler. No. 901,543; Oct. 20; Sp. p. 3104; Dr. p. 634; Gaz. vol. 136; p. 1618.
Type-writer carriage-return mechanism. N. L. Anderson. No. 900,642; Oct. 6; Sp. p. 1224; Dr. p. 251; Gaz. vol. 136; p. 1261.
Type-writer ribbon-inking machine. F. E. Koeneke. No. 900,936; Oct. 13; Sp. p. 1848; Dr. p. 376; Gaz. vol. 136; p. 1383.
Type-writer table. C. E. Kingston. No. 901,916; Oct. 20; Sp. p. 3850; Dr. p. 786; Gaz. vol. 136; p. 1739.
Type-writer tabulating device. C. S. Labofish. No. 901,973; Oct. 27; Sp. p. 3978; Dr. pp. 811–12; Gaz. vol. 136; p. 1788.
Type-writing and printing machine, Combined. W. H. Collier. No. 901,682; Oct. 20; Sp. p. 3377; Dr. pp. 691–2; Gaz. vol. 136; p. 1663.
Type-writing machine. O. Woodward. No. 900,461; Oct. 6; Sp. p. 839; Dr. pp. 170–1; Gaz. vol. 136; p. 1202.
Type-writing machine. J. C. McLaughlin. No. 900,574; Oct. 6; Sp. p. 1078; Dr. p. 221; Gaz. vol. 136; p. 1238.
Type-writing machine. J. H. Jackson. No. 900,931; Oct. 13; Sp. p. 1839; Dr. pp. 374–5; Gaz. vol. 136; p. 1382.
Type-writing machine. M. W. Pool. No. 901,259; Oct. 13; Sp. p. 2439; Dr. pp. 501–2; Gaz. vol. 136; p. 1485.
Type-writing machine. H. W. Merritt. No. 901,982; Oct. 27; Sp. p. 4023; Dr. pp. 816–17; Gaz. vol. 136; p. 1791.
Type-writing machine. H. H. Steele. No. 902,012; Oct. 27; Sp. p. 4078; Dr. p. 828; Gaz. vol. 136; p. 1801.
Type-writing machine. O. Woodward. No. 902,039; Oct. 27; Sp. p. 4131; Dr. pp. 836–8; Gaz. vol. 136; p. 1809.
Type-writing machine. G. J. Barrett. No. 902,131; Oct. 27; Sp. p. 4307; Dr. p. 873; Gaz. vol. 136; p. 1838.
Type-writing machine. J. W. Paul. No. 902,506; Oct. 27; Sp. p. 5130; Dr. p. 1039; Gaz. vol. 136; p. 1963.
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Type-writing machine. E. E. Barney. No. 902,519; Oct. 27; Sp. p. 5153; Dr. p. 1044; Gaz. vol. 136; p. 1968.
Type-writing machine. W. C. Farnum. No. 902,525; Oct. 27; Sp. p. 5164; Dr. pp. 1046–7; Gaz. vol. 136; p. 1969.
Typographer's composing and founding machine. H. Burris. No. 902,134; Oct. 27; Sp. p. 4316; Dr. p. 874; Gaz. vol. 136; p. 1839.
Umbrella-cover. E. Scott. No. 901,198; Oct. 13; Sp. p. 2331; Dr. p. 477; Gaz. vol. 136; p. 1467.
Umbrella-holder. A. A. Stutsman. No. 901,495; Oct. 20; Sp. p. 3011; Dr. p. 615; Gaz. vol. 136; p. 1603.
Undervaist. E. W. Stiles. No. 901,046; Oct. 13; Sp. p. 2059; Dr. p. 418; Gaz. vol. 136; p. 1419.
Universal coupling. H. Dock. No. 901,080; Oct. 13; Sp. p. 2123; Dr. pp. 432–3; Gaz. vol. 136; p. 1430.
Universal coupling. G. A. Anderson. No. 901,864; Oct. 20; Sp. p. 3754; Dr. p. 763; Gaz. vol. 136; p. 1721.
Universal indicator. H. P. Boettcher. No. 900,472; Oct. 6; Sp. p. 857; Dr. pp. 174–5; Gaz. vol. 136; p. 1205.
Unloading apparatus. F. H. and F. H. Brown. No. 901,949; Oct. 27; Sp. p. 3931; Dr. p. 802; Gaz. vol. 136; p. 1780.
Unloading mechanism, Vehicle-. H. O. Sparks. No. 900,606; Oct. 6; Sp. p. 1146; Dr. p. 234; Gaz. vol. 136; p. 1249.
Valve. M. S. Wilcox. No. 900,811; Oct. 13; Sp. p. 1585; Dr. pp. 320–1; Gaz. vol. 136; p. 1343.
Valve. G. M. Davis. No. 900,987; Oct. 13; Sp. p. 1947; Dr. p. 396; Gaz. vol. 136; p. 1400.
Valve. E. V. Anderson. No. 901,222; Oct. 13; Sp. p. 2370; Dr. p. 485; Gaz. vol. 136; p. 1473.
Valve. J. F. Love. No. 902,096; Oct. 27; Sp. p. 4234; Dr. p. 858; Gaz. vol. 136; p. 1827.
Valve. J. P. L. Halyburton. No. 902,291; Oct. 27; Sp. p. 4642; Dr. p. 942; Gaz. vol. 136; p. 1890.
Valve, Air-vent. G. D. Hoffman. No. 901,242; Oct. 13; Sp. p. 2405; Dr. p. 493; Gaz. vol. 136; p. 1480.
Valve, Automatic quick-closing. A. H. Boyd. No. 900,260; Oct. 6; Sp. p. 403; Dr. pp. 81–2; Gaz. vol. 136; p. 1135.
Valve, Automatic starting-. J. B. Lane. No. 902,417; Oct. 27; Sp. p. 4904; Dr. p. 993; Gaz. vol. 136; p. 1932.
Valve, Ball-cock. E. G. Watrous. No. 901,571; Oct. 20; Sp. p. 3150; Dr. pp. 643–4; Gaz. vol. 136; p. 1627.
Valve, Blow-off. J. S. Forbes. No. 900,506; Oct. 6; Sp. p. 940; Dr. pp. 191–2; Gaz. vol. 136; p. 1215.
Valve-controlling means. J. W. Kenevel. No. 901,712; Oct. 20; Sp. p. 3478; Dr. p. 704; Gaz. vol. 136; p. 1674.
Valve-controlling mechanism for internal-combustion engines. H. M. Neer. No. 901,365; Oct. 20; Sp. p. 2690; Dr. p. 552; Gaz. vol. 136; p. 1557.
Valve, Filter-. C. Hungerford. No. 902,232; Oct. 27; Sp. p. 4523; Dr. p. 916; Gaz. vol. 136; p. 1870.
Valve, Flushing-. H. S. Gaskill. No. 900,997; Oct. 13; Sp. p. 1969; Dr. p. 401; Gaz. vol. 136; p. 1404.
Valve, Flushing-. T. F. Payne. No. 901,467; Oct. 20; Sp. p. 2933; Dr. pp. 599–600; Gaz. vol. 136; p. 1593.
Valve, Flushing-. W. H. Bowman. No. 901,584; Oct. 20; Sp. p. 3184; Dr. p. 649; Gaz. vol. 136; p. 1631.
Valve, Flushing-. H. G. Sedgwick. No. 900,214; Oct. 6; Sp. p. 298; Dr. p. 61; Gaz. vol. 136; p. 1120.
Valve for automatic train-stops, Vent-. H. G. Sedgwick. No. 900,215; Oct. 6; Sp. p. 298; Dr. p. 61; Gaz. vol. 136; p. 1484.
Valve for gas-engines, Admission-. G. B. Petsche. No. 901,256; Oct. 13; Sp. p. 2432; Dr. p. 499; Gaz. vol. 136; p. 1491.
Valve for internal-combustion engines. J. C. Bourne and G. H. Rees. No. 901,277; Oct. 13; Sp. p. 2490; Dr. p. 509; Gaz. vol. 136; p. 1400.
Valve for locomotives, Combined check and cut-off. G. B. Eddy. No. 900,989; Oct. 13; Sp. p. 1950; Dr. p. 397; Gaz. vol. 136; p. 1102.
Valve for steam-heating radiators, Drain-. L. E. Fuller. No. 900,159; Oct. 6; Sp. p. 186; Dr. p. 38; Gaz. vol. 136; p. 1101.
Valve for steam-heating, Vacuum-. N. Dolese. No. 900,153; Oct. 6; Sp. p. 171; Dr. p. 35; Gaz. vol. 136; p. 1101.
Valve, Gate-. G. H. Benton. No. 901,146; Oct. 13; Sp. p. 2242; Dr. p. 456; Gaz. vol. 136; p. 1426.
Valve-gear, Locomotive. W. S. Brown. No. 901,066; Oct. 13; Sp. p. 2096; Dr. p. 426; Gaz. vol. 136; p. 1716.
Valve, Piston-. H. S. Sprague. No. 901,846; Oct. 20; Sp. p. 3722; Dr. pp. 756–7; Gaz. vol. 136; p. 1431.
Valve, Relief-. J. Erwood. No. 901,084; Oct. 13; Sp. p. 2128; Dr. p. 434; Gaz. vol. 136; p. 1449.
Valve, Soft-plug. W. Baker. No. 901,142; Oct. 13; Sp. p. 2234; Dr. p. 454; Gaz. vol. 136; p. 1448.
Valve, Steam-. W. Baker. No. 901,141; Oct. 13; Sp. p. 2232; Dr. p. 454; Gaz. vol. 136; p. 1225.
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Van, Moving-. A. B. Yetter. No. 901,766; Oct. 20; Sp. p. 3576; Dr. p. 724; Gaz. vol. 136; p. 1691.
Vapors, Means for withdrawing and condensing. C. B. Lowry and R. Bernhard. No. 902,097; Oct. 27; Sp. p. 4236; Dr. p. 858; Gaz. vol. 136; p. 1827.
Variable-speed motor. A. A. Pfier and C. E. F. Ahlm. No. 900,420; Oct. 6; Sp. p. 728; Dr. p. 152; Gaz. vol. 136; p. 1188.
Varnish composition. C. Ellis. No. 900,687; Oct. 6; Sp. p. 1326; Gaz. vol. 136; p. 1276.
Vault. T. H. Seifert. No. 900,218; Oct. 6; Sp. p. 303; Dr. p. 62; Gaz. vol. 136; p. 1121.
Vault-doors, Mounting for heavy. G. L. Damon. No. 901,425; Oct. 20; Sp. p. 2842; Dr. p. 581; Gaz. vol. 136; p. 1579.
Vault-ventilator, Movable. F. S. Holmes and G. L. Damon. No. 901,710; Oct. 20; Sp. p. 3473; Dr. p. 703; Gaz. vol. 136; p. 1673.
Vaults, Mold for making burial-. T. M. Cass. No. 901,523; Oct. 20; Sp. p. 3004; Dr. pp. 626–7; Gaz. vol. 136; p. 1612.
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Vegetables, Apparatus for treating. C. S. Kierstead. No. 901,011; Oct. 13; Sp. p. 1999; Dr. pp. 405–6; Gaz. vol. 136; p. 1408.
Vehicle-brake. J. K. Kendrick. No. 901,451; Oct. 20; Sp. p. 2911; Dr. p. 593; Gaz. vol. 136; p. 1588.
Vehicle controlling mechanism, Power-driven-. C. W. Willette. No. 901,508; Oct. 20; Sp. p. 3032; Dr. pp. 619–20; Gaz. vol. 136; p. 1607.
Vehicle-cover. J. H. Brooks. No. 900,350; Oct. 6; Sp. p. 581; Dr. p. 121; Gaz. vol. 136; p. 1164.

Vehicle draft apparatus, Equalizer-hook for. J. B. Ashenfelter. No. 902,042; Oct. 27; Sp. p. 4140; Dr. p. 838; Gaz. vol. 136; p. 1810.
Vehicle driving mechanism, Motor-driven-. H. T. Hansen. No. 902,149; Oct. 27; Sp. p. 4341; Dr. p. 879; Gaz. vol. 136; p. 1844.
Vehicle-frame. C. J. Pembroke. No. 901,735; Oct. 20; Sp. p. 3520; Dr. p. 712; Gaz. vol. 136; p. 1682.
Vehicle jack and wrench, Combined. D. C. Lassiter. No. 900,556; Oct. 6; Sp. p. 1045; Dr. p. 214; Gaz. vol. 136; p. 1233.
Vehicle, Motor-. J. D. Allen and J. A. Conly. No. 901,055; Oct. 13; Sp. p. 2074; Dr. p. 422; Gaz. vol. 136; p. 1422.
Vehicle-spring shock-absorbing mechanism. W. P. Klidder. No. 900,388; Oct. 6; Sp. p. 667; Dr. p. 137; Gaz. vol. 136; p. 1177.
Vehicle-spring structure and frame. H. T. Tillotson. No. 900,234; Oct. 6; Sp. p. 329; Dr. pp. 68–9; Gaz. vol. 136; p. 1127.
Vehicle-springs, Brace for supplementary. W. Young. No. 901,707; Oct. 20; Sp. p. 3578; Dr. p. 724; Gaz. vol. 136; p. 1692.
Vehicle-springs, Emergency repair device for. D. P. Power. No. 902,250; Oct. 27; Sp. p. 4554; Dr. p. 925; Gaz. vol. 136; p. 1875.
Vehicle-springs, Steadying device for supplementary. W. Young. No. 901,578; Oct. 20; Sp. p. 3167; Dr. pp. 645–6; Gaz. vol. 136; p. 1629.
Vehicle steering mechanism, Self-propelled-. C. B. Hatfield. No. 901,898; Oct. 20; Sp. p. 3817; Dr. p. 777; Gaz. vol. 136; p. 1733.
Vehicle-wheel. H. Cramer. No. 900,264; Oct. 6; Sp. p. 414; Dr. p. 84; Gaz. vol. 136; p. 1136.
Vehicle-wheel. G. Sommers. No. 900,891; Oct. 13; Sp. p. 1748; Dr. pp. 353–4; Gaz. vol. 136; p. 1368.
Vehicle-wheel. A. A. Daugherty. No. 902,383; Oct. 27; Sp. p. 4839; Dr. p. 978; Gaz. vol. 136; p. 1920.
Vehicle wind-shield. W. N. Beecher. No. 902,199; Oct. 27; Sp. p. 4449; Dr. p. 900; Gaz. vol. 136; p. 1860.
Vehicles, Changing batteries in electrically-propelled. A. J. Doty. No. 900,359; Oct. 6; Sp. p. 595; Dr. p. 123; Gaz. vol. 136; p. 1166.
Vehicles, Differential gear for motor-. C. J. Pittman. No. 901,820; Oct. 20; Sp. p. 3691; Dr. p. 749; Gaz. vol. 136; p. 1710.
Vehicles, Obstacle-removing device for. T. Loveless and W. J. Samways. No. 901,114; Oct. 13; Sp. p. 2188; Dr. p. 445; Gaz. vol. 136; p. 1440.
Vehicles, Transmission mechanism for motor-. C. M. Leech. No. 901,180; Oct. 13; Sp. p. 2296; Dr. p. 469; Gaz. vol. 136; p. 1460.
Vending apparatus, Coin-controlled operating mechanism for. E. X. Somers. No. 900,224; Oct. 6; Sp. p. 311; Dr. pp. 63–4; Gaz. vol. 136; p. 1123.
Vending carton or package. B. C. Tillinghast. No. 902,347; Oct. 27; Sp. p. 4779; Dr. p. 964; Gaz. vol. 136; p. 1909.
Vending-machine, &c., Coin-controlled. A. D. Grover. No. 900,924; Oct. 13; Sp. p. 1824; Dr. p. 371; Gaz. vol. 136; p. 1380.
Vending-machine for matches. J. Fritsche. No. 901,091; Oct. 13; Sp. p. 2142; Dr. p. 437; Gaz. vol. 136; p. 1433.
Ventilating buildings, Automatic means for. D. F. Speer. No. 902,509; Oct. 27; Sp. p. 5137; Dr. p. 1040; Gaz. vol. 136; p. 1964.
Ventilator: *See* Shed-ventilator; Vault-ventilator; Wind-actuated ventilator.
Ventilator. E. B. and G. O. Loomis. No. 900,560; Oct. 6; Sp. p. 1056; Dr. p. 217; Gaz. vol. 136; p. 1234.
Ventilator. J. D. Ripson. No. 900,595; Oct. 6; Sp. p. 1116; Dr. p. 229; Gaz. vol. 136; p. 1245.
Ventilator. A. Darroch. No. 901,075; Oct. 13; Sp. p. 2113; Dr. pp. 430–1; Gaz. vol. 136; p. 1428.
Ventilator attachment. B. S. Boone. No. 900,349; Oct. 6; Sp. p. 580; Dr. p. 120; Gaz. vol. 136; p. 1164.
Vessel, Double-walled. G. P. Altenberg. No. 900,075; Oct. 6; Sp. p. 4; Dr. p. 1; Gaz. vol. 136; p. 1075.
Vessels, Means for transporting. E. L. Burwell. No. 901,589; Oct. 20; Sp. p. 3196; Dr. pp. 653–4; Gaz. vol. 136; p. 1634.
Vessels, Sounding device for. E. Degagné. No. 900,834; Oct. 13; Sp. p. 1632; Dr. p. 330; Gaz. vol. 136; p. 1351.
Voting-machine interlocking mechanism. D. I. Whiteside. No. 900,630; Oct. 6; Sp. p. 1194; Dr. pp. 245–6; Gaz. vol. 136; p. 1256.
Voting-machines, Detachable leg for. C. C. Abbott. No. 900,907; Oct. 13; Sp. p. 1786; Dr. pp. 360–1; Gaz. vol. 136; p. 1374.
Voting-machines, Grouping mechanism for. C. C. Abbott. No. 900,906; Oct. 13; Sp. p. 1781; Dr. p. 360; Gaz. vol. 136; p. 1373.
Voting-machines, Interlocking member for. C. C. Abbott. No. 900,905; Oct. 13; Sp. p. 1776; Dr. p. 360; Gaz. vol. 136; p. 1373.
Wagon-brake. J. Wulf. No. 902,360; Oct. 27; Sp. p. 4802; Dr. pp. 969–70; Gaz. vol. 136; p. 1914.
Wagon, Dray-. G. R. McLeran. No. 901,252; Oct. 13; Sp. p. 2422; Dr. p. 497; Gaz. vol. 136; p. 1483.
Wagon, Dumping-. A. N. Putney. No. 901,260; Oct. 13; Sp. p. 2447; Dr. p. 502; Gaz. vol. 136; p. 1486.
Wall-tie. J. H. Jackson. No. 900,377; Oct. 6; Sp. p. 646; Dr. p. 133; Gaz. vol. 136; p. 1173.
Warp-beam flange. W. J. Monk. No. 900,294; Oct. 6; Sp. p. 478; Dr. pp. 98–9; Gaz. vol. 136; p. 1147.
Washboards, Soap-holder for. V. B. Adams and G. J. Schaller. No. 901,768; Oct. 20; Sp. p. 3582; Dr. p. 725; Gaz. vol. 136; p. 1692.
Washer: *See* Bottle-washer; Dish-washer.
Washing apparatus, Clothes-. M. J. Baker. No. 901,313; Oct. 20; Sp. p. 2575; Dr. p. 530; Gaz. vol. 136; p. 1539.
Washing-machine. W. F. Blake. No. 900,258; Oct. 6; Sp. p. 377; Dr. p. 78; Gaz. vol. 136; p. 1134.
Washing-machine. W. D. Whitney. No. 900,333; Oct. 6; Sp. p. 552; Dr. pp. 114–15; Gaz. vol. 136; p. 1159.
Washing-machine. J. C. Flowers. No. 900,505; Oct. 6; Sp. p. 939; Dr. p. 191; Gaz. vol. 136; p. 1215.
Washing-machine. W. D. Whitney. No. 900,809; Oct. 13; Sp. p. 1583; Dr. p. 320; Gaz. vol. 136; p. 1343.
Washing-machine. W. D. Whitney. No. 901,051; Oct. 13; Sp. p. 2067; Dr. pp. 420–1; Gaz. vol. 136; p. 1420.
Washing-machine. D. McMannama. No. 901,817; Oct. 20; Sp. p. 3677; Dr. p. 747; Gaz. vol. 136; p. 1707.
Washing-machine. J. Becker. No. 902,467; Oct. 27; Sp. p. 5026; Dr. p. 1018; Gaz. vol. 136; p. 1948.
Washing-machine agitator. J. S. James. No. 900,547; Oct. 6; Sp. p. 1024; Dr. p. 208; Gaz. vol. 136; p. 1230.
Washing-machine gearing. B. L. Schmidt. No. 902,174; Oct. 27; Sp. p. 4400; Dr. p. 892; Gaz. vol. 136; p. 1852.
Watch-movement. W. B. Mehl. No. 900,183; Oct. 6; Sp. p. 235; Dr. p. 47; Gaz. vol. 136; p. 1111.
Watch-regulator. J. J. Wiens. No. 902,034; Oct. 27; Sp. p. 4122; Dr. p. 835; Gaz. vol. 136; p. 1807.
Watches, clocks, and the like, Producing movement-plates for. W. E. Porter. No. 902,322; Oct. 27; Sp. p. 4715; Dr. p. 954; Gaz. vol. 136; p. 1901.
Watches, Roller for. J. Schoop. No. 901,487; Oct. 20; Sp. p. 2993; Dr. p. 610; Gaz. vol. 136; p. 1600.
Watchcase-pendant, Dust-proof. M. Rosenhaft. No. 902,112; Oct. 27; Sp. p. 4274; Dr. p. 866; Gaz. vol. 136; p. 1832.
Water-closet. H. W. Charlton. No. 900,831; Oct. 13; Sp. p. 1627; Dr. p. 329; Gaz. vol. 136; p. 1350.
Water-closet. G. M. Depew. No. 901,525; Oct. 20; Sp. p. 3098; Dr. p. 627; Gaz. vol. 136; p. 1613.
Water-closet. E. G. Watrous. No. 901,572; Oct. 20; Sp. p. 3154; Dr. p. 644; Gaz. vol. 136; p. 1627.
Water-closet. F. O. Hilliker. No. 902,295; Oct. 27; Sp. p. 4649; Dr. p. 944; Gaz. vol. 136; p. 1894.
Water-closet apparatus. W. U. Griffiths. No. 901,438; Oct. 20; Sp. p. 2899; Dr. p. 586; Gaz. vol. 136; p. 1583.
Water-closet ball-valve. T. F. Payne. No. 901,466; Oct. 20; Sp. p. 2937; Dr. p. 599; Gaz. vol. 136; p. 1593.
Water-closet connection. E. J. Rice. No. 900,594; Oct. 6; Sp. p. 1114; Dr. p. 228; Gaz. vol. 136; p. 1244.
Water-closet flushing apparatus. F. C. Nickol. No. 901,185; Oct. 13; Sp. p. 2304; Dr. p. 472; Gaz. vol. 136; p. 1462.
Water-closet flushing device. L. D. Lawmin. No. 900,176; Oct. 6; Sp. p. 223; Dr. p. 45; Gaz. vol. 136; p. 1108.
Water-closet-tank lining. C. Pfau. No. 900,775; Oct. 13; Sp. p. 1500; Dr. p. 305; Gaz. vol. 136; p. 1330.
Water-closets, &c., Automatically-closing valve for flushing. W. H. Bowman. No. 901,583; Oct. 20; Sp. p. 3181; Dr. p. 649; Gaz. vol. 136; p. 1631.
Water-cooler. E. Mohr. No. 900,678; Oct. 6; Sp. p. 1309; Dr. p. 268; Gaz. vol. 136; p. 1274.
Water-cooler. G. A. Turner. No. 901,663; Oct. 20; Sp. p. 3320; Dr. p. 683; Gaz. vol. 136; p. 1655.
Water-elevator. F. A. Grunow. No. 901,238; Oct. 13; Sp. p. 2400; Dr. p. 492; Gaz. vol. 136; p. 1479.
Water-fixture and controlling means therefor. R. D. Albright. No. 900,818; Oct. 13; Sp. p. 1601; Dr. p. 324; Gaz. vol. 136; p. 1346.
Water-gate, Automatic constant-discharge. F. W. Hanna. No. 902,531; Oct. 27; Sp. p. 5189; Dr. p. 1048; Gaz. vol. 136; p. 1972.
Water-heater. C. N. Nelson and N. A. Lee. No. 900,873; Oct. 13; Sp. p. 1710; Dr. p. 346; Gaz. vol. 136; p. 1362.
Water into mine-workings, &c., Stopping or sealing off underground flows of. E. B. Kirby. No. 900,683; Oct. 6; Sp. p. 1320; Dr. p. 270; Gaz. vol. 136; p. 1275.
Water-motor. H. H. Held. No. 900,535; Oct. 6; Sp. p. 997; Dr. p. 203; Gaz. vol. 136; p. 1225.
Water-motor. A. W. Breiding. No. 902,202; Oct. 27; Sp. p. 4455; Dr. p. 901; Gaz. vol. 136; p. 1861.
Water-purifier. H. Korten. No. 901,352; Oct. 20; Sp. p. 2603; Dr. p. 546; Gaz. vol. 136; p. 1553.
Water-purifying and like apparatus. A. L. Helwig. No. 902,401; Oct. 27; Sp. p. 4872; Dr. pp. 986–7; Gaz. vol. 136; p. 1926.
Water-purifying apparatus. C. L. Kennicott. No. 900,280; Oct. 6; Sp. p. 402; Dr. pp. 94–5; Gaz. vol. 136; p. 1144.
Water-receptacles, Connection for. E. F. Cook. No. 900,485; Oct. 6; Sp. p. 876; Dr. p. 179; Gaz. vol. 136; p. 1209.
Water, Reducing the corrosive action of. F. N. Speller. No. 900,323; Oct. 6; Sp. p. 538; Dr. p. 111; Gaz. vol. 136; p. 1156.
Water-softener. L. W. Jones and F. B. Leopold. No. 900,551; Oct. 6; Sp. p. 1036; Dr. pp. 212–13; Gaz. vol. 136; p. 1231.
Water-trap. F. W. Meier. No. 901,922; Oct. 20; Sp. p. 3861; Dr. pp. 787–8; Gaz. vol. 136; p. 1749.
Watering device, Stock-. F. E. Williamson. No. 901,860; Oct. 20; Sp. p. 3748; Dr. p. 762; Gaz. vol. 136; p. 1720.
Wave-motor. J. A. McManus. No. 901,117; Oct. 13; Sp. p. 2193; Dr. p. 446; Gaz. vol. 136; p. 1441.
Wave-motor. T. H. Settle. No. 901,489; Oct. 20; Sp. p. 2997; Dr. p. 611; Gaz. vol. 136; p. 1601.
Wave-responsive device. C. D. Balcock. No. 901,942; Oct. 27; Sp. p. 3919; Dr. p. 799; Gaz. vol. 136; p. 1778.
Weather-strip. S. Frigone. No. 902,143; Oct. 27; Sp. p. 4330; Dr. p. 877; Gaz. vol. 136; p. 1842.
Wedge-cutter. L. W. Rouland. No. 901,384; Oct. 20; Sp. p. 2752; Dr. p. 560; Gaz. vol. 136; p. 1566.
Weed-puller. G. N. Nelson. No. 901,820; Oct. 20; Sp. p. 3681; Dr. p. 748; Gaz. vol. 136; p. 1708.
Weeder and cultivator. W. C. Warfield. No. 900,137; Oct. 6; Sp. p. 136; Dr. p. 29; Gaz. vol. 136; p. 1094.
Weighing apparatus, Automatic. P. Edtbauer. No. 900,990; Oct. 13; Sp. p. 1952; Dr. p. 398; Gaz. vol. 136; p. 1401.
Weighing-machine, Automatic. D. A. Flavell. No. 902,485; Oct. 27; Sp. p. 5066; Dr. pp. 1025–6; Gaz. vol. 136; p. 1955.
Welding metal tubes, rings, and the like, Machine for. F. Jottrand. No. 900,381; Oct. 6; Sp. p. 653; Dr. p. 134; Gaz. vol. 136; p. 1174.
Well-cleaning device, Oil-. F. A. Flanegin. No. 901,287; Oct. 13; Sp. p. 2517; Dr. pp. 516–17; Gaz. vol. 136; p. 1495.
Well-drilling apparatus. R. D. Moon. No. 901,182; Oct. 13; Sp. p. 2299; Dr. p. 470; Gaz. vol. 136; p. 1461.
Well-drilling apparatus. J. Conlan. No. 901,229; Oct. 13; Sp. p. 2384; Dr. p. 487; Gaz. vol. 136; p. 1476.
Well-drilling machine. R. L. Woodard. No. 900,636; Oct. 6; Sp. p. 1210; Dr. pp. 248–9; Gaz. vol. 136; p. 1258.
Well-packers, Anchor mechanism for. G. A. Spang. No. 900,440; Oct. 6; Sp. p. 778; Dr. p. 100; Gaz. vol. 136; p. 1195.

Well pipes or casings, Drive head or cap for. D. B. Whitehill. No. 900,140; Oct. 6; Sp. p. 142; Dr. p. 29; Gaz. vol. 136; p. 1095.
Well plug, Gas-. W. F. Burgess. No. 901,574; Oct. 20; Sp. p. 3773; Dr. p. 767; Gaz. vol. 136; p. 1725.
Wells, Spear for oil-. W. C. Beckwith. No. 902,468; Oct. 27; Sp. p. 5028; Dr. p. 1018; Gaz. vol. 136; p. 1949.
Welt-beater. J. J. Heys. No. 901,446; Oct. 20; Sp. p. 2902; Dr. p. 591; Gaz. vol. 136; p. 1586.
Wheel: *See* Brake-wheel; Car-wheel; Self-lubricating wheel; Spring-wheel; Stone-polishing wheel; Traction-wheel; Turbine bucket-wheel; Vehicle-wheel.
Wheel. H. M. Verplanck. No. 901,568; Oct. 20; Sp. p. 3146; Dr. p. 643; Gaz. vol. 136; p. 1626.
Wheel. A. L. Jiminez. No. 901,907; Oct. 20; Sp. p. 3837; Dr. p. 781; Gaz. vol. 136; p. 1736.
Wheel. R. K. Gregory. No. 902,072; Oct. 27; Sp. p. 4192; Dr. p. 850; Gaz. vol. 136; p. 1819.
Wheels, Detachable shoe for self-propelled-vehicle. W. P. Shattuck. No. 901,842; Oct. 20; Sp. p. 3717; Dr. p. 755; Gaz. vol. 136; p. 1714.
Whip-holder. T. M. Nelson. No. 900,193; Oct. 6; Sp. p. 257; Dr. p. 52; Gaz. vol. 136; p. 1114.
Whip-lock. W. J. Arnett. No. 902,129; Oct. 27; Sp. p. 4303; Dr. p. 872; Gaz. vol. 136; p. 1837.
Whip-socket, Lock-equipped. M. Killingson. No. 902,218; Oct. 27; Sp. p. 4421; Dr. p. 907; Gaz. vol. 136; p. 1865.
Winch. V. W. Mason. No. 901,719; Oct. 20; Sp. p. 3490; Dr. p. 706; Gaz. vol. 136; p. 1676.
Wind-actuated ventilator. J. Escher. No. 901,055; Oct. 13; Sp. p. 2131; Dr. p. 434; Gaz. vol. 136; p. 1431.
Winding machinery, Brake-gear for. H. J. Debauche. No. 900,911; Oct. 6; Sp. p. 1284; Dr. p. 262; Gaz. vol. 136; p. 1270.
Windmill. R. G. Finch. No. 900,504; Oct. 6; Sp. p. 937; Dr. p. 190; Gaz. vol. 136; p. 1215.
Windmill-gear. O. L. Huffman. No. 900,544; Oct. 6; Sp. p. 1016; Dr. pp. 206–7; Gaz. vol. 136; p. 1228.
Window. W. J. Summerbell. No. 900,893; Oct. 13; Sp. p. 1752; Dr. pp. 354–5; Gaz. vol. 136; p. 1369.
Window. O. M. Edwards. No. 902,060; Oct. 27; Sp. p. 4171; Dr. p. 845; Gaz. vol. 136; p. 1815.
Window-chair. H. J. Frey. No. 901,301; Oct. 20; Sp. p. 3654; Dr. p. 740; Gaz. vol. 136; p. 1703.
Window-lock. C. C. Higgins. No. 900,539; Oct. 6; Sp. p. 1004; Dr. p. 204; Gaz. vol. 136; p. 1227.
Window-lock. G. O. Keller. No. 901,178; Oct. 13; Sp. p. 2294; Dr. p. 468; Gaz. vol. 136; p. 1460.
Window-pane fastener. A. Billings. No. 901,148; Oct. 13; Sp. p. 2245; Dr. p. 456; Gaz. vol. 136; p. 1451.
Window-screen. M. Casson. No. 901,007; Oct. 13; Sp. p. 2068; Dr. p. 427; Gaz. vol. 136; p. 1426.
Window-screen. E. Carney. No. 901,521; Oct. 20; Sp. p. 3092; Dr. p. 625; Gaz. vol. 136; p. 1611.
Window-screen, Adjustable. E. A. Reitz. No. 902,110; Oct. 27; Sp. p. 4272; Dr. p. 866; Gaz. vol. 136; p. 1831.
Window, Sliding. J. Stumpf. No. 901,208; Oct. 13; Sp. p. 2350; Dr. p. 481; Gaz. vol. 136; p. 1470.
Wire basket. T. J. Goodwin. No. 900,162; Oct. 6; Sp. p. 193; Dr. p. 39; Gaz. vol. 136; p. 1104.
Wire-cloth or other fabric, Frame for holding. C. C. Armstrong. No. 900,691; Oct. 13; Sp. p. 1336; Dr. p. 272; Gaz. vol. 136; p. 1305
Wire-connector. H. W. Wyckoff. No. 902,040; Oct. 27; Sp. p. 4137; Dr. p. 838; Gaz. vol. 136; p. 1809.
Wire-drawing machine. A. Rusbatch. No. 900,312; Oct. 6; Sp. p. 513; Dr. pp. 106–7; Gaz. vol. 136; p. 1153.
Wire machine, Barb-. W. A. Kilmer. No. 902,152; Oct. 27; Sp. p. 4348; Dr. pp. 880–2; Gaz. vol. 136; p. 1845.
Wire-netting machine. A. E. Barlow. No. 902,196; Oct. 27; Sp. p. 4446; Dr. pp. 899–900; Gaz. vol. 136; p. 1859.
Wire pile fabrics from printed warps, Manufacturing. P. and C. Kappler. No. 902,413; Oct. 27; Sp. p. 4894; Dr. p. 991; Gaz. vol. 136; p. 1930.
Wire-splice. W. E. Huber. No. 902,406; Oct. 27; Sp. p. 4879; Dr. p. 987; Gaz. vol. 136; p. 1928.
Wire-stretcher. A. W. Templeton. No. 900,229; Oct. 6; Sp. p. 321; Dr. p. 66; Gaz. vol. 136; p. 1125.
Wire-stretcher. D. J. O'Connor. No. 900,664; Oct. 6; Sp. p. 1274; Dr. p. 260; Gaz. vol. 136; p. 1266.
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